


EASA	AIRWORTHINESS DIRECTIVE	
	AD No.: 2012-0201	
	Date: 26 September 2012	
<p>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.</p>		
<p>This AD is issued in accordance with EC 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].</p>		
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:	None	
ATA 72	Engine – High / Intermediate Pressure Turbine Bearing Support Structure – Inspection / Modification	
Manufacturer(s):	Rolls-Royce plc (RR)	
Applicability:	<p>RB211 Trent 768, 772, 772B and 772C engines, serial numbers 41221, 41425, 41428, 41430, 41431, 41432, 41435, 41437, 41438, 41440, 41442, 41445, 41446, 41451, 41452, 41454, 41455, 41456, 41459, 41460, 41461, 41462, 41463, 41464, 41465, 41466, 41468, 41469, 41470 and 41471.</p> <p>These engines are known to be installed on, but not limited to, Airbus A330 aeroplanes.</p>	
Reason:	<p>In August 2011, a Trent 700 engine was removed for high oil consumption, which was found to have been caused by a small hole in the oil feed tube of the High Pressure / Intermediate Pressure (HP/IP) Bearing Support. The hole was the result of fretting (chafing) with a fractured outer heat shield. This is a known problem and recognised unsafe condition that has re-emerged having been previously addressed by EASA AD 2007-0260R1.</p> <p>Investigation by RR revealed a build error that, in contradiction to the build records, the previous configuration of outer heat shield (Pre-Service Bulletin (SB) 72-F117 standard) was fitted on the oil feed tube service pipe of the HP/IP structure. As the build error may have been reproduced several times, it is assumed that further post-SB 72-F117 standard structures may be in service with pre-SB72-F117 outer heat shields fitted to the oil feed tube.</p> <p>The fretting on the oil feed tube within the HP/IP turbine bearings support structure results from contact with the fracture edges of the tubes outermost heat shield, which has been found to fracture under thermal cycling and then to chafe against the oil tube with the potential to cause holes and consequent oil leaks.</p>	

	<p>This condition, if not detected and corrected, could lead to ejected oil burning in the area to the rear of the HP turbine disc, possibly resulting in HP turbine disc overheat and a disc burst, with consequent damage to the aeroplane and injury to occupants.</p> <p>To address this potential unsafe condition, RR issued Non-Modification SB (NMSB) RB.211-72-AG873 to instruct inspection for cracking and tube fretting of certain engines that may still have pre-SB 72-F117 standard oil feed heat shields installed and, depending on findings, the accomplishment of follow-on repetitive inspections and corrective actions.</p> <p>For the reasons described above, this AD requires the actions as specified in RR NMSB RB.211-72-AG873.</p>
Effective Date:	10 October 2012
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> (1) Within the compliance time periods specified in Sections 1.D (1) and 1.D (2) of RR NMSB RB.211-72-AG873 (for on-wing and in-shop inspections, respectively), to be calculated from the effective date of this AD (instead of from the NMSB issue date), as applicable to engine configuration and depending on the flight hours and/or engine cycles accumulated by the 05 module installed on the engine, accomplish all inspections and corrective actions in accordance with the instructions of Section 3 of RR NMSB RB.211-72-AG873. (2) At the next scheduled overhaul of the 05 module after the effective date of this AD, modify the HP/IP turbine bearing support structure in accordance with the instructions of RR SB RB.211-72-F227 (any revision), or in accordance with the instructions of RR SB RB.211-72-F117 (any revision). (3) Modification of an engine as required by paragraph (2) of this AD constitutes terminating action for the inspections required by paragraph (1) of this AD.
Ref. Publications:	<p>Rolls-Royce NMSB RB.211-72-AG873 dated 27 February 2012.</p> <p>Rolls-Royce SB RB.211-72-F117 dated 06 June 2006, or Revision 1 dated 14 September 2006, or Revision 2 dated 25 September 2006.</p> <p>Rolls-Royce SB RB.211-72-F227 dated 30 March 2007, or Revision 1 dated 08 October 2007.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
Remarks:	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication. 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. <p>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, The United Kingdom. Telephone: +44 (0) 1332 242424, or email from http://www.rolls-royce.com/contact/civil_team.jsp identifying the correspondence as being related to Airworthiness Directives.</p>