



Airworthiness Directive

AD No.: 2018-0164

Issued: 26 July 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):

Trent 1000 engines

Effective Date: 09 August 2018

TCDS Number(s): EASA.E.036

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – High Pressure Turbine Disc Front Cover Plate – Replacement [Life Limitation]

Manufacturer(s):

Rolls-Royce plc (RR)

Applicability:

Trent 1000-AE3, Trent 1000-CE3, Trent 1000-D3, Trent 1000-G3, Trent 1000-H3, Trent 1000-J3, Trent 1000-K3, Trent 1000-L3, Trent 1000-M3, Trent 1000-N3, Trent 1000-P3, Trent 1000-Q3 and Trent 1000-R3 engines, all serial numbers.

These engines are known to be installed on, but not limited to, Boeing 787 aeroplanes.

Definitions:

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

The NMSB: Rolls-Royce Alert Non-Modification Service Bulletin (NMSB) TRENT 1000 72-AK057.

Affected part: High Pressure (HP) turbine disc front cover plates, Part Number (P/N) KH59279.

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



Reason:

Following a recent analysis of the material condition used in manufacture of these parts, it was established that the HP turbine disc front cover plate may have a safe life below its declared safe cyclic life (DSCL).

This condition, if not corrected, could lead to premature failure of an affected part, possibly resulting in damage to the engine and reduced control of the aeroplane.

To address this potential unsafe condition, RR published the NMSB to provide the new DSCL and replacement instructions.

For the reason described above, this AD requires implementation of the reduced DSCL and removal from service of those affected parts that have exceeded the reduced DSCL.

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

Required as indicated, unless accomplished previously:

Life Limit Implementation:

- (1) For Group 1 engines: From the effective date of this AD, before an affected part exceeds 865 flight cycles (FC) since its first installation on an engine, remove that affected part from service 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 part on any engine, provided the part is new, or it is determined that the part has not exceeded 865 FC since its first installation on an engine, and that, following installation, the affected part is replaced as required by paragraph (1) of this AD.

Ref. Publications:

Rolls-Royce Alert NMSB TRENT 1000 72-AK057 original issue dated 10 April 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 June 2018 as PAD 18-087 for consultation until 24 July 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.
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 identifying the correspondence as being related to **Airworthiness Directives**.

