



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-1327; Directorate Identifier 2012-NE-47-AD]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede airworthiness directive (AD) 2014-16-10 that applies to all Rolls-Royce plc (RR) RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines. AD 2014-16-10 requires initial and repetitive ultrasonic inspections (UIs) of the affected low-pressure (LP) compressor blades. Since we issued AD 2014-16-10, RR issued revised service information to reduce the inspection threshold. This proposed AD would retain the UIs in AD 2014-16-10 while applying the revised inspection threshold. We are proposing this AD to prevent LP compressor blade airfoil separations, damage to the engine, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, 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: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Rolls-Royce plc, P.O. Box 31, Derby DE24 8BJ, UK; phone: 44 0 1332 242424; fax: 44 0 1332 249936. You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, 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> by searching for and locating Docket No. FAA-2012-1327; 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 proposed AD, the mandatory continuing airworthiness information, regulatory evaluation, any comments received, and other information. The 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, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this NPRM. Send your comments to an address listed under the ADDRESSES section.

Include “Docket No. FAA-2012-1327; Directorate Identifier 2012-NE-47-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM 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 NPRM.

Discussion

On August 1, 2014, we issued AD 2014-16-10, Amendment 39-17934 (79 FR 48961, August 19, 2014), (“AD 2014-16-10”) for all RR RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines. AD 2014-16-10 requires initial and repetitive UIs of the affected LP compressor blades. AD 2014-16-10 resulted from LP compressor blade partial airfoil blade release events. We issued AD 2014-16-10 to prevent LP compressor blade airfoil separations, damage to the engine, and damage to the airplane.

Actions Since AD 2014-16-10 Was Issued

Since we issued AD 2014-16-10, RR issued Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AH465, Revision 2, dated May 11, 2016. The Alert NMSB reduced the inspection threshold for UI of the LP compressor blades. Also since we issued AD 2014-16-10, the European Aviation Safety Agency (EASA) issued a correction to AD 2016-0141, dated July 20, 2016, requiring the revised inspection threshold.

Related Service Information under 1 CFR Part 51

RR has issued Alert NMSB RB.211-72-AH465, Revision 2, dated May 11, 2016. The NMSB describes procedures for performing a UI of the LP compressor blades. This

service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

We are proposing 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.

Proposed AD Requirements

This proposed AD would require initial and repetitive UIs of the affected LP compressor blades. This proposed AD would require conducting the UIs at a reduced inspection threshold.

Costs of Compliance

We estimate that this proposed AD affects 56 engines installed on airplanes of U.S. registry. We also estimate that it would take about 40 hours per engine to comply with this proposed AD. The average labor rate is \$85 per hour. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$190,400.

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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 the proposed regulation:

- (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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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) 2014-16-10, Amendment 39-17934 (79 FR 48961, August 19, 2014), and adding the following new AD:

Rolls-Royce plc: Docket No. FAA-2012-1327; Directorate Identifier 2012-NE-47-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2014-16-10, Amendment 39-17934 (79 FR 48961, August 19, 2014).

(c) Applicability

This AD applies to Rolls-Royce plc (RR) RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines, with low-pressure (LP) compressor blade, part number (P/N) FK23411, FK25441, FK25968, FW11901, FW15393, FW23643, FW23741, FW23744, KH23403, or KH23404, installed.

(d) Unsafe Condition

This AD was prompted by LP compressor blade partial airfoil release events. We are issuing this AD to prevent LP compressor blade airfoil separations, damage to the engine, and damage to the airplane.

(e) Compliance

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

(1) Ultrasonic Inspection (UI) of LP Compressor Blade

(i) After the effective date of this AD, for LP compressor blades that have accumulated less than 1,800 cycles since new (CSN) or cycles since last inspection

(CSLI), perform a UI of each LP compressor blade before the blade exceeds 2,400 CSN or CSLI. Repeat the UI of the blade before exceeding 2,400 CSLI.

(ii) For any LP compressor blade that exceeds 1,800 CSN on the effective date of this AD, inspect the blade before exceeding 600 flight cycles after the effective date of this AD or before exceeding 3,600 CSN, whichever occurs first. Thereafter, perform the repetitive inspections before exceeding 2,400 CSLI.

(iii) For any blade that exceeds 2,200 CSLI on September 23, 2014 (the effective date of AD 2014-16-10), inspect the blade before exceeding 3,000 CSLI or before further flight, whichever occurs later. Thereafter, perform the repetitive inspections before exceeding 2,400 CSLI.

(iv) Use paragraph 3, excluding subparagraphs 3.C.(2)(b), 3.D.(2) and 3.G, of RR Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AH465, Revision 2, dated May 11, 2016, to perform the inspections required by this AD.

(2) Use of Replacement Blades

(i) After the effective date of this AD, LP compressor blade, P/N FK23411, FK25441, FK25968, FW11901, FW15393, FW23643, FW23741, FW23744, KH23403, or KH23404, that has accumulated at least 2,400 CSN or CSLI is eligible for installation if the blade has passed the UI required by this AD.

(ii) Reserved.

(f) Credit for Previous Actions

You may take credit for the UI required by paragraph (e) of this AD, if you performed the UI before the effective date of this AD using RR NMSB No. RB.211-72-G702, dated May 23, 2011; or RR NMSB No. RB.211-72-G872, Revision 2, dated March 8, 2013, or earlier revisions; or RR NMSB No. RB.211-72-H311, dated March 8, 2013; or the Engine Manual E-Trent-1RR, Task 72-31-11-200-806.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, 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.

(h) Related Information

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2016-0141, dated July 20, 2016, 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-2012-1327.

(3) RR Alert NMSB RB.211-72-AH465, Revision 2, dated May 11, 2016, 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, P.O. Box 31, Derby DE24 8BJ, UK; phone: 44 0 1332 242424; fax: 44 0 1332 249936.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on October 26, 2016.

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

[FR Doc. 2016-26334 Filed: 10/31/2016 8:45 am; Publication Date: 11/1/2016]