

**Service Bulletin No: 24-009**  
**Modification No: INSPECTION**

**Ref No: 151**  
**ATA Chapter: 24**

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**ELECTRICAL POWER - GENERAL**  
**INSPECTION FOR CHAFING ON AN ELECTRICAL HARNESS IN THE ENGINE COMPARTMENT**

**1. Planning Information**

**A. Effectivity**

PC-7 Aircraft MSN 101 thru 618.

**B. Concurrent Requirements**

None.

**C. Reason**

**(1) Problem**

An operator has reported signs of chafing on a wiring harness attached to the engine mounting frame on the RH side of the engine compartment. If an electrical cable becomes chafed through the insulation, a short circuit could cause a fire in the engine compartment.

**(2) Cause**

The RH flexible duct for the condenser unit can chafe against the wiring harness.

**(3) Solution**

Do an inspection of the wiring harness, and the flexible duct, for damage. If major damage is found, replace parts as necessary. If minor chafing damage is found, install a protective sleeve on the wiring harness.

**D. Description**

This Service Bulletin gives the data and instructions necessary to examine the wiring harness and flexible duct for chafing, and replace or repair as necessary.

**E. Compliance**

Mandatory.

Accomplishment required not later than 90 days after the issue date of this Service Bulletin.

**F. Approval**

The technical content of this Service Bulletin is approved under the authority of Letter of DOA Acceptance ref. FOCA.21J.002.

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**

	<b>Man-Hours (No replacement required)</b>	<b>Man-Hours (Replacement required)</b>
Preparation	1.0	1.0
Inspection	1.0	1.0
Replacement of Cables	-	8.0
Repair (Installation of Protective Sleeve)	1.0	-
Installation	1.0	1.0
Close up	1.0	1.0
<b>TOTAL MAN-HOURS</b>	<b>5.0</b>	<b>12.0</b>

**I. Weight and Balance****(1) Weight Change**

None.

**(2) Moment Change**

None.

**J. Electrical Load Data**

Not changed.

**K. Software**

Not changed.

**L. References**

Aircraft Maintenance Manual (AMM): 12-00-00, 20-31-00.

Aircraft Parts Catalog (IPC): 21-50-02.

**M. Publications Affected**

None.

**N. Interchangeability of Parts**

Not applicable.

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

No modification kit is necessary to do this Service Bulletin.

Operators who require further information on price and availability should contact their Customer Liaison Manager at Pilatus Aircraft Ltd., 6371 Stans, Switzerland.

Operators are requested to advise Pilatus Aircraft Ltd, using the Service Bulletin Evaluation Sheet, of the Manufacturer's Serial Number (MSN) and the flying hours of aircraft which are allocated for this Service Bulletin.

**B. Material Necessary for Each Aircraft****(1) Operator Supplied Materials (Ref. AMM 20-31-00-00)**

<b>MATERIAL/ PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>REMARKS</b>
P01-011	SOLVENT, ISOPROPYL ALCOHOL	A/R	
P02-031	ABSORBENT PAPER	A/R	
P09-004	KOROSEAL BINDING	A/R	
P09-020	TAPE, GLASS FIBER	A/R	If required
P09-017	CABLE TIES, HEAT-RESISTANT	A/R	If required
917.96.92.154	PROTECTIVE SLEEVE	A/R	If required

**NOTE:** Pilatus P/Ns are given for materials not included in AMM 20-31-00 at the time of Service Bulletin approval.

**C. Material Necessary for Each Spare**

None.

**D. Re-identified Parts**

None.

**E. Tooling - Cost and Availability**

Not applicable.

**3. Accomplishment Instructions**

**WARNING:** BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. THEY ARE DANGEROUS AND CAN CAUSE INJURY. ALWAYS OBEY THE MANUFACTURERS HEALTH AND SAFETY INSTRUCTIONS.

**A. Preparation**

Open the engine cowlings (access panels ENG 3L and ENG 3R) (Ref. AMM 12-00-00, Page Block 1).

**B. Inspection (Ref. Fig. 1)**

- (1) Loosen the hose clamp at one end of the flexible duct.

**NOTE:** You can do this at the end that is most easy for access.

- (2) Disconnect and move the flexible duct away from the inspection area.

**NOTE:** The flexible duct installation is shown in IPC 21-50-02, Fig. 02.

- (3) Do a visual inspection of the flexible duct for chafing damage. If you find damage that makes the flexible duct unserviceable, remove and discard the flexible duct.
- (4) Use absorbent paper (Material No. P02-031) made moist with solvent (Material No. P01-011) to clean the harness in the area to be inspected.
- (5) Use a bright light source and mirror to do a visual inspection of the harness for chafing damage.
- (6) If you find chafing on the harness and you can see bare wires under the insulation you must replace the damaged electrical cable(s):
  - (a) Send details/photographs of the damaged cable(s) to this address to get replacement data:

PILATUS AIRCRAFT LTD.,  
Customer Technical Support (MCC),  
P.O. Box 992,  
6371 Stans, Switzerland  
Fax: + 41 (0)41 619 67 73  
Email: Techsupport@pilatus-aircraft.com
  - (b) After replacement of the damaged cable(s), continue with the procedure given in Para D, Installation.
- (7) If you find chafing on the harness but you cannot see bare wires under the insulation, continue with the procedure given in Para C, Repair.
- (8) If you find no chafing continue with the procedure given in Para D, Installation.

**C. Repair (Ref. Fig. 2)**

- (1) Remove the harness clamps and move the harness away from the engine mounting frame.
- (2) Use absorbent paper (Material No. P02-031) made moist with solvent (Material No. P01-011) to clean the harness where you will install the protective sleeve.
- (3) Make sure there are no cable ties around the harness where the protective sleeve is to be installed. Remove cable ties as necessary.
- (4) Cut a piece of the protective sleeve (P/N 917.96.92.154) long enough to cover the chafed area plus an additional 45 mm (1.75 in.) at each end. When you cut the protective sleeve:
  - (a) Use sharp scissors to cut the sleeve to the correct length. Make sure the cut is straight.
  - (b) Pull all loose fibers away from the cut end(s) with your fingers and then remove the fibers with scissors.
  - (c) Make sure no more fibers can come loose.
- (5) Wrap glass fiber tape (Material No. P09-020) around the harness at the ends of the repair area (as shown on Figure 2).
- (6) Fold 20 mm (0.75 in.) at the two ends of the protective sleeve inwards to make a double layer.
- (7) Wrap the protective sleeve around the harness with the doubled ends located over the glass fiber tape.
- (8) Install a cable tie (Material No. P09-017) at the ends of the protective sleeve to hold it in place.
- (9) If necessary, install additional cable ties (Material No. P09-017) on the harness. You can install cable ties over the protective sleeve if required.
- (10) Install the harness clamps to attach the harness to the engine mounting frame.

**D. Installation (Ref. Fig. 1)**

- (1) Install the flexible duct and tighten the hose clamp(s).

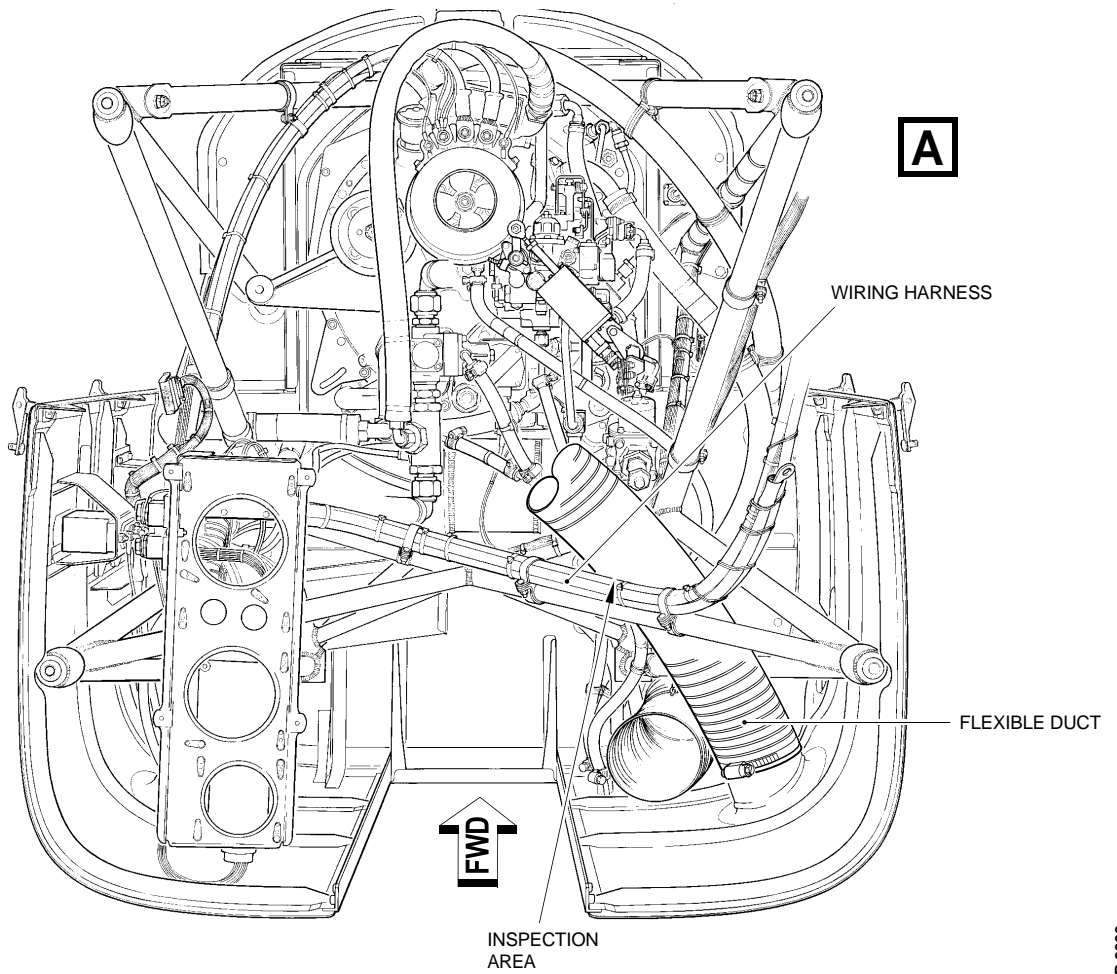
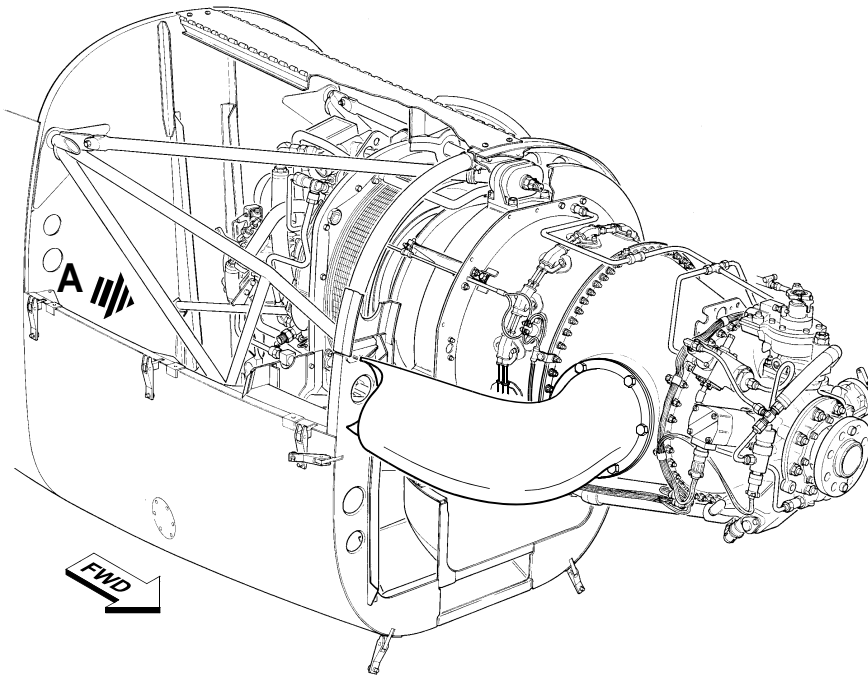
**NOTE:** The flexible duct installation is shown in IPC 21-50-02, Fig. 02.
- (2) Use Koroseal binding (Material No. P09-004), as required, to secure the flexible duct to the engine mounting frame. Do this to prevent movement of the flexible duct which could cause chafing.

**E. Job Close-Up**

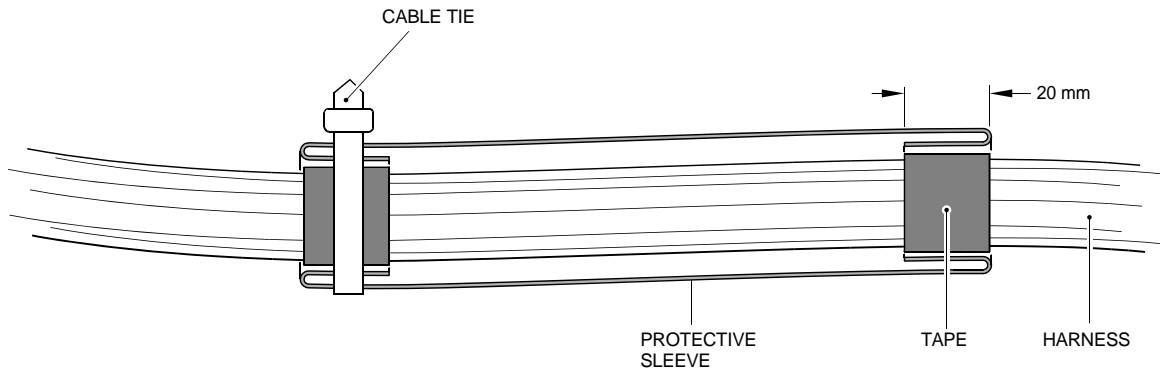
- (1) Remove all equipment, materials and tools from the work area. Make sure that the work area is clean.
- (2) Close the engine cowlings (access panels ENG 3L and ENG 3R).

**F. Documentation**

- (1) Make an entry in the Aircraft Logbook that this Service Bulletin has been incorporated.
- (2) Use the Service Bulletin Evaluation Sheet and report your results and the serial number of the aircraft to PILATUS.



Inspection  
Figure 1



Repair  
Figure 2

SB 2361



SERVICE BULLETIN EVALUATION SHEET FOR SB No. 24-009			
<b>Title</b>	Electrical Power - General Inspection for Chafing on an Electrical Harness in the Engine Compartment		
<b>Customer</b>			
<b>Service Center</b>			
EMBODIMENT REPORTING			
This SB has been embodied:		<input type="checkbox"/>	On the entire fleet
		<input type="checkbox"/>	Only partially
Provide embodiment details per aircraft (use additional copies of this table, if necessary)			
MSN	Flying Hours	MSN	Flying Hours
<b>Additional embodiment comments/findings</b>			
EDITORIAL COMMENTS (procedure, kit quality, suggested improvements, etc.)			
Name	Signature	Date	
Please complete and forward this form to: Pilatus Aircraft LTD, Customer Technical Support (MCC), P.O. BOX 992, 6371 Stans, Switzerland Fax: +41 (0)41 619 6773 Email: Techsupport@pilatus-aircraft.com			

**SERVICE BULLETIN EVALUATION SHEET**

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