EASA **AIRWORTHINESS DIRECTIVE** AD No.: 2009-0249 Date: 20 November 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]. Type/Model designation(s) : Type Approval Holder's Name : Pilatus Aircraft Ltd. PC-12 aeroplanes TCDS Number : EASA.A.089 Foreign AD : Not applicable Supersedure: This AD supersedes AD 2009-0080-E dated 03 April 2009. Navigation – Air Data, Attitude and Heading Reference System **ATA 34** (ADAHRS) – Modification/Replacement Pilatus Aircraft Ltd. Manufacturer(s): Applicability: PC-12/47E aeroplanes, Manufacturer Serial Number (MSN) 545 and from MSN 1001 through MSN 1180 inclusive. Reason: Field reports have indicated that the possibility exists that both Primary Flight Displays (PFDs) could indicate a roll attitude offset of up to 10 degrees in the same direction if an accelerated turn onto the active runway is performed immediately followed by take-off. In addition. annunciated heading splits have been reported. This condition has been reported to correct itself after several minutes. Additionally, if the aeroplane is operating in geographical latitudes with low horizontal magnetic field strength, incorrect heading may be displayed if the ADAHRS switches from GPS track to magnetometer heading while the aeroplane is on the ground. This situation, if not corrected, could result in an undesired bank angle, heading splits and/or incorrect heading, which would constitute an unsafe condition. As a short-term interim measure, AD 2009-0028-E has been released in February 2009 to limit at 30° the bank angle during climb. Afterwards, as a result of the ongoing investigation, the problem has been temporarily addressed with some limitations in the take-off procedure. These limitations have been mandated by AD 2009-0080-E which superseded AD 2009-0028-E.

	In order to terminate the operational limitations, an updated ADAHRS
	version with improved software was developed.
	For the reasons described above this AD supersedes AD 2009-0080-E and mandates as a terminating action either an update of the ADAHRS software or the replacement of the ADAHRS unit. From MSN 1181 and subsequent an improved ADAHRS unit was implemented during production.
Effective Date:	04 December 2009
Required action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously:
	(1) Within 180 days after the effective date of this AD, update the ADAHRS software in accordance with the accomplishment instructions of Honeywell Service Bulletin KSG 7200-34-09, initial issue
	or
	Replace ADAHRS unit KSG 7200 Honeywell Part Number (P/N) 065-00188-5102, Software (S/W) Version MOD 02/02 (Pilatus P/N 985.99.12.192) with a new ADAHRS unit with Honeywell P/N 065-00188-5103 (Pilatus P/N 985.99.12.205) with the accomplishment instructions of Pilatus PC-12 Service Bulletin No. 34-022, initial issue.
	(2) Concurrent with the action required by paragraph (1) of this AD, remove Temporary Revision No. 11 from the Pilatus PC-12/47E Pilot's Operating Handbook (POH).
	(3) After the effective date of this AD, do not install an ADAHRS unit with Honeywell P/N 065-00188-5102 (Pilatus P/N 985.99.12.192) on any PC-12/47E aeroplane.
Ref. Publications:	Honeywell Service Bulletin KSG 7200-34-09, initial issue.
	Pilatus PC-12 Service Bulletin No. 34-022, initial issue.
	The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks:	 If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
	 This AD was posted on 21 October 2009 as PAD 09-127 for consultation until 18 November 2009. No comments were received during the consultation period.
	 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>.
	 For any question 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: <u>SupportPC12@pilatus-aircraft.com</u>