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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0848; Directorate Identifier 2012-NE-20-AD; Amendment 39-17167; AD 2012-17-04]

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 800 series turbofan engines. This AD requires removing from service certain intermediate pressure (IP) turbine discs that have a serial number listed in this AD. This AD was prompted by RR performing an evaluation that determined that the current lives for certain IP turbine discs with a steel inclusion may fail before they reach their current mandatory life limits. We are issuing this AD to prevent failure of the IP turbine disc, which could result in uncontained failure of the engine and damage to the airplane.

DATES: This AD becomes effective October 1, 2012.

We must receive comments on this AD by October 29, 2012.

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, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-245418 or email from http://www.rolls-royce.com/contact/civil_team.jsp, or download the publication from <https://www.aeromanager.com>. You may review copies of the referenced 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 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: Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7143; fax: 781-238-7199; email: alan.strom@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 AD 2012-0120, dated July 4, 2012 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

The inspection of several IP turbine discs at past engine overhauls identified the presence of steel inclusions in these parts. Further investigation concluded that all affected parts were manufactured from Waspalloy billets produced before 1997 at a certain supplier who also melted steel in the same furnaces. Initial engineering evaluation concluded that the lives of the parts would not be affected by the presence of the said steel inclusions. This evaluation has been recently repeated, utilising improved structural analysis, and it is now concluded that the currently published lives of the components cannot be supported for some discs with a steel inclusion.

This condition, if not corrected, could lead to an uncontained IP turbine disc failure, possibly resulting in damage to, and reduced control of, the aeroplane.

The current life limit of the Trent 800 IP turbine disc is 11,610 standard duty cycles. Analysis shows that discs that could have steel inclusions in them must be removed earlier than the current life to prevent uncontained disc failure. We are issuing this AD to prevent failure of the IP turbine disc, which could result in uncontained failure of the engine and damage to the airplane. You may obtain further information by examining the MCAI in the AD docket.

FAA's Determination and Requirements of This AD

This product has been approved by 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

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because no affected IP turbine discs are installed in engines that are used on U.S.-registered airplanes. Therefore, we determined that notice and opportunity for public comment before issuing this AD are unnecessary and that good cause exists for making this amendment effective in fewer 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-2012-0848; Directorate Identifier 2012-NE-20-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).

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); and
3. 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 AD:



2012-17-04 Rolls-Royce plc: Amendment 39-17167; Docket No. FAA-2012-0848; Directorate Identifier 2012-NE-20-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective October 1, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Rolls-Royce plc (RR) RB211-Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17 turbofan engines that have an intermediate pressure (IP) turbine disc with a serial number listed in Table 1 to paragraph (e) of this AD, installed.

(d) Reason

This AD was prompted by RR performing an evaluation that determined that the current lives for certain IP turbine discs with a steel inclusion may fail before they reach their current mandatory life limits. We are issuing this AD to prevent failure of the IP turbine disc, which could result in uncontained failure of the engine and damage to the airplane.

(e) Actions and Compliance

Unless already done, do the following. Remove disc serial numbers (S/Ns) listed in Table 1 to paragraph (e) of this AD within 9,700 standard duty cycles since new.

Table 1 to Paragraph (e)–Affected IP Turbine Discs

IP Turbine Disc S/N	ADREB 84	ADREB 92
ADREB 73	ADREB 85	ADREB 94
ADREB 79	ADREB 86	ADREB 96
ADREB 80	ADREB 87	ADREB 102
ADREB 81	ADREB 88	ADREB 103
ADREB 82	ADREB 89	ADREB 104
ADREB 83	ADREB 90	
	ADREB 91	

(f) Installation Prohibition

After the effective date of this AD, do not install any IP and Low Pressure (LP) turbine module on any engine with an IP turbine disc with an S/N listed in Table 1 to paragraph (e) of this AD if the life of the disc is equal to or greater than 9,700 standard duty cycles since new. After the effective date of this AD, do not install any IP turbine disk listed in Table 1 to paragraph (e) of this AD if the life of the disk is equal to or greater than 9,700 standard duty cycles since new.

(g) Definitions

For the purposes of this AD, a shop visit is one where the IP and LP turbine module has been removed from the engine.

(h) 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.

(i) Related Information

(1) You may find additional information on replacing the IP turbine disc, in RB211 Trent 800 Propulsion Systems Non-Modification Service Bulletin No. RB.211-72-AG795, dated October 28, 2011.

(2) For more information about this AD, contact Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7143; fax: 781-238-7199; email: alan.strom@faa.gov.

(3) Refer to European Aviation Safety Agency Airworthiness Directive 2012-0120, dated July 4, 2012, for related information.

(4) 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 or email from http://www.rolls-royce.com/contact/civil_team.jsp.

(j) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on August 15, 2012.
Colleen M. D'Alessandro,
Assistant Manager, Engine & Propeller Directorate,
Aircraft Certification Service.