



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-0004; Directorate Identifier 2012-NE-01-AD; Amendment 39-18794; AD 2017-03-03]**

**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) 2013-05-18 for certain Rolls-Royce plc (RR) RB211 Trent 500 series turbofan engines. AD 2013-05-18 required initial and repetitive inspections of the low-pressure (LP) fuel tubes, fuel tube clips, and fuel/oil heat exchanger (FOHE) mounts for evidence of damage, wear, and fuel leakage. This AD reduces the repetitive inspection intervals. This AD was prompted by additional service experience. We are issuing this AD to correct 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 60 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, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; or email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp). You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-0004.

## **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-2012-0004; 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 mandatory continuing airworthiness information, regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: Robert.Green@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **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, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0004; Directorate Identifier 2012-NE-01-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD 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 AD.

### **Discussion**

On March 7, 2013, we issued AD 2013-05-18, Amendment 39-17390 (78 FR 17297, March 21, 2013), for all RR RB211 Trent 500 series turbofan engines. AD 2013-05-18 required initial and repetitive inspections of the fuel tubes, fuel tube clips, and FOHE mounts for evidence of damage, wear, and fuel leakage. AD 2013-05-18 resulted from reports of wear found between the securing clips and the LP fuel tube outer surface, which reduces the fuel tube wall thickness, leading to fracture of the fuel tube and consequent fuel leakage. We issued AD 2013-05-18 to prevent engine fuel leaks, which could result in engine damage and damage to the airplane.

### **Actions Since AD 2013-05-18 was Issued**

Since we issued AD 2013-05-18, RR has determined that the repetitive inspection interval should be reduced. Also since we issued AD 2013-05-18, the European Aviation Safety Agency (EASA) has issued AD 2016-0227, dated November 10, 2016, which requires correcting some technical instructions and reducing the inspection interval.

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

We reviewed RR Alert Non Modification Service Bulletin (NMSB) RB.211-73-AG948, Revision 3, dated September 9, 2016. The NMSB describes procedures for inspecting, removing, and replacing the LP fuel tubes, fuel tube clips, and FOHE mounts. 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**

We are issuing this AD because we 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 repetitive inspections of the LP fuel tubes and fuel tube clips, and FOHE mounts for evidence of damage, wear, and fuel leakage.

**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.

**Costs of Compliance**

We estimate that this AD affects no 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> |
|---------------|--|-------------------|-------------------------|-------------------------------|
| Inspection    | 5 work-hours X<br>\$85 per hour =<br>\$425 | \$0               | \$425                   | \$0                           |

### **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 to the extent that it justifies making a regulatory distinction, 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) 2013-05-18, Amendment 39-17390 (78 FR 17297, March 21, 2013), and adding the following new AD:

2017-03-03 **Rolls-Royce plc**: Amendment 39-18794; Docket No. FAA-2012-0004; Directorate Identifier 2012-NE-01-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 supersedes AD 2013-05-18, Amendment 39-17390 (78 FR 17297, March 21, 2013).

**(c) Applicability**

This AD applies to Rolls-Royce plc (RR) RB211 Trent 553-61, RB211 Trent 553A2-61, RB211 Trent 556-61, RB211 Trent 556A2-61, RB211 Trent 556B-61, RB211 Trent 556B2-61, RB211 Trent 560-61, and RB211 Trent 560A2-61 turbofan engines that have any of the following fuel tube part numbers installed: FW57605, FW17689, FW57604, FK30710, FW57578, or FK30713.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7921, Engine Oil Cooler.

**(e) Unsafe Condition**

This AD was prompted by reports of wear found between the securing clips and the low-pressure (LP) fuel tube outer surface, which reduces the fuel tube wall thickness, leading to fracture of the fuel tube and consequent fuel leakage. We are issuing this AD to prevent engine fuel leaks, which could result in engine damage and damage to the airplane.

**(f) Compliance**

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

**(g) Required Actions**

(1) Inspect the LP fuel tubes, clips, and fuel/oil heat exchanger (FOHE) mounts of the LP fuel system of engines that are on wing within 1,600 flight hours after February 24, 2012, or before the next flight after the effective date of this AD, whichever occurs

later. Use the Accomplishment Instructions, paragraph 3.A, of RR Alert Non-Modification Service Bulletin (NMSB) RB.211-73-AG948, Revision 3, dated September 9, 2016, to do the inspection.

(2) At intervals not to exceed 5,000 engine flight hours (EFH), reinspect the LP fuel tubes, clips, and FOHE mounts using the Accomplishment Instructions, paragraph 3.A or 3.B, of RR Alert NMSB RB.211-73-AG948, Revision 3, dated September 9, 2016.

(3) If the LP fuel system fails the inspections required by paragraphs (g)(1) and (2) of this AD, replace the part(s) that failed the inspection with hardware eligible for installation before further flight.

(4) At any shop visit after the effective date of this AD, inspect the LP fuel system using the Accomplishment Instructions, paragraph 3.B, of RR Alert NMSB RB.211-73-AG948, Revision 3, dated September 9, 2016.

**(h) Definitions**

(1) For the purpose of this AD, a shop visit is the induction of an engine into the shop for maintenance or overhaul. The separation of engine flanges solely for the purpose of transporting the engine without subsequent engine maintenance does not constitute an engine shop visit.

(2) For the purposes of paragraph (g)(2) of this AD, EFHs are those accumulated by the engine since the most recent accomplishment of any RR Service Bulletin (SB), NMSB, or Alert NMSB listed in paragraphs (h)(2)(i) through (h)(2)(v) of this AD:

(i) Accomplishment of RR SB RB.211-73-F737, Revision 5, dated June 9, 2009, or earlier versions.

(ii) Accomplishment of RR SB RB.211-73-F738, Revision 2, dated February 20, 2015, or earlier versions.

(iii) Last inspection in accordance with RR Alert NMSB RB.211-73-AG797, Revision 2, dated June 13, 2012.

(iv) Last inspection in accordance with RR NMSB RB.211-73-G723, Revision 1, dated January 31, 2012.

(v) Last inspection in accordance with RR Alert NMSB RB.211-73-AG948, Revision 3, dated September 9, 2016.

**(i) Credit for Previous Actions**

You may take credit for the initial inspections required by paragraphs (g)(1) and (2) of this AD, if you performed these inspections before the effective date of this AD, using RR Alert NMSB RB.211-73-AG948, Revision 2, or earlier versions; RR NMSB RB.211-73-G723, Revision 1, or earlier versions; or RR Alert NMSB RB.211-73-AG797, Revision 2, or earlier versions.

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

The Manager, Engine Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

**(k) Related Information**

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: Robert.Green@faa.gov.

(2) Refer to MCAI EASA AD 2016-0227, dated November 10, 2016, 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-2012-0004.

(3) RR SB RB.211-73-F737, Revision 5, dated June 9, 2009; SB RB.211-73-F738, Revision 2, dated February 20, 2015; RR NMSB RB.211-73-G723, Revision 1, dated January 31, 2012; and RR Alert NMSB RB.211-73-AG797, Revision 2, dated June 13, 2012, which are not incorporated by reference in this AD, can be obtained from RR, using the contact information in paragraph (l)(3) 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) Rolls-Royce plc (RR) Alert Non-Modification Service Bulletin RB.211-73-AG948, Revision 3, dated September 9, 2016.

(ii) Reserved.

(3) For RR service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp).

(4) You may view this service information at FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

(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 January 27, 2017.

Colleen M. D'Alessandro,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.

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