

Civil Aeronautics Manual 5

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# Glider Airworthiness

FEDERAL AVIATION AGENCY

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FEDERAL AVIATION AGENCY

E. R. QUESADA, *Administrator*

NOTE

This manual contains Civil Air Regulations Part 5, dated April 15, 1956, and the editorial changes required by Special Regulation SR-430 effective December 31, 1958.

As amendments and other pertinent materials pertaining to Part 5 are issued, they will be included in this manual.

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# Glider Airworthiness

## Applicability and Definitions

5.0 *Applicability of this part.* This part establishes standards with which compliance shall be demonstrated for the issuance of and changes to type certificates for gliders. This part, until superseded or rescinded, shall apply to all gliders for which applications for type certification are made after the effective date of this part (March 5, 1952).

5.1 *Definitions.* As used in this part terms are defined as follows:

(a) *Administration.*

(1) *Administrator.* The Administrator is the Administrator of the Federal Aviation Agency.

(2) *Applicant.* An applicant is a person or persons applying for approval of a glider or any part thereof.

(3) *Approved.* Approved, when used alone or as modifying terms such as means, devices, specifications, etc., means approved by the Administrator. (See sec. 5.18.)

(b) *General design.*

(1) *Glider.* A glider is a heavier-than-air aircraft the free flight of which does not depend principally upon a power generating unit.

## Certification

5.10 *Eligibility for type certificates.* A glider shall be eligible for type certification under the provisions of this part if it complies with the airworthiness provisions of Part 3 of this subchapter modified to the extent the Administrator finds appropriate for gliders: *Provided,* That the Administrator finds no feature or characteristic of the glider which renders it unsafe.

5.11 *Designation of applicable regulations.* The provisions of this section shall apply to all glider types certificated under this part irrespective of the date of application for type certificate.

(a) Unless otherwise established by the Administrator, the glider shall comply with the provisions of this part together with all amendments thereto effective on the date of application for type certificate, except that compliance with later effective amendments may be elected or required pursuant to paragraphs (c), (d), and (e) of this section.

(b) If the interval between the date of application for type certificate and the issuance of the corresponding type certificate exceeds three years, a new application for type certificate shall be required, except that for applications pending on May 1, 1954, such three-year period shall commence on that date. At the option of the applicant, a new application may be filed prior to the expiration of the three-year period. In either instance the applicable regulations shall be those effective on the date of the new application in accordance with paragraph (a) of this section.

(c) During the interval between filing the application and the issuance of a type certificate, the applicant may elect to show compliance with any amendment of this part which becomes effective during that interval, in which case all other amendments found by the Administrator to be directly related shall be complied with.

(d) Except as otherwise provided by the Administrator pursuant to section 1.24 of this subchapter, a change to the type certificate (see sec. 5.13(b)) may be accomplished, at the option of the holder of the type certificate, either in accordance with the regulations incorporated by reference in the type certificate pursuant to section 5.13(c), or in accordance with subsequent amendments to such regulations in effect on the date of application for approval of the change, subject to the following provisions:

(1) When the applicant elects to show compliance with an amendment to the regulations in effect on the date of application for approval of a change, he shall show compliance with all amendments which the Administrator finds are directly related to the particular amendment selected by the applicant.

(2) When the change consists of a new design or a substantially complete redesign of a component, equipment installation, or system installation of the glider, and the Administrator finds that the regulations incorporated by reference in the type certificate pursuant to section 5.13(c) do not provide complete standards with respect to such change, he shall require compliance with such provisions of the regulations in effect on the date of application for approval of the change as he finds will provide a level of safety equal to that established by the regulations incorporated by reference at the time of issuance of the type certificate.

(e) If a change in design, configuration, or weight is made which the Administrator finds is so extensive as to require a substantially complete investigation of compliance with the regulations, the glider shall be considered as a new type, in which case a new application for type certificate shall be required and the regulations together with all amendments thereto effective on the date of the new application shall be made applicable in accordance with paragraphs (a), (b), (c), and (d) of this section.

**5.12 Recording of applicable regulations.** The Administrator, upon the issuance of a type certificate, shall record the applicable regulations with which compliance was demonstrated. Thereafter, the Administrator shall record the applicable regulations for each change in the type certificate which is accomplished in accordance with regulations other than those recorded at the time of issuance of the type certificate. (See sec. 5.11.)

**5.13 Type certificate.**

(a) An applicant shall be issued a type certificate when he demonstrates the eligibility of the glider by complying with the require-

ments of this part in addition to the applicable requirements in Part 1 of this subchapter.

(b) The type certificate shall be deemed to include the type design (see sec. 5.14(b)), the operating limitations for the glider (see sec. 3.737 of this subchapter), and any other conditions or limitations prescribed by the regulations in this subchapter.

(c) The applicable provisions of this part recorded by the Administrator in accordance with section 5.12 shall be considered as incorporated in the type certificate as though set forth in full.

**5.14 Data required.**

(a) The applicant for a type certificate shall submit to the Administrator such descriptive data, test reports, and computations as are necessary to demonstrate that the glider complies with the requirements of this part.

(b) The descriptive data required in paragraph (a) of this section shall be known as the type design and shall consist of such drawings and specifications as are necessary to disclose the configuration of the glider and all the design features covered in the requirements of this part, such information on dimensions, materials, and processes as is necessary to define the structural strength of the glider, and such other data as are necessary to permit by comparison the determination of the airworthiness of subsequent gliders of the same type.

**5.15 Inspections and tests.** Inspections and tests shall include all those found necessary by the Administrator to insure that the glider complies with the applicable airworthiness requirements and conforms to the following:

(a) All materials and products are in accordance with the specifications in the type design.

(b) All parts of the glider are constructed in accordance with the drawings in the type design.

(c) All manufacturing processes, construction, and assembly are as specified in the type design.

**5.16 Flight tests.** After proof of compliance with the structural requirements con-

tained in this part, and upon completion of all necessary inspections and testing on the ground, and proof of the conformity of the glider with the type design, and upon receipt from the applicant of a report of flight tests performed by him, such official flight tests shall be conducted as the Administrator finds necessary to determine compliance with the requirements of this part.

5.17 *Airworthiness, experimental, and production certificates.* (For requirements with regard to these certificates see Part 1 of this subchapter.)

5.18 *Approval of materials, parts, processes, and appliances.*

(a) Materials, parts, processes, and appliances shall be approved upon a basis and in a manner found necessary by the Administrator to implement the pertinent provisions of this subchapter. The Administrator may adopt and publish such specifications as he finds necessary to administer this part, and

shall incorporate therein such portions of the aviation industry, Federal, and military specifications respecting such materials, parts, processes, and appliances as he finds appropriate.

NOTE: The provisions of this paragraph are intended to allow approval of materials, parts, processes, and appliances under the system of Technical Standard Orders, or in conjunction with type certification procedures for a glider, or by any other form of approval by the Administrator.

(b) Any material, part, process, or appliance shall be deemed to have met the requirements for approval when it meets the pertinent specifications adopted by the Administrator, and the manufacturer so certifies in a manner prescribed by the Administrator.

5.19 *Changes in type design.* (For requirements with regard to changes in type design and the designation of applicable regulations therefor, see sec. 5.11 (d) and (e), and Part 1 of this subchapter.)

