Airworthiness Directive

AD No.: 2024-0181R1

Issued: 24 September 2024

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:
PILATUS AIRCRAFT Ltd

Type/Model designation(s):
PC-24 aeroplanes

Effective Date: Original Issue and Revision 1: 03 October 2024

TCDS Number(s): EASA.A.594

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2024-0181 dated 19 September 2024, which superseded EASA AD 2023-0219-E dated 19 December 2023.

ATA 27 – Flight Controls – Rudder Trim Tab Installation / Threaded Bolts – Replacement

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Manufacturer(s):
Pilatus Aircraft Ltd (Pilatus)

Applicability:
Pilatus PC-24 aeroplanes, manufacturer serial numbers (MSN) 101 and up.

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

The SB: Pilatus PC-24 Service Bulletin (SB) 27-010.

Affected part: A short rudder-trim control rod assembly having Part Number (P/N) 527.20.24.464.

Serviceable part: A short rudder-trim control rod assembly having P/N 527.20.24.069.

Groups: Group 1 aeroplanes are those that have an affected part installed.
Group 2 aeroplanes are those that do not have an affected part installed. An aeroplane having MSN 531 and up is a Group 2 aeroplane, provided that no affected part has been installed in service on that aeroplane.

Reason:

It has been determined that the titanium threaded bolts at the forward end of the short rudder trim tab actuating rods may be subject to unexpectedly high oscillating loads due to aerodynamic forces acting on the rudder trim tab.

This condition, if not corrected, can lead to failure of that bolt with consequent damage to the rudder and rudder trim tab, possibly resulting in loss of rudder control, and reduced or loss of control of the aeroplane.

To address this potential unsafe condition, Pilatus issued SB 27-009 (original issue) and EASA published Emergency AD 2023-0219-E to provide repetitive replacement instructions and a one-time inspection of the threaded titanium bolts, having P/N 527.20.24.489, installed on the rudder trim tab short control rods. That AD was considered an interim action.

After that AD was issued, variations in microstructure potentially affecting fatigue characteristics were discovered in some titanium bolt batches. Therefore, it has been determined that the affected parts must be replaced with serviceable parts having threaded steel bolts, which assure an improved fatigue tolerance. Consequently, Pilatus issued the SB providing the replacement instructions, and EASA published AD 2024-0181 requiring the replacement of the affected parts with serviceable parts and prohibiting (re)installation of affected parts.

Since that AD was issued, it was determined that paragraph (1) of the AD has to be amended, to clarify the required action and to modify its compliance time.

For the reason described above, this AD is revised accordingly.

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

Required as indicated by this AD, unless the action(s) required by this AD have been already accomplished:

Replacement:

(1) For Group 1 aeroplanes: Within 300 flight hours (FH) after first installation on an aeroplane of an affected part, or within 300 FH since last bolt(s) replacement as required by EASA AD 2023-0219-E, whichever occurs later, replace each affected part with a serviceable part in accordance with the instructions of the SB (see Notes 1 and 1A of this AD).

Note 1: If the FH accumulated by an affected part are unknown, the FH accumulated by the aeroplane since first flight may be used instead.

Note 1A: If the threaded titanium bolts have been installed on the aeroplane during different maintenance visits, refer to the bolt which accumulated the higher number of FH.

Part(s) Installation:

(2) For Group 1 and Group 2 aeroplanes: From the effective date of this AD, do not install an affected part on any aeroplane (see Note 2 and Note 3 of this AD).

Note 2: The SB provides instructions to modify and reidentify an affected part into a serviceable part.

Note 3: Removal of an affected part from an aeroplane and subsequent reinstallation of that affected part on the same aeroplane, accomplished during a single maintenance visit, is not considered as 'install' as specified in paragraph (2) of this AD.

Ref. Publications:

Pilatus PC-24 SB 27-010 original issue dated 04 July 2024.

The use of later approved revisions of the above-mentioned document 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. The original issue of this AD was posted on 15 August 2024 as PAD 24-102 for consultation until 12 September 2024. No comments were received during the consultation period.

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: Pilatus Aircraft Ltd, Technical Support, CH-6371 Stans, Switzerland,
Telephone: +41 848 24 7 365, E-mail: techsupport.ch@pilatus-aircraft.com
Website: www.pilatus-aircraft.com.