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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-293-AD; Amendment 39-14072; AD 2005-09-04]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas 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), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain McDonnell Douglas Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), MD-88, and MD-90-30 airplanes. The existing AD currently requires repetitive inspections to detect cracking of the main landing gear (MLG) shock strut pistons, and replacement of a cracked piston with a new or serviceable part. This amendment removes certain airplanes but requires that the existing inspections, and corrective actions if necessary, be accomplished on additional MLG shock strut pistons. This amendment also requires replacing the MLG shock strut pistons with new improved parts, which would terminate the repetitive inspections. The actions specified by this AD are intended to prevent fatigue cracking of the MLG pistons, which could result in failure of the pistons and consequent damage to the airplane structure or injury to airplane occupants. This action is intended to address the identified unsafe condition.

DATES: Effective June 2, 2005.

The incorporation by reference of Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001, as listed in the regulations, is approved by the Director of the Federal Register as of June 2, 2005.

The incorporation by reference of Boeing Service Bulletin MD80-32-309, Revision 01, dated April 25, 2001, as listed in the regulations, was approved previously by the Director of the Federal Register as of June 20, 2002 (67 FR 34823, May 16, 2002).

The incorporation by reference of McDonnell Douglas Alert Service Bulletin MD80-32A308, dated March 5, 1998; and McDonnell Douglas Alert Service Bulletin MD80-32A308, Revision 01, dated May 12, 1998; as listed in the regulations; was approved previously by the Director of the Federal Register as of as of July 28, 1999 (64 FR 33392, June 23, 1999).

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplanes, 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.

FOR FURTHER INFORMATION CONTACT: Mike Lee, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5325; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 99-13-07, amendment 39-11201 (64 FR 33392, June 23, 1999), which is applicable to certain McDonnell Douglas Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), MD-88, and MD-90-30 airplanes, was published in the Federal Register on May 7, 2004 (69 FR 25507). The action proposed to continue to require repetitive inspections to detect cracking of the main landing gear (MLG) shock strut pistons, and replacement of a cracked piston with a new or serviceable part. The action proposed to remove certain airplanes but require that the existing inspections, and corrective actions if necessary, be accomplished on additional MLG shock strut pistons. The action also proposed to require replacing the MLG shock strut pistons with new improved parts, which would terminate the repetitive inspections.

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 for Approval of Alternative Method of Compliance (AMOC)

One commenter requests that we revise the "Alternative Methods of Compliance" paragraph of the proposed AD to specify that an AMOC previously approved for AD 2002-10-03, amendment 39-12749 (67 FR 34823, May 16, 2002), is also approved as an AMOC for the proposed AD. The commenter notes that this AMOC addresses assigning flight cycle counts to MLG shock strut pistons and states that this AMOC would also be applicable to the proposed AD.

We concur with the commenter's request and have revised paragraph (l)(2) of this AD to give credit for AMOCs approved for AD 2002-10-03.

Request To Clarify Acceptable Replacement Parts

The same commenter requests that we revise paragraph (b) of the proposed AD to specify that only an MLG shock strut piston having part number (P/N) 5935347-517 is an acceptable replacement. The commenter states that paragraphs (b) and (j) of the proposed AD contradict one another in this regard. The commenter observes that paragraph (b) allows installation of a piston having P/N 5935347-511 as an approved replacement part (in accordance with Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001). However, paragraph (j) of the proposed AD states that an MLG shock strut piston having P/N 5935347-1 through -509 inclusive, 5935347-511, 5935347-513, or SR09320081-3 through -13 inclusive, cannot be installed after the effective date of the AD.

We partially agree with the commenter's request. We note that paragraph (b) of this AD is part of a restatement of the requirements of AD 99-13-07. When AD 99-13-07 was issued, a new or

serviceable MLG shock strut piston of any approved P/N was an acceptable replacement part. Paragraph (j) is a new requirement of this AD, and the requirements of that paragraph reflect the main purpose of this new AD, which is to require replacing the MLG shock strut pistons with new, improved parts. Thus, we do not agree that paragraph (b) and (j) contradict each other. Rather, paragraph (j) of this AD restricts the P/Ns that may be installed when paragraph (b) is done after the effective date of this AD. However, we agree that it is acceptable to clarify paragraph (b) to state that only an MLG shock strut piston having P/N 5935347-517 may be installed after the effective date of this AD. We have revised paragraph (b) of this AD accordingly.

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 1,364 airplanes of the affected design in the worldwide fleet. The FAA estimates that 849 airplanes of U.S. registry will be affected by this AD.

The inspections that are currently required by AD 99-13-07 take approximately 4 work hours per airplane to accomplish, at an average labor rate of \$65 per work hour. Based on these figures, the new inspections that are required by this AD take approximately 4 work hours per airplane to accomplish, at an average labor rate of \$65 per work hour. The cost impact of these new inspections on U.S. operators is estimated to be \$220,740, or \$260 per airplane, per inspection cycle.

The other costs associated with this AD are carried over from the existing AD which is being superseded and are not new or additional costs. The impact of these existing costs were covered in the rulemaking for that 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. The manufacturer may cover the cost of replacement parts associated with this AD, subject to warranty conditions. Manufacturer warranty remedies may also be available for labor costs associated with this AD. As a result, the costs attributable to this AD may be less than stated above.

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 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 39-11201 (64 FR 33392, June 23, 1999), and by adding a new airworthiness directive (AD), amendment 39-14072, 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).

2005-09-04 McDonnell Douglas: Amendment 39-14072. Docket 2001-NM-293-AD. Supersedes AD 99-13-07, Amendment 39-11201.

Applicability

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 MD80-32A308, Revision 04, dated June 12, 2001.

Compliance

Required as indicated, unless accomplished previously.

To prevent fatigue cracking of the main landing gear (MLG) pistons, which could result in failure of the pistons and consequent damage to the airplane structure or injury to airplane occupants, accomplish the following:

Requirements of AD 99-13-07

Initial Inspection

(a) For airplanes equipped with an MLG shock strut piston having part number (P/N) 5935347-1 through -509 inclusive, 5935347-511, or 5935347-513: Perform fluorescent dye penetrant and fluorescent magnetic particle inspections to detect cracking of an MLG shock strut piston, in accordance with McDonnell Douglas Alert Service Bulletin MD80-32A308, dated March 5, 1998, or Revision 01, dated May 12, 1998; or Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001 (for 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). Perform the inspections at the later of the times specified in paragraphs (a)(1) and (a)(2) of this AD.

(1) Prior to the accumulation of 10,000 total landings on an MLG shock strut piston, or within 6 months after July 28, 1999 (the effective date of AD 99-13-07, amendment 39-11201), whichever occurs later.

(2) Within 2,500 landings after a major overhaul and initial inspection of the MLG shock strut piston accomplished prior to July 28, 1999, in accordance with McDonnell Douglas All Operator Letter 9-2153 (for 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).

Corrective Actions

(b) For airplanes equipped with an MLG shock strut piston having P/N 5935347-1 through -509 inclusive, 5935347-511, or 5935347-513: Condition 1. If any cracking is detected, prior to further flight, replace any cracked MLG shock strut piston with a new or serviceable piston, in accordance with McDonnell Douglas Alert Service Bulletin MD80-32A308, dated March 5, 1998, or Revision 01, dated May 12, 1998; or Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001 (for 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). Thereafter, repeat the inspections required by paragraph (a) of this AD prior to the accumulation of 10,000 total landings on the MLG shock strut piston. After the effective date of this AD, only an MLG shock strut piston having P/N 5935347-517 may be installed in accordance with this paragraph.

Repetitive Inspections

(c) For airplanes equipped with an MLG shock strut piston having P/N 5935347-1 through -509 inclusive, 5935347-511, or 5935347-513: Condition 2. If no cracking is detected, repeat the fluorescent dye penetrant and fluorescent magnetic particle inspections thereafter at intervals not to exceed 2,500 landings, in accordance with McDonnell Douglas Alert Service Bulletin MD80-32A308, dated March 5, 1998, or Revision 01, dated May 12, 1998; or Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001 (for 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); as applicable; until the replacement required by paragraph (h) of this AD has been accomplished.

New Requirements of This AD

Clarification of Inspection Sequence

(d) For inspections accomplished after the effective date of this AD: Where this AD requires fluorescent penetrant and magnetic particle inspections, accomplishment of the fluorescent penetrant inspection must precede accomplishment of the magnetic particle inspection.

Inspection of MLG Piston P/Ns SR09320081-3 through -13

(e) For any MLG piston having P/N SR09320081-3 through -13 inclusive: Perform fluorescent penetrant and magnetic particle inspections to detect fatigue cracking of the MLG pistons, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001. Do the initial inspections at the later of the times specified in paragraphs (e)(1) and (e)(2) of this AD. Repeat the inspections thereafter at intervals not to exceed 2,500 landings, until the requirements of paragraph (f) or (h) of this AD have been accomplished.

- (1) Prior to the accumulation of 10,000 total landings on the MLG piston.
- (2) Within 6 months after the effective date of this AD.

Corrective Actions

(f) For airplanes equipped with an MLG shock strut piston having P/N SR09320081-3 through -13 inclusive: If any cracking is detected during the inspections required by paragraph (e) of this AD, prior to further flight, replace any cracked MLG shock strut piston with a new or serviceable improved assembly, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001. Such replacement terminates the repetitive inspections required by paragraph (e) of this AD for the replaced shock strut piston only.

(g) Where Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001, specifies to contact Boeing-Long Beach for disposition of certain repair conditions: Before further flight, repair per a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA. For a repair method to be approved by the Manager, Los Angeles ACO, as required by this paragraph, the Manager's approval letter must specifically refer to this AD.

Replacement of MLG Shock Strut Piston Assemblies

(h) Replace the MLG shock strut piston assemblies, left- and right-hand sides, with new or serviceable improved assemblies, in accordance with the Accomplishment Instructions of Boeing Service Bulletin MD80-32-309, Revision 01, dated April 25, 2001. Do this replacement at the applicable compliance time specified in paragraph (h)(1) or (h)(2) of this AD. Such replacement terminates the repetitive inspections required by this AD. If the MLG shock strut piston is not serialized, or the number of landings on the piston cannot be conclusively determined, consider the total number of landings on the piston assembly to be equal to the total number of landings accumulated by the airplane with the highest total number of landings in the operator's fleet.

(1) For airplanes listed in Boeing Service Bulletin MD80-32-309, Revision 01, dated April 25, 2001: Do the replacement before the accumulation of 30,000 total landings on the MLG shock strut piston assemblies, or within 5,000 landings after June 20, 2002 (the effective date of AD 2002-10-03, amendment 39-12749), whichever occurs later.

(2) For airplanes other than those identified in paragraph (h)(1) of this AD: Do the replacement before the accumulation of 30,000 total landings on the MLG shock strut piston assemblies, or within 5,000 landings after the effective date of this AD, whichever occurs later.

Note 1: Paragraph (a) of AD 2002-10-03, amendment 39-12749, requires the same actions as paragraph (h) of this AD.

Actions Accomplished Previously in Accordance With Other Service Information

(i) Accomplishment of the replacement specified in Boeing Service Bulletin MD80-32-309, dated January 31, 2000, before June 20, 2002, is considered acceptable for compliance with the requirement of paragraph (h) of this AD.

Parts Installation

(j) As of the effective date of this AD, no person may install an MLG shock strut piston having P/N 5935347-1 through -509 inclusive, 5935347-511, 5935347-513, or SR09320081-3 through -13 inclusive, on any airplane.

No Requirement To Submit Information

(k) Although Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001, specifies to submit certain inspection results to the manufacturer, this AD does not include such a requirement.

Alternative Methods of Compliance

(l)(1) In accordance with 14 CFR 39.19, the Manager, Los Angeles ACO, is authorized to approve alternative methods of compliance for this AD.

(2) Alternative methods of compliance, approved previously per AD 99-13-07, amendment 39-11201, and AD 2002-10-03, amendment 39-12749, are approved as alternative methods of compliance for the corresponding requirements of this AD.

Incorporation by Reference

(m) Unless otherwise specified in this AD, the actions shall be done in accordance with the service bulletins listed in Table 1 of this AD.

TABLE 1.—SERVICE BULLETINS INCORPORATED BY REFERENCE

Service bulletin	Revision level	Date
Boeing Alert Service Bulletin MD80–32A308	Revision 04	June 12, 2001.
Boeing Service Bulletin MD80–32–309	Revision 01	April 25, 2001.
McDonnell Douglas Alert Service Bulletin MD80–32A308	Original	March 5, 1998.
McDonnell Douglas Alert Service Bulletin MD80–32A308	Revision 01	May 12, 1998.

(1) The incorporation by reference of Boeing Alert Service Bulletin MD80-32A308, Revision 04, dated June 12, 2001, 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 Boeing Service Bulletin MD80-32-309, Revision 01, dated April 25, 2001, was approved previously by the Director of the Federal Register as of June 20, 2002 (67 FR 34823, May 16, 2002).

(3) The incorporation by reference of McDonnell Douglas Alert Service Bulletin MD80-32A308, dated March 5, 1998; and McDonnell Douglas Alert Service Bulletin MD80-32A308, Revision 01, dated May 12, 1998; was approved previously by the Director of the Federal Register as of July 28, 1999 (64 FR 33392, June 23, 1999).

(4) To get copies of this service information, go to Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). To inspect copies of this service information, go to the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; to the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or to the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Effective Date

(n) This amendment becomes effective on June 2, 2005.

Issued in Renton, Washington, on April 20, 2005.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-8404 Filed 4-27-05; 8:45 am]

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