



**United Kingdom  
Civil Aviation Authority**

**AIRWORTHINESS  
DIRECTIVE**

**AD No: G-2003-0014**

Issue Date: 18 November 2003

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

Approved by the European Aviation Safety Agency under approval number 824 on 11 November 2003.

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:

Type/Model Designation(s):

**ROLLS-ROYCE plc**

**RB211 Trent 768-60, 772-60, 772B-60**

**Type Certificate Data Sheet No:** 1050

**Superseded/ Revised ADs:** 005-09-2001

**ATA 72 – HP COMPRESSOR – TEST/MODIFICATION**

**Manufacturer(s):** Rolls-Royce plc

**Applicability:** Rolls-Royce RB211 Trent 768-60, 772-60, 772B-60 installed in Airbus A330 aircraft.

**Reason:** There have been a number of low power surges in service on Trent 700 engines. These surges occurred with the aircraft on the ground as take-off power was being set, or during taxi. The cause of the surges has been identified as excessive wear on the HPC casing front location feature. This causes increased HPC tip clearances resulting in loss of surge margin. Engines affected by this problem are also at risk of failure to respond due to surge on acceleration during descent, prior to flap selection.

Routine ground testing for adequate surge margin will assure safe in-flight operation and embodiment of the redesigned HPC casing front location feature will remove the problem.

This AD supersedes AD 005-09-2001 by introducing an extended re-inspection interval for engines incorporating a software modification and also introduces a terminating action modification.

**Effective Date:** 04 December 2003

**Compliance/Action:**

- 1) In-Service Test  
Carry out a surge test in accordance with Rolls-Royce Alert Service Bulletin RB211-71-AD509 revision 3 or later issue, Section 3 Accomplishment Instructions when the engine exceeds 2000 cycles since new or 1000 cycles since HP compressor overhaul, and subsequently at intervals of;  
(a) 130 cycles  
**or**  
(b) 160 cycles if Rolls-Royce Service Bulletin RB211-73-E224 original or later issue, or later software standard, is embodied.

Note: For the purposes of this AD, testing carried out in accordance with the superseded AD 005-09-2001 (Rolls-Royce Alert Service Bulletin RB211-71-D509 revision 2, revision 1 or original issue) is deemed to be valid.

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## 2) Terminating Action

Fit redesigned HP compressor stage 1 casing and intermediate case outer location ring in accordance with the Accomplishment Instructions specified in Rolls-Royce Service Bulletin RB211-72-D574 original or later issue, within 4500 cycles of the effective date of this Directive or before 30 June 2012, whichever is the sooner. Incorporation of this modification removes the requirement to carry out the part 1 In-Service Test and therefore constitutes the terminating action for this AD.

**Reference Publications:** Rolls-Royce Alert Service Bulletin RB211-71-AD509 revision 3, Rolls-Royce Service Bulletin RB211-73-E224 original issue, Rolls-Royce Service Bulletin RB211-72-D574 original issue, may be obtained from Publication Services, Rolls-Royce plc, PO Box 31, Derby, DE24 8BJ, United Kingdom.

**Remarks:** Enquiries regarding this AD should be directed to the 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: [tony.boud@srg.caa.co.uk](mailto:tony.boud@srg.caa.co.uk).