EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2009 - 0089 **[Corrected 17 April 2009]** **Date: 16 April 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) :**
ROLLS-ROYCE PLC	RB211-524 Series Engines

TCDS Number :	UK-CAA TCDS No. 1043, 1046 and 1048
Foreign AD :	Not applicable
Supersedure :	None

ATA 78	**Engine – Thrust Reverser Unit (TRU) – Replacement**
Manufacturer(s):	Rolls-Royce plc
Applicability:	RB211-524D4-19, RB211-524D4-B-19, RB211-524D4-39, RB211-524D4-B-39, RB211-524D4X-B-19, RB211-524H-36, RB211-524H2-19, RB211-524H-T-36, RB211-524H2-T-19, RB211-524G2-19, RB211-524G3-19, RB211-524G2-T-19 and RB211-524G3-T-19 engines, all serial numbers, if equipped with a Thrust Reverser having a part number as identified in Rolls-Royce RB211 Propulsion Systems Non-Modification Service Bulletin (NMSB) No. 78-AG084. These engines are known to be installed, but not limited to Boeing 747 and Boeing 767 series aircraft.
Reason:	An investigation into the loss of a TRU during landing has revealed that this incident was preceded by the detachment of the TRUs fixed structure front ring rivet lines on the rear flange. It was concluded that the loss of rivet lines was directly associated with a previous translating cowl gearbox stubshaft fracture and the subsequent repair of the fixed structure to Engine Manual repair No. FRS5887. This repair instructs the replacement of the damaged section of the structure but does not require the rivets adjacent to the repair to be replaced although latest analysis has shown that the rivets may have weakened as a result a translating cowl gearbox stubshaft failure. Loss of a TRU during landing may release a significant amount of debris, adversely affecting the safety of flight operations. Thus, the loss of a TRU

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	constitutes a potentially unsafe condition. This Airworthiness Directive instructs the replacement of potentially yielded rivets from TRUs in service in order to prevent a further TRU loss. This Airworthiness Directive has been re-issued to correct the reference to the Rolls-Royce NMSB and change it from 72-AG084 to 78-AG084.
Effective Date:	30 April 2009
Required Action(s) and Compliance Time(s):	Required as indicated unless accomplished previously. 1. If a TRU has previously had Engine Manual repair No. FRS5887 and either Engine Manual repair No. FRS4976 or Engine Manual repair No. FRS6669 embodied jointly, carry out the actions specified in Section 3. Accomplishment Instructions of Rolls-Royce NMSB No. 78-AG084 before 31st December 2009. 2. If a TRU has previously had Engine Manual repair No. FRS4976 or Engine Manual repair No. FRS6669 embodied and it is not known whether this was performed jointly with Engine Manual repair No. FRS5887, carry out the actions specified in Section 3. Accomplishment Instructions of Rolls-Royce NMSB No. 78-AG084 before 31st December 2009. 3. If a TRU has previously had only Engine Manual repair No. FRS5887 embodied, carry out the actions specified in Section 3. Accomplishment Instructions of Rolls-Royce NMSB No. 78-AG084 before 31st December 2012.
Ref. Publications:	Rolls-Royce RB211 Propulsion System NMSB No. 78-AG084, initial issue, dated 01 December 2008. 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 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 Directive / 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 Telephone: +44 (0) 1332 242424, Fax: +44 (0) 1332 249936. Email: tech.help@rolls-royce.com or download the publication from https://www.aeromanager.com