

Service Bulletin No: 31-008

Ref No: 237

Modification No: EC-07-0328, EC-09-0679

ATA Chapter: 31

**INDICATING / RECORDING SYSTEMS - INSTRUMENT AND CONTROL PANELS
MODIFICATION TO THE SYSTEMS THAT ARE CONTROLLED BY THE OVERHEAD PANEL****1. Planning Information****A. Effectivity**

PC12/45 and PC-12/47 Aircraft MSN 321, MSN 401 thru MSN 544 and MSN 546 thru MSN 888.

B. Concurrent Requirements

None.

C. Reason**(1) Problem**

Some customers have reported damage to the overhead panel.

(2) Cause

Investigation has shown that short circuits in specific systems can damage the overhead panel, although the overhead panel itself is not the reason for the fault. The specific systems are:

- Automatic START sequence
- External Power Selection
- Inertial separator system
- NO SMOKING/SEAT BELT signs
- Lamp Test
- Nav and Strobe lighting system.

(3) Solution

(a) For the automatic START sequence:

- Add a load switching relay (5 amps)
- Re-route the wiring to the overhead panel.

(b) For the External Power Selection:

- Re-route the overhead panel indication to the OVPD connection of the external power supply-connector
- Add a 1 ohm (sacrificial) resistor to protect the wiring between the external power connection and the overhead panel.

- (c) For the Inertial separator system:
 - Add a load switching relay (5 amps).
 - Re-route the wiring to the overhead panel.
- (d) For the NO SMOKING/SEAT BELT signs (if option is installed), add a 10 Ohm protection resistor.
- (e) For the lamp test:
 - Add a load switching relay (5 amps)
 - Re-route the wiring to the overhead panel.
- (f) For the Nav and Strobe lighting system, re-route the wiring to the overhead panel.

D. Description

This Service Bulletin gives the instructions and data necessary to:

- (1) Do the Modification to the START Sequence System.
- (2) Do the Modification to the External Power Selection System.
- (3) Do the Modification to the Inertial Separator System.
- (4) Do the Modification to the NO SMOKING/SEAT BELT Signs System.
- (5) Do the Modification to the Lamp Test System.
- (6) Do the Modification to the Nav and Strobe Lighting System.
- (7) Do the Modification to Install the additional relays on the left and right relay panels.

Revision No. 1 is issued to add the EC-09-0679, correct the part number of the placard K220 from 110.71.06.342 to 110.71.06.642, to correct the typographical error of the in-line junction part number 71.42.31.560 to 971.42.31.560 and to change the telephone number of the Customer Support Manager.

Revision No. 2 removes the PC-12 notation from the Section 1A, to replace the part number 974.22.00.906 with 974.22.00.901, to add the part number 971.31.18.831 to the kit, to change the instruction from 'remove' to 'cap-and-stow wire H7DA22' and to add an instruction for the modification of the 'NO SMOKING/SEAT BELT' signs.

Revision No. 3 corrects the Inertial Separator Hook Up Chart Line 11 and updates the kit list. Operators who have accomplished this Service Bulletin at a previous Revision must confirm the correct wiring and operation of the Inertial Separator.

Revision No. 3 also corrects the modification to the NO SMOKING/SEAT BELT Signs System so that protection is provided to aircraft which have LED ordinance signs. Operators who have implemented this Service Bulletin at a previous Revision but did not complete the section for the modification to the NO SMOKING/SEAT BELT Signs System (3.B.(6)) because the aircraft had LED type NO SMOKING /SEAT BELT Signs installed, should now complete this section (if the NO SMOKING/SEAT BELT Signs option is installed) and carry out the tests prescribed for the NO SMOKING/SEAT BELT Signs System. Rev No. 3 supersedes the design of Rev No. 1 and Rev No. 2.

Revision No. 4 includes SB 31-008 Rev No. 1 and Rev No. 2 post mod wiring diagram (Fig. 28) for the modification to the NO SMOKING/SEAT BELT Signs System. This is done to support those aircraft which have their NO SMOKING/SEAT BELT Signs System modified according to SB 31-008 Rev No. 1 or Rev No. 2.

NOTE: Aircraft modified with SB 31-008 Rev No. 1 or Rev No. 2, and have conventional bulb type NO SMOKING/SEAT BELT Signs, do not need to be reworked. Aircraft modified with Rev No. 1 or Rev No. 2, and have the LED type NO SMOKING /SEAT BELT Signs option installed, still need to complete the modification given in Section 3.B.(6).

NOTE: Aircraft modified with SB 31-008 Rev No. 3 do not need to be reworked.

E. Compliance

Recommended.

Pilatus recommends that Customers, Operators and Service Centers do this Service Bulletin to prevent potential damage of the overhead panel.

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.

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H. Manpower

The following man-hours are given for the modification of the overhead panel and the related systems:

	Man-Hours
Preparation	2.0
Modification	34.0
Close up	2.0
TOTAL MAN-HOURS	38.0

NOTE: The man-hours above assume the Service Bulletin is done during an annual inspection.

I. Weight and Balance

(1) Weight Change

Not affected.

(2) Moment Change

Not affected.

J. Electrical Load Data

Not changed.

K. Software

Not changed.

L. References

Aircraft Maintenance Manual (AMM):

<u>For Aircraft with Standard Interior</u>	<u>For Aircraft with Executive Interior</u>
12-A-06-20-00-00A-040A-A	12-A-06-20-00-00A-040A-A
12-A-20-31-00-00A-070A-A	12-A-20-31-00-00A-070A-A
12-A-24-30-00-00A-903B-A	12-A-24-30-00-00A-903B-A
12-A-25-10-03-00A-920A-A	12-A-25-10-03-00A-920A-A
12-A-25-21-03-00A-920A-A	12-A-25-22-03-00A-920A-A
12-A-30-20-00-00A-903A-A	12-A-30-20-00-00A-903A-A
12-A-33-40-00-00A-903B-A	12-A-33-40-00-00A-903B-A
12-A-71-00-00-00A-901A-A	12-A-71-00-00-00A-901A-A

M. Publications Affected

Aircraft Wiring Manual (AWM).

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 or to:

PILATUS AIRCRAFT LTD.,
CUSTOMER SUPPORT MANAGER,
CH-6371 STANS,
SWITZERLAND

General Aviation:
Tel: +41 41 619 3333
Fax: +41 41 619 7311
eMail: SupportPC12@pilatus-aircraft.com

PILATUS BUSINESS AIRCRAFT LTD.,
PRODUCT SUPPORT DEPARTMENT
11755 AIRPORT WAY
BROOMFIELD, CO 80021.
UNITED STATES OF AMERICA

Tel: +1 303 465 9099
Fax: +1 303 465 6040
eMail: Productsupport@PilBal.com

PILATUS AUSTRALIA (PTY.) LTD.,
17 JAMES SCHOFIELD DRIVE,
ADELAIDE AIRPORT SA 5950,
AUSTRALIA

Tel: +61 8 8234 4433
Fax: +61 8 8234 4499
eMail: supportpc12@pilatus.com.au

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.

Modification Kit Number	Price	Availability
500.50.12.333	Contact address above	Approximately 5 months

B. Warranty

Credit will be issued for parts and labour for all affected aircraft on approval of a warranty claim, provided the aircraft is within the two year system warranty and the work is accomplished by an authorized Service Center within 12 months from the issue date of this Service Bulletin.

For affected aircraft outside the two year system warranty, credit will be issued for parts only on approval of a warranty claim provided the work is accomplished by an authorized Service Center within 12 months from the issue date of this Service Bulletin.

For affected aircraft which have already incorporated this Service Bulletin prior to Revision 3, an additional credit for 0.5 manhours will be issued on approval of a warranty claim referring to SB 31-008 Rev. 3, provided that the work is accomplished by an authorized Service Center within 12 months from the issue date of Revision 3 to this Service Bulletin.

NOTE: Operators who decide not to accomplish this Service Bulletin within the specified time period, will no longer receive warranty consideration for future OHP failures related to short circuits in specific systems as listed under paragraph 1.C.(2) "Cause". The same rule applies should this Service Bulletin not get incorporated when rectifying a potential future failure as listed in the same paragraph.