

#### U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

ORDER 8130.2F CHG 3

National Policy

Effective Date: April 18, 2007

#### **SUBJ:** Airworthiness Certification of Aircraft and Related Products

1. Purpose. This change is issued to—

**a.** Incorporate the provisions of changed § 21.183(d) and new §§ 21.6, 21.55, 21.120, 21.183(h), and 91.403(d) of Title 14, Code of Federal Regulations (14 CFR), based on Standard Airworthiness Certification of New Aircraft; Final Rule (71 FR 52250, September 1, 2006).

**b.** Revise parts of the order related to standard airworthiness certification of new aircraft built from spare and surplus parts, used aircraft, and surplus military aircraft.

**c.** Provide policy for issuing a standard airworthiness certificate to a manned free balloon when the balloon envelope is the only component ordered from a manufacturer.

**d.** Provide policy for imported aircraft type certificated under a § 21.21 type certificate and manufactured under license by a bilateral country.

**e.** Update information related to the acceptance of repair data on used aeronautical products from bilateral partner aviation authorities.

**f.** Provide policy information to aviation safety inspectors who may issue an experimental certificate of airworthiness in the amateur-built category for type-certificated aircraft. Incorporation of this language is the result of the cancellation of the policy memorandum titled "Type Certificated Aircraft Converted to Amateur-Built," dated December 20, 2006.

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

**3. Disposition of Transmittal Paragraph.** Retain this transmittal sheet until the directive is canceled by a new directive.

Initiated By: AIR-200

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

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#### **CHAPTER 1. INTRODUCTION**

**1. PURPOSE.** This order establishes procedures for accomplishing original and recurrent airworthiness certification of aircraft and related products. 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.

**2. DISTRIBUTION.** This order is distributed to the Washington headquarters branch levels of the Aircraft Certification Service, Flight Standards Service, and the Regulatory Support Division; to the Aviation System Standards office; to the branch level in the Aircraft Certification Service directorates and regional Flight Standards Service divisions; to all aircraft certification offices; to all manufacturing inspection district offices and manufacturing inspection satellite offices; to the Aircraft Certification Branch and Flight Standards Branch at the FAA Academy; to the Brussels Aircraft Certification Division and Flight Standards staff; to applicable representatives of the Administrator; and to all international field offices.

**3.** CANCELLATION. FAA Order 8130.2E, Airworthiness Certification of Aircraft and Related Products, dated January 23, 2003, is cancelled.

**4. AUTHORITY TO CHANGE THIS ORDER.** The issuance, revision, or cancellation of the material in this order is the responsibility of the Aircraft Certification Service, Production and Airworthiness Division, AIR-200. All changes, as required, will be accomplished by this division to carry out the agency's responsibility to provide for original and recurrent airworthiness certifications and related approvals for eligible aeronautical products.

**5. DEVIATIONS.** Adherence to the procedures in this order is necessary for uniform administration of this directive material. Any deviations from this guidance material must be coordinated and approved by AIR-200. If a deviation becomes necessary, the FAA employee involved should ensure the deviations are substantiated, documented, and concurred with by the appropriate supervisor. The deviation must be submitted to AIR-200 for review and approval. The limits of Federal protection for FAA employees are defined by Title 28, United States Code § 2679.

**6. FORMS.** Examples of forms referenced in this order are found at the end of the section or chapter in which they are referenced.

7. ACRONYMS. The following acronyms are used in this order:

AC advisory circular aircraft certification office ACO AD airworthiness directive APIS approved production inspection system ASI aviation safety inspector **Bilateral Airworthiness Agreement** BAA BASA **Bilateral Aviation Safety Agreement** CAA **Civil Aviation Authority** Commercial and Government Entity CAGE CAM **Civil Aeronautics Manual** 

	CAR	Civil Air Regulation	
	CFR	Code of Federal Regulations	
	14 CFR	Title 14, Code of Federal Regulations	
	CG	center of gravity	
	CHDO	certificate holding district office	
	CMACO	certificate management aircraft certification office	
	СМО	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	
	DAS	designated alteration station	
	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	
	DOA	delegation option authorization	
	DOD	Department of Defense	
	DOT	Department of Transportation	
	DRMO	Defense Reutilization Marketing Office	
.1.	EAA	Experimental Aircraft Association	
*	EASA	European Aviation Safety Agency	*
	ELSA	experimental light-sport aircraft	
*	ELT	emergency locator transmitter	*
*	ENAC	Ente Nazionale per L'Aviazione Civile	Ť
	FAA	Federal Aviation Administration	
	FSCAP	flight safety-critical aircraft part	
	FSDO GPO	flight standards district office Government Printing Office	
	ICAO	International Civil Aviation Organization	
	ICAU 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	
	LFV	Luftfartsverket	*
	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	

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NAA	National Aviation Authorities
NTSB	National Transportation Safety Board
ODAR	organizational designated airworthiness representative
PAH	production approval holder
PC	production certificate
PCA	primary category aircraft
PI	principal inspector
PMA	parts manufacturer approval
R&D	research and development
RPM	revolutions per minute
SFA	special flight authorization
SFAR	Special Federal Aviation Regulation
SOC	statement of compliance
STC	supplemental type certificate
49 U.S.C.	Title 49, United States Code
ТС	type certificate
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

**8. DEFINITIONS.** Some of the definitions included in part 1 of Title 14, Code of Federal Regulations (14 CFR) and other publications are listed below.

**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 § 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 part 61.

**e. Bilateral Agreement.** The term "bilateral agreement" means an executive agreement between the U.S. Government and the government of another country to facilitate the airworthiness approval or acceptance of civil aeronautical products exported from one country (contracting state) to the other. There are two types of bilateral agreements related to airworthiness: Bilateral Airworthiness Agreements (BAA) and Bilateral Aviation Safety Agreements (BASA). These agreements are not trade

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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), certificate management unit (CMU), or the Brussels Aircraft Certification Division.

**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. 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.

**k. DOD CAGE Code.** The Department of Defense Commercial and Government Entity (DOD CAGE) code identifies the manufacturer of the part or product produced under government contract.

**I. Dual-Use Product or Part.** Any product or part 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 part 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 part 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, § 21.27.

m. Exception. A case in which a rule, general principle, etc., does not apply.

n. Exemption. Approval to be free from current regulations in 14 CFR.

**o.** Experimental Light-Sport Aircraft. An aircraft issued an experimental operating light-sport category aircraft airworthiness certificate. Experimental light-sport aircraft applies to those aircraft for which the certificate is issued regardless of the purpose within § 21.191(i), Operating light-sport aircraft.

**p. Flight Safety-Critical Aircraft Part.** Any part, assembly, or installation 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.

**q. 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 § 21.191(g).

**r. Light-Sport Aircraft.** 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 § 1.1.

**s. Light-Sport Category.** With respect to aircraft certification, the light-sport category adds a new group of aircraft based on the definition in § 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. The factors of intended aircraft use, operating limitations, and privileges of this category place it in hierarchy between the primary and experimental categories.

t. Light-Sport Eligible Kit. An eligible kit is one that is of the same make and model aircraft that has been issued a light-sport category airworthiness certificate by the FAA. The kit is manufactured by the same entity that built the aircraft, and that aircraft has been issued the LSA airworthiness certificate. Once built, the owner-assembled kit aircraft is eligible for the experimental, operating LSA certificate.

u. Manufacturer. A person who causes a product or part thereof to be produced.

**v. Military Surplus Product or Part.** A product or part 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.

w. Military-Unique 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 PAH engine, propeller, or part produced for civilian application. Breakout products or parts 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.

**x. Part Out.** To remove a part from or disassemble an aircraft, engine, propeller, or assembly of parts.

**y. 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.

**z. Previously Manufactured Aircraft.** Existing aircraft-like vehicles meeting the definition of light-sport aircraft that do not meet the provisions of 14 CFR part 103, Ultralight vehicles, and are in a ready-to-fly condition.

**aa. Production Approval Holder.** A holder of a production certificate (PC), an approved production inspection system (APIS), a parts manufacturer approval (PMA), or a technical standard order (TSO) authorization who controls the design and quality of a product or part thereof.

**bb.** Statement of Compliance. A statement of compliance (SOC) is 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.

**cc.** Two-Place Ultralight Training Vehicle. This is a two-place, noncertificated vehicle operated under a valid training exemption to part 103.

**dd.** Ultralight-like Vehicle. A vehicle that is similar to an ultralight but does not meet the definition or requirements of § 103.1.

ee. Ultralight Vehicle. As defined in 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 unpowered 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.

**ff. 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 (CG) 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.

(5) Paragraph 29 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 155 of this order).

**c.** Exchange. It is highly desirable that all aircraft currently certificated in the standard category carry 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, Form 8100-2. In exchanging these certificates, the operating certificate number will NOT be entered on the revised form. 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 Form 8130-7, in lieu of FAA Form 1362B, Certificate of Airworthiness. The new airworthiness certificate will reflect the date as indicated on Form 1362A or Form 1362B, preceded by a capital "E" in the Date block of the certificate.

#### 28. SURRENDERED AIRWORTHINESS CERTIFICATE.

**a.** Airworthiness certificates voluntarily surrendered by written authorization of 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.** When a U.S.-owned aircraft is sold to a purchaser in another country or is leased for operations and registered in another country and is removed from the U.S. register, the airworthiness certificate is no longer effective; therefore, the airworthiness certificate must be surrendered to the FAA by the aircraft owner or operator as specified in § 21.335(e). The exporting FAA representative will request a \* copy of the deregistration and surrendered airworthiness certificate from the exporter to complete the FAA representative's file.

#### 29. 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 plate with 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 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.

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**30.** 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.

**31. RECORDING OF CONFORMITY INSPECTIONS.** FAA Form 8100-1, Conformity Inspection Record, should be used to document conformity inspections during type, production, and airworthiness certification programs. This form also may be used as a worksheet during any production surveillance activity to supplement official surveillance records and any inspections deemed appropriate during airworthiness certification (see figure 2-4).

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

**b.** Retention. Form 8100-1 should be retained until it has been determined that it would serve no useful purpose.

**32. AIRWORTHINESS CERTIFICATION OF MANNED FREE BALLOONS.** Manned free balloons are type-certificated as complete aircraft consisting of three major components: the envelope, the burner and fuel system, and the basket. The burner and fuel system and basket also are known as the "bottom-end" components. Airworthiness certificates will not be issued for any individual component. 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 type certificate data sheets (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 components 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 component 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.

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- \* **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 components into a complete aircraft may be performed as preventive maintenance under appendix A to part 43, paragraph (c)(27). The aircraft records must properly reflect the installation of the bottom-end components 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 components must be maintained. The due date of the next required inspection is determined based on the time the component parts are due for inspection.
- \* **e.** If an envelope is provided only as a replacement part without obtaining a new aircraft serial \* number, registration number, or ID data plate, the installation of the replacement envelope is a maintenance item under part 43. This requires appropriate documentation of the work performed and a return to service entry in the aircraft records by a person authorized to perform the maintenance. The aircraft ID data plate, serial number, and registration number are carried over from the previous aircraft envelope.
  - **f.** For model changes, see paragraph 29 of this order.

#### 33. RESERVED FOR FUTURE CHANGES.

#### SECTION 3. INITIAL OR SUBSEQUENT ISSUANCE OF AIRWORTHINESS CERTIFICATES (ORIGINAL/RECURRENT) OR RELATED APPROVALS

**34. 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.

#### 35. 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 (new or used) that have not left the original product manufacturer's quality control system.

(2) Aircraft or related products 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 parts,

(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

CONFORMITY INSPECTION RECORD 1. Project Number, TIA/Request Date: 2. SHEET of Sheets							2. SHEET of Sheets			
3. Applicant/Manufacturer:					4. Beginning Date:				5. Ending Date:	
6. Model: 7. Inspected By:										
8. Item	9. Nomenclature of Item Inspected	10. Drawing, Doc	ument, Specificati	ion,	11. Revision and				13. Comments	
No.		etc.			Date		SAT.	UNSAT.		
							<u> </u>			

# FIGURE 2-4. SAMPLE FORM 8100-1, CONFORMITY INSPECTION RECORD (FACE SIDE ONLY)

FAA Form 8100-1 (5-92) SUPERSEDES PREVIOUS EDITION

#### CHAPTER 3. STANDARD AIRWORTHINESS CERTIFICATION

#### SECTION 1. GENERAL INFORMATION

**40. GENERAL.** In no case may any aircraft be operated unless there is an appropriate airworthiness certificate issued to and valid for that aircraft. This chapter provides policy and guidance material associated with airworthiness certification and issuance of Form 8100-2.

**a.** Section 21.183(a) prescribes the basic requirements for issuance of standard airworthiness certificates for aircraft manufactured under a PC.

**b.** Section 21.183(b) prescribes the basic requirements for issuance of standard airworthiness certificates for aircraft manufactured under a TC only.

**c.** Section 21.183(c) prescribes the basic requirements for issuance of the standard airworthiness certificates for an import aircraft type-certificated in accordance with § 21.29. The CAA certifications must be made by issuance of an Export C of A that contains either the certification statement noted on the corresponding FAA TCDS or a certification statement that the aircraft meets its FAA-approved type design and is in a condition for safe operation.

\* **d.** Section 21.183(d) prescribes the basic requirements for issuance of standard airworthiness certificates for used aircraft (aircraft with time in service for other than production flight testing) and for surplus aircraft of the U.S. Armed Forces.

**e.** Section 21.183(h) prescribes the basic requirement for issuance of a standard airworthiness certificate for new aircraft manufactured to a TC, when the applicant does not hold the TC or a licensing agreement from the TC holder. A person seeking to manufacture a new aircraft under this provision must demonstrate to the FAA that the manufacturing began before August 5, 2004. Typically, these aircraft are built from spare and surplus parts. Paragraph 57-1 of this chapter provides detailed guidance for these aircraft.

## **NOTE:** NO FAA field office or FAA representative is authorized to WAIVE regulatory requirements.

**f.** The FAA has full responsibility for finding that each aircraft, at the time an airworthiness certificate is issued, conforms to the type design and is in a condition for safe operation. Therefore, sufficient FAA inspections of each aircraft must be conducted by the certificating ASI or authorized designee.

#### 41. STANDARD AIRWORTHINESS CERTIFICATE.

**a.** Form 8100-2 ((Government Printing Office (GPO) pad only) is used for all original and recurrent certification of aircraft in the STANDARD CATEGORY ONLY and for replacement of Form 1362A still in effect. See chapter 8 of this order for instructions on completing Form 8100-2 (figure 3-1).

**b.** A standard airworthiness certificate remains valid as long as maintenance, preventive maintenance, and alterations are performed in accordance with parts 21, 43, and 91.

**42. APPLICATION FOR AIRWORTHINESS CERTIFICATE.** Form 8130-6 is required whenever an airworthiness certificate is issued or amended. The application for a U.S. airworthiness certificate must be made by the registered owner or an agent who has a notarized letter of authorization from the registered owner. The applicant must complete and sign the appropriate sections of Form 8130-6 before submitting it to the FAA. (Sample forms are contained at the end of each applicable section.) Instructions for completing Form 8130-6 are contained in chapter 8 of this order. AC 21-12, Application for U.S. Airworthiness Certificate, FAA Form 8130-6 can also be used as a reference.

#### 43. STATEMENT OF CONFORMITY.

**a.** Form 8130-9 should be submitted to the FAA as required by §§ 21.53 and 21.130 under the following circumstances:

(1) By the applicant at the time the aircraft or parts thereof are submitted for FAA tests during the type certification program;

(2) By the applicant for each aircraft, aircraft engine, or propeller submitted for type certification; and

(3) By a TC holder or licensee manufacturing products under a TC only (a) with the initial transfer of ownership of each product, (b) upon application for the original issue of an airworthiness certificate, or (c) an export airworthiness approval.

### NOTE: For the purpose of this order, type certification programs include any tasks associated with the issuance of a TC or STC or the approval of Form 337.

**b.** The FAA should review Form 8130-9 for completion and ensure that all of the entries are typewritten or printed legibly in permanent ink. The form also must be signed in permanent ink by an authorized person who holds a responsible position in the manufacturing organization. If the certifier also is an FAA designee, the designee title should not be used. If the inspection and certification is delegated to a supplier by the applicant, a copy of the letter of delegation must be submitted to the FAA at the time of conformity.

#### 44. USE OF PARTS CATALOGS AND MAINTENANCE MANUALS.

**a.** When an aircraft is submitted for airworthiness certification, a determination must be made that the aircraft is in conformance with its type design. This does not imply that every part or component must be subjected to a conformity inspection. Conformity inspections should only be conducted when, in the FAA's judgment, conformity to the type design for a particular part or component cannot be substantiated by any other means.

**b.** Conformity to the type design can only be established when a determination has been made that the materials, processes, dimensions, etc., conform to FAA-approved design data.

**c.** Parts catalogs or maintenance manuals may not be used to conduct conformity inspections. However, they should be used when applicable as an aid in establishing the configuration of a particular aircraft or in determining that the aircraft has been properly maintained.

**d.** MIDOs, MISOs, and CMOs/CMUs having certificate management responsibility for a particular manufacturer interface with the applicable aircraft certification office (ACO) to provide technical data and other pertinent information necessary to support the certification process. It is the applicant's responsibility to provide the type design data for those parts and components for which a conformity determination must be made.

**45. BASIC ELIGIBILITY REQUIREMENTS.** Before a standard airworthiness certificate can be issued, the applicant must show the following:

**a.** The aircraft conforms to its approved type design and is in a condition for safe operation.

**b.** Any major alterations were accomplished in accordance with an approved STC or other FAA-approved data.

c. All applicable ADs have been complied with.

**d.** If altered while in another category, the aircraft continues to meet, or has been returned to, its approved type design configuration and is in a condition for safe operation.

**46. CERTIFICATION PROCEDURES.** The procedures described herein are consistent with any other specific procedures prescribed in paragraphs dealing with individual airworthiness categories.

**a.** Obtain from the applicant a properly executed Form 8130-6, and any other documents required for certification. The applicant must have the form completed and the appropriate sections signed before submitting it to the FAA. The application for a U.S. airworthiness certificate must be made by the registered owner or an agent who has a notarized letter of authorization from the registered owner.

**b.** Contact AFS-750 to determine that an application for airworthiness certification previously has not been denied. If it was denied, the reasons stated in the denial letter must be rectified before issuing an airworthiness certificate.

**c.** Arrange with the applicant to make available for inspection and review the aircraft, aircraft records, and any other data necessary to establish conformity to its type design.

d. Determine that the aircraft is properly registered in accordance with part 47.

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

e. As applicable, ensure compliance with the noise standards of § 21.93(b), § 21.183(e), 14 CFR
\* part 36, Noise Standards: Aircraft Type and Airworthiness Certification, or part 91. Also ensure compliance with the fuel venting and exhaust emission requirements of 14 CFR part 34, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, and the applicable passenger emergency exit requirements of § 21.183(f) and Special Federal Aviation Regulation (SFAR) 41.

#### 56. AIRWORTHINESS CERTIFICATION OF VERY LIGHT AIRCRAFT.

**a.** A very light aircraft (VLA) is considered a special class of aircraft under § 21.17(b). A VLA is defined as an airplane with a single engine (spark or compression-ignition), not more than two seats, a maximum certified takeoff weight of not more than 750 kilograms (approximately 1654 pounds), and a stall speed of not more than 45 knots calibrated airspeed in the landing configuration. The operation of these airplanes is limited to normal category maneuvers and to visual flight rules (VFR), day only, under part 91.

**b.** All VLA are eligible to receive Form 8100-2 under § 21.183(a) or (b) if the airplane has a TC and is manufactured under an FAA PC or APIS. Because the VLA is type-certificated as a special class of aircraft under § 21.17(b), the category in block No. 4 on Form 8100-2 must be identified as VLA-Special Class.

**c.** The import airworthiness certification requirements of § 21.183(c) are applicable to VLA designed to meet the criteria of the Joint Aviation Requirements (JAR) for VLA. The FAA type certification basis for import VLA with JAR 22 engines and propellers installed will be shown on the TCDS. The category in block No. 4 on Form 8100-2 will be identified as VLA-Special Class for Imported VLA. (See figures 3-3 through 3-6 for samples of airworthiness applications and certifications for VLA aircraft.)

#### 57. AIRCRAFT MANUFACTURED IN A BILATERAL COUNTRY.

**a.** New aircraft manufactured in a bilateral country will be inspected and certificated in a manner similar to that noted in paragraph 52 of this order, except that under a bilateral agreement, the CAA of the country of manufacture must certify that the aircraft has been examined, tested, and found to meet its U.S. type design (see paragraph 227 of this order for a definition of a "new" product). An ASI or authorized designee must inspect the aircraft to determine airworthiness eligibility using the current TCDS before the § 21.183(c) airworthiness certificate is issued for the completed aircraft.

**b.** The extent of each inspection conducted depends on many factors requiring good judgment. All parts, assemblies, and completed aircraft should be given a thorough inspection upon delivery of the aircraft to the U.S. owner/operator.

c. The certifying statement from the country of manufacture must be submitted by the applicant with each application for the first U.S. airworthiness certificate to be issued for a particular aircraft. See paragraph 35b(8) of this order and §§ 21.183(c) and 21.185(c).

\*

#### 57-1 NEW AIRCRAFT MANUFACTURED UNDER THE PROVISIONS OF § 21.6(b).

**a.** General. The following provides guidance and instructions on issuing a standard airworthiness certificate, under the provision of § 21.183(h), for new aircraft manufactured to a TC issued under § 21.21 or § 21.27. This requirement only applies to an applicant that does not hold the TC or a licensing agreement from the TC holder. Additionally, under the provision of § 21.6(b), an applicant may build and certificate only one new aircraft (one aircraft, one person, one time), and the applicant must have started manufacturing that aircraft before August 5, 2004. Typically, these aircraft are built from spare and surplus parts.

\*

\*

# **NOTE:** This guidance and instructions do not apply to an applicant that holds the TC or a licensing agreement from the TC holder to build an aircraft. These aircraft may be certificated only under the provisions of § 21.183(a) or (b).

(1) A person seeking to manufacture a new aircraft under the provisions of §§ 21.6(b) and 21.183(h) must demonstrate to the FAA that the manufacturing began before August 5, 2004. Documents that could prove manufacturing began before August 5, 2004, include items such as receipts for the purchase of parts and materials, dated photographs, and dated information received from the FAA related to the manufacturing or certification process for the specific aircraft. This information must be provided to the FAA no later than the time of application for an original airworthiness certificate.

(2) If an applicant meets the requirement of paragraphs 57-1a and 57-1a(1), immediately contact your division manager, directorate manager, or managing office for approval to proceed with the project. The directorates will maintain a record of all projects approved under this paragraph. The following will be discussed with each applicant:

(a) Building aircraft from spare and/or surplus parts does not include the repair of destroyed aircraft. However, parts obtained from a destroyed aircraft may be used provided the parts are inspected and tested as required to ensure they are acceptable for installation and conform to the type design used to substantiate conformity. For such parts, the applicant must ensure all applicable requirements of part 43 are complied with.

(b) For any STC the applicant intends to incorporate into the aircraft during assembly, the applicant must own or have written permission from the STC holder/owner permitting the use of the STC.

(c) Section 21.303(b)(2) does not provide authority to produce parts needed for the assembly of a new aircraft built from spare and/or surplus parts.

**b.** Applicant Responsibilities. An applicant must show that the products, parts, components, and individual assemblies meet the airworthiness and environmental standards that are the basis for their individual approvals. In addition, the collectively assembled aircraft will satisfy the certification basis identified on the referenced type certificate and meet the applicable requirements of § 21.183(h) and any special conditions prescribed by the FAA. The applicant begins by submitting a design package to the cognizant (local) FAA ACO.

(1) The applicant will deliver to the local ACO a compatibility document/matrix to show what STCs are proposed for installation on each aircraft. The matrix should show that the applicant has reviewed the STCs and determined that there are no compatibility issues. The local ACO review is an evaluation as to how the applicant made the determination of compatibility. The compatibility document will be submitted to and accepted by the local ACO and certificate management ACO (CMACO) (the ACO that manages the current TC) before certifying the aircraft.

(2) The applicant will submit to its local ACO a complete design package for the aircraft. The type design data must meet the requirements in § 21.183(h) (as defined in FAA Order 8110.4, Type Certification) and be complete enough to allow the FAA to verify that any PMA parts or TSO articles/ appliances meet the TC requirements. Only FAA-approved design data will be submitted. Field repair manuals or illustrated parts breakdowns will not be submitted; they are FAA-accepted data, not FAA-approved data. Military manuals or drawings will not be submitted; they are not FAA-accepted or –approved data. In addition, the requirements of §§ 21.5, 21.50, and 21.99 need to be complied with as applicable. The following are items that should be included in the design package. However, the ACO/CMACO may request additional documentation as needed.

(a) A master drawing list, which will consist of a complete description of each aircraft type design configuration, including all STCs and a list of the PMA parts, TSO articles/appliances, and owner/operator-produced parts, which make up the configuration of each aircraft. The master drawing list will be the basis for determining conformity to a TC for each aircraft.

# **NOTE:** This list should include installation instructions, process specifications, the drawings or document number, revision level, engineering change orders in effect, the date prepared, and the approval dates of all material.

(b) The aircraft assembly plan, so that the ASI is able to determine when different assembly processes will take place.

(c) The proposed weight and balance process.

(d) The proposed flight test procedure. The applicant must flight test the aircraft in accordance with an FAA-approved production flight test procedure and flight check-off format as prescribed by § 21.127. An FAA flight test engineer will approve the flight test procedure.

(3) The local ACO will verify the design package is complete and then forward it to the CMACO that manages the current/original type certificate project. The CMACO and local ACO will perform a review and validation of the design data to ensure the data are approved and current. A DER will not perform this approval/review process. Order 8110.4 contains more detailed requirements of a design package.

(4) The applicant will maintain and make available to the FAA when requested all supporting documents such as manufacturers' invoices, suppliers' affidavits, packing lists, parts lists, material certification sheets, and other acceptable records to provide traceability of raw stock and parts to their origin and to provide a basis of approval.

(5) The applicant will submit to the FAA a complete conformity folder for the aircraft and Form 8130-9 certifying that the completed aircraft conforms to the FAA-approved data for this project at the time an application for an airworthiness certificate is submitted. In addition to the design package and STC compatibility documents, the conformity folder will include all STCs, inspection checklists, flight test records, and documentation for the specific aircraft being certificated. The build/inspection checklists will include the initials/stamp of the individuals who performed the work and/or inspections and, upon completion, the typed and/or printed name and signature of the applicant.

\*

**c. FAA Responsibilities.** The ASI needs to explain to the applicant that because the applicant is not required to have a quality control system the same as a PAH, it is the applicant's responsibility to demonstrate to the FAA that the aircraft conforms to the TC and is in condition for safe operation. Also, when presenting anything to the FAA, the applicant must ensure compliance with all airworthiness requirements in place at the time of presentation. In addition to the requirements of section 1 of this chapter, the FAA will use the following guidance to establish that the aircraft conforms to its type design as approved by the ACO/CMACO:

(1) FAA Form 8130-11, Checklist and Inspection Record, Aircraft Built from Spare and Surplus Parts (figure 3-7 is a reproducible sample), will be used during the conformity process. The completed checklist will be included in the permanent airworthiness certification record package forwarded to AFS-750.

(2) The ASI must verify the aircraft is assembled from approved materials, parts, and assemblies that conform to the FAA-approved type design for that particular model. The ASI must review the appropriate documents as presented by the applicant, substantiating FAA production approval status of these parts.

(3) The ASI must verify that any major changes to the approved design package have been approved by the appropriate ACO/CMACO.

(4) Used parts and assemblies with established service life-limited parts must be proven airworthy and accompanied by appropriate historical records to substantiate time in service. Such evidence, together with other maintenance records, should be returned to the applicant and made a part of the aircraft historical records. Life-limited items without historical records substantiating their eligibility cannot be accepted for certification on aircraft.

(5) The serial number of the aircraft does not have to appear on the aircraft specification, TCDS, or aircraft listing to be eligible for a standard airworthiness certificate. The aircraft serial number is used primarily for the purpose of individual identification of an aircraft. Under 49 U.S.C. § 44704, it need only be shown that the aircraft conforms to its FAA-approved TC and is in a condition for safe operation for the aircraft to be eligible for a standard airworthiness certificate.

(6) The ASI must ensure the applicant provides parts catalogs, assembly and/or maintenance manuals (as may be produced by the original equipment manufacturer), or the equivalent, for use as a guide by the FAA during all phases of the aircraft assembly inspections.

(7) After the product CMACO reviews the design package and finds it to be acceptable, the ASI uses the package and any other relevant information to develop a conformity inspection plan. The ASI reviews the plan with the applicant and the ACO and/or MIDO to determine the following:

(a) What processes, if any, are to be considered critical and require ASI mandatory inspection acceptance points.

(b) Where mandatory FAA conformity inspection points will be placed. At this point, the assembly plan can be used to forecast when these inspections will be accomplished. These inspections will not be bypassed by the applicant and may require a work stoppage if anything requiring inspection could be covered by further assembly.

(c) That the applicant's incoming parts and raw stock meet all TC requirements and are free of shipping and handling damage. Supporting documents such as manufacturer invoices, supplier affidavits, packing lists, parts lists, material certification sheets, and other acceptable records will be maintained and made available to the FAA.

(d) That the applicant has a process in place to ensure any special tooling meets all needed calibration requirements (for example, torque wrenches, assembly jigs, any equipment used to calibrate flight instrumentation). This process must be traceable to the National Institute of Standards and Technology.

(e) That all parts and material are in compliance with approved design data. The following guidance will establish compliance:

*I* FAA-approved parts obtained from a PAH and eligible for installation on this make and model will be free of shipping and handling damage and meet applicable type design data.

2 New parts fabricated will be properly manufactured, meet all applicable type design data requirements, and meet the airworthiness requirements of the FAA regulations applicable to the product on which the part is to be installed.

*3* Used parts meet all applicable requirements of part 43. These parts will possess an airworthiness approval tag (Form 8130-3) documenting that they are airworthy and approved for return to service.

*4* The applicant will make available all purchase orders and documentation to provide traceability of parts to their origin and to provide the basis of approval for the part. These documents will be available at the time of certification and used to verify the accuracy of the part information contained in the master drawing list. The ASI will review the part traceability (origin) information at the time of certification.

(f) That the aircraft identification and registration marking is correct and has been properly processed through AFS-750.

(g) That there is a process to ensure the reporting of failures, malfunctions, and defects for continued airworthiness will be accomplished.

(8) The ASI will perform all conformity inspections.

(9) The ASI will witness the applicant weigh the aircraft to determine empty weight and CG. A weight and balance report will be submitted at the time of airworthiness certification. FAA-H-8083-1, Aircraft Weight and Balance Handbook, is a good source of guidance to use during this operation.

(10) The ASI will review the completed FAA-approved flight check-off form to verify flight test completion. The aircraft must be flight tested by the applicant in accordance with an FAA-approved production flight test procedure and flight check-off format as prescribed by § 21.127. A DER will not perform this approval/review process.

(11) The ASI will review the 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 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 only" (see figure 3-8) 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 §§ 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). 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 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 Form 8100-2 and Form 8130-6 are forwarded to the CMACO.

#### st SECTION 3. USED AIRCRAFT AND SURPLUS AIRCRAFT OF THE U.S. ARMED FORCES st

#### 58. GENERAL.

\* **a.** Section 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 § 21.29 but not eligible for certification under § 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 part 121 or part 135 may require additional inspections, tests, or the installation of additional instruments and/or equipment before operation.

#### 59. CERTIFICATION PROCEDURES.

\* **a. General.** The FAA must follow the appropriate procedures listed in paragraph 46 of this order, along with the guidance and procedures in paragraphs 60 through 68 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 components. The following provisions address such repair data acceptance for used aeronautical products and components.

(1) As of the date of this order, bilateral agreements with Australia, Germany, New Zealand, and the United Kingdom provide for streamlined acceptance of certain used U.S. aircraft with specific repair data records. The bilateral agreement with Canada provides acceptance of repair data for all products. (See table A2-1 in appendix 2.) In the pending bilateral agreement with the European Community, the FAA also will be expanding its acceptance of data approved under the regulatory system of the European Aviation Safety Agency (EASA).

(2) Under this new agreement, the FAA will accept the repair design data used in the support of major or minor repair regardless of the state of design of the product or appliance, if—

(a) The FAA has certificated/validated the product or appliance,

(b) EASA is acting on behalf of the state of design for the repair design data,

(c) EASA repair design data approval is substantiated via an EASA repair design approval letter or a repair design approval issued under a DOA (see paragraph 59b(3)),

(d) The repair design data is not related to a critical component, and

# **NOTE:** A critical component, for the purpose of this acceptance, means a part identified as critical by the design approval holder or otherwise identified as a critical component by EASA.

(e) The repair is not in an area subject to an FAA AD, unless the AD allows for acceptance of an EASA repair design approval.

# NOTE: For repair data approved before September 28, 2003, the FAA will accept either the National Aviation Authorities (NAA) approval document, or equivalent, or a repair design approval issued under a former national DOA as evidence of the approval.

(3) Effective April 1, 2007, the FAA will begin accepting repair design data directly approved by EASA or by a DOA approved by the NAA of France (Direction Générale de l'Aviation Civile (DGAC)), Germany (Luftfahrt-Bundesamt (LBA)), Italy (Ente Nazionale per L'Aviazione Civile (ENAC)), The Netherlands (CAA), Sweden (Luftfartsverket (LFV)), and the United Kingdom (CAA).

(4) The wording stated in paragraph 59b(2) is based on the current draft bilateral text. The final provisions of the Technical Implementation Procedures for Airworthiness when signed by the FAA and EASA will take precedence over the wording above. It is important to understand that the FAA's acceptance of repair design data is focused on the data and its source of approval. The country from which the aircraft or component enters the United States is not the issue. For example, if a U.S.-manufactured aircraft or component reenters the United States and the repair data records can show traceability of a specific repair accomplished using data as stated in paragraph 59b(2), the repair design data is considered to be FAA-approved. If you have questions regarding the applicable provisions of any of these bilateral agreements, contact the Aircraft Certification Service International Policy Office (AIR-40).

#### 60. CONFORMITY DETERMINATION.

**a.** Under § 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 § 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 Form 337, and that the aircraft has been inspected in accordance with the performance rules for 100-hour inspections as set forth in § 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 part 121 and having a maintenance and inspection organization appropriately rated for the type of aircraft involved.

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**b.** Under the provisions of § 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 parts being used. The FAA is required to make a "finding of conformity" in accordance with § 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 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 which meets the requirements as defined in § 21.183(d)(2). Reference AC 21-23, appendix 4, Summary of Importing Bilateral Agreements.

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

**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 § 21.183(d). Unique situations should be discussed in advance with AIR-200.

**e.** If the application is for an original airworthiness certificate, the maintenance rules of 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, which includes repairs, comes under the applicable provisions of §§ 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 Form 8130-6.

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**61. 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.

**62. ISSUANCE OF STANDARD AIRWORTHINESS CERTIFICATES UNDER § 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 § 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 (§ 21.197) or special flight authorization (SFA) for non-U.S.-registered aircraft may be issued under § 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, refer to 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 (BAA or BASA).

(1) A bilateral agreement provides for close cooperation between the contracting states in the resolution of safety issues that might arise from inservice 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.

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(2) Service documents such as service bulletins and structural repair manuals approved by the airworthiness authority of the country where an affected product is manufactured are considered to be FAA-approved data unless otherwise noted, provided the United States has a bilateral agreement with that country. However, service bulletins or other similar instructions classified as "mandatory" by the CAA are not mandatory in the U.S. regulatory system unless required by an AD. Therefore, owners or operators of affected U.S.-registered aircraft are not required under U.S. law to comply with service documents or directives issued by the airworthiness authorities of other countries unless an FAA AD is issued under 14 CFR part 39, Airworthiness Directives. However, for U.S. type-certificated products not currently on the U.S. register, alternate procedures have been instituted involving the processing of foreign Mandatory Continuing Airworthiness Information (MCAI), that may affect the way the airworthiness certification requirements are met. The MCAI process is described in detail in paragraph 244 of this order.

\* (3) Appendix 2 to this order provides additional guidance on used aircraft under a bilateral agreement related to the acceptance of a 100-hour inspection, Export Certificate of Airworthiness, repair data, maintenance activities, and third country manufactured aircraft.

#### c. Third Party Agreements (reference AC 21-23, paragraph 31c(4)).

(1) The United States has bilateral agreements for reciprocal acceptance of Export Certificates of Airworthiness with a number of countries that contain a "third country provision," through which the CAA of one country may certify products that are manufactured in another bilateral country (see AC 21-2, Export Airworthiness Approval Procedures). This provision primarily was intended to provide the CAA of the exporting country, other than the country of manufacture, with authority to certify to the United States that a product to be exported is in conformance and that the product is in a condition for safe operation. For example, an aircraft manufactured in England is exported to France and operated under French registry. The aircraft is then sold to a buyer in the United States under this provision. If the French DGAC issues a certification to the effect that the aircraft meets its U.S. type design and is in a condition for safe operation, the FAA will honor the certification. (The bilateral agreements between the United States and England and France have third party provisions.)

(2) Because the United States has bilateral agreements with third party countries that attest to their competence in making conformity and airworthiness determinations, the FAA also will accept certifications of those aircraft that have been manufactured in the United States when the CAAs of these countries are willing to issue such certificates. Accordingly, a prospective buyer of a U.S.-manufactured aircraft located in a country other than the United States may request from the CAA of the bilateral third-party country a certification to the effect that the particular U.S.-manufactured aircraft has remained in or has been returned to its type design configuration and is in a condition for safe operation. When applicable, the certification should also contain information concerning any areas where the aircraft does not conform to its type design. This certification will be honored by the FAA as fulfilling the applicant's responsibility, but will not eliminate the inspection requirements mandated by § 21.183(d).

(3) Applicants must be cautioned that it may be impractical to obtain a U.S. airworthiness certificate for an aircraft operated under the registry of another country subsequent to the issuance of an Export C of A by the CAA of the country of manufacture. Applicants should be able to (1) identify repairs and modifications, and any maintenance accomplished, and (2) document the equipment installed on the aircraft from the time the Export C of A was issued to the date of application for a U.S. airworthiness certificate. The applicant must show that the aircraft has remained in or has been returned to its FAA-approved type design and is in a condition for safe operation. This may involve extensive inspections accomplished by designees, the CAA of the country of manufacture, the aircraft manufacturer, and repair stations, before a U.S. airworthiness certificate may be issued.

(4) In cases where an aircraft manufactured outside the United States originally was exported to another country and the CAA of the country of manufacture has issued an Export C of A attesting conformance to a design other than that approved by the FAA, the Export C of A may be useful to the applicant for establishing a configuration baseline for showing conformity to the FAA-approved design after modification. In these cases, or when the Export C of A may not be available, the applicant should obtain a statement from the CAA of the country of manufacture that (1) certifies that when originally exported from that country the aircraft met its FAA-approved design, or (2) identifies any differences between the configuration identified in the original export certification and the FAA-approved design. The applicant must obtain the necessary technical data needed to convert the aircraft to its FAA-approved design configuration. This method may involve extensive inspections to be accomplished by designees, the CAA of the country of manufacture, the aircraft manufacturer, or persons authorized under part 43, before the applicant is able to show conformity to the FAA-approved design. Attempts to obtain a U.S. airworthiness certificate by this method may prove to be impracticable for the applicant; in some instances, the applicant ultimately may be unable to obtain the desired U.S. airworthiness certificate.

(5) The FAA normally will not issue a U.S. airworthiness certificate for an aircraft manufactured outside the United States when no export certification is available. To be acceptable, aircraft manufactured outside the United States must be controlled under bilateral agreement procedures with assurance of conformity and condition provided by the CAA in the country of manufacture. Without assurance in the form of an Export C of A or a certifying statement from the CAA of the country of manufacture, there is no practical way for an applicant to show, or for the FAA to find, that the aircraft conforms to the FAA-approved type design and is in a condition for safe operation.

(6) Inspections by the FAA should be conducted to determine that no changes or modifications have been made, and that the condition of the aircraft has not deteriorated since its export certification by the CAA. Flight testing in accordance with chapter 4 and/or paragraph 61 of this order may be required before a U.S. airworthiness certificate is issued if the aircraft has been disassembled and reassembled since its export certification by the CAA.

\* (7) Note that other CAAs may charge a fee for their services. The applicant must be prepared to pay any such fee if the services of a CAA are requested. Any certification, inspection, or information documents provided to the applicant by the CAA must be in the English language.

**d.** Certification Procedures. In addition to meeting the certification requirements of section 1 of this chapter, the applicant must do the following:

#### (1) For U.S.-Manufactured, U.S. Type-Certificated Aircraft—

(a) Provide the original or an acceptable copy of the U.S. Export C of A obtained when the aircraft originally was exported from the United States. This provides a baseline for the inspection to determine whether the aircraft meets its FAA TC and is used to determine whether there were any deviations to the type design as annotated on the Export C of A when the aircraft originally was exported. For example, equipment inconsistent with the CFR may have been incorporated to comply with the importing country's additional design requirements. All deviations must be resolved before a standard airworthiness certificate can be issued.

(b) Show that any aircraft component overhauled or repaired while the aircraft was operating under non-U.S. registry was accomplished in accordance with methods acceptable to the FAA and that the component conforms to its type design. When this cannot be shown, the component must be removed.

(c) Show that any major alterations, modifications, or repairs performed while the aircraft was under non-U.S. registry were accomplished in compliance with FAA-approved data and that the aircraft conforms to its type design requirements. Under certain BASA Implementation Procedures \* for Airworthiness (IPA) and/or accompanying special arrangements (for example, with Australia, New Zealand, the United Kingdom, Germany, and Canada), the FAA has determined that the bilateral \* aviation authority may approve design data associated with major alterations, modifications, or repairs that do not rise to the level of an amended TC or STC on certain categories of aircraft for which either country is the state of design. When these data are approved directly by authority, or by a delegated individual or organization, they would then be subsequently recognized as FAA-approved data under the bilateral provisions. FAA ASIs and designees should not require the applicant to seek additional FAA approval(s) for data so identified unless there is clear evidence that the data are specifically erroneous or otherwise unreliable. In all other situations, use of an FAA DER to expedite the design approval process should be encouraged for any major alteration or repair that may have been incorporated without FAA approval. Persons authorized under § 43.7 must record in the maintenance records that the major alterations, modifications, or repairs conform to FAA-approved data.

#### NOTE: Table A2-1 in appendix 2 and paragraph 59 of this order provide information related to the FAA's acceptance of specific repair data, conditions under which the repair data are acceptable, and the applicable bilateral agreement countries.

(d) Obtain FAA approval for or resolve any deviation from the type design.

(e) Show that any maintenance performed while the aircraft was under non-U.S. registry was performed in accordance with methods acceptable to the FAA and that the aircraft conforms to its approved type design or properly altered condition.

(f) The applicant for an airworthiness certificate whose aircraft has been maintained, modified, or repaired while under foreign registry must ensure that all records required by § 91.417(b) are translated into the English language.

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#### (2) For Non-U.S.-Manufactured, U.S. Type-Certificated Aircraft—

(a) Furnish a certifying statement from the CAA of the country of manufacture or a certifying statement from the CAA with whom the United States has a third party bilateral agreement, attesting that the aircraft conforms to its type design and is in a condition for safe operation.

(b) Obtain FAA approval for any non-FAA-approved major modifications, alterations, or repairs incorporated in the aircraft.

(c) Obtain FAA approval for or resolve any deviations from the type design, for example, those annotated on the CAA's Export C of A.

#### \* 63. RESERVED FOR FUTURE CHANGES.

**64. SCREENING OF SURPLUS MILITARY AIRCRAFT.** This paragraph provides guidance and instructions on establishing the basic eligibility of surplus military aircraft for airworthiness certification under the provisions of § 21.183(d) when an FAA TC has been issued under the provisions of § 21.21, 21.27, and 21.29.

**a. Initial Screening Inspection.** The initial screening inspection will determine whether the aircraft has reasonable potential for airworthiness certification. Inspections may be performed on some, but not all, surplus military aircraft before they are offered for sale to the public. Aircraft determined to have "no potential" for airworthiness certification during the initial screening inspection, for example, because of an initial lack of military service historical/modification records, may later be presented for rescreening if adequate cause is demonstrated by the owner. The FAA inspector performing the initial inspection must submit FAA Form 8130-10, Surplus Military Aircraft Inspection Record (figures 3-9 and 3-10) for each inspection to the appropriate manufacturing inspection office (MIO). Aircraft may be considered potentially certifiable when the manufacturer's ID plate is installed and the aircraft military records are adequate to determine the historical background of the aircraft. At a minimum, the initial screening inspection must consist of the following:

(1) An examination of the aircraft ID plate(s) to determine military model number, serial number, date of manufacture, and any other pertinent data.

(2) A review of military maintenance manuals and modification records affecting the subject aircraft regarding its current status of mandatory maintenance, for example, the military equivalent to FAA ADs. The records may be considered adequate for potential certification purposes when the following is determined:

(a) All major repairs/modifications and military safety-of-flight items have been properly documented in accordance with prescribed military directives.

(b) The historical records document all known replacement of parts or assemblies.

(c) The historical records document a current list of life-limited parts or assemblies and their current status on the subject aircraft.

(d) The following are typical DOD records that should be reviewed during the screening inspection process. These examples are for surplus Army military aircraft:

1 DA Form 2408-5, Equipment Modification Record;

2 DA Form 2408-13, Aircraft Status Information Record;

3 DA Form 2408-15, Aircraft Historical Record for Aircraft; and

4 DA Form 2408-16, Aircraft Component Historical Record.

(e) The historical records document the maximum weight limits, airspeeds, and operating regimes that have been exceeded as described in the applicable military flight manuals, technical directives, and aircraft specifications. If any of these limits have been exceeded, this information must be recorded on Form 8130-10. The FAA will not make any determination as to what, if any, adverse effects may have resulted from exceeding the described limits. If these limits are exceeded, the MIDO will contact the cognizant FAA engineering office for its appraisal.

(3) An examination of the aircraft to determine its degree of completeness, state of preservation and repair, and general condition. This examination is not necessarily all-inclusive, is for information only, and does not guarantee approval of an airworthiness certificate.

**b.** Aircraft Condition. The condition of the aircraft and its historical records, as found during the initial screening inspection, must be noted on Form 8130-10 for each aircraft. This information will be used for future reference. Upon completion of the above, the FAA inspector who conducted the initial screening inspection must render an opinion as to whether the aircraft has reasonable potential for an airworthiness certificate.

**c.** Screening Report. All inspection findings must be recorded on Form 8130-10. The original form and appropriate attachments must be forwarded to the appropriate MIO within 5 working days after completion of the inspection (see figures 3-9 and 3-10).

#### 65. CONFORMITY CERTIFICATE—MILITARY AIRCRAFT.

**a.** Contractual agreements between segments of the military services and a manufacturer may require the manufacturer to provide FAA Form 8130-2, Conformity Certificate—Military Aircraft (see figure 3-11), for each aircraft procured. Such aircraft must be type-certificated and, in most cases, be manufactured under the terms of a PC.

**b.** By mutual agreement between the FAA and the military services, the FAA may have certain other responsibilities related to the issuance of Form 8130-2. Except as provided in this paragraph, and in any specific requirements in the memorandum of understanding, the normal inspection and surveillance procedures relating to production under a TC or under a PC should be met.

**c.** The completed original Form 8130-2 must be given to the authorized military representative. The cognizant MIDO, or FSDO when delegated, must forward a copy, including those issued by DOA manufacturers, to the appropriate MIO for indefinite retention. The copies may be forwarded either separately or all in one package at the end of the military contract or at the discretion of the directorate.

NOTE: If such military aircraft are eventually sold as surplus and presented for civil certification, it is the applicant's responsibility to furnish Form 8130-2 with the application when the form is necessary as a part of the airworthiness determination. If the applicant cannot obtain the original or a legible copy of the completed conformity certificate, the ASI or authorized designee may request a copy through his or her supervising office from the cognizant military office.

**66. ISSUANCE OF STANDARD AIRWORTHINESS CERTIFICATES, SURPLUS MILITARY AIRCRAFT.** Form 8100-2 (figure 3-12) may be issued when the applicant shows, and the FAA finds, that the aircraft conforms to the FAA-approved type design (including applicable modifications incorporated by an amendment to the TC or STC) and is in a condition for safe operation. A standard airworthiness certificate may be issued for a surplus military aircraft under § 21.183(d) when an FAA TC has been issued under §§ 21.21, 21.27, or 21.29. A copy of Form 8130-2, which should have been issued to the military service at the time the aircraft was accepted, must be made available to the FAA representative or authorized designee by the applicant. This document is necessary to establish basic conformity, including documenting any deviations that may have been in existence at the time of manufacture. This procedure applies to a complete aircraft operated by the military service and released as a complete aircraft from the military service. Adequate military maintenance records must be made available to assist in determining conformity.

**67. CERTIFICATION REQUIREMENTS (APPLICANT).** The following are documents and other information that are typically used by an applicant to show compliance with the airworthiness certification requirements of § 21.183(d):

**a.** Proof of ownership in the form of a DOD Bill of Sale is considered to be recordable evidence and proof of ownership. DOD Form 1427, Notice of Award, Statement, and Release Document (DD 1427), is considered to be proof of ownership only. The DD 1427 is not a bill of sale and cannot be used for registering the aircraft. When an aircraft is sold for recovery of parts or reduction to scrap, a bill of sale is not issued.

**b.** Compliance and conformity to the TC, taking into account any STCs or any amendments to the TC. The applicant must present evidence that the aircraft conforms to the type design. The type design data used to determine conformity must be shown in the applicant's records. The following are typical records that may be used:

(1) Records maintained by the military, the manufacturer, or any other prior owner pertaining to the manufacturing, inspection, maintenance, and operation of the aircraft. Military records may be used to determine continuous conformity while the aircraft was in military service.

(2) Form 8130-2 or prior airworthiness certificate issued by the FAA, if any.

(3) Records such as the TCDS or aircraft specifications that establish, by manufacturer's serial number, that the complete aircraft was produced under an FAA PC or APIS and the extent to which it was so produced.

(4) When components and parts have been replaced since original manufacture, the applicant must show that they are airworthy and eligible for installation.

(5) Records of any components and parts that have been fabricated or assembled by the applicant establishing that they conform to the type design.

(6) Records of engines, gearbox assemblies, landing gear, instruments, or other components or parts establishing that they originally conformed to the type design and have been maintained in accordance with applicable FAA requirements. Military maintenance and/or FAA-approved repair station records may be used for this purpose.

(7) When military records are being used to substantiate any portion(s) of conformity to FAA-approved type design, the applicant must show that the records for that specific aircraft, component, or part are complete and accurate.

(8) An approved flight test procedure and flight checkoff form must be established (when a flight test is deemed necessary) and each aircraft must be flight tested by the applicant's pilot in accordance with that procedure. The FAA production flight test will not be conducted until an entry has been placed in the aircraft records to show that these tests have been satisfactorily completed by the applicant.

(9) The civil and military model designation is reflected on the ID plate (§ 45.13) and all airworthiness documentation, including airworthiness certificates (excluding registration), reflects the civil and military model designation and serial number. The military designation and serial number must be placed in parentheses in the same blocks as the civil model designation and serial number.

c. Form 8130-9 with an outline explaining determination of conformity.

- d. A current weight and balance report from an actual weighing of the aircraft.
- e. Records that indicate that all applicable ADs have been complied with.
- **f.** Records of inspection required by § 21.183(d)(2).

**68. CERTIFICATION PROCEDURES.** The following are some of the typical steps taken by the FAA representative or his authorized designee toward certification of the aircraft in conjunction with those specified in paragraph 46 of this order:

a. Ensure that the application is complete and correct.

**b.** Inspect the aircraft and review records to determine the following:

(1) Compliance and conformity with the TC, taking into account any STCs or any amendments to the TC.

(2) Compliance with applicable ADs.

(3) Currency of weight and balance information from actual weighing; it is recommended that the ASI observe the actual weighing.

(4) Which inspections and tests, including flight tests, are required to find that the aircraft is in a condition for safe operation. The FAA production flight test requirements will be coordinated with FAA flight test personnel.

(5) That an approved flight test procedure and flight checkoff form has been established (when a flight test is deemed necessary) and that each aircraft is flight tested by the applicant's pilot in accordance with that procedure. The FAA production flight tests will not be conducted until an entry has been placed in the aircraft records to show that these tests have been satisfactorily completed by the applicant.

(6) Compliance with the registration and marking requirements of parts 47 and 45.

(7) That the civil model designation is reflected on the ID plate and that all of the airworthiness documentation, including registration and airworthiness certificates, reflect the civil and military model designation and serial number. The military designation and serial number should be placed in parentheses in the same blocks as the civil model designation and serial number.

**69. EXAMPLES OF FORMS.** Figures 3-1 through 3-16 provide examples of forms used in the certification process.

## 70.-85. RESERVED FOR FUTURE CHANGES.

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### SECTION 9. EXPERIMENTAL AMATEUR-BUILT AIRWORTHINESS CERTIFICATIONS

**146. GENERAL.** Under the provisions of § 21.191(g), an amateur-built aircraft is defined as an aircraft in which the major portion has been fabricated and assembled by persons who undertook the construction project solely for their own education or recreation. The applicant should be advised of the availability of AC 20-27, Certification and Operation of Amateur-Built Aircraft.

## NOTE: A rebuilt, altered, or repaired type-certificated aircraft DOES NOT meet the intent of § 21.191(g) and DOES NOT meet the § 21.191(g) requirement that the major portion of the aircraft be fabricated and assembled.

#### a. Eligibility.

(1) Amateur-built aircraft are eligible for an experimental airworthiness certificate when the applicant presents satisfactory evidence of the following:

(a) The aircraft was fabricated and assembled by an individual or group of individuals.

(b) The project was undertaken for educational or recreational purposes.

(c) The FAA finds that the aircraft complies with acceptable aeronautical standards and practices.

## NOTE: Aircraft that are manufactured and assembled as a business for sale to other persons ARE NOT considered to be in compliance with § 21.191(g).

(2) The determination of the major portion factor may be made by evaluating the amount of work accomplished by the individual or group of individuals, against the total amount of work necessary for the complete project, excluding standard procured items. The "major portion" of the aircraft is considered to mean more than 50 percent of the fabrication and assembly operations. The applicant must submit a notarized FAA Form 8130-12, Eligibility Statement, Amateur-Built Aircraft, certifying the major portion was fabricated and assembled for educational or recreational purposes, and that evidence is available to support this statement. The evidence will be provided to the ASI upon request. If a question arises as to the eligibility regarding the major portion requirement of an amateur-built aircraft, FAA Form 8000-38, Fabrication/Assembly Operation Checklist, may be used. See figure 4-14 for a sample Form 8130-12 and figure 4-15 for a sample Form 8000-38.

## **NOTE:** Applicants will jeopardize eligibility for certification under § 21.191(g) if someone else builds the aircraft.

#### b. Design and Construction.

(1) To meet the intent of § 21.191(g) and to be eligible for an experimental airworthiness certificate, satisfactory evidence must be presented to show that the aircraft was not built from completely prefabricated parts or kits. For existing type-certificated aircraft composed of fabricated

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parts and components, credit cannot be given toward the fabrication of these parts and components when applying for an experimental certificate of airworthiness in the amateur-built category.

(2) However, the applicant cannot be expected to have personally fabricated every part that makes up the aircraft any more than this can be expected of a commercial aircraft manufacturer. Items such as engines and engine accessories, propellers, rotor blades, rotor hubs, tires, wheel and brake assemblies, instruments, and standard aircraft hardware such as pulleys, bell cranks, rod ends, bearings, bolts, rivets, etc., may be procured on the open market.

(3) The use of used or salvaged major assemblies from type-certificated aircraft (for example, wings, fuselage, empennage, etc.) from type-certificated aircraft is permitted, as long as they are in a condition for safe operation. However, no credit will be given to the builder(s) when determining major portion. This would include "rebuilding" or "restoring" these components to their original condition. All fabrication, installation, and assembly tasks on the Form 8000-38 that have been satisfied by the use of used or salvaged assemblies must be annotated in the "Kit Manufacturer" column. Prospective builders should be made aware that excessive use of major assemblies when building their aircraft may render the aircraft ineligible for certification under § 21.191(g).

## **NOTE:** Fabrication is defined as "to construct a structure or component from raw stock or materials." This excludes rebuilding or restoring activities.

(4) The practice of attempting to convert a type-certificated aircraft to an amateur-built aircraft by crediting rebuilding, alterations, or repairs does not meet the intent of § 21.191(g) and will not be accepted. The normal field approval or STC processes should be used for modification to these aircraft and kept under their existing maintenance programs to ensure continued airworthiness and conformance to § 43.13. Prospective builders should be made aware that attempting to convert type-certificated aircraft to amateur-built aircraft will, in all likelihood, render the aircraft ineligible for certification under § 21.191(g).

(5) The FAA should be reasonable in its requests to amateur builders, keeping in mind that in most instances only one aircraft is involved. Accordingly, the builder is not required to have the detailed design data, quality systems, procedures, etc., that the holder of a type and PC is required to have for the production of duplicate aircraft.

(6) For a major change, the FAA is not required to modify an experimental amateur-built aircraft's special airworthiness certificate and operating limitations unless the modification creates the need for special restrictions.

(7) The FAA must find the completed aircraft meets that requirements of § 21.191(g) and the procedures in Order 8130.2 before issuing an experimental certificate of airworthiness in the amateur-built category.

## c. Kit Construction.

(1) An aircraft that is built from a kit may be eligible for amateur-built certification, provided the major portion of the aircraft (that is, more than 50 percent), has been fabricated and assembled by the applicant for education and/or recreation and the applicant has evidence to support the major portion requirement. Based on the criteria set forth in paragraphs 146a and b of this order, it is obvious that an aircraft assembled from a kit composed of completely finished prefabricated components, parts, and precut/predrilled materials is not eligible for the issuance of an experimental airworthiness certificate as an amateur-built aircraft.

(2) The major portion of a kit should be composed of raw stock, such as lengths of wood, tubing, extrusions, etc., which may have been cut to an approximate length. A certain quantity of prefabricated parts, such as heat-treated ribs, bulkheads, or complex parts made from sheet metal, fiberglass, or polystyrene would also be acceptable. The kit must still meet the major portion requirement, and the applicant must show to the satisfaction of the FAA inspector that completion of the aircraft is not merely an assembly operation.

(3) Some kits may include assembly jigs, templates, raw stock, or other means to simplify the fabrication and assembly process. If an applicant proposes to use a kit that has such items provided, the FAA inspector should evaluate the kit to determine whether the builder will still fabricate and assemble the major portion of the aircraft and advise the applicant accordingly.

**d. Kit Evaluation.** The FAA does not certify aircraft kits or approve kit manufacturers. However, the FAA does perform evaluations of kits for the purpose of determining if an aircraft built from the kit will meet the major portion requirement of § 21.191(g). This evaluation must not be construed as meaning the kit is FAA "certified," "certificated," or "approved," and it is not appropriate to represent it as such. See paragraphs 148, 149, and 150 of this order for kit evaluation criteria.

### e. Advising Applicants.

(1) FAA inspection of an amateur-built aircraft will be limited to a general airworthiness inspection when the aircraft is submitted for airworthiness certification. The FAA will not perform any progressive precover inspections during the construction of the aircraft. These in-process inspections should be conducted by knowledgeable persons, for example, Experimental Aircraft Association (EAA) technical counselors and certificated mechanics, etc. All advice given to the amateur builder by the FAA should be made a matter of record for future reference. IN NO INSTANCE WILL THE FAA ACTUALLY PERFORM ANY OF THE FABRICATION OR CONSTRUCTION WORK.

(2) Many individuals who desire 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 EAA, located in Oshkosh, Wisconsin. Information on EAA programs and benefits may be obtained via the EAA Web site at http://www.eaa.org.

(3) When the prospective builder contacts the appropriate FAA office to advise the FAA of the construction project, the inspector should provide the prospective builder with the applicable forms and any guidance necessary to ensure a thorough understanding of applicable regulations.

(4) The prospective builder, when applying for an airworthiness certificate, should submit to the FAA a three-view sketch, drawing, or photograph of the proposed aircraft project.

(5) The applicant should be advised that to show compliance with § 91.319(b), the applicant must develop 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, as revised, or its equivalent in scope and detail. Flight test programs accomplish two purposes. First, they ensure that the aircraft has been adequately tested and determined to be safe to fly within the aircraft's flight envelope. Second, 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.

(6) The FAA district office, when requested, should furnish the builder with the following forms:

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

(b) Application for Airworthiness Certificate, Form 8130-6;

(c) Eligibility Statement, Amateur-Built Aircraft, FAA Form 8130-12; and

(d) Affidavit of Ownership for Amateur-Built Aircraft, Aeronautical Center Form 8050-88.

(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. If the applicant cannot, or will not, provide a statement of eligibility, the applicant should be advised that the aircraft cannot be certificated as amateur-built until other satisfactory evidence is provided to substantiate that the major portion of the aircraft was built for educational or recreational purposes.

## f. Weight and Balance.

(1) Before certification, the amateur builder should accurately weigh the aircraft 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. If the aircraft is self-designed, these limits would be determined by the builder's calculations; if the aircraft is constructed from a kit or built from purchased plans, the predetermined data would be used. 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 § 91.9.

(2) Prior to certificating the aircraft, the FAA should verify that the weight and balance 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.

### g. Transfer of Airworthiness Certificates.

(1) An airworthiness certificate is transferred with the aircraft (§ 21.179), for example, if there is a change of ownership, transfer of registration, etc. 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 Form 8130-7 must be issued to reflect the new date of the revised operating limitations. Therefore, Form 8130-6 is required to be submitted by the applicant.

(2) 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 in this category. In this case, a new 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 only be issued after the FAA has verified airworthiness by following the appropriate procedures in paragraph 88 of this order.

h. Operation of Canadian-Registered Amateur-Built Aircraft in the United States. Canadian-registered amateur-built aircraft are issued a special certificate of airworthiness with operating limitations set by Transport Canada Civil Aviation. In the United States, operation of Canadian-registered amateur-built aircraft certified under the provisions of Canadian air regulations is permitted by the issuance of an SFA under § 91.715. This authorization must be obtained before operation in the United States is permitted. The authorization may be obtained electronically via the Flight Standards Web site at http://www.faa.gov/avr/afs/afs800/formtext.htm. Additional guidance on the issuance of SFAs for Canadian-registered amateur-built aircraft may be found in paragraph 261 of this order.

**i. Prototype Aircraft Produced by an Amateur-Built Aircraft Kit Manufacturer.** When persons produce prototype aircraft to be used to prove their design for amateur-built purposes, even though the design is intended to be sold as plans and/or kits, such aircraft are considered to be produced as a furtherance of a business.

(1) These prototype aircraft are not produced by persons "solely for their own education or recreation," and therefore cannot be certificated as amateur-built aircraft under § 21.191(g). An application to be certificated as amateur-built cannot be accepted for such aircraft, but the aircraft could qualify for the purpose of R&D under § 21.191(a). FAA inspectors may issue experimental certificates for the purpose of R&D as long as the applicant has a bona fide program of R&D.

(2) Following termination of an R&D program, such prototype aircraft may be eligible for an experimental certificate for the purpose(s) of exhibition and/or air racing with appropriate operating limitations issued for such purpose(s).

(3) Kit manufacturers also may be eligible to receive an experimental certificate (§ 21.191(f)) for the purpose of conducting market surveys, sales demonstrations, and customer crew training as provided in § 21.195(a). The airworthiness certificate may be issued ONLY after the applicant has

satisfied the requirements of § 21.195(d). The following operating limitations will be added when issuing airworthiness certificates under § 21.191(f):

(a) Condition inspections must be performed in accordance with appendix D to part 43 at least every 90 days or 100 flight hours, whichever comes first. The inspections must be performed by an FAA-certificated mechanic with appropriate ratings as defined in § 43.3.

(b) 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.

NOTE 1: "Customer crew training" means pilot familiarization with that aircraft rather than training the customer to become a pilot. The manufacturer will only be familiarizing an already qualified pilot with the novel characteristics of the aircraft, not training the customer to obtain a pilot's certificate.

NOTE 2: This should not be construed to enlarge the scope of § 21.191(f) except as specifically provided. Amateur builders are not "manufacturers" for the purposes of §§ 21.191(f) and 21.195(a), and cannot obtain Form 8130-7 under § 21.191(f). In addition, a person who distributes kits or plans manufactured by another company would not qualify for Form 8130-7 under §§ 21.191(f) and 21.195(a).

**147. CERTIFICATION PROCEDURES.** The procedures in this chapter provide guidance material associated with airworthiness certification and the issuance of Form 8130-7.

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 prior to the issuance of an airworthiness certificate. During this inspection, the FAA may not request extensive disassembly of the aircraft if the builder can provide documented evidence of in-process inspections. These in-process inspections should be conducted by knowledgeable persons, for example, EAA technical counselors and certificated mechanics. The records should indicate what was inspected, by whom, and the date of the inspection. In addition, builders should document construction phases using photographs taken at appropriate times prior to covering or finishing. The photographs should clearly show the methods of construction and quality of workmanship. Such photographic records should be included with the builder's log or other construction records. The only time extensive disassembly should be requested is when there is a question of safety that would endanger the general public. When an aircraft fabricated from a kit is identified as meeting the major portion rule by the FAA, the FAA will review the applicant's documentation supplied with the kit to verify it agrees with the identification and description given in the FAA listing of eligible amateur-built kits. Deviations from the FAA-identified kit configuration will require the inspector to make an independent determination that the applicant fabricated and assembled the major portion of the aircraft.

b. Record Inspection and Document Review. The FAA representative must-

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

(2) Obtain from the applicant 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.

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

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

(5) Review the aircraft records to determine whether any required maintenance, inspections, etc., have been accomplished. Records must be complete.

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

(7) 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 appendix D to part 43, or other approved programs, and was found to be in a condition for safe operation. This statement will support the owner's inspection and airworthiness statement on block III of the Application for Airworthiness Certificate. The inspection described above will help reduce errors made during construction of the aircraft. (Appendix 1 to AC 90-89, 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 Form 8130-6, block III, attests to the airworthiness of the amateur-built aircraft.

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

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

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

(3) The aircraft nationality and registration marks are in accordance with 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 builder/owner.

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

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

**d. 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 will be attached to 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 § 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 § 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 for the operation of an amateur-built aircraft for an unlimited duration, as appropriate.

(3) Under § 91.319(e), the FAA may prescribe any additional limitations in phase I or 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 entry.

**(b)** Issue Form 8130-7.

(c) Complete sections V and VIII of 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 Form 8130-6 and forward to AFS-750 to be made part of the aircraft record.

### 148. EVALUATION OF AMATEUR-BUILT AIRCRAFT/KITS.

**a.** The purpose of Form 8000-38 is to record the amount of fabrication and assembly accomplished by the kit manufacturer, and the fabrication and assembly necessary for the amateur builder to complete the aircraft.

**b.** Form 8000-38 may be used when—

(1) Determining whether an aircraft built from a kit would meet the major portion fabrication and assembly requirement of 21.191(g).

(2) Settling any question with respect to the major portion requirement that may arise in the certification of an amateur-built aircraft in accordance with § 21.191(g).

## NOTE: The use of this checklist is not necessary for an aircraft built from a kit previously found eligible for amateur-built certification or when the builder's records, data, and notarized statement provide ample proof that the builder fabricated and assembled the major portion of the aircraft.

(3) The aircraft was built from prefabricated major components that are readily available from aircraft parts suppliers.

(4) The aircraft was built using salvaged or used sections from type-certificated standard category aircraft.

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

(6) The aircraft was built from a kit that was changed by the kit manufacturer after the date of eligibility was established.

(7) Providing guidance to a kit manufacturer to determine if a proposed kit-built aircraft meets the major portion requirement of § 21.191(g). Using this checklist, the kit manufacturer can determine whether a proposed kit is eligible for amateur-built certification. If not, the kit manufacturer may be able to adjust the kit content to meet the major portion requirement.

**c.** The totals derived from the Kit Manufacturer and Amateur columns on Form 8000-38 indicate the relative portions of the aircraft fabricated and assembled by the kit manufacturer and the amateur builder. To meet the requirements of § 21.191(g), the total in the Amateur column must be greater than the total in the Kit Manufacturer column.

**d.** It is not necessary that a major portion of the individual parts be fabricated by the amateur builder. If some work (for example, trimming, measuring, cutting, drilling, gluing, lay-up, etc.) is required to prepare the individual part for installation/assembly into the aircraft, and if this work is performed on a representative number of parts listed under each applicable section of the aircraft, the kit may be considered eligible if the major portion of the aircraft has been fabricated and assembled by the amateur builder.

## 149. KIT EVALUATIONS AT MANUFACTURERS' FACILITIES.

**a.** The FAA does not certify aircraft kits or approve kit manufacturers. However, the FAA does perform evaluations of kits for the purpose of determining if an aircraft built from the kit will meet the major portion requirement of § 21.191(g). This evaluation should not be construed as meaning the kit or its manufacturer is FAA "certified," "certificated," or "approved," and it is not appropriate to represent it as such.

**b.** When a kit's eligibility for amateur-built airworthiness certification is questionable, the manufacturer may request evaluation by submitting a letter to the MIO responsible for the geographical area in which the kit manufacturer is located.

**c.** The geographically responsible MIO will forward the request for evaluation to the appropriate MIDO. The MIDO will conduct the evaluation at the kit manufacturer's facility using Form 8000-38. The kit should be evaluated in the exact configuration as supplied to amateur builders. For Form 8000-38—

(1) Upon completion of the evaluation, if the total number of check marks in the Amateur column is less than the total in the Kit Manufacturer column, the kit manufacturer will be advised that the kit does not meet the major portion requirement of 21.191(g); or

(2) If the total number of check marks in the Amateur column is greater than the total in the Kit Manufacturer column, the kit manufacturer will be advised that the kit meets the major portion requirement of § 21.191(g).

**d.** Upon receipt of the completed Form 8000-38 from the MIDO, the MIO will formally notify the kit manufacturer of the results by certified mail. When a kit has been found eligible, the notification should include at least the information in the sample letter illustrated in figure 4-16. When a kit has been found not eligible, the notification should include at least the information in the sample letter illustrated in figure 4-17.

**e.** The MIDO that performs the kit evaluation will establish a permanent file that should contain the following documents:

(1) A copy of the eligibility or non-eligibility letter that was sent to the kit manufacturer.

(2) A copy of Form 8000-38 completed for the kit.

(3) A copy of the manufacturer's document (parts list, assembly manual, etc.), exactly as sold with the kit. Manufacturers should identify each page of the document by date and/or revision level. This information will help to establish configuration of the kit as evaluated.

**f.** For kits found eligible, the MIO will send an evaluation report to the Production and Airworthiness Division, AIR-200, 800 Independence Avenue SW., Washington, DC 20591. The evaluation report must contain copies of the documents listed in paragraphs 149e(1) and (2) of this order.

**g.** Upon receipt of the evaluation report, AIR-200 will e-mail the results to the appropriate FAA field offices and add the kit to the listing of eligible amateur-built aircraft kits. The updated listing is available on the aircraft certification page of the FAA Web site at http://www.faa.gov, or a hardcopy may be obtained from AIR-200 by calling 202-267-8361.

## **NOTE:** The placing of a kit on this list is not a prerequisite for amateur-built airworthiness certification. The purpose of the listing is to assist the FAA by eliminating the need for duplication of evaluations for the major portion determination.

**150.** CHANGES TO ELIGIBLE KITS. Once a kit has been found eligible for amateur-built status, the manufacturer should coordinate with the FAA any change made to the kit that affects the fabrication and assembly operations.

**a.** The kit manufacturer should contact the geographically responsible MIO and describe the changes using parts lists, photographs, drawings, etc.

**b.** The FAA will determine the extent of reevaluation needed. Major changes that decrease the amount of fabrication and assembly required by the builder(s) may affect kit eligibility. Changes that consist of substituting standard hardware items, such as bolts, nuts, rivets, fasteners, etc., normally will not affect eligibility.

**c.** Derivative models developed from kits previously found eligible may have their eligibility determined based on inspection and evaluation of the original kit, and evaluation of detailed documentation of the changes submitted by the kit manufacturer. Inspection of the actual derivative kit is an option of the original evaluating FAA inspection office.

**d.** Evaluation reports of major kit changes and reports for derivative models will be processed the same way as original evaluations. Kits found not eligible after reevaluation will be removed from the listing of eligible amateur-built aircraft kits.

### 151. INSTRUCTIONS FOR COMPLETING FORM 8000-38.

**a.** Enter the kit manufacturer's company name and address.

**b.** Enter the kit model by name and/or number.

**c.** List the latest date or revision date of the kit parts list, assembly manual, etc. (Be sure to include the document name.)

d. Enter the type of aircraft (for example, land, sea, fixed-wing, rotorcraft).

e. Review each operation for its applicability to the kit under evaluation.

**f.** Check the appropriate boxes under Accomplished By for kit manufacturer and/or amateur builder.

g. Enter any operations not on the list in blank spaces.

**h.** If the operation is not applicable to the kit construction, enter "N/A" in the respective block.

**i.** Operations that are accomplished by other manufacturers or suppliers are to be checked in the Kit Manufacturer block.

**j.** The use of used or salvaged assemblies from standard category aircraft will be checked in the Kit Manufacturer block.

**k.** Special tools and fixtures (for example, jigs, templates, etc.) fabricated by the amateur builder will be given credit. No credit will be given for fabrication of hand tools.

**l.** When the evaluation is complete, enter the total number of check marks in the respective blocks on page 5 of the checklist.

**m.** Sign and date the checklist.

### 152. FLIGHT TEST AREAS.

**a.** General. Section 91.319(b) requires that an unproven aircraft be assigned to a flight test area. The assigned test area is prescribed in accordance with § 91.305. The FAA, when requested, should assist applicants in selecting areas that comply with § 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 §§ 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 88 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 reasonable opportunity(s) to execute an off-airport emergency landing that will not jeopardize other persons or property.

**c.** Assigned Flight Test Area. The procedures outlined under section 7, paragraph 135 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.

(2) Amateur-built gliders, balloons, dirigibles, and ultralight vehicles that meet the requirements of § 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 Flight Test Area.** The procedures outlined under section 7, paragraph 136 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.

#### 153. 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 § 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 § 21.193) for this aircraft. In addition, this aircraft must be operated in accordance with applicable air traffic and general operating rules of part 91 and all additional limitations herein prescribed under the provisions of § 91.319(i). These operating \* limitations are a part of 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 § 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, refer to section 7, paragraph 135b(1) of this order.

(3) This aircraft must be operated for at least <u>hours in the assigned geographic area</u>.

# NOTE: The FAA requires a minimum of 25 hours of flight testing for an aircraft with a type-certificated engine and propeller combination installed. A minimum of 40 hours is required when a non-type-certificated engine, propeller, or engine/propeller combination is installed. ASIs may assign longer test hours when it is necessary to determine compliance with § 91.319(b).

(4) All test flights, at a minimum, must be conducted under VFR, day 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 § 91.319(b). Compliance with § 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 phase 1 and 2 and should be issued in accordance with paragraphs 135b(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 is operating in phase II.

(7) 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 § 91.205, this aircraft is to be operated under VFR, day only.

(9) Aircraft instruments and equipment installed and used under § 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.

(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, markings, etc., as required by § 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 builder/owner during each condition inspection.

(14) This aircraft must display the word "EXPERIMENTAL" in accordance with § 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 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 § 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 § 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 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 part 61, or a letter of authorization 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 inspectors should refer to 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 § 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 § 61.31(k)).

(19) After incorporating a major change as described in § 21.93, the aircraft owner is required to reestablish compliance with § 91.319(b) and notify the geographically responsible FSDO of the location of the proposed test area. The aircraft owner must obtain concurrence from the FSDO as to the suitability of the proposed test area. If the major change includes installing a different type of engine (reciprocating to turbine) or a change of a fixed-pitch from or to a controllable propeller, the aircraft owner must fill out a revised Form 8130-6 to update the aircraft's file in the FAA Aircraft Registry. 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 logbook entry describing the change before the test flight. Following satisfactory completion of the required number of flight hours in the flight test area, the pilot must certify in the records that the aircraft has been shown to comply with § 91.319(b). Compliance with § 91.319(b) must be recorded in the 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 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 ASI 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 appendix D to part 43, 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 § 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) 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 appendix D to part 43, 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.

## **NOTE:** Limitations 24 and 25 will be issued in lieu of limitations 22 and 23 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 § 91.409(e), (f), (g), and (h). This inspection must be recorded in the aircraft maintenance records.

(25) 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 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 § 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.

## 154. RESERVED FOR FUTURE CHANGES.

## SECTION 10. CERTIFICATION AND OPERATION OF AIRCRAFT UNDER THE EXPERIMENTAL PURPOSE(S) OF EXHIBITION AND AIR RACING

**155. GENERAL.** Under the provisions of § 21.191(d), exhibition aircraft are defined as aircraft that exhibit the aircraft's flight capabilities, performance, or unusual characteristics at airshows, 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 airshows and productions. Under the provisions of § 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.** Operating an aircraft to demonstrate its flight characteristics or capabilities in connection with sales promotions for the aircraft is not considered to be an eligible operational purpose under the exhibition category. 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 air races, organized fly-in activities, organized exhibitions, youth education events, shopping mall/school/similar static displays, organized aerobatic competition, sail plane fly-ins or competitive races or meets, and movie or television productions. The duration of an airworthiness certificate for exhibition is unlimited.

**b.** Air Racing. Operating an aircraft to demonstrate its flight characteristics or capabilities in connection with sales promotions for the aircraft is not considered to be an eligible operational purpose under the air racing category. A certificate for experimental air racing must only be issued when an aircraft is to be used for valid air racing purposes. The duration of an airworthiness certificate for air racing is unlimited.

**c. Base of Operation.** When an aircraft's base of operation 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. The owner/operator will provide the local FSDO with a copy of the inspection program identifying the person responsible for scheduling and performing the inspections as well as the requested proficiency areas.

**d.** Experimental Airworthiness Certification Moratorium. On July 9, 1993, a moratorium was established because of a dramatic increase in applications for special airworthiness certificates and SFAs for non-U.S.-manufactured aircraft that did not hold TCs issued under § 21.29. The moratorium was lifted on August 18, 1993, with interim guidance provided to certificate these aircraft. Although the moratorium was established for non-U.S.-manufactured aircraft, this policy will be used when issuing a special airworthiness certificate for the experimental purpose(s) of exhibition or air racing, regardless of the country of manufacture.

**e. Effectivity.** Aircraft that received original airworthiness certification before July 9, 1993, are NOT affected by this order unless the original airworthiness certification purpose changes, for example, from R&D to exhibition. Those aircraft, except for purpose changes, will not be affected until the FAA works with the public to determine the best strategy to certificate all experimental exhibition and/or air racing aircraft in accordance with the new policy. The policy established in this order will not be used in these cases unless specifically requested by the applicant.

## FIGURE 5-3. AERONAUTICAL CENTER FORM 8050-72, EXPORT CERTIFICATE NUMBER ASSIGNMENT CARD

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION EXPORT CERTIFICATE NUMBER ASSIGNMENT CARD			CERTIFICATE N	о E 244100				
PRODUCT				EXPORT C OF A TYPE DESIGN CONFORMITY EXCEPTIONS LISTED				
MODEL		SERIAL NO.*f		NO EXCEPTIONS CHECK ONE				
EXPORTER								
FOREIGN PURCHASER								
ADDRESS								
IDENTIFICATION MARK DISPLAYED-U.S.								
EXPORT PROCESSED BY	SIGNATURE-AUTHORIZED REP. AG		AGENCY REPRESENTED	AGENCY OR DESIGNEE NO.				
AC Form 8050-72 (10-78) * Indicate additional serial numbers on reverse side.								

## **CHAPTER 6. IMPORT PROCEDURES**

### SECTION 1. GENERAL INFORMATION

**238. GENERAL.** This chapter provides guidance and procedures relating to U.S. airworthiness certification and approval of imported products. This includes aircraft, aircraft engines, propellers, components, appliances, and materials imported from other countries with whom the United States has a bilateral agreement.

**a.** Non-U.S.-manufactured aircraft and related products must be accompanied by one of the following when being imported to the United States for FAA airworthiness acceptance:

(1) An Export C of A; or

(2) A certifying statement issued by the CAA of the country of manufacture, or by the exporting CAA in the case of a third country, as addressed in paragraph 243 of this order.

**b.** Any deviations from the FAA-approved design must be noted on the certifying statement. Any deviations must be resolved by the installer before the product is eligible for installation on any U.S.-registered aircraft or product thereof.

**c.** The importing document for Class II and III products issued from another country will contain essentially the same information as Form 8130-3, and will be signed by a person or organization authorized by the CAA of the exporting country.

**d.** FAA airworthiness approvals for civil aeronautical products imported to the United States are processed in the following manner:

(1) Issuance of U.S. airworthiness certificates for completed aircraft are processed in accordance with paragraph 241 of this order.

(2) Aircraft engines, propellers, materials, parts, and appliances are considered to meet the requirements of 14 CFR when accompanied by certification from the appropriate CAA. Certification confirms the products are of FAA-approved design and are in a condition for safe operation as outlined in paragraph 248 of this order.

**e.** The FAA requirements for the approval of civil aeronautical products imported to the United States are set forth in the following regulations:

(1) Part 21, subpart H, §§ 21.183(c) and 21.185(c) establish the regulatory requirements for U.S. airworthiness certification of new imported aircraft. The primary basis for airworthiness
\* certification of used imported aircraft is § 21.183(d). New imported aircraft type certificated under a § 21.21 TC and manufactured under license by a bilateral country are no longer entitled to a standard airworthiness certificate under the provision of § 21.183(d).

*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) Engine Builder's Name (Make). The engine make is the name of the manufacturer as it appears on the engine ID plate in accordance with § 45.13(a)(1). Abbreviations may be used, for example, "P&W," "GE," "CMC," etc. When no engines are installed, as in the case of the glider or balloon, enter "N/A."

(g) Engine Model Designation. When engine(s) are installed, enter the complete designation as shown on the engine ID plate; for example, "O-320-A1B," "PT6A-20A," or "CFM-56-3C-1," in accordance with § 45.13(a)(2).

(h) Number of Engines. When applicable, enter the number of engines installed on the aircraft.

(i) **Propeller Builder's Name (Make).** Enter the name of the manufacturer as shown on the propeller identification marking. Enter "N/A" if propellers are not installed. (Reference § 45.13(a)(1).)

(j) **Propeller Model Designation.** When applicable, enter the model designation as shown on the propeller identification marking.

(k) Aircraft Is Import. This block must be checked only if the aircraft was manufactured outside the United States and certificated under § 21.29, and the applicant is seeking airworthiness certification under § 21.183(c), or under § 21.190(d) when an LSA is eligible for an airworthiness certification, flight authorization, or other similar certification in its country of manufacture.

(2) Section II. Certification Requested. The following paragraphs refer to the applicable 14 CFR references for standard and special airworthiness certificates and aid in the completion of 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) of the application), 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, enter in the open space above the category blocks the basis for certification as shown in that aircraft's TCDS or specification sheet (for example, Category N/A - Certification basis CAR 04 A (Civil Air Regulations part 4a)). Applicable regulations are as follows:

1 Section 21.183(a), New aircraft manufactured under a production certificate;

2 Section 21.183(b), New aircraft manufactured under a type certificate only;

*3* Section 21.183(c), Import aircraft;

\*

\*

4 Section 21.183(d), Used aircraft and surplus aircraft of the U.S. Armed Forces; and

5 Section 21.183(h), New aircraft manufactured under the provisions of § 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, and special flight permit. Applicable regulations are as follows:

#### 1 Primary Airworthiness Certificate.

(aa) Section 21.184(a), New primary category aircraft manufactured under a production certificate;

(**bb**) Section 21.184(b), Imported aircraft;

(cc) Section 21.184(c), Aircraft having a current standard airworthiness certificate;

and

(dd) Section 21.184(d), Other aircraft.

**2 Light-Sport Airworthiness Certificate.** Section 21.190, Issue of airworthiness certificate for LSA category.

*3* Limited Airworthiness Certificate. Section 21.189, Issue of airworthiness certificate for limited category aircraft.

#### 4 Provisional Airworthiness Certificate.

(aa) Section 21.221, Class I provisional airworthiness certificates (may be issued for all categories); and

(**bb**) Section 21.223, Class II provisional airworthiness certificates (transport category only).

### 5 Restricted Airworthiness Certificate.

(aa) Section 21.185(a), Aircraft manufactured under a production certificate or type certificate only;

(**bb**) Section 21.185(b), Other aircraft (surplus U.S. military aircraft or one previously type-certificated in another category); and

(cc) Section 21.185(c), Import aircraft (type-certificated in the restricted category in accordance with § 21.29).

### 6 Experimental Certificate.

(aa) Section 21.191(a), Research and development;

- (bb) Section 21.191(b), Showing compliance with regulations;
- (cc) Section 21.191(c), Crew training;
- (dd) Section 21.191(d), Exhibition;
- (ee) Section 21.191(e), Air racing;
- (ff) Section 21.191(f), Market surveys;
- (gg) Section 21.191(g), Operating amateur-built aircraft; and

(**hh**) Section 21.191(h), Operating kit-built aircraft (primary category aircraft assembled by a person(s) without the supervision and quality control of the production certificate holder).

(ii) Section 21.191(i), Operating LSA purpose under § 21.191(i)(1), (i)(2), or (i)(3).

## 7 Special Flight Permit.

(aa) Section 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) Section 21.197(a)(2), Delivering or exporting the aircraft;

(cc) Section 21.197(a)(3), Production flight testing new production aircraft;

(dd) Section 21.197(a)(4), Evacuating aircraft from areas of impending danger;

(ee) Section 21.197 (a)(5), Conducting customer demonstration flights in new production aircraft that have satisfactorily completed production flight tests; and

(**ff**) Section 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. Section 21.187 identifies the requirements an applicant must comply with before multiple airworthiness certificates are issued.

### (3) Section III. Owner's Certification.

**NOTE:** Do not complete this section when application is being made for a special flight permit.

(a) **Registered Owner.** Enter the name and address exactly as shown on the aircraft registration certificate. Part 47 prescribes the requirements for registering aircraft.

(b) If Dealer, Check Here. 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 Type Certificate Data Sheet 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, enter the certification basis for each certificate being requested.

2 If the TCDS or specification for a new aircraft or model has been approved, but not yet published, enter the date of approval, the TC or specification number, and the word "Preliminary."

3 When application is being made for an LSA airworthiness certificate, enter the applicable consensus standard for design and performance from the statement of compliance. If no statement of compliance exists for the aircraft, enter "N/A."

4 Enter "N/A" 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 part 39 and § 21.99, regardless of the type of airworthiness certificate being requested.

*1* Enter the number of the last biweekly supplement to the summary of ADs available as of the date of application, for example, Biweekly 97-06, published on March 24, 1997. When an LSA is equipped with certificated equipment or appliances, use the applicable ADs for the certificated equipment and/or appliances.

2 For LSA, enter all applicable manufacturer safety directives available as of the date of application. If there are not any manufacturer safety directives, enter "NONE."

(e) Aircraft Listing. Enter "N/A."

(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. If more space is required, an attachment may be used.

## NOTE: Enter "N/A" when the application is being made for an experimental certificate.

### (g) Aircraft Operation and Maintenance Records.

*1* Check If Records Are in Compliance With § 91.417. This block applies to all aircraft covered by this section and must be checked to indicate that the recordkeeping requirements of § 91.417 have been met. For example, to comply with § 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 § 91.417(a)(2)(ii), the record must include the current status of the life-limited parts of the airframe, engines, propellers, rotor, and appliances. 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 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, enter "0."

(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 § 21.183(d). This section must be left blank for all other certification actions.

NOTE: Section 21.183(d)(2) states that an experimentally certificated aircraft that previously had been issued a different airworthiness certificate under § 21.183, and is being returned to the standard airworthiness category, is exempt from the 100-hour inspection set forth in § 43.15.

(5) Section V. FAA Representative Certification. This section must be completed by the ASI or designee that inspects the aircraft and issues the certificate.

(a) Check all applicable blocks in items A and B.

(b) **District Office.** An ASI must enter the appropriate district or regional office designation. Designees and DOA manufacturers must enter the designation of the district office geographically responsible for monitoring their activities.

(c) **Designee's Signature and No.** For DOA manufacturers or DAS, enter the authorization number, preceded by "DOA" or "DAS" as applicable. The DMIR, DAR, DOA, or ODAR appointee signature must be signed in ink above the typed or printed name on the original and copy(ies). The typed name and signature must be legible and must not obliterate preprinted information on Form 8130-6.

(d) **ASI's Signature.** The ASI's name must be typed or printed in this box with the signature above.

(6) Section VI. Production Flight Testing. This section must be completed only by a manufacturer applying for a special flight permit for the purpose of flight testing production aircraft under the provisions of 21.197(a)(3). All required entries are self-explanatory.

## **NOTE:** The requirements in this section for LSA production flight testing are only items A and C, with item B remaining blank.

## (7) Section VII. Special Flight Permit Purposes Other Than Production Flight Test.

(a) Item A. Description of Aircraft. The entries in this section must be the same as the corresponding data recorded on the aircraft's registration certificate and, as applicable, on the aircraft's ID plate.

(b) Item B. Description of Flight. Enter the present location of the aircraft in the From box and the aircraft's intended destination in the To box.

*1* The Via entry must contain the name of an airport or city at some intermediate point in the flight to provide a general description of the route flown. For example, a flight from Kansas City, Missouri, to Dallas, Texas, may be via Wichita, Kansas, and Oklahoma City, Oklahoma, in accordance with § 21.199(a)(2).

2 The Duration entry must reflect the overall duration of the special flight permit and need not be the same as the planned duration of the actual flight. Factors such as fueling stops, weather conditions, overnight stops, or any other reasonable condition must be given consideration when establishing the duration.

(c) Item D. The Aircraft Does Not Meet the Applicable Airworthiness Requirements As Follows. This entry must specifically detail the conditions in which the aircraft does not comply with the applicable airworthiness requirements in accordance with § 21.199(a)(4).

(d) Item E. The Following Restrictions Are Considered Necessary for Safe Operation. This entry must contain in detail the restrictions the applicant considers necessary for safe operation of the aircraft; for example, reduced airspeed or weight, turbulence avoidance, and flightcrew member limitations or qualifications. This item must be carefully reviewed by the FAA to determine that the restriction would ensure safe operation of the aircraft. Any deficiencies must be resolved before issuance of the special flight permit. The FAA also may prescribe additional conditions and limitations deemed necessary for safe operation.

(8) Section VIII. Airworthiness Documentation. This section must be completed by the ASI or designee who inspects the aircraft and issues the airworthiness certificate. However, this section is not applicable when a special flight permit is being issued.

(a) Item A. Operating Limitations and Markings in Compliance with § 91.9, as Applicable. This block applies to all aircraft covered by this section. The FAA should check this block when an FAA-approved aircraft flight manual, listing of operation limitation, placards, etc., as applicable to the category of certificate requested, are in the aircraft in accordance with § 91.9.

(b) Item B. Current Operating Limitations Attached. Check this block when operating limitations have been issued and a copy is attached for retention in the permanent record. (This applies to aircraft certificated in categories other than standard.)

(c) Items C, D, and E. Self-explanatory.

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## APPENDIX 2. ACCEPTANCE OF AN EXPORT CERTIFICATE OF AIRWORTHINESS FOR USED AIRCRAFT UNDER A BILATERAL AGREEMENT

**1. PURPOSE.** This appendix describes the concept of a 100-hour inspection requirement under an export certificate of airworthiness.

## 2. RESPONSIBILITIES OF ASIs AND DESIGNEES.

**a.** All FAA ASIs and designees should be aware that not all bilateral agreements provide for U.S. acceptance of a bilateral country's Export C of A on a used U.S.- or third country-manufactured aircraft. (The term "third country" is used to indicate that an aircraft is being exported to the United States from a country that is not the country of manufacture.) However, an Export C of A from a bilateral country for its own used aircraft is always acceptable under a bilateral agreement.

**b.** Table A2-1, Bilateral Agreements that Provide for Acceptance of an Export Certificate of Airworthiness for Used Aircraft, lists the agreements that, current as of January 2007, contain provisions for used aircraft. These agreements are largely the new BASA with Implementation Procedures of Airworthiness. Updates to these bilateral agreements can be found on the FAA's Web site at http://www.faa.gov.

**c.** It is expected that an ASI or designee shall give the maximum credit possible to the validity of a bilateral country's Export C of A when determining an aircraft's conformity to its FAA-approved type design. As a minimum, a bilateral country's Export C of A can be used as evidence that at the time of export—

(1) The aircraft's configuration conformed to its FAA-approved type design, as stated on the aircraft's FAA type certificate data sheet;

(2) The aircraft was determined to be in a condition for safe operation;

(3) The aircraft's configuration conformed to any incorporated FAA-approved design changes under an STC; and

(4) The aircraft was in compliance with all FAA-issued ADs known by the bilateral partner to be in effect.

### 3. ONE HUNDRED-HOUR INSPECTION REQUIREMENT.

**a.** When the conditions stated below are met, credit for a previously performed aircraft inspection can be given to meet the 100-hour inspection required by 21.183(d)(2). In addition to the methods stated in paragraph 60(c) of this order, credit for a previously performed aircraft inspection can be given when the following five conditions are met:

(1) A BASA with Implementation Procedures of Airworthiness has been conducted;

(2) The aircraft is of a type of category included within the scope of a BASA with Implementation Procedures of Airworthiness, section II, including third country aircraft if that aircraft is not a U.S. or bilateral country's type design;

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(3) The inspection was performed while the aircraft was operated on the bilateral country's national registry;

(4) The inspection was performed by a repair facility approved by the bilateral country; and

(5) The aircraft's inspection records can demonstrate that the scope of the performed inspection meets the applicable performance rules states in § 43.15.

**b.** Each ASI or designee should keep in mind that an Export C of A is only as good as the information on which is it based. Countries with which the United States has a bilateral agreement do not issue an Export C of A without first conducting an adequate airworthiness investigation of the aircraft and its historical records. However, the ASI or designee is still required to follow the airworthiness procedures contained in this order, specifically, chapter 3, Standard Airworthiness Certification, and chapter 6, Import Procedures.

**c.** The ASI or designee should conduct a review of the applicant's evidence (for example, Export C of A, maintenance records, and historical records) used to show the aircraft is entitled to the airworthiness certificate requested. Particular attention should be placed on verifying AD compliance, that any repair data are FAA-approved/accepted, and that all incorporated STCs are FAA-approved/ validated.

## 4. SPECIAL BILATERAL PROVISIONS.

**a.** As stated above, the level of credit that can be given to a bilateral country's Export C of A is associated with the provisions specified within the scope of an individual bilateral agreement. Table A2-1 illustrates how these provisions apply from one bilateral country to another. Of a particular note, the Canadian agreements contain more extensive airworthiness provisions than other bilateral agreements regarding airworthiness and maintenance.

**b.** In addition to the regulatory provisions stated in § 43.17, the United States/Canada bilateral agreements include—

(1) U.S. acceptance of a Canadian Export C of A on a used U.S.- or third country-manufactured aircraft.

(2) U.S. acceptance of a Canadian-approved design change under an STC on any aircraft, after the FAA has validated the design change.

(3) U.S. acceptance of the incorporation of the FAA-validated STC, on a U.S.-registered aircraft when accomplished by a Canadian-approved repair facility.

(4) U.S. acceptance of the part(s) associated with an FAA-validated STC, for installation on a U.S.-registered aircraft, when fabricated by a manufacturer holding a production approval issued by Transport Canada Civil Aviation (TCCA).

(5) U.S. acceptance of Canadian-approved repair data on a U.S. aircraft.

(6) U.S. acceptance of a 100-hour inspection on a U.S.-registered aircraft when accomplished by a Canadian-approved maintenance facility.

## NOTE: The term "validated" used in paragraphs 4b(2) through (4) above simply mean that the FAA has conducted an engineering review of the TCCA-approved design change and has issued a corresponding FAA STC. A Canadian STC alone is not adequate.

**c.** The FAA's approval/validation of a bilateral country's approved design change under an STC, in accordance with the provisions of a BASA with Implementation Procedures of Airworthiness, may not be readily apparent while reviewing the aircraft's records. The aircraft's records may at times only reference the bilateral country's design approval. Therefore, the ASI or designee should verify that any incorporated STC modifications are traceable to an FAA STC design approval.

**d.** When the FAA-validated STC is incorporated on a U.S.-registered aircraft, it must have been done in accordance with the applicable 14 CFR. When the FAA-validated STC is incorporated on a non-U.S.-registered aircraft, the incorporation would only be considered acceptable when the following three conditions are met:

(1) The modification was incorporated while an aircraft was operated on the bilateral country's national registry;

(2) The part(s) associated with the FAA-validated STC were fabricated by a manufacturer holding a production approval issued by the bilateral partner; and

(3) The modification was incorporated by a repair facility approved by the bilateral country.

**e.** The amount of credit that may be given to any specific bilateral country's Export C of A is governed by the airworthiness provisions contained in that country's bilateral agreement with the United States. All airworthiness-related bilateral agreements can be found on the FAA's Web site at http://www.faa.gov.

\*

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Certifica	ate of Airworthiness for	Used Aircraft	8130.2F C Appendix
of on lucts	Acceptance of Maintenance Activities on U.SRegistered Aircraft Performed in a Non-FAA-Approved Repair Facility (See notes 4 & 5.)	Acceptance of an Export C of A for Third Country- Manufactured Used Aircraft (See note 6.)	2 2
	NO	YES	•
7.)	NO	YES	

Acceptance of

<b>Bilateral Countries</b>	BAA or BASA IPA	Export C of A for Used U.S. Aircraft (See notes 1 & 2.)	Acceptance of Repair Data on Used U.S. Products	on U.SRegistered Aircraft Performed in a Non-FAA-Approved Repair Facility (See notes 4 & 5.)	Third Country- Manufactured Used Aircraft (See note 6.)
Argentina	BAA	NO	NO	NO	YES
Australia	BASA IPA	YES	YES (See note 7.)	NO	YES
Belgium	BAA	NO	NO	NO	YES
Brazil	BASA IPA	YES	NO	NO	YES
Canada	BASA IPA	YES	YES (See note 3.)	YES	YES
Denmark	BAA	NO	NO	NO	YES
France	BASA IPA	YES	YES (See note 9.)	NO	YES
Germany	BASA IPA	YES	YES (See notes 8 & 9.)	NO	YES
Israel	BASA IPA	YES	NO	NO	YES
Italy	BASA IPA	YES	YES (See note 9.)	NO	YES
Japan	BAA	NO	NO	NO	YES
Netherlands	BASA IPA	YES	YES (See note 9.)	NO	YES
New Zealand	BASA IPA	YES	YES (See note 7.)	NO	YES
Romania	BASA IPA	YES	NO	NO	YES
Singapore	BASA IPA	NO	NO	NO	YES
Sweden	BASA IPA	YES	YES (See note 9.)	NO	YES
United Kingdom	BASA IPA	YES	YES (See notes 8 & 9.)	NO	YES

NOTE 1: The bilateral country's Export C of A can be used as evidence that at the time of export—

1. The aircraft's configuration conformed to its FAA-approved type design, as stated on the aircraft's FAA type certificate data sheet;

2. The aircraft was determined to be in a condition for safe operation;

3. The aircraft configuration conformed to any incorporated FAA-approved design changes under an STC; and

4. The aircraft was in compliance with all FAA-issued ADs known by the bilateral partner to be in effect.

NOTE 2: Please review the applicable bilateral agreement for the country in question because it may have limitations on the type or category of used U.S. aircraft acceptable under the bilateral agreement. For example, the United States acceptance of a Romanian Export C of A on a used U.S. aircraft is limited to a sailplane, power sailplane, or a very light airplane certificated to JAR-VLA.

\* NOTE 3: The United States/Canada BASA IPA, BASA Maintenance Implementation Procedure (MIP), and Memorandum of Understanding contain provisions for FAA acceptance of certain repair data. The following documents provide a better understanding of these provisions:

1. BASA IPA dated October 2000.

2. BASA MIP dated August 31, 2006. See AC 43-10, United States-Canadian BASA/MIP Maintenance, for information related to the provisions of the MIP.

3. The Memorandum of Understanding between TCCA and the FAA dated October 2003, or any later revision approved by TCCA and the FAA. (Reference:

http://www.tc.gc.ca/CivilAviation/certification/Int/Memoranda/usa.htm.) See FAA Order 8110.53, Reciprocal Acceptance of Repair Design Data Approvals Between FAA and TCCA.

\*

\* NOTE 4: The United States/Canadian MIP contains provisions for acceptance of certain maintenance, alterations, or modifications, and those persons or organizations authorized to perform such functions on U.S. products. The acceptable maintenance activities include the accomplishment of a 100-hour inspection. Also § 43.17 provides additional provisions related to maintenance functions performed on U.S. products. The following documents provide a better understanding of these provisions:

1. Section 43.17, Maintenance, preventive maintenance, and alterations performed on U.S. aeronautical products by certain Canadian persons.

2. BASA IPA dated October 2000.

3. BASA MIP dated August 31, 2006. See AC 43-10 for information related to the provisions of the MIP.

4. The Memorandum of Understanding between TCCA and the FAA dated October 2003, or any later approved revisions. See Order 8110.53.

NOTE 5: Please take into consideration that the FAA has certificated repair stations located in other countries that also hold a certification from their national civil aviation authority, thereby giving the repair station the ability to make a compliance statement to their national regulations and the U.S. regulations. In particular, the FAA has concluded BASA MIPs with France, Germany, and Ireland.

NOTE 6: There bilateral agreements (for example, BAA or BASA IPA) contain a third-country provision that allows the United States to accept an Export C of A issued by the bilateral country for certain aircraft. Please review the bilateral agreement for the country in agreement. When allowed by the bilateral agreement, the bilateral country's Export C of A may be used as evidence that at the time of export—

- 1. The aircraft's configuration conformed to its FAA-approved type design, as stated on the aircraft's FAA type certificate data sheet;
- 2. The aircraft was determined to be in a condition for safe operation;
- 3. The aircraft configuration conformed to any incorporated FAA-approved design changes under an STC; and
- 4. The aircraft was in compliance with all FAA-issued ADs known by the bilateral partner to be in effect.
- \* NOTE 7: The BASA IPAs between the United States and the countries of Australia and New Zealand contain specific provisions for FAA acceptance of repair design data related to certain categories of airplanes or aircraft. The BASA IPAs require a specific certifying statement be made by the appropriate CAA related to the acceptance of the repair design data.

NOTE 8: Under the Special Arrangements provisions of the BASA IPAs between the United States and the countries of Germany and the United Kingdom, the FAA has agreed to accept repair design data and alteration data when specific conditions have been met. The conditions or limitations for FAA acceptance of repair design data or alteration data is as follows: 1. United States State of Design Transport Category Airplanes moving from the bilateral country's civil aircraft registry to the U.S. registry.

2. The data has been approved by the U.K. CAA, for airplanes on the U.K. registry, or the LBA, for airplanes on the German registry, or by an approved design organization in the United Kingdom or Germany.

3. The repairs or alterations made to specific airplanes do not constitute a major change rising to the level of an amended type certificate or supplemental type certificate.

4. The repair design data or alteration data is accompanied by the following certifying statement from the appropriate CAA (that is, U.K. CAA or LBA): "The data identified in this document have been examined and were approved under the authority of the [Civil Aviation Authority of the United Kingdom or Luftfahrt-Bundesamt of the Federal Republic of Germany, as appropriate]. Additional maintenance requirements that must be incorporated into the aircraft maintenance program are identified within the approved data."

The information in note 8 was originally published in a July 2003 issued Flight Standards Handbook Bulletin for airworthiness number 03-05 (HBAW 03-05).

## NOTE 9: Review paragraph 59b of this order for the conditions and limitations under which the FAA has agreed to accept specific design data from EASA, and the countries of France, Germany, Italy, The Netherlands, Sweden, and the United Kingdom.