



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0451; Directorate Identifier 2013-NM-122-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 all The Boeing Company Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88 airplanes. This proposed AD was prompted by reports of cracks emanating from the aft-most barrel nut holes of the left and right upper rear spar caps of the horizontal stabilizer. This proposed AD would require repetitive high frequency eddy current (ETHF) inspections for cracks in the areas around the two aft-most barrel nut holes of the upper rear spar caps, and corrective actions if necessary; and repetitive ETHF inspections for cracks in the areas around the two aft-most barrel nut holes of any repaired or replaced upper rear spar cap, and corrective actions if necessary. We are proposing this AD to detect and correct cracks in the horizontal stabilizer, which could propagate until an upper rear spar cap severs, and result in failure of the horizontal stabilizer upper center or aft skin panel 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 service information identified in this proposed 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>; 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: George Garrido, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5357; fax: 562-627-5210; email: george.garrido@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- 2014-0451; Directorate Identifier 2013-NM-122-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 have received reports of cracks emanating from the aft-most barrel nut holes of the left and right upper rear spar caps of the horizontal stabilizer. One airplane had accumulated 40,144 total flight hours and 32,253 total landing cycles, while another airplane had accumulated 58,296 total flight hours and 43,512 total landing cycles. Investigations have determined that the cracks were caused by fatigue. In both cases, the cracks originated inside of the barrel nut holes, and radiated vertically and in the aft direction from the barrel nut holes. This condition, if not corrected, could result in cracks in the horizontal stabilizer, which could propagate until an upper rear spar cap severs, and result in failure of the horizontal stabilizer upper center or aft skin panel and adversely affect the structural integrity of the airplane.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0451.

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 repetitive ETHF inspections for cracks in the areas around the two aft-most barrel nut holes of the left and right upper rear spar caps, and corrective actions if necessary; and repetitive ETHF inspections for cracks in the areas around the two aft-most barrel nut holes of any the repaired or replaced upper rear spar cap, and corrective actions if necessary.

The phrase "corrective actions" is 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.

Costs of Compliance

We estimate that this proposed AD affects 668 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
Inspection	5 work-hours X \$85 per hour = \$425 per inspection cycle	\$0	\$425 per inspection cycle	\$283,900 per inspection cycle

We estimate the following costs to do any necessary repairs and 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 these repairs and replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Repair	Up to 394 work-hours X \$85 per hour = \$33,490	Up to \$32,440	Up to \$65,930
Replacement	Up to 394 work-hours X \$85 per hour = \$33,490	Up to \$60,222	Up to \$93,712

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- 2014-0451; Directorate Identifier 2013-NM-122-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 all The Boeing Company Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88 airplanes; certificated in any category.

(d) Subject

Air Transport Association (ATA) Code 55, Stabilizers.

(e) Unsafe Condition

This AD was prompted by reports of cracks emanating from the aft-most barrel nut holes of the left and right upper rear spar caps of the horizontal stabilizer. We are issuing this AD to detect and correct cracks in the horizontal stabilizer, which could propagate until an upper rear spar cap severs, and result in failure of the horizontal stabilizer upper center or aft skin panel 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

At the applicable compliance time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013;

except as provided by paragraph (i) of this AD: Do a high frequency eddy current inspection (ETHF) for cracks in the areas around the two aft-most barrel nut holes of the left and right upper rear spar caps, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013. Thereafter, repeat the ETHF inspection at the applicable time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013; except as provided by paragraph (i) of this AD. If any cracking is found during any inspection, before further flight, do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013.

(h) Post-Repair/Replacement Actions

For airplanes on which a splice repair or replacement was done, as specified in Boeing Alert Service Bulletin MD80-55A070: At the applicable compliance time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013, do a ETHF inspection for cracks at the two aft-most barrel nut holes of any repaired or replaced upper rear spar cap, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013. Thereafter, repeat the ETHF inspection at the applicable time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013. If any cracking is found during any inspection, before further flight, do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013.

(i) Exception to the Service Information Specifications

Where Boeing Alert Service Bulletin MD80-55A070, Revision 1, dated December 17, 2013, specifies a compliance time “after the original issue date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(j) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin MD80-55A070, dated May 22, 2013, which is not incorporated by reference in this AD.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles 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 (l)(1) of this AD.

(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.

(I) Related Information

(1) For more information about this AD, contact George Garrido, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5357; fax: 562-627-5210; email: george.garrido@faa.gov.

(2) 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 review copies of the 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 July 11, 2014.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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