



**Airworthiness
Directive
2002-365**

Luftfahrt-Bundesamt
Airworthiness Directive Section
Hermann-Blenk-Str. 26
38108 Braunschweig
GERMANY

Rolls-Royce Deutschland

Effective Date: 12 December 2002

Affected:

Kind of aeronautical product: Engine
Manufacturer: Rolls-Royce Deutschland, Dahlewitz, Germany
Type: DART 528, DART 529, DART 530, DART 531, DART 540, DART 552 and DART 550
Models affected: DART 528, 528-7E, 528D-7E, 529, 529-7E, 529-7H, 529-8E, 529-8H, 529-8X, 529-8Y, 529-8Z, 529-D, 529D-7E, 529D-7H, 529D-8E, 529D-8H, 529D-8X, 529D-8Y and 529D-8Z.
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.
DART 542-4, 542-4K, 542-10, 542-10J, 542-10K, 543-10, and 543-10K.
DART 550-2.
DART 552-7, 552-7R and 552-2.
Serial numbers affected: All
German Type Certificate No.: 7002, 7023, 7038, 7039, 7040, 7041

Subject:

Engine fuel and control (ATA-Code 73-00-00) - fuel burner fuel calibration checks and life limitation of combustors.

Reason:

The purpose of this Airworthiness Directive is to instruct calibration burner flow checks of all Dart fuel burners due to high burner fuel flow variations. High burner fuel flow variations could lead to high pressure (HP) turbine disc diaphragm stresses. Burner flow variation is still associated with vibratory excitation of the HP turbine blade assembly. 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.

Action:

The following actions are required by this Airworthiness Directive:

1. Fuel flow examination of the fuel burners (fuel flow calibration checks).
2. Repetition of this examination at fixed intervals.
3. Repair of the fuel burners, if inadmissible deviations were determined with the examinations.
4. Definition of a TBO time (time between overhaul) for combustion chambers on 3000 operation hours. On engines with combustion chambers, for which a TBO time is fixed of less than 3000 operation hours, the overhaul and/or the exchange of the combustion chamber must be already accomplished at an earlier time.

All necessary actions must be performed on the basis of the mentioned Service Bulletin of the manufacturer.

Compliance:

The necessary actions must be carried out in accordance with the mentioned manufacturer service bulletin.

Technical publication of the manufacturer:

Rolls-Royce Deutschland Service Bulletin Da73-A87 Rev. 2 dated 06 November 2002. This Service Bulletin becomes herewith part of this AD and can be ordered from Rolls-Royce Deutschland under the following address:

Rolls-Royce Deutschland Ltd & Co KG
Eschenweg 11
D-15827 Dahlewitz
Germany
Phone: ++49-33-708-3-2026 or ++49-171-613-4213
Fax: ++49-33-708-63615

Enquiries regarding this Airworthiness Directive should be referred to Mr. Martin Borsum, Airworthiness Directive Section at the above address, fax-no. 0049 531/2355-720. Please note, that in case of any difficulty, reference should be made to the German issue!