

Service Bulletin No: 28-015

Ref No: 419

Modification No:

ATA Chapter: 28

**FUEL - STORAGE
APPLICATION OF CHROMATE CONVERSION COATING TO INWARD VENT VALVE****1. Planning Information****A. Effectivity**

PC-12/47E series aircraft MSN 1720, 2001 thru 2032, 2034 thru 2046 and 2048 that have installed inward vent valve (P/N 963.04.26.520) with supplier serial numbers listed at Para. 1.C.

Inward vent valves (P/N 963.04.26.520) that are held as spare and with affected serial numbers listed at Para. 1.C.

B. Concurrent Requirements

Vendor Service Bulletin, Pall Aerospace SB9337-01-29-01, latest revision.

C. Reason**(1) Problem**

The inward vent valve (P/N 963.04.26.520) installed in each wing has an electrical bonding conductive surface on the valve body. This conductive surface has a chromate conversion coating to protect it from corrosion. Some of these inward vent valves have been supplied to Pilatus by the vendor, PALL Aerospace, without the chromate conversion coating. The affected inward vent valve serial numbers are given below:

Inward vent valve serial numbers					
RF4-5627	RF10-4490	RF12-5335	RF12-5352	RG2-2350	RG6-1351
RF4-5628	RF10-4491	RF12-5336	RF12-5353	RG2-2351	RG6-1352
RF4-5630	RF10-7901	RF12-5337	RF12-5354	RG2-2354	RG6-1353
RF10-4471	RF10-7902	RF12-5339	RF12-5355	RG2-2355	RG6-1354
RF10-4472	RF10-7903	RF12-5340	RG2-2334	RG2-2356	RG6-1355
RF10-4473	RF10-4483	RF12-5341	RG2-2336	RG2-2357	RG6-1356
RF10-4474	RF10-4485	RF12-5342	RG2-2338	RG2-2358	RG6-1358
RF10-4475	RF10-4486	RF12-5343	RG2-2339	RG2-2360	RG6-1359
RF10-4476	RF10-4487	RF12-5344	RG2-2340	RG2-2333	RG6-1360
RF10-4477	RF11-8606	RF12-5345	RG2-2341	RG5-4985	RG6-1361

Inward vent valve serial numbers					
RF10-4478	RF11-8607	RF12-5346	RG2-2342	RG5-4988	RG6-1362
RF10-4480	RF12-5330	RF12-5347	RG2-2343	RG5-4989	RG6-1363
RF10-4482	RF12-5331	RF12-5348	RG2-2344	RG5-4992	-
RF10-4484	RF12-5332	RF12-5349	RG2-2346	RG5-4993	-
RF10-4488	RF12-5333	RF12-5350	RG2-2347	RG6-1349	-
RF10-4489	RF12-5334	RF12-5351	RG2-2348	RG6-1350	-

The table below shows affected inward vent valves as installed at production:

MSN	Inward vent valve serial number		MSN	Inward vent valve serial number	
	Left wing	Right wing		Left wing	Right wing
1720	RF4-5630	RF12-5330	2024	RF12-5339	RF12-5341
2001	RF4-5627	RF4-5628	2025	RF12-5346	RG2-2356
2002	RF10-4489	RF10-7902	2026	RF12-5345	RG2-2338
2003	RF10-7901	RF10-4488	2027	RG2-2344	RG2-2340
2004	RF10-4480	RF10-4491	2028	RG2-2334	RG2-2358
2005	RF10-4476	RF10-4490	2029	RG6-1355	RG6-1358
2006	RF10-4474	RF10-4471	2030	RG2-2354	RG2-2341
2007	RF10-4478	RF10-4472	2031	RG2-2343	RG2-2346
2008	RF10-7903	RF10-4475	2032	RG2-2336	RG2-2350
2009	RF10-4473	RF10-4484	2034	RG2-2348	RG2-2357
2010	RF10-4477	RF10-4482	2035	RG2-2339	RG2-2360
2011	RF12-5344	RF12-5348	2036	RG2-2342	RG2-2333
2012	RF10-4487	RF10-4485	2037	RG6-1363	RG6-1360
2013	RF11-8607	RF10-4486	2038	RG2-2355	RG2-2347
2014	RF12-5355	RF12-5352	2039	RG6-1356	RG6-1352
2015	RF12-5349	RF12-5350	2040	-	RG5-4992

MSN	Inward vent valve serial number		MSN	Inward vent valve serial number	
	Left wing	Right wing		Left wing	Right wing
2016	RF11-8606	RF10-4483	2041	RG6-1351	RG6-1353
2017	RF12-5347	RF12-5340	2042	RG6-1354	RG5-4993
2018	RF12-5332	RF12-5351	2043	RG6-1349	RG6-1350
2019	RF12-5335	RF12-5331	2044	RG5-4985	-
2020	RF12-5336	RF12-5354	2045	RG5-4989	RG5-4988
2021	RF12-5333	RF12-5353	2046	RG2-2351	RG6-1362
2022	RF12-5334	RF12-5342	2048	RG6-1361	RG6-1359
2023	RF12-5343	RF12-5337	-	-	-

(2) Solution

Application of a layer of Chromate Conversion Coating to the electrical bonding conductive surface of the affected inward vent valves by the embodiment of a Vendor Service Bulletin, PALL Aerospace SB9337-01-29-01.

D. Description

This Service Bulletin gives the data and instructions necessary to:

- Remove the affected inward vent valve
- Embody Vendor Service Bulletin, PALL Aerospace SB9337-01-29-01
- Install the modified inward vent valve.

E. Compliance

Mandatory.

To be incorporated at the next 1200 FH or 12 months scheduled inspection after the issue date of this Service Bulletin. These Tasks must be completed before 31st October 2021.

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.

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H. Manpower

Task	Man-hours for 1 inward vent valve	Man-hours for 2 inward vent valve
Preparation	0.5	1.0
Modification	0.25	0.5
Close up	0.75	1.5
TOTAL MAN-HOURS*	1.5	3.0

* If done at the 1200 FH/12 month scheduled inspection

I. Weight and Balance

Not changed.

J. Electrical Load Change Data

Not changed.

K. Software

Not changed.

L. References

Vendor Service Bulletin: PALL Aerospace SB9337-01-29-01

Aircraft Maintenance Manual (AMM):

12-C-28-10-03-00A-920A-A

M. Publications Affected

Not affected.

N. Interchangeability of Parts

One way interchangeable.

Pre-SB 28-015 inward vent valves with the affected serial numbers must not be installed in a post SB 28-015 aircraft.

2. Material Information

A. Material - Price and Availability

Operators that require additional information and/or Service Bulletin Material should 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 the kit if parts are superseded. Operators are requested to check the IPD for delivered parts which differ from those listed in the Service Bulletin Materials Kit List.

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 Para 1.E.

C. Material Necessary for Each Aircraft

(1) Material to be ordered from Pilatus Aircraft Ltd or purchase locally

New Part No.	Description	Old Part No.	Qty	Disp. Code	Fig	Item
946.91.27.318	SEAL, O-RING, MS29513-018		AR	N	-	-
		946.91.27.318	AR	D	-	-

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

D. Material Necessary for Each Spare

Refer to the Vendor Service Bulletin, Pall Aerospace SB9337-01-29-01, latest revision.

E. Re-identified Parts

Not applicable.

F. Tooling - Cost and Availability

Refer to the Vendor Service Bulletin, Pall Aerospace SB9337-01-29-01, latest revision

3. Accomplishment Instructions**A. Preparation**

- (1) Remove the left or right inward vent valve, as applicable, refer to AMM 12-C-28-10-03-00A-920A-A.

B. Modification

- (1) Apply a layer of chromate conversion coating to the inward vent valve in accordance with the procedure given in the Accomplishment Instructions of the Vendor Service Bulletin, Pall Aerospace SB9337-01-29-01, latest revision.

C. Close-up

- (1) Install the modified inward vent valve, refer to AMM 12-C-28-10-03-00A-920A-A.
- (2) Remove all the equipment, tools and materials from the work area. Make sure that the work area is clean.

D. 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 the Serial Number(s) of the modified inward vent valves and their location (left wing or right wing), 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 the completed feedback sheet to: fax@campsystems.com

NOTE: Show the serial numbers of the modified inward vent valves and their location (left wing or right wing) on the feedback sheet.






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 SB9337-01-29-01

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SERVICE BULLETIN

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	NAME:	DATE:	
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REVIEWED:	P Love	22/09/2020	 <small>Paul Love, Chief of Office of Airworthiness, DOA EASA: 211477 2020.10.01 15:10:24 +01'00'</small>
APPROVED:	E Bula	22/09/2020	 <small>Digitally signed by Eric C. Bula Date: 2020.10.01 10:23:13 +01'00'</small>

OEM/DOA	
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SPECIFICATION:	TRD-12-00013 ISS 06

OEM/DOA AGREEMENT/APPROVAL			
DEPARTMENT	NAME	DATE:	SIGNATURE



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REVISION TRANSMITTAL SHEET

Issue	Date	Pages Affected	Description of Change
1	22/09/2020	ALL	First issue.



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VALVE NON RETURN

1. PLANNING INFORMATION

A. Effectivity

- (1) The Valve, Non Return Pall Aerospace part number QA09337-01 ISS 1 (Pilatus part number 963.04.26.520). Affected valve serial numbers are listed below:

RF4-5627	RF10-4488	RF12-5331	RF12-5346	RG2-2340	RG2-2358	RG6-1355
RF4-5628	RF10-4489	RF12-5332	RF12-5347	RG2-2341	RG2-2360	RG6-1356
RF4-5630	RF10-4490	RF12-5333	RF12-5348	RG2-2342	RG2-2333	RG6-1358
RF10-4471	RF10-4491	RF12-5334	RF12-5349	RG2-2343	RG5-4985	RG6-1359
RF10-4472	RF10-7901	RF12-5335	RF12-5350	RG2-2344	RG5-4988	RG6-1360
RF10-4473	RF10-7902	RF12-5336	RF12-5351	RG2-2346	RG5-4989	RG6-1361
RF10-4474	RF10-7903	RF12-5337	RF12-5352	RG2-2347	RG5-4992	RG6-1362
RF10-4475	RF10-4483	RF12-5339	RF12-5353	RG2-2348	RG5-4993	RG6-1363
RF10-4476	RF10-4485	RF12-5340	RF12-5354	RG2-2350	RG6-1349	-
RF10-4477	RF10-4486	RF12-5341	RF12-5355	RG2-2351	RG6-1350	-
RF10-4478	RF10-4487	RF12-5342	RG2-2334	RG2-2354	RG6-1351	-
RF10-4480	RF11-8606	RF12-5343	RG2-2336	RG2-2355	RG6-1352	-
RF10-4482	RF11-8607	RF12-5344	RG2-2338	RG2-2356	RG6-1353	-
RF10-4484	RF12-5330	RF12-5345	RG2-2339	RG2-2357	RG6-1354	-

B. Description

This Service Bulletin provides notification for a rework of Valve, Non Return Pall Aerospace part number QA09337-01 ISS 1 (Pilatus part number 963.04.26.520) of the corrosion protective chromate conversion coating on the electrical bonding surface on the valve body that interfaces with the aircraft structure (wing rib). Rework action is described in Para 4 of this document.

C. Compliance

Valve serial numbers listed in this Service Bulletin shall be reworked in accordance with this service bulletin in conjunction with Pilatus Service Bulletin 28-015.



SERVICE BULLETIN

SB9337-01-29-01

D. Concurrent Requirements

For valves that are being reworked at Pilatus Service Centers, Pilatus Service Bulletin 28-015 is a concurrent requirement.

E. Reason

(1) Objective:

This service bulletin defines the rework application of the chromate conversion coating on the electrical bonding conductive surface on the valve body.

(2) Condition:

Some valves have been identified by the vendor (Pall Aerospace) with this chromate conversion coating omitted during manufacture.

(3) Cause:

Lack of discrete routing operation to apply this coating during equipment manufacture.

(4) Improvement:

Prevention of corrosion of bonding surface and sustain electrical bonding function.

(5) Substantiation:

Rework in accordance with this Service Bulletin will restore conformance of the valve to the certified standard.

F. Approval

Pilatus has reviewed and approved the changes in this service bulletin.

G. Manpower

Estimate 0.25 man-hour labour per valve to achieve accomplishment instructions.

H. Weight and Balance

Not changed.



SERVICE BULLETIN

SB9337-01-29-01

I. References

The data used to prepare this service bulletin include Pall Aerospace engineering document and drawing as follows:

Chromate Conversion Coating: In accordance with manufacturer's instructions
Installation drawing: QA09337-01 SHEET 2

Pilatus Service Bulletin: 28-015

J. Publications Affected

Not applicable.

K. Interchangeability

One way interchangeable.

A pre-Service Bulletin SB9337-01-29-01 Valve must not be installed in a post Service Bulletin SB9337-01-29-01 aircraft.

L. Software Accomplishment Summary

Not applicable.



SERVICE BULLETIN

SB9337-01-29-01

2. MATERIAL INFORMATION

A. Material and Availability

(1) Parts necessary to do this Service Bulletin:

Material	Availability
Scotch-Brite Type A or Abrasive Paper (320 grade)	Commercially available
Cloth, lint free	Commercially available
Solvent or Ethanol	Commercially available
Demineralised water	Commercially available
Brush, nylon (acid resistant)	Commercially available
Chromate Conversion Coating (CCC): Brush Alocrom® 1200 (Part A and B) Alternative trade names for this material: <ul style="list-style-type: none">• Bonderite M-CR Alocrom 1200 Brush• Alodine® 1200• Bonderite M-CR Alocrom 1200S AERO• Alodine® 1200S	Commercially available
Low tack masking tape Example: 3M™ 101E General Purpose Masking Tape	Commercially available

(2) Other Spare Parts:

Not applicable.

B. Industry Support Information

Not applicable.

C. Configuration Chart

There is no change to the Valve part number or revision status resulting from the application of this Service Bulletin.

D. Disposition of Parts

Valves installed on aircraft shall be reworked in accordance with this Service Bulletin.

E. Tooling - Price and Availability

None.

SERVICE BULLETIN

SB9337-01-29-01

3. ACCOMPLISHMENT INSTRUCTIONS

A. Identification of the conductive surface

The conductive surface on the valve is identified in Fig 1 and Fig 1A.

Fig 1. Location of the conductive surface on the valve body.

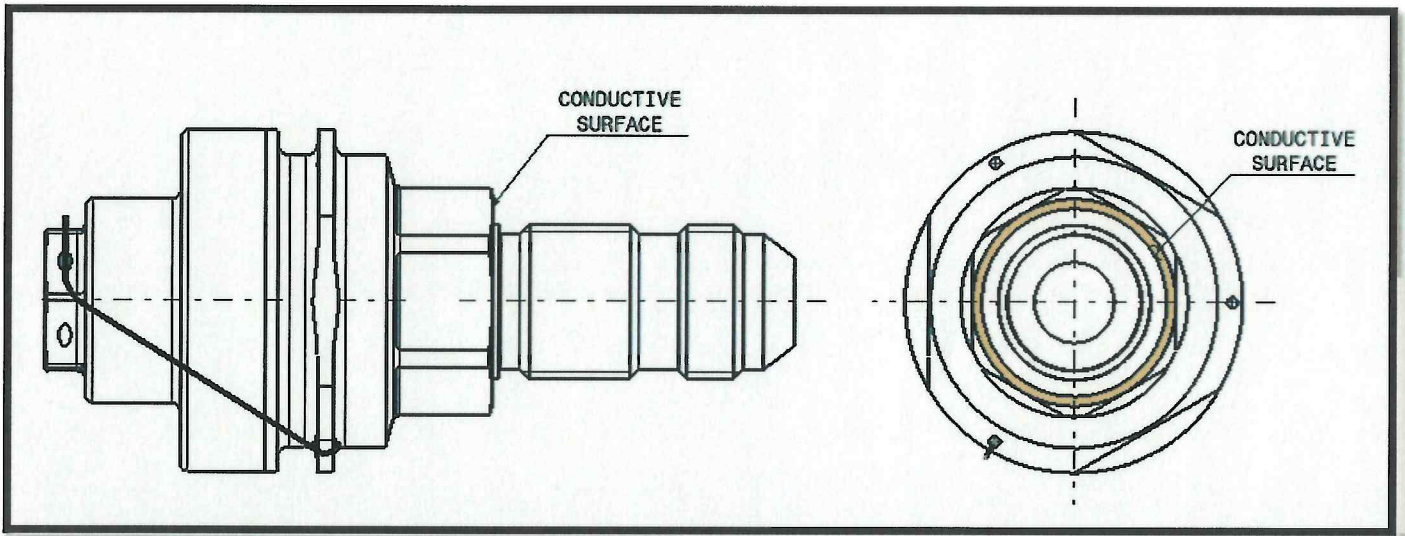
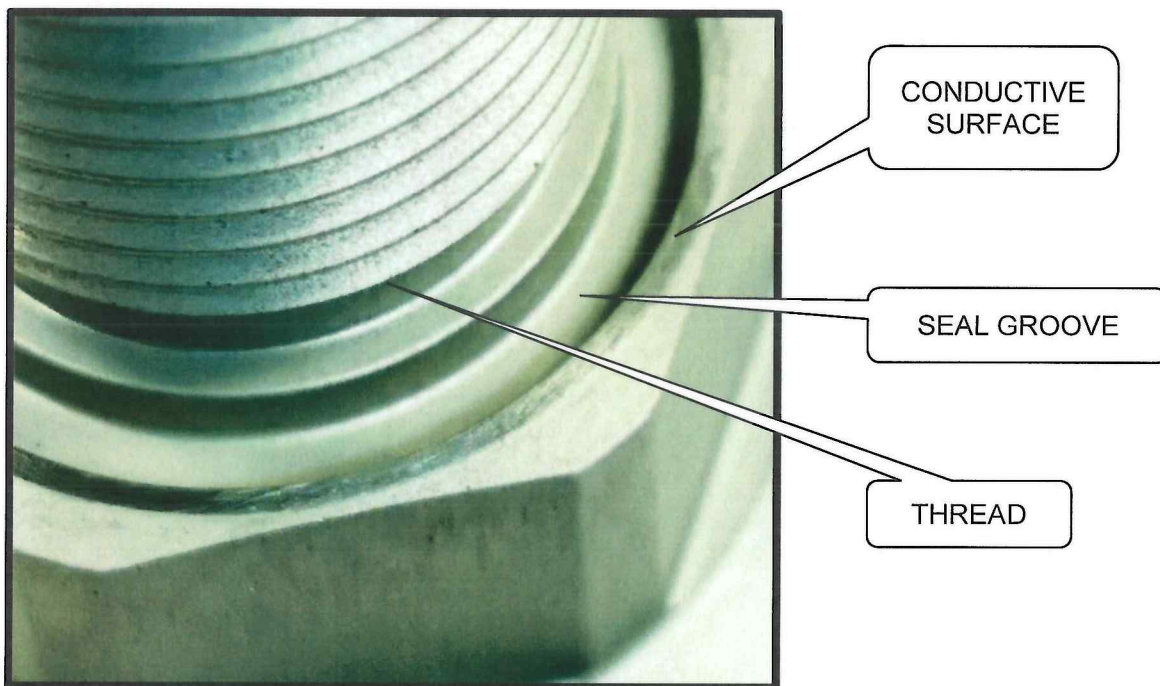


Fig 1A – Image of part showing conductive surface



SERVICE BULLETIN

SB9337-01-29-01

4. REWORK INSTRUCTION

REWORK THE CONDUCTIVE SURFACE AND APPLY CHROMATE CONVERSION COATING (CCC) AS FOLLOWS:

INGRESS OF DEBRIS CONTAMINANT INTO THE VALVE SHALL BE PREVENTED.
LOW TACK MASKING TAPE MAY BE USED TO TEMPORARILY COVER THE INLET OPENING AND OUTLET VENT HOLES (FIG 2) DURING THIS REWORK OPERATION.

- A. VERY LIGHTLY ABRADE CONDUCTIVE SURFACE (FIG 1) USING FINE GRADE ABRASIVE PAPER SCOTCH-BRITE TYPE A OR ABRASIVE PAPER (320 GRADE).
IF ADJACENT AREA IS INADVERTENTLY ABRADED, APPLY CCC PER THIS REWORK PROCEDURE.
- B. REMOVE ANY ABRADED DEBRIS USING USE A LINT-FREE CLOTH MADE MOIST WITH THE SOLVENT OR ETHANOL TO CLEAN THE ABRADED SURFACE AND ADJACENT AREA.

THE ADJACENT THREAD AND SEAL GROOVE (REF FIG 1A) TO BE FREE OF DEBRIS.
- C. MIX CCC AS GIVEN IN THE MANUFACTURER'S INSTRUCTIONS.
USE MANUFACTURERS MATERIAL SAFETY DATA SHEET, SAFETY PERSONAL PROTECTIVE EQUIPMENT AND APPLY THE MANUFACTURER'S EFFLUENT HANDLING RECOMMENDATIONS.
- D. CLEAN CONDUCTIVE SURFACE USING A LINT-FREE CLOTH MADE MOIST WITH THE SOLVENT OR ETHANOL.
- E. USE A BRUSH, NYLON (ACID RESISTANT) AND QUICKLY APPLY A SMOOTH CONTINUOUS LAYER OF CCC TO THE BARE METAL SURFACE. APPLY THE COATING ONLY TO THE BARE METAL SURFACE AS PER FIG 1 AND FIG 1A.
- F. ALLOW THE CCC TO ACT ON THE SURFACE UNTIL AN IRIDESCENT GOLDEN TO GOLDEN YELLOW COLOUR COATING IS OBTAINED. THIS WILL TAKE 1-5 MINUTES DEPENDING ON THE ACTIVITY AND TEMPERATURE OF THE SURFACE THE FRESHLY FORMED ALOCROM COATING IS QUITE SOFT AND CARE MUST BE TAKEN NOT TO DAMAGE IT DURING RINSING AND DRYING.
- G. USE THE DEMINERALISED WATER OR CLOTH, LINT FREE MADE MOIST WITH DEMINERALISED WATER AND LIGHTLY CLEAN THE AREA THAT HAS THE COATING.
- H. ALLOW THE COATING TO THOROUGHLY DRY AT ROOM TEMPERATURE (+20° C NOMINAL) FOR A MINIMUM PERIOD OF 30 MINUTES.
- I. REMOVE MASKING TAPE AFTER COMPLETION OF THE REWORK.

SERVICE BULLETIN

SB9337-01-29-01

FIG 2 LOCATION OF INLET AND OUTLET PORTS

