Airworthiness Directive

AD No.: 2021-0129R1

Issued: 25 May 2022

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 or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:	Type/Model designation(s):
ROLLS-ROYCE DEUTSCHLAND Ltd & Co KG	RB211 Trent 900 engines

Effective Date:	Revision 1: 01 June 2022 Original issue: 01 June 2021
TCDS Number(s):	EASA.E.012
Foreign AD:	Not applicable
Revision:	This AD revises EASA AD 2021-0129 dated 18 May 2021.

ATA 73 – Engine Fuel & Control – Low Pressure Compressor Case Static P30 Air System – Modification

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Manufacturer(s):
Rolls-Royce plc

Applicability:
RB211 Trent 970-84, Trent 972-84 and Trent 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:

Affected part: Low pressure (LP) compressor case air tube assemblies, having Part Number (P/N) KH30025.

The SB: Rolls-Royce Alert Service Bulletin (SB) RB.211-73-AK278 Revision 1. The SB has an 'A' (Alert) in the number, but an earlier or later revision may not have that 'A'. This kind of change does not effectively alter the publication references.

Groups: Group 1 engines are those on which modification (mod) 73-J441 has been embodied in production (ESN 91477 and up), or SB RB.211-73-J441 (any revision) has been embodied in service.
Group 2 engines are those in post-mod/SB 73-G165 (any revision) and pre-mod/SB 73-J441 configuration.
Group 3 engines are those in post-mod/SB 73-K278 configuration.

Reason:

Through introduction of production mod 73-J441 and issuance of SB RB.211-73-J441, Rolls-Royce introduced a flowing P30 air system, with the purpose of minimising the maintenance burden prompted by freezing events in the P30 sense line. However, since that mod/SB was introduced, occurrences have been reported of discrepancies between the software channel A and channel B P30 signals of engines with the flowing P30 air system installed. As a consequence of such an event, the Engine Electronic Controller could select an erroneous P30 value to control the engine.

This condition, if not corrected, could lead to thrust delivery deviating from thrust setting(s), possibly resulting in reduced control of the aeroplane.

To address this potential unsafe condition, Rolls-Royce issued SB RB.211-73-K278 (later revised), providing instructions to modify the P30 air system by replacing the affected part with an LP compressor case air tube assembly, having P/N KH97158, and installing blanking discs, having P/N LK65367.

For the reasons described above, EASA issued AD 2021-0129 to require modification of the P30 air system. That AD also prohibits (re)installation of an affected part on post-mod/SB engines.

This AD is revised to clarify that later revisions of certain Rolls-Royce SBs, not required for compliance with the AD, can be used.

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

Required as indicated, unless accomplished previously:

Modification:

(1) For Group 1 engines: Within 11 months after 01 June 2021 [the effective date of the original issue of this AD], modify the P30 air system in accordance with the instructions of the SB.

(2) For Group 2 engines: When, after 01 June 2021 [the effective date of the original issue of this AD], an engine is modified in accordance with the instructions of SB RB.211-73-J441, before release to service after that modification, modify the P30 air system of that engine in accordance with the instructions of the SB.

Credit:

(3) Modification of an engine, accomplished before 01 June 2021 [the effective date of the original issue of this AD] in accordance with the instructions of Rolls-Royce SB RB.211-73-K278 at original issue, is an acceptable method to comply with the requirements of paragraph (1) of this AD for that engine.

Parts Installation:

(4) Do not install an affected part on any engine, as required by paragraph (4.1), (4.2) or (4.3) of this AD, as applicable.

(4.1) For Group 1 engines: After modification of the engine as required by paragraph (1) of this AD.

(4.2) For Group 2 engines: After modification of the P30 air system of the engine as required by paragraph (2) of this AD.

(4.3) For Group 3 engines: From 01 June 2021 [the effective date of the original issue of this AD].

Ref. Publications:

Rolls-Royce Trent 900 SB RB.211-73-K278 original issue dated 30 January 2019, or Alert SB RB.211-73-AK278 Revision 1 dated 14 April 2021.

Rolls-Royce Trent 900 SB RB.211-73-J441 original issue dated 09 May 2017, or Revision 1 dated 30 January 2019, or Revision 3 dated 23 May 2022.

Rolls-Royce Trent 900 SB RB.211-73-G165 original issued dated 08 September 2009, or Revision 1 dated 19 April 2011, or Revision 2 dated 06 April 2016.

The use of later approved revisions of the above-mentioned documents 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. The original issue of this AD was initially posted on 30 April 2021 as PAD 21-062, republished on 07 May 2021 as PAD 21-062R1 and closed for consultation on 14 May 2021. The Comment Response Documents can be found in the EASA Safety Publications Tool, in the compressed (zipped) file attached to the record for this PAD.

3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: 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**.