



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-7419; Directorate Identifier 2015-NM-189-AD; Amendment 39-18769; AD 2017-01-02]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 787-8 and 787-9 airplanes. This AD was prompted by a report that some inboard and outboard trailing edge flap rotary actuators may have been assembled with an incorrect no-back brake rotor-stator stack sequence during manufacturing. This AD requires inspecting the trailing edge flap rotary actuator, and replacing the rotary actuator or doing related investigative and corrective actions if necessary. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**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 referenced

service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-7419.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-7419; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, 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:** Fnu Winarto, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6659; fax: 425-917-6590; email: [fnu.winarto@faa.gov](mailto:fnu.winarto@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 787-8 and 787-9 airplanes. The NPRM published in the Federal Register on July 12, 2016 (81 FR 45070) (“the NPRM”). The NPRM was prompted by a report that some inboard and outboard trailing edge flap rotary actuators may have been assembled with an incorrect no-back brake rotor-stator stack sequence during manufacturing. The NPRM proposed to require an inspection of the inboard and outboard flap trailing edge rotary actuator for any

discrepant rotary actuator. For discrepant rotary actuators, the NPRM proposed to require replacing the rotary actuator, or alternatively, determining the flight cycles on the rotary actuator, and doing related investigative and corrective actions if necessary. We are issuing this AD to detect and replace rotary actuators having incorrect assembly, which could cause accelerated unit wear that will eventually reduce braking performance. This degradation could lead to loss of no-back brake function and reduced controllability of the airplane.

### **Comments**

We 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. Boeing stated that it supported the NPRM. United Airlines (UAL) stated that it supported the compliance time in the NPRM.

### **Request for the Manufacturer to Re-Evaluate its Warranty Policy**

UAL requested that Boeing re-evaluate its warranty policy. UAL stated that an incorrect stack sequence occurred during the manufacturing process and that operators should not be penalized for having to perform the test and replacement of the rotary actuators.

We partially agree with the request. We agree that this is a manufacturing issue. However, we have not revised this final rule in this regard because we do not regulate Boeing's warranty policy.

### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the NPRM.

**Related Service Information under 1 CFR part 51**

We reviewed Boeing Alert Service Bulletin B787-81205-SB270032-00, Issue 001, dated November 3, 2015. The service information describes procedures for an inspection of the inboard and outboard flap rotary actuator for any discrepant rotary actuator, and procedures for replacing the rotary actuator, or determining the flight cycles on the rotary actuator and doing applicable related investigative and corrective actions. 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**

We estimate that this AD affects 5 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspection	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$425

We estimate the following costs to do any necessary on-condition actions that will be required based on the results of the inspection. We have no way of determining the number of aircraft that might need this replacement:

**On-condition costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Check to determine flight cycles on the rotary	1 work-hour X \$85 per hour = \$85	\$0	\$85

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
actuator			
Functional test	2 work-hours X \$85 per hour = \$170	\$0	\$170
Replacement	2 work-hours X \$85 per hour = \$170	\$0	\$170

**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.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

**Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

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

**2017-01-02 The Boeing Company:** Amendment 39-18769; Docket No. FAA-2016-7419; Directorate Identifier 2015-NM-189-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE 35 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 and 787-9 airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin B787-81205-SB270032-00, Issue 001, dated November 3, 2015.

**(d) Subject**

Air Transport Association (ATA) of America Code 27, Flight Control Systems.

**(e) Unsafe Condition**

This AD was prompted by a report that some inboard and outboard trailing edge flap rotary actuators may have been assembled with an incorrect no-back brake rotor-stator stack sequence during manufacturing. We are issuing this AD to detect and replace rotary actuators having incorrect assembly, which could cause accelerated unit wear that will eventually reduce braking performance. This degradation could lead to loss of no-back brake function and reduced controllability of the airplane.

**(f) Compliance**

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

**(g) Inspection and Other Actions**

Within 60 months after the effective date of this AD, do an inspection of the inboard and outboard trailing edge flap rotary actuator for any discrepant rotary actuator, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB270032-00, Issue 001, dated November 3, 2015. If any discrepant rotary actuator is found, within 60 months after the effective date of this AD, do the actions specified in paragraph (g)(1) or (g)(2) of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB270032-00, Issue 001, dated November 3, 2015.

(1) Replace the discrepant rotary actuator.

(2) Check the maintenance records to determine the flight cycles of each discrepant rotary actuator and, within 60 months after the effective date of this AD, do all applicable related investigative and corrective actions.

**(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), 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 ACO, send it to the attention of the person identified in paragraph (i) 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 required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO 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 Required for Compliance (RC), the provisions of paragraphs (h)(4)(i) and (h)(4)(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.

**(i) Related Information**

For more information about this AD, contact Fnu Winarto, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6659; fax: 425-917-6590; email: fnu.winarto@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 Service Bulletin B787-81205-SB270032-00, Issue 001, dated November 3, 2015.

(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 referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425 227-1221.

(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, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on December 27, 2016.

Jeffrey E. Duven,

Manager,

Transport Airplane Directorate,

Aircraft Certification Service.

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