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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24325; Directorate Identifier 2006-NE-10-AD; Amendment 39-15129; AD 2007-14-07]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc RB211-524 and -535 Series Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Rolls-Royce plc (RR) RB211-524 and -535 series turbofan engines. This AD requires initial and repetitive fluorescent penetrant inspections (FPI) of the high pressure (HP) compressor stage 1 and 2 rotor discs for cracks. This AD results from reports of low-cycle-fatigue cracks found at overhaul in the interface weld between the HP compressor stage 1 and 2 rotor disc. We are issuing this AD to prevent uncontained engine failure and damage to the airplane.

DATES: This AD becomes effective August 16, 2007. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of August 16, 2007.

ADDRESSES: You can get the service information identified in this AD from Rolls-Royce plc, PO Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242424; fax: 011-44-1332-249936.

The Docket Operations office is located at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Ian Dargin, Aerospace Engineer, Engine Certification Office, FAA, Engine And Propeller Directorate, 12 New England Executive Park; Burlington, MA 01803; telephone (781) 238-7178; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with a proposed AD. The proposed AD applies to certain RR RB211-524 and -535 series turbofan engines. We published the proposed AD in the Federal Register on September 25, 2006 (71 FR 57449). That

action proposed to require initial and repetitive FPI and borescope inspections of the HP compressor stage 1 and 2 rotor discs for cracks.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://dms.dot.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.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Unrealistic Compliance Time

Rolls-Royce plc states that the compliance time of 30 days after the effective date of the AD as specified in the proposed AD, is unrealistic and would be an unacceptable burden to operators. We agree. We changed paragraph (f) to read "At the next shop visit after the effective date of this AD, perform an initial fluorescent penetrant inspection (FPI) and borescope inspection of the HP compressor stage 1 and 2 discs for cracks."

Borescope Inspection Requirement

Rolls-Royce plc also states that in their Alert Service Bulletin (ASB) No. RB.211-72-AE359, Revision 1, dated November 17, 2005, there is no requirement for performing borescope inspections. We do not agree. That ASB requires borescope inspections per paragraphs 3A(3) through 3A(4)(o)(i). We did not change the AD.

Correction to the Applicability

Since we issued the proposed AD, we found that we overlooked listing an applicable engine model, model RB211-524D4-B-19. We investigated and found that no U. S. operators currently operate airplanes with this engine model. We added this model number to this AD to complete the applicability listing.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

We estimate that this AD will affect 884 RB211-524 and -535 series turbofan engines installed on airplanes of U.S. registry. We also estimate that it will take about 2 work-hours per engine to perform the inspections, and that the average labor rate is \$80 per work-hour. Based on these figures,

we estimate the total cost to U.S. operators of performing one inspection on all of the engines, to be \$141,440.

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 at the address listed under ADDRESSES.

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 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 adding the following new airworthiness directive:



2007-14-07 Rolls-Royce plc: Amendment 39-15129; Docket No. FAA-2006-24325; Directorate Identifier 2006-NE-10-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective August 16, 2007.

Affected ADs

(b) None.

Applicability

(c) This AD applies to the following Rolls-Royce plc (RR) RB211-524 and -535 series turbofan engines:

-524B2-19	-524D4-19	-524C2-B-19	-524H2-19
-524B-02	-524D4-39	-524D4X-19	-535E4-37
-524B3-02	-524B-B-02	-524D4X-B-19	-535E4-B-37
-524C2-19	-524B2-B-19	-524G2-19	-535E4-C-37
-524B4-02	-524D4-B-19	-524G3-19	-535E4-B-75
-524B4-D-02	-524D4-B-39	-524H-36	-535C-37

These engines are installed on, but not limited to, Boeing 747, 757, 767 series, Lockheed L-1011 series, and Tupolev Tu204 airplanes.

Unsafe Condition

(d) This AD results from reports of low-cycle fatigue cracks found at overhaul in the interface weld between the high pressure (HP) compressor stage 1 and 2 rotor discs. We are issuing this AD to prevent uncontained engine failure and 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 and Repetitive Inspections

(f) At the next shop visit after the effective date of this AD, perform an initial fluorescent penetrant inspection (FPI) and borescope inspection of the HP compressor stage 1 and 2 discs for cracks.

(g) Thereafter, at every engine shop visit, perform repetitive FPIs and borescope inspections of HP compressor stage 1 and 2 rotor discs for cracks.

(h) Use paragraphs 3.A.(1) through 3.A.(4)(o) of the Accomplishment Instructions of RR Alert Service Bulletin (ASB) No. RB.211-72-AE359, Revision 1, dated November 17, 2005, to do the inspections.

(i) Accept or reject as necessary, HP compressor stage 1 and 2 rotor discs using inspection criteria paragraphs 3.A.(5)(a) through 3.A.(5)(f) of the Accomplishment Instructions of RR ASB No. RB.211-72-AE359, Revision 1, dated November 17, 2005.

Definition

(j) For the purpose of this AD, an engine shop visit is defined as anytime the HP compressor stage 1 and 2 rotor discs are removed from the HP compressor stage 3 disc.

Reporting Requirements

(k) Within 10 days, report inspection findings of cracks to the RR local field service office representative. The Office of Management and Budget has approved the reporting requirements specified in paragraph 3.A.(6)(b) of the Accomplishment Instructions of RR ASB No. RB.211-72-AE359, Revision 1, dated November 17, 2005, and assigned OMB control number 2120-0056.

Alternative Methods of Compliance

(l) 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

(m) United Kingdom Civil Aviation Authority airworthiness directive No. G-2005-0028 R1, dated October 18, 2005, also addresses the subject of this AD.

Material Incorporated by Reference

(n) You must use Rolls-Royce plc Alert Service Bulletin No. RB.211-72-AE359, Revision 1, dated November 17, 2005, to perform the inspections required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Rolls-Royce plc, PO Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242424; fax: 011-44-1332-249936, for a copy of this service information. You may 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 July 3, 2007.

Peter A. White,

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

[FR Doc. E7-13410 Filed 7-11-07; 8:45 am]