

49er Sail Setup & Handling Guide

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Skipper "Skilled Engineering" Grand Prix 18 Foot Skiff Champion, now 49er convert.

The 49er puts the thrills and spills of high performance skiff racing within reach of the general sailing public. I would like to share with you some of my experience, which may help with your skiff learning curve. The following is a sound starting point.

MAST TUNING

Rig tensions measure with a "IOOS" gauge with mast stepped without sails hoisted.

Forestay	40
Backstays	17
Side Stays	38
Intermediates	36

MAINSAIL

VANG - UPWIND

Rigged ashore pull mainsheet on until "overbend" creases just start to appear on the main diagonally from the clew to the spreaders. Take up the vang to this tension and mark the control rope for a maximum reference. Note it is easy to over vang the mainsail which will induce more mast bend than luff curve, resulting in inconsistent pressure in the rig when sailing. The rig does not like to be over vanged.

VANG - DOWNWIND

Release vang pressure considerably prior to bearing away. This will reduce mainsail leech and rudder loads. When you have born away onto the new course retension vang to similar tension as upwind to control leech pressure.

LUFF TENSION - UPWIND

Is the key to controlling upwind power. Luff tension induces mast bend which will reduce power to the rig. Be sensitive to this control.

LUFF TENSION - DOWNWIND

Release luff tension to prevent overloading the tack area of the sail as the mast straightens (thus lengthens) under spinnaker.

OUTHAUL - UPWIND

I set up my mainsail with firm outhaul in most conditions. Only when underpowered with crew off the trapeze do we ease outhaul.

OUTHAUL - DOWNWIND

Generally remains in upwind position unless both crew are off the trapeze at which time we ease outhaul for more power.

JIB

LUFF TENSION - UPWIND

Use enough luff tension to remove scallops between the hanks. As wind pressure increases so must the luff tension.

CLEWBOARD AND TRAVELLER - UPWIND

Following is a set up chart

True Wind	0 - 8	to 12	to 15	to 18	to 20+
Clewboard Hole	Top	Middle	Middle	Bottom	Bottom
Travel Pin Hole	1	2	3	4	5

SHEET TENSION - UPWIND

Generally firm trim. Range from the blocks kissing to blocks sprung 25mm apart. Light and fresh winds ease out 25mm, medium air firm trim.

SHEET TENSION - DOWNWIND

Have trim well eased so only bottom half of jib is drawing when sailing under spinnaker. This prevents the jib from drawing wind away from the spinnaker and helps the bow lift as the boat accelerates with rapid changes in apparent wind angle.

SPINNAKER TRIM

RUNNING

The key is to sail the boat heeled to windward with the windward chine in the water. Do not undertrim the spinnaker as this will allow the leech to rotate up and twist around the luff resulting in a lack of power. Do not overtrim as this will not allow spinnaker to exhaust around the mainsail. An exception to this is in fresh conditions where overtrimming is an effective way to "throttle" back if you are going to fast for the sea conditions.

REACHING

Ease sheet as far as possible without making the luff unstable. If the skipper is uncomfortable steering around the spinnaker it is often a sign that the sheet is eased a little to far

CENTREBOARD

The underwater surface area of the board has a dramatic effect on performance both up and down wind. You control area by raising and lowering the board, basically when your looking for pressure you want maximum board area in the water and as you become overpowered progressively lift the board. The maximum up is 200mm as beyond this point the board fouls the crew and equipment when tacking.

SAIL CARE

The design and construction of the sails give excellent performance through a wide wind range. The 49er offers thrills and when not handled correctly spills. It is important for all crews to respect that light weight equipment is the key to performance and sails are no exception.

AVOID LANDING ON THE MAINSAIL OR JIB IN A CAPSIZE

In a capsize the sails can not be expected to withstand the load of crews free falling from the wing height and using the sails to break their fall. If unavoidable spread the load on impact by landing on the whole length of your body, either face down or on your back, by somersaulting. Feet, head / arms first is most likely to cause damage to the sail. The best escape is aft diving beyond the mainsail leech and in this case if you do land towards the back of the sail there will be more give to absorb the shock load than landing around the luff area which is supported by the mast.

MAIN & JIB CARE TIPS

- * Spray the main luff tape and track regularly with silicon to reduce wear on the bolt rope around the batten ends.

- * Minor repairs can be carried out with adhesive Dacron or ideally Mylar stickyback. Ensure the damaged area is dry and salt free, by wiping it down with methylated spirits.

- * Avoid handling the sails on hard surfaces such as concrete.

- * Wash the mainsail zipper with fresh water regularly. Do not spray with lubricant as this attracts grit.

- * Tie a stopper knot in the jib sheet with the clew 900mm away from the traveller block. This helps to restrict the jib from wrapping around the forestay when capsized, reducing the possibility of breaking the jib battens.

SPINNAKER CARE TIPS

Your spinnaker cloth has a silicone finish which reduces friction in the launching chute and when gybing and with care you shall prolong the life of your sail.

- * Avoid drying in direct sunlight or flapping in the wind.

- * Check the mouth of your spinnaker chute for any sharp edges by running your fingers firmly over all surfaces. Sharp surfaces will not only cut the cloth, they will also "pull" seam threads.

- * Spray your launching chute regularly with silicone to reduce friction.

- * "Pulled" threads can often be addressed by holding the gathered area of the seam out on a flat surface and carefully adjusting the tension of the thread back into the form of the original stitch by re-tensioning the thread with a needle, un-picker or similar tool.

- * Tears can be easily repaired with the use of silicone sealant / glue and some .75oz spinnaker cloth. Wash the damaged area with fresh water and/or methylated spirits (clear alcohol). Cut a patch that is 25mm larger than the damaged area, smear a thin layer of silicone around the edge of the patch, spread the damaged area out on a flat surface and apply the patch. When dry the damaged cloth may be cut away leaving the patch.

GOOD SAILING,

Chris Nicholson & North Sails