



Lufttüchtigkeitsanweisung (LTA) Consigne de Navigabilité (CN) Direttive sulla Navigabilità (DN) Airworthiness Directive (AD)		FOCA AD HB-2014-001R1
Inkraftsetzung Mise en vigueur Entrata in vigore Effective Date	05 November 2014	Pilatus – PC-7 FOCA TC/TCDS No: F 56-20

Issue Date: 22 October 2014

ATA Chapter: ATA 51 – Standard Practices and Structures

Subject: **Standard Practices and Structures – Aircraft Structure – Identification of Material Specification, Inspection**

Supersedure / Revised AD(s): HB-2014-001

Type Certificate Holder's Name: Pilatus Aircraft Ltd.

Manufacturer(s): Pilatus Aircraft Ltd.

Applicability: Model PC-7 aircraft, Manufacturer Serial Numbers (MSN) 101 through MSN 618.

Reason: This Airworthiness Directive (AD) is prompted due to the possibility of cracks in some critical parts. It is possible that stress corrosion cracks may occur on various parts of the aircraft structure initially made of aluminium alloy AA2024-T351 which is susceptible to Stress Corrosion Cracking (SCC). Later in production, the material specification was changed to aluminium alloy AA2124-T851 to decrease the risk of stress corrosion. The Part Number (P/N) of the affected structural parts are not always changed when the new material was introduced.

Such a condition, if left uncorrected, could lead to failure of critical parts on the aircraft structure and will prejudice the structural integrity of the aircraft.

To address this potential unsafe condition Pilatus Aircraft Ltd. issued PILATUS PC-7 Service Bulletin (SB) No. 51-001 and FOCA Switzerland issued AD HB-2014-001 to require a one-time check to identify the material specification and inspect the affected areas of the airframe that are made of aluminium alloy AA2024-T351. Any structural parts of the aircraft structure found to be cracked must be reported to Pilatus prior to further flight.

In the meantime Pilatus Aircraft Ltd. issued PILATUS PC-7 SB No. 51-001 Revision 1 to correct paragraphs (§) 1.C.(3) and § 1.D. to update Part Number (P/N) references of the AA2024-T351 material and to add a clarification that an inspection can be carried out if an elevator center control-rod P/N 116.35.07.345 is installed. It also clarifies which center tank support bracket is covered by SB 51-001.

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For the reasons described above, this AD retains the requirements of FOCA Switzerland AD HB-2014-001, which is revised and clarifies that an inspection of the elevator center control-rod can be carried out if P/N 116.35.07.345 is installed and corrects some paragraphs and clarifies the information which center tank support bracket is affected.

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

Required as indicated below, unless already accomplished, within the next 365 days after the effective date of this AD:

- (1) Perform a one time conductivity test of items 6 thru 9 and 11 thru 13 (both on aircraft and those held in stores) as listed in § 1.A.(2) of PILATUS PC-7 SB No. 51-001 Revision 1, to check the material of the parts.
- (2) If the parts are made of aluminium alloy AA2124-T851, make an entry in the aircraft logbook as required by § 3.D.(3) of PILATUS PC-7 SB No. 51-001 Revision 1.
- (3) Replace elevator center control-rods with P/N 116.35.07.271 (Item 3 as listed in § 1.A.(2) of PILATUS PC-7 SB No. 51-001 Revision 1), because the inspection for cracks on this type of control-rods is difficult. If elevator center control-rods P/N 116.35.07.345 (Item 3 as listed in § 1.A.(2) of PILATUS PC-7 SB No. 51-001 Revision 1), are installed, these type of control rods will be inspected.
- (4) Parts (Items 1, 2, 4, 5 and 10 as listed in § 1.A.(2) of PILATUS PC-7 SB No. 51-001 Revision 1) are made of aluminium alloy AA2024-T351. Therefore:
 - Do a one time inspection for cracks of Items 1, 2, 4 and 10
 - Replace Item 5
- (5) If the conductivity test shows the parts are made of aluminium alloy AA2024-T351:
 - a) For Items 7 thru 9 and 11 thru 13 as listed in § 1.A.(2) of PILATUS PC-7 SB No. 51-001 Revision 1, do a one time inspection for cracks. If cracks are found, contact Pilatus.

NOTE: Repetitive mandatory inspections will be added to Chapter 5 of the Aircraft Maintenance Manual (AMM). The inspections will give instructions on how to examine the parts for cracks. The inspections will only be applicable to parts made from AA2024-T351.
 - b) For Item 6 as listed in § 1.A.(2) of PILATUS PC-7 SB No. 51-001 Revision 1, replace the part with a part made of aluminium alloy AA2124-T851.

Ref. Publication(s): PILATUS PC-7 Service Bulletin No. 51-001 Revision 1.

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

For further information contact: The applicable manufacturer's documentation may be obtained directly from:

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