CIVIL AIR REGULATIONS

PART 43
GENERAL OPERATION RULES

Effective July 1, 1945

CIVIL AERONAUTICS BOARD

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43.0 GENERAL

43.00 Scope. The following rules govern the operation of civil aircraft in the United States.

43.1 AIRCRAFT CERTIFICATION AND IDENTIFICATION

43.10 Certificates and identification marks. Aircraft, except foreign aircraft authorized by the Administrator to be flown in the United States, shall not be operated unless the following requirements are met.

43.100 Registration certificate. A registration certificate issued to the owner of the aircraft shall be carried in the aircraft at all times.

NOTE: The owner of an aircraft is required to give immediate notice to the Administrator of any change of address. For other rules governing the registration and recordation of aircraft ownership see Administrator's Regulations 501 and 503.

43.101 Airworthiness certificate. An airworthiness certificate or special authorization issued by the Administrator approving its operation shall be carried in the aircraft at all times during flight.

NOTE: Usually the manufacturer obtains the airworthiness certificate which thereafter remains with the aircraft. If no airworthiness certificate has been issued for the aircraft, or if it has expired, the owner shall obtain this certificate.

43.1010 Aircraft operation record. An aircraft for which an airworthiness certificate is currently in effect shall not be operated unless there is atttached to such airworthiness certificate an appropriate aircraft operation record prescribed and issued by the Administrator, nor shall such aircraft be operated other than in accordance with the limitations prescribed and set forth by the Administrator in such record. Any change made to the aircraft which affects these limitations shall be made under the supervision of an appropriately rated mechanic or other person authorized by the Administrator and such change shall be noted in the aircraft operation record.

43.1011 Duration. An airworthiness certificate shall remain in effect until a termination date is fixed by the Board, unless it is suspended or revoked.

43.1012 Transferability. The airworthiness certificate and the attached currently effective aircraft operation record, upon transfer of ownership, shall remain with the aircraft for which they were issued.

43.1013 Surrender. Upon the cancellation, suspension, or revocation of an airworthiness certificate the owner of the aircraft must, upon request, surrender such certificate to an authorized representative of the Administrator.

43.102 Identification marks. Aircraft identification marks shall be displayed on aircraft in the manner prescribed by the Administrator. Aircraft identification marks are as follows:

(a) **NC.** Roman capital letters NC followed by the registration symbols shall be displayed on aircraft which fully comply with the minimum airworthiness requirements specified in the Civil Air Regulations.

(b) **NR.** Roman capital letters NR followed by the registration symbols shall be displayed on aircraft which fully comply with airworthiness requirements of the Civil Air Regulations, except those rendered inapplicable by the nature of a special purpose for which the aircraft is to be used, and the airworthiness requirements not met are compensated by suitable operating restrictions imposed by the Administrator after making a finding that the aircraft, when operated for the special purpose in accordance with the restrictions placed thereon and carrying only the crew necessary for this special operation, provides a level of safety equivalent to that of an aircraft which fully meets the provisions of the airworthiness requirements of the Civil Air Regulations.

(c) **NX.** Roman capital letters NX followed by the registration symbols shall be displayed on aircraft which have not fully complied with the airworthiness requirements specified in the Civil Air Regulations and are to be operated only for experimental purposes when, in the opinion of the Administrator, such aircraft can be operated with appropriate restrictions without endangering public safety. In addition, the word "experimental" shall be prominently displayed near the entrance to the cabin or cockpit of any aircraft holding an experimental certificate.

(d) **Other marks or symbols.**

(*1*) No design, mark, or symbol which modifies the identification mark shall be placed on aircraft, except with the approval of the Administrator.

(*2*) No design, mark, or symbol which confuses the identification mark shall be placed on the aircraft.

43.1020 Export aircraft. An aircraft manufactured in the United States for delivery outside the United States or its possessions shall display such identification marks or insignia as are approved by the Administrator. Such aircraft shall be operated only for the purpose of test and demonstration flights for a limited period of time or while in necessary transit to the purchaser.

43.2 MAINTENANCE

43.20 General. An aircraft shall not be flown unless it is in airworthy condition. Mechanical work other than routine maintenance must be performed in accordance with § 18.50.

43.21 Flight tests. When an aircraft has undergone any repair or alteration which may have appreciably changed its flight characteristics or substantially affected its operation in flight, such aircraft, prior to carrying passengers, shall be test flown by at least a private pilot appropriately rated for the aircraft, and a notation to that effect shall be entered by such pilot in the aircraft log.

43.22 Annual inspection. An aircraft shall not be flown, except for airworthiness flight tests, unless within the preceding 12 calendar months it has been given an annual inspection as prescribed by the Administrator and has been found to be airworthy by a person designated by the Administrator. A copy of the last inspection report shall be attached to the aircraft operation record and a copy filed with the Administrator.

43.23 Periodic inspection. An aircraft shall not be flown for hire unless within the preceding 100 hours of flight time it has been given a periodic inspection by an appropriately rated mechanic and has been found to be airworthy and a notation to that effect has been entered by such mechanic in the aircraft log. The annual inspection required by § 43.22 will be accepted as one such periodic inspection.

43.24 Aircraft and engine logs. The registered owner shall keep accurate, current, permanent records of the total flight time of the aircraft and the running time of each engine. Such records shall be kept in logbooks or other suitable systems readily available for transfer with the aircraft or individual engine and, upon request, must be presented to an authorized representative of the Administrator or Board. A mechanical device which records the total amount of operation or the total number of engine revolutions may be used in lieu of such aircraft and engine records.

43.25 Rebuilt engine logs. A new record without previous operating history may be used for an aircraft engine rebuilt by the manufacturer or any agency approved by the manufacturer for such work, provided such new record contains a signed statement by such manufacturer or agency giving the date the engine was rebuilt and such other information as the Administrator may require.

43.3 AIRCRAFT INSTRUMENTS AND EQUIPMENT

43.30 NC powered aircraft instruments and equipment. The following instruments and equipment, or instruments and equipment which the Administrator has found to be the equivalent, are required for the particular type of operation specified:

(a) **Contact flight rules (day).**

(*1*) air-speed indicator,
(*2*) altimeter,
(*3*) magnetic direction indicator,
(*4*) tachometer for each engine,
(*5*) oil pressure gauge for each engine using pressure system,
(*6*) temperature gauge for each liquid-cooled engine,
(*7*) oil temperature gauge for each air-cooled engine,
(*8*) manifold pressure gauge, or equivalent, for each altitude engine,
(*9*) fuel gauge indicating the quantity of fuel in each tank,
(*10*) position indicator, if aircraft has retractable landing gear,
(*11*) approved flotation gear readily available for each occupant and a Very pistol or equivalent signal device, if the aircraft is operated for hire over water beyond gliding distance from shore without the aid of power,
(*12*) certificated safety belts for all passengers and members of the crew.

(b) **Contact flight rules (night).**

(*1*) equipment specified in § 43.30 (a),
(*2*) set of certificated forward and rear position lights,
(*3*) one electric landing light, if the aircraft is operated for hire,
(*4*) certificated landing flares as follows, if the aircraft is operated for hire beyond a 3-mile radius from the center of the airport of take-off:

Maximum authorized weight of aircraft	Flares
3,500 pounds or less	5 class-three or 3 class-two
3,500 pounds to 5,000 pounds	4 class-two
above 5,000 pounds	2 class-one or 3 class-two and 1 class-one

If desired, flare equipment specified for heavier aircraft may be used.

(*5*) an adequate source of electrical energy for such electrical and radio equipment as is installed,
(*6*) one spare set of fuses or 3 spare fuses of each magnitude.

(c) **Instrument flight rules.**

(*1*) equipment specified for contact flight rules in §43.30 (a) and, for night flight, equipment specified in §43.30 (b),
(*2*) two-way radio communications system and navigational equipment appropriate to the ground facilities to be used,
(*3*) gyroscopic rate-of-turn indicator,
(*4*) bank indicator,
(*5*) sensitive altimeter adjustable for change in barometric pressure,
(*6*) clock with a sweep-second hand,
(*7*) generator of adequate capacity.

43.4 PILOTING RULES (GENERAL)

43.400 Pilot certificate. Any person piloting an aircraft in the United States shall hold a valid pilot certificate issued by the Administrator or a foreign pilot certificate validated by the Administrator.

43.401 Identification card. An identification card shall be kept in the personal possession of the pilot when piloting aircraft. Such a card will be issued by the Administrator and will contain the pilot's fingerprints, picture, and signature, or it may be a document issued by the Army, Navy, Marine Corps, or Coast Guard identifying the pilot as a member thereof.

NOTE: This requirement will be deleted after the war.

43.402 Medical certificate and renewal. Any person piloting an aircraft shall have in his possession a medical certificate or other evidence satisfactory to the Administrator showing that he has met the physical requirements appropriate to his rating within the following time limits:

(a) student or private pilot—24 calendar months,
(b) commercial pilot—12 calendar months.

43.403 Operation during physical deficiency. A person shall not pilot any aircraft during a period of any known physical deficiency or increase in physical deficiency which would render him unable to meet the physical requirements prescribed for the issuance of his currently effective medical certificate.

43.404 Pilot logbooks. A record of the flight time used to substantiate recent experience or qualification for certificates or ratings shall be kept in a bound logbook. The logging of other flight time is not required. Such record shall show:

(a) date of flight, duration of flight, and the points between which such flight was made,
(b) type and make of the aircraft flown, the airplane class and engine horsepower,
(c) aircraft identification mark,
(d) dual instruction endorsed by a rated instructor, solo, instrument, and night flying time.

43.405 Logging of flight time.

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

(b) **Private and commercial.** A private or commercial pilot may log as solo that portion of any flight during which he is the sole manipulator of the controls of an aircraft for which he is rated or any flight during which he is the sole occupant of the aircraft. A flight instructor may log as solo that flight time during which he is serving as flight instructor.

(c) **Instrument time.** Instrument flight time may be logged as such by the pilot actually manipulating the controls only when the aircraft is flown solely by reference to instruments either under actual or simulated instrument flight conditions.

43.406 Use of liquor, narcotics, and drugs. No person shall pilot an aircraft or serve as a member of the crew while under the influence of intoxicating liquor or use any drug which affects his faculties in any manner contrary to safety. A pilot shall not permit any person to be carried in the aircraft who is obviously under the influence of intoxicating liquor or drugs, except a medical patient under proper care or in case of emergency.

43.407 Towing by aircraft. No pilot shall tow anything by aircraft unless authority for such operation has been issued by the Administrator.

43.408 Dropping objects. No person piloting an aircraft shall permit anything to be dropped from an aircraft in flight which might create any hazard to persons or property.

43.409 Aerobatic flight. No pilot shall intentionally fly an aircraft in aerobatic flight carrying passengers unless all occupants are equipped with approved parachutes.

43.410 Parachutes. No person piloting an aircraft shall permit other than an approved parachute which has been packed within the preceding 60 days by a certificated parachute rigger to be carried in the aircraft in a manner available for emergency use.

43.411 Transportation of explosives and other dangerous articles. No person piloting an aircraft shall permit explosives or other dangerous articles such as inflammable liquids or solids, oxidizing material, corrosive liquid, inflammable or noninflammable compressed gas, poison gas or liquid, poisonous liquid or solid, or tear gas to be carried in aircraft, except as

provided for in Part 49 of the Civil Air Regulations. Small arms ammunition for personal use, necessary aircraft signaling devices, and equipment necessary to safe operation of the aircraft are permitted.

43.5 STUDENT PILOT LIMITATIONS

43.50 General limitations. A student shall not pilot an aircraft carrying a passenger and shall not pilot aircraft for hire or reward or in furtherance of a business.

43.51 Requirement for first solo. A first solo flight in powered aircraft shall not be made until the student has been found competent by a flight instructor to make such flight and authority therefor has been endorsed by such instructor on the student pilot certificate. Prior to the first solo in spinnable powered aircraft the student shall be given instruction in recovery from stalls and spins.

43.52 Flight area limitations. A student shall not pilot an aircraft outside a local flying area designated by his flight instructor until:

(a) he has had at least 10 solo flight hours,

(b) he has passed a written examination on the pertinent provisions of Part 43 and those of Part 60 dealing with contact flight rules,

(c) his student pilot certificate has been appropriately endorsed by a flight instructor.

43.53 Aircraft limitations. A student shall not pilot an aircraft other than that of the type, class, and model which has been endorsed on his student pilot certificate by a flight instructor.

43.54 Recent experience. A student who has not piloted a powered aircraft within 90 days shall not pilot such aircraft in solo flight until he has passed a flight check given by a flight instructor and that fact has been endorsed by such instructor in the student pilot log-book.

43.6 PRIVATE AND COMMERCIAL PILOT PRIVILEGES AND LIMITATIONS

43.60 Private pilot. A private pilot shall not pilot aircraft for hire.

NOTE: This rule permits sharing the expenses of a flight or piloting aircraft in furtherance of a business when the flight is made solely for the personal transportation of the pilot.

43.61 Commercial pilot. A commercial pilot may pilot aircraft for hire.

43.62 Airline transport pilot. An airline transport pilot may exercise the privileges of a commercial pilot with an instrument rating.

43.63 Rating requirements. A private or commercial pilot shall not pilot an aircraft carrying passengers other than an aircraft of the type and class for which he is rated, but may pilot other aircraft without passengers unless limitations placed on his certificate prohibit him from doing so.

43.64 Flight instruction limitations. The following rules govern flight instruction.

43.640 Aircraft. Aircraft shall be equipped with fully functioning dual controls.

43.641 Flight time. A flight instructor shall not give more than 8 hours of dual flight instruction in any one day and not more than 36 hours of dual flight instruction in any 7-day period.

43.642 Endorsement of student pilot certificates. A flight instructor shall not endorse the certificate of any student pilot for solo flight, cross-country flight, or flight in different models of aircraft, unless he has determined that the student is competent to exercise such privileges with safety.

43.65 Instrument flight limitations. A pilot shall not pilot aircraft under instrument flight rules, unless he holds a valid instrument rating issued by the Administrator.

43.66 Instrument flight instruction. Instrument flight instruction may be given only by a person holding an effective instrument rating. A flight instructor rating is not required.

43.67 Simulated instrument flight. Aircraft shall not be flown under simulated instrument flight conditions unless:

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

(b) an appropriately rated pilot occupies the other control seat as safety pilot, and

(c) such safety pilot at all times has adequate vision forward and to either side of the aircraft, or a competent observer occupies a position in the aircraft so that his field of vision adequately supplements that of the safety pilot.

43.68 Recent flight experience. The following rules govern recent flight experience:

43.680 General. No person shall pilot an aircraft carrying passengers unless within the preceding 90 days he has made at least 5 take-offs and landings to a full stop in aircraft of the same type and class, and of a rated horsepower within 50 per cent of the horsepower of the aircraft to be flown.

43.681 Night flight. No person shall pilot an aircraft carrying passengers during the period from one hour after sunset to one hour before sunrise, unless he has made at least 5 take-offs and landings to a full stop during such period within the preceding 90 days.

43.682 Instruction flight. A flight instructor shall not exercise the privileges of the instructor rating unless within the preceding 12 calendar months he has either:

(a) given at least 10 hours of flight instruction while appropriately rated, or
(b) demonstrated his continued proficiency to the Administrator.

43.683 Instrument flight. A pilot shall not pilot an aircraft under instrument flight rules unless he has had at least 6 hours of instrument flight under actual or simulated flight conditions during the preceding 6 calendar months or until he has had 6 hours of such flight time under:

(a) actual instrument conditions, accompanied by a pilot of at least private rating holding an appropriate aircraft and instrument rating, or

(b) simulated instrument conditions in an aircraft, accompanied by a pilot of at least private rating holding an appropriate aircraft rating, or

(c) simulated instrument conditions in equipment approved by the Administrator, except that at least 3 hours must have been had in accordance with paragraph (a) or (b).

43.9 DEFINITIONS

(a) **Pilot** is a person holding a valid pilot certificate issued by the Administrator.

(b) **To pilot** means to be in command of the aircraft during take-off, in flight, or landing.

(c) **Passenger** is an occupant of the aircraft in flight other than a crew member.

(d) **Flight instructor** means a private or commercial pilot who possesses a valid flight instructor rating.

(e) **Routine maintenance** is defined as simple or minor preservation operations, including but not limited to the adjustment of rigging and clearances, and the replacement of small standard parts not involving complex assembly operations.

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