



Airworthiness Directive

AD No.: 2022-0245

Issued: 12 December 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: 26 December 2022

TCDS Number(s): EASA.A.089

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2022-0158 dated 04 August 2022.

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 Revision 2.

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; except those that have been reworked in accordance with the instructions of the SB.

Serviceable part: MLG and NLG electro-mechanical actuators that are not affected parts, which includes 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, moderate and severe corrosion environment, as defined in Pilatus PC-12 Aircraft Maintenance Manual 12-B-20-40-00-00A-901A-A (Corrosion Control).

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 2203, 2205, 2207 or subsequent is Group 2, provided no affected part has been installed on that aeroplane in service.

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 SB 32-030 (original issue) to provide inspection and modification instructions, addressing the aeroplanes delivered at the same time or earlier than those, for which the occurrences were reported. Consequently, EASA published AD 2022-0158 requiring the replacement of each affected part with a serviceable part.

Since that AD was issued, further investigation determined that the affected parts are installed on additional aeroplanes.

For the reason described above, this AD retains the requirements of EASA AD 2022-0158, which is superseded, and addresses additional aeroplanes, with unchanged compliance time for the group of aeroplanes addressed by AD 2022-0158, and extended compliance time for the additional affected aeroplanes.

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 Replacement

Aeroplane MSN	Corrosion Environment	Compliance Time
1300, 1451 to 1663 inclusive	Moderate and severe	Within 3 months after 18 August 2022 [the effective date of EASA AD 2022-0158]
	Mild	Within 6 months, or within 300 flight hours (FH), or during the next scheduled 12 month inspection, whichever occurs first after 18 August 2022 [the effective date of EASA AD 2022-0158]
1664 to 1719 inclusive, 1721 to 1942 inclusive	Mild, moderate and severe	Within 300 FH, or during the next scheduled 12 month inspection, whichever occurs first after the effective date of this AD
1720, 2001 to 2202 inclusive, 2204 and 2206	Mild, moderate and severe	Within 600 FH, 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, do not install on any aeroplane an affected part (see Note 1 of this AD).

Note 1: 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 'installation' as specified in paragraph (2) of this AD.

Ref. Publications:

Pilatus PC-12 SB 32-030 original issue dated 27 June 2022, Revision 1 dated 12 September 2022 and Revision 2 dated 07 October 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. This AD was posted on 09 November 2022 as PAD 22-149 for consultation until 07 December 2022. 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: +41 848 247 365, E-mail: techsupport.ch@pilatus-aircraft.com, Website: www.pilatus-aircraft.com.

