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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-28059; Directorate Identifier 2007-NE-13-AD; Amendment 39-15665; AD 2008-18-08]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc (RR) RB211 Trent 500, 700, and 800 Series Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

This action is necessary following the discovery of IP Compressor Rotor rear balance land cracking on an in-service Trent 800 engine. Stress analysis of the damaged rotor has shown a possible threat to the rotor integrity, the cracking therefore presents a potential unsafe condition.

We are issuing this AD to detect cracking on the intermediate pressure (IP) compressor rotor rear balance land. IP compressor rotor rear balance land cracking can lead to uncontained failure of the rotor and damage to the airplane.

DATES: This AD becomes effective October 14, 2008. The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 14, 2008.

ADDRESSES: The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

FOR FURTHER INFORMATION CONTACT: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park,

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on October 15, 2007 (72 FR 58267). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states that:

This Airworthiness Directive requires inspections for cracks in the rear balance land of the IP Compressor Rotor. The inspections comprise an on-wing one-off inspection by borescope for RR Trent 800 engines which must be completed within a short timescale, and in-shop inspections to be completed at each opportunity for RR Trent 500, 700 and 800 engines (the in-shop inspection may be carried out in lieu of the on-wing inspection for the Trent 800 engines if it is accomplished within the timescale applicable to the on-wing inspection). This action is necessary following the discovery of IP Compressor Rotor rear balance land cracking on an in-service Trent 800 engine. Stress analysis of the damaged rotor has shown a possible threat to the rotor integrity, the cracking therefore presents a potential unsafe condition. The cause of the cracking is currently not fully understood but evidence suggests it relates to an unusual balance weight condition.

You may obtain further information by examining the EASA AD in the AD docket.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received. The commenter supports the NPRM.

Editorial Addition of a New Revision to Alert Service Bulletin RB.211-72-AF260

We received Alert Service Bulletin RB.211-72-AF260, Revision 2, dated July 4, 2007, after we issued the NPRM. We reviewed Revision 2 and determined that no changes to the NPRM were necessary. We updated the revision number from Revision 1 to Revision 2 in this AD.

Conclusion

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

Costs of Compliance

We estimate that this AD will affect about 110 engines installed on airplanes of U.S. registry. We also estimate that it will take about 3.5 work-hours per engine to perform the proposed actions and that the average labor rate is \$80 per work-hour. Based on these figures, we estimate the total cost of the proposed AD to U.S. operators to be \$30,800. Our cost estimate is exclusive of possible warranty coverage.

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.

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 (telephone (800) 647-5527) is provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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:



2008-18-08 Rolls-Royce plc: Amendment 39-15665. Docket No. FAA-2007-28059; Directorate Identifier 2007-NE-13-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective October 14, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Rolls-Royce plc RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 560-61, 560A2-61, 768-60, 772-60, 772B-60, 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17 turbofan engines. These engines are installed on, but not limited to, Airbus A330, A340-500, A340-600, and Boeing 777 series airplanes.

Reason

(d) This action is necessary following the discovery of IP Compressor Rotor rear balance land cracking on an in-service Trent 800 engine. Stress analysis of the damaged rotor has shown a possible threat to the rotor integrity, the cracking therefore presents a potential unsafe condition. The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

We are issuing this AD to detect cracking on the intermediate pressure (IP) compressor rotor rear balance land. IP compressor rotor rear balance land cracking can lead to uncontained failure of the rotor and damage to the airplane.

Actions and Compliance

(e) Unless already done, do the following actions:

Inspection–On-Wing

(1) Applicable to RR Trent 800 engines not previously inspected per Rolls-Royce RB211 Propulsion System Alert Non Modification Service Bulletin RB.211-72-AF260, Revision 2, dated July 4, 2007; or earlier issue: Within 400 flight cycles of the Effective Date of this AD inspect the IP Compressor rotor rear balance land for cracks in accordance with Rolls-Royce RB211 Propulsion System Alert Non Modification Service Bulletin RB.211-72-AF313, dated February 22, 2007 section 3 Accomplishment Instructions. Engines on which cracking is found should be rejected from service.

Inspection–In-Shop

(2) Applicable to RR Trent 500, 700 and 800 engines at each shop visit in which the engine is sufficiently disassembled to access the IP Compressor Module rear face: Inspect the IP Compressor

rotor rear balance land for cracks in accordance with Rolls-Royce RB211 Propulsion System Alert Non Modification Service Bulletin RB.211-72-AF260, Revision 2, dated July 4, 2007; or earlier issue section 3 Accomplishment Instructions.

Other FAA AD Provisions

(f) Alternative Methods of Compliance (AMOCs): The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

Related Information

(g) Refer to EASA Airworthiness Directive 2007-0052, dated February 23, 2007, for related information.

(h) Contact James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: james.lawrence@faa.gov; telephone (781) 238-7176; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(i) You must use the service information specified in Table 1 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; telephone: 44 (0) 1332-242424; fax: 44 (0) 1332-249936.

(3) You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Table 1—Material Incorporated by Reference

Alert Service Bulletin No.	Page	Revision	Date
RB.211-72-AF260; Total pages—11	ALL	Original	October 17, 2006.
RB.211-72-AF260; Total pages—11	ALL	1	January 17, 2007.
RB.211-72-AF260; Total pages—11	ALL	2	July 4, 2007.
RB.211-72-AF313; Total pages—11	ALL	Original	February 22, 2007.

Issued in Burlington, Massachusetts, on August 25, 2008.

Mark A. Rumizen,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. E8-20212 Filed 9-8-08; 8:45 am]