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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2019-0567; Product Identifier 2019-NE-21-AD; Amendment 39-19698; AD 2019-15-05]**

**RIN 2120-AA64**

### **Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG Turbofan Engines**

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

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

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all Rolls-Royce Deutschland Ltd & Co KG (RRD) Trent 1000-AE3, Trent 1000-CE3, Trent 1000-D3, Trent 1000-G3, Trent 1000-H3, Trent 1000-J3, Trent 1000-K3, Trent 1000-L3, Trent 1000-M3, Trent 1000-N3, Trent 1000-P3, Trent 1000-Q3 and Trent 1000-R3 engines. This AD requires removal of the affected high-pressure turbine (HPT) disk front cover plate before reaching its new life limit. This AD was prompted by a recent analysis that determined the HPT disk front cover plate may have a safe life below its declared life limit. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective August 16, 2019.

The FAA must receive comments on this AD by September 16, 2019.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

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

Fax: 202-493-2251.

Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, United Kingdom, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: [corporate.care@rolls-royce.com](mailto:corporate.care@rolls-royce.com); internet: <https://customers.rolls-royce.com>

royce.com/public/rollsroycecare. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0567.

### **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-2019-0567; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Besian Luga, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7750; fax: 781-238-7199; email: [Besian.luga@faa.gov](mailto:Besian.luga@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2018-0164R1, dated March 14, 2019 (corrected copy dated March 21, 2019) (referred to after this as “the MCAI”), to address an unsafe condition for the specified products. The MCAI states:

Following a recent analysis of the material condition used in manufacture of these parts, it was established that the HP turbine disc front cover plate may have a safe life below its declared safe cyclic life (DSCL).

This condition, if not corrected, could lead to premature failure of an affected part, possibly resulting in damage to the engine and reduced control of the aeroplane.

To address this potential unsafe condition, RR published the NMSB to provide the new DSCL and replacement instructions. Consequently, EASA issued AD 2018-0164 to require implementation of the reduced DSCL and removal from service of those affected parts that have exceeded the reduced DSCL.

Since that [EASA] AD was issued, further analysis has resulted in the approval of an extended life for the affected parts. RR has published the TLM Task for this extended limit and it is expected the NMSB will be cancelled accordingly.

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-2019-0567.

### **Related Service Information**

The FAA reviewed Rolls-Royce plc (RR) Alert Service Bulletin (ASB) TRENT1000 72-AK057, Initial Issue, dated April 10, 2018. The service information describes procedures for either removing the engine containing the affected HPT disk front cover plate or replacing the HPT disk front cover plate during a shop visit.

## **FAA's Determination**

This product has been approved by EASA 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. The FAA is issuing this AD because we evaluated all the relevant information provided by EASA and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

## **AD Requirements**

This AD requires removal of the affected HPT disk front cover plate from service before reaching its new life limit and replacing it with a part eligible for installation.

## **Differences Between This AD and the MCAI or Service Information**

This AD and EASA AD 2018-0164R1, dated March 14, 2019 (corrected copy dated March 21, 2019) require removal of the affected HPT disk front cover plate before accumulating 1,250 cycles since first installation on an engine. RR ASB Trent1000 72-AK057, Initial Issue, dated April 10, 2018, requires removal of the affected HPT disk front cover plate before accumulating 865 cycles since first installation. Since publication of the ASB, the manufacturer has revised its analysis, which has resulted in an extension of the life limit for this part to 1,250 cycles.

## **FAA's Justification and Determination of the Effective Date**

No domestic operators use this product. Therefore, the FAA finds good cause that notice and opportunity for prior public comment are unnecessary. In addition, for the reason stated above, the FAA finds that good cause exists for making this amendment effective in less than 30 days.

## **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, the FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2019-0567 and Product Identifier 2019-NE-21-AD at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

The FAA will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact we receive about this final rule.

## **Regulatory Flexibility Act**

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

## Costs of Compliance

The FAA estimates that this AD affects 0 engines installed on airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace HPT disk front cover plate	7 work-hours × \$85 per hour = \$595	\$307,137	\$307,732	\$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.

The FAA is 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

## Regulatory Findings

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, and
- (2) Will not affect intrastate aviation in Alaska.

## 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):



**2019-15-05 Rolls-Royce Deutschland Ltd & Co KG:** Amendment 39-19698; Docket No. FAA-2019-0567; Product Identifier 2019-NE-21-AD.

**(a) Effective Date**

This AD is effective August 16, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Rolls-Royce Deutschland Ltd & Co KG (RRD) Trent 1000-AE3, Trent 1000-CE3, Trent 1000-D3, Trent 1000-G3, Trent 1000-H3, Trent 1000-J3, Trent 1000-K3, Trent 1000-L3, Trent 1000-M3, Trent 1000-N3, Trent 1000-P3, Trent 1000-Q3 and Trent 1000-R3 engines.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

**(e) Unsafe Condition**

This AD was prompted by recent analysis of the material condition used in the manufacture of these parts that determined the high-pressure turbine (HPT) disk front cover plate may have a safe life below its declared safe cyclic life. The FAA is issuing this AD to prevent failure of the HPT disk front cover plate. The unsafe condition, if not addressed, could result in uncontained release of the HPT turbine disk front cover plate, damage to the engine, and damage to the airplane.

**(f) Compliance**

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

**(g) Required Actions**

Remove the HPT disk front cover plate, part number KH59279, from service prior to it reaching 1,250 engine cycles since first installation on an engine and replace with a part eligible for installation.

**(h) Installation Prohibition**

Do not install any HPT disk front cover plate, part number KH59279, into any engine, or any engine onto any airplane, if that part has exceeded 1,250 engine cycles since first installation on an engine.

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

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(j) Related Information**

(1) For more information about this AD, contact Besian Luga, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7750; fax: 781-238-7199; email: Besian.luga@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2018-0164R1, dated March 14, 2019 (corrected copy dated March 21, 2019), for more information. You may examine the EASA AD in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2019-0567.

**(k) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on July 26, 2019.  
Karen M. Grant,  
Acting Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.