

Title 14—AERONAUTICS AND SPACE

Chapter 1—Federal Aviation Admin-
istration, Department of Transpor-
tation

(Docket No. 0287, Amndt. 25-80; 121-68)

PART 25—AIRWORTHINESS STAND-
ARDS; TRANSPORT CATEGORY
AIRCRAFT

PART 121—CERTIFICATION AND OP-
ERATIONS; AIR CARRIERS AND
COMMERCIAL OPERATORS OF
LARGE AIRCRAFT

Crashworthiness and Passenger
Evacuation

The purpose of these amendments of Parts 25 and 121 of the Federal Aviation Regulations is to revise the emergency evacuation requirements and related operating procedures for transport category aircraft. The amendments were proposed in Notice No. 68-28 issued on October 30, 1968 (33 F.R. 18147).

One proposal included in Notice No. 68-28 (Item No. 6 of the notice) and dealing with a revision of § 121.310(h) was already adopted on February 11, 1969, as Amendment No. 121-45 (34 F.R. 2247).

Several comments were received in response to the various proposals contained in Notice No. 68-28.

With respect to Item No. 1 of the notice—the proposed revision of § 25.785(c)—several comments went beyond the scope of the notice and will not be considered at this time. One comment, however, suggested an 18° angle instead of a 10° angle as a standard for a seat requiring protection from head injury. After conducting additional tests on sideward facing seats, the FAA has concluded that an 18° angle would provide an adequate level of safety, and this standard will be adopted.

Regarding Item No. 2 of the notice—the amendment of § 25.803—two comments objected to the way the notice specified the limit dimensions for floor level exits/doors in the side of the fuselage because the wording might exclude Type A emergency exits 76 inches high as “impractical”, and also exclude exits/doors having only one dimension that is beyond the listed limits. The FAA considers these comments valid and the proposed language of § 25.803(b) will be changed accordingly. One comment also recommended that the amendment of § 25.803(b) exclude exits/doors that

lead into a baggage or cargo compartment when such compartment is not accessible from the passenger cabin. This recommendation will also be adopted in the final rule.

The comments received on the proposed revision of § 25.803(c), suggested that it would burden those persons who seek to provide exits/doors in excess of requirements, that the rule would necessitate additional emergency evacuation demonstrations, and that the proposed amendment is incompatible with current training practices which encourage the use of all exits. The FAA disagrees with these comments since excess exits need not be provided at all and, if provided, would only increase the evacuation capability of the aircraft; the rule requires no additional evacuation demonstrations since it applies only to configurations having the maximum seating capacity; and, finally, the rule does not deal with training requirements but is intentionally conservative to provide a margin of safety. The rule will thus be adopted as proposed.

With respect to Item No. 3 of the notice—the proposed revision of § 121.285(c)—one comment suggested that no cargo whatever be carried in passenger compartments unless it is carried in approved pallets, bins, or special cargo containers. While this suggestion merits consideration, it is beyond the scope of the notice and should not affect the minor change proposed in the notice. Section 121.285(c) will, therefore, be adopted as proposed.

Regarding Item No. 4 of the notice dealing with an amendment of § 121.291, the comments received were generally favorable and the proposal will be adopted.

Favorable comments were also received on the proposal contained in Item No. 5 of the notice and § 121.310(d) will be amended as proposed. One comment, however, raised the point that the proposed rule does not make sense with respect to lights that are self-illuminated by other than electrical means since they are always armed and turned on. The proposed rule is not intended to apply to these lights such as radioactive or chemical lights on slides. It is intended to apply only to electric lights.

Concerning Item No. 7 of the notice—the suggested amendment of § 121.310(l)—two comments dealt with exit size limits and are related to the comments made on § 25.803(b). The proposed amendment will consequently be revised to make it consistent with § 25.803(b). Moreover, one comment suggested that the phrase “ * * and that an equivalent level of safety is provided” be deleted from the waiver provision since an equivalent level of safety on some air-

craft would be so cumbersome and impractical that it would defeat the purpose of the waiver. The FAA agrees and the suggestion will be adopted.

Regarding Item No. 8 of the notice—the proposed revision of § 121.391(b)—one comment objected to the deletion of the field approval provision in current § 121.391(b) pointing out that numerous approvals have already been granted. The FAA believes that these approvals should be reexamined in light of the new rule and that the exemption procedure of Part 11 would give adequate relief in cases deserving exemption from the rule. However, in order to prevent an undue hardship, the proposal will be adopted with a provision allowing approvals granted under the current § 121.391(b) to remain in effect for 1 more year.

With regard to Item No. 9 of the Notice which deals with an amendment of § 121.589(b), the comments received were generally favorable but also requested an extension of the compliance date. The FAA agrees that an extension is justified and § 121.589(b) will be revised further to extend the general compliance date to August 24, 1969, and, in special cases, until October 24, 1969.

Additionally, the proposed change of Appendix D of Part 121—Item No. 10 of the notice—will be adopted as proposed in the notice.

There remains the question of the applicability of revised §§ 25.785(c), 25.803(b) and (c)(1) in relation to § 25.2 which deals with requirements that must be met by an applicant for a type certificate. Accordingly, § 25.2 will be revised to allow an applicant to meet either the current or revised § 25.785(c), and to require the applicant to meet the revised §§ 25.803(b) and 25.803(c)(1) as a condition for obtaining a type certificate after the effective date of this amendment.

In consideration of the foregoing, Parts 25 and 121 of the Federal Aviation Regulations are hereby amended as follows, effective April 23, 1969:

§ 25.2 [Amended]

1. Section 25.2 is amended as follows:
a. Paragraph (a) is amended to read as follows:

(a) After October 23, 1967, that the airplane concerned meets the requirements of §§ 25.783(g), 25.803(c)(2) through (9), 25.803(d), 25.807(a), (c), and (d), 25.809(f), and (h), 25.811(a), (b), (d), (e), (f), and (g), 25.812(a)(1), (b), (c), (d), (e), (h), (i), (j), and (k)(1) and (2), 25.813(a), (b), and (c), 25.815, 25.817, 25.853(a) and (b), 25.855(a), 25.993(f), and 25.1359(c), in effect on October 24, 1967, or June 20, 1968, and
b. By adding the word “; and” to the end of § 25.2(b).

c. By adding new paragraphs (c) and

(As published in the Federal Register 34 F.R. 5543 on March 22, 1969)

(d) to § 25.2 to read as follows:

(c) After April 23, 1969, that the airplane concerned meets the requirements of § 25.785(c) in effect either prior to or on that date; and

(d) After April 23, 1969, that the airplane concerned meets the requirements of §§ 25.803(b) and 25.803(c)(1) in effect on that date.

2. By amending the first sentence in paragraph (c) of § 25.785 to read as follows:

§ 25.785 Seats, berths, safety belts, and harnesses.

(c) Each occupant of a seat that makes more than an 18° angle with the vertical plane containing the airplane centerline, must be protected from head injury by a safety belt and an energy absorbing rest that will support the arms, shoulders, head, and spine, or by a safety belt and shoulder harness that will prevent the head from contacting any injurious object.

3. By amending § 25.803 (b) and (c) (1) to read as follows:

§ 25.803 Emergency evacuation.

(b) Passenger ventral and tail cone exits and any floor level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 44 or more inches high and 20 or more inches wide, but not wider than 46 inches, must meet the applicable emergency exit requirements of this section and §§ 25.807 through 25.813.

(c)

(1) It must be conducted either during the dark of the night or during daylight with the dark of the night simulated, utilizing only the emergency lighting system and utilizing only the minimum number of required emergency exits and the emergency evacuation equipment on one side of the fuselage with the airplane in the normal ground attitude, with landing gear extended.

4. By amending the introductory statement in paragraph (c) of § 121.285 to read as follows:

§ 121.285 Carriage of cargo in passenger compartments.

(c) All cargo may be carried forward of the foremost seated passengers and carry-on baggage may be carried alongside the foremost seated passengers, if the cargo (including carry-on baggage) is carried either in approved bins as specified in paragraph (b) of this section, or in accordance with the following:

5. Paragraphs (a) and (b) of § 121.

291 are amended to read as follows:

§ 121.291 Demonstration of emergency evacuation procedures.

(a) Each certificate holder must show, by actual demonstrations conducted in accordance with paragraph (a) of Appendix D to this part, that the emergency evacuation procedures for each type and model of airplane with a seating capacity of more than 44 passengers, that is used in its passenger-carrying operations, allow the evacuation of the full seating capacity, including crewmembers, in 90 seconds or less—

(b) Each certificate holder operating or proposing to operate one or more landplanes in extended overwater operations, or otherwise required to have certain equipment under § 121.339, must show, by a simulated ditching conducted in accordance with paragraph (b) of Appendix D to this part, that it has the ability to efficiently carry out its ditching procedures.

6. By amending the italic heading and introductory sentence of § 121.310 to read as follows:

§ 121.310 Additional emergency equipment.

(d) *Emergency light operation.* Each light required by paragraphs (c) and (h) of this section must comply with the following:

7. By amending § 121.310(d) to read as follows:

§ 121.310 Additional emergency equipment.

(i) *Other floor level exits.* After September 30, 1969, each floor level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 44 or more inches high and 20 or more inches wide, but not wider than 46 inches, each passenger ventral exit (except the ventral exits on M-404 and CV-240 airplanes), and each tail cone exit, must meet the requirements of this section for floor level emergency exits. However, the Administrator may grant a deviation from this paragraph if he finds that circumstances make full compliance impractical and that an acceptable level of safety has been achieved.

8. By amending paragraph (b) of § 121.391 to read as follows:

§ 121.391 Flight attendants.

(b) If, in conducting the emergency evacuation demonstration required under § 121.291(a), the certificate holder used more flight attendants than is re-

quired under paragraph (a) of this section for the maximum seating capacity of the airplane used in the demonstration, he may not, thereafter, take off that airplane—

(1) In its maximum seating capacity configuration with fewer flight attendants than the number used during the emergency evacuation demonstration; or

(2) In any reduced seating capacity configuration with fewer flight attendants than the number required by paragraph (a) of this section for that seating capacity plus the number of flight attendants used during the emergency evacuation demonstration that were in excess of those required under paragraph (a) of this section.

(3) Deviations granted under this paragraph and in effect on April 22, 1969, shall remain in effect until April 23, 1970.

9. By amending § 121.589(b) to read as follows:

§ 121.589 Carry-on baggage.

(b) After August 24, 1969, no certificate holder may permit a passenger to carry any article of baggage aboard an airplane under paragraph (a) (2) of this section unless that article can be stowed under a passenger seat in such a way that it will not slide forward under crash impacts severe enough to induce the ultimate inertia forces specified in § 25.561(b)(3) of this chapter or the requirements of the Civil Air Regulations under which the aircraft was type certificated. A certificate holder may obtain an additional extension of the compliance date but not beyond October 24, 1969, from the air carrier district office charged with the overall supervision of its operation by showing that good cause exists for the extension.

10. Appendix D of Part 121 is amended as follows:

(1) Paragraph (a) (17) is amended as follows:

(a) *Aborted takeoff demonstration.*

(17) Not more than 50 percent of the minimum number of required emergency exits may be used for the demonstration.

(2) Delete paragraph (b) in its entirety.

(3) Redesignate paragraph (c) as paragraph (b).

(Secs. 313(a), 601, 603, 604, Federal Aviation Act of 1958; 49 U.S.C. 1354, 1421, 1423, 1424; sec. 6(e), Department of Transportation Act; 49 U.S.C. 1655(c))

Issued in Washington, D.C., on March 18, 1969.

D. D. THOMAS,
Acting Administrator.