PILATUS AIRCRAFT LTD. CH-6371 STANS, SWITZERLAND

SERVICE BULLETIN

SERVICE BULLETIN NO: 35-004 REF NO: 178

MODIFICATION NO: 030413 ATA CHAPTER: 35

OXYGEN - PASSENGER OXYGEN
OXYGEN PIPES - CHANGE THE ROUTING POSITIONS

1. Planning Information

A. Effectivity

PC-12 and PC-12/45 aircraft with an executive interior and a six, seven or eight-seat oxygen system as follows:

MSN	MSN	MSN	MSN
124	166	401	405
407	411 thru 414	417 thru 424	427
429 thru 430	432 thru 433	435 thru 437	439
441	443 thru 444	446 thru 465	468 thru 470
472 thru 475	478 thru 490	492	494 thru 496
498 thru 516	518 thru 522	524	

B. Concurrent Requirements

None

C. Reason

(1) Problem

It is possible for chaff damage to occur in the passenger oxygen pipe-assemblies (pipes) (535.21.12.076) and (535.21.12.054) in aircraft with executive interiors. These pipes are installed on the fuselage structure above the cabin headliner. The oxygen pipes are not pressurized at all times. The pipes are pressurized only on crew selection or automatically if the cabin pressurization fails above 13500 ft (4117 m).

(2) Cause

The chaff damage occurs because the clearance distances are not sufficient between the pipes and some of the cabin lighting components in the headliner.

(3) Solution

Increase the clearance distances between the pipes and the applicable lighting components to prevent the damage. To do this the pipe routing must be changed and the forward pipe (535.21.12.076) replaced.

D. Description

This Service Bulletin gives the data and instructions to

(a) On aircraft with six, seven or eight-seat oxygen-systems:

(i) Replace the forward pipe (535.21.12.076)

(ii) Examine for damage the:

- overhead panel
- interior light power-supply units.

(b) On aircraft with eight-seat oxygen-systems:

(i) Examine the aft pipe (535.21.12.054) for damage.

(ii) Change the locations of the aft-pipe clip mounting-angles.

E. Compliance

Mandatory.

Required at the next Annual Service but not later than 31 December 2004.

F. Approval

The technical content of this document is 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 6 or 7 Seat	Total 8 Seat
Preparation	8.0	8.0
Modification of the aft pipe routing	X	1.5
Replacement of forward pipe	0.5	0.5
Close up	10.0	10.0
TOTAL MAN-HOURS	**18.5**	**20**

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

H. Weight and Balance

(1) Weight Change

Not affected.

(2) Moment Change

Not affected.

I. Electrical Load Data

Not changed.

J. Software

Not changed.

K. References

Aircraft Maintenance Manual (AMM), 25-21-03 and 35-00-00.

Structural repair Manual (SRM), (Ref. SRM 51-40-01)

Illustrated Parts Catalog (IPC), 35-20-00.

L. Publications Affected

Illustrated Parts Catalog (IPC), Chapter 35-20-00.

M. Interchangeability of Parts

Pre and Post SB 35-004 forward pipes are not interchangeable.

2. Material Information

A. Material - Price and Availability

Operators should send orders for Service Bulletin Modification Kits, to their Authorized Pilatus Service Center, or to:

PILATUS AIRCRAFT LTD.,
CUSTOMER SUPPORT MANAGER,
CH-6371 STANS,
SWITZERLAND

General Aviation:
Tel: + 41 41 619 6208
Fax: + 41 41 619 7311
eMail: SupportPC12@pilatus-aircraft.com

Government:
Tel: + 41 41 619 6509
Fax. + 41 41 619 6224
eMail: rpaterson@pilatus-aircraft.com

PILATUS BUSINESS AIRCRAFT LTD.,
PRODUCT SUPPORT DEPARTMENT
11755 AIRPORT WAY
BROOMFIELD, CO 80021.
UNITED STATES OF AMERICA

Tel: 303 465 9099
Fax: 303 465 6040
eMail: Productsupport@PilBal.com

PILATUS AUSTRALIA (Pty.) LTD.,
PO BOX 732
MARLESTON SA 5033
AUSTRALIA

Tel: (08) 8234 4433
Fax: (08) 8234 4499
Free Call: 1800 445 007
eMail: info@pilatus.com.au

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

Modification Kit Number	Price	Availability
500.50.12.294	Contact address above	Contact address above

B. Material Necessary for Each Aircraft

(1) Material to be Procured

Modification Kit No. 500.50.12.294 consists these parts:

New Part No.	Description	Old Part No.	Qty	Disp. Code	Fig	Item
535.21.12.125	Pipe Assy, Oxygen	535.21.12.076	1	D	1	1
532.42.12.117	Angle, Mounting	N/A	1	N/A	2	7

Disposition Codes: D - Discard / R - Return to Pilatus

(2) Operator Supplied Materials

Part No.	Description	Qty	Remarks
908.40.32.251	Alodine 1200S	A/R	Pilatus Item No. P07-001
971.32.51.105	Tie, Cable MS3367-5-9	1	TCAS antenna installation with the eight-seat executive oxygen-systems
939.17.81.018	Rivet, Solid, Univ Hd, MS20470-AD-4	A/R	Length as required

3. Accomplishment Instructions - Aircraft

WARNING: THE MIXTURE OF OIL OR GREASE WITH OXYGEN CAN CAUSE EXPLOSIONS. MAKE SURE THAT ALL PARTS, TOOLS, EQUIPMENT AND CLOTHES HAVE NO OIL OR GREASE ON THEM.

WARNING: BE CAREFUL WHEN YOU USE THE CONSUMABLES. OBEY THE MANUFACTURERS HEALTH AND SAFETY INSTRUCTIONS.

WARNING: MAKE SURE THAT UNWANTED MATERIAL DOES NOT GO INTO THE OXYGEN SYSTEM. IT CAN CAUSE CONTAMINATION OR BLOCKAGE OF THE SYSTEM.

A. Preparation

(1) Remove the overhead panel (Ref. AMM, 25-21-03, Page Block 401).

B. Replacement of the Forward Oxygen Pipe

(1) Obey the safety precautions given in AMM, 35-00-00, Page Block 201.

(2) Remove and discard the forward oxygen pipe (535.21.12.076)(Ref. IPC, 35-20-00, Fig 01, Item 35). Keep the clamps, washers and screws.

(3) Put the new oxygen pipe (535.21.12.125) in position and loosely connect it at each end.

(4) Put the clamps on the oxygen pipe and install the washers and screws.

(5) Tighten the oxygen pipe connections.

C. Inspection for Damage - Eight-Seat Oxygen System

(1) Examine the overhead panel for damage. Ask Pilatus for instructions if you find damage.

(2) Examine the interior-lighting power-supply units for damage. Replace the interior-lighting power-supply units if you find damage.

(3) Examine the aft oxygen pipe for damage. You must replace the aft oxygen pipe if you find damage. Do this during Para. 3.F.

D. Inspection for Damage - Six and Seven Seat Oxygen System

(1) Examine the overhead panel for damage. Ask Pilatus for instructions if you find damage.

(2) Examine the interior-lighting power-supply units for damage. Replace the interior-lighting power-supply units if you find damage.

E. Modification of the TCAS Antenna Cable Routing (Fig. 2)

This procedure is only applicable to aircraft with the TCAS antenna installed and the eight-seat oxygen system.

(1) Remove and discard the cable tie (6).

(2) Remove the screw (2), the washer (4), the nut (5) and the mounting base (3). Discard the nut (5) and washer (4).

(3) Put the new mounting angle (7) in position. Use the holes in the angle (7) as a template to make marks on the stringer for the two rivets.

(4) Remove the angle (7).

(5) Use a 0.13 in. (3,3 mm) diameter drill to make new holes where you made the marks at Step (3).

(6) Deburr the new rivet holes you made at Step (5).

(7) Obey the manufacturers instructions and apply a layer of Alodine 1200S (Item No. P07-001) to the bare metal of the holes in the stringer.

(8) Put the angle (7) in position and install the two rivets (P/N: 939.17.81.018) to attach the angle to the stringer (Ref. SRM 51-40-01, Page Block 1).

(9) Put the mounting base (3) on the mounting angle (7) and install the screw (2).

(10) Move the antenna cable (1) to the new position.

(11) Attach the antenna cable (1) to the mounting base (3) with a new cable tie (6).

F. Modification of the Attachment of the Aft Oxygen Pipe (Fig. 1)

This procedure is applicable only to the eight-seat oxygen system.

(1) Obey the safety precautions given in AMM, 35-00-00, Page Block 201.

(2) Disconnect the pipe (1) (535.21.12.054).

(3) Remove the screws (6), washers (5), the clamps (4) and the pipe (1). On Frame 25 remove washer (3) also.

(4) Install blanks in the open ends of all disconnected aircraft oxygen pipes.

(5) Remove the two rivets that attach the five oxygen-pipe angle brackets (angle) (2) to Frames 25, 27, 29, 31 and 32 (Ref. SRM 51-40-01, Page Block 1). Remove the angles (2).

(6) Move one of the angles (2) inboard and align the outer hole of the angle with the inner hole in the Frame (where you removed the rivets in Step (5)).

(7) Install a grip pin or similar to hold the angle (2) in this location.

(8) Use the other hole in the angle as a guide and make a mark for the new hole in the frame.

(9) Remove the grip pin and the angle (2).

(10) Use a 0.13 in. (3,3 mm) diameter drill to make a new hole where you made the mark at Step (8).

(11) Do Steps (6) thru (10) for the other four Frames.

(12) Deburr the new rivet holes you made at Step (10).

(13) Obey the manufacturers instructions and apply a layer of Alodine 1200S (Item No. P07-001) to the bare metal of the holes in the Frames and the angles (2).

(14) Put one of the angles (2) in position and install the two rivets (P/N: 939.17.81.018) to attach the angle to the Fame (Ref. SRM 51-40-01, Page Block 1).

(15) Do Step (14) for the other four angles (2).

(16) Install a rivet (P/N: 939.17.81.018) in the remaining rivet hole in Frames 25, 27, 29, 31 and 32 (Ref. SRM 51-40-01, Page Block 1).

(17) Remove the blanks from the oxygen pipes and connectors.

(18) Put the pipe (1) in position, turned approximately 90 degrees from the initial position and loosely connect it at each end.

(19) Put the clamps (4) in position on the pipe (1) and install the washers (5) and the screws (6). On Frame 25, install also washer (3).

(20) Tighten the connections of the pipe (1).

G. Oxygen System Test

(1) Do the Leak Test After Part of the System has been disconnected (Ref. AMM, 35-00-00, Page Block 501).

(2) Do the Test of the Passenger Oxygen System (Ref. AMM, 35-00-00, Page Block 501).

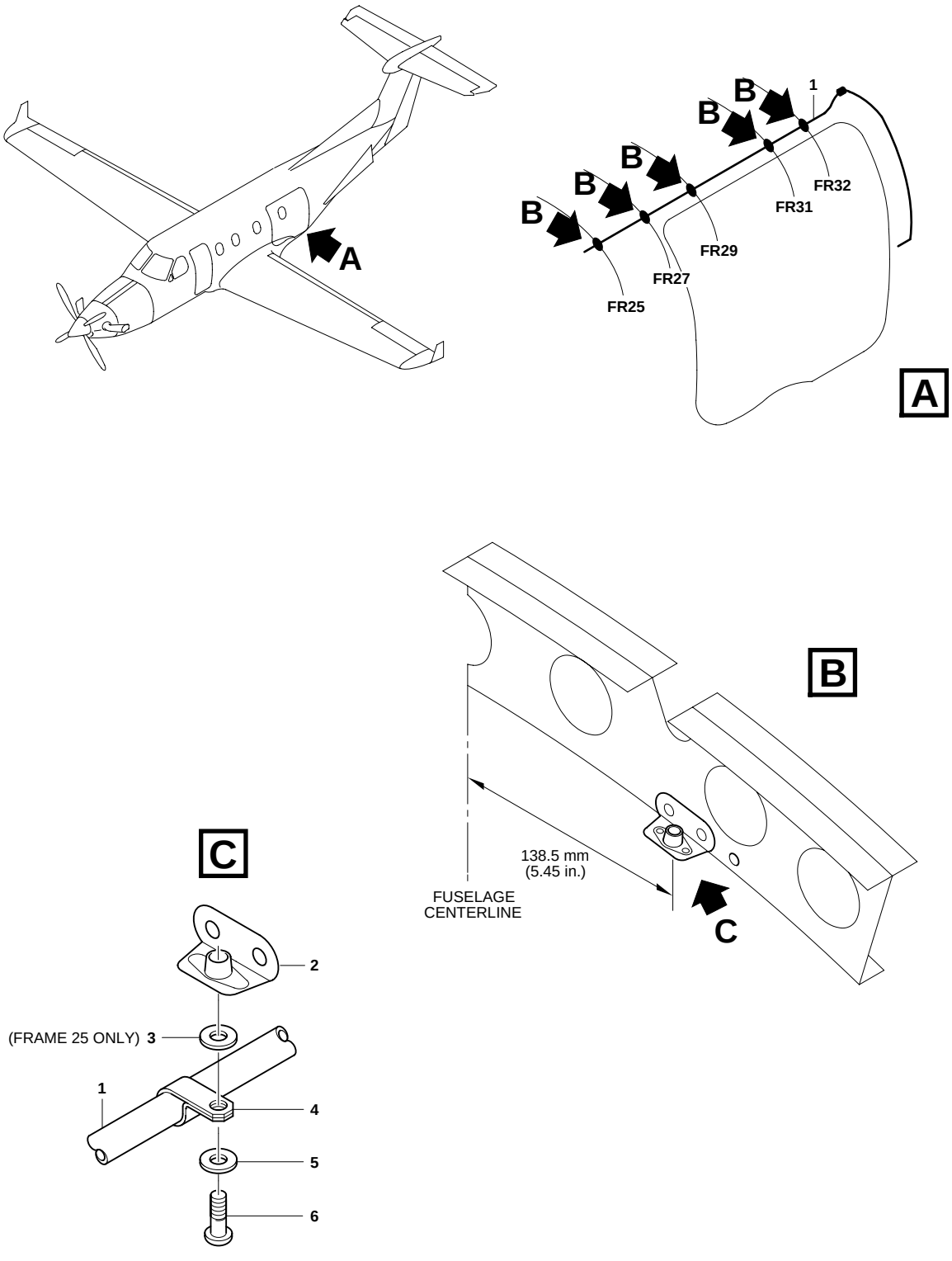
H. Close up

(1) Install the overhead panel (Ref. AMM, 25-21-03, Page Block 401).

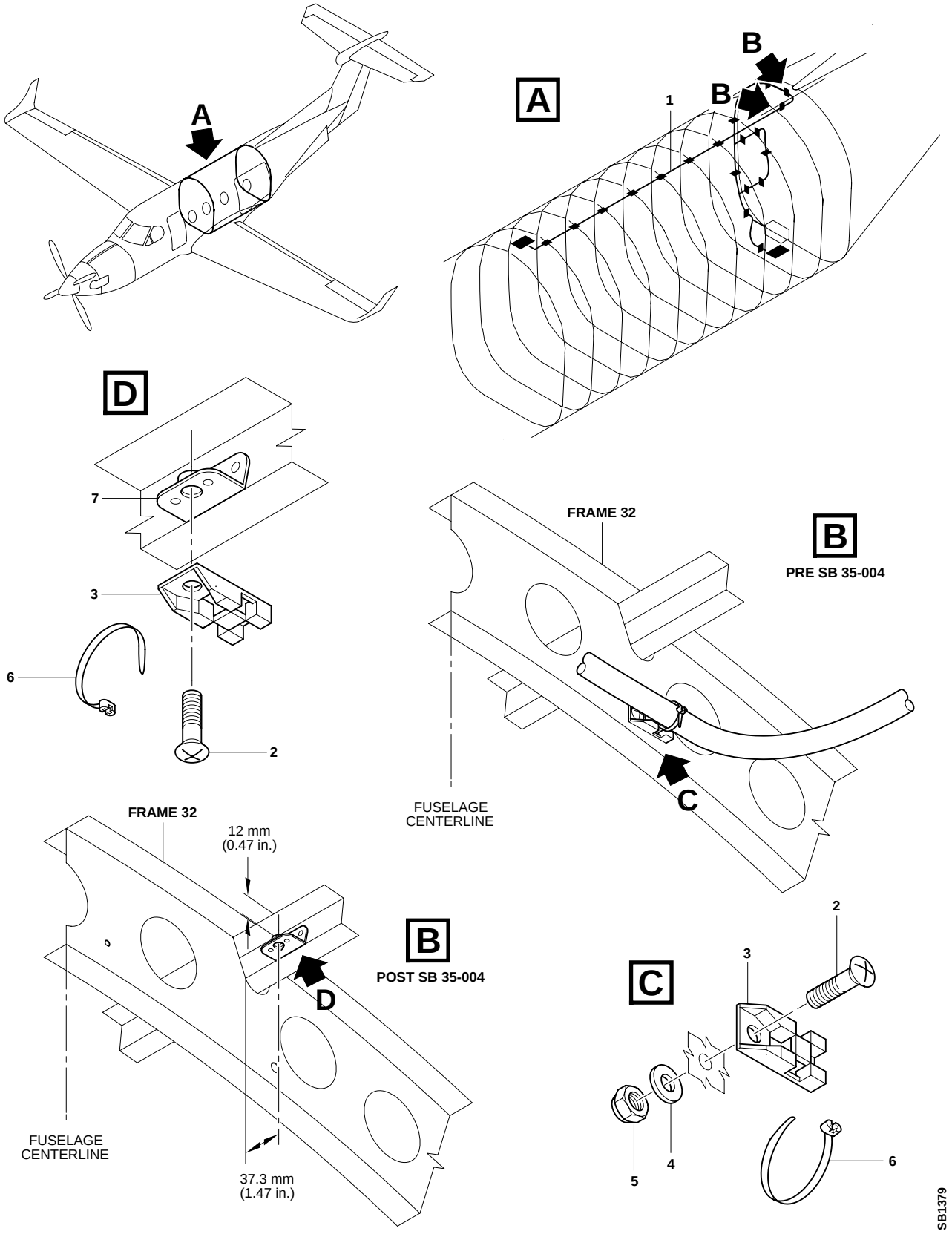
(2) Make sure the work area is clean and clear of tools and other items.

I. Documentation

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



Modification of the Aft Pipe Routing
Figure 1



Modification of the TCAS Antenna Cable Routing
Figure 2