

a loophole that creates a security vulnerability that could potentially compromise public health and safety.

The Proposed Amendments

The petitioner requests that 10 CFR part 73 be amended to require that licensees implement procedures to ensure that: (1) When information becomes known to a licensee about an individual that would prevent that individual from gaining unescorted access to the protected area of a nuclear power plant, the licensee will implement measures to ensure the individual does not enter the protected area, whether escorted or not; and (2) when sufficient information is not available to a licensee about an individual to determine whether the criteria for unescorted access are satisfied, the licensee will implement measures to allow that individual to enter the protected area only when escorted at all times by an armed member of the security force who remains in periodic communication with security supervision. In the case of the first proposal, the petitioner believes that when it is known that a person's trustworthiness and reliability do not meet the prescribed standards identified in § 73.56(b), access to protected areas, either escorted or unescorted, should be denied. In the case of the second proposal, the petitioner recognizes that it is impractical and burdensome to conduct background investigations of every person requiring access to a protected area, noting persons may need one-time access. With that in mind, the petitioner proposes granting these persons access to protected areas, but only when escorted by an armed member of the security force and only when this armed member is in periodic communication with security supervision.

Conclusion

The petitioner believes that current regulations create a security vulnerability that could potentially compromise public health and safety. The petitioner believes that its proposed amendments to 10 CFR part 73 will address this vulnerability in current regulations that enables persons who do not meet trustworthiness and reliability standards for unescorted access to protected areas of nuclear power plants permission to enter protected areas with an unarmed escort. Accordingly, the petitioner requests that the NRC amend its regulations related to the physical protection of nuclear power plants and materials as described previously in the section titled, "The Proposed Amendments."

Dated at Rockville, Maryland, this 3rd day of April 2007.

Kenneth R. Hart,

Acting Secretary of the Commission.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM366 Special Conditions No. 25-07-03-SC]

Special Conditions: Boeing Model 787-8 Airplane; Composite Wing and Fuel Tank Structure—Fire Protection Requirements

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. These novel or unusual design features are associated with composite materials chosen for the construction of the fuel tank skin and structure. For these design features, the applicable airworthiness regulations do not contain adequate or appropriate safety standards for wing and fuel tank structure with respect to post-crash fire safety. 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 24, 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. NM366, 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. NM366. 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:

Mike Dostert, FAA, Propulsion/Mechanical Systems, ANM-112, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2132; 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 Pub. L. 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.

The 787 will be the first large transport category airplane that will not be fabricated primarily with aluminum materials for the fuel tank structure. Instead it will use predominantly composite materials for the structural elements and skin of the wings and fuel tanks. Conventional airplanes with aluminum skin and structure provide a well understood level of safety during post-crash fire scenarios with respect to fuel tanks. This is based on service history and extensive full-scale fire testing. Composites may or may not have capabilities equivalent to aluminum, and current regulations do not provide objective performance requirements for wing and fuel tank structure with respect to post-crash fire safety. Because the use of composite structure is new and novel compared to the designs envisioned when the applicable regulations were written,

additional substantiation by test and analysis will be required to show that the 787 provides an acceptable level of safety with respect to the performance of the wings and fuel tanks during an external fuel-fed fire.

Although the FAA has previously approved fuel tanks made of composite materials that are located in the horizontal stabilizer of some airplanes, the composite wing structure of the 787 will introduce a new fuel tank construction into service. Advisory Circular (AC) 20-107A, Composite Aircraft Structure, under the topic of flammability, states: "The existing requirements for flammability and fire protection of aircraft structure attempt to minimize the hazard to the occupants in the event ignition of flammable fluids or vapors occurs. The use of composite structure should not decrease this existing level of safety." The relevance to the wing structure is that post-crash fire passenger survivability is dependent on the time available for passenger evacuation prior to fuel tank breach or structural failure. Structural failure can be a result of degradation in load-carrying capability in the upper or lower wing surface caused by a fuel-fed ground fire. Structural failure can also be a result of over-pressurization caused by ignition of fuel vapors in the fuel tank.

The FAA has historically developed rules with the assumption that the material of construction for wing and fuselage would be aluminum. As a representative case, § 25.963 was developed as a result of a large fuel-fed fire following the failures of fuel tank access doors caused by uncontained engine failures. During the subsequent Aviation Rulemaking Advisory Committee (ARAC) harmonization process with the JAA,¹ the structures group attempted to harmonize the requirements of § 25.963 regarding the impact and fire resistance of fuel tank access panels. Both authorities recognized that existing aluminum wing structure provided an acceptable level of safety. Further rulemaking has not yet been pursued.

As with previous Boeing airplane designs with under-wing mounted engines, the wing tanks and center tanks

are located in proximity to the passengers and near the engines. Past experience indicates post crash survivability is greatly influenced by the size and intensity of any fire that occurs. The ability of aluminum wing surfaces wetted by fuel on their interior surface to withstand post-crash fire conditions has been demonstrated by tests conducted at the FAA Technical Center. These tests have verified adequate dissipation of heat across wetted aluminum fuel tank surfaces so that localized hot spots do not occur, thus minimizing the threat of explosion. This inherent capability of aluminum to dissipate heat also allows the wing lower surface to retain its load carrying characteristics during a fuel-fed ground fire. It significantly delays wing collapse or burn-through for a time interval that usually exceeds evacuation times. In addition, as an aluminum fuel tank is heated with significant quantities of fuel inside, fuel vapor accumulates in the ullage space, exceeding the upper flammability limit relatively quickly and thus reducing the threat of a fuel tank explosion prior to fuel tank burn-through. Service history of conventional aluminum airplanes has shown that fuel tank explosions caused by ground fires have been rare on airplanes configured with flame arrestors in the fuel tank vent lines. Fuel tanks constructed with composite materials may or may not have equivalent capability.

Current regulations were developed and have evolved under the assumption that wing construction would be of aluminum materials, which provide inherent properties. Current regulations may not be adequate when applied to airplanes constructed of different materials. Aluminum has the following properties with respect to fuel tanks and fuel-fed external fires.

- Aluminum is highly thermally conductive. It readily transmits the heat of a fuel-fed external fire to fuel in the tank. This has the benefit of rapidly driving the fuel tank ullage to exceed the upper flammability limit prior to burn-through of the fuel tank skin or heating of the wing upper surface above the auto-ignition temperature. This greatly reduces the threat of fuel tank explosion.

- Aluminum panels at thicknesses previously used in wing lower surfaces of large transport category airplanes have been fire resistant as defined in CFR 14 part 1 and AC 20-135.

- The heat capacity of aluminum and fuel will prevent burn-through or wing collapse for a time interval that will generally exceed the passenger evacuation time.

¹ The JAA is the Joint Aviation Authority of Europe and the JAR is its Joint Aviation Requirements, the equivalent of our Federal Aviation Regulations. In 2003, the European Aviation Safety Agency (EASA) was formed, and EASA is now the principal aviation regulatory agency in Europe. We intend to work with EASA to ensure that our rules are also harmonized with its Certification Specifications (CS). But since these efforts in developing harmonization of § 25.963 occurred before EASA was formed, it was the JAA that was involved with them.

The extensive use of composite materials in the design of the 787 wing and fuel tank structure is considered a major change from conventional and traditional methods of construction. This will be the first large transport category airplane to be certificated with this level of composite material for these purposes. The applicable airworthiness regulations do not contain specific standards for post-crash fire safety performance of wing and fuel tank skin or structure.

Discussion of Proposed Special Conditions

In order to provide the same level of safety as exists with conventional airplane construction, Boeing must demonstrate that the 787 has sufficient post-crash survivability, in the event that the wings are exposed to a large fuel-fed fire, to enable occupants to safely evacuate. Factors in fuel tank survivability are the structural integrity of the wing and tank, flammability of the tank, burnthrough resistance of the wing skin, and the presence of auto-ignition threats during exposure to a fire. The FAA assessed post crash survival time during the adoption of amendment 25-111 for fuselage burnthrough protection. Studies conducted by and on behalf of the FAA indicated that, following a survivable accident, prevention of fuselage burnthrough for approximately 5 minutes can significantly enhance survivability. (See report numbers DOT/FAA/AR-99/57 and DOT/FAA/AR-02/49.) Beyond five minutes, there is little benefit, due to the effects of the fuel fire itself. That assessment was carried out based on accidents involving airplanes with conventional fuel tanks, and considering the ability of ground personnel to rescue occupants. In addition, AC20-135 indicates that, when aluminum is used for fuel tanks, the tank should withstand the effects of fire for 5 minutes without failure. Therefore, to be consistent with existing capability and related requirements, the 787 fuel tanks must be capable of resisting a post crash fire for at least 5 minutes. In demonstrating compliance, Boeing must address a range of fuel loads from minimum to maximum, as well as any other critical fuel load.

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 complying with part 25 regulations governing the fire-safety performance of the fuel tanks, wings, and nacelle, the Boeing Model 787-8 must demonstrate acceptable post-crash survivability in the event the wings are exposed to a large fuel-fed ground fire. Boeing must demonstrate that the wing and fuel tank design can endure an external fuel-fed pool fire for at least 5 minutes. This shall be demonstrated for minimum fuel loads (not less than reserve fuel levels) and maximum fuel loads (maximum range fuel quantities), and other identified critical fuel loads. Considerations shall include fuel tank flammability, burn-through resistance, wing structural strength retention properties, and auto-ignition threats during a ground fire event for the required time duration.

Issued in Renton, Washington, on March 30, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-27806; Directorate Identifier 2006-NM-287-AD]

RIN 2120-AA64

Airworthiness Directives; Dassault Model Mystere-Falcon 50 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the products listed above. This proposed 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:

* * * discovery of interferences between the power wire supplying the galley's coffee-maker and the surrounding structure. These interferences might, by chafing and degrading the wire insulation, generate short circuits between the wire and the aircraft ground through the composite cabinet structure, without activation of the Circuit Breaker (C/B). Several hot spots may then be created and generate a large amount of thick smokes just behind the cockpit.

The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

DATES: We must receive comments on this proposed AD by May 9, 2007.

ADDRESSES: You may send comments by any of the following methods:

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

- Fax: (202) 493-2251.
- Mail: Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.

- 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: <http://www.regulations.gov>. Follow the instructions for submitting comments.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5227) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington