



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2024-2538; Project Identifier MCAI-2023-01211-E; Amendment
39-22991; AD 2025-06-03]**

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 Airworthiness Directive (AD) 2022-24-06 for certain Rolls-Royce Deutschland Ltd & Co KG (RRD) Model BR700-710A1-10, BR700-710A2-20, and BR700-710C4-11 engines. AD 2022-24-06 required initial and repetitive visual inspections of certain low-pressure compressor (LPC) rotor (fan) disks and replacement of any LPC rotor (fan) disk with cracks detected. AD 2022-24-06 also allows for modification of the engine in accordance with RRD service information as a terminating action to these inspections. Since the FAA issued AD 2022-24-06, the manufacturer published updated service information and revised the engine maintenance manual (EMM) to provide instructions for an improved ultrasonic inspection method, which prompted this AD. This AD requires initial and repetitive visual inspections of certain LPC rotor (fan) disks and replacement of any LPC rotor (fan) disk with cracks detected and would allow modification of the engine as a terminating action to the inspections, 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-2024-2538; 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 material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email:

ADs@easa.europa.eu. You may find this material on the EASA website at ad.easa.europa.eu.

- You may view this material 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-2024-2538.

FOR FURTHER INFORMATION CONTACT: Barbara Caufield, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7146; email: barbara.caufield@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2022-24-06, Amendment 39-22246 (87 FR 73919, December 2, 2022), (AD 2022-24-06). AD 2022-24-06 applied to RRD Model BR700-710A1-10, BR700-710A2-20, and BR700-710C4-11 engines. AD 2022-24-06 required initial and repetitive visual inspections of certain LPC rotor (fan) disks and replacement of any LPC rotor (fan) disk with cracks detected. AD 2022-24-06 also allows for modification of the engine in accordance with RRD service information as a terminating action to these inspections. The FAA issued AD 2022-24-06 to prevent failure of the LPC rotor fan or blade.

The NPRM published in the *Federal Register* on November 26, 2024 (89 FR 93230). The NPRM was prompted by EASA AD 2022-0110R1, dated November 22, 2023 (EASA AD 2022-0110R1) (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 updated service information and revised the EMM to provide instructions for an improved ultrasonic inspection method for certain LPC rotor (fan) disks.

In the NPRM, the FAA proposed to retain all of the requirements of AD 2022-24-06. The NPRM proposed to require initial and repetitive visual inspections of certain LPC rotor (fan) disks and replacement of any LPC rotor (fan) disk with cracks detected and would allow modification of the engine as a terminating action to the inspections, as specified in EASA AD 2022-0110R1.

Discussion of Final Airworthiness Directive

Comments

The FAA received one comment from an anonymous commenter that supported the NPRM without change.

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 comment received, and determined that air safety requires adopting the 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.

Material Incorporated by Reference under 1 CFR Part 51

The FAA reviewed EASA AD 2022-0110R1, which specifies procedures for initial and repetitive visual inspections of certain LPC rotor (fan) disks, and replacement of any LPC rotor (fan) disk with cracks detected.

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 the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 586 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
Inspect LPC compressor rotor (fan) disk	4 work-hours x \$85 per hour = \$340	\$0	\$340	\$199,240

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

On-condition costs

Action	Labor Cost	Parts Cost	Cost per product
Replace LPC compressor rotor (fan) disk	10 work-hours x \$85 per hour = \$850	\$470,000	\$470,850

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

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 AD 2022-24-06, Amendment 39-22246 (87 FR 73919, December 2, 2022); and

b. Adding the following new airworthiness directive:

2025-06-03 Rolls-Royce Deutschland Ltd & Co KG: Amendment 39-22991; Docket No. FAA-2024-2538; Project Identifier MCAI-2023-01211-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

This AD replaces AD 2022-24-06, Amendment 39-22246 (87 FR 73919, December 2, 2022) (AD 2022-24-06).

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd & Co KG (RRD) Model BR700-710A1-10, BR700-710A2-20, and BR700-710C4-11 engines as identified in European Union Aviation Safety Agency AD 2022-0110R1, dated November 22, 2023 (EASA AD 2022-0110R1).

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports of cracks on certain low-pressure compressor (LPC) rotor (fan) disks. The FAA is issuing this AD to prevent failure of the LPC rotor fan or blade. The unsafe condition, if not addressed, could result in high energy debris release, damage to the airplane, and reduced control of 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, EASA AD 2022-0110R1.

(h) Exceptions to EASA AD 2022-0110R1

(1) Where EASA AD 2022-0110R1 requires compliance from its effective date, this AD requires using the effective date of this AD.

(2) Where EASA AD 2022-0110R1 requires compliance from “29 June 2022 [the effective date of the original issue of this AD],” this AD requires replacing that text with “January 6, 2023 (the effective date of AD 2022-24-06).”

(3) This AD does not require compliance with paragraph (7) of EASA AD 2022-0110R1. The actions required by paragraph 7 of EASA AD 2022-0110R1 were included in AD 2022-26-02, Amendment 39-22280 (87 FR 78846, December 23, 2022), and for this AD may be used for informational purposes.

(4) This AD does not adopt the “Remarks” paragraph of EASA AD 2022-0110R1.

(i) No Reporting Requirement

Although the service information referenced in EASA AD 2022-0110R1 specifies to submit certain information to the manufacturer, 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 AIR-520 Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (k) of this AD and email to:

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 Barbara Caufield, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7146; email: barbara.caufield@faa.gov.

(l) Material Incorporated by Reference

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

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

(i) European Union Aviation Safety Agency (EASA) AD 2022-0110R1, dated November 22, 2023.

(ii) [Reserved]

(3) For EASA material identified in this AD, 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 material 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 March 11, 2025.

Peter A. White,
Deputy Director, Integrated Certificate Management Division,
Aircraft Certification Service.
[FR Doc. 2025-04445 Filed: 3/18/2025 8:45 am; Publication Date: 3/19/2025]