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Regulations
Serial Number 60

THE UNITED STATES OF AMERICA
CIVIL AERONAUTICS AUTHORITY
WASHINGTON, D. C.

At a session of the Civil Aeronautics Authority held at its office in Washington, D. C., on the 7th day of November , 1939.

Acting pursuant to the authority vested in it by the Civil Aeronautics Act of 1938, particularly sections 205 (a), 601 (a) and 602 of said Act, and finding that its action is desirable in the public interest and is necessary to carry out the provisions of and to exercise and perform its powers and duties under said Act, the Civil Aeronautics Authority hereby amends the Civil Air Regulations as follows:

AMENDMENT NO. 37 OF THE CIVIL AIR REGULATIONS

ELIMINATING SOLO AND LIMITED-COMMERCIAL PILOT CERTIFICATES AND CREATING A NEW METHOD FOR CERTIFICATION OF PILOTS

Effective May 1, 1940 , Part 20, as amended, of the Civil Air Regulations is hereby stricken and the following new Part 20 is inserted in lieu thereof:

" PART 20--PILOT CERTIFICATES

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20.0 Classification of pilot certificates.

(a) Aircraft pilot certificates, other than gliders, 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) Student glider pilot certificate.

(2) Private glider pilot certificate.

(3) Commercial glider pilot certificate.

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

(a) 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

*Note: On May 1, 1940 the effective date of these regulations, the Authority will discontinue the issuance of solo and limited-commercial pilot certificates, except under the special circumstances prescribed in § 20.33. Solo and limited-commercial pilot certificates in effect on that date will not be endorsed to remain in effect, in the case of the solo pilot certificate, beyond May 1, 1941 and, in the case of the limited-commercial pilot certificate, beyond May 1, 1942. (See § 20.33)

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.

20.102 Citizenship. Applicant may be of any nationality.

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 comply with the following requirements as to physical condition, demonstrated by examinations conducted in accordance with § 20.52:

(a) Eye. Applicant shall have:

(1) A visual acuity of at least 20/50 in each eye separately, without correction: Provided, That, if the vision in either or both eyes is poorer than 20/50 and is brought up to 20/30 or better in each such eye by glasses, the applicant may be qualified on condition that such glasses be worn while piloting aircraft.

(2) An average of 30 millimeters or less on the depth perception apparatus, with or without glasses: Provided, That if the depth perception is greater than 30 millimeters without correction

and can be corrected to at least 30 millimeters by glasses, the applicant may be qualified upon condition that such glasses be worn while piloting aircraft;

(3) No diplopia unless corrected by glasses in which case such glasses shall be worn while piloting aircraft; and

(4) No serious pathology of the eye.

(b) Ear, nose, throat and equilibrium. Applicant shall be able to hear the whispered voice at three feet; shall have no acute or chronic disease of the internal ear, no disease or malformation of the nose or throat which may interfere with or be aggravated by flying, and no disturbance in equilibrium.

(c) General physical condition. Applicant shall have no organic or functional disease or structural defect or limitation which would interfere with the safe piloting of aircraft.

(d) Nervous system. Applicant shall have no disease of the mental or nervous system and no abnormality of the personality.

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 but, prior to his first solo flight, applicant

shall have had 8 hours dual flight instruction, including recovery from spins and stalls and shall have been deemed, in the opinion of his instructor, competent to make such flight and such competency shall be certified to by his instructor on the student pilot certificate in the space provided therefor. Dual flight instruction in recovery from spins shall not be required when an applicant has received all of his dual flight instruction in aircraft fully determined to be characteristically incapable of spinning. Until he has received dual instruction in spins any such applicant shall be limited to the operation of aircraft possessing that characteristic and the instructor shall make a notation to that effect on the pilot certificate of the applicant. When the applicant has received dual instruction in spins the instructor shall make a notation to that effect on the certificate. Prior to his first cross-country* solo flight, applicant shall have logged 8 hours solo flight time and his instructor shall have certified on the student pilot certificate, in the space provided therefor, that he deems the student competent to make such flight. The dates of such solo flights and the type, weight and engine classification of the aircraft so flown shall also be certified to by the instructor in the same manner.

20.11 (Unassigned).

*Note: After a minimum of 8 hours' dual instruction and certification by his instructor, a student pilot may fly solo in the vicinity of his instructor's operating base. After he has had 8 hours' solo and has secured the proper certification by his instructor, he may fly cross-country but must remain within 50 miles of his instructor's operating base.

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. Same as in § 20.104, except that a certificate may be issued to an applicant who does not meet these physical requirements if, in the opinion of the Authority, his flying experience gained prior to his disability offsets such physical deficiency. Such applicant may be limited to the particular operations specified in his Airman Rating Record.

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, and navigation by terrain (pilotage)and by dead reckoning, including the use of instruments and other aids to navigation in visual-contact flying.

20.126 Aeronautical experience. Applicant shall have logged at least 35 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 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 2 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 thereof: Provided, That a graduate of the private pilot course of a certificated flying school will be deemed to have met the requirements of this section upon presentation of his certificate of graduation within 30 days thereof.*

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) From an altitude not to exceed 1,000 feet, with engine throttled, a 180° turn and a landing in normal landing attitude, the wheels touching the ground beyond and within 300 feet of a line or point designated by the examining inspector of the Authority.

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

(b) From an altitude not to exceed 1,500 feet, with engine throttled, a 360° turn and a landing in normal landing attitude, the wheels touching the ground beyond and within 300 feet of a line or point designated by the examining inspector of the Authority.

(c) A spiral in one direction from 2,000 feet, with engine throttled, and a landing in normal landing attitude, the wheels touching the ground beyond and within 300 feet of a line or point designated by the examining inspector of the Authority.

(d) A series of 3 shallow and 3 steep figure 8 turns, and one 720° steep power turn in each direction. During these maneuvers, the pilot shall not gain or lose more than 200 feet of altitude.

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

(f) Emergency maneuvers such as simulated forced landings, spirals, side slips and climbing turns, and recovery from stalls and such other maneuvers as the examining inspector of the Authority may deem necessary and appropriate to demonstrate the competency of the applicant for the certificate or rating sought.

(g) 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

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

the examining inspector of the Authority 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.

20.128 (Unassigned).

20.129 Military competence. An applicant who is or, was within the 60 days preceding application, a member of the regular Army, Navy, Marine Corps, or Coast Guard, or a reserve member of any such service on active duty for a period of at least one year, will be deemed to have met the requirements of §§ 20.125 through § 20.127 if he submits to an inspector of the Authority a certificate from the appropriate officer in charge of flying in his service, stating that the applicant is or, was within the 60 days preceding application, on flying status as an airplane pilot and competent to pilot airplanes of a stated type, weight, and engine classification. Said applicant will be deemed to have met the requirements of §§ 20.124 if he submits to an inspector of the Authority (1) a certificate from a flight medical officer of his service stating that the applicant meets or, at the time of his separation from the service, met the physical standards prescribed by his service for flying status as an airplane pilot; and (2) a certified copy of the current medical examination of the applicant for flying in his service: Provided, That such certified copy may be submitted at any time within four months after application and the pilot certificate ap-

plied for may be issued prior to its receipt.

20.13 (Unassigned).

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 the United States, or

(b) A citizen of a foreign country which grants reciprocal commercial pilot privileges to citizens of the United States on equal terms and conditions with citizens of such foreign country, or

(c) An alien who has filed his declaration of intention to become a citizen of the United States and notifies the Authority of the serial number of such declaration and of the date thereof and of the court in which it is filed: Provided, That the certificate is, in such case, subject to revocation if the holder does not from time to time keep the Authority advised of the status of the proceedings in court and does not diligently and successfully prosecute them and become admitted as a citizen.

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

20.144 Physical condition. Applicant shall comply with the following requirements as to physical condition demonstrated by examinations conducted in accordance with § 20.52: Provided, That a certificate may be issued to an applicant who does not meet these physical requirements if, in the opinion of the Authority, his flying experience gained prior to his disability offsets such physical deficiency:

(a) Eye. Applicant shall have:

(1) A visual acuity of at least 20/20 in each eye separately without correction: Provided, That if the vision in either or both eyes is not poorer than 20/50 and is brought up to 20/20 or better in each such eye by glasses, the applicant may be qualified upon condition that correcting glasses be worn while piloting aircraft;

(2) An average depth perception of 30 millimeters or less with or without glasses: Provided, That if the depth perception is greater than 30 millimeters without correction, and can be corrected to at least 30 millimeters by glasses, the applicant may be qualified upon condition that correcting glasses be worn while piloting aircraft;

(3) No diplopia;

(4) Not more than 1 diopter of hyperphoria;

(5) Properly balanced eye muscles with an abduction of 3 diopters or more;

(6) Sufficient accommodation to pass a test prescribed by the Authority based primarily upon ability to read official aeronautical maps;

(7) Normal fields of vision; and

(8) No pathology of the eye.

(b) Ear, nose, throat and equilibrium. Applicant shall be able to hear the whispered voice at 8 feet with each ear separately; shall have no acute or chronic disease of the middle or internal ear; no disease of the mastoid; no unhealed perforations of the ear drum; no disease or malformation of the nose or throat which may interfere with or be aggravated by flying; and no disturbance of equilibrium.

(c) General physical condition. Same as in § 20.104 (c).

(d) Nervous system. Same as in § 20.104 (d).

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.*

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

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

(b) In the maneuvers required by § 20.127 (d), the pilot shall not gain or lose more than 100 feet.

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

20.148 (Unassigned).

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

20.149 Military competence. An applicant who, within 60 days preceding application, has been on active member of the regular Army, Navy, Marine Corps, or Coast Guard, or a reserve member of any such service on active duty for a period of not less than one year, will be deemed to have met the requirements of § 20.145 through § 20.147 if he submits to an inspector of the Authority a certificate from the appropriate officer in charge of flying in his service that he was on a flying status as an airplane pilot at the time of his separation from the service and was at that time competent to pilot airplanes of a stated type, weight and engine classification. Said applicant will be deemed to have met the requirements of § 20.144 if he submits to an inspector of the Authority (1) a certificate from a flight medical officer of his service stating that at the time of his separation from the service the applicant met the physical standards prescribed by his service for flying status as an airplane pilot, and (2) a certified copy of the current medical examination of the applicant for flying in his service: Provided, That such certified copy may be submitted at any time within four months after application and the pilot certificate applied for may be issued, prior to its receipt.

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

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. Applicant may be of any nationality.

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 § 20.152.

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.

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. Any person who is the holder of at least a currently effective private pilot certificate and who shall have completed not less than 25 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.

20.167 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.

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 the provisions of Parts 01, 20 and 60, as are pertinent to his certificate.

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 a Class 1 airplane by a certificated instructor, evidenced by the signed entry of such instructor in the log-book of the applicant.

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 2 flights including right and left turns in each flight.

20.2 Special rating requirements. To be eligible for a special pilot rating, an applicant shall comply with the following requirements prescribed for the particular rating sought:

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

20.200 Age. Same as in § 20.120.

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

20.202 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.

20.203 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 Authority, deemed necessary and appropriate for safe and sound instruction in the safe piloting of aircraft.

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

20.210 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 Authority 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.

20.211 Aeronautical experience. Applicant shall have logged at least 200 hours of solo flight time as prescribed in § 20.146, including at least 20 hours of instrument flying instruction and practice, and shall be possessed of a valid private, limited-commercial or commercial pilot certificate. In lieu of not to exceed 10 hours of the foregoing 20-hour requirement applicant may show an equal or greater amount of instruction and practice under simulated conditions approved by the Authority.

20.212 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 Authority deems necessary.

(g) A practical demonstration, while in flight or under simulated conditions, of estimating arrival time, taking into account speed, wind and drift.

20.213 Radio skill. Applicant shall satisfactorily accomplish, solely by instruments, a 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 Authority deems necessary.

20.3 Pilot certificate.

20.30 Existing pilot certificates. Every person holding a pilot certificate in effect on May 1, 1940, may operate aircraft without an Airman Rating Record* until the expiration, suspension, or revocation of such certificate.

20.300 Aircraft rating. The aircraft which the applicant is deemed competent to pilot and the type of aircraft in which he is deemed competent to instruct will be prescribed on his Airman Rating Record. In the case of conventional aircraft, such description shall be by type, weight and engine classification and, in the case of unconventional aircraft, shall be by such method as is appropriate to define clearly the competence of the applicant. (See §§ 20.54 and 20.55.)

20.301 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 § 20.56.)

20.302 Special rating. When issued to an applicant, as provided for in §§ 20.2 and 20.4, any special rating will be entered upon his Airman Rating Record.

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*Note: Under § 20.60 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 weight and engine classification ratings, special ratings, and flight area limitations.

20.31 Application. Application for a pilot certificate shall be made upon the applicable form prescribed and furnished by the Authority.

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

20.32 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 Authority and of any State or municipal official charged with the duty of enforcing local laws or regulations involving Federal compliance.

20.33 Duration. A pilot certificate shall be of 60 days' duration and, unless the holder thereof is otherwise notified by the Authority within such period, shall continue in effect indefinitely thereafter, unless suspended or revoked by the Authority, except that it shall immediately expire (1) at the end of each designated period* after the date of issuance thereof if the holder of such certificate

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*Note: A statement of duration in substantially the form of § 20.33 will appear on all pilot certificates. The above reference to a "designated period" means the period which will be designated on each pilot certificate. For example, the holder of a student or a private certificate will, under ordinary circumstances, be required to secure an endorsement each year while a limited-commercial or a commercial pilot will be required to secure an endorsement every six months. Hereafter in this Part this period will be referred to as the "endorsement period".

fails to secure an endorsement by an authorized inspector or, in case of a student pilot certificate, a medical examiner of the Authority within the last 45 days of each such period, or (2) at any time an authorized inspector of the Authority, or, in case of a student pilot certificate, an authorized inspector or medical examiner of the Authority, shall refuse to endorse such certificate after inspection or examination: Provided, That no solo or limited-commercial pilot certificate shall be endorsed to remain effective beyond May 1, 1941, in the case of solo certificates, or May 1, 1942, in the case of limited-commercial certificates.

20.34 Periodic endorsement requirements. No pilot certificate shall receive a periodic endorsement* unless the holder thereof shall make application for endorsement upon the applicable form prescribed and furnished by the Authority and shall have logged the hours of certified solo flight time and satisfactorily accomplished the physical examination, hereinafter required with respect to the following classes of pilot certificates:

(a) Student pilot.

(1) No solo flight time required.

(2) A physical examination identical with that required for the issuance of the student pilot certificate, within the 9 months immediately preceding the expiration of the endorsement period.

*Note: See footnote to § 20.33. Under § 20.33 a periodic endorsement can only be secured within the last 45 days of each endorsement period.

(b) Solo pilot.

(1) 15 hours of solo flight time within the endorsement period in aircraft of each type, weight and engine classification for which endorsement is sought.

(2) A physical examination identical with that required for the issuance of a solo pilot certificate, within the 9 months preceding the expiration of the endorsement period.

(c) Private pilot.

(1) 15 hours of solo flight time within the endorsement period in aircraft of each type* for which endorsement is sought, and if endorsement is sought for more than one aircraft weight and engine classification, 5 hours of solo flight time shall have been logged in aircraft of each such weight and engine classification.

(2) A private pilot who does not meet the 15 hours of solo flight time requirement, in lieu thereof, within the 60 days immediately preceding the expiration of the endorsement period, may log a period of 5 hours flight time, including at least two hours of dual flight instruction or check from a certificated instructor, in an aircraft of each weight and engine classification for which endorsement is sought: Provided, That the certificated instructor certifies on the application for endorsement that such private pilot satis-

*Note: See §§ 20.54 for aircraft type classifications.

factorily practiced and performed with such instructer all the maneuvers required in the flight test for the original issuance of a private pilot certificate, giving the dates of such flights, and the type, weight and engine classification and identification mark of the aircraft in which each such flight was acquired.

(3) A physical examination identical with that required for the issuance of the private pilot certificate, within the 14 months immediately preceding the expiration of the endorsement period.

(4) An active member of the regular Army, Navy, Marine Corps or Coast Guard, or a reserve member of any such service on extended active duty with such service, who has satisfactorily met the same conditions specified for the issuance of a private pilot certificate to any such person, shall be deemed to have met the requirements set forth in this subsection (c).

(d) Limited-commercial pilot.

(1) 10 hours of solo flight time within the endorsement period in aircraft of each type, weight and engine classification, for which the endorsement is sought.

(2) A physical examination identical with that required for the issuance of a commercial pilot certificate, within the 60 days immediately preceding the expiration of the endorsement period.

(e) Commercial pilot.

(1) 10 hours of solo flight time within the endorsement period in aircraft of each type, weight and engine classification, for which the endorsement is sought: Provided, That a commercial pilot employed as a second pilot in scheduled air carrier operation, may be deemed to have met this requirement if he shall have logged 20 hours of solo flight time as a second pilot in such operation within the endorsement period, but after endorsement the certificate shall be valid only for scheduled air carrier operation as a second pilot.

(2) A physical examination identical with that required for the issuance of the commercial pilot certificate, within the 60 days immediately preceding the expiration of the endorsement period.

(f) Airline transport pilot. (See Part 21.)

(g) Student glider pilot.

(1) No solo flight time required.

(2) A student glider pilot 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.

(h) Private glider pilot.

(1) 10 gliding flights, or one soaring flight of one hour, within the endorsement period.

(2) A private glider pilot 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.

(i) Commercial glider pilot.

(1) 10 gliding flights, or one soaring flight of one hour, within the endorsement period.

(2) A commercial glider pilot 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.

20.35 Special issuance of certificate. If any pilot certificate expires, a new certificate will be issued on application therefor, if the applicant secures the flight time and physical examination required for periodic endorsement (§§ 20.34) and satisfactorily accomplishes the flight test and the written examination on the Civil Air Regulations prescribed for the particular class of certificate and rating sought: Provided, That no solo or limited-commercial pilot certificate shall be issued under this section to remain in effect beyond

May 1, 1941 in the case of a solo certificate, or

May 1, 1942 in the case of a limited-commercial certificate. The examination on the Civil Air Regulations may not be required if application is made within the year immediately following the expiration of the endorse-

ment period, and a flight test may not be required if the application is made within 90 days immediately following the expiration of the endorsement period. In applying this section, the time within which physical examinations and flight time must be secured in order to comply with the periodic endorsement requirements shall be computed from the date of application for special issuance, rather than the date of the expiration of the endorsement period as is provided in § 20.34.*

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

20.37 Operation during physical deficiency. A certificated pilot shall not operate any aircraft during the period of any known physical deficiency or increase in physical deficiency, which would render him during that period unable to meet the physical requirements specified in the Civil Air Regulations for the classification of pilot certificate held.

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*Note: For example, the holder of a private pilot certificate which has a one year endorsement period designated thereon, fails to have his certificate endorsed prior to or on January 1, 1941, the date the endorsement period expires. Should he apply for special issuance of a certificate on February 1, 1941, he must have logged the 15 hours of flight time required in § 20.34 (c) during the one year period between February 1, 1940 and February 1, 1941 and not during the endorsement period, January 1, 1940 to January 1, 1941. Likewise, he must have accomplished the physical examination required in § 20.34 (c) within the 14 months prior to February 1, 1941 rather than the 14 months prior to January 1, 1941.

20.38 Surrender. Upon the suspension, revocation, or expiration of a pilot certificate, the holder of such certificate shall, upon request, surrender such certificate to any officer or employee of the Authority.

20.39 Re-examination. The following rules will govern application for re-examination 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 re-examination at any time after the expiration of 30 days from the date of such failure.

(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 re-examination 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 re-examination shall be deemed to have met the 5 hours solo flight time requirement 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 re-examination at any time after the expiration of 30 days from the date of such failure.

(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 re-examination only after he has made at least 20 additional gliding flights.

20.4 Special rating.

20.40 Provision for issuance. Upon application made on the appropriate form prescribed and furnished by the Authority, a special rating will be entered on the Airman Rating Record of a pilot who, after inspection and examination, is found by the Authority to meet the requirements prescribed for such rating in § 20.2.

20.41 Application. Same as in § 20.31 applied to a special rating.

20.42 (Unassigned).

20.43 Periodic endorsement requirements with respect to special ratings. A pilot certificate shall not receive a periodic endorsement with respect to any special rating unless the holder thereof shall have logged the hours of certified flight time hereinafter required with respect to the following classes of special ratings.

(a) Instructor rating. Service as an instructor for

10 hours within the 6 months immediately preceding the expiration of the endorsement period.

(b) Instrument rating.

(1) If a private pilot, 10 hours of flying solely by instruments within the endorsement period, 5 hours of which shall have been within the 6 months immediately preceding the expiration of such period.

(2) If a limited-commercial or commercial pilot, 5 hours of flying solely by instruments within the 6 months immediately preceding the expiration of the endorsement period.

(3) In lieu of either of the above requirements applicant may show an equal amount of practice under simulated conditions approved by the Authority.

20.44 Special issuance of special ratings. In the event a pilot satisfactorily shows to the Authority that an emergency prevented endorsement of his certificate with respect to any special rating within the 45 days immediately preceding the expiration of the endorsement period, a new rating or ratings will be issued if application is made therefor within 60 days immediately following the expiration of such endorsement period and the applicant complies with the requirements for periodic endorsement and satisfactorily accomplishes the flight tests prescribed for the particular special rating sought. Such flight tests may not be required if the application is made within 30 days immediately following the expiration of the endorsement

period. In applying this section, the time within which the flight time must be secured in order to comply with the periodic endorsement requirements shall be computed from the date of application for special issuance, rather than the date of the expiration of the endorsement period as is provided in §§ 20.43.*

20.45 (Unassigned).

20.46 Re-examination. An applicant for a special rating who has failed to accomplish successfully any prescribed test for such rating may apply for re-examination thereon after the expiration of 30 days from the date of such failure.

20.5 Examinations and tests.

20.50 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 Authority or by a properly qualified person designated for the purpose by the Authority.

20.51 Time and place. All examinations and tests will be held at such times and places as the Authority or its representative may designate.

20.52 Physical examinations. The following rules will govern the physical examinations given in connection with the original issuance of any pilot certificate:

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*Note: See footnote to § 20.35.

(a) The appropriate physical examination prescribed shall be accomplished before any practical or theoretical test or other examination will be given, and shall be completed within the 9 months preceding application for a private pilot certificate, or within the 4 months preceding application for a commercial pilot certificate.

(b) In lieu of a physical examination conducted by an authorized medical examiner of the Authority, a certified copy of the medical examination for flying in the United States Army, Navy, Marine Corps or Coast Guard, made within the 60 days preceding the date of filing application for a pilot certificate, or any periodic endorsement thereof, will be accepted for any pilot certificate or rating provided for in this Part: Provided, That the physical qualifications as shown in such prior examination are not less than those required by these regulations for the class of pilot certificate or rating applied for.

(c) A pilot holding a certificate of a lower grade and applying for a certificate of a higher shall pass satisfactorily a new physical examination for the grade applied for unless his prior physical examination was for the higher grade and was passed within the time limit prescribed in § 20.52 (a)

20.53 Aircraft used in tests. The applicant shall furnish a certificated 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.

20.54 Aircraft type classification. For purposes of specifying the types of aircraft which the applicant is deemed competent to pilot and for convenience of examining the applicant with respect thereto, the following aircraft type classification is prescribed:

(a) Conventional airplane (land).

(b) Conventional airplane (water).

(c) Autogiro (land).

(d) Autogiro (water).

(e) Glider.

(f) Lighter-than-air aircraft.

20.55 Aircraft weight and engine classification. For purposes of specifying the weight and powerplant equipment of aircraft which the applicant is deemed competent to pilot, and for convenience of examining the applicant with respect thereto, the following aircraft weight and engine classification is prescribed:

(a) Class 1.--Gross weight not more than 1,300 pounds.

(b) Class 2S.--Gross weight between 1,300 and 4,000 pounds, single-engine.

(c) Class 2M.--Gross weight between 1,300 and 4,000 pounds, multi-engine.

(d) Class 3S.--Gross weight between 4,000 and 10,000 pounds, single-engine.

(e) Class 3M.--Gross weight between 4,000 and 10,000 pounds, multi-engine.

(f) Class 4S.--Gross weight between 10,000 and 25,000 pounds, single-engine.

(g) Class 4M.--Gross weight between 10,000 and 25,000 pounds, multi-engine.

(h) Class 5.--Gross weight in excess of 25,000 pounds.

20.56 Flight area limitations.

(a) Prior to certification by his instructor that he has logged 8 hours of solo flight time and is deemed competent to make cross-country flights, a student pilot shall not operate an aircraft in solo flight outside of an area in the vicinity of the operating base of the instructor prescribed in writing by the airport manager and approved by the local inspector of the Authority. Unless the airport manager is otherwise notified by such inspector within 15 days from the date of the receipt of such designation the flight area prescribed by him shall be deemed to have been approved.

(b) After certification by his instructor that he has logged 8 hours of solo flight time and is deemed competent to make cross-country flights, a student pilot shall not operate an aircraft in solo flight outside of the area within a 50 mile radius of the operating base of the instructor prescribed in writing by the airport manager and approved by the local inspector of the Authority. Unless the airport manager is otherwise notified by such inspector within 15 days from the date of the receipt of such designation the flight area prescribed by him shall be deemed to have been approved.

(c) A limited-commercial pilot shall not pilot aircraft carrying persons for hire outside of the area within a radius of 10 miles of a particular operating base named in his Airman Rating Record: Provided, That upon 10 days' notice to and approval by a duly authorized inspector of the Authority, said area specified in such record may be

changed to a different area.

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

20.57 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 Authority prior or subsequent to the issuance of a pilot certificate or rating.

20.58 Standard of performance. Every practical and theoretical examination and test shall be accomplished to the satisfaction of the Authority 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.

20.6 Pilot regulations.

20.60 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 Authority, nor shall any certificated pilot, including a student pilot, operate any aircraft otherwise than in accordance with the rating limitations prescribed by the Authority and set forth in his pilot certificate or Airman Rating Record: Provided, That

(a) the holder of a valid commercial pilot certificate may pilot aircraft as a second pilot without a weight and engine classification rating for the particular aircraft operated;

(b) the holder of a valid private, limited-commercial, or commercial pilot certificate may pilot airplanes of a weight or engine classification, or of an airplane classification,* 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.**

20.61 Flight limitations.

20.610 Student. A person possessed of a valid student pilot certificate or receiving dual instruction shall not pilot any aircraft carrying any person other than a certificated instructor. Such person shall not pilot any aircraft for hire. A person less than 21 years of age shall not receive dual instruction in any aircraft unless such person has first obtained the written consent of either parent, or legal or natural guardian and delivered such consent to his instructor.

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*Note: See § 04.010 (landplane, seaplane, amphibian).

**Note: This section does not permit a person limited to the operation of aircraft incapable of spinning under §§ 20.107 and 20.127 (g) to operate aircraft which are capable of spinning, nor does it permit persons who, by reason of physical deficiencies or for other reasons, have been limited under § 20.124 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.

20.611 Solo pilot. A person possessed of a valid solo pilot certificate shall not pilot any aircraft for hire nor shall he pilot any aircraft carrying any person other than a certificated instructor.

20.612 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.

20.613 Limited-commercial pilot. A person possessed of a valid limited-commercial pilot certificate shall not pilot any aircraft carrying any person for hire beyond the geographical limits specified on his Airman Rating Record: Provided, however, That such pilot may carry guests, executives, or employees of his employer beyond such limits if no additional payment is made for such carriage, and: Provided, further, That such pilot may serve as second pilot, except in scheduled air transportation service, beyond such geographical limits if the person in command of such aircraft is possessed of at least a valid commercial pilot certificate.

20.614 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.

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

20.616 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 who has proved to the satisfaction of a duly authorized representative of the Authority that he 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 limited-commercial or commercial pilot.

20.617 Uncertificated pilots. The owner of a certificated aircraft shall not permit any person to operate such aircraft unless such person is possessed of an appropriate currently effective pilot certificate.

20.62 (Unassigned).

20.63 (Unassigned).

20.64 Night flying. No person shall take off or land an aircraft carrying passengers during the period between one hour after sunset and one hour before sunrise, unless he has made at least 5 take-offs and landings during such period within the 90 days immediately preceding such take-off or landing.

20.65 Instruction. The following rules shall govern the giving of flight instruction:

20.650 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 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.

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

20.652 Dual control instruction. No flight time shall be logged as instruction time by a student or a person giving instruction unless the aircraft in which the instruction was given was equipped with fully functioning dual controls and the person giving the instruction held an appropriate pilot certificate and an instructor rating and was in full charge of one set of such controls. Such dual controls shall be fully functioning as set forth in § 20.53, except in aircraft manufactured prior to January 1, 1939.

20.66 (Unassigned).

20.67 Log-books. The following rules shall govern pilot log-books:

20.670 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.

20.671 Contents. The log-book shall contain the date of flight, the make and model of aircraft flown, its type, weight and engine classification, 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 Authority or State or municipal officer enforcing local regulations or laws involving Federal compliance.

20.672 Consideration of flying time. From and after November 1, 1937, no flying time shall be considered in connection with the issuance or endorsement of a pilot certificate unless the aircraft flown was a public or certificated aircraft.

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

20.68 Foreign flights. No person shall be in command of any civil aircraft of the United States flying in any foreign country unless possessed of a valid private, limited-commercial, commercial or airline transport pilot certificate, with a rating for the type, weight and engine classification of aircraft so flown.

20.69 Qualified foreign pilots.

(a) An applicant for a private pilot certificate, upon a satisfactory showing to the Authority 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 Authority to have met the requirements prescribed in this Part for a private pilot certificate.

(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 an inspector of the Authority 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 Authority may prescribe."

By the Authority:

/s/ Paul J. Frizzell

Paul J. Frizzell,
Secretary.

(SEAL)