



**United Kingdom
Civil Aviation Authority**

**AIRWORTHINESS
DIRECTIVE**

AD No: G-2004-0009

Issue Date: 27 May 2004

This AD is issued by the UK CAA acting for and on behalf of the European Aviation Safety Agency as the Primary Aviation Authority (ICAO Annex 8 Authority of State of Design) for the affected product(s).

Approved by the European Aviation Safety Agency under approval number 2004-5258 on 18 May 2004.

In accordance with Article 9(7)(b) of the Air Navigation Order 2000 as amended the following action required by this Airworthiness Directive (AD) is mandatory for applicable aircraft registered in the United Kingdom.

No person may operate an aircraft to which an AD applies except in accordance with the requirements of that AD unless otherwise agreed with the Authority of the State of Registry.

Type Approval Holders Name:

ROLLS-ROYCE PLC

Type/Model Designation(s):

**RB211 TRENT 875-17, 877-17, 884-17,
884B-17, 892-17, 892B-17, 895-17**

Type Certificate Data Sheet No: 1051

Superseded/ Revised ADs: None

ATA 72 – ENGINE - IP TURBINE BEARING – OIL VENT TUBE INSPECTION

Manufacturer(s): Rolls-Royce plc

Applicability: Models RB211 Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, 895-17 engines installed on Boeing 747 aeroplanes.

Reason: This Airworthiness Directive has been raised following an incident involving uncontained multiple IP turbine blade release on a Trent 700 engine. The blade release was the result of an overspeed of the IP turbine rotor that was initiated by an internal fire in the HP/IP bearing chamber. Post incident analysis and investigation has established that blockage of the HP/IP turbine bearing vent pipe due to oil coking was a significant factor in the failure occurrence. The Trent 800 has a similar type design standard to that of the Trent 700.

To prevent a potentially unsafe condition developing on the Trent 800 engine fleet, this Airworthiness Directive (AD) instructs a one off inspection of the HP/IP turbine vent tube, with repeat inspections required if a certain carbon build-up is found. Cleaning of the vent tube is also instructed if carbon accumulation is found. This action mitigates the risk of further events within the fleet.

Effective Date: 10 June 2004

Compliance/Action:**In-Service Inspection**

- 1) Inspect and clean as necessary the HP/IP turbine oil vent tube in accordance with Section 3 Accomplishment Instructions of Rolls-Royce Alert Non Modification Service Bulletin RB211-72-AE362, when the 05 module life exceeds the threshold life of 15,000 hours since new, or 3,000 cycles since new.
 - a. For 05 modules that exceed the threshold life at the time of the effective date of this AD, carry out the action within 6 months of the effective date of the AD.
 - b. For 05 modules that are below the threshold life at the time of the effective date of this AD, carry out the action within 6 months of reaching the threshold life.
- 2) HP/IP turbine oil vent tubes inspected and cleaned in accordance with this AD, and for which it has been determined that an 8mm diameter flexible borescope would not pass through the internal vent tube, but a 6mm diameter borescope would pass along the full length of the internal vent tube into the bearing chamber; carry out a repeat inspection in accordance with Section 3 Accomplishment Instructions of Rolls-Royce Alert Non Modification Service Bulletin RB211-72-AE362, at intervals of 100 hours or 300 cycles (whichever occurs first) since the previous inspection.
- 3) HP/IP turbine oil vent tubes inspected and cleaned in accordance with this AD, and for which it has been determined that an 6mm diameter flexible borescope would not pass through the internal vent tube, remove the engine from service within 10 cycles of the inspection.

Reference Publications: Rolls-Royce Alert Non Modification Service Bulletin RB211-72-AE362 original or later issues, may be obtained from Publication Services (Rolls-Royce), PO Box 31, Derby, DE24 8BJ, United Kingdom. Phone: +44 (0) 1332 242424 Fax: +44 (0) 1332 249936.

Note: Later EASA Approved Service Bulletin issue numbers than the issue referenced within this Airworthiness Directive are also considered to be an acceptable means of compliance .

Remarks:

Enquiries regarding this Airworthiness Directive may be directed to Civil Aviation Authority, Safety Regulation Group, Propulsion Department, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR, United Kingdom. Phone: +44 (0)1293 573199 Fax: +44 (0)1293 573979 E-mail: pete.woollacott@srg.caa.co.uk.