

Service Bulletin No: 55-001

Ref No: 205

Modification No:

ATA Chapter: 55

**STABILIZER - ELEVATOR AND RUDDER
INSPECTION OF HINGE BOLT LOCKING****1. Planning Information****A. Effectivity**

All PC-6 Series aircraft.

All elevator and rudder assemblies held as spares.

B. Concurrent Requirements

None.

C. Reason**(1) Problem**

Loose elevator hinge bolts have been reported.

(2) Cause

Suspected incorrect torque and locking of the hinge bolts.

(3) Solution

Make sure that the elevator and rudder hinge bolts are correctly torqued and locked.

D. Description

This Service Bulletin gives the data and instructions to correctly torque and lock the elevator and rudder hinge bolts.

Revision 1 gives instructions to install a new locking screw in a more accessible position and revises the installation of the hinge bolt. It also includes a procedure for elevators and rudder assemblies held as spares, corrects an access panel number, adds an alternative lockwire and includes publications affected.

If the previous version of this Service Bulletin has been accomplished, additional work is required to install a new locking screw in a more accessible position.

E. Compliance

Mandatory.

This Service Bulletin must be accomplished within 2 months of the issue date of Revision 1 to this Service Bulletin (Nov 25/11).

If the previous version of this Service Bulletin has been accomplished, the additional work to install the new locking screw is to be accomplished within 6 months of the issue date of Revision 1 to this Service Bulletin (Nov 25/11).

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.

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H. Manpower

	Aircraft Total	Spares Total
Preparation	1.0	-
Procedure - Elevator	1.5	1.5
Procedure - Rudder	0.7	0.7
Close up	1.0	-
TOTAL MAN-HOURS	4.2	2.2

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

I. Weight and Balance

(1) Weight Change

None.

(2) Moment Change

None.

J. Electrical Load Data

Not changed.

K. Software

Not changed.

L. References

Not applicable.

M. Publications Affected

| Aircraft Maintenance Manual - Document No. 01975 only: 55-21-11, 55-41-11.

N. Interchangeability of Parts

| A Pre SB 55-001 elevator or rudder assembly cannot be installed on the aircraft.

2. Material Information
A. Material - Price and Availability

No Modification Kit is required for this Service Bulletin.

B. Material Necessary for Each Aircraft
(1) Operator Supplied Parts

PART NO.	DESCRIPTION	QTY	REMARKS
930.36.11.118	SCREW, NAS1352C06H4P	3	Or equivalent
938.77.11.108	WASHER, NAS1149FN616P	6	Or equivalent
938.07.68.502	NUT, MS21042-06,CADM	3	Or equivalent

(2) Operator Supplied Materials

MATERIAL NO.	DESCRIPTION	QTY	PILATUS PART NO.
P01-008	SOLVENT, WHITE SPIRIT	A/R	908.63.81.101
P02-031	ABSORBENT PAPER	A/R	904.49.73.004
P02-006 or P02-007	LOCKWIRE, 0,6MM	A/R	919.01.11.203
	LOCKWIRE, 0,6MM	A/R	919.01.11.103
P04-029	PASTE. INSTALLATION, DUOTEMPI PMY45	A/R	908.24.02.001
P07-007	PRIMER, EPOXY		
	• PRIMER	A/R	910.02.05.031
	• HARDENER	A/R	910.02.05.032
	• THINNERS	A/R	910.09.00.101
P07-021	ALODINE 1132, TOUCH-N-PREP PEN	1	908.40.32.252

C. Material Necessary for Each Spare
(1) Operator Supplied Parts

PART NO.	DESCRIPTION	QTY	REMARKS
930.36.11.118	SCREW, NAS1352C06H4P	1	Or equivalent
938.77.11.108	WASHER, NAS1149FN616P	2	Or equivalent
938.07.68.502	NUT, MS21042-06,CADM	1	Or equivalent

(2) Operator Supplied Materials

MATERIAL NO.	DESCRIPTION	QTY	PILATUS PART NO.
P01-008	SOLVENT, WHITE SPIRIT	A/R	908.63.81.101
P02-031	ABSORBENT PAPER	A/R	904.49.73.004
P07-007	PRIMER, EPOXY		
	• PRIMER	A/R	910.02.05.031
	• HARDENER	A/R	910.02.05.032
	• THINNERS	A/R	910.09.00.101
P07-021	ALODINE 1132, TOUCH-N-PREP PEN	1	908.40.32.252

D. Re-identified Parts

Not applicable.

E. Tooling - Cost and Availability

Not applicable.

3. Accomplishment Instructions - Aircraft**A. Preparation**

- (1) On aircraft with electrically operated trim, open and install a safety clip to the following circuit breakers:

STAB TRIM
RUDDER TRIM

- (2) Remove the access panels EL4, ET1 and EB1.

B. Procedure - Elevators

- (1) Give support to the elevators.
- (2) Remove the lockwire and remove the hinge bolts at the outboard end rib of the left and right elevators.
- (3) Install the new locking screw on the end rib of the left and right elevators (Ref. Fig. 1):
 - (a) Refer to Figure 1 and enlarge the tooling hole for the new locking screw to 3,8 mm.
 - (b) Deburr the hole.
 - (c) Clean the hole with absorbent paper (Material No. P02-031) made moist with solvent (Material No. P01-008).
 - (d) Remove all swarf and debris from the elevator.
 - (e) Apply Alodine 1132 (Material No. P07-021) to the bare metal of the hole and allow to dry.
 - (f) Apply primer (Material No. P07-007) on top of the alodine and allow to dry.
 - (g) Install the new locking screw (P/N 930.36.11.118), with two washers (P/N 938.77.11.108) and a nut (P/N 938.07.68.502) in the tooling hole as shown on Figure 1. Install a washer under the head of the screw and under the nut.

NOTE: Do not remove the old lockwire tab.

- (4) Install the elevator hinge bolts:

CAUTION: THE TORQUE VALUE GIVEN IN STEP 3.B.(4)(c) DOES NOT INCLUDE THE RUN-DOWN TORQUE OF THE SELF LOCKING NUT. YOU MUST MAKE SURE THE SELF LOCKING NUT IS SERVICEABLE AND ADD THE RUN-DOWN TORQUE VALUE.

- (a) Apply installation paste (Material No. P04-029) to the threads of the hinge bolt.
- (b) Install the hinge bolt and measure the run-down torque necessary to turn the hinge bolt in the self-locking nut.

NOTE: If you can turn the hinge bolt with your hand the self-locking nut is unserviceable. Contact Pilatus for repair data.

CAUTION: DO NOT APPLY ANY CORRECTION FACTOR FOR THE LUBRICANT TO THE TORQUE VALUE OF THE HINGE BOLT.

- (c) Torque the hinge bolt to 5,1 Nm (45 lbf. in.) plus the recorded run-down torque.
- (d) Safety the hinge bolt to the new locking screw with lockwire (Material No. P02-006 or P02-007).

- (5) Remove the support from the elevators.

C. Procedure - Rudder

- (1) Give support to the rudder.
- (2) Remove the lockwire and remove the hinge bolt at the top rib of the rudder.
- (3) Install the new locking screw on the end rib of the rudder (Ref. Fig. 1):
 - (a) Refer to Figure 1 and enlarge the tooling hole for the new locking screw to 3,8 mm.
 - (b) Deburr the hole.
 - (c) Clean the hole with absorbent paper (Material No. P02-031) made moist with solvent (Material No. P01-008).
 - (d) Remove all swarf and debris from the rudder.
 - (e) Apply Alodine 1132 (Material No. P07-021) to the bare metal of the hole and allow to dry.
 - (f) Apply primer (Material No. P07-007) on top of the alodine and allow to dry.
 - (g) Install the new locking screw (P/N 930.36.11.118), with two washers (P/N 938.77.11.108) and a nut (P/N 938.07.68.502) in the tooling hole as shown on Figure 1. Install a washer under the head of the screw and under the nut.

NOTE: Do not remove the old lockwire tab.

- (4) Install the rudder hinge bolt:

CAUTION: THE TORQUE VALUE GIVEN IN STEP 3.C.(4)(c) DOES NOT INCLUDE THE RUN-DOWN TORQUE OF THE SELF LOCKING NUT. YOU MUST MAKE SURE THE SELF LOCKING NUT IS SERVICEABLE AND ADD THE RUN-DOWN TORQUE VALUE.

- (a) Apply installation paste (Material No. P04-029) to the threads of the hinge bolt.
- (b) Install the hinge bolt and measure the run-down torque necessary to turn the hinge bolt in the self-locking nut.

NOTE: If you can turn the hinge bolt with your hand the self-locking nut is unserviceable. Contact Pilatus for repair data.

CAUTION: DO NOT APPLY ANY CORRECTION FACTOR FOR THE LUBRICANT TO THE TORQUE VALUE OF THE HINGE BOLT.

- (c) Torque the hinge bolt to 5,1 Nm (45 lbf. in.) plus the recorded run-down torque.
 - (d) Safety the hinge bolt to the new locking screw with lockwire (Material No. P02-006 or P02-007).
- (5) Remove the support from the rudder.

D. Close up

- (1) Remove all tools and materials. Make sure the work areas are clean.
- (2) Install the access panels EL4, ET1 and EB1.
- (3) For aircraft with electric trim, remove the safety clip and close the circuit breakers:

STAB TRIM
RUDDER TRIM

E. Documentation

- (1) Make an entry in the Aircraft Logbook that this Service Bulletin has been incorporated.

4. Accomplishment Instructions - Spares**A. Procedure**

- (1) Install the new locking screw on the end rib of all elevator and rudder assemblies held as spares (Ref. Fig. 1):
 - (a) Refer to Figure 1 and enlarge the tooling hole for the new locking screw to 3,8 mm.
 - (b) Deburr the hole.
 - (c) Clean the hole with absorbent paper (Material No. P02-031) made moist with solvent (Material No. P01-008).
 - (d) Remove all swarf and debris from the elevator / rudder.
 - (e) Apply Alodine 1132 (Material No. P07-021) to the bare metal of the hole and allow to dry.
 - (f) Apply primer (Material No. P07-007) on top of the alodine and allow to dry.
 - (g) Install the new locking screw (P/N 930.36.11.118), with two washers (P/N 938.77.11.108) and a nut (P/N 938.07.68.502) in the tooling hole as shown on Figure 1. Install a washer under the head of the screw and under the nut.

NOTE: Do not remove the old lockwire tab.

B. Documentation

- (1) Make an entry on the Elevator / Rudder Equipment Label that this Service Bulletin has been incorporated.



NOTE: EXISTING LOCKWIRE TAB NOT SHOWN

Hinge Bolt Locking - Modification
Figure 1