

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. 2001-NM-78-AD; Amendment 39-12998; AD 2002-26-10]**

**RIN 2120-AA64**

### **Airworthiness Directives; McDonnell Douglas DC-9-10, -20, -30, -40, and -50 Series Airplanes**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment supersedes an existing airworthiness directive (AD), applicable to certain McDonnell Douglas DC-9-10, -20, -30, -40, and -50 series airplanes, that currently requires a one-time visual inspection to determine the modification status of the corners of the forward lower cargo doorjamb; low-frequency eddy current or X-ray inspections to detect cracks of the fuselage skin and doubler at all corners of the forward lower cargo doorjamb; various follow-on repetitive inspections; and modification, if necessary. This amendment retains those requirements but requires certain high-frequency, rather than low-frequency, eddy current inspections for certain conditions. The actions specified by this AD are intended to detect and correct cracking, which could result in rapid decompression of the fuselage and consequent reduced structural integrity of the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Effective February 10, 2003.

The incorporation by reference of McDonnell Douglas Service Bulletin DC9-53-277, Revision 01, dated June 16, 1999, excluding Evaluation Form, as listed in the regulations, is approved by the Director of the Federal Register as of February 10, 2003.

The incorporation by reference of McDonnell Douglas Service Bulletin DC9-53-277, dated September 30, 1996, was approved previously by the Director of the Federal Register as of May 22, 1998 (63 FR 19180, April 17, 1998).

**ADDRESSES:** The service information referenced in this AD may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Wahib Mina, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5324; fax (562) 627-5210.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 98-08-24, amendment 39-10473 (63 FR 19180, April 17, 1998), which is applicable to certain McDonnell Douglas Model DC-9-10, -20, -30, -40, and -50 series airplanes, and Model C-9 (military) airplanes, was published in the Federal Register on August 30, 2002 (67 FR 55732). The action proposed to require a one-time visual inspection to determine the modification status of the corners of the forward lower cargo doorjamb; low-frequency eddy current (LFEC) inspections to detect cracks of the fuselage skin and doubler at all corners of the forward lower cargo doorjamb; various follow-on repetitive inspections; and modification, if necessary. The action also proposed to retain the existing requirements, but require certain high-frequency, rather than low-frequency, eddy current inspections for certain conditions.

## **Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

### **Request To Extend Repetitive Inspection Interval**

One commenter asks that the repetitive inspection interval specified in paragraph (b)(1)(i)(A) of the proposed AD be extended from 3,500 landings to 3,860 landings. The commenter states that this would permit inspection of affected areas during a scheduled maintenance visit.

The FAA does not agree with the commenter's request. Insufficient supporting data were provided to us to substantiate the request. In developing an appropriate compliance time for this action, we considered not only the degree of urgency associated with addressing the subject unsafe condition, but the manufacturer's recommendation as to an appropriate compliance time, and the practical aspect of accomplishing the required inspections within an interval of time that parallels normal scheduled maintenance for the majority of affected operators. No change to the final rule is necessary in this regard.

### **Request for Deferral of Upgrade or Replacement of Previously Approved Repairs**

The same commenter asks that upgrade or replacement of certain repairs, as specified in paragraph (c) of the proposed AD, be deferred for a period of 24 months, providing the high frequency eddy current (HFEC) inspections find no evidence of cracking. The commenter states that this would pertain to an existing repair or modification that is not in accordance with the published structural repair manual (SRM) or rework drawing specifications, but has been approved for static strength by an original equipment manufacturer or FAA Designated Engineering Representative (DER).

We do not agree with the commenter. We have conducted further analysis of this issue in conjunction with the manufacturer, and we have determined that, for the corners of the forward lower cargo door jamb that have been modified, but not in accordance with the DC-9 SRM or service rework drawing, an initial HFEC inspection of the fuselage skin adjacent to the existing repairs would not detect any cracking under the repairs. The absence of cracking outside a repaired area does not indicate that an acceptable level of safety is being maintained, since possible cracking under the repairs could grow rapidly and extend out from under the repaired area. No change to paragraph (c) of the final rule is necessary in this regard.

## **Request To Change Certain Language in Preamble**

The same commenter states that the proposed AD should explicitly state that the new AD supersedes and cancels the requirements of the existing AD, to avoid a duplicate compliance requirement.

We do not agree with the commenter; the requested language is already in the proposed AD. The Summary section of the proposed AD states, "This document proposes the superseding of an existing airworthiness directive \* \* \* The Summary section also specifies that the proposed AD retains the requirements in the existing AD, but requires HFEC rather than low frequency eddy current inspections for certain conditions. No change to the final rule is necessary in this regard.

## **Explanation of Editorial Change**

We have changed the service bulletin citation throughout this final rule to exclude the Evaluation Form. (The form is intended to be completed by operators and submitted to the manufacturer to provide input on the quality of the service bulletin; however, this AD does not include such a requirement.)

## **Explanation of Changes to Final Rule**

In the Summary section of the proposed AD, we inadvertently omitted identification of the X-ray inspection to detect cracks, which was required by AD 98-08-24. That inspection was, however, identified in the actions required by the proposed AD. We have changed the Summary section of this AD to include the following phrase: "\* \* \* low-frequency eddy current or X-ray inspections to detect cracks \* \* \*"

The language in paragraph (f)(3) of the proposed AD has been changed from "An alternative method of compliance for any inspection or repair \* \* \*" to "An alternative method of compliance that provides an acceptable level of safety may be used for any repair \* \* \*" to clarify that a DER is not permitted to approve an inspection method.

## **Conclusion**

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Cost Impact**

There are approximately 899 airplanes of the affected design in the worldwide fleet. The FAA estimates that 622 airplanes of U.S. registry will be affected by this AD.

The inspection that is currently required by AD 98-08-24, and retained in this AD, takes approximately 1 work hour per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the currently required actions is estimated to be \$60 per airplane.

Should an operator be required to accomplish an eddy current inspection, it will take approximately 1 work hour per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of an eddy current inspection required by this AD is estimated to be \$60 per airplane.

Should an operator be required to accomplish the modification, it will take approximately 14 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$936 or \$2,807 per airplane, depending on the service kit purchased. Based on these figures, the cost impact of the modification required by this AD is estimated to be \$1,776 or \$3,647 per airplane.

No change to the parts cost or work hour estimate is anticipated as a result of the new actions included in this AD.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

## **Regulatory Impact**

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (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); and (3) 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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by removing amendment 39-10473 (63 FR 19180, April 17, 1998), and by adding a new airworthiness directive (AD), amendment 39-12998, to read as follows:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2002-26-10 Boeing:** Amendment 39-12998. Docket 2001-NM-78-AD. Supersedes AD 98-08-24, Amendment 39-10473.

**Applicability:** Model DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, and DC-9-15F airplanes; DC-9-21 airplanes; 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; DC-9-41 airplanes; and DC-9-51 airplanes; certificated in any category; as listed in McDonnell Douglas Service Bulletin DC9-53-277, Revision 01, dated June 16, 1999, excluding Evaluation Form.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To detect and correct cracking in the fuselage skin or doubler at the corner of the forward lower cargo doorjamb, which could result in rapid decompression of the fuselage and consequent reduced structural integrity of the airplane, accomplish the following:

**Note 2:** Where there are differences between the service bulletin and the AD, the AD prevails.

**Note 3:** This AD is related to AD 96-13-03, amendment 39-9671; and AD 94-03-01, amendment 39-8807. This AD will affect Principal Structural Element (PSE) 53.09.001 of the DC-9 Supplemental Inspection Document (SID).

## One-time Inspection

(a) Prior to the accumulation of 48,000 total landings, or within 3,500 landings after May 22, 1998 (the effective date of AD 98-08-24, amendment 39-10473), whichever occurs later: Perform a one-time general visual inspection to determine if the corners of the forward lower cargo doorjamb have been modified.

**Note 4:** For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless

otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

#### **Follow-On Actions: Unmodified Doorjamb**

(b) If the general visual inspection required by paragraph (a) of this AD reveals that the corners of the forward lower cargo doorjamb have not been modified: Before further flight, perform a low-frequency eddy current (LFEC) or X-ray inspection to detect cracks of the fuselage skin and doubler at all corners of the forward lower cargo doorjamb, in accordance with McDonnell Douglas Service Bulletin DC9-53-277, dated September 30, 1996; or Revision 01, dated June 16, 1999, excluding Evaluation Form. After the effective date of this AD, Revision 01 of the service bulletin must be used.

(1) If no cracking is detected during the LFEC or X-ray inspection required by this paragraph, accomplish the requirements of either paragraph (b)(1)(i) or (b)(1)(ii) of this AD.

(i) Option 1. Repeat the inspections as follows until the actions specified in paragraph (b)(1)(ii) of this AD are accomplished:

(A) If the immediately preceding inspection was conducted using LFEC techniques, conduct the next inspection within 3,500 landings; or

(B) If the immediately preceding inspection was conducted using X-ray techniques, conduct the next inspection within 2,850 landings.

(ii) Option 2. Before further flight, modify the corners of the forward lower cargo doorjamb, in accordance with the service bulletin. Within 28,000 landings after accomplishment of that modification, perform a high-frequency eddy current (HFEC) inspection to detect cracks on the skin adjacent to the modification, in accordance with the service bulletin. Repeat the HFEC inspection thereafter at intervals not to exceed 20,000 landings.

(A) If no crack is detected on the skin adjacent to the modification during any HFEC inspection required by this paragraph: Repeat the HFEC inspection thereafter at intervals not to exceed 20,000 landings.

(B) If any crack is detected on the skin adjacent to the modification during any HFEC inspection required by this paragraph: Before further flight, repair it in accordance with a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA.

(2) If any crack is found during any LFEC or X-ray inspection required by this paragraph and the crack is 2 inches or less in length: Before further flight, modify it in accordance with the service bulletin. Within 28,000 landings after accomplishment of the modification, perform an HFEC inspection to detect cracks on the skin adjacent to the modification, in accordance with the service bulletin.

(i) If no crack is detected during the HFEC inspection required by this paragraph: Repeat the HFEC inspection thereafter at intervals not to exceed 20,000 landings.

(ii) If any crack is detected during the HFEC inspection required by this paragraph: Before further flight, repair it in accordance with a method approved by the Manager, Los Angeles ACO.

(3) If any crack is found during any LFEC or X-ray inspection required by this paragraph and the crack is greater than 2 inches in length: Before further flight, repair it in accordance with a method approved by the Manager, Los Angeles ACO.

### **Follow-On Actions: Doorjamb Modified per Other Than Structural Repair Manual/Drawing**

(c) If the general visual inspection required by paragraph (a) of this AD reveals that the corners of the forward lower cargo doorjamb have been modified, but not in accordance with the DC-9 SRM or Service Rework Drawing: Before further flight, repair it in accordance with a method approved by the Manager, Los Angeles ACO.

### **Follow-On Actions: Doorjamb Modified per SRM/Drawing**

(d) If the general visual inspection required by paragraph (a) of this AD reveals that the corners of the forward lower cargo doorjamb have been modified in accordance with the DC-9 SRM or Service Rework Drawing: Within 28,000 landings since accomplishment of that modification, or within 3,500 landings after May 22, 1998, or before the accumulation of 48,000 total landings, whichever occurs latest, perform an HFEC inspection to detect cracks on the skin adjacent to the modification, in accordance with McDonnell Douglas Service Bulletin DC9-53-277, dated September 30, 1996; or Revision 01, dated June 16, 1999, excluding Evaluation Form. After the effective date of this AD, Revision 01 of the service bulletin must be used. Repeat the HFEC inspection thereafter at intervals not to exceed 20,000 landings.

(1) If no crack is detected during any HFEC inspection required by this paragraph: Repeat the HFEC inspection thereafter at intervals not to exceed 20,000 landings.

(2) If any crack is detected during any HFEC inspection required by this paragraph: Before further flight, repair it in accordance with a method approved by the Manager, Los Angeles ACO.

(e) Accomplishment of the actions required by this AD constitutes terminating action for inspections of PSE 53.09.001 (reference McDonnell Douglas Model DC-9 SID) required by AD 96-13-03, amendment 39-9671.

### **Alternative Methods of Compliance**

(f)(1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

(2) Alternative methods of compliance approved in accordance with AD 98-08-24, amendment 39-10473; AD 94-03-01, amendment 39-8807; or AD 96-13-03, amendment 39-9671; are acceptable for compliance with the applicable requirements of this AD.

(3) An alternative method of compliance that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Los Angeles ACO, to make such findings.

**Note 5:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

### **Special Flight Permits**

(g) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

## **Incorporation by Reference**

(h) Unless otherwise provided in this AD, the actions shall be done in accordance with McDonnell Douglas Service Bulletin DC9-53-277, dated September 30, 1996; or McDonnell Douglas Service Bulletin DC9-53-277, Revision 01, dated June 16, 1999, excluding Evaluation Form.

(1) The incorporation by reference of McDonnell Douglas Service Bulletin DC9-53-277, Revision 01, dated June 16, 1999, excluding Evaluation Form, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of McDonnell Douglas Service Bulletin DC9-53-277, dated September 30, 1996, was approved previously by the Director of the Federal Register as of May 22, 1998 (63 FR 19180, April 17, 1998).

(3) Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

## **Effective Date**

(i) This amendment becomes effective on February 10, 2003.

Issued in Renton, Washington, on December 24, 2002.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03-29 Filed 1-3-03; 8:45 am]

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