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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2010-1159; Directorate Identifier 2010-NM-006-AD;
Amendment 39-16746; AD 2011-14-11]**

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Model 747-400 and -400D Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires a general visual inspection to determine the routing of the wire bundles in the number two and number three engine pylons near the leading edge, and related investigative and corrective actions if necessary. For certain airplanes, this AD also requires certain concurrent actions. This AD was prompted by a report of a fuel leak from the main fuel feed tube at the number two engine pylon. We are issuing this AD to detect and correct chafing of the main fuel feed tube and the alternating current motor-driven hydraulic pump wire bundle, which could lead to arcing from the exposed wire to the fuel feed tube, and could result in a fire or explosion.

DATES: This AD is effective August 19, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications 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. 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; phone: 425-917-6505; fax: 425-917-6590; e-mail: tung.tran@faa.gov.

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 the specified products. That NPRM published in the Federal Register on December 1, 2010 (75 FR 74663). That NPRM proposed to require a general visual inspection to determine the routing of the wire bundles in the number two and number three engine pylons near the leading edge, and related investigative and corrective actions if necessary. For certain airplanes, that NPRM also proposed to require certain concurrent actions.

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 Wording of Precipitating Event

Boeing requested a change to the wording describing the precipitating event specified in the Summary and Discussion sections and paragraph (e) of the NPRM to clarify the location of the fuel leak. Boeing clarified that, for the record, the fuel leaked from the main fuel feed tube and drained through the drain line.

We agree that changing the language to specify the location of the leak makes the description more accurate. Therefore, we have changed the wording appropriately in the Summary section and paragraph (e) of this AD. However, the subject text does not appear in the Discussion section in the final rule.

Request To Include Service Bulletin Reference in the "FAA's Determination and Requirements of this Proposed AD" Paragraph of the NPRM

Boeing requested that we change the last sentence of the "FAA's Determination and Requirements of this Proposed AD" paragraph in the NPRM to cite the specific service bulletin number, revision level, and date to differentiate between previous and new service information.

We agree that the requested change might clarify the information. However, because that section is not restated in the final rule, we cannot make the requested change to this AD.

Request To Remove Cost of Concurrent Actions

Boeing requested that we remove the cost of the concurrent inspection and bracket installation from the Costs of Compliance section of the NPRM. Boeing stated that the cost for the concurrent inspection and bracket installation was previously stated in AD 92-27-13, Amendment 39-8448 (58 FR 5920, January 25, 1993), and is not necessary in this proposed AD.

We disagree that it is unnecessary to include the cost of the concurrent actions in this AD. We acknowledge that these costs have already been stated in an existing AD; however, we have provided

costs for required actions in this AD, including concurrent actions, regardless of whether operators might already have done them. No change has been made to the AD in this regard.

Request To Include On-Condition Costs

Boeing stated that we should include the costs of inspecting the fuel feed tube and the alternating current motor driven hydraulic pump wire bundle, repairs, replacing the fuel tube, and changing the routing of the wire bundle to above the support bracket.

We agree with the request to include the costs of these actions specified above. We have added an "On-condition costs" table to reflect these costs.

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—and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not significantly increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

We estimate that this AD affects 15 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Table—Estimated Costs

Action	Work hours	Average labor rate per hour	Parts	Cost per product	Number of U.S.-registered airplanes	Fleet cost
Inspection of wire routing	1	\$85	\$0	\$85	15	\$1,275
Concurrent Inspection and Bracket Installation	9	\$85	\$0	\$765	15	\$11,475

We estimate the following costs to do any necessary inspections or repairs that would be required based on the results of the required inspection. We have no way of determining the number of aircraft that might need these inspections or repairs:

On-Condition Costs

Action	Work hours	Average labor rate per hour	Parts	Cost per product
Inspection of wire bundle and fuel feed tube	3	\$85	\$0	\$255
Repair of wire bundle, repair or replacement of fuel feed tube, and wire bundle routing change	7	\$85	\$26	\$621

The cost estimate figures discussed above are based on assumptions that no operator has yet accomplished any of the actions required by this AD, and that no operator would accomplish those actions in the future if this AD were not adopted. However, we have been advised that the concurrent inspection and bracket installation have already been done on some affected airplanes. Therefore, the future economic cost impact of this rule on U.S. operators is expected to be less than the cost impact figure indicated above.

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 adding the following new airworthiness directive (AD):



2011-14-11 The Boeing Company: Amendment 39-16746; Docket No. FAA-2010-1159; Directorate Identifier 2010-NM-006-AD.

Effective Date

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

Affected ADs

- (b) AD 92-27-13, Amendment 39-8448, affects this AD.

Applicability

- (c) This AD applies to The Boeing Company Model 747-400 and -400D series airplanes, certificated in any category; as specified in Boeing Service Bulletin 747-29A2114, Revision 1, dated July 15, 2010.

Subject

- (d) Air Transport Association (ATA) of America Code 29: Hydraulic power.

Unsafe Condition

- (e) This AD was prompted by a report of a fuel leak from the main fuel feed tube at the number two engine pylon. The Federal Aviation Administration is issuing this AD to detect and correct chafing of the main fuel feed tube and the alternating current motor-driven hydraulic pump wire bundle, which could lead to arcing from the exposed wire to the fuel feed tube, and could result in a fire or explosion.

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.

Inspection

- (g) Within 24 months after the effective date of this AD, do a general visual inspection to determine the routing of the wire bundles in the number two and number three engine pylons near the leading edge, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-29A2114, Revision 1, dated July 15, 2010. Do all applicable related investigative and corrective actions before further flight.

Concurrent Requirements

(h) For Model 747-400 series airplanes: Before or concurrently with accomplishing the requirements of paragraph (g) of this AD, install all applicable cable support brackets in the number two and number three engine pylon areas, and do all applicable related investigative and corrective actions, in accordance with Phase II of Boeing Service Bulletin 747-24A2168, Revision 3, dated July 29, 1993. Do all applicable related investigative and corrective actions before further flight. Doing the actions required by paragraph (c) of AD 92-27-13, Amendment 39-8448, is an acceptable method of compliance for the installation required by this paragraph.

Note 1: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

Credit for Actions Accomplished in Accordance With Previous Service Information

(i) Actions accomplished before the effective date of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-29A2114, dated October 1, 2009, are considered acceptable for compliance with the corresponding actions specified in paragraph (g) of this AD.

(j) Actions accomplished before the effective date of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-24A2168, Revision 1, dated December 5, 1991; or Revision 2, dated September 24, 1992; are considered acceptable for compliance with the corresponding actions specified in paragraph (h) of this AD.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Seattle 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. 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 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.

(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, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

Related Information

(l) For more information about this AD, 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; e-mail: tung.tran@faa.gov.

Material Incorporated by Reference

(m) You must use Boeing Service Bulletin 747-29A2114, Revision 1, dated July 15, 2010; and Boeing Service Bulletin 747-24A2168, Revision 3, dated July 29, 1993; as applicable; 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, 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.