



# Notification of a Proposal to issue an Airworthiness Directive

**PAD No.: 21-022**

**Issued: 12 February 2021**

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

**Design Approval Holder's Name:**

ROLLS-ROYCE DEUTSCHLAND Ltd & Co KG

**Type/Model designation(s):**

Tay engines

**Effective Date:** [TBD - standard: 14 days after AD issue date]

**TCDS Number(s):** EASA.E.063

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2015-0050R1 dated 19 June 2015.

## ATA 72 – Engine – Low Pressure Turbine Stage 2/3 Discs – Inspection / Replacement

**Manufacturer(s):**

Rolls-Royce plc

**Applicability:**

TAY 620-15 and Tay 650-15 engines, all engine serial numbers (ESN).

These engines are known to be installed on, but not limited to, Fokker F28 Mark 0070 and Mark 0100 series aeroplanes.

**Definitions:**

For the purpose of this AD, the following definitions apply:

**The NMSB:** Rolls-Royce Alert Non-Modification Service Bulletin (NMSB) TAY-72-A1524 Revision 7.

**Groups:** Group 1 engines are those installed or previously installed on an aeroplane operated under an air operator certificate (AOC) issued by the Islamic Republic of Iran. This includes engines as identified by ESN, and low pressure turbine (LPT) modules as specified, in the NMSB.

Group 2 are all other engines (and modules), including those that are no longer installed on an aeroplane operated under an AOC issued by the Islamic Republic of Iran.



**Reason:**

Strip-down of some Tay 650-15 engines revealed excessively corroded stage 2 and stage 3 LPT discs. Subsequent evaluation concluded that the corrosion was caused by the environment in which these engines had been operated.

This condition, if not detected and corrected, could lead to an uncontained LPT disc failure, potentially resulting in damage to, and/or reduced control of the aeroplane.

To address this unsafe condition, Rolls-Royce issued Alert NMSB TAY-72-A1524 (original issue) to provide inspection instructions for stage 2 and stage 3 LPT discs. Consequently, EASA issued AD 2008-0122 to require repetitive inspections of stage 2 and stage 3 LPT discs on certain engines. That AD was superseded by EASA AD 2010-0060 (later revised), which was subsequently superseded by EASA AD 2013-0007, in both cases to expand the population of affected engines.

After that AD was issued, it was identified that stage 2 and stage 3 LPT discs corrosion may also affect engines which were operated in such an environment in the past. Consequently, EASA issued AD 2015-0050 (later revised), retaining the requirements of EASA AD 2013-0007, which was superseded, and expanded the AD applicability to include engines which were previously operated under these specific environmental conditions.

Since EASA AD 2015-0050R1 was issued, Rolls-Royce issued the NMSB, amending the effectivity to include Tay 620-15 series engines and removing Tay 651-54 engines, as Model Tay 651-54 engines are no longer approved.

For the reasons described above, this AD retains the requirements of EASA AD 2015-0050R1, which is superseded, and expands the Applicability to include Tay 620-15 engines and removing Tay 651-54 engines. This AD also refers for the Applicability to the NMSB, no longer listing affected engines in an Appendix.

**Required Action(s) and Compliance Time(s):**

Required as indicated, unless accomplished previously:

**Inspection(s):**

- (1) For Group 1 engines: From the effective date of this AD, before exceeding 11 700 flight cycles (FC) accumulated since first installation of the engine on an aeroplane operated under an AOC issued by the Islamic Republic of Iran, and, thereafter, at intervals not to exceed 11 700 FC, inspect the stage 2 and stage 3 LPT discs for corrosion in accordance with the instructions of the NMSB.

**Corrective Action(s):**

- (2) If, during any inspection as required by paragraph (1) of this AD, corrosion is detected on a stage 2 or stage 3 LPT disc, before release to service of the engine, replace the affected stage 2 or stage 3 LPT disc, as applicable, with a serviceable part. This can be accomplished in accordance with approved Rolls-Royce maintenance instructions.



**Credit:**

- (3) Inspections and corrective actions on an engine, accomplished before the effective date of this AD in accordance with the instructions of Rolls-Royce Alert NMSB TAY-72-A1524 at Revision 6 (or earlier revisions) are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD for that engine.

**Terminating Action:**

- (4) For Group 1 engines: None.
- (5) For Group 2 engines: Following removal from an aeroplane operated under an AOC issued by the Islamic Republic of Iran, replacement on the engine of the affected stage 2 and stage 3 LPT discs as required by paragraph (2) of this AD constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that engine.

**Ref. Publications:**

Rolls-Royce Alert NMSB TAY-72-A1524 Revision 4 dated 16 November 2012, or Revision 5 dated 13 February 2015, or Revision 6 dated 16 June 2015, or Revision 7 dated 18 November 2020.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

**Remarks:**

1. This Proposed AD will be closed for consultation on 12 March 2021.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
4. For any question concerning the technical content of the requirements in this PAD, please contact: Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany, Telephone: + 49 33708 6 3500, E-mail: [DWOSD@rolls-royce.com](mailto:DWOSD@rolls-royce.com).

