



Airworthiness Directive

AD No.: 2019-0071

Issued: 28 March 2019

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, 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 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: 11 April 2019

TCDS Number(s): EASA.E.111

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Low Pressure Turbine Rear Support Seal Panel – Replacement

Manufacturer(s):

Rolls-Royce plc

Applicability:

Rolls-Royce Trent XWB-75, XWB-79, XWB-79B and XWB-84 engines, all serial numbers (ESN).

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 NMSB: Rolls-Royce Alert Non-Modification Service Bulletin (NMSB) TRENT XWB 72-AJ994 Revision 1 dated 15 November 2018.

Where, in this AD, reference is made to a Rolls-Royce NMSB with an 'A' (Alert) in the number, it should be recognised that a 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: Low pressure (LP) turbine rear support seal panel assemblies, identified as catalogue serial number (CSN) 72512301890, having a serial number (s/n) as listed in Appendix 1 of the NMSB. This appendix also lists the s/n of the modules 51, and ESN of the engines, in which these panels were originally installed.



Serviceable part: LP turbine rear support seal panel assemblies, identified as CSN 72512301890, having an s/n not listed in Appendix 1 of the NMSB.

Qualified shop visit: Level 4 (Overhaul) or Level 3 (Refurbishment) shop visit of an engine with an affected part installed, or Level 2 shop visit (Check and Repair) of a module 51 with an affected part installed.

Reason:

The affected parts, as defined in this AD, are static parts, located behind the intermediate pressure (IP) turbine 2 disc, forming a seal between the IP and LP cavities through an interface with the rotating IP flying seal. It was recently determined that, on certain affected parts, insufficient fusion was achieved on the resistance welding during manufacturing.

This condition, if not corrected, could lead to air leakage through the LP seal panel, affecting the service lives of the IP turbine 2 and LP turbine 1 discs, possibly resulting in premature disc failure and high energy uncontained debris release from the engine, with consequent damage to, and reduced control of, the aeroplane.

To address this potential unsafe condition, Rolls-Royce identified the affected parts and published the NMSB, providing instructions to replace these affected parts.

For the reason described above, this AD requires replacement of affected parts during a qualified shop visit.

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

Required as indicated, unless accomplished previously:

Replacement:

- (1) During the next qualified shop visit after the effective date of this AD, or during the current shop visit, if, on the effective date of this AD, the engine or the module 51 is in a qualified shop visit as defined in this AD, replace each affected part with a serviceable part in accordance with the instructions of Section 3 of the NMSB.

Credit:

- (2) Replacement of each affected part with a serviceable part on an engine or module 51, as applicable, accomplished before the effective date of this AD in accordance with the instructions of the original issue of Rolls-Royce NMSB TRENT XWB 72-AJ994 is acceptable to comply with the requirements of paragraph (1) of this AD for that engine or module 51, as applicable.

Parts Installation:

- (3) From the effective date of this AD, do not re-install on any engine an affected part that was removed as required by paragraph (1) of this AD.



Ref. Publications:

Rolls-Royce Alert NMSB TRENT XWB 72-AJ994 original issue dated 05 September 2018, and Revision 1 dated 15 November 2018.

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 14 February 2019 as PAD 19-023 for consultation until 14 March 2019. 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](#).
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 http://www.rolls-royce.com/contact/civil_team.jsp identifying the correspondence as being related to **Airworthiness Directives**.

