[Federal Register Volume 76, Number 136 (Friday, July 15, 2011)]

[Rules and Regulations]

[Pages 41651-41653]

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[FR Doc No: 2011-17400]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0217; Directorate Identifier 2010-NM-165-AD; Amendment 39-16748; AD 2011-15-01]

RIN 2120-AA64

Airworthiness Directives; 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

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires a detailed inspection to detect distress and existing repairs to the leading edge structure of the vertical stabilizer at the splice at Station Zfs = 52.267; repetitive inspections for cracking in the front spar cap forward flanges of the vertical stabilizer, and either the aft flanges or side skins; repetitive inspections for loose and missing fasteners; and related investigative and corrective actions if necessary. This AD was prompted by reports of cracked vertical stabilizer skin, a severed front spar cap, elongated fastener holes at the leading edge of the vertical stabilizer, and a cracked front spar web and front spar cap bolt holes in the vertical stabilizer. We are issuing this AD to detect and correct such cracking damage, which could result in the structure being unable to support limit load, and could lead to the loss of the vertical stabilizer.

DATES: This AD is effective August 19, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of August 19, 2011.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, California 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; e-mail dse.boecom@boeing.com; 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, Washington. 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 AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document 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: Roger Durbin, Aerospace Engineer, Airframe Branch, ANM-120L, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: 562-627-5233; fax: 562-627-5210; e-mail: Roger.Durbin@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to the specified products. That NPRM published in the Federal Register on March 14, 2011 (76 FR 13543). That NPRM proposed to require a detailed inspection to detect distress and existing repairs to the leading edge structure of the vertical stabilizer at the splice at Station Zfs = 52.267; repetitive inspections for cracking in the front spar cap forward flanges of the vertical stabilizer, and either the aft flanges or side skins; repetitive inspections for loose and missing fasteners; and related investigative and corrective actions if necessary.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and the FAA's response to each comment.

Support for the Proposed AD

Boeing stated that it agrees with the NPRM.

Request To Change Heading for Paragraph (h) of the NPRM

American Airlines (American) stated that the heading of "Repetitive Inspections for Cracks, and Related Investigative and Corrective Actions" prior to paragraph (h) of the NPRM should not include "repetitive" because paragraph (h) of the NPRM only address initial inspections. From these statements, we infer that American wants us to remove "repetitive" from the heading preceding paragraph (h) of the NPRM.

We disagree. The heading applies to all paragraphs following the heading until the next header. Paragraph (h)(2) of this AD requires repetitive inspections if no crack is detected by the initial inspection. We have not changed the AD in this regard.

Request To Match Actions Proposed in NPRM to Actions in Service Information

American stated that Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010, in paragraph 4 and 5 of the Accomplishment Instructions, recommends repetitive inspections of the leading edge and spar cap structure, and that only paragraph (j) of the NPRM requires repetitive inspections and then only for the leading edge structure under some conditions. We infer that

American wants us to change the AD to match Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010.

We disagree with revising the AD. In addition to paragraph (j), paragraph (h)(2) of this AD requires repetitive inspections for cracks of the left and right vertical stabilizer front spar cap if no crack is detected by the initial inspection, which is consistent with the service information and results in the AD and service information having consistent requirements. We have not changed the AD in this regard.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

We estimate that this AD will affect 668 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 for existing repairs, distress	10 work-hours X \$85 per hour = \$850	\$0	\$850	\$567,800
Repetitive inspections for cracking and loose and missing fasteners	7 work-hours X \$85 per hour = \$595 per inspection cycle	\$0	\$595 per inspection cycle	\$397,460 per inspection cycle

We have received no definitive data that would enable us to provide cost estimates for the oncondition 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

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):

AIRWORTHINESS DIRECTIVE



www.faa.gov/aircraft/safety/alerts/ www.gpoaccess.gov/fr/advanced.html

2011-15-01 The Boeing Company: Amendment 39-16748; Docket No. FAA-2011-0217; Directorate Identifier 2010-NM-165-AD.

Effective Date

(a) This AD is effective August 19, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to 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, as identified in Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010.

Subject

(d) Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 55: Stabilizers.

Unsafe Condition

(e) This AD was prompted by reports of cracked vertical stabilizer skin, a severed front spar cap, elongated fastener holes at the leading edge of the vertical stabilizer, and a cracked front spar web and front spar cap bolt holes in the vertical stabilizer. We are issuing this AD to detect and correct such cracking damage, which could result in the structure being unable to support limit load, and could lead to the loss of the vertical stabilizer.

Compliance

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

Inspections

(g) Within 4,500 flight cycles after the effective date of this AD, do a detailed inspection for distress in and existing repairs to the leading edge structure of the vertical stabilizer at the splice at Station Zfs=52.267, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010.

Repetitive Inspections for Cracks, and Related Investigative and Corrective Actions

(h) Before further flight after doing the inspection required by paragraph (g) of this AD, inspect for cracks of the left and right vertical stabilizer front spar cap, in accordance with either Option 1 or

Option 2 as specified in the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010. If any crack is found, before further flight, evaluate and verify to confirm all crack indications, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010.

- (1) If any cracking is confirmed, before further flight, repair using a method approved in accordance with the procedures specified in paragraph (1) of this AD.
- (2) If no cracking is confirmed, repeat the inspection thereafter at intervals not to exceed the applicable interval specified in paragraph (h)(2)(i) or (h)(2)(ii) of this AD.
- (i) If the most recent inspection was done using Option 1, the next inspection must be done within 4,400 flight cycles.
- (ii) If the most recent inspection was done using Option 2, the next inspection must be done within 3,000 flight cycles.

Leading Edge Repair

(i) If leading edge distress is found during the detailed inspection required by paragraph (g) of this AD, before further flight and after accomplishing the inspection required by paragraph (h) of this AD, repair the leading edge, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010.

Inspection for Loose/Missing Fasteners

- (j) For airplanes on which no cracking is confirmed during the initial inspection required by paragraph (h) of this AD: At the applicable time specified in paragraph (j)(1) or (j)(2) of this AD, do a detailed inspection for indications of loose and missing fasteners, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010. If any loose or missing fastener is found, before further flight, repair the leading edge, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010.
- (1) If the inspection required by paragraph (h) was done using Option 1, do the inspection required by paragraph (j) of this AD within 4,400 flight cycles after accomplishing the inspection required by paragraph (h) of this AD.
- (2) If inspection required by paragraph (h) was done using Option 2, do the inspection required by paragraph (j) of this AD within 3,000 flight cycles after accomplishing the inspection required by paragraph (h) of this AD.
- (k) For airplanes on which no cracking is confirmed during the most recent inspection required by paragraph (h) of this AD: Repeat the inspection for loose and missing fasteners required by paragraph (j) of this AD thereafter at intervals not to exceed the applicable time specified in paragraph (k)(1) or (k)(2) of this AD.
- (1) If the most recent inspection required by paragraph (h) was done using Option 1, the next inspection required by paragraph (j) of this AD must be done within 4,400 flight cycles after accomplishing the most recent inspection required by paragraph (j) of this AD.
- (2) If the most recent inspection required by paragraph (h) was done using Option 2, the next inspection required by paragraph (j) of this AD must be done within 3,000 flight cycles after the most recent inspection required by paragraph (j) of this AD.

Alternative Methods of Compliance (AMOCs)

(l)(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 the Related Information section 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.

Related Information

(m) For more information about this AD, contact Roger Durbin, Aerospace Engineer, Airframe Branch, ANM-120L, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: 562-627-5233; fax: 562-627-5210; e-mail: Roger.Durbin@faa.gov.

Material Incorporated by Reference

- (n) You must use Boeing Alert Service Bulletin MD80-55A067, dated June 24, 2010, to do the actions required by this AD, unless the AD specifies otherwise.
- (1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.
- (2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, California 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; e-mail dse.boecom@boeing.com; Internet https://www.myboeingfleet.com.
- (3) You may review copies of the 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.
- (4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on July 1, 2011. Jeffrey E. Duven, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.