

FEDERAL AVIATION REGULATIONS
SELECTED ISSUES UNDER FAR PARTS 61 AND 91
A PRACTICAL ANALYSIS

1. THE “GO/NO GO” DECISION:

- ASSUMING THE PIC IS SATISFIED THAT THE WEATHER IS SUITABLE FOR THE FLIGHT TO BE UNDERTAKEN, AN IMPORTANT COMPONENT OF THE “GO/NO GO” DECISION IS THE LEGALITY OF THE FLIGHT UNDER PARTS 61 AND 91 OF THE FARs.
 - WILL A GIVEN FLIGHT BE LEGAL?
 - IF THE FLIGHT IS NOT LEGAL THEN THE FLIGHT PROBABLY WON’T BE SAFE.
- A. ON A VFR AND IFR FLIGHT BOTH THE **PILOT AND THE AIRCRAFT** MUST PASS REGULATORY MUSTER UNDER PARTS 61 AND 91 OF THE FARs.

1. THE AIRCRAFT:

VFR:

- FAR 91.205

Sec. 91.205 - Powered civil aircraft with standard category U.S. airworthiness certificates: Instrument and equipment requirements.

(a) *General.* Except as provided in paragraphs (c)(3) and (e) of this section, no person may operate a powered civil aircraft with a standard category U.S. airworthiness certificate in any operation described in paragraphs (b) through (f) of this section unless that aircraft contains the instruments and equipment specified in those paragraphs (or FAA-approved equivalents) for that type of operation, and those instruments and items of equipment are in operable condition.

(b) *Visual-flight rules (day).* For VFR flight during the day, the following instruments and equipment are required:

- (1) Airspeed 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 for each altitude engine.
- (9) Fuel gauge indicating the quantity of fuel in each tank.
- (10) Landing gear position indicator, if the aircraft has a retractable landing gear.
- (11) For small civil airplanes certificated after March 11, 1996, in accordance with part 23 of this chapter, an approved aviation red or aviation white anticollision light system. In the event of failure of any light of the anticollision light system, operation of the aircraft may continue to a location where repairs or replacement can be made.
- (12) If the aircraft is operated for hire over water and beyond power-off gliding distance from shore, approved flotation gear readily available to each occupant and at least one pyrotechnic signaling device. As used in this section, "shore" means that area of the land adjacent to the water which is above the high water mark and excludes land areas which are intermittently under water.
- (13) An approved safety belt with an approved metal-to-metal latching device for each occupant 2 years of age or older.
- (14) For small civil airplanes manufactured after July 18, 1978, an approved shoulder harness for each front seat. The shoulder harness must be designed to protect the occupant from serious head injury when the occupant experiences the ultimate inertia forces specified in §23.561(b)(2) of this chapter. Each shoulder harness installed at a flight crewmember station must permit the crewmember, when seated and with the safety belt and shoulder harness fastened, to perform all functions necessary for flight operations. For purposes of this paragraph --
 - (i) The date of manufacture of an airplane is the date the inspection acceptance records reflect that the airplane is complete and meets the FAA-approved type design data; and
 - (ii) A front seat is a seat located at a flight crewmember station or any seat located alongside such a seat.
- (15) An emergency locator transmitter, if required by §91.207.

(16) For normal, utility, and acrobatic category airplanes with a seating configuration, excluding pilot seats, of 9 or less, manufactured after December 12, 1986, a shoulder harness for --

(i) Each front seat that meets the requirements of §23.785 (g) and (h) of this chapter in effect on December 12, 1985;

(ii) Each additional seat that meets the requirements of §23.785(g) of this chapter in effect on December 12, 1985.

- ELT'S

VFR NIGHT: FAR 91.205(c)

(c) *Visual flight rules (night)*. For VFR flight at night, the following instruments and equipment are required:

(1) Instruments and equipment specified in paragraph (b) of this section.

(2) Approved position lights.

(3) An approved aviation red or aviation white anticollision light system on all U.S.-registered civil aircraft. Anticollision light systems initially installed after August 11, 1971, on aircraft for which a type certificate was issued or applied for before August 11, 1971, must at least meet the anticollision light standards of part 23, 25, 27, or 29 of this chapter, as applicable, that were in effect on August 10, 1971, except that the color may be either aviation red or aviation white. In the event of failure of any light of the anticollision light system, operations with the aircraft may be continued to a stop where repairs or replacement can be made.

(4) If the aircraft is operated for hire, one electric landing light.

(5) An adequate source of electrical energy for all installed electrical and radio equipment.

(6) One spare set of fuses, or three spare fuses of each kind required, that are accessible to the pilot in flight.

➤ NO SPECIFIC REQUIREMENT FOR RADIO EQUIPMENT

- FAR 91.215:

REQUIRES A MODE C (ALTITUDE REPORTING) TRANSPONDER IF YOU PLAN TO FLY ABOVE 10,000 FEET MSL, WITHIN 30 MILES OF PRIMARY AIRPORT IN CLASS B AIRSPACE, OR IN OR ABOVE CLASS C AIRSPACE

b) *All airspace.* Unless otherwise authorized or directed by ATC, no person may operate an aircraft in the airspace described in paragraphs (b)(1) through (b)(5) of this section, unless that aircraft is equipped with an operable coded radar beacon transponder having either Mode 3/A 4096 code capability, replying to Mode 3/A interrogations with the code specified by ATC, or a Mode S capability, replying to Mode 3/A interrogations with the code specified by ATC and intermode and Mode S interrogations in accordance with the applicable provisions specified in TSO C-112, and that aircraft is equipped with automatic pressure altitude reporting equipment having a Mode C capability that automatically replies to Mode C interrogations by transmitting pressure altitude information in 100-foot increments. This requirement applies --

(1) *All aircraft.* In Class A, Class B, and Class C airspace areas;

(2) *All aircraft.* In all airspace within 30 nautical miles of an airport listed in appendix D, section 1 of this part from the surface upward to 10,000 feet MSL;

(3) Notwithstanding paragraph (b)(2) of this section, any aircraft which was not originally certificated with an engine-driven electrical system or which has not subsequently been certified with such a system installed, balloon or glider may conduct operations in the airspace within 30 nautical miles of an airport listed in appendix D, section 1 of this part provided such operations are conducted --

(i) Outside any Class A, Class B, or Class C airspace area; and

(ii) Below the altitude of the ceiling of a Class B or Class C airspace area designated for an airport or 10,000 feet MSL, whichever is lower; and

(4) All aircraft in all airspace above the ceiling and within the lateral boundaries of a Class B or Class C airspace area designated for an airport upward to 10,000 feet MSL; and

(5) All aircraft except any aircraft which was not originally certificated with an engine-driven electrical system or which has not subsequently been certified with such a system installed, balloon, or glider -- --

(i) In all airspace of the 48 contiguous states and the District of Columbia at and above 10,000 feet MSL, excluding the airspace at and below 2,500 feet above the surface; and

(ii) In the airspace from the surface to 10,000 feet MSL within a 10-nautical-mile radius of any airport listed in appendix D, section 2 of this part, excluding the airspace below 1,200 feet outside of the lateral boundaries of the surface area of the airspace designated for that airport.

(c) *Transponder-on operation.* While in the airspace as specified in paragraph (b) of this section or in all controlled airspace, each person operating an aircraft equipped with an operable ATC transponder maintained in accordance with §91.413 of this part shall operate the transponder, including Mode C equipment if installed, and shall reply on the appropriate code or as assigned by ATC.

(d) *ATC authorized deviations.* Requests for ATC authorized deviations must be made to the ATC facility having jurisdiction over the concerned airspace within the time periods specified as follows:

(1) For operation of an aircraft with an operating transponder but without operating automatic pressure altitude reporting equipment having a Mode C capability, the request may be made at any time.

(2) For operation of an aircraft with an inoperative transponder to the airport of ultimate destination, including any intermediate stops, or to proceed to a place where suitable repairs can be made or both, the request may be made at any time.

(3) For operation of an aircraft that is not equipped with a transponder, the request must be made at least one hour before the proposed operation.

- CURRENT ANNUAL INSPECTION
- FAR 91.411 AND 91.413:
TRANSPONDER AND ENCODING
ALTIMETER MUST HAVE BEEN CHECKED
WITHIN THE PREVIOUS 24 MONTHS.

“AROW”: THE AIRCRAFT MUST CARRY THE PROPER PAPERWORK:

- AIRWORTHINESS CERTIFICATE
- REGISTRATION
- OPERATING LIMITATIONS

- WEIGHT AND BALANCE DATA INCLUDING AN INSTALLED EQUIPMENT LIST.

IFR: FAR 91.205(d)

FIVE WORKING FLIGHT INSTRUMENTS, CLOCK, MAGNETIC COMPASS, AND COMMUNICATION AND NAVIGATION EQUIPMENT APPROPRIATE TO THE GROUND FACILITIES TO BE USED.

(d) *Instrument flight rules.* For IFR flight, the following instruments and equipment are required:

- (1) Instruments and equipment specified in paragraph (b) of this section, and, for night flight, instruments and equipment specified in paragraph (c) of this section.
- (2) Two-way radio communications system and navigational equipment appropriate to the ground facilities to be used.
- (3) Gyroscopic rate-of-turn indicator, except on the following aircraft:
- (4) Slip-skid indicator.
- (5) Sensitive altimeter adjustable for barometric pressure.
- (6) A clock displaying hours, minutes, and seconds with a sweep-second pointer or digital presentation.
- (7) Generator or alternator of adequate capacity.
- (8) Gyroscopic pitch and bank indicator (artificial horizon).
- (9) Gyroscopic direction indicator (directional gyro or equivalent).

FAR 91.411:

FOR IFR ***IN CONTROLLED AIRSPACE***, THE ALTIMETER AND STATIC SYSTEM MUST HAVE BEEN CHECKED BY QUALIFIED PERSONNEL WITH THE PRECEDING 24 CALENDAR MONTHS.

FAR 91.171: VOR CHECKS

(a) No person may operate a civil aircraft under IFR using the VOR system of radio navigation unless the VOR equipment of that aircraft --

(1) Is maintained, checked, and inspected under an approved procedure; or

(2) Has been operationally checked within the preceding 30 days, and was found to be within the limits of the permissible indicated bearing error set forth in paragraph (b) or (c) of this section.

(b) Except as provided in paragraph (c) of this section, each person conducting a VOR check under paragraph (a)(2) of this section shall --

(1) Use, at the airport of intended departure, an FAA-operated or approved test signal or a test signal radiated by a certificated and appropriately rated radio repair station or, outside the United States, a test signal operated or approved by an appropriate authority to check the VOR equipment (the maximum permissible indicated bearing error is plus or minus 4 degrees); or

(2) Use, at the airport of intended departure, a point on the airport surface designated as a VOR system checkpoint by the Administrator, or, outside the United States, by an appropriate authority (the maximum permissible bearing error is plus or minus 4 degrees);

(3) If neither a test signal nor a designated checkpoint on the surface is available, use an airborne checkpoint designated by the Administrator or, outside the United States, by an appropriate authority (the maximum permissible bearing error is plus or minus 6 degrees); or

(4) If no check signal or point is available, while in flight --

(i) Select a VOR radial that lies along the centerline of an established VOR airway;

(ii) Select a prominent ground point along the selected radial preferably more than 20 nautical miles from the VOR ground facility and maneuver the aircraft directly over the point at a reasonably low altitude; and

(iii) Note the VOR bearing indicated by the receiver when over the ground point (the maximum permissible variation between the published radial and the indicated bearing is 6 degrees).

(c) If dual system VOR (units independent of each other except for the antenna) is installed in the aircraft, the person checking the equipment may check one system against the other in place of the check procedures specified in paragraph (b) of this section. Both systems shall be tuned to the same VOR ground facility and note the indicated bearings to that station. The maximum permissible variation between the two indicated bearings is 4 degrees.

(d) Each person making the VOR operational check, as specified in paragraph (b) or (c) of this section, shall enter the date, place, bearing error, and sign the aircraft log or other record. In addition, if a test signal radiated by a repair station, as specified in paragraph (b)(1) of this section, is used, an entry must be made in the aircraft log or other record by the repair station certificate holder or the certificate holder's representative certifying to the bearing transmitted by the repair station for the check and the date of transmission.

2. THE PILOT IN COMMAND:

“IMSAFE” AM I ‘SAFE’ TO CONDUCT THIS FLIGHT??

A. FAA MEDICAL CERTIFICATE

B. FAR 61.56 CURRENT FLIGHT REVIEW

Sec. 61.56 - Flight review.

(a) Except as provided in paragraphs (b) and (f) of this section, a flight review consists of a minimum of 1 hour of flight training and 1 hour of ground training. The review must include:

(1) A review of the current general operating and flight rules of part 91 of this chapter; and

(2) A review of those maneuvers and procedures that, at the discretion of the person giving the review, are necessary for the pilot to demonstrate the safe exercise of the privileges of the pilot certificate.

(b) Glider pilots may substitute a minimum of three instructional flights in a glider, each of which includes a flight to traffic pattern altitude, in lieu of the 1 hour of flight training required in paragraph (a) of this section.

(c) Except as provided in paragraphs (d), (e), and (g) of this section, no person may act as pilot in command of an aircraft unless,

since the beginning of the 24th calendar month before the month in which that pilot acts as pilot in command, that person has --

(1) Accomplished a flight review given in an aircraft for which that pilot is rated by an authorized instructor and

(2) A logbook endorsed from an authorized instructor who gave the review certifying that the person has satisfactorily completed the review.

(d) A person who has, within the period specified in paragraph (c) of this section, passed a pilot proficiency check conducted by an examiner, an approved pilot check airman, or a U.S. Armed Force, for a pilot certificate, rating, or operating privilege need not accomplish the flight review required by this section.

(e) A person who has, within the period specified in paragraph (c) of this section, satisfactorily accomplished one or more phases of an FAA-sponsored pilot proficiency award program need not accomplish the flight review required by this section.

(f) A person who holds a current flight instructor certificate who has, within the period specified in paragraph (c) of this section, satisfactorily completed a renewal of a flight instructor certificate under the provisions in §61.197 need not accomplish the 1 hour of ground training specified in paragraph (a) of this section.

(g) A student pilot need not accomplish the flight review required by this section provided the student pilot is undergoing training for a certificate and has a current solo flight endorsement as required under §61.87 of this part.

(h) The requirements of this section may be accomplished in combination with the requirements of §61.57 and other applicable recent experience requirements at the discretion of the authorized instructor conducting the flight review.

(i) A flight simulator or flight training device may be used to meet the flight review requirements of this section subject to the following conditions:

(1) The flight simulator or flight training device must be used in accordance with an approved course conducted by a training center certificated under part 142 of this chapter.

(2) Unless the flight review is undertaken in a flight simulator that is approved for landings, the applicant must meet the takeoff and landing requirements of §61.57(a) or §61.57(b) of this part.

(3) The flight simulator or flight training device used must represent an aircraft or set of aircraft for which the pilot is rated.

REFERENCE AC-61-98A APPENDIX 2
(SEE ATTACHED)

- NEW RATING
- WINGS PROGRAM

C. FAR 61.57 CURRENT INSTRUMENT
RATING

REFERENCE AC-61-98A APPENDIX 3
(SEE ATTACHED)

(c) *Instrument experience.* Except as provided in paragraph (e) of this section, no person may act as pilot in command under IFR or in weather conditions less than the minimums prescribed for VFR, unless within the preceding 6 calendar months, that person has:

(1) For the purpose of obtaining instrument experience in an aircraft (other than a glider), performed and logged under actual or simulated instrument conditions, either in flight in the appropriate category of aircraft for the instrument privileges sought or in a flight simulator or flight training device that is representative of the aircraft category for the instrument privileges sought --

(i) At least six instrument approaches;

(ii) Holding procedures; and

(iii) Intercepting and tracking courses through the use of navigation systems.

(2) For the purpose of obtaining instrument experience in a glider, performed and logged under actual or simulated instrument conditions --

(i) At least 3 hours of instrument time in flight, of which 1 1/2 hours may be acquired in an airplane or a glider if no passengers are to be carried; or

(ii) 3 hours of instrument time in flight in a glider if a passenger is to be carried.

(d) *Instrument proficiency check.* Except as provided in paragraph (e) of this section, a person who does not meet the instrument experience requirements of paragraph (c) of this section within the prescribed time, or within 6 calendar months after the prescribed time, may not serve as pilot in command

under IFR or in weather conditions less than the minimums prescribed for VFR until that person passes an instrument proficiency check consisting of a representative number of tasks required by the instrument rating practical test.

(1) The instrument proficiency check must be --

(i) In an aircraft that is appropriate to the aircraft category;

(ii) For other than a glider, in a flight simulator or flight training device that is representative of the aircraft category; or

(iii) For a glider, in a single-engine airplane or a glider.

(2) The instrument proficiency check must be given by -

(i) An examiner;

(ii) A person authorized by the U.S. Armed Forces to conduct instrument flight tests, provided the person being tested is a member of the U.S. Armed Forces;

(iii) A company check pilot who is authorized to conduct instrument flight tests under part 121, 125, or 135 of this chapter, and provided that both the check pilot and the pilot being tested are employees of that operator;

(iv) An authorized instructor; or

(v) A person approved by the Administrator to conduct instrument practical tests.

- **CURRENCY LAPSES**

D. ATC CLEARANCE FOR FLIGHT IN CONTROLLED AIRSPACE.

E. IFR FLIGHTS IN UNCONTROLLED AIRSPACE: (OR HOW A PILOT CAN LEGALLY DEPART AN UNCONTROLLED, (CLASS G), AIRPORT IN ZERO-ZERO CONDITIONS WITHOUT PHONE CALLS, RADIO WORK, THE NEED FOR AN ATC CLEARANCE OR EVEN A CURRENTLY CERTIFIED ALTIMETER AND STATIC SYSTEM!!):

REQUIREMENTS:

- CURRENT INSTRUMENT RATING
- OTHERWISE LEGALLY CURRENT
- REQUIRED INSTRUMENTATION
- NO CLEARANCE REQUIRED
- NO REPORTING
- NO RADIO
- NO NAVIGATION EQUIPMENT

SCARY.....ISN'T IT??????

B. DISCUSSION AND FOOD FOR THOUGHT:

- ARE AERONAUTICAL CHARTS REQUIRED IN ORDER TO CONDUCT PART 91 FLIGHTS??
- WHEN DOES A POH CONSTITUTE A LEGAL SUBSTITUTE FOR AN APPROVED FLIGHT MANUAL??
- WHEN, IF EVER, IS A CURRENT VOR CHECK NOT REQUIRED WHEN CONDUCTING A PART 91 IFR FLIGHT??
- WHEN IS A CLEARANCE REQUIRED FOR A PART 91 IFR FLIGHT???
- DO I HAVE TO CARRY THE AIRCRAFT LOGBOOKS IN THE AIRCRAFT TO BE LEGAL FOR FLIGHT??
- DO I HAVE TO CARRY MY PILOT LOGBOOK IN THE AIRCRAFT TO BE LEGAL AS PIC??
- DO I HAVE TO HAVE A PILOT LOGBOOK AT ALL??
- CAN I LEGALLY FLY IFR DIRECT WHEN MY AIRCRAFT IS NOT RNAV EQUIPPED???
- IF I AM NOT INSTRUMENT RATED OR INSTRUMENT CURRENT CAN I ACT AS SAFETY PILOT?? WHAT IF MEDICAL EXPIRED 5/31/03???
- MY LAST SUCCESSFUL BFR WAS JUNE 10, 2001. ASSUMING I AM OTHERWISE LEGAL AND CURRENT, WHEN IS THE LAST DATE THAT I CAN LEGALLY ACT AS PIC??
- ASSUME AM I OTHERWISE LEGALLY CURRENT TO ACT AS PIC IN AS/MEL. MY LAST FLIGHT AS PIC

WAS JANUARY 15, 2003. CAN I MAKE A SOLO DAYTIME FLIGHT AS PIC TODAY WITHOUT MEETING/FULFILLING ANY OTHER REGULATORY REQUIREMENT(S)?? WHAT ABOUT AN IFR FLIGHT??

- UNDER FAR 91.205(d). WHAT FLIGHT INSTRUMENT IS NOT REQUIRED FOR LEGAL FLIGHT??
- FIDO, MY TRUSTY “SIC”, HOPPED IN THE MOONEY DURING PREFLIGHT AND ATE MY COMPASS CORRECTION CARD. BEING THE TYPE A+ PERSONALITY I AM, I HAVE PRINTED THE COMPASS DEVIATIONS ON THE BACK OF MY BUSINESS CARDS SOME OF WHICH I HAVE WITH ME. DID THE MUTT SCRUB OUR FLIGHT OR IS IT STILL A GO??? WHAT IF I GAVE MY LAST CARD TO A NEW CLIENT ON THE WAY TO THE AIRPORT???
- MY WIFE IS NOT A PILOT. BECAUSE I WAS BUSY MOWING THE LAWN AND EMPTYING THE TRASH, (AND FOLDING THE LAUNDRY), I GAVE HER A COMPLETELY FILLED OUT FLIGHT PLAN FORM AND ASKED HER TO CALL BDR AFSS AND FILE THE PROPOSED IFR FLIGHT PLAN FOR ME. ASSUMING I AM OTHERWISE LEGAL, (AND NOT EXHAUSTED), CAN I LEGALLY CONDUCT THE FLIGHT AS FILED WITHOUT CALLING FLIGHT SERVICE MYSELF???
WHAT ABOUT FOR A VFR FLIGHT PLAN FILED IN THE SAME MANNER???
- CONDUCT YOUR OWN PERIODIC “FLIGHT REVIEW” OR “ICC” WITH A FELLOW PILOT USING THE AC GUIDELINES.