



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 19-076

Issued: 02 May 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):

RB211 Trent 900 engines

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

TCDS Number(s): EASA.E.012

Foreign AD: Not applicable

Supersedure: None

ATA 73 – Engine Fuel & Control – Engine Electronic Control Software – Update

Manufacturer(s):

Rolls-Royce plc

Applicability:

RB211 Trent 970-84, 972-84 and 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:

Where, in this AD, reference is made to a Rolls-Royce mod, Service Bulletin (SB) or Non-Modification SB (NMSB) with an 'A' (Alert) in the number, it should be recognised that an earlier or later revision may not have that 'A'. This kind of change does not effectively alter the publication references for the purpose of this AD.

The SB: Rolls-Royce Trent 900 SB RB.211-73-K110.



Affected SW: Engine electronic controller (EEC) software (SW) version 12.2, Part Number (P/N) RRY22-01-22-380A, and earlier versions and P/N.

Serviceable SW: EEC SW version 12.3, P/N RRY23-01-23-380A, or later version and P/N.

Groups: Group 1 engines are those that have an EEC with an affected SW installed.

Group 2 engines are those that have an EEC with serviceable SW installed. An engine having ESN 91580 or higher is a Group 2 engine.

Reason:

Rolls-Royce has developed EEC SW version 12.3 in order to improve the Trent 900 intermediate pressure (IP) turbine over-speed system (IPTOS). As part of the risk mitigation actions to respond to different in-service occurrences, Rolls-Royce assumed a certain in-service incorporation rate for this new SW version. In case the expected incorporation rate is not met, insufficient protection may exist against IP shaft failure.

This condition, if not corrected, could lead to IP turbine disc burst and high-energy debris release, possibly resulting in damage to, and reduced control of, the aeroplane.

To address this potential unsafe condition, Rolls-Royce published the SB, providing instructions to install the new SW.

For the reasons described above, this AD requires updating the EEC SW.

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

Required as indicated, unless accomplished previously:

SW Update:

- (1) For Group 1 engines: Within 3 months after the effective date of this AD, update the EEC SW in accordance with the instruction of the SB.

Part Installation:

- (2) Do not operate any engine having an EEC with affected SW installed, and do not upload affected SW on any EEC, as required by paragraph (2.1) or (2.2) of this AD, as applicable.

(2.1) For Group 1 engines: After modification of the engine as specified in paragraph (1) of this AD.

(2.2) For Group 2 engines: From the effective date of this AD.

EEC SW Intermixing:

- (3) From the effective date of this AD, do not intermix EEC SW 12.3 on an aeroplane with SW standards earlier than EEC SW 12.2.

Ref. Publications:

Rolls-Royce Trent 900 SB RB.211-72-K110 original issue dated 01 February 2019, or Revision 1 dated 13 March 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 16 May 2019.
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**.

