DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

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) 2013–23–03, which applies to certain The Boeing Company Model 747–100, 747–100B, 747–100B SUD, 747–200B, 747–200C, 747–200F, 747–300, 747–400, 747–400D, 747–400F, and 747SR series airplanes. AD 2013–23–03 currently requires doing a detailed inspection of certain attach fittings for a conical defect and replacing if necessary. Since we issued AD 2013–23–03, we received a report that a machining defect was also found on some of the actuator assemblies inspected during manufacture. This defect could lead to fatigue cracking and subsequent fracture. For certain airplanes, this proposed AD would mandate new inspections of the inboard actuator attach fittings for machining defects, and overhaul or replacement, if necessary. This proposed AD would also limit the compliance time for doing the replacement for certain other airplanes. We are proposing this AD to detect and correct defective inboard actuator attach fittings which, combined with loss of the outboard actuator load path, could result in uncontrolled retraction of the outboard flap, damage to flight control systems, and consequent reduced controllability of the airplane.

DATES: We must receive comments on this proposed AD by June 1, 2015.

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

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


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–2015–0828; 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.


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–2015–0828; Directorate Identifier 2014–NM–146–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

The preamble to AD 2013–23–03, Amendment 39–17658 (78 FR 68345, November 14, 2013), specified that we considered the requirements “interim action.” AD 2013–23–03 explained that we might consider further rulemaking to require a minimum thickness inspection of inboard actuator attach fittings that are conically machined. Since we issued AD 2013–23–03, we received a report that a machining defect was also found on some of the actuator assemblies inspected during manufacture at the point where the tapered machining transitioned to the hemispherical machining at the top of the inner surface. Revised service information has been issued and, for certain airplanes, this proposed AD would mandate new...
inspections of the inboard actuator attach fittings for machining defects, and overhaul or replacement, if necessary. This proposed AD would also limit the compliance time for doing the replacement, for certain other airplanes.

**Related Service Information Under 1 CFR part 51**

We reviewed Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014. The service information describes procedures for new inspections of the inboard actuator attach fittings for machining defects, and overhaul or replacement, if necessary. This service information is reasonably available; see ADDRESSES for ways to access this service information.

**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.

**Related AD**

This proposed AD is related to AD 2005–20–18, Amendment 39–14312 (70 FR 57740, October 4, 2005), for Model 747–100, –200B, –200F, –200C, –100B, –300 series airplanes. AD 2005–20–18 required inspecting and overhauling, replacing, or repairing (as applicable) the actuator attach fittings on the inboard and outboard flaps of the wing. The replacement was done in accordance with Boeing Service Bulletin 747–57A2316.

**Proposed AD Requirements**

This proposed AD would retain all of the requirements of AD 2013–23–03, Amendment 39–17658 (78 FR 68345, November 14, 2013). For certain airplanes, this proposed AD would mandate new inspections of the inboard actuator attach fittings for machining defects, and overhaul or replacement, if necessary. This proposed AD would also limit the compliance time for doing the replacement for certain other airplanes. This proposed AD would also require accomplishing the actions specified in the service information described previously.

**Costs of Compliance**

We estimate that this proposed AD affects 184 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

<table>
<thead>
<tr>
<th>Action</th>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>New proposed inspections for machining defect.</td>
<td>$680</td>
<td>0</td>
<td>125,120.</td>
<td></td>
</tr>
<tr>
<td>Replacement for airplanes without any defect.</td>
<td>$109,480.</td>
<td>14,230</td>
<td>14,230 per airplane.</td>
<td></td>
</tr>
</tbody>
</table>

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

**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 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) 2013–23–03, Amendment 39–17658 (78 FR 68345, November 14, 2013), and adding the following new AD:

   **The Boeing Company:** Docket No. FAA–2015–0828; Directorate Identifier 2014–NM–146–AD.

   **(a) Comments Due Date**

   The FAA must receive comments on this AD action by June 1, 2015.

   **(b) Affected ADs**

   This AD replaces AD 2013–23–03, Amendment 39–17658 (78 FR 68345, November 14, 2013).
(c) Applicability


(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by a report of the fracture of an inboard actuator attach fitting of the outboard flap. An inspection of the attach fitting revealed that it was incorrectly machined with a cylindrical profile instead of a conical profile, resulting in reduced wall thickness. A machining defect was also found on some actuator assemblies inspected during manufacture at the point where the tapered machining transitioned to the hemispherical machining at the top of the inner surface. This defect could lead to fatigue cracking and subsequent fracture. We are issuing this AD to detect and correct defective inboard actuator attach fittings which, combined with loss of the outboard actuator load path, could result in uncontrolled retraction of the outboard flap, damage to flight control systems, and consequent reduced controllability of the airplane.

(f) Compliance

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

(g) Retained Part Number Inspection

This paragraph restates the requirements of paragraph (g) of AD 2013–23–43 Amendment 39–17658 (78 FR 6345, November 14, 2013), with revised service information. Within 90 days after November 29, 2013 (the effective date of AD 2013–23–03): Inspect to determine the part number of the inboard actuator attach fittings of the outboard flaps, in accordance with Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, dated September 12, 2013; or Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014. As of the effective date of this AD, only Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014, may be used.

(h) Retained Actions for Certain Attach Fittings

This paragraph restates the requirements of paragraph (h) of AD 2013–23–03 Amendment 39–17658 (78 FR 6345, November 14, 2013), with revised service information. If, during the inspection required by paragraph (g) of this AD, any inboard actuator attach fitting having part number (P/N) 65B08564–7 is found, before further flight, do the actions specified in paragraph (h)(1) or (h)(2) of this AD.

(i) Do a detailed inspection of the inboard actuator attach fitting for a cylindrical defect, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, dated September 12, 2013; or Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014. As of the effective date of this AD, only Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014, may be used. For airplanes on which the detailed inspection is done before the effective date of this AD: If any cylindrical defect is found, before further flight, do the actions specified in paragraph (h)(1)(i) or (h)(1)(ii) of this AD, dated June 23, 2014, may be used. For airplanes on which the detailed inspection is done before the effective date of this AD: If any cylindrical defect is found, before further flight, do the actions specified in paragraph (h)(2) of this AD.

(ii) Do an ultrasonic inspection or by mechanically measuring the thickness and do a detailed inspection of the inner conical section to determine if the machining defect is present, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, dated September 12, 2013.

(j) New Actions For Airplanes on Which Any Cylindrical Defect Is Found

For airplanes on which the detailed inspection required by paragraph (h)(1) of this AD is done on or after the effective date of this AD: If any cylindrical defect is found during any inspection required by paragraph (h)(1) of this AD, before further flight, do the actions specified in paragraph (j)(1) or (j)(2) of this AD.

(1) Determine the minimum wall thickness of the actuator attach fitting either by doing an ultrasonic inspection or by mechanically measuring the thickness and do a detailed inspection of the inner conical section to determine if the machining defect is present, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(i) If the minimum thickness of the wall is less than 0.140 inch: Before further flight, replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(ii) If the minimum thickness of the wall is 0.130 inch or greater: Before further flight, replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(j) New Actions For Airplanes on Which No Cylindrical Defects Are Found

If no cylindrical defect is found during any inspection required by paragraph (h)(1) of this AD, within 24 months after the effective date of this AD, do the actions specified in paragraph (j)(1) or (j)(2) of this AD.

(1) Determine the minimum wall thickness of the actuator attach fitting either by doing an ultrasonic inspection or by mechanically measuring the thickness and do a detailed inspection of the inner conical section to determine if the machining defect is present, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(i) If the minimum thickness of the wall is less than 0.130 inch: Before further flight, replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(ii) If the minimum thickness of the wall is 0.140 inch or greater and the machining defect is present, before further flight, do the actions specified in paragraph (j)(1)(ii)(B) of this AD.

(A) Overhaul the inboard actuator attach fitting of the outboard flap, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(B) Replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.
(iii) If the minimum thickness of the wall is 0.130 inch or greater and less than 0.140 inch and the machining defect is not present, within 48 months or 3,000 flight cycles after the effective date of this AD, whichever occurs first, replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(iv) If any machining defect is found and the minimum thickness of the wall is less than 0.130 inch: Before further flight, do the actions specified in paragraph (k)(1) of this AD.

(k) New Inspection or Replacement for Certain Fittings That Were Previously Inspected

For airplanes with any inboard actuator attach fitting having P/N 65B08564–7 installed and the fitting was inspected in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(i) If any machining defect is found and the minimum thickness of the wall is 0.140 inch or greater: Before further flight, do the actions specified in paragraphs (k)(1)(A) or (k)(1)(B) of this AD.

(A) Overhaul the inboard actuator attach fitting of the outboard flap, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(B) Replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(ii) If any machining defect is found and the minimum thickness of the wall is 0.130 inch or greater and less than 0.140 inch:

(1) Overhaul the inboard actuator attach fitting of the outboard flap, in accordance with Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(2) Replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–57A2343, Revision 1, dated June 23, 2014.

(l) Part Installation Limitation

As of the effective date of this AD, no actuator attach fitting having P/N 65B08564–7 that meets the requirements of CONDITION 5 or CONDITION 6 defined in Boeing Alert Service Bulletin 747–57A2343, dated September 12, 2013, may be installed on any airplane unless the inspection specified in paragraph (k)(1) of this AD is done and the applicable actions in paragraphs (k)(1)(i), (k)(1)(ii), (k)(1)(iii), and (k)(1)(iv) are done within the applicable times specified in paragraphs (k)(1)(i), (k)(1)(ii), (k)(1)(iii), and (k)(1)(iv) of this AD.

(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, 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-AMN-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) If any service information contains steps that are identified as RC (Required for Compliance), those steps must be done to comply with this AD; any steps that are not identified as RC are recommended. Those steps that are not identified as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC provided the steps identified as RC can be done and the airplane can be put back in a serviceable condition. Any substitutions or changes to steps identified as RC require approval of an AMOC.

(5) AMOCs approved for AD 2013–23–03, Amendment 39–17658 (78 FR 68345, November 14, 2013) are approved as AMOCs for the corresponding provisions 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, 1601 Lind Avenue SW., Renton, WA 98057–3356; phone: 425–917–6428; fax: 425–917–6590; email: nathan.p.weigand@faa.gov.

(2) 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, Washington. For information on the availability of this material at the FAA, call 425–227–1221.

Issued in Renton, Washington, on April 6, 2015.

John P. Piccola, Jr.,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. 2015–08464 Filed 4–14–15; 8:45 am]
BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede Airworthiness Directive (AD) 2011–07–10, for certain Bombardier, Inc. Model BD–100–1A10 (Challenger 300) airplanes. AD 2011–07–10 currently requires revising the Airworthiness Limitations section of the Instructions for Continued Airworthiness; doing detailed visual inspections; removing discrepant material; cleaning the surfaces of the valves, the plug of the sensing port, and the cabin pressure-sensing port plug; securing the insulation; installing a new safety valve,