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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-1027; Directorate Identifier 2013-NM-121-AD; Amendment 39-17886; AD 2014-13-10]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. This AD was prompted by a report of installation of incorrect wire support clamps within the bay area of the left and right environmental control systems (ECS) during production; the ECS bay area is a flammable fluid leakage zone. Use of incorrect wire support clamps that are not fully cushioned could allow electrical power wiring to come in contact with the exposed metal of the improper clamp, causing a short circuit and subsequent electrical arcing. This AD requires inspecting to identify the part number of the wire support clamp, and related investigative and corrective actions if necessary. We are issuing this AD to prevent electrical arcing and a potential ignition source, which, in combination with flammable fuel vapors, could result in a fuel tank explosion, and consequent loss of the airplane.

DATES: This AD is effective August 19, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of August 19, 2014.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2013-1027; 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 (phone: 800-647-5527) is Docket 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: Georgios Roussos, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6482; fax: 425-917-6590; email: georgios.roussos@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. The NPRM published in the Federal Register on December 12, 2013 (78 FR 75512). The NPRM was prompted by a report of installation of incorrect wire support clamps within the bay area of the left and right ECS during production; the ECS bay area is a flammable leakage zone. Use of incorrect wire support clamps that are not fully cushioned could allow electrical power wiring to come in contact with the exposed metal of the improper clamp, causing a short circuit and subsequent electrical arcing. The NPRM proposed to require inspecting to identify the part number of the wire support clamp, and related investigative and corrective actions if necessary. We are issuing this AD to prevent electrical arcing and a potential ignition source, which, in combination with flammable fuel vapors, could result in a fuel tank explosion, and consequent loss of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (78 FR 75512, December 12, 2013) and the FAA's response to each comment.

Requests To Remove Certain Language in "Relevant Service Information" Section

Boeing, All Nippon Airways (ANA), and American Airlines (AA) asked that the third sentence in the "Relevant Service Information" section of the NPRM (78 FR 75512, December 12, 2013) be removed. That sentence specified "The related investigative actions include an eddy current inspection of the wing front spar for cracking and a detailed inspection of the bolt forward of the wing front spar upper chord for cracking or missing bolts." Boeing stated that those actions seem unrelated to the intent of the AD. ANA stated that the eddy current inspection is not specified in Boeing Special Attention Service Bulletin 737-28-1312, dated April 19, 2013. AA stated that those actions are not included in the referenced service information, and asked that those actions be clarified or that the "Relevant Service Information" section be corrected by removing those actions.

We agree that the "Relevant Service Information" section in the NPRM (78 FR 75512, December 12, 2013) should not have stated that the related investigative actions include an eddy current inspection of the wing front spar for cracking; that inspection is not related to the unsafe condition

addressed by this AD. However, the "Relevant Service Information" section of the NPRM is not carried over into this final rule; therefore, no change to this final rule is necessary in this regard.

Request To Include Equivalent Parts

AA asked that we add "equivalent fully cushioned wire clamps" to the approved part numbers (P/Ns) identified in paragraph (h) of the proposed AD (78 FR 75512, December 12, 2013) (redesignated as paragraph (i) of this AD). AA stated that paragraph (h) of the proposed AD prohibits the installation of a wire support clamp within the ECS bay area, unless the clamp has P/N TA0930034-10, TA0930034-10P, TA0930034-11, or TA0930034-12P. AA noted that adding "equivalent fully cushioned wire clamps" would account for future part number changes and future availability issues of the included part numbers. AA also asserted that including the equivalent clamps also would reduce the potential for airplanes becoming noncompliant during future maintenance.

We do not agree to add "equivalent fully cushioned wire clamps" to the approved part numbers identified in paragraph (i) of this AD (designated as paragraph (h) of the proposed AD). AA did not submit any data to show how equivalency of the wire support clamp is to be established, maintained, and controlled. However, under the provisions of paragraph (j) of this AD, we may consider requests to use alternate clamps if sufficient data are submitted to substantiate that these clamps meet the standards for the environmental (temperature, vibration, fluid resistance) and performance requirements necessary to provide an acceptable level of safety. We have not changed this final rule in this regard.

Request To Change Costs of Compliance Section

AA asked that we change the inspection estimate in the "Costs of Compliance" section in the NPRM (78 FR 75512, December 12, 2013) from 6 to 24 work-hours, as specified in Boeing Special Attention Service Bulletin 737-28-1312, dated April 19, 2013.

We agree to change the work-hour estimate for the inspection specified in the "Costs of Compliance" section. After further review of Boeing Special Attention Service Bulletin 737-28-1312, dated April 19, 2013, we have determined that the work-hour estimate of 24 hours is based on correct installation of the wire clamps and does not include repairs to the wiring. Therefore, we have increased the work hour estimate for the inspection specified in the "Costs of Compliance" section of this final rule.

Changes to This Final Rule

Since we issued the NPRM (78 FR 75512, December 12, 2013), Boeing has issued Special Attention Service Bulletin 737-28-1312, Revision 1, dated April 21, 2014. No additional work is necessary on airplanes that were changed using Boeing Special Attention Service Bulletin 737-28-1312, dated April 19, 2013. We have added Boeing Special Attention Service Bulletin 737-28-1312, Revision 1, dated April 21, 2014, to paragraphs (c) and (g) of this AD, and added a new credit paragraph (h) to this AD giving credit for Boeing Special Attention Service Bulletin 737-28-1312, dated April 19, 2013.

Since we issued the NPRM (78 FR 75512, December 12, 2013), we have determined that the language used in the "Parts Installation Limitations" paragraph of the AD needs clarification. As written, the language could be interpreted as applying to "all" clamps located in the ECS bay area; however, the limitation only applies to certain clamps. We have changed paragraph (h) of the the proposed AD (redesignated as paragraph (i) of this AD) to provide that clarification.

Conclusion

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

Costs of Compliance

We estimate that this AD affects 519 airplanes of U.S. registry.
We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	24 work-hours × \$85 per hour = \$2,040	\$0	\$2,040	\$1,058,760

We estimate the following costs to do any necessary related investigative and corrective actions that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these actions.

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Related investigative and corrective actions	1 work-hour × \$85 per hour = \$85	\$3	\$88

We have received no definitive data that would enable us to provide cost estimates for the on-condition repair of chafed or damaged wiring specified in this AD.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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

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 the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

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 FAA amends § 39.13 by adding the following new airworthiness directive (AD):



2014-13-10 The Boeing Company: Amendment 39-17886; Docket No. FAA-2013-1027; Directorate Identifier 2013-NM-121-AD.

(a) Effective Date

This AD is effective August 19, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, certificated in any category, having a variable number identified in paragraph 1.A.1., Effectivity, of Boeing Special Attention Service Bulletin 737-28-1312, Revision 1, dated April 21, 2014.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel System.

(e) Unsafe Condition

This AD was prompted by a report of installation of incorrect wire support clamps within the bay area of the left and right environmental control systems (ECS) during production; the ECS bay area is a flammable fluid leakage zone. Use of incorrect wire support clamps that are not fully cushioned could allow electrical power wiring to come in contact with the exposed metal of the improper clamp, causing a short circuit and subsequent electrical arcing. We are issuing this AD to prevent electrical arcing and a potential ignition source, which, in combination with flammable fuel vapors, could result in a fuel tank explosion, and consequent loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection and Related Investigative and Corrective Actions

Within 60 months after the effective date of this AD: Do a detailed inspection to determine if a wire support clamp having part number (P/N) TA0930034-10, TA0930034-10P, TA0930034-11, or TA0930034-12P is installed, and do all applicable related investigative and corrective actions before further flight, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-28-1312, Revision 1, dated April 21, 2014.

(h) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Service Bulletin 737-28-1312, dated April 19, 2013.

(i) Parts Installation Limitation

As of the effective date of this AD, no person may install a wire support clamp on any airplane at the locations identified in the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-28-1312, Revision 1, dated April 21, 2014, unless the wire support clamp has P/N TA0930034-10, TA0930034-10P, TA0930034-11, or TA0930034-12P.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

For more information about this AD, contact Georgios Roussos, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6482; fax: 425-917-6590; email: georgios.roussos@faa.gov.

(l) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Special Attention Service Bulletin 737-28-1312, Revision 1, dated April 21, 2014.

(ii) Reserved.

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

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

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 25, 2014.
Jeffrey E. Duven,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.