



Airworthiness Directive

D-2005-252R1

Luftfahrt-Bundesamt

Airworthiness Directive Section
Hermann-Blenk-Str. 26
38108 Braunschweig
G E R M A N Y

This Airworthiness Directive supersedes the Airworthiness Directives 2005-252 of 31 July 2005

Rolls-Royce Deutschland

Effective Date: 31 August 2005

Affected:

Kind of aeronautical product: Aircraft Engine
Manufacturer: Rolls-Royce plc, Derby, United Kingdom
Type: TAY 650
Models affected: TAY 650-15 and TAY 651-54
Serial Numbers affected: All
German Type Certificate No.: 6328

Subject:

Reduction of the declared safe cyclic lives of the high pressure turbine (HPT) stage 1 disc.

Reason:

This AD requires replacing certain high pressure turbine (HPT) stage 1 discs and before reaching a new reduced life cycle limit. This AD is prompted by an updated low-cycle-fatigue (LCF) analysis of the HPT stage 1 disc performed by the manufacturer. We are issuing this AD to prevent low cycle cracking and failure of the HPT stage 1 disc due to exceeding the life limit, which could result in an uncontained engine failure and damage to the airplane.

Action:

The following actions are required by this Airworthiness Directive:

1. For Tay 650-15 engines that had previously been exposed to flight profiles that are different to the currently operated profile, the cyclic life consumption of the high pressure turbine stage 1 disc must be re-established.
2. For Tay 650-15 and Tay 651-54 engines no HPT stage 1 disc is permitted to have a cyclic life consumption in excess of the cyclic life limits as defined in Rolls-Royce Deutschland Alert Service Bulletin TAY-72-A1676 Revision 1 dated August 16, 2005 after the corresponding compliance date.

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

Compliance:

The necessary actions must be carried out:

Action 1: 30 calendar days after the effective date of this Airworthiness Directive.

Action 2: In accordance with the Rolls-Royce Deutschland Alert Service Bulletin TAY-72-A1676 Revision 1 dated August 16, 2005.

Technical Information of the manufacturer:

Rolls-Royce Deutschland Alert Service Bulletin TAY-72-A1676 Revision 1 of 16 August 2005. This Service Bulletin becomes hereby part of this AD and can be obtained from:

Rolls-Royce Deutschland Ltd & Co KG
Service Engineering
Eschenweg 11
15827 Dahlewitz
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EASA-Approval

Approved by the European Aviation Safety Agency (EASA) under approval number 2005-6179 on 16 August 2005.