

EASA	NOTIFICATION OF A PROPOSAL TO ISSUE AN AIRWORTHINESS DIRECTIVE
	<p>PAD No.: 09-136</p> <p>Date: 02 December 2009</p> <p>Note: This Proposed Airworthiness Directive (PAD) 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>In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below. All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation closing date indicated.</p>	
<p>Type Approval Holder's Name :</p> <p>ROLLS-ROYCE PLC</p>	<p>Type/Model designation(s) :</p> <p>RB211 Trent 900 series engines</p>
<p>TCDS Number : EASA.E.012</p>	
<p>Foreign AD : Not applicable</p>	
<p>Supersedure : None</p>	
ATA 72	Engine – IP Shaft Coupling Splines – Inspection
Manufacturer(s):	Rolls-Royce plc
Applicability:	<p>RB211 Trent 900 series engines, all marks, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Airbus A380 series aircraft.</p>
Reason:	<p>Wear, beyond Engine Manual limits, has been identified on the abutment faces of the splines on the Trent 900 Intermediate Pressure (IP) shaft rigid coupling on several engines during strip. The shaft to coupling spline interface provides the means of controlling the turbine axial setting and wear through of the splines would permit the IP turbine to move rearwards.</p> <p>Rearward movement of the IP turbine would enable contact with static turbine components and would result in loss of engine performance with potential for in-flight shut down, multiple IP turbine blade release or oil firing below IP and LP turbine discs. Some of these conditions present a potential unsafe condition to the aeroplane.</p> <p>This AD requires inspection of the IP shaft coupling splines and, depending on the results, requires further repetitive inspections or corrective actions.</p>
Effective Date:	[TBD: 14 days after final AD issue date]

<p>Required Action(s) and Compliance Time(s):</p>	<p>The following measures are made mandatory from the effective date of this AD, unless accomplished previously:</p> <p>(a) On-wing - Carry out the actions specified in Table 1.a and 1.b of this AD and section 3.A of Rolls-Royce RB211-Trent 900 Alert Non Modification Service Bulletin (NMSB) 72-AG329.</p> <p>and,</p> <p>(b) In-shop - Carry out the actions specified in section 3.B of Rolls-Royce RB211-Trent 900 NMSB 72-AG329.</p>
<p>Ref. Publications:</p>	<p>Rolls-Royce RB211-Trent 900 Alert Non Modification Service Bulletin (NMSB) 72-AG329 Initial Issue, dated 26 November 2009.</p> <p>The use of later approved updates of this document is acceptable for compliance with the requirement of this AD.</p>
<p>Remarks :</p>	<ol style="list-style-type: none"> 1. This Proposed AD will be closed for consultation on 30 December 2009. 2. Enquiries regarding this PAD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail ADs@easa.europa.eu. 3. For any questions concerning the technical content of the requirements in this AD, please contact: Rolls-Royce plc., P.O. Box 31, Derby, DE24 8BJ, United Kingdom; Telephone: +44 (0) 1332 242424, Fax: +44 (0) 1332 249936; Email: tech.help@rolls-royce.com or download the publication from https://www.aeromanager.com

Table 1.a: On-wing Borescope Inspection – Initial Inspection			
Configuration / Condition	Action	Compliance Time	Further Action and Repetitive Interval
Engines where the life since new is 250 flight cycles or less ⁽¹⁾	Carry out inspection of the IP shaft coupling splines – measurement of spline crest – in accordance with section 3.A of Rolls-Royce NMSB 72-AG329	Before the engine has achieved 400 flight cycles since new	See Table 1.b and Figure 8 of section 3.A of Rolls-Royce NMSB 72-AG329
Engines where the life since new is more than 250 flight cycles ⁽¹⁾		Within 150 flight cycles	

Note ⁽¹⁾: Coupling life is assumed to be the engine time since new, however, if it is known that the coupling (FW33264) was replaced with new during any shop visit then the life since that shop visit may be used in place of time since new, to establish the inspection threshold.

Table 1.b: On-wing Borescope Inspection – Further Action and Repetitive Inspection Intervals		
Condition	Action	Compliance Time / Repetitive Interval (not to exceed)
Measured spline crest in accordance with section 3.A of Rolls-Royce NMSB 72-AG329 is:		
Less than 0,5 mm with no material remaining	Remove the engine	Before next flight
Less than 0,5 mm with some material remaining	Remove the engine	Within 10 flight cycles
More than 0,5 mm but less than 1 mm	Repeat inspection	Within 50 flight cycles
More than 1 mm but less than 1,5 mm	Repeat inspection	Within 100 flight cycles
More than 1,5 mm but less than 2 mm	Repeat inspection	Within 200 flight cycles
More than 2 mm but less than 2,4 mm	Repeat inspection	Within 300 flight cycles
More than 2,4 mm ⁽²⁾	Repeat inspection	Within 400 flight cycles

Note ⁽²⁾: The nominal unworn dimension of the spline crest is 2,65 mm.