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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-0218; Project Identifier AD-2023-00779-T; Amendment 39-22836; AD 2024-18-02]

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 all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. This AD was prompted by a determination that the flight deck door decompression panel can strike the captain's seat headrest if a flight deck or below the flight deck rapid decompression event occurs when the seat is in a certain position. This AD requires, for certain airplanes, replacing the affected captain's seat assembly. This AD also prohibits the installation of affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective November 12, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 12, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2024-0218; 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 Westminister 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-2024-0218.

FOR FURTHER INFORMATION CONTACT:

Nicole S. Tsang, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206-231-3959; email Nicole.S.Tsang@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 all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. The NPRM published in the **Federal Register** on February 6, 2024 ([89 FR 8109](#)). The NPRM was prompted by a determination that the flight deck door decompression panel can strike the captain's seat headrest if a flight deck or below the flight deck rapid decompression event occurs when the seat is in a certain position. In the NPRM, the FAA proposed to require, for certain airplanes, replacing the affected captain's seat assembly. The FAA also proposed to prohibit the installation of affected parts. The FAA is issuing this AD to address the possibility that the decompression panel could strike the captain's head or face. The unsafe condition, if not addressed, could result in serious or potentially fatal injury to the captain after a flight deck or below the flight deck rapid decompression event.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Air Line Pilots Association, International (ALPA) and United Airlines who supported the NPRM without change.

The FAA received additional comments from six commenters, including American Airlines, Air France, Boeing, British Airways, KLM Royal Dutch Airlines, and an individual. The following presents the relevant comments received on the NPRM and the FAA's response to each comment.

Request To Change Applicability

American Airlines requested that the applicability of the proposed AD be limited to the Boeing airplanes with line numbers in the effectivity of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023. The commenter stated that the Boeing

Illustrated Parts Data (IPD) does not allow the installation of the captain's seat having Ipeco part number (P/N) 3A380-0007-01-7 on Boeing airplanes with line numbers that are not in the effectivity of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023.

The FAA does not agree with the request. As explained in the NPRM, the FAA has determined there is a rotability issue, and the actions required by this AD can be accomplished on Boeing airplanes that are not identified in the effectivity of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023. It is physically possible to install a captain's seat having Boeing P/N S632Z301-21 (Ipeco P/N 3A380-0007-01-7) on airplanes initially delivered with the acceptable seat assemblies. The FAA has not changed this AD in response to this request.

Request for Alternative Method of Compliance

Air France, KLM Royal Dutch Airlines, British Airways, and an individual requested the proposed AD be revised to allow using procedures or modifications similar to those in the existing Boeing Flight Crew Operations Manual (FCOM). Air France requested an alternative method of compliance (AMOC) that could consist of marking limits on the flight deck based on existing Boeing FCOM instructions and adding procedures (which the commenter stated Boeing is developing) into the Airplane Flight Manual (AFM). KLM Royal Dutch Airlines requested that, as an alternative to the proposed AD, the FAA consider allowing instructions similar to those in the existing Boeing FCOM, along with revising the procedures in the AFM to include installation of a placard limiting seat recline and providing information to aid accurate seat positioning. British Airways noted that the proposed AD allows installing later-approved part numbers and claimed that the later-approved part will be a seat with a placarding solution as proposed by Boeing that will essentially revert the part number back to a "-7." British Airways requested that the proposed AD be revised to allow for the Boeing proposal using a placard as a means of compliance. An individual requested an AMOC-type approach that allows operators to enhance procedural compliance with the existing Boeing FCOM using procedures (including FCOM guidance around limiting the recline/aft movement of the seat), flight deck markings, and crew awareness training. The individual also requested a longer-term approach to the decompression panel issue that allow time for Boeing to come up with a permanent engineering solution to the door panel which will avoid the need to artificially limit the captain's seat recline. Air France stated that the seat modification makes it impossible for pilots to achieve effective rest and may force the operator to add a third pilot on the operated routes or change the Boeing 787 fleet network, which can cause significant costs. KLM Royal Dutch Airlines stated that the seat modification limits seat recline to the point that it reduces the ability for pilots to have a controlled rest, which can negatively affect flight safety. KLM Royal Dutch Airlines suggested that its proposal would achieve the same level of safety as the proposed seat hardware modification. British Airways noted that the mechanical limiting device is more restrictive for tilt and recline than the guidance in Boeing's existing FCOM, meaning pilots can't effectively rest in the operating seat, increasing operational risk due to pilot fatigue. British Airways suggested the increased risk due to pilot fatigue outweighs the low risk of a flight deck decompression while the pilot's seat is in the most rearward and tilted position. The individual stated that the risk analysis appears to be exaggerated given the likelihood of a decompression event occurring with a taller pilot without an alternative crew member available to safely continue flight, which the commenter stated is not likely given in-service experience of modern jet aircraft. The individual stated that the seat recline is restricted more than what would be required for 99.9% of the pilot cohort to avoid contact with the decompression panel in the event of an in-flight

decompression. The individual suggested that the mechanical limiter doesn't account for the fore/aft position of the seat and assumes an absolute worst-case scenario with a pilot in the 0.01 percentile.

The FAA does not agree with the commenters' requests. The FAA evaluated fleet data and determined through risk analysis that the risk to flight crew is unacceptable and that delaying this action would be inappropriate. Additionally, the FAA notes that the flight deck door decompression panel may strike a taller or shorter pilot during a flight deck decompression event because the captain's seat headrest is in the path of the decompression panel when the seat is in the aft track position with full recline and full seat pan tilt. The commenters' proposals do not include supporting data that demonstrates an acceptable level of safety. However, under the provisions of paragraph (k) of this AD, operators may submit AMOC proposals that include supporting data that demonstrates an acceptable level of safety. Regarding a commenter's request to revise the AD to allow Boeing's proposed placard as a means of compliance, the FAA notes that this AD allows installing later-approved parts that meet the criteria specified in paragraph (h)(2) of this AD. A later-approved part may have a placard solution, but a placard solution alone is not the same as a later-approved part. The FAA has not changed this AD in response to these requests.

Request To Clarify Rapid Decompression Event

Boeing requested that the FAA clarify text regarding the rapid decompression event that could lead to the unsafe condition. Boeing requested that the FAA revise the text "flight deck decompression event" to instead say "flight deck or below the flight deck rapid decompression event" when referring to events that could cause the flight deck door decompression panel to strike the captain's seat headrest. Boeing stated that each event would cause the flight deck door to open in the forward direction, either partially or fully.

The FAA agrees with the request for the reasons provided. The FAA has revised this AD accordingly.

Request To Extend the Compliance Time

British Airways requested that the compliance time be extended. British Airways noted that it relies on subcontractor suppliers to modify the seats, with limited extra seats to use while replacement seats are being provided, and the supplier may not have capacity to ramp up to conversion rate. British Airways added that Boeing does not have stock of the captain's seat having Boeing P/N S632Z301-31 (Ipeco P/N 3A380-0007-01-8) to support a fleet-wide campaign within the 3-year compliance time.

The FAA does not agree with the request. After considering all the available information, the FAA has determined that the compliance time, as proposed, represents an appropriate interval of time in which the required actions can be performed in a timely manner within the affected fleet, while still maintaining an adequate level of safety. In developing an appropriate compliance time, the FAA considered the safety implications, parts availability, and normal maintenance schedules for timely accomplishment of the modifications. The FAA has not changed this AD in response to this request.

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, and any other changes

described previously, 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 Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023. This material specifies procedures for replacing the affected captain's seat assembly part number (P/N) S632Z301-21 (Ipeco P/N 3A380-0007-01-7) with captain's seat assembly P/N S632Z301-31 (Ipeco P/N 3A380-0007-01-8).

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 155 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
Replacement	Up to 3 work-hours × \$85 per hour = \$255	\$1,335	Up to \$1,590	Up to \$246,450.

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:

2024-18-02 The Boeing Company: Amendment 39-22836; Docket No. FAA-2024-0218; Project Identifier AD-2023-00779-T.

(a) Effective Date

This airworthiness directive (AD) is effective November 12, 2024.

(b) Affected ADs

This AD affects AD 2016-19-04, Amendment 39-18653 ([81 FR 65857](#), September 26, 2016) (AD 2016-19-04).

(c) Applicability

This AD applies to all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 25, Equipment/furnishings.

(e) Unsafe Condition

This AD was prompted by a determination that the flight deck door decompression panel can strike the captain's seat headrest if a flight deck or below the flight deck rapid decompression event occurs when the seat is in a certain position. The FAA is issuing this AD to address the possibility that the decompression panel could strike the captain's head or face. The unsafe condition, if not addressed, could result in serious or potentially fatal injury to the captain after a flight deck or below the flight deck rapid decompression event.

(f) Compliance

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

(g) Required Actions

For airplanes with an original certificate of airworthiness or original export certificate of airworthiness issued on or before the effective date of this AD, with a seat assembly having Boeing part number (P/N) S632Z301-21 (Ipeco P/N 3A380-0007-01-7) installed on the captain's side: Except as specified by paragraph (h) of this AD, at the applicable times specified in the "Compliance" paragraph of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Special Attention Service Bulletin B787-81205-SB250294-00, Issue 001, dated June 14, 2023, which is referred to in Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023.

(h) Exceptions to Service Bulletin Specifications

(1) Where the Boeing Recommended Compliance Time column of the table in the "Compliance" paragraph of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023, refers to the Issue 001 date of Requirements Bulletin B787-81205-SB250294-00 RB, this AD requires using the effective date of this AD.

(2) Where Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023, specifies replacement with captain's seat assemblies having Boeing P/N S632Z301-31 (Ipeco P/N 3A380-0007-01-8), this AD requires installing that part number or a later-approved part number. Later-approved part numbers are only those that are approved as a replacement for the applicable captain's seat assembly and are approved as part of the type design by the FAA or The Boeing Company Organization Designation Authorization (ODA) after June 14, 2023 (the issuance date of Boeing Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001).

(i) Terminating Action for Certain Requirements of AD 2016-19-04

Replacement of the captain's seat assembly as required by paragraph (g) of this AD terminates the requirements of paragraph (h)(1) of AD 2016-19-04, for that captain's seat assembly only.

(j) Parts Installation Prohibition

As of the effective date of this AD, no person may install a captain's seat assembly, having Boeing P/N S632Z301-21 (Ipeco P/N 3A380-0007-01-7), on any airplane.

(k) 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 (l)(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 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.

(l) Related Information

(1) For more information about this AD, contact Nicole S. Tsang, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone 206-231-3959; email Nicole.S.Tsang@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (m)(3) this AD.

(m) 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 Special Attention Requirements Bulletin B787-81205-SB250294-00 RB, Issue 001, dated June 14, 2023.

(ii) [Reserved]

(3) For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister 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 September 3, 2024.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[[FR Doc. 2024-23114](#) Filed 10-7-24; 8:45 am]

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