



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0580; Product Identifier 2020-NM-052-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 supersede Airworthiness Directive (AD) 2019-02-03, which applies to all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. AD 2019-02-03 requires revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations. Since the FAA issued AD 2019-02-03, the manufacturer has developed a new fire handle design that will eliminate the need for the airworthiness limitations required by AD 2019-02-03. This proposed AD would retain the requirements of AD 2019-02-03 and would require incorporation of an airworthiness limitation which applies only to certain airplanes. This proposed AD would also require replacing or modifying certain engine fire control panels, which would terminate the revised airworthiness limitation when a certain condition is met. 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, 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 on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0580.

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-2020-0580; 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. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Tak Kobayashi, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3553; email: takahisa.kobayashi@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-2020-0580; Product Identifier 2020-NM-052-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 received, 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 proposed AD.

Discussion

The FAA issued AD 2019-02-03, Amendment 39-19550 (84 FR 2437, February 7, 2019) (“AD 2019-02-03”), for all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. AD 2019-02-03 requires revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness

limitations. AD 2019-02-03 resulted from reports of warpage of internal engine fire handle components, which can cause binding and prevent proper operation. The FAA issued AD 2019-02-03 to address a latent failure of the engine fire handle, which could result in the inability to extinguish an engine fire that, if uncontrollable, could lead to wing failure.

Actions Since AD 2019-02-03 Was Issued

The preamble to AD 2019-02-03 explains that the FAA considered the requirements “interim action” and was considering further rulemaking. Since the FAA issued AD 2019-02-03, the manufacturer developed a new fire handle design for the engine fire control panel. The FAA has determined that replacement with a new or modified engine fire control panel addresses the unsafe condition and will eliminate the need for the airworthiness limitations required by AD 2019-02-03. Therefore, the FAA has determined that the airworthiness limitations required by AD 2019-02-03 should be revised to limit its applicability to airplanes equipped with the old design—an engine fire control panel having part number (P/N) 412600-001 or an engine fire shutoff switch having P/N 417000-101 or 417000-102. The FAA has also determined that once the new or modified engine fire control panel is installed on all affected airplanes in an operator’s fleet, the revised airworthiness limitation may be removed.

Related Service Information under 1 CFR part 51

The FAA reviewed Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020. The service information describes procedures for replacing the engine fire control panel with a new or modified panel. 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 retain all actions of AD 2019-02-03. This proposed AD would also require revising the existing maintenance or inspection program, as applicable, to incorporate an airworthiness limitation that applies to airplanes equipped with an engine fire control panel having part number (P/N) 412600-001, or an engine fire shutoff switch having P/N 417000-101 or P/N 417000-102. This proposed AD would also require accomplishment of the actions identified in Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020, described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

For information on the procedures and compliance times, see this service information at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0580.

This proposed AD would require revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to

accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance (AMOC) according to paragraph (o) of this proposed AD.

Explanation of Requirements Bulletin

The FAA worked in conjunction with industry, under the Airworthiness Directive Implementation Aviation Rulemaking Committee (AD ARC), to enhance the AD system. One enhancement is a process for annotating which steps in the service information are “required for compliance” (RC) with an AD. Boeing has implemented this RC concept into Boeing service bulletins.

In an effort to further improve the quality of ADs and AD-related Boeing service information, a joint process improvement initiative was worked between the FAA and Boeing. The initiative resulted in the development of a new process in which the service information more clearly identifies the actions needed to address the unsafe condition in the “Accomplishment Instructions.” The new process results in a Boeing Requirements Bulletin, which contains only the actions needed to address the unsafe condition (i.e., only the RC actions).

Costs of Compliance

The FAA estimates that this proposed AD affects 122 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

The FAA estimates the total cost per operator for the retained actions from AD 2019-02-03 to be \$7,650 (90 work-hours x \$85 per work-hour).

The FAA has determined that revising the existing maintenance or inspection program takes an average of 90 work-hours per operator, although the agency recognizes

that this number may vary from operator to operator. In the past, the agency has estimated that this action takes 1 work-hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), the FAA has determined that a per-operator estimate is more accurate than a per-airplane estimate.

The FAA estimates the total cost per operator for the new proposed maintenance or inspection program revision to be \$7,650 (90 work-hours x \$85 per work-hour).

Estimated costs for required replacement or modification

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement or modification	2 work-hours X \$85 per hour = \$170	\$5,000	\$5,170	\$630,740

According to the manufacturer, some or all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. The FAA does not control warranty coverage for affected individuals. As a result, the FAA has included all known costs in our cost estimate.

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 has 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 that the 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 removing Airworthiness Directive (AD) 2019-02-03, Amendment 39-19550 (84 FR 2437, February 7, 2019), and adding the following new AD:

The Boeing Company: Docket No. FAA-2020-0580; Product Identifier 2020-NM-052-AD.

(a) Comments Due Date

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

(b) Affected ADs

This AD replaces AD 2019-02-03, Amendment 39-19550 (84 FR 2437, February 7, 2019) (“AD 2019-02-03”).

(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 26, Fire protection.

(e) Unsafe Condition

This AD was prompted by reports of warpage of internal engine fire handle components that can cause binding and prevent proper operation, and by the development of a new fire handle design that will prevent the unsafe condition. The FAA is issuing this AD to address a latent failure of the engine fire handle, which could result in the inability to extinguish an engine fire that, if uncontrollable, could lead to wing failure.

(f) Compliance

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

(g) Retained Maintenance/Inspection Program Revision, With No Changes

This paragraph restates the requirements of paragraph (g) of AD 2019-02-03, with no changes. Within 14 days after February 22, 2019 (the effective date of AD 2019-02-03), revise the existing maintenance or inspection program, as applicable, to add airworthiness limitation 28-AWL-FIRE, by incorporating the information specified in figure 1 to paragraph (g) of this AD into the Airworthiness Limitations Section of the Instructions for Continued Airworthiness. The initial compliance time for accomplishing the actions specified in figure 1 to paragraph (g) of this AD is within 45 days after February 22, 2019.

Figure 1 to paragraph (g): Engine fire handle operational check

AWL No.	Task	Interval	Applicability	Description
28-AWL -FIRE	ALI	30 days	787-8, -9, and -10 airplanes	<p>Engine Fire Handle Operational Check.</p> <p>Concern: The fire handle design can result in airplanes operating with an engine fire handle that cannot be operated. A latently failed engine fire handle could prevent the fire extinguishing agent from being able to be released. In the event of certain engine fires, the potential exists for an engine fire to be uncontrollable.</p> <p>Perform the following engine fire handle checks (unless checked by the flightcrew in a manner approved by the principal operations inspector):</p> <ol style="list-style-type: none"> 1. Press the left engine fire handle solenoid override button, and verify that the handle can be pulled up using normal force. CAUTION: Do not rotate the engine fire handle; inadvertent discharge of the fire extinguishing agent would result. Although not required, pulling the FIRE EXT BOTTLE – ENG L1 and L2 circuit breakers will prevent fire bottle discharge. 2. Stow the handle. 3. Press the right engine fire handle solenoid override button, and verify that the handle can be pulled up using normal force. CAUTION: Do not rotate the engine fire handle; inadvertent discharge of the fire extinguishing agent would result. Although not required, pulling the FIRE EXT BOTTLE – ENG R1 and R2 circuit breakers will prevent fire bottle discharge. 4. Stow the handle. <p>Replace any engine fire handle that fails any operational check before further flight.</p>

(h) Retained Restrictions on Alternative Actions and Intervals, With New Exception

This paragraph restates the requirements of paragraph (h) of AD 2019-02-03, with a new exception. Except as required by paragraph (k) of this AD: After accomplishment of the existing maintenance or inspection program revision required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (o) of this AD.

(i) New Required Actions

For the airplanes identified in Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020: At the applicable times specified in the “Compliance” paragraph of Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020, except as specified by paragraph (j) of this AD, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020.

Note 1 to paragraph (i): Guidance for accomplishing the actions required by paragraph (i) of this AD can be found in Boeing Service Bulletin B787-81205-SB260008-00, Issue 001, dated March 10, 2020, which is referred to in Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020.

(j) Exception to Service Information Specifications

Where Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020, uses the phrase “the issue 001 date of Requirements Bulletin B787-81205-SB260008-00 RB,” this AD requires using “the effective date of this AD.”

(k) New Maintenance/Inspection Program Revision

Prior to or concurrently with the actions specified in paragraph (i) of this AD, or within 30 days after the effective date of the AD, whichever occurs later: Revise the existing maintenance or inspection program, as applicable, by incorporating the information specified in figure 2 to paragraph (k) of this AD into the Airworthiness Limitations Section of the Instructions for Continued Airworthiness. It is acceptable to change the limitation number from 28-AWL-FIRE to 26-AWL-FIRE, provided the rest of the information in figure 2 to paragraph (k) of this AD remains unchanged. The initial compliance time for accomplishing the actions specified in figure 2 to paragraph (k) of this AD is within 30 days after accomplishing the last 28-AWL-FIRE or 26-AWL-FIRE task, as applicable. Accomplishing the revision required by this paragraph terminates the actions required by paragraph (g) of this AD.

Figure 2 to paragraph (k): Engine fire handle operational check

AWL No.	Task	Interval	Applicability	Description
28-AWL -FIRE	ALI	30 days	787-8, -9, and -10 airplanes equipped with an engine fire control panel having part number 412600-001 or an engine fire shutoff switch having part number 417000-101 or 417000-102	<p>Engine Fire Handle Operational Check.</p> <p>Concern: The fire handle design can result in airplanes operating with an engine fire handle that cannot be operated. A latently failed engine fire handle could prevent the fire extinguishing agent from being able to be released. In the event of certain engine fires, the potential exists for an engine fire to be uncontrollable.</p> <p>Perform the following engine fire handle checks (unless checked by the flightcrew in a manner approved by the principal operations inspector):</p> <ol style="list-style-type: none"> 1. Press the left engine fire handle solenoid override button, and verify that the handle can be pulled up using normal force. CAUTION: Do not rotate the engine fire handle; inadvertent discharge of the fire extinguishing agent would result. Although not required, pulling the FIRE EXT BOTTLE – ENG L1 and L2 circuit breakers will prevent fire bottle discharge. 2. Stow the handle. 3. Press the right engine fire handle solenoid override button, and verify that the handle can be pulled up using normal force. CAUTION: Do not rotate the engine fire handle; inadvertent discharge of the fire extinguishing agent would result. Although not required, pulling the FIRE EXT BOTTLE – ENG R1 and R2 circuit breakers will prevent fire bottle discharge. 4. Stow the handle. <p>Replace any engine fire handle that fails any operational check before further flight.</p>

(l) New Restrictions on Alternative Actions and Intervals

After accomplishment of the existing maintenance or inspection program revision required by paragraph (k) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an AMOC in accordance with the procedures specified in paragraph (o) of this AD.

(m) Terminating Action for Repetitive Inspections

Accomplishment of the actions required by paragraph (i) of this AD on all affected airplanes in an operator's fleet terminates the requirements of paragraph (k) of this AD.

(n) Parts Installation Prohibition

As of the effective date of this AD, no person may install on any airplane any engine fire control panel having part number (P/N) 412600-001, or any engine fire shutoff switch having P/N 417000-101 or P/N 417000-102.

(o) 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 (p)(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 2019-02-03 are approved as AMOCs for the corresponding provisions of paragraph (g) of this AD.

(p) Related Information

(1) For more information about this AD, contact Tak Kobayashi, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3553; email: takahisa.kobayashi@faa.gov.

(2) For service information 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; internet <https://www.myboeingfleet.com>. You may view this referenced 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.

Issued on July 7, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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