



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0204; Directorate Identifier 2012-NM-229-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 747-400 and 747-400F series airplanes. This proposed AD was prompted by reports of cracking in the outboard flange of the longeron extension fittings, which attach to the wing-to-body fairing support frame. This proposed AD would require repetitive inspections of the longeron extension fittings for cracking, and corrective actions if necessary. We are proposing this AD to detect and correct cracks in the longeron extension fittings, which can become large and adversely affect the structural integrity of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Boeing service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; 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 (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: Nathan.P.Weigand@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0204; Directorate Identifier 2012-NM-229-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

We received reports that cracks were found in the outboard flanges of the longeron extension fittings installed on the left and right sides of the airplane. Longerons extension fittings are installed on the fuselage under the wing-to-body fairing and attach the overwing longeron to the fuselage. The outboard flange of the fitting attaches to the wing-to-body fairing support frame web. Subsequent analysis by Boeing indicated that the cracks were caused by fatigue combined with preload stress from improper fit-up during assembly. A manufacturing process change that began at line number 1199 might have resulted in preloading the longeron extension fittings. We are proposing this AD to detect and correct cracks in the longeron extension fittings, which can become large and adversely affect the structural integrity of the airplane.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2013-0204.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under “Differences Between the Proposed AD and the Service Information.”

The phrase “related investigative actions” might be used in this proposed AD. “Related investigative actions” are follow-on actions that (1) are related to the primary action, and (2) are actions that further investigate the nature of any condition found. Related investigative actions in an AD could include, for example, inspections.

In addition, the phrase “corrective actions” might be used in this proposed AD. “Corrective actions” are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

Differences Between the Proposed AD and the Service Information

This proposed AD includes airplanes that are not included in the effectivity of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012. That service bulletin defines actions for airplanes having line numbers 1199 through 1419 inclusive. Boeing recently reported an event that involved a cracked longeron extension fitting on the airplane having line number 1101. Based on this event we are expanding the airplane applicability in this proposed AD from airplanes having line numbers 1199 through 1419 inclusive to airplanes having line numbers 1076 through 1419 inclusive. We have coordinated this difference with Boeing.

Although Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, specifies that operators may contact the manufacturer for the disposition of certain repair conditions, this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been

approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

Costs of Compliance

We estimate that this proposed AD affects 41 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
High frequency eddy current inspection for cracking in longeron extension fittings	32 work-hours X \$85 per hour = \$2,720, per inspection cycle	\$0	\$2,720	\$111,520, per inspection cycle
Option to do preventative modification instead of repetitive inspections	479 work-hours X \$85 per hour = \$40,715	\$0	\$40,715	\$1,669,315

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need this replacement:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replacement	464 work-hours X \$85 per hour = \$39,440	\$0	\$39,440

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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),
- (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.

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 airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2013-0204; Directorate Identifier 2012-NM-229-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 747-400 and 747-400F series airplanes, certificated in any category, line numbers 1076 through 1419 inclusive.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of cracking in the outboard flange of the longeron extension fittings, which attach to the wing-to-body fairing support frame. We are issuing this AD to detect and correct cracks in the longeron extension fittings, which can become large and adversely affect the structural integrity of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection of Longeron Extension Fitting

For all airplanes: Except as required by paragraphs (i)(1) and (i)(4) of this AD, at the time specified in table 1 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012: Do a surface high frequency eddy current (HFEC) inspection of the left and right longeron extension fittings for cracking, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, except as required by paragraphs (i)(2) and (i)(3) of this AD. Do all applicable corrective actions before further flight. If no cracking is found, repeat the inspection thereafter at the intervals specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, until a permanent repair, longeron extension fitting replacement, or preventative modification is done, in accordance with the

Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012.

(h) Inspection of Temporary Repair and Corrective Actions

For airplanes on which a temporary repair as specified in Boeing Alert Service Bulletin 747-53A2860 has been done: At the times specified in table 2 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, do a surface HFEC inspection of the temporary repair of the longeron extension fittings for cracking, and all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, except as required by paragraph (i)(3) of this AD. Do all applicable corrective actions before further flight.

(i) Exceptions to Service Bulletin Specifications

The following exceptions apply to this AD.

(1) Where Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, specifies a compliance time relative to the issue date of that service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, specifies to contact Boeing for repair information: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(3) For airplanes not identified in Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012: These airplanes are in Group 1 for the purposes of this AD and are required to do the applicable actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012.

(4) Where Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, specifies “all airplanes,” this means all airplanes identified in paragraph (c) of this AD.

(j) Optional Terminating Action

Doing the permanent repair, longeron extension fitting replacement, or preventative modification, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, terminates the repetitive inspection required by paragraph (g) of this AD.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office, 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 the attention of the person identified in the Related Information section of this AD. Information may be emailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) 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.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(I) Related Information

(1) For more information about this AD, contact Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: Nathan.P.Weigand@faa.gov.

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

Issued in Renton, Washington, on February 25, 2013.

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

[FR Doc. 2013-05189 Filed 03/06/2013 at 8:45 am; Publication Date: 03/07/2013]