DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-1023; Directorate Identifier 2013-NM-042-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 supersede airworthiness directive (AD) 84-19-01, which applies to certain The Boeing Company Model 747-100, 747-200B, 747-200F series airplanes. AD 84-19-01 requires repetitive inspections for cracking of certain tension ties, and repair and certain modifications if necessary. Since we issued AD 84-19-01, the upper deck tension ties have been identified as structure that is susceptible to widespread fatigue damage (WFD), and additional action is necessary for certain airplanes to adequately address the identified unsafe condition on the fleet. This proposed AD is intended to complete certain mandated programs intended to support the airplane reaching its limit of validity (LOV) of the engineering data that support the established structural maintenance program. For certain airplanes, this proposed AD would add 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 proposed AD would require repetitive post-modification inspections for cracking of the tension tie at BS 760 or 780, and corrective action if necessary. We are proposing 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: 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 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 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; 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: Roger Caldwell, Aerospace Engineer, Denver Aircraft Certification Office, FAA, 26805 East 68th Avenue, Denver, CO 80249; phone: 303-342-1086; fax: 303-342-1088; email: roger.caldwell@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include "Docket No. FAA-2013-1023; Directorate Identifier 2013-NM-042-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

On September 4, 1984, we issued AD 84-19-01, Amendment 39-4913 (49 FR 35365, September 17, 1984), for certain Boeing Model 747-100, 747-200B, and 747-200F series airplanes. AD 84-19-01 requires repetitive inspections for cracking of certain tension ties, and repair and certain modifications if necessary. AD 84-19-01 resulted from a crack in the body station 760 tension tie as a result of bending due to cabin pressurization. We issued AD 84-19-01 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.

Actions Since AD 84-19-01, Amendment 39-4913 (49 FR 35365, September 17, 1984), Was Issued

As described in FAA Advisory Circular 120-104 (http://www.faa.gov/documentLibrary/media/Advisory_Circular/120-104.pdf), several programs have been developed to support initiatives that will ensure the continued airworthiness of aging airplane structure. The last element of those initiatives is the requirement to establish a limit of validity (LOV) of the engineering data that support the structural maintenance program under 14 CFR 26.21. This proposed AD is the result of an assessment of the previously established programs by design approval holder during the process of establishing the LOV for Model 747-100, 747-200B, and 747-200F series airplanes. The actions specified in this proposed AD are necessary to complete certain programs to ensure the continued airworthiness of aging airplane structure and to support an airplane reaching its LOV.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 747-53A2088, Revision 4, dated January 11, 2013. For information on the procedures and compliance times, see this service information at http://www.regulations.gov by searching for Docket No. FAA-2013-1023.

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

Although this proposed AD does not explicitly restate the requirements of AD 84-19-01, Amendment 39-4913 (49 FR 35365, September 17, 1984), this proposed AD would retain all of the requirements of AD 84-19-01. Those requirements are referenced in the service information identified previously, which, in turn, is referenced in

paragraphs (g) and (i) of this proposed AD. Paragraph (h) of this proposed AD would mandate the previously optional modification of the tension ties. This proposed AD would require accomplishing the actions specified in the service information identified previously, except as discussed under "Differences Between the Proposed AD and the Service Information."

This proposed AD would require that requests for approval of alternative methods of compliance (AMOCs) be directed to the Seattle Aircraft Certification Office.

The phrase "corrective actions" might be used in this proposed AD. "Corrective actions" 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

The service bulletin specifies to contact the manufacturer for instructions on how to repair certain conditions, but 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.

Explanation of Compliance Time

The compliance time for the modification specified in this proposed AD for addressing WFD was established to ensure that discrepant structure is modified before WFD develops in airplanes. Standard inspection techniques cannot be relied on to detect WFD before it becomes a hazard to flight. We will not grant any extensions of the compliance time to complete any AD-mandated service bulletin related to WFD without extensive new data that would substantiate and clearly warrant such an extension.

Costs of Compliance

We estimate that this proposed AD affects 24 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	Number of U.S. airplanes	Cost on U.S. operators
Inspection	3 work-hours X $85 per hour = $255 per inspection cycle	$0	$255 per inspection cycle	Up to 24	$6,120 per inspection cycle
Modification	32 work-hours X $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 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 proposed 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 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 that the 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 removing airworthiness directive (AD) 84-19-01, Amendment 39-4913 (49 FR 35365, September 17, 1984), and adding the following new AD:

The Boeing Company: Docket No. FAA-2013-1023; Directorate Identifier 2013-NM-042-AD.

(a) Comments Due Date

The FAA must receive comments on this AD action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 84-19-01, Amendment 39-4913 (49 FR 35365, 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 a report 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 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 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 in Table 2 specified in 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.

(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)(2) 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 (49 FR 35365, 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 Roger Caldwell, Aerospace Engineer, Denver Aircraft Certification Office, FAA, 26805 East 68th Avenue, Denver, CO 80249; phone: 303-342-1086; fax: 303-342-1088; email: Roger.Caldwell@faa.gov.

(2) For information about AMOCs, 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.

(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. 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.

Issued in Renton, Washington, on November 29, 2013.

John P. Piccola,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[4910-13-P]

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