

Proposed Rules

Federal Register

Vol. 72, No. 80

Thursday April 26, 2007

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM373 Special Conditions No. 25-07-09-SC]

Special Conditions: Boeing Model 787-8 Airplane; Composite Fuselage In-Flight Fire/Flammability Resistance

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 fuselage of the Boeing Model 787-8 series airplane will be made of composite materials rather than conventional aluminum. While the regulations include flame propagation standards for some materials commonly found in inaccessible areas of the airplane, they do not yet incorporate standards for materials used to construct the fuselage. Therefore, special conditions are needed to address this design feature. 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 June 11, 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. NM373, 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. NM373. 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 provisions of § 21.101.

Novel or Unusual Design Features

In-flight fires have originated in inaccessible areas of aircraft where thermal/acoustic insulation located adjacent to the aluminum aircraft skin has been the path for flame propagation and fire growth. Although these insulation materials were required to comply with the basic "Bunsen burner" requirement of title 14 Code of Federal Regulations (CFR) sections 25.853(a) and 25.855(d), these incidents revealed unexpected flame spread along the insulation film covering material of the thermal/acoustic insulation. In all cases, the ignition source was relatively modest and, in most cases, was

electrical in origin (for example an electrical short circuit, arcing caused by chafed wiring, or a ruptured ballast case).

In September 2003, in an effort to limit use of materials that sustain or propagate a fire in inaccessible areas, the FAA promulgated 14 CFR 25.856(a), which requires that thermal/acoustic insulation material installed in the fuselage meet newly developed flame propagation test requirements. That rule was Amendment 25-111. These requirements were developed to address a realistic fire threat. We consider that threat generally applicable to the 787.

Conventional aluminum fuselage material does not contribute to in-flight fire propagation. As a result, there are no standards that address in-flight fire safety of the fuselage structure itself. The 787 will make extensive use of composite materials in the fabrication of the majority of the

- Wing,
- Fuselage skin,
- Stringers,
- Spars, and
- Most other structural elements of all major sub-assemblies of the airplane.

As a result of this extensive use of a new construction material, the fuselage cannot be assumed to have the fire resistance previously afforded by aluminum during the in-flight fire scenario mentioned above. These proposed special conditions would require that the 787 provide the same level of in-flight survivability as a conventional aluminum fuselage airplane. This includes its thermal/acoustic insulation meeting requirements of § 25.856(a). Resistance to flame propagation must be shown, and all products of combustion that may result must be evaluated for toxicity and found acceptable.

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 affects only certain novel or unusual design features of the 787. It is not a rule of general applicability, and it affects 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 25.853(a) governing material flammability, the following special conditions apply:

The 787 composite fuselage structure must be shown to be resistant to flame propagation under the fire threat used to develop 14 CFR 25.856(a). If products of combustion are observed beyond the test heat source, they must be evaluated and found acceptable.

Issued in Renton, Washington, on April 18, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-7840 Filed 4-25-07; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-28016; Directorate Identifier 2006-NM-227-AD]

RIN 2120-AA64

Airworthiness Directives; Learjet Model 31, 31A, 35, 35A (C-21A), 36, 36A, 55, 55B, and 55C Airplanes, and Model 45 Airplanes

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Learjet Model 31, 31A, 35, 35A (C-21A), 36, 36A, 55, 55B, and 55C airplanes, and Model 45 airplanes. This proposed AD would require inspecting for unsealed gaps on the pylon side of the engine firewall and cleaning/sealing any unsealed gap; and, for certain airplanes, inspecting for unsealed gaps of the pylon trailing edge and cleaning/sealing any gap. This proposed AD results from a report that unsealed gaps (penetration points) of the engine

firewall were discovered during production. We are proposing this AD to prevent penetration of flammable liquids or fire through the engine firewall into the engine pylon, which could lead to fire inside the airplane.

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

ADDRESSES: Use one of the following addresses to submit comments on this proposed AD.

• **DOT Docket Web site:** Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.

• **Government-wide rulemaking Web site:** Go to <http://www.regulations.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.

• **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.

Contact Learjet, Inc., One Learjet Way, Wichita, Kansas 67209-2942, for the service information identified in this proposed AD.

FOR FURTHER INFORMATION CONTACT:

James Galstad, Aerospace Engineer, Systems and Propulsion Branch, ACE-116W, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4135; fax (316) 946-4107.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to submit any relevant written data, views, or arguments regarding this proposed AD. Send your comments to an address listed in the **ADDRESSES** section. Include the docket number "FAA-2007-28016; Directorate Identifier 2006-NM-227-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 with FAA personnel concerning this proposed AD. Using the search function of that web site, anyone can find and read the