



## FAR PART 91: 91.155 – 91.519

### 91.159 VFR Cruising Altitude or Flight Level

1. All VFR aircraft above 3,000 ft. AGL and below 18,000 ft. MSL in level cruising flight must maintain specified altitudes.
2. The altitude prescribed is based upon the magnetic course (not magnetic heading).
3. For magnetic courses of 0° to 179°, use odd thousand foot MSL altitudes plus 500 ft., e.g., 3,500; 5,500; or 7,500.
4. For magnetic courses of 180° to 359°, use even thousand foot MSL altitudes plus 500 ft., e.g., 4,500; 6,500; or 8,500.
5. When operating above 18,000 feet MSL, you must maintain the altitude or flight level assigned by ATC.

### Instrument Flight Rules

#### 91.203 Civil Aircraft: Certifications Required

1. You may not operate a civil aircraft unless it has in it both of the following:
  - a. An appropriate and current airworthiness certificate which is posted near the aircraft entrance for passengers and crew to see
  - b. A registration certificate issued to the aircraft owner
2. You are also required to have
  - a. An approved Airplane Flight Manual or Pilot's Operating Handbook accessible to the pilot
  - b. The aircraft's weight and balance information
3. An easy way to remember the required documents is by using the memory aid **ARROW**:

**A**irworthiness certificate  
**R**egistration  
**R**adio station license  
**O**perating limitations  
**W**eight and balance

NOTE: A radio station license is required only if the airplane is flown outside of U.S. airspace (i.e., to another country). Additionally, on these flights you are required to have a restricted radiotelephone operator permit. These are requirements of the Federal Communications Commission (FCC), not FAA requirements.

#### 91.207 Emergency Locator Transmitters

1. ELT batteries must be replaced after 1 cumulative hr. of use or after 50% of their useful life (or charge, if rechargeable) expires.
2. The expiration date for batteries used in an ELT must be legibly marked on the outside of the transmitter.
3. The ELT must be inspected every 12 calendar months for
  - a. Proper installation
  - b. Battery corrosion
  - c. Operation of the controls and crash sensor
  - d. Sufficient signal radiated from its antenna
4. This regulation also lists 11 conditions for which an ELT is not required in aircraft.



### 91.209 Aircraft Lights

1. During the period from sunset to sunrise, you may not operate an aircraft unless it has lighted position (navigation) lights.
2. You may not park or move an aircraft in, or in dangerous proximity to, a night flight operations area of an airport unless the aircraft
  - a. Is clearly illuminated,
  - b. Has lighted position lights, or
  - c. Is in an area that is marked by obstruction lights.
3. At all times, you must use anticollision lights (i.e., rotating beacon and/or strobe lights) if your airplane is so equipped.
  - a. The anticollision light may be turned off if you (the pilot in command) determine that it would be in the interest of safety, given the operating conditions, to turn it off.

### 91.215 ATC Transponder and Altitude Reporting Equipment and Use

1. Mode C transponder equipment is required in all Class A, Class B, and Class C airspace areas.
2. All aircraft certified with an engine-driven electrical system must have Mode C transponder equipment
  - a. Within 30 NM of the primary airport of a Class B airspace area from the surface up to 10,000 ft. MSL
  - b. Above 10,000 ft. MSL, excluding airspace at or below 2,500 ft. AGL
3. All aircraft must have Mode C transponder equipment
  - a. Within a Class C airspace area, above the ceiling, and within the lateral limits of the Class C airspace area
  - b. Within 10 NM of certain specified airports (except below 1,200 ft. AGL outside of the lateral boundaries of the surface area designated for that airport)
4. If the airplane you are flying is equipped with a Mode C transponder and is maintained in accordance with FAR 91.413, you must have it on in all controlled airspace, not just the airspace specified above.

### 91.307 Parachutes and Parachuting

1. Emergency parachutes cannot be carried aboard an airplane unless they meet FAA specifications.
2. Except in emergencies, persons may not make parachute jumps from airplanes unless in accordance with FAR Part 105.
3. Unless each occupant of the aircraft is wearing an approved parachute, no pilot carrying another person may execute any intentional maneuver that exceeds
  - a. A bank of 60° relative to the horizon
  - b. A nose-up or nose-down attitude of 30° relative to the horizon
4. Item 3. does not apply to flight tests for pilot certifications or ratings or to spins and other flight maneuvers required for any certificate or rating if given by a CFI.



### **91.407 Operation after Maintenance, Preventive Maintenance, Rebuilding, or Alteration**

1. You may not operate an aircraft that has undergone any maintenance, preventive maintenance, rebuilding, or alteration unless
  - a. It has been approved for return to service by a person authorized by FAR 43.7.
  - b. The logbook entry required by FARs 43.9 and 43.11 has been made.
2. You may not operate an aircraft that has been significantly altered or rebuilt to the extent that it changes its flight characteristics until it has been test-flown by an appropriately rated pilot with at least a private pilot certificate.

### **91.409 Inspections**

1. Annual inspections are good through the last day of the 12th calendar month after the previous annual inspection.  

EXAMPLE: An aircraft has its annual inspection on March 22, 2012. The latest day this inspection is good through is March 31, 2013.

  - a. An annual inspection must be performed by a certified mechanic (A & P) who also has an inspection authorization (IA).
2. Airplanes that are used to carry people for hire or to provide flight instruction for hire must undergo an annual or 100-hr. inspection within the preceding 100 hr. of flight time.
  - a. The 100 hr. may not be exceeded by more than 10 hr. if necessary to reach a place at which an inspection can be performed.
  - b. The next inspection, however, is due 200 hr. from the prior inspection; e.g., if the inspection is done at 105 hr., the next inspection is due in 95 hr.
  - c. If you have an inspection done prior to 100 hr., you cannot add the time remaining to 100 hr. to the next inspection.