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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0045; Directorate Identifier 2007-NE-53-AD; Amendment 39-16041; AD 2009-21-04]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG Model BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30 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:

Repair Scheme BRG3086 Issue 1 instructs the repair of the High-Pressure (HP) Compressor Front Drum Assembly Damping Grooves. This repair has an impact on the life of the HP Compressor Front Drum Assembly.

We are issuing this AD to prevent failure of front HP compressor rotors, which could result in an uncontained engine failure and damage to the airplane.

DATES: This AD becomes effective December 3, 2009.

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: Jason Yang, Aerospace Engineer, Engine Certification Office, FAA, Engine and 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, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany; telephone 49 (0) 33-7086-1768; fax 49 (0) 33-7086-3356, or go to:

<http://www.rolls-royce.com/deutschland/en/default.htm>, for a copy of the service information referenced in this AD.

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 February 12, 2009 (74 FR 7004). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states that:

Repair Scheme BRG3086 Issue 1 instructs the repair of the HP Compressor Front Drum Assembly Damping Grooves. This repair has an impact on the life of the HP Compressor Front Drum Assembly. This emergency airworthiness directive has been raised to mandate certain specific CAUTION notes related to specific subtasks of the BR715 Time Limits Manual (TLM) T-715-3BR instructing a reduced life for certain Serial Numbers (SN) of the HP Compressor Front Drum Assemblies Part No. BRH20070 after repair BRG3086 Issue 1 has been applied and Part No. BRR21918 after repair BRG3086 Issue 1 has been applied. Results for each individual repair case are listed in the latest revision of Non-Modification Service Bulletin SB-BR700-72-A900437.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Since we issued the proposed AD, we found it necessary to add a column to Table 1 for affected HP compressor rotor front disc assemblies operating under the C1-30 derated design engine mission.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD with the change described previously.

Differences Between This AD and the MCAI or Service Information

We have found it necessary to differ from the MCAI as follows:

We don't require operators to amend the Time Limits Manual.

- We don't allow the operators to show compliance by using RRD ASB SB-BR700-72-A900437, initial issue, dated February 26, 2007. Some of the affected parts are not included in the initial issue of the ASB.
- We have incorporated in this AD, the life reduction Table for the HPC drum assemblies, by serial number (SN), that are specified in RRD ASB SB-BR700-72-A900437, Revision 2, dated September 17, 2009.
- HPC drum assembly, P/N BRH20070 is not affected by the AD; since only certain HPC drums with P/N BRR21918 were affected in accordance with RRD ASB SB-BR700-72-A900437, Revision 2, dated September 17, 2009.

Costs of Compliance

Based on the service information, we estimate that this AD will affect about 14 engines installed on airplanes of U.S. registry. We also estimate that it will take about 10 work-hours per engine to

comply with this AD. The average labor rate is \$80 per work-hour. Required parts will cost about \$100,000 per engine. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$1,411,200.

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 (telephone (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:



2009-21-04 Rolls-Royce Deutschland Ltd & Co KG (formerly BMW Rolls-Royce GmbH and BMW Rolls-Royce Aero Engines): Amendment 39-16041. Docket No. FAA-2009-0045; Directorate Identifier 2007-NE-53-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective December 3, 2009.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Rolls-Royce Deutschland Ltd & Co KG model BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30 turbofan engines. These engines are installed on, but not limited to, McDonnell Douglas 717-200 airplanes.

Reason

(d) Repair Scheme BRG3086 Issue 1 instructs the repair of the High-Pressure (HP) Compressor Front Drum Assembly Damping Grooves. This repair has an impact on the life of the HP Compressor Front Drum Assembly.

We are issuing this AD to prevent failure of front HP compressor rotors, which could result in an uncontained engine failure and damage to the airplane.

Actions and Compliance

(e) Remove the following HP Compressor drum assemblies from operation before reaching the life limit specified in Table 1 of this AD.

Table 1 – Flight Cycle Life by Part Number, Serial Number, and Mission for Affected HP Compressor Rotor Front Disc Assemblies

Disc Assembly Part No.	Serial No.	A1-30 Design	B1-30 and C1-30 Designs	A1-30 Hawaiian	C1-30 Tropical and Derated Tropical	C1-30 Derated Design
BRR21918	1,107	6,600	4,500	4,500	3,800	6,600
BRR21918	1,120	6,800	4,700	4,700	4,000	6,800
BRR21918	1,122	7,000	4,900	4,900	4,100	7,000
BRR21918	1,144	7,300	5,000	5,000	4,200	7,300
BRR21918	1,154	6,800	4,700	4,700	4,000	6,800

BRR21918	1,163	6,800	4,700	4,700	4,000	6,800
BRR21918	1,166	6,500	4,500	4,500	3,800	6,500
BRR21918	1,194	6,900	4,800	4,800	4,000	6,900
BRR21918	1,217	7,000	4,900	4,900	4,100	7,000
BRR21918	1,232	7,200	5,000	5,000	4,200	7,200
BRR21918	1,255	7,300	5,100	5,100	4,300	7,300
BRR21918	1,259	7,500	5,200	5,200	4,400	7,500
BRR21918	1,271	7,300	5,100	5,100	4,300	7,300
BRR21918	1,292	7,300	5,100	5,100	4,300	7,300

Other FAA AD Provisions

(f) Alternative Methods of Compliance (AMOCs): 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 Emergency Airworthiness Directive 2007-0050-E, dated February 26, 2007, and Rolls-Royce Deutschland Ltd & Co KG Alert Service Bulletin SB-BR700-72-A900437, Revision 2, dated September 17, 2009, for related information. Contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany; telephone 49 (0) 33-7086-1768; fax 49 (0) 33-7086-3356, or go to: <http://www.rolls-royce.com/deutschland/en/default.htm>, for a copy of this service information.

(h) Contact Jason Yang, Aerospace Engineer, Engine Certification Office, FAA, Engine and 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.

Issued in Burlington, Massachusetts, on October 1, 2009.

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