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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0562; Directorate Identifier 2009-NE-29-AD; Amendment 39-17603; AD 2013-19-21]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding airworthiness directive (AD) AD 2012-04-13, for all Rolls-Royce plc (RR) model RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61; and RB211 Trent 768-60, 772-60, and 772B-60; and RB211-Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17; and RB211-524G2-T-19, -524G3-T-19, -524H-T-36, and -524H2-T-19 turbofan engines that have a high-pressure (HP) compressor stage 1 to 4 rotor disc installed, with a certain part number (P/N) installed. AD 2012-04-13 required repetitive inspections of the axial dovetail slots and follow-on corrective action depending on findings. This new AD expands the population of affected parts. This AD also changes, for the purposes of this AD, the definition of "engine shop visit." This AD was prompted by reports of additional affected HP compressor rotor discs that require the same action. We are issuing this AD to detect cracks in the HP compressor stage 1 and 2 disc posts, which could result in failure of the disc post and HP compressor blades, damage to the engine, and damage to the airplane.

DATES: This AD is effective November 6, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 6, 2013.

ADDRESSES: The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

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

FOR FURTHER INFORMATION CONTACT: Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7779; fax: 781-238-7199; email: frederick.zink@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2012-04-13, Amendment 39-16969 (77 FR 13483, March 7, 2012), ("AD 2012-04-13"). AD 2012-04-13 applied to the specified products. The NPRM published in the Federal Register on May 14, 2013 (78 FR 28161). The NPRM proposed to continue to require repetitive inspections of the axial dovetail slots and follow-on corrective action depending on findings. The NPRM also proposed to expand the population of affected parts, and to change, for the purposes of this AD, the definition of "engine shop visit.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and the FAA's response to each comment.

Support for the Proposed AD

The Boeing Company supports the NPRM (78 FR 28161, May 14, 2013) as written.
We made no change to this AD.

Request To Revise Definition of Engine Shop Visit

American Airlines (AAL) and RR requested that we change the definition of engine shop visit. The commenters noted that the definition of engine shop visit in the NPRM (78 FR 28161, May 14, 2013) differs from that in RR Alert Non-Modification Service Bulletin No. RB.211-72-AF964, Revision 3, dated January 11, 2013. AAL also indicated that the definition of engine shop visit in the NPRM, if adopted, would dramatically increase turn time and costs and affect availability of spare engines.

We agree. We revised this AD by changing the definition of engine shop visit to read: "For the purpose of this AD, an "engine shop visit" is whenever the HP compressor rotor is accessible and the compressor blades have been removed."

Request To Correct Paragraph Designations in Compliance Section

AAL requested that we correct references in the compliance section of the NPRM (78 FR 28161, May 14, 2013) that did not refer to the correct paragraph designation.

We agree. The references should be to "paragraph (f)" or "paragraph (f)(2)," as applicable, rather than to "paragraph (e)." We changed this AD by revising several references in the compliance section and the Credit for Previous Action paragraph from "paragraph (e)" to "paragraph (f)" or to "paragraph (f)(2)," as applicable.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described. We determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Costs of Compliance

We estimate that this AD affects about 432 engines installed on airplanes of U.S. registry. We also estimate that it will take about 20 hours per product to comply with this AD. The average labor rate is $85 per hour. No parts are required. Based on these figures, we estimate the cost of the AD on U.S. operators to be $734,400.

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 have 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 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 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) 2012-04-13, Amendment 39-16969 (77 FR 13483, March 7, 2012) and adding the following new AD:

2013-19-21 Rolls Royce plc: Amendment 39-17603; Docket No. FAA-2010-0562; Directorate Identifier 2009-NE-29-AD.

(a) Effective Date

This AD is effective November 6, 2013.

(b) Affected ADs

This AD supersedes AD 2012-04-13, Amendment 39-16969 (77 FR 13483, March 7, 2012).

(c) Applicability

This AD applies to the following Rolls-Royce plc (RR) model turbofan engines that have a high-pressure (HP) compressor stage 1 to 4 rotor disc installed, with a part number (P/N) listed in Table 1 to paragraph (c) of this AD:

(1) RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61; and

(2) RB211 Trent 768-60, 772-60, and 772B-60; and

(3) RB211-Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17; and

(4) RB211-524G2-T-19, -524G3-T-19, -524H-T-36, and -524H2-T-19.

Table 1 to Paragraph (c)–Affected HP Compressor Stage 1 to 4 Rotor Disc P/Ns by Engine Model

Engine model	HP Compressor stage 1 to 4 rotor disc P/N
1. RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61	FK30524 or FW88340.
2. RB211 Trent 768-60, 772-60, and 772B-60	FK22745, FK24031, FK23313, FK25502, FK26185, FK32129, FW20195, FW20196, FW20197, FW20638, FW23711, FW88695, FW88696, FW88697, FW88698, FW88699, FW88700, FW88701, FW88702, or FW88703.
3. RB211 Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17	FK24009, FK26167, FK32580, FW11590, FW61622, FW88723, FW88724, or FW88725.
4. RB211-524G2-T-19, -524G3-T-19, -524H-T-36, and -524H2-T-19	FK25502, FW20195, FW23711, FW88695, FW88696, or FW88697.

(d) Unsafe Condition

We are issuing this AD to detect cracks in the HP compressor stage 1 and 2 disc posts, which could result in failure of the disc post and HP compressor blades, damage to the engine, and damage to the airplane.

(e) Compliance

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

(f) Cleaning and Inspection

(1) Clean and perform a fluorescent-penetrant inspection of the HP compressor stage 1 to 4 rotor disc at the first shop visit after accumulating 1,000 cycles since new (CSN) on the stage 1 to 4 rotor disc or at the next shop visit after the effective date of this AD, whichever occurs later.

(2) Use paragraphs 3.A. through 3.E.(11) of the Accomplishment Instructions of RR Alert Non-Modification Service Bulletin (NMSB) No. RB.211-72-AF964, Revision 3, dated January 11, 2013, to do the cleaning and inspection.

(3) Thereafter, at every engine shop visit, clean and inspect as required by paragraph (f)(2) of this AD.

(4) If on the effective date of this AD, an engine with an affected part has 1,000 CSN or more, and is in the shop, clean and inspect as required by paragraph (f)(2) of this AD before returning the engine to service.

(5) If cracks or anomalies are found during the inspection required by paragraph (f)(2) of this AD, accomplish the applicable corrective actions before returning the engine to service.

(g) Definition

For the purpose of this AD, an "engine shop visit" is whenever the HP compressor rotor is accessible and the compressor blades have been removed.

(h) Credit for Previous Action

If you performed cleanings and inspections before the effective date of this AD using RR NMSB No. RB.211-72-AF964, Revision 1, dated June 6, 2008, or Revision 2, dated June 8, 2011, then you met the requirements of paragraph (f) of this AD.

(i) 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.

(j) Related Information

(1) For more information about this AD, contact, contact Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7779; fax: 781-238-7199; email: frederick.zink@faa.gov.

(2) Refer to European Aviation Safety Agency AD No. 2013-0042, dated February 26, 2013, for related information. You may examine this AD on the Internet at http://www.regulations.gov/#!documentDetail;D=FAA-2010-0562-0023.

(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.211-72-AF964. Revision 3, dated January 11, 2013.

(ii) None.

(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: 011-44-1332-249936; email: http://www.rolls-royce.com/contact/civil_team.jsp; or download from https://www.aeromanager.com.

(4) 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.

(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 September 18, 2013.
Carlos A. Pestana,
Acting Directorate Assistant Manager, Engine & Propeller Directorate,
Aircraft Certification Service.