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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-1023; Directorate Identifier 2013-NM-042-AD; Amendment 39-17797; AD 2014-05-24]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 84-19-01 for certain The Boeing Company Model 747-100, 747-200B, and 747-200F series airplanes. AD 84-19-01 required repetitive inspections for cracking of certain tension ties, and repair and certain modifications if necessary. This new AD requires, for certain airplanes, additional inspections for cracking of the tension tie at body station (BS) 760 or 780, corrective action if necessary, and eventual modification of the tension ties. For all airplanes, this new AD requires repetitive post-modification inspections for cracking of the tension tie at BS 760 or 780, and corrective action if necessary. This AD was prompted by reports of cracking in the BS 760 tension tie as a result of bending due to cabin pressurization. We are issuing this AD to detect and correct tension tie cracking, which could eventually result in in-flight depressurization of the airplane and the inability to withstand current regulatory failsafe loads.

DATES: This AD is effective April 25, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 25, 2014.

ADDRESSES: For 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 view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. 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> by searching for and locating Docket No. FAA-2013-1023; 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 Docket 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: Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: Nathan.P.Weigand@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 84-19-01, Amendment 39-4913 (Docket No. 84-NM-10-AD; 49 FR 36365, September 17, 1984). AD 84-19-01 applied to certain Boeing Model 747-100, 747-200B, and 747-200F series airplanes. The NPRM published in the Federal Register on December 6, 2013 (78 FR 73457). The NPRM was prompted by reports of cracking in the BS 760 tension tie as a result of bending due to cabin pressurization. The NPRM proposed to continue to require repetitive inspections for cracking of certain tension ties, and repair and certain modifications if necessary. The NPRM also proposed to require, for certain airplanes, additional inspections for cracking of the tension tie at BS 760 or 780, corrective action if necessary, and eventual modification of the tension ties. For all airplanes, the NPRM also proposed to require repetitive post-modification inspections for cracking of the tension tie at BS 760 or 780, and corrective action if necessary. We are issuing this AD to detect and correct tension tie cracking, which could eventually result in in-flight depressurization of the airplane and the inability to withstand current regulatory failsafe loads.

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comment received. Boeing supported the NPRM (78 FR 73457, December 6, 2013).

Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

Are consistent with the intent that was proposed in the NPRM (78 FR 73457, December 6, 2013) for correcting the unsafe condition; and

Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 73457, December 6, 2013).

Costs of Compliance

We estimate that this AD affects 24 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Number of U.S. airplanes	Cost on U.S. operators
Inspection	3 work-hours × \$85 per hour = \$255 per inspection cycle	\$0	\$255 per inspection cycle	Up to 24	\$6,120 per inspection cycle.
Modification	32 work-hours × \$85 per hour = \$2,720	672	\$3,392	Up to 24	\$81,408.

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

According to the manufacturer, some of the costs of this 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 have determined that 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) 84-19-01, Amendment 39-4913 (Docket No. 84-NM-10-AD; 49 FR 36365, September 17, 1984), and adding the following new AD:



2014-05-24 The Boeing Company: Amendment 39-17797; Docket No. FAA-2013-1023; Directorate Identifier 2013-NM-042-AD.

(a) Effective Date

This AD is effective April 25, 2014.

(b) Affected ADs

This AD supersedes AD 84-19-01, Amendment 39-4913 (Docket No. 84-NM-10-AD; 49 FR 36365, September 17, 1984).

(c) Applicability

This AD applies to The Boeing Company Model 747-100, 747-200B, and 747-200F series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of cracking in the body station (BS) 760 tension tie as a result of bending due to cabin pressurization. We are issuing this AD to detect and correct tension tie cracking, which could eventually result in in-flight depressurization of the airplane and the inability to withstand current regulatory failsafe loads.

(f) Compliance

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

(g) Repetitive Inspections: Unmodified Airplanes

For airplanes that have not been modified as specified in Boeing Service Bulletin 747-53-2088: At the applicable time specified in Table 1 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, except as required by paragraph (j)(1) of this AD, do detailed (close visual) and surface high frequency eddy current inspections for cracking of the tension tie at BS 760 or 780, as applicable, and do all applicable corrective actions, in accordance with Part I of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, except as required by paragraph (j)(2) of this AD. Do all applicable corrective actions before further flight. Repeat the inspections thereafter at the applicable time specified in Table 1 or Table 2 of paragraph 1.E., "Compliance," of Boeing Alert

Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, until accomplishment of the requirements of paragraph (h) of this AD.

(h) Modification

For airplanes that have not been modified as specified in Boeing Service Bulletin 747-53-2088: At the applicable time specified in Table 1 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, except as required by paragraph (j)(1) of this AD, modify the tension ties, including doing an open-hole high frequency eddy current inspection for cracks, as applicable, and all applicable corrective actions, in accordance with Part III of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, except as required by paragraph (j)(2) of this AD. All applicable corrective actions must be done before further flight. This modification terminates the repetitive inspection requirements of paragraph (g) of this AD.

(i) Post-modification Repetitive Inspections

For airplanes that have been modified as specified in Boeing Service Bulletin 747-53-2088: At the applicable time specified in Table 2 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, do a detailed inspection for cracking of the tension tie at BS 760 or 780, and do all applicable corrective actions, in accordance with Part I of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, except as required by paragraph (j)(2) of this AD. Do all applicable corrective actions before further flight. Repeat the inspection thereafter at the applicable time specified in Table 2 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013. Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, notes that additional post-modification inspections are specified in Boeing Service Bulletin 747-53A2502; those post-modification inspections are required by AD 2006-01-07, Amendment 39-14446 (71 FR 1947, January 12, 2006).

(j) Exceptions to Service Information Specifications

(1) Where Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, specifies a compliance time "after the Revision 4 date of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013, specifies to contact Boeing for appropriate action: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(k) Credit for Previous Actions

This paragraph provides credit for the actions specified in this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 747-53A2088, Revision 3, dated September 8, 1994, which is not incorporated by reference in this AD.

(l) Special Flight Permit

Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

(m) Alternative Methods of Compliance (AMOCs)

(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 manager of the ACO, send it to the attention of the person identified in paragraph (n)(1) 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.

(4) AMOCs approved for AD 84-19-01, Amendment 39-4913 (Docket No. 84-NM-10-AD; 49 FR 36365, September 17, 1984), are approved as AMOCs for the corresponding requirements of paragraph (g) (the retained detailed inspections) and paragraph (i) of this AD, but not as AMOCs for the high frequency eddy current inspections required by paragraph (g) of this AD.

(n) Related Information

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

(2) Service information identified in this AD that is not incorporated by reference in this AD may be obtained at the addresses specified in paragraphs (o)(3) and (o)(4) of this AD.

(o) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013.

(ii) Reserved.

(3) For 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>.

(4) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on February 26, 2014.

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