[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-1071; Product Identifier 2019-NM-165-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all The Boeing Company Model 737-900ER series airplanes. This proposed AD was prompted by reports of significant corrosion of electrical connectors located in the main landing gear (MLG) wheel well. This proposed AD would require repetitive records checks to determine exposure to certain deicing fluids or repetitive inspections for corrosion of the electrical connectors, and corrective actions if necessary. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to https://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet https://www.myboeingfleet.com. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2019-1071.

Examining the AD Docket

You may examine the AD docket on the Internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2019-1071; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Julio C. Alvarez, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3657; email: julio.c.alvarez@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2019-1071; Product Identifier 2019-NM-165-AD" at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

The FAA will post all comments we receive, without change, to https://www.regulations.gov, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this NPRM.

Discussion

The FAA has received reports indicating the presence of significant corrosion of electrical connectors located in the MLG wheel well of airplanes that land on runways treated with deicing fluids containing potassium formate or potassium acetate. Corrosion and subsequent moisture ingress may lead to electrical shorting of the connectors. This

condition, if not addressed, can cause incorrect function of critical systems necessary for safe flight and landing.

Related Rulemaking

AD 2005-18-23, Amendment 39-14264 (70 FR 54253, September 14, 2005) ("AD 2005-18-23"), applies to Boeing Model 737-600, -700, -700C, -800, and -900 series airplanes, and addresses the same unsafe condition identified in this NPRM. Model 737-900ER series airplanes were not type certificated at the time AD 2005-18-23 was issued. The FAA has therefore determined that this NPRM is necessary to mandate the same requirements on Model 737-900ER series airplanes.

Related Service Information Under 1 CFR part 51

This proposed AD would require Boeing Alert Service Bulletin 737-24A1148, Revision 1, dated July 10, 2003, which the Director of the Federal Register approved for incorporation by reference as of October 19, 2005 (70 FR 54253, September 14, 2005). This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

The FAA is proposing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require repetitive records checks to determine exposure to certain deicing fluids or repetitive inspections for corrosion of electrical connectors, and applicable corrective actions.

The phrase "corrective actions" is used in this proposed AD. Corrective actions correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

Differences Between this Proposed AD and the Service Information

The effectivity of Boeing Alert Service Bulletin 737-24A1148, Revision 1, dated July 10, 2003, does not specifically identify Model 737-900ER series airplanes; that airplane model was not type certificated at the time the service information was issued. The service information does, however, identify the line numbers for Model 737-900ER series airplanes, all of which are in Group 3, so the actions of that service bulletin are appropriate and can be accomplished on those airplanes.

Boeing Alert Service Bulletin 737-24A1148, Revision 1, dated July 10, 2003, differs from this proposed AD in the cumulative areas of backshell corrosion that need corrective action, and in the compliance time for the respective corrective actions, which are specified in paragraphs (g)(2)(i) through (ii) of this proposed AD. These differences have been coordinated with Boeing. The proposed requirements correspond to three alternative methods of compliance approved for AD 2005-18-23 and reflect the relief provided for AD 2005-18-23.

Boeing Alert Service Bulletin 737-24A1148, Revision 1, dated July 10, 2003, specifies that airplanes exposed to affected runway deicing fluids be inspected for

corroded electrical connectors within 12 months. AD 2005-18-23 instead requires initially determining the airplane's exposure to affected runway deicing fluids within 12 months, and allows an additional 90 days to inspect for corrosion. For AD 2005-18-23, the FAA had determined that the additional 90 days for the inspection represented an acceptable interval of time for affected airplanes to operate without jeopardizing safety. Therefore, since the unsafe condition and airplane design are the same in AD 2005-18-23 and this NPRM, the FAA has determined that 90 days is an appropriate compliance time for the initial inspection in this proposed AD.

Boeing Alert Service Bulletin 737-24A1148, Revision 1, dated July 10, 2003, and AD 2005-18-23 specify repeating the inspection at 12-month intervals. However, the FAA determined that a longer interval would provide an acceptable level of safety. The FAA therefore issued alternative methods of compliance (AMOCs) for AD 2005-18-23 allowing this inspection interval to be increased to 24 months. Therefore, this proposed AD specifies a repetitive inspection interval of 24 months.

Costs of Compliance

The FAA estimates that this proposed AD affects 346 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Repetitive records check	1 work-hour X $85 per hour = $85 per inspection cycle	$0	$85 per inspection cycle	Up to $29,410 per inspection cycle
Repetitive detailed inspection	3 work-hours X $85 per hour = $255 per inspection cycle	$0	$255 per inspection cycle	Up to $88,230 per inspection cycle

The FAA estimates the following costs to do any necessary repairs or replacements that would be required based on the results of the proposed inspection. The FAA has no way of determining the number of aircraft that might need these repairs or replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Cleaning or replacement	Up to 5 work-hours X $85 per hour = Up to $425	Up to $831	Up to $1,256

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.

The FAA is 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.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the

Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD 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.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, 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.

List of Subjects in 14 CFR Part 39

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

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

The Boeing Company: Docket No. FAA-2019-1071; Product Identifier 2019-NM-165-AD.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 737-900ER series airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 24, Electrical power.

(e) Unsafe Condition

This AD was prompted by reports of significant corrosion of electrical connectors located in the main landing gear (MLG) wheel well. The FAA is issuing this AD to address corrosion and subsequent moisture ingress that may lead to electrical shorting of the connectors and incorrect functioning of critical systems necessary for safe flight and landing.

(f) Compliance

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

(g) Required Actions

Within 12 months after the effective date of this AD: Do the actions required by paragraph (g)(1) or (2) of this AD.

(1) Determine airplane exposure to runway deicing fluids containing potassium formate or potassium acetate by reviewing airport data on the types of components in the deicing fluid used at airports that support airplane operations.

(i) If the airplane has not been exposed: Repeat the requirements specified in paragraph (g)(1) of this AD thereafter at intervals not to exceed 24 months.

(ii) If the airplane has been exposed: Within 90 days after that determination is made, do the inspection required by paragraph (g)(2) of this AD. Repeat the inspection thereafter at intervals not to exceed 24 months.

(2) Do a detailed inspection of the electrical connectors, including the contacts and backshells of the line replaceable unit (LRU) in the wheel well of the MLG, for corrosion in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-24A1148, Revision 1, dated July 10, 2003. Perform applicable corrective actions at the applicable times, as specified in paragraphs (g)(2)(i) through (iii) of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-24A1148, Revision 1, dated July 10, 2003. Repeat the inspection thereafter at intervals not to exceed 24 months. For the purposes of this AD, a detailed inspection is defined as an intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed

appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required.

(i) If the total backshell surface area corrosion is 10 percent or less, clean the backshell(s) before further flight.

(ii) If the total backshell surface area corrosion is greater than 10 percent but less than 20 percent, replace the connectors and backshells within 30 days after the detailed inspection.

(iii) If the total backshell surface area corrosion is 20 percent or more, replace the connectors and backshells before further flight.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, 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 certification office, send it to the attention of the person identified in paragraph (i)(1) 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.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the

Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously for AD 2005-18-23, Amendment 39-14264 (70 FR 54253, September 14, 2005) ("AD 2005-18-23"), are approved as AMOCs for the corresponding provisions of this AD.

(i) Related Information

(1) For more information about this AD, contact Julio C. Alvarez, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3657; email: julio.c.alvarez@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet https://www.myboeingfleet.com. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on December 26, 2019.

Jeffrey E. Duven,
Director,
System Oversight Division,
Aircraft Certification Service.

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