


EASA	AIRWORTHINESS DIRECTIVE	
	AD No.: 2010-0075	
	Date: 20 April 2010	
<p>Note: This Airworthiness Directive (AD) 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>This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>		
Type Approval Holder's Name :	Type/Model designation(s) :	
Rolls-Royce Deutschland Ltd & Co KG	BR700-710 engines	
TCDS Number :	EASA.E.018	
Foreign AD :	Not applicable	
Supersedure :	Not applicable	
ATA 72	Engine – High Pressure (HP) Turbine Discs Stage 1 and 2 Assembly Life Limits – Modification	
Manufacturer(s):	Rolls-Royce Deutschland Ltd & Co KG	
Applicability:	<p>All BR700-710A1-10 model engines if equipped with HP Turbine Discs stage 1 or 2 listed in Table 1 or Table 2 of this AD, and All BR700-710A2-20 model engines if equipped with HP Turbine Discs stage 1 or 2 listed in Table 1 or Table 2 of this AD, and All BR700-710C4-11 model engines which have hardware configuration standard 710C4-11 engraved on the engine data plate (Service Bulletin SB-BR700-72-101466 standard not incorporated) and if equipped with HP Turbine Discs stage 1 or 2 listed in Table 1 or Table 2 of this AD.</p> <p>These engines are known to be installed on, but not limited to Gulfstream GV, GV-SP (G500, G550) and Bombardier BD-700-1A10, BD-700-1A11 series aeroplanes.</p>	
Reason:	<p>Due to manufacturing problems of BR700-710 HP Stage 1 and 2 Turbine Discs it was necessary to re-calculate the Declared Safe Cyclic Life (DSCCL) for all BR700-710 HP Turbine Discs. The analysis concluded that it is required to reduce the approved life limits for the HP Turbine Disc Part Numbers (P/N) that are listed in Table 1 and Table 2 of this AD.</p> <p>Exceeding the revised approved life limits could potentially result in non-</p>	

	<p>contained disc failure.</p> <p>This AD requires compliance with the new life limits for replacement of the affected HP Stage 1 and 2 Turbine Discs, as necessary (at a cyclic life that is lower than the one currently applicable in the Time Limits Manuals) and introduction of the new DSCL into the applicable aircraft maintenance programme. The revised DSCL are given in the Rolls-Royce Deutschland Alert Non-Modification Service Bulletin (NMSB) SB-BR700-72-A900497 initial issue.</p>
Effective Date:	04 May 2010
Required action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Within one month after the effective date of this AD or upon accumulating the new DSCL indicated in Table 1 or 2 of this AD, whichever occurs later, and thereafter, at intervals not to exceed the new DSCL, replace the HP1 Turbine Disc or the HP2 Turbine Disc, as applicable, with a serviceable HP1 Turbine Disc or the HP2 Turbine Disc, as applicable, in accordance with Rolls-Royce Deutschland. NMSB SB-BR700-72-A900497 initial issue.</p> <p>(2) Compliance with the requirements of paragraph (1) of this AD can be demonstrated by:</p> <p>(2.1) Revising as follows, unless accomplished previously, the approved Aircraft Maintenance Programme from which the Operator or the Owner ensures the continuing airworthiness of each operated aeroplane:</p> <p style="padding-left: 40px;">Incorporate the new DSCL and associated aircraft airworthiness limitations specified in the Rolls-Royce Deutschland. NMSB SB-BR700-72-A900497 initial issue.</p> <p style="padding-left: 40px;">and</p> <p>(2.2) Complying with the approved Aircraft Maintenance Programme as described in paragraph (2.1) of this AD.</p> <p>(3) After the effective date of this AD, do not install any HP1 Turbine Disc or HP2 Turbine Disc unless in compliance with paragraph (1) of this AD.</p>
Ref. Publications:	<p>Time Limits Manual (TLM) T-710-1BR (BR700-710A1-10).</p> <p>Time Limits Manual (TLM) T-710-2BR (BR700-710A2-20).</p> <p>Time Limits Manual (TLM) T-710-4BR (BR700-710C4-11).</p> <p>Rolls-Royce Deutschland Alert NMSB-BR700-72-A900497 initial issue.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: Rolls-Royce Deutschland Ltd & Co KG Eschenweg 11 - 15827 Dahlewitz – Germany

	Phone: +49 (0) 33 7086 1768 ; Fax: +49 (0) 33 7086 3356 E-mail: rtd.aog@rolls-royce.com .
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Table1:

Component	Part Number	Engine Variant	Declared Safe Cyclic Life (Flight Cycles)
HP1 Turbine Disc	BRR21215	BR700-710A1-10	6075
		BR700-710A2-20	5950
	BRR22005	BR700-710A1-10 BR700-710A2-20	6200
	BRR22006	BR700-710A1-10 BR700-710A2-20	6200
	BRR22007	BR700-710A1-10 BR700-710A2-20	6200
	BRR22358	BR700-710A1-10 BR700-710A2-20	6200
	BRR23864	BR700-710A1-10 BR700-710A2-20	6200
	BRR23884	BR700-710A1-10 BR700-710A2-20	6200
	BRR23885	BR700-710A1-10 BR700-710A2-20	6200
	BRR23952	BR700-710A1-10 BR700-710A2-20 BR700-710C4-11	6200
	BRR23953	BR700-710A1-10 BR700-710A2-20 BR700-710C4-11	6200
	BRR23954	BR700-710A1-10 BR700-710A2-20	6200

Table 2:

Component	Part Number	Engine Variant	Declared Safe Cyclic Life (Flight Cycles)
HP2 Turbine Disc	BRR18291	BR700-710A1-10	9300
	BRR21214	BR700-710A1-10 BR700-710A2-20	9600
	BRR22008	BR700-710A1-10 BR700-710A2-20 BR700-710C4-11	10500
	BRR22009	BR700-710A1-10 BR700-710A2-20 BR700-710C4-11	10500
	BRR22010	BR700-710A1-10 BR700-710A2-20	10500
	BRR22359	BR700-710A1-10 BR700-710A2-20	10500