



## 適航指令發布單

### Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2021-02-011	發布日期 Date issued	2021/2/25
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	Model 787-8, 787-9, and 787-10 airplanes, certificated in any category.		
主旨摘要	This AD requires replacing or modifying certain engine fire control panels , which terminates the revised airworthiness limitation added in this final rule also continues to retaining the requirements of AD 2019-02-03 (CAA2019-02-007) and revising existing maintenance or inspection program , as applicable , to incorporate new or more restrictive airworthiness limitations.		
民航局 CAA <input type="checkbox"/> 本國產品 Native products <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authorities <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input checked="" type="checkbox"/> FAA  <input type="checkbox"/> EASA  <input type="checkbox"/> Brazil  <input type="checkbox"/> Transport Canada Civil Aviation  <input type="checkbox"/> DGAC             </div> <div style="width: 48%;"> <input type="checkbox"/> Germany LBA  <input type="checkbox"/> CAA-NL  <input type="checkbox"/> UK CAA  <input type="checkbox"/> Japan CAB  <input type="checkbox"/> CAA of Israel  <input type="checkbox"/> Other _____             </div> </div>		
	設計國 AD 編號 Original AD number	2021-02-06	
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ <input type="checkbox"/>		
	2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do <input type="checkbox"/> Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 26. Ref. Boeing Requirements Bulletin B787-81205-SB260007-00 RB, Issue 001, dated February 22, 2019. and B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020.		
註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a> Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel:(02)2349-6331~3, Fax:(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a>			

[Federal Register Volume 86, Number 34 (Tuesday, February 23, 2021)]  
[Rules and Regulations]  
[Pages 10790-10796]  
From the Federal Register Online via the Government Publishing Office [www.gpo.gov]  
[FR Doc No: 2021-03567]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2020-0580; Product Identifier 2020-NM-052-AD; Amendment 39-21389; AD 2021-02-06]**

**RIN 2120-AA64**

### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2019-02-03, which applied to all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. AD 2019-02-03 required revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations. This AD retains the requirements of AD 2019-02-03 and requires incorporation of an airworthiness limitation that applies only to certain airplanes. This AD also requires replacing or modifying certain engine fire control panels, which terminates the revised airworthiness limitation added in this final rule when a certain condition is met. 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. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective March 30, 2021.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of March 30, 2021.

**ADDRESSES:** For service information identified in this final rule, 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 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 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.

**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](mailto:takahisa.kobayashi@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2019-02-03, Amendment 39-19550 (84 FR 2437, February 7, 2019) (AD 2019-02-03). AD 2019-02-03 applied to all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. The NPRM published in the Federal Register on July 15, 2020 (85 FR 42749). The NPRM 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 eliminate the need for the airworthiness limitations required by AD 2019-02-03. The NPRM proposed to retain the requirements of AD 2019-02-03 and to require incorporation of an airworthiness limitation that applies only to certain airplanes. The NPRM also proposed to require replacing or modifying certain engine fire control panels, which would terminate the revised airworthiness limitation added in this final rule when a certain condition is met. 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.

### **Comments**

The FAA gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Request To Expand Approved Alternative Methods of Compliance (AMOCs)**

Boeing asked that paragraph (o)(4) of the proposed AD (paragraph (p)(4) of this AD), which specifies “AMOCs approved previously for AD 2019-02-03 are approved as AMOCs for the corresponding provisions of paragraph (g) of this AD,” also include approval of AMOCs for the corresponding provisions of paragraph (k) of the proposed AD. Boeing stated that approved AMOC RA-19-00263 (Boeing letter requesting an AMOC for AD 2019-02-03) provides inspection instructions equivalent to Airworthiness Limitation 28-AWL-FIRE in figure 1 to paragraph (g) of the proposed AD. Boeing added that the inspection instructions of 28-AWL-FIRE in figure 1 to paragraph (g) of the proposed AD and in figure 2 to paragraph (k) of the proposed AD are identical.

The FAA partially agrees with the commenter's request. The FAA previously approved Boeing Alert Requirements Bulletin B787-81205-SB260007-00 RB, Issue 001, dated February 22, 2019, as an AMOC to the requirements of paragraph (g) of AD 2019-02-03. The inspection instructions provided in Boeing Alert Requirements Bulletin B787-81205-SB260007-00 RB, Issue 001, dated February 22, 2019, are equivalent to 28-AWL-FIRE in figure 1 to paragraph (g) of this AD and in figure 2 to paragraph (k) of this AD. Because paragraph (k) is a new requirement of this AD, the

FAA has instead added the action as an alternative terminating action, paragraph (l) of this AD, for the repetitive inspections for 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.

### **Request To Revise Parts Installation Prohibition Paragraph or Extend Compliance Time**

American Airlines, All Nippon Airways (ANA), and United Airlines asked that the FAA revise paragraph (n) of the proposed AD to continue to allow, for a limited time, the installation of the engine fire handle with the part numbers on which an unsafe condition has been identified after the effective date of the AD. American Airlines and United Airlines asked that installing the parts be allowed for 15 months after the effective date of the AD, which is consistent with the referenced service information. ANA asked that it be allowed to install the parts until the engine fire handle with new part numbers is installed in accordance with paragraph (i) of the proposed AD. ANA also asked that the compliance time specified in paragraph (i) of the proposed AD be extended to 24 months after the effective date of the AD.

American Airlines stated that this change is necessary because the repetitive inspections of the engine fire handle with the part numbers on which an unsafe condition has been identified remain in place until those part numbers are replaced by the new part numbers. American Airlines added that they would need a full panel or two new switches if there were findings of failed fire handles because they can't mix old and new parts. American Airlines, ANA, and United Airlines expressed their concern regarding parts availability due to limited supply. ANA stated that the supply of the engine fire handles with new part numbers is insufficient worldwide due to the Coronavirus Disease 2019 (COVID-19).

The FAA partially agrees with the commenters' requests, based on the limited supply of new part numbers available due to extenuating circumstances. The FAA has received a number of reports of failed engine fire handles found during the repetitive inspections. The frequency of failures found in service, and the provisions of the "Parts Installation Prohibition" of paragraph (n) of the proposed AD, could have forced operators to install the new part numbers from a limited supply before reaching the compliance time in paragraph (i) of this AD. Furthermore, as American Airlines stated, the repetitive inspections required by 28-AWL-FIRE remain in place until a fire handle with new part numbers is installed. The repetitive inspections do not eliminate the latent failure of the engine fire handle, but they will limit the number of flights the airplanes can operate with a failed engine fire handle. Since paragraph (n) of the proposed AD would have applied to all airplanes including those airplanes delivered with the engine fire control panel having the new part number required by paragraph (i) of this AD, and since it is necessary to prohibit the replacement of the new part number with the old part number for those airplanes that are not covered by paragraph (i) of this AD, the FAA has revised paragraph (o) of this AD (paragraph (n) of the proposed AD) to include an exception for airplanes identified in Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020. For airplanes affected by paragraph (i) of this AD, once operators comply with the actions required by paragraph (i) of this AD by installing parts with new part numbers, operators must continue to maintain the airplane configuration compliant with the AD requirements. For airplanes delivered with the fire control panel having the new part number, paragraph (o) of this AD prohibits the replacement of the new part numbers with the old part numbers on which the unsafe condition was identified.

The FAA does not agree with ANA's request to revise the compliance time in paragraph (i) of this AD to 24 months. Since the level of impact of parts supply may vary for each operator, we are unable to determine an appropriate change to the compliance time in paragraph (i) of this AD that will result in a minimal impact on safety and on operators' ability to comply with the AD requirements. Therefore, operators that encounter limited parts supply that could hinder the ability to meet the requirements of paragraph (i) of this AD within the compliance time indicated should request an AMOC to extend this compliance time. If data are provided to show that the extended

compliance time addresses the unsafe condition, operators may request approval of an AMOC under the provisions of paragraph (p) of this AD. The FAA has not changed this AD regarding this issue.

### **Request To Revise Airworthiness Limitation 28-AWL-FIRE**

The Air Line Pilots Association, International (ALPA) asked that the FAA revise Airworthiness Limitation 28-AWL-FIRE to remove the language that allows the flightcrew to perform an operational check of the engine fire handle. ALPA stated that because the proposed AD retains the actions required by AD 2019-02-03, the proposed AD also retains the allowance for the flightcrew to perform the engine fire handle operational check in a manner approved by the principal operations inspector in lieu of being performed by specifically trained maintenance personnel per the procedures in 28-AWL-FIRE. ALPA previously highlighted concern with the flightcrew conducting the check required by AD 2019-02-03, and reiterated that concern in comments on the NPRM. ALPA noted that without specific training to flightcrews, the opportunity exists for the operational check to be performed inaccurately. ALPA concluded that to ensure that the check is effective until the terminating action is accomplished, consistent procedures should be followed and documented by appropriately trained maintenance personnel, as specified in the proposed AD.

The FAA does not agree with the commenter's request. Airworthiness Limitation 28-AWL-FIRE includes an allowance for the flightcrew to perform an operational check of the engine fire handle since the inspection interval is relatively short and the inspection procedure is relatively straightforward. Based on this allowance, operators can develop the procedures for the flightcrew to perform an operational check in a timely manner. Operators must ensure that the operational check required by 28-AWL-FIRE is accurately performed by the flightcrew in order for the procedures to be approved by the principal operations inspector. The FAA has not changed this AD in this regard.

### **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously, and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

### **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.

The FAA also reviewed Boeing Requirements Bulletin B787-81205-SB260007-00 RB, Issue 001, dated February 22, 2019. The service information describes procedures for performing repetitive operational checks of the engine fire handle.

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.

### **Costs of Compliance**

The FAA estimates that this AD affects 122 airplanes of U.S. registry. The FAA estimates the following costs to comply with this 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. 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 maintenance or inspection program revision to be \$7,650 (90 work-hours x \$85 per work-hour).

#### **Estimated Costs for Required Replacement or Modification**

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

According to the manufacturer, some or all of the costs of this 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 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.

## **Adoption of 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) 2019-02-03, Amendment 39-19550 (84 FR 2437, February 7, 2019), and
- b. Adding the following new AD:



**FAA  
Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2021-02-06 The Boeing Company:** Amendment 39-21389; Docket No. FAA-2020-0580; Product Identifier 2020-NM-052-AD.

### **(a) Effective Date**

This AD is effective March 30, 2021.

### **(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"> <li>1. Press the left engine fire handle solenoid override button, and verify that the handle can be pulled up using normal force.</li> </ol> <p>CAUTION: Do not rotate the engine fire handle; inadvertent discharge of the fire extinguishing agent would result.</p> <p>Although not required, pulling the FIRE EXT BOTTLE – ENG L1 and L2 circuit breakers will prevent fire bottle discharge.</p> <ol style="list-style-type: none"> <li>2. Stow the handle.</li> <li>3. Press the right engine fire handle solenoid override button, and verify that the handle can be pulled up using normal force.</li> </ol> <p>CAUTION: Do not rotate the engine fire handle; inadvertent discharge of the fire extinguishing agent would result.</p> <p>Although not required, pulling the FIRE EXT BOTTLE – ENG R1 and R2 circuit breakers will prevent fire bottle discharge.</p> <ol style="list-style-type: none"> <li>4. Stow the handle.</li> </ol> <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 (p) 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**

Except as provided by paragraph (l) of this AD: 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"> <li>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.</li> <li>2. Stow the handle.</li> <li>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.</li> <li>4. Stow the handle.</li> </ol> <p>Replace any engine fire handle that fails any operational check before further flight.</p>

#### **(l) Alternative Operational Check**

For Model 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: As an alternative to performing the actions required by paragraph (k) of this AD, within 30 days after accomplishing the last 28-AWL-FIRE or 26-AWL-FIRE task or accomplishing the last operational check of the engine fire handle in accordance with Boeing Requirements Bulletin B787-81205-

SB260007-00 RB, Issue 001, dated February 22, 2019; perform an operational check of the engine fire handle in accordance with Boeing Requirements Bulletin B787-81205-SB260007-00 RB, Issue 001, dated February 22, 2019. Repeat the operational check thereafter at intervals not to exceed 30 days. Accomplishing the initial check specified in this paragraph terminates the actions required by paragraph (g) of this AD.

Note 2 to paragraph (l): Guidance for accomplishing the actions specified in paragraph (l) of this AD can be found in Boeing Service Bulletin B787-81205-SB260007-00, Issue 001, dated February 22, 2019, which is referred to in Boeing Requirements Bulletin B787-81205-SB260007-00 RB, Issue 001, dated February 22, 2019.

#### **(m) 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 (p) of this AD.

#### **(n) 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.

#### **(o) Parts Installation Prohibition**

For Model 787-8, -9, and -10 airplanes, except those identified in Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020: 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.

#### **(p) 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 (q) 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.

**(q) Related Information**

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.

**(r) 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 Requirements Bulletin B787-81205-SB260007-00 RB, Issue 001, dated February 22, 2019.

(ii) Boeing Requirements Bulletin B787-81205-SB260008-00 RB, Issue 001, dated March 10, 2020.

(3) 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>.

(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 service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on January 7, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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