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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0521; Directorate Identifier 2009-NE-21-AD; Amendment 39-16405; AD 2010-17-13]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc RB211-524C2 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:

A number of LPT casings have been found cracked during engine shop visit. Cracking of the LPT casing reduces the capability of the casing to contain debris in the event of an LPT stage 1 blade failure. Therefore, blade failure in an engine featuring a cracked LPT casing may result in release of uncontained high energy debris.

For the reason described above, this AD requires repetitive inspections and corrective actions, depending on findings.

We are issuing this AD to detect cracks in the low-pressure turbine (LPT) casings, which could result in the release of uncontained high-energy debris in the event of a stage 1 blade failure. Uncontained high-energy debris could result in damage to the airplane.

DATES: This AD becomes effective September 22, 2010.

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: Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: alan.strom@faa.gov; telephone (781) 238-7143; fax (781) 238-7199.

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 May 19, 2010 (75 FR 27973). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

A number of LPT casings have been found cracked during engine shop visit. Cracking of the LPT casing reduces the capability of the casing to contain debris in the event of an LPT stage 1 blade failure. Therefore, blade failure in an engine featuring a cracked LPT casing may result in release of uncontained high energy debris.

Comments

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

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

Based on the service information, we estimate that this AD will affect about 10 products of U.S. registry. We also estimate that it will take about 10 work-hours per product to comply with this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$25,000 per product. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$258,500.

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 (phone (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, 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:



2010-17-13 Rolls-Royce plc (Formerly Rolls-Royce Limited): Amendment 39-16405. Docket No. FAA-2010-0521; Directorate Identifier 2009-NE-21-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective September 22, 2010.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Rolls-Royce plc (RR) model RB211-524C2-19 and RB211-524C2-B-19 turbofan engines. These engines are installed on, but not limited to, Boeing 747 series airplanes.

Reason

(d) A number of LPT casings have been found cracked during engine shop visit. Cracking of the LPT casing reduces the capability of the casing to contain debris in the event of an LPT stage 1 blade failure. Therefore, blade failure in an engine with a cracked LPT casing may result in release of uncontained high-energy debris.

We are issuing this AD to detect cracks in the low-pressure turbine (LPT) casings, which could result in the release of uncontained high-energy debris in the event of a stage 1 blade failure. Uncontained high-energy debris could result in damage to the airplane.

Actions and Compliance

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

Initial Inspection Requirements

(1) Perform a fluorescent penetrant inspection (FPI) before the life of the LPT casing has reached 4,500 cycles-since-new (CSN) or within 4,500 cycles-since-last inspection (CSLI) or within 500 cycles after the effective date of this AD, whichever occurs later. You can find guidance on performing the FPI in RR Alert Service Bulletin (ASB) RB.211-72-AG076, dated November 13, 2008.

Repetitive Inspection Requirements

(2) Thereafter, perform an FPI at intervals not exceeding 4,500 CSLI. You can find guidance on performing the FPI in Rolls-Royce plc ASB RB.211-72-AG076, dated November 13, 2008.

Remove Parts With Cracks

(3) Remove cracked LPT casings, found using paragraphs (e)(1) or (e)(2) of this AD, from service before further flight.

Alternative Methods of Compliance (AMOCs)

(f) 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 MCAI EASA AD 2009-0083, dated April 16, 2009, and Rolls-Royce plc ASB No. RB.211-72-AG076, dated November 13, 2008, for related information. Contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; telephone 011 44 1332 242424; fax 011 44 1332 249936, for a copy of this service information.

(h) Contact Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: alan.strom@faa.gov; telephone (781) 238-7143; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(i) None.

Issued in Burlington, Massachusetts, on August 6, 2010.

Peter A. White,

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

[FR Doc. 2010-20353 Filed 8-17-10; 8:45 am]

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