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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-1015; Directorate Identifier 2013-NE-37-AD; Amendment 39-17798; AD 2014-05-25]

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 adopting a new airworthiness directive (AD) for all Rolls-Royce plc (RR) RB211-Trent 970-84, RB211-Trent 970B-84, RB211-Trent 972-84, RB211-Trent 972B-84, RB211-Trent 977-84, RB211-Trent 977B-84, and RB211-Trent 980-84 turbofan engines. This AD requires inspections of the low-pressure turbine exhaust case and support assembly or tail bearing housing (TBH) to detect cracks or damage. This AD was prompted by an RR structural re-analysis indicating that the TBH may not retain full limit load capability in all fail-safe conditions. We are issuing this AD to prevent failure of the TBH, resulting in damage to the engine and damage to the airplane.

DATES: This AD becomes effective April 7, 2014.

We must receive comments on this AD by May 5, 2014.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of April 7, 2014.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: 202-493-2251.

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: 011-44-1332-245418, 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> by searching for and locating Docket No. FAA-2013-1015; or in person at the Docket Operations office 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 (MCAI), the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (phone: 800-647-5527) is the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Anthony W. Cerra, Jr., Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7128; fax: 781-238-7199; email: anthony.cerra@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2013-0240 (correction), dated October 4, 2013 (referred to herein after as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

Rolls-Royce performed a re-analysis of the structural features of the Trent 900 low-pressure turbine exhaust case and support assembly (also known as Tail Bearing Housing, or TBH). The result of this re-analysis indicates that the TBH may not retain full limit load capability in all fail-safe conditions. In addition, during previous inspections of Trent 900 TBH mounts and vanes, cracks have been found in the outer annulus leading edge (LE) fillet of some vanes.

These conditions, if not detected and corrected, could lead to disconnection of the TBH structural ring from the mounts, possibly resulting in damage to, or reduced control of, the aeroplane.

You may obtain further information by examining the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-1015.

Relevant Service Information

RR has issued Repeater Technical Variance (TV) No. 132043, Issue 1, dated March 25, 2013; Repeater TV No. 132217, Issue 5, dated May 23, 2013; TV No. 124801, Issue 2, dated July 4, 2012; TV No. 124851, Issue 2, dated July 4, 2012; Alert Non-Modification Service Bulletin (NMSB) No. RB.211-72-AG971, Revision 1, dated September 27, 2013; and Alert NMSB No. RB.211-72-AH154, Revision 1, dated June 18, 2013. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This AD

This product has been approved by the aviation authority of the United Kingdom 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 information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This AD requires inspections of the TBH to detect cracks or damage.

FAA's 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 precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2013-1015; Directorate Identifier 2013-NE-37-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 with FAA personnel concerning this AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

Costs of Compliance

We estimate that this AD will affect 0 engines installed on airplanes of U.S. registry. We also estimate that it would take about 8 hours per engine to comply with this AD. The average labor rate is \$85 per hour. Based on these figures, we estimate the total cost of this AD to U.S. operators is \$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

We determined that 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 this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

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):



2014-05-25 Rolls-Royce plc: Amendment 39-17798; Docket No. FAA-2013-1015; Directorate Identifier 2013-NE-37-AD.

(a) Effective Date

This AD is effective April 7, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Rolls-Royce plc (RR) RB211-Trent 970-84, RB211-Trent 970B-84, RB211-Trent 972-84, RB211-Trent 972B-84, RB211-Trent 977-84, RB211-Trent 977B-84, and RB211-Trent 980-84 turbofan engines.

(d) Reason

This AD was prompted by an RR structural re-analysis indicating that the tail bearing housing (TBH) may not retain full limit load capability in all fail-safe conditions. We are issuing this AD to prevent failure of the TBH, resulting in damage to the engine and damage to the airplane.

(e) Actions and Compliance

Comply with this AD within the compliance times specified, unless already done. Performing the on-wing or in-shop inspections as specified in paragraph (e)(1) satisfies the requirements of this AD.

(1) Accomplish on-wing or in-shop inspections of the TBH as specified in paragraphs (e)(1)(i) through (e)(1)(iv) of this AD.

(i) Perform an inspection of the mount lug run-outs, before exceeding 2,200 flight cycles since new (FCSN). Use Section 3.A., 3.B., or 3.C. of RR Alert Non-Modification Service Bulletin (NMSB) No. RB.211-72-AG971, Revision 1, dated September 27, 2013, to do the inspection. Thereafter, inspect every 2,200 flight cycles (FC).

(ii) For a TBH with 900 FCSN or less on the effective date of this AD, perform an inspection of the mount lug forging leading edge (LE) areas and fail safe catcher, before exceeding 1,000 FCSN. Use Section 3.A., or 3.B. of RR Alert NMSB No. RB.211-72-AH154, Revision 1, dated June 18, 2013; or Section 3.B. or 3.C. of RR Alert NMSB No. RB.211-72-AG971, Revision 1, dated September 27, 2013, to do the inspection. Thereafter, inspect every 1,000 FC.

(iii) For a TBH with more than 900 FCSN on the effective date of this AD, perform an inspection of the mount lug forging LE areas and fail safe catcher, within 100 FC. Use Section 3.A. or 3.B. of RR Alert NMSB No. RB.211-72-AH154, Revision 1, dated June 18, 2013; or Section 3.B. or 3.C. of RR Alert NMSB No. RB.211-72-AG971, Revision 1, dated September 27, 2013, to do the inspection. Thereafter, inspect every 1,000 FC.

(iv) Perform an inspection of the top core vanes, before exceeding 3,800 FCSN. Use Section 3.C. of RR Alert NMSB No. RB.211-72-AG971, Revision 1, dated September 27, 2013, to do the inspection. Thereafter, inspect every 3,800 FC.

(2) If any inspection required by paragraph (e)(1) of this AD fails, remove the TBH from service.

(3) Remove any TBH from service before the TBH exceeds 17,200 FCSN.

(f) Credit for Previous Actions

(1) If, before the effective date of this AD, you performed inspections and corrective actions using RR Alert NMSB No. RB.211-72-AG971, dated September 20, 2012 or RR Alert NMSB No. RB.211-72-AH154, dated June 13, 2013; you met the requirements of paragraph (e)(1) of this AD.

(2) If, before the effective date of this AD, the last in-shop inspection of the mount lug run-outs was accomplished using Section 3.C. of RR Alert NMSB No. RB.211-72-AG971, dated September 20, 2012, the compliance time interval for the next on-wing or in-shop inspection of the fail safe catcher, as required by paragraphs (e)(1)(ii) and (e)(1)(iii) of this AD, may be counted from that last in-shop inspection of the mount lug run-outs.

(3) If, before the effective date of this AD, you performed inspections and corrective actions using RR Technical Variance (TV) No. 124801, Issue 2, dated July 4, 2012 or earlier versions; or TV No. 124851, Issue 2, dated July 4, 2012 or earlier versions; you met the requirements of paragraph (e)(1)(i) of this AD.

(4) If, before the effective date of this AD, you performed inspections and corrective actions using RR TV No. 132043, Issue 1, dated March 25, 2013 or earlier versions; or TV No. 132217, Issue 5, dated May 23, 2013 or earlier versions; you met the requirements of paragraphs (e)(1)(ii) and (e)(1)(iii) of this AD.

(5) Any inspections and corrective actions performed are not terminating action for the repetitive inspections required by paragraph (e)(1) of this AD.

(g) Alternative Methods of Compliance (AMOCs)

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

(h) Related Information

(1) For more information about this AD, contact Anthony W. Cerra, Jr., Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7128; fax: 781-238-7199; email: anthony.cerra@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2013-0240 (correction), dated October 4, 2013, 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-2013-1015.

(3) RR Repeater TV No. 132043, Repeater TV No. 132217, TV No. 124801, and TV No. 124851, which are not incorporated by reference in this AD, can be obtained from RR, using the contact information in paragraph (i)(3) of this AD.

(4) 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.

(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 (NMSB) No. RB.211-72-AG971, Revision 1, dated September 27, 2013.

(ii) Rolls-Royce plc Alert NMSB No. RB.211-72-AH154, Revision 1, dated June 18, 2013.

(3) 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: 011-44-1332-245418, or email: http://www.rolls-royce.com/contact/civil_team.jsp.

(4) You may view this service information at 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.

(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 February 27, 2014.
Colleen M. D'Alessandro,
Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.