

<b>Bundesamt für Zivilluftfahrt (BAZL)</b> <b>Office fédéral de l'aviation civile (OFAC)</b> <b>Ufficio federale dell'aviazione civile (UFAC)</b> <b>Federal Office for Civil Aviation (FOCA)</b> Maulbeerstrasse 9 CH-3003 Berne Switzerland	<b>Lufttüchtigkeitsanweisung (LTA)</b> <b>Consigne de Navigabilité (CN)</b> <b>Prescrizione di Aeronavigabilità (PA)</b> <b>Airworthiness Directive (AD)</b>	FOCA AD  <b>HB 1994-087R1</b>
Inkraftsetzung Mise en vigueur Entrata in vigore Effective Date	<b>06 April 1994</b>	Revises HB 94-087

Revision 1, issued 28 November 2003

**Betroffene Muster - Types concernés - Applicabilità - Models affected**

**PILATUS AIRCRAFT LTD.**

Model PC-6 B2-H4 aircraft up to and including Serial Number 901, if equipped with the modified tail wheel P/N 114.45.06.050.

**Anlass / Massnahmen - Objet / Mesures - Oggetto / Provvedimenti - Subject / Action**

**REAR FUSELAGE** ▪ Reinforcement between bulkhead 12 and 13.

**Fristen - Délais - Scadenza - Compliance**

(Required as indicated, unless already accomplished)

The effective date on this page is applicable.

Compliance in accordance with Pilatus PC-6 Service Bulletin No. 166, and/or later revisions approved by the Swiss Federal Office for Civil Aviation (FOCA).

**Herkunft - Provenance - Provenienza - Origin**

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**Bezugnahme - Référence - Riferimento - Reference**

Pilatus PC-6 Service Bulletin No. 166 Revision 1, dated 26 August 1997, which is an integral part of this Airworthiness Directive.

**Bemerkungen - Observations - Osservazioni - Remarks**

**This Airworthiness Directive:**

- Revises and replaces FOCA AD HB 94-087 original issue.

**NOTE:**

Revision 1 has been issued to reflect text improvements of the Pilatus PC-6 Service Bulletin No. 166 Revision 1.

Rechtsmittelbelehrung Voies de droit Rimedi giuridici Right to appeal	siehe TM Nr. voir CT no. vedi CT no. see CT no.  <b>02.020-80</b>		Seite Page Pagina Page	1 1	von de di of 10
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PILATUS AIRCRAFT LTD CH-6371 STANS SWITZERLAND

# SERVICE BULLETIN

SERVICE BULLETIN NO: PC-6 166  
MODIFICATION NO: 932361

REF NO:  
ATA CHAPTER: 53

## REAR FUSELAGE - REINFORCEMENT BETWEEN BULKHEADS 12 AND 13

### 1. Planning Information

#### A. Effectivity

- (1) All PC-6 model B2-H4 aircraft, up to and including MSN 901 which are equipped with tail-wheel (P/N: 114.45.06.050).
- (2) This Service Bulletin will be incorporated, prior to delivery, on PC-6 aircraft MSN 902 and subsequent.

#### B. Reason

To reinforce the rear fuselage section (between bulkheads 12 and 13) when the modified tail wheel (P/N: 114.45.06.050) is fitted.

#### C. Description

Accomplishment of this Service Bulletin which must be done at the next 100 hour inspection, consists of completing the following tasks:

- (1) Remove the horizontal stabilizer (Ref. AMM 55-11-11).
- (2) Remove the electrical trim actuator (Ref. AMM 27-45-11).
- (3) Reinforce the fuselage top plate and side walls (between bulkheads 12 and 13) with the supplied parts.
- (4) Install the electrical trim actuator.
- (5) Install the horizontal stabilizer.
- (6) Adjustment and test of the horizontal stabilizer and elevator (Ref. AMM 27-40-00 and 27-30-00).

#### D. Compliance

Mandatory.

#### E. Approval

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

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**F. Manpower**

<b>Task</b>	<b>Man-hours</b>
Preparation	2.0
Modification	6.0
Close-Up	1.0
<b>TOTAL MAN-HOURS</b>	<b>9.0</b>

**NOTE:** Man-hours figures are calculated for units installed in the aircraft and represent the total time estimated for the task.

**G. Material - Cost and Availability**

**(1) Material**

Operators should send orders for Service Bulletin modification kits, to:

PILATUS AIRCRAFT LTD,  
CUSTOMER LIAISON MANAGER,  
CH 6371 STANS,  
SWITZERLAND.

Tel No: + 41 41-619 6509  
Fax No: + 41 41-610 3351

**NOTE:** Operators are requested to advise Pilatus Aircraft Ltd. of the Manufacturers Serial Number (MSN) and the flying hours of the aircraft which are allocated for this Service Bulletin.

**(2) Cost and Availability**

<b>Kit Number:</b>	<b>Cost:</b>	<b>Availability</b>
500.50.06.106	SFr 340,75	21 days

**NOTE:** Cost valid until the end of 1997.

**H. Tooling**

Standard Tools.

**I. Weight and Balance**

Complete SB Kit weights approximately 200 gr. (0.45 lb.).

**J. References**

Aircraft Maintenance Manual, Chapters 27-30-00, 27-40-00, 27-45-11, 55-11-11 and 55-21-11.  
Structural Repair Manual, Chapter 51-00-06.

**K. Publications Affected**

None.

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**2. Accomplishment Instructions**

**A. Preparation**

**WARNING:** MAKE SURE THAT THE HORIZONTAL STABILIZER AND ELEVATOR UNITS ARE SUPPORTED DURING REMOVAL AND INSTALLATION.

- (1) Prepare the aircraft for servicing.
- (2) Set the horizontal stabilizer to give full nose up trim.
- (3) Open and install a safety clip to circuit breaker STAB TRIM.
- (4) Disconnect the aircraft battery and hang a placard "WARNING DO NOT CONNECT ELECTRICAL POWER" on the external power connection.
- (5) Remove the elevator units (Ref. AMM 55-21-11).
- (6) Remove access panels FB7 and FB8.
- (7) Open access panels FT2 and FT3 and disconnect the tension springs.
- (8) Remove the horizontal stabilizer (Ref. AMM 55-11-11).
- (9) Remove the horizontal stabilizer actuator (Ref. AMM 27-45-11).

**B. Modification (Ref. Figs. 1 and 2)**

**CAUTION:** RIGHT SIDE FUSELAGE: REMOVE CABLE CLIPS SECURING ELECTRICAL CABLES AND POSITION ELECTRICAL CABLES OUT OF THE WAY.

LEFT SIDE FUSELAGE: POSITION CONTROL CABLES OUT OF THE WAY.

**NOTE:** Use standard practices when this modification is done. After drilling, deburr holes and apply wash primer and repair paint schemes (Ref. SRM 51-00-06).

- (1) Install the doubler plate (P/N: 112.36.06.114) on the top of the fuselage box (Ref. Fig. 1):

**NOTE:** The double plate comes with a series of pre-drilled (2.4 mm) holes.

Existing holes, in the fuselage, must be transferred to the doubler plate.

- (a) Remove rivets, from the fuselage top surface, which are covered by the doubler.
- (b) Clamp the doubler plate in position, as the template.
- (c) Drill oversize (3.6 mm) the three peripheral holes (1) and secure with grip pins.

**NOTE:** It will be seen that one hole is left empty in the fuselage center, upper surface.

- (d) Drill oversize (3.6 mm) the center hole (2) and secure with a grip pin.
- (e) Drill oversize (3.6 mm) all holes as shown in the riveting template (Detail C).

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- (f) Remove the four grip pins (1 and 2).
  - (g) Deburr the fuselage and doubler plate, restore surface treatment and allow to dry.
  - (h) Replace the doubler and secure with the four grip pins.
  - (i) Rivet holes as shown in riveting plan/legend.
  - (j) Remove the four grip pins and rivet the holes as per riveting plan/legend.
  - (k) Paint rivets, top and bottom, with yellow wash primer and allow to dry.
- (2) Install the two RH stringers (1 and 2) (P/N's: 112.36.06.112 and 112.36.06.113) on the right inner fuselage wall:

**NOTE:** All holes to be drilled 2.7 mm, using the stringers as templates.

- (a) Mark and drill the top hole of the forward stringer (1), in the fuselage wall/top longeron, and secure the stringer with a grip pin (Ref Fig 2, measurement A = 135 mm (5.26 in) between center of the two row of rivets).

**NOTE:** Prior to drilling, make sure that the stringer (1) lies central between the upper and lower longerons, allowance must be made for the securing of the angle bracket (3), to the lower end of the stringer and longeron.

- (b) Use a Set Square, aligned to the inner top longeron, to position the stringer to form the 90° angle.
- (c) Drill the lower hole and secure with a grip pin.
- (d) Progressively drill all holes.
- (e) Remove stringer and deburr all holes.
- (f) Install the front stringer and secure with rivets.
- (g) Drill, deburr and rivet the angle bracket (3) (P/N: 6201.01.2303) to the lower end of the stringer and longeron.
- (h) Mark and drill the top hole of the rear stringer (2), in the fuselage wall/top longeron, and secure the stringer with a grip pin (Ref Fig 2, measurement B = 150 mm (5.85 in) between center of the two row of rivets).

**NOTE:** Prior to drilling, make sure that the stringer (2) lies central between the upper and lower longerons, allowance must be made for the securing of the angle bracket (3), to the lower end of the stringer and longeron.

- (i) Use a Set Square, aligned to the inner top longeron, to position the stringer to form the 90° angle.
- (j) Drill the lower hole and secure with a grip pin.
- (k) Progressively drill all holes.

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- (l) Remove stringer and deburr all holes.
  - (m) Install the rear stringer and secure with the rivets.
  - (n) Drill, deburr and rivet the angle bracket (3) (P/N: 6201.01.2303) to the lower end of the stringer and longeron.
- (3) Install the LH stringer (4) (P/N: 112.36.06.111) on the left inner fuselage wall:

**NOTE:** All holes to be drilled 2.7 mm, using the stringer as a template.

- (a) Mark and drill the top hole in the fuselage wall/top longeron to align with that of the stringer (4) and secure together with a grip pin (Ref Fig 2, measurement C = 288 mm (11.2 in) between center of the two rows of rivets).
- NOTE:** Prior to drilling, make sure that the stringer (5) lies central between the upper and lower longerons, allowance must be made for the securing of the angle bracket, to the lower end of the stringer and longeron.
- (b) Use a Set Square, aligned to the inner top longeron, to position the stringer to form the 90° angle.
  - (c) Drill the lower hole and secure with a grip pin.
  - (d) Progressively drill all holes.
  - (e) Remove stringer and deburr all holes (stringer and fuselage).
  - (f) Install the stringer and secure with rivets.
  - (g) Drill, deburr and rivet the angle bracket (3) (P/N: 6201.01.2303) to the lower end of the stringer and longeron.
- (4) Replace surface treatment, inside and outside, and allow to dry.
- (5) Repair paint schemes and make sure that the work area is cleared of all swarf and tools.

**C. Close-Up**

- (1) Install the horizontal stabilizer actuator (Ref. AMM 27-45-11).
- (2) Install the horizontal stabilizer (Ref. AMM 55-11-11).
- (3) Install the elevators (Ref. AMM 55-21-11).
- (4) Rig the horizontal stabilizer (Ref. AMM 27-40-00).
- (5) Rig the elevator controls (Ref. AMM 27-30-00).
- (6) Connect the tension springs and close access panels FT2 and FT3.
- (7) Install access panels FB7 and FB8.

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- (8) Connect the aircraft battery and remove the WARNING placard from external power connection.
- (9) Remove safety clip and close the circuit breaker STAB TRIM.

**D. Documentation**

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

**3. Material Information****A. List of Components**

Modification of one aircraft requires the following material which can be ordered under the Modification Kit Number: 500.50.06.106:

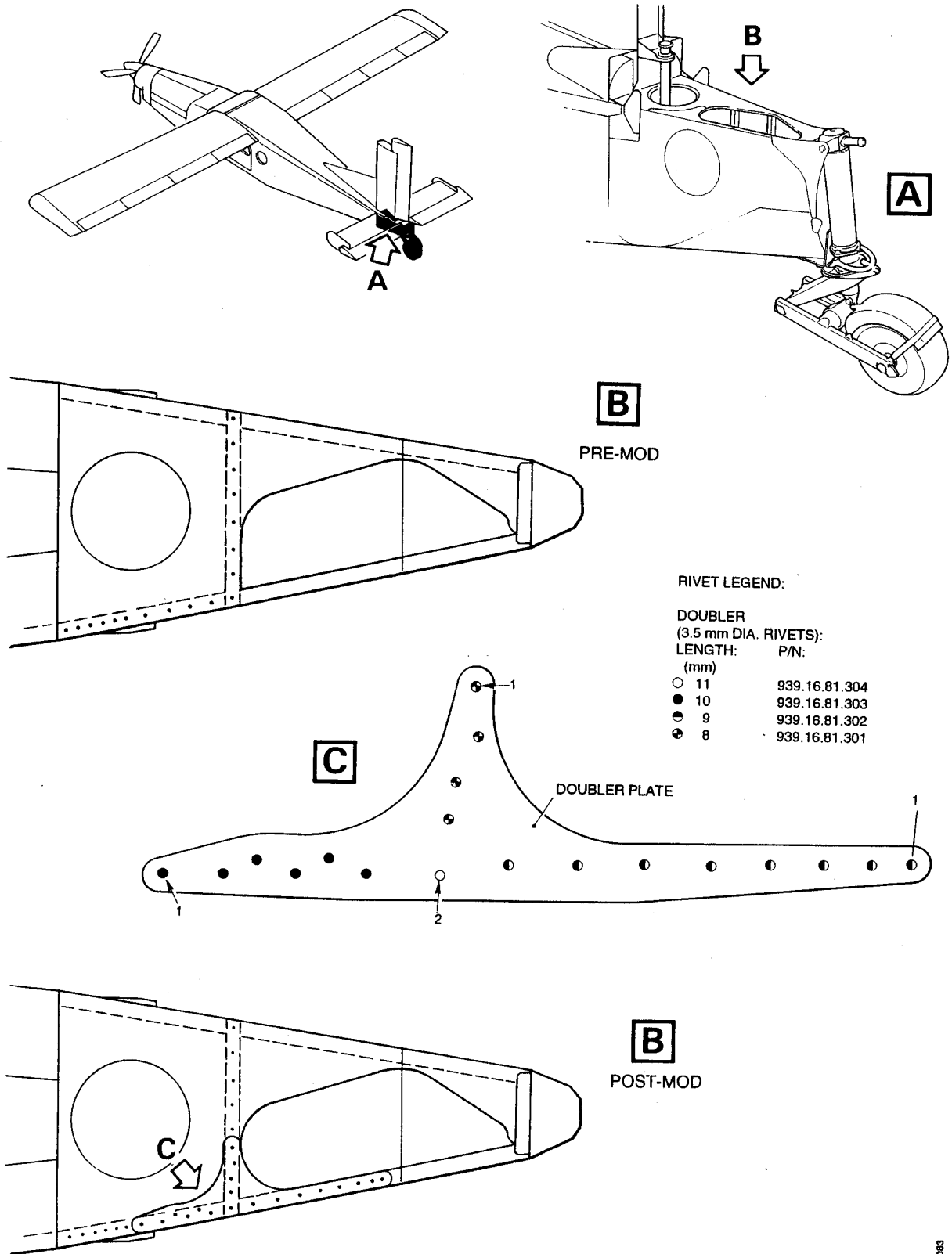
Description:	Part Number:	Qty:	Remarks:
Doubler	112.36.06.114	1	
Stringer LH	112.36.06.111	1	
Stringer RH	112.36.06.112	1	
Stringer RH	112.36.06.113	1	
Angle Brackets	6201.01.2303	3	

**B. Customer Supplied Material**

Description:	Part Number:	Qty:	Remarks
			To secure the Doubler:
Rivets, Solid Univ HD, Al	939.16.81.301	10	VSM 13127 3.5 x 8
	939.16.81.302	10	VSM 13127 3.5 x 9
	939.16.81.303	10	VSM 13127 3.5 x 10
	939.16.81.304	5	VSM 13127 3.5 x 11
			To secure the stringers and angle brackets:
	939.16.81.253	40	VSM 13127 2.6 x 6
	939.16.81.255	10	VSM 13127 2.6 x 7
	939.16.81.256	5	VSM 13127 2.6 x 8

**NOTE:** Rivet quantities are in excess to what is actually required for the modification.

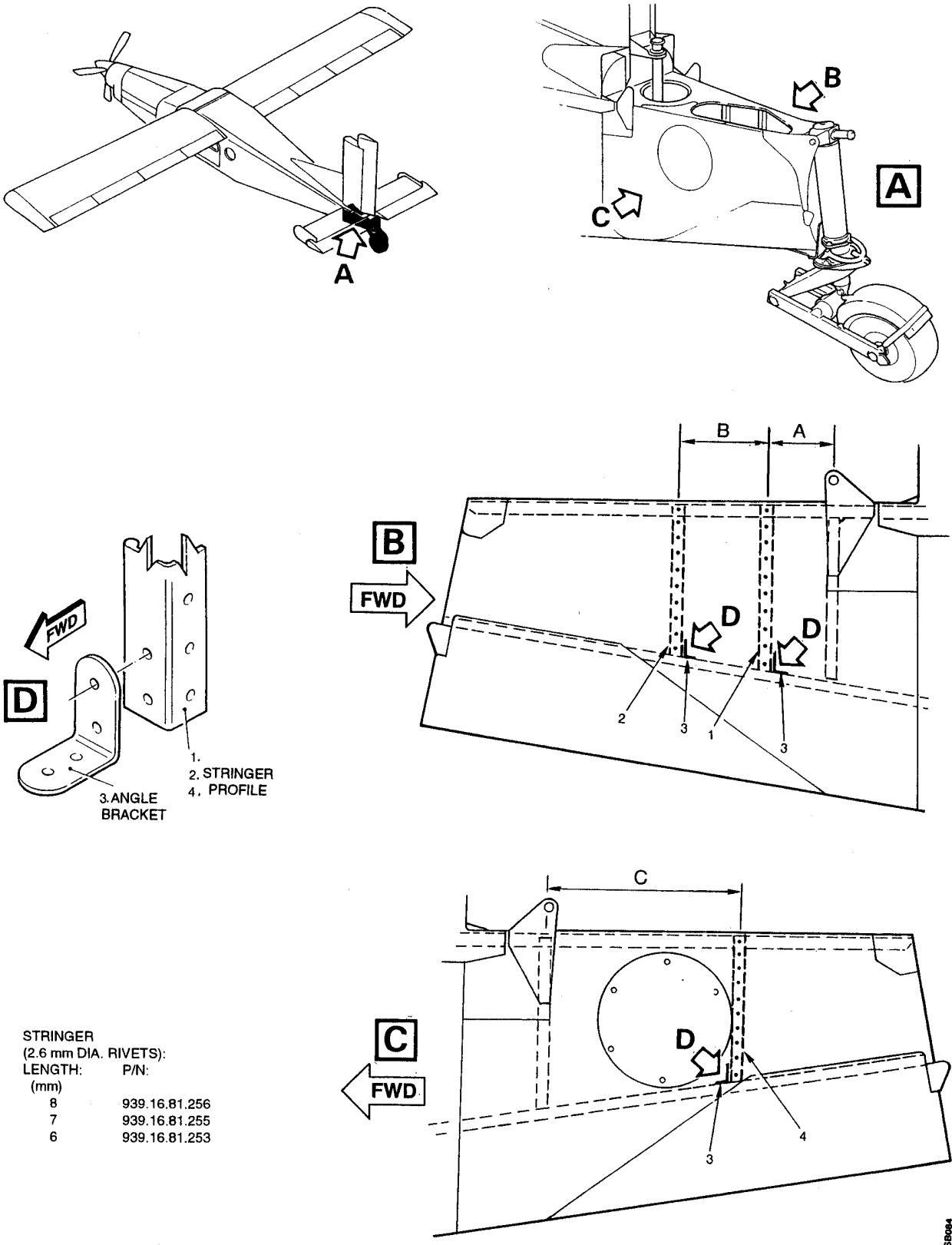
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Installation of Doubler Modification  
Figure 1



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STRINGER  
(2.6 mm DIA. RIVETS):

LENGTH: (mm)	P/N:
8	939.16.81.256
7	939.16.81.255
6	939.16.81.253

Installation of Stringer Modification  
Figure 2



### SERVICE BULLETIN EVALUATION

The purpose of this Evaluation Form is to allow you, the customer, to comment on this Service Bulletin. Your comments will be used to further improve our Service Bulletin program.

SERVICE BULLETIN EVALUATION FOR SB No. PC-6 166 Rev. 1	
Title	REAR FUSELAGE - REINFORCEMENT BETWEEN BULKHEADS 12 AND 13
Aircraft MSN	Total Airframe Hours
Owner	
Operator	
Service Center	
Please Tick as appropriate	
<input type="checkbox"/> We will embody/accomplish this SB	<input type="checkbox"/> Fully
<input type="checkbox"/> We have embodied/accomplished this SB	<input type="checkbox"/> Partially
<input type="checkbox"/> We will not embody/accomplish this SB	<input type="checkbox"/> Our experience does not justify embodiment
<input type="checkbox"/> Decision deferred (please explain)	<input type="checkbox"/> Other (please explain)
Comments (procedure, kit quality, suggested improvements, etc.)	

Please forward this form to:  
PILATUS AIRCRAFT LTD,  
TECHNICAL PUBLICATIONS DEPARTMENT (EZD),  
CH 6371 STANS,  
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Date:  
Name:

Signature: