

<b>Bundesamt für Zivilluftfahrt (BAZL)</b> <b>Office fédéral de l'aviation civile (OFAC)</b> <b>Ufficio federale dell'aviazione civile (UFAC)</b> <b>Federal Office for Civil Aviation (FOCA)</b> Maulbeerstrasse 9 CH-3003 Berne Switzerland	<b>Lufttüchtigkeitsanweisung (LTA)</b> <b>Consigne de Navigabilité (CN)</b> <b>Prescrizione di Aeronavigabilità (PA)</b> <b>Airworthiness Directive (AD)</b>	FOCA AD  <b>HB-2005-168</b>
Inkraftsetzung Mise en vigueur Entrata in vigore Effective Date	<b>PILATUS – PC-12</b>  FOCA TC/TCDS No: F56-30 ATA 32 – LANDING GEAR	

Issue date: 03 May 2005

**Subject: LANDING GEAR COMPONENTS – Inspection, Replacement**

**Superseded/Revised ADs:** Not applicable

**1. APPLICABILITY:**

**PILATUS AIRCRAFT LTD.**

Model PC-12 and PC-12/45 airplanes, Manufacturer Serial Numbers (MSN) 101 thru MSN 471 inclusive and MSN 473 thru MSN 482 inclusive equipped with Landing Gear Components as listed below:

- 1.1. Nose Landing Gear (NLG) assemblies Part Number (P/N) 532.20.12.038 and P/N 532.20.12.039 with Serial Numbers (S/N) AM 001 thru AM 045 inclusive and AM 048 thru AM 054 inclusive.
- 1.2. Main Landing Gear (MLG) assemblies P/N 532.10.12.049 and P/N 532.10.12.050 with S/N AM 001 thru AM 027 inclusive, AM 029 thru AM 045 inclusive, AM 047 thru AM 050 inclusive, AM 052 and AM 053.
- 1.3. MLG shock absorber assemblies P/N 532.10.12.175 with S/N AM 001 thru AM 017 inclusive, AM 019, AM 021 thru AM 063 inclusive, AM 065 thru AM 070 inclusive, AM 072 thru AM 074 inclusive, AM 080, AM 084, AM 086, AM 089, AM 090, AM 093 thru AM 096 inclusive, AM 099, AM 103 thru AM 107 inclusive.

**2. REASON:**

It has been found that some components of MLG-, NLG- and MLG shock absorber assemblies have the potential to fail during operation. Investigations revealed that the problem is caused by an improper cadmium plating process applied to the high strength steel part, which can cause hydrogen embrittlement. Affected are only components that are installed on MLG-, NLG- and MLG shock absorber assemblies, with Serial Numbers that start with the letters AM.

Components in this condition can decrease the specified fatigue life and could lead to main and/or nose landing gear collapse during operation with consequent loss of airplane control.

The corrective actions of the previous FOCA Airworthiness Directives (ADs) HB-2001-603 and HB-2003-522 were predicated on a risk analysis based on the nature of the defects found. The present AD HB-2005-168 addresses the residual deficiencies of the landing gear components and requires an inspection to determine the Serial Number of the MLG-, NLG- and MLG shock absorber assemblies and replacement of specified components with new parts, if necessary.

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### 3. COMPLIANCE / ACTION:

Required as indicated below, unless already accomplished:

**Within the next 300 hours time-in-service (TIS) after the effective date of this AD, but not later than 31 December 2005:**

#### 3.1. INSPECTION / REPLACEMENT

- 3.1.1. Perform an inspection of the NLG assemblies P/N 532.20.12.038 or P/N 532.20.12.039, MLG assemblies P/N 532.10.12.049 and P/N 532.10.12.050 and MLG shock absorber assemblies P/N 532.10.12.175 to determine if the S/Ns start with the letters AM. If the assembly S/Ns do not start with the letters AM, no further action is required.
- 3.1.2. If during the inspection required by paragraph 3.1.1. of this AD an assembly has a S/N starts with the letters AM, within the compliance time, replace the specified components with new parts.

### 4. PARTS INSTALLATION:


- 4.1. As of the effective date of this AD, no person shall install any assembly listed in TABLE 1 below and any parts thereof on any Model Pilatus PC-12 Series airplane, unless the MLG-, NLG- and/or MLG shock absorber assembly has been inspected and the specified components have been replaced in accordance with the Accomplishment Instructions of PILATUS PC-12 Service Bulletin No. 32-016, dated 11 March 2004 or later revisions approved by the Swiss Federal Office for Civil Aviation (FOCA).

Before installing any assembly check compliance with FOCA ADs HB-2001-603 (PC-12 SB 32-012) and/or HB-2003-522 (PC-12 SB 32-015) and accomplish, if necessary.

**TABLE 1**

Landing Gear Assemblies	Part Number (P/N)	Serial Number (S/N)
Nose Landing Gear assembly	532.20.12.038 or 532.20.12.039	AM 001 thru AM 045 AM 048 thru AM 054
Main Landing Gear assemblies	532.10.12.049 and 532.10.12.050	AM 001 thru AM 027 AM 029 thru AM 045 AM 047 thru AM 050 AM 052 thru AM 053
MLG shock absorber assemblies	532.10.12.175	AM 001 thru AM 017 AM 019 AM 021 thru AM 063 AM 065 thru AM 070 AM 072 thru AM 074 AM 080, AM 084, AM 086 AM 089 thru AM 090 AM 093 thru AM 096 AM 099 AM 103 thru AM 107

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FOCA AD <b>HB-2005-168</b>	<b>Lufttüchtigkeitsanweisung (LTA)</b> <b>Consigne de Navigabilité (CN)</b> <b>Prescrizione di Aeronavigabilità (PA)</b> <b>Airworthiness Directive (AD)</b>		<b>BAZL Schweiz</b> <b>OFAC Suisse</b> <b>UFAC Svizzera</b> <b>FOCA Switzerland</b>
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## 5. REF. PUBLICATIONS:

The actions required by this AD shall be done in accordance with the manufacturer's documentation listed in this paragraph, and/or later revisions approved by the Swiss Federal Office for Civil Aviation (FOCA):

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### Manufacturer's Documentation

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- PILATUS PC-12 Service Bulletin No. 32-016, dated 11 March 2004.
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The applicable manufacturer's documentation may be obtained directly from:

**PILATUS AIRCRAFT LTD.**  
CUSTOMER SUPPORT MANAGER  
CH-6371 STANS, Switzerland

TEL No.: +41 41 619 6208  
FAX No.: +41 41 619 7311  
Email: [SupportPC12@pilatus-aircraft.com](mailto:SupportPC12@pilatus-aircraft.com)

## 6. FOR FURTHER INFORMATION CONTACT:

FEDERAL OFFICE FOR CIVIL AVIATION (FOCA)  
Design and Production (STEH)  
Maulbeerstrasse 9  
CH-3003 Berne, Switzerland

FAX No.: +41 31 325 9324 (or)  
FAX No.: +41 31 322 5918

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