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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1879; Project Identifier AD-2023-00286-T; Amendment 39-22794; AD 2024-15-03]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule.

SUMMARY:

The FAA is superseding Airworthiness Directive (AD) 2019-16-05, which applied to all The Boeing Company Model 777 airplanes. AD 2019-16-05 required identifying the part number, and the serial number if applicable, of the Captain's and First Officer's seats, and applicable on-condition actions for affected seats. This AD was prompted by reports of uncommanded fore/aft movement of the Captain's and First Officer's seats. This AD retains the requirements of AD 2019-16-05 and adds an inspection of previously omitted part numbers. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective October 15, 2024.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 15, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of October 8, 2019 ([84 FR 45895](#), September 3, 2019).

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2023-1879; 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; websitemyboeingfleet.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-2023-1879.

FOR FURTHER INFORMATION CONTACT:

Courtney Tuck, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3986; email: courtney.k.tuck@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend [14 CFR part 39](#) to supersede AD 2019-16-05, Amendment 39-19708 ([84 FR 45895](#), September 23, 2019) (AD 2019-16-05). AD 2019-16-05 applied to all The Boeing Company Model 777-200, -200LR, -300, -300ER, and 777F series airplanes. The NPRM published in the **Federal Register** on September 27, 2023 ([88 FR 66310](#)). The NPRM was prompted by reports of uncommanded fore/aft movement of the Captain's and First Officer's seats. In the NPRM, the FAA proposed to continue to require the actions of AD 2019-16-05 and add an inspection of previously omitted part numbers. The FAA is issuing this AD to address uncommanded fore/aft movement of the Captain's and First Officer's seats. Uncommanded fore/aft seat movement during a critical part of a flight, such as takeoff or landing, could cause a flight control obstruction or unintended flight control input, which could result in the loss of the ability to control the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from Boeing in support of the NPRM without change.

The FAA received additional comments from American Airlines and an individual commenter. The following presents the comments received on the NPRM and the FAA's response.

Request for Credit for Previous Actions

American Airlines and an individual requested credit for the accomplishment of actions required by the previous revision of the service information if it can be shown through maintenance records that the required actions have already been accomplished.

The FAA agrees that credit may be granted, under specific conditions. Paragraph (j) of this AD has been added to identify these conditions.

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 Service Bulletin 777-25-0607, Revision 2, dated January 27, 2023. The material describes procedures for identification of the part number, and the serial number if applicable, of the Captain's and First Officer's seats, and for applicable on-condition actions for affected seats including an inspection of each seat's fore/aft and vertical manual control levers for looseness, installation of serviceable seats, and a seat functional test after any cable adjustment.

The FAA also reviewed Boeing Special Attention Service Bulletin 777-25-0619, Revision 2, dated January 27, 2023. This material describes procedures for a detailed inspection and repetitive checks of the horizontal movement system for the Captain's and First Officer's seats for findings (*e.g.*, evidence of cracks, scores, corrosion, dents, deformation, or visible wear; and incorrectly assembled microswitch assemblies, actuators, and limit switches), and applicable on-condition actions. The on-condition actions include clearing the seat tracks of foreign object debris (FOD), overhauling the horizontal movement system, and replacing the horizontal actuator. This material also describes procedures for an optional terminating action for the repetitive checks by installing a serviceable Captain's or First Officer's seat.

This AD also requires Boeing Special Attention Service Bulletin 777-25-0619, Revision 1, dated August 8, 2018, which the Director of the Federal Register approved for incorporation by reference as of October 8, 2019 ([84 FR 45895](#), September 3, 2019).

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 **ADDRESSES** .

Costs of Compliance

The FAA estimates that this AD affects 327 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated Costs for Required Actions per Seat

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Identification, seat (retained actions from AD 2019-16-05)	1 work-hour × \$85 per hour = \$85	\$0	\$85	\$27,795.
Detailed inspection, horizontal movement system (retained actions from AD 2019-16-05)	1 work-hour × \$85 per hour = \$85	0	\$85	\$27,795.
Checks, horizontal movement system (retained actions)	2 work-hours × 85 per hour = 170 per check cycle	0	\$170 per check cycle	\$55,590 per check cycle.

The FAA estimates the following costs to do any on-condition actions that would be required. The FAA has no way of determining the number of aircraft that might need these on-condition actions:

Estimated Costs of On-Condition Actions per Seat *

Action	Labor cost	Parts cost	Cost per product
Adjustment, control lever cable	1 work-hour × \$85 per hour = \$85	\$0	\$85.
Overhaul, horizontal movement system	11 work-hours × \$85 per hour = \$935	Up to \$5,824	Up to \$6,759.
Inspection of each seat's fore/aft and vertical manual control levers	1 work-hour × \$85 per hour = \$85	\$0	\$85.
Installation of serviceable seats	1 work-hour × \$85 per hour = \$85	\$0	\$85.
Clearing FOD	1 work-hour × \$85 per hour = \$85	\$0	\$85.
Replacement of the horizontal actuator	1 work-hour × \$85 per hour = \$85, per actuator	\$7,937 per actuator	\$8,022 per actuator.
Functional test, adjusted control lever cable	1 work-hour × \$85 per hour = \$85	\$0	\$85.

** The estimated cost for tooling to align an affected seat for adjustment of the control lever cable is up to \$46,064.*

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:

a. Removing Airworthiness Directive (AD) 2019-16-05, Amendment 39-19708 ([84 FR 45895](#), September 3, 2019); and

b. Adding the following new AD:

2024-15-03 The Boeing Company: Amendment 39-22794; Docket No. FAA-2023-1879; Project Identifier AD-2023-00286-T.

(a) Effective Date

This airworthiness directive (AD) is effective October 15, 2024.

(b) Affected ADs

This AD replaces AD 2019-16-05, Amendment 39-19708 ([84 FR 45895](#), September 3, 2019) (AD 2019-16-05).

(c) Applicability

This AD applies to all The Boeing Company Model 777-200, -200LR, -300, -300ER, and 777F series 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 reports of uncommanded fore/aft movement of the Captain's and First Officer's seats. The FAA is issuing this AD to address uncommanded fore/aft movement of the Captain's and First Officer's seats. Uncommanded fore/aft seat movement during a critical part of a flight, such as takeoff or landing, could cause a flight control obstruction or unintended flight control input, which could result in the loss of the ability to control the airplane.

(f) Compliance

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

(g) Seat Part Number Identification and On-Condition Actions

Except as specified in paragraphs (i) and (j) of this AD: At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 777-25-0607, Revision 2, dated January 27, 2023, do an inspection to determine the part number, and serial number as applicable, of

the Captain's and First Officer's seats, and do all applicable on-condition actions, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-25-0607, Revision 2, dated January 27, 2023. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and serial number of the Captain's and First Officer's seats can be conclusively determined from that review.

(h) Detailed Inspection and Repetitive Checks of Horizontal Movement System and On-Condition Actions

Except as specified in paragraphs (i) and (j) of this AD: At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 777-25-0619, Revision 2, dated January 27, 2023, do all applicable actions identified as "RC" (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-25-0619, Revision 1, dated August 8, 2018, or Revision 2, dated January 27, 2023. As of the effective date of this AD, only Boeing Special Attention Service Bulletin 777-25-0619, Revision 2, dated January 27, 2023, may be used. Actions identified as terminating action in Boeing Special Attention Service Bulletin 777-25-0619, Revision 1, dated August 8, 2018, or Revision 2, dated January 27, 2023, terminate the applicable required actions of this AD, provided the terminating action is done in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-25-0619, Revision 1, dated August 8, 2018, or Revision 2, dated January 27, 2023.

(i) Exceptions to Service Bulletin Specifications

(1) Where Boeing Special Attention Service Bulletin 777-25-0619, Revision 2, dated January 27, 2023, uses the phrase "the Original issue date of this service bulletin," this AD requires replacing those words with "October 8, 2019 (the effective date of AD 2019-16-05)."

(2) Where Boeing Special Attention Service Bulletin 777-25-0607, Revision 2, dated January 27, 2023, specifies compliance for certain actions "within 72 months after the Original Issue date of this service bulletin," this AD requires replacing those words with "within 36 months after October 8, 2019 (the effective date of AD 2019-16-05)."

(3) Where Boeing Special Attention Service Bulletin 777-25-0607, Revision 2, dated January 27, 2023, specifies compliance for certain actions "within 36 months after the Revision 2 date of this service bulletin," this AD requires compliance within 36 months after the effective date of this AD.

(j) Acceptable Conditions for Compliance

If the airplane records show that an Ipeco Captain's or First Officer's seat meets any condition in figure 1 to paragraph (j) of this AD, the actions specified in this AD are not required for that seat.

Figure 1 to Paragraph (j)—Alternative Acceptable Seats

Installation per Boeing Special Attention Service Bulletin –	And installation per Ipeco Service Bulletin –	Having Ipeco Part Number –	And additional required conditions –
777-25-0607, Revision 1, dated July 17, 2018	None	3A258-0041-01-2 or 3A258-0042-01-2	No additional conditions required.
	201-25-04, Issue 2, dated March 28, 2014; or Issue 3, dated March 4, 2020; or Issue 4, dated January 28, 2021	3A201-0007-01-1 or 3A201-0008-01-1	The manual override cable maintenance has been completed on the seat in accordance with Ipeco Component Maintenance Manual 25-10-87, Revision 28, dated December 13, 2013, or subsequent revisions up to and including Revision 53, dated November 30, 2023.
	201-25-04, Issue 4, dated January 28, 2021	3A201-0007-01-1Z or 3A201-0008-01-1Z	The manual override cable maintenance has been completed on the seat in accordance with Ipeco Component Maintenance Manual 25-10-87, Revision 28, dated December 13, 2013, or subsequent revisions up to and including Revision 53, dated November 30, 2023.
	258-25-08, Issue 4, dated April 25, 2014; or Issue 5, dated March 4, 2020; or Issue 6, dated January 28, 2021	3A258-0041-01-1 or 3A258-0042-01-1	Does not have a serial number identified by the effectivity of the referenced Ipeco service bulletins.
	258-25-08, Issue 4, dated April 25, 2014; or Issue 5, dated March 4, 2020; or Issue 6, dated January 28, 2021	3A258-0041-01-1 or 3A258-0042-01-1	The manual override cable maintenance has been completed on the seat in accordance with Ipeco Component Maintenance Manual 25-11-38, Revision 21, dated December 12, 2013, or subsequent revisions up to and including Revision 53, dated December 4, 2023.
	258-25-08, Issue 6, dated January 28, 2021	3A258-0041-01-1Z or 3A258-0042-01-1Z	Does not have a serial number identified by the effectivity of the referenced Ipeco service bulletin.
	258-25-08, Issue 6, dated January 28, 2021	3A258-0041-01-1Z or 3A258-0042-01-1Z	The manual override cable maintenance has been completed on the seat in accordance with Ipeco Component Maintenance Manual 25-11-38, Revision 21, dated December 12, 2013, or subsequent revisions up to and including Revision 53, dated December 4, 2023.
Installation per Boeing Special Attention Service Bulletin –	And installation per Ipeco Service Bulletin –	Having Ipeco Part Number –	And additional required conditions –

777-25-0619, Revision 1, dated August 8, 2018	None	3A201-0007-01-1Z, 3A201-0008-01-1Z, 3A258-0041-01-2, 3A258-0041-01-1Z, 3A258-0042-01-2, or 3A258-0042-01-1Z	No additional conditions required.
	201-25-07, Issue 3, dated January 9, 2018; or Issue 4, dated April 20, 2020	3A201-0007-01-1 or 3A201-0008-01-1	Has a horizontal actuator with Artus part number AD8650503 at "Amendment C" or later.
	201-25-08, Issue 4, dated January 29, 2018; or Issue 5, dated April 20, 2020; or Issue 6, dated April 6, 2021	3A201-0007-01-1 or 3A201-0008-01-1	Has a horizontal actuator with Artus part number AD8650503 at "Amendment C" or later.
	258-25-13, Issue 3, dated November 27, 2017; or Issue 4, dated April 28, 2020; or Issue 5, dated November 1, 2021	3A258-0041-01-1 or 3A258-0042-01-1	Has a horizontal actuator with Artus part number AD8650503 at "Amendment C" or later.
	258-25-14, Issue 4, dated January 29, 2018; or Issue 5, dated April 28, 2020	3A258-0041-01-1 or 3A258-0042-01-1	Has a horizontal actuator with Artus part number AD8650503 at "Amendment C" or later.

(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 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.

(4) AMOCs approved for AD 2019-16-05 are approved as AMOCs for the corresponding provisions of this AD.

(5) For material that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (k)(5)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(l) Related Information

(1) For more information about this AD, contact Courtney Tuck, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3986; email: courtney.k.tuck@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (m)(5) of 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.

(3) The following material was approved for IBR on October 15, 2024.

(i) Boeing Special Attention Service Bulletin 777-25-0607, Revision 2, dated January 27, 2023.

(ii) Boeing Special Attention Service Bulletin 777-25-0619, Revision 2, dated January 27, 2023.

(4) The following material was approved for IBR on October 8, 2019 ([84 FR 45895](#), September 3, 2019).

(i) Boeing Special Attention Service Bulletin 777-25-0619, Revision 1, dated August 8, 2018.

(ii) [Reserved]

(5) 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.

(6) 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.

(7) 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 August 23, 2024.

Suzanne Masterson,

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

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