EASA

AIRWORTHINESS DIRECTIVE

AD No.: 2009-0060

Date: 11 March 2009

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

	State of Registry [EC 216/2008, Article 14(4) exemption].		
Type Approval Holder's Name :		Type/Model designation(s):	
PILATUS AIRCRAFT Ltd.		PC-12 series aeroplanes	
TCDS Number :	EASA.A.089		
Foreign AD :	Not applicable		
Supersedure :	None		
ATA 32	Nose Gear – Torque Tube of the Nose Wheel Steering – Replacement / Limitations		
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Manufacturer(s):	Pilatus Aircraft Ltd.		
Applicability:	Model PC-12, PC-12/45, PC-12/47 aeroplanes, from Manufacturer Serial Number (MSN) 101 through MSN 544 inclusive and from MSN 546 through MSN 888 inclusive, and		
	Model PC-12/47E aero MSN 1080 inclusive.	planes, with MSN 545 and from MSN 1001 through	
Reason:	This Airworthiness Directive (AD) is prompted by reports of several in-service cracked torque tubes. A reduced wall thickness produced during the manufacturing process has been determined to be the initial cause. Additionally, all the involved torque tubes have been found to show fatigue cracking problems.		
	Such a condition, if left uncorrected, could lead to failure of the torque tube and result in loss of the steering control on ground and consequent unsafe condition.		
	For the reason described above, this new AD mandates the replacement of certain torque tubes by new ones of an improved design and the latest revision of chapter 4 'limitations' of the PC-12 Aircraft Maintenance Manual (AMM) which introduces the new life limit for torque tubes with Part Number (P/N) 532.50.12.047.		
Effective Date:	25 March 2009		

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

Required as indicated, unless accomplished previously:

Note: The torque tubes P/N 532.50.12.047 can fail due to either of the two root causes. Some incorrectly machined torque tubes have a thinner wall; those torque tubes have been fitted to MSN 101 through MSN 299. All torque tubes P/N 532.50.12.047 can develop fatigue cracks; those torque tubes have been fitted to MSN 101 through MSN 1080.

For aeroplanes from MSN 101 through MSN 299:

(1) Within 100 Flight Hours or one year after the effective date of this AD, whichever occurs first, replace the torque tube P/N 532.50.12.047 by a torque tube P/N 532.50.12.064 in accordance with the accomplishment instructions of Pilatus PC-12 Service Bulletin (SB) 32-021 initial issue.

For aeroplanes from MSN 300 through MSN 1080:

(2) Before accumulation on the torque tube P/N 532.50.12.047 of 15 000 Total Landings, 11 000 Total Hours Time-In-Service (TIS) or 10 years from the date of manufacture, whichever occurs first, replace the torque tube by a torque tube P/N 532.50.12.064 in accordance with the accomplishment instructions of the relevant Pilatus PC-12 AMM.

For torque tubes P/N 532.50.12.047 which have accumulated at the effective date of this AD more than 14 500 Total Landings, 10 500 Total Hours Time-In-Service (TIS) or 10 years from the date of manufacture, replace the torque tube by a torque tube P/N 532.50.12.064 within 500 Landings, 500 Hours TIS, or 6 months after the effective date of this AD, whichever occurs first.

For all aeroplanes:

- (3) Within 30 days after the effective date of this AD, amend the operator's approved maintenance programme to incorporate the structural, component and miscellaneous limitations defined in Pilatus PC-12 Temporary Revision No. 04-02, document 12-A-04-00-00A-000T-A, dated 28 January 2009 (for PC-12, PC-12/45, PC-12/47) and in document 12-B-04-00-00-00A-000A-A Revision 1, dated 27 January 2009 (for PC-12/47E).
- (4) After the effective date of this AD, do not install a torque tube P/N 532.50.12.047 on any post SB 32-021 aeroplanes.

Ref. Publications:

PILATUS PC-12 Service Bulletin No. 32-021, initial issue.

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

Pilatus PC-12 Structural, Component and Miscellaneous - Airworthiness Limitations, Temporary Revision No. 04-02, document 12-A-04-00-00-00A-000T-A, dated 28 January 2009 and document 12-B-04-00-00-00A-000A-A, Revision 1, dated 27 January 2009.

Remarks:

- 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
- 2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication.
- Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail: <u>ADs@easa.europa.eu</u>
- 4. For any questions concerning the technical content of the requirements in this AD, please contact: PILATUS AIRCRAFT LTD Customer Support Manager, CH-6371 STANS, Switzerland Tel.: +41 (0)41 619 62 08 Fax: +41 (0)41 619 73 11 E-mail: SupportPC12@pilatus-aircraft.com

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