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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 25

[Docket No. FAA-2007-28250, SFAR No. 109]

RIN 2120-A161

#### Special Requirements for Private Use Transport Category Airplanes

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** This special federal aviation regulation (SFAR) amends the airworthiness standards for transport category airplanes by adding new cabin interior criteria for operators of private use, not for hire, not for common carriage airplanes. These standards may be used instead of the specific requirements that affect transport category airplanes operated by air carriers. These standards supplement the requirements for operation under the air traffic and general operating rules. This SFAR provides alternative criteria for transport category airplanes that are operated for private use while continuing to provide an acceptable level of safety for those operations.

**DATES:** These amendments become effective June 8, 2009.

**FOR FURTHER INFORMATION CONTACT:** For technical questions concerning this SFAR, contact Alan Sinclair, Airframe and Cabin Safety Branch (ANM-115), Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2195, facsimile (425) 227-1320; e-mail: [alan.sinclair@faa.gov](mailto:alan.sinclair@faa.gov). For legal questions concerning this final rule, contact Douglas Anderson, Office of Regional Council (ANM-7), 1601 Lind Avenue, SW., Renton, Washington

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#### SUPPLEMENTARY INFORMATION:

##### Authority for This Rulemaking

The FAA's authority to issue rules on aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements." Under that section, the FAA is charged with promoting safe flight of civil aircraft in air commerce by prescribing minimum standards required in the interest of safety for the design and performance of aircraft; regulations and minimum standards in the interest of aviation safety for inspecting, servicing, and overhauling aircraft; and regulations for other practices, methods, and procedures the Administrator finds necessary for safety of air commerce. This regulation is within the scope of that authority because it prescribes—

- New safety standards for the design of transport category airplanes; and
- New requirements necessary for safety for the design, production, operation and maintenance of those airplanes.

##### Background

Transport category airplanes are required to comply with the standards of Title 14 Code of Federal Regulations (14 CFR) part 25 to be eligible for a type certificate (TC) in this category. To the extent considered appropriate for safety, part 25 requirements contain different provisions based on passenger capacity discriminants. These requirements do not distinguish between airplanes operated in air carrier service and airplanes operated for private use.

Aviation industry representatives have stated that the part 25 standards are written with only air carrier operation in mind, and have questioned whether the one level of airworthiness requirements for transport category airplanes is, in fact, appropriate for all types of operation. This SFAR addresses airworthiness standards related to cabin interiors for transport category airplanes in private use passenger operation. It

provides new cabin interior criteria for operators of private use airplanes. These standards may be used as an alternative to specific requirements that affect transport category airplanes under the air traffic and general operating rules. This SFAR provides an acceptable level of safety for those operations.

No cost is associated with this SFAR, which is a voluntary alternative means for certifying the cabin of transport category private use airplanes. People who choose to use these alternative means may incur minor incremental costs for more fire extinguishers, cockpit design criteria, and a potential cost for a flight attendant, compared to the existing cabin certification method. The established potential benefit of this SFAR is time and cost savings for the cabin certification process.

With limited exception, the type certification (TC) requirements for transport category airplanes have historically been separate from, and independent of, operational standards. That is, the TC requirements do not consider the type of operation intended for the airplane. Title 14 CFR 91.501(b) describes operational requirements for large and turbine powered multi-engine airplanes not required to be operated under 14 CFR parts 121 and 135.

The aviation industry asked the FAA to consider differentiating between the airworthiness requirements related to cabin interiors for different types of operation. Title 49 United States Code (49 U.S.C. 44701(d)) directs the FAA to consider differences between air transportation and other air commerce. This provision does not require the FAA to adopt regulations that always provide a higher level of safety for air carriers than for other operations. It does, however, establish the principle that our regulations should set a higher level of safety for air carriers whenever appropriate.

##### Summary of the NPRM

On July 13, 2007, the FAA published in the **Federal Register** a Notice of Proposed Rulemaking (NPRM), Notice No. 07-13, entitled "Special Requirements for Private Use Transport Category Airplanes" (72 FR 38732). That NPRM is the basis for this final rule.

In the NPRM, we proposed to amend the airworthiness standards for transport category airplanes by adding new cabin interior criteria for operators of private use airplanes. These

standards may be used instead of the specific requirements that affect transport category airplanes operated by air carriers. They would supplement the requirements for operation under the air traffic and general operating rules. The NPRM was intended to provide alternative criteria for transport category airplanes that are operated for private use, while continuing to provide an acceptable level of safety for those operations.

Amendments 25–127 and 121–341, Security Related Considerations in the Design and Operation of Transport Category Airplanes (73 FR 6386, October 28, 2008), is not applicable to airplanes operated for private use. Although we specifically sought input on this subject, we received no comments on it. We subsequently published the NPRM for this rulemaking, which proposed certain alternative requirements for private use airplanes, but did not include the security requirements. In this SFAR we determine that the requirements of § 25.795, for security considerations, are not intended to apply to airplanes operated for private use.

The NPRM contains additional background and rationale for this rulemaking and, except where we have made revisions in this SFAR, should be referred to for that information.

### Summary of Comments

The FAA received 116 comments from 14 commenters. All of the commenters generally support the proposed changes. Comments include suggested changes, more fully described in the discussion below.

The FAA received comments on the following general areas of the proposal:

- General Operations/Part 135 Crossover Operations.
  - 60 Passenger Upper Limit.
  - Flight Attendant Requirement.
  - Pre-flight Briefing.
  - Operations Placard.
  - Equipment and Design General.
  - Firm Handholds.
  - Occupant Protection/Side-Facing Seats Criteria.
    - Direct View.
    - Distance Between Exits, Exit Deactivation, and 60-Foot Rule.
  - Emergency Exit Signs.
  - Emergency Lighting.
  - Interior Doors.
  - Width of Aisle.
  - Materials for Compartment Interiors.
    - Fire Detection.
    - Cooktop Requirements.

- Hand-Held Fire Extinguishers.
- Design for Security.
- Other Subjects.

### Discussion of the Final Rule

#### *General Operations/Part 135 Crossover Operations*

This SFAR was written to address transport category airplanes operated in private use, not for hire, not for common carriage. As discussed in the NPRM, private use operations differ significantly from air carrier operations. Typically, private use operations have lower passenger capacities and different demands for passenger amenities and functionality. This is why different standards can apply to the same airplane type, depending on how it is operated.

Several commenters, including General Aviation Manufacturing Association (GAMA), Airbus, Boeing, Bombardier and the International Coordinating Council of Aerospace Industries Associations (ICCAIA), requested that airplanes approved using the SFAR be allowed to operate under part 135. These commenters cited several reasons for this request, including the ability to offset costs by allowing the airplane to generate revenue. Some commenters proposed that certain provisions of the SFAR should not be carried into part 135 operations, but others should.

This SFAR permits design features—such as the installation of interior doors and reduced flammability standards—that would make airplanes approved under this SFAR non-compliant with part 135 requirements. The limitation on the type of operation permitted under this SFAR is consistent with the NPRM and has not been changed.

As discussed in the NPRM, Title 49 United States Code (49 U.S.C. 44701(d)) directs the FAA to consider differences between air transportation and other air commerce. This provision establishes the principle that our regulations should set a higher level of safety for air carriers whenever appropriate. The airworthiness standards for operation under part 135 are already established and, before this SFAR is adopted, were effectively the same as for private use. This SFAR creates a standard focused on private use, not for hire, not for common carriage operation which did not previously exist. Extending the provisions of the SFAR to part 135 is both beyond the scope of the proposed rule, and not in keeping with the statutory mandate. The fare-paying

flying public expects the same level of safety regardless of which airplane they are flying on. Persons flying on airplanes approved using the SFAR typically have more knowledge, familiarity, and choice in doing so. Since an airplane approved under the SFAR would not meet all of the minimum requirements of parts 25 and 135, allowing operation in part 135 would additionally create an uneven playing field for those airplanes that have been certificated to meet the full requirements of parts 25 and 135. This SFAR will not allow airplanes to operate under part 135 that do not meet all applicable requirements of part 135.

However, it does not prohibit operation in part 135, provided the aircraft meets all the existing requirements of that part. Some airworthiness standards of part 25, for which this SFAR grants relief, are not required for airplanes operated under part 135 (that is, part 135 also allows operation of airplanes meeting the standards of part 23, which in some cases are less stringent than part 25).

As noted above, some commenters suggested that the provisions of the SFAR be identified as acceptable for part 135 operation, or not. These commenters also suggested that the applicant identify the modifications required in order for the airplane to be eligible for part 135 operation. We agree that the operator should be made aware of what is necessary in order to operate in part 135. In order for an operator to switch from private use to part 135 operations, limitations would be needed to identify necessary changes to meet the additional part 135 requirements (see Table 1). For example, doors that may be closed for private use would have to be disabled and secured open for part 135 operations. A new paragraph 2(g) has been added to clarify this issue.

If the possibility exists that the airplane may be placed in part 135 or part 121 service, we recommend that the Airplane Flight Manual (AFM) be modified to include those areas that would need to be addressed before the airplane would be permitted in part 135 operations. For example, interior doors must be deactivated and locked out such that a maintenance action will be required to reactivate the door. Following is a table identifying the alternative airworthiness standards allowed under this SFAR and whether they are acceptable for operations under part 135.

TABLE 1

SFAR provision	Acceptable in 135?
4(a) Firm Handhold .....	No.
4(b) Side-facing Seats .....	Yes, for single place seats only.
5. Direct View .....	No.
6. Passenger Information Signs .....	Yes.
7. Distance Between Exits .....	No.
8. Emergency Exit Signs .....	Yes.
9(a) Emergency Lighting .....	No.
9(b) Floor Proximity Escape Path Markings .....	Yes.
9(c) Transverse Separation of the Fuselage .....	No.
10.(a)–(f) Interior Doors .....	No.
11. Width of Aisles .....	No.
12. Materials for Compartment Interiors .....	No.
13. Fire Detection .....	Yes.
14. Cooktops .....	Yes.

### 60-Passenger Upper Limit

Paragraph 2(a) of the SFAR restricts the maximum passenger count to 60, as proposed in the NPRM. The majority of the commenters requested that no upper limit be placed on the maximum number of passengers allowed. As discussed in the NPRM, the FAA concluded that a passenger capacity limit was necessary, considering the number of modifications to the certification standards this SFAR permits. As the number of passengers increases, and the complexity of the interior increases as allowed by the SFAR, it is more difficult to predict safety issues that can arise and not be accounted for in standardized evacuation demonstrations. The larger airplanes operated in private use (*e.g.*, Boeing 737, Airbus A320) have an average passenger seating configuration of 25. As the passenger count increases beyond 60, the complexity of the interior takes the airplane outside the intended scope of the SFAR and more FAA oversight is required to ensure that an appropriate level of safety is maintained.

While the FAA has approved private use airplanes with passenger capacities greater than 60, these are the exception. In those cases there are generally additional safety issues regarding evacuation, fire protection and project-specific installations. Because of that, we would need to evaluate such configurations on an individual basis to determine whether exemptions or special conditions are appropriate. The 60-passenger limitation in this SFAR would not preclude certification of these larger airplanes, but it would enable us to evaluate these issues and impose additional requirements necessary for safety. Therefore, the FAA is adopting this limitation as proposed.

Bombardier commented that airplanes sometimes have more seats than passengers, and not all seats are usable for takeoff and landing. In this case, they question how the SFAR will be applied. To clarify, the 60-passenger limit in the SFAR applies to the actual passenger capacity of the specific airplane. If extra passenger seats are installed and are accessible to passengers, then design considerations must be addressed. If the seats are not appropriate for occupancy during taxi, takeoff and landing, *e.g.*, do not meet the strength requirements of § 25.561 or, if applicable, § 25.562, then each such seat must be clearly marked that it is not to be occupied during taxi, takeoff and landing. Such marking may be in the form of a placard mounted at a suitable location easily readable by any approaching passenger. If the seats could be occupied during taxi, takeoff and landing, *i.e.*, they meet all the applicable strength and human injury criteria, then there must be a limitation in the Limitations Section of the Airplane Flight Manual to note that although there are more than 60 seats installed, no more than 60 passengers may be on the airplane. Additionally, as a continuous reminder to crew and passengers, placards must be installed at each door that can be used to board passengers, stating that the maximum passenger capacity is 60. The placards must be designed and located such that they are clearly legible to passengers entering through the door. The rule text has been revised to clarify the requirements should extra passenger seats be installed.

### Flight Attendant Requirement

Paragraph 2(b)(2) of the SFAR requires at least one flight attendant for those airplanes that were initially type certified with 75 or more passengers and have interior doors irrespective of the

seating capacity of the airplane in private use. The NPRM proposed that a flight attendant be required when interior doors are installed, for passenger seating arrangements of 10–50.<sup>1</sup> The majority of the commenters objected to the ten-passenger criterion and noted that none of the current FAA exemptions issued for doors between passenger compartments require a flight attendant. The commenters requested that the FAA withdraw the flight attendant requirement and simply rely on the requirements currently listed in § 91.533. The proposed requirement would have effectively lowered the threshold for a required flight attendant from 20 (as specified in § 91.533) to 10. Based on the comments received and after further consideration, we agree that this is overly stringent and not in keeping with past practice.

The intent of the proposed requirement was to address the additional complexity in monitoring interior configurations with partitioned and isolated occupant compartments. This in turn is predicated on the original capacity of the airplane and, by association, its size. We have reviewed this issue in more detail and have revised the SFAR to limit the flight attendant requirement to those airplanes originally type certificated with relatively large maximum seating capacities, *i.e.*, 75 or more passengers. For smaller airplanes, the requirements in § 91.533 are acceptable because the cabins are smaller and typically less complex than those being installed in the large transport airplanes. As a result, it is less likely that someone will become trapped or lost during an emergency evacuation, and there is less

<sup>1</sup> Paragraph 2(b) of the NPRM also proposed to require two flight attendants for airplanes with passenger capacities exceeding 50. We received no comments on this proposal, and paragraph 2(b)(1) contains this requirement.

need to have a flight attendant. The criterion of 75 or more passengers demarcates the large commercial jets from the small to medium regional and business jets where interior configurations are likely to be less complex. Therefore, the SFAR has been revised to restrict the additional requirement for at least one flight attendant to those airplane types whose original maximum type certificated passenger capacity is 75 or more.

#### *Pre-Flight Briefing*

Paragraph 2(c) of the SFAR requires that the AFM include a limitation requiring passenger briefing on the relevant airplane features specifically required to comply with the SFAR. As proposed, the requirement would have applied directly to an operator. Bombardier, Embraer and ICCAIA commented that, to be consistent, the SFAR should impose a requirement on the applicant for a TC. We agree and paragraph 2(c) is revised to require an AFM limitation. They also commented that, as proposed, the briefing requirement was open to very broad interpretation, and could be taken to require a briefing on every aspect of the SFAR. They recommend that the briefing be limited to only those features the passengers need to be aware of to maintain the intended level of safety, such as frangible features in interior doors, or moving seats to their intended position for taxi, takeoff and landing. We agree and the SFAR has been revised to reflect this intent.

#### *Operations Placard*

Paragraph 2(e) of the SFAR requires a placard stating: "Operations involving the carriage of persons or property for compensation or hire are prohibited," to be located in the area around the airworthiness certificate holder at the entrance to the cockpit. Paragraph 2(d) of the SFAR requires the same limitation to be included in the AFM. These restrictions have not changed from the NPRM; however, the location of the placard has been revised from the proposal that it be "located in conspicuous view of the pilot-in-command." Airbus, Bombardier, ICCAIA, and Fokker Services requested that the placard requirement be removed. They state that a placard installation is not directly related to airplane safety and that a competing number of placards are already installed, for which the information value is questionable. They believe an AFM limitation is sufficient, since the crew is required to follow the AFM when operating. While it is certainly true that the crew is required to follow

the AFM, an AFM limitation is not conspicuous. The proposed placard requirement was intended to be a conspicuous notification regarding the limitations on the type of operations permitted for the airplane. However, we have reconsidered the location of the placard installation. Based on the input from the commenters, we agree that the instrument panel would not be an appropriate place to locate this placard. The area around the airworthiness certificate holder at the entrance to the flightdeck is deemed the most appropriate location, and we revised the SFAR to relocate the placard to this area.

#### *Evacuation Analysis*

Paragraph 2(f) of the SFAR requires an evacuation analysis for airplanes with a passenger capacity of 45–60, which is in keeping with current § 25.803. There were no comments on this proposal, and it is adopted as proposed.

#### *Equipment and Design General*

A number of commenters appeared to be confused about the applicability of the SFAR, its effect on the certification basis of the airplane, and when to follow the SFAR instead of existing rules. The specific issues are discussed with the topic they apply to below. However, as a general matter, the SFAR is intended to modify existing rules that are part of the certification basis of the airplane to facilitate operation in private use. It does not intend to address rules not already in their certification basis. Paragraph 3 of the SFAR was revised to clarify this and to specify that applicants must take into account the certification basis of their specific airplane when utilizing this SFAR.

#### *Firm Handholds*

Paragraph 4(a) of the SFAR grants relief from § 25.785(j), which requires a firm handhold along the aisle for people to steady themselves in moderately rough air, and the SFAR is consistent with the requirements proposed in the NPRM. It was clear from the comments submitted that there was some confusion on the intent of this requirement. Airbus, Bombardier and ICCAIA all commented that the proposal did not address open spaces, and did not offer guidance on what "bordered by seats" meant, or where handholds would be required and where they would not.

The SFAR is intended to limit application of the existing requirements of § 25.785(j) to those aisles along sidewalls or between seats. There is no intent to add additional requirements. In lieu of the requirement for "firm

handholds" in § 25.785(j), the SFAR permits the applicant to show compliance if they can demonstrate that the interior features will allow people to steady themselves while occupying the airplane's aisles only. The NPRM notes that this provision has a slight reduction in safety, since only certain aisles will be required to have the equivalent of a handhold, and that the FAA has previously granted exemptions for aisles in those areas (such as bedrooms) when there is no practical design approach. The term "bordered by seats" refers to an aisle that has seats along one or both sides. We agree that the spacing and configuration of seats used in the affected airplanes may not satisfy the literal requirements of § 25.785(j). Therefore, we added a provision specifying that the installation be practicable. Whenever practicable, passengers must have a means to steady themselves, but only while occupying the airplane's aisles.

#### *Occupant Protection/Side Facing Seats Criteria*

Paragraph 4(b) of the SFAR was updated to include the current test requirements for the certification of side-facing seats. The FAA's policy for side-facing seat certification criteria was updated<sup>2</sup> during the NPRM process and so the NPRM reflected the out-of-date policy. Most of the policy changes provided simplified test methods, and clarifications to the earlier policy. The net effect of the policy changes was to reduce the number of tests required and simplify design considerations. A number of the commenters provided extensive comments requesting that the SFAR be revised to align criteria with current practice. As mentioned above, this difference in the NPRM and the current FAA policy was not deliberate, but a result of the differing administrative process between the two. The intent of the SFAR was always to adopt the latest FAA policy on this subject. We are revising the SFAR to reflect the current policy language specified in special conditions and exemptions.

Bombardier and ICCAIA also commented that side-facing seats should not be limited to private use. In this case, we agree that single-place side-facing seats are not limited to private use. The FAA has defined criteria using special conditions—and now this SFAR—that provide the same level of safety for occupants of single-place side-facing seats as that of forward- or aft-facing seats. Therefore, installation of a

<sup>2</sup> [Policy Statement No. ANM-03-115-30, available on the Internet at <http://rgl.faa.gov>].

single-place side-facing seat using those criteria is acceptable regardless of operation. However, we have not been able to define criteria for multiple occupant seats that provide an equivalent level of safety. These installations have been addressed through exemptions. While it is true that not all such exemptions have contained a private use limitation, these installations are generally only found in private use. As discussed above, this SFAR applies only to airplanes designed for private use. Any requests for installation of multiple occupant side-facing seats for other than private use would require a petition for exemption and must be shown to be in the public interest.

#### *Direct View*

Paragraph 5 of the SFAR requires that the majority of installed flight attendant seats must face the cabin area for which the flight attendant is responsible. For example, if only 1 or 2 flight attendant seats are installed, then each must face the cabin; if 4 flight attendant seats are installed, then 3 must face the cabin. The NPRM would have required that all installed flight attendant seats face the cabin. This change was based on a comment from Airbus, pointing out that previous FAA exemptions address the majority rather than all flight attendant seats. Bombardier and Gulfstream evidently interpreted this provision as requiring installation of flight attendant seats. They note the difficulty in installing flight attendant seats on small transport airplanes and question the perceived requirement. There was some confusion on the intent of this requirement. This section of the SFAR does not require the installation of flight attendant seats. The SFAR's intent is that, if there are flight attendant seats installed, then the majority must be located such that they face the cabin area, *e.g.*, flight attendant seats should not be aft facing when located at the aft most exits. To avoid future confusion, the SFAR was revised to read, “\* \* \* the majority of installed flight attendant seats must be located \* \* \*”

#### *Distance Between Exits, Exit Deactivation, and 60-Foot Rule*

Paragraph 7 of the SFAR allows the deactivation of exits to create a distance of greater than sixty feet between exits, which would not otherwise be allowed under § 25.807(f)(4). The NPRM proposed specific criteria that provide an adequate level of passenger safety by limiting the passenger number and the distance needed to travel to an exit. These criteria are unchanged from the NPRM. Airbus and ICCAIA requested

that the SFAR be revised to allow more distance between passengers and an exit, and to permit the deactivation of more exits to create more than one instance where the distance between exits was greater than 60 feet. In particular, the commenters questioned the specific criteria and how they are justified. While noting that the criteria are likely based on FAA's experience with prior installations and exemptions, Airbus stated it would like more flexibility.

The SFAR was written to be consistent with existing FAA policy and guidance. The intent of the 60-foot rule is to avoid excessive distances between passengers and their nearest exits under unpredictable accident conditions. By placing restrictions on how to create exit-to-exit distance greater than 60 feet, the SFAR maintains the spirit of the requirement. In developing the proposed criteria, we assessed many potential configurations on a variety of airplane types.

The distance criterion in paragraph 7(a) ensures that the intent of § 25.807(f)(4) is maintained: passengers should not be seated more than 30 feet from the nearest exit. Given the increased complexity of private use cabin interiors allowed under this SFAR, and the resulting increased potential for obstruction, the passenger-capacity limits specified in paragraphs 7(b) and (c) are necessary to prevent crowding that would delay evacuation. Finally, paragraph 7(d)—which limits the use of this allowance to one pair of exits on each side of the airplane—is necessary to ensure that the airplane as a whole retains an acceptable emergency exit arrangement.

While different approaches are possible, the SFAR offers relief from the 60-foot rule with reasonable limitations, considering the remaining provisions of the SFAR. No alternative proposals were provided, so there is no clear justification to change these requirements or the FAA guidance on this issue. Therefore no change was made to the SFAR.

GAMA recommended that the FAA permit reactivation of exits to enable operation in part 135. The FAA has no restriction on reactivating exits. However, the applicant would need to determine the extent of the modification necessary to restore the exit(s) to full compliance and obtain approval. This is true whether or not the SFAR is utilized.

#### *Emergency Exit Signs*

Paragraph 8 of the SFAR permits the use of a single exit sign to meet the requirements of § 25.811(d)(1) and (2).

Bombardier and ICCAIA contended that this provision is not needed in the SFAR since the regulations do not specifically require two signs. Furthermore, they noted that the same criteria are proposed to be incorporated in a revision to Advisory Circular 25–17. Their position is that by including the provision in the SFAR, there is an implication of non-compliance, which may complicate validation by foreign airworthiness authorities. They also noted that the level of safety is not reduced with this provision.

We agree that the level of safety using this provision is not reduced. By including this provision, applicants that elect to use the SFAR can use the single sign without having to refer to a draft advisory circular. Its inclusion does not limit its use only to the SFAR.

GAMA and Embraer suggested alternative wording to make the requirement clearer with respect to legibility of the exit signs. They proposed to include consideration of not only seats, but bulkheads/dividers when assessing sign legibility, assuming that if there is a bulkhead, the exit will not be visible from a seat beyond the bulkhead. They suggested that the rule refer to the farthest seat or bulkhead/divider, whichever is closer. While we agree that this issue should be addressed, the focus of this requirement needs to be on the seat farthest from the exit that must rely on the exit sign. Therefore, we have revised paragraph 8(b) of the SFAR to read, “The sign can be read from the aisle adjacent to the passenger seat that is farthest from the exit and that does not have an intervening bulkhead/divider or exit.” For seats beyond such an intervening bulkhead/divider, § 25.811(d)(3), which is still fully applicable to airplanes subject to this SFAR, requires signage on the bulkhead/divider indicating exit locations.

#### *Emergency Lighting*

Paragraph 9 of the SFAR effectively raises the threshold for large, electrically illuminated exit signs from 10 passengers to 20 passengers. It requires that, for airplanes with 19 or fewer passengers, the emergency exit signs required by § 25.811(d)(1), (2), and (3) must have red letters at least 1-inch high on a white background at least 2 inches high. These signs may be internally electrically illuminated, or self-illuminated by non-electrical means, with an initial brightness of at least 160 microlamberts. The color may be reversed for a sign self-illuminated by non-electrical means. These are the same requirements as proposed in the NPRM. Transport Canada commented

that the reference to § 25.812(b)(2) should be to § 25.812(b)(1), since it is from this paragraph that relief is provided. We agree and the SFAR is changed. Based on the comments there was some confusion regarding whether the signs would be accepted for both parts 91 and part 135 operations. The inclusion of the exit signs in the SFAR does not prohibit applicants from seeking equivalent level of safety findings or exemptions which would permit the use of these types of exit signs in part 135 operation. Therefore no change was made to the SFAR.

#### *Interior Doors*

Paragraph 10 of the SFAR allows installation of otherwise prohibited interior doors, provided a number of conditions are met that will prevent these doors from impeding emergency evacuations. Amendment 25–116, Miscellaneous Cabin Safety Changes (69 FR 62778, October 27, 2004), effective November 26, 2004, changed the requirement for interior doors in § 25.813(e), such that no interior door can be installed between any passenger seat (occupiable for taxi takeoff or landing) and any exit on part 25 airplanes. This replaced a less stringent requirement that no door could be installed between passenger compartments and was adopted in recognition of the risk that passengers may become trapped behind such doors in an emergency evacuation. This was noted by Transport Canada and ICCAIA, and they requested that the latest rule be addressed by the SFAR.

We agree and paragraph 10 of the SFAR has been updated accordingly. The relief granted is the same as in the NPRM (that is, the SFAR allows the installation of doors that would otherwise be prohibited). However, it applies to doors between any passenger seat and any emergency exit, rather than just to doors between passenger compartments. Without this revision, current § 25.813(e) would prohibit installation of these doors.

Fokker Services questioned the need for laterally translating doors across longitudinal aisles. They suggest that hinged doors can be acceptable if the direction of hinging does not impede egress. The FAA originally established the requirement for laterally translating doors as a condition of exemptions. Hinged doors, in addition to having their direction of motion aligned with the most likely impact vectors, also have the potential to intrude into the cabin to a greater degree than doors that translate. Since the regulations do not permit doors at all, this allowance is a change in the level of safety, regardless

of the door type. Hinged doors would further affect the level of safety, such that we cannot find it acceptable. There is no change to the SFAR on this point.

We have added a new paragraph 10(f) to be consistent with the requirements of § 25.820, which requires that: “All lavatory doors must be designed to preclude anyone from becoming trapped inside the lavatory. If a locking mechanism is installed, it must be capable of being unlocked from the outside without the aid of special tools.” This requirement is also consistent with all the exemptions related to interior doors issued to date. This does not create any new requirements.

#### *Width of Aisle*

Paragraph 11 of the SFAR has been revised to allow aisle width to go to 0-inch width during in-flight operations, provided that it can be demonstrated that all areas of the airplane’s cabin are easily accessible by a crewmember during emergency. The NPRM proposed to require a minimum aisle of 9-inches in-flight. Several commenters, including GAMA and ICCAIA, objected to this provision, especially as it pertains to airplanes that are only required to have a 9-inch aisle for taxi, takeoff and landing. They noted that this is contrary to current practice and would result in significant design changes or loss of passenger capacity. Aero Consulting Services suggested, instead of a minimum aisle width, a requirement for access along the length of the cabin would be more appropriate. Commenters cited specific interior arrangements that would no longer be approvable using the proposed criteria and indicated that the utility of the SFAR would be greatly reduced if these criteria are maintained.

Based on the strong feedback from the commenters, the FAA has reconsidered the 9-inch in-flight aisle requirement. We agree that a requirement focused on access along the length of the cabin is more appropriate in this SFAR, and is consistent with current industry practice for features such as footrests that protrude into the aisle. The FAA will only permit the 0-inch aisle width during periods other than taxi, takeoff and landing, providing the applicant can demonstrate the ability to access all parts of the cabin during an emergency. The SFAR was revised accordingly.

#### *Materials for Compartment Interiors*

Paragraph 12 of the SFAR requires compliance with § 25.853, except that compliance with appendix F, parts IV and V, to part 25 (if applicable to the airplane) need not be demonstrated, if it

can be shown that the maximum evacuation time for all occupants does not exceed 45 seconds under the conditions specified in appendix J to part 25. This paragraph has been revised to clarify that only the provisions of § 25.853 contained in the airplane’s certification basis must be complied with.

Gulfstream, Fokker Services and Airbus commented on this provision. The commenters were confused about how the SFAR applied to specific airplanes and to what degree this superseded existing rules. Gulfstream interpreted the requirement as applying to airplanes with a seating capacity of 10 or more, and that these airplanes would now need to show compliance with evacuation requirements they did not previously have to meet. In fact, the heat release and smoke emissions requirements only apply to airplanes with more than 19 seats that have the requirements of § 25.853(d), at Amendment 116 or equivalent, in their certification basis. If the airplane’s certification basis does not include heat release and smoke emissions requirements (§ 25.853 at Amendment 25–61), then this paragraph of the SFAR is not applicable. However, it is correct that airplanes with more than 19 seats that are otherwise required to comply with heat release and smoke emissions requirements would have to show a 45-second evacuation time under the terms of the SFAR. Fokker Services proposed language to explicitly state that the provision apply only to airplanes with heat release and smoke emissions requirements. We agree with the intent, and the SFAR now refers to “the applicable provisions of § 25.853.”

Airbus proposed that the evacuation requirement might be met by analysis only, rather than both analysis and testing. This may be a matter of semantics, because any evacuation analysis must be based on tests. However, the test data may be previously generated data, assuming the airplane has already demonstrated compliance in accordance with appendix J to part 25; so an analysis that utilizes prior test data could be acceptable. However, we do not anticipate that an analysis without any substantiating test data would be acceptable.

Bombardier also requested that the fire penetration requirements of § 25.856(b) be excluded from the SFAR for reasons similar to those granting relief from heat release and smoke emissions requirements. This is beyond the scope of the NPRM and would require a new public comment period. In addition, the thermal/acoustic

insulation used to provide fire penetration resistance is less a customization feature and more inherent in the design of the airplane. At this time, we do not anticipate granting relief from this requirement for those airplanes already required to comply.

#### *Fire Detection*

Paragraph 13 of the SFAR requires that, for airplanes with a type certificated passenger capacity of 20 or more, there must be means that meet the requirements of § 25.858(a) through (d) to signal the flightcrew in the event of a fire in any isolated room not occupiable for taxi, takeoff and landing, which can be closed off from the rest of the cabin by a door. This requirement is unchanged from the NPRM except that we have added the passenger capacity discriminator.

Aero Consulting Services, Bombardier, Gulfstream, Transport Canada and ICCAIA all interpreted this provision as requiring fire detectors in lavatories. The commenters requested that the SFAR be revised to remove the requirement. The SFAR does not require the addition of smoke detectors in lavatories for airplanes if this is not already a requirement of their certification basis. Section 25.854, which applies to airplanes with a passenger capacity of 20 or more, already adequately defines the certification requirements for lavatories and smoke detectors. The SFAR was intended to address those areas on these same airplanes that are not accounted for in part 25 (e.g., staterooms, offices, conference rooms) and only if they are not occupied during taxi, takeoff and landing. This paragraph requires that fire detectors be installed in those areas. Paragraph 13 was also revised to include a statement regarding the applicability of § 25.854 to lavatories.

#### *Cooktop Requirements*

Paragraph 14 of the SFAR requires that each cooktop must be designed and installed to minimize any potential threat to the airplane, passengers, and crew as outlined in the criteria. This paragraph is unchanged from the NPRM, except for the format. In the NPRM the criteria were shown in an appendix to the SFAR. In this SFAR it appears as part of the rule text. Airbus and ICCAIA requested that the criteria be simplified. However, they did not propose alternative criteria that would justify changing these requirements. The cooktop requirements listed in the SFAR are consistent with the numerous existing special conditions.

#### *Hand-Held Fire Extinguishers*

In addition to the requirements of § 25.851 for hand-held fire extinguishers, paragraph 15 of the NPRM would have required a fire extinguisher be installed for every pair of exits originally type certificated in the passenger cabin, regardless of whether the exits are deactivated for the proposed configuration. As a result of the comments received, as discussed below, only airplanes originally type certificated with more than 60 passengers need to comply with this requirement. The NPRM also proposed that a fire extinguisher be installed at every pair of exits originally type certificated in the passenger cabin, but did not include the 60 passenger discriminator.

Gulfstream requested removal of this section because it would add cost and weight, based on the number of exit pairs on Gulfstream airplanes. Airbus, Fokker, Bombardier and ICCAIA proposed alternative wording to reflect their understanding of this provision. All commented that the language of the SFAR implied that these provisions were added to the requirements already contained in § 25.851. They also suggested that the installation requirements should not specify the location of the extinguishers at exits, but should be general, based on the number of exits originally certificated. The commenters requested that the SFAR be revised to clarify the quantity required and the placement locations.

We agree that the SFAR as proposed could have unintended consequences, and be burdensome to operators and manufacturers of transport airplanes. The intent of the SFAR was to ensure that there would be an adequate number of fire extinguishers installed on board “large” transport airplanes and that the fire extinguishers would be evenly distributed throughout the cabin. The current certification requirements are based on passenger capacity, so the larger airplanes with greatly reduced passenger counts are not adequately addressed in part 25. Thus, there is a need for additional criteria for installation of fire extinguishers.

Based on the comments, we have revised the SFAR to limit by size the airplanes affected and to be more flexible, both in terms of installation location, and the way the total number of extinguishers is determined. This addresses the concerns expressed by Gulfstream regarding the effect on transport airplanes, as well as other comments suggesting revised wording to be more general. We have made it clear that the number of extinguishers is the

greater of those required by § 25.851, or the number of originally certificated exit pairs. In addition, this requirement is now based on an originally certificated passenger count of greater than 60, since this is a significant break point in § 25.851 in terms of the number of extinguishers required. Other provisions of § 25.851 continue to apply.

#### *Design for Security*

Since publication of Notice No. 07–13, the FAA has issued Amendment 25–127, which addresses security considerations in the design of transport category airplanes. This amendment is intended to mitigate through design measures some of the security risks faced in aviation. As discussed in Amendment 25–127, and the NPRM that preceded it, these requirements do not provide the same benefits for airplanes in private use. In Amendment 25–127 we noted that this SFAR would exclude the “design for security” requirements for that reason. Therefore, a new paragraph 16 is added to the SFAR, that excludes newly adopted § 25.795 for airplanes approved in accordance with this SFAR.

#### *Other Subjects*

Gulfstream expressed their desire that this rulemaking be harmonized with the European Aviation Safety Agency (EASA) rulemaking initiatives, and suggests that a harmonization effort be started. They noted that such harmonization helps minimize certification costs. We have kept EASA apprised of this rulemaking and will continue to do so. We agree that, whenever possible, harmonized requirements benefit all parties. At this time, however, there are no formal harmonization initiatives on this subject. We will work with EASA and other authorities to assist with any rulemaking they choose to promulgate.

Boeing proposed that part 91 be amended to prohibit operations for hire, rather than requiring a limitation in the AFM. An amendment to part 91 is beyond the scope of the NPRM, and is more far-reaching than the limitation included in this SFAR. The AFM limitation is consistent with other limitations on operation and addresses the specific regulatory provisions modified by this SFAR.

Boeing and ICCAIA suggested that a new section be written to address the use of glass in the cabin, for features such as partitions panels. This use of glass is uncommon and not a longstanding practice. In any case, criteria for approval of glass panels in the cabin is beyond the scope of the NPRM, and would require a separate



notice and comment to establish criteria.

#### **Paperwork Reduction Act**

According to the 1995 amendments to the Paperwork Reduction Act (5 CFR 1320.8(b)(2)(vi)), an agency may not collect or sponsor the collection of information, nor may it impose an information collection requirement unless it displays a currently valid OMB control number. The OMB control number for this information collection will be published in the **Federal Register**, after Office of Management and Budget approval.

#### **International Compatibility**

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has determined that there are no ICAO Standards and Recommended Practices that correspond to these regulations.

#### **Regulatory Evaluation, Regulatory Flexibility Determination, International Trade Impact Assessment, and Unfunded Mandates Assessment**

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Pub. L. 96–354) requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Pub. L. 96–39) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of \$100 million or more annually (adjusted for inflation with base year of 1995). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this SFAR.

Department of Transportation Order DOT 2100.5 prescribes policies and

procedures for simplification, analysis, and review of regulations. If the expected cost impact is so minimal that a proposed or final rule does not warrant a full evaluation, this order permits that a statement to that effect and the basis for it be included in the preamble if a full regulatory evaluation of the cost and benefits is not prepared. Such a determination has been made for this SFAR. The reasoning for this determination follows:

This SFAR establishes FAA rulemaking requirements for certifying cabin interiors for transport category private use airplanes. These requirements are voluntary and may be used instead of the existing requirements that are primarily designed for airplanes used in scheduled airline service. The purpose of the rule is to reduce time and costs for people certifying cabins for transport category private use airplanes. The regulatory evaluation prepared for the NPRM indicated that a typical certification under this SFAR might save the airplane purchaser four months and \$725,000 per exemption, compared to existing certification procedures. The completion center would accrue savings of approximately \$100,000 per airplane per exemption, and the FAA would accrue savings of approximately \$6,000 per airplane per exemption. This results in approximately \$725,000 plus \$100,000 plus \$6,000 in savings, for a total of \$831,000 per airplane per exemption.

No comments were received on the NPRM regulatory summary statement. However, changes were made to the proposed rule as a result of comments received on the NPRM that affected the regulatory summary statement. These changes provided even more cost relief than those identified for the proposed rule.

From an economic standpoint, the most important changes were:

1. **Flight Attendant Requirement.** This SFAR requires a flight attendant only for those airplanes with interior doors that were initially type certificated with 75 or more passengers. The NPRM proposed that a flight attendant be required when interior doors are installed for passenger seating arrangements of 10 or more.

2. **Operation of an airplane certified in accordance with this SFAR in part 135 service is not prohibited by this SFAR, provided that the airplane meets all part 135 requirements when operated under part 135.**

The expected outcome of this SFAR will be a minimal economic impact with positive net benefits. Therefore, a full regulatory evaluation was not prepared.

FAA has, therefore, determined that this SFAR is not a “significant regulatory action” as defined in section 3(f) of Executive Order 12866, and is not “significant” as defined in DOT's Regulatory Policies and Procedures.

#### **Regulatory Flexibility Determination**

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes “as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration.” The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

However, if an agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

The NPRM concluded that the proposal would have no adverse impact on small business entities. As in the case of the NPRM, this SFAR provides a voluntary alternate means of certifying the cabin interior for private use transport category airplanes. No comments were received on the Regulatory Flexibility Analysis in the NPRM. Therefore, as the acting FAA Administrator, I certify that this rule will not have a significant economic impact on a substantial number of small entities.

#### **International Trade Impact Assessment**

The Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign



commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has assessed the potential effect of this SFAR and notes the rule is voluntary and cost-relieving, thus is not considered an unnecessary obstacle to trade.

#### Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of \$100 million or more (in 1995 dollars) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a "significant regulatory action." The FAA currently uses an inflation-adjusted value of \$136.1 million in lieu of \$100 million. This SFAR does not contain such a mandate; therefore, the requirements of Title II of the Act do not apply.

#### Executive Order 13132, Federalism

The FAA has analyzed this SFAR under the principles and criteria of Executive Order 13132, Federalism. We determined that this action will not have a substantial direct effect on the States, or the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, does not have federalism implications.

#### Regulations Affecting Intrastate Aviation in Alaska

Section 1205 of the FAA Reauthorization Act of 1996 (110 Stat. 3213) requires the FAA, when modifying its regulations in a manner affecting intrastate aviation in Alaska, to consider the extent to which Alaska is not served by transportation modes other than aviation, and to establish appropriate regulatory distinction. In the NPRM, we requested comments on whether the proposed rule should apply differently to intrastate operations in Alaska. We did not receive any comments, and we have determined, based on the administrative record of this rulemaking, that there is no need to make any regulatory distinctions applicable to intrastate aviation in Alaska.

#### Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this rulemaking action qualifies for the categorical exclusion identified in paragraph 312f and involves no extraordinary circumstances.

#### Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA has analyzed this SFAR under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). We have determined that it is not a "significant energy action" under the executive order because it is not a "significant regulatory action" under Executive Order 12866, and it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

#### Availability of Rulemaking Documents

You can get an electronic copy of rulemaking documents using the Internet by—

1. Searching the Federal eRulemaking Portal (<http://www.regulations.gov>);
2. Visiting the FAA's Regulations and Policies Web page at [http://www.faa.gov/regulations\\_policies/](http://www.faa.gov/regulations_policies/); or
3. Accessing the Government Printing Office's Web page at <http://www.gpoaccess.gov/fr/index.html>.

You can also get a copy by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267-9680. Make sure to identify the amendment number or docket number of this rulemaking.

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477-78) or you may visit <http://DocketsInfo.dot.gov>.

#### Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires FAA to comply with small entity requests for information or

advice about compliance with statutes and regulations within its jurisdiction. If you are a small entity and you have a question regarding this document, you may contact your local FAA official, or the person listed under the **FOR FURTHER INFORMATION CONTACT** heading at the beginning of the preamble. You can find out more about SBREFA on the Internet at [http://www.faa.gov/regulations\\_policies/rulemaking/sbre\\_act/](http://www.faa.gov/regulations_policies/rulemaking/sbre_act/).

#### List of Subjects in 14 CFR Part 25

Air transportation, Aircraft, Aviation safety, Safety.

#### The Amendment

■ In consideration of the foregoing, the Federal Aviation Administration amends Chapter I of Title 14, Code of Federal Regulations as follows:

#### PART 25—AIRWORTHINESS STANDARDS—TRANSPORT CATEGORY AIRPLANES

■ 1. The authority citation for part 25 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701, 44702 and 44704.

■ 2. In part 25, add SFAR No.109 to read as follows:

#### Special Federal Aviation Regulation No. 109

1. *Applicability.* Contrary provisions of 14 CFR parts 21, 25, and 119 of this chapter notwithstanding, an applicant is entitled to an amended type certificate or supplemental type certificate in the transport category, if the applicant complies with all applicable provisions of this SFAR.

#### Operations

##### 2. General.

(a) The passenger capacity may not exceed 60. If more than 60 passenger seats are installed, then:

(1) If the extra seats are not suitable for occupancy during taxi, takeoff and landing, each extra seat must be clearly marked (e.g., a placard on the top of an armrest, or a placard sewn into the top of the back cushion) that the seat is not to be occupied during taxi, takeoff and landing.

(2) If the extra seats are suitable for occupancy during taxi, takeoff and landing (*i.e.*, meet all the strength and passenger injury criteria in part 25), then a note must be included in the Limitations Section of the Airplane Flight Manual that there are extra seats installed but that the number of passengers on the airplane must not exceed 60. Additionally, there must be a placard installed adjacent to each door

that can be used as a passenger boarding door that states that the maximum passenger capacity is 60. The placard must be clearly legible to passengers entering the airplane.

(b) For airplanes outfitted with interior doors under paragraph 10 of this SFAR, the airplane flight manual (AFM) must include an appropriate limitation that the airplane must be staffed with at least the following number of flight attendants who meet the requirements of 14 CFR 91.533(b):

(1) The number of flight attendants required by § 91.533(a)(1) and (2) of this chapter, and

(2) At least one flight attendant if the airplane model was originally certified for 75 passengers or more.

(c) The AFM must include appropriate limitation(s) to require a preflight passenger briefing describing the appropriate functions to be performed by the passengers and the relevant features of the airplane to ensure the safety of the passengers and crew.

(d) The airplane may not be offered for common carriage or operated for hire. The operating limitations section of the AFM must be revised to prohibit any operations involving the carriage of persons or property for compensation or hire. The operators may receive remuneration to the extent consistent with parts 125 and 91, subpart F, of this chapter.

(e) A placard stating that "Operations involving the carriage of persons or property for compensation or hire are prohibited," must be located in the area of the Airworthiness Certificate holder at the entrance to the flightdeck.

(f) For passenger capacities of 45 to 60 passengers, analysis must be submitted that demonstrates that the airplane can be evacuated in less than 90 seconds under the conditions specified in § 25.803 and appendix J to part 25.

(g) In order for any airplane certified under this SFAR to be placed in part 135 or part 121 operations, the airplane must be brought back into full compliance with the applicable operational part.

#### *Equipment and Design*

3. *General.* Unless otherwise noted, compliance is required with the applicable certification basis for the airplane. Some provisions of this SFAR impose alternative requirements to certain airworthiness standards that do not apply to airplanes certificated to earlier standards. Those airplanes with an earlier certification basis are not required to comply with those alternative requirements.

#### 4. *Occupant Protection.*

(a) *Firm Handhold.* In lieu of the requirements of § 25.785(j), there must be means provided to enable persons to steady themselves in moderately rough air while occupying aisles that are along the cabin sidewall, or where practicable, bordered by seats (seat backs providing a 25-pound minimum breakaway force are an acceptable means of compliance).

(b) *Injury criteria for multiple occupancy side-facing seats.* The following requirements are only applicable to airplanes that are subject to § 25.562.

(1) *Existing Criteria.* All injury protection criteria of § 25.562(c)(1) through (c)(6) apply to the occupants of side-facing seating. The Head Injury Criterion (HIC) assessments are only required for head contact with the seat and/or adjacent structures.

(2) *Body-to-Body Contact.* Contact between the head, pelvis, torso or shoulder area of one Anthropomorphic Test Dummy (ATD) with the head, pelvis, torso or shoulder area of the ATD in the adjacent seat is not allowed during the tests conducted in accordance with § 25.562(b)(1) and (b)(2). Contact during rebound is allowed.

(3) *Thoracic Trauma.* If the torso of an ATD at the forward-most seat place impacts the seat and/or adjacent structure during testing, compliance with the Thoracic Trauma Index (TTI) injury criterion must be substantiated by dynamic test or by rational analysis based on previous test(s) of a similar seat installation. TTI data must be acquired with a Side Impact Dummy (SID), as defined by 49 CFR part 572, subpart F, or an equivalent ATD or a more appropriate ATD and must be processed as defined in Federal Motor Vehicle Safety Standards (FMVSS) part 571.214, section S6.13.5 (49 CFR 571.214). The TTI must be less than 85, as defined in 49 CFR part 572, subpart F. Torso contact during rebound is acceptable and need not be measured.

(4) *Pelvis.* If the pelvis of an ATD at any seat place impacts seat and/or adjacent structure during testing, pelvic lateral acceleration injury criteria must be substantiated by dynamic test or by rational analysis based on previous test(s) of a similar seat installation. Pelvic lateral acceleration may not exceed 130g. Pelvic acceleration data must be processed as defined in FMVSS part 571.214, section S6.13.5 (49 CFR 571.214).

(5) *Body-to-Wall/Furnishing Contact.* If the seat is installed aft of a structure—such as an interior wall or furnishing that may contact the pelvis, upper arm, chest, or head of an occupant seated next to the structure—the structure or a

conservative representation of the structure and its stiffness must be included in the tests. It is recommended, but not required, that the contact surface of the actual structure be covered with at least two inches of energy absorbing protective padding (foam or equivalent) such as Ensolute.

(6) *Shoulder Strap Loads.* Where upper torso straps (shoulder straps) are used for sofa occupants, the tension loads in individual straps may not exceed 1,750 pounds. If dual straps are used for restraining the upper torso, the total strap tension loads may not exceed 2,000 pounds.

(7) *Occupant Retention.* All side-facing seats require end closures or other means to prevent the ATD's pelvis from translating beyond the end of the seat at any time during testing.

#### (8) *Test Parameters.*

(i) All seat positions need to be occupied by ATDs for the longitudinal tests.

(ii) A minimum of one longitudinal test, conducted in accordance with the conditions specified in § 25.562(b)(2), is required to assess the injury criteria as follows. Note that if a seat is installed aft of structure (such as an interior wall or furnishing) that does not have a homogeneous surface, an additional test or tests may be required to demonstrate that the injury criteria are met for the area which an occupant could contact. For example, different yaw angles could result in different injury considerations and may require separate tests to evaluate.

(A) For configurations without structure (such as a wall or bulkhead) installed directly forward of the forward seat place, Hybrid II ATDs or equivalent must be in all seat places.

(B) For configurations with structure (such as a wall or bulkhead) installed directly forward of the forward seat place, a side impact dummy or equivalent ATD or more appropriate ATD must be in the forward seat place and a Hybrid II ATD or equivalent must be in all other seat places.

(C) The test may be conducted with or without deformed floor.

(D) The test must be conducted with either no yaw or 10 degrees yaw for evaluating occupant injury. Deviating from the no yaw condition may not result in the critical area of contact not being evaluated. The upper torso restraint straps, where installed, must remain on the occupant's shoulder during the impact condition of § 25.562(b)(2).

(c) For the vertical test, conducted in accordance with the conditions specified in § 25.562(b)(1), Hybrid II

ATDs or equivalent must be used in all seat positions.

5. *Direct View.* In lieu of the requirements of § 25.785(h)(2), to the extent practical without compromising proximity to a required floor level emergency exit, the majority of installed flight attendant seats must be located to face the cabin area for which the flight attendant is responsible.

6. *Passenger Information Signs.* Compliance with § 25.791 is required except that for § 25.791(a), when smoking is to be prohibited, notification to the passengers may be provided by a single placard so stating, to be conspicuously located inside the passenger compartment, easily visible to all persons entering the cabin in the immediate vicinity of each passenger entry door.

7. *Distance Between Exits.* For an airplane that is required to comply with § 25.807(f)(4), in effect as of July 24, 1989, which has more than one passenger emergency exit on each side of the fuselage, no passenger emergency exit may be more than 60 feet from any adjacent passenger emergency exit on the same side of the same deck of the fuselage, as measured parallel to the airplane's longitudinal axis between the nearest exit edges, unless the following conditions are met:

(a) Each passenger seat must be located within 30 feet from the nearest exit on each side of the fuselage, as measured parallel to the airplane's longitudinal axis, between the nearest exit edge and the front of the seat bottom cushion.

(b) The number of passenger seats located between two adjacent pairs of emergency exits (commonly referred to as a passenger zone) or between a pair of exits and a bulkhead or a compartment door (commonly referred to as a "dead-end zone"), may not exceed the following:

(1) For zones between two pairs of exits, 50 percent of the combined rated capacity of the two pairs of emergency exits.

(2) For zones between one pair of exits and a bulkhead, 40 percent of the rated capacity of the pair of emergency exits.

(c) The total number of passenger seats in the airplane may not exceed 33 percent of the maximum seating capacity for the airplane model using the exit ratings listed in § 25.807(g) for the original certified exits or the maximum allowable after modification when exits are deactivated, whichever is less.

(d) A distance of more than 60 feet between adjacent passenger emergency exits on the same side of the same deck

of the fuselage, as measured parallel to the airplane's longitudinal axis between the nearest exit edges, is allowed only once on each side of the fuselage.

8. *Emergency Exit Signs.* In lieu of the requirements of § 25.811(d)(1) and (2) a single sign at each exit may be installed provided:

(a) The sign can be read from the aisle while directly facing the exit, and

(b) The sign can be read from the aisle adjacent to the passenger seat that is farthest from the exit and that does not have an intervening bulkhead/divider or exit.

9. *Emergency Lighting.*

(a) *Exit Signs.* In lieu of the requirements of § 25.812(b)(1), for airplanes that have a passenger seating configuration, excluding pilot seats, of 19 seats or less, the emergency exit signs required by § 25.811(d)(1), (2), and (3) must have red letters at least 1-inch high on a white background at least 2 inches high. These signs may be internally electrically illuminated, or self illuminated by other than electrical means, with an initial brightness of at least 160 microlamberts. The color may be reversed in the case of a sign that is self-illuminated by other than electrical means.

(b) *Floor Proximity Escape Path Marking.* In lieu of the requirements of § 25.812(e)(1), for cabin seating compartments that do not have the main cabin aisle entering and exiting the compartment, the following are applicable:

(1) After a passenger leaves any passenger seat in the compartment, he/she must be able to exit the compartment to the main cabin aisle using only markings and visual features not more than 4 feet above the cabin floor, and

(2) Proceed to the exits using the marking system necessary to accomplish the actions in § 25.812(e)(1) and (e)(2).

(c) *Transverse Separation of the Fuselage.* In the event of a transverse separation of the fuselage, compliance must be shown with § 25.812(l) except as follows:

(1) For each airplane type originally type certificated with a maximum passenger seating capacity of 9 or less, not more than 50 percent of all electrically illuminated emergency lights required by § 25.812 may be rendered inoperative in addition to the lights that are directly damaged by the separation.

(2) For each airplane type originally type certificated with a maximum passenger seating capacity of 10 to 19, not more than 33 percent of all electrically illuminated emergency lights required by § 25.812 may be

rendered inoperative in addition to the lights that are directly damaged by the separation.

10. *Interior doors.* In lieu of the requirements of § 25.813(e), interior doors may be installed between passenger seats and exits, provided the following requirements are met.

(a) Each door between any passenger seat, occupiable for taxi, takeoff, and landing, and any emergency exit must have a means to signal to the flightcrew, at the flightdeck, that the door is in the open position for taxi, takeoff and landing.

(b) Appropriate procedures/limitations must be established to ensure that any such door is in the open configuration for takeoff and landing.

(c) Each door between any passenger seat and any exit must have dual means to retain it in the open position, each of which is capable of reacting the inertia loads specified in § 25.561.

(d) Doors installed across a longitudinal aisle must translate laterally to open and close, e.g., pocket doors.

(e) Each door between any passenger seat and any exit must be frangible in either direction.

(f) Each door between any passenger seat and any exit must be operable from either side, and if a locking mechanism is installed, it must be capable of being unlocked from either side without the use of special tools.

11. *Width of Aisle.* Compliance is required with § 25.815, except that aisle width may be reduced to 0 inches between passenger seats during in-flight operations only, provided that the applicant demonstrates that all areas of the cabin are easily accessible by a crew member in the event of an emergency (e.g., in-flight fire, decompression). Additionally, instructions must be provided at each passenger seat for restoring the aisle width required by § 25.815. Procedures must be established and documented in the AFM to ensure that the required aisle widths are provided during taxi, takeoff, and landing.

12. *Materials for Compartment Interiors.* Compliance is required with the applicable provisions of § 25.853, except that compliance with appendix F, parts IV and V, to part 25, need not be demonstrated if it can be shown by test or a combination of test and analysis that the maximum time for evacuation of all occupants does not exceed 45 seconds under the conditions specified in appendix J to part 25.

13. *Fire Detection.* For airplanes with a type certificated passenger capacity of 20 or more, there must be means that meet the requirements of § 25.858(a)

through (d) to signal the flightcrew in the event of a fire in any isolated room not occupiable for taxi, takeoff and landing, which can be closed off from the rest of the cabin by a door. The indication must identify the compartment where the fire is located. This does not apply to lavatories, which continue to be governed by § 25.854.

14. *Cooktops.* Each cooktop must be designed and installed to minimize any potential threat to the airplane, passengers, and crew. Compliance with this requirement must be found in accordance with the following criteria:

(a) Means, such as conspicuous burner-on indicators, physical barriers, or handholds, must be installed to minimize the potential for inadvertent personnel contact with hot surfaces of both the cooktop and cookware. Conditions of turbulence must be considered.

(b) Sufficient design means must be included to restrain cookware while in place on the cooktop, as well as representative contents, e.g., soup, sauces, etc., from the effects of flight loads and turbulence. Restraints must be provided to preclude hazardous movement of cookware and contents. These restraints must accommodate any cookware that is identified for use with the cooktop. Restraints must be designed to be easily utilized and effective in service. The cookware restraint system should also be designed so that it will not be easily disabled, thus rendering it unusable. Placarding must be installed which prohibits the use of cookware that cannot be accommodated by the restraint system.

(c) Placarding must be installed which prohibits the use of cooktops (i.e., power on any burner) during taxi, takeoff, and landing.

(d) Means must be provided to address the possibility of a fire occurring on or in the immediate vicinity of the cooktop. Two acceptable means of complying with this requirement are as follows:

(1) Placarding must be installed that prohibits any burner from being powered when the cooktop is unattended. (**Note:** This would prohibit a single person from cooking on the cooktop and intermittently serving food to passengers while any burner is powered.) A fire detector must be installed in the vicinity of the cooktop which provides an audible warning in the passenger cabin, and a fire extinguisher of appropriate size and extinguishing agent must be installed in the immediate vicinity of the cooktop. Access to the extinguisher may not be blocked by a fire on or around the cooktop.

(2) An automatic, thermally activated fire suppression system must be installed to extinguish a fire at the cooktop and immediately adjacent surfaces. The agent used in the system must be an approved total flooding agent suitable for use in an occupied area. The fire suppression system must have a manual override. The automatic activation of the fire suppression system must also automatically shut off power to the cooktop.

(e) The surfaces of the galley surrounding the cooktop which would be exposed to a fire on the cooktop surface or in cookware on the cooktop must be constructed of materials that comply with the flammability requirements of part III of appendix F to part 25. This requirement is in addition to the flammability requirements typically required of the materials in these galley surfaces. During the selection of these materials, consideration must also be given to ensure that the flammability characteristics of the materials will not be adversely affected by the use of cleaning agents and utensils used to remove cooking stains.

(f) The cooktop must be ventilated with a system independent of the airplane cabin and cargo ventilation system. Procedures and time intervals must be established to inspect and clean or replace the ventilation system to prevent a fire hazard from the accumulation of flammable oils and be included in the instructions for continued airworthiness. The ventilation system ducting must be protected by a flame arrestor. [**Note:** The applicant may find additional useful information in Society of Automotive Engineers, Aerospace Recommended Practice 85, Rev. E, entitled "Air Conditioning Systems for Subsonic Airplanes," dated August 1, 1991.]

(g) Means must be provided to contain spilled foods or fluids in a manner that will prevent the creation of a slipping hazard to occupants and will not lead to the loss of structural strength due to airplane corrosion.

(h) Cooktop installations must provide adequate space for the user to immediately escape a hazardous cooktop condition.

(i) A means to shut off power to the cooktop must be provided at the galley containing the cooktop and in the cockpit. If additional switches are introduced in the cockpit, revisions to smoke or fire emergency procedures of the AFM will be required.

(j) If the cooktop is required to have a lid to enclose the cooktop there must be a means to automatically shut off

power to the cooktop when the lid is closed.

#### 15. *Hand-Held Fire Extinguishers.*

(a) For airplanes that were originally type certificated with more than 60 passengers, the number of hand-held fire extinguishers must be the greater of—

(1) That provided in accordance with the requirements of § 25.851, or

(2) A number equal to the number of originally type certificated exit pairs, regardless of whether the exits are deactivated for the proposed configuration.

(b) Extinguishers must be evenly distributed throughout the cabin. These extinguishers are in addition to those required by paragraph 14 of this SFAR, unless it can be shown that the cooktop was installed in the immediate vicinity of the original exits.

16. *Security.* The requirements of § 25.795 are not applicable to airplanes approved in accordance with this SFAR.

Issued in Washington, DC, on February 11, 2009.

Lynne A. Osmus,

Acting Administrator.

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2009-0419; Directorate Identifier 2009-NM-050-AD; Amendment 39-15898; AD 2009-10-03]

RIN 2120-AA64

#### Airworthiness Directives; 328 Support Services GmbH Dornier Model 328-100 and -300 Airplanes

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

During a recent Aileron Dual Load Path and Linkage Inspection, which is a certification maintenance requirement (CMR) task, the installed control rods were found to be corroded. The affected rod assemblies