
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.1 (1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Rolls Royce Turbine Engines - RB211 Series**AD/RB211/33****High Speed Gearbox and Dedicated Generator - Modifications****10/2003
DM**

Applicability: Rolls Royce RB211- 524G2, 524G2-T, 524G3, 524G3-T, 524H, 524H2, 524H-T and 524H2-T series engines installed on Boeing 747 and 767 aeroplanes, as detailed in Rolls Royce Service Bulletin (SB) RB.211-72-E037 dated 26 March 2003.

Requirement:

1. Modify the High Speed Gearbox Rear Housing and fittings in accordance with Rolls Royce SB RB.211-72-E037 dated 26 March 2003 on:
 - a. All RB211-524H-36 and 524H-T-36 series engines; and
 - b. All RB211 engines **except** 524H-36 and 524H-T-36 series engines.
2. As an alternative means of compliance with Requirement 1(a):
 - a. Carry out the actions required by Rolls Royce SB RB.211-73-D435 dated 6 July 2001; and
 - b. Carry out the actions required by Rolls Royce SB RB.211-72-E037 dated 26 March 2003

Note 1: Requirement 2 offers an acceptable means of compliance (AMOC) by introducing a software modification in accordance with Rolls Royce SB RB.211-73-D435 to prevent uncommanded acceleration etc. in the event of erratic HP shaft signals. The incorporation of this software modification delays the need to comply with SB RB211-72-E037 and RB.211-73-C501 (a requirement contained in the body of SB RB211-72-E037 and Requirement 3 of this AD) until 31 December 2006.

3. Unless previously carried out in accordance with initial issue Rolls Royce SB RB.211-73-C501, dated 17 June 1998, or, Revision 1, dated 30 August 2000, modify Dedicated Generator Installation in accordance with Rolls Royce SB RB.211-73-C501, Revision 2, dated 19 June 2003.

Note 2: CAA (UK) AD 004-03-2003 refers.

Rolls Royce Turbine Engines - RB211 Series

AD/RB211/33 (continued)

Compliance: For Requirement 1: (a) Prior to 31 December 2004.
(b) Prior to 31 December 2008.
For Requirement 2: (a) Prior to 31 October 2003.
(b) Prior to 31 December 2006.

For Requirement 3: Prior to or concurrent with compliance with Requirement 1 or 2(b) as appropriate.

This Airworthiness Directive becomes effective on 6 August 2003.

Background: The dedicated generator rotor assembly has suffered a number of bearing failures due to the low fatigue life of the bearing material, resulting in possible oil loss and engine shut-down. Bearing failure can also lead to an erratic HP shaft speed signal being sent to the Full Authority Fuel Controller (FAFC) causing uncommanded engine acceleration with no throttle response, which could lead to uncontrolled thrust asymmetry during take-off or landing. The intention of this Directive is to introduce modifications to prevent the possibility of uncontrolled thrust asymmetry.



Jim Coyne
Delegate of the Civil Aviation Safety Authority

1 August 2003