

Service Bulletin No: 53-003
Modification No: INSPECTION

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ATA Chapter: 53

**FUSELAGE - REAR FUSELAGE
STABILIZER-TRIM ATTACHMENT COMPONENTS - INSPECTION**

1. Planning Information

A. Effectivity

Pilatus PC-6 Series aircraft MSNs 337 thru 1005.

Fairchild built PC-6 aircraft MSNs 2001 thru 2092.

All PC-6 horizontal stabilizer assemblies, stabilizer control-system fittings, connecting pieces, bearing supports and bearing forks held as spares.

B. Concurrent Requirements

None.

This Service Bulletin applies to the Post SB 53-001 Revision 1 configuration.

C. Reason

(1) Problem

Wear and cracks have been reported in the following Post SB 53-001 R1 stabilizer-trim attachment and structural components:

- Fitting (116.40.06.112) or (116.40.06.033) in aircraft with electrical horizontal-stabilizer control-systems (CONFIG 1 aircraft)
- Connecting piece (6232.0026 - all variants) in aircraft with mechanical horizontal-stabilizer control-systems (CONFIG 2 aircraft).

(2) Cause

It is possible that slightly asymmetric installation and/or operational conditions resulting in strong stabilizer vibration can cause the initiation of cracks.

(3) Solution

NOTE: As an alternative to the inspections detailed in (a) and (b) you can replace the non-inspected items. Replacement instead of inspection satisfies the requirements of this Service Bulletin.

(a) Before the next flight:

Do a visual inspection for crack damage in the applicable stabilizer-trim attachment components, and the related parts and structure. The stabilizer-trim actuator and the fitting or connecting piece must be removed to do the inspection. No cracks are permitted. Replace all crack damaged components and structure before the next flight.

NOTE: If the fitting or connecting piece has been in service for not more than 100 flight hours and not more than 100 landings at the issue date of this SB, the visual inspection before next flight is not necessary.

(b) Within 100 flight hours or 100 landings (whichever comes first):

(i) Do a visual inspection for crack damage in the applicable stabilizer-trim attachment components, and the related parts and structure. No cracks are permitted. Replace all crack damaged components before the next flight.

(ii) Remove the surface finish and do a dye-penetrant inspection for crack damage in the applicable stabilizer-trim attachment components, and the related parts and structure. No cracks are permitted. Replace all crack damaged components before the next flight.

NOTE: As an alternative to the dye-penetrant inspection you can do an eddy current inspection, which does not require removal of the surface finish. A right-angled shaft surface-probe with minimal drop is required to inspect in the gap between the lugs of the components:

- CONFIG 1 aircraft - smallest gap is 12,7 mm (0.5 in.).
- CONFIG 2 aircraft - smallest gap is 6 mm (0.24 in.).

(c) Before installation on an aircraft or within 6 months (whichever comes first):

(i) Do the inspection, detailed in Para. (3)(b) above, of all PC-6 horizontal stabilizer assemblies held as spares. Replace all crack damaged components before installation on an aircraft.

(ii) Do the inspection, detailed in Para. (3)(b) above, of all PC-6 stabilizer control-system fittings, connecting pieces, bearing supports and bearing forks held as spares. Discard all crack damaged parts.

D. Description

This Service Bulletin gives the data and instructions to do inspections for crack damage in the applicable stabilizer-trim attachment components and to replace defective components (if necessary).

Revision 1 is issued to:

- Show the screw (16), washer (17) and nut (18) on Fig. 1 and include them in the parts lists and procedures
- Correct two cross-references on Page 10 and correct the SB reference in the title of Fig. 2.

If operators have replaced the bearing fork (Fig. 1, Item 12) in accordance with the initial issue of this Service Bulletin, they must make sure it is installed with two bolts and one screw.

E. Compliance

Mandatory.

The visual inspection is required before the next flight, if:

- The fitting (on CONFIG 1 aircraft) P/N 116.40.06.112 or 116.40.06.033 has been in service for more than 100 flying hours or 100 landings at the issue date of this Service Bulletin
- The connecting piece (on CONFIG 2 aircraft) P/N 6232.0026 has been in service for more than 100 flying hours or 100 landings at the issue date of this Service Bulletin.

The non-destructive inspection is required within 100 flight hours or 100 landings (whichever comes first) after the issue date of this Service Bulletin.

Horizontal stabilizer assemblies, stabilizer control-system fittings, connecting pieces, bearing supports and bearing forks held as spares are to be inspected before installation on an aircraft or within 6 months (whichever comes first) after 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 Authorities for any changes, local regulations or sanctions that may affect the embodiment of this Service Bulletin.

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H. Manpower

	Total (Inspection)		Total (Replacements)	
	CONFIG 1	CONFIG 2	CONFIG 1	CONFIG 2
Preparation	1.0	1.0	-	-
Removal	0.5	0.5	-	-
Inspection A - Visual	0.5	0.5	-	-
Inspection B - NDI	0.5	0.5	-	-
Installation/Replacement of Fitting/ Connecting Piece	1.5	1.5	-	-
Replacement of Bearing Fork/Bearing Supports	-	-	4.0	6.0
Close up	0.5	0.5	-	-
TOTAL MAN-HOURS	4.5	4.5	4.0	6.0

NOTE: Man-hours figures do not include the time required to cure sealants 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

PC-6 aircraft except B2-H2/B2-H4:

- Airworthiness Limitations (AL) Doc. 02334: Appendix E and J.
- Repair and Overhaul Manual (ROM): Chapter 2 and 12.

PC-6 aircraft B2-H2/B2-H4:

- Aircraft Maintenance Manual (AMM) Doc. 01975: 27-45-11, 55-11-11.
- Structural Repair Manual (SRM): 51-00-03, 51-00-05, 51-00-06, 51-00-09.

M. Publications Affected

None.

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 and/or Service Bulletin material should contact their Authorized Pilatus Service Center, or:.

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Operators are requested to advise Pilatus Aircraft Ltd, of the Manufacturer's Serial Number (MSN) and the flying hours and landings of aircraft which are affected by this Service Bulletin.