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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2010-1158; Directorate Identifier 2010-NM-125-AD;
Amendment 39-16750; AD 2011-15-03]**

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Model 747 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) that applies to the products listed above. That AD currently requires repetitive inspections to detect damage of the sleeving and wire bundles of the boost pumps of the numbers 1 and 4 main fuel tanks, and of the auxiliary tank jettison pumps (if installed); replacement of any damaged sleeving with new sleeving; and repair or replacement of any damaged wires with new wires. For airplanes on which any burned wires are found, that AD also requires an inspection to detect damage of the conduit, and replacement of any damaged conduit with a serviceable conduit. This new AD reduces the initial compliance time and repetitive inspection interval in the existing AD. This AD was prompted by fleet information indicating that the repetitive inspection interval in the existing AD is too long because excessive chafing of the sleeving continues to occur much earlier than expected between scheduled inspections. We are issuing this AD to detect and correct abrasion of the Teflon sleeving and wires in the bundles of the fuel boost pumps for the numbers 1 and 4 main fuel tanks and of the auxiliary tank jettison pumps (if installed), which could result in electrical arcing between the wires and aluminum conduit and consequent fire or explosion of the fuel tank.

DATES: This AD is effective August 19, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of August 19, 2011.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail me.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 98057-3356. 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 AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is 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: Tung Tran, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6505; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede an airworthiness directive (AD) 97-26-07, Amendment 39-10250 (62 FR 65352, December 12, 1997). That AD applies to the specified products. The NPRM published in the Federal Register on December 14, 2010 (75 FR 77793). That NPRM proposed to continue to require repetitive inspections to detect damage of the sleeving and wire bundles of the boost pumps of the numbers 1 and 4 main fuel tanks, and of the auxiliary tank jettison pumps (if installed); replacement of any damaged sleeving with new sleeving; and repair or replacement of any damaged wires with new wires. For airplanes on which any burned wires are found, that NPRM also proposed to continue to require an inspection to detect damage of the conduit, and replacement of any damaged conduit with a serviceable conduit. That NPRM proposed to reduce the initial compliance time and repetitive inspection interval in the existing AD.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and the FAA's response to each comment.

Request To Change Heading for Restated Requirements

United Airlines (UA) asked that we change the heading titled "Restatement of Requirements of AD 96-26-06, Amendment 39-9870," which precedes paragraph (g) of the NPRM, to "Restatement of Requirements of AD 97-26-07, Amendment 39-10250. UA pointed out that AD 97-26-07 superseded AD 96-26-06.

We agree with UA for the reason provided. Although certain requirements in AD 96-26-06 are carried over in AD 97-26-07—and in this AD—those requirements are identified by the AD number within the applicable paragraphs. We have changed the heading preceding paragraph (g) of this AD accordingly.

Request To Add Approved Alternate Method of Compliance

UA asked that Boeing Alert Service Bulletin 747-28A2204, Revision 2, dated September 1, 2005, be included in paragraphs (g), (i), (j), and (k) of the NPRM. UA stated that Boeing Alert

Service Bulletin 747-28A2204, Revision 2, dated September 1, 2005, was approved as an alternative method of compliance (AMOC) to the requirements of paragraph (a) of AD 97-26-07.

We partially agree with UA. We agree that Revision 2, dated September 1, 2005, of Boeing Alert Service Bulletin 747-28A2204, was reviewed by the FAA, and approved as an AMOC to the requirements of paragraph (a) of AD 97-26-07. We do not agree that Boeing Alert Service Bulletin 747-28A2204, Revision 2, dated September 1, 2005, should be added to the requested paragraphs because those paragraphs are part of the restatement of the requirements of AD 97-26-07. However, we have added a new paragraph (p) to this AD (and reidentified subsequent paragraphs) to give operators credit for using Boeing Alert Service Bulletin 747-28A2204, Revision 2, dated September 1, 2005, to accomplish the specified actions.

Request To Include Terminating Action

UA asked that terminating action be included in the NPRM. UA stated that it believes Boeing is developing a solution that would terminate the inspections required by the NPRM.

We acknowledge the comment from UA. However, Boeing has not submitted a revised service bulletin with terminating action for the repetitive inspections. We are aware that Boeing is developing a solution to the wire chafing issue, but until a modification is approved and available we are unable to reference it in the AD. However, under the provisions of paragraph (q) of this AD, we will consider requests for accomplishing a terminating modification if data are submitted to substantiate that it would provide an acceptable level of safety. We have made no change to the AD in this regard.

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 have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

We estimate that this AD affects 215 airplanes of U.S. registry. The new requirements of this AD add no additional economic burden. The current costs for this AD are repeated below for the convenience of affected operators.

The actions that are required by AD 97-26-07 and retained in this AD take about 4 work-hours per airplane, at an average labor rate of \$85 per work-hour. Based on these figures, the estimated cost of the currently required actions is \$73,100, or \$340 per airplane, per inspection cycle.

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),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

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 removing airworthiness directive (AD) 97-26-07, Amendment 39-10250 (62 FR 65352, December 12, 1997), and adding the following new AD:



2011-15-03 The Boeing Company: Amendment 39-16750; Docket No. FAA-2010-1158; Directorate Identifier 2010-NM-125-AD.

Effective Date

- (a) This AD is effective August 19, 2011.

Affected ADs

- (b) This AD supersedes AD 97-26-07, Amendment 39-10250.

Applicability

- (c) This AD applies to all The Boeing Company Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, 747SR, and 747SP series airplanes, certificated in any category.

Subject

- (d) Air Transport Association (ATA) of America Code 28: Fuel.

Unsafe Condition

- (e) This AD was prompted by fleet information indicating that the repetitive inspection interval in the existing AD is too long because excessive chafing of the sleeving continues to occur much earlier than expected between scheduled inspections. The Federal Aviation Administration is issuing this AD to detect and correct abrasion of the Teflon sleeving and wires in the bundles of the fuel boost pumps for the numbers 1 and 4 main fuel tanks and of the auxiliary tank jettison pumps (if installed), which could result in electrical arcing between the wires and aluminum conduit and consequent fire or explosion of the fuel tank.

Compliance

- (f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Restatement of Requirements of AD 97-26-07, Amendment 39-10250

Inspections/Repair or Replace if Necessary

- (g) Perform an initial inspection to detect damage of the sleeving and wire bundles of the forward and aft boost pumps of the numbers 1 and 4 main fuel tanks, and of the wire bundles of the auxiliary tank jettison pumps (if installed), in accordance with Boeing Alert Service Bulletin 747-28A2204, dated December 19, 1996; Boeing Service Bulletin 747-28A2204, Revision 1, dated October 30, 1997; or Boeing Alert Service Bulletin 747-28A2204, Revision 3, dated March 11, 2010;

at the time specified in paragraph (g)(1) or (g)(2) of this AD, as applicable. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-28A2204 may be used.

(1) For airplanes having line numbers 001 through 432 inclusive: Inspect within 120 days after January 21, 1997 (the effective date of AD 96-26-06, amendment 39-9870, which was superseded by AD 97-26-07).

(2) For airplanes having line numbers 433 and subsequent: Inspect at the later of the times specified in paragraphs (g)(2)(i) or (g)(2)(ii) of this AD.

(i) Prior to the accumulation of 20,000 flight cycles or 60,000 flight hours, whichever occurs first; or

(ii) Within 120 days after December 29, 1997 (the effective date of AD 97-26-07).

(h) Repeat the inspection required by paragraph (g) of this AD at intervals not to exceed 20,000 flight cycles or 60,000 flight hours since the last inspection, whichever occurs first, until the first inspection required by paragraph (n) of this AD has been accomplished.

(i) If any damaged sleeving is found, prior to further flight, replace the sleeving with new sleeving, in accordance with Boeing Alert Service Bulletin 747-28A2204, dated December 19, 1996; Boeing Service Bulletin 747-28A2204, Revision 1, dated October 30, 1997; or Boeing Alert Service Bulletin 747-28A2204, Revision 3, dated March 11, 2010. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-28A2204 may be used.

(j) If any damaged wire is found, prior to further flight, repair or replace the wire with a new wire, in accordance with Boeing Alert Service Bulletin 747-28A2204, dated December 19, 1996; Boeing Service Bulletin 747-28A2204, Revision 1, dated October 30, 1997; or Boeing Alert Service Bulletin 747-28A2204, Revision 3, dated March 11, 2010. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-28A2204 may be used.

(k) If any burned wire is found, prior to further flight, perform an inspection to detect damage of the conduit, in accordance with Boeing Alert Service Bulletin 747-28A2204, dated December 19, 1996; Boeing Service Bulletin 747-28A2204, Revision 1, dated October 30, 1997; or Boeing Alert Service Bulletin 747-28A2204, Revision 3, dated March 11, 2010. If any damage is found, prior to further flight, replace the conduit with a serviceable conduit, in accordance with Boeing Alert Service Bulletin 747-28A2204, dated December 19, 1996; Boeing Service Bulletin 747-28A2204, Revision 1, dated October 30, 1997; or Boeing Alert Service Bulletin 747-28A2204, Revision 3, dated March 11, 2010. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-28A2204 may be used.

(l) For airplanes having line numbers 433 and subsequent: Within 14 days after accomplishing the initial inspection required by paragraph (g) of this AD, submit a report of any damaged sleeving (i.e., holes, breaks, cuts, splits), damaged wire (i.e., worn or cracked insulation, exposed conductor, indication of arcing/burning), or damaged conduit to the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, WA 98057-3356; fax (425) 227-1181. The report shall include the information specified in paragraphs (l)(1), (l)(2), (l)(3), (l)(4), and (l)(5) of this AD. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

(1) The airplane serial number.

(2) The total hours' time-in-service accumulated on the airplane.

(3) The total number of flight cycles accumulated on the airplane.

(4) A description of any damage found.

(5) The location of where the damaged part was installed.

(m) For airplanes having line numbers 433 and subsequent: Within 14 days after accomplishing the initial inspection required by paragraph (g) of this AD, submit any damaged part to the Manager, Seattle ACO. The damaged part shall be tagged to include the information specified in paragraphs (l)(1), (l)(2), (l)(3), (l)(4), and (l)(5) of this AD. Additionally, operators shall align the inner sleeving,

outer sleeving, and wire as installed in the airplane, and secure the sleeving and wiring in place by taping or other means when submitting the damaged part to the Manager, Seattle ACO. Information collection requirements contained in this regulation have been approved by the OMB under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

New Reduced Inspection Intervals

Repetitive Inspections

(n) Do the next inspection required by paragraph (h) of this AD at the time specified in paragraph (n)(1) or (n)(2) of this AD, as applicable, in accordance with Boeing Alert Service Bulletin 747-28A2204, Revision 3, dated March 11, 2010. Repeat the inspection thereafter at intervals not to exceed 15,000 flight hours. Accomplishing the initial inspection in this paragraph ends the repetitive inspection requirements of paragraph (h) of this AD.

(1) For airplanes on which the inspection required by paragraph (g) of this AD has been done as of the effective date of this AD: Do the inspection at the earlier of the times specified in paragraph (n)(1)(i) and (n)(1)(ii) of this AD.

(i) Within 15,000 flight hours after the most recent inspection, or within 6,000 flight hours after the effective date of this AD, whichever occurs later.

(ii) Within 20,000 flight cycles or 60,000 flight hours after the most recent inspection required by paragraph (g) or (h) of this AD, whichever occurs first.

(2) For airplanes on which the inspection required by paragraph (g) of this AD has not been done as of the effective date of this AD: Do the inspection before the accumulation of 15,000 total flight hours, or within 6,000 flight hours after the effective date of this AD, whichever occurs later.

Paperwork Reduction Act Burden Statement

(o) A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave., SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

Credit for Actions Accomplished in Accordance With Previous Service Information

(p) Actions done before the effective date of this AD in accordance with Boeing Alert Service Bulletin 747-28A2204, Revision 2, dated September 1, 2005, are acceptable for compliance with the corresponding requirements of this AD.

Alternative Methods of Compliance (AMOCs)

(q)(1) The Manager, Seattle ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to ATTN: Tung Tran, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW.,

Renton, Washington 98057-3356; telephone (425) 917-6505; fax (425) 917-6590. Information may be e-mailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your Principal Maintenance Inspector or Principal Avionics Inspector, as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

(3) AMOCs approved previously in accordance with AD 97-26-07, Amendment 39-10250, are approved as alternative methods of compliance with the corresponding requirements of this AD. Compliance time extensions approved previously in accordance with AD 97-26-07, are not approved as alternative methods of compliance for the compliance times required by paragraph (n) of this AD.

Material Incorporated by Reference

(r) You must use Boeing Alert Service Bulletin 747-28A2204, Revision 3, dated March 11, 2010, 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 Boeing Alert Service Bulletin 747-28A2204, Revision 3, dated March 11, 2010, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

(3) You may review copies of the 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.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on July 1, 2011.

Jeffrey E. Duven,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.