CIVIL AERONAUTICS BOARD

PART 35

FLIGHT ENGINEER CERTIFICATES

As amended to November 1, 1949

WASHINGTON, D. C.

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AUTHORITY: §§ 35.1 to 35.32 issued under sec. 205 (a), 52 Stat. 984; 49 U. S. C. 425 (a). Interpret or apply secs. 601, 602, 52 Stat. 1007, 1008, 49 U. S. C. 551, 552; Pub. Law 872, 80th Cong.

SOURCE: §§ 35.1 to 35.32 contained in Amendment 35–0, Civil Air Regulations, 12 F. R. 41, except as noted following provision affected.

NOTE: The following explanatory statement was issued as a part of Amendment 35–0:

In accordance with the provisions of Title VI of the Civil Aeronautics Act of 1938 it is unlawful for any person to serve in any capacity as an airman in connection with any civil aircraft used in air commerce without an airman certificate authorizing him to serve in such capacity, or in violation of the terms of any such certificate. A flight engineer falls within the definition of airman as defined in that act.

The purpose of this part is to provide a means for compliance with the airman requirements of Title VI of the act with respect to the use in air commerce of those types of aircraft which require the services of flight engineers by providing the standards by which flight engineers may be certificated as airmen.

REQUIREMENTS FOR CERTIFICATE

§ 35.1 *Issuance.* A flight engineer certificate will be issued to an applicant who meets the requirements of §§ 35.2–35.9.

§ 35.2 *Age.* Applicant shall be at least 21 years of age.

§ 35.3 *Citizenship.* Applicant shall be a citizen of the United States or of a foreign government which grants reciprocal flight engineer privileges to citizens of the United States on equal terms and conditions with citizens of such foreign government.

§ 35.4 *Education.* Applicant shall be able to read, write, speak, and understand the English language.

§ 35.5 *Physical standards.* Applicant shall meet the physical standards of the second class prescribed in Part 29 of this subchapter.

§ 35.6 *Experience.* Each applicant for a flight engineer certificate shall:

(a) Have had at least 3 years of diversified practical experience in the maintenance and repair of aircraft and aircraft engines, of which one year shall have been in the maintenance and repair of multiengine aircraft of a type used in air carrier operations and having engines rated at least at 800 horsepower each; or

(b) Be a graduate of at least a two-year specialized aeronautical training course in the maintenance, repair, and overhaul of aircraft and aircraft engines, of which at least six months shall be in the maintenance and repair of multiengine aircraft of a type used in air carrier operations and having engines rated at least at 800 horsepower each; or

(c) Have had at least 100 hours of flight experience in the duties of a flight engineer; or

(d) Have satisfactorily completed a course of ground and flight instruction in at least the items specified in § 35.7 which the Administrator has found adequate for the training of a flight engineer; or

(e) Have had at least 200 hours of flight time as pilot in command of an aircraft having 4 engines or more.

[Amdt. 35–1, 14 F. R. 2196]

§ 35.7 *Knowledge.* Applicant shall pass a written examination on the following subjects pertaining to aircraft having 4 or more engines and certificated in the transport category or to aircraft having 4 or more engines and incorporating a flight engineer station:

(a) Responsibilities and limitations of a flight engineer as specified in the regulations of this subchapter.

(b) Theory of flight and elementary aerodynamics;

(c) Aircraft performance and aircraft engine operation with respect to limitations;

(d) Mathematical computations of engine operation and fuel consumption, including basic meteorology with respect to engine operations;

(e) Aircraft loading and center of gravity computations;

(f) Basic aircraft maintenance and operating procedures.

[Amdt. 35–1, 13 F. R. 2645]

§ 35.8 *Skill.* Applicant shall pass a practical test in the duties of a flight engineer during flight on an aircraft having 4 or more engines and certificated in the transport category or on an aircraft having 4 or more engines and incorporating a flight engineer station; and shall demonstrate competency with respect to:

(a) Normal duties and procedures relating to aircraft, aircraft engines, propellers, and appliances;

(b) Recognition of the malfunctioning of aircraft, aircraft engines, propellers, and appliances, and the taking of appropriate action thereon;

(c) Emergency duties and procedures relating to aircraft, aircraft engines, propellers, and appliances.

[Amdt. 35–1, 13 F. R. 2645]

§ 35.9 *Limited certificate.* (a) An applicant may be certificated as a flight engineer for an aircraft having less than 4 engines: *Provided,* That (1) the design of the aircraft incorporates a flight engineer station satisfactory to the Administrator, (2) the applicant meets the requirements of §§ 35.1 through 35.6, and (3) the applicant passes written and practical examinations respecting such aircraft on the subjects listed in §§ 35.7 and 35.8.

(b) A certificate issued under the provisions of this section shall contain an appropriate limitation which may be removed at such time as the holder of the certificate passes the written and practical tests prescribed in §§ 35.7 and 35.8.

[Amdt. 35–1, 13 F. R. 2645]

CERTIFICATION RULES

§ 35.10 *Application.* Application shall be made on a form and in the manner prescribed by the Administrator.

§ 35.11 *Duration.* A flight engineer certificate shall remain in effect unless it is suspended, or revoked, or a general termination date for such certificate is fixed by the Board.

§ 35.12 *Temporary certificates.* The Administrator or his authorized representative may issue a temporary flight engineer certificate for a period of not to exceed 90 days, subject to the terms and conditions specified therein by the Administrator.

[Amdt. 35–1, 12 F. R. 1030]

§ 35.13 *Surrender.* Any flight engineer shall, upon request, deliver his certificate to the Administrator, if it has been suspended or revoked.

§ 35.14 *Reexamination.* Applicants who have failed in any examination may apply for reexamination on the part failed after 30 days from the date of such failure.

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(d) mathematical computations of engine operation and fuel consumption, including basic meteorology with respect to engine operations;

(e) aircraft loading and center of gravity computations;

(f) basic aircraft maintenance and operating procedures.

35.07 Skill. Applicant shall pass a practical test in the duties of a flight engineer during flight on an aircraft having 4 or more engines and certificated in the transport category or on an aircraft having 4 or more engines and incorporating a flight engineer station; and shall demonstrate competency with respect to:

(a) normal duties and procedures relating to aircraft, aircraft engines, propellers, and appliances;

(b) recognition of the malfunctioning of aircraft, aircraft engines, propellers, and appliances, and the taking of appropriate action thereon;

(c) emergency duties and procedures relating to aircraft, aircraft engines, propellers, and appliances.

35.08 Limited certificate.

(a) An applicant may be certificated as a flight engineer for an aircraft having less than 4 engines: *Provided*, That (1) the design of the aircraft incorporates a flight engineer station satisfactory to the Administrator, (2) the applicant meets the requirements of §§ 35.00 through 35.05, and (3) the applicant passes written and practical examinations respecting such aircraft on the subjects listed in §§ 35.06 and 35.07.

(b) A certificate issued under the provisions of this section shall contain an appropriate limitation which may be removed at such time as the holder of the certificate passes the written and practical tests prescribed in §§ 35.06 and 35.07.

35.1 CERTIFICATION RULES

35.10 Application. Application shall be made on a form and in the manner prescribed by the Administrator.

35.11 Duration. A flight engineer certificate shall remain in effect unless it is suspended, or revoked, or a general termination date for such certificate is fixed by the Board.

35.110 Temporary certificates. The Administrator or his authorized representative may issue a temporary flight engineer certificate for a period of not to exceed 90 days, subject to the terms and conditions specified therein by the Administrator.

35.12 Surrender. Any flight engineer shall, upon request, deliver his certificate to the Administrator, if it has been suspended or revoked.

35.13 Reexamination. Applicants who have failed in any examination may apply for reexamination on the part failed after 30 days from the date of such failure.

35.14 Certificate. No individual shall serve in the flight crew as a flight engineer unless he has in his personal possession while so serving a valid flight engineer certificate issued by the Administrator.

35.15 Medical certificate and renewal. No individual shall exercise the privileges of a flight engineer certificate unless he has in his personal possession while so serving a medical certificate or other evidence satisfactory to the Administrator showing that he has met the physical requirements appropriate to his certificate within the preceding 12 calendar months.

35.16 Certificate display. A flight engineer shall, upon request, present his airman and medical certificates for examination by any representative of the Civil Aeronautics Board or Administrator or by any State or local law enforcement officer.

35.17 Operation during physical deficiency. No flight engineer shall exercise the privileges of his airman certificate during any period of known physical deficiency or increase in physical deficiency which would render him unable to meet the physical requirements prescribed for the issuance of his currently effective medical certificate.

NOTICE

Advise the Civil Aeronautics Board, Washington 25, D. C., that you have purchased this part of the Civil Air Regulations and that agency will supply you with copies of amendments which have been issued since this printing. Be sure to specify the number of this part, otherwise your request cannot be filled.

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