MODEL AFFECTED:	PS-28 Cruiser / SportCruiser / PiperSport
SUBJECT:	Reinforcement of the nose wheel leg attachment to the firewall
AIRCRAFT AFFECTED:	All PS-28 Cruiser, SportCruiser, PiperSport aircraft equipped with or being in process of installation of the new NLG leg – dwg. SG0300N.
COMPLIANCE:	Apply this Service Bulletin not later than at the next scheduled inspection after 50 flight hours (see the CR-MM-1-0-00, Rev.13, Chapter 2, point 2.5.1.e) or promptly after issue of this Bulletin in case that local cracks and/or deformation of vertical brackets on the nose landing gear leg attachment to the firewall are discovered, or upon installation of a new NLG leg – dwg. SG0300N.

DESCRIPTION:
This Service Bulletin contains instructions for installation of parts for reinforcement of the nose landing gear leg attachment to the firewall.

APPROVAL:
The reinforcement is EASA approved under Minor Change Approval No.10054963 dated October 2nd, 2015.

AUTHORISATION TO PERFORM:
US: Repairman (LS-M) or Mechanic (A&P)
EASA Part M or Part 145 Maintenance organization

REASON:
Minor local cracks and deformations of the SF0157L/P vertical brackets short edge in the nose landing gear leg attachment to the firewall were discovered on some PS-28 Cruiser aircraft.
To avoid a possible occurrence of this situation a set of parts to increase the carrying capacity of the SF0157L/P vertical brackets by means of SF0602L/P stiffener, SF0604/N bulkhead and SF0601L/P "U" stiffener has been developed.

MANPOWER:
Maximum 8 hours are required to complete this Service Bulletin when an angle riveting machine is available. One person is able to perform all works except riveting. This operation requires assistance of the second person. In case that only a standard riveting machine is available, it is necessary to remove the power unit and relevant number of hours must be added.

SPECIAL TOOLS:
Angle riveting machine, angle drilling machine, extended drill of dia. 2,4 mm, standard drilling machine, drill of dia. 2,4 mm, 3,2 mm, 3,3 mm and 4,1 mm. Drill of dia. 8-10 mm to deburr holes edge, Agrafs of dia. 2,4 mm, Agrafs of dia.4 mm. Agraf pliers, primary colour to repair a damaged paint.
Another common tools for aircraft servicing are needed.

WEIGHT AND BALANCE:
Insignificant effect.

ELECTRICAL LOAD DATA:
Not affected.

REFERENCES:
N/A

PUBLICATIONS AFFECTED:
N/A

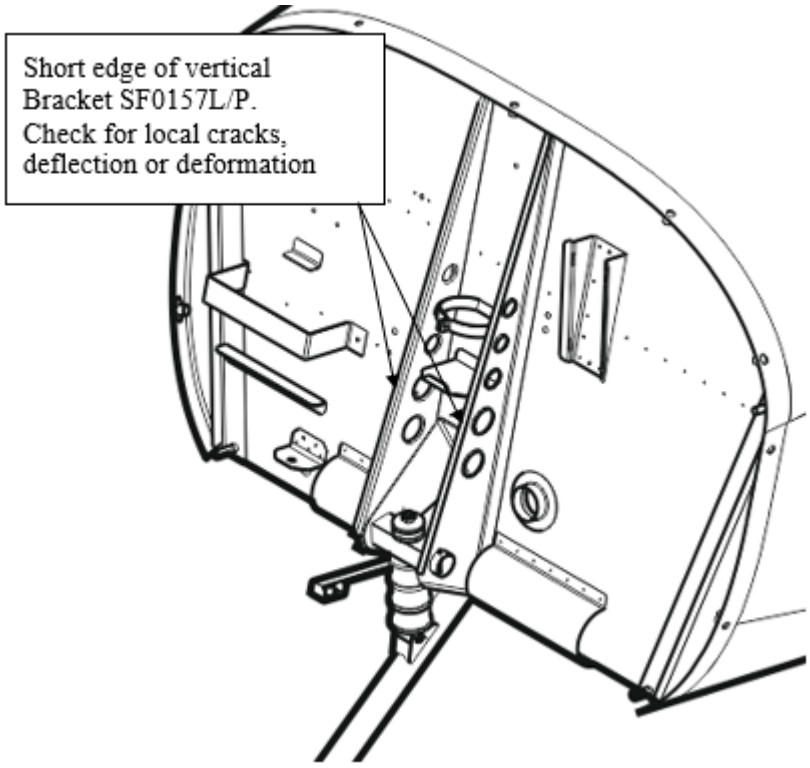
MATERIAL:
Parts can be ordered from the aircraft OEM or from the respective authorized supplier of the aircraft parts.

ACCOMPLISHMENT INSTRUCTIONS:

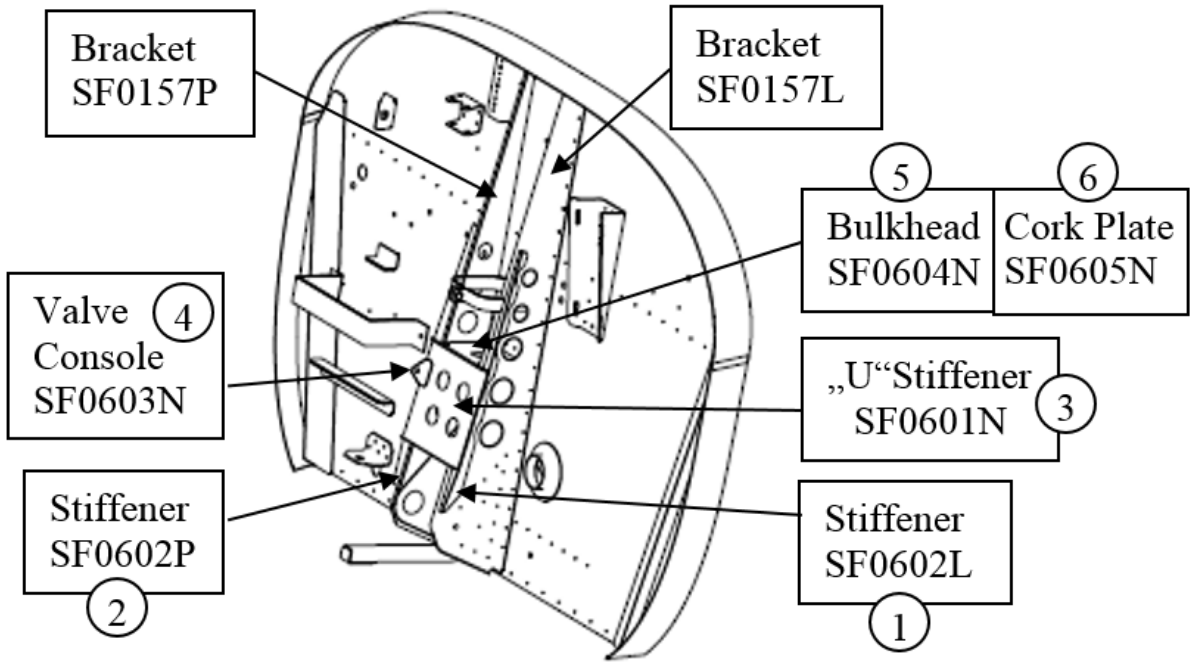
The following parts are required for the reinforcement:

Item	Name	Part Number	Nomenclature	Quantity (pcs.)	Note
1	Stiffener	SF0602L		1	
2	Stiffener	SF0602P		1	
3	"U" Stiffener	SF0601N		1	
4	Valve Console	SF0603N		1	
5	Bulkhead	SF0604N		1	
6	Cork Plate for Expansion Tank	SF0605N		1	
	Rivets	See the Table in the Supplement No.3 for details			

Scheme No.1 – Parts on the Firewall to be checked for possible local cracks, deflection or deformation



Scheme No.2 - Parts on the Firewall



ACCOMPLISHMENT INSTRUCTIONS:

In general:
For places to check, see the Scheme No.1.
It is assumed in this Service Bulletin that an angle riveting machine is available. Then it is not necessary to demount the power unit.
If the angle riveting machine is not available, then use a standard riveting machine but it is necessary to demount the power unit, see the CR-MM-1-0-00, Chapter 10.

To accomplish this Bulletin carry out the following steps:

1. Move the aircraft to a suitable place to perform the work.
2. Remove engine cowlings, disconnect positive battery terminal, (see the CR-MM-1-0-00).
3. If an angle riveting machine is available, demount airbox, battery, exhaust system, oil and expansion tank. Disconnect the fuel system parts leading from the gascolator to the fuel pump, disconnect or deflect hoses where necessary. Go on to the Point 5.
4. In case an angle riveting machine is not available, use a standard riveting machine; demount the power unit, see the CR-MM-1-0-00, Chapter 10. Go on to the point 6.
5. In case the Control box of the efficient heating system is installed (see the Picture 2 in the Supplement No.4), demount the cable of cabin heating, drill out the rivets and remove the Control box. To remove the rivets, see the CR-MM-1-0-00, Chapter 15, point 15.2.

6. Now the landing gear attachment area on the firewall should be easily accessible.

7. Check thoroughly again the nose wheel leg attachment area for cracks and deformation. Stop enlarging of cracks by drilling a hole with the drill bit of dia. 3,2 mm at the utmost end of the crack, for details see the CR-MM-1-0-00 , Chapter 15, point 15.1 and point 15.4.5.1. Straighten out all bent or deformed parts.

8. Fit the **Stiffener SF0602P** in place with the **Bracket SF0157P** in accordance with the scheme in the Supplement No.1 and drill together. Use drill bit of dia.2,4 mm. Use Agrafs to hold together, see the Pictures 3, 4 in the Supplement No.4.
9. Fit the **Stiffener SF0602L** in place with the **Bracket SF0157L** in accordance with the scheme in the Supplement No.1 and drill together. Use drill bit of dia.2,4 mm. Use Agrafs to hold together

10. Drill out and remove the **Bottom Support** of the Expansion tank and rivet the holes with Blind rivets of dia.4 mm, see the Table in the Supplement No.3.

11. Use the **Cork Plate SF0605N** and stick it to the **Bulkhead SF0604N**. Use the Chemopren Pattex or similar glue to stick.
12. Take the **Bulkhead SF0604N & Cork Plate assembly**, then fit the assembly in place with the **Brackets SF0157L/P** in accordance with the scheme in the Supplement No.1 and drill together with the Brackets. Use the drill bit of dia.2,4 mm for holes. Use Agrafs to hold together. See the Pictures 5, 6 in the Supplement No.4.
13. Use the **"U" Stiffener SF0601N** interconnecting both **Brackets SF0157L/P**, fit in place with the Brackets and drill (dia 2,4 mm) together. Use Agrafs to hold together.
14. Use the **Valve Console SF0603N**, fit it in place with the **"U" Stiffener SF0601N** accordingly to the scheme in the Supplement No.1 and No.2 and drill (2,4 mm) together. Use Agrafs to hold together. See the Pictures 7, 8 in the Supplement No.4.

15. Drill all the pre-drilled holes to the individual final diameters in accordance with the Table in the Supplement No.3.
    Note: *Remove individual Agrafs step-by-step only for the hole which is just being re-drilled to the final diameter and after re-drilling insert new Agrafs in the re-drilled holes back again.*

16. Release the Agrafs, release the parts, deburr the holes edges and clean all parts properly. Use a primary paint to cover a damaged paint where necessary. Fit the parts in place (except the **"U" Stiffener SF0601N**) and hold together with help of Agrafs again.

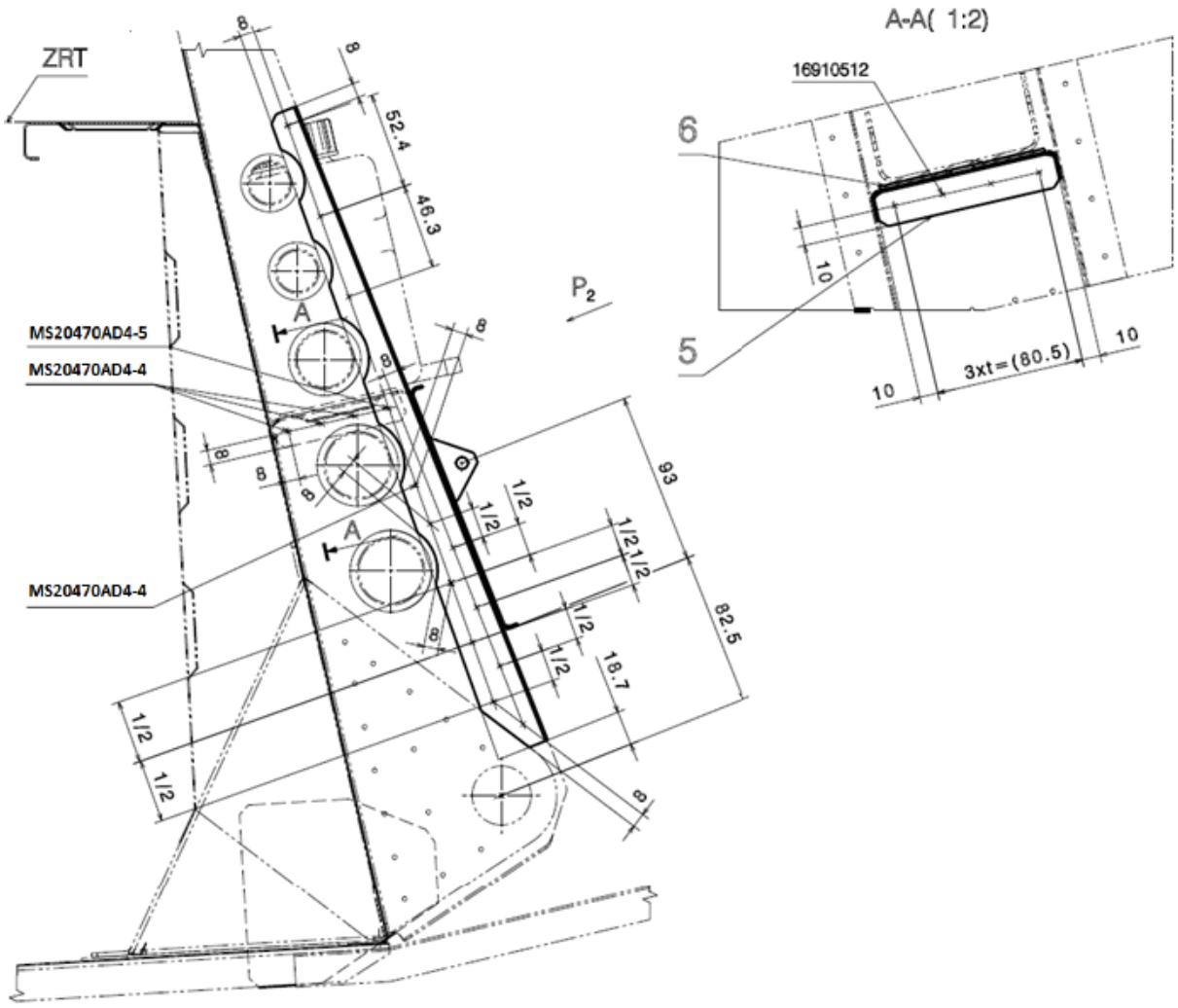
17. Rivet the parts. For details, see the Pictures 5, 6 in the Supplement No.4. For individual parts use the rivets in accordance with the table in the Supplement No.3. The rivet type is defined in scheme in the Supplements No.1 and No.2.
    Note: *The bottom part of the Bulkhead SF0604N which is connected to the Firewall is riveted by Blind rivets, see the Supplement No.1, Section A-A.*

18. Fit the **"U" Stiffener SF0601N** in place, hold together with Agrafs and rivet. See the Pictures 7 to 10 in the Supplement No.4.
    Note: *If not enough space to rivet the top rivet row of the "U" Stiffener SF0601N, then first hold it with Agrafs in the upper rivet row only and lift up the bottom part of the "U" Stiffener. Insert hand with a suitable bucking bar under the Stiffener and apply riveting of the top rivet row. As late as the top row is riveted continue and rivet the further rows.*

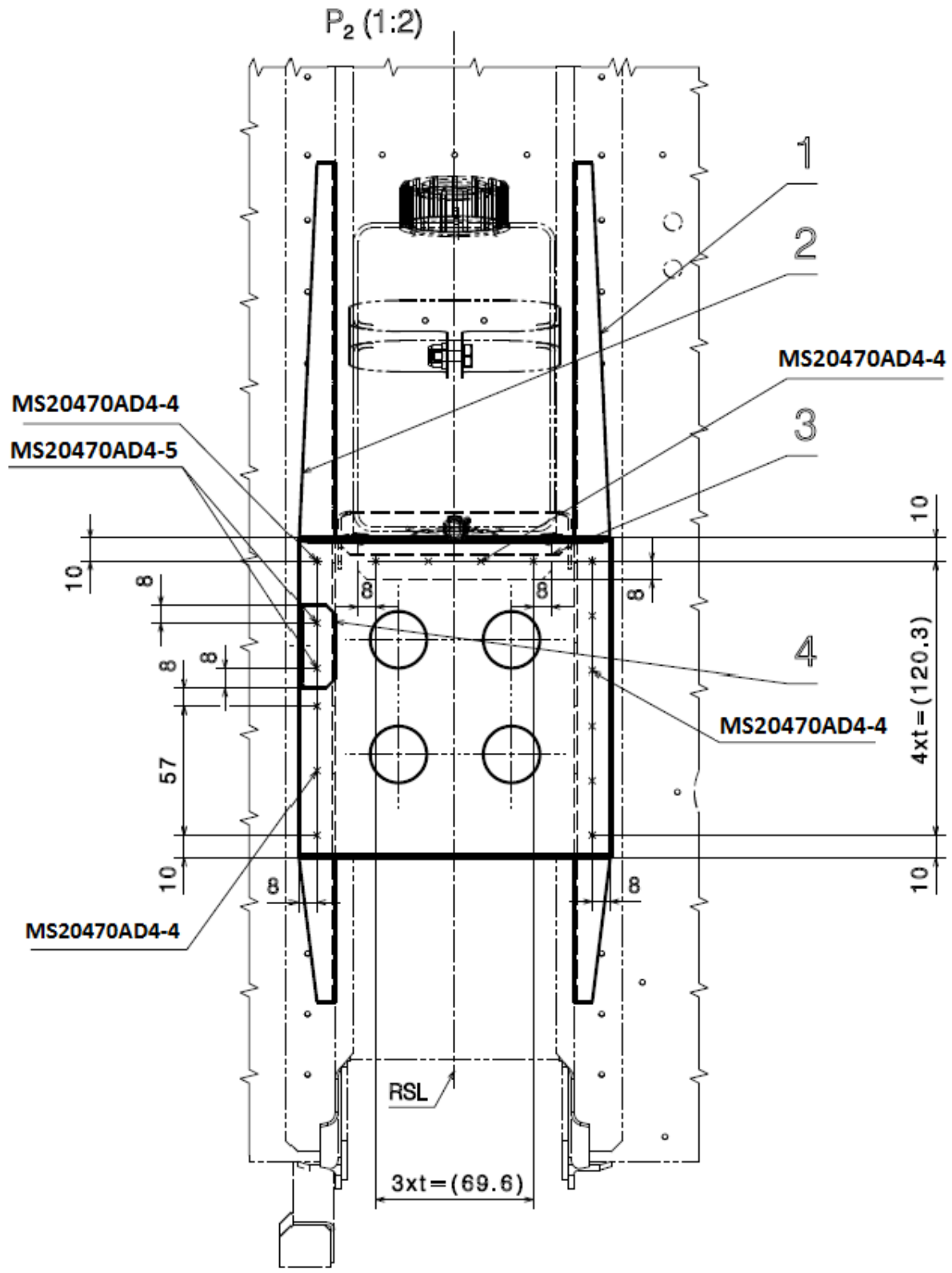
19. Rivet back the Control box of the Heating system, see the Picture 2 in the Supplement No.4. Use the rivets in accordance with the Table in the Supplement No.3.
20. Mount the airbox, battery, exhaust system, oil and water tank back again. Connect back the fuel system parts and hoses where necessary. Put all systems and aggregates in order again.
21. Restore the aircraft to the airworthy condition. Perform the engine run test and check the relevant systems.
22. Complete aircraft records to reflect compliance with this bulletin.

SUPPLEMENTS:

Supplement No. 1: Assembly - Reinforcement of the nose wheel leg attachment on the firewall – Sheet 1



Supplement No. 2: Assembly - Reinforcement of the nose wheel leg attachment on the firewall – Sheet 2



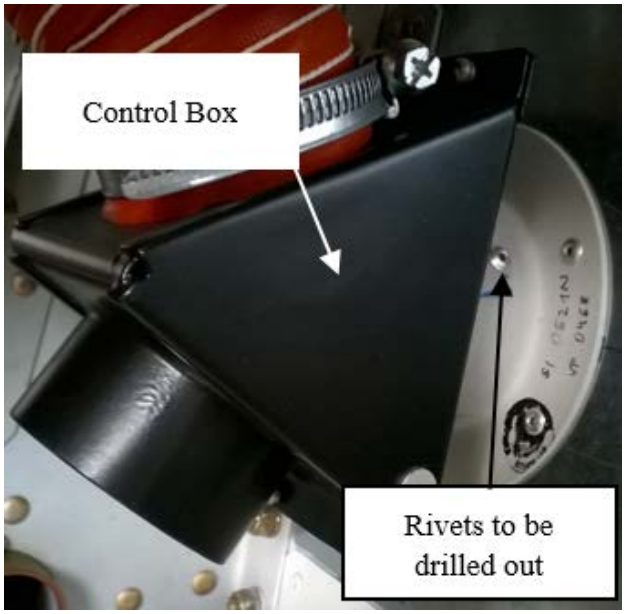
Supplement No. 3: Table of rivets and recommended holes

Item	**Pcs.**	**Nomenclature, P/N**	**Rivet Diameter**	**Recommended Hole Diameter**
	-	**-**	**(mm)**	**(mm)**
Rivet	44	MS20470AD4-4	3,2	3,3
Rivet	4	MS20470AD4-5	3,2	3,3
Blind Rivet	8	P/N16910512	4	4,1
Rivet for Control box	3	P/N16910412	3,2	3,3

Supplement No. 4, Pictures:

Picture 1

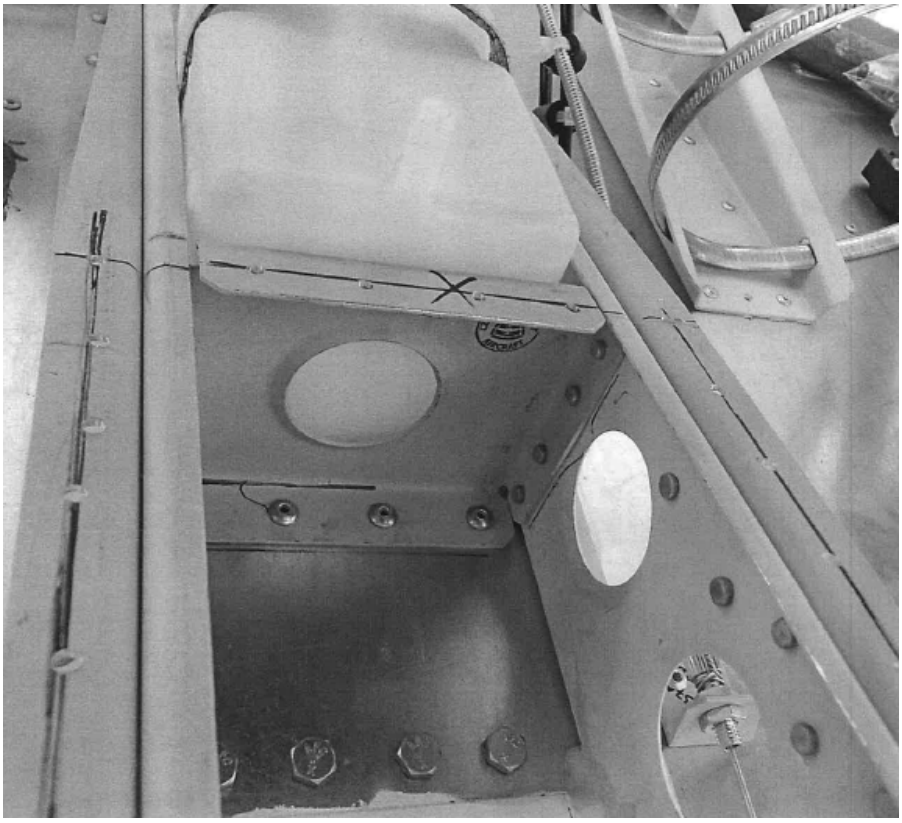
Picture 2



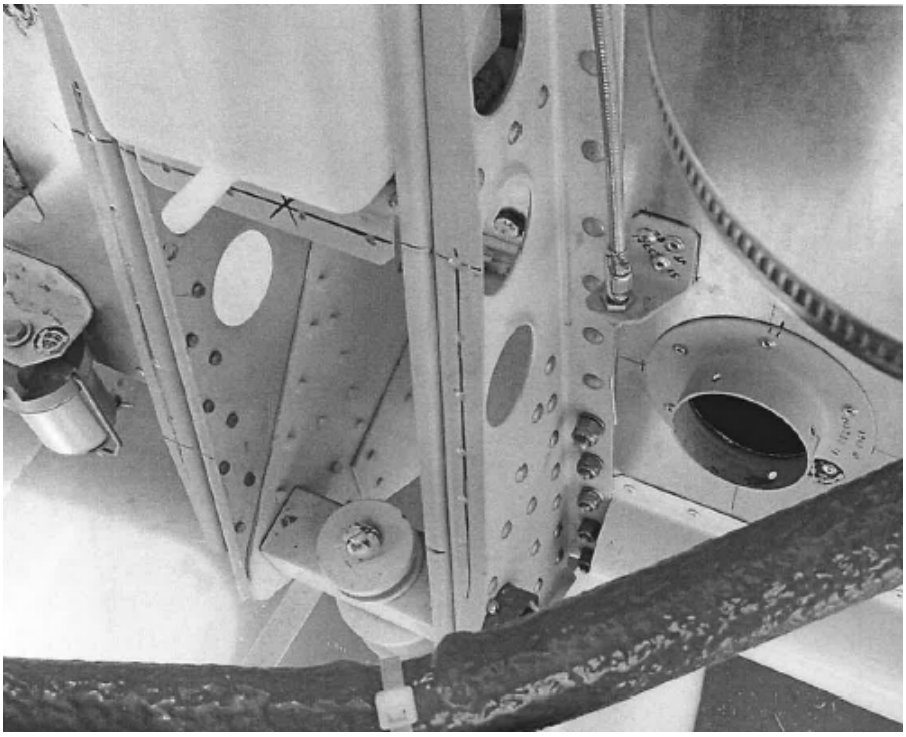
Picture 3

Picture 4

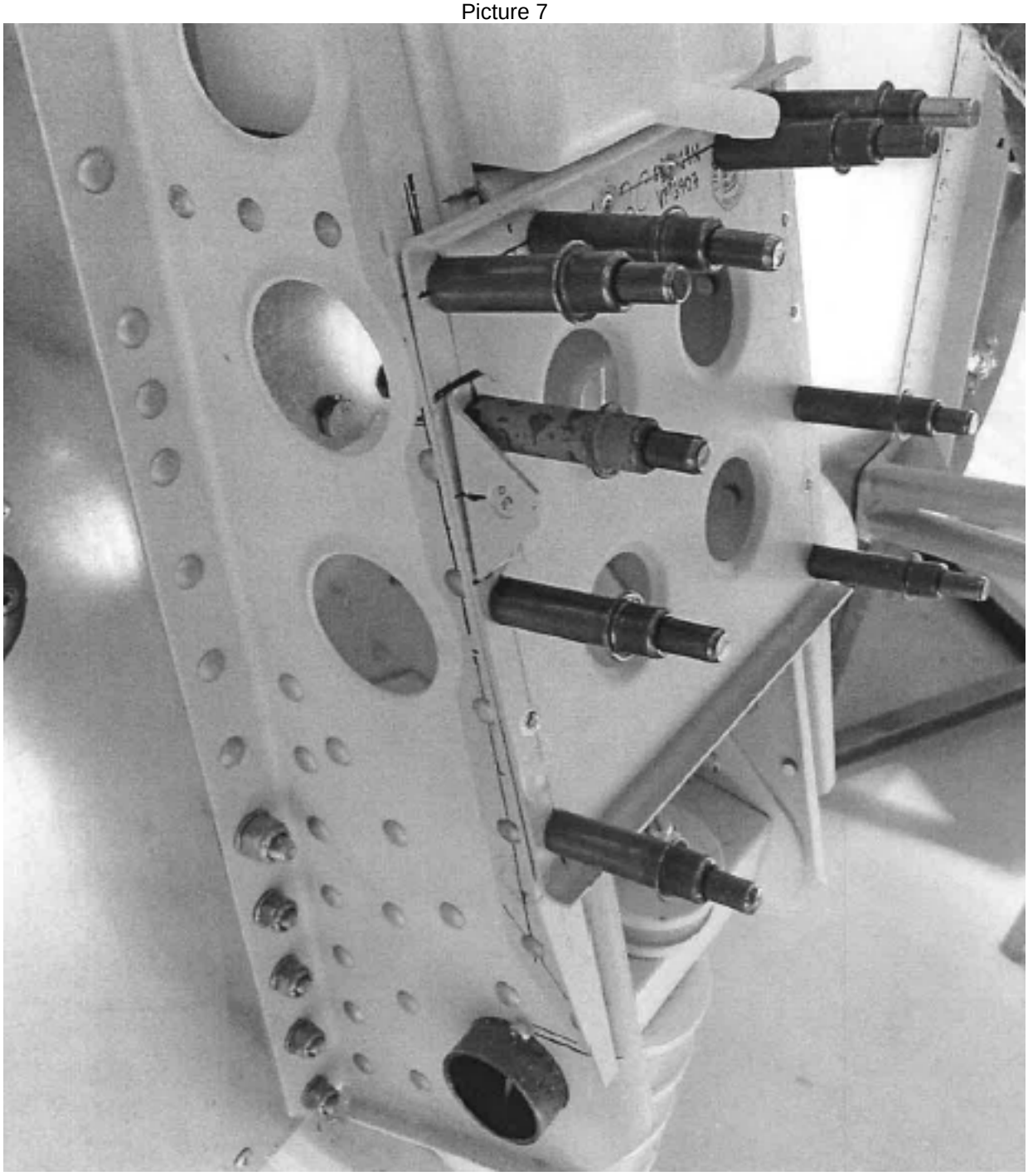
Picture 5



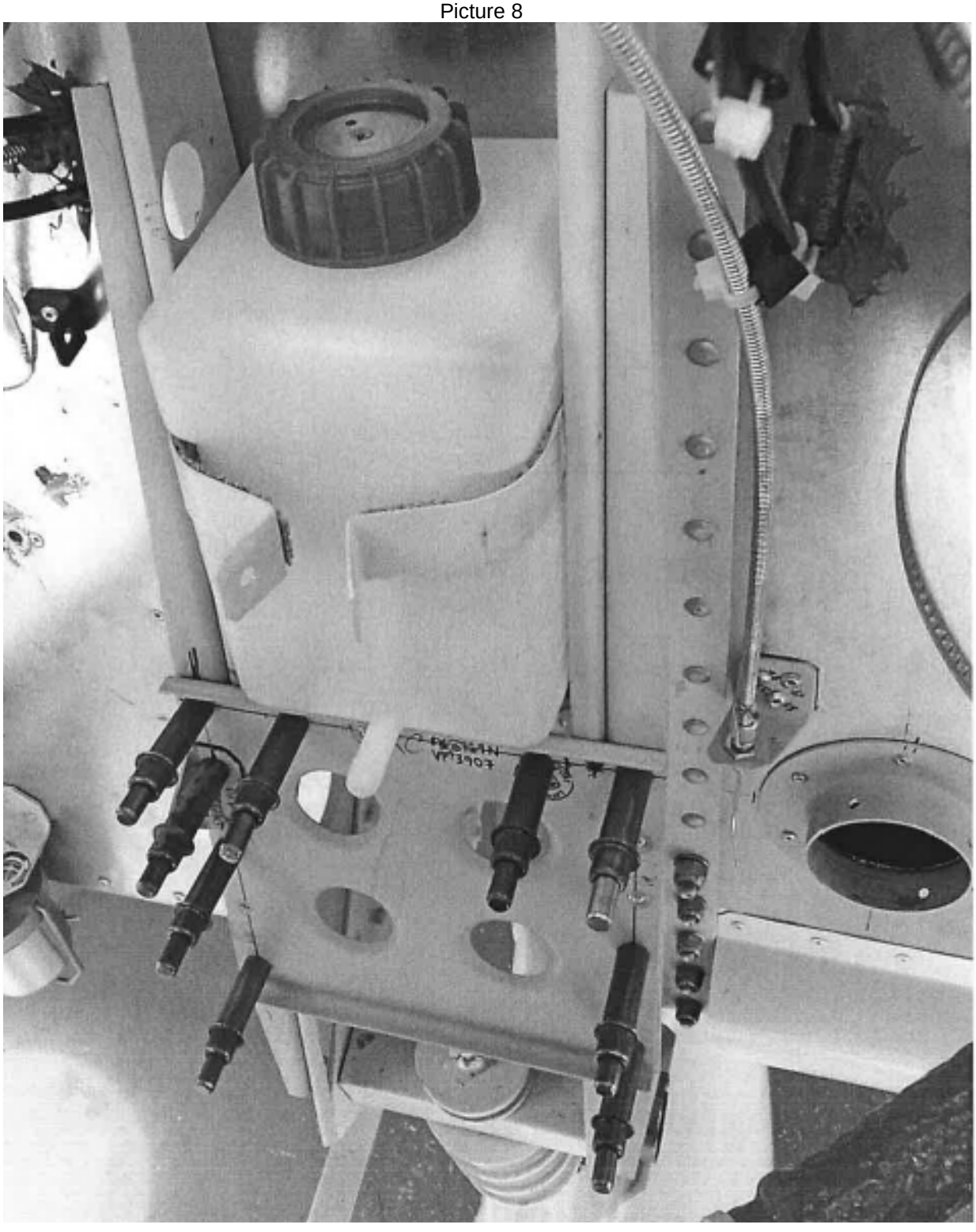
Picture 6



Picture 7



Picture 8



Picture 9

Picture 10

COSTS:
To be covered by the aircraft owner/operator.

APPROVAL:

This SB was approved by:

Title	Head of the Design Organisation	Airworthiness Manager
Name	Jiří Konečný	Miroslav Koukal
Hand written signature