



## Airworthiness Directive

**AD No.:** 2021-0176

**Issued:** 22 July 2021

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):

RB211 Trent 900 engines

**Effective Date:** 05 August 2021

**TCDS Number(s):** EASA.E.012

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 72 – Engine – Critical Parts – Removal from Service

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### Manufacturer(s):

Rolls-Royce plc

### Applicability:

RB211 Trent 970-84, Trent 970B-84, Trent 972-84, Trent 972B-84, and Trent 972E-84 engines, all serial numbers (s/n).

### Definitions:

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

**Affected part:** Critical engine components as identified by part name, Part Number (P/N) and s/n in Appendix 1 of this AD.

**The TLM Tasks:** Rolls-Royce RB211 Trent 900 Time Limits Manual (TLM) T-TRENT-9RR, Revision dated 16 April 2021 (or later), task 05-10-01-800-801-A00 and task 05-10-01-800-801-C00.

### Reason:

Recently, it was determined that incorrect part usage declarations have been made for a limited number of life limited parts (LLP) regarding their cyclic life consumption during flight test. For a number of these LLP, the actual life usage records could not be determined. Following investigation, some of these components could not be located, nor confirmation obtained of the destruction of



these parts, which should have been removed from engines during their initial upgrade from flight test to in-service standard.

This condition, if not corrected, could lead to LLP failure, possibly resulting in high-energy debris release, with consequent damage to, and reduced control of, the aeroplane.

To address this potential unsafe condition, Rolls-Royce issued the TLM Tasks to identify the affected parts and to prohibit (re)installation. These tasks do not change any declared mandatory life for any component listed within the TLM.

For the reason described above, this AD requires removal from service of all affected parts. This AD also prohibits (re)installation of affected parts on any engine.

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

Required as indicated, unless accomplished previously:

#### **Removal from Service:**

- (1) Within 30 days after the effective date of this AD, remove each affected part from the engine. This can be accomplished by using the applicable replacement instructions as provided in the applicable Engine Manual.

#### **Parts Installation:**

- (2) From the effective date of this AD, do not install an affected part on any engine.

#### **Ref. Publications:**

Rolls-Royce RB211 Trent 900 TLM T-TRENT-9RR, Chapter 05-10-01-800-801 (Critical Group A Parts Lives), Revision dated 16 April 2021.

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 16 June 2021 as PAD 21-087 for consultation until 14 July 2021. 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](mailto: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**.



## Appendix 1 – Critical Parts to be Removed from Service

<b>Part Name</b>	<b>P/N</b>	<b>s/n</b>
Intermediate Pressure (IP) Compressor Stage 1-8 Rotor Shaft	FW20677	MW0267729
IP Turbine Disc	FW43058	LDRQA00271
High Pressure (HP) Compressor Shaft Stage 1-4 Rotor Disc	FW20087	MW0276943 and MW0276945
HP Compressor Stage 5 Disc	FW21500	MW0265615 and MW0265616
HP Compressor Stage 6 Disc and Cone	FW22427	MW0267924 and MW0267996
HP Turbine Rotor Disc	FW37983	LDRPP00019, LDRPP00030 and LDRPP00035
HP Turbine Front Cover Plate	FW29069	TEREC0473, TEREC0591, TEREC0641 and TEREC0645

