



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0022; Project Identifier MCAI-2020-00395-E]

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: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all Rolls-Royce Deutschland Ltd & Co KG (RRD) Trent XWB-75, Trent XWB-79, Trent XWB-79B, Trent XWB-84, and Trent XWB-97 model turbofan engines. This proposed AD was prompted by the manufacturer revising the time limits manual (TLM) to incorporate repairs to the low-pressure compressor (LPC) blades and introduce a new fan blade inspection. This proposed AD would require revisions to the airworthiness limitations section (ALS) of the Rolls-Royce (RR) Trent XWB TLM and the operator's existing approved aircraft maintenance program (AMP). The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed 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 NPRM, 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; email: <https://www.rolls-royce.com/contact-us/civil-aerospace.aspx>; 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.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0022; 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 NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for 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:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0022; Project Identifier MCAI-2020-00395-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 proposal 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 agency will also post a report summarizing each substantive verbal contact received about this NPRM.

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 NPRM 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 NPRM, 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 NPRM. 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.

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2020-0066, dated March 23, 2020 (referred to after this as “the MCAI”), to address the unsafe condition on these products. The MCAI states:

The Airworthiness Limitations Section instructions for Trent XWB engines, which are approved by EASA, are defined and published in TLM TRENTXWB-K0680-TIME0-01. These instructions have been identified as mandatory for continued airworthiness.

Failure to accomplish these instructions could result in an unsafe condition.

Rolls-Royce recently revised the TLM, introducing new and/or more restrictive instructions.

For the reason described above, this [EASA] AD requires accomplishment of the instructions specified in the TLM, as defined in this AD.

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-2021-0022.

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 the FAA of the unsafe condition described in the MCAI and service information. The FAA is issuing this NPRM because the agency evaluated all the relevant information provided by EASA and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Related Service Information

The FAA reviewed Rolls-Royce Airworthiness Limitations (Mandatory Inspections), TRENTXWB-A-05-20-01-00A01-030A-D, Revision 013, dated September 1, 2019, of the Rolls-Royce Trent XWB TLM TRENTXWB-K0680-TIME0-01, and Rolls-Royce Airworthiness Limitations (Mandatory Inspections), TRENTXWB-B-05-20-01-00A01-030A-D, Revision 005, dated April 1, 2020, of the Rolls-Royce Trent XWB TLM TRENTXWB-K0680-TIME0-01. These two sections of the TLM specify inspection intervals, differentiated by engine model, for critical rotating parts.

Proposed AD Requirements in this NPRM

This proposed AD would require revisions to the ALS of the RR Trent XWB TLM, as applicable to each engine model, and to the operator's existing approved AMP, to include new or more restrictive sections of the applicable RR Trent XWB TLM for each affected engine model.

Differences Between this Proposed AD and the MCAI or Service Information

EASA AD 2020-0066, dated March 23, 2020, requires that operators replace each component before exceeding the applicable life limit and that each mandatory inspection

is accomplished within the thresholds and intervals, as specified in the latest revision of the TLM. This proposed AD would not mandate these actions because the manufacturer did not revise the life limit for any components with its revision to the TLM.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 22 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Revise the ALS of the RR Trent XWB TLM and the operator's existing approved AMP	1 work-hour x \$85 per hour = \$85	\$0	\$85	\$1,870

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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would 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 Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:

Rolls-Royce Deutschland Ltd & Co KG (Type Certificate previously held by Rolls-Royce plc): Docket No. FAA-2021-0022; Project Identifier MCAI-2020-00395-E.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 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 (RRD) (Type Certificate previously held by Rolls-Royce plc) Trent XWB-75, Trent XWB-79, Trent XWB-79B, Trent XWB-84, and Trent XWB-97 model turbofan 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 time limits manual (TLM) to incorporate repairs to the low-pressure compressor (LPC) blades and introduce a new fan blade inspection. The FAA is issuing this AD to 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

Within 120 days after the effective date of this AD, revise the Rolls-Royce (RR) Trent XWB TLM, as applicable to each engine model, and the operator’s existing approved aircraft maintenance program (AMP) by incorporating the following:

(1) For Trent XWB-75, Trent XWB-79, Trent XWB-79B, and Trent XWB-84 model turbofan engines, add Figure 1 to paragraph (g)(1) of this AD to the airworthiness limitations section (ALS) of RR Trent XWB TLM TRENTXWB-K0680-TIME0-01.

Figure 1 to Paragraph (g)(1)

2.4.8	LP Compressor blades CSN 72311301250 , refer to TRENTXWB-A-72-31-13-02A01-300A-C	
Part number	Inspection interval (EFC)	
	Standard Operation	Ultra Long Range Operation
KH14304	Remove the LP Compressor blades and repair in accordance with FRSA424, refer to TRENTXWB-A-72-31-13-02A08-600A-C at every engine refurbishment where a Level 3 workscope or above is instructed on the HP System Module.	Remove the LP Compressor blades and repair in accordance with FRSA424, refer to TRENTXWB-A-72-31-13-02A08-600A-C at every engine refurbishment where a Level 3 workscope or above is instructed on the HP System Module.
KH56535	Remove the LP Compressor blades and repair in accordance with FRSA424, refer to TRENTXWB-A-72-31-13-02A08-600A-C at every engine refurbishment where a Level 3 workscope or above is instructed on the HP System Module.	Remove the LP Compressor blades and repair in accordance with FRSA424, refer to TRENTXWB-A-72-31-13-02A08-600A-C at every engine refurbishment where a Level 3 workscope or above is instructed on the HP System Module.

(2) For Trent XWB-97 model turbofan engines, add Figure 2 to paragraph (g)(2) of this AD to the ALS of RR Trent XWB TLM TRENTXWB-K0680-TIME0-01.

Figure 2 to Paragraph (g)(2)

2.2.13	LP compressor fan blade CSN 72311301250, refer to DMC-TRENTXWB-B-72-31-13-02A01-300A-C.
Part number	Interval
KH74127	Examine the fan blade leading edge at every engine refurbishment

Note 1 to paragraph (g): Figure 1 to Paragraph (g)(1) and Figure 2 to Paragraph (g)(2) contain language from the original equipment manufacturer's TLM.

(h) Definition

For the purpose of this AD, the operator's existing approved AMP is defined as the basis for which the operator or the owner ensures the continuing airworthiness of each operated airplane.

(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 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.

(j) 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 Union Aviation Safety Agency AD 2020-0066, dated March 23, 2020, 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-2021-0022.

(3) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, United Kingdom, DE24 8BJ; phone:

+44 (0)1332 242424; fax: +44 (0)1332 249936; email: <https://www.rolls-royce.com/contact-us/civil-aerospace.aspx>; website: <https://www.rolls-royce.com/contact-us.aspx>. You may view this referenced 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.

Issued on January 29, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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