



## Airworthiness Directive

**AD No.:** 2018-0185

**Issued:** 29 August 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:** 12 September 2018

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

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2017-0075R1 dated 05 May 2017.

### ATA 71 – Powerplant – Drains Mast – Inspection / Replacement

**Manufacturer(s):**

Rolls-Royce plc (RR)

**Applicability:**

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

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:

Where, in this AD, reference is made to an RR modification (mod), SB or Non-Modification Service Bulletin (NMSB) with an 'A' (Alert) in the number, it should be recognised that an earlier or later revision may not have that 'A'. This kind of change does not effectively alter the publication references for the purpose of this AD.

**The NMSB:** RR Trent 900 Alert NMSB RB.211-71-AJ576 Revision 1.

**Affected part:** Drains masts, Part Number (P/N) FW29847 (pre-mod 72-H499), and P/N KH31996 (post-mod 72-H499), as applicable.



**Serviceable part:** An affected part that is new (never installed on an engine), or has passed an inspection, before installation, in accordance with the instructions of the NMSB.

**Passed an inspection:** No cracks or other defects were found, or defects were corrected, during an inspection of an affected part.

**Groups:** Group 1 engines are those that have drains mast P/N KH31996 installed and have mod/SB 80-H632 embodied. Group 2 engines are those that have drains mast P/N FW29847 installed, or have drains mast P/N KH31996 installed and do not have mod/SB 80-H632 embodied.

**Reason:**

Occurrences were reported on in-service RB211 Trent 900 engines, where cracks were found in the transition duct area of the drains mast, which is part of the fire wall in Zone 1.

This condition, if not detected and corrected, could, in combination with a fire in the surrounding area, lead to a breach of the fire wall, possibly resulting in an uncontrolled fire and consequent reduced control of the aeroplane.

To address this potential unsafe condition, RR published NMSB RB.211-71-AJ576 at original issue to provide inspection instructions for engines with drains mast P/N KH31996 and post-mod 80-H632 vent ejector installed, which were determined as more susceptible to cracking. Consequently, EASA issued AD 2017-0075 (later revised) to require, for engines with post-mod 80-H632 vent ejector installed, a one-time inspection of drains mast P/N KH31996 and, depending on findings, accomplishment of applicable corrective action(s). P/N FW29847 (pre-mod 72-H499) drains masts were not affected by that AD.

Since EASA AD 2017-0075R1 was issued, prompted by in-service findings, it was decided to expand the group of affected engines, including those with pre-mod 80-H632 vent ejector installed, and to expand the group of affected parts, to include P/N FW29847 (pre-mod 72-H499) drains masts. RR published the NMSB accordingly. It was also decided that repetitive inspections are necessary to ensure continued fleet safety.

For the reason described above, this AD retains the requirements of EASA AD 2017-0075R1, which is superseded, adds engines with pre-mod 80-H632 vent ejector installed, and engines with drains mast P/N FW29847 (pre-mod 72-H499) installed, and requires repetitive inspections of all affected engines.

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

Required as indicated, unless accomplished previously:

**Inspection:**

- (1) Within the compliance time specified in Table 1 of this AD, as applicable, or within 24 months after first operation of the engine, whichever occurs later, and, thereafter, at intervals not to exceed 24 months, visually inspect the external areas of the affected part in accordance with the instructions of the NMSB.



Table 1 – Initial Inspection

Group	Compliance Time
1	Within 24 months after 16 May 2017 [the effective date of EASA AD 2017-0075]
2	Within 24 months after the effective date of this AD

**Corrective Action(s):**

- (2) If, during any inspection as required by paragraph (1) of this AD, any visual crack is detected, as defined in the NMSB, before next flight, seal the crack in accordance with the instructions of the NMSB.
- (3) Within 100 engine flight cycles after the corrective action as required by paragraph (2) of this AD, replace the affected part with a serviceable part in accordance with the instructions of the NMSB.

**Credit:**

- (4) Inspection and corrective action on a Group 1 engine, accomplished before the effective date in accordance with the instructions of RR Alert NMSB RB.211-71-AJ576 at original issue, is acceptable to comply with the requirements of paragraphs (1), (2) and (3) of this AD for that engine.

**Part Installation:**

- (5) For Group 1 engines: From 16 May 2017 [the effective date of EASA AD 2017-0075], it is allowed to install an affected part on an engine, provided the part is a serviceable part as defined in this AD.
- (6) For Group 2 engines: From the effective date of this AD, it is allowed to install an affected part on an engine, provided the part is a serviceable part as defined in this AD.

**Engine Installation:**

- (7) From the effective date of this AD, it is allowed to install a Group 1 or Group 2 engine on an aeroplane, provided the affected part installed on that engine is a serviceable part, as defined in this AD.

**Terminating Action:**

- (8) None.

**Ref. Publications:**

Rolls-Royce plc NMSB RB.211-71-AJ576 original issue dated 17 March 2017, and Revision 1 dated 11 July 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 26 July 2018 as PAD 18-106 for consultation until 23 August 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/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp) identifying the correspondence as being related to **Airworthiness Directives**.

