

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 25**

[Docket No. NM372, Special Conditions No. 25-07-08-SC]

**Special Conditions: Boeing Model 787-8 Airplane; Reinforced Flightdeck Bulkhead**

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

**ACTION:** Notice of proposed special conditions.

**SUMMARY:** This notice proposes special conditions for the Boeing Model 787-8 airplane. This airplane will have novel or unusual design features when compared to the state of technology envisioned in the airworthiness standards for transport category airplanes. The Boeing Model 787-8 airplanes will have a flightdeck bulkhead incorporating ballistic- and intrusion-resistant features. While the regulations include standards for ballistic- and intrusion-resistant flightdeck doors, they do not yet incorporate the same standards for these features in the bulkhead. Therefore, special conditions are needed to address these design features. These proposed special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards. Additional special conditions will be issued for other novel or unusual design features of the Boeing Model 787-8 airplanes.

**DATES:** Comments must be received on or before May 29, 2007.

**ADDRESSES:** Comments on this proposal may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate, Attention: Rules Docket (ANM-113), Docket No. NM372, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; or delivered in duplicate to the Transport Airplane Directorate at the above address. All comments must be marked Docket No. NM372. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

**FOR FURTHER INFORMATION CONTACT:** Jeff Gardlin, FAA, Airframe/Cabin Safety, ANM-115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2136; facsimile (425) 227-1320.

**SUPPLEMENTARY INFORMATION:****Comments Invited**

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive as well as a report summarizing each substantive public contact with FAA personnel concerning these proposed special conditions. The docket is available for public inspection before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this notice between 7:30 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive on or before the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change the proposed special conditions based on comments we receive.

If you want the FAA to acknowledge receipt of your comments on this proposal, include with your comments a pre-addressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it back to you.

**Background**

On March 28, 2003, Boeing applied for an FAA type certificate for its new Boeing Model 787-8 passenger airplane. The Boeing Model 787-8 airplane will be an all-new, two-engine jet transport airplane with a two-aisle cabin. The maximum takeoff weight will be 476,000 pounds, with a maximum passenger count of 381 passengers.

**Type Certification Basis**

Under provisions of 14 CFR 21.17, Boeing must show that Boeing Model 787-8 airplanes (hereafter referred to as "the 787") meet the applicable provisions of 14 CFR part 25, as amended by Amendments 25-1 through 25-117, except §§ 25.809(a) and 25.812, which will remain at Amendment 25-115. If the Administrator finds that the applicable airworthiness regulations do not contain adequate or appropriate safety standards for the 787 because of a novel or unusual design feature, special conditions are prescribed under provisions of 14 CFR 21.16.

In addition to the applicable airworthiness regulations and special conditions, the 787 must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of part 36. In addition, the FAA must issue a finding of regulatory adequacy pursuant to section 611 of Public Law 92-574, the "Noise Control Act of 1972."

Special conditions, as defined in § 11.19, are issued in accordance with § 11.38 and become part of the type certification basis in accordance with § 21.17(a)(2).

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same or similar novel or unusual design feature, the special conditions would also apply to the other model under the provisions of § 21.101.

**Novel or Unusual Design Features**

The 787 will incorporate a number of novel or unusual design features. Because of rapid improvements in airplane technology, the applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. These proposed special conditions for the 787 contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

On January 15, 2002, the FAA promulgated 14 CFR 25.795(a) (Amendment 25-106), which specifies that the flightdeck door of a transport airplane be designed to resist forcible intrusion by unauthorized persons and penetration by small arms fire and fragmentation devices. At the time it was written, the regulation was limited to the flightdeck door to expedite a rapid retrofit of the existing airplanes required by operating rules to have a flightdeck door.

In addition to a reinforced flightdeck door, the 787 will have a flightdeck bulkhead which is reinforced to resist intrusion and ballistic penetration. The regulations do not adequately address the certification requirements for such a bulkhead, and appropriate certification standards are necessary. These proposed special conditions would require that the reinforced flightdeck bulkhead meet the same standards as those specified in § 25.795(a) for flightdeck doors. The proposed special conditions contain the minimum standards that the Administrator considers necessary to ensure that safety standards are

maintained after the aircraft enters into service.

On December 21, 2006, the FAA issued a notice of proposed rulemaking that proposes amending § 25.795(a) to require that a flightdeck bulkhead—and any other accessible barrier separating the flightcrew compartment from occupied areas—also be designed to resist intrusion or penetration. The methods of compliance described in the preamble of that notice and associated draft advisory material could be used to show compliance to these proposed special conditions.

For the 787, the reinforced bulkhead may be comprised of components such as the walls of adjacent lavatories, galleys, or crew rest areas. Those components would be covered by these proposed special conditions.

#### Applicability

As discussed above, these proposed special conditions are applicable to the 787. Should Boeing apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design features, these proposed special conditions would apply to that model as well under the provisions of § 21.101.

#### Conclusion

This action would affect only certain novel or unusual design features of the 787. It is not a rule of general applicability, and it would affect only the applicant that applied to the FAA for approval of these features on the airplane.

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

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these Special Conditions is as follows:

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

#### The Proposed Special Conditions

Accordingly, the Administrator of the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for the Boeing Model 787-8 airplane.

In addition to the requirements of 14 CFR 25.795(a) governing protection of the flightdeck door, the following special conditions apply.

The reinforced bulkhead, including components that comprise the bulkhead, separating the flightcrew compartment from occupied areas must be designed to meet the following standards:

It must resist forcible intrusion by unauthorized persons and be capable of

withstanding impacts of 300 Joules (221.3 foot-pounds) at critical locations on the bulkhead as well as a 1113 Newton (250 pound) constant tensile load on accessible handholds.

It must resist penetration by small arms fire and fragmentation devices to a level equivalent to level IIIa of the National Institute of Justice Standard (NIJ) 0101.04.

Issued in Renton, Washington, on April 4, 2007.

**Stephen P. Boyd,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*

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**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2007-27611; Directorate Identifier 2007-CE-024-AD]

**RIN 2120-AA64**

**Airworthiness Directives; Sierra Hotel Aero, Inc. Models Navion (L-17A), Navion A (L-17B), (L-17C), Navion B, Navion D, Navion E, Navion F, Navion G, and Navion H Airplanes**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all Sierra Hotel Aero, Inc. (formally Navion Aircraft LLC) Models Navion (L-17A), Navion A (L-17B), (L-17C), Navion B, Navion D, Navion E, Navion F, Navion G, and Navion H airplanes. This proposed AD would require a one-time inspection of the entire fuel system and repetitive inspections of certain fuel selector valves. This proposed AD results from reports of airplane accidents associated with leaking or improperly operating fuel selector valves. We are proposing this AD to detect and correct fuel system leaks or improperly operating fuel selector valves, which could result in the disruption of fuel flow to the engine. This failure could lead to engine power loss.

**DATES:** We must receive comments on this proposed AD by July 11, 2007.

**ADDRESSES:** Use one of the following addresses to comment on this proposed AD:

• **DOT Docket Web site:** Go to <http://dms.dot.gov> and follow the

instructions for sending your comments electronically.

• **Mail:** Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.

• **Fax:** (202) 493-2251.

• **Hand Delivery:** Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

• **Federal eRulemaking Portal:** Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

For service information identified in this proposed AD, contact Sierra Hotel Aero, 1690 Aeronca Lane, South St. Paul, MN 55075; phone: (651) 306-1456; fax: (612) 677-3171; Internet: <http://www.navion.com/servicebulletins.html>; e-mail: [servicebulletinsupport@navion.com](mailto:servicebulletinsupport@navion.com).

**FOR FURTHER INFORMATION CONTACT:** Tim Smyth, Aerospace Engineer, 2300 East Devon Avenue, Room 107, Des Plaines, Illinois 60018; telephone: (847) 294-7132; fax: (847) 294-7834.

#### SUPPLEMENTARY INFORMATION:

##### Comments Invited

We invite you to send any written relevant data, views, or arguments regarding this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include the docket number, "FAA-2007-27611; Directorate Identifier 2007-CE-024-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all comments received by the closing date and may amend the proposed AD in light of those comments.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive concerning this proposed AD.

##### Discussion

We have received several recent reports of Navion series airplanes involved in accidents where loss of engine power was a contributing factor. In some of these accidents, the National Transportation Safety Board (NTSB) determined that the cause of engine power loss was defective fuel selector valves or gasolators that allowed air to be introduced into the fuel lines and disrupt the flow of fuel to the engine.

This condition, if not corrected, could result in engine power loss.