



Airworthiness Directive

AD No.: 2024-0070

Issued: 14 March 2024

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I Part M.A.301, or Annex Vb Part ML.A.301, as applicable, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I Part M.A.303, or Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

ROLLS-ROYCE DEUTSCHLAND Ltd & Co KG

Type/Model designation(s):

Trent XWB engines

Effective Date: 28 March 2024

TCDS Number(s): EASA.E.111

Foreign AD: Not applicable

Supersedure: None

ATA 79 – Oil – Front Bearing Housing Oil Feed Tube Assembly – Replacement

Manufacturer(s):

Rolls-Royce plc

Applicability:

Trent XWB-75, Trent XWB-79, Trent XWB-79B and Trent XWB-84 engines, all serial numbers (s/n).

These engines are known to be installed on, but not limited to, Airbus A350 aeroplanes.

Definitions:

For the purpose of this AD, the following definitions apply:

The SB: Rolls-Royce Service Bulletin (SB) TRENT XWB 79-AK684. Where, in this AD, reference is made to a Rolls-Royce modification (mod), SB or Non-Modification SB with an 'A' (Alert) in the number, it should be recognised that an earlier or later revision may not have that 'A'. This kind of change does not effectively alter the publication references for the purpose of this AD.

Affected part: Front bearing housing (FBH) oil feed tube assemblies, having Part Number (P/N) KH47678.

Serviceable part: FBH oil feed tube assemblies, having P/N LV19901.



Groups: Group 1 engines are those that have an affected part installed. Group 2 engines are those that do not have an affected part installed. All engines on which Rolls-Royce mod 79-AK684 has been embodied in production are Group 2.

Qualified engine shop visit: Non-modular rework level of engine check & repair or engine refurbishment.

Reason:

Occurrences have been reported on in-service engines of measuring differential oil pressures that are lower than expected. Preliminary investigation identified the need for restricting the intended excess oil supply to the FBH bearing chamber. Operation at extremes of the flight envelope could cause oil pressure to drop below the amber limit.

This condition, if not corrected, could lead to FBH bearing chamber firing, possibly resulting in engine in-flight shut-down (IFSD) or dual IFSD, with consequent reduced, or loss of, control of the aeroplane.

To address this potential unsafe condition, Rolls-Royce developed mod 79-AK684, re-distributing the oil flow between all bearing chambers and gearboxes, thereby increasing the overall differential oil pressure within the oil feed system. Rolls-Royce also issued the SB, providing in-service modification instructions.

For the reason described above, this AD requires modification of each engine by replacement of each affected part with a serviceable part. This AD also prohibits (re)installation of affected parts.

Required Action(s) and Compliance Time(s):

Required as indicated by this AD, unless the actions required by this AD have been already accomplished:

Modification:

- (1) For Group 1 engines: During the next qualified engine shop visit, or within 75 months, whichever occurs first after the effective date of this AD, modify the engine in accordance with the instructions of the SB, removing the affected part from service.

For an engine that, on the effective date of this AD, is in a qualified engine shop visit where the high pressure module re-assembly has not yet started, before release to service, modify that engine in accordance with the instructions of the SB, removing the affected part from service.

Part Installation:

- (2) Do not install an affected part on any engine as required by paragraph (2.1) or (2.2) of this AD, as applicable.

(2.1) For Group 1 engines: After modification of the engine as required by paragraph (1) of this AD.

(2.2) For Group 2 engines: From the effective date of this AD.



Exemption:

- (3) Although the sections 3B and 3C of the SB specify to record all relevant details on the inspection build record, this AD does not require those actions.

Ref. Publications:

Rolls-Royce TRENT XWB SB 79-AK684 original issue dated 02 January 2024.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 07 February 2024 as PAD 24-021 for consultation until 06 March 2024. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed ('zipped') file, attached to the record for this AD.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this AD, please contact your designated Rolls-Royce representative, or download the publication from your Rolls-Royce Care account at <https://customers.rolls-royce.com>.

If you do not have a designated representative or Rolls-Royce Care account, please contact **Corporate Communications** at **Rolls-Royce plc**, P.O. Box 31, Derby, DE24 8BJ, United Kingdom Telephone +44 (0)1332 242424,

or send an email through <https://www.rolls-royce.com/contact-us/civil-aerospace.aspx> identifying the correspondence as being related to **Airworthiness Directives**.

