SILHOUETTE **MAKE & MEND** Sheets

No.9 MAST SUPPORTS

Editor: Ian Rodger

All the Sll's I have owned have had mast supports, and I mean the type that transfer the mast's downward load from the deck to the keel, hog or keelson usually via a floor cross beam.

Interior modifications, extra berths, tables, or just more space is aquired by making this support detachable but you must remember to put it in when going sailing, although I've forgotten mine a number of times and haven't yet had the heel of the mast down below. If you do forget, you soon notice the rigging slacker than usual and that reminds you to put it back in before it really blows. The last few Silhouettes I have owned have all been Slll's and although these were made without mast supports, I like to make one and fit it when sailing h ard .

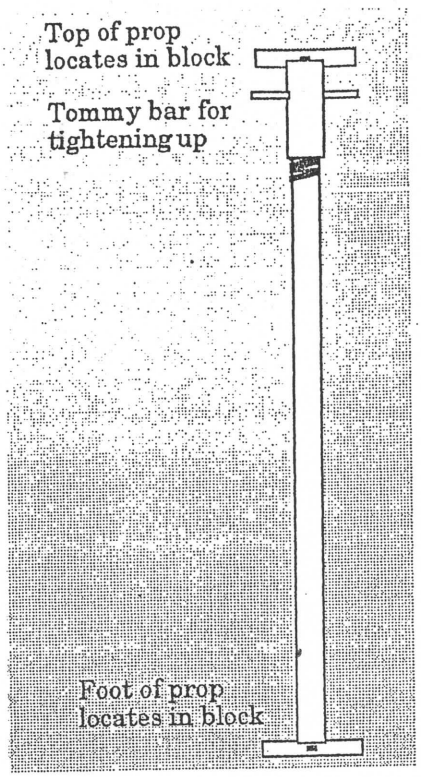
I have measured up to 1/2" deflection of the cabin top although I've never heard of one collapsing. It is easier to set up the shrouds and trim for best performance if a mast support is used and I suppose that is the best reason for having one on an Slll.

Now to the detachable support. All that is required is a length of tube with a threaded collar and locations top and bottom. The top location should be under the tabernacle or mast step but choose the position by lifting the floor boards and choosing the floor cross beam which is the nearest to being vertically under the mast. A little fore or aft doesn't matter. On the Slll the floor boards join overt the appropriate floor beam which is convenient. On the Sll I think the same applies,

Chisel about1/4 depth out of the beam big enough to take a large headed screw head and penny washer (brass or stainless) and that is the bottom location. The top location similarly on the wooden boat but using either a tapped hole or a self tapper on the fibreglass deck head. I find that a 1/4" whitworth head is adequate location both top and bottom but penny washers of suitable bearing plates are essential and you will need a half-hole in each floor board to easily clear the tube.

There are several possibilities for the tube, I will mention two and leave the choice to you.

The first and easiest to aquire is a piece of conduit or steam pipe preferably galvanised but of course you can paint it as it is always inside anyway. One end needs to be threaded for about 2" minimum and a straight threaded collar with either a hole for a tommy bar or a fixed one as in the drawing. When I made the last one I didn't have a



piece of conduit around but I had a length of old imperial 1" copper tube and also a pair of old brass taps that I was throwing away, so I utilised the threaded sections on these to get the adjustment.This has the advantage that you can if so disposed, polish the coppertube until it shines every time you clean the boat.

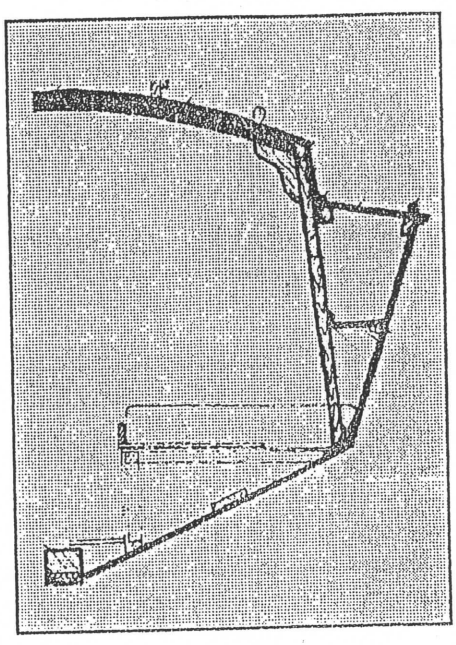
OR Alternatively you can transmit the mast loading through a ring beam to the hull, which gives you a permanently clear passage forward, without the inconvenience of a prop. You may need to go forward to get through the forehatch while under wa, and if you weigh 15 stone, this may be awkward!

First, you need to laminate a strong beam, about 3" wide by 1.5" thick underneath the cabin roof , just where the mast prop should normally be. It needs to be securely glued and screwed to the roof plies, and the tabernacle should be bolted right through it.

Then fit 3"x l" hardwood struts from the outer edges of the beam vertically down to the chine as in the drawing, and fit substantial knees into the angle between them. You will find that geometry comes in handy here, as there are some interesting compound angles required.

You will find that the line of the struts conveniently passes just in front of the side shelves if fitted, and can be screwed to them for extra rigidity. The lower ends of the vertical struts can be veed to locate snugly over the upper corners of the bilge stringers, and should be screwed and glassed into place.

A 'proper' ring beam would transmit the load all the way down to the keel, but this arrangement has proved strong enough for the pressures developed on a Silhouette rig.



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