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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0655; Project Identifier MCAI-2020-01497-E; Amendment 39-21846; AD 2021-25-03]

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.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Rolls-Royce Deutschland Ltd. & Co KG (RRD) Trent 7000-72 and Trent 7000-72C model turbofan engines. This AD was prompted by the manufacturer revising the engine Time Limits Manual (TLM) life limits of certain critical rotating parts and updating certain maintenance tasks. This AD requires the operator to revise the airworthiness limitation section (ALS) of their existing approved continuous airworthiness maintenance program (CAMP) by incorporating the revised tasks of the applicable TLM for each affected model turbofan engine, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 19, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 19, 2022.

ADDRESSES: For material incorporated by reference in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; website: www.easa.europa.eu. You may find this material on the EASA website at <https://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 <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0655. For material identified in this AD that is not incorporated by reference, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; phone: +44 (0)1332 242424 fax: +44 (0)1332 249936; website: <https://www.rolls-royce.com/contact-us.aspx>.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0655; 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 EASA AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, M-30, West Building Ground Floor, Room W12 140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kevin M. Clark, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7088; fax: (781) 238-7199; email: kevin.m.clark@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2020-0244, dated November 5, 2020 (EASA AD 2020-0244) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all RRD Trent 7000-72 and Trent 7000-72C model turbofan engines.

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 Trent 7000-72 and Trent 7000-72C model turbofan engines. The NPRM published in the Federal Register on August 12, 2021 (86 FR 44316). The NPRM was prompted by the manufacturer revising the engine TLM life limits of certain critical rotating parts and updating certain maintenance tasks. In the NPRM, the FAA proposed to require accomplishing the actions specified in EASA AD 2020-0244, described previously, as incorporated by reference, except for any differences identified as exceptions in the regulatory text of this proposed AD and except as discussed under “Differences Between this Proposed AD and the EASA AD.” The FAA is issuing this AD to address the unsafe condition on these products. See the MCAI for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from three commenters. The commenters were Air Line Pilots Association, International, The Boeing Company, and Delta Air Lines, Inc. (DAL). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Add Exception to the Definition of AMP

DAL requested that paragraph (h), Exceptions to EASA AD 2020-0244, of the proposed rule, be updated to provide an exception to the definition of the AMP for airplanes operated under FAA regulations. DAL noted that the EASA AD's definition of an AMP is applicable to an airplane operated under European Union regulations.

The FAA agrees and has updated paragraph (h)(1) of this AD.

Request To Add Exception for High-Pressure Turbine (HPT) Blade Inspection

DAL requested that paragraph (h), Exceptions to EASA AD 2020-0244, of this AD, be updated to provide an exception for the HPT blade visual inspections in the TLM to make the FAA AD consistent with the most recent publication of RR Trent 7000 TLM-T-T7000-1RR (the TLM) and with EASA AD 2021-0169, dated July 19, 2021 (EASA AD 2021-1069). DAL reasoned that EASA AD 2021-0169 incorporates a life limit of 1,000 flight cycles since new on the HPT blade and explicitly cancels the inspection intervals defined in the TLM.

The FAA disagrees with adding this exception to paragraph (h) of this AD. The unsafe condition and corrective actions in EASA AD 2021-0169 are beyond the scope of this AD. The FAA may consider future rulemaking in response to EASA AD 2021-0169.

Support for the AD

Air Line Pilots Association, International, and The Boeing Company supported the AD without change.

Conclusion

The FAA reviewed the relevant data, considered any comments received, 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, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed EASA AD 2020-0244. EASA AD 2020-0244 specifies revising the approved AMP by incorporating the limitations, tasks, and associated thresholds and intervals described in the TLM. 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.

Other Related Service Information

The FAA reviewed Chapter 05-10 of RR Trent 7000 TLM T-T7000-1RR, dated July 10, 2020. RR Trent 7000 TLM T-T7000-1RR, Chapter 05-10, identifies the reduced life limits of certain critical rotating parts.

The FAA also reviewed Chapter 05-20 of RR Trent 7000 TLM T-T7000-1RR, dated July 10, 2020. RR Trent 7000 TLM T-T7000-1RR, Chapter 05-20, identifies the critical rotating part inspection thresholds and intervals.

Costs of Compliance

The FAA estimates that this AD affects 10 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
Revise the ALS	1 work-hour × \$85 per hour = \$85	\$0	\$85	\$850

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 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:



2021-25-03 Rolls-Royce Deutschland Ltd & Co KG (Type Certificate previously held by Rolls-Royce plc): Amendment 39-21846; Docket No. FAA-2021-0655; Project Identifier MCAI-2020-01497-E.

(a) Effective Date

This airworthiness directive (AD) is effective January 19, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd. & Co KG (RRD) (Type Certificate previously held by Rolls-Royce plc) Trent 7000-72 and Trent 7000-72C model turbofan engines.

(d) Subject

Joint Aircraft Service Component (JASC) Code 7200, Engine (Turbine/Turboprop).

(e) Unsafe Condition

This AD was prompted by the manufacturer revising the engine Time Limits Manual (TLM) life limits of certain critical rotating parts and updating certain maintenance tasks. The FAA is issuing this AD prevent the failure of critical rotating parts. The unsafe condition, if not addressed, could result in failure of one or more engines, loss of thrust control, and loss of the airplane.

(f) Compliance

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

(g) Required Actions

Except as specified in paragraph (h) of this AD: Perform all required actions within the compliance times specified in, and in accordance with, European Union Aviation Safety Agency AD 2020-0244, dated November 5, 2020 (EASA AD 2020-0244).

(h) Exceptions to EASA AD 2020-0244

(1) EASA AD 2020-0244 defines the AMP as: “The approved Aircraft Maintenance Programme (AMP) on the basis of which the operator or the owner ensures the continuing airworthiness of each operated engine. For engines installed on aeroplanes operated under EU regulations, compliance with the approved AMP is required by Commission Regulation (EU) 1321/2014, Part M.A.301, paragraph 3.” In lieu of that definition, this AD defines the AMP as the existing approved Continuous

Airworthiness Maintenance Program (CAMP) that is the basis for which the operator or the owner ensures the continuous airworthiness of each operated airplane.

(2) The requirements specified in paragraphs (1) and (2) of EASA AD 2020-0244 are not required by this AD.

(3) Where EASA AD 2020-0244 requires compliance from its effective date, this AD requires using the effective date of this AD.

(4) Paragraph (3) of EASA AD 2020-0244 specifies revising the approved AMP within 12 months after its effective date, but this AD requires revising the existing approved CAMP within 90 days after the effective date of this AD.

(5) This AD does not mandate compliance with the “Remarks” section of EASA AD 2020-0244.

(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 ECO Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed 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.

(j) Related Information

(1) For more information about this AD, contact Kevin M. Clark, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7088; fax: (781) 238-7199; email: kevin.m.clark@faa.gov.

(2) For material identified in this AD that is not incorporated by reference, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; phone: +44 (0)1332 242424 fax: +44 (0)1332 249936; website: <https://www.rolls-royce.com/contact-us.aspx>.

(k) 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) European Union Aviation Safety Agency (EASA) AD 2020-0244, dated November 5, 2020.

(ii) [Reserved]

(3) For EASA AD 2020-0244, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; website: www.easa.europa.eu. You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this service information at 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 material 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 <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on November 24, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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