

## Code of Federal Regulations

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### ▼ Sec. 25.785

|   |                                    |
|---|------------------------------------|
| Part 25 AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES |                                    |
| Subpart D--Design and Construction                            | Personnel and Cargo Accommodations |

#### Sec. 25.785

Seats, berths, safety belts, and harnesses.

- (a) Each seat, berth, safety belt, harness, and adjacent part of the airplane at each station designated as occupiable during takeoff and landing must be designed so that a person making proper use of these facilities will not suffer serious injury in an emergency landing as a result of the inertia forces specified in Sec. 25.561.
- (b) Each seat and berth must be approved.
- (c) Each occupant must be protected from head injury by--
  - (1) A safety belt and shoulder harness that will prevent the head from contacting any injurious object;
  - (2) A safety belt plus the elimination of any injurious object within striking radius of the head; or
  - (3) A safety belt plus a cushioned rest that will support the arms, shoulders, head, and spine.
- (d) If the seat backs do not have a firm hand hold, there must be a hand grip or rail along each aisle to enable occupants to steady themselves while using the aisles in moderately rough air.
- (e) Each projecting object that would injure persons seated or moving about the airplane in normal flight must be padded.
- (f) Each berth must be designed so that the forward part has a padded end board, canvas diaphragm, or equivalent means, that can withstand the static load reaction of the occupant when subjected to the forward inertia force specified in Sec. 25.561. Berths must be free from corners and protuberances likely to cause serious injury to a person occupying the berth during emergency conditions.
- (g) Each crewmember seat at flight deck stations must have provisions for a shoulder harness. These seats must meet the strength requirements of paragraph (i) of this section.
- (h) Cabin attendant seats must be in the passenger compartment near approved floor level emergency exits.
- (i) Each seat berth, and its supporting structure, must be designed for an occupant weight of 170 pounds, considering the maximum load factors, inertia forces, and reactions between the occupant, seat, and safety belt or harness, at each relevant flight and ground load condition (including the emergency landing conditions prescribed in Sec. 25.561). For berths, the forward inertia force must be considered in accordance with paragraph (f)

of this section and need not be considered with respect to the safety belt. In addition--

(1) The structural analysis and testing of the seats, berths, and their supporting structures may be determined by--

(i) Assuming that the critical load in the forward, sideward, downward, and rearward directions (as determined from the prescribed flight, ground, and emergency landing conditions) acts separately; and

(ii) Using selected combinations of loads if the required strength in each specified direction is substantiated;

(2) Each pilot seat must be designed for the reactions resulting from the application of the pilot forces prescribed in Sec. 25.395; and

(3) The inertia forces specified in Sec. 25.561 must be multiplied by a factor of 1.33 (instead of the fitting factor prescribed in Sec. 25.625) in determining the strength of the attachment of--

(i) Each seat to the structure; and

(ii) Each belt or harness to the seat or structure.

#### ▶ **Comments**

#### ▼ **Document History**

##### **Notice of Proposed Rulemaking Actions:**

Notice of Proposed Rulemaking. Notice No. [64-28](#); Issued on 05/14/64.

##### **Final Rule Actions:**

Final Rule. Docket No. [5066](#); Issued on 11/03/64.