EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2014-0031 **Date: 04 February 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 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:	This AD supersedes EASA AD 2013-0060 dated 11 March 2013.

ATA 72	**Engine – Low Pressure Compressor Blades – Inspection / Replacement**
Manufacturer(s):	Rolls-Royce plc (RR)
Applicability:	RB211 Trent 768-60, 772-60, 772B-60 and 772C-60 engines, all serial numbers. These engines are known to be installed on, but not limited to, Airbus A330 aeroplanes.
Reason:	Low Pressure (LP) compressor partial aerofoil blade release events occurred in service on RR Trent 700 engines. While primary containment of the released sections was achieved in each case, some of the releases did exhibit secondary effects that are considered to present a potential hazard. Previously, expeditious actions by RR mitigated the risks presented by these effects, by removal from service of batches of LP compressor blades. However, some causal factors still exist that are not fully understood. This condition, if not detected and corrected, could lead to LP compressor blade release with possible consequent loss of the engine nose cowl, under cowl fires and forward projection of secondary debris, possibly resulting in damage to the aeroplane and/or injury to persons on the ground. To address this potential unsafe condition, EASA issued AD 2012-0247 to require a one-time inspection of the higher life LP compressor blades. After identification of a population of these LP compressor blades that were incorrectly inspected, EASA issued AD 2013-0060, superseding AD 2012-0247, to require re-inspection of the affected blades. Since EASA AD 2013-0060 was issued, to mitigate the risk of further partial fan blade release events, RR issued Non-Modification Service Bulletin (NMSB)

	RB.211-72-AH465, providing instructions for a programme of repetitive ultrasonic inspections of the affected LP compressor blades to detect sub-surface anomalies in the aerofoil. For the reasons described above, this AD supersedes EASA AD 2013-0060 and requires repetitive inspections of all affected LP compressor blades and, depending on findings, replacement.
Effective Date:	18 February 2014
Required Action(s) and Compliance Time(s):	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) For LP Compressor blades Part Number (P/N) FK23411, P/N FK25441, P/N FK25968, P/N FW11901, P/N FW15393, P/N FW23643, P/N FW23741, P/N FW23744, P/N KH23403 and P/N KH23404, before exceeding 3 600 FC since new and, thereafter, at intervals not to exceed 2 400 FC, accomplish an ultrasonic inspection of each LP compressor blade in accordance with the instructions of Section 3 of RR NMSB RB.211-72-AH465. LP compressor blade ultrasonic inspections accomplished in accordance with the instructions referenced in the mandatory inspection section of the applicable engine Time Limits Manual (TLM) T-Trent-1RR are acceptable to comply with the inspection requirements of paragraph (1) of this AD. (2) LP compressor blade ultrasonic inspections, accomplished before the effective date of this AD in accordance with the instructions of Rolls-Royce NMSB RB.211-72-G702, or NMSB RB.211-72-G872, or NMSB RB.211-72-H311, or Engine Manual (EM) E-Trent-1RR, Task 72-31-11-200-806, are acceptable to comply with the inspection requirements of paragraph (1) of this AD. (3) For any blade that, on the effective date of this AD, has already exceeded 2 200 FC since last inspection, the next inspection must be accomplished before exceeding 3 000 FC since the last inspection. Thereafter, repetitive inspections must be accomplished as required by paragraph (1) of this AD. (4) If, during any inspection as required by paragraph (1) or (3) of this AD, a LP Compressor blade fails the ultrasonic inspection, before next flight, or before release to service of the engine, as applicable, replace the affected blade with a serviceable one. (5) From the effective date of this AD, installation on an engine of a replacement LP compressor blade having P/N FK23411, P/N FK25441, P/N FK25968, P/N FW11901, P/N FW15393, P/N FW23643, P/N FW23741, P/N FW23744, P/N KH23403 or P/N KH23404, that has accumulated or exceeded 3 600 FC since new, or 2 400 FC since inspection in accordance with RR NMSB RB.211-72-AH465, or since an inspection as specified in paragraph (2) of this AD, whichever occurred later, is allowed, provided that, prior to installation, the replacement LP compressor blade has passed the ultrasonic inspection in accordance with the instructions of Section 3 of RR NMSB RB.211-72-AH465.
Ref. Publications:	Rolls-Royce NMSB RB.211-72-G702 dated 23 May 2011. Rolls-Royce NMSB RB.211-72-G872 dated 2 April 2012, or Revision 1 dated 2 July 2012, or Revision 2 dated 08 March 2013. Rolls-Royce NMSB RB.211-72-H311 dated 08 March 2013. Rolls-Royce NMSB RB.211-72-AH465 dated 15 July 2013.

	RR Trent 700 EM E-Trent-1RR. RR Trent 700 TLM T-Trent-1RR. The use of later approved revisions of these 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 19 November 2013 as PAD 13-170 for consultation until 17 December 2013. The Comment Response Document can be found at http://ad.easa.europa.eu. 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 email through http://www.rolls-royce.com/contact/civil_team.jsp identifying the correspondence as being related to **Airworthiness Directives**.