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[Page 65303-65306]  
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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. 2000-NM-57-AD; Amendment 39-12915; AD 2002-21-09]**

**RIN 2120-AA64**

### **Airworthiness Directives; McDonnell Douglas Model 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 adopts a new airworthiness directive (AD), applicable to certain McDonnell Douglas Model DC-9-10, -20, -30, -40, and -50 series airplanes. This AD requires, among other actions, various inspections to detect cracks of the cockpit enclosure window sill, and follow-on and corrective actions, as applicable. The actions specified by this AD are intended to prevent fatigue cracking of the internal doublers and frame structure of the fuselage skin of the cockpit enclosure window sill, 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 November 29, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of November 29, 2002.

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

Other Information: Judy Golder, Airworthiness Directive Technical Editor/Writer; telephone (425) 687-4241, fax (425) 227-1232. Questions or comments may also be sent via the Internet using the following address: [judy.golder@faa.gov](mailto:judy.golder@faa.gov). Questions or comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain McDonnell Douglas Model DC-9-10, -20, -30, -40, and -50 series airplanes, was published as a supplemental notice of proposed rulemaking (NPRM) in the Federal Register on July 17, 2002 (67 FR 46932). That action proposed to require, among other actions, various inspections to detect cracks of the cockpit enclosure window sill, and follow-on and corrective actions, as applicable.

## **Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the supplemental NPRM or the FAA's determination of the cost to the public.

## **Explanation of Change to Proposed Rule**

The FAA has corrected paragraph (j)(2) of this final rule to state that an alternative method of compliance (AMOC) that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by a Boeing Designated Engineering Representative (DER) authorized by the FAA to make such findings, and to clarify that a DER is not permitted to approve an inspection method.

## **Conclusion**

After careful review of the available data, 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 809 Model DC-9-10, -20, -30, -40, and -50 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 572 airplanes of U.S. registry will be affected by this AD, that it will take approximately 4 work hours per airplane to accomplish the initial inspections, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the requirements of this AD on U.S. operators is estimated to be \$137,280, or \$240 per airplane.

The cost impact figure discussed above is 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 adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

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

*We post ADs on the internet at "[www.airweb.faa.gov/rgl](http://www.airweb.faa.gov/rgl)"*

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).

## **2002-21-09 McDonnell Douglas:** Amendment 39-12915. Docket 2000-NM-57-AD.

**Applicability:** Model DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, DC-9-15F, DC-9-21, DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-32F (C-9A, C-9B), DC-9-33F, DC-9-34, DC-9-34F, DC-9-41, and DC-9-51 airplanes; listed in Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002; certificated in any category.

**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 (j)(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 prevent fatigue cracking of the internal doublers and frame structure of the fuselage skin of the cockpit enclosure window sill, 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 AD and the referenced service bulletin, the AD prevails.

### **Initial Inspections**

(a) Before the accumulation of 40,000 total landings, or within 5,000 landings after the effective date of this AD, whichever occurs later, do the actions specified in paragraphs (a)(1) and (a)(2) of this AD per the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002.

(1) Do a general visual inspection to determine if any existing repair of the internal doublers and frame structure of the fuselage skin of the cockpit enclosure window sill has been accomplished before the effective date of this AD.

**Note 3:** 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."

(2) Do inspections to detect cracks or loose or missing fasteners of the cockpit enclosure window sill per paragraphs 3.B.1. through 3.B.6. of the Accomplishment Instructions of the service bulletin. The inspections include a general visual inspection to detect loose or missing fasteners or cracks of the upper nose skins of the cockpit; a high frequency eddy current (HFEC) inspection for cracking of Zees; and detailed, borescope, and HFEC inspections for cracking of the skins and frames.

**Note 4:** For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc. may be used. Surface cleaning and elaborate access procedures may be required."

**Note 5:** If any cracked Zee is found during any inspection per paragraph (a)(2) of this AD, refer to paragraph (h) of this AD.

### **Condition 1 (No Previous Repair and No Crack)**

(b) If no previous repair and no crack is found during the inspections required by paragraphs (a)(1) and (a)(2) of this AD: Do the actions specified in paragraph (b)(1) or (b)(2) of this AD, at the times specified in those paragraphs.

### **Condition 1, Option 1: Repetitive Inspections**

(1) Condition 1, Option 1: Repeat the inspections required by paragraph (a)(2) of this AD every 5,000 landings, until paragraph (b)(2) of this AD is done. If any crack is found, before further flight, determine the applicable Condition as specified in the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002, and do the applicable actions required by this AD.

### **Condition 1, Option 2: Permanent Repair**

(2) Condition 1, Option 2: Do paragraphs (b)(2)(i) and (b)(2)(ii) of this AD.

(i) Before further flight, do all actions associated with the permanent repair (including detailed and eddy current inspections of various parts; and repair, replacement, or rework of those parts, as applicable) per Condition 1, Option 2 of the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002. This terminates the repetitive inspections per paragraph (b)(1) of this AD.

**Note 6:** Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002, refers to Boeing Service Rework Drawing SR09530268, Revision D, dated November 29, 2001, as an additional source of service information for identifying parts to be inspected, and repairing, replacing, or reworking those parts.

(ii) Within 40,000 landings after doing the permanent repair required by paragraph (b)(2)(i) of this AD, repeat the inspections specified in paragraph (a)(2) of this AD to detect any crack of the completed repair, per the Accomplishment Instructions of the service bulletin. If no crack is found,

repeat the inspections specified in paragraph (a)(2) of this AD every 5,000 landings. If any crack is found, do paragraph (g) of this AD.

### **Condition 2 (Any Crack Within Flyable Limits for Temporary Repair)**

(c) If any crack is found during the initial inspection required by paragraph (a)(2) of this AD or during any repetitive inspection required by paragraph (b)(1) of this AD, and that crack is WITHIN the flyable limits specified in Condition 2 of the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002: Do the actions specified in paragraph (c)(1) OR (c)(2) of this AD.

**Note 7:** Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002, refers to Boeing Service Rework Drawing SR09530268, Revision D, dated November 29, 2001, as the source for determining flyable limits.

### **Condition 2, Option 1: Temporary Repair and Repetitive Inspections**

(1) Condition 2, Option 1: Do paragraphs (c)(1)(i), (c)(1)(ii), (c)(1)(iii), and (c)(1)(iv) of this AD, at the times specified in those paragraphs.

(i) Before further flight, do the temporary repair (including installation of doublers) per Condition 2, Option 1, of the Accomplishment Instructions of the service bulletin.

(ii) Within 2,000 landings after doing the temporary repair, do a general visual inspection to detect cracks of the skins and external doublers. If NO crack is found that is outside the flyable limits specified in Condition 2 of the Accomplishment Instructions of the service bulletin, repeat the inspection every 2,000 landings until paragraph (c)(2)(i) of this AD is done.

(iii) Within 3,500 landings after doing the temporary repair, do borescope and HFEC inspections to detect cracks of the internal structure. If NO crack is found that is outside the flyable limits specified in Condition 2 of the Accomplishment Instructions of the service bulletin, repeat the inspection every 3,500 landings until paragraph (c)(2)(i) of this AD is done.

**Note 8:** If any crack is found during any inspection per paragraph (c)(1)(ii) or (c)(1)(iii) of this AD, refer to paragraph (f) of this AD.

(iv) Except as provided by paragraph (f) of this AD, within 8,000 landings after doing the temporary repair, do the permanent repair specified in paragraph (c)(2) of this AD.

### **Condition 2, Option 2: Permanent Repair**

(2) Condition 2, Option 2: Do paragraphs (c)(2)(i) and (c)(2)(ii) of this AD at the times specified in those paragraphs.

(i) Before further flight, do all actions associated with the permanent repair (including detailed and eddy current inspections of various parts; and repair, replacement, or rework of those parts, as applicable) per Condition 2, Option 2, of the Accomplishment Instructions of the service bulletin. This terminates the repetitive inspections required by paragraphs (c)(1)(ii) and (c)(1)(iii) of this AD.

(ii) Within 40,000 landings after doing the permanent repair required by paragraph (c)(2)(i) of this AD, repeat the inspections specified in paragraph (a)(2) of this AD to detect any crack of the completed repair, per the Accomplishment Instructions of the service bulletin. If no crack and no crack progression is found, repeat the inspections specified in paragraph (a)(2) of this AD every 5,000 landings. If any crack or crack progression is found, do paragraph (g) of this AD.

### **Condition 3 (Existing Temporary Repairs Per Certain Service Information)**

(d) If any temporary repair is found during any inspection required by paragraph (a)(1) of this AD and that repair WAS accomplished per the service information identified in Condition 3 of the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002: Do the actions specified in paragraph (d)(1) or (d)(2) of this AD. Also, if the Station Y=83.550 frames have been repaired before the effective date of this AD per DC-9/MD-80 Structural Repair Manual, Section 53-03, Figure 34, or Boeing Service Rework Drawing S509530127, do a one-time inspection of the frames for crack growth emanating beyond the repair angles. If any crack progression is found, before further flight, replace the frames with new frames per the Accomplishment Instructions of the service bulletin.

### **Condition 3, Option 1: Repetitive Inspections**

(1) Condition 3, Option 1: Do paragraphs (d)(1)(i), (d)(1)(ii), and (d)(1)(iii) of this AD at the times specified in those paragraphs.

(i) Within 2,000 landings after doing the temporary repair, or before further flight after accomplishment of the initial inspections in paragraph (a) of this AD, whichever is later, do a general visual inspection to detect cracks of the skins and external doublers. If NO crack is found that is outside the flyable limits specified in Condition 2 of the Accomplishment Instructions of the service bulletin, repeat the inspection every 2,000 landings until paragraph (d)(2)(i) of this AD is done.

**Note 9:** If any crack outside the flyable limits is found during any inspection per paragraph (d)(1)(i) or (d)(1)(ii) of this AD, refer to paragraph (f) of this AD.

(ii) Within 3,500 landings after doing the temporary repair, or before further flight after accomplishment of the initial inspections in paragraph (a) of this AD, whichever is later, do borescope and HFEC inspections to detect cracks of the internal structure. If NO crack is found that is outside the flyable limits specified in Condition 2 of the Accomplishment Instructions of the service bulletin, repeat the inspection every 3,500 landings until paragraph (d)(2)(i) of this AD is done.

(iii) Except as provided by paragraph (f) of this AD, within 8,000 landings after doing the temporary repair, or before further flight if more than 8,000 landings have been accumulated since the temporary repair, do the permanent repair specified in paragraph (d)(2)(i) of this AD.

### **Condition 3, Option 2: Permanent Repair**

(2) Condition 3, Option 2: Do paragraphs (d)(2)(i) and (d)(2)(ii) of this AD at the times specified in those paragraphs.

(i) Before further flight, do all actions associated with the permanent repair (including detailed and eddy current inspections of various parts; and repair, replacement, or rework of those parts, as applicable) per Condition 3, Option 2 of the Accomplishment Instructions of the service bulletin. This terminates the repetitive inspections required by paragraphs (d)(1)(i) and (d)(1)(ii) of this AD.

(ii) Within 40,000 landings after doing the permanent repair required by paragraph (d)(2)(i) of this AD, repeat the inspections specified in paragraph (a)(2) of this AD to detect any crack of the completed repair, per the Accomplishment Instructions of the service bulletin. If no crack and no crack progression is found: Repeat the inspections specified in paragraph (a)(2) of this AD every 5,000 landings. If any crack or crack progression is found, do paragraph (g) of this AD.

#### **Condition 4 (Existing Repairs Per Other Service Information)**

(e) If any repair is found during any inspection required by paragraph (a)(1) of this AD, and the repair was not accomplished per the service information identified in Condition 4 of the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002: Before further flight, repair per a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA.

#### **Condition 5 (Crack Outside Flyable Limits for Temporary Repair)**

(f) If any crack is found during any inspection required by paragraph (a)(2), (b)(1), (c)(1)(ii), (c)(1)(iii), (d)(1)(i), or (d)(1)(ii) of this AD; AND that crack is OUTSIDE the limits specified in Condition 2 of the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002; AND a permanent repair was NOT previously accomplished per this AD: Do paragraphs (f)(1) and (f)(2) of this AD at the times specified in those paragraphs.

(1) Before further flight, do all actions associated with the permanent repair (including detailed and eddy current inspections of various parts; and repair, replacement, or rework of those parts, as applicable) per Condition 5 of the Accomplishment Instructions of the service bulletin.

(2) Within 40,000 landings after doing the permanent repair required by paragraph (f)(1) of this AD, repeat the inspections specified in paragraph (a)(2) of this AD to detect any crack of the completed repair, per the Accomplishment Instructions of the service bulletin. If no crack and no crack progression is found, repeat the inspections specified in paragraph (a)(2) of this AD every 5,000 landings. If any crack or crack progression is found, do paragraph (g) of this AD.

#### **Corrective Actions: Cracking Following Permanent Repair**

(g) If any crack or crack progression is found during any inspection required by paragraph (b)(2)(ii), (c)(2)(ii), (d)(2)(ii), or (f)(2) of this AD: Before further flight, repair per a method approved by the Manager, Los Angeles ACO.

#### **Corrective Action for Cracked Zee**

(h) If any cracked Zee is found during any inspection performed per paragraph (a)(2) of this AD: Before further flight, replace the cracked Zee with a new part per the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002.

#### **Previously Accomplished Inspections and Repairs**

(i) Inspections and repairs accomplished before the effective date of this AD per the Accomplishment Instructions of Boeing Service Bulletin DC9-53-290, dated December 14, 1999, are acceptable for compliance with the corresponding actions in this AD.

#### **Alternative Methods of Compliance**

(j)(1) An alternative method of compliance (AMOC) 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) An AMOC 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 10:** 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**

(k) 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**

(l) Unless otherwise specified in this AD, the actions shall be done in accordance with Boeing Service Bulletin DC9-53-290, Revision 01, dated March 15, 2002. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. 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; 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**

(m) This amendment becomes effective on November 29, 2002.

Issued in Renton, Washington, on October 11, 2002.

Michael J. Kaszycki,  
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.  
[FR Doc. 02-26664 Filed 10-23-02; 8:45 am]  
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