

§ 125.225 Flight data recorders.

- (a) Except as provided in [paragraph \(d\)](#) of this section, after October 11, 1991, no person may operate a large airplane type certificated before October 1, 1969, for operations above 25,000 feet altitude, nor a multiengine, turbine powered airplane type certificated before October 1, 1969, unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. The following information must be able to be determined within the ranges, accuracies, resolution, and recording intervals specified in [appendix D of this part](#):
- (1) Time;
 - (2) Altitude;
 - (3) Airspeed;
 - (4) Vertical acceleration;
 - (5) Heading;
 - (6) Time of each radio transmission to or from air traffic control;
 - (7) Pitch attitude;
 - (8) Roll attitude;
 - (9) Longitudinal acceleration;
 - (10) Control column or pitch control surface position; and
 - (11) Thrust of each engine.
- (b) Except as provided in [paragraph \(d\)](#) of this section, after October 11, 1991, no person may operate a large airplane type certificated after September 30, 1969, for operations above 25,000 feet altitude, nor a multiengine, turbine powered airplane type certificated after September 30, 1969, unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. The following information must be able to be determined within the ranges, accuracies, resolutions, and recording intervals specified in [appendix D of this part](#):
- (1) Time;
 - (2) Altitude;
 - (3) Airspeed;
 - (4) Vertical acceleration;
 - (5) Heading;
 - (6) Time of each radio transmission either to or from air traffic control;
 - (7) Pitch attitude;
 - (8) Roll attitude;
 - (9) Longitudinal acceleration;

- (10) Pitch trim position;
 - (11) Control column or pitch control surface position;
 - (12) Control wheel or lateral control surface position;
 - (13) Rudder pedal or yaw control surface position;
 - (14) Thrust of each engine;
 - (15) Position of each thrust reverser;
 - (16) Trailing edge flap or cockpit flap control position; and
 - (17) Leading edge flap or cockpit flap control position.
- (c) After October 11, 1991, no person may operate a large airplane equipped with a digital data bus and ARINC 717 digital flight data acquisition unit (DFDAU) or equivalent unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. Any parameters specified in [appendix D of this part](#) that are available on the digital data bus must be recorded within the ranges, accuracies, resolutions, and sampling intervals specified.
- (d) No person may operate under this part an airplane that is manufactured after October 11, 1991, unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data and a method of readily retrieving that data from the storage medium. The parameters specified in [appendix D of this part](#) must be recorded within the ranges, accuracies, resolutions and sampling intervals specified. For the purpose of this section, “manufactured” means the point in time at which the airplane inspection acceptance records reflect that the airplane is complete and meets the FAA-approved type design data.
- (e) Whenever a flight recorder required by this section is installed, it must be operated continuously from the instant the airplane begins the takeoff roll until it has completed the landing roll at an airport.
- (f) Except as provided in [paragraph \(g\)](#) of this section, and except for recorded data erased as authorized in this paragraph, each certificate holder shall keep the recorded data prescribed in [paragraph \(a\)](#), [\(b\)](#), [\(c\)](#), or [\(d\)](#) of this section, as applicable, until the airplane has been operated for at least 25 hours of the operating time specified in [§ 125.227\(a\) of this chapter](#). A total of 1 hour of recorded data may be erased for the purpose of testing the flight recorder or the flight recorder system. Any erasure made in accordance with this paragraph must be of the oldest recorded data accumulated at the time of testing. Except as provided in [paragraph \(g\)](#) of this section, no record need be kept more than 60 days.
- (g) In the event of an accident or occurrence that requires immediate notification of the National Transportation Safety Board under [49 CFR part 830](#) and that results in termination of the flight, the certificate holder shall remove the recording media from the airplane and keep the recorded data required by [paragraph \(a\)](#), [\(b\)](#), [\(c\)](#), or [\(d\)](#) of this section, as applicable, for at least 60 days or for a longer period upon the request of the Board or the Administrator.
- (h) Each flight recorder required by this section must be installed in accordance with the requirements of [§ 25.1459 of this chapter](#) in effect on August 31, 1977. The correlation required by [§ 25.1459\(c\) of this chapter](#) need be established only on one airplane of any group of airplanes.
- (1) That are of the same type;
 - (2) On which the flight recorder models and their installations are the same; and

(3) On which there are no differences in the type design with respect to the installation of the first pilot's instruments associated with the flight recorder. The most recent instrument calibration, including the recording medium from which this calibration is derived, and the recorder correlation must be retained by the certificate holder.

(i) Each flight recorder required by this section that records the data specified in paragraphs (a), (b), (c), or (d) of this section must have an approved device to assist in locating that recorder under water.

(j) After August 20, 2001, this section applies only to the airplane models listed in § 125.226(l)(2). All other airplanes must comply with the requirements of § 125.226.

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