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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-1143; Directorate Identifier 2008-NM-136-AD; Amendment 39-15990; AD 2009-16-07]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-600, -700, -700C, -800, and -900 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD), which applies to certain Boeing Model 737-600, -700, -700C, -800, and -900 series airplanes. That AD currently requires replacing brackets that hold the P5 panel to the airplane structure, the standby compass bracket assembly, the generator drive and standby power module, and the air conditioning module, as applicable. The existing AD also currently requires, among other actions, inspecting for wire length and for damage of the connectors and the wire bundles, and doing applicable corrective actions if necessary. This new AD requires an additional operational test of the P5-14 panel. This AD results from a report of an electrical burning smell in the flight compartment. We are issuing this AD to prevent wire bundles from contacting the overhead dripshield panel and modules in the P5 overhead panel, which could result in electrical arcing and shorting of the electrical connector and consequent loss of several critical systems essential for safe flight; and to ensure proper operation of the passenger oxygen system. If an improperly functioning passenger oxygen system goes undetected, the passenger oxygen mask could fail to deploy and result in possible incapacitation of passengers during a depressurization event.

DATES: This AD becomes effective September 22, 2009.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of September 22, 2009.

On June 22, 2006 (71 FR 28766, May 18, 2006), the Director of the Federal Register approved the incorporation by reference of certain other publications listed in the AD.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800-647-5527) is the Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Binh Tran, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6485; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 2006-10-17, amendment 39-14601 (71 FR 28766, May 18, 2006). The existing AD applies to certain Boeing Model 737-600, -700, -700C, -800, and -900 series airplanes. That NPRM was published in the Federal Register on October 31, 2008 (73 FR 64894). That NPRM proposed to continue to require replacing brackets that hold the P5 panel to the airplane structure, the standby compass bracket assembly, the generator drive and standby power module, and the air conditioning module. That NPRM also proposed to continue to require, among other actions, inspecting for wire length and for damage of the connectors and the wire bundles and doing applicable corrective actions if necessary. That NPRM also proposed to require an additional operational test of the P5-14 panel.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments that have been received on the NPRM.

Request To Align AD Action With Related Service Bulletin

One commenter, Boeing, requests that the NPRM wording for paragraph (f)(4) be revised to align with Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008. Boeing states that the current wording in the NPRM indicates that the standby compass bracket assembly must be replaced with a new assembly. Boeing states that Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, states that the standby compass bracket assembly need not be replaced for all groups of airplanes. Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, also states to replace the standby compass bracket if necessary.

We agree that clarification may be necessary. Paragraph (f)(4) is a restatement of actions required by AD 2006-10-17, and is retained in this supersedure. Paragraph (f) of this AD states that the corrective actions (including replacing the standby compass bracket assembly as required by paragraph (f)(4) of this AD) must be done, as applicable. In addition, we note that a new requirement of this AD, paragraph (i) of this AD, requires that after the effective date of this AD, only Revision 3 of Boeing Service Bulletin 737-24A1141, dated February 20, 2008, be used to do all applicable actions. We have not made any changes to the AD in this regard.

Request To Clarify Terminology

One commenter, the Air Transport Association (ATA), on behalf of its member Delta Airlines, requests that the terminology in Boeing Service Bulletin 737-24A1141 be clarified. In its comment, Delta states that it believes that Boeing Service Bulletin 737-24A1141 contains material that is vague in nature, which would leave information subject to interpretation.

Delta states that Boeing Service Bulletin 737-24A1141 includes figures that contain statements such as, "Some airplanes may have different wires, panels or connectors" (e.g., in Figures 6-11 and 94 of the service bulletin). Delta is concerned that statements such as these, when dealing with compliance situations in which many different individuals are left to determine the intent and method prescribed by such instructions, can lead to problems determining the state of compliance of aircraft that have had work accomplished per the required accomplishment instructions. In the past, this has led to the grounding of airplanes at significant expense to the airlines, while confusion over the interpretation of said instructions is determined and resolved. Therefore, Delta believes that either Boeing Service Bulletin 737-24A1141 should be revised to clarify the meaning of vague terms (e.g., "typical"), or the AD should include notes to accomplish the same intent.

Delta states that failure to clarify the vague terms will likely lead to the same compliance issues that operators previously experienced with the B737 Rudder System Enhancement Program (AD 2007-03-07, Amendment 39-14918, 72 FR 4625, February 1, 2007) and MD88 auxiliary hydraulic pump feeder wire inspection/modification (AD 2006-15-15, Amendment 39-14696, 71 FR 43035, July 31, 2006).

We find that clarification of certain material contained in Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, is necessary. We discussed the material referenced by the commenter as "vague" with Boeing to clarify the intended meaning.

Boeing noted that Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, was initially released in January 2004, and since then has been revised three times (December 2004, December 2005, and February 2008) to update and correct information. As specified in Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, required actions include: replacing brackets to lower the P5 overhead panel to increase the space between the wire bundles and the dripshield panel and modules; inspecting to determine if unwanted wire length or damage exists; retying the wire bundle or reterminating the wire bundle into the connector to eliminate the unwanted wire; and repairing damaged wire and using teflon tape, nylon sheet, and lacing tape to give greater protection to the wire bundles. Also, depending on airplane configuration, the service bulletin specifies replacing the standby compass bracket assembly with a new assembly, and replacing the stud assemblies with new assemblies.

Boeing clarified that the P5 overhead panel varies from customer to customer, as indicated in the 98 figures contained in Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008. Boeing explains that the phrase questioned by the commenter—i.e., "Some airplanes may have different wires, panels or connectors"—was used in the illustrations in the figures to indicate that the configuration on any given customer's airplane may be different from that shown in the illustrations. The illustrations simply provide examples of various configurations an operator might find; therefore, the information provided in the illustrations of the figures is for reference. Boeing explained further that the word "typical" is intended to represent a configuration that is in more than one location within an illustration. Additionally, while accomplishment of the steps specified in the tables of the figures is required, the illustrations are simply examples of the wiring configuration.

In addition, we find that the word "unwanted" requires clarification. That term is used in various locations in the service bulletin in conjunction with wire length conditions—e.g., paragraph 3.B.9. of the Accomplishment Instructions states to "Inspect the connectors and the wire bundles in the rear, P5 aft panel to determine if unwanted wire length exists in Group 1-22 airplanes. See Figure 6." We clarify that the General Information section of the Accomplishment Instructions of Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, references Boeing Standard Wiring Practices Manual (SWPM) 20-10-11 for wire installation procedures, including defining the amount

of slack and making sure that all wire slack is securely tied into the parent harness or clamped. Additionally, it should be noted that tables found in certain figures of Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008 (Figure 6, for example), refer operators to the SWPM for general conditions for wire installation.

We have revised this final rule to include new Note 2 and Note 3 to clarify the meaning of the terminology discussed previously.

Updated Contact Information for Alternative Methods of Compliance (AMOCs)

We have updated the contact information for paragraph (k) of this final rule.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the change described previously. We also determined that this change will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

There are about 740 airplanes of the affected design in the worldwide fleet. This AD affects about 333 airplanes of U.S. registry.

For all airplanes, the required inspection, replacements, and wiring change that are required by AD 2006-10-17 and retained in this AD take about 16 or 18 work hours per airplane (depending on airplane configuration), at an average labor rate of \$80 per work hour. Required parts cost about \$10,231 or \$11,139 per airplane (depending on the kit). Based on these figures, the estimated cost of the replacements and inspections required by this AD for U.S. operators is between \$3,833,163 and \$4,188,807, or between \$11,511 and \$12,579 per airplane.

For certain airplanes, the modification of the generator drive and standby power module assembly that is required by AD 2006-10-17 and retained in this AD takes about 2 work hours per airplane, at an average labor rate of \$80 per work hour. The airplane manufacturer states that it will supply required parts to operators at no cost. Based on these figures, the estimated cost of this modification required by this AD is \$160 per airplane.

For certain other airplanes, the modification of the air conditioning module assembly that is required by AD 2006-10-17 and retained in this AD takes about 1 work hour per airplane, at an average labor rate of \$80 per work hour. The airplane manufacturer states that it will supply required parts to operators at no cost. Based on these figures, the estimated cost of this modification required by this AD is \$80 per airplane.

For certain airplanes, the new action takes about 21 or 23 work hours per airplane depending on the airplane configuration, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the new actions required by this AD for U.S. operators is \$1,680 or \$1,840 per airplane, depending on the airplane configuration.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This

regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that this AD:

- (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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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. The Federal Aviation Administration (FAA) amends § 39.13 by removing amendment 39-14601 (71 FR 28766, May 18, 2006) and by adding the following new airworthiness directive (AD):



2009-16-07 Boeing: Amendment 39-15990. Docket No. FAA-2008-1143; Directorate Identifier 2008-NM-136-AD.

Effective Date

- (a) This AD becomes effective September 22, 2009.

Affected ADs

- (b) This AD supersedes AD 2006-10-17.

Applicability

(c) This AD applies to Boeing Model 737-600, -700, -700C, -800, and -900 series airplanes, certificated in any category; as identified in Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008.

Unsafe Condition

(d) This AD results from a report of an electrical burning smell in the flight compartment. We are issuing this AD to prevent wire bundles from contacting the overhead dripshield panel and modules in the P5 overhead panel, which could result in electrical arcing and shorting of the electrical connector and consequent loss of several critical systems essential for safe flight; and to ensure proper operation of the passenger oxygen system. If an improperly functioning passenger oxygen system goes undetected, the passenger oxygen mask could fail to deploy and result in possible incapacitation of passengers during a depressurization event.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Requirements of AD 2006-10-17

Inspection/Replacements/Wiring Changes/Corrective Actions

(f) Within 36 months after June 22, 2006 (the effective date of AD 2006-10-17), do the applicable actions in paragraphs (f)(1) through (f)(5) of this AD by accomplishing all the applicable actions specified in the Accomplishment Instructions of Boeing Service Bulletin 737-24A1141, Revision 2, dated December 1, 2005, except as provided by paragraph (i) of this AD. Any applicable corrective actions must be done before further flight.

- (1) Replace the five brackets that hold the P5 panel to the airplane structure with new brackets;
- (2) Do a general visual inspection for wire length and damage of the connectors and the wire bundles, and applicable corrective actions;
- (3) Make wiring changes;

- (4) Replace the standby compass bracket assembly with a new assembly; and
- (5) Replace the stud assemblies with new assemblies.

Note 1: For the purposes of this AD, a general visual inspection is: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(g) Actions done before June 22, 2006, in accordance with Boeing Alert Service Bulletin 737-24A1141, Revision 1, dated December 23, 2004, are acceptable for compliance with the requirements of paragraph (f) of this AD.

Concurrent Requirements

(h) Before or concurrently with the requirements of paragraph (f) of this AD, do the applicable action specified in Table 1 of this AD.

Table 1 – Concurrent requirements

For Airplanes Identified in Boeing Component Service Bulletin–	Action
(1) 233A3205-24-01, dated July 26, 2001	Modify the generator drive and standby power module assembly in accordance with the Accomplishment Instructions of Boeing Component Service Bulletin 233A3205-24-01, dated July 26, 2001.
(2) 69-37319-21-02, Revision 1, dated August 30, 2001	Modify the air conditioning module assembly in accordance with the Accomplishment Instructions of Boeing Component Service Bulletin 69-37319-21-02, Revision 1, dated August 30, 2001.

New Actions Required by This AD

New Service Bulletin Revision

(i) As of the effective date of this AD, use only the Accomplishment Instructions of Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, to do all the applicable actions required by paragraph (f) of this AD.

Note 2: Accomplishment of the steps specified in the tables of the figures of Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, is required. Due to the variability of airplane configurations, the illustrations in the figures are provided as examples.

Note 3: Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, refers to "unwanted" wire length. "Unwanted" wire length is any wire length that does not meet the wire length requirements specified in the Standard Wiring Practices Manual (SWPM).

Additional Operational Test

(j) For airplanes on which the actions required by paragraph (f) of this AD have been done in accordance with Boeing Service Bulletin 737-24A1141, Revision 2, dated December 1, 2005, before the effective date of this AD: Within 12 months after the effective date of this AD, do an operational test of the P5-14 panel in accordance with paragraphs 3.B.92. and 3.B.93., as applicable, of the Accomplishment Instructions of Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Seattle Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to Attn: Binh Tran, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6485; fax (425) 917-6590. Or, e-mail information to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(3) AMOCs approved previously in accordance with AD 2006-10-17 are approved as AMOCs for the corresponding provisions of this AD.

Material Incorporated by Reference

(l) You must use the service information contained in Table 2 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

Table 2 – All material incorporated by reference

Document	Revision Level	Date
Boeing Component Service Bulletin 233A3205-24-01	Original	July 26, 2001
Boeing Component Service Bulletin 69-37319-21-02	1	August 30, 2001
Boeing Service Bulletin 737-24A1141	3	February 20, 2008

(1) The Director of the Federal Register approved the incorporation by reference of the service information contained in Table 3 of this AD under 5 U.S.C. 552(a) and 1 CFR part 51.

Table 3 – New material incorporated by reference

Document	Revision Level	Date
Boeing Service Bulletin 737-24A1141	3	February 20, 2008

(2) The Director of the Federal Register previously approved the incorporation by reference of the service information contained in Table 4 of this AD on June 22, 2006 (71 FR 28766, May 18, 2006).

Table 4 – Material previously incorporated by reference

Document	Revision Level	Date
Boeing Component Service Bulletin 233A3205-24-01	Original	July 26, 2001
Boeing Component Service Bulletin 69-37319-21-02	1	August 30, 2001

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

(4) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221 or 425-227-1152.

(5) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on August 7, 2009.
Stephen P. Boyd,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.