

## Airworthiness Directive

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [64 FR 52221 No. 187 09/28/99]

Docket No. 99-NM-216-AD; Amendment 39-11338; AD **99-20-08**

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model MD-11 Series  
Airplanes

**PDF Copy (If Available):**

#### ▼ Preamble Information

AGENCY: Federal Aviation Administration, DOT

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to all McDonnell Douglas Model MD-11 series airplanes. This action prohibits installation of a certain In-flight Entertainment Network system. This amendment is prompted by the results of a special certification review of the in-flight entertainment system installed on a Model MD-11 series airplane that was involved in a recent accident. The actions specified in this AD are intended to prevent possible confusion as the flightcrew performs their duties in response to a smoke/fumes emergency, which could impair their ability to correctly identify the source of the smoke/fumes and subsequently affect the continued safe flight and landing of the airplane.

DATES: Effective October 13, 1999.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 99-NM-216-AD, 1601 Lind Avenue, SW.,

Renton, Washington 98055-4056. Information pertaining to this AD 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: Elvin Wheeler, Aerospace Engineer, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712; telephone (562) 627-5344; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: On September 2, 1998, a McDonnell Douglas Model MD-11 series airplane was involved in an accident near Halifax, Nova Scotia. To date, causal factors of the accident have not been determined; however, the National Transportation Safety Board is assisting Canadian authorities in determining the cause of the accident. It is known that smoke in the flight deck had been reported by the flightcrew, and there were indications of heat damage to electrical wires in the recovered wreckage.

In the early phases of the accident investigation, interest was focused on the in-flight entertainment (IFE) system installed aboard the accident airplane. The IFE system installed on the accident airplane is known as the In-Flight Entertainment Network (IFEN). The modification of the MD-11 airplane involving the installation of the IFEN system was accomplished under the authority of Switzerland's Federal Office for Civil Aviation (FOCA). The basis for FOCA's certifying the IFEN system in Switzerland was FAA Supplemental Type Certificate (STC) No. ST00236LA-D. That STC was issued by Santa Barbara Aerospace (SBA) under its authority as an FAA Designated Alteration Station (DAS).

The FAA conducted a special certification review of the IFEN system approved by STC No. ST00236LA-D in order to determine if any unsafe design or unsafe installation features exist in connection with the IFEN system. The review identified two areas of concern, both relating to IFEN system electrical power and the airplane crew's ability to remove electrical power from it when necessary. There is no indication that the areas of concern identified by the FAA as a result of the special certification review are related to the cause of the accident. The Canadian authorities have not yet determined the cause of the accident.

The current design of the IFEN system electrical power switching is

not compatible with the design concept of the MD-11 airplane with regard to the response by the flightcrew to a cabin or flight deck smoke/fumes emergency. In addition, the current IFEN system design does not provide the flightcrew and/or cabin crew with the ability to remove electrical power by a means other than pulling the system's circuit breakers. The airplane manufacturer's design concept of the airplane results in power being removed from the main cabin systems when the "CAB BUS" switch is engaged during a smoke/fumes emergency. However, the design of the IFEN system installation circumvented flightcrew procedures for responding to a smoke/fumes emergency by connecting the IFEN system to an electrical bus that is not de-energized when the "CAB BUS" switch is activated. Although the power to the IFEN system would eventually be removed via activation of the SMOKE ELEC/AIR rotary switch, the flightcrew would expect that selection of the "CAB BUS" switch would isolate all non-essential power to the cabin. Also, the cabin crew is able to only deactivate individual in-seat video displays (ISVD) from the IFEN system management terminal, deactivation does not remove electrical power from the ISVD's and other IFEN system components. These conditions, if not corrected, could result in possible confusion as the flightcrew performs their duties in response to a smoke/fumes emergency, which could subsequently impair their ability to correctly identify the source of the smoke/fumes and subsequently affect the continued safe flight and landing of the airplane.

At the present time, the IFEN approved by STC ST00236LA-D is not installed on any airplane of U.S. registry, and the STC holder has surrendered the STC to the FAA. Nevertheless, because the data were FAA-approved, it is possible that in the future an operator, in reliance on that approval, may decide to install the IFEN on its airplane. Therefore, an AD is necessary to prevent such installation.

### **Explanation of Requirements of the Rule**

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, this AD is being issued to prohibit installation of an In-flight Entertainment Network system approved by STC ST00236LA-D.

### **Cost Impact**

None of the Model MD-11 series airplanes affected by this action are on the U.S. Register. All airplanes included in the applicability of this rule currently are operated by non-U.S. operators under foreign registry; therefore, they are not directly affected by this AD action. However, the FAA considers that this rule is necessary to ensure that

the unsafe condition is addressed in the event that any of these subject airplanes are imported and placed on the U.S. Register in the future.

Since a specific modification commensurate with the requirements of this AD has not yet been developed, the FAA is unable at this time to provide specific information as to the number of work hours or cost of parts that would be required to accomplish actions associated with amendments to STC ST00236LA-D.

As indicated earlier in this preamble, the FAA specifically invites the submission of comments and other data regarding this economic aspect of this proposal.

### **Determination of Rule's Effective Date**

Since this AD action does not affect any airplane that is currently on the U.S. register, it has no adverse economic impact and imposes no additional burden on any person. Therefore, prior notice and public procedures hereon are unnecessary and the amendment may be made effective in less than 30 days after publication in the Federal Register.

### **Comments Invited**

Although this action is in the form of a final rule and was not preceded by notice and opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this 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 under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the 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 that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 99-NM-216-AD." The postcard will be date stamped and returned to the commenter.

### **Regulatory Impact**

The regulations adopted herein will not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

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, 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:

## ▼ Regulatory Information

**99-20-08 McDONNELL DOUGLAS:** Amendment 39-11338. Docket 99-NM-216-AD.

Applicability: All Model MD-11 series airplanes, 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 (b) 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 possible confusion as the flightcrew performs their duties in response to a smoke/fumes emergency, which could subsequently impair their ability to correctly identify the source of the smoke/fumes, and subsequently affect the continued safe flight and landing of the airplane, accomplish the following:

### **Modification**

(a) As of the effective date of this AD, no person shall install on any airplane an In-Flight Entertainment Network (IFEN) in accordance with data approved by Supplemental Type Certificate (STC) ST00236LA-D, dated November 19, 1996; Amendment 1, dated December 18, 1996; Amendment 2, dated January 24, 1997; Amendment 3, dated February 3, 1997; Amendment 4, dated March 11, 1997; or Amendment 5, dated August 7, 1997.

### **Alternative Methods of Compliance**

(b) 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. 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 Permits**

(c) 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.

(d) This amendment becomes effective on October 13, 1999.

▼ **Footer Information**

Issued September 21, 1999.

▼ **Comments**