EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2010-0087 **[corrected: 06 May 2010]** **Date: 05 May 2010** 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) :**
ROLLS-ROYCE plc	RB211 Trent 800 Engines

TCDS Number :	UK CAA 1051
Foreign AD :	Not applicable
Supersedure :	This AD supersedes EASA AD 2008-0099 dated 21 May 2008 and corrected on 12 June 2008

ATA 72	**Engine – High Pressure Compressor Stage 1- 4 Shaft – Life Limit Reduction**
Manufacturer(s):	Rolls-Royce plc
Applicability:	RB211 Trent 895-17, 892-17, 892B-17, 884-17, 884B-17, 877-17 and 875-17 engines if fitted with HP Compressor Stage 1- 4 shaft part number FK32580. These engines are known to be installed on, but not limited to Boeing 777 series aircraft.
Reason:	During manufacture of High Pressure (HP) Compressor stage 1 discs a small number of parts have been rejected due to a machining defect that was found during inspection. Analysis of the possibility of less severe examples having been undetected and passed into service has concluded that action is required to reduce the risk of failure. It was therefore necessary to reduce the life limit. The new applied life limits were required by AD 2008-0099. However, some life limits for the Heavy Flight Profile Parts were incorrect. This new AD partially retains the requirements of EASA AD 2008-0099, which is superseded, and, in addition, requires the implementation of more restrictive life limits for use in the Heavy Flight Profile Parts. This AD has been corrected as, inadvertently, a wrong effective date was

	indicated for the Heavy Flight Profile Parts.
Effective Date:	19 May 2010
Required action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: RB211 Trent 800 Critical Part lives may be monitored by one of two methods: “Multiple Flight Profile Monitoring”; or “Heavy Flight Profile” (for details refer to RR Engine Manual Airworthiness Limitations Section). This Compliance section is therefore divided into two sections to address these two possibilities. (1) Multiple Flight Profile Monitoring parts: (a) On 04 June 2008 (effective date of EASA AD 2008-0099), if the part life is equal to or over 5 580 Standard Duty Cycles (SDC) then the part must be withdrawn from service before exceeding 7 780 SDC. **Note 1:** Standard Duty Cycles (SDC) is the product of Flight Cycles and Beta Factor, as specified in the RR Engine Manual Airworthiness Limitations Section. (b) On 04 June 2008 (effective date of EASA AD 2008-0099), if the part life is between 3 380 SDC and 5 580 SDC then the part should be withdrawn from service before exceeding a further 2 200 SDC. (c) On 04 June 2008 (effective date of EASA AD 2008-0099), if the part life is equal to or below 3 380 SDC then the part must be withdrawn from service before exceeding 5 580 SDC. **Note 2**: Operators should be aware that reassessment of the revised life limit in accordance with this AD (including possible reassessment of the applicable subsection (a), (b), or (c) (above)) will be necessary if, at some time in the future, the operator changes the flight profile that was applicable before the Effective Date, such that parts which are the subject of this AD are affected. To recalculate the revised life limit, the life of the part, in Standard Duty Cycles, at the Effective Date must be recalculated from the part's entry into service (zero life), and must use the Beta factor(s) for the new flight profile(s). (2) Heavy Flight Profile Parts: (a) On 04 June 2008 (effective date of EASA AD 2008-0099), if the part life is equal to or over 5 280 Flight Cycles then the part must be withdrawn from service before exceeding 6850 Flight Cycles. (b) On 04 June 2008 (effective date of EASA AD 2008-0099), if the part life is between 3710 Flight Cycles and 5280 Flight Cycles then the part should be withdrawn from service before exceeding further 1570 Flight Cycles. (c) On 04 June 2008 (effective date of EASA AD 2008-0099), if the part life is equal to or below 3710 Flight Cycles then the part must be withdrawn from service before exceeding 5280 Flight Cycles.
Ref. Publications:	Rolls-Royce Alert Non Modification Service Bulletin RB211-72-AF825 Revision 3. The use of later approved revisions of this document 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 assessment have granted the issuance of a Final AD with Requests 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 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.