



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2023-1652; Project Identifier MCAI-2022-01528-E; Amendment
39-22751; AD 2024-10-06]**

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 superseding four airworthiness directives (ADs) for all Rolls-Royce Deutschland Ltd & Co KG (RRD) Model RB211-535E4-37, RB211-535E4-B-37, and RB211-535E4-C-37 engines. The superseded ADs required recalculating the cyclic life for certain engine life-limited rotating parts and replacing those parts that have exceeded their cyclic life limit within specified compliance times. Since the FAA issued those ADs, the manufacturer has revised the engine time limits manual (TLM), introducing new and more restrictive instructions. This AD requires revising the airworthiness limitations section (ALS) of the existing approved maintenance or inspection program, 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 [INSERT DATE 35 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 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1652; 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, 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](https://www.regulations.gov) under Docket No. FAA-2023-1652.

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 to supersede AD 2003-17-15, Amendment 39-13290 (68 FR 51682, August 28, 2003) (AD 2003-17-15); AD 2013-19-17, Amendment 39-17599 (78 FR 61171, October 3, 2013; corrected November 14, 2013 (78 FR 68360)) (AD 2013-19-17); AD 2013-19-18, Amendment 39-17600 (78 FR 61168, October 3, 2013) (AD 2013-19-18); AD 2015-17-

21, Amendment 39-18254 (80 FR 65925, October 28, 2015) (AD 2015-17-21); and AD 2016-03-04, Amendment 39-18391 (81 FR 6755, February 9, 2016) (AD 2016-03-04) for RRD Model RB211-535E4-37, RB211-535E4-B-37, and RB211-535E4-C-37 engines. The NPRM also affected AD 2004-19-04, Amendment 39-13798 (69 FR 56683, September 22, 2004; corrected September 30, 2004 (69 FR 58257)) (AD 2004-19-04) for Model RB211-22B, RB211-524, and RB211-535 series engines. Those ADs required recalculating the cyclic life for certain engine life-limited rotating parts, replacing those parts that have exceeded their cyclic life limit within specified compliance times, and revising the engine TLM. The FAA issued those ADs to prevent failure of critical life-limited rotating engine parts, which could result in uncontained parts release, uncontained engine failure, damage to the engine, and damage to the airplane.

The NPRM published in the *Federal Register* on August 4, 2023 (88 FR 51742). The NPRM was prompted by EASA AD 2022-0235, dated December 1, 2022 (EASA AD 2022-0235) (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 the manufacturer published a revised engine TLM introducing new or more restrictive tasks and limitations. These new or more restrictive tasks and limitations include updating declared lives of certain critical parts.

You may examine the MCAI in the AD docket at regulations.gov under Docket No. FAA-2023-1652.

In the NPRM, the FAA proposed to retain none of the requirements of AD 2003-17-15, AD 2013-19-17, AD 2013-19-18, AD 2015-17-21, and AD 2016-03-04. The NPRM proposed to require revising the existing approved maintenance or inspection program, as applicable, to incorporate more restrictive airworthiness limitations, as specified in EASA AD 2022-0235. The NPRM also proposed to terminate all

requirements of AD 2004-19-04 for Model RB211-535E4-37, RB211-535E4-B-37, and RB211-535E4-C-37 engines only.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from three commenters. The commenters were the Air Line Pilots Association, International (ALPA), Boeing, and StandardAero. ALPA and Boeing supported the NPRM without change. The following presents the comment received on the NPRM and the FAA's response.

Request to Consider Artificial Aging Requirements in AD 2016-03-04

StandardAero noted that AD 2016-03-04 incorporates the new life as published in the latest TLM revision and applies an artificial aging calculation that is not included in the TLM revision for specific part numbers. The commenter asked the FAA to clarify if the artificial aging calculation required by AD 2016-03-04 is no longer required.

The FAA agrees that the artificial aging calculation for components that is specified in RRD Alert Non-Modification Service Bulletin No. RB.211-72-AH972, Revision 3, dated August 28, 2015, and required by AD 2016-03-04, is necessary to evaluate the total life consumed for the applicable parts. Therefore, the FAA has determined not to supersede AD 2016-03-04 and has revised this final rule accordingly.

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, considered the 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 2022-0235, which specifies instructions for accomplishing the actions specified in the applicable engine TLM, including performing maintenance tasks, replacing life-limited parts, and revising the existing approved maintenance or inspection program, as applicable, by incorporating the limitations, tasks, and associated thresholds and intervals described in the engine TLM. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 468 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 of the existing approved maintenance or inspection program	1 work-hour x \$85 per hour = \$85	\$0	\$85	\$39,780

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

The FAA has 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 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:

a. Removing Airworthiness Directive 2003-17-15, Amendment 39-13290 (68 FR 51682, August 28, 2003); Airworthiness Directive 2013-19-17, Amendment 39-17599 (78 FR 61171, October 3, 2013; corrected November 14, 2013 (78 FR 68360)); Airworthiness Directive 2013-19-18, Amendment 39-17600 (78 FR 61168, October 3, 2013); and Airworthiness Directive 2015-17-21, Amendment 39-18254 (80 FR 65925, October 28, 2015); and

b. Adding the following new airworthiness directive:

2024-10-06 Rolls-Royce Deutschland Ltd & Co KG: Amendment 39-22751; Docket No. FAA-2023-1652; Project Identifier MCAI-2022-01528-E.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

(1) This AD replaces AD 2003-17-15, Amendment 39-13290 (68 FR 51682, August 28, 2003).

(2) This AD affects AD 2004-19-04, Amendment 39-13798 (69 FR 56683, September 22, 2004; corrected September 30, 2004 (69 FR 58257)) (AD 2004-19-04).

(3) This AD replaces AD 2013-19-17, Amendment 39-17599 (78 FR 61171, October 3, 2013; corrected November 14, 2013 (78 FR 68360)).

(4) This AD replaces AD 2013-19-18, Amendment 39-17600 (78 FR 61168, October 3, 2013).

(5) This AD replaces AD 2015-17-21, Amendment 39-18254 (80 FR 65925, October 28, 2015).

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd & Co KG Model RB211-535E4-37, RB211-535E4-B-37, and RB211-535E4-C-37 engines.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by the manufacturer revising the engine Time Limits Manual and the life limits of certain critical rotating parts. The FAA is issuing this AD to prevent failure of critical rotating parts. The unsafe condition, if not addressed, could result in uncontained parts release, uncontained engine failure, 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

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 (EASA) AD 2022-0235, dated December 1, 2022 (EASA AD 2022-0235).

(h) Exceptions to EASA AD 2022-0235

(1) Where EASA AD 2022-0235 defines the AMP as the Aircraft Maintenance Programme which contains the tasks on the basis of which the scheduled maintenance is conducted to ensure the continuing airworthiness of each operated engine, this AD defines the AMP as the Aircraft Maintenance Program which contains the tasks on the basis of which the operator or the owner ensures the continuing airworthiness of each operated airplane.

(2) Where EASA AD 2022-0235 refers to its effective date, this AD requires using the effective date of this AD.

(3) This AD does not require compliance with paragraphs (1) and (2) of EASA AD 2022-0235.

(4) Where paragraph (3) of EASA AD 2022-0235 specifies revising the approved Aircraft Maintenance Programme within 12 months after the effective date of EASA AD 2022-0235, this AD requires revising the airworthiness limitations section of the existing approved maintenance or inspection program, as applicable, within 90 days after the effective date of this AD.

(5) This AD does not adopt the “Remarks” paragraph of EASA AD 2022-0235.

(i) Provisions for Alternative Actions and Intervals

After performing the actions required by paragraph (g) of this AD, no alternative actions and associated thresholds and intervals, including life limits, are allowed unless they are approved as specified in the provisions of the “Ref. Publications” section of EASA AD 2022-0235.

(j) Terminating Action for AD 2004-19-04

Accomplishing the actions required by this AD terminates all requirements of AD 2004-19-04 for Model RB211-535E4-37, RB211-535E4-B-37, and RB211-535E4-C-37 engines only.

(k) 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 responsible Flight Standards Office, as appropriate. If sending information directly to the manager of AIR-520 Continued Operational Safety Branch, send it to the

attention of the person identified in paragraph (l) 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.

(l) 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.

(m) 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 2022-0235, dated December 1, 2022.

(ii) [Reserved]

(3) For EASA AD 2022-0235, 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 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 at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA,

visit www.archives.gov/federal-register/cfr/ibr-locations or email

fr.inspection@nara.gov.

Issued on May 17, 2024.

Suzanne Masterson,
Deputy Director, Integrated Certificate Management Division,
Aircraft Certification Service.

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