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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2020-0205; Product Identifier 2020-NM-024-AD; Amendment 39-19883; AD 2020-06-14]

RIN 2120-AA64

#### Airworthiness Directives; The Boeing Company Airplanes

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

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. This AD requires repetitive cycling of the airplane electrical power. This AD was prompted by a report that the stale-data monitoring function of the common core system (CCS) may be lost when continuously powered on for 51 days. This could lead to undetected or unannounced loss of common data network (CDN) message age validation, combined with a CDN switch failure. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective April 7, 2020.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 7, 2020.

The FAA must receive comments on this AD by May 7, 2020.

**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 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 referenced service information at the FAA, Transport Standards 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-2020-0205.

## **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-2020-0205; 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, the regulatory evaluation, 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:** Joe Saleme, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3536; email: [joe.salameh@faa.gov](mailto:joe.salameh@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The FAA has received a report indicating that the stale-data monitoring function of CCS may be lost when continuously powered on for 51 days. This could lead to undetected or unannounced loss of CDN message age validation, combined with a CDN switch failure. The CDN handles all the flight-critical data (including airspeed, altitude, attitude, and engine operation), and several potentially catastrophic failure scenarios can result from this situation. Potential consequences include:

- Display of misleading primary attitude data for both pilots.
- Display of misleading altitude on both pilots' primary flight displays (PFDs).
- Display of misleading airspeed data on both pilots' PFDs, without annunciation of failure, coupled with the loss of stall warning, or over-speed warning.
- Display of misleading engine operating indications on both engines.

The potential loss of the stale-data monitoring function of the CCS when continuously powered on for 51 days, if not addressed, could result in erroneous flight-critical data being routed and displayed as valid data, which could reduce the ability of the flightcrew to maintain the safe flight and landing of the airplane.

## **Related Service Information Under 1 CFR Part 51**

The FAA reviewed Boeing Alert Service Bulletin B787-81205-SB420045-00, Issue 002, dated February 14, 2020. The service information describes procedures for repetitive cycling of the airplane electrical power. 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 issuing 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.

## **AD Requirements**

This AD requires accomplishing the actions identified as “RC” (required for compliance) in the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB420045-00, Issue 002, dated February 14, 2020, described previously, except for any differences identified as exceptions in the regulatory text of this 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-2020-0205.

## **Interim Action**

The FAA considers this AD interim action. If final action is later identified, the FAA might consider further rulemaking then.

## **Justification For Immediate Adoption and Determination of the Effective Date**

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C.) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for “good cause,” finds that those procedures are “impracticable, unnecessary, or contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without seeking comment prior to the rulemaking. Similarly, Section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies foregoing notice and comment prior to adoption of this rule because, as described in the Discussion section of this AD, the stale-data monitoring function of the CCS may be lost when continuously powered on for 51 days. This could lead to undetected or unannounced loss of CDN message age validation, combined with a CDN switch failure. This condition, if not addressed, could result in erroneous flight-critical data being routed and displayed as valid data, which could reduce the ability of the flightcrew to maintain the safe flight and landing of the airplane. Given the significance of the risk presented by this unsafe condition, the unsafe condition must be immediately addressed.

Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b)(3)(B). In addition, for the reasons stated above, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days.

## **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, the FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2020-0205 and Product Identifier 2020-NM-024-AD at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information 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 <https://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact the agency receives about this final rule.

## Confidential Business Information

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 AD 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 AD, 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 AD. Submissions containing CBI should be sent to Joe Saleme, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3536; email: joe.saleme@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.

## Regulatory Flexibility Act (RFA)

The requirements of the RFA do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

## Costs of Compliance

The FAA estimates that this AD affects 196 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated Costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Power cycling	1 work-hour × \$85 per hour = \$85 per cycle	\$0	\$85 per cycle	\$16,660 per cycle.

## 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, and
- (2) Will not affect intrastate aviation in Alaska.

**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 adding the following new airworthiness directive (AD):



**2020-06-14 The Boeing Company:** Amendment 39-19883; Docket No. FAA-2020-0205; Product Identifier 2020-NM-024-AD.

**(a) Effective Date**

This AD is effective April 7, 2020.

**(b) Affected ADs**

None.

**(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 42, Integrated Modular Avionics.

**(e) Unsafe Condition**

This AD was prompted by a report that the stale-data monitoring function of the common core system (CCS) may be lost when continuously powered on for 51 days. This could lead to undetected or unannounced loss of common data network (CDN) message age validation, combined with a CDN switch failure. The FAA is issuing this AD to address this condition, which could result in erroneous flight-critical data being routed and displayed as valid data, and could reduce the ability of the flightcrew to maintain the safe flight and landing of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

Except as specified by paragraph (h) of this AD: At the applicable times specified in paragraph 5., "Compliance," of Boeing Alert Service Bulletin B787-81205-SB420045-00, Issue 002, dated February 14, 2020, do all applicable actions identified as "RC" (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB420045-00, Issue 002, dated February 14, 2020.

## **(h) Exception to Service Information Specifications**

Where Boeing Alert Service Bulletin B787-81205-SB420045-00, Issue 002, dated February 14, 2020, uses the phrase “the Issue 2 date of this service bulletin,” this AD requires using “the effective date of this AD.”

## **(i) Credit for Previous Actions**

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin B787-81205-SB420045-00, Issue 001, dated January 28, 2020.

## **(j) 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 (k)(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) For service information that contains steps that are labeled as RC, the provisions of paragraphs (j)(4)(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.

## **(k) Related Information**

(1) For more information about this AD, contact Joe Saleme, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3536; email: joe.salameh@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(3) and (4) of this AD.

## **(l) 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 Service Bulletin B787-81205-SB420045-00, Issue 002, dated February 14, 2020.

(ii) [Reserved]

(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, Transport Standards 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 March 17, 2020.

Gaetano A. Sciortino,  
Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division,  
Aircraft Certification Service.