

Service Bulletin No: 34-022

Ref No: 239

Modification No: EC-09-0328

ATA Chapter: 34

**NAVIGATION - ATTITUDE AND DIRECTION  
UPGRADE THE AIR DATA, ATTITUDE AND HEADING REFERENCE SYSTEM (ADAHRS) TO -205  
STANDARD****1. Planning Information****A. Effectivity**

All PC-12/47E aircraft MSN 545 and MSN 1001 thru 1180.

This modification will be incorporated during production on MSN 1181 and subsequent.

ADAHRS KSG 7200 Honeywell P/N 065-00188-5102, S/W MOD 02/02 (Pil P/N 985.99.12.192) held as stock.

**B. Concurrent Requirements**

None

**C. Reason****(1) Problem:**

PC-12/47E equipped with the KSG 7200 ADAHRS, Honeywell P/N 065-00188-5102 (SW MOD 02/02), Pilatus P/N 985.99.12.192:

Field reports have indicated that the possibility exists that both Primary Flight Displays (PFD) 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 takeoff. In addition, annunciated heading splits have been reported.

Additionally, if the aircraft 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 aircraft is on the ground.

**(2) Solution:**

Install an updated ADAHRS KSG 7200, Honeywell P/N 065-00188-5103 (Pilatus P/N 985.99.12.205)

or

update existing ADAHRS KSG 7200, Honeywell P/N 065-00188-5102 (Pilatus P/N 985.99.12.192) to the latest standard using Honeywell Service Bulletin KSG 7200-34-09.

The algorithms have been updated to prevent roll offset indications on both PFDs after takeoff and to prevent annunciated heading splits.

The automatic switch setting from magnetometer heading to GPS track (and vice versa) has been reduced from 80/95 mGauss to 60/75 mGauss. In addition, the slewing on

ground has been improved so that the correct GPS track (TRK) or magnetometer heading (HDG) is displayed without any delay.

**D. Description**

This Service Bulletin gives the data and instructions necessary to:

- Do the Honeywell Service Bulletin KSG 7200-34-09 to update the ADAHRS software
- or
- Replace an installed ADAHRS unit with a Honeywell 065-00188-5103 (Pilatus P/N 985.99.12.205) unit.

**E. Compliance**

Mandatory.

Compliance time one year from the date of issue of this Service Bulletin.

**F. Approval**

The technical content of this document is approved under the authority of DOA No. EASA. 21J. 357.

PILATUS advises Operators/Owners to check with their local Airworthiness Authorities for any changes, local regulations or sanctions that may affect the embodiment of this Service Bulletin.

**G. Manpower**

| <b>Task</b>              | <b>Man-hours</b> |
|--------------------------|------------------|
| Preparation              | 1.0              |
| Software upload and test | 3.5              |
| Close up                 | 1.5              |
| <b>TOTAL MAN-HOURS</b>   | <b>6.0</b>       |

**NOTE:** Refer also to the Honeywell Service Bulletin KSG 7200-34-09

**H. Weight and Balance**

Not affected.

**I. Electrical load Data:**

Not changed

**J. Software:**

The software in the ADAHRS unit is upgraded to SW ID 03/01.

**K. References**

Aircraft Maintenance Manual (AMM): 12-B-34-25-00-00A-903A-A, 12-B-34-25-01-00A-920A-A

Honeywell Service Bulletin KSG 7200-34-09

**L. Publications Affected**

Remove TR No. 11 and TR No. 13 from the AFM.

**M. Interchangeability of Parts:**

One way interchangeable. A pre-Service Bulletin 34-022 ADAHRS unit must not be installed in a post-Service Bulletin 34-022 aircraft.

**2. Material Information****A. Material - Price and Availability**

Operators shall contact Honeywell, Olathe to order replacement parts. Fax Purchase Orders to + 1 913 712 1335.

**NOTE:** It is absolutely imperative that you include the following note on your PO to receive the correct serial tags: **Honeywell CSR please add this mandatory message to AS400 pick ticket notes: Requires Unit Serial Tags for KSG 7200 serial number xxxx.**

Please note that the KSG 7200 ADAHRS (P/N 065-00188-5102 or -5103) installed on the PC-12/47E falls under International Trade Restrictions and is regulated by the United States Department of Commerce export compliance rules.

If you want more information about this modification, please contact us as follows:

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Operators are requested to advise Pilatus Aircraft Ltd, of the Manufacturer's Serial Number (MSN) and the flying hours of aircraft which are affected by this Service Bulletin.

**B. Warranty**

Honeywell agrees to cover the costs for parts and labor of affected aircraft on approval of a warranty claim, provided the work is accomplished by an appropriately rated Honeywell Service Center within 12 months of the issue date of this Service Bulletin. A properly completed warranty claim may be filed by accessing the Honeywell Aerospace web page at: <https://portal.honeywell.com/wps/portal/aero/serviceprograms/warranty> and selecting the Bendix King logo.

**C. Material Necessary for Each Aircraft**

- (1) **Parts to be ordered from Honeywell  
(Refer Honeywell Service Bulletin KSG 7200-34-09):**

| New Part No.                                 | Description   | Qty | Remarks                                |
|--|---|-----|--|
| 222-30306-0000                               | KSG7200 ADAHRS SOFTWARE CD ROM (SW MOD 03/01)       | 1   | 1 each per Service Center<br>See Note. |
| 222-30197-0006<br>(Pil P/N<br>985.99.12.206) | KSG7200 PILATUS PC-12/47E CERTIFICATION FILE CD-ROM | 1   | 1 each per aircraft                    |
| 057-05287-0301                               | SOFTWARE MODIFICATION TAG (SW MOD 03/01)            | 1   | 1 each per aircraft                    |
| 057-06060-1003                               | SERIAL NUMBER TAG                                   | 1   | 1 each per aircraft<br>See Note 2      |
| 057-06060-1002                               | DUPLICATE SERIAL NUMBER TAG                         | 1   | 1 each per aircraft<br>See Note 2      |

**NOTE 1:** This software falls under International Trade Restrictions and is restricted by the United States Department of Commerce export compliance rules.

**NOTE 2:** Please tell Honeywell the Serial Number (S/N) of the currently installed ADAHRS as this S/N must be referred to when you order the above listed tags.

- (2) **Parts required if you will accomplish this Service Bulletin by replacement of an ADAHRS:**

| New Part No.  | Description   | Old Part No.  | Qty | Disp. Code          |
|---|---|---|-----|---------------------|
| 065-00188-5103<br>S/W MOD 03/01<br>(Pil P/N<br>985.99.12.205) | ADAHRS UNIT   | 065-00188-5102<br>S/W MOD 02/02<br>(Pil P/N<br>985.99.12.192) | 1   | R<br>See Note       |
| 222-30197-0006<br>(Pil P/N<br>985.99.12.206)                  | KSG7200 PILATUS PC-12/47E CERTIFICATION FILE COMPACT DISK-READ ONLY MEMORY (CD-ROM) | 222-30197-0001<br>(Pil P/N<br>985.99.12.196)                  | 1   | 1 each per aircraft |

Disposition Codes: D - Discard / R - Return to Honeywell

**NOTE:** This part needs to be ordered from Honeywell (SPEX-Pool) directly.

**D. Operator Supplied Materials**

None.

**E. Material Necessary for Each Spare**

Not applicable.

**F. Re-identified Parts**

Not applicable.

**G. Tooling - Cost and Availability**

(1) Parts to be supplied by Pilatus:

| New Part No.   | Description                                      | Old Part No. | Qty |
|----------------|--|--------------|-----|
| 222-30183-0002 | KSG 7200 ADAHRS FIELD MAINTENANCE PROGRAM CD-ROM | -            | 1   |

**NOTE:** This item will be distributed free-of-charge by Pilatus to the Service Center who will accomplish this Service Bulletin.

(2) Parts to be supplied by Service Center

| Pil Part No.                  | Description                   | Remarks  |
|-------------------------------|-------------------------------|--|
| -                             | LAPTOP                        | Requirement: CD-ROM 8X or better / 20GB HDD or greater / MS Windows XP, 2000 or NT / RS232 (Serial) Port or compatible USB to Serial Converter |
| 985.99.99.610                 | MAINTENANCE BOX               | -  |
| 990.00.01.201<br>(P/N 671494) | RS 232 CABLE<br>(SUB D CABLE) | or suitable alternative  |

**3. Accomplishment Instructions****A. Modification**

- (1) Do the Honeywell Service Bulletin:
  - (a) Get access to the ADAHRS unit (Ref. AMM 12-B-34-25-01-00A-920A-A). Make a note of the Serial Number of the ADAHRS unit for the Feedback Sheet.
  - (b) Do the Honeywell Service Bulletin KSG 7200-34-09.
  - (c) Do a functional check of the ADAHRS (Ref. AMM 12-B-34-25-00-00A-903A-A).
  - (d) Do an alignment check of the ADAHRS (Ref. AMM 12-B-34-25-00-00A-903A-A).
  - (e) Close the access to the ADAHRS unit (Ref. AMM 12-B-34-25-01-00A-920A-A).

**NOTE:** Only do Step 3.A.(2) if you replace the ADAHRS unit to satisfy this Service Bulletin.

- (2) Replace an ADAHRS Unit:
  - (a) Remove the ADAHRS unit, Honeywell P/N 065-00188-5102 S/W MOD 02/02 (Pil P/N 985.99.12.192) (Ref. AMM 12-B-34-25-01-00A-920A-A). Make a note of the Serial Number of the removed ADAHRS unit for the Feedback Sheet.
  - (b) Make a note of the Serial Number of the new ADAHRS unit for the Feedback Sheet. Install the new ADAHRS unit, Honeywell P/N 065-00188-5103 S/W MOD 03/01 (Pilatus P/N 985.99.12.205) (Ref. AMM 12-B-34-25-01-00A-920A-A).
  - (c) Record the Serial Number of the removed and installed ADAHRS units on the Feedback Sheet.
- (3) Replace the Certification File Disk.
  - (a) Remove the Honeywell Certification File Disk from the CD compartment to the left of the Captain's seat.
  - (b) Put the new Honeywell Certification File Disk in the CD compartment.

**B. Documentation**

- (1) Make an entry in the Aircraft Logbook that this Service Bulletin has been incorporated.
- (2) Remove TR No. 11 and TR No. 13 from the Aircraft Flight Manual (AFM).
- (3) Record the removal of TR No. 11 and TR No. 13 on the AFM Record of Temporary Revisions page.

**NOTE:** Contact your local Airworthiness Authority when you remove AFM TR No. 11 as the insertion of this TR was mandated by an Airworthiness Directive.

- (4) Send the Feedback Sheet to PILATUS.

**FEEDBACK SHEET FOR ACCOMPLISHMENT OF SB NO. 34-022**

|  |  |                       |           |                      |
|--|--|-----------------------|-----------|----------------------|
| Title  | NAVIGATION - ATTITUDE AND DIRECTION<br>UPGRADE THE AIR DATA, ATTITUDE AND HEADING REFERENCE SYSTEM<br>(ADARS) TO .205 STANDARD |                       |           |                      |
| Aircraft MSN   |  | Aircraft Registration |           | Total Airframe Hours |
| Owner  |  |                       |           |                      |
| Operator   |  |                       |           |                      |
| Service Center   |  |                       |           |                      |
| Details of removed/installed parts:  |  |                       |           |                      |
| S/N of removed KSG 7200 (ADARS) with<br>P/N 065-00188-5102 S/W MOD 02/02 (985.99.12.192)                         |  |                       |           |                      |
| S/N of installed KSG 7200 (ADARS) with<br>P/N 065-00188-5103 (985.99.12.205)                                     |  |                       |           |                      |
| Comments   |  |                       |           |                      |
|  |  |                       |           |                      |
|  |  |                       |           |                      |
|  |  |                       |           |                      |
|  |  |                       |           |                      |
| The undersigned confirms the accomplishment of SB 34-022   |  |                       |           |                      |
| Date of accomplishment   | Name   |                       | Signature |                      |
|  |  |                       |           |                      |
| Please scan and email the completed sheet to:<br>supportpc12@pilatus-aircraft.com<br>or fax to: +41 41 619 73 11 |  |                       |           |                      |