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[Page 9516-9518]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-212-AD; Amendment 39-13067; AD 2003-04-18]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model MD-90-30 Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain McDonnell Douglas Model MD-90-30 airplanes, that requires measuring the length of the wear indicator on the brake stack of the main landing gear (MLG) brake assembly to determine the degree of wear, and follow-on actions. This action also requires eventual replacement of the existing MLG brake assembly with a new, improved or modified assembly, which constitutes terminating action for any repetitive actions being performed per this AD. The actions specified by this AD are intended to prevent failure of the MLG brakes and consequent loss of braking capability, which could result in the airplane overrunning the runway during take-off or landing. This action is intended to address the identified unsafe condition.

DATES: Effective April 4, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of April 4, 2003.

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: Ken Sujishi, Aerospace Engineer, Systems & Equipment Branch, ANM-130L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5353; fax (562) 627-5210.

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 MD-90-30 airplanes was published in the Federal Register on September 4, 2002 (67 FR 56506). That action proposed to require measuring the length of the wear indicator on the brake stack of the main landing gear (MLG) brake assembly to determine the degree of wear, and follow-on actions. That action also proposed to require eventual replacement of the existing MLG brake assembly with a new, improved or modified assembly, which would constitute terminating action for any repetitive actions being performed per the proposed AD.

Comments

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

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.

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 change previously described. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 115 airplanes of the affected design in the worldwide fleet. The FAA estimates that 21 airplanes of U.S. registry will be affected by this AD.

It will take approximately 1 work hour per airplane to accomplish the measurement of the brake stack wear indicator, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of this action on U.S. operators is estimated to be \$1,260, or \$60 per airplane, per measurement cycle.

It will also take approximately 1 work hour per airplane to accomplish the inspection for discrepancies of the pressure plate of the MLG brake, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of this action on U.S. operators is estimated to be \$1,260, or \$60 per airplane, per inspection cycle.

It will take approximately 6 work hours per airplane to accomplish the replacement of the MLG brake assembly, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$55,000. Based on these figures, the cost impact of this action on U.S. operators is estimated to be \$1,162,560, or \$55,360 per airplane.

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 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.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).

2003-04-18 McDonnell Douglas: Amendment 39-13067. Docket 2001-NM-212-AD.

Applicability: Model MD-90-30 airplanes, certificated in any category; equipped with a main landing gear (MLG) brake assembly having part number (P/N) 5012193R, 5012193-1, 5012193-1-P, 5012193-2, 5012193-2-P, 5012193-3, or 5012193-3-P.

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 (h) 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 failure of the MLG brake and consequent loss of braking capability, which could result in the airplane overrunning the runway during take-off or landing, accomplish the following:

Measurement of Brake Wear

(a) Within 120 days after the effective date of this AD, measure the length of the wear indicator on the brake stack of the MLG brake assembly to determine the degree of wear, according to Boeing Alert Service Bulletin MD90-32A042, Revision 01, dated August 17, 2000, excluding Evaluation Form; and Aircraft Braking Systems Corporation Service Bulletin MD90-32-13, Revision 2, dated April 28, 2000.

(1) If the wear indicator measures more than 1.30 inches: Repeat the measurement of the brake stack wear indicator every 260 landings, until the wear indicator measures 1.30 inches or less. When the wear indicator measures 1.30 inches or less, do paragraph (a)(2) of this AD.

(2) If the wear indicator measures 1.30 inches or less: Before further flight, do paragraph (b) of this AD.

Repetitive Inspections for Discrepancies of Pressure Plate

(b) Perform a general visual inspection of the MLG brake assembly for discrepancies of the pressure plate (i.e., the surface of the piston insulator is flush with or has pushed beyond the surface of the counterbore), according to Boeing Alert Service Bulletin MD90-32A042, Revision 01, dated August 17, 2000, excluding Evaluation Form; and Aircraft Braking Systems Corporation Service Bulletin MD90-32-13, Revision 2, dated April 28, 2000. If no discrepancy of the pressure plate is

found, repeat the inspection at intervals not to exceed 260 landings, until paragraph (c)(1), (c)(2), or (d) of this AD has been accomplished.

Note 2: 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."

Corrective Actions

(c) If any discrepancy of the pressure plate is found during any inspection required by paragraph (b) of this AD: Before further flight, do paragraph (c)(1), (c)(2), (c)(3), or (d) of this AD.

(1) If the length of the wear indicator on the MLG brake is less than 0.40 inch: Overhaul the MLG brake assembly (including replacing the carbon stack) according to Boeing Alert Service Bulletin MD90-32A042, Revision 01, dated August 17, 2000, excluding Evaluation Form; and Aircraft Braking Systems Corporation Service Bulletin MD90-32-13, Revision 2, dated April 28, 2000. Such overhaul terminates the repetitive inspections required by paragraph (b) of this AD.

(2) If the length of the wear indicator on the MLG brake is greater than or equal to 0.40 inch but less than or equal to 2.10 inches: Repair the MLG brake assembly according to Boeing Alert Service Bulletin MD90-32A042, Revision 01, dated August 17, 2000, excluding Evaluation Form; and Aircraft Braking Systems Corporation Service Bulletin MD90-32-13, Revision 2, dated April 28, 2000. The repair procedures involve replacing the swage tube subassemblies of the brake with new subassemblies, replacing the pressure plate with a new, improved pressure plate, shortening the wear indicator tube, inspecting to determine the radius of the piston insulators, and replacing the piston insulators with reworked insulators if necessary. Such repair terminates the repetitive inspections required by paragraph (b) of this AD.

(3) If the length of the wear indicator on the brake is greater than 2.10 inches: No further action is required by this paragraph.

Replacement With Modified Brake Assembly

(d) Except as provided by paragraph (c) of this AD, at the next brake overhaul, or within 36 months after the effective date of this AD, whichever is first: Replace any MLG brake assembly having P/N 5012193R, 5012193-1, 5012193-1-P, 5012193-2, 5012193-2-P, 5012193-3, or 5012193-3-P; with a new, improved or modified MLG brake assembly having P/N 5012193-4; according to Boeing Service Bulletin MD90-32-045, Revision 01, dated December 15, 2000, excluding Evaluation Form; and Aircraft Braking Systems Corporation Service Bulletin MD90-32-14, dated May 9, 2000. The modification involves replacement of certain wear indicator tubes with new tubes, installation of a new, improved pressure plate, measurement of the radius of the piston insulators, rework of the piston insulators if necessary, and reidentification of the brake assembly. Accomplishment of the replacement specified in this paragraph terminates the requirements of this AD.

Actions Accomplished per Previous Revisions of Service Bulletin

(e) Inspections and corrective actions accomplished before the effective date of this AD according to Boeing Alert Service Bulletin MD90-32A042, dated April 27, 2000, is acceptable for compliance with the corresponding actions required by paragraphs (a), (b), and (c) of this AD.

(f) Replacements accomplished before the effective date of this AD according to Boeing Service Bulletin MD90-32-045, dated July 21, 2000, are acceptable for compliance with paragraph (d) of this AD.

Part Installation

(g) As of the effective date of this AD, no person may install a MLG brake assembly having P/N 5012193R, 5012193-1, 5012193-2, or 5012193-3 on any airplane, unless the MLG brake assembly is inspected and any applicable corrective action has been accomplished according to this AD.

Alternative Methods of Compliance

(h) 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 Aircraft Certification Office (ACO), FAA. 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.

Note 3: 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

(i) Special flight permits may be issued in accordance with sections 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

(j) Unless otherwise provided in this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin MD90-32A042, Revision 01, dated August 17, 2000, excluding Evaluation Form; Aircraft Braking Systems Corporation Service Bulletin MD90-32-13, Revision 2, dated April 28, 2000; Boeing Service Bulletin MD90-32-045, Revision 01, dated December 15, 2000, excluding Evaluation Form; and Aircraft Braking Systems Corporation Service Bulletin MD90-32-14, dated May 9, 2000; as applicable. 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; 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

(k) This amendment becomes effective on April 4, 2003.

Issued in Renton, Washington, on February 19, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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