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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0904; Directorate Identifier 2014-NE-14-AD; Amendment 39-18129; AD 2015-07-01]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Rolls-Royce plc (RR) RB211-524 turbofan engines with certain part number (P/N) low-pressure turbine (LPT) stage 3 turbine blades installed. This AD requires implementation of a life limit for certain P/N LPT stage 3 turbine blades and replacement of affected blades that reach or exceed the life limit. This AD was prompted by reports of LPT stage 3 turbine blade failures, release of blades, and subsequent in-flight shutdowns. We are issuing this AD to prevent failure of LPT stage 3 turbine blades and subsequent release of blade debris, which could lead to failure of one or more engines, loss of thrust control, and damage to the airplane.

DATES: This AD becomes effective May 8, 2015.

ADDRESSES: For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: http://www.rolls-royce.com/contact/civil_team.jsp; Internet: <https://www.aeromanager.com>. 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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0904.

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-2014-0904; 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 address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kenneth Steeves, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7765; fax: 781-238-7199; email: kenneth.steeves@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to the specified products. The NPRM was published in the Federal Register on December 2, 2014 (79 FR 71363). The NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Since 2006, a number of low pressure turbine (LPT) Stage 3 blade failures have been reported, each resulting in engine in-flight shut-down. Engineering analysis on those occurrences indicates that blades with an accumulated life of 11,000 flight cycles (FC) or more have an increased risk of failure.

This condition, if not detected and corrected, could lead to release of LPT Stage 3 blade debris and consequent (partial or complete) loss of engine power, possibly resulting in reduced control of the aeroplane.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received. The commenter supports the NPRM (79 FR 71363, December 2, 2014).

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting this AD as proposed.

Costs of Compliance

We estimate that this AD affects 2 engines installed on airplanes of U.S. registry. We also estimate that it will take about 120 hours per engine to comply with this AD. The average labor rate is \$85 per hour. Parts cost is zero. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$20,400.

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 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.

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):



2015-07-01 Rolls-Royce plc: Amendment 39-18129; Docket No. FAA-2014-0904; Directorate Identifier 2014-NE-14-AD.

(a) Effective Date

This AD becomes effective May 8, 2015.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Rolls-Royce plc (RR) RB211-524B-02, RB211-524B-B-02, RB211-524B2-19, RB211-524B2-B-19, RB211-524B3-02, RB211-524C2-19, and RB211-524C2-B-19 turbofan engines with low-pressure turbine (LPT) stage 3 turbine blade, part number (P/N) LK55386, LK86483, or LK86503, installed.

(d) Reason

This AD was prompted by reports of LPT stage 3 turbine blade failure, release of blades, and subsequent in-flight shutdown. We are issuing this AD to prevent failure of LPT stage 3 turbine blades and subsequent release of blade debris, which could lead to failure of one or more engines, loss of thrust control, and damage to the airplane.

(e) Actions and Compliance

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

(1) Remove from service before further flight any LPT stage 3 turbine blade, P/N LK55386, LK86483, or LK86503, that exceeds 11,000 flight cycles since new.

(2) If you cannot determine the accumulated flight cycles, remove any LPT stage 3 turbine blade, P/N LK55386, LK86483, or LK86503, within 200 flight cycles after the effective date of this AD.

(3) After the effective date of this AD, do not install any LPT stage 3 turbine blade, P/N LK55386, LK86483, or LK86503, on any engine if the blade has accumulated 11,000 or more flight cycles since new.

(f) 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. You may email your request to: ANE-AD-AMOC@faa.gov.

(g) Related Information

(1) For more information about this AD, contact Kenneth Steeves, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7765; fax: 781-238-7199; email: kenneth.steeves@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2014-0210, dated September 19, 2014, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0904-0002>.

(3) RR Alert Non-Modification Service Bulletin No. RB.211-72-AH790, Revision 1, dated November 5, 2014, which is not incorporated by reference in this AD, can be obtained from Rolls-Royce plc, using the contact information in paragraph (g)(4) of this AD.

(4) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: http://www.rolls-royce.com/contact/civil_team.jsp; Internet: <https://www.aeromanager.com>.

(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.

(h) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on March 26, 2015.

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