EASA

AIRWORTHINESS DIRECTIVE



AD No.: 2009-0021 [Corrected 09 February 2009]

Date: 06 February 2009

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.

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].

Type Approval Holder's Name :

Type/Model designation(s) : RB211 Trent 700 and Trent 800 Engines

TCDS Number : UK CAA 1051, EASA.E.042

Foreign AD : Not applicable

Supersedure : None

ROLLS-ROYCE plc

ATA 72	Engine – IP and HP Compressor shafts – Inspection			
Manufacturer(s):	Rolls-Royce plc			
Applicability:	RB211 Trent 768-60, 772-60, 772B-60 and 772C-60 engines;			
	These engines are known to be installed on, but not limited to, Airbus A330 series aircraft.			
	And RB211 Trent 895-17, 892-17, 892B-17, 884-17, 884B-17, 877-17 and 875-17 engines;			
	These engines are known to be installed on, but not limited to, Boeing 777 series aircraft.			
Reason:	In completing a review of Engine Manual repair/acceptance limits for titanium compressor shafts, Rolls-Royce has found the specified limits to be incorrect such that the shot peened surface layer at life critical features (the axial dovetail slots) may have been inadvertently removed in-service. Removal of the shot peened layer results in increased vulnerability of the part to tensile stresses, which could reduce the life of the shaft to below the published life limits. The acceptable limits for material loss on these surfaces have now been corrected in the Engine Manual.			
	This AD identifies shafts for which such dressing operations have been known to have been carried out and requires that an inspection for compliance with the corrected Engine Manual limits be accomplished and that the shafts be dispositioned accordingly. This AD has been corrected to amend a typographical error within the Ref. Publications and to specify the Manual revision dates.			

Effective Date:	20 February 2009						
	The engine components as identified in Table 1 of this AD must be withdrawn from service prior exceeding the cyclic usage Compliance Period as specified in Table 1 of this AD, in order to carry out a one-time piece part full Focused Inspection, in accordance with current applicable RR Engine Manual acceptance limits (see Ref. Publications below).						
	Table 1 – List of affected shafts						
Required action(s) and Compliance	Engine Type	Affected Component	Part Number	Shaft Serial Number	Compliance Period (Life from 04/12/08* in flight cycles)		
	Trent 800	1-8 IP Compressor Shaft	FK24100	MW0115238	750		
	Trent 800	1-4 HP Compressor Shaft	FK32580	MW0115512	750		
	Trent 800	1-4 HP Compressor Shaft	FK32580	MW0004708	2000		
	Trent 800	1-4 HP Compressor Shaft	FK32580	MW00063868	2500		
	Trent 800	1-8 IP Compressor Shaft	FK24100	DN65507	2500		
	Trent 800	1-8 IP Compressor Shaft	FK24100	DN65158	2500		
	Trent 800	1-4 HP Compressor Shaft	FK32580	MW0125467	3500		
Time(s):	Trent 800	HP Compressor Shaft	FW11590	DN65189	3500		
	Trent 800	IP Compressor Shaft	FK24100	MW0091518	3500		
	Trent 800	IP Compressor Shaft	FK24100	MW0126365	3500		
	Trent 800	IP Compressor Shaft	FK24100	DN66422	4750		
	Trent 800	IP Compressor Shaft	FK24100	MW0203314	4750		
	Trent 700	I-o IP Compressor Shaft	FK22279	DN63228	3250		
	Trent 700	IP Compressor Shaft	FK26048	MW0026046	4500		
	* Note 1 - this date has been used to maintain consistency with the associated Rolls-Royce Alert Non Modification Service Bulletin RB211-72-AG086. Note 2 - Rolls-Royce Alert Non Modification Service Bulletin RB211-72-AG086 provides a reference to the particular engines which may be fitted with the components identified above.						
Ref. Publications:	Rolls-Royce Alert Non Modification Service Bulletin RB211-72-AG086 initial issue						
	Rolls-Royce Trent 800 Engine Manual E-TRENT-2RR tasks 72-32-31-200-801 (1-8 IP Compressor Shaft inspection) and 72-41-31-200-801 (1-4 HP Compressor Shaft inspection). Manual revision date June 2008						
	KOIIS-KOYCE Frent 700 Engine Manual E-TRENT-1RR tasks 72-32-31-200-801 (1-8 IP Compressor Shaft inspection) and 72-41-31-200-801 (1-4 HP Compressor Shaft inspection). Manual revision date June 2008						
	I he use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.						
Remarks :	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 <u>ADs@easa.europa.eu</u>
4.	For any question 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. Email: tech.help@rolls-royce.com or download the publication from https://www.aeromanager.com