

to satisfy the test required for an additional rating under paragraph (b) of this section.

(Sec. 6, 80 Stat. 937, 49 U.S.C. 1655; secs. 313(a), 601 through 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421 through 1425); sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)); and 14 CFR 11.49)

[Doc. No. 1179, 27 FR 7969, Aug. 10, 1962, as amended by Amdt. 63-17, 40 FR 32830, Aug. 5, 1975; Doc. 63-21, 47 FR 13316, Mar. 29, 1982]

#### § 63.37 Aeronautical experience requirements.

(a) Except as otherwise specified therein, the flight time used to satisfy the aeronautical experience requirements of paragraph (b) of this section must have been obtained on an airplane—

(1) On which a flight engineer is required by this chapter; or

(2) That has at least three engines that are rated at least 800 horsepower each or the equivalent in turbine-powered engines.

(b) An applicant for a flight engineer certificate with a class rating must present, for the class rating sought, satisfactory evidence of one of the following:

(1) At least 3 years of diversified practical experience in aircraft and aircraft engine maintenance (of which at least 1 year was in maintaining multi-engine aircraft with engines rated at least 800 horsepower each, or the equivalent in turbine engine powered aircraft), and at least 5 hours of flight training in the duties of a flight engineer.

(2) Graduation from at least a 2-year specialized aeronautical training course in maintaining aircraft and aircraft engines (of which at least 6 calendar months were in maintaining multiengine aircraft with engines rated at least 800 horsepower each or the equivalent in turbine engine powered aircraft), and at least 5 hours of flight training in the duties of a flight engineer.

(3) A degree in aeronautical, electrical, or mechanical engineering from a recognized college, university, or engineering school; at least 6 calendar months of practical experience in maintaining multiengine aircraft with

engines rated at least 800 horsepower each, or the equivalent in turbine engine powered aircraft; and at least 5 hours of flight training in the duties of a flight engineer.

(4) At least a commercial pilot certificate with an instrument rating and at least 5 hours of flight training in the duties of a flight engineer.

(5) At least 200 hours of flight time in a transport category airplane (or in a military airplane with at least two engines and at least equivalent weight and horsepower) as pilot in command or second in command performing the functions of a pilot in command under the supervision of a pilot in command.

(6) At least 100 hours of flight time as a flight engineer.

(7) Within the 90-day period before he applies, successful completion of an approved flight engineer ground and flight course of instruction as provided in appendix C of this part.

(Sec. 6, 80 Stat. 937, 49 U.S.C. 1655)

[Doc. No. 6458, 30 FR 14559, Nov. 23, 1965, as amended by Amdt. 63-5, 31 FR 9047, July 1, 1966; Amdt. 63-17, 40 FR 32830, Aug. 5, 1975]

#### § 63.39 Skill requirements.

(a) An applicant for a flight engineer certificate with a class rating must pass a practical test on the duties of a flight engineer in the class of airplane for which a rating is sought. The test may only be given on an airplane specified in § 63.37(a).

(b) The applicant must—

(1) Show that he can satisfactorily perform preflight inspection, servicing, starting, pretakeoff, and postlanding procedures;

(2) In flight, show that he can satisfactorily perform the normal duties and procedures relating to the airplane, airplane engines, propellers (if appropriate), systems, and appliances; and

(3) In flight, in an airplane simulator, or in an approved flight engineer training device, show that he can satisfactorily perform emergency duties and procedures and recognize and take appropriate action for malfunctions of the airplane, engines, propellers (if appropriate), systems and appliances.