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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-21140; Directorate Identifier 2004-NM-274-AD; Amendment 39-14273; AD 2005-19-08]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-9-14, DC-9-15, and DC-9-15F Airplanes; and McDonnell Douglas Model DC-9-20, DC-9-30, DC-9-40, and DC-9-50 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all transport category airplanes listed above. This AD requires repetitive inspections for cracks of the main landing gear (MLG) shock strut cylinder, and related investigative and corrective actions if necessary. This AD results from two reports of a collapsed MLG and a report of cracks in two MLG cylinders. We are issuing this AD to detect and correct fatigue cracks in the shock strut cylinder of the MLG, which could result in a collapsed MLG during takeoff or landing, and possible reduced structural integrity of the airplane.

DATES: This AD becomes effective October 21, 2005.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of October 21, 2005.

ADDRESSES: You may examine the AD docket on the Internet at *http://dms.dot.gov* or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024), for service information identified in this AD.

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:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at *http://dms.dot.gov* or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all McDonnell Douglas Model DC-9-14, DC-9-15, and DC-9-15F airplanes; Model DC-9-21 airplanes; Model 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; Model DC-9-41 airplanes; and Model DC-9-51 airplanes. That NPRM was published in the Federal Register on May 9, 2005 (70 FR 24338). That NPRM proposed to require repetitive inspections for cracks of the main landing gear (MLG) shock strut cylinder, and related investigative and corrective actions if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Request to Refer to Latest Service Bulletin Revision

The commenter, an airplane operator, states that the manufacturer is planning to revise Boeing Alert Service Bulletin DC9-32A350, dated December 3, 2004, which was cited as the appropriate source of service information for the action in the NPRM. The commenter asks that we revise paragraph (f) to refer to the new revision of the service bulletin, and that we also give credit for the actions done in accordance with the original issue of the service bulletin. In addition, the commenter requests that we address certain references in the service bulletin that are incorrect.

We agree with the commenter. We have revised paragraph (f) of the final rule to refer to Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005, as the appropriate source of service information. We have also added a new paragraph (l) to give credit for the actions done in accordance with the original issue of the service bulletin, and re-identified the subsequent paragraph accordingly. Revision 1 of the service bulletin does not increase the scope of the AD; however it corrects certain references, including incorrect references to certain procedures for paint removal from the inspection area.

Request to Add Optional Terminating Action

The same commenter states that the manufacturer has designed a new-material shock strut cylinder that is not air-melted. The commenter states that installing this new part should be considered as an optional terminating action for the inspections in the NPRM. The commenter points out that cylinders that are not air-melted are not subject to the unsafe condition addressed in the NPRM.

We disagree with the commenter. The manufacturer has advised us it has designed a new-material shock strut cylinder that is not air-melted, although this part is not yet available. However,

operators may request alternative methods of compliance with the requirements of this rule; paragraph (n) of the final rule includes a provision for the approval of such methods. We have not changed the final rule in this regard.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 644 airplanes of the affected design in the worldwide fleet. The following table provides the estimated costs for U.S. operators to comply with this AD.

ESTIMATED COSTS

Action	Work hours	Average labor rate per hour	Parts	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspection, per inspection cycle.	4 to 6	$65	None	$260 to $390	426	$110,760 to $166,140, per inspection cycle.

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 have determined that 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); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

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 Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

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/aircraft/safety/alerts/

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).

2005-19-08 McDonnell Douglas: Amendment 39-14273. Docket No. FAA-2005-21140; Directorate Identifier 2004-NM-274-AD.

Effective Date

(a) This AD becomes effective October 21, 2005.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all McDonnell Douglas Model DC-9-14, DC-9-15, and DC-9-15F airplanes; Model DC-9-21 airplanes; Model 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; Model DC-9-41 airplanes; and Model DC-9-51 airplanes; certificated in any category.

Unsafe Condition

(d) This AD results from two reports of a collapsed main landing gear (MLG) and a report of cracks in two MLG cylinders. We are issuing this AD to detect and correct fatigue cracks in the shock strut cylinder of the MLG, which could result in a collapsed MLG during takeoff or landing, and possible reduced structural integrity of the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Service Bulletin Reference Paragraph

(f) The term "service bulletin," as used in this AD, means the Accomplishment Instructions of Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005.

Records Review

(g) Before the applicable compliance time specified in paragraph (h) or Table 1 of this AD, as applicable, do the applicable actions in paragraphs (g)(1) and (g)(2) of this AD.

(1) For all airplane groups: Review the airplane maintenance records of the MLG to determine its service history and the number of landings on the MLG shock strut cylinder.

(2) For Group 3 airplanes identified in the service bulletin: Review the maintenance records to determine if the MLG cylinder on each Group 3 airplane has always been on a Group 3 airplane, and do the actions in paragraph (k) of this AD.

Inspection

(h) Inspect the MLG shock strut cylinders for cracks using the Option 1 or Option 2 non-destructive testing inspection described in the service bulletin. Inspect in accordance with the Accomplishment Instructions of the service bulletin. Do the detailed inspection before the accumulation of 60,000 total landings on the MLG, or at the applicable grace period specified in Table 1 of this AD, whichever occurs later, except as provided by paragraph (k) of this AD. If the review of maintenance records is not sufficient to conclusively determine the service history and number of landings on the MLG shock strut cylinder, perform the initial inspection at the applicable grace period specified in Table 1 of this AD.

TABLE 1.—GRACE PERIOD AND REPETITIVE INTERVAL

Airplanes identified in the service bulletin as group	Grace period	Repetitive interval
1	Within 18 months or 650 landings after the effective date of this AD, whichever occurs first.	Intervals not to exceed 650 landings.
2	Within 18 months or 500 landings after the effective date of this AD, whichever occurs first.	Intervals not to exceed 500 landings.
3, except as provided by paragraph (k) of this AD.	Within 18 months or 2,500 landings after the effective date of this AD, whichever occurs first.	Intervals not to exceed 2,500 landings.
4	Within 18 months or 2,100 landings after the effective date of this AD, whichever occurs first.	Intervals not exceed 2,100 landings.

No Crack Indication Found

(i) If no crack indication is found during the inspection required by paragraph (h) of this AD, repeat the inspection at the applicable interval specified in Table 1 of this AD.

Related Investigative and Corrective Actions

(j) If any crack indication is found during any inspection required by paragraph (h) or (i) of this AD, before further flight: Confirm the crack indication by doing all applicable related investigative actions and doing the applicable corrective actions in accordance with the service bulletin. Repeat the inspection at the applicable threshold and interval specified in paragraph (h) of this AD.

MLG Cylinder Previously Installed on Group 4 Airplanes

(k) For MLG cylinders on Group 3 airplanes as identified in the service bulletin: If the MLG cylinder was previously installed on a Group 4 airplane, as identified in the service bulletin, or if the service history and number of landings cannot be determined, the MLG cylinder must be inspected at the grace period and repetitive interval that applies to Group 4 airplanes, as specified in Table 1 of this AD.

Actions Accomplished in Accordance With Original Issue of Service Bulletin

(l) Actions done before the effective date of this AD in accordance with Boeing Alert Service Bulletin DC9-32A350, dated December 3, 2004, are acceptable for compliance with the corresponding actions required by this AD.

Alternative Methods of Compliance (AMOCs)

(m) The Manager, Los Angeles Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(n) You must use Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024), for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC; on the Internet at *http://dms.dot.gov*; or at the National Archives and Records Administration (NARA). For information on the availability of thismaterial at the NARA, call (202) 741-6030, or go to *http://www.archives.gov/federal-register/cfr/ibr-locations.html*.

Issued in Renton, Washington, on September 7, 2005.
Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
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