

(7) Design changes, including material substitutions, must be controlled and approved before being incorporated in the finished product.

(8) Rejected materials and parts must be segregated and identified in a manner that precludes installation in the finished product.

(9) Materials and parts that are withheld because of departures from design data or specifications, and that are to be considered for installation in the finished product, must be processed through the Materials Review Board. Those materials and parts determined by the Board to be serviceable must be properly identified and reinspected if rework or repair is necessary. Materials and parts rejected by the Board must be marked and disposed of to ensure that they are not incorporated in the final product.

(10) Inspection records must be maintained, identified with the completed product where practicable, and retained by the manufacturer for at least two years.

§ 21.127 Tests: aircraft.

(a) Each person manufacturing aircraft under a type certificate only shall establish an approved production flight test procedure and flight check-off form, and in accordance with that form, flight test each aircraft produced.

(b) Each production flight test procedure must include the following:

(1) An operational check of the trim, controllability, or other flight characteristics to establish that the production aircraft has the same range and degree of control as the prototype aircraft.

(2) An operational check of each part or system operated by the crew while in flight to establish that, during flight, instrument readings are within normal range.

(3) A determination that all instruments are properly marked, and that all placards and required flight manuals are installed after flight test.

(4) A check of the operational characteristics of the aircraft on the ground.

(5) A check on any other items peculiar to the aircraft being tested that can best be done during the ground or flight operation of the aircraft.

§ 21.128 Tests: aircraft engines.

(a) Each person manufacturing aircraft engines under a type certificate only shall subject each engine (except rocket engines for which the manufacturer must establish a sampling technique) to an acceptable test run that includes the following:

(1) Break-in runs that include a determination of fuel and oil consumption and a determination of power characteristics at rated maximum continuous power or thrust and, if applicable, at rated takeoff power or thrust.

(2) At least five hours of operation at rated maximum continuous power or thrust. For engines having a rated takeoff power or thrust higher than rated maximum continuous power or thrust, the five-hour run must include 30 minutes at rated takeoff power or thrust.

(b) The test runs required by paragraph (a) of this section may be made with the engine appropriately mounted and using current types of power and thrust measuring equipment.

[Doc. No. 5085, 29 FR 14568, Oct. 24, 1964, as amended by Amdt. 21-5, 32 FR 3735, Mar. 4, 1967]

§ 21.129 Tests: propellers.

Each person manufacturing propellers under a type certificate only shall give each variable pitch propeller an acceptable functional test to determine if it operates properly throughout the normal range of operation.

§ 21.130 Statement of conformity.

Each holder or licensee of a type certificate only, for a product manufactured in the United States, shall, upon the initial transfer by him of the ownership of such product manufactured under that type certificate, or upon application for the original issue of an aircraft airworthiness certificate or an aircraft engine or propeller airworthiness approval tag (FAA Form 8130-3), give the Administrator a statement of conformity (FAA Form 317). This statement must be signed by an authorized person who holds a responsible position in the manufacturing organization, and must include—

(a) For each product, a statement that the product conforms to its type

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certificate and is in condition for safe operation;

(b) For each aircraft, a statement that the aircraft has been flight checked; and

(c) For each aircraft engine or variable pitch propeller, a statement that the engine or propeller has been subjected by the manufacturer to a final operational check.

However, in the case of a product manufactured for an Armed Force of the United States, a statement of conformity is not required if the product has been accepted by that Armed Force.

[Amdt. 21-25, 34 FR 14068, Sept. 5, 1969]

Subpart G—Production Certificates

SOURCE: Docket No. 5085, 29 FR 14569, Oct. 24, 1964, unless otherwise noted.

§ 21.131 Applicability.

This subpart prescribes procedural requirements for the issue of production certificates and rules governing the holders of those certificates.

§ 21.133 Eligibility.

(a) Any person may apply for a production certificate if he holds, for the product concerned, a—

(1) Current type certificate;

(2) Right to the benefits of that type certificate under a licensing agreement; or

(3) Supplemental type certificate.

(b) Each application for a production certificate must be made in a form and manner prescribed by the Administrator.

§ 21.135 Requirements for issuance.

An applicant is entitled to a production certificate if the Administrator finds, after examination of the supporting data and after inspection of the organization and production facilities, that the applicant has complied with §§ 21.139 and 21.143.

§ 21.137 Location of manufacturing facilities.

The Administrator does not issue a production certificate if the manufacturing facilities concerned are located

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outside the United States, unless the Administrator finds no undue burden on the United States in administering the applicable requirements of the Federal Aviation Act of 1958 or of the Federal Aviation Regulations.

§ 21.139 Quality control.

The applicant must show that he has established and can maintain a quality control system for any product, for which he requests a production certificate, so that each article will meet the design provisions of the pertinent type certificate.

§ 21.143 Quality control data requirements; prime manufacturer.

(a) Each applicant must submit, for approval, data describing the inspection and test procedures necessary to ensure that each article produced conforms to the type design and is in a condition for safe operation, including as applicable—

(1) A statement describing assigned responsibilities and delegated authority of the quality control organization, together with a chart indicating the functional relationship of the quality control organization to management and to other organizational components, and indicating the chain of authority and responsibility within the quality control organization;

(2) A description of inspection procedures for raw materials, purchased items, and parts and assemblies produced by manufacturers' suppliers including methods used to ensure acceptable quality of parts and assemblies that cannot be completely inspected for conformity and quality when delivered to the prime manufacturer's plant;

(3) A description of the methods used for production inspection of individual parts and complete assemblies, including the identification of any special manufacturing processes involved, the means used to control the processes, the final test procedure for the complete product, and, in the case of aircraft, a copy of the manufacturer's production flight test procedures and checkoff list;