

Airworthiness Directive

AD No.: 2022-0158

Issued: 04 August 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, 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-12/47E aeroplanes

Effective Date: 18 August 2022

TCDS Number(s): EASA.A.089

Foreign AD: Not applicable

Supersedure: None

ATA 32 – Landing Gear – Nose and Main Landing Gear Actuators – Replacement

Manufacturer(s):

Pilatus Aircraft Ltd (Pilatus)

Applicability:

PC-12/47E aeroplanes, manufacturer serial number (MSN) 1300, 1451 and subsequent.

Definitions:

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

The SB: Pilatus PC-12 Service Bulletin (SB) 32-030.

Affected part: Main landing gear (MLG) electro-mechanical actuators, having Part Number (P/N) 959.56.01.823 or P/N 959.56.01.845, and nose landing gear (NLG) electro-mechanical actuators, having P/N 959.56.01.824 or P/N 959.56.01.844.

Serviceable part: An affected part that has been reworked in accordance with the instructions of the SB, or MLG electro-mechanical actuators, having P/N 959.56.01.853 and NLG electro-mechanical actuators, having P/N 959.56.01.852.

Corrosion environment: Mild or moderate and severe corrosion environment, as detailed in Pilatus PC-12 Aircraft Maintenance Manual 12-B-20-40-00-00A-901A-A (Corrosion Control).



Groups: Group 1 aeroplanes are those having MSN 1300, 1451 to 1663 inclusive that have an affected part installed. Group 2 aeroplanes are those that are not Group 1.

Reason:

Occurrences have been reported of finding corrosion on the MLG and the NLG actuator attachment lugs, underneath the anti-rotation pads, of PC-12/47E aeroplanes. Subsequent investigation revealed that extension and retraction of the landing gear results in fretting between the anti-rotation pads and the actuator attachment lugs. Over time, this can damage the surface protection and lead to corrosion of the attachment lug areas underneath the anti-rotation pads.

This condition, if not detected and corrected, may lead to crack propagation at corrosion spots, followed by fracture and consequent failure of the attachment lug, possibly resulting in unintended extension of the landing gear combined with the loss of the regular extension/retraction functionality, with consequent damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, Pilatus issued the SB to provide inspection and modification instructions.

For the reasons described above, this AD requires replacement of each affected part with a serviceable part, as defined in this AD.

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

Required as indicated, unless accomplished previously:

Replacement:

- (1) For Group 1 aeroplanes: Within the compliance times as defined in Table 1 of this AD, as applicable, replace each affected part with a serviceable part in accordance with the instructions of the SB.

Table 1 – Affected Part Inspection

Corrosion Environment	Compliance Time
Moderate and severe	Within 3 months after the effective date of this AD
Mild	Within 6 months, or within 300 flight hours, or during the next scheduled 12 month inspection, whichever occurs first after the effective date of this AD

Part(s) Installation:

- (2) For Group 1 and Group 2 aeroplanes: From the effective date of this AD, it is allowed to install on any aeroplane an affected part, provided it is serviceable part, as defined in this AD.

Ref. Publications:

Pilatus PC-12 SB 32-030 original issue dated 27 June 2022.

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. 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: Pilatus Aircraft Ltd Technical Support, CH-6371 Stans, Switzerland, Telephone: +41 848 247 365, E-mail: techsupport.ch@pilatus-aircraft.com, Website: www.pilatus-aircraft.com.

