



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1032; Project Identifier MCAI-2020-00856-E; Amendment 39-21338; AD 2020-24-08]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG (Type Certificate Previously Held by Rolls-Royce plc) Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Rolls-Royce Deutschland Ltd & Co KG (Type Certificate Previously Held by Rolls-Royce plc) (RRD) RB211 Trent 768-60, 772-60, 772B-60 and 772C-60 model turbofan engines.

This AD requires replacement of high-pressure turbine (HPT) blades with parts eligible for installation before exceeding specified flight cycles since new. This AD was prompted by several reports from the manufacturer that HPT blades on RB211 Trent 700 model turbofan engines have been subject to high levels of corrosion fatigue, leading to blade cracking and eventual release, resulting in an aborted take-off and in-flight shut-downs. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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 <https://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: Deliver to Mail address above 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, P.O. Box 31, Derby, DE24 8BJ, United Kingdom, phone: +44 (0)1332 242424; website: <https://www.rolls-royce.com/contact-us.aspx>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety 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 at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1032.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1032; 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, any comments received, and other information. The street address for the Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Scott Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7132; fax: (781) 238-7199; email: Scott.M.Stevenson@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 EASA AD No. 2018-0291,

dated December 21, 2018 (referred to after this as “the MCAI”), to address the unsafe condition for the specified products. The MCAI states:

HP turbine blades on a number of Trent 700 engines have been subject to high levels of corrosion fatigue, leading to blade cracking and eventual release. This has caused a number of aborted take-off and in-flight shut-down events. Sampling has identified that corrosion fatigue affects blades at varying rates, likely dependent on environmental, operational and individual blade conditions.

This condition, if not corrected, could lead to blade failure and subsequent increased risk of high energy debris release, possibly resulting in damage to, and reduced control of, the aeroplane.

To address this potential unsafe condition, RR issued the NMSB to provide instructions for removal from service of certain engines where a higher level of corrosion exposure is expected for the affected blades.

For the reason described above, this [EASA] AD requires removal from service of certain engines, to be corrected in shop.

You may obtain further information by examining the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1032.

Related Service Information under 1 CFR Part 51

The FAA reviewed Rolls-Royce RB211 Trent 700 Series Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AK165, dated November 26, 2018. The Alert NMSB describes procedures for removal of specific engines, identified by serial number, to enable replacement of potentially corrosion-fatigued HPT blades. The FAA also reviewed Task 72-41-52-200-800 – General Data for the Inspection of the High Pressure (HP) Turbine Blades, dated June 10, 2011, from the (Rolls-Royce) RR Trent-768-60/15 Engine Manual. This Task describes procedures for inspection of the HPT blades. This

service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

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 it evaluated all the relevant information provided by EASA and determined that the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires replacement of HPT blades on affected engines prior to accumulating a specified number of flight cycles since new, or before further flight, whichever occurs later.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C.) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for "good cause," finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than 30 days, upon a finding of good cause.

The FAA has found the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because no domestic operators use this product. It is unlikely that the FAA will receive any adverse comments or useful information about this AD from U.S. operators. Accordingly, notice and opportunity for prior public comment are unnecessary, pursuant to 5 U.S.C. 553(b)(3)(B). In addition, for the foregoing reasons, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) 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 FAA-2020-1032 and Project Identifier MCAI-2020-00856-E at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this final rule contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this final rule, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this final rule. Submissions containing CBI should be sent to Scott Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

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
Remove and replace HPT blades	52 work hours x \$85 per hour = \$4,420	\$1,500,000	\$1,504,420	\$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.

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 that 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.

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):

2020-24-08 Rolls-Royce Deutschland Ltd & Co KG (Type Certificate Previously Held by Rolls-Royce plc): Amendment 39-21338; Docket No. FAA-2020-1032; Project Identifier MCAI-2020-00856-E.

(a) Effective Date

This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd & Co KG (Type Certificate Previously Held by Rolls-Royce plc) (RRD) RB211 Trent 768-60, 772-60, 772B-60, and 772C-60 model turbofan engines with an engine serial number (ESN) identified in Table 1 or Table 2 of Appendix 1 of Rolls-Royce (RR) RB211 Trent 700 Series Alert Non-

Modification Service Bulletin RB.211-72-AK165, dated November 26, 2018 (the NMSB).

(d) Subject

Joint Aircraft System Component (JASC) Code/Air Transport Association (ATA) of America Code 7250 – Turbine Section.

(e) Unsafe Condition

This AD was prompted by a determination by the manufacturer that high-pressure turbine (HPT) blades on several RB211 Trent 700 model turbofan engines have been subject to high levels of corrosion fatigue, leading to HPT blade cracking and eventual release. The FAA is issuing this AD to prevent failure of the HPT blades. The unsafe condition, if not addressed, could result in blade failure and subsequent release of high-energy debris, possibly resulting in damage to, and reduced control of, the airplane.

(f) Compliance

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

(g) Required Actions

(1) For engines with an ESN listed in Table 1 of Appendix 1 of the NMSB, prior to each HPT blade accumulating 3,500 flight cycles since new, or before further flight after the effective date of this AD, whichever occurs later, remove the HPT blade from service and replace with a part eligible for installation.

(2) For engines with an ESN listed in Table 2 of Appendix 1 of the NMSB, prior to each HPT blade accumulating 5,800 flight cycles since new, or before further flight after the effective date of this AD, whichever occurs later, remove the HPT blade from service and replace with a part eligible for installation.

(3) If the flight cycles since new of an HPT blade are unable to be determined, use the flight cycles since new, flight cycles since refurbishment, or flight cycles since overhaul of the HPT module.

(h) Definition

For the purpose of this AD, “a part eligible for installation” is:

(1) An HPT blade that has:

(i) been removed from an engine with a serial number listed in Table 1 of the NMSB; and

(ii) not exceeded 3,500 flight cycles since new; and

(iii) before installation, passed an inspection (no crack detected) in accordance with Task 72-41-52-200-800 – General Data for the Inspection of the High Pressure (HP) Turbine Blades, dated June 10, 2011, from the (Rolls-Royce) RR Trent-768-60/15 Engine Manual (RR Task 72-41-52-200-800); or

(2) An HPT blade that has:

(i) been removed from an engine with a serial number listed in Table 2 of the NMSB; and

(ii) not exceeded 5,800 flight cycles since new; and

(iii) before installation, passed an inspection (no crack detected) in accordance with Task 72-41-52-200-800 – General Data for the Inspection of the High Pressure (HP) Turbine Blades, dated June 10, 2011, from the RR Trent-768-60/15 Engine Manual (RR Task 72-41-52-200-800); or

(3) An HPT blade with zero flight cycles since new.

(i) No Reporting Requirements

The reporting requirements specified in paragraph R. of RR Task 72-41-52-200-800 are not required by this AD.

(j) 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 Related Information. You may email your request to: ANE-AD-AMOC@faa.gov.

(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.

(k) Related Information

(1) For more information about this AD, contact Scott Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7132; fax: (781) 238-7199; email: Scott.M.Stevenson@faa.gov.

(2) Refer to European Aviation Safety Agency (EASA) AD No. 2018-0291, dated December 21, 2018, for more information. You may examine the EASA AD in the AD docket at <https://www.regulations.gov> by searching for and locating it in Docket No. FAA-2018-1032.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Rolls-Royce RB211 Trent 700 Series Alert Non-Modification Service Bulletin RB.211-72-AK165, dated November 26, 2018.

(ii) Task 72-41-52-200-800 – General Data for the Inspection of the High Pressure (HP) Turbine Blades, dated June 10, 2011, from the (Rolls-Royce) RR Trent-768-60/15 Engine Manual.

(3) For service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom, phone: +44 (0)1332 242424; website: <https://www.rolls-royce.com/contact-us.aspx>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on November 17, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2020-27897 Filed: 12/17/2020 8:45 am; Publication Date: 12/18/2020]