

## **VAREO TIPS – Last updated May 2005**

These tips are intended to supplement the basic information in the Vareo Owner's Manual that is provided with a new boat. Please note that the information is provided in good faith and is for guidance only. Any related comments or suggestions would be gratefully received by the RS Association and should be directed to the Vareo Class Representative or Association Secretary (see [www.rs-association.com](http://www.rs-association.com) for contact info.).

### **BOAT PREPARATION**

A few improvements have been incorporated into the standard fit-out specification of new boats over the years. Details of main changes can be found at [www.rssailing.com](http://www.rssailing.com) under Vareo details. Owners of older unmodified boats may find the following useful:

To seal the mast and thereby reduce any tendency of complete boat inversion following a capsize: remove the masthead fitting, plug the underside e.g. with a cork, replace, putting retaining screw to the side of the fitting rather than the front where it could chafe the halyard, then apply silicone sealant to the joint & old screw hole. Silicone sealant can also be squeezed into the centre of any mast rivets that are open, except those securing the kicker eye; leave those holes open and also leave the bottom of the mast open so that water can escape. Replace the standard 8mm mainsheet with a smaller diameter rope to reduce friction where it passes through the boom. A 7mm diameter sheet is now standard. A Topper mainsheet works well.

If you find that the spinnaker halyard cam cleat supplied on early boats locks inadvertently when dropping the spinnaker, replacement with a Spinlock cleat is recommended. To make the Spinlock self locking, you will need to mount it on the wedge sold with the Spinlock – then you will have to raise the mainsheet jammer/block by the same amount as the thick end of the wedge otherwise it will foul the Spinlock (a circle of plastic kitchen chopping board works well).

If the spinnaker gets caught in the block immediately forward of the mast, consider resiting it to the starboard side of the mast & resite the hole through the mast bridge (look at a new boat to see positions).

If the spinnaker gets caught in the halyard pulley coming out of the pole, wrap a self-adhesive sleeve around it leaving a gap at the open end, ensuring that the halyard runs freely.

New spinnaker chutes have a convenient pocket for storing the main halyard and, more importantly, wrap around the bottom of the mast to prevent the spinnaker catching on the deck fittings in that area. Alternatively, loop some bungee around the mast below the deck to hold the coiled halyard.

Wear on the front deck caused by the spinnaker halyard can be reduced by covering the worn area with a patch available from LDC.

Replace the original gooseneck fitting with a new one which has a collar to hold the boom away from the mast. This should overcome the problem of the boom tack fitting pulling out.

The original outhaul is difficult to adjust when racing & the rules have been modified to allow a 4:1 purchase. Whilst this can be achieved simply by inserting a small block on the outhaul rope attached to the sail & leading the control line from the take-off point for the kicker, through this block & back through the existing clamcleat, a much neater system is to use the in-boom replacement kit & instructions from LDC.

The following additional modifications are appropriate to all boats and are thought by some sailors to be useful:

If adjustment of the daggerboard is difficult because a rather short piece of elastic has been supplied, replace it with a longer piece, which can be looped around the base of the mast below the kicker fitting and through the handle of the daggerboard.

If the mast has to be removed frequently consider attaching the kicker using a carbine hook (similar to, but stronger than those supplied for the shrouds) instead of a shackle.

When stepping the mast, ensure that the shroud eyes on the mast are correctly aligned as they can sometimes get stuck in a twisted position.

Attach the shrouds to the deck eyes so that the mouths of the fittings are inboard, reducing the possibility of trapping the spinnaker sheet.

Whilst sailing, the leeward shroud goes slack; this can allow the shroud fitting to rotate sufficient to jam under the deck eye and cause damage when shroud tension subsequently increases; to prevent this, tape around the deck eyes and the shroud fittings so that they are held upright when slack; also tape around the ferrule above the shroud fittings to prevent spinnaker damage.

Tiller extensions are easily bent & replacement with a carbon fibre extension is popular. Tape around the tiller extension coupling to prevent its inadvertent release.

Check that the knot in the spinnaker tack line (line that emerges from the front of the pole) is positioned so that the pole can just fully extend. Tie the spinnaker tack to this line just outboard of the knot, so that the tack is within a couple of inches of the end of the pole when the spinnaker is set. Tying it further away limits how low the boat can be sailed with the spinnaker filled.

To minimise the weight supported by the spinnaker, particularly beneficial in light airs, the middle of the sheet line should be looped through the clew cringle of the spinnaker and the ends tied together in the cockpit. For additional security, wrap some tape around the knot.

The spinnaker sheets can be routed in front of or behind the mainsheet block. In front of the block helps reduce tangles, behind the block avoids interference with the mainsheet when the spinnaker is set and maximises the sheet length available in the cockpit.

A spinnaker sheet take-away system is useful for getting rid of all the sheet lying around the boat when the spinnaker is stowed.

When tying the main halyard to the head of the sail, keep the knot close to the cringle so that the sail can be hoisted to the top of the mast and set correctly.

Use adhesive tape for calibration marks on the mast for the Cunningham, on the end of the boom for the outhaul (before spraying with lubricant!) and on the last run of the kicker line. Use the tape to mark minimum and maximum positions of adjustment, so that settings can be gauged and reproduced consistently. Note that there is some interaction between control line settings (e.g. kicker adjustment affects outhaul tension) so adjust all lines to nominal before determining the extreme of each.

Replace the transom bridle line with a much longer one which can be tied on to itself and thereby tensioned.

Toe straps can be made more accessible by tying elastic cord to them and fixing the stretched cord to holes drilled in the rear of the black rubbing strakes on the side decks. NB be very careful not to puncture the side decks.

LDC can supply a toe strap kit for the forward end of the cockpit – useful in lighter airs.

To help judge when the boat is pointing sufficiently low for raising and lowering the spinnaker use either a masthead burgee/wind-indicator or tell-tales attached to the shrouds.

Supplement the leech ribbons with tell-tails for more feedback on sail set. Use self-adhesive patches to secure the tails without puncturing the sail.

A continuous Kicking Strap can be formed to get over the problem of running out of rope on one side of the boat on windward/leeward courses. LDC have a handout on how to splice the line; if the rope is to be led forward through the kicker mast attachment point to keep it out of the way (recommended), then a new rope about 5½ metres long will be required.

To prevent inversion when capsizing, consider hoisting a float to the top of the mast.

To assist with righting the boat after capsizing, a Righting Line Kit is available from LDC – but ensure that the P clips used are sited so as not to foul the trolley supports.

## CONTROL LINE SETTINGS

**Outhaul** – With the original 2:1 system, the outhaul is difficult to adjust without going head-to wind. So for racing the outhaul is usually set for the beat and left for the remainder of the course. In general, set the outhaul to leave about eight inches between the sail and the middle of the boom. Six inches would be more suitable for lightweight helms. Tighten if really windy. The new, 4:1 system makes it possible to adjust the outhaul whilst racing – try tight when overpowered & let off downwind.

**Downhaul/Cunningham** – Vary from medium tension to really tight for the beats, depending on wind strength. Slacken for off-wind.

**Kicker/Vang** – Take up the slack when beating. If really windy when beating, momentarily pull the mainsheet in hard to enable further tightening of the kicker (but make sure you release the tension before rounding the windward mark!). However if windy and tired/not concerned about speed, slackening the kicker allows lots of sail twist and wind to be spilled from the top of the sail, making the boat much less sensitive to gusts. Use medium tension for reaching and light tension for downwind. Increase the tension downwind if roll stability is a problem.  
If going into irons when tacking in high winds, increase boat speed before tack & turn further than normal; if this does not work, let off kicker before the tack & retension on completion of tack.

**Mainsheet** - Adjust the mainsheet when beating so that the end of the boom is roughly over the corner of the transom (approximately 12 to 18 inches between the rearmost mainsheet blocks). Sheetin g much further is slow! Concentrate on keeping the tell tails flying. When sailing high with the spinnaker, adjust the mainsheet to balance the helm and so minimize rudder drag.

## SPINNAKER ADVICE

The high boat speed that is possible from flying the spinnaker enables the skilled Vareo helm to make big gains when sailing downwind. Some of the key factors are outlined below:

**Hoist** - The boat should be flat and under control, with kicker and Cunningham (downhaul) eased before attempting the hoist. Sail low and have the main in a position that it can be eased quickly if a gust hits - not in the cleat!

**Flying the kite** - Aim to keep the luff "on the curl" by continually playing the spinnaker sheet.

**Mainsail** - Try to play the main at the same time as the kite. You may find it easier to take the sheet off the boom rather than through the centre jammer. Try holding the main sheet in the same hand as the kite sheet, over the top of it; this will mean that both main and kite are played in unison, and allows the main to be freed quickly for bearing away in a gust.

**Down wind angle** - If there is enough wind to plane, sail the boat high enough to get it on the plane, then bear away as deep as possible while maintaining speed. As the speed dies, head up to regain speed again. This requires constant adjustment in direction and will result in sailing further but considerably faster over the course than simply sailing as deep as possible. If there is not enough wind to plane, sail as low as possible without the kite collapsing behind the main. A small amount of windward heel will encourage the kite to swing to windward, allowing deeper sailing.

**Gybe** - Firstly, try to maximise speed through the gybe. This reduces load in the main sheet and so reduces the chance of a capsize. When beginning the bear away, take up the slack in the windward spinnaker sheet (it is possible to fly the kite using only the windward sheet). When moving across the boat during the gybe, keep hold of the new kite sheet and give the main a flick to encourage it across. If you get it right the kite will

fill as you come out of the gybe. Do not cleat the main sheet during the gybe because, if a gust hits, you will not be able to free it quickly enough to avoid capsizing. If windy / a lightweight, steering an S-shaped course can help avoid a capsizing: turn the boat normally for the gybe and then, just before the sails fill on the new side, turn the boat slightly away from the wind (head low).

**Drop** - Make sure the boat is flat and stable before attempting to drop the kite, and try to keep the kite full while preparing for the drop (a flapping kite is more likely to result in capsizing than a full one). Take up the slack in the spinnaker halyard just prior to release from the cleat, so that the spinnaker can be 'bagged' as fast as possible.

**Downwind tactics** - Getting downwind tactics right takes lots of practice, but can be more rewarding than picking a couple of shifts while sailing upwind. The general principle (on windward/leeward courses) is that, if the wind swings clockwise while on the run, the port gybe will take you nearer (deeper) to the leeward mark. If the wind goes anticlockwise then the starboard gybe will take you nearer the leeward mark. As the wind moves around, aim to keep on the gybe that allows sailing deepest to the mark. Shift and gust effects need to be considered together. It may be worth missing a shift to get into a gust, and then gybing so that higher boat speed more than compensates for the loss of distance. Note that, no matter how good the theory, there is no substitute for real practice on the water in a wide range of conditions and tactical situations.

## BOAT TRIM

In general for roll-trim concentrate on keeping the boat flat. When beating in strong winds sit opposite the main block for maximum leverage. In very light winds a small amount of leeward heel will encourage the spinnaker to fill.

Regarding fore-aft trim, generally sit forward to minimise depth at the stern and drag. The Vareo has a wide and relatively flat rear hull section that provides good stability and helps promote planing. However, the drag associated with the large wetted area is a disadvantage when racing in light winds and then it is especially important to sit well forward. A longer tiller extension than standard is useful for this but handling it during tacking requires some practice. Move back in stronger winds to keep the bow up and to promote planing off-wind.

## CAPSIZES

Polishing the dagger board will make recovery difficult if you capsize! But if you do go over, a righting line may help as will tensioning the toe straps with elasticated cord (see above for both ideas).

In strong wind, let off the kicker & mainsheet & drop the spinnaker before attempting to right the boat.

If the boat inverts & the sail will not come up from leeward towards the wind, pull the boat up the other way & when the sail starts to come out of the water, hang on to the dagger board so that when the boat flips completely over, you are carried under the boat & emerge on the other side – you should then be able to right the boat in the normal way providing you do not let it invert again!

## MAINTENANCE

To reduce wear and ease operation, regularly spray the following areas with a dry lubricant:

spinnaker pole; mast sleeve where it passes through the bridge piece; bottom couple of inches of mast; luff of sail (bolt rope), especially the top and bottom ends and in the region of the battens; the clew end of the boom where the rope slides; the front edge of the bridge piece if a spinnaker is used; and all blocks.

Remove the mast and flush the mast pot regularly to remove any contamination that could accelerate wear (alternatively, capsizing regularly in deep water!).