

SERVICE BULLETIN

SERVICE BULLETIN NO: 28-009

REF NO: 106

MODIFICATION NO: 03 0178

ATA CHAPTER: 28

FUEL - DISTRIBUTION FUEL BOOSTER PUMP - DAMAGE TO WIRES DURING INSTALLATION

1. Planning Information

A. Effectivity

- (1) All PC-7 aircraft from MSN 101 thru MSN 618 with fuel booster pump (fuel pump) Part No's. 968.84.11.401 and 968.84.11.403 (Lear Romec RR53710B type) or Part No. 968.84.11.404 (Lear Romec RR53710K) installed.
- (2) All fuel pumps Part No's. 968.84.11.401 and 968.84.11.403 (Lear Romec RR53710B type) or Part No. 968.84.11.404 (Lear Romec RR53710K) held as spare.

B. Concurrent Requirements

None.

C. Reason

(1) Problem

It is possible the electrical power wires (leads) to the left and right fuel pumps are damaged. This damage could cause an electric arc from the leads in an air/fuel mixture which can make a dangerous condition.

(2) Cause

The damage can occur to the leads during the installation of the pump. It is also possible that the leads could rub during the operation of the aircraft.

(3) Solution

A Temporary Revision (TR) to the Aircraft Maintenance Manual (AMM) changes the defuel procedure.

D. Description

This Service Bulletin gives the instructions to examine the leads and to apply the spiral wrap.

The TR is attached to this Service Bulletin. The operator must insert the TR in the applicable AMM as shown in the TR instructions.

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E. Compliance

Mandatory.

Immediately on receipt of this Service Bulletin and before the next maintenance procedure, insert the TR in the applicable AMM.

Within the next 50 hours time-in-service (TIS) or three calendar months after the effective date of this Service Bulletin (whichever is the sooner), obey the instructions given in Sect 3, Paras A thru E of this Service Bulletin.

F. Approval

The technical aspects of this Service Bulletin have been approved by the Federal Office for Civil Aviation (FOCA) of Switzerland as an Airworthiness Directive.

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
Fuel Pumps - Removal	1.5
Installation of Spiral Wrap	1.0
Fuel Pumps - Installation	2.0
TOTAL MAN-HOURS	4.5

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

H. Weight and Balance

(1) Weight Change

Not affected.

(2) Moment Change

Not affected.

I. Electrical Load Data

Not changed.

J. Software

Not changed.

K. References

AMM, 12-11-28, 28-00-00 and 28-20-03,
Temporary Revision (TR) 12-01.

FAA Advisory Circular (AC) 43.13-1B Paragraph 11-97. Wiring replacement.

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L. Publications Affected

AMM, 28-20-03.

M. Interchangeability of Parts

Pre and Post Service Bulletin 28-009 fuel pumps are not interchangeable.

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2. Material Information

A. Material - Price and Availability

Operators should send orders for Service Bulletin modification kits, to:

PILATUS AIRCRAFT LTD,
CUSTOMER LIAISON MANAGER,
CH 6371 STANS, Tel: +41 41 619 65 09
SWITZERLAND Fax: +41 41 619 61 70

Modification Kit Number	Price	Availability
500.50.07.004	Contact address above	Contact address above

B. Material Necessary for Each Aircraft

(1) Material to be Procured

Modification Kit No. 500.50.07.004 consists these parts:

New Part No.	Description	Old Part No.	Qty	Disp. Code	Fig	Item
115.55.07.008	Gasket	115.55.07.008	2	D	N/A	N/A
917.96.91.102	1/8 in. Spiral Wrap, PTFE	N/A	2800 mm	N/A	1	1
917.96.91.101	1/4 in. Spiral Wrap, PTFE	N/A	1400 mm	N/A	1	2
946.91.27.210	Packing, Preformed	946.91.27.210	2	D	N/A	N/A
946.91.27.310	Packing, Preformed	946.91.27.310	26	D	N/A	N/A
946.91.27.722	Packing, Preformed	946.91.27.722	2	D	N/A	N/A

Disposition Codes: D - Discard / R - Return to Pilatus

The quantity of items supplied in the Modification Kit is sufficient for the left and the right fuel pump procedures.

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C. Material Necessary for Each Spare

(1) Material to be Procured

New Part No.	Description	Old Part No.	Qty	Disp. Code	Fig	Item
917.96.91.102	1/8 in. Spiral Wrap, PTFE	N/A	1400 mm	N/A	1	1
917.96.91.101	1/4 in. Spiral Wrap, PTFE	N/A	700 mm	N/A	1	2

Disposition Codes: D - Discard / R - Return to Pilatus

Operators should send orders for Spiral Wrap, to their Authorized Pilatus Service Center, or to:

PILATUS AIRCRAFT LTD,
CUSTOMER LIAISON MANAGER,
CH 6371 STANS, Tel: +41 41 619 65 09
SWITZERLAND Fax: +41 41 619 61 70

D. Reidentified Parts

- (1) Reidentify the fuel pump Part No. 968.84.11.401, 968.84.11.403 or 968.84.11.404 when this Service Bulletin is done. Use a stamp or vibropen to put the letter B immediately after the Serial Number on the fuel pump Identification-plate.

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E. Fuel Pump Identification and Configuration

Description	Type Part No.	Serial No. - Suffix	Pilatus Part No.	Remarks
Fuel Booster Pump	RR53710B		968.84.11.401	
Fuel Booster Pump	RR53710B	R1 and/or R2 or Ser. No. B3926 and above	968.84.11.403	-Post Lear Romec SB RR 53710B-20-001 (supersedes SB5602) -Post Pil. PC-7 SB 28-002 (supersedes Pil. P/N: 968.84.11.401)
Fuel Booster Pump	RR53710B	B	968.84.11.401 or 968.84.11.403	-Post Pil. PC-7 SB 28-009 (Retrofit in field)
Fuel Booster Pump	RR53710K		968.84.11.404	
Fuel Booster Pump	RR53710K	A	968.84.11.404	-Post Lear Romec SB RR 53710K-20-001 -Post Pil. PC-7 SB 28-004
Fuel Booster Pump	RR53710K	B	968.84.11.404	-Post Pil. PC-7 SB 28-009 (Retrofit in field)
Fuel Booster Pump	RR53710L	NO MODIFICATION REQUIRED	968.84.11.405	-Post Lear Romec SB RR 53710K-20-002 and RR 53710K-20-003 (Rework of K version - wires at the bottom) (supersedes Pil. P/N: 968.84.11.404)
Fuel Booster Pump	RR53710M	NO MODIFICATION REQUIRED	968.84.11.406	-Post Lear Romec SB RR 53710B-20-002 (Rework of B version - wires at the top) (supersedes Pil. P/N: 968.84.11.403)

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3. Accomplishment Instructions - Aircraft

WARNING: BE CAREFUL WHEN YOU DO WORK IN AN AREA WHERE THERE IS POSSIBLY A FUEL AND AIR MIXTURE. FUEL AND AIR MIXTURES ARE EXPLOSIVE.

WARNING: DO NOT LET UNWANTED MATERIAL GO INTO THE AIRCRAFT FUEL SYSTEM. CONTAMINATION OF THE FUEL SYSTEM CAN CAUSE DAMAGE AND/OR CORROSION.

A. Preparation

- (1) Obey the safety precautions given in AMM, 28-00-00, Page Block 201.
- (2) Defuel the aircraft (Ref. AMM, 12-11-28, Page Block 301 and TR 12-01).
- (3) Remove the left and right fuel pumps (Ref. AMM, 28-20-03, Page Block 201).

B. Examination and Modification of the Fuel Pumps

- (1) Examine the fuel pumps
 - (a) For fuel pumps Part No. 968.84.11.401, 968.84.11.403 or 968.84.11.404. Examine the wires in accordance with FAA Advisory Circular (AC) 43.13-1B, Paragraph 11-97, Wiring replacement. If defects are found, send the fuel pump for repair to:

PILATUS AIRCRAFT LTD,
COMPONENT REPAIRS,
(TRAINER AIRCRAFT) MANAGER,
CH6371 STANS, Tel: +41 (41) 619 6904
SWITZERLAND, Fax: +41 (41) 619 6294

- (2) If there are no defects to the leads, do Step C. to install the lead protection.

C. Installation of the Lead Protection (Ref. Fig. 1)

This procedure is the same for the left and the right fuel pump.

- (1) Unwind the fuel-pump lead (the black wire and the white wire) to isolate the wires. Hold the wires in this position.

CAUTION: MAKE SURE THAT YOU DO NOT CAUSE DAMAGE TO THE FUEL PUMP WIRES WHEN YOU CUT THE SPIRAL WRAP.

- (2) Install the spiral wrap on each wire:
 - (a) For a wire with no splice. Wind spiral wrap (1) around the full length of the wire. Twist the spiral wrap (1) to make sure there are no gaps and cut the spiral wrap (1).
 - (b) For a wire with a splice. Wind spiral wrap (1) around the wire between the edge of the shrink wrap and the end of the wire. Twist the spiral wrap (1) to make sure there are no gaps and cut the spiral wrap (1). Do this for each side of the splice.
- (3) Release the black wire and the white wire.
- (4) Wind the spiral wrap (2) around the full length of the black wire and the white wire. Twist the spiral wrap (2) to make sure there are no gaps and cut the spiral wrap (2).

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- (5) Reidentify the fuel pump Part No. 968.84.11.401, 968.84.11.403 or 968.84.11.404 when this Service Bulletin is done. Use a stamp or vibropen to put the letter B immediately after the Serial Number on the fuel pump Identification plate.

D. Close up

Do not install Pre-Service Bulletin 28-009 fuel pumps Part No. 968.84.11.401, 968.84.11.403 or 968.84.11.404.

- (1) Install the left and right fuel pumps (Ref. AMM, 28-20-03, Page Block 201). Use the revised installation procedure (TR 28-02 attached to this Service Bulletin).
- (2) Make sure the work area is clean and clear of tools and other items.

E. Documentation

- (1) Make an entry in the Aircraft Logbook to show this Service Bulletin has been incorporated.

4. Accomplishment Instructions - Spares

A. Examination and Modification of the Fuel Pumps (Ref. Fig. 1)

- (1) Examine the fuel pumps
- (a) For fuel pumps Part No. 968.84.11.401, 968.84.11.403 or 968.84.11.404. Examine the wires in accordance with FAA Advisory Circular (AC) 43.13-1B, Paragraph 11-97, Wiring replacement. If defects are found, send the fuel pump for repair to:

PILATUS AIRCRAFT LTD,
COMPONENT REPAIRS,
(TRAINER AIRCRAFT) MANAGER,
CH6371 STANS, Tel: +41 (41) 619 6904
SWITZERLAND, Fax: +41 (41) 619 6294

- (2) If there are no defects to the lead, install the lead protection
- (a) Unwind the fuel-pump lead (the black wire and the white wire) to isolate the wires. Hold the wires in this position.

CAUTION: MAKE SURE THAT YOU DO NOT CAUSE DAMAGE TO THE FUEL PUMP WIRES WHEN YOU CUT THE SPIRAL WRAP.

- (3) Install the spiral wrap on each wire:
- (a) For a wire with no splice. Wind spiral wrap (1) around the full length of the wire. Twist the spiral wrap (1) to make sure there are no gaps and cut the spiral wrap (1).
- (b) For a wire with a splice. Wind spiral wrap (1) around the wire between the edge of the shrink wrap and the end of the wire. Twist the spiral wrap (1) to make sure there are no gaps and cut the spiral wrap (1). Do this for each side of the splice.
- (4) Release the black wire and the white wire.
- (5) Wind the spiral wrap (2) around the full length of the black wire and the white wire. Twist the spiral wrap (2) to make sure there are no gaps and cut the spiral wrap (2).

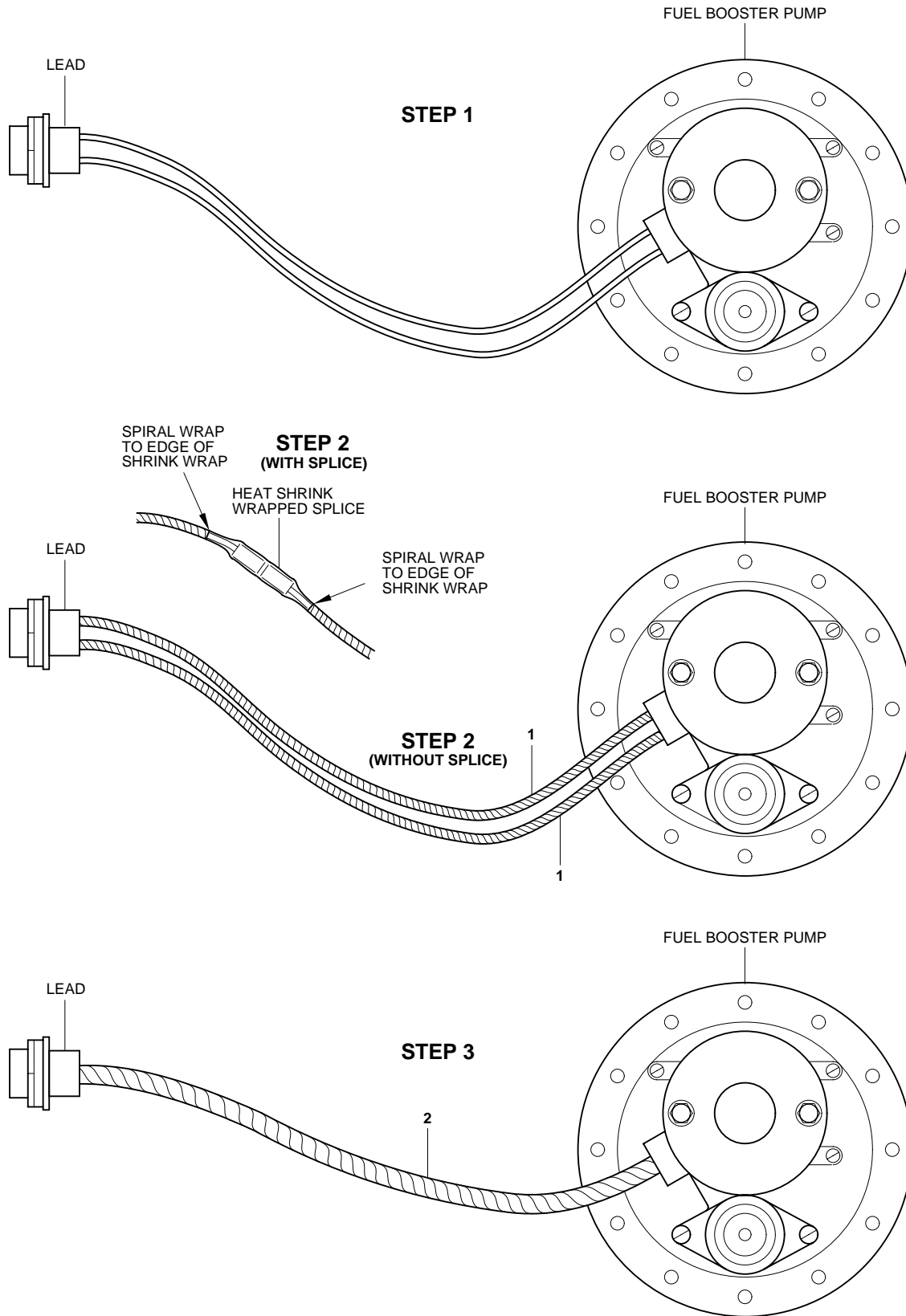
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- (6) Reidentify the fuel pump Part No. 968.84.11.401, 968.84.11.403 or 968.84.11.404 when this Service Bulletin is done. Use a stamp or vibropen to put the letter B immediately after the Serial Number on the fuel pump Identification plate.

B. Documentation

- (1) Make an entry in the spare parts inventory list that this modification has been incorporated.

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Lead Protection - Installation
Figure 1