[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0538; Product 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) 2017-03-02, which applies to certain Rolls-Royce plc (RR) RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines. AD 2017-03-02 requires initial and repetitive ultrasonic inspections (UIs) of the affected low-pressure (LP) compressor blades. Since we issued AD 2017-03-02, RR issued revised service information to reduce the inspection threshold for UIs of the affected blades. This proposed AD would retain the UIs in AD 2017-03-02 while reducing the inspection threshold. We are proposing this AD to address the unsafe condition on these products.

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, England, DE24 8BJ; phone: 011–44–1332– 242424; fax: 011–44–1332–249936, or email: http://www.rolls-royce.com/contact/civil_team.jsp. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.

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-2018-0538; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Kevin M. Clark, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7088; fax: 781-238-7199; email: kevin.m.clark@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

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

Include “Docket No. FAA-2018-0538; Product 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 proposed AD.

Discussion

We issued AD 2017-03-02, Amendment 39-18793 (82 FR 10701, February 15, 2017), (“AD 2017-03-02”), for certain RR RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines with LP compressor blade, part number (P/N) FK23411, FK25441, FK25968, FW11901, FW15393, FW23643, FW23741, FW23744, KH23403, or KH23404, installed. AD 2017-03-02 requires the UIs of the affected LP compressor blades. AD 2017-03-02 resulted from revised service information to reduce the inspection threshold of the UI for the LP compressor blades. We issued AD 2017-03-02 to correct the unsafe condition on these products.

Actions Since AD 2017-03-02 Was Issued

Since we issued AD 2017-03-02, further analysis determined that the initial and repetitive inspection threshold described in Revision 3 of Rolls-Royce Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AH465 must be further reduced from 2,400 cycles to 1,200 cycles. Therefore, RR issued Revision 4 of Alert NMSB RB.211-72-AH465, dated October 3, 2017. Also, since we issued AD 2017-03-02, the European Aviation Safety Agency (EASA) issued AD 2017-0241, dated December 6, 2017, which

requires ultrasonic inspection of each affected LP compressor blade within the compliance time specified in Section 1.D. of RR Alert NMSB RB.211-72-AH465.

Related Service Information under 1 CFR part 51

We reviewed Rolls-Royce Alert NMSB RB.211-72-AH465, Revision 4, dated October 3, 2017. The Alert NMSB describes procedures for performing initial and repetitive 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.

Other Related Service Information

We also reviewed the following service information: RR NMSB RB.211–72–G702, dated May 23, 2011; RR NMSB RB.211–72–G872, Revision 2, dated March 8, 2013, or earlier revisions; RR NMSB RB.211–72–H311, dated March 8, 2013; RR Engine Manual E-Trent-1RR, Task 72–31–11–200–806; or Airbus A330 Aircraft Maintenance Manual (AMM), Tasks 72-31-41-270-801 or 72-31-41-270-802. These service documents describe the inspection procedures for the UI of the Trent 700 LP compressor blades.

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 retain all requirements of AD 2017-03-02. This proposed AD would reduce the inspection threshold for UI of the LP compressor blades from 2,400 cycles to 1,200 cycles. This proposed AD would also require accomplishing the actions specified in the service information described previously.

Differences Between the Proposed AD and the MCAI or Service Information

The compliance time of this proposed AD differs from EASA AD 2017-0241 in that, for blades with 2,400 cycles since new or cycles since last inspection on the effective date of this AD, this AD requires inspection within 30 days after the effective date of this AD. EASA AD 2017-0241 specifies that all blades must be inspected before accumulating 2,400 cycles.

Costs of Compliance

We estimate that this proposed AD affects 56 engines installed on airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	44 work-hours X $85 per hour = $3,740	$0	$3,740	$209,440

This proposed AD provides updated labor cost for completing the UI of the LP compressor blades as a correction to AD 2017-03-02.

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

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, 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) 2017-03-02, Amendment 39-18793 (82 FR 10701, February 15, 2017), and adding the following new AD:

Rolls-Royce plc: Docket No. FAA-2018-0538; Product Identifier 2012-NE-47-AD.

(a) Comments Due Date

The FAA must receive comments on this AD action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2017-03-02, Amendment 39-18793 (82 FR 10701, February 15, 2017).

(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) Subject

Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

(e) Unsafe Condition

This AD was prompted by LP compressor blade partial airfoil release events that occurred in-service on RR Trent 700 engines. While released sections were contained in each case, projection of secondary debris and effects could present a potential hazard. We are issuing this AD to prevent LP compressor blade airfoil separation. The unsafe condition, if not addressed, could result in damage to the engine and damage to the airplane.

(f) Compliance

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

(g) Required Actions

(1) After the effective date of this AD, perform an ultrasonic inspection (UI) of each LP compressor blade within the compliance time specified in Figure 1 to paragraph (g) of this AD, and thereafter at intervals not to exceed 1,200 cycles since last inspection (CSLI).

(2) Use the Accomplishment Instructions, paragraph 3, excluding subparagraphs 3.C.(2)(b), 3.D.(2), and 3.G.(1), of RR Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AH465, Revision 4, dated October 3, 2017, to perform the inspections required by this AD.

Figure 1 to Paragraph (g) – Compliance times

LP compressor blade cycles since new (CSN) or CSLI on the effective date of this AD	**Compliance Time (CSN or CSLI, unless otherwise specified)**
600 cycles or less	Before exceeding 1,200 cycles
More than 600 cycles and less than 1,800 cycles	Within 600 cycles after the effective date of this AD, not to exceed 2,400 cycles
1,800 cycles or more	Before exceeding 2,400 cycles or within 30 days after the effective date of this AD, whichever comes

LP compressor blade cycles since new (CSN) or CSLI on the effective date of this AD	Compliance Time (CSN or CSLI, unless otherwise specified)
	later.

(3) If an LP compressor blade fails the inspection required by this AD, replace the blade with a part eligible for installation, prior to return to service.

(h) Parts Installation

After the effective date of this AD, LP compressor blade, P/N FK23411, FK25441, FK25968, FW11901, FW15393, FW23643, FW23741, FW23744, KH23403, or KH23404, is eligible for installation if the LP compressor blade has not exceeded 1,200 CSN or CSLI.

(i) Credit for Previous Actions

You may take credit for the UIs required by paragraph (g) of this AD, if you performed the UIs before the effective date of this AD using the following service information: RR NMSB RB.211–72–AH465, Revision 3, dated April 27, 2017, or earlier revisions; RR NMSB RB.211–72–G702, dated May 23, 2011; RR NMSB RB.211–72–G872, Revision 2, dated March 8, 2013, or earlier revisions; RR NMSB RB.211–72–H311, dated March 8, 2013; RR Engine Manual E-Trent-1RR, Task 72–31–11–200–806; or Airbus A330 Aircraft Maintenance Manual (AMM), Tasks 72-31-41-270-801 or 72-31-41-270-802.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local Flight Standards District Office/Certificate Holding District Office.

(k) Related Information

(1) For more information about this AD, contact Kevin M Clark, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7088; fax: 781-238-7199; email: kevin.m.clark@faa.gov.

(2) For service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011–44–1332–242424; fax: 011–44–1332–249936, or email: http://www.rolls-royce.com/contact/civil_team.jsp. You may view this referenced service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.

Issued in Burlington, Massachusetts, on August 9, 2018.

Robert J. Ganley,
Manager, Engine and Propeller Standards Branch,
Aircraft Certification Service.

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