

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

[Docket No. 2000-NM-229-AD]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas DC-9-51 and DC-9-83 Series Airplanes Modified by Supplemental Type Certificate SA8026NM**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 all McDonnell Douglas Model DC-9-51 and DC-9-83 series airplanes modified by Supplemental Type Certificate SA8026NM. This proposal would require deactivation of the in-flight entertainment (IFE) system and removal of the system from the airplane. This action is necessary to prevent the inability of the flight crew to remove power from the IFE system when necessary. Inability to remove power from the IFE system during a non-normal or emergency situation could result in inability to control smoke or fumes in the airplane flight deck or cabin. This action is intended to address the identified unsafe condition.

DATES: Comments must be received by April 16, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-229-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. 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-229-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 Hollingsead International, Inc., 7416 Hollister Avenue, Goleta, California 93117. This information may be examined at the FAA, Transport

Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California.

FOR FURTHER INFORMATION CONTACT:

George Mabuni, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5341; 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 action 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 action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-229-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-229-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

The Federal Aviation Administration (FAA) recently completed a review of in-flight entertainment (IFE) systems certified by supplemental type certificate (STC) and installed on transport category airplanes. The review focused on the interface between the IFE system and airplane electrical system, with the objective of determining if any unsafe conditions exist with regard to the interface. STC's issued between 1992 and 2000 were considered for the review.

The type of IFE systems considered for review were those that contain video monitors (cathode ray tubes or liquid crystal displays; either hanging above the aisle or mounted on individual seat backs or seat trays), or complex circuitry (i.e., power supplies, electronic distribution boxes, extensive wire routing, relatively high power consumption, multiple layers of circuit protection, etc.). In addition, in-seat power supply systems that provide power to more than 20 percent of the total passenger seats were also considered for the review. The types of IFE systems not considered for review include systems that provide only audio signals to each passenger seat, ordinary in-flight telephone systems (e.g., one telephone handset per group of seats or bulkhead-mounted telephones), systems that only have a video monitor on the forward bulkhead(s) (or a projection system) to provide passengers with basic airplane and flight information, and in-seat power supply systems that provide power to less than 20 percent of the total passenger seats.

Items considered during the review include the following:

- Can the electrical bus(es) supplying power to the IFE system be deenergized when necessary without removing power from systems that may be required for continued safe flight and landing?
- Can IFE system power be removed when required without pulling IFE system circuit breakers? [i.e., is there a switch (dedicated to the IFE system or a combination of loads) located in the flight deck or cabin that can be used to remove IFE power?]
- If the IFE system requires changes to flight crew procedures, has the airplane flight manual (AFM) been properly amended?
- If the IFE system requires changes to cabin crew procedures, have they been properly amended?

- Does the IFE system require periodic or special maintenance?
- In all, approximately 180 IFE systems approved by STC were reviewed by the FAA. The review results indicate that potential unsafe conditions exist on some IFE systems installed on various transport category airplanes. These conditions can be summarized as:
- Electrical bus(es) supplying power to the IFE system cannot be deenergized when necessary without removing power from systems that may be required for continued safe flight and landing.
 - Power cannot be removed from the IFE system when required without pulling IFE system circuit breakers (i.e., there is no switch dedicated to the IFE system or combination of systems for the purpose of removing power).
 - Installation of the IFE system has affected crew (flight crew and/or cabin crew) procedures, but the procedures have not been properly revised.

FAA’s Determination

As part of its review of IFE systems, the FAA has determined that an unsafe condition exists on McDonnell Douglas Model DC-9-51 and DC-9-83 series airplanes modified by STC SA8026NM. While a means, other than pulling the circuit breakers, exists to remove power from the IFE system, the emergency procedures for the flight crew and cabin crew have not been revised to advise the crew that this means is available to

remove power from the IFE system when necessary. This condition, if not corrected, could result in failure to remove power from the IFE system during a non-normal or emergency situation, and consequent inability to control smoke or fumes in the airplane flight deck or cabin.

Explanation of Relevant Service Information

The FAA has reviewed and approved Hollingsead International Service Bulletin 2526-2332-001, dated July 19, 2000, which describes procedures for deactivation of the IFE system and removal of the system from the airplane. The procedures include removal of circuit breakers, stowage of associated wires, installation of plug buttons in circuit breaker holes, and removal of audio and video equipment. Accomplishment of the actions specified in the service bulletin is intended to adequately address the identified unsafe condition. In addition, the operators of the affected airplanes have informed the FAA that the IFE systems installed in accordance with STC SA8026NM are no longer in use, and the operators are removing them.

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, except as discussed below.

Differences Between Proposed Rule and Service Bulletin

Operators also should note that the service bulletin specifies that the actions therein should be accomplished within 1 year after the date of issuance of the service bulletin. In developing an appropriate compliance time for this action, the FAA considered not only the degree of urgency associated with addressing the subject unsafe condition, but the amount of time necessary to accomplish the proposed actions, the availability of necessary parts, and the practical aspect of accomplishing the proposed actions within an interval of time that parallels normal scheduled maintenance for the affected operators. In consideration of all of these factors, the FAA has determined that 18 months after the effective date of this AD represents an appropriate interval of time allowable wherein an acceptable level of safety can be maintained.

Other Relevant Proposed Rulemaking

This proposed action is one of a number of proposed AD’s on airplanes modified by STC’s that have been determined to be subject to similar unsafe conditions. Other currently proposed AD’s include the following airplanes and STC’s:

Model/Series	STC number	Docket number
Boeing 757-200	SA1727GL	2000-NM-228-AD
McDonnell Douglas DC-10-30	ST00054SE	2000-NM-231-AD
Boeing 767-300 and 767-300ER	SA5765NM SA5978NM	2000-NM-232-AD
Boeing 767-300	ST00157SE	2000-NM-233-AD
Boeing 747-100 and -200	ST00196SE	2000-NM-234-AD
Boeing 767-200	SA5134NM	2000-NM-235-AD
Boeing 767-300	ST00118SE	2000-NM-236-AD
Boeing 737-300	ST00171SE	2000-NM-237-AD
Boeing 767-200	SA4998NM	2000-NM-238-AD
Boeing 767-300	SA7019NM-D	2000-NM-239-AD
Boeing 747-100 and -200	SA8622SW	2000-NM-240-AD
McDonnell Douglas DC-10-30	SA8452SW	2000-NM-241-AD
Boeing 737-700	ST09100AC-D ST09104AC-D ST09105AC-D ST09106AC-D	2000-NM-242-AD

Model/Series	STC number	Docket number
Boeing 767-200	ST09022AC-D	2000-NM-243-AD
Boeing 747SP	ST09097AC-D	2000-NM-244-AD
Boeing 747-400	SA8843SW	2000-NM-245-AD
Airbus A340-211	ST0902AC-D	2000-NM-246-AD

Cost Impact

There are approximately 6 airplanes of the affected design in the worldwide fleet. The FAA estimates that 3 airplanes of U.S. registry would be affected by this proposed AD, that it would take approximately 4 work hours per airplane to accomplish the proposed actions, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the proposed AD on U.S. operators is estimated to be \$720, or \$240 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 13132.

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: 19 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-229-AD.

Applicability: Model DC-9-51 and DC-9-83 series airplanes modified by Supplemental Type Certificate (STC) SA8026NM, certificated in any category.

Note 1: 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 the inability of the flight crew to remove power from the in-flight entertainment (IFE) system when necessary; which, during a non-normal or emergency situation, could result in inability to control smoke or fumes in the airplane flight deck or cabin; accomplish the following:

Deactivation and Removal

(a) Within 18 months after the effective date of this AD, deactivate the IFE system

and remove the system from the airplane, in accordance with Hollingshead International Service Bulletin 2526-2332-001, dated July 19, 2000.

Spares

(b) As of the effective date of this AD, no person shall install an IFE system in accordance with STC SA8026NM on any airplane.

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 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

(d) Special flight permits may be issued in accordance with §§ 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 February 23, 2001.

Donald L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-231-AD]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-10-30 Series Airplanes Modified by Supplemental Type Certificate ST00054SE

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).