

## § 63.43

and the ratings placed thereon renewed if, at the time of application for renewal, the foreign flight engineer license on which that certificate is based is in effect. Application for the renewal of the certificate and ratings thereon must be made before the expiration of the certificate.

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

[Doc. No. 8846, 33 FR 18614, Dec. 17, 1968, as amended by Amdt. 63-20, 45 FR 5673, Jan. 24, 1980]

### § 63.43 Flight engineer courses.

An applicant for approval of a flight engineer course must submit a letter to the Administrator requesting approval, and must also submit three copies of each course outline, a description of the facilities and equipment, and a list of the instructors and their qualifications. An air carrier or commercial operator with an approved flight engineer training course under part 121 of this chapter may apply for approval of a training course under this part by letter without submitting the additional information required by this paragraph. Minimum requirements for obtaining approval of a flight engineer course are set forth in appendix C of this part.

## Subpart C—Flight Navigators

AUTHORITY: Secs. 313(a), 314, 601, and 607; 49 U.S.C. 1354(a), 1355, 1421, and 1427.

SOURCE: Docket No. 1179, 27 FR 7970, Aug. 10, 1962, unless otherwise noted.

### § 63.51 Eligibility requirements; general.

To be eligible for a flight navigator certificate, a person must—

- (a) Be at least 21 years of age;
- (b) Be able to read, write, speak, and understand the English language;
- (c) Hold at least a second-class medical certificate issued under part 67 of this chapter within the 12 months before the date he applies; and
- (d) Comply with §§ 63.53, 63.55, and 63.57.

### § 63.53 Knowledge requirements.

(a) An applicant for a flight navigator certificate must pass a written test on—

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(1) The regulations of this chapter that apply to the duties of a flight navigator;

(2) The fundamentals of flight navigation, including flight planning and cruise control;

(3) Practical meteorology, including analysis of weather maps, weather reports, and weather forecasts; and weather sequence abbreviations, symbols, and nomenclature;

(4) The types of air navigation facilities and procedures in general use;

(5) Calibrating and using air navigation instruments;

(6) Navigation by dead reckoning;

(7) Navigation by celestial means;

(8) Navigation by radio aids;

(9) Pilotage and map reading; and

(10) Interpretation of navigation aid identification signals.

(b) A report of the test is mailed to the applicant. A passing grade is evidence, for a period of 24 months after the test, that the applicant has complied with this section.

[Doc. No. 1179, 27 FR 7970, Aug. 10 1962, as amended by Amdt. 63-19, 43 FR 22639, May 25, 1978]

### § 63.55 Experience requirements.

(a) An applicant for a flight navigator certificate must be a graduate of a flight navigator course approved by the Administrator or present satisfactory documentary evidence of—

(1) Satisfactory determination of his position in flight at least 25 times by night by celestial observations and at least 25 times by day by celestial observations in conjunction with other aids; and

(2) At least 200 hours of satisfactory flight navigation including celestial and radio navigation and dead reckoning.

A pilot who has logged 500 hours of cross-country flight time, of which at least 100 hours were at night, may be credited with not more than 100 hours for the purposes of paragraph (a)(2) of this section.

(b) Flight time used exclusively for practicing long-range navigation methods, with emphasis on celestial navigation and dead reckoning, is considered to be satisfactory navigation experience for the purposes of paragraph (a)

of this section. It must be substantiated by a logbook, by records of an armed force or a certificated air carrier, or by a letter signed by a certificated flight navigator and attached to the application.

**§ 63.57 Skill requirements.**

(a) An applicant for a flight navigator certificate must pass a practical test in navigating aircraft by—

- (1) Dead reckoning;
- (2) Celestial means; and
- (3) Radio aids to navigation.

(b) An applicant must pass the written test prescribed by § 63.53 before taking the test under this section. However, if a delay in taking the test under this section would inconvenience the applicant or an air carrier, he may take it before he receives the result of the written test, or after he has failed the written test.

(c) The test requirements for this section are set forth in appendix A of this part.

[Doc. No. 1179, 27 FR 7970, Aug. 10, 1962, as amended by Amdt. 63-19, 43 FR 22639, May 25, 1978]

**§ 63.59 Retesting after failure.**

(a) An applicant for a flight navigator certificate who fails a written or practical test for that certificate may apply for retesting—

(1) After 30 days after the date he failed that test; or

(2) Before the 30 days have expired if the applicant presents a signed statement from a certificated flight navigator, certificated ground instructor, or any other qualified person approved by the Administrator, certifying that that person has given the applicant additional instruction in each of the subjects failed and that person considers the applicant ready for retesting.

(b) A statement from a certificated flight navigator, or from an operations official of an approved navigator course, is acceptable, for the purposes of paragraph (a)(2) of this section, for the written test and for the flight test. A statement from a person approved by the Administrator is acceptable for the written tests. A statement from a supervising or check navigator with the United States Armed Forces is accept-

able for the written test and for the practical test.

(c) If the applicant failed the flight test, the additional instruction must have been administered in flight.

[Doc. No. 1179, 27 FR 7970, Aug. 10, 1962, as amended by Amdt. 63-19, 43 FR 22640, May 25, 1978]

**§ 63.61 Flight navigator courses.**

An applicant for approval of a flight navigator course must submit a letter to the Administrator requesting approval, and must also submit three copies of the course outline, a description of his facilities and equipment, and a list of the instructors and their qualifications. Requirements for the course are set forth in appendix B to this part.

APPENDIX A TO PART 63—TEST REQUIREMENTS FOR FLIGHT NAVIGATOR CERTIFICATE

(a) *Demonstration of skill.* An applicant will be required to pass practical tests on the prescribed subjects. These tests may be given by FAA inspectors and designated flight navigator examiners.

(b) *The examination.* The practical examination consists of a ground test and a flight test as itemized on the examination check sheet. Each item must be completed satisfactorily in order for the applicant to obtain a passing grade. Items 5, 6, 7 of the ground test may be completed orally, and items 17, 22, 23, 34, 36, 37, 38, and 39 of the flight test may be completed by an oral examination when a lack of ground facilities or navigation equipment makes such procedure necessary. In these cases a notation to that effect shall be made in the "Remarks" space on the check sheet.

(c) *Examination procedure.* (1) An applicant will provide an aircraft in which celestial observations can be taken in all directions. Minimum equipment shall include a table for plotting, a drift meter or absolute altimeter, an instrument for taking visual bearings, and a radio direction finder.

(2) More than one flight may be used to complete the flight test and any type of flight pattern may be used. The test will be conducted chiefly over water whenever practicable, and without regard to radio range legs or radials. If the test is conducted chiefly over land, a chart should be used which shows very little or no topographical and aeronautical data. The total flight time will cover a period of at least four hours. Only one applicant may be examined at one time, and no applicant may perform other than navigator duties during the examination.