PILATUS AIRCRAFT LTD. CH-6371 STANS, SWITZERLAND

FOR PLANNING PURPOSES

SERVICE BULLETIN

SERVICE BULLETIN NO: 25-002 REF NO: 028

MODIFICATION NO: 97 0126 ATA CHAPTER: 25

INSTALLATION OF A SUPPLEMENTARY AIRCRAFT HEATING SYSTEM FOR EXTREME COLD TEMPERATURES

1. Planning Information

A. Effectivity

(1) All PC-12, PC-12/45 and PC-12/47 aircraft up to and including MSN 999, as a Customer option, except for aircraft MSN 545.

(2) The aircraft MSN 164 has been modified to this Service Bulletin, by PILATUS, at their facilities in Stans Switzerland.

(3) The aircraft MSN 184 has been modified to Rev. 1 of this Service Bulletin, by PILATUS, at their facilities in Stans Switzerland.

B. Concurrent Requirements

None.

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.

Since the original issue of this Service Bulletin, PILATUS has developed a factory-option 2nd Battery installation. When this Service Bulletin is installed, and the aircraft has a 2nd battery - the 2nd battery must also be protected the same way as the main battery.

Also as part of this revision, the Part Number of the rivets, required to secure the doublers to the fuselage, is changed (refer to pages 8 and 16 of this Service Bulletin).

Revision No. 2 is issued to add the PC-12/47 model to the Service Bulletin effectivity.

Revision No. 3 is issued to correct the telephone number of the Liaison Manager, the test of the battery heating system and the supplementary engine heating-system.

Revision No. 4 changes the Effectivity and updates the Service Bulletin to the latest standard.

D. Description

Accomplishment of this Service Bulletin consists of completing the following tasks (Ref, Fig. 1):

(1) Installing a heater element/s (P/N: 968.20.13.903), around the battery (batteries). This heater element is powered from an external source (i.e. 110 V AC), through an electrical-socket (P/N: 968.20.13.905) which is fitted on the rear LH fuselage. A pilot light (P/N: 968.20.13.904), located along side the power socket, gives an indication when the system is active. The activation of the heater element is controlled by a thermal sensor attached to

the fuselage. Linked to this system is the installation of an internal power outlet. The intention of this outlet is to facilitate 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 110 V AC (1.5 kW) internal cabin heater), with a variable output up to 1.5 kW, using normal North-American domestic 110 Volt, 15 Amp power.

(2) Installing an engine-heater kit (P/N: 968.20.13.902) which has 5 heater elements. The heater elements are attached, with sealant (IS 808), to the engine reduction gearbox (LH and RH), auxiliary gearbox (LH) and a fifth element on the FCU. These elements are powered from an external source (i.e. 110 V AC), through an electrical-socket (P/N: 968.20.13.905) which is fitted on the front underside of the LH fuselage. A pilot light (P/N: 968.20.13.904), located along side the power socket, gives an indication when the system is active.

(3) Installing a change-over rocker-type switch on the crew center console connected to a temperature sensor (P/N: 975.15.16.102) under the cabin floor and to the cabin temperature gage on the center console. When the rocker switch is depressed, the sensor will register the ambient temperature under the cabin floor and will register on the existing cabin temperature gage, fitted on the center console, above the rocker switch. This will be identified by a placard "CABIN - UNDERFLOOR".

(4) An Insulated Engine Blanket (P/N: 968.20.13.901) which will retain the engine latent heat, is to be carried on the aircraft and installed around the engine; 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:

But, this is a mandatory requirement for aircraft seeking certification with the Canadian Airworthiness Authorities.

It is highly recommended for any PC-12, PC-12/45 or PC-12/47 aircraft contemplating operating in an environment with extreme low ambient ground temperature.

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.

G. Manpower

	Total
Preparation	0.5
Installation of Main Battery Heating	3.0
Installation of 2nd Battery Heating	2.0
Installation of Engine Heating	3.0
Installation of Temperature Sensor	2.0
Test	1.0
Close up	0.5
TOTAL MAN-HOURS	**12.0**

Man-hours figures are calculated for components installed in the aircraft and represent the total time estimated for the task but does not take into account any time for the sealant to cure (approximately 24 hours plus).

H. Weight and Balance

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

I. Electrical Load Data

Not applicable.

J. Software

Not changed.

K. References

Aircraft Maintenance Manual (AMM), Chapters 24-00-00.

Illustrated Parts Catalog (IPC), Chapter 25-30-00.

L. Publications Affected

Airplane Flight Manual (AFM) Supplement No: 10.

M. 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 or:

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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.