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FEDERAL AVIATION AGENCY

Washington, D.C.

Civil Aeronautics Manual 1

Certification, Identification, and Marking of Aircraft and Related Products

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Supplement No. 7, CAM 1 dated December 15, 1959 February 1, 1964

SUBJECT: Revisions to CAM 1.

This supplement is issued to incorporate into CAM 1 Civil Air Regulations Amendments 1–7, 1–8, and 1–9.

Amendment 1–7 concerns special flight permits. It was issued August 12, 1963, and became effective August 17, 1963.

Amendment 1–8 concerns the issuance of supplemental type certificates to holders of type certificates. It was issued November 22, 1963, and became effective December 5, 1963.

Amendment 1–9 concerns the airworthiness certification of surplus military aircraft. It was issued December 5, 1963, and became effective January 10, 1964.

This supplement also corrects a printing error in section 1.55–1(a)(3). Two lines of type were omitted when this section was last printed.

New or revised material is enclosed in black brackets on the pages submitted with this supplement, except the pages in the addendum containing the preambles of amendments.

Remove the following pages:	*Insert the following new pages:*
V and VI	V and VI
9 and 10	9 through 10–1
23 and 24	23 and 24
29 and 30	29 through 30–1
32–1 through 34	33 through 34–2
	P–7 through 10

Director, Flight Standards Service.

Attachments.

Replacement and Modification Parts

Airworthiness Certificates

Airworthiness Certificates—Continued

Aircraft Nationality and Registration Marks

Appendixes

operators of products previously certificated under such type certificate.

(b) Where no current unsafe condition exists but the Administrator or the holder of the type certificate finds through service experience that changes in type design will contribute to the safety of the product, the holder of the type certificate may submit appropriate design changes for the approval of the Administrator. Upon approval of such changes the manufacturer shall make available to all operators of the same type of product information on the design changes.

Supplemental Type Certificates

[1.25 *Supplemental type certificates.* Any person who alters a product by introducing a major change (see sec. 1.21) in a previously approved type design which is not so extensive as to require application for a new type certificate (see sections 3.11(e), 4b.11(e), 5.11(e), 6.11(e), 7.11(e), 13.11(e), and 14.11(e) of this chapter), must obtain approval of such change in type design from the Administrator. The holder of the type certificate for a product who alters the product by introducing such a major change must obtain such approval by the issuance of a supplemental type certificate or by an amendment to his type certificate. In the case of a person other than the holder of the type certificate, such approval must be obtained by the issuance of a supplemental type certificate. The application for a supplemental type certificate is made upon a form and in a manner prescribed by the Administrator.]

[Amendment 1–8, published in 28 F.R. 12924, Dec. 5, 1963, effective Dec. 5, 1963.]

1.25–1 *Application for a supplemental type certificate (FAA policies which apply to sec. 1.25).*

(a) *Applicant.* A supplemental type certificate may be issued to more than one applicant for the same design change [7] provided each applicant shows compliance with the applicable airworthiness requirements in accordance with section 1.26. (See sec. 1.28–1.)

(b) *Form and manner of application.* The applicant should complete three copies of Form FAA–2417 and submit them to the local FAA Flight Standards Inspector. The drawings and technical data substantiating compliance with the applicable airworthiness requirements should also be submitted for approval in accordance with section 1.27–1.

1.26 *Applicable requirements.* The applicant for a supplemental type certificate shall demonstrate that the altered product meets the airworthiness requirements which are applicable to the product involved (see secs. 3.11 (d), 4b.11 (d), 5.11 (d), 6.11 (d), 13.11 (d), and 14.11 (d) of this chapter).

1.26–1 *Airworthiness requirements (FAA policies which apply to sec. 1.26).*

(a) The methods used to show compliance with the applicable airworthiness requirements [8] are the same as those used for original type certification; namely, by preparing drawings, stress analysis, and by conducting ground and flight tests and preparing reports thereon. Acceptable methods of showing compliance are outlined in Civil Aeronautics Manuals 3 and 4b.

1.27 *Requirements for issuance.* Upon receipt of an application and a satisfactory demonstration of compliance with the applicable requirements in accordance with sections 1.25 and 1.26, the Administrator shall indicate approval of the change in type design. Such approval together with the previously issued type certificate for the product shall constitute a supplemental type certificate.

1.27–1 *Procedures for obtaining approval (FAA policies which apply to sec. 1.27).* FAA approval of a major change in type design is based upon examination of the supporting data, conducting or reviewing tests, inspection of the altered product, and a finding by the FAA that

[7] Examples of the types of changes defined in section 1.21 as major design changes are contained in section 18.1–1 of Civil Aeronautics Manual 18. A change in the *empty* weight or balance is not a major design change unless an increase in the maximum weight, center of gravity limits, or other factors listed in the definition of a major change are also involved.

[8] Detailed information on the applicable airworthiness requirements used for the original type certification of the product involved may be obtained from the Federal Aviation Agency.

the applicable requirements are met. Such approval involves two steps:

(a) *Design examination.* Approval of the technical supporting data describing the design change and showing compliance with the applicable airworthiness requirements should be obtained from one of the following:

(1) *An FAA Designated Engineering Representative (DER).* After DER approval of the data, the DER will complete, sign, and send Form FAA–1600 "Statement of Compliance of Aircraft or Aircraft Components with the Civil Air Regulations," to the regional FAA Aircraft Engineering and Manufacturing Division. Whereas a DER's authority may be limited to certain areas, the DER should indicate on Form FAA–1600 whether any additional areas require FAA approval. On a complex project the DER should contact the appropriate FAA Aircraft Engineering office as early as possible.

(2) *The FAA.* The technical data describing and substantiating the design change should be submitted to the local FAA aviation safety agent for forwarding to the FAA regional office. When necessary, arrangements should be made with FAA for completing any flight or ground testing required by the applicable airworthiness requirements, and the reports of such tests should be included in the technical data pertaining to the design change.

(3) *A Designated Manufacturer's Certification Representative (DMCR).* If the aircraft was originally certificated under the Delegation Option Procedures of Part 410 of chapter II of this title (Regulations of the Administrator ref. sec. 410.37), a copy of the DMCR's approval letter should be included with the supporting data.

(b) *Inspection of the product.* A new design change normally requires an inspection of a modified article by an FAA representative in order to establish compliance with the applicable airworthiness requirements. See section 1.15. In the case of a complex modification program involving FAA flight tests, the FAA will conduct the appropriate portions of a standard type inspection.

1.27–2 *Issuance and recording of supplemental type certificates (FAA policies which apply to sec. 1.27).*

(a) *Issuance.* When the design examination and inspection described in section 1.27–1 have been satisfactorily completed, the FAA will approve the change in type design by completing Form FAA–2417. This form, signed by the Chief, Aircraft Engineering and Manufacturing Division, FAA Regional Office, or other person authorized to perform this function, will constitute the supplemental type certificate for the change in type design.

(b) *Recording and disposition of supplemental type certificates.* One signed copy of Form FAA–2417 will be given a number and returned to the applicant; one copy will be retained in the issuing FAA regional office; and one copy will be sent to the FAA Washington office for use in publishing a summary list of supplemental type certificates. Technical data submitted with the application will be filed in the FAA regional office.

1.28 *Privileges.* The holder or licensee of a supplemental type certificate for an altered product, may, in the case of aircraft, obtain airworthiness certificates (see applicable secs. 1.60 through 1.72), or in the case of engines, propellers, or other products, obtain approval for installation on certificated aircraft; he may obtain a production certificate (see secs. 1.30 through 1.46) with respect to the change in the type design for which approval was obtained in accordance with sec. 1.27.

Note: **The provisions of this section are not intended to affect in any way the proprietary rights of the holder of a type certificate or of a supplemental type certificate.**

1.28–1 *Airworthiness certification or approval of modified aircraft or products (FAA policies which apply to sec. 1.28).*

(a) After a supplemental type certificate has been issued in accordance with section 1.27–2, airworthiness certificates for aircraft, or approval for products incorporating the design change may be issued on the basis of an inspection for conformity with the approved data conducted in accordance with section 1.67 or section 18.11 of this subchapter.

(b) The privileges specified in section 1.28 also apply to approvals of major design changes issued prior to August 25, 1955, the effective date of section 1.28. Such approvals are indicated on a Major Repair and Alteration Form FAA–337, air carriers' records, or listed on the FAA Aircraft Specification [9] for the product involved.

Production Certificates

1.30 *Application.* Any person, whether or not a citizen of the United States, may apply for the issuance of a production cer-

[9] An aircraft specification is a document prepared by the Federal Aviation Agency in support of a type certificate to set forth the type design, the operating limitations, and any other conditions or limitations prescribed by the Civil Air Regulations for a specific type of aircraft. FAA Aircraft Specifications are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

(d) For requirements concerning identification plates, see the airworthiness part applicable to the particular product involved.

Replacement and Modification Parts

1.55 *Applicable rules.* Any person other than the holder of the type certificate producing replacement or modification parts for sale for installation on a type certificated product shall comply with sections 1.12 (a) and (b), 1.13, 1.15 (a) and (d), 1.20, and 1.50 (also see sec. 1.25).

***Note:* The provisions of this section are not applicable to parts produced under the terms of a type and/or production certificate, to parts produced by owners or operators for maintaining or altering their own products, or to standard parts (such as bolts and nuts) conforming to established industry or Government specifications; e. g., SAE and military specifications, and FAA Technical Standard Orders.**

1.55–1 *Replacement and modification parts design approval (FAA policies which apply to sec. 1.55).* Any person, whether or not a citizen of the United States, may apply to the FAA regional office for approval of the design of a part for use on a type certificated product. Such part must comply with the Civil Air Regulations governing the basic design for the product on which the part will be installed.

(a) Engineering design approval is a prerequisite for FAA approval of the fabrication inspection system. Evidence of design approval may be shown by one of the following means:

(1) A statement confirming that the design data has been approved by the FAA. This statement must contain the date and nature of the design approval.

(2) Evidence of a licensing arrangement with the holder of the type certificate covering the product on which the part is to be installed.

(3) A statement confirming that the approved design data of the type certificate holder was obtained from the FAA. Such data is available only when the type certificate holder has given permission for its release.

(b) A design that is obtained by copying an approved part but is not substantiated by technical data is not acceptable as a basis for production inspection system approval.

(c) The design approval entitles the holder to production privileges equivalent to those accorded to the holder of a type certificate.

(d) After FAA approval, the design data for a part should be retained by the manufacturer and made available to any FAA representative. Each change to a part should be approved by the FAA and the manufacturer should identify such change on the drawing. The manufacturer should keep a record of each change with its date of FAA approval.

1.55–2 *Replacement and modification parts—inspection approval (FAA policies which apply to sec. 1.55).*

(a) The request, in duplicate, for a fabrication inspection system approval, together with evidence of design approval, should be submitted to the appropriate regional office or to the local FAA agent (letter form). The request should list the nomenclature of the part, part number, manufacturer's name, and model of the type certificated product for which the part has been approved for installation.

(b) Prior to the approval of the fabrication inspection system Approval Tag, Form FAA 186, will be used by the FAA representative, not to exceed 6 months, as evidence of inspection approval. After the inspection system is approved, the manufacturer must indicate on the part or package of small parts, evidence that they were produced under an approved inspection system. The symbol "FAA–PMA" is evidence that the part(s) has been manufactured under an FAA—Parts Manufacturer Approval.

(c) Each part or package shipped should be accompanied by approved installation drawings or specifications, where applicable, to assure that the installation will conform to the basic approval.

(d) Each part manufactured or modified shall be marked with such of the following data as the Administrator finds appropriate:

(1) Manufacturer's or modifier's name, trademark or symbol. The trademark or symbol should be filed with the FAA and will be included on the supplemental type certificates and approved replacement parts listing.

(2) Part number.

(3) Name and model designation of the type certificated product(s) for which the part is eligible for installation, or if impractical, a tag should be attached to the part indicating installation eligibility information.

(e) If the Administrator finds that the fabrication inspection system cannot be approved or that parts manufactured or modified subsequent to the approval of the inspection system repeatedly contain significant discrepancies, the installation of parts on certificated products in either case may be restricted until satisfactory corrective action is initiated by the manufacturer.

(f) The approval of a fabrication inspection system will be evidenced by a letter from the Chief, Manufacturing Inspection Branch to the manufacturer. The letter of approval is not transferable and will be surrendered to the FAA upon written request.

1.55–3 *Fabrication inspection system (FAA rules which apply to sec. 1.55).* Section 1.55 requires the manufacturer of replacement or modification parts to comply with section 1.15 (d) and thereby establish an inspection system. Persons manufacturing replacement or modification parts for sale shall establish within 6 months from the date of initial production of the parts and thereafter maintain a fabrication inspection system to assure that such parts are in conformity with the design data and safe for installation on type certificated products.

(a) *Inspection system standards.* The inspection system shall provide assurance for the following, where appropriate:

(1) That all incoming materials used in the finished part are as specified in the design data.

(2) That all incoming material is properly identified when physical and chemical properties cannot otherwise be readily and accurately determined.

(3) That all materials subject to damage and deterioration are suitably stored and adequately protected.

(4) That all processes affecting quality and safety of the finished product are accomplished in accordance with acceptable specifications.

(5) That parts in process are inspected for conformity with the design data at points in production where accurate determination can be made. Statistical quality control procedures may be employed where it is shown that a satisfactory level of quality will be maintained for the particular part involved.

(6) That current design drawings are readily available to manufacturing and inspection personnel, and used when necessary.

(7) That major changes to the basic design are adequately controlled and approved before being incorporated in the finished part.

(8) That rejected materials and components are segregated and identified in such a manner as to preclude their use in the finished part.

(9) That inspection records are maintained, identified with the completed part, where practicable, and retained in the manufacturer's file for a period of at least 2 years after the part has been completed.

1.55–4 *Surveillance of inspection system (FAA policies which apply to sec. 1.55).*

(a) The assigned Flight Standards Inspector will use sections 1.55–1 through 1.55–3 as a guide in conducting inspection of the manufacturing facilities. If the manufacturer's facilities are found acceptable by evaluating the results of the inspection system and as reflected in the quality and workmanship of the finished parts, the inspection system should be approved. The FAA thereafter will reduce its inspection surveillance and increase its reliance on the manufacturer's inspection system in the determination of the acceptability of future parts.

(1) The FAA representative will conduct periodic inspections of the manufacturer's facilities; make such spot inspections of individual parts as may be necessary to ascertain that the manufacturing facilities and inspection system continuously complies with the standards set forth in sections 1.55–1 through 1.55–3; that the individual parts conform to the approved design data; that fabrication processes and treatments are in compliance with pertinent specifications; and that the quality of workmanship and materials are acceptable.

(2) Drawings and other technical data maintained in the place of manufacture should

worthiness certificates are contained in Part 8 of this subchapter. (See sec. 1.69–1 for procurement of the manual for Part 8.)

1.71 *Airworthiness certificate for limited category aircraft.* Airworthiness certificates in the limited category are issued for surplus military aircraft type certificated under Part 9 of this subchapter. Aircraft in the limited category may not be used for the carriage of persons or property for compensation or hire. [Original airworthiness certificates for aircraft type certificated in the limited category will not be issued after June 30, 1965.]

[Amendment 1–9, published in 28 F.R. 13394, Dec. 11, 1963, effective Jan. 1, 1964.]

1.71–1 *Issuance of limited airworthiness certificates (FAA policies which apply to sec. 1.71).*

(a) *Aircraft models issued a limited type certificate.*

Aircraft manufacturer	Models eligible	Limited aircraft specification No.
Boeing	B–17F and B–17G (Flying Fortress).	AL–1.
North American.	B–25G, B–25H and B–25J (Mitchell).	AL–2.
Douglas	A–26B and A–26C (Invader).	AL–3.
Douglas	A–24B (Navy SBD-5) (Dauntless).	AL–4.
Consolidated-Vultee.	PB2Y–3, PB2Y-3R, PB2Y-5, PB2Y-5R, PB2Y–5Z (Coronado).	AL–5.
Consolidated	LB 30	AL–6.
Sikorsky	R–4B Helicopter	AL–7.
Grumman	TBF–1, TBF–1C, TBM–1, TBM–1C, TBM–3, TBM-3E (Avenger).	AL–8.
Douglas	A-20B, A-20C, A-20G, A–20H, and A–20J (Havoc).	AL–9.
Lockheed	P–38E, P–38J, P–38L, P–38M, F–5E, F–5F, and F–5G (Lightning).	AL–10.
North American.	P–51C, P–51D, and P–51K (Mustang).	AL–11.
Beech	AT–10, AT–10BH, AT–10GL, and AT–10GF (Wichita).	AL–12.
Lockheed	B–34, PV–1, and PV–2 (Ventura).	AL–13.
Northrop	P–16, P–61A, and P–61B (Black Widow).	AL–14.
North American.	A–36A (Mustang)	AL–15.
Curtiss	0–52	AL–16.
Grumman	J2F–3, J2F–4, J2F–5, and J2F–6 (Duck).	AL–17.
Curtiss-Wright.	P–40N, P–40L (Warhawk).	AL–18.
Sikorsky	R–5A Helicopter	AL–19.
Martin	PBM–5 (Mariner)	AL–20.
Bell	P–63C and P–63E (Kingcobra).	AL–21.
North American.	BC–1	AL–22.
Grumman	F8F–1 (Bearcat)	AL–23.
Chance-Vought.	OS2U–1, OS2U–2, and OS2U–3 (Kingfisher).	AL–24.
Grumman	FM–2 (Wildcat)	AL–25.
Stinson	L–1, L–1A, L–1B, L–1C, L–1D, L–1E, and L–1F (Vigilant).	AL–26.
North American.	BT–9, BT–9A, BT–9B, and BT–9C (Yale).	AL–27.
Culver	PQ–14A, PQ–14B, and TD2C–1.	AL–28.
Sikorsky Helicopter.	R–6A and HOS–1	AL–29.
Consolidated	C–87A (Liberator Express).	AL–30.
Curtiss	AT–9 and AT–9A (Jeep).	AL–31.
North American.	BT–14 (Yale)	AL–32.

(b) *Application procedure for an original limited airworthiness certificate.* The following procedure should be followed by an applicant for a Limited Airworthiness Certificate.

(1) Establish that the aircraft in question is one of the models or series that have been issued a Limited Type Certificate. (See sec.

1.71–1 (a) for listing of aircraft issued a "limited category" type certificate.)

(2) Determine that the aircraft configuration conforms to the requirements set forth in the pertinent "limited category" aircraft specification.

(3) Present evidence that the periodic inspection has been accomplished by an appropriately rated mechanic immediately prior to submitting the application. The scope of a periodic inspection is described under section 18.30–18 of Civil Aeronautics Manual 18.

(4) Accomplish a flight test for the purpose of checking the proper functions of the powerplant, instruments and controls of airframe and powerplant.

(5) Present logbooks for the aircraft. The logbooks should show the results of the flight test and be signed by the pilot making the flight test. The entry should indicate that the aircraft performs normally and is considered airworthy.

(6) Present any information or technical orders that the FAA representative deems necessary to establish airworthiness compliance.

(7) Present a properly executed application for a Limited Airworthiness Certificate. Application for a Limited Airworthiness Certificate is made on Form FAA–305. (See sec. 1.60–2 for application procedure.)

(8) Present with the application a "limited category" aircraft specification for the particular model shown on the application. "Limited category" aircraft specifications are contained in the publication "Aircraft Specifications." This publication may be inspected at FAA regional offices, or it may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

The applicant should discuss the "limited category" aircraft certification requirements with the local FAA representative prior to formally submitting the aircraft for inspection and certification. This procedure is not mandatory; however, it will usually expedite final approval since the FAA representative will be able to instruct the applicant concerning the requirements for his particular aircraft.

1.72 *Airworthiness certificate for limited category aircraft; requirements for reissuance.* An applicant for an airworthiness certificate for an aircraft in the limited category shall show that the aircraft has been previously type certificated in the limited category, and that the aircraft complies fully with the requirements of Part 9 of this subchapter.

1.72–1 *Procedure to be followed for recertification in the "limited category" (FAA policies which apply to sec. 1.72).*

(a) Aircraft previously certificated in the "limited category" and subsequently certificated in the "restricted" or "experimental" classification of airworthiness are eligible for recertification in the "limited" classification of airworthiness; provided, the aircraft is restored to the original level of airworthiness and is in a good state of preservation and repair, and in condition for safe operation. Application for recertification should be made in the same manner as outlined in section 1.71–1 (b).

1.73 *Experimental certificates.* Experimental certificates are issued for amateur-built aircraft and for aircraft which are to be used for experiment, for exhibition, for air racing, and to show compliance with Civil Air Regulations for the issuance of type certificates and related purposes.

NOTE: The following interpretation of section 1.73 was adopted by the Civil Aeronautics Board on June 20, 1958:

The Board interprets and construes section 1.73 of Part 1 of the Civil Air Regulations as permitting the training by the manufacturer of its flight crews in an aircraft possessing an experimental certificate issued for the purpose of showing compliance with the regulations for the issuance of type certificates and airworthiness certificates.

1.73–1 *Experimental airworthiness certification (FAA policies which apply to sec. 1.73).*

(a) *Type of operations.* Experimental airworthiness certificates are issued for the following, and similar types of operations: research and development; flight testing leading to type certificates; testing of new installations such as powerplants, propellers, controls, electronic

equipment, etc., racing and exhibition flights and amateur-built aircraft.

(b) *Experimental military type aircraft.* Aircraft built on a military contract and identified by military aircraft identification marks are considered public aircraft and do not require issuance of airworthiness certificates. However, aircraft of military design built independently by manufacturers with the intention of demonstrating to prospective military purchas-

(4) The aircraft will not be used for the carriage of cargo nor in connection with any business or employment.

(5) Such additional restrictions as the Administrator may deem necessary in the interest of safety.

(f) *Modified restrictions.* Upon satisfactory completion of the flight experience requirements outlined in paragraph (g) of this section, and the flight test demonstration outlined in paragraph (h), the flight operation restrictions applied at the time of initial certification may be amended as follows:

(1) Acrobatics may not be performed while carrying passengers.

(2) The restriction regarding flight areas may be removed.

(3) Passengers or cargo may not be carried for compensation or hire.

The placard "Passengers Prohibited" may be removed and the following substituted:

"Passenger Warning—this aircraft is amateur-built and does not comply with the Federal Safety Regulations for 'standard' aircraft."

(g) *Flight experience.* Prior to conducting the flight demonstration provided in paragraph (h) of this section, and subsequent to modification of the operating restrictions as provided for in paragraph (f), the applicant should submit evidence that the following flight experience has been accumulated on the aircraft.

(1) The aircraft should have been flown at least 50 hours when a type certificated engine is installed, or 75 hours when an uncertificated engine is used.

(2) When application is made for the modification of the operation restrictions, the applicant should submit a log of the aircraft flight history, containing at least the following information:

(i) The duration of each individual flight counted toward the flight time of (1) above.

(ii) A statement as to the purpose of each flight (test, pleasure, or proficiency).

(iii) Number of landings made.

(iv) A full description of any mishaps however minor, or any experiences not entirely normal that occur during the flight experience period.

The pertinent portion of the log should be certified by the signature of the applicant and by the signature of the pilot or pilots, other than the applicant that flew the aircraft during the flight experience period.

(h) *Flight test demonstration.* Upon satisfactory completion of the flight experience required in paragraph (g) of this section, the applicant may apply for the modified restrictions provided for in paragraph (f) of this section. Application should be made in writing to the local FAA Aviation Safety District Office. An aviation safety agent will reexamine the aircraft and the flight experience record and upon finding them satisfactory will witness the flight test demonstration. The flight test will be conducted by a certificated pilot holding at least a private pilot's rating. The flight test will be of such scope as to demonstrate that the aircraft performance is adequate for such operations with respect to takeoff, climb, and landing at maximum and minimum weights, for which the aircraft is to be certificated. The aircraft will be demonstrated to be satisfactorily controllable and reasonably maneuverable during taxiing, takeoff, climb, level flight, dive and landing, with or without power. Adequate provisions should be made for emergency egress and use of parachutes by the crew during the flight test.

1.75 *Experimental certificates; duration.*

(a) An experimental certificate shall remain in effect for one year from the date of issuance or renewal, unless a shorter period is established by the Administrator.

(b) The Administrator may, from time to time, reinspect any aircraft or part thereof to ascertain whether it is in an airworthy condition. The owner, operator, or bailee of the aircraft shall, upon request, make it available for such inspection.

(c) Upon suspension, revocation, or termination by order of the Administrator of an experimental certificate, the owner, operator, or bailee of the aircraft shall, upon request, surrender the certificate to an authorized representative of the Administrator.

(Rev. 2/1/64)

1.75–1 *Duration of experimental airworthiness certificate (FAA policies which apply to sec. 1.75).*

(a) Experimental airworthiness certificates will be issued to expire on a specific date, or will indicate a condition under which the certificate will automatically expire. The duration of the experimental certificate may vary from one flight to a limited number of operating hours, or days. In any case, the duration will not exceed one year.

(b) It is the policy of the FAA to do everything possible to encourage legitimate experimentation leading to improvement in aircraft whenever this may be done without endangering the lives of persons or property not involved in the experimentation. Since it is recognized that a certain amount of danger to the operator is inherent in all experimental flying, the certificates issued for experimental aircraft will contain specific operating conditions and limitations designed to protect the lives and property of persons not involved in the experimentation.

1.76 *Special flight permits.* [(a)] A special flight permit may be issued for an aircraft which may not currently meet applicable airworthiness requirements, but which is capable of safe flight, for the purpose of permitting the aircraft to be flown to a base where repairs or alterations are to be made, or to permit the delivery or export of the aircraft, or to permit production flight tests of new production aircraft.

[(b) A special flight permit may be issued as an authorization to operate an aircraft at a weight in excess of its maximum certificated takeoff weight, for flight beyond the normal range of the aircraft, over (1) water, or (2) land areas where adequate landing facilities or appropriate fuel is not available. The excess weight authorized by this regulation shall be limited to the additional fuel, fuel-carrying facilities, and navigation equipment necessary for the flight.]

[Amendment 1–7, published in 28 F.R. 8444, Aug. 17, 1963, effective Aug. 17, 1963.]

1.77 *Special flight permits; requirements for issuance.* The requirements for the issuance of special flight permits are as stated in paragraphs (a) and (b) of this section.

(a) Where found necessary by the Administrator, an applicant for a special flight permit shall submit a statement in a form approved by the Administrator indicating the purpose of the flight, the proposed itinerary, the duration of authorization requested, the persons to be on board the aircraft, the particulars, if any, in which the aircraft does not comply fully with the applicable airworthiness requirements, and the restrictions, if any, deemed necessary for safe operation of the aircraft.

(b) The Administrator shall accomplish, or shall require the applicant to accomplish, such appropriate inspections or tests as the Administrator may deem necessary in the interest of safety.

(c) Nothing in paragraphs (a) and (b) of this section shall prevent the issuance to an air carrier by the Administrator of a general authorization to conduct ferry flights for specified purposes as provided in those paragraphs, under such terms and conditions as may from time to time be prescribed by the Administrator.

1.77–1 *Application for permit (FAA rules which apply to sec. 1.77).*

(a) *Persons who may make application.* The registered aircraft owner or his agent shall make application for a special flight permit.

(b) Application form. Application shall be made by completing in duplicate Form FAA 1779 entitled "Application and Authorization for Ferry Permit," and submitting it to an authorized FAA Aviation Safety representative.

(Application forms are available at all FAA regional and Aviation Safety District Offices and from designated FAA representatives. The application form consists of two parts: the first part is completed by the applicant and furnishes a description of the aircraft, and the proposed flight; the second part is completed by the FAA representative, and is the authority to conduct the flight. This part shall be prepared to contain the conditions and limitations under which the flight is to be conducted.)

1.77–2 *Airworthiness (FAA policies which apply to sec. 1.77).*

(a) While the aircraft may not be eligible for a Certificate of Airworthiness, it must be found

safe for the flight described on the application prior to commencing the flight. The FAA representative may make this determination prior to issuing the authorization, or he may require a pre-flight inspection to be conducted by a certificated mechanic in order to determine that the aircraft is safe for the flight authorized.

1.77–3 *Flight restrictions (FAA policies which apply to sec. 1.77).* The following flight restrictions will be prescribed for all aircraft to be operated under a special flight permit:

(a) The carriage of persons other than crew members will be prohibited.

(b) Weather minimums under which the flight may be conducted will be established.

(c) The duration of the authorization will be shown.

(d) The purpose of the flight will be indicated.

(e) Special area restrictions will be listed, if applicable.

(f) Preflight inspection requirements, if any, will be listed.

(g) The origin, destination, and proposed itinerary, taking into consideration reasonable deviations necessitated by weather or other circumstances beyond the control of the operator will be indicated.

1.77–4 *Authorization for air carrier ferry flight of a four-engine airplane with one engine inoperative (FAA rules which apply to sec. 1.77(c)).*

(a) *General authorization.* An air carrier is authorized to conduct ferry flights of a four-engine airplane with one engine inoperative, to a base where repairs are to be made to the inoperative engine, in accordance with the following conditions and limitations:

(1) The airplane model has been test flown and found satisfactory for safe flight in accordance with the flight test requirements of paragraph (b) of this section.

(2) The FAA Approved Airplane Flight Manual contains the performance data specified in paragraph (c) of this section and the flight is conducted in accordance with such data.

(3) The air carrier's operations manual contains operating procedures specified in paragraph (d) of this section and the flight is conducted in accordance with such procedures.

(4) No person other than required members of the flight crew shall be carried on board the airplane during such flight.

(5) No flight crew member shall be used unless he is thoroughly familiar with the operating procedures for one-engine-inoperative ferry flights specified in the air carrier's operations manual and the limitations and performance information set forth in the FAA Approved Airplane Flight Manual.

(b) *Flight tests.* The performance of the airplane with one engine inoperative shall be determined by flight test in accordance with the following:

(1) A speed shall be chosen, but in no case shall it be less than $1.3V_{s3}$, at which the airplane is satisfactorily controllable in a climb with the critical engine inoperative and its propeller removed or in a configuration desired by the applicant, and all other engines operating at the maximum power determined in subparagraph (3) of this paragraph.

(2) The distance to accelerate to the speed specified in subparagraph (1) of this paragraph and climb to 50 feet shall be determined with the landing gear extended, the critical engine inoperative and its propeller removed or in a configuration desired by the applicant, and the other engines operating at not more than the power specified in subparagraph (3) of this paragraph.

(3) The procedures to be used during takeoff, flight, and landing shall be established, i. e., the approximate trim settings, the method of power application, maximum power and speed.

(4) The performance shall be determined at a maximum weight not to exceed that which will permit a rate of climb of at least 400 feet per minute in the enroute configuration specified in section 4b.120 (c) of this subchapter at an altitude of 5,000 feet.

(c) *FAA Approved Airplane Flight Manual.* The FAA Approved Airplane Flight Manual shall contain the following performance data determined in accordance with paragraph (b) of this section covering at least the following variables:

(1) Maximum weight

(2) C. G. range

(3) Configuration of the inoperative propeller

(4) Runway length for takeoff

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(5) Altitude range.

(d) *Air carrier's operations manual.* Operating procedures shall be established in the air carrier's operations manual which will provide for the safe operation of the airplane, with specific provisions for operations from airports where the runways may require a takeoff or approach over populated areas. No airplane shall be taken off where the initial climb is made over thickly populated areas. VFR weather

In recent years, a number of persons have become interested in restoring antique aircraft so that they may be operated for pleasure or during public aviation events such as airshows, and fly-ins. Certain of these persons have pointed out to Agency representatives that when the currently prescribed identification marks are placed on their aircraft, the antique effect is largely lost because entirely different identification marking regulations were in effect at the time these aircraft were first manufactured. Noting that some States now permit the display of outdated nonstandard license plates on anique automobiles, they urged that some similar relief be granted for antique aircraft.

Currently effective sections 1.102(a) and 1.103(a), which became effective on December 31, 1960, prescribe 12-inch identification marks to be located either on the sides of the fuselage, or on the vertical tail surfaces, for fixed-wing aircraft. Compliance with this provision introduces the anachronism that operators of antique aircraft find objectionable. In general, they wish to display, instead, the formerly prescribed 20-inch wing marks and 2-inch side fuselage or vertical tail surface marks.

The Agency adopted the 12-inch side identification marks as standard for fixed-wing aircraft as a means of decreasing the collision hazard associated with air-to-air identification of civil aircraft by U.S. Air Force interceptor aircraft engaged in national defense. In addition, the Agency's air traffic controllers had advised that such marks aided in the control of air traffic by facilitating the identification of aircraft.

More recently the Agency has been informed by the U.S. Air Force North American Air Defense Command that it would have no objection to the deletion of the requirement for side fuselage or tail markings on antique aircraft which are operated at less than 180 knots TAS within the continental limits of the United States, except for the Florida area, but that it would object to granting similar relief, under similar conditions, for all nonantique aircraft. Relevant also is a new rule, recently adopted by the Agency as part of Amendment 60–24 effective December 26, 1961, which requires that aircraft operated to, from, or on an airport at which an airport traffic control tower is operated by the United States Government be capable of two-way radio communication with that control tower. With two-way communication available, control tower personnel now have little need to visually identify aircraft by means of its identification marks.

In view of these developments, the Agency believes that antique aircraft need not be marked for visual identification at long range. There remains, however, a minimal need for relatively small identification marks to facilitate routine identification of aircraft on the ground by Agency personnel responsible for enforcement of regulations dealing with the airworthiness, operation, and maintenance of civil aircraft. For this purpose, it is necessary that the correct nationality letter and registration number be marked on each aircraft. Accordingly, section 1.108 is being amended to exempt antique aircraft from the identification marking provisions of sections 1.101 through 1.107 under specified conditions defining: (1) what is meant by an antique aircraft; (2) the revised standard for identification marks, including size and location; (3) the maximum operating airspeed; and (4) the area in which such aircraft are permitted to operate.

In addition, the last paragraph of section 1.108–1(b) is being deleted because it conflicts with the Agency's present policy delegating authority to the regional offices on questions concerning the identification markings for nonconventional aircraft; and the remaining substantive provisions of section 1.108–1 are being incorporated into section 1.108 with such editorial revisions as are necessary for clarity. One such editorial revision deletes reference to the term "nonconventional aircraft" since, as defined in section 1.108–1(a), this term embraces classes of aircraft other than those which are not conventional in the usual sense.

Since this regulation provides relief from the provisions of the previous regulation, and imposes no additional burden upon any person, compliance with the notice and public procedure provisions of the Administrative Procedure Act is unnecessary, and good cause exists for making it effective on less than 30 days' notice.

Amendment revised section 1.108 and deleted section 1.108–1.

Amendment 1-7

Special Flight Permits

Adopted: Aug. 12, 1963
Effective: Aug. 17, 1963
Published: Aug. 17, 1963
[28 F.R. 8444]

Present sections 1.76 and 1.76-1 of Part 1 (14 CFR Part 1) of the Civil Air Regulations provide for the issuance of a special flight permit for an aircraft, which may not currently meet applicable airworthiness requirements but which is capable of safe flight, for the purpose of permitting the aircraft to be flown to a base where repairs or alterations are to be made; to permit the delivery or export of the aircraft; or to permit flight tests of new production aircraft. The purpose of this amendment is to incorporate into section 1.76 provisions for the issuance of a special flight permit specifically for the purpose of permitting certain aircraft to be operated over land areas where adequate landing facilities or appropriate fuel is not available or over water, beyond the normal range of such aircraft, at weights in excess of the maximum certificated takeoff weight established for the aircraft.

With the introduction of light, twin-engine aircraft into general aviation use, it has become a common practice to effect delivery of these aircraft by fly-away rather than crating and surface shipment. Under the provisions of section 1.76, special flight permits, many delivery flights are made beyond the normal range of the aircraft involved and temporary fuel tanks and navigational equipment are installed for such flights. The extra equipment and fuel results in weights in excess of the maximum certificated takeoff weight established for the aircraft. Experience with such delivery flights has shown that aircraft which meet the conditions and limitations of a special flight permit can be temporarily operated at weights in excess of their maximum certificated takeoff weight without any adverse effect on safety.

The Agency has received numerous requests for temporary authority to operate aircraft at weights in excess of the maximum certificated takeoff weight for purposes other than the delivery or export of the aircraft. Such requests are for the purpose of conducting flights to various places overseas and return, or over various land areas where adequate landing facilities or appropriate fuel is not available when the excess weight consists only of the added fuel and navigational equipment necessary to conduct such flights. However, the provisions of section 1.76 do not specifically provide for the issuance of special flight permits for such purposes. Thus, under the present rules, prior to the operation of an aircraft on any flight beyond the normal range of such aircraft for purposes other than those specified in section 1.76, the aircraft must be recertificated at the necessary temporary weight increase in excess of the maximum certificated takeoff weight. The Agency is aware that such recertification in accordance with the applicable Civil Air Regulations is expensive and time-consuming. Moreover, the Agency believes that, in the light of the experience with operations conducted under the provisions of section 1.76, such recertification is not necessary in the interest of safety for the temporary operation of an aircraft at an increase in takeoff weight, if such aircraft meets the conditions and limitations applicable to a special flight permit.

Therefore, the Agency considers it appropriate in the public interest to permit a greater utilization of aircraft by amending section 1.76 to provide for the issuance of special flight permits for aircraft which are to be flown over land areas where adequate landing facilities or appropriate fuel is not available or over water, beyond the normal range of the aircraft. Under the provisions of this amendment, the aircraft must meet all the applicable airworthiness requirements except those provisions which it cannot meet as a result of the increased maximum certificated takeoff weight. Thus, the installation of the additional fuel-carrying facilities must be approved by the Administrator. Furthermore, the aircraft with the extra fuel-carrying facilities must be found safe for operation prior to the issuance of a special flight permit.

In addition to the foregoing, section 1.76–1 is deleted since it contains an interpretation of a regulation which became obsolete as the result of subsequent amendments to that regulation.

Since this amendment relieves a restriction, and does not impose a burden on any person, notice and public procedure hereon are not necessary, and it may be made effective on less than 30 days' notice.

Amendment redesignated the text of section 1.76 as paragraph (a) of the section and added a paragraph (b)

Amendment 1–8

Issuance of Supplemental Type Certificates to Holders of Type Certificates	Adopted: Nov. 22, 1963 Effective: Dec. 5, 1963 Published: Dec. 5, 1963 [28 F.R. 12924]

The purpose of this amendment to Part 1 of the Civil Air Regulations is to permit holders of type certificates to obtain supplemental type certificates (STC's) when they introduce major changes in their products.

Section 1.25 provides that when a person, other than the holder of the type certificate for a product, alters the product by introducing a major change in a previously approved type design, and the change is not so extensive as to require application for a new type certificate, such person shall apply for issuance of a supplemental type certificate. The language of this provision precludes holders of a type certificate for a product from obtaining an STC for alterations of the same product.

Holders of type certificates may presently obtain approval for major changes in their products only by an amendment to their type certificates. Some type certificate holders, however, have stated they believe there is an advantage to them in the use of the STC procedure. Among other things, it is contended that STC's can be easily controlled and readily processed, and that some customers insist on work being done under an STC.

In view of the foregoing and since there appears to be no reason for excluding the holder of a type certificate from whatever benefits may be derived from supplemental type certification, section 1.25 is amended to permit the type certificate holder to obtain approval for certain major changes to his product either by the issuance of an STC or by an amendment to his type certificate.

Since this amendment merely provides an additional means by which the holder of a type certificate may obtain approval of a major change to his product and imposes no burden on any person, I find that notice and public procedure hereon is unnecessary, and that good cause exists for making it effective on less than 30 days' notice.

Amendment revised section 1.25.

Amendment 1–9

Airworthiness Certification of Surplus Military Aircraft:	Adopted: Dec. 5, 1963 Effective: Jan. 10, 1964 Published: Dec. 11, 1963 [28 F.R. 13394]

The purpose of this amendment to Part 1 of the Civil Air Regulations is to specify a cut off date for the issuance of original airworthiness certificates in the limited category under Part 9.

In Notice No. 63–13 [28 F.R. 3555], it was proposed that original airworthiness certificates in the limited category no longer be issued for surplus military aircraft. Comments indicated that in at least a few instances such action could result in substantial economic hardship to some persons. Such hardship might be avoided if limited airworthiness certificates would continue to be issued for a period of time to permit persons who have acquired such aircraft an opportunity to certificate them.

In view of the foregoing, original airworthiness certificates for aircraft in the limited category will continue to be issued through June 30, 1965 and section 1.71 of Part 1 is amended accordingly. This decision obviates the changes proposed in Notice No. 63–13 to sections 1.61, 1.61–1, 1.71, 1.71–1, and 1.72.1. In addition, the present provisions of Part 1 will continue to permit an aircraft certificated as experimental or in the restricted category as of June 30, 1965, which immediately prior to such certification was certificated in the limited category, to be reissued a limited airworthiness certificate.

Interested persons have been afforded an opportunity to participate in the making of this regulation, and due consideration has been given to all relevant matter presented.

This amendment is subject to the FAA Recodification Program announced in Draft Release 61–25 (26 F.R. 10698). This recodification, however, will not result in any substantive change in the rules as adopted herein.

Amendment added a new sentence at the end of section 1.71.

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