


EASA	AIRWORTHINESS DIRECTIVE	
	AD No : 2006 - 0182 Date: 28 June 2006	
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.		
Type Approval Holder's Name : ROLLS-ROYCE PLC		Type/Model designation(s) : RB211-535
TCDS Number : UK-CAA: 1044 and 1049		
Foreign AD : None		
Supersedure : None		
ATA 72	Engine Turbine Section – High Pressure Turbine - Inspection	
Manufacturer:	Rolls-Royce PLC	
Applicability:	RB211-535C, RB211-535E4, RB211-535E4-B, RB211-535E4-C	
Reason:	<p>HPT Discs recently inspected in accordance with the Engine Manual have exhibited cracks in the disc rim. The discs have failed to meet the inspection acceptance criteria and have been returned to Rolls-Royce for engineering investigation.</p> <p>This investigation has concluded that the cracks have resulted from scores within the cooling air holes in the disc rim that could have been introduced during new part manufacture or during overhaul of the disc. The engineering investigation has concluded that if this cracking was undetected then it could result in uncontained disc failure and a potential unsafe condition for the aircraft.</p> <p>Background Information: UK CAA Airworthiness Directive G-2004-0027 for Reaming Induced Machining Anomalies (RIMA) addresses the same HPT Disc Rim cooling air hole feature as this AD.</p> <p>The Eddy Current Inspection procedure as defined in Rolls-Royce TSD594-J Overhaul Process Manual Task 70-00-00-200-223 has previously been required to be undertaken in Non-Mod Service Bulletins: 72-C816, 72-C817, 72-AE651, 72-AE717, 72-AE718.</p>	

Effective Date:	10 July 2006
Compliance:	<p>Carry out an Eddy Current Inspection (ECI), as defined in paragraph 3, Accomplishment Instructions of Rolls-Royce NMSB 72-AE969 or later EASA approved revision, of RB211-535 series engine HP Turbine discs in accordance with the following schedule:</p> <ol style="list-style-type: none"> 1) If the HP Turbine disc has an accumulated life <u>less than or equal to</u> 17500 cycles since new on the effective date of this Directive, inspect the disc by whichever is the soonest of the following requirements: <ol style="list-style-type: none"> (a) Inspect the disc prior to reaching 18000 cycles since new. (b) Inspect the disc at next engine shop visit where the HP Turbine rotor is removed from the Combustor Outer Casing (COC) and the disc life is greater than 5000 cycles since new. (c) At current engine shop visit if the HP Turbine rotor has been removed from the COC and it has not yet been reinstalled into the COC on the effective date of this Directive and the disc life is greater than 5000 cycles since new. 2) If the HP Turbine disc has an accumulated life <u>greater than</u> 17500 cycles since new on the effective date of this Directive, inspect the disc by whichever is the soonest of the following requirements: <ol style="list-style-type: none"> (a) Inspect the disc within 500 cycles (b) Inspect the disc at next engine shop visit where the HP Turbine rotor is removed from the COC . (c) At current engine shop visit if the HP Turbine rotor has been removed from the COC and it has not yet been reinstalled into the COC on the effective date of this Directive. 3) Repeat the inspection of the of the HP Turbine disc at every subsequent engine shop visit where the HP Turbine blades are removed from the HP Turbine disc. 4) If an HP Turbine disc has previously been inspected in accordance with the Eddy Current Inspection requirements of Rolls-Royce TSD594-J Overhaul Process Manual Task 70-00-00-200-223 at an HP Turbine disc life of greater than 5000 cycles since new, then that inspection meets the initial inspection requirements of paragraphs (1) and (2) of this Directive. <p>Previous inspections may have been conducted as instructed in other Service Bulletins referenced in the Reason section of this Airworthiness Directive.</p>

Ref. Publications:	Rolls-Royce RB211 Propulsion System Non Modification Service Bulletin Mod No: 72-AE969
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Methods of Compliance (AMOC) for this AD. 2. This AD was posted as PAD 06-134 for consultation on 29 May 2006 with a comment period until 16 June 2006. The Comment Response Document can be found at: http://ad.easa.eu.int/ . 3. Enquiries regarding this Airworthiness Directive should be referred to Mr M. Capaccio, Airworthiness Directive Focal Point – Certification Directorate, EASA, E-mail: ADs@easa.europa.eu . 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. Phone: +44 (0) 1332 242424, Fax: +44 (0) 1332 249936.