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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-0463; Project Identifier AD-2023-00792-T; Amendment 39-22890; AD 2024-23-11]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule.

SUMMARY:

The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 737-8, 737-9, and 737-8200 (737 MAX) airplanes. This AD was prompted by a report of a non-conforming installation of spoiler wire bundles that led to unintended spoiler motion, including one instance of a flight spoiler hardover. Further investigation identified the potential for a hardover of more than one flight spoiler on the same wing, which can exceed full lateral control capability leading to loss of control of the airplane. This AD requires a one-time inspection of the clearance between the spoiler control wire bundles and the adjacent structure, and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective January 6, 2025.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 6, 2025.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2024-0463; 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 final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Boeing material 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; website*myboeingfleet.com*.
- You may view this material at the FAA, Airworthiness Products Section, Operational Safety 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 at *regulations.gov* under Docket No. FAA-2024-0463.

FOR FURTHER INFORMATION CONTACT:

Michael Closson, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3973; email: *Michael.P.Closson@faa.gov*.

SUPPLEMENTARY INFORMATION:

Background

The FAA 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 737-8, 737-9, and 737-8200 airplanes. The NPRM published in the **Federal Register** on March 11, 2024 (89 FR 17346). The NPRM was prompted by a report of a non-conforming installation of flight spoiler control wire bundles that led to unintended spoiler motion, including one instance of flight spoiler hardover. Further investigation identified the potential for simultaneous time-limited hardovers of more than one flight spoiler on the same wing, which can exceed full lateral control capability leading to loss of control of the airplane. In the NPRM, the FAA proposed to require a one-time inspection of the clearance between the spoiler control wire bundles and the adjacent structure, and applicable on-condition actions. The FAA is issuing this AD to address the potential for improper clearance between the spoiler control wire bundles and the adjacent structure. Improper clearance can lead to damage to the wire bundle, causing unintentional spoiler motion and consequent loss of control of the airplane. A hardover of more than one flight spoiler on the same wing can exceed full lateral control capability leading to loss of control of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from seven commenters: The Boeing Company, United Airlines, Air Line Pilots Association, International, and four individuals, who supported the NPRM without change.

The FAA received additional comments from three commenters: SunExpress Airlines, The Foundation for Aviation Safety, and an individual. The following summarizes the comments received on the NPRM

and provides the FAA's responses.

Request for Immediately Adopted Rule (IAR)

The Foundation for Aviation Safety (the Foundation) requested [1] that the FAA issue the AD as an immediately adopted rule (IAR) [2] with a compliance time of 30 days instead of the proposed 36-month compliance time. The Foundation's rationale referenced the service history of this model, the FAA's use of what the Foundation described as an unvalidated assumption about wear rates, the presence of a potentially catastrophic single failure condition, and the required inspection is estimated to take nine hours [3] per airplane.

In addition, an individual requested the FAA require “immediate repair of the defects on the identified aircraft” due to recent Boeing failures.

The FAA does not agree with the request to issue the AD as an IAR, or to shorten the compliance time. After conducting a risk analysis, the FAA did not find it necessary to issue an IAR with a shorter compliance time, but determined that an NPRM, which allowed the opportunity for public comment, was appropriate.

As part of their argument for an IAR and shortened compliance time, the Foundation stated that the potential failure condition is the result of a single point of failure (the chafed wire to a spoiler actuator), which is incorrect. The NPRM was issued to address the potential catastrophic event of simultaneous time-limited [4] hardovers of more than one flight spoiler on the same wing, which would require two separate specific wires to short to ground almost simultaneously.

To support their argument for the IAR, the Foundation also questioned the FAA's assumptions regarding the use of unvalidated wire “wear rates” to support the compliance times in the NPRM. The FAA concurs that “wear rate” is highly dependent upon the specific installation and operational environment of the wire bundle in question. However, the FAA did not use Boeing's “wear rate” in developing the risk analysis as suggested by the commenter. Instead, the FAA's analysis incorporated feedback from 737 MAX operators that had performed the inspections called out in Boeing Service Letter 737-SL-293-A, dated May 17, 2022, which indicated no findings of wire chafing in over 650 Model 737 MAX airplanes. This, combined with the FAA risk analysis, showed that an NPRM was appropriate.

Request for Credit for Prior Inspections

SunExpress Airlines requested that Boeing Service Letter 737-SL-27-293-B, dated May 23, 2022, serve as alternative method of compliance to paragraphs (g) and (h) of the proposed AD. The commenter asserted that the Work Instructions of Boeing Service Letter 737-SL-27-293-B fulfills the requirements stated in Boeing Alert Requirements Bulletin 737-27A1325 RB, dated July 14, 2023 (Alert RB 737-27A1325 RB).

The FAA agrees that accomplishing Boeing Service Letter 737-SL-27-293-B, dated May 23, 2022, provides some of the inspection and corrective action instructions called out in Alert RB 737-27A1325 RB. However, the FAA disagrees with giving credit for paragraphs (g) and (h) of this AD because the scope of the inspections in Boeing Service Letter 737-SL-27-293-B, dated May 23, 2022, does not include inspections for the outboard clamp locations and does not have certain of the defined

clearance requirements of the Requirements Bulletin. Paragraph (i) of this AD allows the commenter to request an alternative method of compliance (AMOC) for the actions in the Service Letter that are duplicated in the Requirements Bulletin.

Request for Additional Guidance To Identify Affected Airplanes

An individual requested that the FAA issue additional guidance to assist in identifying other airplane models that may be subject to the same unsafe condition.

Such additional guidance is unnecessary. The FAA has worked with Boeing to identify the affected airplanes and those airplanes have been listed in Alert RB 737-27A1325 RB. The agency has also verified with Boeing that the actions and practices identified in Alert RB 737-27A1325 RB have been incorporated in Boeing's production processes at a specific airplane line number, ensuring this unsafe condition does not exist on airplanes delivered from that line number forward.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 737-27A1325 RB, dated July 14, 2023. This material specifies procedures for spoiler control wire bundles clearance measurement and applicable on-condition actions. On-condition actions include a detailed inspection of the spoiler control wire bundles and adjacent structure for chafing damage, repair of any spoiler control wire bundles and any structural damage, and adjustment of the spoiler control wire bundles to ensure clearance requirements are met.

This material 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.

Costs of Compliance

The FAA estimates that this AD affects 207 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Measurement of wire bundle clearance	1 work-hour × $85 per hour = $85	$0	$85	$17,595

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

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Inspection	1 work-hour × $85	$0	$85
Rework cable bundles without chafing damage to wires or airplane structure	2 work-hours × $85 per hour = $170	0	170
Rework cable bundles with chafing damage to wires or airplane structure	5 work-hours × $85 per hour = $425	0	425

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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.

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) 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 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:

2024-23-11 The Boeing Company: Amendment 39-22890; Docket No. FAA-2024-0463; Project Identifier AD-2023-00792-T.

(a) Effective Date

This airworthiness directive (AD) is effective January 6, 2025.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-8, 737-9, and 737-8200 airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 737-27A1325 RB, dated July 14, 2023.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Unsafe Condition

This AD was prompted by a report of a non-conforming installation of spoiler wire bundles that led to unintended spoiler motion, including one instance of a flight spoiler hardover. Further investigation identified the potential for a time-limited hardover of more than one flight spoiler on the same wing, which can exceed full lateral control capability leading to loss of control of the airplane. The FAA is

issuing this AD to address improper clearance between the spoiler control wire bundles and the adjacent structure, which can lead to damage to the wire bundle, causing unintentional spoiler motion. The unsafe condition, if not addressed, could result in loss of control of the airplane.

(f) Compliance

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

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the "Compliance" paragraph of Boeing Alert Requirements Bulletin 737-27A1325 RB, dated July 14, 2023, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-27A1325 RB, dated July 14, 2023.

Note 1 to paragraph (g):

Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 737-27A1325, dated July 14, 2023, which is referred to in Boeing Alert Requirements Bulletin 737-27A1325 RB, dated July 14, 2023.

(h) Exception to Service Information Specifications

Where the Compliance Time columns of the tables in the "Compliance" paragraph of Boeing Alert Requirements Bulletin 737-27A1325 RB, dated July 14, 2023, use the phrase "the original issue date of Requirements Bulletin 737-27A1325 RB," this AD requires using the effective date of this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR-520, Continued Operational Safety 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 responsible Flight Standards 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 (j)(1) of this AD. Information may be emailed to: *AMOC@faa.gov*.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards 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, AIR-520, Continued Operational Safety 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.

(j) Related Information

(1) For more information about this AD, contact Michael Closson, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3973; email: *Michael.P.Closson@faa.gov*.

(2) Service information identified in this AD that is not incorporated by reference is available at the address specified in paragraph (k)(3) of this AD.

(k) Material Incorporated by Reference

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

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

(i) Boeing Alert Requirements Bulletin 737-27A1325 RB, dated July 14, 2023.

(ii) [Reserved]

(3) For Boeing material 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; website *myboeingfleet.com*.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov*.

Issued on November 14, 2024.

John P. Piccola, Jr.,

Director, Integrated Certificate Management Division, Aircraft Certification Service.

Footnotes

1. The Foundation's comment on this AD was submitted directly to the FAA Administrator, but has been placed into the rulemaking docket.

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2. An "Immediately Adopted Rule" or "IAR" is an FAA term for a rule that is issued without first obtaining public comment, a.k.a a "Final Rule with request for Comments," based upon good cause.

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3. Although the work-hours listed in the NPRM for the one-time inspection and on-condition actions amount to nine hours of work per airplane, no airplane would require all of the on-condition actions. Therefore, the actions required by this AD would take less than nine hours of work per airplane.

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4. This type of flight spoiler failure will be detected within a short time window by a software monitor, which will then fully retract spoiler eliminating the hardover condition, thereby limiting the exposure window for concurrent failures.

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[FR Doc. 2024-28120 Filed 11-29-24; 8:45 am]

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