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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2005-20034; Directorate Identifier 2004-NM-178-AD; Amendment 39-14463; AD 2006-02-11]**

**RIN 2120-AA64**

**Airworthiness Directives; McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), DC-10-40, DC-10-40F, MD-10-10F, MD-10-30F, MD-11, and MD-11F Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain McDonnell Douglas transport category airplanes. This AD requires doing repetitive detailed inspections for accumulation of debris (blockage) in the drain holes of the pitot tubes, and cleaning the hole if any evidence of debris is found. This AD results from reports of blocked drain holes of the pitot tubes. We are issuing this AD to prevent blocked drain holes of the pitot tubes, which could result in the accumulation of water in the pitot-static system and consequent failure of that system. Failure of the pitot-static system could result in erroneous airspeed indications in the cockpit and consequent loss of airspeed control.

**DATES:** This AD becomes effective March 3, 2006.

**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:** Brett Portwood, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5350; 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 certain McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), DC-10-40, DC-10-40F, MD-10-10F, MD-10-30F, MD-11, and MD-11F airplanes. That NPRM was published in the Federal Register on January 12, 2005 (70 FR 2062). That NPRM proposed to require doing repetitive detailed inspections for accumulation of debris (blockage) of the drain holes of the pitot tubes, and cleaning the hole if any evidence of debris is found.

### **Comments**

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

### **Support for the NPRM**

One commenter supports the NPRM.

### **Requests To Extend Repetitive Interval**

Three commenters request that the 650-flight-hour interval for the repetitive detailed inspections in paragraph (f) of the NPRM be increased. One commenter, the airplane manufacturer, states that it originally recommended an interval of 650 flight hours because that was believed to be greater than the A-check interval in use at that time. The commenter points out that an A-check for some operators is now approaching 1,000 flight hours and recommends that interval. The commenter also states that inspection data, which cover as much as ten years, show that there have been no findings of blockage of the holes of the pitot tube drain tube since implementation of repetitive inspections.

A second commenter states that it has performed the proposed repetitive inspections on its fleet every 2,000 flight hours since July 1999. The results of an analysis conducted by the commenter revealed no events of all three pitot tube drains being blocked and only two events where the drain holes on one of the three pitot tubes were blocked. Based on this service history, the commenter does not support a repetitive interval of less than 2,000 flight hours.

A third commenter states that an interval shorter than an A-check would require operators to perform the proposed visual and forced-air inspections during turnaround of the airplane. The commenter's normal turnaround time is 2 hours. The commenter further states that the proposed visual and forced air inspections take at least one hour, and that it takes at least an additional 20 minutes for the pitot probes to cool down. In addition, the commenter states that its airplanes have never had blockage through calcium build-up; however, it has heard from other operators that calcium blockage takes more than a year to build up. Therefore, the commenter concludes that it

would be costly to do the proposed inspections during a turnaround and suggests an interval of at least 850 flight hours, preferably 1,000 flight hours.

We agree that the repetitive inspection interval can be extended somewhat. Since issuance of the NPRM, we have analyzed further in-service data from the airplane manufacturer and failure rate data for a blocked pitot tube from DC-10, MD-10, and MD-11 service history, which included 22 reported events.

The airplane manufacturer performed an analysis using four maintenance intervals: 650, 700, 1,000, and 1,500 flight hours. The results of the analysis predicted the expected number of occurrences of a single blocked pitot tube and the expected number of occurrences of multiple blocked pitot tubes, assuming the blockage occurred as a random event. Based on the results of this analysis, the calculated probability of multiple blocked pitot tubes within the four maintenance intervals was documented. The airplane manufacturer assumed that treating the blockage as a random event would address a slow blockage build-up, such as calcium build-up, but would not adequately address foreign object blockage. Furthermore, it was noted that, if the right environmental conditions are present, such as flying through a bug storm, a large blockage of more than one pitot tube could occur within a maintenance interval established solely based on a slow blockage build-up.

Based on the results of the airplane manufacturer's analysis, we determined that we cannot rely on the random event analysis, alone, to determine a minimum, safe maintenance interval. As a result, we assessed additional safety margins to account for the non-random large blockage events and determined that a maintenance interval of more than 1,000 flight hours would result in an unacceptable risk of additional occurrences of multiple blocked pitot tubes. Therefore, we have made a change to the final rule to increase the repetitive time interval to 1,000 flight hours.

### **Request To Delete Forced-Air Check**

One commenter, the airplane manufacturer, requests that the forced-air check in paragraph (h) of the NPRM be deleted. The commenter states that it is unsure that the forced-air check provides a benefit, and that there is a potential for damaging the air data equipment if the system were to be overpressurized during the test procedure.

We agree. Although the forced-air check is intended to provide additional assurance that any microscopic debris is cleared from the drain holes of the pitot tubes, the airplane manufacturer is aware of in-service reports or incident data indicating that the forced-air check has caused damage to air data equipment on airplanes. Therefore, we have made a change to the final rule to remove the forced-air check.

### **Request To Revise Reference to Airplane Maintenance Manual (AMM)**

One commenter, the airplane manufacturer, requests that the reference to Chapter 34-11-02 of the AMM specified in paragraph (j) of the NPRM (re-designated as paragraph (h) in final rule) be revised to Chapter 34-11. The commenter states that Chapter 34-11-02 is correct for Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), DC-10-40, DC-10-40F, MD-10-10F, and MD-10-30F airplanes, but Chapter 34-11-01 is correct for Model MD-11 and MD-11F airplanes.

We partially agree. We do not agree to reference Chapter 34-11 because that reference is too general. However, we will revise paragraph (h) of the AD to refer to the correct chapter for the affected airplane models as indicated by the commenter.

## **Request To Change Reference to Special Compliance Item (SCI)**

One commenter requests that Boeing SCI 34-2 be approved as an alternative method of compliance (AMOC) in the NPRM. The commenter believes that the current Boeing MD-11 Time Controlled Task Card, developed per Boeing SCI 34-2, provides an equivalent level of safety and complies with the intent of the NPRM.

We do not agree. We have determined that Boeing SCI 34-2 is not reasonably available to all operators and the public like most Boeing service bulletins referenced in ADs are. Therefore, we have determined that incorporating by reference that service document in this AD would be inappropriate. However, under the provisions of paragraph (i) of this AD, we may consider requests for approval of such an AMOC.

## **Clarification of AMOC Paragraph**

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

## **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 314 airplanes of the affected design in the worldwide fleet. This AD will affect about 216 airplanes of U.S. registry. The required inspections will take about 2 work hours per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the estimated cost of the AD for U.S. operators is \$28,080, or \$130 per airplane, 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, 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**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)

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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).

**2006-02-11 McDonnell Douglas:** Amendment 39-14463. Docket No. FAA-2005-20034; Directorate Identifier 2004-NM-178-AD.

## Effective Date

- (a) This AD becomes effective March 3, 2006.

## Affected ADs

- (b) None.

## Applicability

(c) This AD applies to all McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), DC-10-40, DC-10-40F, MD-10-10F, MD-10-30F, MD-11, and MD-11F airplanes; certificated in any category.

## Unsafe Condition

(d) This AD was prompted by reports of blocked drain holes of the pitot tubes. We are issuing this AD to prevent blocked drain holes of the pitot tubes, which could result in the accumulation of water in the pitot-static system and consequent failure of that system. Failure of the pitot-static system could result in erroneous airspeed indications in the cockpit and consequent loss of airspeed control.

## 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.

## Repetitive Inspections

(f) Within 90 days after the effective date of this AD, do a detailed inspection for accumulation of debris (blockage) in the drain holes of the pitot tubes in accordance with paragraph (g) of this AD. Repeat the inspection thereafter at intervals not to exceed 1,000 flight hours.

**Note 1:** For the purposes of this AD, a detailed inspection is "an intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors magnifying lenses, etc. may be necessary. Surface cleaning and elaborate procedures may be required."

### **Visual Check**

(g) Do a visual check in accordance with paragraphs (g)(1) through (g)(3) of this AD. The visual check must be done by certificated maintenance personnel.

(1) Make certain that the pitot heat is off and the pitot tubes are not hot.

**Note 2:** Caution. Exercise care in checking pitot tubes to prevent severe burns to your hands.

(2) Attempt to look through the left and right drain holes of each pitot tube.

(3) Make sure that ambient light (or flashlight) is visible through both drain holes of each pitot tube.

### **Corrective Action**

(h) If any evidence of drain hole blockage is found during any inspection required by paragraph (f) or (g) of this AD, before further flight, clean the hole in accordance with a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA. Chapter 34-11-02 of the Boeing DC-10 or MD-10 Airplane Maintenance Manual is one approved method for Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), DC-10-40, DC-10-40F, MD-10-10F, and MD-10-30F airplanes; as applicable. Chapter 34-11-01 of the applicable Boeing MD-11 Airplane Maintenance Manual is one approved method for Model MD-11 and MD-11F airplanes.

### **Alternative Methods of Compliance (AMOCs)**

(i)(1) The Manager, Los Angeles ACO, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

### **Material Incorporated by Reference**

(j) None.

Issued in Renton, Washington, on January 19, 2006.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 06-734 Filed 1-26-06; 8:45 am]

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