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**AIRWORTHINESS DIRECTIVE**

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For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(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 - Dart Series****AD/DART/32****Fuel Burner Flow Calibration Checks****4/2008**

- Applicability:
- Dart 528-7E, 528D-7E, 529, 529-7E, 529-7H, 529-8E, 529-8H, 529-8X, 529-8Y, 529-8Z, 529D-7E, 529D-7H, 529D-8E, 529D-8H, 529D-8X, 529D-8Y and 529D-8Z engines, all serial numbers;
  - Dart 531, 532-2L, 532-2S, 532-7, 532-7L, 532-7N, 532-7P, 532-7R, 533-2, 534-2, 535-2, 535-7, 535-7R, 536-2, 536-2T, 536-7, 536-7P and 536-7R engines, all serial numbers;
  - Dart 542-4, 542-4K, 542-10, 542-10J, 542-10K, 543-10 and 543-10K engines, all serial numbers;
  - Dart 550-2 engines, all serial numbers; and
  - Dart 552-2, 552-7 and 552-7R engines, all serial numbers.

*Note 1: These engines are known to be installed on, but not limited to, Fokker F27 series aircraft, Maryland Aircraft Industries (formerly Fairchild) F-27 and FH-227 series aircraft, and BAE Systems (Operations) Ltd (formerly British Aerospace; Hawker Siddeley) HS.748 series aircraft.*

*Note 2: Engines on which Rolls-Royce modification 1946 has been incorporated via Service Bulletin (SB) Da72-533 are not affected by the requirements of this AD.*

- Requirement: Accomplish the checks and follow-up actions, as necessary, and in accordance with the instructions contained in Rolls-Royce SB Da73-A87 Revision 3 dated 19 November 2007.

*Note 3: EASA AD 2008-0004 dated 11 January 2008 refers.*

- Compliance: After the effective date this AD at the thresholds and within the time intervals and limits as indicated in Rolls-Royce SB Da73-A87 Revision 3.

This Airworthiness Directive becomes effective on 10 April 2008.

## Rolls Royce Turbine Engines - Dart Series

AD/DART/32 (continued)

**Background:** The purpose of this Airworthiness Directive is to require calibration burner flow checks on all Dart fuel burners, where the engine is fitted with certain high pressure (HP) turbine discs, due to high burner fuel flow variations. High burner fuel flow variations could lead to HP turbine disc diaphragm stresses. Burner flow variation is still associated with vibratory excitation of certain HP turbine blade assemblies. This can accelerate wear between the blade platforms and shrouds and potentially this can result in high stresses in the disc rim. The actions specified by this airworthiness directive are intended to prevent engine damages and loss of the engine in flight.



David Punshon

Delegate of the Civil Aviation Safety Authority

11 February 2008