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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-46-AD; Amendment 39-12798; AD 2002-13-10]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-10-10, -10F, -15, -30, -30F, -30F (KC10A and KDC-10), -40, and -40F Airplanes; Model MD-10-10F and -30F Airplanes; and Model MD-11 and -11F Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain McDonnell Douglas Model DC-10-10, -10F, -15, -30, -30F, -30F (KC10A and KDC-10), -40, and -40F airplanes; Model MD-10-10F and -30F airplanes; and Model MD-11 and -11F airplanes. This AD requires repetitive tests for electrical continuity and resistance and repetitive inspections to detect discrepancies of the fuel boost/transfer pump connectors; and corrective actions, if necessary. This action is necessary to prevent arcing of connectors in the fuel boost/transfer pump circuit, which could result in a fire or explosion of the fuel tank. This action is intended to address the identified unsafe condition.

DATES: Effective August 12, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of August 12, 2002.

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; 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: Technical Information: Philip C. Kush, Aerospace Engineer, Propulsion Branch, ANM-140L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712; telephone (562) 627-5263; fax (562) 627-5210.

Other Information: Judy Golder, Airworthiness Directive Technical Editor/Writer; telephone (425) 687-4241, fax (425) 227-1232. Questions or comments may also be sent via the Internet using the following address: judy.golder@faa.gov. Questions or comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

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 DC-10-10, -10F, -15, -30, -30F (KC-10A and KDC-10), -40, and -40F series airplanes; Model MD-10-10F and -30F series airplanes; and Model MD-11 and -11F series airplanes; was published in the Federal Register on September 20, 2001 (66 FR 48388). That action proposed to require repetitive tests for electrical continuity and resistance and repetitive inspections to detect discrepancies of the fuel boost/transfer pump connectors; and corrective actions, if necessary.

Explanation of New Relevant Service Information

Since the issuance of the proposed AD, the manufacturer has issued Boeing Alert Service Bulletin DC10-28A228, including Appendix, Revision 02, dated December 7, 2001. The proposed AD refers to the original issue, dated December 11, 2000, and Revision 01, dated July 16, 2001, of that service bulletin, as acceptable sources of service information for McDonnell Douglas Model DC-10-10, -10F, -15, -30, -30F, -30F (KC10A and KDC-10), -40, and -40F airplanes; and Model MD-10-10F and -30F airplanes. Revision 02 of the service bulletin contains no new procedures, but adds a single airplane, which was inadvertently omitted from previous issue of the service bulletin, to the effectivity listing.

The FAA has revised applicable paragraphs of this final rule to refer to Revision 02 as an acceptable source of service information. However, the applicability statement of this final rule continues to refer to Boeing Alert Service Bulletin DC10-28A228, including Appendix, Revision 01. Because the effectivity listing of Revision 02 adds an airplane, we find that requiring accomplishment of the actions in this AD on that airplane would necessitate issuance of a supplemental notice of proposed rulemaking and re-opening of the comment period. Considering the nature of this unsafe condition and the number of airplanes in the affected fleet, we find that it would be inappropriate to delay issuance of this final rule in this way. The FAA may consider additional rulemaking to require accomplishment of the actions in this AD on the airplane added to Revision 02 of the referenced service bulletin.

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.

Allow Use of Equivalent Equipment

Three commenters, together with the Air Transport Association of America (on behalf of its members), note that the proposed AD specifies the use of a Quadtech 1864 megohm meter for the electrical continuity and resistance tests that would be required by paragraph (a) of the AD. The commenters note that the referenced service bulletins allow the use of an equivalent megohm meter that meets current and voltage requirements. One of the commenters explains that it is common for test equipment to change frequently and the required model specified in the AD may not be available in the future.

The FAA concurs that an equivalent megohm meter that meets current and voltage requirements, as specified in the applicable referenced service bulletin, is acceptable for doing the required tests. We have revised paragraph (a) of this final rule accordingly.

Extend Compliance Time

Two commenters, as well as the Air Transport Association on behalf of their members, request that we extend the compliance time for the initial inspection from the proposed period of six months after the effective date of the AD. One commenter asks for 12 months and another for 18 months on the basis that the proposed compliance time may not be sufficient to allow operators to do the requirements during scheduled maintenance. The commenter that requests 18 months states that such an extension would provide an acceptable level of safety. As its rationale, the commenter notes that it is not aware of any previous incidents of arcing of the connectors that occurred without corresponding fuel boost/transfer pump circuit protection, and a low-fuel-pressure light illuminated during these incidents. Further, the commenter explains that another AD has mandated new cockpit procedures that eliminate the possibility of continued arcing and significantly reduce the likelihood of an ignition source in the fuel tank in the event of a pump failure.

We do not concur. The intent of the proposed tests and inspections is to find and fix arcing damage or installation defects of the boost/
transfer pump, pump connector, and associated wiring, in order to minimize pump failures or subsequent damage. In the continuing investigation of arcing damage of pumps and connectors, we have found other instances of arcing that occurred without fuel boost/transfer pump circuit protection and without cockpit indication that arcing damage has occurred. Because of the continuing incidents of arcing damage during operation, we find that it would be inappropriate to extend the compliance time for the requirements of this AD. No change to the final rule is necessary in this regard.

Revise Cost Impact

Two commenters request that we revise the estimated cost impact of the proposed AD. They state that the estimate of 65 work hours and a total cost of $3,900 per airplane is low. The commenters want the cost estimate to include the cost for repairing pumps and replacing wiring harnesses. One commenter stresses the poor reliability of the boost pump housing check valves.

We do not concur. The cost impact estimate in AD actions is limited to the cost of actions actually required by the rule. It does not consider the costs of "on condition" actions, such as repair or replacement ("corrective actions, if necessary"). Such "on-condition" repair actions would be required to be accomplished, regardless of AD requirements, in order to correct an unsafe condition identified in an airplane and to ensure operation of that airplane in an airworthy condition, as required by the Federal Aviation Regulations. No change to the final rule is necessary in this regard.

Explanation of Changes to Final Rule

The FAA has revised the applicability statement in this final rule to identify model designations as published in the most recent type certificate data sheet for the affected models. We have also revised related model designations in the preamble.

Also, for clarification, we have revised the definition of a "general visual inspection" in this final rule.

Also, we have revised Note 1 of this final rule to clarify that airplane FUEL TANKS on which the fuel/boost pump and wiring connector have been removed and the fuel tank made inoperable are not subject to the requirements of this AD.

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.

Interim Action

This is considered to be interim action. The manufacturer has advised that it currently is developing a modification that will address the unsafe condition addressed by this AD. Once this modification is developed, approved, and available, the FAA may consider additional rulemaking.

Cost Impact

There are approximately 399 Model DC-10-10, -10F, -15, -30, -30F, -30F (KC10A and KDC-10), -40, and -40F airplanes; and Model MD-10-10F and -30F airplanes; of the affected design in the worldwide fleet. The FAA estimates that 313 airplanes of U.S. registry will be affected by this AD, that it will take approximately 65 work hours per airplane to accomplish the required tests and inspections, and that the average labor rate is $60 per work hour. Based on these figures, the cost impact of this AD on U.S. operators of these airplanes is estimated to be $1,220,700, or $3,900 per airplane, per test or inspection cycle.

There are approximately 179 Model MD-11 and -11F airplanes of the affected design in the worldwide fleet. The FAA estimates that 115 airplanes of U.S. registry will be affected by this AD, that it will take approximately 78 work hours per airplane to accomplish the required tests and inspections, and that the average labor rate is $60 per work hour. Based on these figures, the cost impact of this AD on U.S. operators is estimated to be $538,200, or $4,680 per airplane, per test or inspection cycle.

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.

Sec. 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.airweb.faa.gov/rgl"

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).

2002-13-10 McDonnell Douglas: Amendment 39-12798. Docket 2001-NM-46-AD.

Applicability: Model DC-10-10, -10F, -15, -30, -30F, -30F (KC10A and KDC-10), -40, and -40F airplanes, and Model MD-10-10F and -30F airplanes; as listed in Boeing Alert Service Bulletin DC10-28A228, including Appendix, Revision 01, dated July 16, 2001; and Model MD-11 and -11F airplanes, as listed in Boeing Alert Service Bulletin MD11-28A112, including Appendix, dated December 11, 2000; certificated in any category.

Note 1: Airplane fuel tanks on which the fuel/boost pump and wiring connector have been physically removed and the fuel tank made inoperable are NOT subject to the requirements of this AD.

Note 2: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise 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 (c) 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 arcing of connectors of the fuel boost/transfer pump, which could result in a fire or explosion of the fuel tank, accomplish the following:

Repetitive Tests and Inspections

(a) Within 6 months after the effective date of this AD, do tests (using a digital multi-meter and Quadtech 1864 megohm meter or an equivalent megohm meter that meets current and voltage requirements, as specified in the applicable service bulletin) for electrical continuity and resistance and general visual inspections to detect discrepancies (e.g., damage, arcing, loose parts, wear) of the fuel boost/transfer pump (alternating current pumping unit) by accomplishing all the actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin MD11-28A112, including Appendix, dated December 11, 2000 (for Model MD-11 and -11F airplanes); or Boeing Alert Service Bulletin DC10-28A228, including Appendix, dated December 11, 2000, or Revision 01, dated July 16, 2001, or Revision 02, dated December 7, 2001 (for Model DC-10-10, -10F, -15, -30, -30F, -30F (KC10A and KDC-10), -40, and -40F airplanes, and Model MD-10-10F and -30F airplanes); as applicable. Repeat the tests and inspections thereafter every 18 months.

Note 3: 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, If Necessary

(b) If the result of any test required by paragraph (a) of this AD is outside the limits specified in the applicable service bulletin identified in that paragraph, or if any discrepancy is detected during any inspection required by paragraph (a) of this AD, before further flight, accomplish corrective actions (e.g., replacement of connector/wire assembly with serviceable connector/wire assembly, and replacement of the pump with a serviceable fuel boost/transfer pump), as applicable, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD11-28A112, including Appendix, dated December 11, 2000 (for Model MD-11 and -11F airplanes); or Boeing Alert Service Bulletin DC10-28A228, including Appendix, dated December 11, 2000, Revision 01, dated July 16, 2001, or Revision 02, dated December 7, 2001 (for Model DC-10-10, -10F, -15, -30, -30F, -30F (KC10A and KDC-10), -40, and -40F airplanes, and Model MD-10-10F and -30F airplanes); as applicable.

Alternative Methods of Compliance

(c) 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 4: 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

(d) 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

(e) The actions shall be done in accordance with Boeing Alert Service Bulletin MD11-28A112, including Appendix, dated December 11, 2000; Boeing Alert Service Bulletin DC10-28A228, including Appendix, dated December 11, 2000; Boeing Alert Service Bulletin DC10-28A228, including Appendix, Revision 01, dated July 16, 2001; or Boeing Alert Service Bulletin DC10-28A228, including Appendix, Revision 02, dated December 7, 2001; 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; 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

(f) This amendment becomes effective on August 12, 2002.

Issued in Renton, Washington, on June 25, 2002.
Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. 02-16531 Filed 7-5-02; 8:45 am]
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