CIVIL AIR REGULATIONS

PART 20

PILOT CERTIFICATES

Effective July 1, 1945

CIVIL AERONAUTICS BOARD

WASHINGTON, D. C.

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Sec.
20.0 Student pilot certificate.
20.1 Pilot certificate and ratings.
20.2 Private pilot rating.
20.3 Commercial pilot rating.
20.4 Aircraft, flight instructor, and instrument ratings.
20.5 Certification rules.
20.6 Examinations and tests.

Airline transport pilot certificates and lighter-than-air pilot certificates are provided for in Parts 21 and 22.

20.0 STUDENT PILOT CERTIFICATE

20.00 Issuance. A student pilot certificate will be issued by the Administrator to an applicant who meets the following applicable requirements.

20.01 Age.

(a) **Powered aircraft.** 16 years.

(b) **Gliders.** 14 years.

If an applicant is 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.

20.02 Citizenship. Applicant shall be a loyal citizen of the United States or of a friendly foreign government not under the domination of or associated with any government with which the United States is at war. (Wartime regulation to be revised when conditions permit.)

20.03 Education. Applicant shall be able to read, write, speak, and understand the English language or an appropriate operation limitation will be placed on the student pilot certificate.

20.04 Physical standards.

(a) **Powered aircraft.** Applicant shall meet the physical standards of the third class prescribed in Part 29.

(b) **Glider.** Applicant shall have no known physical defect which renders him incompetent to pilot a glider, and shall so certify.

20.05 Aeronautical knowledge. None.

20.1 PILOT CERTIFICATE AND RATINGS

20.10 Issuance. A pilot certificate will be issued to an applicant who meets the minimum requirements prescribed herein. Private and commercial pilot, aircraft type and class, instrument, flight instructor, and any necessary special ratings for which the pilot has been found qualified will be issued in connection with a pilot certificate.

20.11 Graduates of certificated flying schools. A graduate of a certificated flying school will be deemed to have met the aeronautical experience requirements of this Part, if he presents an appropriate certificate of graduation within 60 days after graduation date.

20.2 PRIVATE PILOT RATING

20.20 Age.

(a) **Powered aircraft.** 17 years.

(b) **Glider.** 14 years.

20.21 Citizenship. Applicant shall be a loyal citizen of the United States or of a friendly foreign government not under the domination of or associated with any government with which the United States is at war. (Wartime regulation to be revised when conditions permit.)

20.22 Education. Applicant shall be able to read, write, speak, and understand the English language or an appropriate operation limitation will be placed on the pilot certificate.

20.23 Physical standards.

(a) Powered aircraft. Applicant shall meet the physical standards of the third class prescribed in Part 29.

(b) Glider. Applicant shall have no known physical defect which renders him incompetent to pilot a glider, and shall so certify.

20.24 Aeronautical knowledge. Applicant for a powered aircraft or glider rating shall have passed the written examination prescribed in §43.52 (b) within the preceding 24 calendar months.

20.25 Aeronautical experience.

(a) Powered aircraft. Applicant shall have had at least 10 hours of dual flight time given by a rated flight instructor of which at least 2 hours shall have been after solo, including instruction in recovery from spins, and 30 hours of solo flight time; or 7 hours of dual flight time given by a rated flight instructor of which at least 2 hours shall have been after solo and 20 hours of solo flight time in nonspinnable aircraft. As part of the foregoing requirements the applicant shall have had at least 3 hours of solo cross-country flying including one flight to a point not less than 50 miles distant from the point of departure with at least 2-full stop landings at different points along the course.

Not more than 50 per cent of the above required solo flight time may be had in gliders, provided that the applicant is the holder of a pilot certificate with a private or commercial glider rating.

(b) Glider. Applicant for a glider rating shall have had at least 100 gliding flights, 25 of which must have included a 360° turn.

20.26 Aeronautical skill. Applicant shall competently perform the following maneuvers:

(a) Powered aircraft.

(1) A series of 3 landings from an altitude not to exceed 1,000 feet with engine throttled and a 180° change in direction, the aircraft touching the ground in normal landing attitude beyond and within 300 feet of a designated line or point. At least one landing must be accomplished from a forward slip;

(2) three moderately banked around-pylon figure eights, variation in altitude not to exceed 200 feet;

(3) a 720° power turn in each direction in a banked attitude of more than 45°, variation in altitude not to exceed 200 feet;

(4) climbing and gliding turns at minimum controllable speeds;

(5) recovery from power-on and power-off stalls entered from straight flight and turns;

(6) recovery from a right and left spin of at least one turn accompanied by an inspector or a flight examiner.

Any of the above required maneuvers may be modified or eliminated if such action is appropriate to the characteristics of the aircraft used in the test and appropriate operation limitations are entered on the rating record.

(b) Glider.

(1) One flight with a 180° turn and down-wind landing;

(2) two flights with a 360° turn to right and left, respectively, landing each time at a point beyond and within 200 feet of a designated line or point;

(3) two flights with right and left turns in each flight.

(c) Aircraft limitation. When the applicant's medical certificate shows a structural defect or limitation, such additional maneuvers and tests as may be necessary to demonstrate the competency of the applicant to pilot aircraft safely shall be required. A pilot certificate issued under these circumstances may be limited to the operation of a particular aircraft or model of aircraft and to the type of operation.

20.3 COMMERCIAL PILOT RATING

20.30 Age. 18 years.

20.31 Citizenship. Applicant shall be a loyal citizen of the United States or 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. A certificate may be issued to an applicant who is a citizen of a friendly foreign government which does not grant reciprocal privileges, but the effectiveness of such certificate shall in any event terminate 6 months after the war and may be terminated by the Administrator at any time without notice.

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

20.33 Physical standards.

(a) **Powered aircraft.** Applicant for a powered aircraft rating shall meet the physical standards of the second class prescribed in Part 29.

(b) **Glider.** Applicant shall have no known physical defect which renders him incompetent to pilot a glider, and shall so certify.

20.34 Aeronautical knowledge.

(a) **Powered aircraft.** Applicant shall pass a written examination covering such of the provisions of Parts 43 and 60 as are pertinent; meteorology as applied to the recognition of weather conditions while flying, the analyzing of weather maps and sequence reports furnished by the United States Weather Bureau; practical air navigation problems including the use of maps, navigation by terrain and dead reckoning, and the use of navigational instruments and aids; the theory and practice of flight; the maintenance of aircraft and the maintenance and use of aircraft power plants in common use.

(b) **Glider.** Applicant shall pass a written examination on such of the provisions of Parts 43 and 60 as are pertinent or hold a powered aircraft rating.

20.35 Aeronautical experience.

(a) **Powered aircraft.** Applicant shall have had at least 200 hours of solo flight time of which at least 5 hours must have been had within 60 days immediately preceding the date of application. As part of the foregoing requirements the applicant shall have had at least 20 hours of solo cross-country flying, including at least one flight to a point not less than 150 miles distant from the point of departure with at least 3 full-stop landings at different points on the course.

Not more than 25 per cent of the above required solo flight time may be had in gliders, provided that the applicant is the holder of a pilot certificate with a private or commercial glider rating.

(b) **Glider.** Applicant shall have had at least 250 gliding flights or 150 gliding flights and 5 hours of soaring. At least 5 of such flights must have been made within 60 days preceding the date of application. Applicant also shall have had at least one hour of flight instruction in recovery from stalls and spins. An applicant who is the holder of a private or commercial rating for powered aircraft who has had not less then 100 gliding flights or 50 gliding flights and 5 hours of solo soaring time will be deemed to have met the requirements of this section.

20.36 Aeronautical skill. Applicant shall competently perform the following maneuvers:

(a) **Powered aircraft.**

(*1*) A series of 3 landings from an altitude not to exceed 1,000 feet with engine throttled and a 180° change in direction, the aircraft touching the ground in normal landing attitude beyond and within 200 feet of a designated line or point. At least one landing shall be accomplished from a forward slip;

(*2*) a spiral in each direction of not less than 3 full turns in a banked attitude of not less than 60°, with engine throttled;

(*3*) three shallow on-pylon figure eights, 3 steep on-pylon figure eights, and one 720° power turn in each direction in a banked attitude of at least 60°. During each of these maneuvers the total variation in altitude shall not exceed 100 feet;

(*4*) a two-turn spin in each direction starting the recovery with an error of not more than plus or minus 10°;

(*5*) straight climbs, climbing turns, slips, maneuvers at minimum controllable speeds, and emergency maneuvers such as simulated forced landings and recovery from stalls entered from both level and steeply banked attitudes.

Any of the above required maneuvers may be modified or eliminated if such action is

appropriate to the characteristics of the aircraft used in the test and appropriate operation limitations are entered on the rating record.

(b) **Glider.**

(1) One flight with a 180° turn and down-wind landing;

(2) two flights with a 360° turn to right and left, respectively, landing each time beyond and within 100 feet of a designated line or point;

(3) two flights with right and left turns in each flight.

20.4 AIRCRAFT, FLIGHT INSTRUCTOR, AND INSTRUMENT RATINGS

20.40 Aircraft rating competence. Applicant for additional aircraft ratings subsequent to the original issuance of a pilot certificate shall demonstrate competence appropriate to the pilot rating held in aircraft of the type and class for which a rating is sought. A pilot limited by his rating to nonspinnable airplanes, when applying for removal of this restriction, shall have had at least 30 solo hours, and shall have had at least 3 hours of certified dual instruction on spinnable airplanes. A pilot limited by his rating to gliders, when applying for powered aircraft ratings, shall meet the aeronautical knowledge, experience, and skill requirements for powered aircraft applicable to the pilot rating sought.

20.400 Aircraft type rating. The following aircraft type ratings are issued:

(a) airplane,
(b) glider,
(c) autogiro,
(d) helicopter.

20.401 Airplane class ratings. The following airplane class ratings are issued:

(a) single engine land,
(b) single engine sea,
(c) multiengine land,
(d) multiengine sea.

20.41 Flight instructor rating for powered aircraft.

20.410 Age. 18 years.

20.411 Knowledge. Applicant shall pass a theoretical and practical examination on his competency to instruct students in flight.

20.412 Experience. Applicant shall be a commercial pilot or a private pilot who meets the requirements of § 20.35 (a).

20.413 Skill. Applicant shall demonstrate his ability to perform with precision and to teach such flight maneuvers as are necessary and appropriate for instruction in the safe piloting of aircraft.

20.42 Instrument rating.

20.420 Knowledge. Applicant shall pass a written examination demonstrating his familiarity with the use of such instruments and other navigational aids, both in the aircraft and on the ground, as are necessary for the navigation of aircraft by instruments. In addition, an applicant who is a private pilot shall meet the knowledge requirements of § 20.34 (a) except those pertinent to the maintenance of aircraft and aircraft engines.

20.421 Experience. Applicant shall be a commercial pilot or private pilot who meets the requirements of § 20.35 (a). As part of the experience requirements he shall have had at least 40 hours of instrument time under actual or simulated instrument flight conditions, not less than 20 hours of which must have been in actual flight.

20.422 Aeronautical skill. Applicant shall competently perform the following maneuvers solely by reference to instruments:

(a) straight and level flight.
(b) moderately banked 180° and 360° turns in both directions,
(c) straight and level flight at minimum safe speeds, minimum glides, maximum climbs, and approaches to stalled attitudes of flight,
(d) climbing turns,
(e) stalls, skids, slips, spirals, banks in excess of 45°, and recovery from unusual positions,
(f) a demonstration of estimating arrival time, taking into account speed, wind, and drift.

20.423 Radio skill. Applicant shall demonstrate his competence while flying solely by reference to instruments with respect of the following items:

(a) tuning radio,
(b) orientation,
(c) operation along a radio range leg,
(d) locating cone of silence,
(e) letdown using approved instrument approach procedure for the particular airport.

20.424 Modified tests. Any of the maneuvers or procedures required in §§ 20.422 and 20.423 may be modified or eliminated if such action is appropriate to the characteristics of the aircraft or equipment used in the test and appropriate operation limitations are noted.

20.5 CERTIFICATION RULES

20.50 Application. Application for a student pilot certificate, pilot certificate, or any rating shall be made on a form furnished by the Administrator.

20.51 Duration. A student pilot certificate or a pilot certificate with a private or commercial rating shall expire 24 calendar months* after the month of issuance. However, the Administrator or his authorized representative may issue a temporary pilot certificate with a private or commercial rating for a period of not to exceed 90 days subject to the terms and conditions specified therein by the Administrator.

20.52 Renewals. Application for renewal of pilot certificates with private or commercial ratings shall be made on a form furnished by the Administrator and may be mailed or presented to any inspector within 60 days prior to the month of expiration.

20.53 Reinstatement. An expired pilot certificate with private or commercial ratings may be reinstated upon application and presentation of a statement from a rated flight instructor that he flight checked the applicant and found him competent to exercise the privileges of a holder of a pilot certificate and any appropriate aircraft type and class ratings previously held.

20.54 Surrender. Any pilot shall, upon request, deliver his certificate or rating to the Administrator, if it has been suspended or revoked.

20.55 Exchange of certificates. An existing private or commercial pilot certificate which was effective on or after January 1, 1942, may be exchanged at any time prior to July 1, 1947, for a pilot certificate and appropriate ratings as provided for in this Part.

20.56 Military competence.

20.560 Pilot certificate. Applicant who is, or was within the preceding 12 calendar months, a member of the armed forces of the United States and has served on solo flying status for a period of 6 consecutive months will be deemed to have met the aeronautical knowledge, experience, and skill rerquirements of the Civil Air Regulations for the issuance of a pilot certificate with ratings appropriate to the military pilot rating held: *Provided*, That he passes a written examination on Parts 43 and 60 of the Civil Air Regulations and submits reliable documentary evidence showing:

(a) that he is a member of the armed forces or that he has been honorably discharged or returned to inactive status.
(b) that he is, or was, a rated military pilot, and
(c) his total solo flying time.

20.561 Ratings. Ratings will be issued in connection with such a pilot certificate or in connection with an effective private or commercial pilot certificate held if the applicant meets the following requirements:

(a) **Aircraft type and class ratings.** These ratings will be issued to an applicant who presents reliable documentary evidence showing that within the preceding 12 calendar months he has had at least 10 hours of flying time during which he was the sole manipulator of the controls of an aircraft of the type and class for which a rating is sought.

(b) **Instrument rating.** This rating will be issued to an applicant who holds an effective military instrument rating, if the requirements for the issuance of such rating and the privileges authorized by it are not less than the requirements of the Civil Air Regulations for the issuance of an instrument rating and the privileges authorized by such rating.

* *For example, a certificate issued any time in April 1946 will expire on the last day of April 1948.*

20.6 EXAMINATIONS AND TESTS

20.60 General. The prescribed examinations and tests shall be given by a person designated by the Administrator.

20.61 Physical examination. Prior to taking examinations or tests for a rating the applicant for

(**a**) private rating shall have met the appropriate physical requirements prescribed for the issuance of his certificate within the preceding 24 calendar months.

(**b**) commercial rating shall have met the appropriate physical requirements prescribed for the issuance of his certificate within the preceding 12 calendar months.

20.62 Aircraft used in flight tests.

(**a**) **Powered aircraft.** Applicant shall furnish a certificated aircraft which must be equipped with complete dual controls and accommodate the applicant and examiner and parachutes for both. In addition, aircraft used for instrument flight tests shall be equipped as specified in § 43.30 (c).

(**b**) **Glider.** Applicant shall furnish a certificated glider.

20.63 Time and place. All examinations and tests will be held at such times and places as the Administrator may designate.

20.64 Reapplication after failure. Applicants who have failed in any examination will be subject to the following rules in making application for reexamination:

(**a**) An applicant for a pilot certificate with a powered aircraft rating or for an additional rating who fails to pass any prescribed theoretical examination may reapply after the expiration of 30 days from the date of such failure or after he has received not less than 5 hours of instruction from a certificated ground instructor in each subject failed.

(**b**) An applicant who has failed to pass any prescribed practical examination or test on powered aircraft may reapply only after an appropriately rated flight instructor has checked his competency and certified in the applicant's logbook that he considers such applicant qualified for the certificate or rating sought, or after the expiration of 30 days from the date of such failure.

(**c**) An applicant for a glider rating who has failed to pass any prescribed theoretical examination may reapply at any time after the expiration of 30 days or after he has received not less than 5 hours of instruction on each subject failed from a certificated ground instructor.

(**d**) An applicant for a glider rating who has failed to pass any prescribed practical examination or test may reapply only after he has made at least 20 additional gliding flights.

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