

S III - REBUILD

PART 8 - MAST AND STANDING RIGGING

As I said in my opening article, much of this series of articles applies to Silhouettes in general. This part, although specifically directed to S III's does apply to S II's, in particular to alloy mast S II's.

I am assuming that you have a mast and rigging as supplied by Hurley's. Starting at the top you have a masthead crane with two pulley blocks in the centre for the main halyard, a further block forward for the jib halyard and above and forward a s.s. strip with an elongated hole to take a swivel block for a spinnaker if required. At the rear, in between the backstay attachment pin and the mast, there is another pin which you can use for a topping lift. There is a pin for the forestay at the forward lower extremity and bolted through s.s. strips either side for the cap shrouds.

A little less than half-way down the mast there are sockets either side for spreaders and fittings just below with two sets of holes and pins each side, only the rear of which are used for the lower shrouds.

Just below the bottom of the mast groove there is a length of tufnol traveller riveted to the mast for the gooseneck. Finally the bottom sits in a galvanised tabernacle with 2 through bolts.

Over the years I have seen some weird and wonderful ways in which the mast has been rigged, hence this lengthy explanation! In one particular boat I acquired there were no blocks at all at the masthead and all the halyards were passed around the 1/4" diameter pins!

The standing rigging comprises forestay, backstay, cap shrouds to the forward pair of chainplates and one pair of lower shrouds to the aft chainplates. All of these are terminated at the bottom end with Brooks and Adams rigging screws.

There are two main things wrong with the above arrangement.

The first and most important is that the mast cannot bend in the correct way. The mast should bend so that the mast half-way up moves forward with respect to the top and bottom. I will define this as the correct bend. This correct bend should increase as the wind forces increase. This flattens the sail and also spills wind from the top of the sail which is exactly what is needed.

You must start off with a pre-bend when the mast is rigged and the easiest way to do this is to add forward lower shrouds using the pins already on the mast and fitting additional chainplates or U-bolts forward from the existing forward chainplates by about the same distance as the rear ones. You can then induce the pre-bend (about half mast width is sufficient) by tightening the new forward lower shrouds before taking up the slack on the rear ones.

There are other ways of achieving pre-bend, but they all demand more in the way of engineering and I will deal with them later in the series.

The second of the two required alterations, although second in importance needs to be done first, if you intend to do both, because it alters standing rigging lengths. The mast requires to be approximately vertical fore and aft, with the boat afloat and no crew aboard. In order to achieve this you have either to tilt the tabernacle forward or make the top holes into slots so that the mast is not restrained from moving fore and aft at the top.

You then need to lengthen the backstay and shorten the forestay by trial and error(about 5 or 6 inches). You do not particularly need a rigging screw on the forestay as the backstay tension does the job,(one way is to put both rigging screws in the back and attach the forestay directly.)

The reason for doing the mast rake first is because it will change the lower shroud lengths slightly.

When you have done these two things you will have a much better balanced boat.

Many times I have heard that Silhouettes suffer from excess weather helm but if you get one rigged and tuned it will be better balanced than many modern designed boats costing 20 or 30 times as much! A few months ago I was out in the Solent sailing a £30,000 model and after an hour at the helm I was exhausted. In the same conditions in my Silhouette it would have been much more enjoyable!