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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 39-16489; AD 2010-17-12R1]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd. & Co. KG. (RRD) Models Tay 650-15 and Tay 651-54 Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments; revision.

SUMMARY: The FAA is revising an existing airworthiness directive (AD) for the products listed above. This AD revision results from the need to correct the applicability paragraph of that AD, and 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 AD 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 European Aviation Safety Agency (EASA) AD 2008-0122 was 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. It has been later realized that the same unsafe condition could potentially occur on more serial numbers for the Tay 650-15 engines and on the Tay 651-54 engines. This AD, superseding EASA AD 2008-0122, retaining its requirements, is therefore issued to expand the Applicability in adding further engine serial numbers for the Tay 650-15 engines and in adding the Tay 651-54 engines.

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

DATES: This AD becomes effective November 18, 2010.

We must receive comments on this AD by December 3, 2010.

The Director of the Federal Register approved the incorporation by reference of RRD Alert Service Bulletin No. TAY-72-A1524, Revision 3, dated March 24, 2010, as of September 27, 2010 (75 FR 51651, August 23, 2010).

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: Mark Riley, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: mark.riley@faa.gov; phone: (781) 238-7758; fax: (781) 238-7199.

SUPPLEMENTARY INFORMATION:

Discussion

On August 23, 2010, we published AD 2010-17-12, Amendment 39-16404, in the Federal Register (75 FR 51651). That AD is applicable to RRD models Tay 650-15 and Tay 651-54 turbofan engines. We discovered that the applicability paragraph of that AD is in error. This AD revision corrects that applicability paragraph. The requirements of that AD remain the same in this AD revision.

FAA's Determination and Requirements of This AD

This product has been approved by the aviation authority of the United Kingdom, and is approved for operation in the United States. Pursuant to our bilateral agreement with the United Kingdom, they have notified us of the unsafe condition described in the MCAI. We are issuing this AD because we evaluated all information provided by the European Aviation Safety Agency 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 this AD revision reduces the applicability, and the impact on the affected U.S. registered

fleet remains unchanged. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable 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-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 39-16404, and adding the following new airworthiness directive (AD):



2010-17-12R1 Rolls-Royce Deutschland Ltd & Co KG (RRD) (formerly Rolls-Royce plc, Derby, England): Amendment 39-16489.; Docket No. FAA-2007-0037; Directorate Identifier 2007-NE-41-AD.

Effective Date

(a) This AD becomes effective November 18, 2010.

Affected ADs

(b) This AD revises AD 2010-17-12, Amendment 39-16404.

Applicability

(c) This AD applies to:

(1) RRD model Tay 650-15 turbofan engines that have a serial number listed in Table 1, Table 2, or Table 3 of this AD, with a low-pressure (LP) turbine module M05300AA installed; and

(2) All RRD model Tay 651-54 turbofan engines with an LP turbine module M05300AA installed.

(3) These engines are installed on, but not limited to, Fokker F.28 Mark 0070 and 0100 airplanes, and Boeing 727 airplanes modified in accordance with Supplemental Type Certificate No. SA8472SW.

**Table 1—Affected Tay 650-15 Engines by Serial Number
(Carried Forward From AD 2008-10-14 and AD 2009-22-01)**

Engine Serial Number	17327	17556	17686
	17332	17561	17699
17251	17365	17562	17701
17255	17393	17563	17702
17256	17437	17580	17736
17273	17443	17581	17737
17275	17470	17612	17738
17280	17520	17618	17739
17281	17521	17635	17741
17282	17523	17637	17742
17300	17539	17645	17808
17301	17542	17661	

**Table 2 – Affected Tay 650-15 Engines by Serial Number
(Carried Forward From AD 2009-22-01)**

Engine Serial Number			
	17438	17518	17553
	17445	17522	17585
17249	17446	17534	17613
17303	17460	17535	17723
17358	17474	17536	17724
17370	17478	17538	17740
17425	17490	17540	17759
17426	17491	17541	17760
17433	17517	17552	17807

**Table 3 – Affected Tay 650-15 Engines by Serial Number
(Added New in This AD)**

Engine Serial Number			
	17376	17698	17719
	17413	17707	17731
17344	17537	17716	17756
17360	17694	17718	17757

Reason

(d) This AD revision results from:

- (1) The need to correct the applicability paragraph of AD 2010-17-12; and
- (2) 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 states:

(3) Strip results from some of the engines listed in the applicability section of this AD 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 European Aviation Safety Agency (EASA) AD 2008-0122 was 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. It has been later realized that the same unsafe condition could potentially occur on more serial numbers for the Tay 650-15 engines and on the Tay 651-54 engines. This AD, superseding EASA AD 2008-0122, retaining its requirements, is therefore issued to expand the Applicability in adding further engine serial numbers for the Tay 650-15 engines and in adding the Tay 651-54 engines.

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

Actions and Compliance

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

(1) Prior to accumulating 11,700 flight cycles (FC) since new of disk life, and thereafter at intervals not exceeding 11,700 FC of disk life, inspect the LP turbine disks stage 2 and stage 3 for corrosion using RRD Alert Service Bulletin (ASB) No. TAY-72-A1524, Revision 3, dated March 24, 2010.

(2) For engines with disk life 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 paragraphs (e)(1) and (e)(2) of this AD, corrosion is found, replace the affected parts. RRD TAY 650 Engine Manual–E-TAY-3RR, Tasks 72-52-23-200-000 and 72-52-24-200-000, and RRD TAY 651 Engine Manual–E-TAY-5RR, Tasks 72-52-23-200-000 and 72-52-24-200-000, contain 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 and Table 2 of this AD using RRD ASB No. TAY-72-A1524, Revision 1, dated September 1, 2006, or Revision 2, dated June 13, 2008, 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 EASA AD 2010-060R1, dated April 14, 2010, for related information. Contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany; phone: 011 49 (0) 33-7086-1883; fax: 011 49 (0) 33-7086-3276, for a copy of the service information referenced in this AD.

(i) Contact Mark Riley, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: mark.riley@faa.gov; phone: (781) 238-7758; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(j) You must use Rolls-Royce Deutschland Ltd & Co KG Alert Service Bulletin No. TAY-72-A1524, Revision 3, dated March 24, 2010, to do the inspections required by this AD.

(1) The Director of the Federal Register previously approved the incorporation by reference of RRD Alert Service Bulletin No. TAY-72-A1524, Revision 3, dated March 24, 2010, listed in the AD as of September 27, 2010 (75 FR 51651, August 23, 2010).

(2) For service information identified in this AD, contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany; phone: 011 49 (0) 33-7086-1883; fax: 011 49 (0) 33-7086-3276.

(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 22, 2010.

Peter A. White,
Assistant Manager, Engine and Propeller Directorate,
Aircraft Certification Service.