Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 20-079

Issued: 13 May 2020

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 - planned: 7 days after AD issue date]

TCDS Number(s): EASA.E.036

Foreign AD: Not applicable

Supersedure: None

ATA 73 – Engine Fuel and Control – Fuel Pump – Replacement [Life Limitation]

Manufacturer(s):
Rolls-Royce plc

Applicability:
Trent 1000-D2, Trent 1000-J2 and Trent 1000-K2 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 73-AK581. 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: Fuel pumps, having Part Number (P/N) G5030FPU01.

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:

An unexpected reduction in fuel pump performance has been seen during testing of high life units. Strip examination of these fuel pumps has identified that life related wear-out of the internal components is causing deterioration in pump efficiency. The effect of the loss of fuel pump efficiency is more pronounced on higher rated engines.

This condition, if not corrected, could lead to reduced engine thrust, possibly resulting in reduced control of the aeroplane.

To address this potential unsafe condition, Rolls-Royce published the NMSB to provide instructions for replacement of the affected parts before exceeding reduced life limits.

For the reasons described above, this AD requires removal from service of the affected parts.

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

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

Required as indicated, unless accomplished previously:

Life Limit Implementation:

(1) For Group 1 engines, all ratings: Before an affected part exceeds the applicable life limits, as specified in section 1.D.(2) of the NMSB, remove that affected part from service and install a serviceable part in accordance with the instructions of the NMSB.

(2) For Group 1 engines, D2 rating only: Before an affected part exceeds the life limits, as specified in section 1.D.(3) of the NMSB, remove that affected part from service and install a serviceable part in accordance with the instructions of the NMSB.

Part Installation:

(3) 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 has not exceeded the applicable life limits as specified in the NMSB, and that, following installation, the affected part is replaced as required by paragraph (1) or (2) of this AD, as applicable.

Ref. Publications:

Rolls-Royce Trent 1000 Alert NMSB 73-AK581 original issue dated 12 May 2020.

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 27 May 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 https://www.rolls-royce.com/contact-us/civil-aerospace.aspx identifying the correspondence as being related to **Airworthiness Directives**.