

**Service Bulletin No: 57-017****Ref No: 183****Modification No: Inspection****ATA Chapter: 57**

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**WINGS - WING STRUCTURE****DO AN INSPECTION FOR CORROSION OF THE ANGLE BRACKETS INSTALLED ON THE LH AND RH WING MIDDLE RIB 23****1. Planning Information****A. Effectivity**

MSN 101 thru MSN 618.

**B. Concurrent Requirements**

None.

**C. Reason****(1) Problem**

An operator has reported that during a scheduled inspection corrosion was found on the angle brackets installed on the LH and RH wing middle rib 23.

The angle brackets are made of steel and during manufacture of the wing, anchor nuts are installed on them. The anchor nuts are for the installation of the aileron outboard-bearing supports. Two types of anchor nuts were used, silver-plated or cadmium plated.

It is possible that the silver-plated anchor nuts have caused the corrosion after being installed without corrosion preventative during manufacture of the wing.

**(2) Solution**

A borescope inspection is done for corrosion on the eight brackets installed on the LH and RH wing middle rib 23 around the area of the anchor nuts. The inspection will also identify what type of anchor nuts are installed, silver-plated or cadmium plated:

If silver-plated anchor nuts are identified:

- If corrosion is found on the brackets, the details of the corrosion will be reported to Pilatus
- If corrosion is not found, mandatory inspections (added to Chapter 5 of the Aircraft Maintenance Manual (AMM)) become applicable.

If cadmium-plated anchor nuts are identified:

- If corrosion is found on the brackets, the details of the corrosion will be reported to Pilatus
- If corrosion is not found, a layer of corrosion preventative will be applied to the brackets.

**D. Description**

This Service Bulletin gives the data and instructions necessary to:

- (1) Do the borescope inspection for corrosion on the eight brackets installed on the LH and RH wing middle rib 23 and identify the type of anchor nuts installed.
- (2) Do the recovery procedures dependent on the results of the borescope inspection.

**E. Compliance**

Mandatory.

Accomplishment required not later than 12 months after the effective 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 Borescope Inspection</b>	<b>Corrosion Preventative Application</b>
Preparation	0.50	-
Do the corrosion inspection with the borescope	0.50	-
If necessary, apply the corrosion preventative	-	0.50
Close-Up	0.50	-
<b>TOTAL MAN-HOURS</b>	<b>1.50</b>	<b>0.50</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, 20-40-01.

Tool and Equipment Manual (TEM): 20-40-01, 20-40-02.

**M. Publications Affected**

AMM: 05-10-20.

**N. Interchangeability of Parts**

Not applicable.

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

No modification kit is required for 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. of the Manufacturer's Serial Number (MSN), the flying hours and landings of aircraft which are allocated for this Service Bulletin using the Service Bulletin Evaluation Form.

**B. Material Necessary for Each Aircraft**
**(1) Material to be Procured**

None.

**(2) Operator Supplied Materials (Ref. AMM, 20-31-00):**

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
P01-010	SOLVENT	A/R	Or equivalent
P02-031	ABSORBENT PAPER	A/R	Or equivalent
P10-015	CPC ARDROX AV 30	A/R	Only required when corrosion not found to brackets with cadmium plated anchor nuts

**C. Material Necessary for Each Spare**

None.

**D. Re-identified Parts**

None.

**E. Tooling - Cost and Availability**

PART No.	DESCRIPTION	QTY	REMARKS
904.21.06.622	CORROSION TREATMENT EQUIPMENT, PUMP	1	TEM 20-40-01
904.21.06.623	CORROSION TREATMENT EQUIPMENT, PRESSURE CUP	1	TEM 20-40-02
-	BORESCOPE (MINIMUM X 10)	1	Local supply

PART No.	DESCRIPTION	QTY	REMARKS
-	ANGLE TUBE	1	Local supply to dimensions given in Fig. 1, Sheet 2

### 3. Accomplishment Instructions

**WARNING:** BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. OBEY THE MANUFACTURERS HEALTH AND SAFETY INSTRUCTIONS BEFORE.

#### A. Preparation

- (1) Put a warning sign "DO NOT OPERATE THE FLIGHT CONTROLS" in the front and rear cockpits.
- (2) Remove the LH (L 1) and RH (R 1) wing tip fairings (Ref. AMM, 12-00-00).
  - (a) Remove and keep the 18 screws that attach the wing tip fairing to the wing.
  - (b) Disconnect the position light electrical connector.
  - (c) Disconnect the bonding lead from the wing.
  - (d) Remove the wing tip fairing.

#### B. Inspection

- (1) Do a borescope inspection to find corrosion and to identify the type of anchor nuts on the brackets on the LH and RH middle ribs 23 (Ref. Fig. 1).

**NOTE:** Only personnel that are qualified and authorized by their delegated Airworthiness Authorities are allowed to do this test.

**NOTE:** Obey the manufacturer's instructions when you use the borescope for the inspection.

**NOTE:** You can identify what type of anchor nuts (5) or (6) are installed by the colour:

- The silver-plated anchor nuts (5) or (6) have a silver colour
- The cadmium-plated anchor nuts (5) or (6) have a yellow/bronze colour.

**NOTE:** If you find corrosion, you must replace the brackets (Ref. Service Bulletin 57-018).

- (a) Do the borescope inspection of these outboard brackets through the aft lightening hole in the end rib 25 (Ref. Detail A):
  - Angle bracket LH (1)
  - Angle bracket RH (2)
  - Channel bracket LH (3)
  - Channel bracket RH (4).
- (b) Do the borescope inspection to these forward inboard brackets through the 2nd to aft lightening hole in the end rib 25 (Ref. Detail D):
  - Channel bracket LH (9)
  - Channel bracket RH (10).

- (c) Do the borescope inspection to these aft inboard brackets through the 2nd to aft lightening hole in the end rib 25 (Ref. Detail D):

- Angle bracket LH (7)
- Angle bracket RH (8).

Use the angle tube (Local supply) with the borescope probe to direct the probe towards the aft brackets (Ref. Detail E).

- (2) Do the recovery procedures dependent on the results of the borescope inspections you did in Step 3.B.(1).

**WARNING:** BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. OBEY THE MANUFACTURERS HEALTH AND SAFETY INSTRUCTIONS BEFORE.

- (a) If silver-plated anchor nuts are identified:

- If corrosion is found on the brackets, contact Pilatus and report the details of the corrosion
- If corrosion is not found, mandatory inspections (added to Chapter 5 of the Aircraft Maintenance Manual (AMM)) become applicable.

- (b) If cadmium-plated anchor nuts are identified:

- If corrosion is found on the brackets, contact Pilatus and report the details of the corrosion
- If corrosion is not found, apply a layer of CPC Ardrex AV 30 (Material No. P10-015) to the brackets, refer to Step 3.B.(2)(c).

- (c) Apply the CPC Ardrex AV 30 (Material No. P10-015) to the brackets.

- 1 Use the equipment that follows to apply the CPC Ardrex AV 30 (Material No. P10-015):

- The corrosion-treatment equipment pump (Ref. TEM 20-40-01)
- The corrosion-treatment equipment pressure cup (Ref. TEM 20-40-02)
- The angle tube (Local supply), as necessary to guide the rod nozzle to the application area.

**NOTE:** Use the rod nozzle of approximately 650 mm length on the corrosion-treatment equipment with the minimum spray opening angle, this will minimise the application of CPC outside the affected area.

- 2 Apply the CPC Ardrex AV 30 (Material No. P10-015) to the brackets (Ref. AMM, 20-40-01-201).

**NOTE:** When you apply the CPC to the inboard brackets, use a rod nozzle with a 90° angle, this will avoid the application of too much CPC to rib 22.

- (d) Do the inspection of the brackets again, refer to Step 3.B.(1), and make sure the application of CPC is sufficient (Ref. AMM, 20-40-01).

- (e) If necessary, apply the CPC again, refer to Step 3.B.(2)(c).

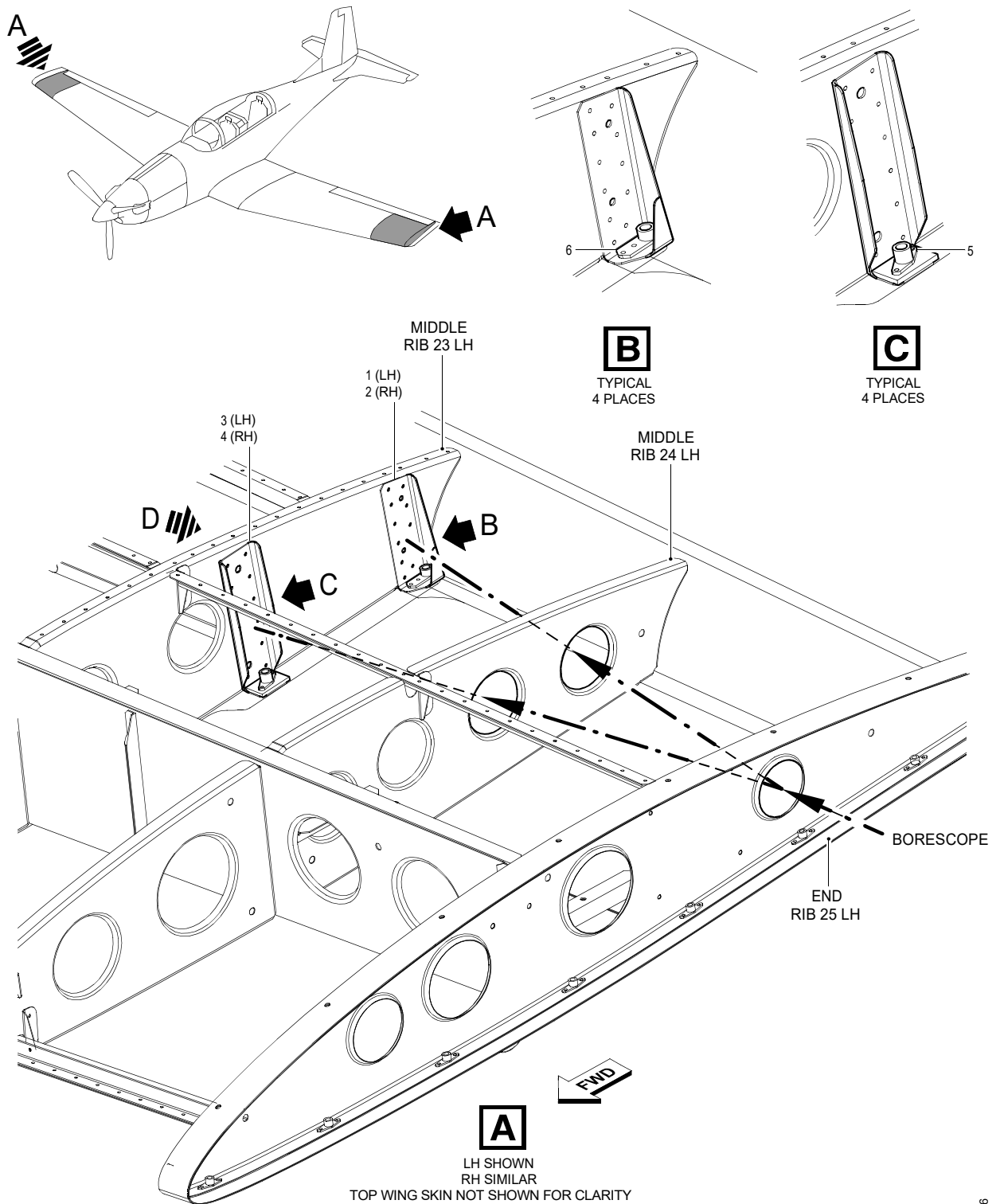
**C. Job Close-Up**

- (1) Remove all equipment, materials and tools from the work area. Make sure that the work area is clean.
- (2) Install the LH (L 1) and RH (R 1) wing tip fairings (Ref. AMM, 12-00-00).
  - (a) Put the wing tip fairing in position on the wing.
  - (b) Connect the bonding lead from the wing.
  - (c) Connect the position light electrical connector.
  - (d) Install the 18 screws that attach the wing tip fairing to the wing.
- (3) Remove the warning signs from the front and rear cockpits.

**D. Documentation**

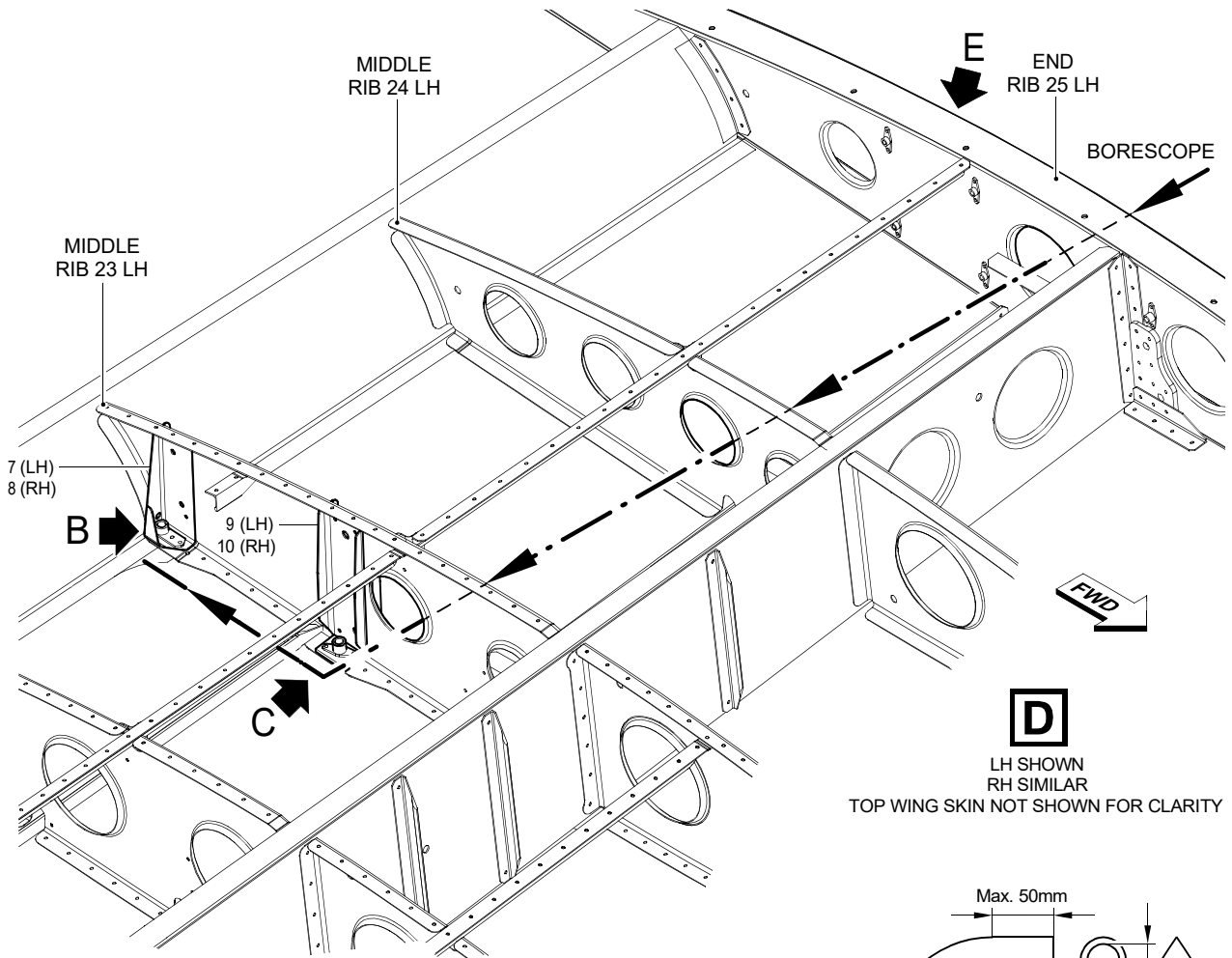
- (1) Make an entry in the Aircraft Logbook that this Service Bulletin has been incorporated.
- (2) Use the Service Bulletin Evaluation Sheet and report your results and the serial number of the aircraft to Pilatus.



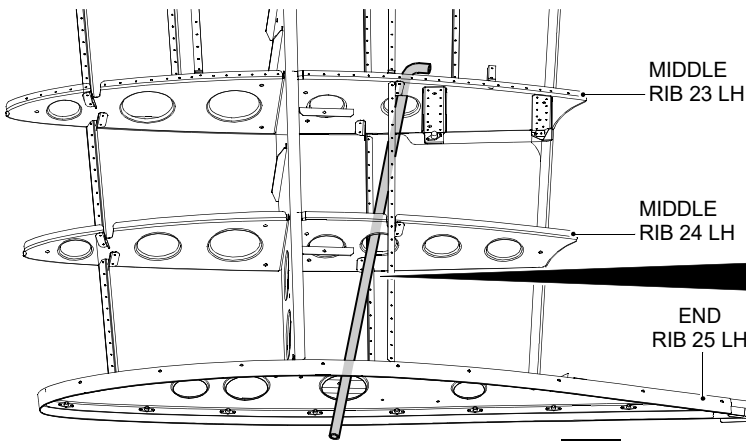


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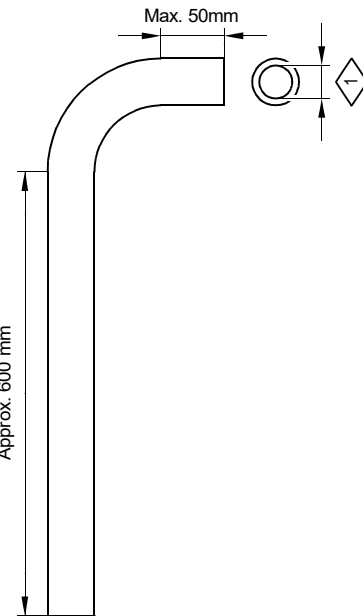
Boreoscope Inspection of the LH and RH Wing Middle Ribs 23  
Figure 1 (Sheet 1 of 2)



**D**  
LH SHOWN  
RH SIMILAR  
TOP WING SKIN NOT SHOWN FOR CLARITY



**E**  
LH SHOWN  
RH SIMILAR  
TOP WING SKIN NOT SHOWN FOR CLARITY



NOTE:

1 BETWEEN 1.5x AND 2x DIAMETER OF BORESCOPE PROBE.

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Borescope Inspection of the LH and RH Wing Middle Ribs 23  
Figure 1 (Sheet 2 of 2)

<b>SERVICE BULLETIN EVALUATION SHEET FOR SB No. 57-017</b>			
<b>Title</b>	<b>Wings - Wing Structure</b> <b>Do an Inspection for Corrosion of the Angle Brackets Installed on the LH and RH Wing Middle Rib 23</b>		
<b>Customer</b>			
<b>Service Center</b>			
<b>EMBODIMENT REPORTING</b>			
<b>This SB has been embodied:</b>		<input type="checkbox"/>	<b>On the entire fleet</b>
		<input type="checkbox"/>	<b>Only partially</b>
<b>Provide embodiment details per aircraft (use additional copies of this table, if necessary)</b>			
<b>MSN</b>	<b>Flying Hours</b>	<b>MSN</b>	<b>Flying Hours</b>
<b>Additional embodiment comments/findings</b>			
<b>EDITORIAL COMMENTS</b>			
<b>(procedure, kit quality, suggested improvements, etc.)</b>			
<b>Name</b>	<b>Signature</b>	<b>Date</b>	
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**SERVICE BULLETIN EVALUATION SHEET**

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