EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2014-0089 **Date: 15 April 2014** Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, 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 EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 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 [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Design Change Approval Holder's Name:	**Type/Model designation(s):**
ROLLS-ROYCE plc	RB211 Trent 700 engines

TCDS Number:	EASA.E.042
Foreign AD:	Not applicable
Supersedure:	None

ATA 73	**Engine Fuel and Control – Low Pressure Fuel Tubes and Clips, Fuel Oil Heat Exchanger Mounts – Inspection / Replacement**
Manufacturer(s):	Rolls-Royce plc (RR)
Applicability:	RB211 Trent 768-60, 772-60, 772B-60 and 772C-60 engines, all serial numbers, if incorporating RR modification 73-F343 in production, or modified in service in accordance with RR Service Bulletin (SB) RB.211-73-F343. These engines are known to be installed on, but not limited to, Airbus A330 aeroplanes.
Reason:	Fuel leaks from the engine have occurred in-service due to damage to sections of the fan case Low Pressure (LP) fuel tube which runs between the Fuel Oil Heat Exchanger (FOHE) and the High Pressure Fuel Pump. Frettage damage between the securing clips and the tube outer surface has been caused by excessive movement within the system that resulted from deterioration of the FOHE mounting hardware. The thinning of the tube wall causes the tube to fracture and fuel loss to occur. Fuel leak detection and the associated flight crew procedures can be complex, leading to some flight crews failing to detect and/or address such situations. This condition, if not detected and corrected, could lead to a critical fuel imbalance or in-flight fuel starvation, possibly resulting engine in-flight shut-down and, consequently, reduced control of the aeroplane. To address this potential unsafe condition, RR issued Non-Modification Service Bulletin (NMSB) RB.211-73-AH522 to provide instructions to detect and replace deteriorated hardware. For the reasons described above, this AD requires repetitive on-wing and in-shop inspections and, depending on findings, replacement of fan case LP fuel tubes, clips and FOHE mounting hardware.

<table>
<tr><td>Effective Date:</td><td>29 April 2014</td></tr>
<tr><td>Required Action(s) and Compliance Time(s):</td><td>
Required as indicated, unless accomplished previously:

Note: Where in this AD, reference is made to an RR SB or 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.

(1) Within the compliance time specified in Table 1 of this AD and, thereafter, at intervals not to exceed 4 000 flight hours (FH), accomplish an on-wing inspection of fan case LP fuel tubes Part Number (P/N) FW53576 and the relevant associated clips, and FOHE mounts and associated hardware in accordance with the instructions of RR NMSB RB.211-73-AH522.

(2) Inspections on an engine, accomplished before the effective date of this AD in accordance with instructions of RR NMSB RB.211-73-G848 (at any Revision), are acceptable in lieu of the initial inspections as required by paragraph (1) of this AD for that engine.

Table 1
<table>
<tr><td>FH accumulated by the engine since new, on the effective date of this AD</td><td>Compliance time</td></tr>
<tr><td>3 200 FH or more</td><td>Within 800 FH after the effective date of this AD</td></tr>
<tr><td>Less than 3 200 FH</td><td>Before exceeding 4 000 FH since new</td></tr>
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(3) From the effective date of this AD, during each engine shop visit, inspect the fan case LP fuel tubes P/N FW26589, P/N FW36335, P/N FW26587, P/N FW53576 and P/N FW53577 and the relevant associated clips, and the FOHE mounts and associated hardware, in accordance with the instructions of RR NMSB RB.211-73-AH522.

(4) If, during any inspection as required by paragraph (1) or (3) of this AD, any discrepancies (as defined in RR NMSB RB.211-73-AH522) are detected, before next flight, or before release to service of the engines, as applicable, replace the affected fan case LP fuel tubes and relevant associated clips, and FOHE mounts and associated hardware, in accordance with the instructions of RR NMSB RB.211-73-AH522.

(5) An in-shop inspection accomplished in accordance with paragraph (3) of this AD is acceptable in lieu of an on-wing inspection as required by paragraph (1) of this AD.

(6) Replacement of fan case LP fuel tubes and the relevant associated clips or FOHE mounts and associated hardware with serviceable parts, as required by paragraph (4) of this AD, does not constitute terminating action for the repetitive inspections required by paragraphs (1) and (3) of this AD.
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<tr><td>Ref. Publications:</td><td>
Rolls-Royce NMSB RB.211-73-AH522 dated 20 September 2013, or Revision 1 dated 18 March 2014.

Rolls-Royce SB RB.211-73-F343 dated 08 November 2006.

The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
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<tr><td>Remarks:</td><td>
1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.

2. This AD was posted on 31 January 2014 as PAD 14-028 for consultation
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	until 28 February 2014. No comments were received during the consultation period. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. 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 Aeromanager account at www.aeromanager.com. If you do not have a designated representative or Aeromanager 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 e-mail through http://www.rolls-royce.com/contact/civil_team.jsp identifying the correspondence as being related to **airworthiness directives**.