

(e)(1) *Certain Media*

(e)(1)(i)

1. *Internet advertisements.* The exemption for advertisements made through broadcast or electronic media does not extend to [advertisements made by electronic communication, such as] advertisements posted on the Internet or sent by e-mail.

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By order of the Board of Governors of the Federal Reserve System, April 20, 2007.

**Jennifer J. Johnson,**

*Secretary of the Board.*

[FR Doc. E7-7873 Filed 4-27-07; 8:45 am]

BILLING CODE 6210-01-P

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 25

[Docket No. NM375 Special Conditions No. 25-07-10-SC]

#### Special Conditions: Boeing Model 787-8 Airplane; Lithium Ion Battery Installation

**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 use high capacity lithium ion battery technology in on-board systems. For this design feature, the applicable airworthiness regulations do not contain adequate or appropriate safety standards. 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 14, 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. NM375, 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. NM375. 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:**

Nazih Khaouly, FAA, Airplane & Flight Crew Interface Branch, ANM-111, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2432; facsimile (425) 227-1149.

**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.

The 787 design includes planned use of lithium ion batteries for the following applications:

- Main and Auxiliary Power Unit (APU) Battery/Battery Charger System
- Flight Control Electronics
- Emergency Lighting System
- Recorder Independent Power Supply

Large, high capacity, rechargeable lithium ion batteries are a novel or unusual design feature in transport category airplanes. This type of battery has certain failure, operational, and maintenance characteristics that differ significantly from those of the nickel-cadmium and lead-acid rechargeable batteries currently approved for

installation on large transport category airplanes. The FAA is proposing this special condition to require that (1) All characteristics of the lithium ion battery and its installation that could affect safe operation of the 787 are addressed, and (2) appropriate maintenance requirements are established to ensure the availability of electrical power from the batteries when needed.

### Background

The current regulations governing installation of batteries in large transport category airplanes were derived from Civil Air Regulations (CAR) part 4b.625(d) as part of the recodification of CAR 4b that established 14 CFR part 25 in February, 1965. The new battery requirements, 14 CFR 25.1353(c)(1) through (c)(4), basically reworded the CAR requirements.

Increased use of nickel-cadmium batteries in small airplanes resulted in increased incidents of battery fires and failures. This led to additional rulemaking affecting large transport category airplanes as well as small airplanes. On September 1, 1977, and March 1, 1978, respectively the FAA issued 14 CFR 25.1353c(5) and c(6), governing nickel-cadmium battery installations on large transport category airplanes.

The proposed use of lithium ion batteries for the emergency lighting system on the 787 has prompted the FAA to review the adequacy of these existing regulations. Our review indicates that existing regulations do not adequately address several failure, operational, and maintenance characteristics of lithium ion batteries that could affect the safety and reliability of the 787's lithium ion battery installation.

At present, there is limited experience with use of rechargeable lithium ion batteries in applications involving commercial aviation. However, other users of this technology, ranging from wireless telephone manufacturing to the electric vehicle industry, have noted safety problems with lithium ion batteries. These problems include overcharging, over-discharging, and flammability of cell components.

#### 1. Overcharging

In general, lithium ion batteries are significantly more susceptible to internal failures that can result in self-sustaining increases in temperature and pressure (thermal runaway) than their nickel-cadmium or lead-acid counterparts. This is especially true for overcharging, which causes heating and destabilization of the components of the cell, leading to formation (by plating) of

highly unstable metallic lithium. The metallic lithium can ignite, resulting in a self-sustaining fire or explosion. Finally, the severity of thermal runaway from overcharging increases with increasing battery capacity, because of the higher amount of electrolytes in large batteries.

#### 2. Over-Discharging

Discharge of some types of lithium ion batteries beyond a certain voltage (typically 2.4 volts) can cause corrosion of the electrodes of the cell, resulting in loss of battery capacity that cannot be reversed by recharging. This loss of capacity may not be detected by the simple voltage measurements commonly available to flightcrews as a means of checking battery status. This is a problem shared with nickel-cadmium batteries.

#### 3. Flammability of Cell Components

Unlike nickel-cadmium and lead-acid batteries, some types of lithium ion batteries use liquid electrolytes that are flammable. The electrolytes can serve as a source of fuel for an external fire, if there is a breach of the battery container.

These problems experienced by users of lithium ion batteries raise concern about use of these batteries in commercial aviation. The intent of these proposed special conditions is to establish appropriate airworthiness standards for lithium ion battery installations in the 787 and to ensure, as required by 14 CFR 25.601, that these battery installations are not hazardous or unreliable. To address these concerns, these proposed special conditions adopt the following requirements:

- Those sections of 14 CFR 25.1353 that are applicable to lithium ion batteries.
- The flammable fluid fire protection requirements of 14 CFR 25.863. In the past, this rule was not applied to batteries of transport category airplanes, since the electrolytes used in lead-acid and nickel-cadmium batteries are not flammable.
- New requirements to address the hazards of overcharging and over-discharging that are unique to lithium ion batteries.
- New maintenance requirements to ensure that batteries used as spares are maintained in an appropriate state of charge.

These proposed special conditions are similar to special conditions adopted for the Airbus A380 (71 FR 74755); December 13, 2006).

### 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 lieu of the requirements of 14 CFR 25.1353(c)(1) through (c)(4), the following special conditions apply. Lithium ion batteries on the Boeing Model 787-8 airplane must be designed and installed as follows:

- (1) Safe cell temperatures and pressures must be maintained during any foreseeable charging or discharging condition and during any failure of the charging or battery monitoring system not shown to be extremely remote. The lithium ion battery installation must preclude explosion in the event of those failures.
- (2) Design of the lithium ion batteries must preclude the occurrence of self-sustaining, uncontrolled increases in temperature or pressure.
- (3) No explosive or toxic gases emitted by any lithium ion battery in normal operation, or as the result of any failure of the battery charging system, monitoring system, or battery installation not shown to be extremely remote, may accumulate in hazardous quantities within the airplane.
- (4) Installations of lithium ion batteries must meet the requirements of 14 CFR 25.863(a) through (d).
- (5) No corrosive fluids or gases that may escape from any lithium ion battery may damage surrounding structure or any adjacent systems, equipment, or electrical wiring of the airplane in such a way as to cause a major or more severe failure condition, in accordance with 14 CFR 25.1309(b) and applicable regulatory guidance.

(6) Each lithium ion battery installation must have provisions to prevent any hazardous effect on structure or essential systems caused by the maximum amount of heat the battery can generate during a short circuit of the battery or of its individual cells.

(7) Lithium ion battery installations must have a system to control the charging rate of the battery automatically, so as to prevent battery overheating or overcharging, and,

(i) A battery temperature sensing and over-temperature warning system with a means for automatically disconnecting the battery from its charging source in the event of an over-temperature condition, or,

(ii) A battery failure sensing and warning system with a means for automatically disconnecting the battery from its charging source in the event of battery failure.

(8) Any lithium ion battery installation whose function is required for safe operation of the airplane must incorporate a monitoring and warning feature that will provide an indication to the appropriate flight crewmembers whenever the state-of-charge of the batteries has fallen below levels considered acceptable for dispatch of the airplane.

(9) The Instructions for Continued Airworthiness required by 14 CFR 25.1529 must contain maintenance requirements for measurements of battery capacity at appropriate intervals to ensure that batteries whose function is required for safe operation of the airplane will perform their intended function as long as the battery is installed in the airplane. The Instructions for Continued Airworthiness must also contain procedures for the maintenance of lithium ion batteries in spares storage to prevent the replacement of batteries whose function is required for safe operation of the airplane with batteries that have experienced degraded charge retention ability or other damage due to prolonged storage at a low state of charge.

**Note:** These special conditions are not intended to replace 14 CFR 25.1353(c) in the certification basis of the Boeing 787-8 airplane. These special conditions apply only to lithium ion batteries and their installations. The requirements of 14 CFR 25.1353(c) remain in effect for batteries and battery installations of the Boeing 787-8 airplane that do not use lithium ion batteries.

Issued in Renton, Washington, on April 23, 2007.

**Stephen P. Boyd,**

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

[FR Doc. E7-8186 Filed 4-27-07; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2007-28036; Directorate Identifier 2006-NM-278-AD]

RIN 2120-AA64

#### Airworthiness Directives; Airbus Model A330 and A340 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 the products listed above. This proposed AD results from mandatory continuing airworthiness information (MCAI) issued 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 failure of an evacuation slide raft to inflate, which could delay the evacuation of passengers in case of an emergency. 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 30, 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 Rulemaking 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:** Tim Backman, Aerospace Engineer, ANM-116, International Branch, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2797; fax (425) 227-1149.

#### SUPPLEMENTARY INFORMATION:

##### Streamlined Issuance of AD

The FAA is implementing a new process for streamlining the issuance of ADs related to MCAI. This streamlined process will allow us to adopt MCAI safety requirements in a more efficient manner and will reduce safety risks to the public. This process continues to follow all FAA AD issuance processes to meet legal, economic, Administrative Procedure Act, and **Federal Register** requirements. We also continue to meet our technical decision-making responsibilities to identify and correct unsafe conditions on U.S.-certificated products.

This proposed AD references the MCAI and related service information that we considered in forming the engineering basis to correct the unsafe condition. The proposed AD contains text copied from the MCAI and for this reason might not follow our plain language principles.

#### Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include "Docket No. FAA-2007-28036; Directorate Identifier 2006-NM-278-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because 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 about this proposed AD.

#### Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2006-0354, dated November 28, 2006 (referred to after this as "the MCAI"), to correct an