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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NE-02-AD; Amendment 39-14439; AD 2005-26-18]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland (Formerly Rolls-Royce plc) Models Tay 650-15 and 651-54 Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) for Rolls-Royce Deutschland (formerly Rolls-Royce plc) (RRD) models Tay 650-15 and 651-54 turbofan engines. That AD currently requires borescope inspection of the high pressure compressor (HPC) stage 12 disc assembly to detect damage caused by HPC outlet guide vane (OGV) retaining bolt failure, and replacement of unserviceable parts with serviceable parts. That AD also requires as terminating action, the incorporation of a new design retention arrangement for the HPC OGV to prevent HPC OGV retaining bolt failure. This ad requires the same actions but extends the terminating action compliance time for Tay 650-15 engines. This AD also includes references to later revisions of two of the applicable RRD service bulletins (SBs). This AD results from RRD relaxing the terminating action compliance time for Tay 650-15 engines due to reassessment by RRD. We are issuing this AD to prevent an uncontained failure of the HPC stage 11/12 disc spacer, which could result in damage to the airplane.

DATES: This AD becomes effective February 3, 2006. The Director of the Federal Register previously approved the incorporation by reference of certain publications listed in the regulations as of February 15, 2002 (67 FR 4652, January 31, 2002).

ADDRESSES: You can get the service information identified in this AD from Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany, telephone: 011 49 (0) 33-7086-1768, fax: 011 49 (0) 33-7086-3356.

You may examine the AD docket at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA. You may examine the service information, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Jason Yang, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7747; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with a proposed airworthiness directive (AD). The proposed AD applies to RRD models Tay 650-15 and 651-54 turbofan engines. We published the proposed AD in the Federal Register on July 25, 2005 (70 FR 42515). That action proposed to require the same actions as AD 2002-01-29 but extends the terminating action compliance time for Tay 650-15 engines.

Examining the AD Docket

You may examine the AD Docket (including any comments and service information), by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. See ADDRESSES for the location.

Comments

We provided the public the opportunity to participate in the development of this AD. We received no comments on the proposal or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

There are about 400 Tay 650-15 and 651-54 turbofan engines of the affected design in the worldwide fleet. We estimate that 105 engines installed on airplanes of U.S. registry will be affected by this AD. We also estimate that it will take about 3 work hours per engine to perform the proposed borescope inspection, and that the average labor rate is \$65 per work hour. Required parts will cost about \$3,200 per engine. We estimate that one third of the engines will have the parts replaced at time of engine overhaul. We also estimate that one third of the engines will have the parts replaced during an engine mid-life shop visit. We also estimate that one third of the engines will have the parts replaced at an engine shop visit dedicated for these parts replacements, at a cost of about \$90,000 per engine. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$3,600,000.

Special Flight Permits Paragraph Removed

Paragraph (f) of the current AD, AD 2002-01-29, contains a paragraph pertaining to special flight permits. Even though this AD does not contain a similar paragraph, we have made no changes with regard to the use of special flight permits to operate the airplane to a repair facility to do the work required by this AD. In July 2002, we published a new Part 39 that contains a general authority regarding special flight permits and airworthiness directives; see Docket No. FAA-2004-8460, Amendment 39-9474 (69 FR 47998, July 22, 2002). Thus, when we now supersede ADs we will not include a specific paragraph on special flight permits unless we want to limit the use of that general authority granted in section 39.23.

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 have 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 that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under 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 summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2001-NE-02-AD" in your request.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

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Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration 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 39-12624 (67 FR 4652, January 31, 2002) and by adding a new airworthiness directive, Amendment 39-14439, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-26-18 Rolls-Royce Deutschland (formerly Rolls-Royce plc): Amendment 39-14439. Docket No. 2001-NE-02-AD.

Effective Date

- (a) This AD becomes effective February 3, 2006.

Affected ADs

- (b) This AD supersedes AD 2002-01-29.

(c) This AD applies to Rolls-Royce Deutschland (formerly Rolls-Royce plc) (RRD) models Tay 650-15 and 651-54 turbofan engines with high pressure compressor (HPC) outlet guide vane (OGV) retaining bolts part numbers (P/Ns) BLT3602, DU909, and DU818 installed. These engines are installed on, but not limited to Boeing 727 and Fokker F.28 Mark 0100 airplanes.

Unsafe Condition

(d) This AD results from RRD relaxing the terminating action compliance time for Tay 650-15 engines due to reassessment by RRD. We are issuing this AD to prevent an uncontained failure of the HPC stage 11/12 disc spacer, which could result in damage to the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Initial Inspection

(f) Perform a borescope inspection of the rear side of the stage 12 rotor disc at or before accumulating 8,000 cycles-since-new on the OGV retaining bolts, or within 30 days from the effective date of this AD, whichever occurs later. Use paragraph 3.A.(1) of the Accomplishment Instructions of RRD Mandatory Service Bulletin (MSB) Tay-72-1483, Revision 2, dated October 20, 2000, to do the inspection. If damage is observed on the stage 12 rotor disc, remove the engine from service.

Repetitive Inspections

(g) Thereafter, perform repetitive borescope inspections of the rear side of the stage 12 rotor disc no earlier than 1,800 and no later than 2,200 cycles-since-last-inspection, or no later than 18 months since-last-inspection, whichever occurs first. Use paragraph 3.A.(1) of the Accomplishment Instructions of RRD MSB Tay-72-1483, Revision 2, dated October 20, 2000, to do the inspections. If damage is observed on the stage 12 rotor disc, remove the engine from service.

OGV Retaining Bolt Replacement

(h) For engines that had OGV bolts replaced with new bolts P/Ns BLT3602, DU909, and DU818 as specified in RRD SB Tay-72-1484, dated November 15, 1999, or Revision 1, dated December 17, 1999, the initial and repetitive inspection requirements, based on engine cycles-since-bolt installation, are the same as specified in paragraphs (f) and (g) of this AD.

Terminating Action

(i) As terminating action for the inspections required by this AD, do the following:

(1) Before November 1, 2007, for Tay 650-15 engines, and before October 1, 2012, for Tay 651-54 engines, remove from service the parts listed in the following Table 1:

TABLE 1.—PARTS TO BE REMOVED FROM SERVICE

Part No.	Part name
JR12314A	HPT Rotor Inner Seal Support Assembly.
EU57842A	HP Compressor Outlet Guide Vane 5-Span.
EU57843A	HP Compressor Outlet Guide Vane 6-Span.
JR30962A	HP Rotor Thrust Bearing Housing Assembly.
JR30568A	Diffuser Case Assembly.
KB7106	Tab Washer.
EU12042	Retaining Lock Plate.
DU818	Hex Head Bolt.

(2) Information on removing these parts from service can be found in RRD MSB Tay-72-1498, dated October 20, 2000, or RRD MSB Tay-72-1498, Revision 1, dated December 1, 2000, or RRD SB Tay-72-1498, Revision 2, dated December 31, 2004.

(j) After performing the actions specified in paragraph (i) of this AD, the inspections specified in paragraphs (f) through (h) of this AD are no longer required.

Alternative Methods of Compliance

(k) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(l) Luftfahrt Bundesamt airworthiness directive D-2004-365, dated January 31, 2005, also addresses the subject of this AD.

Material Incorporated by Reference

(m) You must use Rolls-Royce Mandatory Service Bulletin Tay-72-1483, Revision 2, dated October 20, 2000, to perform the inspections required by this AD. The Director of the Federal Register previously approved the incorporation by reference of this service bulletin as of February 15, 2002 (67 FR 4652, January 31, 2002), in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany, telephone: 011 49 (0) 33-7086-1768, fax: 011 49 (0) 33-7086-3356. You can review copies at the FAA, New England Region, Office of the Regional Counsel, 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 December 23, 2005.

Carlos Pestana,

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

[FR Doc. 05-24642 Filed 12-29-05; 8:45 am]

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