



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 25-018

Issued: 29 January 2025

Note: This Proposed Airworthiness Directive (PAD) 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.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

ROLLS-ROYCE DEUTSCHLAND Ltd & Co KG

Type/Model designation(s):

RB211 Trent 900 engines

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number(s): EASA.E.012

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Low-Pressure Compressor Rotor Shaft – Inspection(s)

Manufacturer(s):

Rolls-Royce plc

Applicability:

RB211 Trent 970-84, Trent 970B-84, Trent 972-84, Trent 972B-84, Trent 972E-84, Trent 977-84, Trent 977B-84 and Trent 980-84 engines, all serial numbers.

Definitions:

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

The NMSB: Rolls-Royce Non-Modification Service Bulletin (NMSB) RB211 72–AL186.

Affected part: Low-pressure compressor (LPC) rotor shaft having Part Number (P/N) FW21472.

Serviceable part: An affected part which is new (never previously installed on an engine); or an affected part, which accumulated less than 8 000 engine flight cycles (EFC) since first installation on an engine, or after having passed (no discrepancy found) an inspection in accordance with the instructions of the NMSB; or an LPC rotor shaft eligible for installation, which is not an affected part.



Groups: Group 1 engines are those having an affected part installed. Group 2 engines are those which do not have an affected part installed.

Reason:

Occurrences of the cracking were reported, affecting the threads 7 location of the affected part. Investigation to determine the root cause of the cracking is ongoing.

This condition, if not detected and corrected, could lead to fracture of the affected part, potentially resulting in uncontained release of high energy debris and damage to, and reduced control of, the aeroplane.

To address this potential unsafe condition, Rolls-Royce issued the NMSB (as defined in this AD) providing repetitive in-shop inspection instructions.

For the reason described above, this AD requires repetitive inspections of the affected part and introduces installation restrictions for engines and LPC rotor shafts.

This AD is considered to be an interim action and further AD action may follow.

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

Required as indicated by this AD, unless the action(s) required by this AD have been already accomplished:

Inspections:

- (1) For Group 1 engines: Before exceeding 8 000 EFC accumulated by the affected part since first installation on an engine or, if an inspection in accordance with the instruction of Cleaning, Inspection and Repair (CIR) CIR-TRENT-9RR Manual 72-31-20-200-801 "Examine the LP Compressor Shaft Assembly" dated 01 January 2025 has been accomplished before the effective date of this AD, before exceeding 8 000 EFC since last accomplishment of that inspection and, thereafter, at intervals not to exceed 8 000 EFC, accomplish an in-shop inspection of the affected part in accordance with the instructions of the NMSB.

Corrective Action(s):

- (2) If, during any inspection, as required by paragraph (1) of this AD, any crack is detected, before release to service of the engine, replace the affected part with a serviceable part in accordance with approved Rolls-Royce RB211 Trent 900 maintenance instructions.

Terminating Action:

- (3) None.

Part Installation:

- (4) For Group 1 and Group 2 engines: From the effective date of this AD, installation of an affected part on an engine is allowed, provided that the part is a serviceable part. After that installation, the engine remains (or becomes) a Group 1 engine and must be inspected as required by this AD.



Engine Installation:

- (5) For Group 1 engines: From the effective date of this AD, it is allowed to install an engine on an aeroplane, provided that the engine is equipped with a serviceable part.

Acceptable Method:

- (6) Accomplishment of the inspection on an engine in accordance with the instruction of the Rolls-Royce Technical Variance TV265450 is an acceptable method to comply with the initial inspection as required by paragraph (1) of this AD for that engine.

Ref. Publications:

Rolls-Royce NMSB RB211 72–AL186 original issue dated 27 January 2025.

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

Remarks:

1. This Proposed AD will be closed for consultation on 26 February 2025.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, 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 PAD 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.
4. For any question concerning the technical content of the requirements in this PAD, 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**.

