

Service Bulletin No: 25-041

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ATA Chapter: 25

**EQUIPMENT/FURNISHINGS - GENERAL
INSTALLATION OF A SUPPLEMENTARY AIRCRAFT HEATING SYSTEM (115 VAC/60 HZ) 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. The heater elements are powered from an external source (115 VAC/60 Hz), through a power receptacle installed on the rear LH fuselage. An indicator light, located adjacent to the power socket, gives an indication when the system is active. The activation of the heater elements 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 115 VAC (1.5 kW) internal cabin heater), with a variable output up to 1.5 kW, using normal North-American domestic 115 Volt, 15 Amp power at a frequency of 60 Hz.
- An engine heating system that has four heating elements installed around the engine. The heater elements are attached, with sealant (AC-1230), to the engine oil sump, the FCU and the LH and RH nose case. These elements are powered from an external source (115 VAC/60 Hz), through a power receptacle which is installed on the front underside of the LH fuselage. An indicator light, located adjacent to the power socket, gives an indication when the system is active.

An Insulated Engine Cover (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.).

E. Compliance

Optional

This is a mandatory requirement for aircraft seeking certification with the Canadian Airworthiness Authorities.

It is highly recommended for any PC-12/47E aircraft 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	10.0
TOTAL MAN-HOURS	53.5

NOTE: Man-hour 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-920A-A 12-B-20-31-00-00A-070A-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-903A-A

M. Publications Affected

AMM

Illustrated Parts Catalog (IPC)

Airplane Flight Manual (AFM) Supplement No: 2.

N. Interchangeability of Parts

Not applicable.

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

Use the Order Form in Service Bulletin 45-004 (Load Honeywell Primus APEX Option File for various Factory Options) to send orders for Service Bulletin Modification Kits, to your Authorized Pilatus Service Center, or to:

PILATUS AIRCRAFT LTD
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