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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-0037; Directorate Identifier 2007-NE-41-AD; Amendment 39-16052; AD 2009-22-01]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd. & Co. KG. (RRD) Tay 650-15 Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are superseding an existing airworthiness directive (AD) for the products listed above. That AD currently requires initial and repetitive inspections of the low-pressure (LP) turbine discs stage 2 and stage 3 for corrosion, on certain serial number engines. This AD requires the same actions, but extends the applicability to additional engine serial numbers. 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:

Strip results from some of the engines listed in the applicability section of this directive revealed excessively corroded low-pressure turbine disks stage 2 and stage 3. The corrosion is considered to be caused by the environment in which these engines are operated. Following a life assessment based on the strip findings it is concluded that inspections for corrosion attack are required. The action specified by this AD is intended to avoid a failure of a low-pressure turbine disk stage 2 or stage 3 due to potential corrosion problems which could result in uncontained engine failure and damage to the airplane.

We are issuing this AD to detect corrosion that could cause the stage 2 or stage 3 disk of the LP turbine to fail and result in an uncontained failure of the engine.

DATES: This AD becomes effective November 12, 2009.

We must receive comments on this AD by November 27, 2009.

The Director of the Federal Register approved the incorporation by reference of Rolls-Royce Deutschland Alert Service Bulletin No. TAY-72-A1524, Revision 2, dated June 13, 2008, listed in the AD as of November 12, 2009.

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.

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 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: Jason Yang, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: jason.yang@faa.gov; telephone (781) 238-7747; fax (781) 238-7199.

Contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, Dahlwitz, 15827 Blankenfelde-Mahlow, Germany; telephone 49 (0) 33-7086-1768; fax 49 (0) 33-7086-3356, for the service information referenced in this AD.

SUPPLEMENTARY INFORMATION:

Discussion

On May 5, 2008, the FAA issued AD 2008-10-14 (Amendment 39-15521 (73 FR 29405, May 21, 2008)). That AD requires initial and repetitive inspections of the LP turbine discs stage 2 and stage 3 for corrosion on 45 engines by serial number. That AD was the result of MCAI issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. That condition, if not corrected, could result in the stage 2 or stage 3 disk of the LP turbine to fail and result in an uncontained failure of the engine.

Since AD 2008-10-14 was issued, RRD identified 34 additional engines by serial number that require the same inspections. The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2008-0122, dated July 1, 2008. That MCAI extends the applicability to include the 34 additional engine serial numbers for inspections.

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

Relevant Service Information

Rolls-Royce Deutschland has issued Alert Service Bulletin No. TAY-72-A1524, Revision 2, dated June 13, 2008. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This AD

Although no airplanes that are registered in the United States use these RRD Tay 650-15 engines, the possibility exists that the engines could be used on airplanes that are registered in the United States in the future. The unsafe condition described previously is likely to exist or develop on other RRD Tay 650-15 engines of the same type design. We are issuing this AD to detect corrosion that could cause the stage 2 or stage 3 disk of the LP turbine to fail and result in an uncontained failure of the engine. This AD requires initial and repetitive inspections of the LP turbine discs stage 2 and stage 3 for corrosion on certain serial number engines. You must use the service information described previously to perform the actions required by this AD.

FAA's Determination of the Effective Date

Since no domestic operators use this product, notice and opportunity for public comment before issuing this AD are unnecessary. Therefore, we are adopting this regulation immediately.

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-2007-0037; Directorate Identifier 2007-NE-41-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 removing Amendment 39-15521 (73 FR 29405, May 21, 2008), and by adding a new airworthiness directive, Amendment 39-16052, to read as follows:



2009-22-01 Rolls-Royce Deutschland Ltd & Co KG (RRD) (formerly Rolls-Royce plc, Derby, England): Amendment 39-16052. Docket No. FAA-2007-0037; Directorate Identifier 2007-NE-41-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective November 12, 2009.

Affected ADs

(b) This AD supersedes AD 2008-10-14, Amendment 39-15521.

Applicability

(c) This AD applies to RRD Tay 650-15 turbofan engines that have a serial number listed in Table 1 or Table 2 of this AD, and low-pressure (LP) turbine module M05300AA installed. These engines are installed on, but not limited to, Fokker F28 Mark 0100 airplanes.

**Table 1 – Affected Tay 650-15 Engines by Serial Number
(Carried Forward From AD 2008-10-14)**

Engine Serial Number
17251
17255
17256
17273
17275
17280
17281
17282
17300
17301
17327
17332
17365
17393
17437
17443

17470
17520
17521
17523
17539
17542
17556
17561
17562
17563
17580
17581
17612
17618
17635
17637
17645
17661
17686
17699
17701
17702
17736
17737
17738
17739
17741
17742
17808

Table 2 – Affected Tay 650-15 Engines by Serial Number (Added New in This AD)

Engine Serial Number
17249
17303
17358

17370
17425
17426
17433
17438
17445
17446
17460
17474
17478
17490
17491
17517
17518
17522
17534
17535
17536
17538
17540
17541
17552
17553
17585
17613
17723
17724
17740
17759
17760
17807

Reason

(d) Strip results from some of the engines listed in the applicability section of this directive revealed excessively corroded low-pressure turbine disks stage 2 and stage 3. The corrosion is considered to be caused by the environment in which these engines are operated. Following a life

assessment based on the strip findings it is concluded that inspections for corrosion attack are required. The action specified by this AD is intended to avoid a failure of a low-pressure turbine disk stage 2 or stage 3 due to potential corrosion problems which could result in uncontained engine failure and damage to the airplane.

We are issuing this AD to detect corrosion that could cause the stage 2 or stage 3 disk of the LP turbine to fail and result in an uncontained failure of the engine.

Actions and Compliance

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

(1) Prior to accumulating 11,700 flight cycles (FC) since new, and thereafter at intervals not exceeding 11,700 FC of the engine, inspect the LP turbine disks stage 2 and stage 3 for corrosion in accordance with RRD Alert Service Bulletin No. TAY-72-A1524, Revision 2, dated June 13, 2008.

(2) For engines that already exceed 11,700 FC on the effective date of this AD, perform the inspection within 90 days after the effective date of this AD.

(3) When, during any of the inspections as required by paragraph (e)(1) of this directive, corrosion is found, replace the affected parts. The RRD TAY 650 Engine Manual–E-TAY-3RR, Tasks 72-52-23-200-000 and 72-52-24-200-000 contains guidance on performing the inspection for corrosion and rejection criteria.

Previous Credit

(f) Initial inspections done before the effective date of this AD on LP turbine disks stage 2 and stage 3 listed in Table 1 of this AD using RRD Alert Service Bulletin No. TAY-72-A1524, Revision 1, dated September 1, 2006, comply with the initial inspection requirements specified in this AD.

Alternative Methods of Compliance (AMOCs)

(g) 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

(h) Refer to European Aviation Safety Agency AD 2008-0122, dated July 1, 2008, for related information.

(i) Contact Jason Yang, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: jason.yang@faa.gov; telephone (781) 238-7747; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(j) You must use Rolls-Royce Deutschland Alert Service Bulletin No. TAY-72-A1524, Revision 2, dated June 13, 2008, to do the actions required by this AD.

(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 Deutschland Ltd & Co KG, Eschenweg 11, Dahlwitz, 15827 Blankenfelde-Mahlow, Germany; telephone 49 (0) 33-7086-1768; fax 49 (0) 33-7086-3356.

(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>.

Issued in Burlington, Massachusetts, on October 8, 2009.
Diane S. Romanosky,
Acting Manager, Engine and Propeller Directorate,
Aircraft Certification Service.