FULL LOTUS®
MANUFACTURING INC.

FULL LOTUS FLOATS

Product information bulletin

September 1, 1995

USING FULL LOTUS FLOATS WITH SACS

(Step Anti Compression System)

The SACS system.

The SACS system provides a well supported flat planing surface for the bottom of the float which will not collapse or deform under the weight of the aircraft.

This system consists of several components

1) The SACS bladders are two higher pressure bladders that support the step area of the float. They are installed inside the float at the step area.

2) The reinforcement plate is a formed aluminum plate that fits underneath the float stiffener tubes and supports the top of the SACS bladders.

3) The stiffener board is a formed aluminum plate that fits between the float shell and the hull cap. It provides a flat planing surface and is supported by the SACS bladders.

This bulletin covers two topics.

1) Assembling and using a new float equipped with the SACS system

2) Retrofitting an existing float with the SACS system.

NOTE: This bulletin is in addition to your Full Lotus Float manual and should be used in conjunction with it. The manual has detailed instruction on float inflation procedures.

1. Assembling and using a new float equipped with the SACS system.

The following procedure should be used to assemble and inflate Full Lotus Floats with the SACS.

1.1 Assembly of SACS system.

1) Your new float will have the SACS bladders already installed in the float. They should be checked for correct placement before the float is inflated.

2) Open the two center access zippers on the front float compartments. Insert your hand and feel the small SACS bladders to verify that they are attached to the velcro strips located on the bottom inside of the float. The velcro on the SACS bladder should be aligned across the float, the same as the velcro on the bottom of the float. Correct the attachment of the SACS bladders if it is not as described above.

4) Undo the top nuts on the SACS bladder valves and place the reinforcement plate over the valves with one washer underneath it. Replace the top nuts and washers but do not tighten the nuts. The assembly should look like Fig. 1 The edges of the reinforcement plate will fit under the float stiffener tubes.

5) Slide the stiffener tubes into the pockets on the top of the float passing them above the SACS reinforcement plate you have just installed. The assembly should look like Fig. 1.

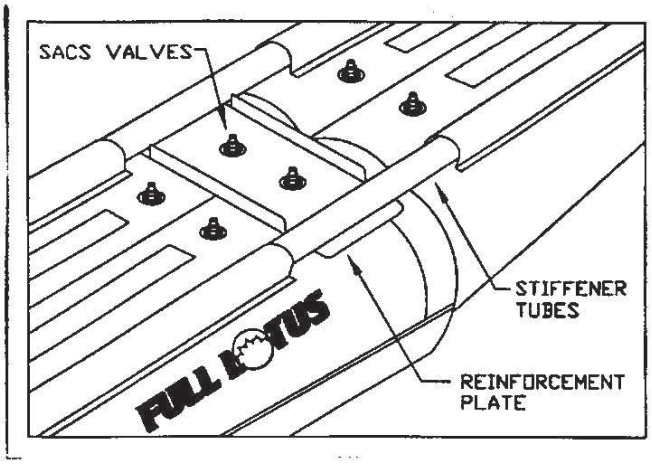

Fig. 1. Reinforcement plate assembly.

1.2 Inflating the SACS bladders.

1) Inflate all the bladders EXCEPT the SACS bladders following EXACTLY the procedure in section 4. of your Full Lotus manual.

2) Check that all the bladders except the SACS bladders are at operating pressure.

3) VERY CAREFULLY inflate the SACS bladders up to 15 P.S.I. (103 Kpa.). It is necessary to be very careful as the SACS bladders will fill quickly and can burst if overinflated.

4) Tighten the nuts on the SACS valves.

2. Retrofitting an existing float with the SACS system.

There are two kinds of retrofits. Older floats will not have velcro strips sewn into the bottom of the float. The SACS bladders will be held in place by the existing foam step blocks.

Newer floats will have velcro strips sew into the bottom of the float to attach the SACS bladders.

To determine which floats you have do the following: Gradually let the air out of the bladders a little at a time and in rotation. When there is just enough air left to retain the shape of the float, unzip the two inside zippers on the front section of the float. Slide your hand into the float towards the step and under the foam step block.

If your float has the velcro strips installed you will be able to feel them under the foam blocks.

Follow the appropriate instructions below to retrofit tha SACS system.

2.1 Retrofitting the SACS system to floats without velcro strips installed.

1) Let air out of the float bladders gradually and in rotation until the float is deflated.

2) Before installing the SACS bladders you will need to cut valve holes in the top of the float.

3) Mark out the hole location as shown in Fig. 2. using the following dimensions:

For float sizes 1000, 1220, 1260, 1650, 1700 dimension "A" and "B" are both 2 1/2 " (64 MM).

For float sizes 2000, 2150, 2250 dimensions "A" and "B" are both 3" (76 MM).

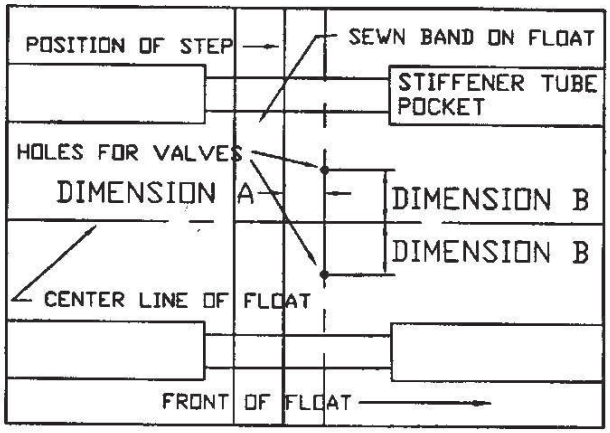

Fig. 2 Marking the valve holes.

4) Open the zippers on the two front center compartments.

5) Carefully cut a 5/16" (8 mm) diameter hole in the top double layer of the float. A small pair of scissors or a sharp utility knife and a block of wood inside the float can be used. Be careful not to cut the bladders.

6) Move the bladders out of the way and remove the foam blocks from their pockets.

7) Cut 6" off the large ends of the two step blocks as shown in Fig. 3. A sharp extendable utility knife or a serrated bread knife will work.

8) Replace the foam blocks. Make sure that the thin end of the block is inserted well into the fabric pocket.

9) Partially inflate the SACS bladders - just enough so they retain their shape.

10) Insert one SACS bladder into each of the two center front compartments. Slide the bottom of the bladder down betwen the back of the float and the shortened step block. Fit the valve up through the valve hole in the top surface of the float.

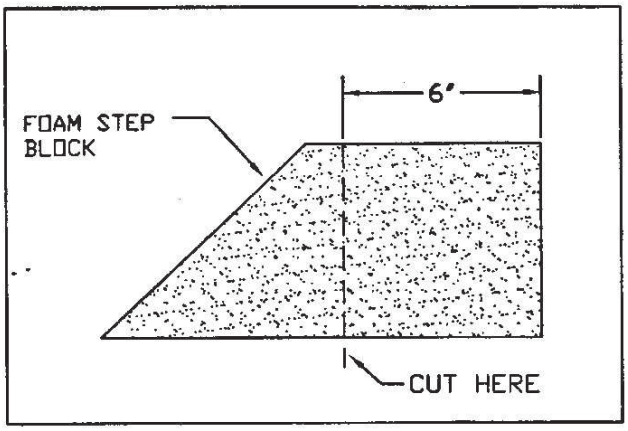

Fig. 3 Cutting the foam blocks.

11) Undo the top nuts on the SACS bladder valves and place the reinforcement plate over the valves with one washer underneath it. Replace the top nuts and washers. Do not tighten the nuts. The assembly should look like Fig. 1. The edges of the reinforcement plate will fit under the float stiffener tubes.

12) Slide the stiffener tubes into the pockets on the top of the float passing them above the SACS reinforcement plate you have just installed. The assembly should look like Fig. 1.

13) Follow the procedure EXACTLY in section 4 of your Full Lotus float manual inflate the main bladders, (not the the SACS bladders). It is quicker if you remove the valve stems to do the initial fill.

14) Following the procedure in Section 1.2 inflate the SACS bladders.

15) Tighten the SACS valve nuts.

2.2 Retrofitting the SACS system to a float with velcro strips installed.

1) Let air out of the float bladders gradually and in rotation until the float is deflated.

2) Before installing the SACS bladders you will need to cut valve holes in the top of the float.

3) Mark out the hole location as shown in Fig. 2. using the following dimensions. If your float is a recent model it may have a very small pin hole marking the location of the valves.

For float sizes 1000, 1220, 1260, 1650, 1700 dimension "A" and "B" are both 2 1/2 " (64 MM).

For float sizes 2000, 2150, 2250 dimensions "A" and "B" are both 3" (76 MM).

5) Open the zippers on the two front center compartments.

4) Carefully cut a 5/16" (8 mm) diameter hole in the top double layer of the float. A small pair of scissors or a sharp utility knife and a block of wood inside the float can be used. Be careful not to cut the bladders.

6) Move the bladders out of the way and remove the foam blocks from their pockets. The foam blocks will no longer be needed and can be discarded.

7) Inflate the SACS bladders until they just hold their shape.

8) Move the main bladder out of the way and slide one SACS bladder into each center compartment.

9) Align the velcro on the bladder with the velcro on the bottom of the float and press the bladder into place. Both pieces of velcro will be aligned ACROSS the float.

11) Undo the top nuts on the SACS bladder valves and place the reinforcement plate over the valves with one washer underneath it. Replace the top nuts and washers. Do not tighten the nuts. The assembly should look like Fig. 1 The edges of the reinforcement plate will fit under the float stiffener tubes.

12) Slide the stiffener tubes into the pockets on the top of the float passing them above the SACS reinforcement plate you have just installed. The assembly should look like Fig. 1.

10) Follow the procedure EXACTLY in section 4 of your Full Lotus float manual inflate the main bladders, (not the the SACS bladders). It is quicker if you remove the valve stems to do the initial fill.

13) Following the procedure in Section 1.2 inflate the SACS bladders.

14) Tighten the SACS valve nuts.

3. Maintenance.

No maintenance of the SACS system is required other than checking the inflation of all bladders to the pressures marked onto the top of the float (for the main bladders) or marked onto the reinforcing plate (for the SACS bladders).