



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0056; Product Identifier 2017-NE-29-AD; Amendment 39-19584; AD 2019-05-02]**

**RIN 2120-AA64**

**Airworthiness Directives; Rolls-Royce plc Turbofan Engines**

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

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

**SUMMARY:** We are superseding airworthiness directive (AD) 2017-22-13 for certain Rolls-Royce plc (RR) RB211-Trent 900 turbofan engine models. AD 2017-22-13 required an inspection of the drains mast and the replacement or repair of the drains mast if a crack is found. This AD retains this requirement, but adds repetitive inspections and expands the population of affected RR RB211-Trent 900 turbofan engine models. This AD was prompted by RR in-service findings that indicated a need to include part number (P/N) FW29847 drains mast and additional RR RB211-Trent 900 turbofan engines to the affected population. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 15 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 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

We must receive any comments on this 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 <http://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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; phone: +44 (0)1332 242424; fax: 011-44-1332-249936; email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp); Internet: <https://customers.rolls-royce.com/public/rollsroycecare>. You may view this service information at the FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0056.

### **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-2019-0056; 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 AD, the mandatory continuing airworthiness information,

regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527) is listed above. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Besian Luga, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7750; fax: 781-238-7199; email: besian.luga@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued AD 2017-22-13, Amendment 39-19093 (82 FR 51550, November 7, 2017), (“AD 2017-22-13”), for certain RR RB211-Trent 970-84 and RB211-Trent 972-84 turbofan engines. AD 2017-22-13 required an inspection of the drains mast and the replacement or repair of the drains mast if a crack is found. AD 2017-22-13 resulted from cracks found in the transition duct area of the drains mast. We issued AD 2017-22-13 to visually inspect the external areas of the transition duct area of the drains mast for a crack, and if a crack is found, to replace the drains mast or seal the crack.

**Actions Since AD 2017-22-13 was Issued**

Since we issued AD 2017-22-13, RR in-service investigations found cracks in the transition duct area of the drains mast. The RR investigation originally highlighted that engines that have installed the sub-idle ejector system introduced in RR Service Bulletin (SB) RB.211-80-H632, Revision 2, dated August 11, 2015, were most at risk of cracking. As a result, RR published Rolls-Royce Alert Non-Modification Service Bulletin (NMSB) No. RB.211-71-AJ576, Revision 1, dated July 11, 2018, to add engines with a drains mast, P/N KH31996, installed that have installed the sub-idle ejector system introduced in RR SB RB.211-80-H632, Revision 2, dated August 11, 2015, and engines with a drains mast, P/N FW29847, installed or have a drains mast, P/N KH31996, that have not installed the sub-idle ejector system introduced in RR SB RB.211-80-H632, Revision 2,

dated August 11, 2015. Also since we issued AD 2017-22-13, the European Union Aviation Safety Agency (EASA) has issued EASA AD 2018-0185, dated August 29, 2018, which retains the requirements of EASA AD 2017-0075R1, dated May 5, 2017, but adds repetitive inspections and expands the population of affected RR RB211-Trent 900 turbofan engine models. We are issuing this AD to address the unsafe condition on these products.

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

We reviewed Rolls-Royce Alert NMSB No. RB.211-71-AJ576, Revision 1, dated July 11, 2018. The Alert NMSB describes procedures for inspection, repair, and replacement of the drains mast. 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.

#### **Other Related Service Information**

We reviewed Rolls-Royce SB RB.211-80-H632, Revision 2, dated August 11, 2015. The SB describes procedures for installing a new sub-idle ejector system on the low-pressure compressor case.

#### **FAA's Determination**

This product has been approved by EASA, and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all the relevant information provided by EASA 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 visual inspections of the external areas of the transition duct area of the drains mast for a crack. This AD also requires, if a crack is found, replacement of the drains mast with a part eligible for installation or sealing of the crack.

## **FAA's Justification and Determination of the Effective Date**

No domestic operators use this product. Therefore, we find that notice and opportunity for prior public comment are unnecessary and that good cause exists 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 we did not provide you with notice and an opportunity to provide your comments before it becomes effective. However, we invite 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-2019-0056 and product identifier 2017-NE-29-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. We will consider all comments received by the closing date and may amend this final rule because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this final rule.

## **Costs of Compliance**

We estimate that this AD affects zero engines installed on 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> |
|-------------------------|--------------------------------------|-------------------|-------------------------|-------------------------------|
| Inspect the drains mast | 2 work-hours X \$85 per hour = \$170 | \$0               | \$170                   | \$0                           |

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection.

**On-condition costs**

| <b>Action</b>           | <b>Labor cost</b>                  | <b>Parts cost</b> | <b>Cost per product</b> |
|-------------------------|------------------------------------|-------------------|-------------------------|
| Replace the drains mast | 1 work-hour X \$85 per hour = \$85 | \$72,000          | \$72,085                |
| Seal the drains mast    | 1 work-hour X \$85 per hour = \$85 | \$0               | \$85                    |

**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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In

accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

### **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 part 39 of the Federal Aviation Regulations (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) 2017-22-13, Amendment 39-19093 (82 FR 51550, November 7, 2017), and adding the following new AD:

2019-05-02 **Rolls-Royce plc**: Amendment 39-19584; Docket No. FAA-2019-0056; Product Identifier 2017-NE-29-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2017-22-13, Amendment 39-19093 (82 FR 51550, November 7, 2017).

**(c) Applicability**

This AD applies to all Rolls-Royce plc (RR) RB211-Trent 970-84 and RB211-Trent 972-84 turbofan engines with a drains mast, part number (P/N) KH31996 or FW29847, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7170, Powerplant/Engine Drains.

**(e) Unsafe Condition**

This AD was prompted by RR in-service findings that indicated a need to include part number (P/N) FW29847 drains mast and additional RR RB211-Trent 900 turbofan engines to the affected population. We are issuing this AD to prevent failure of the drains mast. The unsafe condition, if not addressed, could result in engine fire and damage to the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) For Group 1 engines, within 24 months after November 22, 2017 (the effective date of AD 2017-22-13), or within 24 months time since new, whichever occurs later, and thereafter, at intervals not to exceed 24 months since previous inspection, visually inspect the external areas of the transition duct area of the drains mast for a crack using Accomplishment Instructions, paragraph 3.A.(1), of RR Alert Non-Modification Service Bulletin (NMSB) RB.211-71-AJ576, Revision 1, dated July 11, 2018.

If a crack is found, do one of the following before further flight:

- (i) Remove and replace the drains mast with a part eligible for installation, or
- (ii) Seal the crack using the Accomplishment Instructions, paragraph 3.A.(1).(c).(ii).(2), of RR Alert NMSB RB.211-71-AJ576, Revision 1, dated July 11, 2018, and within 100 flight cycles after sealing the crack, remove and replace the drains mast with a part eligible for installation.

(2) For Group 2 engines, within 24 months after the effective date of this AD, and thereafter, at intervals not to exceed 24 months since previous inspection, visually inspect the external areas of the transition duct area of the drains mast for a crack using Accomplishment Instructions, paragraph 3.A.(1), of RR Alert NMSB RB.211-71-AJ576, Revision 1, dated July 11, 2018.

If a crack is found, do one of the following before further flight:

- (i) Remove and replace the drains mast with a part eligible for installation, or
- (ii) Seal the crack using the Accomplishment Instructions, paragraph 3.A.(1).(c).(ii).(2), of RR Alert NMSB RB.211-71-AJ576, Revision 1, dated July 11, 2018, and within 100 flight cycles after sealing the crack, remove and replace the drains mast with a part eligible for installation.

**(h) Definition**

(1) For the purposes of this AD, “Group 1” engines are those with a drains mast, P/N KH31996, installed that have installed the sub-idle ejector system introduced in RR SB RB.211-80-H632, Revision 2, dated August 11, 2015. “Group 2” engines are those engines with a drains mast, P/N FW29847, installed or have a drains mast, P/N KH31996, that have not installed the sub-idle ejector system introduced in RR SB RB.211-80-H632, Revision 2, dated August 11, 2015.

(2) For the purposes of this AD, a part eligible for installation is a drains mast with a part number not listed in this AD or a part that has passed the inspection required by this AD.

(3) For the purposes of this AD, a flight cycle is a take-off and landing.

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

(1) The Manager, ECO 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 (j)(1) of this AD. You may email your request to: ANE-AD-AMOC@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.

**(j) Related Information**

(1) For more information about this AD, contact Besian Luga, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7750; fax: 781-238-7199; email: besian.luga@faa.gov.

(2) Refer to MCAI European Union Aviation Safety Agency (EASA) AD 2018-0185, dated August 29, 2018, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2019-0056.

**(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) Rolls-Royce Alert Non-Modification Service Bulletin No. RB.211-71-AJ576, Revision 1, dated July 11, 2018.

(ii) [Reserved]

(3) For Rolls-Royce plc service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; phone: +44 (0)1332 242424; fax: 011-44-1332-249936; email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp); Internet: <https://customers.rolls-royce.com/public/rollsroycecare>.

(4) You may view this service information at FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(5) You may view this service information 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 Burlington, Massachusetts, on March 6, 2019.

Karen M. Grant,  
Acting Manager, Engine & Propeller Standards Branch,  
Aircraft Certification Service.  
[FR Doc. 2019-04394 Filed: 3/11/2019 8:45 am; Publication Date: 3/12/2019]