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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0288; Directorate Identifier 2013-NM-101-AD; Amendment 39-18009; AD 2014-22-04]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model DC-9-10, DC-9-20, and DC-9-30 series airplanes. This AD was prompted by an evaluation by the design approval holder (DAH) indicating that the improved (shot-peened) aft fuselage non-ventral pressure bulkhead tee is subject to widespread fatigue damage (WFD). This AD requires repetitive inspections for cracking of the improved (shot-peened) non-ventral aft pressure bulkhead tees, and replacement if necessary. We are issuing this AD to detect and correct fatigue cracking of the improved (shot-peened) non-ventral aft pressure bulkhead tees connecting the bulkhead web to the fuselage, which could result in reduced structural integrity and rapid decompression of the airplane.

DATES: This AD is effective December 11, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 11, 2014.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, CA 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; 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-2014-0288; 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: Eric Schrieber, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5348; fax: 562-627-5210; email: eric.schrieber@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model DC-9-10, DC-9-20, and DC-9-30 series airplanes. The NPRM published in the Federal Register on May 29, 2014 (79 FR 30753). The NPRM was prompted by an evaluation by the DAH indicating that the improved (shot-peened) aft fuselage non-ventral pressure bulkhead tee is subject to WFD. The NPRM proposed to require repetitive inspections for cracking of the improved (shot-peened) non-ventral aft pressure bulkhead tees, and replacement if necessary. We are issuing this AD to detect and correct fatigue cracking of the improved (shot-peened) non-ventral aft pressure bulkhead tees connecting the bulkhead web to the fuselage, which could result in reduced structural integrity and rapid decompression of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comment received. Boeing supported the NPRM (79 FR 30753, May 29, 2014).

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 (79 FR 30753, May 29, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 30753, May 29, 2014).

Costs of Compliance

We estimate that this AD affects 48 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	Cost on U.S. operators
Inspection	Up to 148 work-hours × \$85 per hour = \$12,580 per inspection cycle	\$0	\$12,580 per inspection cycle	Up to \$603,840 per inspection cycle.

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

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replacement (per tee)	4,000 work-hours × \$85 per hour = \$340,000	\$26,000	\$366,000

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):



2014-22-04 The Boeing Company: Amendment 39-18009 ; Docket No. FAA-2014-0288;
Directorate Identifier 2013-NM-101-AD.

(a) Effective Date

This AD is effective December 11, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, and DC-9-15F airplanes; Model DC-9-21 airplanes; and Model DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-33F, DC-9-34, DC-9-34F, and DC-9-32F (C-9A, C-9B) airplanes; certificated in any category; equipped with a non-ventral aft pressure bulkhead.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by an evaluation by the design approval holder (DAH) indicating that the improved (shot-peened) non-ventral aft pressure bulkhead tee is subject to widespread fatigue damage (WFD). We are issuing this AD to detect and correct fatigue cracking of the improved (shot-peened) non-ventral aft pressure bulkhead tees connecting the bulkhead web to the fuselage, which could result in reduced structural integrity and rapid decompression of the airplane.

(f) Compliance

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

(g) Definitions

(1) For the purposes of this AD, the term "original tee section" refers to the original (non-peened) non-ventral aft pressure bulkhead web to fuselage skin attach tee sections.

(2) For the purposes of this AD, the term "improved tee section" refers to improved (shot peened) non-ventral aft pressure bulkhead web to fuselage skin attach tee sections.

(h) Inspection

For airplanes on which an improved tee section having P/N 5910163-257, 5910163-259, 5910163-260, 5910163-261, 5910163-262, 5910163-263, SR09530001-3, SR09530001-5,

SR09530001-6, SR09530001-7, SR09530001-8, SR09530001-9, SR09530001-29, SR09530001-30, SR09530001-31, SR09530001-32, SR09530001-33, SR09530001-35, SR09530056-3, SR09530056-5, SR09530056-6, SR09530056-7, SR09530056-8, SR09530056-9, SR09530056-11, SR09530056-13, SR09530056-14, SR09530056-15, SR09530056-16, SR09530056-17, SR09530056-19, SR09530056-21, SR09530056-22, SR09530056-23, SR09530056-24, or SR09530056-25, is installed: At the applicable time specified in paragraph (i)(1) or (i)(2) of this AD, do a general visual and low frequency eddy current (LFEC) inspection (Option I), or a high and low frequency eddy current inspection (Option II), for cracking of the improved tee sections, in accordance with the Accomplishment Instructions of McDonnell Douglas DC-9 Alert Service Bulletin A53-231, Revision 2, dated June 25, 1993, including Service Sketch 3683D, Revision C, dated July 19, 1989.

(i) Compliance Times

(1) For Option I and Option II inspections specified in paragraph (h) of this AD: If the time of installation of an improved tee section having a part number listed in paragraph (h) of this AD is known, do the initial inspection required by paragraph (h) of this AD within 50,000 flight cycles after installation of the improved tee section, or within 1,500 flight cycles after the effective date of this AD, whichever occurs later.

(2) For Option I and Option II inspections specified in paragraph (h) of this AD: If the time of installation of an improved tee section having a part number identified in paragraph (h) of this AD is not known, do the initial inspection required by paragraph (h) of this AD before the accumulation of 75,000 total flight cycles, or within 1,500 flight cycles after the effective date of this AD, whichever occurs later.

(j) Repetitive Inspections

If no cracking is found during the inspection required by paragraph (h) of this AD: Do the actions specified in paragraph (j)(1) or (j)(2) of this AD, as applicable, in accordance with the Accomplishment Instructions of McDonnell Douglas DC-9 Alert Service Bulletin A53-231, Revision 2, dated June 25, 1993, including Service Sketch 3683D, Revision C, dated July 19, 1989.

(1) For Option I: If Option I was used for the inspection required by paragraph (h) of this AD, do the actions at the applicable intervals, as specified in paragraphs (j)(1)(i), (j)(1)(ii), and (j)(1)(iii) of this AD.

(i) Repeat the LFEC inspection for cracking of the side areas above the floor between longerons L7 and L17 on the fuselage left and right sides, at intervals not to exceed 2,000 flight cycles.

(ii) Repeat the general visual inspection for cracking of the top and lower areas from longeron L7 left side to L7 right side, and lower fuselage longeron L17 to L20 on the fuselage left and right sides, at intervals not to exceed 1,500 flight cycles.

(iii) Repeat the general visual inspection for cracking of the bottom areas from longeron L20 left side to L20 right side, at intervals not to exceed 3,500 flight cycles.

(2) For Option II: If Option II was used for the inspection required by paragraph (h) of this AD, repeat the high and low eddy frequency eddy current inspections for cracking around the entire periphery of the fuselage from the forward side of the bulkhead at intervals not to exceed 2,500 flight cycles.

(k) Corrective Action and Post-Replacement Inspections

If any cracking is found during any inspection required by paragraph (h) or (j) of this AD: Before further pressurized flight, replace each cracked tee section with an airworthy tee section having a part number identified in paragraph (h) of this AD, or with an original tee section having P/N 5910163-89, 5910163-91, 5910163-92, 5910163-93, 5910163-94, or 5910163-95, in accordance with the

Accomplishment Instructions of McDonnell Douglas DC-9 Alert Service Bulletin A53-231, Revision 2, dated June 25, 1993, including Service Sketch 3683D, Revision C, dated July 19, 1989.

(1) If the tee section is replaced with an improved tee section listed in paragraph (h) of this AD, prior to the accumulation of 50,000 flight cycles after installation, inspect the tee section in accordance with paragraph (h) of this AD and do all applicable corrective actions and repetitive inspections in accordance with and at the times specified in paragraphs (j) and (k) of this AD.

(2) If the tee section is replaced with an original tee section listed in paragraph (k) of this AD, prior to the accumulation of 25,000 flight cycles after installation, inspect the tee section in accordance with paragraph (h) of this AD and do all applicable corrective actions and repetitive inspections in accordance with and at the times specified in paragraphs (j) and (k) of this AD.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles 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 (m) of this AD. Information may be emailed to: 9-ANM-LAACO-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, Los Angeles ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane and 14 CFR 25.571, Amendment 45, and the approval must specifically refer to this AD.

(m) Related Information

For more information about this AD, contact Eric Schrieber, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5348; fax: 562-627-5210; email: eric.schrieber@faa.gov.

(n) 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) McDonnell Douglas DC-9 Alert Service Bulletin A53-231, Revision 2, dated June 25, 1993, including Service Sketch 3683D, Revision C, dated July 19, 1989.

(ii) Reserved.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, CA 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; 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 October 28, 2014.
Jeffrey E. Duven,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.