CIVIL AIR REGULATIONS

PART 20
PILOT CERTIFICATES

As amended to February 15, 1944

CIVIL AERONAUTICS BOARD

WASHINGTON, D. C.

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20.0 Classification of pilot certificates.

(a) Aircraft pilot certificates, other than glider or lighter-than-air, are classified in the following ascending grades:

(1) Student pilot certificate.
(2) Private pilot certificate.
(3) Commercial pilot certificate.
(4) Airline transport pilot certificate (provided for in all respects in Part 21).

(b) Glider pilot certificates are classified in the following ascending grades:

(1) Students glider pilot certificate.
(2) Private glider pilot certificate.
(3) Commercial glider pilot certificate.

(c) Lighter-than-air pilot certificates are provided for in all respects in Part 22.

20.00 Special pilot ratings. Special pilot ratings are as follows:

(a) Flight instructor rating.
(b) Instrument rating.

20.1 Pilot certificate requirements.

20.10 Student pilot certificate. To be eligible for a student pilot certificate, an applicant shall comply with the following requirements.

20.100 Age. Applicant shall be at least 16 years of age. If applicant be less than 21 years of age at the time of making application, he shall submit with his application the written consent of either parent, or legal or natural guardian to the issuance of the pilot certificate sought.

20.101 Character. Applicant shall be of good moral character.

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20.102 Citizenship. Applicant shall be:

(a) A citizen of and of unquestionable loyalty to the United States, or

(b) A person who is in sympathy with the objectives of the United States and who is a trustworthy citizen of a friendly foreign government not under the domination of or associated with any government with which the United States is at war.

20.103 Education. If an applicant is unable to read, speak, and understand the English language, appropriate operation limitations may be entered upon his student pilot certificate.

20.104 Physical condition. Applicant shall meet the physical standards of the Third Class prescribed in Part 29.

20.105 Aeronautical knowledge. No requirement is prescribed but, prior to his first solo flight, applicant shall demonstrate thorough familiarity with the provisions of Part 60 dealing with contact flight by satisfactorily accomplishing a written examination on such provisions, and such fact shall be certified to by his instructor.

20.106 Aeronautical experience. No requirement.

20.107 Aeronautical skill. No requirement is prescribed.

20.11 (Unassigned).

20.12 Private pilot certificate. To be eligible for a private pilot certificate an applicant shall comply with the following requirements.

20.120 Age. Same as in § 20.100, except that applicant shall be at least 18 years of age.

20.121 Character. Same as in § 20.101.

20.122 Citizenship. Same as in § 20.102.

20.123 Education. Applicant shall be able to read, speak, and understand the English language. A citizen of Puerto Rico may not be compelled to meet these requirements but in any such case appropriate operation limitations may be entered upon his Airman Rating Record.

20.124 Physical condition. Applicant shall meet the physical standards of the Third Class prescribed in Part 29.

20.125 Aeronautical knowledge. Applicant shall be familiar with and accomplish satisfactorily a written examination covering so much of the provisions of Parts 01, 20, and 60 as are pertinent to his certificate, prevailing weather conditions in the United States as encountered in flying, and the forecasting thereof, the analyzing of weather maps and sequence reports as furnished by the United States Weather Bureau, practical air navigation problems and the use of maps, navigation by terrain (pilotage) and by dead reckoning, including the use of instruments and other aids to navigation in visual contact flying, and the general servicing and operation of aircraft.

20.126 Aeronautical experience. Applicant shall have logged at least 35 hours of solo flight time: *Provided,* That an applicant seeking a rating limited to two-control nonspinnable airplanes with nose wheel type landing gear shall have logged at least 25 hours of solo flight time. As part of the foregoing applicant shall have logged at least 5 hours within the 60 days immediately preceding the date of filing the application, and at least 5 hours of cross-country flying of which at least 3 hours shall be solo, which shall include at least one flight over a course of not less than 50 miles with at least two full-stop landings at different points along the course. Such experience shall be certified to by some person, other than the applicant, having direct knowledge thereof. A graduate of the private pilot course of a certificated flying school will be deemed to have met the above requirements upon presentation of his certificate of graduation within 30 days thereof.*

*Note: The approved private pilot flight course is specified in the pertinent provision of Part 50.

20.127 Aeronautical skill. Applicant shall satisfactorily demonstrate his ability to pilot aircraft in solo flight and, in addition to normal take-offs, turns, and landings, to perform satisfactorily the following maneuvers:

(a) A series of three landings from an altitude not to exceed 1,000 feet, with engine throttled and a 180-degree turn, the aircraft touching the ground in normal landing attitude beyond and within 300 feet of a line or point designated by the examining inspector for the Administrator.

(b) A spiral in each direction of not less than three full turns, in a banked attitude of not less than 60 degrees, with engine throttled.

(c) The following three maneuvers: (1) three shallow figure eights either "on pylon" or "around pylon"; (2) three steep figure eights either "on pylon" or "around pylon"; and (3) one 720-degree power turn in each direction in a banked attitude of at least 60 degrees. During each of these maneuvers the total variation in altitude shall not exceed 200 feet.

(d) A right-hand and a left-hand spin, each of at least one full turn.*

*Note: At his discretion, the examining inspector may ride with the applicant during these maneuvers or may permit a certificated instructor to do so.

(e) Coordination exercises, straight climbs, climbing turns, slips and emergency maneuvers such as simulated forced landings, recovery from stalls entered from both level and steeply banked attitudes, and such other maneuvers as the examining inspector for the Administrator may deem necessary and appropriate to demonstrate the competency of the applicant for the certificate or rating sought.

(f) Under ordinary circumstances, none of the maneuvers provided for in § 20.127 shall be disregarded, but any such maneuver may be modified or eliminated by the examining inspector for the Administrator if such action is appropriate to the special characteristics of the aircraft used in the test. In any such case the applicant shall be limited to the particular makes and models, or general types, of aircraft specified in his Airman Rating Record.

20.129 Military competence. An applicant, who within the preceding sixty days has been on active duty with flying status for a period of not less than six months as a member of the Army, Navy, Marine Corps, or Coast Guard of the United States or the armed service of any government allied with the United States, shall be deemed to have met the aeronautical knowledge, experience and skill requirements of the Civil Air Regulations for the issuance of a pilot certificate of appropriate type and grade:

(a) If he submits to an inspector of the Administrator written proof of an honorable discharge or return to inactive reserve status together with a certificate from the appropriate military officer in charge of flying showing that the applicant was, at the time of separation from the service, on solo flying status as a rated military pilot; and setting forth the pilot rating held by him and the type, class, and horsepower of aircraft he had been found competent to pilot;

(b) If the requirements for the military pilot rating held are at least equivalent to the requirements of the Civil Air Regulations for the type and grade of pilot certificate sought; and

(c) If he passes the written examination on the Civil Air Regulations required of applicants for the type and grade of certificate sought.

20.14 Commercial pilot certificate. To be eligible for a commercial pilot certificate, an applicant shall comply with the following requirements:

20.140 Age. Same as in § 20.120.

20.141 Character. Same as in § 20.101.

20.142 Citizenship. Applicant shall be:

(a) A citizen of and of unquestionable loyalty to the United States, or

(b) A person who is in sympathy with the objectives of the United States and who is a trustworthy citizen of a friendly foreign government not under the domination of or associated with any government with which the United States is at war and which government grants reciprocal commercial pilot privileges to citizens of the United States on equal terms and conditions with citizens of such foreign government, or

(c) A person who is in sympathy with the objectives of the United States and who is a trustworthy citizen of a friendly foreign government not under the domination of, or associated with any government with which the United States is at war. The effectiveness of the certificate issued to such person shall in any event terminate six months after the war and may be terminated by the Administrator at any time without notice. Upon application to the Administrator the war limitation clause may be removed whenever the government of the country of which he is a citizen grants the reciprocity required in paragraph (b) of this section.

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

20.144 Physical condition. Applicant shall meet the physical standards of the Second Class prescribed in Part 29.

20.145 Aeronautical knowledge. Same as in § 20.125 except that the examinations will be more searching and in greater detail. In addition, applicant shall satisfactorily accomplish

a written examination on the theory and the practice of flight and the maintenance of aircraft, and on the maintenance and proper use of aircraft power units in common use.

20.146 Aeronautical experience. Applicant shall have logged at least 200 hours of solo flight time, of which at least 5 hours shall have been logged within the 60 days immediately preceding the date of filing the application. As part of the foregoing, applicant shall have logged at least 10 hours of solo cross-country flying, which shall include at least one flight over a course of not less than 100 miles with at least three full-stop landings at different points on such course. Such experience shall be certified to by some person, other than the applicant, having direct knowledge of the same: *Provided*, That a graduate of a commercial pilot course of a certificated flying school shall be deemed to have met the requirements of this section upon presentation of his certificate of graduation within 30 days thereof.*

*Note: The approved commercial pilot flight course is specified in the pertinent provision of Part 50.

20.147 Aeronautical skill. Same as in § 20.127 except as follows:

(a) In the maneuvers required by § 20.127 (a), the aircraft shall touch the ground within 200 feet beyond the line or point designated.

(b) In each of the maneuvers required by § 20.127 (c) the total variation in altitude shall not exceed 100 feet.

(c) In the spins required by § 20.127 (d), the applicant shall perform a two-turn spin in each direction with an error of not more than plus or minus 10 degrees.

20.149 Military competence. Same as § 20.129.

20.15 Student glider pilot certificate. To be eligible for a student glider pilot certificate, an applicant shall comply with the following requirements: *Provided*, That the holder of a currently effective pilot certificate of student grade or higher may serve as a student glider pilot without holding a student glider pilot certificate.

20.150 Age. Applicant shall be at least 14 years of age. If applicant be less than 21 years of age at the time of making application, he shall submit with his application the written consent of either parent, or legal or natural guardian, to the issuance of the glider pilot certificate sought.

20.151 Character. Applicant shall be of good moral character.

20.152 Citizenship. Same as § 20.102.

20.153 Education. If an applicant is unable to read, speak, and understand the English language, appropriate operation limitations may be entered upon his Airman Rating Record.

20.154 Physical condition. Applicant shall have no physical defect which renders him incompetent to pilot a glider and shall so certify to the best of his knowledge and belief.

20.155 Aeronautical knowledge. No requirements.

20.156 Aeronautical experience. No requirements.

20.157 Aeronautical skill. No requirements.

20.16 Private glider pilot certificate. To be eligible for a private glider pilot certificate an applicant shall comply with the following requirements.

20.160 Age. Same as in § 20.150.

20.161 Character. Same as in § 20.151.

20.162 Citizenship. Same as in § 20.102.

20.163 Education. Applicant shall be able to read, speak, and understand the English language. A citizen of Puerto Rico may not be compelled to meet these requirements, but in any such case appropriate operation limitations may be entered upon his Airman Rating Record.

20.164 Physical condition. Same as in § 20.154.

20.165 Aeronautical knowledge. Applicant shall be familiar with and accomplish satisfactorily a written examination on the provisions of Part 60 dealing with contact flight. This requirement shall not be applicable to an applicant who possesses a currently effective pilot certificate of private grade or higher.

20.166 Aeronautical experience. Applicant shall have completed at least 100 gliding flights, 25 of which shall have each included a 360° turn, and at least 5 of such 25 flights shall have been made within the 60 days preceding the date of filing the application.

20.167 Aeronautical skill. Applicant shall demonstrate his ability to pilot a glider by satisfactorily making at least the following: One flight with a 180° turn and a downwind landing, one flight with a 360° turn to the right and a landing to within 200 feet of a designated mark, and one flight with a 360° turn to the left and a similar landing. If the applicant pos-

sesses a currently effective pilot certificate of private grade or higher, the Administrator may accept as evidence of the above required demonstration of ability, a statement from a commercial glider pilot certifying that the applicant has the aeronautical experience required in § 20.166 and has satisfactorily demonstrated to him the aeronautical skill required by § 20.167.

20.17 Commercial glider pilot certificate. To be eligible for a commercial glider pilot certificate, an applicant shall comply with the following requirements:

20.170 Age. Same as § 20.150, except that applicant shall be at least 18 years of age.

20.171 Character. Same as in § 20.151.

20.172 Citizenship. Same as in § 20.142.

20.173 Education. Same as in § 20.143.

20.174 Physical condition. Same as in § 20.154.

20.175 Aeronautical knowledge. Applicant shall be familiar with and accomplish satisfactorily a written examination on so much of Parts 01, 20, and 60 as are pertinent to his certificate. This requirement shall not apply to an applicant who possesses a currently effective pilot certificate of a private grade or higher.

20.176 Aeronautical experience. Applicant shall have completed at least 250 gliding flights or 200 gliding flights and 5 hours of soaring. At least 100 of such gliding flights shall each have included a 360° turn, and at least 5 of such 100 flights shall have been made within the 60 days preceding the date of filing the application. Applicant shall also have had at least 1 hour of instruction in recovery from stalls and spins in an airplane of not more than 1,500 pounds standard weight by a certificated instructor, evidenced by the signed entry of such instructor in the log-book of the applicant. Any person who is the holder of at least a currently effective private pilot certificate and who shall have completed not less than 100 gliding flights or logged not less than 5 hours of gliding or soaring solo flight time, shall be deemed to have met the requirements of this section.

20.177 Aeronautical skill. Applicant shall demonstrate his ability to pilot a glider by satisfactorily making at least the following: One flight with a 180° turn and a downwind landing, one flight with a 360° turn to the right and a landing to a point not more than 100 feet beyond a designated line, one flight with a 360° turn to the left and a similar landing and two flights including right and left turns in each flight.

20.178 Military competence. An applicant who has successfully completed a glider pilot course, satisfactory to the Administrator, conducted under the supervision of the Army, Navy, Marine Corps, or Coast Guard, upon presentation of satisfactory evidence of completion of such course within 60 days from the date thereof, will be deemed to have met the requirements of §§ 20.175, 20.176, and 20.177.

20.2 (Unassigned.)

20.3 Pilot certificates.

20.30 Application. Application for a pilot certificate shall be made upon the applicable form prescribed and furnished by the Administrator. If an applicant is applying as a graduate of a course of flight instruction approved by the Administrator of Civil Aeronautics, such application shall be accompanied by a recommendation from the applicant's instructor made upon a form prescribed and furnished by the Administrator.

20.31 Duration. A pilot certificate shall be of 60 days' duration and, unless the holder thereof is otherwise notified by the Administrator within such period, it shall continue in effect thereafter until otherwise specified by the Board unless suspended or revoked, or until the holder thereof has applied for and has been issued a new certificate of a different grade to pilot the same type of aircraft.

20.310 Existing certificates. A pilot certificate currently effective on January 1, 1942, shall continue in effect for a period of 60 days subsequent to the date of its issuance and, unless the holder thereof is otherwise notified by the Administrator within such period, shall continue in effect indefinitely thereafter, unless suspended or revoked, or until the holder thereof has applied for and has been issued a new certificate of a different grade to pilot the same type of aircraft: *Provided*, That no limited commercial certificate shall remain effective after May 1, 1942: *Provided further*, That a pilot certificate under suspension on January 1, 1942, shall, after reinstatement, continue in effect in accordance with the provisions of this section applicable to currently effective pilot certificates.

20.32 Expired certificates: special issuance. The holder of any pilot certificate which has expired subsequent to April 1, 1941, upon application to any inspector made within one

year of its expiration, may obtain a permanent certificate of the same or equivalent grade to pilot aircraft of the same type and with the same special ratings theretofore held by such person immediately prior to its expiration by passing a flight test appropriate to his grade of certificate. Such person shall be issued an aircraft rating based on the aircraft in which he passed such flight test.

20.33 Display. A pilot certificate shall be kept in the personal possession of the pilot at all times when piloting aircraft, and shall be presented for inspection upon request of any passenger, of any authorized officer or employee of the Administrator or Board and of any State or municipal official charged with the duty of enforcing local laws or regulations involving Federal compliance.

20.34 Non-transferability. A pilot certificate is not transferable.

20.35 Revocation. No person whose pilot certificate has been revoked shall apply for or be issued a pilot certificate of any grade or rating for a period of one year after the revocation, except as the order of revocation may otherwise provide.

20.36 Surrender. A holder of a pilot certificate shall, upon request, surrender such certificate to any officer or employee of the Administrator if it has been suspended or revoked.

20.37 Airman identification card. An airman identification card shall be a part of a pilot certificate and shall be kept in the personal possession of the pilot at all times when piloting aircraft. Such card shall be issued by the Administrator and contain the pilot's fingerprints, picture, and signature or shall be a document satisfactory to the Administrator issued by the Army, Navy, Marine Corps, or Coast Guard identifying the pilot as a member thereof.

20.38 Qualified foreign pilots. (a) An applicant for a private pilot certificate or an instrument rating, upon a satisfactory showing to the Administrator that he is a member of a military or naval service of a foreign country on flying status, or is a holder of a pilot certificate of competency issued by a foreign country, the privileges of which are not less than those of a private pilot, may be deemed by the Administrator to have met the requirements prescribed in this Part for a private pilot certificate. A person who holds a private pilot certificate issued under this section, and a valid instrument rating issued by the Army, Navy, Marine Corps, or Coast Guard may be deemed by the Administrator to have met the requirements prescribed in this Part for an instrument rating.

(b) The provisions of this Part shall not apply to certificates issued pursuant to this section nor to the holders of such certificates.

(c) Any person issued a private pilot certificate under the provisions of this section, before being eligible to pilot civil aircraft of the United States, shall offer proof satisfactory to the Administrator, or his duly authorized representative, that he is the duly authorized representative of a foreign person or nation contemplating the purchase of aircraft manufactured in the United States, or that he is the duly authorized representative of the competent aeronautical authorities of the foreign nation in which such aircraft will be registered, and such private pilot shall not pilot any civil aircraft of the United States except aircraft which a foreign person or nation contemplates purchasing, and then only in accordance with such terms and conditions as the Administrator may prescribe: *Provided,* That if such certificate authorizes instrument flight, such terms and conditions shall include a requirement that the holder be familiar with the let-down-through procedures for all airports into which he proposes to operate under instrument flight conditions.

20.4 Special rating.

20.40 Provision for issuance. Upon application made on the appropriate form prescribed and furnished by the Administrator, a special rating will be entered on the Airman Rating Record of a pilot who, after inspection and examination, is found by the Administrator to meet the requirements prescribed for such rating in §§ 20.43 and 20.44.

20.41 Application. Same as in § 20.30 applied to a special rating.

20.42 (Unassigned.)

20.43 Flight instructor rating requirements. To be eligible for an instructor rating, an applicant shall comply with the following requirements:

20.430 Age. Same as in § 20.120.

20.431 Aeronautical knowledge. Applicant shall have practical and theoretical knowledge of flight instruction and shall accomplish a satisfactory written and practical examination thereon.

20.432 Aeronautical experience. Applicant shall be possessed of a valid commercial or private pilot certificate: *Provided,* That in the latter case, he meets the requirements of § 20.146.

20.433. Aeronautical skill. Applicant shall satisfactorily accomplish a practical flight test as to his ability to perform with precision and teach properly such fundamental flight maneuvers as are, in the opinion of the Administrator, deemed necessary and appropriate for safe and sound instruction in the safe piloting of aircraft.

20.44 Instrument rating requirements. To be eligible for an instrument rating, an applicant shall comply with the following requirements.

20.440 Aeronautical knowledge. Applicant shall be familiar with the use of such instruments and other navigational aids, both in aircraft and on the ground, as are deemed by the Administrator to be necessary for the navigation of aircraft by instruments, and with meteorology as applied to weather analysis and forecasting, and the applicant shall satisfactorily accomplish a written examination thereon.

20.441 Aeronautical experience. Applicant shall be possessed of a valid private or commercial pilot certificate, and shall have logged at least 200 hours of solo flight time as prescribed in § 20.146, including at least 20 hours of instrument instruction and practice under actual or simulated flight conditions approved by the Administrator: *Provided,* That not less than 10 hours of such 20-hour requirement shall be in actual flight.

20.442 Aeronautical skill. Applicant shall satisfactorily accomplish, solely by instruments, a flight test with respect to the following:

(a) Straight level flight for a given period of time.
(b) Moderately banked 180° and 360° turns in both directions.
(c) Minimum glides and maximum climbs, and approaches to stalled attitudes of flight.
(d) Climbing turns.
(e) Stalls, skids, slips and spirals, and banks in excess of 45°, and recovery from the same.
(f) Such other maneuvers as the examining inspector of the Administrator deems necessary.
(g) A practical demonstration, while in flight or under simulated conditions, of estimating arrival time, taking into account speed, wind, and drift.

20.443 Radio skill. Applicant shall satisfactorily accomplish, solely by instruments, flight test with respect to the following:

(a) Tuning radio.
(b) Orientation.
(c) Following radio range.
(d) Locating cone of silence.
(e) Letting-down-through on the range by the approved instrument approach procedure for the particular airport used in connection with the test.
(f) Such other maneuvers as the examining inspector of the Administrator deems necessary.

20.444 Military instrument competence. An applicant who holds a valid instrument rating issued by the Army, Navy, Marine Corps, or Coast Guard and who holds a commercial pilot certificate may be issued an instrument rating valid only for piloting air carrier aircraft as a second pilot.

20.5 Pilot aircraft rating.

20.50 Aircraft type rating. For purposes of specifying the type of aircraft which the applicant is deemed competent to pilot and for convenience in examining and rating the applicant with respect thereto, aircraft are typed as follows:

(a) Airplane;
(b) Autogiro;
(c) Glider;
(d) Lighter-than-air aircraft.

20.51 Airplane class and horsepower rating.

20.510 Airplane class rating. For purposes of specifying the class of airplane which the applicant is deemed competent to pilot and for convenience in examining and rating the applicant with respect thereto, airplanes are classed as follows:

(a) Single-engine, land;
(b) Single-engine, sea;
(c) Multi-engine, land;
(d) Multi-engine, sea;
(e) Unconventional.

20.511 Horsepower rating. For purposes of specifying the horsepower of airplanes which the applicant is deemed competent to pilot and for convenience in examining and rating the applicant with respect thereto, pilots are rated as follows:

(a) A certificated pilot shall be rated to fly airplanes of 80 or less horsepower if competence has been demonstrated in airplanes certificated for a maximum-except-take-off of 80 or less horsepower.

(b) Except where subsection (a) hereof is applicable, a certificated pilot shall be rated to fly airplanes of a range of horsepower extending from 50 percent less to 50 percent greater than the total maximum-except-take-off horsepower for which the airplanes in which competency was demonstrated were certificated.

(c) A certificated pilot eligible for 2 or more horsepower range ratings shall be rated for one continuous range extending from the lowest to the highest horsepower for which he has qualified.

20.512 Multiple airplane class and horsepower ratings. The horsepower rating shall apply to all airplane class ratings without the necessity of a separate flight test in each combination of such ratings. An applicant who has demonstrated competence in both single and multi-engine airplanes and in both land and sea airplanes may be rated for all airplane classes* except unconventional.

*Note: For example, a pilot may be rated under § 20.510 for single-engine land airplanes and under § 20.511 (a) and (b) for 180 or less horsepower by reason of flight tests in land planes of 50 hp and 120 hp. If he subsequently passes a rating flight test in a multi-engine seaplane of 450 hp, he will be rated under § 20.510 *for single or multi-engine* land or sea airplanes, and therefore, will be eligible to fly single or multi-engine *land or sea* airplanes of 675 or less horsepower.

20.52 Aircraft rating competence. The aircraft which the applicant is deemed competent to pilot will be prescribed on his Airman Rating Record* or certificate by type and, in the case of an airplane, by airplane class and horsepower and, in the case of unconventional airplanes such description as is appropriate to define clearly the competence of the applicant. Competence to pilot aircraft in solo flight shall be demonstrated in aircraft of the type and, in the case of an airplane, the airplane class and horsepower range for which rating is sought. A pilot other than a student pilot, limited by his certificate or Airman Rating Record to two-control non-spinnable airplanes with nose wheel type landing gear shall have logged a minimum of 35 hours of solo flight time of which at least 10 hours shall have been in three-control airplanes of traditional type and he shall demonstrate his ability to pilot competently such airplanes before such limitation may be removed.

*Note: Under § 20.70 no certificated pilot, except a student pilot, may pilot aircraft unless an Airman Rating Record is attached to his certificate. The airman Rating Record is a sheet which will be attached to all pilot certificates, except student certificates, when they are issued and will contain such items as type, class and horsepower ratings, special ratings, and flight area limitations.

20.520 Flight area rating. When limited, the geographical area in which the applicant is deemed competent to pilot the aircraft will be entered upon his Airman Rating Record (see §20.71).

20.521 Special rating. When issued to an applicant, as provided for in §§20.43 and 20.44, any special rating will be entered upon his Airman Rating Record.

20.522 Application to amend. When any change in an Airman Rating Record is desired, the applicant shall file a written request therefor with the Administrator upon a form prescribed and furnished by the Administrator.

20.6 Examinations and tests.

20.60 General. The examinations and tests prescribed in the foregoing regulations (both for pilot certificates and for the ratings issued with respect thereto) will be conducted by an authorized officer or employee of the Administrator or by a properly qualified person designated for the purpose by the Administrator.

20.600 Physical examinations. The appropriate physical examination prescribed for the original issuance of a pilot certificate shall be accomplished before any practical or theoretical test or other examination will be given, and shall be completed within the 12-month period immediately preceding the giving of such tests or examinations.

20.61 Aircraft used in tests. The applicant shall furnish a certified aircraft for any flight test involved. Each such aircraft, used in any test for a pilot certificate above the grade of student pilot, shall be equipped with dual controls and shall accommodate the applicant, the inspector, and parachutes for both. Aircraft having only one elevator and aileron control for two seats, or any arrangement whereby all flight and engine controls cannot be handled in a normal or conventional manner from either seat are not considered as having dual controls

for the purpose of flight tests for pilot certificate or ratings. Each such aircraft shall have adequate vision for the pilot and check pilot.

20.62 Inspection. The applicant for a pilot certificate or rating shall offer full cooperation with respect to any inspection or examination which may be made of such applicant upon proper request by any authorized representative of the Administrator prior or subsequent to the issuance of a pilot certificate or rating.

20.63 Standard of performance. Every practical and theoretical examination and test shall be accomplished to the satisfaction of the Administrator and the passing grade in the subject of examination and test shall be at least 70 percent. Each flight maneuver will be graded separately. Other examinations will each be graded as a whole.

20.64 Time and place. All examinations and tests will be held at such times and places as the Administrator or his representative may designate.

20.65 Reexamination.

20.650 Pilot certificates. The following rules will govern application for reexamination for pilot certificates:

(a) An applicant for a private or commercial pilot certificate who has failed to accomplish successfully any prescribed theoretical examination may apply for reexamination at any time after the expiration of 30 days from the date of such failure or after he has received not less than 5 hours instruction on each subject of the examination failed from a certificated ground instructor rated for such subject and presents a statement from such instructor showing the amount of instruction given and stating that he deems the applicant qualified to pass the required examination in such subject.

(b) An applicant for a private or commercial pilot certificate who has failed to accomplish successfully any prescribed practical examination or test may apply for reexamination only after he has logged at least 6 additional hours of flight time, including at least 3 hours of dual instruction time with a certificated instructor and his instructor shall have certified in the applicant's log-book that he deems such applicant qualified for the certificate sought. Upon meeting the requirements set forth in this subsection (b), an applicant for reexamination shall be deemed to have met the 5 hours solo flight time requirements set forth in §§ 20.126 and 20.146.

(c) An applicant for a private glider or commercial glider pilot certificate who has failed to accomplish successfully any prescribed theoretical examination may apply for reexamination at any time after the expiration of 30 days from the date of such failure or after he has received not less than 5 hours instruction on each subject of the examination failed from a certificated ground instructor rated for such subject and presents a statement from such instructor showing the amount of instruction given and stating that he deems the applicant qualified to pass the required examination in such subject.

(d) An applicant for a private glider or commercial glider pilot certificate who has failed to accomplish successfully any prescribed practical examination or test may apply for reexamination only after he has made at least 20 additional gliding flights.

20.651 Special ratings. The following rules shall govern application for reexamination for special ratings:

(a) An applicant who has failed any prescribed theoretical examination may apply for reexamination at any time after the expiration of thirty days from the date of such failure, or, after he has received not less than five hours instruction on each subject of the examination failed from whichever one of the following persons is appropriate:

(1) A certificated flight instructor.

(2) A certificated ground instructor, rated for the subject.

(3) A person qualified to instruct in the theory of instrument flight. Applicant shall verify such instruction by presenting a statement from the instructor showing the amount of instruction given and stating that he deems the applicant qualified to pass the required examination in such subject.

(b) An applicant who has failed the flight test for a special rating may apply for reexamination thereon only after he has logged at least six additional hours of flight instruction and his instructor shall have certified in the applicant's log-book that he deems such applicant qualified to pass the required flight test; such instruction shall be given if for a flight instructor rating by a certificated flight instructor and if for an instrument rating by a pilot holding the appropriate aircraft rating and an instrument rating.

20.7 Pilot regulations.

20.70 Airman Rating Record requirements. No certificated pilot, except a student pilot, shall operate any aircraft unless there is attached to his pilot certificate the appropriate Airman Rating Record, prescribed and issued by the Administrator, nor shall any certificated pilot, including a student pilot, operate any aircraft otherwise than in accordance with the rating limitations prescribed by the Administrator and set forth in his pilot certificate of Airman Rating Record: *Provided*, That

(a) the holder of a valid commercial pilot certificate may pilot airplanes as a second pilot without an airplane class and horsepower rating for the particular airplane operated;

(b) the holder of a valid private or commercial pilot certificate may pilot airplanes of a class or within a horsepower range other than that specified in his Airman Rating Record, but shall not carry any person other than a certificated instructor rated for the airplane operated or any member of the crew thereof.*

*Note: This section does not permit a person who by reason of § 29.2 or § 20.127 (f) has been limited to the operation of a particular make or model of aircraft or a general type of aircraft to operate other makes or models or other general types.

(c) The holder of a valid private or commercial pilot certificate limited by his Airman Rating Record to the operation of aircraft incapable of spinning may pilot spinnable aircraft in accordance with subsection (b) of this section only after receiving dual instruction in spins.

(d) The holder of a valid private or commercial pilot certificate limited by his Airman Rating Record to the operation of two-control non-spinnable airplanes with nose wheel type landing gear may pilot three-control airplanes of any class or horsepower in accordance with subsection (b) of this section only after receiving 4 hours of dual instruction in three-control airplanes.

20.71 Flight area limitations. (a) No student pilot shall make a solo flight outside of an area, in the vicinity of the operating base of his instructor, prescribed in writing by the person directly in charge of the landing area on which the instructor's operating base is located and approved by the local inspector of the Administrator, unless such student pilot has been certified for cross-country solo flights.

(b) No student pilot shall be certified for cross-country solo flight until after he shall have logged 8 hours solo flight time and his instructor shall have certified on his student pilot certificate, in the space provided therefor, that he deems the student competent to make such flight. No student pilot certified for cross-country solo flights shall make a solo flight outside of the area, within a 150-mile radius of the operating base of his instructor, prescribed in writing by the person directly in charge of the landing area on which the instructor's operating base is located and approved by the local inspector of the Administrator: *Provided*, That a certificated flying school may prescribe in writing an area within a 250-mile radius of its operating base and, upon approval of said area by the local inspector of the Administrator, a student pilot enrolled in the flight curriculum of said school and certified for cross-country solo flights may fly solo within such area at the direction of said flying school.

(c) No person shall operate an aircraft in solo flight outside the flight areas specified in his pilot certificate or Airman Rating Record.

(d) Flight area designations submitted to the local inspector under subsections (a) and (b) hereof shall be deemed approved by him unless the person submitting the designations is otherwise notified by the inspector within 15 days from the date of submission.

20.72 Flight limitations.

20.720 Student. A student pilot shall not operate aircraft for hire or carry anyone other than a certificated instructor. A student pilot who has not flown an aircraft within 90 days shall not operate aircraft in solo flight until he has passed a satisfactory flight check given by a certificated instructor and that fact has been endorsed on his student pilot certificate.

20.7200 Requirement for first solo.

(a) Three-control airplanes of traditional type. No first solo flight shall be made by a student pilot in a three-control airplane of traditional type until he shall have had a minimum of 8 hours of dual instruction in such aircraft, including recovery from spins and stalls.

(b) Non-spinnable three-control airplanes. No first solo flight shall be made by a student pilot in a non-spinnable three-control airplane until he shall have had a minimum of 8 hours of dual instruction in three-control airplanes. Instruction in spins is not required.

(c) Two-control non-spinnable airplanes with nose wheel type landing gear. No first solo flight shall be made by a student pilot in a two-control non-spinnable airplane with nose wheel type landing gear until he shall have had a minimum of 5 hours of dual instruction in such airplanes.

In addition to meeting the requirements contained in (a), (b) or (c) above a student pilot shall not make a first solo flight unless his instructor deems him competent to make such flight and so certifies on the student pilot certificate in the space provided therefor.

20.7201 Solo flight restrictions after first solo. Upon completion of a student pilot's first solo flight his instructor shall make a notation to that effect on the student pilot certificate together with a statement of the date, the type, and in the case of an airplane, the airplane class and horsepower range of the aircraft so flown. If such solo flight is made either in a two-control non-spinnable airplane with nose wheel type landing gear or in a three-control airplane determined to be characteristically incapable of spinning, the instructor shall also make an appropriate notation to that effect. Thereafter—

(a) If such first solo flight was made in a three-control airplane of traditional type the student shall not solo aircraft of a different type, class or horsepower range until such time as his instructor shall deem him competent to fly such other aircraft solo, and shall have made a notation to that effect on his certificate, together with the date, type, and in the case of an airplane, the class and horsepower range.

(b) If such first solo flight was made in a three-control airplane determined to be characteristically incapable of spinning, such pilot shall be subject to the limitations of paragraph (a) above, and in addition he shall not solo an airplane characteristically capable of spinning until after he shall have received dual instruction in spins, and a notation to that effect has been made on his Airman Rating Record.

(c) If such first solo flight was made in a two-control non-spinnable airplane with nose wheel type landing gear such pilot shall be subject to the limitations of paragraphs (a) and (b) above, and in addition, prior to flying solo a three-control airplane, shall have received a minimum of 4 hours of dual instruction in such airplanes.

20.721 Private pilot. A person possessed of a valid private pilot certificate shall not pilot for hire any aircraft carrying any person or property; nor pilot any aircraft in furtherance of a business except as an incident to his personal transportation: *Provided*, That this section shall not prevent such pilot from receiving remuneration by direction of the Government of the United States, or of any State or political subdivision thereof, for participation in official missions of the Civil Air Patrol or of any other recognized semi-military organization, while a member of such organization.

20.722 Commercial pilot. A person possessed of a valid commercial pilot certificate shall not pilot any aircraft carrying any person or property in scheduled air transportation service unless also possessed of a valid instrument rating.

20.723 Glider pilot. No person shall pilot a glider for hire unless possessed of a valid commercial glider pilot certificate.

20.724 Dual control airplanes. Airplanes equipped with fully or partially functioning dual controls shall not be operated with both control seats occupied unless one of such control seats is occupied (a) by a person possessed of at least a valid commercial pilot certificate, or (b) by a person possessed of at least a valid private pilot certificate and a valid instructor rating, or (c) by a person possessed of at least a valid private pilot certificate and whose Airman Rating Record has been endorsed by a duly authorized representative of the Administrator to the effect that such person has logged at least 200 hours of solo flight time and is competent to exercise the privilege granted by this section: *Provided*, That two persons may occupy such control seats if each such person is possessed of at least a valid private pilot certificate: *Provided further*, That where more than one passenger is carried for hire neither control seat shall be occupied by any person other than a properly certificated commercial pilot.

20.725 Simulated instrument flight. No person shall operate an aircraft under simulated instrument flight conditions unless:

(a) fully functioning dual controls are installed in the aircraft;

(b) a properly certificated pilot occupies the other control seat as safety pilot; and

(c) such safety pilot at all times has adequate vision from the aircraft: *Provided*, That if the vision of the safety pilot forward or to either side of the aircraft is obstructed, a competent observer must occupy such a position in the aircraft that his field of vision adequately supplements that of the safety pilot.

(d) Notwithstanding provisions of (a), (b), and (c) of this section, a member of the Armed Forces of the United States may operate single-place aircraft in simulated instrument flight: *Provided*, such flights shall be made only during the hours of daylight, in accordance with contact flight rules, *and provided further*, each such aircraft is accompanied by and under the continuous control by radio of a competent observer in an escort aircraft.

20.726 Permission to use aircraft. Neither the owner nor anyone having custody of an aircraft shall permit any person to operate such aircraft unless the owner or the one having custody of the aircraft has ascertained that such person is the holder of an appropriate currently effective pilot certificate by actual examination of the certificate and by requiring such person to identify himself as the person referred to in the certificate.

20.727 Recent experience requirements.

20.7270 Solo flight. A certificated pilot who within the preceding 6 calendar months has not made and logged at least 5 take-offs and 5 landings to a full stop in an aircraft of the type and class proposed to be flown shall pass a flight check in such aircraft before otherwise piloting civil aircraft of that type and class. Such check flight shall be given by a certificated pilot of private grade or higher qualified according to § 20.7271 in an aircraft of the same type and class as that of the aircraft proposed to be flown.

20.7271 Passenger flight. A certificated pilot shall not pilot any civil aircraft carrying any other person (other than a certificated pilot of at least private grade or higher, rated for the aircraft operated and possessed of the recent experience required by this section or any member of the crew thereof) unless, within the preceding 3 calendar months, he shall have made and logged at least 5 take-offs and 5 landings to a full stop in an aircraft of the same type and class as that of the aircraft in which any such person is carried: *Provided*, That a pilot while flying in schedule air transportation shall be governed as to recent experience for passenger flight by the provisions of Part 61.

20.7272 Instructional flight. No flight instructor shall give flying instruction in civil aircraft to any other person unless within the preceding 12 calendar months he shall either

(a) while possessed of a valid instructor's rating have given at least 10 hours of flight instruction in aircraft for which he held at the time of giving such instruction a valid aircraft rating, or

(b) have passed such practical flight test as the Administrator deems necessary and appropriate to demonstrate continued proficiency for giving flight instruction.

20.7273 Night flight. No person shall take off or land a civil aircraft carrying passengers during the period from one hour after sunset to one hour before sunrise, unless he has made and logged at least 5 take-offs and 5 landings to a full stop during such period within the preceding 3 calendar months.

20.7274 Instrument flight. A certificated pilot who within the preceding 6 calendar months has not flown and logged at least 2 hours of flight time solely by reference to instruments under either actual or properly simulated instrument flight conditions, shall not pilot an aircraft under such conditions until he has flown and logged at least 2 hours of such flight time accompanied by a certificated pilot of at least private grade holding an appropriate type, class, and horsepower rating for the aircraft, and authorized to operate aircraft under instrument conditions.

20.73 Periodic physical examination. (a) A certificated pilot shall not pilot an aircraft in flight unless within the preceding 12 calendar months he has met the physical requirements for original issuance of his certificate by passing an examination, given by an authorized medical examiner of the Administrator.

(b) In lieu of the physical examination conducted by an authorized medical examiner of the Administrator, a certificate from the appropriate officer in charge of flying in the Army, Navy, Marine Corps, or Coast Guard certifying that the applicant is on pilot status solo in such service will be accepted as evidence of the physical fitness required for the issuance of any medical certificate provided for in this Part: *Provided*, That the physical qualifications required for such pilot status are not less than those required by these regulations for the grade of pilot certificate applied for.

20.730 Medical certificate. A medical certificate issued by an authorized medical examiner of the Administrator or other evidence satisfactory to the Administrator that the pilot has met the appropriate physical requirements prescribed in this Part shall be carried by such pilot while piloting aircraft.

20.731 Correcting lenses. A certificated pilot who, at his most recent periodic physical examination, met the physical qualifications for original issuance of his grade of certificate in accordance with § 20.73 only by the use of correcting lenses shall not pilot aircraft in flight without wearing such correcting lenses, and a statement to that effect shall be endorsed by the medical examiner on his medical certificate.

20.74 Pilot experience report. At the time of each physical examination the pilot shall furnish to the medical examiner to be forwarded by him to the Administrator a report setting forth the amount and type of his aeronautical experience and such other pertinent data as the Administrator may require, since his last preceding medical examination.

20.75 Operation during physical deficiency. A certificated pilot shall not operate any aircraft during the period of any known physical deficiency which would render him during that period unable to meet the physical requirements with which he complied in order to secure his certificate: *Provided, however,* That the holder of at least a private pilot certificate may operate an aircraft otherwise than for hire during the period of a temporary physical deficiency if the aircraft is equipped with fully functioning dual controls and the other control seat is occupied by another pilot who holds at least a private pilot certificate.

20.76 Log-books. The following rules shall govern pilot log-books.

20.760 General. Every certificated pilot and every person receiving flying instruction shall keep an accurate record of his flying time in a log-book in which the entries with respect to solo flying time have been certified to by him and the entries with respect to dual instruction have been certified to by his certificated instructor. Log-books shall be bound records and the entries shall be accurate, legible, in ink or indelible pencil, and so arranged as to facilitate easy reference thereto.

20.761 Contents. The log-book shall contain the date of flight, the make and model of aircraft flown, its type and, in the case of an airplane, its airplane class and horsepower, the aircraft identification mark, a statement of solo, dual instruction, instrument and night flying time, the duration of the flight, the points between which such flight was made, and, in addition, when any flight results in serious damage to the aircraft, a notation to this effect. Flying instruction time shall be logged in the same manner and, in addition, the instructor shall make complete entries in the log-book of his student showing the nature of each maneuver in which instruction was given and the time spent thereon. The instructor shall attest each such entry with his initials, pilot certificate number and pertinent rating. A log-book shall be presented for inspection, upon request and reasonable notice, to any authorized representative of the Administrator or Board or State or municipal officer enforcing local regulations or laws involving Federal compliance.

20.762 Logging of pilot flight time.

(a) **Student pilot.** The holder of a student pilot certificate may log as solo flight time only that time during which he is the sole occupant of an aircraft in flight.

(b) **Pilots of private grade or higher.** The holder of a pilot certificate, other than a student pilot certificate, may log as solo flight time that portion of any flight during which he is the sole manipulator of the controls: *Provided,* That he may log as solo flight time only 50 percent of any flight time during which a certificated instructor or a certificated airline transport pilot is in the aircraft serving as an instructor for the purpose of reviewing or increasing such pilot's skill; and *Provided further,* That the holder of a commercial pilot certificate while serving in scheduled air transportation shall log his flight time as provided in Part 61.

(c) **Flight instructor.** A certificated instructor may log as solo flight time all that flight time during which he is serving as an instructor for the purpose of reviewing or increasing another pilot's skill.

(d) **Instrument.** Instrument flight time may be logged as such only when the aircraft is flown solely by reference to instruments whether under actual or properly simulated flight conditions. (Over-the-top flying shall not be logged as instrument flight time.)

20.8 Flight instruction. The following rules shall govern the giving of flight instruction:

20.80 Rating required. No person shall give flying instruction to any other person unless possessed of at least a valid commercial pilot certificate and a valid flight instructor rating, or, in case of instruction of glider students, unless possessed of a valid commercial glider pilot certificate: *Provided, however,* That the holder of a valid private pilot certificate and a valid instructor rating may give flying instruction not for hire. *Provided further,* That nothing herein contained shall be construed to limit the instruction by one airline transport pilot of other pilots in air transportation service as provided in Part 21 of the Civil Air Regulations.

20.81 Dual control. No flight instruction shall be given unless the aircraft in which the instruction is given is equipped with fully functioning dual controls, as set forth in § 20.61, except in aircraft manufactured prior to January 1, 1939.

20.82 Time limitations. No flight instructor shall give more than 36 hours of dual flying instruction or check time in any 7-day period.

20.83 Instrument instruction. Instrument instruction in flight shall not be deemed flying instruction within the meaning of § 20.8, but no person shall give instrument instruction in flight unless possessed of a valid instrument rating.

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