

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. 2000-NM-32-AD]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model MD-11 Series Airplanes**AGENCY:** Federal Aviation Administration, DOT.**ACTION:** Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to certain McDonnell Douglas Model MD-11 series airplanes. This proposal would require resistance tests of the brake coils of the auto throttle servo (ATS) and of the elevator load feel (ELF)/flap limiter (FL) duplex actuator for low electrical resistance; and corrective actions, if necessary. This action is necessary to prevent electrical shorting of the brake coils of the ATS or ELF/FL duplex actuator, which could result in smoke in the cockpit and/or passenger cabin. This action is intended to address the identified unsafe condition.

DATES: Comments must be received by September 11, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-32-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1231. Comments may also be sent via the Internet using the following address: 9-anm-nprmcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2000-NM-32-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in the proposed rule may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind

Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California.

FOR FURTHER INFORMATION CONTACT:

Brett Portwood, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5350; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION:**Comments Invited**

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the proposed AD is being requested.
- Include justification (*e.g.*, reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-32-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the

FAA, Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-32-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

As part of its practice of re-examining all aspects of the service experience of a particular aircraft whenever an accident occurs, the FAA has become aware of an incident in which the auto throttle servo (ATS) shorted electrically and caused smoke in the cockpit. This incident occurred on a McDonnell Douglas Model MD-11 series airplane. Investigation revealed that one of the servo brake solenoid assemblies had internal shorting of the coil windings caused by corrosion due to chlorine contamination during production of the ATS. Electrical shorting of the brake coils of the ATS or elevator load feel/flap limiter (ELF/FL) duplex actuator, if not corrected, could result in smoke in the cockpit and/or passenger cabin.

This incident is not considered to be related to an accident that occurred off the coast of Nova Scotia involving a McDonnell Douglas Model MD-11 series airplane. The cause of that accident is still under investigation.

Other Related Rulemaking

The FAA, in conjunction with Boeing and operators of Model MD-11 series airplanes, is continuing to review all aspects of the service history of those airplanes to identify potential unsafe conditions and to take appropriate corrective actions. This airworthiness directive (AD) is one of a series of actions identified during that process. The process is continuing and the FAA may consider additional rulemaking actions as further results of the review become available.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Service Bulletin MD11-22-024, dated March 29, 2000, which describes procedures for resistance tests of the brake coils of the ATS and of the ELF/FL duplex actuator for low electrical resistance; and corrective actions, if necessary. The corrective actions include replacing the thrust control module with a new thrust control module or a thrust control module that has a modified and reidentified ATS, and replacing the ELF/FL duplex actuator with a modified and reidentified ELF/FL duplex actuator. Accomplishment of the actions specified in the service bulletin is intended to adequately address the identified unsafe condition.

Explanation of Requirements of Proposed Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would require accomplishment of the actions specified in the service bulletin described previously.

Cost Impact

There are approximately 187 McDonnell Douglas Model MD-11 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 60 airplanes of U.S. registry would be affected by this proposed AD, that it would take approximately 2 work hours per airplane to accomplish the proposed resistance tests, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the resistance tests proposed by this AD on U.S. operators is estimated to be \$7,200, or \$120 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this proposed 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 proposed herein would 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 proposal would not have federalism implications under Executive Order 13232.

For the reasons discussed above, I certify that this proposed regulation (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, 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 copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by

contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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:

McDonnell Douglas: Docket 2000-NM-32-AD.

Applicability: Model MD-11 series airplanes, as listed in Boeing Service Bulletin MD11-22-024, dated March 29, 2000; certificated in any category.

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 (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 electrical shorting of the brake coils of the auto throttle servo (ATS) or elevator load feel (ELF)/flap limiter (FL) duplex actuator, which could result in smoke in the cockpit and/or passenger cabin, accomplish the following:

Resistance Tests

(a) Within 1 year after the effective date of this AD, accomplish the actions specified in paragraphs (a)(1), (a)(2), and (a)(3) of this AD in accordance with Boeing Service Bulletin MD11-22-024, dated March 29, 2000.

(1) Perform resistance tests of the brake coils of the ATS for low electrical resistance. If one or both resistance tests fail, prior to further flight, replace the thrust control module with a new thrust control module or a thrust control module that has a modified and reidentified auto throttle servo, in accordance with the service bulletin.

(2) Perform resistance tests of the brake coils of the FL duplex actuator for low electrical resistance. If one or both resistance tests fail, prior to further flight, replace the FL duplex actuator with a modified and reidentified FL duplex actuator in accordance with the service bulletin.

(3) Perform resistance tests of the brake coils of the ELF duplex actuator for low electrical resistance. If one or both resistance tests fail, prior to further flight, replace the ELF duplex actuator with a modified and reidentified ELF duplex actuator in accordance with the service bulletin.

Spares

(b) As of the effective date of this AD, no person shall install the following parts on any airplane.

(1) Thrust control module assembly having part number ABH7760-1, ABH7760-501, or ABH7760-503;

(2) Flap limiter duplex actuator having part number 4059004-901; or

(3) Elevator load feel duplex actuator having part number 4059005-901.

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 ACO, FAA, Transport Airplane Directorate. 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 2: 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 Permit

(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.

Issued in Renton, Washington, on July 14, 2000.

John J. Hickey,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

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14 CFR Part 39

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RIN 2120-AA64

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AGENCY: Federal Aviation Administration, DOT.