



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 18-054

Issued: 17 April 2018

Note: This Proposed Airworthiness Directive (PAD) 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.

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 plc

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 Turbine Blades – Replacement

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: A 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). This AD also introduces a limitation, not allowing more than one affected engine to be installed on an aeroplane.

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.

Limitation:

- (2) From the effective date, do not operate an aeroplane with two or more Group 1 engines installed.

Parts Installation:

- (3) 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. This Proposed AD will be closed for consultation on 15 May 2018.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. 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 <http://www.rolls-royce.com/contact-us.aspx> identifying the correspondence as being related to **Airworthiness Directives**.

