



## Airworthiness Directive

**AD No.:** 2018-0121

**Issued:** 01 June 2018

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 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 (EC) 216/2008, Article 14(4) exemption].

### Design Approval Holder's Name:

ROLLS-ROYCE plc

### Type/Model designation(s):

RB211 Trent 900 engines

**Effective Date:** 15 June 2018

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

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 72 – Engine – Low Pressure Turbine Blades – Replacement

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### Manufacturer(s):

Rolls-Royce plc (RR)

### Applicability:

RB211 Trent 970-84, 972-84 and 972E-84 engines, all serial numbers (ESN).

These engines are known to be installed on, but not limited to, Airbus A380 aeroplanes.

### Definitions:

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

**The NMSB:** RR Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AJ933. The NMSB has an 'A' (Alert) in the number, but a later revision may not have that 'A'. This kind of change does not effectively alter the publication references.

**Affected module:** Low pressure (LP) turbine modules, having LP turbine blades installed that have been cleaned during overhaul using OMat 198. Appendix 1 of the NMSB provides a list of affected modules. That list also identifies, for information, the ESN of engines on which an affected module was known to be installed at the time of issuance of the NMSB.

**Groups:** Group 1 engines are those that have an affected module installed. Group 2 engines are those that do not have an affected module installed.



**Qualified shop visit:** An engine or module Level 2 Check and Repair shop visit, or higher level.

**Reason:**

An occurrence was reported where a Trent 900 engine experienced a release of LP turbine stage 2 blades, resulting in an in-flight shut-down of the engine. Investigation of the event confirmed that this failure had been caused by internal corrosion, due to cleaning contaminants remaining in the blade cavity after overhaul. A batch of 12 engine modules have been identified that are similarly affected.

This condition, if not detected and corrected, could lead to failure of the affected parts and consequent uncommanded engine in-flight shut-down, possibly resulting in reduced control of the aeroplane.

To address this potential unsafe condition, RR has published the NMSB, providing instructions to induct the affected engines into a shop visit, to have the affected parts removed and replaced.

For the reasons described above, this AD requires removal from service of the affected engines and accomplishment of applicable corrective action(s).

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

Required as indicated, unless accomplished previously:

**Replacement:**

- (1) For Group 1 engines: During the next qualified shop visit, or before 01 January 2023, whichever occurs first after the effective date of this AD, replace all affected LP turbine blades in accordance with the instructions of the NMSB.

**Parts Installation:**

- (2) For Group 1 and Group 2 engines: From the effective date of this AD, it is allowed to install an affected module on any engine, provided that, following installation, the engine is corrected, as required by paragraph (1) of this AD.

**Ref. Publications:**

Rolls-Royce Alert NMSB RB.211-72-AJ933 original issue, dated 05 February 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 17 April 2018 as PAD 18-054 for consultation until 15 May 2018. 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](#).
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-us.aspx> identifying the correspondence as being related to **Airworthiness Directives**.

