

29er hull fitout

2007 ISAF Youth boats

"BP" means bearing point

| Line name | Type of line | Diameter | Length imperial | Length metric mm | |
|---------------------------------------|---------------|----------|-----------------|------------------|------------------------|
| Sheets | | | | | |
| Mainsheet | Polypropylene | 8 mm | 26' 3" | 8001 | Cut ends |
| Spinnaker sheet | Polypropylene | 8 mm | 36' | 10973 | BP splice to BP splice |
| Spin. attachment tail | Polyester | 3.5 mm | 15" | 381 | BP splice to cut end |
| Primary jib sheet | Dyneema core | 5mm | 19' | 5791 | Cut ends |
| Secondary jib sheet | Dyneema core | 3 mm | 39" | 991 | BP splice to cut end |
| Hull | | | | | |
| Spin halyd cockpit take up shockchord | Shockcord | 5mm | 16' | 4877 | Cut ends |
| Spin halyd take up block tie-line | Vectran | 1.5mm | 12" | 305 | Cut ends |
| Vang deck control | Dynema | 5mm | 130" | 3302 | Cut ends |
| Cunningham deck control | Dynema | 5mm | 144" | 3658 | Cut ends |
| Trapeze retractor | Shockcord | 5mm | 1 x 82" | 2083 | Cut ends |
| Trap retractor loop at mast base | Dyneema core | 3mm | 13.75" | 335 | Cut ends |
| Spinnaker tack line | Dynema | 5mm | 14' 8" | 373 | Cut ends |
| Spinnaker pole launcher line | Dynema | 5mm | 7' 9" | 2362 | Cut ends |
| Spinnaker halyd lift | Shockcord | 5mm | 24" | 610 | Cut ends |
| Hiking strap lift | Shockcord | 5mm | 90" | 2286 | Cut ends |
| Bridle max ht 990mm, min <737 | Dynema core | 3.5mm | 81" | 2057 | Spliced in place |
| Tiller preventer | Polyester | 3mm | 48" | 1219 | Cut ends |

| | | | | | |
|--------------------------------------|------------------|-------|-----------|-------|------------------------|
| Spinnaker sock (aft end) | Vectran | 1.5mm | 31" | 787 | Cut ends |
| Spin sock forward end | Shockchord | 2mm | 20" | 508 | Cut ends |
| Forestay tensioner | Dynema | 5mm | 120" | 3048 | Cut ends |
| Spin block lifter | Tennis ball | | | | Cut to size |
| Halyards | | | | | |
| Main halyard | Dyneema core | 3 mm | 19' 8" | 5995 | BP splice to cut end |
| Jib halyard | Dyneema core | 3 mm | 12' 11" | 3937 | BP splice to cut end |
| Halyard connector | Polyester | 3 mm | 31' | 9449 | BP splice to BP splice |
| Spin halyd | Dynema | 5mm | 57' | 17374 | Cut ends |
| Spin halyd retainer loop at spreader | Dyneema core | 3mm | | | |
| Mast | | | | | |
| Jib downhaul | Dynema | 5mm | 52" | 1321 | Cut ends |
| Shockcord between shrouds at hounds | Shockcord | 5mm | 12" | 305 | Cut ends |
| Shockcord between shrouds in slot | Shockcord | 5mm | 41" | 1041 | Cut ends |
| Trap height adjustment line | Dynema | 5mm | 2 x 72" | 1829 | Cut ends |
| Trap wire | | | | | |
| Wire only | 7 x 19 | 3/16" | 11' 9.75" | 3600 | BP eye to BP eye |
| Boom | | | | | |
| Vang shoe control line | Dynema | 5mm | 82" | 2083 | Cut ends |
| Vang shoe gauge line | Vectran | 1.5mm | 40" | 1016 | Cut ends |
| Vang shoe gauge shockchord | Light shockchord | 1.5mm | 48" | 1219 | Cut ends |
| Outhaul | Dynema | 5mm | 72" | 1829 | Cut ends |



The spinnaker halyards will all be run external to the mast. Not only does this reduce the friction but it removes the possibility of the halyard being wrapped around one of the other two halyards.

With the halyard external, competitors will not be allowed to take the masts apart.

This was the subject of a request for redress by a team at the previous ISAF use of the 29er in 2002. The request stated that the spinnaker halyard had jammed due to the failure of the supplied equipment. During the hearing, it was revealed that the competitor had taken the mast apart to "straighten the halyards" prior to even using the boat and the request was thrown out.



A loop of Spectra core will be supplied to go around the spreader base and the halyard can be run either in front of the spreader as shown below or behind it as shown on the next page.

Length

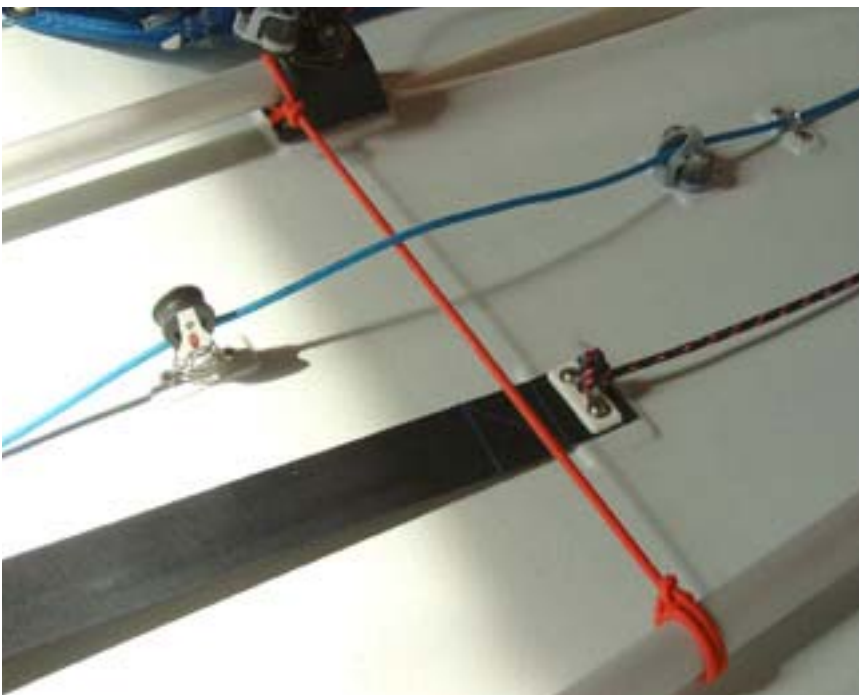
Spinnaker halyard - 17374 mm - cut end to cut end ("cut to cut").

Spreader loop - 660 mm cut to cut.





Halyard led behind the spreader
Length of loop - 660 mm - cut to cut



A shockchord lift for the spinnaker halyard will be fitted to the boats as show at left.
Length
610 mm - cut to cut

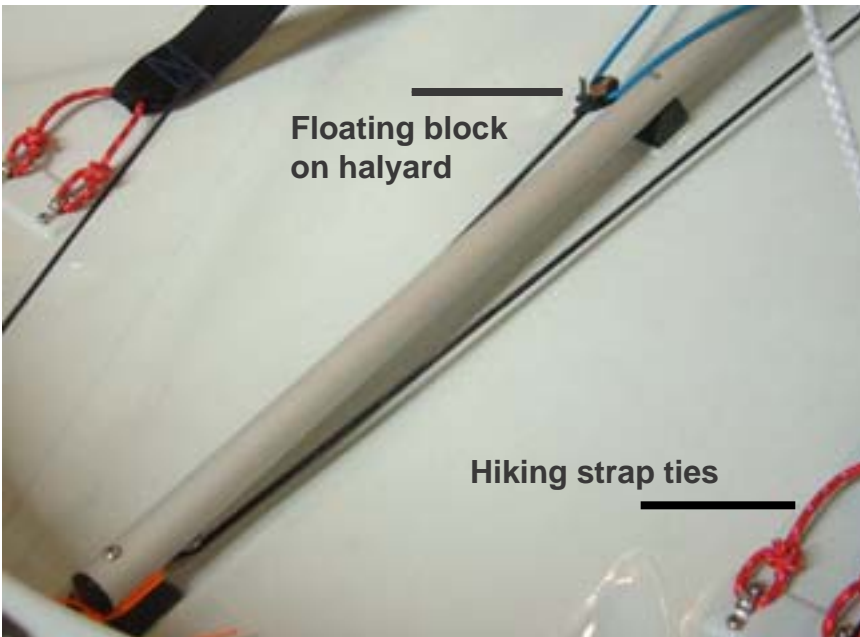


Competitors will be supplied with two single blocks and a length of shockchord to set up their own spinnaker halyard take up system. It will come tied off to the centre foot rail as shown at left.
Lengths
Shockchord 4877 mm - cut to cut
Block tie-line 305mm - cut to cut (see next page)



Length

Block tie line - 305 mm cut to cut



Length

Hiking strap ties - 533 mm - cut to cut



The main halyard and the jib halyard are both 3mm Spectra core without a cover. They have a spliced loop at the lower end.

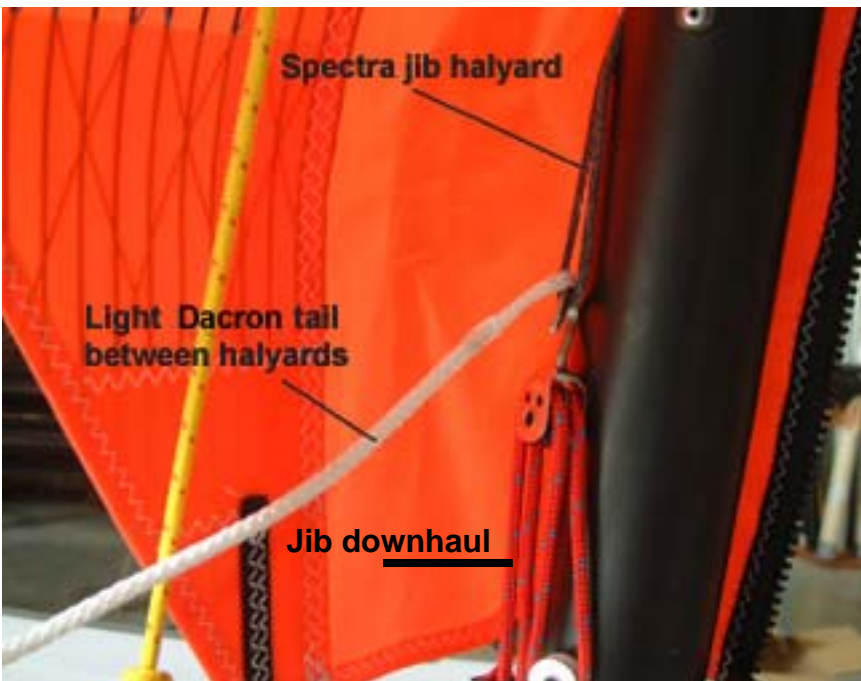
Length

Main Halyard - 5995 mm - BP splice to cut end



The main halyard will be supplied with a tie ball and the halyard slightly long so that it can be set up and the excess trimmed.

At left - the attachment loose. Photo below, the attachment tight.



Length

Jib Halyard - 3937 mm - BP splice to cut end

Tail between halyards - 9449 - BP splice to BP splice

Jib downhaul - 1321mm - cut to cut



As with the main halyard, the jib halyard is slightly oversize. At left the attachment loose, below tight.



Tail between the two halyards carried in pocket.



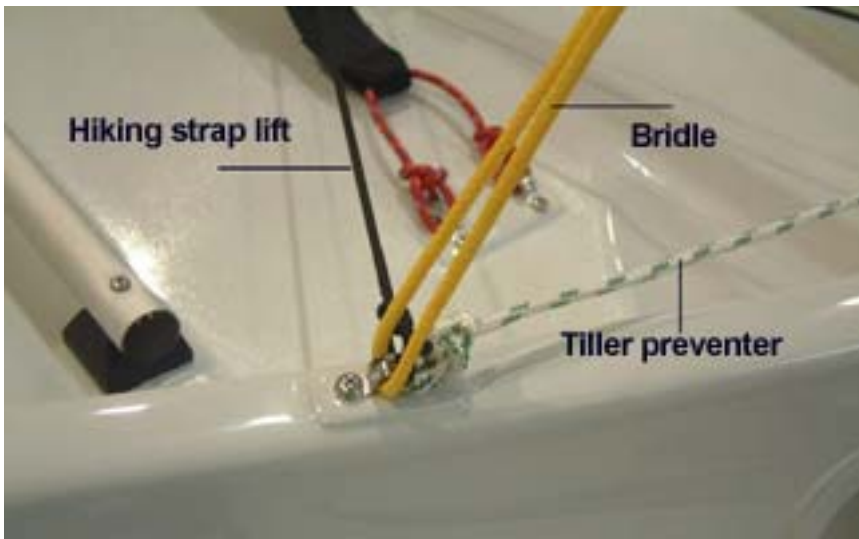
The bridles are spliced to the eye straps and are adjustable by hand. The adjustment allows the top of the block on the bridle to be raised to a point 990 mm above the cockpit sole to accommodate light air.

In heavier air it can be shortened down to well below a point 727 above the cockpit.

Length

Bridle fully extended - 990 mm - cockpit floor to top of block.

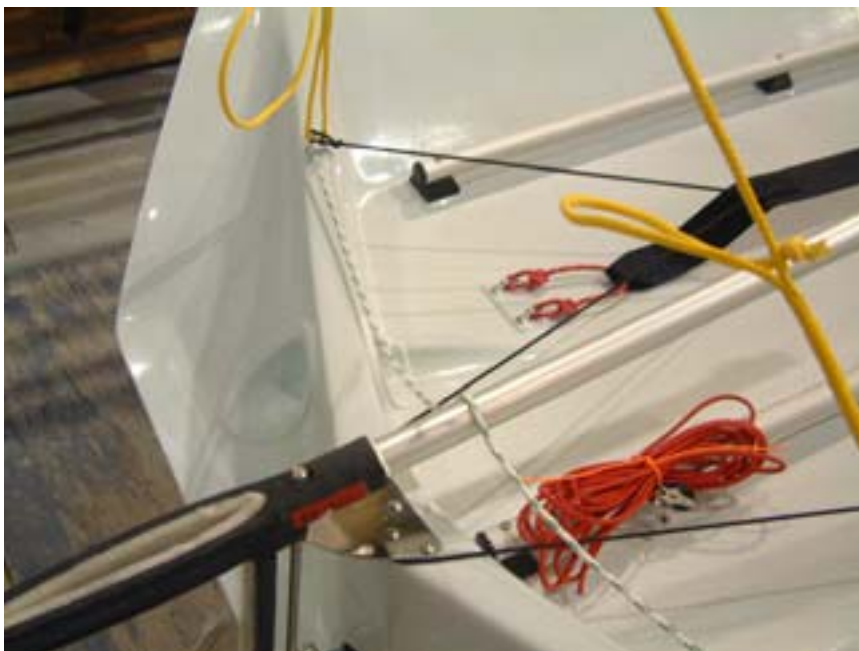
Retracted - will shorten to less than 727mm from cockpit floor to top of block.



The shockchord lifting the hiking straps is a continuous length that runs from the bridle eye strap forward to a loop in the strap, back around the top gudgeon, forward to the opposite strap and back to the opposite eye strap. See bottom two photos.

Length

Shockchord strap lift - 2286mm - cut to cut



The hulls will be provided with a tiller preventer line running between the two bridle eye straps. The line lies loose over the tiller when sailing, as shown at left. In the event of the tiller coming out of the competitor's hand, the line will prevent the rudder from swinging up against the hull and becoming dented as shown in the bottom photo.

Any dent in the side wall of the rudder as a result of it coming in contact with the back end of the hull will not be considered normal wear and tear as it cannot be repaired. Competitors must ensure that the preventer is tied securely and at a length that will prevent this happening.



Length

Tiller preventer - 1219mm - cut to cut



Length

Spin sock securing shockchord - 508mm - cut to cut



Length

Aft end spin sock securing line - 787 - cut to cut



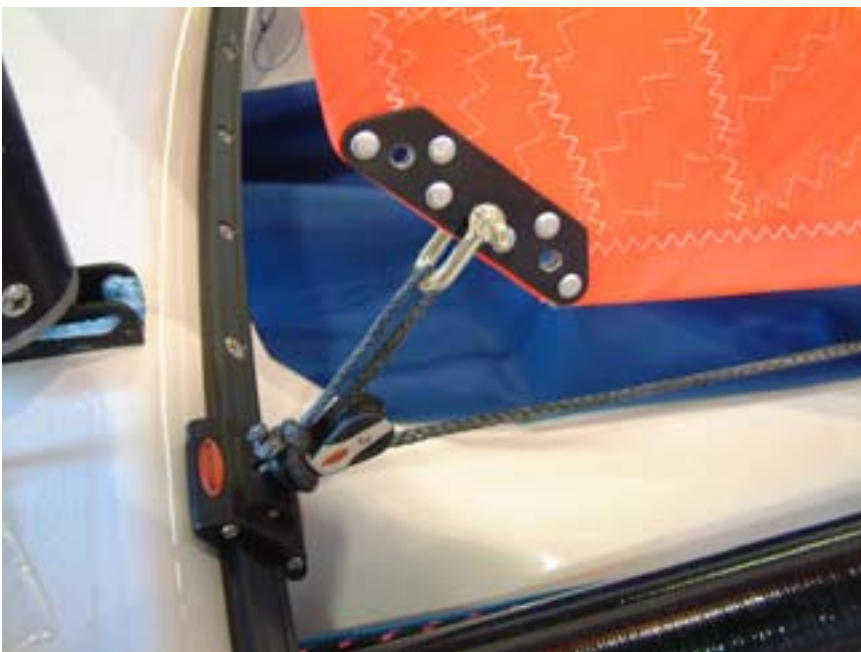
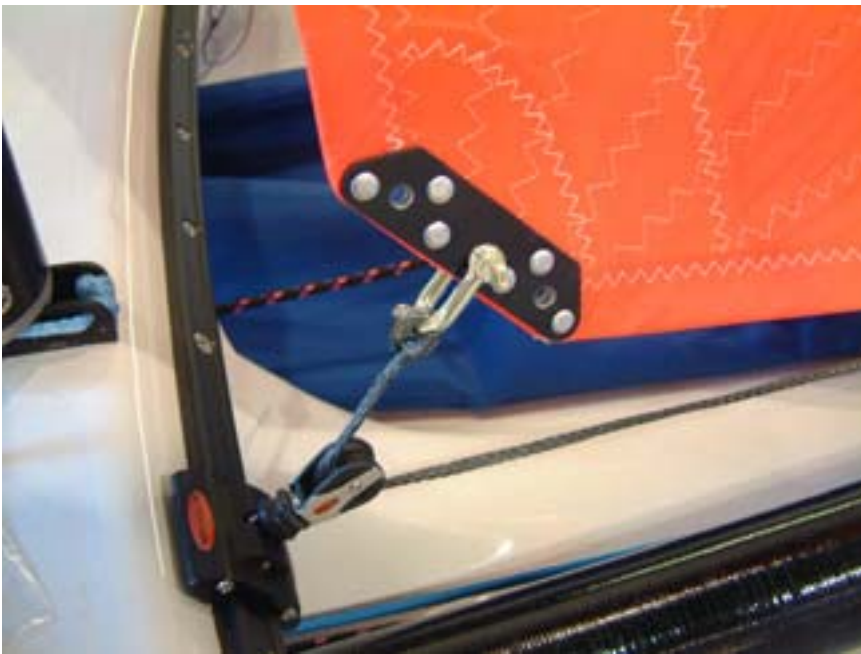
A piece of shockchord will be attached when the boats are shipped to one or both shrouds in the area of the jib slot.

Shockchord is also provided between the shrouds up at the hounds as in the bottom photo to prevent the spinnaker from going in between the sheave and the jib halyard.



Length

Slot shockchord 1041 mm - cut to cut
Hounds shockchord 305 mm - cut to cut



The jibsheet primary is set up as above left. The secondary is a piece of Spectra core with a splice in one end. See photo above. A captive pin shackle will be attached to the other end.

The jib can be rigged as a 2:1 system as shown at left or a 4:1 system by taking the end of the secondary sheet back to the base of the block and tying it off as in the bottom photo.

Lengths

Jib primary - 5791mm - cut to cut

Jib secondary - 991 mm - BP splice to cut end



The trap wires are fitted with donuts above the adjustable clam cleats. See green donut in the photo at left.

The trap wires are fitted with the height adjustment lines as shown.

Length

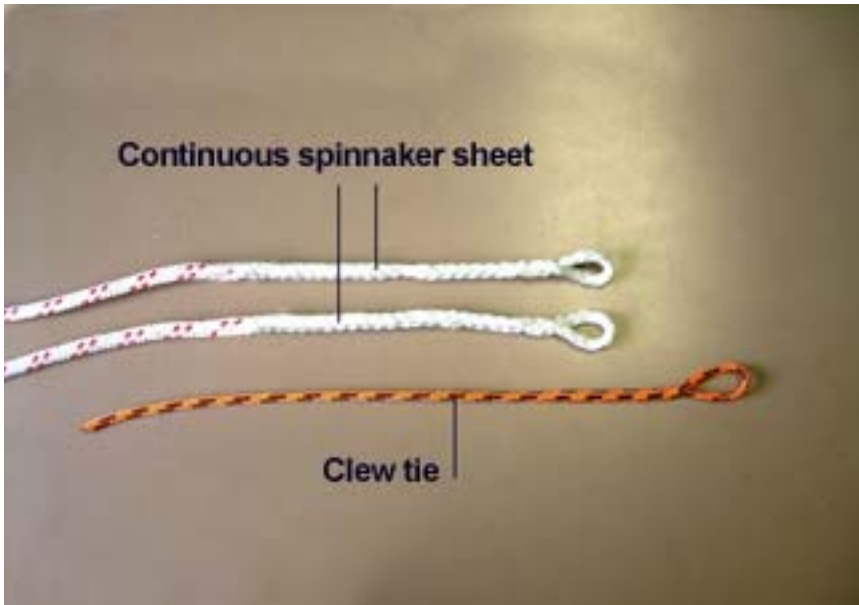
1829mm - cut to cut

The trap retractor shockchord is being run across the boat to the opposite trap wire as shown in the bottom left photo and there is a waxed spectra securing loop at the mast base as shown below right.

Length

Shockchord 2083mm - cut to cut. Loop 335mm - cut to cut





The spinnaker sheet is being supplied as a continuous line with the casing removed near the end and a splice in the end.

Competitors may choose to cut it into two lines if desired.

A clew tie line with a splice in one end is supplied with the sheet to be used as suggested in the photos below. When tightened onto the spliced ends of the sheet it provides a smooth knot-free join to ease passing around the forestay in the gybe. The other end is attached to the spinnaker clew.



Lengths

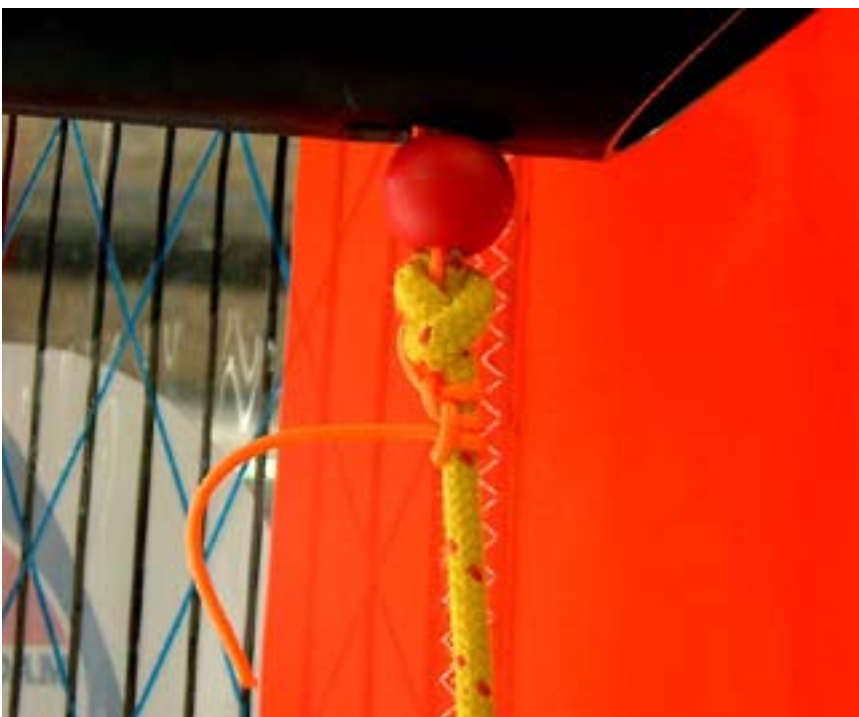
Continuous Spinnaker sheet 10973 mm. BP Splice to BP splice
 Clew tie 381 mm - BP splice to cut end





The vang shoe adjustment line is shown at left but a stopper ball will be supplied on this line (see blow-up below).

Top world crews are now rigging a calibration system for the vang tension which involves setting up the stopper on the control line so that it is at the boom when the vang shoe is in its minimum desired tension position. A thin Vectran line is tied off at the knot under the ball, passed through the ball, threaded through the exit block on top of the boom and back to a position on the boom roughly opposite the crew. (Photo on next page). The orange line can just be seen in the photo at left on top of the boom coming out of the block.





The Vectran line is then knotted to a thin shockchord which is run to the end of the boom and tied off there.

With the vang in its minimum position ("off") with the ball up against the underside of the boom, the position of the knot is marked on a gauge which is a strip of tape (not supplied). The vang is then tensioned to its maximum expected position, usually tried on the water until it is accurately determined, and this position ("max") also marked on the tape.

Both the Vectran line and the shockchord will be shipped as shown below with the boom.

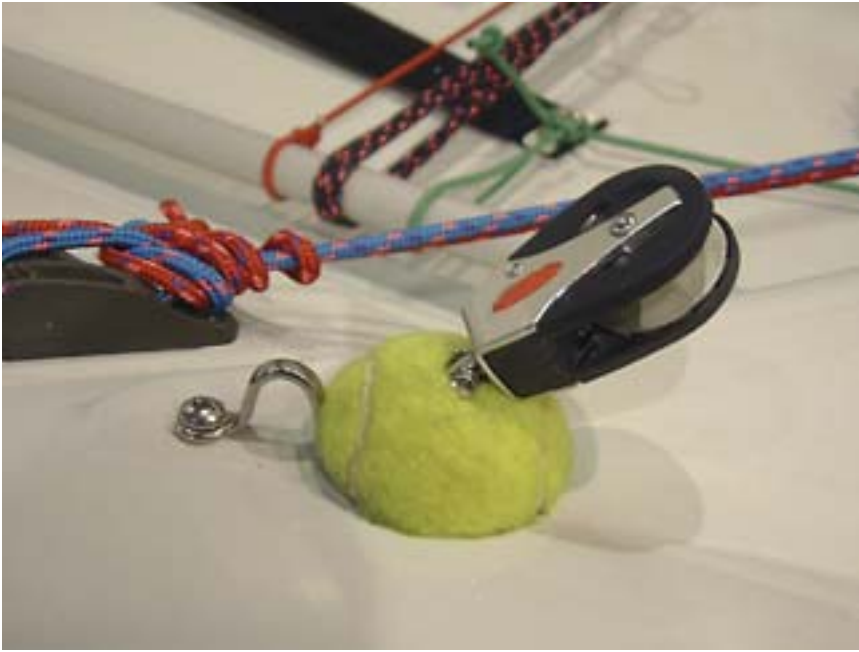


Length

Vectran 1016 - cut to cut

Shockchord 1219 - cut to cut

Shoe control line 2083 - cut to cut
(yellow with red tracer in the picture)



All spinnaker ratchet blocks will have 1/2 a tennis ball under them



All boats will be fitted with height-adjustable toe straps

Miscellaneous

1. All boats will be supplied with a forestay, vang-type, tensioner.
2. Competitors MAY fit their own twin extensions on the tiller but MUST leave the attachment fitting on the tiller at the end of the event. A standard single tiller extension IS supplied with the boat.
3. Competitors MAY splice the mainsheet and the jibsheet together.
4. Competitors may NOT take the masts apart.
5. If in doubt - ask!!
6. Lines supplied with the boats may not be exactly the same colour as shown in this document