Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64


AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Model DC–10–10, DC–10–10F, DC–10–15, DC–10–30, DC–10–30F (KC–10A and KDC–10), DC–10–40, DC–10–40F, MD–10–10F, MD–10–30F, MD–11, and MD–11F airplanes. This proposed AD would require installing an in-line fuse in certain fuel level switches and sleeving the wires between the fuel tank and the in-line fuse. For certain airplanes this proposed AD would also require installing an in-line fuse in certain fuel pump pressure switches. This proposed AD results from fuel system reviews conducted by the manufacturer. We are proposing this AD to prevent fuel tank explosions and consequent loss of the airplane.

DATES: We must receive comments on this proposed AD by June 7, 2010.

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

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800–0019, Long Beach, California 90846–0001; telephone 206–544–5000, extension 2; fax 206–766–5683; e-mail dse.boecom@boeing.com; Internet https://www.myboeingfleet.com. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425–227–1221.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.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 800–647–5527) is in the AD docket.

ADDRESSES: Comments will be available in the AD docket shortly after receipt.


SUPPLEMENTARY INFORMATION:

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–2010–0384; Directorate Identifier 2010–NM–003–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://www.regulations.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 FAA has examined the underlying safety issues involved in fuel tank explosions on several large transport airplanes, including the adequacy of existing regulations, the service history of airplanes subject to those regulations, and existing maintenance practices for fuel tank systems. As a result of those findings, we issued a regulation titled “Transport Airplane Fuel Tank System Design Review, Flammability Reduction and Maintenance and Inspection Requirements” (66 FR 23086, May 7, 2001). In addition to new airworthiness standards for transport airplanes and new maintenance requirements, this rule included Special Federal Aviation Regulation No. 88 (“SFAR 88,” Amendment 21–78, and subsequent Amendments 21–82 and 21–83). Among other actions, SFAR 88 requires certain type design (i.e., type certificate (TC) and supplemental type certificate (STC)) holders to substantiate that their fuel tank systems can prevent ignition sources in the fuel tanks. This requirement applies to type design holders for large turbine-powered transport airplanes and for subsequent modifications to those airplanes. It requires them to perform design reviews and to develop design changes and maintenance procedures if their designs do not meet the new fuel tank safety standards. As explained in the preamble to the rule, we intended to adopt airworthiness directives to mandate any changes found necessary to address unsafe conditions identified as a result of these reviews.

In evaluating these design reviews, we have established four criteria intended to define the unsafe conditions associated with fuel tank systems that require corrective actions. The percentage of operating time during which fuel tanks are exposed to flammable conditions is one of these criteria. The other three criteria address the failure type and evaluation:

1. Single failures, single failures in combination with latent condition(s),
and in-service failure experience. For all four criteria, the evaluations included consideration of previous actions taken that may mitigate the need for further action.

We have determined that the actions identified in this proposed AD are necessary to reduce the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

An investigation conducted by the airplane manufacturer has revealed that float level switch wires located on the left and right wing forward spar, right main landing gear wheel well, horizontal stabilizer front spar, empennage, forward and aft cargo compartments, and fuel pump pressure switch wires located in the aft cargo compartment, are routed in the same bundles as power wires. If a short circuit between a float level switch wire and a power wire occurs, an over-current can cause excessive temperatures in the float level switch wires, which could damage the float level or fuel pump pressure switch wire, and become a potential ignition source for the fuel tank. Adding an in-line fuse as a self-contained component in each float level and pressure switch circuit, and sleeving the wires between the fuel tank and the in-line fuse, will minimize the possibility of excessive temperatures in the float level or pressure switch wires. If a short circuit between a float level switch wire and a power wire occurs, the result could be a fuel tank explosion and consequent loss of the airplane.

Relevant Service Information


- Fuel tanks 1, 2, and 3
- Upper and lower auxiliary fuel tanks
- Center wing fuel tanks
- Forward and aft auxiliary fuel tanks

Procedures for installing the in-line fuses include sleeving the wires between the fuel tank and the in-line fuse.

We have reviewed Boeing Service Bulletin MD11–28–132, dated November 25, 2008 (for Model MD–11 and MD–11F airplanes). This service bulletin describes procedures for installing an in-line fuse in each float level switch in the fuel tanks listed below, as applicable.

- Fuel tanks 1, 2, and 3
- Upper and lower auxiliary fuel tanks
- Forward auxiliary fuel tanks
- Center wing fuel tanks
- Tail fuel tank

Procedures for installing the in-line fuses include sleeving the wires between the fuel tank and the in-line fuse.

FAA’s Determination and Requirements of This Proposed AD

We are proposing this AD because we evaluated all relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs. This proposed AD would require accomplishing the actions specified in the service information described previously.

Costs of Compliance

We estimate that this proposed AD would affect 281 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this proposed AD.

<table>
<thead>
<tr>
<th>Action</th>
<th>Work hours</th>
<th>Average labor rate per hour</th>
<th>Parts</th>
<th>Cost per product</th>
<th>Number of U.S.-registered airplanes</th>
<th>Fleet cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation/Sleeving</td>
<td>Between 64 and 136 $1</td>
<td>$85</td>
<td>Between $3,139 and $5,598 $1</td>
<td>Between $8,579 and $17,158</td>
<td>281</td>
<td>Between $2,410,699 and $4,821,398</td>
</tr>
</tbody>
</table>

1 Depending on airplane configuration.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. 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.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866, 2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979), and 3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

You can find our regulatory evaluation and the estimated costs of compliance in the AD Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator,
the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:


Comments Due Date
(a) We must receive comments by June 7, 2010.

Affected ADs
(b) None.

Applicability
(c) This AD applies to the airplanes identified in paragraphs (c)(1) and (c)(2) of this AD.


Alternative Methods of Compliance (AMOCs)

(h)(1) The Manager, Los Angeles Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Philip Kush, Aerospace Engineer, Propulsion Branch, ANM–140L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712–4137; telephone (562) 627–5263; fax (562) 627–5210.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

Issued in Renton, Washington, on April 9, 2010.

Ali Bahrami,
Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2010–9111 Filed 4–20–10; 8:45 am]
BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64


AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Model 747–100, 747–100B, 747–100B SUD, 747–200B, 747–200C, 747–200F, 747–300, 747–400, 747SR, and 747SP series airplanes. This proposed AD would require repetitive detailed inspections of certain overlapping intercostal webs, and related investigative and corrective actions if necessary. This proposed AD results from reports of cracks in overlapping intercostal webs. We are proposing this AD to detect and correct such cracking, which could grow and result in a severed intercostal. If an intercostal is severed, cracks could develop in the adjacent frame structure and skin, resulting in a rapid loss of cabin pressure.

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


Hand Delivery: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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