

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-NM-91-AD; Amendment 39-13366; AD 2003-03-15 R1]

RIN 2120-AA64

Airworthiness Directives; Various Boeing and McDonnell Douglas Transport Category Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment revises an existing airworthiness directive (AD), applicable to various Boeing and McDonnell Douglas transport category airplanes, that currently requires revising the Airplane Flight Manual (AFM) to advise the flightcrew to don oxygen masks as a first and immediate step when the cabin altitude warning horn sounds. The actions specified by that AD are intended to prevent incapacitation of the flightcrew due to lack of oxygen, which could result in loss of control of the airplane. This amendment removes certain requirements for certain airplanes and revises the direction to the flightcrew to don oxygen masks as a first and immediate step when the cabin altitude warning occurs, rather than "when the cabin altitude warning horn sounds." This action is intended to address the identified unsafe condition.

DATES: Effective December 22, 2003.

ADDRESSES: Information pertaining to this amendment may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue SW, Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California.

FOR FURTHER INFORMATION CONTACT: Boeing Airplane Models: Don Eiford, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW, Renton, Washington 98055-4056; telephone (425) 917-6465; fax (425) 917-6590.

McDonnell Douglas Airplane Models: Joe Hashemi, Aerospace Engineer, Flight Test Branch, ANM-160L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5380; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by revising AD 2003-03-15, amendment 39-13039 (68 FR 4892, January 31, 2003), which is applicable to various Boeing and McDonnell Douglas transport category airplanes, was published in the Federal Register on July 9, 2003 (68 FR 40823). That action proposed to revise the wording of the existing AD to remove reference to the word "Emergency" when specifying "Crew Oxygen Mask-ON/100%." That action also proposed to revise the existing AD to specify that the words "If the cabin altitude warning occurs" be used rather than the words, "If the cabin altitude warning horn sounds."

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.

Request To Revise the Applicability of the Notice of Proposed Rulemaking (NPRM)

One commenter notes that the existing AD requires flightcrew action to don oxygen masks as a first and immediate step, "when the cabin altitude warning horn sounds," and that the NPRM proposes to revise the wording to "when the cabin altitude warning occurs." The commenter suggests that, since the NPRM addresses those airplanes that may not have a warning horn, it should exclude those airplanes that do not have warning horns.

The FAA does not agree with the commenter's request. For those airplanes that are equipped with warning horns, we are not changing the AFM revision required by AD 2003-13-15. While no further action is required by this revised AD for those airplanes, it is still necessary for this AD to apply to them to continue to require the appropriate AFM revision.

Request To Clarify Table 2

One commenter notes that Table 2 of the NPRM does not address McDonnell Douglas Model DC-8 series airplanes, as currently specified in AD 2003-03-15. The commenter assumes that the information for Model DC-8 series airplanes should also be included in Table 2 of the NPRM.

We agree with the commenter. Although those airplanes were included in the applicability of the NPRM, we inadvertently did not include Model DC-8 series airplanes in Table 2 of the NPRM. We have revised Table 2 of the AD to include those airplanes in this AD.

Editorial Changes

In Table 2 of paragraph (a) of the NPRM, we noted several instances where the word "mask" should have been plural. We have revised the AD to reflect the word "masks."

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.

Changes to Labor Rate

After the NPRM was issued, we reviewed the figures we use to calculate the labor rate to do the required actions. To account for various inflationary costs in the airline industry, we find it appropriate to increase the labor rate used in these calculations from \$60 per work hour to \$65 per work hour. The economic impact information, below, has been revised to reflect this increase in the specified hourly labor rate.

Cost Impact

There are approximately 6,956 airplanes (5,179 Boeing airplanes and 1,777 McDonnell Douglas airplanes) of the affected design in the worldwide fleet. The FAA estimates that 3,601 airplanes (2,392 Boeing airplanes and 1,209 McDonnell Douglas airplanes) of U.S. registry will be affected by this AD, that it will take approximately 1 work hour per airplane to accomplish the required actions, and that the average labor rate is \$65 per work hour. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be \$234,065, or \$65 per airplane.

The cost impact figure discussed above is 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, 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 removing amendment 39-13039 (68 FR 4892, January 31, 2003), and by adding a new airworthiness directive (AD), amendment 39-13366, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

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).

2003-03-15 R1 Transport Category Airplanes: Amendment 39-13366. Docket 2003-NM-91-AD.
Revises AD 2003-03-15, Amendment 39-13039.

Applicability: The airplanes listed in Table 1 of this AD, certificated in any category:

TABLE 1.—AFFECTED AIRPLANE MODELS

Airplane manufacturer	Airplane model
Boeing	707 series airplanes.
	720 series airplanes.
	727 series airplanes.
	737-100 series airplanes.
	737-200 series airplanes.
	737-200C series airplanes.
	737-300 series airplanes.
	737-400 series airplanes.
	737-500 series airplanes.
	747-100 series airplanes.
	747-100B series airplanes.
	747-100B SUD series airplanes.
	747-200B series airplanes.
	747-200F series airplanes.
	747-200C series airplanes.
	747-300 series airplanes.
	747SR series airplanes.
	747SP series airplanes.
McDonnell Douglas	DC-8-11 airplanes.
	DC-8-12 airplanes.
	DC-8-21 airplanes.
	DC-8-31 airplanes.
	DC-8-32 airplanes.
	DC-8-33 airplanes.
	DC-8-41 airplanes.
	DC-8-42 airplanes.
	DC-8-43 airplanes.
	DC-8-51 airplanes.
	DC-8-52 airplanes.
	DC-8-53 airplanes.
	DC-8F-54 airplanes.

DC-8-55 airplanes.
DC-8F-55 airplanes.
DC-8-61 airplanes.
DC-8-61F airplanes.
DC-8-62 airplanes.
DC-8-62F airplanes.
DC-8-63 airplanes.
DC-8-63F airplanes.
DC-8-71 airplanes.
DC-8-71F airplanes.
DC-8-72 airplanes.
DC-8-72F airplanes.
DC-8-73 airplanes.
DC-8-73F airplanes.
DC-9-11 airplanes.
DC-9-12 airplanes.
DC-9-13 airplanes.
DC-9-14 airplanes.
DC-9-15 airplanes.
DC-9-15F airplanes.
DC-9-21 airplanes.
DC-9-31 airplanes.
DC-9-32 airplanes.
DC-9-32 (VC-9C) airplanes.
DC-9-32F airplanes.
DC-9-32F (C-9A, C-9B) airplanes.
DC-9-33F airplanes.
DC-9-34 airplanes.
DC-9-34F airplanes.
DC-9-41airplanes.
DC-9-51 airplanes.
DC-9-81 (MD-81) airplanes.
DC-9-82 (MD-82) airplanes.
DC-9-83 (MD-83) airplanes.
DC-9-87 (MD-87) airplanes.
MD-88 airplanes.
MD-90-30 airplanes.
DC-10-10 airplanes.
DC-10-10F airplanes.
DC-10-15 airplanes.
DC-10-30 airplanes.
DC-10-30F airplanes.
DC-10-30F (KC-10A, KDC-10) airplanes.
DC-10-40 airplanes.
DC-10-40F airplanes.
MD-10-10F airplanes.
MD-10-30F airplanes.
MD-11 airplanes.
MD-11F airplanes.

Compliance: Required as indicated, unless accomplished previously.

To prevent incapacitation of the flightcrew due to lack of oxygen, which could result in loss of control of the airplane, accomplish the following:

Revision to the Airplane Flight Manual

(a) Within 90 days after the effective date of this AD: For the applicable airplane models listed in the "For—" column of Table 2 of this AD, revise the procedures regarding donning oxygen masks in the event of rapid depressurization, as contained in the Emergency Procedures section of the FAA-approved Airplane Flight Manual (AFM), by replacing the text in the "Replace—" column of Table 2 of this AD with the information in the applicable figure referenced in the "With the Information In—" column of Table 2 of this AD. This may be accomplished by recording the AD number of this AD on the applicable figure and inserting it into the AFM. Table 2 and Figures 1 through 9 follow:

TABLE 2.—AFM REVISIONS

For—	Replace—	With the information in—
Boeing Model 707, 720, and 727 series airplanes.	“ <i>RAPID DEPRESSURIZATION</i> Oxygen Masks & Regulators ON, 100% ALL”	Figure 1 of this AD.
Boeing Model 737–100, –200, and –200C series airplanes.	“ <i>RAPID DEPRESSURIZATION</i> (With airplane altitude above 14,000 feet M.S.L.). PRIMARY Oxygen Masks & Regulators—ON, 100%”	Figure 2 of this AD.
Boeing Model 737–300, 737–400, 737–500, 747–100, 747–100B, 747–100B SUD, 747–200B, 747–200F, 747–200C, 747–300, 747SR, and 747SP series airplanes.	“ <i>RAPID DEPRESSURIZATION</i> (With airplane altitude above 14,000 feet M.S.L.). RECALL Oxygen Masks & Regulators—ON, 100%”	Figure 3 of this AD.
McDonnell Douglas Model DC–8–11, DC–8–12, DC–8–21, DC–8–31, DC–8–32, DC–8–33, DC–8–41, DC–8–42, DC–8–43, DC–8–51, DC–8–52, DC–8–53, DC–8F–54, DC–8–55, DC–8F–55, DC–8–61, DC–8–61F, DC–8–62, DC–8–62F, DC–8–63, DC–8–63F, DC–8–71, DC–8–71F, DC–8–72, DC–8–72F, DC–8–73, and DC–8–73F airplanes.	“ <i>RAPID DEPRESSURIZATION</i> <i>Phase I and II</i> Crew oxygen masks—ON”	Figure 4 of this AD.

McDonnell Douglas Model DC-9- 11, DC-9- 12, DC-9-13, DC-9- 14, DC-9-15, DC-9-15F, DC-9- 21, DC-9-31, DC-9-32, DC-9- 32 (VC-9C), DC-9-32F, DC-9- 32F (C-9A, C- 9B), DC-9-33F, DC-9- 34, DC-9-34F, DC-9-41, and DC-9-51 airplanes.	“ <i>RAPID DECOMPRESSION/EMERGENCY DESCENT Phase I and II</i> Manual Pressurization Control FULL FORWARD AND MANUALLY LOCKED Note: Manual Pressurization control forces may be high, apply forces as required Crew Oxygen Masks—ON”	Figure 5 of this AD.
McDonnell Douglas Model DC-9-81 (MD- 81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC- 9-87 (MD-87), and MD- 88 airplanes.	“ <i>RAPID DECOMPRESSION/EMERGENCY DESCENT Phase I and II</i> Manual Pressurization Control—FULL FORWARD AND MANUALLY LOCKED Note: Manual Pressurization control forces may be high, apply forces as required Crew Oxygen Masks— ON/EMERGENCY/100%”	Figure 6 of this AD.
McDonnell Douglas Model MD-90- 30 airplanes.	“ <i>RAPID DECOMPRESSION OXY MASKS— ON/100%/EMERGENCY</i> ”	Figure 7 of this AD.
McDonnell Douglas DC- 10-10, DC- 10-10F, DC- 10-15, DC-10-30, DC- 10-30F, DC-10-30F (KC- 10A, KDC-10), DC-10-40, and DC-10- 40F airplanes.	“ <i>RAPID DEPRESSURIZATION/EMERGENCY DESCENT Recall Cabin Outflow Valve—VERIFY CLOSED (CLOSE ELECTRICALLY OR MANUALLY IF NOT CLOSED) Oxygen Masks—100% (if required)</i> ”	Figure 8 of this AD.
McDonnell Douglas MD- 10-10F, MD-10-30F, MD-11, and MD- 11F airplanes.	“ <i>CABIN ALTITUDE</i> Memory Item Outflow Valve—Verify Closed”	Figure 9 of this AD.

Figure 1

For Boeing Model 707, 720, and 727 Series Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING OR RAPID DEPRESSURIZATION

If the cabin altitude warning horn sounds:

Oxygen Masks & Regulators ON, 100%, ALL"

The rest of the steps under this heading in the AFM are unchanged.

Figure 2

For Boeing Model 737-100, -200, and -200C Series Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING OR RAPID DEPRESSURIZATION

If the cabin altitude warning horn sounds:
PRIMARY

Oxygen Masks & Regulators ON, 100%"

The rest of the steps under this heading in the AFM are unchanged.

Figure 3

For Boeing Model 737-300, 737-400, 737-500, 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200F, 747-200C, 747-300, 747SR, and 747SP Series Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING OR RAPID DEPRESSURIZATION

If the cabin altitude warning horn sounds:
RECALL

Oxygen Masks & Regulators ON, 100%"

The rest of the steps under this heading in the AFM are unchanged.

Figure 4

For McDonnell Douglas Model DC-8-11, DC-8-12, DC-8-21, DC-8-31, DC-8-32, DC-8-33, DC-8-41, DC-8-42, DC-8-43, DC-8-51, DC-8-52, DC-8-53, DC-8F-54, DC-8-55, DC-8F-55, DC-8-61, DC-8-61F, DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING/RAPID DEPRESSURIZATION

Phase I and II

If the cabin altitude warning occurs:

Crew oxygen masks	ON/100%"
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The rest of the steps under this heading in the AFM are unchanged.

Figure 5

For McDonnell Douglas Model DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, DC-9-15F, DC-9-21, DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-32F (C-9A, C-9B), DC-9-33F, DC-9-34, DC-9-34F, DC-9-41, and DC-9-51 Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING/RAPID DEPRESSURIZATION/EMERGENCY DESCENT

Phase I and II

If a cabin altitude warning occurs:

Crew Oxygen Masks	ON/100%
Manual Pressurization Control	FULL FORWARD AND MANUALLY LOCKED"

Note: Manual Pressurization control forces may be high, apply forces as required."

The rest of the steps under this heading in the AFM are unchanged.

Figure 6

For McDonnell Douglas Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88 Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING/RAPID DEPRESSURIZATION/EMERGENCY DESCENT

Phase I and II

If the cabin altitude warning occurs:

Crew Oxygen Masks	ON/100%
Manual Pressurization Control	FULL FORWARD AND MANUALLY LOCKED

Note: Manual Pressurization control forces may be high, apply forces as required."

The rest of the steps under this heading in the AFM are unchanged.

Figure 7

For McDonnell Douglas MD-90-30 Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING OR RAPID DEPRESSURIZATION

If the cabin altitude warning occurs:

OXY MASKS..... ON/100%"

The rest of the steps under this heading in the AFM are unchanged.

Figure 8

For McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, DC-10-30F (KC-10A, KDC-10), DC-10-40, and DC-10-40F Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING OR RAPID DEPRESSURIZATION/EMERGENCY DESCENT

Recall

If the cabin altitude warning occurs:

Oxygen Masks	ON/100%
Cabin	
OUTFLOW VALVE	VERIFY CLOSED (CLOSE ELECTRICALLY OR MANUALLY IF NOT CLOSED)"

The rest of the steps under this heading in the AFM are unchanged.

Figure 9

For McDonnell Douglas Model MD-10-10F, MD-10-30F, MD-11, and MD-11F Airplanes:

Insert the information in this figure into the "Emergency Procedures" section of the FAA-approved Airplane Flight Manual.

"CABIN ALTITUDE WARNING OR CABIN ALTITUDE

If the cabin altitude warning occurs:

Memory Item

Oxygen Masks	ON/100%
Outflow Valve	Verify Closed"

The rest of the steps under this heading in the AFM are unchanged.

Alternative Methods of Compliance

(b) In accordance with 14 CFR 39.19, the Manager, Seattle Aircraft Certification Office (ACO), FAA, or the Manager, Los Angeles ACO, FAA, is authorized to approve alternative methods of compliance (AMOCs) for this AD.

Effective Date

(c) This amendment becomes effective on December 22, 2003.

Issued in Renton, Washington, on November 7, 2003.
Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
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