

Service Bulletin No: 25-042

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Modification No: EC-15-0406

ATA Chapter: 25

**EQUIPMENT/FURNISHINGS - GENERAL
INSTALLATION OF A SUPPLEMENTARY AIRCRAFT HEATING SYSTEM (230 VAC) FOR EXTREME
COLD TEMPERATURES****1. Planning Information****A. Effectivity**

All PC-12/47E series aircraft MSN 1001 and up, as a customer option.

B. Concurrent Requirements

Service Bulletin 45-004 (latest revision) - Load Honeywell Primus APEX Option File for various Factory Options (to enable the underfloor temperature indication).

New Option File CD with Option File Underfloor Temperature Indication (P/N 545.05.12.003).

C. Reason

To improve engine starting and ensure adequate operating environments for the electrical and avionics equipment when the aircraft is operated after cold soak in subzero temperatures.

D. Description

The systems that follow are installed to improve operation of the aircraft in cold soak in subzero temperatures:

- A battery heating system that has two heating elements is installed around the batteries. This heater elements are powered from an external source (230 VAC), through a power receptacle installed on the rear LH fuselage. An indicator light, located along side the power socket, gives an indication when the system is active. The activation of the heater element is controlled by a temperature sensor attached to the fuselage.
- A power outlet that is connected to the battery heating system is also installed. This enables the use of an auxiliary electrical fan-type cabin heater. This auxiliary heater is a commercially-available domestic 'safety' type with a ceramic-core element. It is a free-standing unit (e.g. WINDMERE 230 VAC (1.5 kW) internal cabin heater), with a variable output up to 1.5 kW, using normal European domestic 230 Volt, 15 Amp power.
- An engine heating system that has four heating elements installed around the engine. The heater elements are attached, with RTV silicone sealant (Dow Corning 732), to the engine oil sump, the FCU and the LH and RH nose case. These elements are powered from an external source (230 VAC), through a power receptacle which is installed on the front underside of the LH fuselage. An indicator light, located along side the power socket, gives an indication when the system is active.

An Insulated Engine Blanket (P/N: 968.20.13.901) which retains the engine latent heat, is stored on the aircraft. The blanket is installed around the engine cowling; when the aircraft is on the ground and the temperature is expected to drop beneath -15 °C (5 °F). This blanket weighs 4 kg (9 lb).

This Service Bulletin supersedes Service Bulletin 25-035. Customers who have embodied Service Bulletin 25-035 need not take further action.

E. Compliance

Optional

It is highly recommended for any PC-12/47E aircraft contemplating operating in an environment with extremely low ambient ground temperature.

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 designated 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
Preparation	0.5
Modification	43.0
Close up	10
TOTAL MAN-HOURS	53.5

NOTE: Man-hours figures do not include the time required to cure sealants and adhesives.

I. Weight and Balance

This aircraft must be weighed on completion of the Service Bulletin and the AFM amended.

J. Electrical Load Data

Not changed.

K. Software

Not changed.

L. References

Aircraft Maintenance Manual (AMM)

12-B-06-20-00-00A-040A-A	12-B-11-00-00-00A-901A-A	12-B-20-31-00-00A-070A-A
12-B-20-40-00-00A-904A-A	12-B-20-40-10-00A-901A-A	12-B-20-50-00-00A-901A-A
12-B-21-30-00-00A-903A-A	12-B-24-00-00-00A-901A-A	12-B-24-30-07-00A-920A-A
12-B-24-30-07-00A-920B-A	12-B-25-23-01-00A-920A-A	12-B-25-90-00-00A-903B-A

M. Publications Affected

Illustrated Parts Data (IPD)

POH Supplement No: 2 to POH 02277.

N. Interchangeability of Parts

Not applicable.

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

Operators that require additional information and/or Service Bulletin Material should contact their authorized Pilatus Service Center, or Pilatus Customer Support on www.pilatus-aircraft.com → contact us

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. Material Necessary for Each Aircraft

Part Numbers given in this Service Bulletin are correct at the time of approval. Pilatus Aircraft Ltd. reserves the right to change the part numbers as necessary. Part numbers of items delivered with the Modification Kit are correct when the kit is dispatched. This could lead to differences between those part numbers quoted in this Service Bulletin and the Modification Kit if parts are superseded. Operators are requested to check the IPD for delivered parts which differ from those listed in the Service Bulletin Materials Kit List.