

## 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:

#### **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.