



Airworthiness Directive

AD No.: 2021-0114

Issued: 23 April 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 800 engines

Effective Date: 07 May 2021

TCDS Number(s): EASA.E.047

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Low Pressure Compressor Case – Inspection

Manufacturer(s):

Rolls-Royce plc

Applicability:

RB211 Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17 and 895-17 engines, all serial numbers (ESN), except those that have been modified in accordance with the instructions of Part 1 of Rolls-Royce Service Bulletin (SB) RB.211-72-G581.

These engines are known to be installed on, but not limited to, Boeing 777 aeroplanes.

Definitions:

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

The NMSB: Rolls-Royce Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AG774. 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 for the purpose of this AD.

Affected part: Low pressure (LP) compressor front (fan) case assemblies, having Part Number (P/N) FK33097, P/N FK26850, P/N FK26853, P/N FK26915, P/N FK26692 or P/N FK28577.



Qualified Shop Visit: Any scheduled shop visit where the affected part is exposed and substantial rebuild has not yet started, except shop visits for serviceability only.

Reason:

Occurrences have been reported of finding corrosion on LP compressor front case assemblies, on the casing Isogrid structure under the Kevlar wrap. The corrosion was identified during engine overhaul by bulging of the Kevlar wrap or the rear titanium fire shield. During engine manufacture, anti-corrosion paint is applied, but this is susceptible to fretting from the Kevlar wrap during engine operation. To prevent this, a thin layer of Silcoset is applied onto the case prior to applying the Kevlar wrap. However, it has been determined that excessive movement between the Kevlar wrap and the fan case has resulted in the Silcoset and anti-corrosion paint fretting away.

This condition, if not detected and corrected, may affect the containment integrity of the LP compressor front case during a fan blade release event, possibly resulting in damage to, or reduced control of, the aeroplane.

To address this potential unsafe condition, Rolls-Royce published the NMSB to provide inspection instructions.

For the reasons described above, this AD requires a one-time inspection of the affected part and, depending on findings, accomplishment of applicable corrective action(s).

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

Required as indicated, unless accomplished previously:

Inspection:

- (1) During a qualified shop visit, not later than 40 months after the effective date of this AD, inspect the affected part in accordance with the instructions of the NMSB.

For an engine that, on the effective date of this AD, is in a qualified shop visit, as defined in this AD, the affected part must be inspected before release to service of the engine.

Corrective Action(s):

- (2) If, during the inspection as required by paragraph (1) of this AD, any corrosion is found within the criteria as specified in the NMSB, before release to service of the engine, accomplish the applicable corrective action(s) in accordance with the instructions of the NMSB.
- (3) If, during the inspection as required by paragraph (1) of this AD, any corrosion is found exceeding the criteria as specified in the NMSB, before release to service of the engine, contact Rolls-Royce for approved repair instructions and accomplish those instructions accordingly.

Credit:

- (4) Inspection(s) and corrective action(s) on an engine, accomplished before the effective date of this AD in accordance with the instructions of Rolls-Royce Alert NMSB RB.211-72-AG774 at original issue (except ESN listed in Appendix 6 of NMSB RB.211-72-AJ032), or Revision 1, or Revision 2, or Revision 3; or Rolls-Royce Alert NMSB RB.211-72-AJ032, as applicable, are



acceptable to comply with the requirements of paragraphs (1) and (2) of this AD for that engine.

- (5) Corrective action(s) on an engine, accomplished in accordance with the instructions of Rolls-Royce SB RB.211-72-G634 or SB RB.211-72-G856, are acceptable to comply with the requirements of paragraph (2) of this AD for that engine.

Alternative Method of Compliance / Modification:

- (6) Modification of an engine in accordance with the instructions of Rolls-Royce Trent 800 SB RB.211-72-G581 is an acceptable alternative method to comply with the requirements of paragraphs (1) and (2), or paragraphs (1) and (3), as applicable, of this AD for that engine, provided the engine is modified within the compliance time as specified in paragraph (1) of this AD.
- (7) After modification of an engine as specified in paragraph (6) of this AD, ensure that the engine remains in post-SB RB.211-72-G581 configuration.

Ref. Publications:

Rolls-Royce Alert NMSB RB.211-72-AG774 original issue dated 20 March 2021, or Revision 1 dated 31 July 2013, or Revision 2 dated 23 December 2014, or Revision 3 dated 24 September 2015, or Revision 4 dated 13 October 2020.

Rolls-Royce Alert NMSB RB.211-72-AJ032 original issue dated 24 September 2015.

Rolls-Royce SB RB211-72-G581 original issue dated 20 March 2012.

Rolls-Royce SB RB.211-72-G634 original issue dated 20 March 2012, or Revision 1 dated 03 July 2012.

Rolls-Royce SB RB.211-72-G856 original issue dated 26 July 2013, or Revision 1 dated 27 August 2014.

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. This AD was posted on 25 February 2021 as PAD 21-032 for consultation until 25 March 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.



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**.

