


EASA	NOTIFICATION OF A PROPOSAL TO ISSUE AN AIRWORTHINESS DIRECTIVE
	<p>PAD No.: 12-007</p> <p>Date: 01 February 2012</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>RB211-524 and RB211-535 Engines</p>
<p>TCDS Numbers: United Kingdom No. 1046, 1048, 1044 and 1049</p>	
<p>Foreign AD: Not applicable</p>	
<p>Supersedure: None</p>	
<p>ATA 73</p>	<p>Engine – Intermediate Pressure (IP) Turbine Disc – Identification / Inspection / Replacement</p>
<p>Manufacturer(s):</p>	<p>Rolls-Royce plc</p>
<p>Applicability:</p>	<p>RB211-524G2-19, RB211-524G2-T-19, RB211-524G3-19, RB211-524G3-T-19, RB211-524H2-19, RB211-524H2-T-19, RB211-524H-36 and RB211-524H-T-36 engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Boeing 747 and Boeing 767 series aeroplanes.</p> <p>RB211-535E4-37, RB211-535E4-B-37, RB211-535E4-B-75 and RB211-535E4-C-37 engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Boeing 757 and Tupolev Tu204 series aeroplanes.</p>
<p>Reason:</p>	<p>The inspection of several IP turbine discs at past engine overhauls identified the presence of steel inclusions in these parts. Further investigation concluded that all affected parts were manufactured from billets produced before 1997 at a certain supplier who also melted steel in the same furnaces. Initial engineering evaluation concluded that the lives of the parts would not be affected by the presence of the said steel inclusions. This evaluation has been recently repeated, utilising improved structural analysis, and it is now concluded that the currently published lives of the components cannot be supported for some discs with a steel inclusion.</p> <p>This condition, if not corrected, could lead to an uncontained IP turbine disc failure, possibly resulting in damage to, and reduced control of, the aeroplane.</p> <p>For the reasons described above, this AD requires removal and inspection of certain IP turbine discs and, depending on findings, replacement with a serviceable part. This AD also prohibits (re)installation of certain IP turbine discs on an engine.</p>

Effective Date:	[TBD: 14 days after final AD issue date]																	
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> (1) During the next scheduled engine Level 3 shop visit, or Level 4 shop visit, or Module 05 Level 2 shop visit, whichever occurs first after the effective date of this AD, identify the Part Number (P/N) and serial number (s/n) of the IP turbine disc installed on the engine. (2) If a turbine disc is installed with a P/N as listed in Table 1 of this AD and a s/n as listed in Appendix 1 (for RB211-524) or Appendix 2 (for RB211-535) of the NMSB, as applicable, of Rolls-Royce Propulsion Systems Non-Modification Service Bulletin (NMSB) RB211-72-AG493 Revision 1 (hereafter referred to as the NMSB), and the accumulated life (in cycles) of the IP turbine disc exceeds the inspection threshold, but is below the maximum life as identified in the applicable Time Limits Manual, or below the maximum life as specified in Appendix 1 (for RB211-524) or Appendix 2 (for RB211-535E4) of the NMSB, as applicable, remove the IP turbine disc from the engine and accomplish an inspection in accordance with the instructions of Section 3 of the NMSB. <p>Note: As an alternative to the inspection required by paragraph (2) of this AD, it is acceptable to replace the removed IP turbine disc with a serviceable part.</p> <p style="text-align: center;">Table 1 – Affected IP Turbine Discs</p> <table border="1"> <thead> <tr> <th>Engine type</th><th>IP turbine disc P/N</th></tr> </thead> <tbody> <tr> <td rowspan="4">RB211-524G and RB211-524H engines</td><td>LK82335</td></tr> <tr> <td>UL27958</td></tr> <tr> <td>UL37681</td></tr> <tr> <td>UL37721</td></tr> <tr> <td rowspan="5">RB211-524G-T and RB211-524H-T engines</td><td>UL38383</td></tr> <tr> <td>UL38384</td></tr> <tr> <td>UL38467</td></tr> <tr> <td>UL38929</td></tr> <tr> <td>UL38930</td></tr> <tr> <td rowspan="3">RB211-535E4 engines</td><td>UL17774</td></tr> <tr> <td>UL19818</td></tr> <tr> <td>UL27940</td></tr> </tbody> </table> <ol style="list-style-type: none"> (3) If the results of an inspection as required by paragraph (1) of this AD exceed the criteria as detailed in Appendix 4 of the NMSB, or if the affected IP turbine disc has reached or exceeded its life limit, as specified in Appendix 1 (for RB211-524) or Appendix 2 (for RB211-535) of the NMSB, as applicable, before returning the engine to service, replace the disc with a serviceable part. (4) From the effective date of this AD, do not install on any engine an IP turbine disc with a P/N as listed in Table 1 of this AD and a s/n as listed in Appendix 1 or Appendix 2 of the NMSB, as applicable to engine model, except in accordance with the inspection and replacement requirements of this AD. 	Engine type	IP turbine disc P/N	RB211-524G and RB211-524H engines	LK82335	UL27958	UL37681	UL37721	RB211-524G-T and RB211-524H-T engines	UL38383	UL38384	UL38467	UL38929	UL38930	RB211-535E4 engines	UL17774	UL19818	UL27940
Engine type	IP turbine disc P/N																	
RB211-524G and RB211-524H engines	LK82335																	
	UL27958																	
	UL37681																	
	UL37721																	
RB211-524G-T and RB211-524H-T engines	UL38383																	
	UL38384																	
	UL38467																	
	UL38929																	
	UL38930																	
RB211-535E4 engines	UL17774																	
	UL19818																	
	UL27940																	
Ref. Publications:	Rolls-Royce Propulsion Systems NMSB RB211-72-AG493 Revision 1,																	

	<p>dated 11 November 2011.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p>
Remarks :	<ol style="list-style-type: none"> 1. This Proposed AD will be closed for consultation on 29 February 2012. 2. Enquiries regarding this PAD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail ADs@easa.europa.eu 3. For any question concerning the technical content of the requirements in this PAD, please contact your designated Rolls-Royce representative, or download the publication from your Aeromanager account at www.aeromanager.com, or contact at Rolls-Royce plc. Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, United Kingdom, telephone: +44 (0) 1332 242424, or send an e-mail through http://www.rolls-royce.com/contact/civil_team.jsp identifying the correspondence as being related to Airworthiness Directives.