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**AIRWORTHINESS DIRECTIVE**

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On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/TAY/5 Amdt 2 and issues the following AD under subregulation 39.001(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.

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**Rolls Royce Turbine Engines - Tay Series****AD/TAY/5                      HP Compressor OGV Segment to Outer Seal                      3/2005**  
**Amdt 3                                      Spacer Retaining Bolt Release**

Applicability: Rolls-Royce Aircraft Engine Models TAY 650-15, 650-15/10 and TAY 651-54 that do not incorporate Rolls Royce Service Bulletin (SB)

Tay-72-1498 Revision 1 dated 01 December 2000; or

Tay 72-1498 Revision 2 dated 31 December 2004.

Requirement: 1. Carry out inspection in accordance with Rolls Royce SB Tay-72-1483 Revision 2 dated 20 October 2000.

2. Modify the engine in accordance with Rolls Royce SB Tay-72-1498 Revision 2.

*Note 1: German LBA AD D-2004-365 approved under EASA approval No. 2004-12660 dated 31 December 2004 refers.*

*Note 2: AD D-2004-365 supersedes UK CAA Airworthiness Directives 003-10-2000 and 005-12-99.*

Compliance: 1. As detailed in the requirement document.

2. (a) At the latest by 31 October 2007 for Engine Models Tay 650-15 and Tay 650-15/10.

(b) At the latest by 30 September 2012 for Engine Model Tay 651-54.

*Note 3: Compliance with Requirement 2 constitutes terminating action for Requirement 1 of this AD.*

This Amendment becomes effective on 17 March 2005.

Background: Several incidents of HPC OGV segment to outer seal spacer retaining bolt release have been reported on TAY 650-15 series engines. In extreme cases this has led to cracking of the stage 11-12 spacer. The problem is attributed to the OGV retaining bolts cracking in Low Cycle Fatigue (LCF) at the point where the bolts enter the diffuser case. This is as a result of bending loads imparted by a transient thermal mismatch between the inner seal carrier and the diffuser case flange near Maximum Take Off (MTO).

## Rolls Royce Turbine Engines - Tay Series

AD/TAY/5 Amdt 3 (continued)

The actions specified by this Airworthiness Directive are intended to prevent HPC OGV segment to outer seal spacer retaining bolt release, which can result in an uncontained engine failure and damage to the airplane.

The current amendment revises the compliance dates and makes reference to the latest revision of the applicable Service Bulletins.

Amendment 2 of this AD became effective on 25 December 2003.

Amendment 1 of this AD became effective on 13 June 2002.

The original issue of this AD became effective on 15 June 2000.



James Coyne  
Delegate of the Civil Aviation Safety Authority

4 February 2005