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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0658; Directorate Identifier 2009-NM-058-AD; Amendment 39-16115; AD 2009-24-21]

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 superseding an existing airworthiness directive (AD) that applies to all 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. That AD currently requires repetitive inspections for cracks of the main landing gear (MLG) shock strut cylinder, and related investigative and corrective actions if necessary. This AD adds more work on airplanes that have main landing gear shock struts with certain identified part numbers. 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 January 8, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of January 8, 2010.

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.

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 (telephone 800-647-5527) is the 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: Wahib Mina, 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:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 2005-19-08, amendment 39-14273 (70 FR 54616, September 16, 2005). The existing AD applies to all McDonnell Douglas Model DC-9-14, DC-9-15, and DC-9-15F airplanes; and Model DC-9-20, DC-9-30, DC-9-40, and DC-9-50 series airplanes. That NPRM was published in the Federal Register on July 30, 2009 (74 FR 37963). That NPRM proposed to continue to require repetitive inspections for cracks of the main landing gear (MLG) shock strut cylinder, and related investigative and corrective actions if necessary. That NPRM also proposed to require more work on airplanes that have main landing gear shock struts with certain identified part numbers.

Comments

We provided the public the opportunity to participate in the development of this AD. No comments have been received on the NPRM or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

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	4 to 6	$80	None	$320 to $480 per inspection cycle	426	$136,320 to $204,480 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 removing amendment 39-14273 (70 FR 54616, September 16, 2005) and by adding the following new airworthiness directive (AD):

2009-24-21 McDonnell Douglas: Amendment 39-16115. Docket No. FAA-2009-0658; Directorate Identifier 2009-NM-058-AD.

Effective Date

(a) This AD becomes effective January 8, 2010.

Affected ADs

(b) This AD supersedes AD 2005-19-08.

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.

Subject

(d) Air Transport Association (ATA) of America Code 32: Landing gear.

Unsafe Condition

(e) 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

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

Restatement of Requirements of AD 2005-19-08, With Revised Service Information

Records Review

(g) Except as required by paragraph (m) of this AD, 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 Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005; or Revision 2, dated March 20, 2009; except as required by paragraph (m) of this AD. Inspect in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005; or Revision 2, dated March 20, 2009; except as required by paragraph (m) of this AD. After the effective date of this AD, use only Boeing Alert Service Bulletin DC9-32A350, Revision 2, dated March 20, 2009. 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 required by paragraph (m) of this AD, and 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 – Threshold and Repetitive Interval

Airplanes Identified in the Service Bulletin as Group	Threshold	Repetitive Interval
1	Within 18 months or 650 landings after October 21, 2005 (the effective date of AD 2005-19-08), whichever occurs first	Intervals not to exceed 650 landings.
2	Within 18 months or 500 landings after October 21, 2005, 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 October 21, 2005, whichever occurs first	Intervals not to exceed 2,500 landings.
4	Within 18 months or 2,100 landings after October 21, 2005, whichever occurs first	Intervals not to exceed 2,100 landings.

No Indication of Cracking Is Found

(i) If no indication of cracking is found during the inspection required by paragraph (h) of this AD, repeat the inspection in accordance with Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005; or Boeing Alert Service Bulletin DC9-32A350, Revision 2, dated March 20, 2009; at the applicable interval specified in Table 1 of this AD, except as required by paragraph (m) of this AD. After the effective date of this AD, use only Boeing Alert Service Bulletin DC9-32A350, Revision 2, dated March 20, 2009.

Related Investigative and Corrective Actions

(j) If any indication of cracking is found during any inspection required by paragraph (h) or (i) of this AD: Before further flight, confirm the indication of cracking by doing all applicable related investigative actions and doing the applicable corrective actions in accordance with Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005; or Revision 2, dated March 20,

2009; except as required by paragraph (m) of this AD. After the effective date of this AD, use only Boeing Alert Service Bulletin DC9-32A350, Revision 2, dated March 20, 2009. 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 Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005; or Revision 2, dated March 20, 2009: If the MLG cylinder was previously installed on a Group 4 airplane, as identified in Boeing Alert Service Bulletin DC9-32A350, Revision 1, dated August 3, 2005; or Revision 2, dated March 20, 2009; 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, except as required by paragraph (m) of this AD.

Actions Accomplished in Accordance With Original Issue of Service Bulletin

(l) For airplanes with shock struts that have part numbers other than 5924400-505 and 5924400-506: 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 paragraphs (h), (i), (j), and (k) of this by this AD.

New Requirements of This AD

(m) For airplanes with shock struts that have part numbers 5924400-505 and 5924400-506: Do the actions required by paragraphs (g), (h), (i), (j), and (k), as applicable, in accordance with Boeing Alert Service Bulletin DC9-32A350, Revision 2, dated March 20, 2009. Do the actions at the time specified in those paragraphs, except where Table 1 of this AD specifies a compliance time after October 21, 2005, the compliance time for these airplanes is within the specified compliance time after the effective date of this AD.

Alternative Methods of Compliance (AMOCs)

(n)(1) The Manager, Los Angeles Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Wahib Mina, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5324; fax (562) 627-5210.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(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 an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who 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 the approval must specifically refer to this AD.

Material Incorporated by Reference

(o) You must use Boeing Alert Service Bulletin DC9-32A350, Revision 2, dated March 20, 2009, as applicable, 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 or 425-227-1152.

(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 NARA, 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 November 19, 2009.

Stephen P. Boyd,

Acting Manager, Transport Airplane Directorate,

Aircraft Certification Service.