



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-2959; Directorate Identifier 2015-NM-008-AD; Amendment 39-18470; AD 2016-07-25]**

**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 airplanes. This AD was prompted by reports indicating that the ram air turbine (RAT) assembly may fail to operate if deployed at low airspeeds. This AD requires replacing either the RAT pump and control module assembly or the entire RAT assembly. We are issuing this AD to prevent failure of the RAT assembly to operate at low air speeds. The volume fuse on the RAT assembly may be activated in-flight before the RAT is deployed. This may lead to improper pump hydraulic pressure offloading when the RAT is needed. Failure of the RAT to operate in an all engine out event would result in loss of control of the airplane.

**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: Data & Services Management, P. O. Box 3707,

MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; 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-2015-2959.

### **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-2015-2959; 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:** Sean J. Schauer, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6479; fax: 425-917-6590; email: [sean.schauer@faa.gov](mailto:sean.schauer@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 airplanes. The NPRM published in the Federal Register on July 24, 2015 (80 FR 43972) (“the NPRM”). The NPRM was prompted by reports indicating that the RAT assembly may fail to operate if deployed at low airspeeds. The NPRM proposed to require replacing

either the RAT pump and control module assembly or the entire RAT assembly. We are issuing this AD to prevent failure of the RAT assembly to operate at low air speeds. The volume fuse on the RAT assembly may be activated in-flight before the RAT is deployed. This may lead to improper pump hydraulic pressure offloading when the RAT is needed. Failure of the RAT to operate in an all engine out event would result in loss of control 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 to each comment.

### **Support for the NPRM**

United Airlines stated that it supports the NPRM.

### **Request for Correction of RAT Minimum Design Speed**

Boeing requested that we revise the NPRM to state that the RAT minimum design speed is 120 knots, not 130 knots. Boeing explained that the RAT will remain operational as the airplane decelerates through the minimum RAT design speed of 120 knots, not 130 knots. Boeing expressed that the performance of the RAT was shown to meet the Boeing Model 787 requirement that specifies 120 knots as the minimum RAT design speed.

We agree that the RAT will remain operational as the airplane decelerates through the minimum RAT design speed of 120 knots, not 130 knots. However, that specific information is in the preamble of the NPRM, which is not restated in this final rule. Therefore, no changes have been made to this final rule in this regard.

### **Request to Revise Compliance Time**

The Air Line Pilots Association requested that we revise the compliance time of 36 months, to 12 months because the 36 months compliance time is too long, and that 12 months would be more suitable.

We disagree with the request to revise the compliance time. No data was submitted to substantiate the request made by the commenter. Engineering analysis indicates that 36 months is an appropriate compliance time to complete the required actions of this AD, and provides an acceptable level of safety. Most ADs, including this one, permit operators to accomplish the requirements of an AD at a time earlier than the specified compliance time; therefore, an operator may choose to perform the actions required by this AD earlier than the specified compliance time. We have made no changes to this final rule in this regard.

### **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-SB290015-00, Issue 002, dated November 25, 2014. The service information describes procedures for replacing either the RAT pump and control module assembly or the RAT assembly including an installation test and corrective actions if necessary. 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 12 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement	7 work-hours X \$85 per hour = \$595	N/A	\$595	\$7,140

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all 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.

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):

2016-07-25 **The Boeing Company**: Amendment 39-18470; Docket No. FAA-2015-2959; Directorate Identifier 2015-NM-008-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 airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin B787-81205-SB290015-00, Issue 002, dated November 25, 2014.

**(d) Subject**

Air Transport Association (ATA) of America Code 29, Hydraulic Power.

**(e) Unsafe Condition**

This AD was prompted by reports indicating that the ram air turbine (RAT) assembly may fail to operate if deployed at low airspeeds. We are issuing this AD to prevent failure of the RAT assembly to operate at low air speeds. The volume fuse on the RAT assembly may be activated in-flight before the RAT is deployed. This may lead to improper pump hydraulic pressure offloading when the RAT is needed. Failure of the RAT to operate in an all engine out event would result in loss of control of the airplane.

**(f) Compliance**

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

**(g) Replacement**

Within 36 months after the effective date of this AD, replace the RAT pump and control module assembly or the RAT assembly, including an installation test and applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin B787-81205-SB290015-00, Issue 002, dated November 25, 2014. Do all applicable corrective actions before further flight.

**(h) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin B787-81205-SB290015-00, Issue 001, dated September 4, 2014, which is not incorporated by reference in this AD.

**(i) 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 (j)(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 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 (i)(4)(i) and (i)(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. 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.

**(j) Related Information**

(1) For more information about this AD, contact Sean J. Schauer, Aerospace Engineer, Systems and Equipment Branch, ANM 130S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6479; fax: 425-917-6590; email: sean.schauer@faa.gov.

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

**(k) 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-SB290015-00, Issue 002, dated November 25, 2014.

(ii) Reserved.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at FAA, 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 March 26, 2016.

Jeffrey E. Duven,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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