

Airworthiness Directive

AD No.: 2022-0040

Issued: 08 March 2022

Note: This Airworthiness Directive (AD) 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.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

AIRBUS

Type/Model designation(s):

A350 aeroplanes

Effective Date: 15 March 2022

TCDS Number(s): EASA.A.151

Foreign AD: Not applicable

Supersedure: None

ATA 73 – Engine Fuel and Control – Hydro-Mechanical Unit – Replacement / Life Limitation

Manufacturer(s):

Airbus

Applicability:

Airbus A350-1041 aeroplanes, all manufacturer serial numbers equipped with Rolls-Royce TRENT XWB-97 engines.

Definitions:

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

The AOT: Airbus Alert Operators Transmission (AOT) A73P002-21.

The NMSB: Rolls-Royce Alert Non-Modification Service Bulletin (NMSB) TRENT XWB-73-AK747. The NMSB has an 'A' (Alert) in the number, but a later revision may not have that 'A'. This kind of change does not effectively alter the publication references.

Affected part: Hydro-mechanical units (HMU) having Part Number G5020HMU02.

Serviceable part: An HMU which is not an affected part; or an affected part that has accumulated less than 2 000 engine hours since new (first installation on an aeroplane), or since last Combining Spill Valve (CSV) replacement, or since last overhaul (under specific conditions as listed in the NMSB).

Reason:

Rejected take-offs of A350-1000 aeroplanes were reported after the aeroplanes had experienced transient engine N1 shaft speed exceedance. Investigations revealed that the CSV of the engine HMU was slow to close due to piston wear. A worn CSV piston does not move fully and freely over its operating range, and, when it moves to fully closed position, an excess of fuel is sent to the fuel nozzles which eventually results in an N1 transient shaft overspeed.

A stuck CSV piston could significantly reduce engine thrust and, combined with a loss of the second engine, could possibly result in reduced control of the aeroplane.

To address this potential unsafe condition, Airbus issued the AOT to provide instructions for replacement of the affected parts at reduced life limits.

For the reason described above, this AD requires replacement of affected parts before exceeding the reduced life limit.

This AD is considered to be an interim action and further AD action may follow.

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

Required as indicated, unless accomplished previously:

Replacement / Life Limit:

- (1) Before an affected part exceeds the life limit as defined in Table 1 of this AD, as applicable depending on calendar timeframe, replace that affected part with a serviceable part, as defined in this AD, in accordance with the instructions of the AOT.

Table 1 – HMU Replacement / Life Limit

Calendar Timeframe	Life Limit (see Note 1)
31 March 2022 to 29 June 2023	11 000 engine hours
30 June 2023 and after	7 500 engine hours

Note 1: The engine hours referred to in Table 1 of this AD are those accumulated by the affected part since new (first installation on an aeroplane), or since last CSV replacement, or since last overhaul (under specific conditions as listed in the NMSB).

Part(s) Installation:

- (2) From the effective date of this AD, it is allowed to install an affected part on any engine of the aeroplane, provided the part is a serviceable part, and that, following installation, the affected part is replaced as required by paragraph (1) of this AD (see Note 2 of this AD).



Note 2: Removal of an affected part from any engine of an aeroplane and subsequent reinstallation of that affected part on the same aeroplane, accomplished during a single maintenance visit, is not considered as 'installation' as specified in paragraph (2) of this AD.

Ref. Publications:

Airbus AOT A73P002-21 original issue dated 23 February 2022.

Rolls-Royce Alert NMSB TRENT XWB 73-AK747 original issue dated 22 February 2022.

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

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, 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 AD 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.
5. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS A350 XWB, E-mail: continued-airworthiness.a350@airbus.com.

