

(b) *Aircraft type rating.* A person who is applying for an additional aircraft type rating to be added to an airline transport pilot certificate is not required to pass a knowledge test if that person's airline transport pilot certificate lists the aircraft category and class rating that is appropriate to the type rating sought.

(c) *Aeronautical knowledge areas.* (1) Applicable Federal Aviation Regulations of this chapter that relate to airline transport pilot privileges, limitations, and flight operations;

(2) Meteorology, including knowledge of and effects of fronts, frontal characteristics, cloud formations, icing, and upper-air data;

(3) General system of weather and NOTAM collection, dissemination, interpretation, and use;

(4) Interpretation and use of weather charts, maps, forecasts, sequence reports, abbreviations, and symbols;

(5) National Weather Service functions as they pertain to operations in the National Airspace System;

(6) Windshear and microburst awareness, identification, and avoidance;

(7) Principles of air navigation under instrument meteorological conditions in the National Airspace System;

(8) Air traffic control procedures and pilot responsibilities as they relate to en route operations, terminal area and radar operations, and instrument departure and approach procedures;

(9) Aircraft loading, weight and balance, use of charts, graphs, tables, formulas, and computations, and their effect on aircraft performance;

(10) Aerodynamics relating to an aircraft's flight characteristics and performance in normal and abnormal flight regimes;

(11) Human factors;

(12) Aeronautical decision making and judgment; and

(13) Crew resource management to include crew communication and coordination.

#### § 61.157 Flight proficiency.

(a) *General.* (1) The practical test for an airline transport pilot certificate is given for—

(i) An airplane category and single-engine class rating;

(ii) An airplane category and multi-engine class rating;

(iii) A rotorcraft category and helicopter class rating;

(iv) A powered-lift category rating; and

(v) An aircraft type rating for the category and class ratings listed in paragraphs (a)(1)(i) through (a)(1)(iv) of this section.

(2) A person who is applying for an airline transport pilot practical test must meet—

(i) The eligibility requirements of § 61.153 of this part; and

(ii) The aeronautical knowledge and aeronautical experience requirements of this subpart that apply to the aircraft category and class rating sought.

(b) *Aircraft type rating.* Except as provided in paragraph (c) of this section, a person who is applying for an aircraft type rating to be added to an airline transport pilot certificate:

(1) Must receive and log ground and flight training from an authorized instructor on the areas of operation in this section that apply to the aircraft type rating sought;

(2) Must receive a logbook endorsement from an authorized instructor certifying that the applicant completed the training on the areas of operation listed in paragraph (e) of this section that apply to the aircraft type rating sought; and

(3) Must perform the practical test in actual or simulated instrument conditions, unless the aircraft's type certificate makes the aircraft incapable of operating under instrument flight rules. If the practical test cannot be accomplished for this reason, the person may obtain a type rating limited to "VFR only." The "VFR only" limitation may be removed for that aircraft type when the person passes the practical test in actual or simulated instrument conditions.

(c) *Exceptions.* A person who is applying for an aircraft type rating to be added to an airline transport pilot certificate or an aircraft type rating concurrently with an airline transport pilot certificate, and who is an employee of a certificate holder operating under part 121 or 135 of this chapter or of a fractional ownership program manager operating under subpart K of

part 91 of this chapter, need not comply with the requirements of paragraph (b) of this section if the applicant presents a training record that shows satisfactory completion of that certificate holder's or program manager's approved pilot-in-command training program for the aircraft type rating sought.

(d) *Upgrading type ratings.* Any type rating(s) on the pilot certificate of an applicant who successfully completes an airline transport pilot practical test shall be included on the airline transport pilot certificate with the privileges and limitations of the airline transport pilot certificate, provided the applicant passes the practical test in the same category and class of aircraft for which the applicant holds the type rating(s). However, if a type rating for that category and class of aircraft on the superseded pilot certificate is limited to VFR, that limitation shall be carried forward to the person's airline transport pilot certificate level.

(e) *Areas of operation.* (1) For an airplane category—single-engine class rating:

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;
- (iv) In-flight maneuvers;
- (v) Instrument procedures;
- (vi) Landings and approaches to landings;
- (vii) Normal and abnormal procedures;
- (viii) Emergency procedures; and
- (ix) Postflight procedures.

(2) For an airplane category—multi-engine class rating:

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;
- (iv) In-flight maneuvers;
- (v) Instrument procedures;
- (vi) Landings and approaches to landings;
- (vii) Normal and abnormal procedures;
- (viii) Emergency procedures; and
- (ix) Postflight procedures.

(3) For a powered-lift category rating:

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;
- (iv) In-flight maneuvers;

- (v) Instrument procedures;
- (vi) Landings and approaches to landings;
- (vii) Normal and abnormal procedures;
- (viii) Emergency procedures; and
- (ix) Postflight procedures.

(4) For a rotorcraft category—helicopter class rating:

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;
- (iv) In-flight maneuvers;
- (v) Instrument procedures;
- (vi) Landings and approaches to landings;
- (vii) Normal and abnormal procedures;
- (viii) Emergency procedures; and
- (ix) Postflight procedures.

(f) *Proficiency and competency checks conducted under part 121, part 135, or subpart K of part 91.* (1) Successful completion of any of the following checks satisfy the requirements of this section for the appropriate aircraft rating:

(i) A proficiency check under §121.441 of this chapter.

(ii) Both a competency check under §135.293 of this chapter and a pilot-in-command instrument proficiency check under §135.297 of this chapter.

(iii) Both a competency check under §91.1065 of this chapter and a pilot-in-command instrument proficiency check under §91.1069 of this chapter.

(2) The checks specified in paragraph (f)(1) of this section must be conducted by an authorized designated pilot examiner or FAA aviation safety inspector.

(g) *Use of a flight simulator or flight training device for an airplane rating.* If a flight simulator or flight training device is used for accomplishing all of the training and the required practical test for an airplane transport pilot certificate with an airplane category, class, and type rating, if applicable, the applicant, flight simulator, and flight training device are subject to the following requirements:

(1) The flight simulator and flight training device must represent that airplane type if the rating involves a type rating in an airplane, or is representative of an airplane if the applicant is only seeking an airplane class

rating and does not require a type rating.

(2) The flight simulator and flight training device must be used in accordance with an approved course at a training center certificated under part 142 of this chapter.

(3) All training and testing (except preflight inspection) must be accomplished by the applicant to receive an airplane class rating and type rating, if applicable, without limitations and—

(i) The flight simulator must be qualified and approved as Level C or Level D; and

(ii) The applicant must meet the aeronautical experience requirements of § 61.159 of this part and at least one of the following—

(A) Hold a type rating for a turbojet airplane of the same class of airplane for which the type rating is sought, or have been designated by a military service as a pilot in command of an airplane of the same class of airplane for which the type rating is sought, if a turbojet type rating is sought;

(B) Hold a type rating for a turbopropeller airplane of the same class as the airplane for which the type rating is sought, or have been appointed by a military service as a pilot in command of an airplane of the same class of airplane for which the type rating is sought, if a turbopropeller airplane type rating is sought;

(C) Have at least 2,000 hours of flight time, of which 500 hours must be in turbine-powered airplanes of the same class as the airplane for which the type rating is sought;

(D) Have at least 500 hours of flight time in the same type of airplane as the airplane for which the type rating is sought; or

(E) Have at least 1,000 hours of flight time in at least two different airplanes requiring a type rating.

(4) Subject to the limitation of paragraph (g)(5) of this section, an applicant who does not meet the requirements of paragraph (g)(3) of this section may complete all training and testing (except for preflight inspection) for an additional rating if—

(i) The flight simulator is qualified and approved as Level C or Level D; and

(ii) The applicant meets the aeronautical experience requirements of § 61.159 of this part and at least one of the following—

(A) Holds a type rating in a propeller-driven airplane if a type rating in a turbojet airplane is sought, or holds a type rating in a turbojet airplane if a type rating in a propeller-driven airplane is sought;

(B) Since the beginning of the 12th calendar month before the month in which the applicant completes the practical test for the additional rating, has logged—

(1) At least 100 hours of flight time in airplanes in the same class as the airplane for which the type rating is sought and which requires a type rating; and

(2) At least 25 hours of flight time in airplanes of the same type for which the type rating is sought.

(5) An applicant meeting only the requirements of paragraph (g)(4)(ii)(A) and (B) of this section will be issued an additional rating, or an airline transport pilot certificate with an added rating, as applicable, with a limitation. The limitation shall state: "This certificate is subject to pilot-in-command limitations for the additional rating."

(6) An applicant who has been issued a certificate with the limitation specified in paragraph (g)(5) of this section—

(i) May not act as pilot in command of the aircraft for which an additional rating was obtained under the provisions of this section until the limitation is removed from the certificate; and

(ii) May have the limitation removed by accomplishing 15 hours of supervised operating experience as pilot in command under the supervision of a qualified and current pilot in command, in the seat normally occupied by the pilot in command, in an airplane of the same type for which the limitation applies.

(7) An applicant who does not meet the requirements of paragraph (g)(3)(ii)(A) through (E) or (g)(4)(ii)(A) and (B) of this section may be issued an airline transport pilot certificate or an additional rating to that pilot certificate after successful completion of one of the following requirements—

(i) An approved course at a part 142 training center that includes all training and testing for that certificate or rating, followed by training and testing on the following tasks, which must be successfully completed on a static airplane or in flight, as appropriate—

- (A) Preflight inspection;
- (B) Normal takeoff;
- (C) Normal ILS approach;
- (D) Missed approach; and
- (E) Normal landing.

(ii) An approved course at a part 142 training center that complies with paragraphs (g)(8) and (g)(9) of this section and includes all training and testing for a certificate or rating.

(8) An applicant meeting only the requirements of paragraph (g)(7)(ii) of this section will be issued an additional rating or an airline transport pilot certificate with an additional rating, as applicable, with a limitation. The limitation shall state: “This certificate is subject to pilot-in-command limitations for the additional rating.”

(9) An applicant issued a pilot certificate with the limitation specified in paragraph (g)(8) of this section—

(i) May not act as pilot in command of the aircraft for which an additional rating was obtained under the provisions of this section until the limitation is removed from the certificate; and

(ii) May have the limitation removed by accomplishing 25 hours of supervised operating experience as pilot in command under the supervision of a qualified and current pilot in command, in the seat normally occupied by the pilot in command, in an airplane of the same type for which the limitation applies.

(h) *Use of a flight simulator or flight training device for a helicopter rating.* If a flight simulator or flight training device is used for accomplishing all of the training and the required practical test for an airline transport pilot certificate with a helicopter class rating and type rating, if applicable, the applicant, flight simulator, and flight training device are subject to the following requirements:

(1) The flight simulator and flight training device must represent that helicopter type if the rating involves a type rating in a helicopter, or is rep-

resentative of a helicopter if the applicant is only seeking a helicopter class rating and does not require a type rating.

(2) The flight simulator and flight training device must be used in accordance with an approved course at a training center certificated under part 142 of this chapter.

(3) All training and testing requirements (except preflight inspection) must be accomplished by the applicant to receive a helicopter class rating and type rating, if applicable, without limitations and—

(i) The flight simulator must be qualified and approved as a Level C or Level D; and

(ii) The applicant must meet the aeronautical experience requirements of §61.161 of this part and at least one of the following—

(A) Hold a type rating for a turbine-powered helicopter, or have been designated by a military service as a pilot in command of a turbine-powered helicopter, if a turbine-powered helicopter type rating is sought;

(B) Have at least 1,200 hours of flight time, of which 500 hours must be in turbine-powered helicopters;

(C) Have at least 500 hours of flight time in the same type helicopter as the helicopter for which the type rating is sought; or

(D) Have at least 1,000 hours of flight time in at least two different helicopters requiring a type rating.

(4) Subject to the limitation of paragraph (h)(5) of this section, an applicant who does not meet the requirements of paragraph (h)(3) of this section may complete all training and testing (except for preflight inspection) for an additional rating if—

(i) The flight simulator is qualified and approved as Level C or Level D; and

(ii) The applicant meets the aeronautical experience requirements of §61.161 of this part and, since the beginning of the 12th calendar month before the month in which the applicant completes the practical test for the additional rating, has logged—

(A) At least 100 hours of flight time in helicopters; and

(B) At least 15 hours of flight time in helicopters of the same type of helicopter for which the type rating is sought.

(5) An applicant meeting only the requirements of paragraph (h)(4)(ii) (A) and (B) of this section will be issued an additional rating or an airline transport pilot certificate with a limitation. The limitation shall state: "This certificate is subject to pilot-in-command limitations for the additional rating."

(6) An applicant who has been issued a certificate with the limitation specified in paragraph (h)(5) of this section—

(i) May not act as pilot in command of the helicopter for which an additional rating was obtained under the provisions of this section until the limitation is removed from the certificate; and

(ii) May have the limitation removed by accomplishing 15 hours of supervised operating experience as pilot in command under the supervision of a qualified and current pilot in command, in the seat normally occupied by the pilot in command, in a helicopter of the same type for which the limitation applies.

(7) An applicant who does not meet the requirements of paragraph (h)(3)(ii) (A) through (D), or (h)(4)(ii) (A) and (B) of this section may be issued an airline transport pilot certificate or an additional rating to that pilot certificate after successful completion of one of the following requirements—

(i) An approved course at a part 142 training center that includes all training and testing for that certificate or rating, followed by training and testing on the following tasks, which must be successfully completed on a static aircraft or in flight, as appropriate—

- (A) Preflight inspection;
- (B) Normal takeoff from a hover;
- (C) Manually flown precision approach; and

(D) Steep approach and landing to an off-airport heliport; or

(ii) An approved course at a training center that includes all training and testing for that certificate or rating and compliance with paragraphs (h)(8) and (h)(9) of this section.

(8) An applicant meeting only the requirements of paragraph (h)(7)(ii) of this section will be issued an additional

rating or an airline transport pilot certificate with an additional rating, as applicable, with a limitation. The limitation shall state: "This certificate is subject to pilot-in-command limitations for the additional rating."

(9) An applicant issued a certificate with the limitation specified in paragraph (h)(8) of this section—

(i) May not act as pilot in command of the aircraft for which an additional rating was obtained under the provisions of this section until the limitation is removed from the certificate; and

(ii) May have the limitation removed by accomplishing 25 hours of supervised operating experience as pilot in command under the supervision of a qualified and current pilot in command, in the seat normally occupied by the pilot in command, in an aircraft of the same type for which the limitation applies.

(i) *Use of a flight simulator or flight training device for a powered-lift rating.* If a flight simulator or flight training device is used for accomplishing all of the training and the required practical test for an airline transport pilot certificate with a powered-lift category rating and type rating, if applicable, the applicant, flight simulator, and flight training device are subject to the following requirements:

(1) The flight simulator and flight training device must represent that powered-lift type, if the rating involves a type rating in a powered-lift, or is representative of a powered-lift if the applicant is only seeking a powered-lift category rating and does not require a type rating.

(2) The flight simulator and flight training device must be used in accordance with an approved course at a training center certificated under part 142 of this chapter.

(3) All training and testing requirements (except preflight inspection) must be accomplished by the applicant to receive a powered-lift category rating and type rating, if applicable, without limitations; and—

(i) The flight simulator must be qualified and approved as Level C or Level D; and

(ii) The applicant must meet the aeronautical experience requirements

**§61.157**

**14 CFR Ch. I (1–1–08 Edition)**

of §61.163 of this part and at least one of the following—

(A) Hold a type rating for a turbine-powered powered-lift, or have been designated by a military service as a pilot in command of a turbine-powered powered-lift, if a turbine-powered powered-lift type rating is sought;

(B) Have at least 1,200 hours of flight time, of which 500 hours must be in turbine-powered powered-lifts;

(C) Have at least 500 hours of flight time in the same type of powered-lift for which the type rating is sought; or

(D) Have at least 1,000 hours of flight time in at least two different powered-lifts requiring a type rating.

(4) Subject to the limitation of paragraph (i)(5) of this section, an applicant who does not meet the requirements of paragraph (i)(3) of this section may complete all training and testing (except for preflight inspection) for an additional rating if—

(i) The flight simulator is qualified and approved as Level C or Level D; and

(ii) The applicant meets the aeronautical experience requirements of §61.163 of this part and, since the beginning of the 12th calendar month before the month in which the applicant completes the practical test for the additional rating, has logged—

(A) At least 100 hours of flight time in powered-lifts; and

(B) At least 15 hours of flight time in powered-lifts of the same type of powered-lift for the type rating sought.

(5) An applicant meeting only the requirements of paragraph (i)(4)(ii) (A) and (B) of this section will be issued an additional rating or an airline transport pilot certificate with a limitation. The limitation shall state: “This certificate is subject to pilot-in-command limitations for the additional rating.”

(6) An applicant who has been issued a certificate with the limitation specified in paragraph (i)(5) of this section—

(i) May not act as pilot in command of the powered-lift for which an additional rating was obtained under the provisions of this section until the limitation is removed from the certificate; and

(ii) May have the limitation removed by accomplishing 15 hours of supervised operating experience as pilot in

command under the supervision of a qualified and current pilot in command, in the seat normally occupied by the pilot in command, in a powered-lift of the same type for which the limitation applies.

(7) An applicant who does not meet the requirements of paragraph (i)(3)(ii) (A) through (D) or (i)(4)(ii) (A) and (B) of this section may be issued an airline transport pilot certificate or an additional rating to that pilot certificate after successful completion of one of the following requirements—

(i) An approved course at a part 142 training center that includes all training and testing for that certificate or rating, followed by training and testing on the following tasks, which must be successfully completed on a static aircraft or in flight, as appropriate—

(A) Preflight inspection;

(B) Normal takeoff from a hover;

(C) Manually flown precision approach; and

(D) Steep approach and landing to an off-airport site; or

(ii) An approved course at a training center that includes all training and testing for that certificate or rating and is in compliance with paragraphs (i)(8) and (i)(9) of this section.

(8) An applicant meeting only the requirements of paragraph (i)(7)(ii) of this section will be issued an additional rating or an airline transport pilot certificate with an additional rating, as applicable, with a limitation. The limitation shall state: “This certificate is subject to pilot-in-command limitations for the additional rating.”

(9) An applicant issued a pilot certificate with the limitation specified in paragraph (i)(8) of this section—

(i) May not act as pilot in command of the aircraft for which an additional rating was obtained under the provisions of this section until the limitation is removed from the certificate; and

(ii) May have the limitation removed by accomplishing 25 hours of supervised operating experience as pilot in command under the supervision of a qualified and current pilot in command, in the seat normally occupied by the pilot in command, in a powered-lift of the same type for which the limitation applies.

(j) *Waiver authority.* Unless the Administrator requires certain or all tasks to be performed, the examiner who conducts the practical test for an airline transport pilot certificate may waive any of the tasks for which the Administrator approves waiver authority.

[Doc. No. 25910, 62 FR 16298, Apr. 4, 1997; Amdt. 61-103, 62 FR 40905, July 30, 1997; Amdt. 61-104, 63 FR 20288, Apr. 23, 1998; Amdt. 61-109, 68 FR 54560, Sept. 17, 2003]

**§ 61.158 [Reserved]**

**§ 61.159 Aeronautical experience: Airplane category rating.**

(a) Except as provided in paragraphs (b), (c), and (d) of this section, a person who is applying for an airline transport pilot certificate with an airplane category and class rating must have at least 1,500 hours of total time as a pilot that includes at least:

(1) 500 hours of cross-country flight time.

(2) 100 hours of night flight time.

(3) 75 hours of instrument flight time, in actual or simulated instrument conditions, subject to the following:

(i) Except as provided in paragraph (a)(3)(ii) of this section, an applicant may not receive credit for more than a total of 25 hours of simulated instrument time in a flight simulator or flight training device.

(ii) A maximum of 50 hours of training in a flight simulator or flight training device may be credited toward the instrument flight time requirements of paragraph (a)(3) of this section if the training was accomplished in a course conducted by a training center certificated under part 142 of this chapter.

(iii) Training in a flight simulator or flight training device must be accomplished in a flight simulator or flight training device, representing an airplane.

(4) 250 hours of flight time in an airplane as a pilot in command, or as second in command performing the duties of pilot in command while under the supervision of a pilot in command, or any combination thereof, which includes at least—

(i) 100 hours of cross-country flight time; and

(ii) 25 hours of night flight time.

(5) Not more than 100 hours of the total aeronautical experience requirements of paragraph (a) of this section may be obtained in a flight simulator or flight training device that represents an airplane, provided the aeronautical experience was obtained in an approved course conducted by a training center certificated under part 142 of this chapter.

(b) A person who has performed at least 20 night takeoffs and landings to a full stop may substitute each additional night takeoff and landing to a full stop for 1 hour of night flight time to satisfy the requirements of paragraph (a)(2) of this section; however, not more than 25 hours of night flight time may be credited in this manner.

(c) A commercial pilot may credit the following second-in-command flight time or flight-engineer flight time toward the 1,500 hours of total time as a pilot required by paragraph (a) of this section:

(1) Second-in-command time, provided the time is acquired in an airplane—

(i) Required to have more than one pilot flight crewmember by the airplane's flight manual, type certificate, or the regulations under which the flight is being conducted;

(ii) Engaged in operations under subpart K of part 91, part 121, or part 135 of this chapter for which a second in command is required; or

(iii) That is required by the operating rules of this chapter to have more than one pilot flight crewmember.

(2) Flight-engineer time, provided the time—

(i) Is acquired in an airplane required to have a flight engineer by the airplane's flight manual or type certificate;

(ii) Is acquired while engaged in operations under part 121 of this chapter for which a flight engineer is required;

(iii) Is acquired while the person is participating in a pilot training program approved under part 121 of this chapter; and

(iv) Does not exceed more than 1 hour for each 3 hours of flight engineer flight time for a total credited time of no more than 500 hours.

(d) An applicant may be issued an airline transport pilot certificate with