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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0880; Directorate Identifier 2013-NE-28-AD; Amendment 39-17667; AD 2013-23-12]

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 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61 turbofan engines. This AD requires replacement or repair of the low-pressure (LP) compressor fan blade set before reaching a specified number of flight cycles since new (FCSN) or flight cycles since last leading edge profile blade repair (FCSLR). This AD was prompted by reports of erosion of the leading edge profile of the LP compressor blade set contributing to fan blade flutter. We are issuing this AD to prevent failure of the LP compressor blades, which could lead to an uncontained engine failure and damage to the airplane.

DATES: This AD becomes effective December 11, 2013.

We must receive comments on this AD by January 10, 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, DE24 8BJ, UK; phone: 44-0-1332-242424; fax: 44-0-1332-249936; 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 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: 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

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2013-0214, dated September 16, 2013 (referred to herein after as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

Erosion of the leading edge profile of Trent 500 engines' low pressure (LP) compressor blades is proven to contribute to fan flutter, a risk that is mitigated by regular restoration of the leading edge of these blades. Recently, Rolls-Royce has conducted a review regarding the in-service restoration of the leading edge profile of LP compressor blades. The results of this review concluded that not all LP compressor blades have been restored as intended.

This condition, if not corrected, could lead to fan flutter, LP compressor blade cracking and uncontained LP compressor blade failures, possibly resulting in damage to, and reduced control of, the aeroplane.

For the reasons described above, this AD requires initial and repetitive leading edge restoration of the LP compressor blades.

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-2013-0880.

Relevant Service Information

RR has issued Alert Non-Modification Service Bulletin No. RB.211-72-AH149, Revision 1, dated May 3, 2013 and RB.211-72-H464, dated August 28, 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.

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-2013-0880; Directorate Identifier 2013-NE-28-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 would affect 0 engines installed on airplanes of U.S. registry. We also estimate that it would take about 6 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):



2013-23-12 Rolls-Royce plc: Amendment 39-17667; Docket No. FAA-2013-0880; Directorate Identifier 2013-NE-28-AD.

(a) Effective Date

This AD is effective December 11, 2013.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Rolls-Royce plc (RR) RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61 turbofan engines.

(d) Reason

This AD was prompted by reports of erosion of the leading edge profile of the low-pressure (LP) compressor blade set contributing to fan blade flutter. We are issuing this AD to prevent failure of the LP compressor blades, which could lead to an uncontained engine failure and damage to the airplane.

(e) Actions and Compliance

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

(1) If on the effective date of this AD, the LP compressor fan blades:

(i) Have less than 3,750 flight cycles since new (FCSN) or flight cycles since last leading edge profile blade repair (FCSLR), replace or repair the LP compressor fan blade set before accumulating 4,000 FCSN or FCSLR;

(ii) Have 3,750 or more FCSN or FCSLR, but less than 4,400 FCSN or FCSLR, replace or repair the LP compressor fan blade set within 250 flight cycles (FC), but not later than 4,500 FCSN or FCSLR;

(iii) Have 4,400 FCSN or FCSLR or more, replace or repair the LP compressor fan blade set within 100 FC; or

(iv) Have FCSN or FCSLR that are unknown, replace or repair the LP compressor fan blade set within 100 FC.

(2) Thereafter, replace or repair the LP compressor fan blade set within every 4,000 FCSN or FCSLR.

(f) Definition

LP compressor fan blades eligible for installation are:

(1) LP compressor fan blades with less than 4,000 FCSN; or

(2) LP compressor fan blades with less than 4,000 FCSLR, if LP compressor fan blades were repaired using RR Alert Non-Modification Service Bulletin No. RB.211-72-AH149, Revision 1,

dated May 3, 2013 or earlier version or, for initial restoration only, RB.211-72-H464, dated August 28, 2013.

(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 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 MCAI European Aviation Safety Agency, AD 2013-0214, dated September 16, 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-2013-0880.

(3) Rolls-Royce plc Alert Non-Modification Service Bulletin No. RB.211-72-AH149, Revision 1, dated May 3, 2013 and RB.211-72-H464, dated August 28, 2013, which are not incorporated by reference in this AD, can be obtained from RR, using the contact information in paragraph (h)(4) of this AD.

(4) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, UK; phone: 44-0-1332-242424; fax: 44-0-1332-249936; 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.

(i) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on November 8, 2013.
Colleen M. D'Alessandro,
Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.