

## Horizon Sails – Set up

### MAST TUNING – STAY TENSIONS

The mast at deck level should be 2850 (J) from stem head to forward edge of mast at deck level. Mast step is positioned so that the mast will be perpendicular to the water line when the mast is chocked securely at deck level.

1. FORESTAY – Adjust forestay so that a slight (approximately 40mm) reverse bend in mast is visible when sighting up sail track from deck level.
2. Adjust LOWER SHROUDS so that the mast is perpendicular athwartships (sideways). A simple method of checking this is to fix the jib halyard so that the snap shackle can just reach the toe rail on one side. Without adjusting the halyard length, swing the snap shackle to the opposite toe rail. If the mast is correct it will coincide with the toe rail as on the other side. Any variance will be double the amount of adjustment required on the turnbuckles.
3. BACKSTAY. Haul on backstay so that 100mm aft bend is achieved in mast. (sight from deck level)
4. SHROUDS Tighten cap shrouds until wire at 1500mm from deck, can be moved through approximately 50mm circle. Continually check as shrouds are being fashioned that mast is kept straight athwartships.
5. Release BACKSTAY and sight up mast. You should have an aft bend of approximately 40mm – 50mm and shroud tension will be noticeably tighter.
6. Slowly increase LOWER SHROUD TENSION a few turns on each at a time, until mast is straight both fore and aft and athwartships
7. REGULAR CHECKING with jib halyard to ensure mast is still perpendicular athwartships is necessary as all new wire stretches slightly after initial sailing

When sailing on the wind in 10-12 knots the leeward shroud should be just firm and not 'floppy'

### SETTING OF SAILS

#### HEADSAILS

##### Sheeting Angle

In general, headsails should be sheeted on wide sheeting angles than would normally be used on mast head rigs and should be generally be considerably flatter (particularly in the leech area) than headsails for masthead rigs.

If the fairlead is in the correct position the sails should have an absolutely uniform angle of attack to the wind. This can be checked by slowly luffing the boat into the wind and seeing if the sail backs evenly along the full length of the luff.

With the rigging set up correctly, with correct halyard tension and correct fairlead position, all tell-tales should behave in unison.

As the sail is luffed closer to the wind the tell-tales on the windward side of the sail will start to lift and move instead of flowing back against the sail.

If the tell-tale at the head of the sail reacts before the lower ones the fairlead position is too far aft. If the lower tell-tale reacts first the fairlead is too far forward.

Do not attempt studies of luff behaviour when the wind is variable in strength or direction, as frequently minor differences in wind can be found at different heights above the water. Also make sure that spinnaker halyards are tied back against the mast

### Leech Tension

The best guide for the sheeting of the leech of headsails is the position of the leech in relation to the end of the spreaders. The No. 1 Headsail should be normally sheeted well clear of the spreaders about 100-150mm, the No. 2 Headsail should be 50-100mm clear of the spreaders, and the No. 3 Headsails, whose leech will be forward of the spreaders should be sheeted so that if the shape of the sail was extended back to the spreaders it would about coincide with the end of the spreaders. In strong conditions all headsails should be sheeted somewhat freer in the leech.

Any excessive hook in the leech of headsails seems very detrimental with a large mainsail behind the headsail and so an absolute minimum amount of leech line tension should be used to just remove leech flutter.

### Luff Tension

In light conditions the luff should be slack enough to just (or nearly) produce tiny horizontal wrinkles in the luff of the headsail. As the wind strength increases, more luff tension should be applied, (either by increasing halyard tension, or if the sail is at full hoist by applying tension on the Cunningham control) to hold the draft of the sail forward in the correct position and also to free the leech in the upper part of the sail in strong winds.

### Setting of Mainsails

This can probably best be covered in two sections

Firstly, when carrying full mainsail and secondly, when the mainsail is reefed. It does however, at all times seem to be extremely important to ease the main traveller to leeward as early as possible and thus widen out the sheeting angle of the mainsail. It must be remembered that the mainsail is producing probably the largest