

[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

(Docket No. 88-NM-80-AD)

AIRWORTHINESS DIRECTIVES: Boeing Models 707, 727, 737, 747, and 757 Series Airplanes; and McDonnell Douglas Models DC-8, DC-9 (includes MD-80 series), and DC-10 Series Airplanes.

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of Proposed Rulemaking (NPRM).

SUMMARY: This notice proposes a new airworthiness directive (AD), applicable to certain transport category airplanes certificated for operation with a main deck Class B cargo compartment, which would require design changes either to modify the cargo compartment to the Class C configuration or to require the use of flame penetration-resistant cargo containers. This action is prompted by the recent loss of a Boeing Model 747 "Combi" airplane that apparently developed a major fire in the main deck cargo compartment.

DATES: Comments must be received no later than ~~November~~ 7, 1988

ADDRESSES: Send comments on the proposal in duplicate to Federal Aviation Administration, Northwest Mountain Region, Office of the Regional Counsel (Attn: ANM-103), Attention: Airworthiness Rules Docket No. 88-NM-80-AD, 17900 Pacific Highway South, C-68966, Seattle, Washington 98168.

FOR FURTHER INFORMATION CONTACT: Mr. Weston B. Slifer, Systems & Equipment Branch, ANM-130S, FAA, Northwest Mountain Region, Seattle Aircraft Certification Office, 17900 Pacific Highway South, C-68966, Seattle, Washington 98168,

telephone (206) 431-1945; or Mr. Kevin Kuniyoshi, Systems & Equipment Branch, ANM-130L, FAA, Northwest Mountain Region, Los Angeles Aircraft Certification Office, 4344 Donald Douglas Drive, Long Beach, California 90808, telephone (210) 514-6323.

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 should identify the regulatory docket number and be submitted in duplicate to the address specified above. All communications received on or before the closing date for comments specified above will be considered by the Administrator before taking action on the proposed rule. The proposals contained in this Notice may be changed in light of the comments received. 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.

AVAILABILITY OF NPRM

Any person may obtain a copy of this Notice of Proposed Rulemaking (NPRM) by submitting a request to the FAA, Northwest Mountain Region, Office of the Regional Counsel (Attn: ANM-103), Attention: Airworthiness Rules Docket No. 88-NM-80-AD, 17900 Pacific Highway South, C-68966, Seattle, Washington 98168. DISCUSSION: A Boeing Model 747 "Combi" airplane, operating with a main deck Class B cargo compartment, as defined by Federal Aviation Regulation (FAR) 25.857(b), was lost over the Indian Ocean on November 28, 1987. While the cause

of the accident has not been determined, there was evidence of a major fire on board the airplane, which developed from an undetermined origin and progressed within the main deck cargo compartment.

This information prompted an FAA review of existing regulations, policies, and procedures pertaining to the certification of large main deck Class B cargo compartments with volumes exceeding 200 cu. ft. The results of this review are contained in a report titled "Evaluation of Transport Airplane Main Deck Cargo Compartment Fire Protection Certification Procedures," which has been made a part of the Rules Docket for examination by interested persons. The report concludes that, notwithstanding compliance with the existing regulations, airplanes equipped with main deck Class B cargo compartments do not provide an acceptable level of safety in terms of smoke and fire protection.

The FAA is considering the development of new type certification and operations regulations to address this issue; however, the existing unsafe condition requires immediate action, applicable to both new production and in-service airplanes. This Notice, therefore, proposes to require a design change for all airplanes listed above that are operated with main deck Class B cargo configurations with volumes exceeding 200 cu. ft. This design change would require either that the Class B cargo compartment be modified to a Class C configuration, meeting the requirements of FAR 25, Appendix F, Part III; or that flame penetration-resistant containers, meeting the requirements of FAR 25, Appendix F, Part III, and having smoke detection and fire extinguishing systems, be used to carry all cargo. The requirements for a Class C cargo compartment are contained in FAR 25.855 and FAR 25.857(c). Class C cargo compartments require a smoke detection system and a built-in fire extinguishing system controllable from the cockpit.

FAA recognizes that other alternative design changes may be developed which may provide a level of safety equivalent to the options stated above. Therefore, the proposal includes provisions for the use of alternate means of compliance, when approved by FAA.

It should be noted that the applicability of this proposal is not limited by airplane serial number. Accordingly, the provisions of the AD, upon becoming effective, would also apply to new designs of the affected models and approved designs that are in production. When such airplanes are inspected for the issuance of an airworthiness certificate, they would be required to comply with the provisions of the AD resulting from this proposal.

Since this condition is likely to exist or develop on other airplanes of these same type designs, an AD is proposed which would require the modification of all main deck Class B cargo compartments to the Class C configuration; or the use of flame penetration-resistant containers with smoke detection and fire extinguishing systems to carry all cargo; or an alternate means of compliance approved by the FAA.

It is estimated that a total of approximately 80 U.S.-registered Boeing Model 707, 727, 737, and 747 series airplanes, and 124 U.S.-registered McDonnell Douglas Model DC-8, DC-9, and DC-10 series airplanes, ~~of U.S. registry~~, have been certificated to operate with a Class B main deck cargo compartment. Many of these airplanes have been permanently converted to the all-passenger configuration and are, therefore, not affected by this proposal. Approximately 40 of these model Boeing and McDonnell Douglas series airplanes are presently operating in the mixed cargo/passenger configuration. There are no known U.S.-registered McDonnell Douglas DC-8 or DC-9 series "combi" airplanes in service.

The design alternative selected by an operator will have a significant impact on the cost of complying with this proposed AD. The highest cost option is expected to be the conversion to a Class C compartment, as defined in paragraph A. of this proposal. A conservative cost estimate for such a modification, based upon costs of required materials, labor, and testing, between \$750,000 and \$1,000,000 per airplane. Based on these figures, the total cost of this AD on U.S. operators is estimated to be between \$30,000,000 and \$40,000,000.

The regulations set forth in this notice would be promulgated pursuant to the authority in the Federal Aviation Act of 1958, as amended (49 U.S.C. 1301, et seq.), which statute is construed to preempt state law regulating the same subject. Thus, in accordance with Executive Order 12612, it is determined that such regulations do not have federalism implications warranting the preparation of a Federalism Assessment.

For these reasons, the FAA has determined that this document (1) involves a proposed regulation which is not major under Executive Order 12291 and (2) is not a significant rule pursuant to the Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and it is further certified under the criteria of the Regulatory Flexibility Act that this proposed rule, if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities because few, if any, large transport airplanes are operated by small entities. A copy of a draft regulatory evaluation prepared for this action is contained in the regulatory docket.

LIST OF SUBJECTS: 14 CFR Part 39 - Aviation Safety, Aircraft.

THE PROPOSED AMENDMENT

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend Section 39.13 of Part 39 of the Federal Aviation Regulations (14 CFR 39.13) as follows:

1. The authority citation for Part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); and 14 CFR 11.89.

2. By adding the following new airworthiness directive:

BOEING and McDONNELL DOUGLAS: Applies to Boeing Models 707, 727, 737, 747, and 757 series airplanes; and McDonnell Douglas Models DC-8, DC-9 (includes MD-80 series), and DC-10 series airplanes; equipped with a main deck Class B cargo compartment, as defined by FAR 25.857(b) or its predecessors, with a volume exceeding 200 cu. ft.; certificated in any category. Compliance is required as indicated, unless previously accomplished.

To minimize the hazard associated with a main deck Class B cargo compartment fire, accomplish the following:

A. Within 180 days after the effective date of this AD, or prior to carrying cargo in a main deck Class B cargo compartment, whichever occurs later, accomplish either of the following:

1. Modify all main deck Class B cargo compartments of volume exceeding 200 cu. ft. to comply with the design standards specified in FAR 25.857(c) for a Class C compartment. In addition, the ceiling and sidewall liner panels must meet FAR 25, Appendix F, Part III, effective June 16, 1986. The modification must be approved by the Manager, Seattle Aircraft Certification Office, FAA, Northwest Mountain Region (for Boeing airplanes), or the Manager, Los Angeles Aircraft Certification Office, FAA, Northwest Mountain Region (for McDonnell Douglas airplanes).

2. Modify all main deck Class B cargo compartments to require the following placard installed in conspicuous locations approved by the Manager, Seattle Aircraft Certification Office, FAA, Northwest Mountain Region (for Boeing airplanes), or the Manager, Los Angeles Aircraft Certification Office, FAA, Northwest Mountain Region (for McDonnell Douglas airplanes), throughout the compartment:

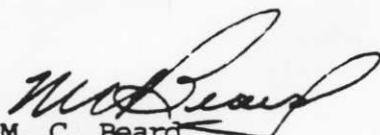
"Cargo carried in this compartment must be loaded in an approved flame penetration-resistant container meeting the requirements of FAR 25.857(c), with ceiling and sidewall liners and floor panels that meet the requirements of FAR 25, Appendix F, Part III, effective June 16, 1986."

- B. An alternate means of compliance or adjustment of the compliance time, which provides an acceptable level of safety, may be used when approved by the Manager, Seattle Aircraft Certification Office, FAA, Northwest Mountain Region (Boeing Models); or the Manager, Los Angeles Aircraft Certification Office, FAA, Northwest Mountain Region (McDonnell Douglas Models).

NOTE: The request should be forwarded through an FAA Principal Maintenance Inspector (PMI), who may add any comments and then send it to the Manager, Seattle Aircraft Certification Office, or the Manager, Los Angeles Aircraft Certification Office, as appropriate.

- C. Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate airplanes to a base in order to comply with the requirements of this AD.

Issued in Washington, D.C., on July 8, 1988


M. C. Beard
Director
Office of Airworthiness