



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 19-216

Issued: 18 December 2019

Note: This Proposed Airworthiness Directive (PAD) 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.

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 DEUTSCHLAND Ltd & Co KG

Type/Model designation(s):

Trent 1000 engines

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number(s): EASA.E.036

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – De-Pairing Limitation

Manufacturer(s):

Rolls-Royce plc

Applicability:

Trent 1000-A, Trent 1000-AE, Trent 1000-C, Trent 1000-CE, Trent 1000-D, Trent 1000-E, Trent 1000-G and Trent 1000-H 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-AK468. 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 part: Intermediate pressure compressor (IPC) modules.



Reason:

Occurrences have been reported of engine surges on certain Trent 1000 engines, particularly those that have accumulated a high number of flight hours (FH) and engine flight cycles (EFC). The investigation into the cause(s) of these events is on-going.

This condition, if not corrected, could lead to a dual engine surge, possibly resulting in a dual engine in-flight shut-down and consequent reduced control of the aeroplane.

To address this potential unsafe condition, Rolls-Royce published the NMSB to provide de-pairing instructions, reducing the risk of a dual surge event. Instructions for in-shop performance recovery are being developed.

For the reasons described above, this AD requires de-pairing of the affected engines.

This AD is considered an interim action and further AD action may follow.

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

Required as indicated, unless accomplished previously:

De-pairing:

- (1) Within 30 days after the effective date of this AD, remove one engine from the aeroplane as specified in Table 1 of the NMSB and, thereafter, ensure that both engines installed on the aeroplane continue to meet the criteria specified in Table 1 of the NMSB.

Engine Installation:

- (2) From the effective date of this AD, it is allowed to install an engine on an aeroplane, provided that both engines installed on the aeroplane meet the criteria specified in Table 1 of the NMSB.

Ref. Publications:

Rolls-Royce Trent 1000 Alert NMSB 72-AK468 original issue dated 09 December 2019.

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 01 January 2020.
2. Enquiries regarding this PAD should be referred to the EASA Programming and Continued Airworthiness Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#).
4. 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/civil_team.jsp identifying the correspondence as being related to **Airworthiness Directives**.

