

[Federal Register Volume 78, Number 16 (Thursday, January 24, 2013)]  
[Rules and Regulations]  
[Pages 5126-5128]  
From the Federal Register Online via the Government Printing Office [www.gpo.gov]  
[FR Doc No: 2013-01358]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2012-1334; Directorate Identifier 2012-NE-49-AD; Amendment 39-17324; AD 2013-02-03]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Rolls-Royce plc Turbofan Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Rolls-Royce plc (RR) RB211-Trent 970-84, 970B-84, 972-84, 972B-84, 977-84, 977B-84, and 980-84 turbofan engines. This AD requires replacement of the fuel oil heat exchanger (FOHE). This AD was prompted by a report of an in-flight increase of N2 intermediate pressure rotor vibrations resulting in an engine surge and pilot shut down of the engine. We are issuing this AD to prevent rotor bearing oil starvation, uncontained engine failure, and damage to the airplane.

**DATES:** This AD becomes effective January 24, 2013.

We must receive comments on this AD by March 11, 2013.

**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.

For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE248BJ, United Kingdom; phone: 44 (0) 1332 242424; fax: 44 (0) 1332 249936, or email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp). You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. 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>; 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 (phone: 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:** Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: [robert.green@faa.gov](mailto:robert.green@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued mandatory continuing airworthiness information (MCAI) EASA AD 2012-0260, dated December 11, 2012, to correct an unsafe condition for the specified products. The MCAI states:

During a revenue service flight, a Trent 900 engine experienced increased N2 intermediate pressure (IP) vibrations, followed by an engine surge. The pilot shut down the engine, the aeroplane carried out an air turn-back, and a 3-engine landing was successfully performed. Subsequent investigation results revealed the presence of oil by-pass seal material from the Fuel-to-Oil Heat Exchanger (FOHE) in the restrictor hole of the Tail Bearing Housing (TBH) cover plate. The blocked restrictor hole caused oil starvation to the low pressure (LP) and IP location bearings.

This condition, if not detected and corrected, could lead to LP location bearing damage, possibly resulting in uncontained engine failure and consequent damage to the aeroplane.

The oil baffle seals in FOHE, part number 47111-1241, become damaged with use and loose seal material can block the restrictor hole. You may obtain further information by examining the MCAI in the AD docket.

### **Relevant Service Information**

RR has issued Alert Non-Modification Service Bulletin RB.211-79-AH031, dated October 25, 2012. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

### **FAA's Determination and Requirements of This AD**

This product has been approved by 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.

## **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. Accordingly, this AD is effective upon publication.

## **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-2012-1334; Directorate Identifier 2012-NE-49-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 adding the following new AD:



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**2013-02-03 Rolls-Royce plc:** Amendment 39-17324; Docket No. FAA-2012-1334; Directorate Identifier 2012-NE-49-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective January 24, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Rolls-Royce plc RB211-Trent 970-84, 970B-84, 972-84, 972B-84, 977-84, 977B-84, and 980-84 turbofan engines with a fuel oil heat exchanger (FOHE), part number 47111-1241, installed.

**(d) Reason**

This AD was prompted by a report of an in-flight increase of N2 intermediate pressure rotor vibrations resulting in an engine surge and pilot shut down of the engine. We are issuing this AD to prevent rotor bearing oil starvation, uncontained engine failure, and damage to the airplane.

**(e) Actions and Compliance**

Unless already done, do the following actions.

(1) For engines installed on the effective date of this AD, replace the FOHE within 500 engine hours (EHs) from the effective date of this AD, or before exceeding 5,000 EHs time since new (TSN) or time since overhaul (TSO), whichever occurs later.

(2) For engines in the shop on the effective date of this AD, do not approve the engine for return to service if the FOHE has 5,000 or more EHs TSN or TSO.

(3) After the effective date of this AD, do not install a FOHE on any engine, or any engine on any airplane, unless the FOHE has fewer than 5,000 EHs TSN or TSO.

**(f) Alternative Methods of Compliance (AMOCs)**

The Manager, Engine Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

**(g) Related Information**

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238 7754; fax: 781-238-7199; email: [robert.green@faa.gov](mailto:robert.green@faa.gov).

(2) Refer to European Aviation Safety Agency Airworthiness Directive 2012-0260, dated December 11, 2012, and Rolls-Royce plc Alert Non-Modification Service Bulletin RB.211-79-AH031, dated October 25, 2012, for related information.

(3) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE248BJ, United Kingdom; phone: 44 (0) 1332 242424; fax: 44 (0) 1332 249936; or email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp).

(4) 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.

**(h) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on January 14, 2013.  
Thomas Boudreau,  
Acting Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.