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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0624; Directorate Identifier 2010-NE-11-AD; Amendment 39-17358; AD 2013-04-01]

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 an existing airworthiness directive (AD) for all Rolls-Royce plc (RR) RB211-524 series turbofan engines. That AD currently requires removal and repair of certain thrust reverser units (TRUs) prior to reinstallation. This AD requires the same actions for an expanded population of TRUs and extends the compliance time for repairing certain TRUs. This AD was prompted by additional engineering evaluation of TRUs, as a result of a translating cowl gearbox stubshaft failure and subsequent repair. We are issuing this AD to prevent failure of the attachment rivets, which may result in release of the TRU from the engine.

DATES: This AD is effective March 8, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of March 8, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain other publication as of August 12, 2011, (76 FR 40217, July 8, 2011).

We must receive any comments on this AD by April 8, 2013.

ADDRESSES: You may send comments 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. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; 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 street 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, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: Robert.Green@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On June 8, 2011, we issued AD 2011-13-01, Amendment 39-16724 (76 FR 40217, July 8, 2011), for all RR plc RB211-524 series turbofan engines. That AD required removal and repair of certain TRUs prior to reinstallation. That AD resulted from an investigation into the loss of a TRU during landing. The investigation revealed that the incident was preceded by the detachment of the TRU's fixed structure front ring rivet lines on the rear flange. It was determined that the loss of rivet lines was directly associated with a previous translating cowl gearbox stubshaft fracture and the repair of the fixed structure to Engine Manual repair No. FRS5887. At the time, the repair instructed the replacement of the damaged section of the structure but did not require the rivets adjacent to the repair to be replaced. Subsequent analysis has shown that the rivets may have weakened as a result of the translating cowl gearbox stubshaft failure.

Actions Since AD Was Issued

Since we issued AD 2011-13-01, (76 FR 40217, July 8, 2011), engineering evaluation by RR has concluded that the compliance time for repairing TRUs that had only Engine Manual repair No. FRS5887 incorporated as a result of a translating cowl gearbox stubshaft failure, can be extended. RR also concluded that TRUs previously repaired at the front ring with additional rivets using Engine Manual repair No. FRS5887 Part 2, and that have not had Engine Manual repair Nos. FRS4976 and FRS6669 applied to the rear ring at the No. 2 or No. 3 gearbox position, constitute a new population that must be removed and repaired during the next scheduled engine removal. The European Aviation Safety Agency (EASA) has notified us of this same unsafe condition, and corrective actions described in EASA AD 2012-0255, dated November 30, 2012.

Relevant Service Information

We reviewed RR Alert Non-Modification Service Bulletin (NMSB) No. RB.211-78-AG084, Revision 7, dated November 23, 2012. The NMSB describes procedures for removal, repair, and reinstallation of affected TRUs.

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 removal and repair of TRUs that experienced a cowl gearbox stubshaft failure with subsequent repair of the fixed structure to Engine Manual repair No. FRS5887. This AD also requires removal and repair of TRUs previously repaired at the front ring with additional rivets using Engine Manual repair No. FRS5887 Part 2, and that have not had Engine Manual repair Nos. FRS4976 and FRS6669 applied to the rear ring at the No. 2 or No. 3 gearbox position.

FAA's Justification and Determination of the Effective Date

The FAA has found that notice and comment prior to adoption of this rule is unnecessary because no engines are used on U.S. registered airplanes. Therefore, we find 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 AD. Send your comments to an address listed under the ADDRESSES section. Include the Docket No. FAA-2011-0624 and Directorate Identifier 2010-NE-11-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.

Costs of Compliance

We estimate that this AD will not affect any engines installed on airplanes of U.S. registry. Therefore, we estimate the cost of this AD to U.S. operators to be \$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) 2011-13-01, Amendment 39-16724 (76 FR 40217, July 8, 2011) and adding the following new AD:



2013-04-01 Rolls-Royce plc: Amendment 39-17358; Docket No. FAA-2011-0624; Directorate Identifier 2010-NE-11-AD.

(a) Effective Date

This AD is effective March 8, 2013.

(b) Affected ADs

This AD supersedes AD 2011-13-01, Amendment 39-16724 (76 FR 40217, July 8, 2011).

(c) Applicability

This AD applies to Rolls-Royce plc (RR) RB211-524D4-19, -524D4-B-19, -524D4-39, -524D4-B-39, -524D4X-19, -524D4X-B-19, -524H-36, -524H2-19, -524H-T-36, -524H2-T-19, -524G2-19, -524G3-19, -524G2-T-19, and -524G3-T-19 turbofan engines with thrust reverser units (TRUs) that have a part number (P/N) specified in paragraph 1.A. of RR Alert Non-Modification Service Bulletin (NMSB) No. RB.211-78-AG084, Revision 7, dated November 23, 2012, installed.

(d) Unsafe Condition

This AD was prompted by additional engineering evaluation of TRUs, as a result of a translating cowl gearbox stubshaft failure and subsequent repair. We are issuing this AD to prevent failure of the attachment rivets, which may result in release of the TRU from the engine.

(e) Compliance

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

(1) If no repairs were performed as a result of a stubshaft failure, no further action is necessary.

(2) If before December 14, 2009, the TRU has incorporated Engine Manual repair No. FRS5887 and incorporated either Engine Manual repair No. FRS4976 or No. FRS6669 as a result of a translating cowl gearbox stubshaft failure, then repair the TRU before further flight. Use the procedures in Section 3., Accomplishment Instructions, of RR Alert NMSB No. RB.211-78-AG084, Revision 5, dated February 4, 2011, to do the repair.

(3) If before December 14, 2009, the TRU has incorporated Engine Manual repair No. FRS4976, or No. FRS6669 as a result of a translating cowl gearbox stubshaft failure, and it is not known whether Engine Manual repair No. FRS5887 was incorporated concurrently, then repair the TRU within 200 engine flight cycles after the effective date of this AD. Use the procedures in Section 3., Accomplishment Instructions, of RR Alert NMSB No. RB.211-78-AG084, Revision 5, dated February 4, 2011, to do the repair.

(4) If before December 14, 2009, the TRU has incorporated only Engine Manual repair No. FRS5887 as a result of a translating cowl gearbox stubshaft failure, then repair the TRU within 1,150 engine flight cycles after the effective date of this AD. Use the procedures in Section 3., Accomplishment Instructions, of RR Alert NMSB No. RB.211-78-AG084, Revision 7, dated November 23, 2012, to do the repair.

(5) If the TRU has previously been repaired at the front ring with additional rivets using Engine Manual repair No. FRS5887 Part 2, and has not had Engine Manual repair Nos. FRS4976 and FRS6669 applied to the rear ring at the No. 2 or No. 3 gearbox position:

(i) Remove the TRU from the engine during the next scheduled engine removal after the effective date of this AD; and

(ii) Before returning the TRU to service, repair the TRU using the procedure in Section 3.A.(4), Accomplishment Instructions, of RR Alert NMSB No. RB.211-78-AG084, Revision 7, dated November 23, 2012.

(f) Credit for Actions Accomplished in Accordance With Previous Service Information

(1) Actions performed before the effective date of this AD using RR Alert NMSB No. RB.211-78-AG084, Revision 4, dated December 22, 2009, or RR Alert NMSB No. RB.211-78-AG084, Revision 3, dated November 24, 2009, satisfy the requirements of paragraphs (e)(2) and (e)(3) of this AD.

(2) Actions performed before the effective date of this AD using RR Alert NMSB No. RB.211-78-AG084, Revision 6, dated November 16, 2012, or Revision 5, dated February 4, 2011, or Revision 4, dated December 22, 2009, or Revision 3, dated November 24, 2009, satisfy the requirements of paragraph (e)(4) of this AD.

(3) Actions performed before the effective date of this AD using RR Alert NMSB No. RB.211-78-AG084, Revision 6, dated November 16, 2012, satisfy the requirements of paragraph (e)(5)(ii) of this AD.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(h) Related Information

(1) Refer to EASA Airworthiness Directive 2012-0255, dated November 30, 2012, for related information.

(2) Contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: Robert.Green@faa.gov, for more information about this AD.

(i) 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 Alert Non-Modification Service Bulletin No. RB.211-78-AG084, Revision 7, dated November 23, 2012.

(ii) Reserved.

(3) The following service information was approved for IBR on August 12, 2011, (76 FR 40217, July 8, 2011).

(i) Rolls-Royce plc Alert Non-Modification Service Bulletin No. RB.211-78-AG084, Revision 5, dated February 4, 2011.

(ii) Reserved.

(4) For Rolls-Royce plc 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.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(6) 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 February 7, 2013.

Robert J. Ganley,
Acting Manager, Engine & Propeller Directorate,
Aircraft Certification Service.