


<b>EASA</b>	<b>PROPOSED AIRWORTHINESS DIRECTIVE</b>	
	<p><b>PAD No : 07-212</b></p> <p><b>Date: 20 November 2007</b></p>	
No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.		
<b>Type Approval Holder's Name :</b>		<b>Type/Model designation(s) :</b>
Rolls-Royce plc		RB211-22B and -524 Series Engines
TCDS Number: United Kingdom Engine TCDS No. 1039 and 1043		
Foreign AD: Not applicable		
Supersedure: None		
<b>ATA 72</b>	<b>Engine – Low Pressure Turbine (LPT) Shaft – Inspection / Replacement</b>	
Manufacturer(s):	Rolls-Royce plc	
Applicability:	<p>RB211-22B series engines, all models, all serial numbers; and RB211-524B4-02, RB211-524B4-D-02, RB211-524D4-19, RB211-524D4-39, RB211-524D4-B-19, RB211-524D4-B39, RB211-524D4X-19 and RB211-524D4X-B-19 engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Boeing 747 series aircraft; and Lockheed L-1011 series aircraft.</p> <p><b>Note:</b> Some RB211-524 series engines and all RB211-535 series Engines, although listed in the referenced Rolls-Royce Non Modification Service Bulletin (NMSB), are not affected by the same unsafe condition and therefore this AD does not apply to those engines.</p>	
Reason:	<p>Several low pressure turbine (LPT) shafts have been found with cracks originating from the rear cooling air holes. The cracks were found at normal component overhaul, by the standard Magnetic Particle Inspection (MPI) technique defined in the associated engine manual. The cracks have been found to initiate from corrosion pits. Propagation of a crack from the rear cooling air holes may result in shaft failure and subsequently in an uncontained Low Pressure Turbine failure.</p> <p>For the reasons stated above, this Airworthiness Directive (AD) requires the inspection of the affected engines' LPT shafts and replacement of the shaft, as necessary.</p>	
Effective Date:	[TBD: 14 days after final AD issue date]	

Compliance:	<p>Required as indicated, unless accomplished previously:</p> <p><b>1. Initial Inspection Requirements</b></p> <p>(a) If on the effective date of this AD, the engine is undergoing a shop visit where the LPT shaft has been completely disassembled to piece-part level in accordance with the appropriate disassembly procedures contained in the Engine Manual and the LPT shaft has not been re-protected with corrosion resistant coating then, before installing the engine on an aircraft, the LPT shaft must be inspected in accordance with the accomplishment instructions of Rolls-Royce NMSB 72-AF336;</p> <p>(b) For all other engines, at the next engine shop visit after the effective date of this AD when the LPT shaft is completely disassembled to piece-part level in accordance with the appropriate disassembly procedures contained in the Engine Manual, inspect the LPT Shaft in accordance with the accomplishment instructions of Rolls-Royce NMSB 72-AF336.</p> <p><b>2. Repetitive Inspection Requirements</b> – following initial inspection of an LPT shaft in accordance with paragraph 1 of this AD, the LPT shaft must be re-inspected in accordance with the accomplishment instructions of Rolls-Royce NMSB 72-AF336 and in accordance with the following schedule:</p> <table border="1" data-bbox="560 882 1452 1209"> <tr> <th>Engine Model</th><th>Maximum Time Between Inspections (engine cycles)</th></tr> <tr> <td>RB211-22B Series, all models</td><td>3 500</td></tr> <tr> <td>RB211-524B4-D-02</td><td>4 000</td></tr> <tr> <td>RB211-524D4-19, RB211-524D4-39, RB211-524D4-B-19, RB211-524D4-B39, RB211-524D4X-19 and RB211-524D4X-B-19</td><td>normal shop visit interval</td></tr> </table> <p><b>3.</b> All LPT shafts inspected according to the schedule above and found to be cracked must be replaced with serviceable LPT shafts before installing the engine on an aircraft.</p>	Engine Model	Maximum Time Between Inspections (engine cycles)	RB211-22B Series, all models	3 500	RB211-524B4-D-02	4 000	RB211-524D4-19, RB211-524D4-39, RB211-524D4-B-19, RB211-524D4-B39, RB211-524D4X-19 and RB211-524D4X-B-19	normal shop visit interval
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Ref. Publications:	<p>Rolls-Royce RB211 Propulsion System Non Modification Service Bulletin No. RB211-72-AF336 original issue.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p>								
Remarks :	<p>1. If requested and appropriately substantiated, EASA can accept Alternative Methods of Compliance for this AD.</p> <p>2. The closing date for comments is 18 December 2007.</p> <p>3. Enquiries regarding this AD should be referred to the AD Focal Point - Certification Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a> .</p> <p>4. For any question concerning the technical content of the requirements in this AD, please contact: Rolls-Royce plc, Publication Services, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; Telephone: +44 (0) 1332 242424, Fax: +44 (0) 1332 249936; Email: <a href="mailto:tech.help@rolls-royce.com">tech.help@rolls-royce.com</a> or download the publication from <a href="https://www.aeromanager.com/">https://www.aeromanager.com/</a></p>								