Airworthiness Directive

AD No.: 2018-0088

Issued: 18 April 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):
RB211 Trent 800 engines

Effective Date: 02 May 2018

TCDS Number(s): EASA.E.047

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2016-0084 dated 26 April 2016.

ATA 72 – Engine – Upper Bifurcation Fairing Seal Face – Inspection / Modification

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Manufacturer(s):
Rolls-Royce plc (RR)

Applicability:
RB211 Trent 895-17, 892-17, 892B-17, 884-17, 884B-17, 877-17 and 875-17 engines, all serial numbers.

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: RR Alert Non-Modification Service Bulletin (NMSB) RB.211-72-AJ165. The NMSB has an 'A' (Alert) in the number, but 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 modification SB: RR Service Bulletin (SB) RB211-72-J803.

Qualified shop visit: Any scheduled Level 1 or Level 2 shop visit.

Reason:

Inspection of in-service Trent 800 engines identified cracking and/or material release from the upper bifurcation fairing, which mates to the aeroplane thrust reverser upper bifurcation forward fire seal. Both sets of hardware create the engine firewall to isolate the engine compartment fire zone, which is a firewall feature of the aeroplane type design. Damage (missing materials and holes/openings) to the upper bifurcation fairing creates a breach of the engine fire wall, which may decrease the effectiveness of the engine fire detection and suppression systems due to excess fan air entering the engine compartment fire zone. This could delay or prevent the fire detection and suppression system from functioning properly, and can result in an increased risk of prolonged burning, potentially allowing a fire to reach unprotected areas of the engine, strut and wing.

This condition, if not detected and corrected, could lead to an uncontrolled fire, possibly resulting in damage to, or loss of, the aeroplane.

To address this potential unsafe condition, RR published the NMSB to provide inspection instructions. Consequently, EASA issued AD 2016-0084 to require repetitive inspections of the upper bifurcation fairing and, depending on findings, accomplishment of applicable corrective action(s).

Since that AD was issued, RR developed modification (mod) 72-J803, which introduces a revised upper bifurcation nose fairing assembly, featuring an additional support bracket assembly at the right hand seal land. RR also published the modification SB to provide instructions for in-service engines. This modification removes the need for repetitive inspections.

For the reasons described above, this AD retains the requirements of EASA AD 2016-0084, which is superseded, and requires a modification, which constitutes terminating action for the repetitive inspections required by this AD.

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

Required as indicated, unless accomplished previously:

Repetitive Inspections:

(1) Before exceeding 7 500 engine flight hours (EFH) since first installation of an engine on an aeroplane, or within 7 500 EFH since last inspection (see Note 1 of this AD) of the upper bifurcation fairing, or within 150 flight cycles after 12 May 2016 [the effective date of EASA AD 2016-0084], whichever occurs later, and, thereafter, at intervals not to exceed 7 500 EFH, accomplish an inspection of the upper bifurcation fairing, either on-wing or in-shop, in accordance with the instructions of Section 3.A.(2) or 3.B.(1), respectively, of the NMSB.

Note 1: Previous inspection of an upper bifurcation fairing may have been accomplished in-shop in accordance with the applicable Engine Manual, task 72-03-14, or on-wing in accordance with the applicable aeroplane maintenance documents, as identified in the NMSB.

Corrective Action(s):

(2) If, during any inspection as required by paragraph (1) of this AD, any discrepancy is detected, within the applicable compliance time(s) specified in the NMSB, accomplish the applicable

corrective action(s) in accordance with the instructions of Section 3.A.(2) (on-wing) or 3.B.(1) (in-shop) of the NMSB.

Modification:

(3) During the next qualified shop visit after the effective date of this AD, modify the engine in accordance with the instructions of the modification SB.

Terminating Action:

(4) Accomplishment of corrective actions on an engine, as required by paragraph (2) of this AD, does not constitute terminating action for the repetitive inspections required by paragraph (1) of this AD for that engine.

(5) Modification of an engine as required by paragraph (3) of this AD constitutes terminating action for the repetitive inspection requirements of paragraph (1) of this AD for that engine.

(6) After modification of an engine as required by paragraph (3) of this AD, ensure that the engine remains in post-mod 72-J803 configuration.

Ref. Publications:

Rolls-Royce Alert NMSB RB.211-72-AJ165 original issue dated 31 March 2016, or Revision 1 dated 05 February 2018.

Rolls-Royce SB RB211-72-J803 original issue dated 07 December 2017.

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 15 March 2018 as PAD 18-039 for consultation until 12 April 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. 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**.