

Service Bulletin No: 71-001

Ref No: 94

Modification No:

ATA Chapter: 71

**POWER PLANT - GENERAL
ONE-TIME INSPECTION FOR THE CORRECT INSTALLATION OF ATTACHMENT HARDWARE****1. Planning information****A. Effectivity**

PC-24 aircraft MSN 101 thru MSN 162, MSN 164 and MSN 165, and MSN 167 and MSN 168.

This inspection has been incorporated on MSN 163, MSN 166 and MSN 169 thru MSN 182 during production.

This inspection will be incorporated on MSN 183 and subsequent during production.

B. Concurrent requirements

None.

C. Reason**(1) Problem**

During a scheduled maintenance inspection it was reported that there was incorrectly installed attachment hardware in the engine and nacelle area:

- (a) The four attachment bolts for the LH aft isolator assembly were found to have washers missing below the bolt heads. Small damage marks were also found around the edge of the bolt holes on the LH rear engine beam plug due to the bolt head radius being forced into the edge of the bolt holes as they were tightened.
- (b) Some of the keeper fitting attachment bolts on the LH/RH middle inner nacelle were found to have insufficiently tightened nuts.

(2) Solution

- (a) Do a one-time inspection for missing washers at the attachment bolts for the LH and RH rear engine beam plug to aft isolator assembly. Due to the inspection on the rear engine beam, an inspection on the LH and RH front engine beam to yoke attachment is also necessary.

If the inspection finds that a washer is missing:

- Do an inspection for damage around the bolt hole
- Replace the bolt and install a new washer.

- (b) Do a one-time inspection for loose nuts at the keeper fitting attachment bolts on the LH/RH middle inner nacelle.

If the inspection finds loose nuts, tighten/replace the nuts.

D. Description

This Service Bulletin gives the data and instructions necessary to do an inspection for incorrectly installed attachment hardware at the:

- LH/RH front and rear engine beams
- LH/RH middle inner nacelles.

E. Compliance

Mandatory.

At the next 12 month inspection, but not later than 13 months from the issue date of this Service Bulletin.

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 designated Airworthiness Authority for any changes, local regulations or sanctions that may affect the embodiment of this Service Bulletin.

G. Copyright and legal statement

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H. Manpower**(1) Inspection**

Description	Man-Hours
Preparation	1.00
Inspection	0.25
Requirements after job completion	1.00
TOTAL MAN-HOURS	2.25

(2) Replacement (If necessary)

NOTE 1: The Man-Hours given are per washer/bolt replacement.

Description	Man-Hours
Preparation	0.75
Shut-off valve removal (If necessary)	0.50
Replacement	1.00 (See NOTE 1 above)
Shut-off valve installation (If removed)	0.50
Close up	1.00
Engine run (If shut-off valve removed/installed)	0.75
TOTAL MAN-HOURS	4.50

NOTE 2: Man-hours do not include the time necessary to cure sealants, paints and adhesives.

I. Weight and balance

Not changed.

J. Electrical load change data

Not changed.

K. Software

Not changed.

L. References

Aircraft Maintenance Manual (AMM):

PC24-A-A00-50-0000-00A-070A-A	PC24-A-A06-40-0000-00A-040A-A
PC24-A-E20-10-0003-00A-913A-A	PC24-A-E20-10-0004-00A-913A-A
PC24-A-E20-20-0001-00A-040A-A	PC24-A-E24-00-0000-00A-913A-A
PC24-A-E36-10-0004-00A-520A-A	PC24-A-E36-10-0004-00A-720A-A
PC24-A-E71-10-0001-00A-520A-A	PC24-A-E71-10-0001-00A-720A-A.

Structural Repair Manual (SRM)

PC24-A-E51-20-0006-00A-353A-A.

Tools and Equipment Manual (TEM):

PC24-A-A00-00-0000-00A-060A-A.

M. Publications affected

None.

N. Interchangeability of parts

Not applicable.

2. Material information
A. Material - Price and availability

Operators that require additional information and/or Service Bulletin material can contact their authorized Pilatus Service Center, or Pilatus Customer Support on www.pilatus-aircraft.com → contact us.

NOTE: Part numbers given in this Service Bulletin are correct at the time of approval. Pilatus Aircraft Ltd reserves the right to change the part numbers as necessary. Part numbers of items delivered with a kit are correct when the kit is dispatched. This could lead to differences between those part numbers quoted in a Service Bulletin and a kit if parts are superseded. Operators are requested to check the Illustrated Parts Data (IPD) for delivered parts that differ from those listed in the Service Bulletin materials kit list.

Operators are requested to advise Pilatus Aircraft Ltd of the Manufacturers' Serial Number (MSN), the flying hours and landings of aircraft that are allocated for this Service Bulletin.

B. Warranty

Credit will be issued for parts and labour for all affected aircraft on approval of a warranty claim, provided the work is accomplished by an authorized Service Center within the compliance time given in Section 1.E on Page 2 of this Service Bulletin.

C. Material necessary for each aircraft
(1) Material to procure (If replacement necessary)

New part No.	Description	Old part No.	Qty	Disp. code	Fig	Item
LH/RH Rear engine beam						
571.20.24.005	Class 1 Bolt, .3750 Inch	-	AR	N	3	9
		571.20.24.005	AR	D	3	9
938.77.10.244	Washer, Csk 90°, Cres, Pass, 9.5*2.0	-	AR	N	3	10
940.17.02.520	Cotter Pin, Mon, 2.4*19.1	-	AR	N	3	12
		940.17.02.520	AR	D	3	12
LH/RH Front engine beam						
571.20.24.010	Class 1 Bolt, .4375 Inch	-	AR	N	3	2
		571.20.24.010	AR	D	3	2
571.20.24.009	Washer	-	AR	N	3	3
940.17.02.520	Cotter Pin, Mon, 2.4*19.1	-	AR	N	3	7
		940.17.02.520	AR	D	3	7

Disposition Codes: D - Discard / N - New / R - Return to Pilatus / E - Exchange part

NOTE: If it is necessary to install a washer because it was missing, the bolt must also be replaced.

(2) Additional material to procure (If necessary)

New part No.	Description	Old part No.	Qty	Disp. code	Fig	Item
LH/RH Rear engine beam						
560.20.99.018	Nut, Hex, Crw, Cres, AG-PL, 9.5*10.7	-	AR	N	3	13
LH/RH Front engine beam						
560.20.99.012	Nut, Hex, Crw, Cres, D-Lub, 11.1*11.9	-	AR	N	3	6
LH/RH Middle inner nacelle						
938.09.14.204	Nut, 12 P, SLFLKG, NAS1805-4P, Cres	-	AR	N	1	3

Disposition Codes: D - Discard / N - New / R - Return to Pilatus / E - Exchange part

D. Operator supplied materials

NOTE: To identify the materials used in this procedure, look in the Consumable materials list. Refer to AMM PC24-A-A00-50-0000-00A-070A-A.

Material No.	Description	Qty	Remarks
P01-010	Solvent	AR	-
P02-041	Lint-free cleaning cloth	AR	-
P04-041	Aeroshell grease 58	AR	P/N 908.20.02.068

E. Material necessary for each spare

Not applicable.

F. Re-identified parts

Not applicable.

G. Tools and equipment

NOTE: To identify the AGE and tools used in this procedure, look in the list of Product support equipment, tools and software. Refer to TEM PC24-A-A00-00-0000-00A-060A-A.

Tools and equipment	Recommended Pilatus part
Tool kit, mechanic	Local supply
Safety clip(s) (P/N 110.88.07.065)	T12-001

3. Accomplishment instructions

WARNING: BE CAREFUL WHEN YOU REMOVE/OPEN THE NACELLES ON AN ENGINE THAT HAS BEEN IN OPERATION. THE NACELLES CAN BE HOT AND CAUSE INJURY TO PERSONNEL.

WARNING: DO NOT TOUCH THE ENGINE SURFACES AFTER ENGINE OPERATION. THE ENGINE SURFACES ARE HOT. THIS CAN CAUSE INJURY TO PERSONNEL.

A. Preparation

- (1) Obey the safe maintenance practices as necessary. Refer to AMM PC24-A-E20-10-0003-00A-913A-A.
- (2) On the ECB synoptic page, make sure that these ECBs are set to OUT. Refer to Table 1.

Table 1: ECBs set OUT

ECB name	EPDU
IGN 2 L	EPDU 4
IGN 2 R	EPDU 4

- (3) Make sure that these CBs are open and have a Safety clip (Tool No. T12-001) installed. Refer to Table 2.

Table 2: CBs opened

CB panel	Panel number	CB locator	CB name
Rear fuselage	PNL 3711	LC2	IGN 1 L
Rear fuselage	PNL 3711	LE1	IGN 1 R

- (4) If necessary, de-energize the aircraft electrical system. Refer to AMM PC24-A-E24-00-0000-00A-913A-A.
- (5) Open/Remove the access panels/fairings in Table 3. Refer to AMM PC24-A-A06-40-0000-00A-040A-A and PC24-A-E71-10-0001-00A-520A-A.

Table 3: Access panels/fairings to be opened/removed

Panel number	Panel name
331AB	Skin panel, FWD, lower LH
331CB	Skin panel, rear, lower LH
341AB	Skin panel, FWD, lower RH
341CB	Skin panel, rear, lower RH

Panel number	Panel name
412AB	Nacelle, middle, bottom, LH
422AB	Nacelle, middle, bottom, RH

B. Inspection

(1) LH/RH Middle inner nacelle. Refer to Figure 1

NOTE: The procedure to inspect for loose nuts on the LH and RH middle inner nacelle is the same.

- (a) Do an inspection to determine if the nuts (3) are sufficiently tightened on the four keeper fitting (2) attachment bolts (4) on the middle inner nacelle (1). Refer to Figure 1 (View C).
- (b) If you find that a nut (3) is not sufficiently tightened:
 - 1 Correctly install the nut (3). Use a new nut (3) (P/N 938.09.14.204) if necessary.
 - 2 Torque the nut (3) plus the run-down torque. Refer to AMM PC24-A-E20-20-0001-00A-040A-A.
- (c) Do the above inspection procedure on the other side of the aircraft.

(2) LH/RH Front and rear engine beam. Refer to Figure 2

NOTE: The procedure to inspect for missing washers on the LH and RH front and rear engine beam is the same.

- (a) Do an inspection to determine if washers are installed below the bolt heads (5) at the:
 - Four attachment points of the front engine beam (1) to yoke (2). Refer to Figure 2 (View B and D)
 - Four attachment points of the rear engine beam plug (4) to aft isolator assembly (3). Refer to Figure 2 (View C and D).
- (b) Do the above inspection procedure on the other side of the aircraft.
- (c) If you find that washers are not installed, continue with this Service Bulletin from Para. **3.C.**
- (d) If you find that all of the washers are installed, continue with this Service Bulletin from Para. **3.D.**

C. Replacement (If necessary)

WARNING: WHEN YOU REMOVE BOLTS FROM THE ENGINE BEAMS, YOU MUST ONLY REMOVE ONE BOLT AT A TIME. THIS WILL PREVENT INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

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

(1) Preparation

- (a) Open/Remove the access panels/fairings, as necessary, in Table 4. Refer to AMM PC24-A-A06-40-0000-00A-040A-A and PC24-A-E71-10-0001-00A-520A-A.

Table 4: Access panels/fairings to be opened/removed, as necessary

Panel number	Panel name
332AT	Fairing, front LH
332CB	Fairing, lower LH
332CT	Fairing, upper LH
342AT	Fairing, front RH
342CB	Fairing, lower, RH
342CT	Fairing upper, RH
412AT	Nacelle, middle, top, LH
412BB	Nacelle, middle, inner, LH
422AT	Nacelle, middle, top, RH
422BB	Nacelle, middle, inner, RH

(2) Front engine beam to yoke attachment points. Refer to Figure 3

NOTE: Due to the bolt (P/N 571.20.24.010) being installed without a washer below the bolt head, the bolt must also be replaced.

NOTE: The procedure to replace/install a bolt/washer at each of the attachment points on the LH and RH front engine beam is the same.

- (a) Remove and discard the cotter pin (7).
- (b) Remove the castellated nut (6), the three washers (5) and the bolt (2) that attach the front engine beam (1) to the yoke (4). Discard the bolt (2).
- (c) Use a clean lint-free cleaning cloth (Material No. P02-041) made moist with solvent (Material No. P01-010) and clean the area around the bolt hole.

- (d) Do an Eddy Current NDT inspection for damage around the bolt hole. Refer to SRM PC24-A-E51-20-0006-00A-353A-A.
 - 1 If you find damage, contact Pilatus Aircraft Ltd.
 - 2 If you do not find damage, continue from the next step below.
- (e) Apply a thin layer of aeroshell grease 58 (Material No. P04-041) on the shank and threads of a new bolt (2) (P/N 571.20.24.010).
- (f) Loosely install a new washer (3) (P/N 571.20.24.009), the new bolt (2), the three washers (5) and the castellated nut (6). Use a new castellated nut (6) (P/N 560.20.99.012) if necessary.
- (g) Torque the castellated nut (6) to between 487 and 540 in-lb (55 and 61 Nm) plus the run-down torque. Refer to AMM PC24-A-E20-20-0001-00A-040A-A.
- (h) Safety the castellated nut (6) with a new cotter pin (7) (P/N 940.17.02.520).
- (i) Do the above procedure again, as necessary, to install/replace a washer (3)/bolt (2) at any other applicable attachment point.

**(3) Rear engine beam plug to aft isolator assembly attachment points.
Refer to Figure 3**

NOTE: Due to the bolt (P/N 571.20.24.005) being installed without a washer below the bolt head, the bolt must also be replaced.

NOTE: The procedure to replace/install a bolt/washer at each of the attachment points on the LH and RH rear engine beam is the same.

- (a) If necessary, remove the LH/RH shut-off valve, as applicable. Refer to AMM PC24-A-E36-10-0004-00A-520A-A.
- (b) Remove and discard the cotter pin (12).
- (c) Remove the castellated nut (13), the three washers (11) and the bolt (9) that attach the rear engine beam (8) to the aft isolator assembly (14). Discard the bolt (9).
- (d) Use a clean lint-free cleaning cloth (Material No. P02-041) made moist with solvent (Material No. P01-010) and clean the area around the bolt hole.
- (e) Do an Eddy Current NDT inspection for damage around the bolt hole. Refer to SRM PC24-A-E51-20-0006-00A-353A-A.
 - 1 If you find damage, contact Pilatus Aircraft Ltd.
 - 2 If you do not find damage, continue from the next step below.
- (f) Apply a thin layer of aeroshell grease 58 (Material No. P04-041) on the shank and threads of a new bolt (9) (P/N 571.20.24.005).
- (g) Loosely install a new washer (10) (P/N 938.77.10.244), the new bolt (9), the three washers (11) and the castellated nut (13). Use a new castellated nut (13) (P/N 560.20.99.018) if necessary.

- (h) Torque the castellated nut (13) to between 194.7 and 256.7 in-lb (22 and 29 Nm) plus the run-down torque. Refer to AMM PC24-A-E20-20-0001-00A-040A-A.
- (i) Safety the castellated nut (13) with a new cotter pin (12) (P/N 940.17.02.520).
- (j) Do the above procedure again, as necessary, to install/replace a washer (10)/bolt (9) at any other applicable attachment point.
- (k) If removed, install the shut-off valve(s). Refer to AMM PC24-A-E36-10-0004-00A-720A-A.

NOTE: If it is necessary to install the shut-off valve, a leak check and engine run will also be necessary. Make sure that you close/install the access panels/ fairing in Table 5 below before you do the engine run.

(4) Close up

- (a) Close/Install the access panels/fairings (if removed) in Table 5. Refer to AMM PC24-A-A06-40-0000-00A-040A-A and PC24-A-E71-10-0001-00A-520A-A.

Table 5: Access panels/fairings to be closed/installed (If removed)

Panel number	Panel name
332AT	Fairing, front LH
332CB	Fairing, lower LH
332CT	Fairing, upper LH
342AT	Fairing, front RH
342CB	Fairing, lower, RH
342CT	Fairing upper, RH
412AT	Nacelle, middle, top, LH
412BB	Nacelle, middle, inner, LH
422AT	Nacelle, middle, top, RH
422BB	Nacelle, middle, inner, RH

D. Requirements after job completion

- (1) Remove all the equipment, tools and materials from the work area. Make sure that the work area is clean.
- (2) Close/Install the access panels/fairings in Table 6. Refer to AMM PC24-A-A06-40-0000-00A-040A-A and PC24-A-E71-10-0001-00A-720A-A.

Table 6: Access panels/fairings to be closed/installed

Panel number	Panel name
412AB	Nacelle, middle, bottom, LH
422AB	Nacelle, middle, bottom, RH
331AB	Skin panel, FWD, lower LH
331CB	Skin panel, rear, lower LH (See note below)
341AB	Skin panel, FWD, lower RH
341CB	Skin panel, rear, lower RH (See note below)

NOTE: Access panels 331CB and 341CB must be kept open if an engine run is necessary.

- (3) Remove the safety clip and close these CBs. Refer to Table 7.

Table 7: Mechanical CB to be closed

CB panel	Panel number	CB locator	CB name
Rear fuselage	PNL 3711	└C2	IGN 1 L
Rear fuselage	PNL 3711	└E1	IGN 1 R

- (4) On the ECB synoptic page, set these ECBs to IN. Refer to Table 8.

Table 8: ECBs set to IN

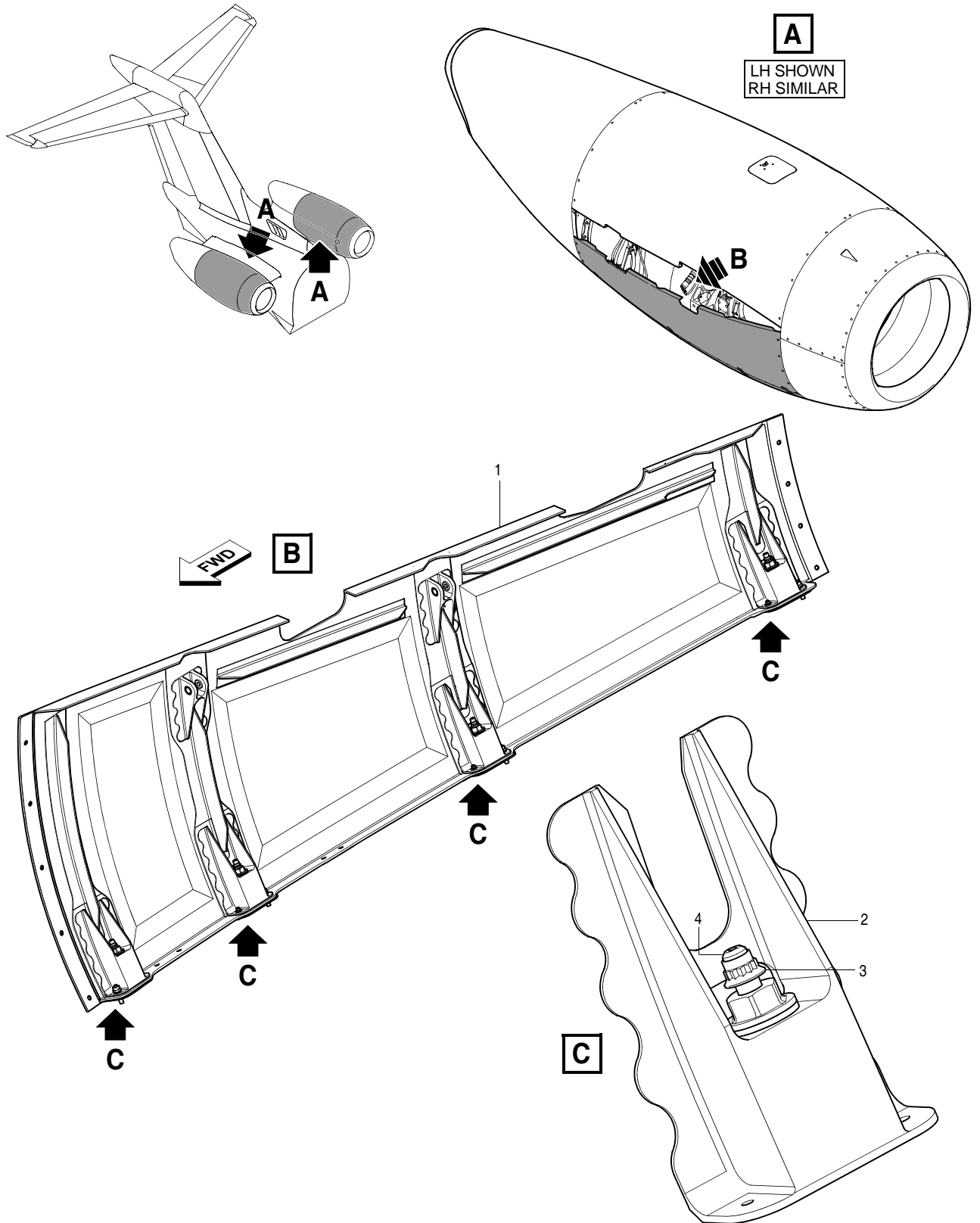
ECB name	EPDU
IGN 2 L	EPDU 4
IGN 2 R	EPDU 4

- (5) Do the Closeup practices. Refer to AMM PC24-A-E20-10-0004-00A-913A-A.

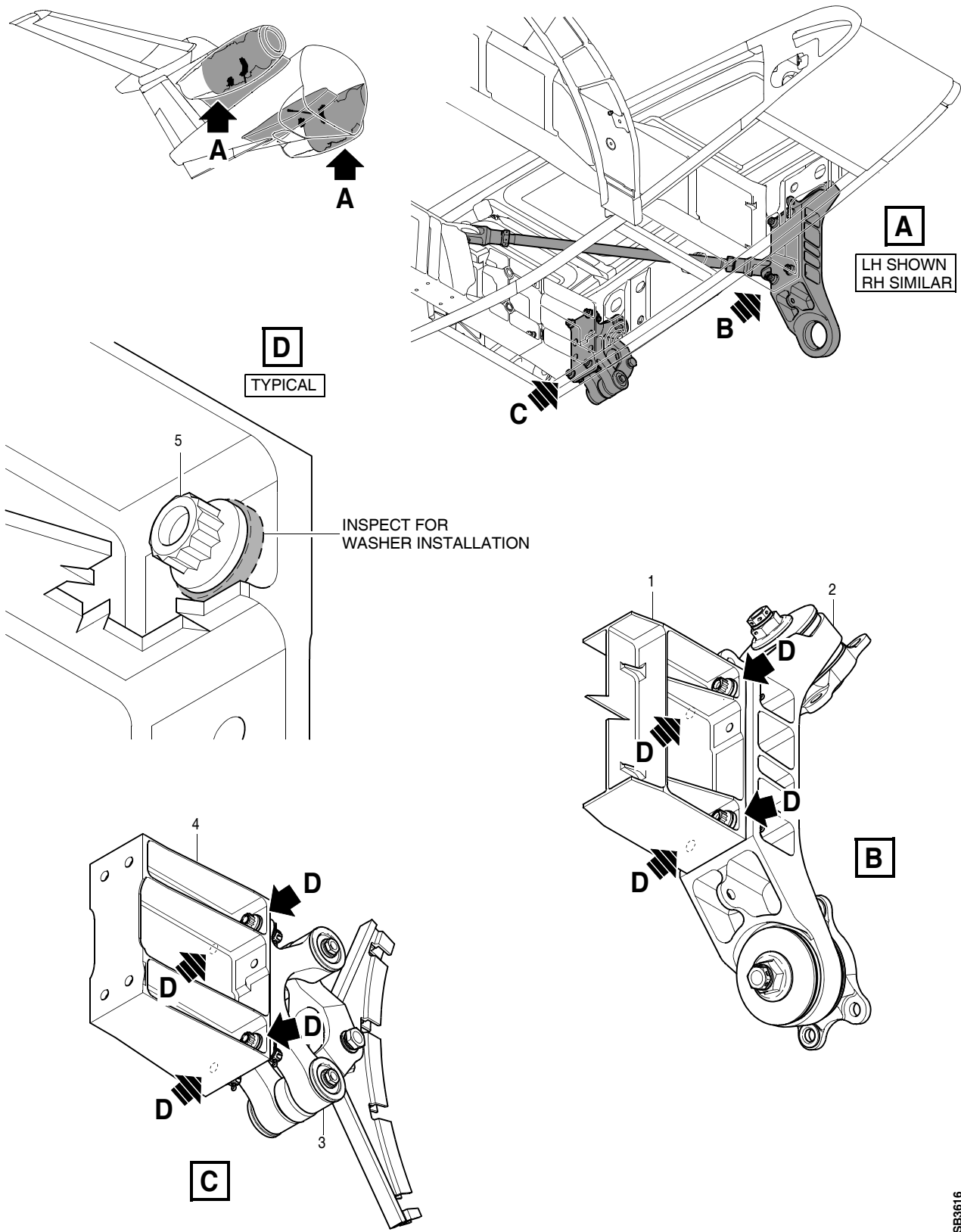
E. Documentation

- (1) Make an entry in the Aircraft Logbook to record the incorporation of this Service Bulletin.
- (2) Make sure that the Aircraft Logbook shows any new Pilatus Part Number(s) and/or Serial Number(s), as applicable.
- (3) Inform CAMP of the incorporation of this Service Bulletin and any new Pilatus Part Number(s) and/or Serial Number(s), as applicable. Send to: fax@campsystems.com
- (4) Send the completed feedback sheet with the serial number of the aircraft to Pilatus Aircraft Ltd Technical Support email: techsupport.ch@pilatus-aircraft.com

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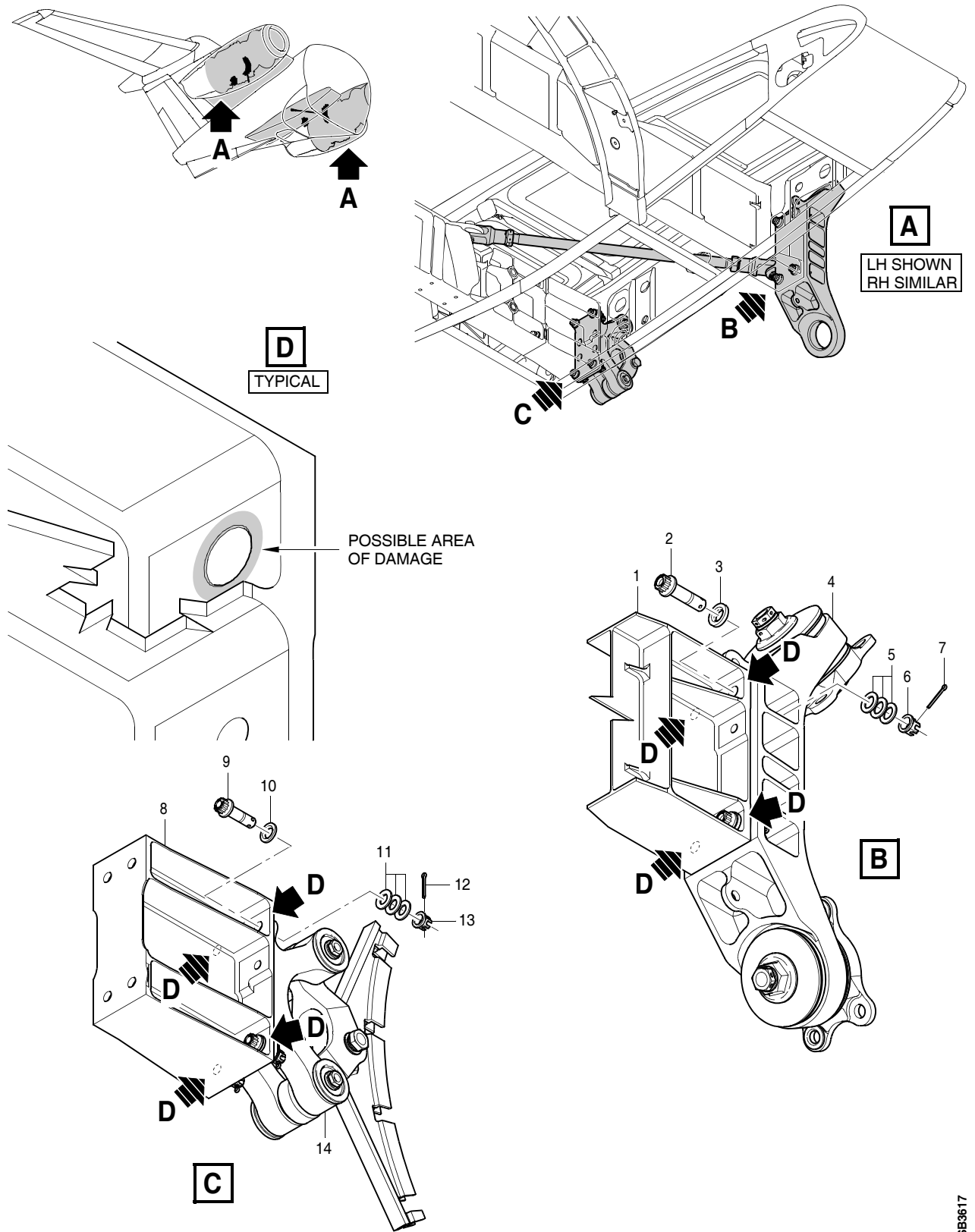


LH/RH Middle inner nacelle - Inspection for loose nuts
Figure 1



LH/RH Front and rear engine beams - Inspection for washer installation
Figure 2

SB3616



LH/RH Front and rear engine beams - Installation of the washer
Figure 3

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Feedback sheet for accomplishment of SB 71-001

The purpose of this feedback sheet is to provide Pilatus with the current information on each individual PC-24 aircraft. Please complete the grey cells as appropriate using black ink and block letters.

Send the completed feedback sheet to **Pilatus Aircraft Ltd Technical Support**
 email: techsupport.ch@pilatus-aircraft.com

Aircraft MSN		Aircraft Registration		Total Airframe Hours	
Owner				Total Landings	
Operator					
Service Center					

Incorrectly Installed Attachment Hardware Found

Front Engine Beam to Yoke			Rear Engine Beam Plug to Aft Isolator Assembly		
Missing Washer	LH	RH	Missing Washer	LH	RH
Upper fwd	<input type="checkbox"/>	<input type="checkbox"/>	Upper fwd	<input type="checkbox"/>	<input type="checkbox"/>
Upper aft	<input type="checkbox"/>	<input type="checkbox"/>	Upper aft	<input type="checkbox"/>	<input type="checkbox"/>
Lower fwd	<input type="checkbox"/>	<input type="checkbox"/>	Lower fwd	<input type="checkbox"/>	<input type="checkbox"/>
Lower aft	<input type="checkbox"/>	<input type="checkbox"/>	Lower aft	<input type="checkbox"/>	<input type="checkbox"/>

LH Middle Inner Nacelle			RH Middle Inner Nacelle		
Loose Nut Found	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Loose Nut Found	<input type="checkbox"/> Yes	<input type="checkbox"/> No

<input type="checkbox"/> We have embodied/accomplished this SB	<input type="checkbox"/> Fully	<input type="checkbox"/> Partially
The undersigned confirms the accomplishment of this Service Bulletin		
Date of accomplishment	Name	Signature
Comments (procedure, kit quality, suggested improvements etc.)		

Feedback Sheet

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