

SERVICE BULLETIN

SERVICE BULLETIN NO: 55-002

REF NO: 021

MODIFICATION NO:

ATA CHAPTER: 55

STABILIZERS - HORIZONTAL STABILIZER ELEVATOR - INSPECTION AND REPAIR TO PREVENT SKIN DISTORTION

1. Planning Information

A. Effectivity

PC-9 (M) aircraft from MSN 605 thru MSN 607, MSN 617 thru MSN 638 and MSN 641 thru MSN 654.

All elevator assemblies (P/N: 555.20.09.009) held as spare.

B. Concurrent Requirements

None.

C. Reason

(1) Problem

It is possible for damage to occur in the bottom skin panels of the elevator during some flight conditions. The areas at risk of damage are adjacent to the trailing edges, immediately inboard of left and right rib 10.

(2) Cause

There are no fasteners (rivets) to hold the skin panels in the areas between the last rivets at the rear ends of ribs 10 and the trailing edges of elevator. Thus, during unusually high aerodynamic loads, unwanted movement and separation of the skin from the internal structure can occur.

This damage does not occur at the equivalent locations on the top surfaces of the elevator. This is because the static wick dischargers which are installed in these areas prevent unwanted movement of the skin panels.

(3) Solution

Do an inspection of the elevator to make sure that no damage has occurred in the applicable areas.

If no damage has occurred, install rivets to attach the bottom skin panels to the internal structure of the elevator (hood skin). The rivets prevent unwanted movement of the skin panels between the end of the ribs 10 and the trailing edges.

D. Description

This Service Bulletin gives the data and instructions necessary to do an inspection of the elevator and, if serviceable, install new rivets.

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E. Compliance

Mandatory.

Required within the next 30 hours time-in-service (TIS) after the effective date of this Service Bulletin, unless already accomplished.

F. Approval

The technical aspects of this Service Bulletin have been approved by the Federal Office for Civil Aviation (FOCA) of Switzerland as an Airworthiness Directive.

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. Manpower

	Total
Preparation	0.25
Inspection	0.5
Modification of the elevator	1.0
Close up	0.25
TOTAL MAN-HOURS	2.0

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

H. Weight and Balance

Not affected.

I. Electrical Load Data

Not changed.

J. Software

Not changed.

K. References

Aircraft Maintenance Manual (AMM), 27-00-00, and 27-30-01.

Structural Repair Manual (SRM), 51-40-00.

L. Publications Affected

Not applicable.

M. Interchangeability of Parts

Not applicable.

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2. Material Information

A. Material - Price and Availability

Not Applicable. No modification kit is necessary to incorporate this Service bulletin.

Operators are requested to use the Service Bulletin Evaluation Form to advise PILATUS of the Manufacturers Serial Number, flying hours and landings of aircraft to which this Service Bulletin is applicable.

B. Material Necessary for Each Aircraft

Not applicable.

Operator Supplied Materials

Part No.	Description	Qty	Remarks
908.40.32.251	Alodine (1200S)	A/R	Item No. P07-001
939.19.80.537	Rivet (AD44)	4	Pop-Imex

C. Material Necessary for Each Spare

Not applicable.

Operator Supplied Materials

Part No.	Description	Qty	Remarks
908.40.32.251	Alodine (1200S)	A/R	Item No. P07-001
939.19.80.537	Rivet (AD44)	4	Pop-Imex

D. Reidentified Parts

Not applicable.

E. Tooling - Cost and Availability

Not applicable.

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3. Accomplishment Instructions - Aircraft (Ref. Fig. 1)

WARNING: MAKE SURE THAT BOTH EJECTION SEATS HAVE THE SAFETY PINS INSTALLED IN THE SAFE FOR SERVICING LOCATIONS BEFORE YOU GO INTO THE COCKPIT.

A. Preparation

- (1) Put warning signs (DO NOT OPERATE THE FLIGHT CONTROLS) in the front and rear cockpits.
- (2) Install the gust lock (Ref. AMM, 27-00-00, Page Block 1).

B. Inspection

- (1) Do an inspection of the elevator for signs of buckling and crack damage in the bottom skin panels. Do this in the areas immediately inboard of the left and right ribs 10 and adjacent to the trailing edge.
- (2) Do an inspection of the elevator trailing edges for signs of distortion and crack damage.
- (3) Replace the elevator assembly if you find buckling, distortion or crack damage in the inspection areas (Ref. AMM, 27-30-01, Page Block 401). Send the unserviceable elevator to PILATUS for repair.

NOTE: It is necessary to use a special jig during elevator repairs. This item is not usually available to aircraft Operators.

C. Installation of the Rivets

- (1) Make marks to show the new rivet locations on the bottom skin panels.
 - (a) Make a mark to show the centerline of the rivets which attach the bottom skin panel to the left rib 10. Make sure the centerline continues to the trailing edge.
 - (b) Make a mark to show an intersection of the rivet centerline at 207 mm (8.15 in.) from the front edge of the skin panel. The intersection of the marks shows the location of the rivet.
 - (c) Do Steps (a) and (b) again to show the new rivet location on the right side of the elevator.
- (2) Use a 3.2 mm (1/8 in.) diameter drill to remove the rear, inboard rivets from the bases of the static wick dischargers. These are on the top surface of the elevator at the rear of the left and right ribs 10.

NOTE: It is necessary to remove the rivets (from the static wick dischargers) to make sufficient clearance space for the installation of the new rivets in the bottom skins.

- (3) Install the rivets in the bottom skin panels.
 - (a) Use a 2.5 mm (3/32 in.) and a 3.3 mm (1/8 in.(clearance)) diameter drills in sequence to make the rivet hole at the intersection of the marks on the left skin panel.
 - (b) De-burr the rivet hole.

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- (c) Obey the manufacturers instructions and apply a layer of the corrosion preventative material (Item No. P07-001) on the bare metal surfaces of the rivet hole.
 - (d) Install the rivet (AD44) (Ref. SRM, 51-40-00, Page Block 1).
 - (e) Obey the manufacturers instructions and apply the layers of the applicable paint on the head of the rivet.
 - (f) Do Steps (a) thru (e) again to install the rivet in the right side of the elevator.
- (4) Install the rivets (AD46) in the left and right static wick dischargers (Ref. SRM, 51-40-00, Page Block 1).

D. Close up

- (1) Remove all tools and materials. Make sure the work areas are clean.
- (2) Remove the gust lock (Ref. AMM, 27-00-00, Page Block 1).
- (3) Remove the warning signs from the front and rear cockpits.

E. Documentation

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

4. Accomplishment Instructions - Spares

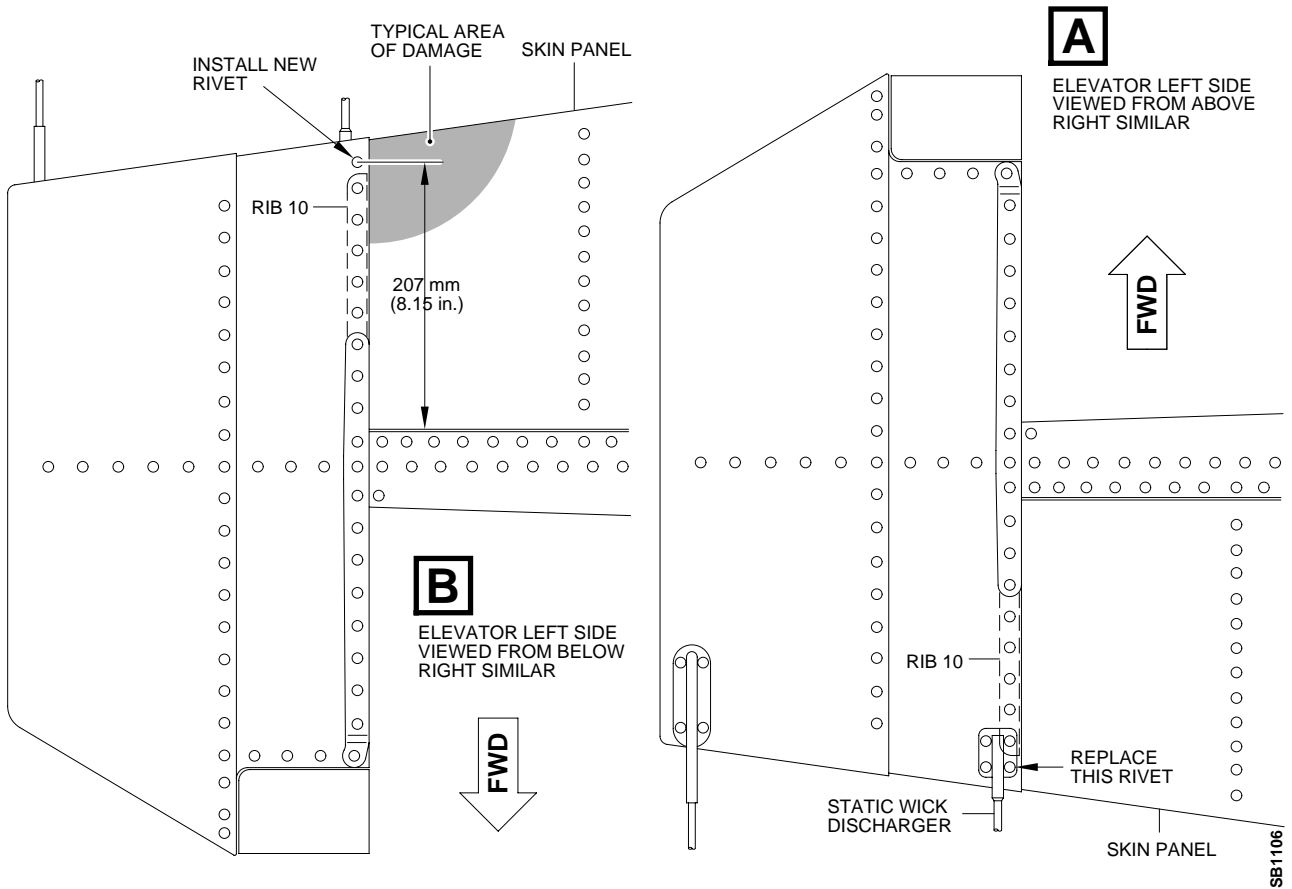
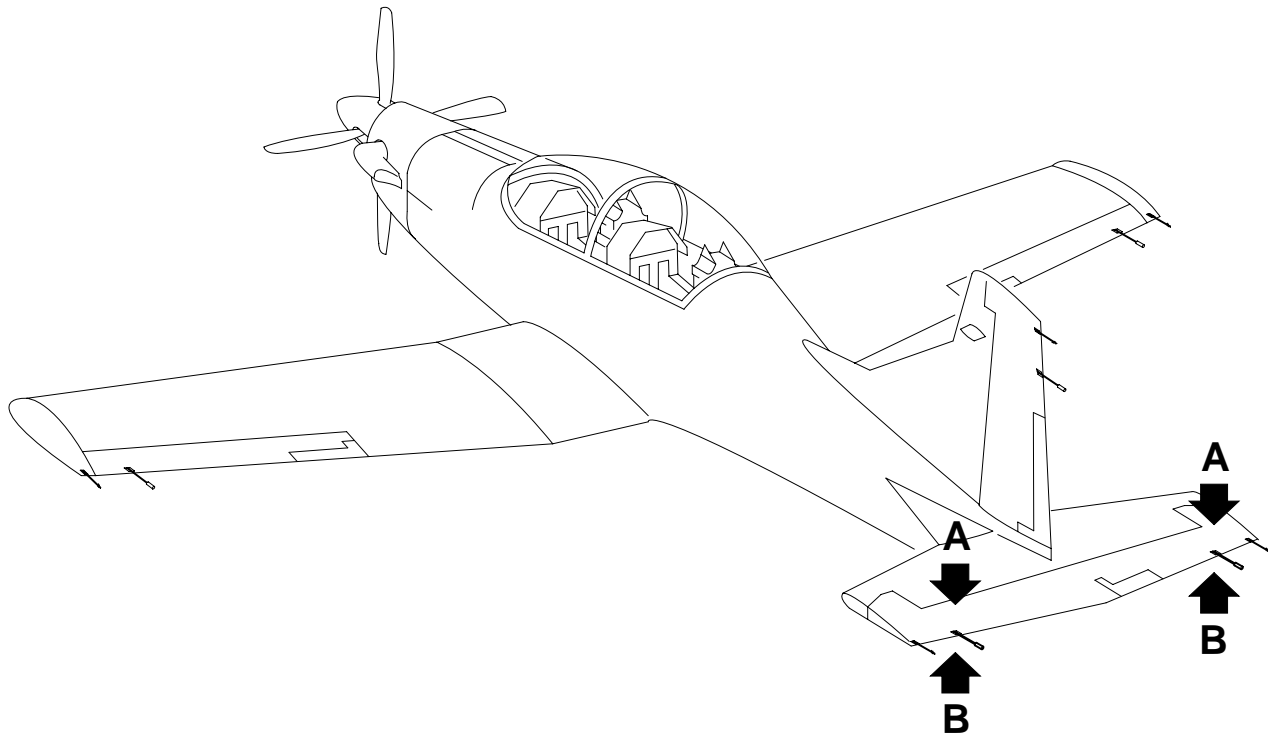
A. Installation of the Rivets

- (1) Do Sect 3, Para C, Steps (1) thru (4) to install rivets in all elevators held as spare.

B. Documentation

- (1) Make an entry in the spare parts inventory list that this modification has been incorporated.

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Elevator - Inspection and Repair
Figure 1