

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0091; Directorate Identifier 2007-NM-311-AD; Amendment 39-15666; AD 2008-18-09]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Boeing Model 747 airplanes. This AD requires modification of the refuel valve control unit for the reserve fuel tanks. This AD also requires a revision to the FAA-approved maintenance program to incorporate airworthiness limitation (AWL) No. 28-AWL-20 or AWL No. 28-AWL-25, as applicable. This AD results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent lightning-induced electrical energy from entering a reserve fuel tank through the refuel valve, which could result in a fuel tank explosion and consequent loss of the airplane.

DATES: This AD is effective October 17, 2008.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 17, 2008.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

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 AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800-647-5527) is the Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Sulmo Mariano, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6501; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to certain Boeing Model 747 airplanes. That NPRM was published in the Federal Register on January 31, 2008 (73 FR 5770). That NPRM proposed to require modification of the refuel valve control unit for the reserve fuel tanks. That NPRM also proposed to require a revision to the FAA-approved maintenance program to incorporate airworthiness limitation (AWL) No. 28-AWL-20 or AWL No. 28-AWL-25, as applicable.

Actions Since NPRM Was Issued

On April 28, 2008, we issued AD 2008-10-07, amendment 39-15513 (73 FR 25977, May 8, 2008), applicable to certain Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes. That AD requires revising the FAA-approved maintenance program by incorporating new AWLs for fuel tank systems to satisfy Special Federal Aviation Regulation No. 88 ("SFAR 88") requirements. That AD also requires the initial inspection of certain repetitive AWL inspections to phase in those inspections, and repair if necessary. As an optional action, that AD also allows incorporating AWL No. 28-AWL-20 into the FAA-approved maintenance program. Therefore, we have added a new paragraph (i) to this AD, which states that incorporating AWL No. 28-AWL-20 into the FAA-approved maintenance program in accordance with paragraph (g) of AD 2008-10-07 terminates the action required by paragraph (g)(1) of this AD, for the applicable airplanes.

On April 28, 2008, we issued AD 2008-10-06, amendment 39-15512 (73 FR 25990, May 8, 2008), applicable to certain Boeing Model 747-400, 747-400D, and 747-400F series airplanes. That AD requires revising the FAA-approved maintenance program by incorporating new AWLs for fuel tank systems to satisfy SFAR 88 requirements. That AD also requires the initial inspection of certain repetitive AWL inspections to phase in those inspections, and repair if necessary. As an optional action, that AD also allows incorporating AWL No. 28-AWL-25 into the FAA-approved maintenance program. Therefore, we have added a new paragraph (j) to this AD, which states that incorporating AWL No. 28-AWL-25 into the FAA-approved maintenance program in accordance with paragraph (g)(3) of AD 2008-10-06 terminates the action required by paragraph (g)(2) of this AD, for the applicable airplanes.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comments received from the four commenters.

Request To Allow Use of Future Revisions to the Service Bulletin

Boeing and Japan Airlines (JAL) request that we revise paragraph (f) of the NPRM to specify that the proposed modification may also be done in accordance with any future approved revisions to Boeing Alert Service Bulletin 747-28A2291. As justification, Boeing states that the service bulletin could be revised by the time we issue this AD. JAL states that, during validation of the original issue of the service bulletin, Boeing found minor discrepancies with the service bulletin, which Boeing will correct in the next revision to the service bulletin.

We disagree with revising paragraph (f) of this AD, since Boeing has not issued a revision to the service bulletin. If the service bulletin is revised after issuance of this AD, we might consider approving the revised service bulletin as an alternative method of compliance (AMOC). Further, we have removed all references to the use of a "later revision" of the applicable service information from paragraphs (g)(1) and (g)(2) of this AD to be consistent with FAA policies and Office of the Federal Register regulations. We may consider approving the use of later revisions of the service information as an AMOC with this AD, as provided by paragraph (k) of this AD.

Request To Revise Paragraph (g)

KLM Royal Dutch Airlines (KLM) states that the intent of paragraph (g) of the NPRM is to maintain the design features introduced in accordance with Boeing Alert Service Bulletin 747-28A2291, dated September 27, 2007, when the reserve tank fueling valve controller is removed and replaced. KLM thinks that it is clearer if paragraph (g) of the NPRM states that the critical design configuration control limitations (CDCCLs) must be incorporated into the applicable paragraphs of the aircraft maintenance manual (AMM) to maintain these design features.

We infer that KLM requests that we revise paragraphs (g)(1) and (g)(2) of this AD as proposed above. We disagree because it is insufficient to only update the AMM with CDCCL notes. CDCCLs are airworthiness limitations. This AD requires revising an operator's FAA-approved maintenance program to include the new CDCCL, but it does not require specific changes to the AMM. We have not changed this AD in this regard.

Request To Extend Compliance Time

Lufthansa requests that we extend the compliance time from 60 months to 72 months for accomplishing the proposed modification. Lufthansa states that this extension will allow operators to implement the modification at the next maintenance layover.

We do not agree with Lufthansa's request to extend the compliance time. The operator provides no technical justification for revising the compliance time. In developing an appropriate compliance time for this AD, we considered the urgency associated with the subject unsafe condition and the practical aspect of accomplishing the required modification on the 747 fleet in a timely manner. Also, the modification requires less than 7 work hours, which may be done as separate work packages during regular maintenance. However, according to the provisions of paragraph (k) of this AD, we may approve requests to adjust the compliance time if the request includes data that prove that the new compliance time would provide an acceptable level of safety. No change to this AD is necessary in this regard.

Other Change Made to This AD

For standardization purposes, we have added a new paragraph (h) to this AD to specify that no alternative CDCCLs may be used unless they are approved as an AMOC. Inclusion of this paragraph in the AD is intended to ensure that the AD-mandated airworthiness limitations changes are treated the same as the airworthiness limitations issued with the original type certificate.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

We estimate that this AD affects about 300 airplanes of U.S. registry. The following table provides the estimated costs, at an average labor rate of \$80 per hour, for U.S. operators to comply with this AD.

Estimated Costs				
Action	Work hours	Parts	Cost per product	Fleet cost
Modification	Up to 7	Up to \$286	Up to \$846	Up to \$253,800.
Maintenance program revision	1	None	\$80	\$24,000.

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

This AD will not have federalism implications under Executive Order 13132. This AD will 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 that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under 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.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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:



2008-18-09 Boeing: Amendment 39-15666. Docket No. FAA-2008-0091; Directorate Identifier 2007-NM-311-AD.

Effective Date

- (a) This airworthiness directive (AD) is effective October 17, 2008.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 747-28A2291, dated September 27, 2007.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (k) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

Unsafe Condition

(d) This AD results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent lightning-induced electrical energy from entering a reserve fuel tank through the refuel valve, which could result in a fuel tank explosion and consequent loss of the airplane.

Compliance

- (e) Comply with this AD within the compliance times specified, unless already done.

Modification

(f) Within 60 months after the effective date of this AD, modify the refuel valve control unit for the reserve fuel tanks, by accomplishing all of the applicable actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 747-28A2291, dated September 27, 2007.

Maintenance Program Revision

(g) Concurrently with accomplishing the modification required by paragraph (f) of this AD, revise the FAA-approved maintenance program by incorporating the information specified in paragraph (g)(1) or (g)(2) of this AD, as applicable.

(1) For Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes: Incorporate AWL No. 28-AWL-20 of Section D of the Boeing 747-100/200/300/SP Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6-13747-CMR, Revision January 2007, into the FAA-approved maintenance program.

(2) For Model 747-400, 747-400D, and 747-400F series airplanes: Incorporate AWL No. 28-AWL-25 of Subsection D of the Boeing 747-400 Maintenance Planning Data (MPD) Document, D621U400-9, Section 9, Revision 24, dated June 2006, into the FAA-approved maintenance program.

No Alternative Critical Design Configuration Control Limitations (CDCCLs)

(h) After accomplishing the applicable action specified in paragraph (g) of this AD, no alternative CDCCLs may be used unless the CDCCLs are approved as an AMOC in accordance with the procedures specified in paragraph (k) of this AD.

Terminating Action for Maintenance Program Revision

(i) For Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes: Incorporating AWL No. 28-AWL-20 into the FAA-approved maintenance program in accordance with paragraph (g) of AD 2008-10-07, amendment 39-15513, terminates the action required by paragraph (g)(1) of this AD.

(j) For Model 747-400, 747-400D, and 747-400F series airplanes: Incorporating AWL No. 28-AWL-25 into the FAA-approved maintenance program in accordance with paragraph (g)(3) of AD 2008-10-06, amendment 39-15512, terminates the action required by paragraph (g)(2) of this AD.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Seattle ACO, FAA, ATTN: Sulmo Mariano, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6501; fax (425) 917-6590; has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(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 appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

Material Incorporated by Reference

(l) You must use the service information contained in Table 1 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

(3) You may review copies of the service information that is incorporated by reference at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Table 1—Material Incorporated by Reference

Service information	Revision	Date
Boeing Alert Service Bulletin 747–28A2291	Original	September 27, 2007.
Boeing 747–100/200/300/SP Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6–13747–CMR.	January 2007	January 2007.
Boeing 747–400 Maintenance Planning Data (MPD) Document, D621U400–9, Section 9	24	June 2006.

Issued in Renton, Washington, on August 25, 2008.

Dionne Palermo,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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