

Service Bulletin No: 27-006
Modification No: INSPECTION

Ref No: 222
ATA Chapter: 27

**FLIGHT CONTROLS - RUDDER - RUDDER SHAFT ASSY
INSPECTION FOR APPROVED RIVET CONFIGURATION**

1. Planning Information

A. Effectivity

All Pilatus PC-6 aircraft.

Fairchild built PC-6 aircraft MSN 2001 thru 2092.

Rudder shaft assemblies held as spares.

B. Concurrent Requirements

None.

C. Reason

(1) Problem

Incorrect rivet configurations on the rudder shaft assy have been discovered during a post-event investigation.

(2) Cause

The tapered pins of the original design of the rudder shaft assy were replaced with an insufficient quantity of rivets of unknown origin.

(3) Solution

Each rudder shaft assy must be inspected for an approved design of rivet configuration.

D. Description

This Service Bulletin gives the data and instructions to do the inspection work as follows:

- Examine the rivet configuration for an approved design.
- Contact Pilatus Aircraft Ltd for repair instructions if necessary.

Revision 1 to this Service Bulletin:

- Adds Rivet, Blind Half-round Monel NAS1919M05S03U (P/N 939.19.89.113) to Config 1 in Table 1.
- Amends the Nomenclature and Specification for/to Rivet, Blind Half-round Monel NAS1919M06S03U (P/N 939.19.89.133) given in Config 2 of Table 1.

No additional work is necessary for Revision No. 1 of this Service Bulletin if the Operator has accomplished the Service Bulletin at the initial issue.

E. Compliance

Mandatory.

Accomplishment of this Service Bulletin is necessary at or before the next scheduled maintenance (100 Hour Inspection or Annual Inspection) and within 12 months from the issue date of this Service Bulletin.

Aircraft with a rivet configuration of the rudder shaft assy not in accordance with Table 1 (Approved Rivet Configurations) must be repaired before next flight. You must contact Pilatus Aircraft Ltd.

For spare parts in stores, accomplishment of this Service Bulletin is necessary at or before installation on an aircraft and within 12 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 local Airworthiness Authorities for any changes, local regulations or sanctions that may affect the embodiment of this Service Bulletin.

G. Copyright and Legal Statements

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H. Manpower

	Total
Preparation	2.0
Inspection	0.5
Close up	4.0
TOTAL MAN-HOURS	6.5

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

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

Not affected.

(2) Moment Change

Not affected.

J. Electrical Load Data

Not changed.

K. Software

Not changed.

L. References

Aircraft Maintenance Manual (AMM): 27-22-01.

Structural Repair Manual (SRM): 51-00-03.

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 should contact their authorized Pilatus Service Center, or Pilatus Customer Support on www.pilatus-aircraft.com → contact us.

B. Warranty

Not applicable.

C. Material Necessary for Each Aircraft

(1) Material to be Procured

Not applicable.

(2) Operator Supplied Parts

Operators are to supply the expendable parts listed in the referenced procedures (Ref. Para 1.L.) if necessary.

(3) Operator Supplied Materials (Ref. the Consumable Materials List AMM, 20-31-00)

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
P01-008	SOLVENT (WHITE SPIRIT)	A/R	
P02-031	ABSORBENT PAPER	A/R	

NOTE: Operators are to supply the consumable materials listed in the referenced procedures (Ref. Para 1.L.) in addition to the materials listed above.

D. Material Necessary for Each Spare

Not applicable.

E. Reidentified Parts

Not applicable.

F. Tooling - Cost and Availability:

PART NO.	DESCRIPTION	QTY	REMARKS
-	WARNING SIGN	1	DO NOT OPERATE FLIGHT CONTROLS

3. Accomplishment Instructions - Part 1 - On Aircraft

WARNING: MAKE SURE THAT YOU OBEY ALL OF THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

WARNING: WHEN YOU DRILL CUT OR ABRASE MATERIALS YOU MUST WEAR THE CORRECT PROTECTIVE EQUIPMENT (GLOVES, FILTER MASKS AND FACE-SHIELDS/SAFETY-GLASSES/GOGGLES). ABRASIVE DUST CAN GET IN YOUR LUNGS OR ON YOUR SKIN AND CAUSE INJURY OR SKIN IRRITATION. DO NOT INHALE DUST. WHEN AUTHORIZED, MAKE THE AREA MOIST BEFORE YOU MANUALLY ABRASE TO PREVENT AIRBORNE DUST PARTICLES. WHEN AUTHORIZED, USE A HAND-HELD ABRASION/GRINDER/SANDER TOOL THAT IS EXPLOSION PROOF WITH A SUCTION SYSTEM TO REMOVE DUST PARTICLES. MAKE SURE THAT THE WORK AREA IS FULLY VENTILATED. OBEY YOUR LOCAL REGULATIONS WHEN YOU COLLECT AND DISCARD THE DUST AND OTHER UNWANTED MATERIALS.

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

CAUTION: AIRCRAFT WITH A RIVET CONFIGURATION OF THE RUDDER SHAFT ASSY NOT IN ACCORDANCE WITH TABLE 1 (APPROVED RIVET CONFIGURATIONS) MUST BE REPAIRED BEFORE NEXT FLIGHT. YOU MUST CONTACT PILATUS AIRCRAFT LTD.

NOTE: AMM references given are applicable for holders of AMM Doc. 01975.

A. Preparation (Ref. Fig. 1)

- (1) Put a warning notice in the cockpit to tell persons not to operate the flight controls.
- (2) Remove the access panels FL2 and FT2 (Ref. AMM 06-40-00, Page Block 1).

B. Inspect the Rivet Configuration of the Rudder Shaft Assy (Fig. 1)

- (1) Make absorbent paper (Material No. P02-031) moist with solvent (Material No. P01-008) and fully clean the work area of each of the rivet positions.
- (2) Examine the rudder shaft assy (1) as follows:

NOTE: If necessary you can remove the rudder shaft assy (1) from the aircraft to do the inspection (Ref. AMM 27-22-01, Page Block 401).

- (a) Identify and make a record of the quantity, type and size of rivets installed at:
 - Top Position
 - Middle Position
 - Bottom Position.

- (b) If you cannot identify the rivets easily then continue as follows:
- 1 Use the applicable diameter drills to remove the rivets (Ref. SRM 51-00-03, Page Block 1).
 - 2 Measure the hole diameters and contact Pilatus Aircraft Ltd for repair instructions before the next flight.
- (c) If you find any other damage to the rudder shaft assy (1) you must contact Pilatus Aircraft Ltd for repair instructions before the next flight.
- (3) Make sure that the rivet configuration at each position is in accordance with Table 1:
- If the rivet configuration is not an approved design you must contact Pilatus Aircraft Ltd for repair instructions before the next flight.

CONFIG	RIVET DIAMETER	QTY OF RIVETS		ACCEPTABLE RIVET TYPE
		Position	Qty	
1	4 mm	Top Position	8	Blind Rivet, Universal Head CR3223-5 (P/N 939.19.86.111), Blind Rivet, Universal Head CR163-5-6 (P/N 939.19.80.711), Rivet, Universal Head MS20470-AD5 (P/N 939.17.81.026) (Ref. NOTE <1>), Rivet, Universal Head SN213102 (P/N 939.13.81.026) (Ref. NOTE <1>), or Rivet, Blind Half-round Monel NAS1919M05S03U (P/N 939.19.89.113)
		Middle Position	2	
		Bottom Position	8	
2	4,8 mm	Top Position	8	Rivet, Blind Half-round Monel NAS1919M06S03U (P/N 939.19.89.133) or Rivet, Universal Head MS20470-AD6 (P/N 939.17.81.034) (Ref. NOTE <1>)
		Middle Position	2	
		Bottom Position	8	
3	5 mm	Top Position	8	Rivet, Universal Head SN213102 (P/N 939.13.81.034) (Ref. NOTE <1>)
		Middle Position	2	
		Bottom Position	8	

Table 1 - Approved Design - Rivet Configurations

NOTE: <1> The P/N given are dummy Part Numbers, the specific grip length is as required.

C. Close Up

- (1) If necessary install the rudder shaft assy (Ref. AMM 27-22-01, Page Block 401).

- (2) Remove all tools and materials. Make sure the work areas are clean.
- (3) Install the access panels FL2 and FT2 (Ref. AMM 06-40-00, Page Block 1).
- (4) Remove the warning notice from the cockpit.

D. Documentation

Make an entry in the Aircraft Logbook that this Service Bulletin has been accomplished.

4. Accomplishment Instructions - Part 2 - Spare Parts held in Stores

WARNING: MAKE SURE THAT YOU OBEY ALL OF THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

WARNING: WHEN YOU DRILL CUT OR ABRABE MATERIALS YOU MUST WEAR THE CORRECT PROTECTIVE EQUIPMENT (GLOVES, FILTER MASKS AND FACE-SHIELDS/SAFETY-GLASSES/GOGGLES). ABRASIVE DUST CAN GET IN YOUR LUNGS OR ON YOUR SKIN AND CAUSE INJURY OR SKIN IRRITATION. DO NOT INHALE DUST. WHEN AUTHORIZED, MAKE THE AREA MOIST BEFORE YOU MANUALLY ABRABE TO PREVENT AIRBORNE DUST PARTICLES. WHEN AUTHORIZED, USE A HAND-HELD ABRASION/GRINDER/SANDER TOOL THAT IS EXPLOSION PROOF WITH A SUCTION SYSTEM TO REMOVE DUST PARTICLES. MAKE SURE THAT THE WORK AREA IS FULLY VENTILATED. OBEY YOUR LOCAL REGULATIONS WHEN YOU COLLECT AND DISCARD THE DUST AND OTHER UNWANTED MATERIALS.

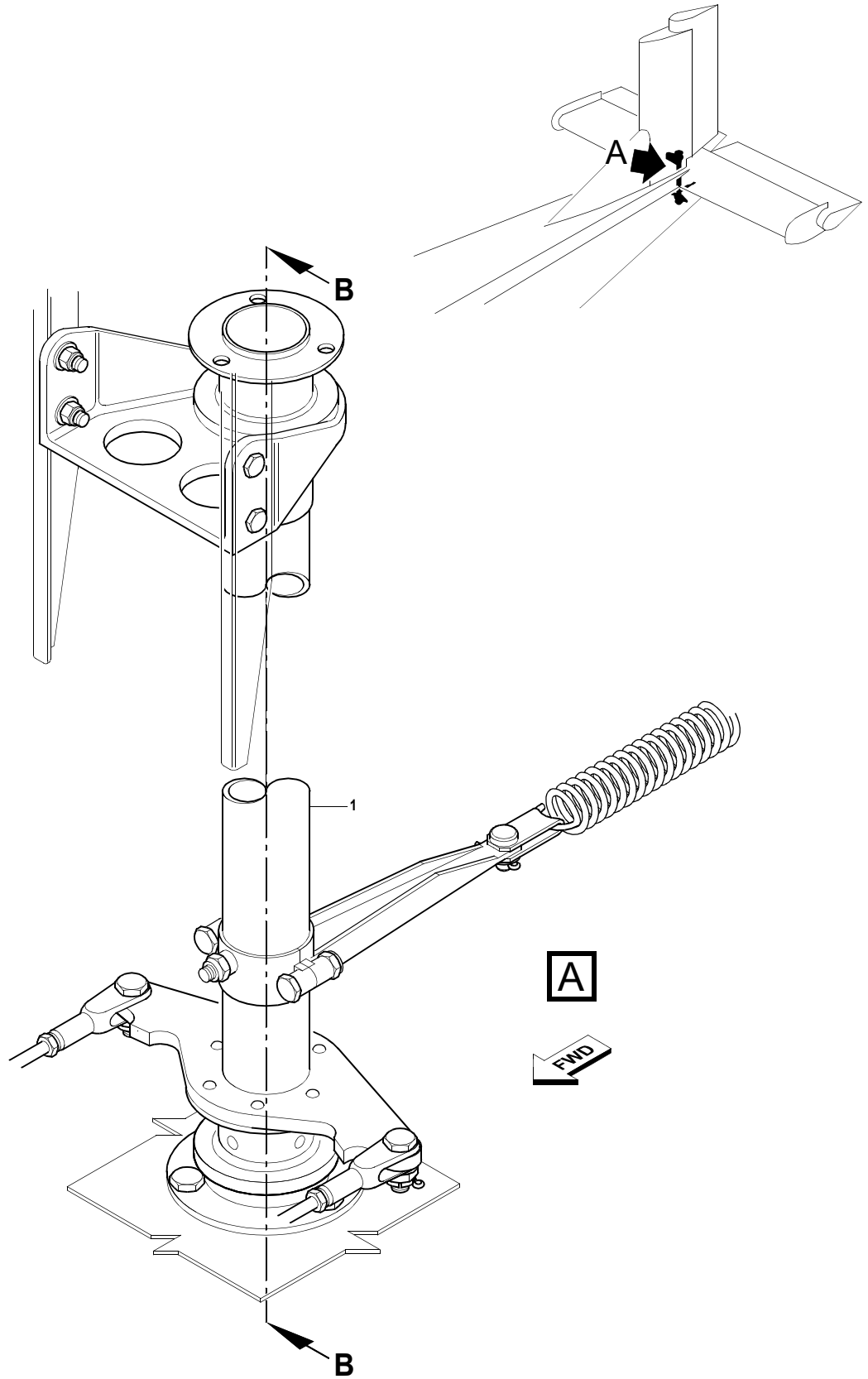
WARNING: BE CAREFUL WHEN YOU USE THE CONSUMABLE MATERIALS. OBEY THE MANUFACTURER'S HEALTH AND SAFETY INSTRUCTIONS.

A. Inspect the Rivet Configuration of the Rudder Shaft Assy (Fig. 1)

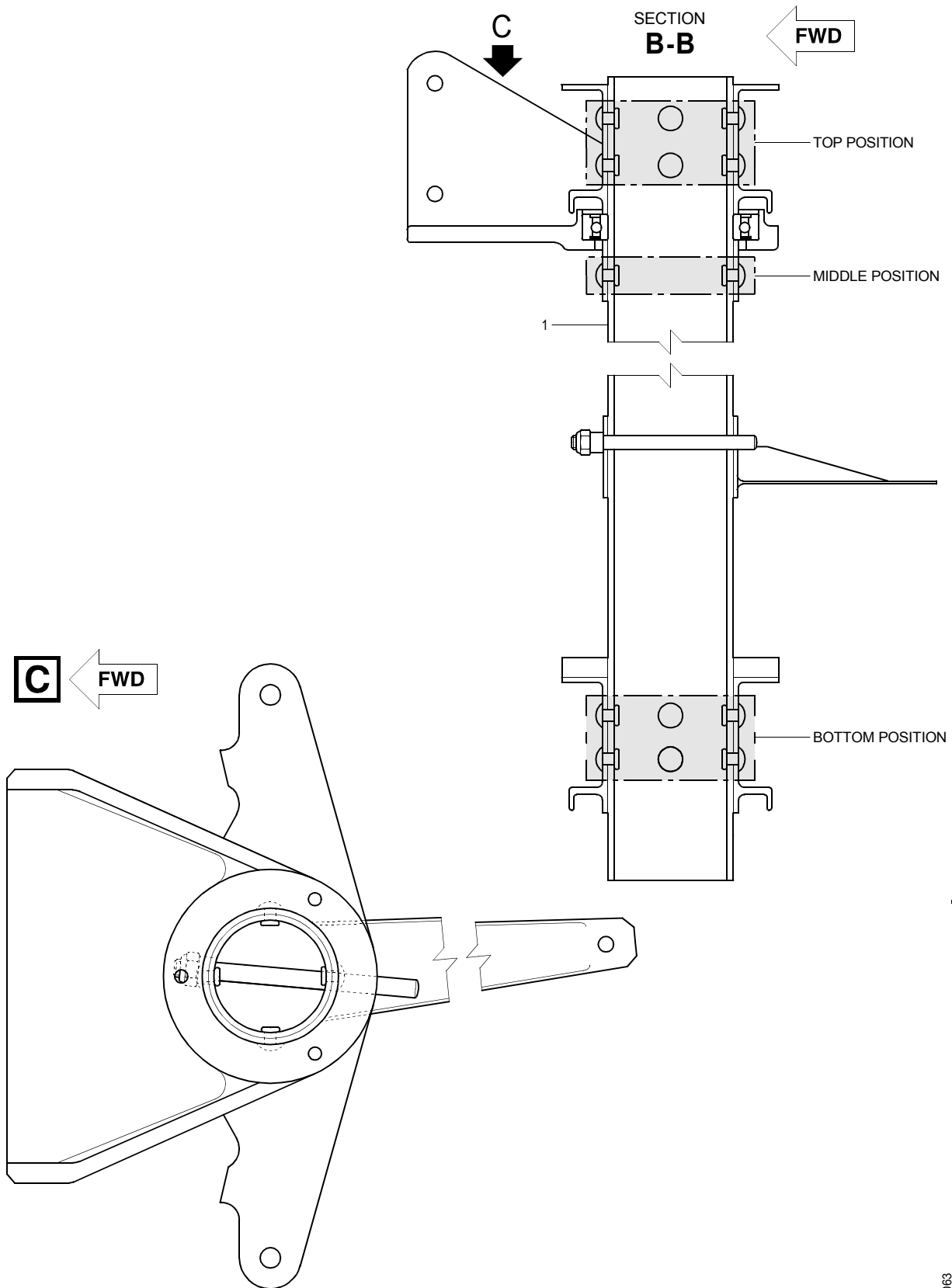
- (1) Do the inspection procedure given in Steps 3.B.(1) thru 3.B.(3).
- (2) If the rudder shaft assy (1) fails the inspection mark the item as unserviceable and contact Pilatus Aircraft Ltd for repair instructions.

B. Documentation

Make an entry on the serviceable label (attached to the part) that this Service Bulletin has been accomplished and also mark the part with an indelible pen.



Rudder Shaft Assy - Rivet Configuration - Inspection
Figure 1 (Sheet 1 of 2)



Rudder Shaft Assy - Rivet Configuration - Inspection
Figure 1 (Sheet 2 of 2)

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