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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0705; Directorate Identifier 2014-NE-13-AD; Amendment 39-18006; AD 2014-22-02]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Rolls-Royce plc (RR) Trent 1000-A, 1000-C, 1000-D, 1000-E, 1000-G, and 1000-H turbofan engines. This AD requires removing engine electronic controller (EEC) software earlier than standard MB6.15 and replacing with a software standard eligible for installation. This AD was prompted by a finding that an intermediate pressure (IP) shaft failure may not be detected by EEC software earlier than standard MB6.15. We are issuing this AD to detect IP shaft failure and prevent IP compressor turbine burst, uncontained engine failure, and damage to the airplane.

DATES: This AD becomes effective November 14, 2014.

We must receive comments on this AD by December 15, 2014.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- 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.

For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: http://www.rolls-royce.com/contact/civil_team.jsp; Internet: <https://www.aeromanager.com>. You may view this service information at the FAA, Engine &

Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0705; 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 mandatory continuing airworthiness information (MCAI), regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Kenneth Steeves, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7765; fax: 781-238-7199; email: kenneth.steeves@faa.gov.

SUPPLEMENTARY INFORMATION:

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-2014-0705; Directorate Identifier 2014-NE-13-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.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2014-0192, dated September 1, 2014 (referred to hereinafter as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

An investigation carried out by RR has identified the risk of Intermediate Pressure (IP) shaft failure that may not be detected and accommodated by the engine control system. An IP shaft failure that is not detected may result in IP turbine overspeed.

This condition, if not corrected, could lead to IP turbine burst and consequent release of high energy debris, possibly resulting in damage to, and reduced control of, the aeroplane.

You may obtain further information by examining the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0705.

Relevant Service Information

RR has issued Alert Service Bulletin (ASB) No. TRENT 1000 73-AH914, dated July 23, 2014. The ASB describes procedures for removing software earlier than standard MB6.15, and installing a software standard eligible for installation.

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 European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This AD requires removing EEC software earlier than standard MB6.15, and replacing with a software standard eligible for installation.

FAA's Determination of the Effective Date

No domestic operators use this product. Therefore, we find that notice and opportunity for prior public comment are unnecessary and that good cause exists for making this amendment effective in less than 30 days.

Costs of Compliance

We estimate that this AD affects no engines installed on airplanes of U.S. registry. We also estimate that it will take about 1 hour per engine to comply with this AD. The average labor rate is \$85 per hour. Required parts cost is about \$200 per engine. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$0.

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),

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) 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.

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 adding the following new airworthiness directive (AD):



2014-22-02 Rolls-Royce plc: Amendment 39-18006; Docket No. FAA-2014-0705; Directorate Identifier 2014-NE-13-AD.

(a) Effective Date

This AD is effective November 14, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Rolls-Royce plc (RR) Trent 1000-A, 1000-C, 1000-D, 1000-E, 1000-G, and 1000-H turbofan engines.

(d) Reason

This AD was prompted by a finding that an intermediate pressure (IP) shaft failure may not be detected by engine electronic controller (EEC) software earlier than standard MB6.15. We are issuing this AD to detect IP shaft failure and prevent IP compressor turbine burst, uncontained engine failure, and damage to the airplane.

(e) Actions and Compliance

Comply with this AD within the compliance times specified, unless already done.

- (1) Within 30 days or 180 flight cycles after the effective date of this AD, whichever occurs first, remove from the engine any EEC software standard earlier than software standard MB6.15.
- (2) Install EEC software eligible for installation.

(f) Installation Prohibition

After the effective date of this AD, do not install any EEC containing a software standard earlier than software standard of MB6.15, into any engine.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(h) Related Information

(1) For more information about this AD, contact Kenneth Steeves, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7765; fax: 781-238-7199; email: kenneth.steeves@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2014-0192, dated September 1, 2014, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2014-0705.

(3) RR Alert Service Bulletin No. TREN 1000 73-AH914, dated July 23, 2014, which is not incorporated by reference in this AD, can be obtained from RR using the contact information in paragraph (h)(4) of this AD.

(4) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: http://www.rolls-royce.com/contact/civil_team.jsp; Internet: <https://www.aeromanager.com>.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(i) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on October 17, 2014.
Colleen M. D'Alessandro,
Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.