

Service Bulletin No: 45-001

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Modification No: EC-08-0462, EC-08-0753

ATA Chapter: 45

**UPGRADE THE HONEYWELL PRIMUS APEX OPERATIONAL SOFTWARE TO BUILD 5****1. Planning Information****A. Effectivity**

PC-12/47E aircraft MSN 545 and MSNs 1001 thru 1100.

This modification will be accomplished during production on MSN 1101 and subsequent.

**B. Concurrent Requirements**

None

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

During the initial certification of Primus APEX, all equipment (basic and optional) was installed (if ordered by the customer), however the system software did not include the functionality for some of the optional systems. The circuit breakers for these optional systems were collared so that power could not be applied and the configuration module for the aircraft had these optional systems disabled. This first change of Primus APEX is based on Software Build 5 and enables the optional functions disabled during initial certification, at the same time introducing software fixes to existing functions classed as "product improvements" of the initial certified system configuration.

**• New Functionality (Software Build 5)**

- Uplink Graphical Weather (XM) Basic, if ordered (Hardware already installed)
- Lightning Data, if ordered (Hardware already installed)
- Electronic Checklist (does not include Checklist Database), if ordered (ECL, CKLST)
- Electronic Charts, if ordered
- SD Card Dataloading (requires accomplishment of Service Bulletin 46-001)

- **Product Improvement Software Changes (Software Build 5)**
  - De-Icing
  - Weather Radar
  - ECS
  - FMS
  - CPCS
  - INAV-MAP
  - Engine Indication
  - External Communication
  - Fuel Indication
  - Transponder
  - Hydraulic
  - Nav (Gnd Referenced)
  - Trim Indication
  - TAWS
  - Electrical Indication
  - TCAS
  - PFD
  - APM
  - CAS
  - CMC/SCMS
  - General Displays
  - Autopilot
- **New Functionality (Software Build 5)**
  - **Uplink Graphical Weather (XM):**

Provides supplemental weather data that is downloaded to an aircraft receiver (XM) via a dedicated satellite network covering southern Canada and the USA. The Weather drop down menu is modified to include the option to display XM weather. The XM weather is displayed as an overlay on the MAP.  
Additional information will be supplied by Pilatus to describe the procedure to activate the service.
  - **Lightning Data:**

Provides supplemental lightning data that is derived from an on aircraft sensor (WX-500 Stormscope). The LX mode menu page is enabled. The LX data is displayed as an overlay on the HSI and MAP.
  - **Advisory Checklist:**

This provides an electronic checklist (ECL) for normal procedures. The flight worthy ECL database is not a certification item of Pilatus and will be produced and approved by an independent company.  
Additional information will be supplied by Pilatus to describe the procedure to obtain the ECL database.
  - **Charts/Maps**

Allows the supplemental display of Jeppesen charts/maps on the upper MFD. The data is classed as supplemental as the system cannot support a “paperless” cockpit. The data will be derived from an approved Jeppesen data base and provide: Airport data, Departure, Arrival, Approach, Noise, Airspace and NOTAMs. An Aircraft symbol will be displayed on charts that have that capability. Chart subscription has to be done through Honeywell/Jeppesen INDS ([www.epicinds.com](http://www.epicinds.com)).
  - **SD Card Dataloading:**

Allows loading of databases and downloading of CMC files using the SD card on the Multi Function Controller.

**(2) Solution**

Update the Honeywell PRIMUS APEX Software to Build 5.

**D. Description**

This Service Bulletin gives the data and instructions necessary to:

- (1) Do a full software load to update the Honeywell PRIMUS APEX Software to Build 5.
- (2) Make the Stormscope System operational (if installed).
- (3) Make the XM Satel\$lite Weather System operational (if installed).
- (4) Install the placard on the yokes for the ECL (if installed).
- (5) Install the ADAHRS and Magnetometer correction data placards.
- (6) Replace the Software CDROMs for Build 5.
- (7) Remove the Non-Functional Placards from the Pilot's and Co-pilot's instrument panel.

Revision No. 1 of this Service Bulletin adds a step to remove the Non-Functional Placards and deletes the clear sealant as it is no longer necessary.

Revision No. 2 of this Service Bulletin adds a Note regarding downgrade of software Build standard and adds a copyright paragraph. Customers who have incorporated this Service Bulletin at a previous issue need not do further work.

**E. Compliance**

Recommended.

**F. Approval**

The technical content of this Service Bulletin 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.

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**H. Manpower**

	Total
Modification	3.5
Operational Test	1.5
Close up	0.5
<b>TOTAL MAN-HOURS</b>	<b>5.5</b>

**NOTE:** Man-hours figures do not include the time required to cure consumable materials.

**I. Weight and Balance**

Not changed.

**J. Electrical Load Data**

Not changed.

**K. Software**

The Honeywell PRIMUS APEX Software is updated to Build 5.

**NOTE:** It is NOT acceptable to downgrade the Primus APEX Operational software (i.e. install a lower Build standard of Operational software than that which is currently loaded).

**L. References**

Aircraft Maintenance Manual (AMM): 12-B-20-31-00-00A-070A-A, 12-B-24-00-00-00A-901A-A, 12-B-34-41-10-00A-903A-A, 12-B-34-41-30-00A-903A-A, 12-B-45-45-00-00A-550A-A

**M. Publications Affected**

AMM, Illustrated Parts Data (IPD), Aircraft Flight Manual (AFM).

**N. Interchangeability of Parts**

Not applicable.

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

Operators should send orders for Service Bulletin Modification Kits, to their Authorized Pilatus Service Center.

If you want more information about the serialization of software build 5, please contact us as follows:

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**B. Warranty**

- (1) Honeywell agrees to cover the costs for 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.
- (2) Pilatus will supply the parts free-of-charge for all affected aircraft, provided the work is accomplished by an authorized Service Center within 12 months of the issue date of this Service Bulletin.