


EASA	AIRWORTHINESS DIRECTIVE	
	<p style="text-align: center;"><b>AD No.: 2007-0004</b></p> <p style="text-align: center;"><b>Date: 08 January 2007</b></p>	
<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.</p>		
<p><b>Type Approval Holder's Name:</b> Rolls-Royce plc</p>	<p><b>Type/Model designation(s)</b> RB211 Trent 800 series Engines</p>	
<p>TCDS Number: UK CAA 1051</p>		
<p>Foreign AD: Not applicable</p>		
<p>Supersedure: This AD supersedes and cancels EASA AD 2006-0239 R2 dated 13 October 2006, the original publication of which superseded and cancelled CAA UK Airworthiness Directive 002-08-2002.</p>		
<b>ATA 05</b>	<b>Time Limits - HP Compressor Stage 5-6 Rotor Disc Cyclic Life</b>	
<p>Manufacturer:</p>	<p>Rolls-Royce plc</p>	
<p>Applicability:</p>	<p>RB211 Trent 895-17, 892-17, 892B-17, 884-17, 884B-17, 877-17 and 875-17, known to be installed on Boeing 777 series aeroplanes.</p>	
<p>Reason:</p>	<p>Rolls-Royce Service Bulletin RB 211-72-AE082 was initially issued in 2002 and was made mandatory by UK CAA Airworthiness Directive 002-08-2002.</p> <p>The Service Bulletin addressed cracking in Trent 800 HP Compressor stage 5-6 rotor disc stage 5 and 6 loading slots. A cyclic life limit lower than that declared in the Time Limits manual was applied to the disc. The cyclic life was a function of engine thrust rating and model with a lower life being applied to the higher thrust rating models. Later revisions (2 &amp; 3) introduced further life reductions and a rework solution to restore component life.</p> <p>Rolls-Royce has now introduced a Multiple Flight Profile Monitoring methodology (NMSB 72-AE935) for life limited parts in which the published lives are in the form of Standard Duty Cycles. Standard Duty Cycles are obtained by multiplying flight cycles by a factor (the Beta factor) that is defined according to the flight profile group which is applicable to the fleet. A separate flight profile (called "Heavy") is also introduced and is based on normal flight cycles.</p> <p>Rolls-Royce has therefore re-issued Service Bulletin RB 211-72-AE082 to define this new methodology. As this is a significant revision to the original Service Bulletin affecting compliance methodology, it was deemed necessary to supersede CAA Airworthiness Directive 002-08-2002, which was done by the issuance of EASA AD 2006-0239.</p>	

	<p>Revision 1 of EASA AD 2006-0239 was issued to delay the introduction of the new cyclic lives.</p> <p>Revision 2 of EASA AD 2006-0239 was necessary due to a delay in the introduction of the new Multiple Flight Profile Monitoring methodology which has affected the dates quoted in the Compliance section.</p> <p>A minor error was then discovered in the lifing calculations for FK25230 which resulted in a reduction in some of the lives. It was therefore necessary to supersede EASA Airworthiness Directive 2006-0239 with this AD.</p> <p>This AD is necessary as life reductions are applicable in some cases and failure to comply with the revised life limits could result in an unsafe condition.</p>
Effective Date:	22 January 2007
Compliance:	<p>The following HP Compressor stage 5-6 rotor disc cyclic life limits must be complied with as detailed below:</p> <ol style="list-style-type: none"> <li>1) Up to and including 30 January 2007: <ul style="list-style-type: none"> <li>Part number FK 25230 and FK 27899: <ol style="list-style-type: none"> <li>a) Trent 875-17, 877-17, 884-17, 884B-17, 892-17 and 892B-17 ratings, no component to exceed 7500 flight Cycles.</li> <li>b) Trent 895-17 rating, no component may exceed 7370 Flight Cycles.</li> </ol> </li> </ul> </li> <li>2) From 31 January 2007 to 31 May 2009: <ol style="list-style-type: none"> <li>a) Part number FK 25230: <ol style="list-style-type: none"> <li>i) Aircraft operating within Multiple Flight Profile Monitoring (other than "Heavy") as defined in the Aircraft Maintenance Manual 70-01-10, no component may exceed 7470 Standard Duty Cycles.</li> <li>ii) Aircraft operating in the "Heavy" Flight Profile as defined in the Aircraft Maintenance Manual 70-01-10, no component may exceed 6410 Flight Cycles.</li> </ol> </li> <li>b) Part number FK 27899: <ol style="list-style-type: none"> <li>i) Aircraft operating within Multiple Flight Profile Monitoring (other than "Heavy") as defined in the Aircraft Maintenance Manual 70-01-10, no component may exceed 7500 Standard Duty Cycles.</li> <li>ii) Aircraft operating in the "Heavy" Flight Profile as defined in the Aircraft Maintenance Manual 70-01-10, no component may exceed 7400 Flight Cycles.</li> </ol> </li> </ol> </li> <li>3) After 31 May 2009: <ul style="list-style-type: none"> <li>Part Number FK 25230 and FK 27899:</li> <li>Aircraft operating within Multiple Flight Profile Monitoring or the "Heavy" Flight Profile as defined in the Aircraft Maintenance</li> </ul> </li> </ol>

	Manual 70-01-10, no component may exceed 5000 Standard Duty Cycles or 5000 Flight Cycles respectively.
Ref. Publications:	Rolls-Royce RB211 Propulsion System Non Modification Service Bulletin Alert RB211-72-AE082 Revision 5 or later approved revisions.
Remarks:	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Methods of Compliance (AMOCs) for this AD.</li> <li>2. The original AD 2006-0239 was posted on 07 July 2006 as PAD 06-179 for consultation until 07 August 2006. No comments were received during the consultation period. Given this fact and the limited time available it was considered reasonable not to submit this AD for consultation.</li> <li>3. Enquiries regarding this Airworthiness Directive should be referred to the Airworthiness Directive Focal Point - Certification Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a></li> <li>4. For any questions concerning the technical content of the requirements in this AD, please contact Rolls-Royce plc. PO Box 31, Derby, DE24 8BJ, United Kingdom; Telephone +44 (0)1332-242424; Facsimile +44 (0)1332-249936.</li> </ol>

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