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Title 14—AERONAUTICS AND SPACE

Chapter I—Federal Aviation Administration, Department of Transportation

[Docket No. 7947, Amdt. 91-57]

PART 91—GENERAL OPERATION AND FLIGHT RULES

Altitude Alerting System or Device

The purpose of this amendment to Part 91 of the Federal Aviation Regulations is to establish a requirement for an altitude alerting system or device in all U.S. registered turbojet civil airplanes.

These amendments are based on a notice of proposed rule making published in the FEDERAL REGISTER on December 20, 1967 (Notice 67-53, 32 F.R. 19190). Interested persons have been afforded an opportunity to participate in the rule making through submission of written comments. Due consideration has been given to all relevant matter presented.

The proposal for an altitude warning device was first issued by the FAA on February 6, 1967 as an advance notice of proposed rule making (Notice 67-2, 32 F.R. 2860) which requested public comment on several specific questions relating to these devices. Based on the comments received, the FAA issued Notice 67-53 containing a proposed rule with specific requirements for such a device. A majority of the comments on Notice 67-53 were in favor of requiring an altitude warning device.

The comments against the proposal are substantially the same as the negative responses to ANPRM 67-2 which have been discussed in Notice 67-53. There the FAA stated that, while some of the points raised had merit, there was sufficient justification to proceed with regulatory action. The latest comments support that determination.

Several individual operators and the Aircraft Industries Association strongly recommended that the rule specify the objective rather than specific parameters and other detailed requirements. This group stated that certain sophisticated systems and devices that will have altitude alerting capability as well as other desirable features are in an advanced stage of development. Some operators are now committed to install this equipment in connection with modernization programs. Assuming these systems will in fact accomplish the objective, the FAA does not wish to inhibit or restrict their development by overly specific requirements or insufficient lead time.

Consequently, the rule will allow the industry to accomplish the altitude alerting objective by any appropriate system or device. Safety will not be adversely affected by eliminating some of the detailed requirements of the proposed rule and may well be enhanced by encouraging the earlier development of systems that will include additional safety features. In addition, the effective date has been extended to 30 months after adoption in order to provide time for development of these more sophisticated systems. However, this is not to suggest that a more sophisticated system or device will be necessary to meet the purpose of this amendment. A device which will provide the required indications will suffice.

Some operators expressed the fear that the proposed amendment would require the altitude alerting system or device to be used in connection with terminal letdown and instrument approach procedures and thus preclude reliance on radio altimeters or other devices which are capable of more precise obstacle clearance and ground avoidance information. This is a misconception that probably resulted from a lack of clarity in the notices as to the primary purpose of the proposed altitude alerting requirement. The revised language of the amendment has been clarified in this respect by using the term "system or device" which will permit the use of either one device or a system of more than one device. There was some objection to the phrase "altitude warning" due to its emergency connotation. Therefore the term "altitude alerting" is used since this is more appropriate to the purpose of this amendment.

There was considerable opposition to the proposal which permits a flight to be continued only if a failure or malfunction occurs after the airplane has taken off. The FAA has determined that the language would in fact create an unreasonable economic burden which is not justified in the interests of safety and the rule is revised accordingly.

In consideration of the foregoing, Part 91 of the Federal Aviation Regulations is amended, effective September 28, 1968, by adding a new § 91.51 to read as follows:

§ 91.51 Altitude alerting system or device; turbojet powered civil airplanes.

(a) No person may operate a turbojet powered U.S. registered civil airplane after February 28, 1971, unless that airplane is equipped with an approved altitude alerting system or device that is in operable condition and meets the requirements of paragraph (b) of this section.

(b) Each altitude alerting system or device required by paragraph (a) of this section must be able to—

(1) Alert the pilot, upon approaching a preselected altitude in either ascent or descent, by a sequence of both aural and visual signals in sufficient time to establish level flight at that preselected altitude;

(2) Provide the required signals from sea level to the highest operating altitude approved for the airplane in which it is installed;

(3) Preselect altitudes in increments that are commensurate with the altitudes at which the aircraft is operated;

(4) Be tested without special equipment to determine proper operation of the alerting signals; and

(5) Accept necessary barometric pressure settings if the system or device operates on barometric pressure.

However, for operations below 3,000 feet AGL, the system or device need only provide one signal, either visual or aural, to comply with this paragraph.

(c) Each operator to which this section applies must establish and assign procedures for the use of the altitude alerting system or device and each flight crewmember must comply with those procedures assigned to him.

(d) Notwithstanding any other provision of this section to the contrary, a person may—

(1) Ferry a newly acquired airplane from the place where possession of it was taken to a place where the altitude alerting system or device is to be installed;

(2) Continue a flight as planned to a place where repair or replacement can be made in the event that the altitude alerting system or device malfunctions or becomes inoperative;

(3) Ferry an airplane with an inoperative altitude alerting system or device from a place where repair or replacement cannot be made to a place where they can be made; or

(4) Conduct an airworthiness flight test, during which the altitude alerting system or device is turned off, to test it or to test an altimeter or other equipment in the airplane.

(Secs. 313(a), 601, Federal Aviation Act of 1958; 49 U.S.C. 1354(a), 1421)

Issued in Washington, D.C., on August 22, 1968.

D. D. THOMAS,
Acting Administrator.

(As published in the Federal Register /33 F.R. 12180/ on August 29, 1968)