Laser®

Laser Race Outhaul & Cunningham System

Dyneema - SK78

Woven using only Dyneema SK78 fibre this product is highly resistant to abrasion and UV radiation. The innovative impregnation process further enhances these characteristics and prolongs life span. Extreme break strength, low weight and stretch values are this products key advantages.

Control Line - Dinghy Pro

Dinghy Pro is the result of continued development effort on 8 plait dinghy lines. Noticeable advancements offered by Dinghy Pro include improved cleat retention and dimensional stability without compromising the handling usability the discerning sailor has learned to demand. Other merits include its low water absorption, ensuring minimal weight gain when wet.

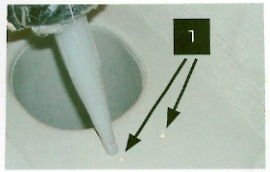
List of Parts

1. Cleat Base & Cleats
2. Block Plate & Fork head Blocks
3. Single Blocks (X5)
4. Clew Tie Down - Dyneema SK78 (Grey 4mm x 600mm)
5. 10 gage Pan Head Screws (x4)
6. Outhaul Control Line - Dinghy Pro (Blue/Grey 4mm x 4800mm)
7. Outhaul Primary Line– Dyneema SK78 (Grey 4mm x 1500mm)
8. Outhaul Elastic – (Black 5mm x 1000mm)
9. Outhaul Hook
10. Outhaul Block Tie - Dinghy Pro (Blue/Grey 4mm x 600mm)
11. Cunningham Control Line - Dinghy Pro (Black/Grey 4mm x 3900mm)
12. Cunningham Primary Line - Dyneema SK78 (Grey 4mm x 900mm)
13. Mast Retention Line - Dinghy Pro (Black/Grey 4mm x 1400mm)

Tools required:
Pozidriv screwdriver or Standard Phillips head screwdriver (Ideally size PZ2 or PH2)

3M 4200/5200, Silicone sealant or Sikaflex (Sourced from DIY store or marine chandlery)

Installation Instructions

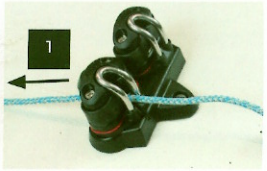


1 Apply Silicone sealant or Sikaflex to all four pre-drilled screw holes in the foredeck. x2 for the block plate and x2 for the cleat plate.

2 Fit the cleat base using the screws provided. (parts 1 & 5).

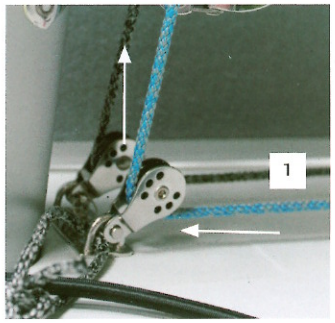
3 Fit the block plate using the screws provided. (parts 2 & 5).

Outhaul

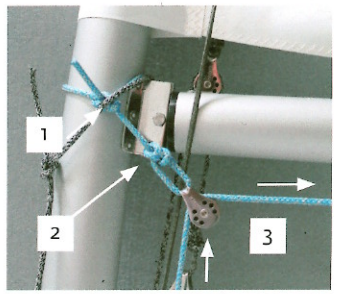


1 Pass the outhaul control line (Blue/Grey) through the port/left deck cleat. (Part 6)

2 Tie a handle grip (See "How to Form a Handle Grip") in its aft facing loose end before tying a bowline loop at its base to form a handle.



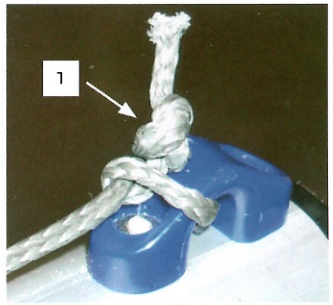
3 Pass the forward facing end of the outhaul control line through port deck turning block.



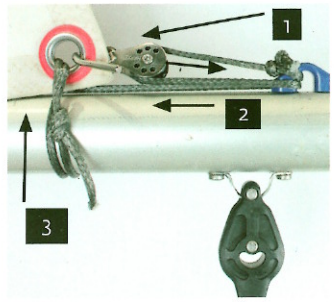
4 Put the sail on the mast and put the mast in the boat.

5 Take the outhaul block tie (Blue/Grey) and secure a bowline loop around the mast immediately above the goose neck before tying a single block on the remaining loose end. (Parts 3 & 10) The distance from the centre of the gooseneck bolt to the block must not exceed 100mm by way of Laser class rules.

6 Feed the outhaul control line upwards, through the block previously tied at the gooseneck and aft/ rearwards along the boom.



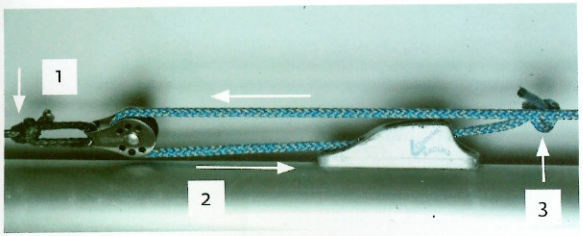
7 Tie the outhaul primary line (Grey) to the outhaul fairlead at the aft end of the boom using an overhand stopper knot – Single hitch with a figure eight stopper knot in the end of the rope. (Part 7)



8 Attach the hook to the block and secure the hook in the clew of the sail. (Parts 3 & 9)

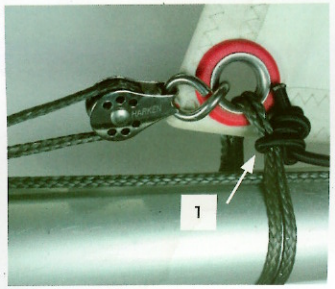
9 Pass the outhaul primary line around the outhaul block/hook and around the outhaul fairlead before feeding it forwards along the boom.

10 Pass the clew tie down (Grey) twice around the sail clew and boom before tying the loose ends together using a reef knot. (Part 4)

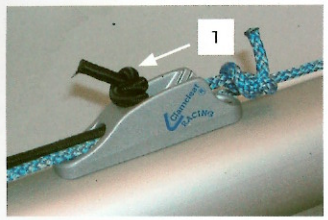


11 Tie a single block on the end of the outhaul primary line using a bowline. (Part 3)

12 Feed the loose end of the outhaul control line around the block and through the boom cleat before tying a figure eight stopper knot in its end.

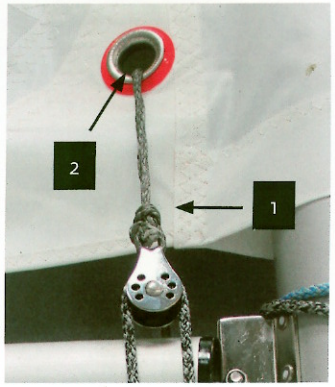


13 Take the outhaul elastic (Black) and tie it around the clew tie down using an overhand stopper knot – Single hitch with a figure eight stopper knot in the end of the elastic. (Part 8)

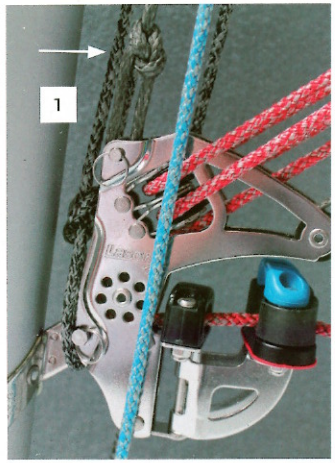


14 The remaining loose end of the outhaul elastic should be passed through the boom cleat before tying a double overhand stopper knot in its forward facing end.

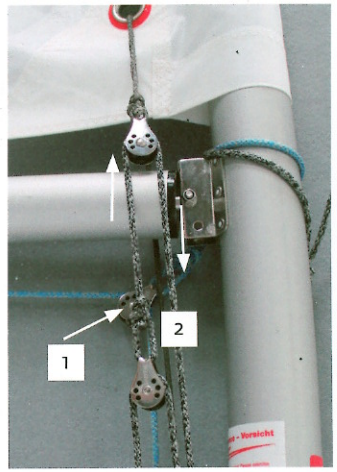
Cunningham



1 Using a bowline, tie one end of the cunningham primary line (Grey) to one of the remaining single blocks before passing the loose end through the sail tack from starboard/right to port/left side. (Parts 3 & 12)

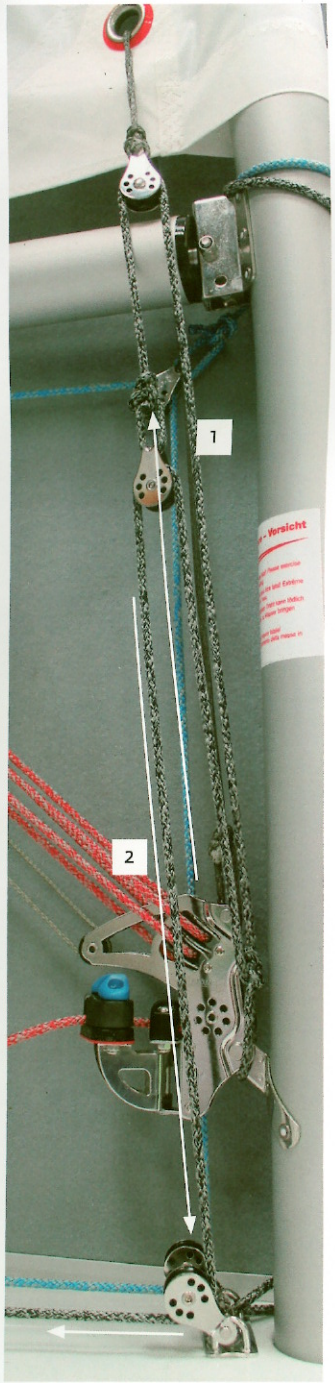


2 Feed the loose end of the cunningham primary line downwards, parallel to the mast before tying it around the pin located at the upper edge of the vang base unit.



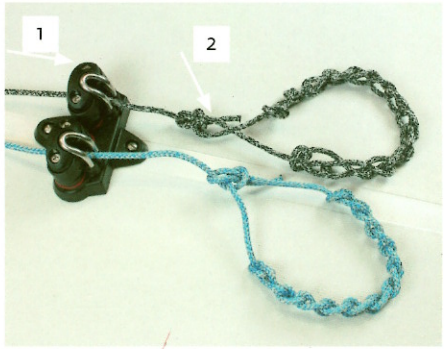
3 Using a bowline, tie one end of the cunningham control line (Black/Grey) to the remaining single block before passing the loose end around the block tied to the end of the cunningham primary line. (Parts 3 & 11)

4 Feed the loose end of the cunningham control line down the starboard side of the mast and whilst holding the line relatively taught tie a half hitch around the vang tang.



5 With the half hitch pulled taught feed the loose end back up the starboard side of the mast and around the second single block.

6 Feed the cunningham control line back down the mast, around the starboard/right hand deck turning block and aft/rearwards.



7 Pass the cunnigham control line through the starboard/right deck cleat.

8 Finally, tie a handle grip (See "How to Form a Handle Grip") in its aft facing loose end before tying a bowline loop at its base to form a handle.

9 The mast retaining line (Black/Grey) should be tied with a little slack, so that if the boom rotates forward of the mast, it will not put the block plate under load. However, it must be tight enough to prevent the mast moving more than 75mm/3" out of the mast step, in the event of a capsize. (Part 13):

Tie one end with a bowline around the port/left eye of the block plate. The centreboard shockcord should be passed through the bowline.

10 Tie the other end with a bowline around the mast immediately above the goose neck.

How to form rope handle

1 Tie a slip knot loop in the rope.

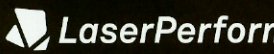
2 Pass the body of the rope that would untie the slip knot (if pulled) through the previously formed loop to make another.

3 Tighten each loop you form as you go. (Prior to forming the next)

4 Keep adding loop knots until you have a handle grip of the desired length.

5 Finish the grip by passing the very end of the rope (not body) through the loop you previously formed.

PHOTO: MARK TURNER



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