EASA	EMERGENCY AIRWORTHINESS DIRECTIVE
	AD No.: 2010-0242-E **Date: 22 November 2010** Note: This Emergency 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 EC 1702/2003, Part 21A.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].

Type Approval Holder's Name :	**Type/Model designation(s) :**
ROLLS-ROYCE PLC	RB211 Trent 900 series engines

TCDS Number :	EASA.E.012
Foreign AD :	Not applicable
Supersedure :	This AD supersedes EASA AD 2010-0236-E dated 10 November 2010.

ATA 72	**Engine – High Pressure / Intermediate Pressure (HP/IP) Structure – Inspections**
Manufacturer(s):	Rolls-Royce plc
Applicability:	RB211 Trent 900 series engines, variants RB211 Trent 970-84, RB211 Trent 970B-84, RB211 Trent 972-84, RB211 Trent 972B-84, RB211 Trent 977-84, RB211 Trent 977B-84 and RB211 Trent 980-84, all serial numbers. These engines are known to be installed on, but not limited to, Airbus A380 series aeroplanes.
Reason:	An uncontained engine failure has recently occurred on a Rolls-Royce Trent 900 involving release of high energy debris and leading to damage to the aeroplane. Analysis of the preliminary elements from the incident investigation shows that an oil fire in the HP/IP structure cavity may have caused a sequence of events leading to failure of the Intermediate Pressure Turbine (IPT) Disc. This condition, if not detected and corrected, could result in additional uncontained engine failures, possibly leading to damage to the aeroplane and injury to persons on the ground. Pending conclusion of the investigation, EASA issued AD 2010-0236-E to require repetitive inspections of the Low Pressure Turbine (LPT) stage 1 blades and case drain, HP/IP structure air buffer cavity and oil service tubes in order to detect any abnormal oil leakage, and if any discrepancy is found, to prohibit further engine operation. Since issuance of AD 2010-0236-E, the incident investigation has progressed and inspection data from in-service engines has been gathered and analysed. The results of this analysis show the need to amend the inspection procedure,

	retaining the inspection of the air buffer cavity and focusing on the oil service tubes within the HP/IP structure. For the reasons described above, this AD partially retains the requirements of AD 2010-0236-E, which is superseded, and requires implementation of the amended procedure and accomplishment of the associated inspections. The requirements of this AD are considered as interim action. If, as a result of the on-going incident investigation, a terminating action is later identified, further mandatory actions might be considered.
Effective Date:	23 November 2010
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) Within the compliance times indicated in Table 1 of this AD, accomplish inspections in accordance with the instructions of Rolls-Royce Non Modification Service Bulletin (NMSB) 72-AG590 Revision 2, Section 3, paragraphs 3.A or 3.B, as applicable to the engine configuration.

Table 1

Engine Configuration	Compliance time	
	Initial Threshold	Repetitive Interval
On-wing	Within 10 flight cycles (FC) after 10 November 2010 [the effective date of AD 2010-0236-E]	At intervals not exceeding 20 FC
Un-installed	After engine installation and before next flight	
In-shop	After the engine test procedure and before next flight	

(2) Inspections accomplished prior to the effective date of this AD, in accordance with the instructions of Rolls-Royce NMSB 72-AG590 at original issue or Revision 1, are acceptable to comply with the initial inspections required by paragraph (1) of this AD. After the effective date of this AD, all inspections must be accomplished in accordance with the instructions of Rolls-Royce NMSB 72-AG590 at Revision 2.

(3) If a discrepancy is found during any inspection as required by paragraph (1) of this AD, except as specified in paragraph (4.1) of this AD, further operation of the affected engine is prohibited.

(4) If the result of an inspection, as required by paragraph (1) of this AD, indicates that [as specified in Rolls-Royce NMSB 72-AG590 Revision 2] *"continued operation is acceptable subject to authorisation from Rolls-Royce"*, before further operation of the engine, contact Rolls-Royce for an assessment, and:

(4.1) If Rolls-Royce determine that the engine condition is acceptable, this is not a discrepancy and further operation of the affected engine is allowed.

(4.2) If Rolls-Royce determine that the engine condition is not acceptable, this is a discrepancy and further operation of the affected engine is prohibited.

(5) If any discrepancy is found during an inspection as required by paragraph (1) of this AD, within one day after the inspection, report the findings to Rolls-Royce.

(6) From the effective date of this AD, do not operate an engine on an aeroplane, unless it has been inspected in accordance with the requirements of this AD.

Ref. Publications:	Rolls-Royce RB211 Trent 900 Alert NMSB 72-AG590 Revision 2 dated 18 November 2010. The use of later approved revisions of this document 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. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification 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.** PO Box 31, Derby, DE24 8BJ, United Kingdom. Phone: +44 (0) 1332 242424, or e-mail from http://www.rolls-royce.com/contact/civil_team.jsp identifying the correspondence as being related to **Airworthiness Directives**.