(b) *Airplanes manufactured before January 3, 1991.* Except as provided in paragraph (c) of this section, after January 2, 1991, no person may operate a turbine-powered airplane manufactured before January 3, 1991 unless it meets one of the following requirements as applicable.

(1) The makes/models/series listed below must be equipped with either an approved airborne windshear warning and flight guidance system, an approved airborne detection and avoidance system, or an approved combination of these systems:

(i) A–300–600;

(ii) A–310—all series;

(iii) A–320—all series;

(iv) B–737–300, 400, and 500 series;

(v) B–747–400;

(vi) B–757—all series;

(vii) B–767—all series;

(viii) F–100—all series;

(ix) MD–11—all series; and

(x) MD–80 series equipped with an EFIS and Honeywell-970 digital flight guidance computer.

(2) All other turbine-powered airplanes not listed above must be equipped with as a minimum requirement, an approved airborne windshear warning system. These airplanes may be equipped with an approved airborne windshear detection and avoidance system, or an approved combination of these systems.

(c) *Extension of the compliance date.* A certificate holder may obtain an extension of the compliance date in paragraph (b) of this section if it obtains FAA approval of a retrofit schedule. To obtain approval of a retrofit schedule and show continued compliance with that schedule, a certificate holder must do the following:

(1) Submit a request for approval of a retrofit schedule by June 1, 1990, to the Flight Standards Division Manager in the region of the certificate holding district office.

(2) Show that all of the certificate holder's airplanes required to be equipped in accordance with this section will be equipped by the final compliance date established for TCAS II retrofit.

(3) Comply with its retrofit schedule and submit status reports containing information acceptable to the Administrator. The initial report must be submitted by January 2, 1991, and subsequent reports must be submitted every six months thereafter until completion of the schedule. The reports must be submitted to the certificate holder's assigned Principal Avionics Inspector.

(d) *Definitions.* For the purposes of this section the following definitions apply—

(1) *Turbine-powered airplane* includes, e.g., turbofan-, turbojet-, propfan-, and ultra-high bypass fan-powered airplanes. The definition specifically excludes turbopropeller-powered airplanes.

(2) An airplane is considered manufactured on the date the inspection acceptance records reflect that the airplane is complete and meets the FAA Approved Type Design data.

[Doc. No. 25954, 55 FR 13242, Apr. 9, 1990]

§ 121.359 Cockpit voice recorders.

(a) No certificate holder may operate a large turbine engine powered airplane or a large pressurized airplane with four reciprocating engines unless an approved cockpit voice recorder is installed in that airplane and is operated continuously from the start of the use of the checklist (before starting engines for the purpose of flight), to completion of the final checklist at the termination of the flight.

(b) [Reserved]

(c) The cockpit voice recorder required by paragraph (a) of this section must meet the following application standards:

(1) The requirements of part 25 of this chapter in affect on August 31, 1977.

(2) After September 1, 1980, each recorder container must—

(i) Be either bright orange or bright yellow;

(ii) Have reflective tape affixed to the external surface to facilitate its location under water; and

(iii) Have an approved underwater locating device on or adjacent to the container which is secured in such a manner that they are not likely to be separated during crash impact, unless the cockpit voice recorder, and the flight recorder required by §121.343, are installed adjacent to each other in such a manner that they are not likely to be separated during crash impact.

(d) No person may operate a multiengine, turbine-powered airplane having a passenger seat configuration of 10–19 seats unless it is equipped with an approved cockpit voice recorder that:

(1) Is installed in compliance with §23.1457(a) (1) and (2), (b), (c), (d), (e), (f), and (g); §25.1457(a) (1) and (2), (b), (c), (d), (e), (f), and (g) of this chapter, as applicable; and

(2) Is operated continuously from the use of the checklist before the flight to completion of the final checklist at the end of the flight.

(e) No person may operate a multiengine, turbine-powered airplane having a passenger seat configuration of 20 to 30 seats unless it is equipped with an approved cockpit voice recorder that—

(1) Is installed in compliance with §23.1457 or §25.1457 of this chapter, as applicable; and

(2) Is operated continuously from the use of the checklist before the flight to completion of the final checklist at the end of the flight.

(f) In complying with this section, an approved cockpit voice recorder having an erasure feature may be used, so that at any time during the operation of the recorder, information recorded more than 30 minutes earlier may be erased or otherwise obliterated.

(g) For those aircraft equipped to record the uninterrupted audio signals received by a boom or a mask microphone, the flight crewmembers are required to use the boom microphone below 18,000 feet mean sea level. No person may operate a large turbine engine powered airplane or a large pressurized airplane with four reciprocating engines manufactured after October 11, 1991, or on which a cockpit voice recorder has been installed after October 11, 1991, unless it is equipped to record the uninterrupted audio signal received by a boom or mask microphone in accordance with §25.1457(c)(5) of this chapter.

(h) In the event of an accident or occurrence requiring immediate notification of the National Transportation Safety Board under part 830 of its regulations, which results in the termination of the flight, the certificate holder shall keep the recorded information for at least 60 days or, if requested by the Administrator or the Board, for a longer period. Information obtained from the record is used to assist in determining the cause of accidents or occurrences in connection with investigations under part 830. The Administrator does not use the record in any civil penalty or certificate action.

[Doc. No. 6258, 29 FR 19205, Dec. 31, 1964, as amended by Amdt. 121–20, 31 FR 8912, June 28, 1966; Amdt. 121–23, 31 FR 15192, Dec. 3, 1966; Amdt. 121–32, 32 FR 13914, Oct. 6, 1967; Amdt. 121–130, 41 FR 47229, Oct. 28, 1976; Amdt. 121–135, 42 FR 36973, July 18, 1977; Amdt. 121–143, 43 FR 22642, May 25, 1978; Amdt. 121–197, 53 FR 26147, July 11, 1988; Amdt. 121–251, 60 FR 65933, Dec. 20, 1995]

§121.360 Ground proximity warning-glide slope deviation alerting system.

(a) No person may operate a turbine-powered airplane unless it is equipped with a ground proximity warning system that meets the performance and environmental standards of TSO-C92 (available from the FAA, 800 Independence Avenue SW., Washington, DC 20591) or incorporates TSO-approved ground proximity warning equipment.

(b) For the ground proximity warning system required by this section, the Airplane Flight Manual shall contain—

(1) Appropriate procedures for—

(i) The use of the equipment;

(ii) Proper flightcrew action with respect to the equipment;

(iii) Deactivation for planned abnormal and emergency conditions;

(iv) Inhibition of Mode 4 warnings based on flaps being in other than the landing configuration if the system incorporates a Mode 4 flap warning inhibition control; and

(2) An outline of all input sources that must be operating.

(c) No person may deactivate a ground proximity warning system required by this section except in accordance with the procedures contained in the Airplane Flight Manual.

(d) Whenever a ground proximity warning system required by this section is deactivated, an entry shall be made in the airplane maintenance record that includes the date and time of deactivation.

(e) No person may operate a turbine-powered airplane unless it is equipped with a ground proximity warning/glide slope deviation alerting system that