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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2023–1212; Project Identifier MCAI–2022–00423–E; Amendment 39–22538; AD 2023–17–12]

RIN 2120–AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd. & Co. KG Engines

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule.

SUMMARY:

The FAA is adopting a new airworthiness directive (AD) for all Rolls-Royce Deutschland Ltd. & Co. KG (RRD) Model RB211 Trent 768–60, 772–60, and 772B–60 engines. This AD was prompted by reports of cracks on affected intermediate-pressure compressor (IPC) rotor shaft balance lands. This AD requires repetitive on-wing or in-shop borescope inspections (BSIs) of the affected IPC rotor shaft balance land for cracks and replacement of any IPC rotor shaft if necessary and prohibits the installation of an affected IPC rotor shaft on any engine, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference (IBR). The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective October 26, 2023.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 26, 2023.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No.FAA–2023–1212; 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), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

• For EASA service information identified in this final rule, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: *ADs@easa.europa.eu;* website: *easa.europa.eu*. You may find this material on the EASA website at *ad.easa.europa.eu*.

• 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 (817) 222–5110. It is also available at *regulations.gov* under Docket No. FAA–2023–1212.

FOR FURTHER INFORMATION CONTACT:

Sungmo Cho, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238–7241; email: *sungmo.d.cho@faa.gov*.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all RRD Model RB211 Trent 768–60, 772–60, and 772B–60 engines. The NPRM published in the **Federal Register** on June 14, 2023 (88 FR 38759). The NPRM was prompted by AD 2022–0055, dated March 23, 2022 (EASA AD 2022–0055) (also referred to as the MCAI), issued by EASA, which is the Technical Agent for the Member States of the European Union. The MCAI states that cracking on the IPC rotor shaft balance land has been historically observed on RRD Model Trent 700 engines. To address this unsafe condition, Rolls-Royce plc (RR) originally developed Modification 72–AG402, which introduced a revised balancing method that removed the original balancing weights from the IPC rotor shaft balance land and published RR Service Bulletin (SB) RB.211–72– AG402 to provide instructions for an in-service modification. In addition, RR published Non-Modification Service Bulletin (NMSB) RB.211–72–AG085, Revision 3, dated August 27, 2021, to provide instructions for an in-shop eddy current inspection (ECI) of the IPC rotor shaft balance land. Consequently, EASA issued EASA AD 2018–0049R2, dated September 13, 2021 (EASA AD 2018–0049R2).

Since EASA issued EASA AD 2018–0049R2, RR determined that some RRD Model Trent 700 engines (post-RR SB RB.211–72–AG402) were not inspected in accordance with RR NMSB RB.211–72–AG085 during engine refurbishment due to the policy applied previously from RR NMSB RB.211–72–AG085, Revision 2. RR identified the affected batch of IPC rotor shaft balance lands and published RR NMSB RB.211–72–AK706, Initial Issue, dated November 24, 2021, which describes procedures to perform a

BSI of the IPC rotor shaft balance land until the in-shop ECI is accomplished in accordance with RR NMSB RB.211–72–AG085. To address this, EASA issued the MCAI.

In the NPRM, the FAA proposed to require accomplishing the actions specified in the MCAI described previously, except for any differences identified as exceptions in the regulatory text. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at *regulations.gov* under Docket No. FAA–2023–1212.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

The FAA reviewed EASA AD 2022–0055, which specifies procedures for performing repetitive on-wing or in-shop BSIs of the IPC rotor shaft balance land and, if any discrepancies are detected, accomplishing the applicable corrective actions or replacing the IPC rotor shaft. The MCAI also specifies prohibiting the installation of an affected IPC rotor shaft on any engine and that accomplishing an in-shop ECI of the IPC rotor shaft balance land or replacing the IPC rotor shaft constitutes as terminating action for the repetitive BSIs.

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** .

Differences Between This AD and the MCAI

EASA AD 2022–0055 applies to RRD Model RB211 Trent 768–60, 772–60, 772B–60, and 772C–60 engines. This AD does not apply to RRD Model RB211 Trent 772C–60 engines, as this model engine does not have an FAA type certificate.

Costs of Compliance

The FAA estimates that this AD affects 62 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
BSI of IPC rotor shaft balance land	4.50 work-hours × $85 per hour = $382.50	$0	$382.50	$23,715

The FAA estimates the following costs to do any necessary replacements that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need these replacements:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replace IPC rotor shaft	50 work-hours × $85 per hour = $4,250	$2,120,000	$2,124,250

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,

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

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:

2023–17–12 Rolls-Royce Deutschland Ltd. & Co. KG Engines: Amendment 39–22538; Docket No. FAA–2023–1212; Project Identifier MCAI–2022–00423–E.

(a) Effective Date

This airworthiness directive (AD) is effective October 26, 2023.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd. & Co. KG Model RB211 Trent 768–60, 772–60, and 772B–60 engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

(e) Unsafe Condition

This AD was prompted by reports of cracks on the intermediate-pressure compressor (IPC) rotor shaft balance land. The FAA is issuing this AD to detect cracks on the IPC rotor shaft balance land. The

unsafe condition, if not addressed, could lead to IPC rotor shaft failure and consequent uncontained high-energy debris, possibly resulting in damage to the airplane.

(f) Compliance

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

(g) Required Actions

Except as specified in paragraphs (h) and (i) of this AD: Perform all required actions within the compliance times specified in, and in accordance with, European Union Aviation Safety Agency AD 2022–0055, dated March 23, 2022 (EASA AD 2022–0055).

(h) Exceptions to EASA AD 2022–0055

(1) Where EASA AD 2022–0055 refers to its effective date, this AD requires using the effective date of this AD.

(2) This AD does not adopt the Remarks paragraph of EASA AD 2022–0055.

(3) Where the service information referenced in EASA AD 2022–0055 specifies to use certain tooling, equivalent tooling may be used.

(i) No Reporting Requirement

Although the service information referenced in EASA AD 2022–0055 specifies to notify the manufacturer or supply pictures to the manufacturer of any cracks, dents, or nicks, this AD does not include that requirement.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR–520, Continued Operational Safety 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 (k) of this AD and email 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) Additional Information

For more information about this AD, contact Sungmo Cho, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238–7241; email: *sungmo.d.cho@faa.gov*.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference 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) European Union Aviation Safety Agency (EASA) AD 2022–0055, dated March 23, 2022.

(ii) [Reserved]

(3) For EASA AD 2022–0055, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: *ADs@easa.europa.eu;* website: *easa.europa.eu*. You may find this EASA AD on the EASA website at *ad.easa.europa.eu*.

(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 (817) 222–5110.

(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: *fr.inspection@nara.gov,* or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html*.

Issued on September 18, 2023.

Victor Wicklund,

Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2023–20485 Filed 9–20–23; 8:45 am]

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