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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2016-8845; Directorate Identifier 2016-NM-094-AD; Amendment 39-18732; AD 2016-25-06]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting 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), and DC-9-87 (MD-87) airplanes; and Model MD-88 airplanes. This AD was prompted by a report of fatigue cracking in a rear spar lower cap of the horizontal stabilizer. This AD requires repetitive inspections for cracking of the rear spar lower caps of the horizontal stabilizer, post-modification and post-repair inspections, and corrective actions if necessary. This AD also provides an optional terminating fatigue life enhancement modification. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective January 25, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 25, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone: 562-797-1717; 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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-8845.

#### **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-2016-8845 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:** Haytham Alaidy, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5224; fax: 562-627-5210; email: haytham.alaidy@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 all The Boeing Company Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) airplanes; and Model MD-88 airplanes. The NPRM published in the Federal Register on August 22, 2016 (81 FR 56540) ("the NPRM"). The NPRM was prompted by a report of fatigue cracking in a rear spar lower cap of the horizontal stabilizer. The NPRM proposed to require repetitive inspections for cracking of the rear spar lower caps of the horizontal stabilizer, post-modification and post-repair inspections, and corrective actions if necessary. The proposed AD also included an optional terminating fatigue life enhancement modification. We are issuing this AD to detect and correct fatigue cracking in the rear spar lower caps of the horizontal stabilizer, which, paired with cracking in adjacent areas, could adversely affect the structural integrity 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.

### **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 for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

### **Related Service Information Under 1 CFR Part 51**

We reviewed Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016. The service information describes procedures for doing inspections for cracking of the rear spar lower caps of the horizontal stabilizer, post-modification and post-repair inspections, and corrective actions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Costs of Compliance**

We estimate that this AD affects 395 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	3 work-hours × \$85 per hour = \$255 per inspection cycle	\$0	\$255 per inspection cycle	\$100,725 per inspection cycle.

### Estimated Costs for Optional Actions

Action	Labor cost	Parts cost	Cost per product
Modification	59 work-hours × \$85 per hour = \$5,015 per stabilizer	\$1,267	\$6,282 per stabilizer.

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

### On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replacement	368 work-hours × \$85 per hour = \$31,280 per stabilizer	\$31,408	\$62,688 per stabilizer.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions that require repair using a method specified in paragraph (k) of 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

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):



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**2016-25-06 The Boeing Company:** Amendment 39-18732; Docket No. FAA-2016-8845; Directorate Identifier 2016-NM-094-AD.

**(a) Effective Date**

This AD is effective January 25, 2017.

**(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), and DC-9-87 (MD-87) airplanes; and Model MD-88 airplanes; certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 55, Stabilizers.

**(e) Unsafe Condition**

This AD was prompted by a report of fatigue cracking in a Model MD-88 rear spar lower cap of the horizontal stabilizer. We are issuing this AD to detect and correct fatigue cracking in the rear spar lower caps of the horizontal stabilizer, which, paired with cracking in adjacent areas, could adversely affect the structural integrity of the airplane.

**(f) Compliance**

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

**(g) Repetitive Inspections and Corrective Actions**

Except as specified in paragraph (i)(1) of this AD, at the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016: Do an open hole high frequency eddy current inspection (HFEC) or surface HFEC inspection for cracking of the rear spar lower caps of the horizontal stabilizer, and do all applicable corrective actions; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016, except as specified in paragraph (i)(2) of this AD. Do all applicable corrective actions before further flight. Repeat the inspection thereafter at the applicable interval specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016, until accomplishment of the actions provided by paragraph (h) of this AD.

## **(h) Optional Terminating Action**

Accomplishment of the fatigue life enhancement modification in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016, terminates the repetitive inspections required by paragraph (g) of this AD.

## **(i) Service Information Exceptions**

(1) Where paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016, 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.

(2) If any cracking is found during any inspection required by this AD, and Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016, specifies to contact Boeing for appropriate action: Before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

## **(j) Post-Modification and Post-Repair Actions**

For airplanes on which any modification or repair specified in (g) or (h) of this AD has been done: At the applicable time and intervals specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016, do all applicable post-modification and post-repair inspections and all applicable corrective actions; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A072, dated April 8, 2016; except as specified in paragraph (i)(2) of this AD. All applicable corrective actions must be done before further flight.

## **(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) 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, modification, or alteration 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. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) Except as required by paragraph (i)(2) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (k)(4)(i) and (k)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or sub-step is labeled "RC Exempt," then the RC requirement is removed from that step or sub-step. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled 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 RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(l) Related Information**

For more information about this AD, contact Haytham Alaidy, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5224; fax: 562-627-5210; email: haytham.alaidy@faa.gov.

**(m) 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 MD80-55A072, dated April 8, 2016.

(ii) Reserved.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone: 562-797-1717; Internet: <https://www.myboeingfleet.com>.

(4) You may view this 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.

(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 November 25, 2016.

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