[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-2227; Project Identifier AD-2022-00113-T]

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 certain The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. This proposed AD was prompted by incidents related to throttle malfunctions during a balked landing with the auto-throttle (A/T) engaged, potential erroneous readings from the low range radio altimeter (LRRA), and possible deficiencies in low airspeed protections and crew alerting systems. This proposed AD would require updating the thrust management (TM) and displays and crew alerting (DCA) operational program software (OPS). The FAA is proposing this AD to address the unsafe conditions 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 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.

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2023-2227; 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, any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

• 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; website myboeingfleet.com.

• You may view this service information 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 by searching for and locating Docket No. FAA-2023-2227.

FOR FURTHER INFORMATION CONTACT: Doug Tsuji, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone: 206-231-3548; email: Douglas.Tsuji@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 ADDRESSES. Include

"Docket No. FAA-2023-2227; Project Identifier AD-2022-00113-T" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Doug Tsuji, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone: 206-231-3548; email: Douglas.Tsuji@faa.gov. Any commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA has received reports of several incidents involving Model 787 airplanes related to a throttle malfunction.

The FAA has received a report indicating that a design review of the dual 787 LRRA system, which included an evaluation of airplane health management (AHM) records, determined that there is an elevated rate of in-service altimeter miscompare events and loss of output events.

The FAA received an in-service report of a Model 787 airplane with flight management function (FMF) Block point (BP) 4.0 software experiencing the throttle returning to IDLE after manual increase of thrust during a balked landing with the A/T engaged.

The FAA has reviewed a report of the investigation of an accident that revealed deficiencies in low airspeed protections and crew alerting systems on Model 777 and 787 series airplanes.

As a result of the above, one or more of the following scenarios could occur.

During landing, erroneous altimeter readings from the LRRA could result in the A/T not commanding IDLE during flare, and, in combination with improper crew reaction, could result in a runway overrun.

In addition, if the A/T system is engaged during a manual go-around or missed approach and the thrust mode is set to IDLE, manual attempts to override the A/T system by pushing the thrust levers forward will not disconnect the A/T system as expected, resulting in the thrust levers retarding back to IDLE. This unexpected loss of thrust, if not corrected, could result in a loss of altitude and possible controlled flight into terrain (CFIT).

Further, airplanes with versions of FMF software prior to BP 4 are susceptible to situations where the flightcrew may believe the airplane systems will prevent the airplane

from having too low an airspeed for its flight condition, when in fact the systems do not offer that protection. This can also result in a CFIT event.

While these conditions may result in a different outcome, they all can be addressed by the same corrective action. These conditions, if not addressed, could result in unsafe conditions.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin B787-81205-SB310018-00 RB, Issue 002, dated July 15, 2021. This service information specifies procedures for installing updated DCA OPS software and doing a software configuration check.

The FAA also reviewed Boeing Alert Requirements Bulletin B787-81205-SB340053-00 RB, Issue 001, dated November 16, 2022. This service information specifies procedures for installing updated TM OPS software and doing a software configuration check.

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 ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would require accomplishing the actions specified in the service information already described, except as discussed under "Differences Between this Proposed AD and the Service Information," and except for any differences identified as exceptions in the regulatory text of this proposed AD.

Differences Between this Proposed AD and the Service Information

Although the service information recommends accomplishing certain required actions within 12 months, the FAA has determined that a 12 month interval would not address the identified unsafe condition soon enough to ensure an adequate level of safety for the affected fleet. In developing an appropriate compliance time for this AD, the FAA considered the manufacturer's recommendation and the degree of urgency associated with the subject unsafe condition. In light of these factors, the FAA finds that a 6-month compliance time represents an appropriate interval of time for affected airplanes to continue to operate without compromising safety.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 125 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
Install and check DCA software	3 work-hours X $85 per hour = $255	$0*	$255	$31,875
Install and check TM software	4 work-hours X $85 per hour = $340	$0*	$340	$42,500

*Boeing has confirmed that there is no charge for the software.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this proposed 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

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) Would not affect intrastate aviation in Alaska, and

(3) Would 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:

The Boeing Company: Docket No. FAA-2023-2227; Project Identifier AD-2022-00113-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin B787-81205-SB340053-00 RB, Issue 001, dated November 16, 2022.

(d) Subject

Air Transport Association (ATA) of America Code 31, Instruments; 34, Navigation.

(e) Unsafe Condition

This proposed AD was prompted by incidents related to throttle malfunctions during a balked landing with the auto-throttle (A/T) engaged, potential erroneous readings from the low range radio altimeter (LRRA), and possible deficiencies in low airspeed protections and crew alerting systems. The FAA is issuing this AD to address problems with thrust management (TM) and displays and crew alerting (DCA)

operational program software. The unsafe conditions, if not addressed, could result in possible runway overrun or controlled flight into terrain.

(f) Compliance

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

(g) Required Actions

(1) For airplanes identified in Boeing Alert Requirements Bulletin B787-81205-SB310018-00 RB, Issue 002, dated July 15, 2021: Within 6 months after the effective date of this AD, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB310018-00 RB, Issue 002, dated July 15, 2021.

Note 1 to paragraph (g)(1): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin B787-81205-SB310018-00, Issue 002, dated July 15, 2021, which is referred to in Boeing Alert Requirements Bulletin B787-81205-SB310018-00 RB, Issue 002, dated July 15, 2021.

(2) For airplanes identified in Boeing Alert Requirements Bulletin B787-81205-SB340053-00 RB, Issue 001, dated November 16, 2022: Within 6 months after the effective date of this AD, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB340053-00 RB, Issue 001, dated November 16, 2022.

Note 2 to paragraph (g)(2): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin B787-81205-SB340053-00, Issue 001, dated November 16, 2022, which is referred to in Boeing Alert Requirements Bulletin B787-81205-SB340053-00 RB, Issue 001, dated November 16, 2022.

(h) 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) 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 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.

(i) Related Information

For more information about this AD, contact Doug Tsuji, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone: 206-231-3548; email: Douglas.Tsuji@faa.gov.

(j) 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 Alert Requirements Bulletin B787-81205-SB310018-00 RB, Issue 002, dated July 15, 2021.

(ii) Boeing Alert Requirements Bulletin B787-81205-SB340053-00 RB, Issue 001, dated November 16, 2022.

(3) 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; website myboeingfleet.com.

(4) You may view this service information 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 17, 2023.

Caitlin Locke,
Director, Compliance & Airworthiness Division,
Aircraft Certification Service.
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