

# ASSEMBLY MANUAL



Photo Pierrick Contin

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# ASSEMBLY MANUAL

## NECESSARY TOOLS

1 x pair of pliers/  
2 x 10 spanners



It is advisable to assemble the Hobie Dragon with two people.

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## LIST OF THE PARTS

- ⇒ Hulls(2)
- ⇒ Front crossbeam
- ⇒ Rear crossbeam
- ⇒ Mast
- ⇒ Trampoline
- ⇒ Rudders (2)
- ⇒ Tiller crossbar
- ⇒ Tiller extension
- ⇒ Main sail
- ⇒ Jib
- ⇒ Batten set (6)
- ⇒ Rig bag
- ⇒ Rope bag
- ⇒ Wire bag



**CAUTION - DANGER**  
**ALUMINIUM PAST**  
**STAY CLEAR OF**  
**OVERHEAD ELECTRIC WIRES**

**Wires**

1. Shrouds and stay adjuster covers
2. Trapeze wires
3. Pigtail, forestay and jib halyard.



**Ropes**

- |                      |                    |
|----------------------|--------------------|
| 1. Righting line     | 6. Jib halyard     |
| 2. Mainsheet rope    | 7. Tack line       |
| 3. Jibsheet rope     | 8. Cunningham line |
| 4. Main halyard      | 9. Trapeze line    |
| 5. Trampoline lacing |                    |



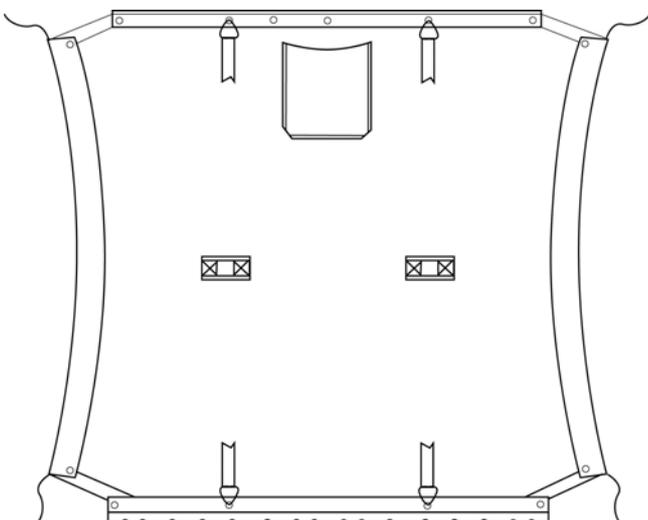


### Rig bag Dragon Club

1. Mainsheet block
2. Mainsheet system with hook
3. Gudgeons, nylon washer and split rings.
4. Stay adjusters, shroud anchor plates, drilled pin, split rings
5. Jib furler
6. Cunningham block + hook
7. Drain plugs
8. Bow shackle
9. Jib blocks with shackle
10. Crossbar mounting kit (parts already on the hulls)
11. Trapeze handles and rope locks.
12. TCM connecting kit

### Rig bag Dragon Xtrème

1. Spanner for hull assembly
2. mainsheet system with hook
3. Jib furler
4. Stay adjusters
5. Gudgeons
6. Shroud anchor plates, drilled pin and split rings
7. Cunningham block + hook
8. Drain plugs



### Trampoline



**1**

Position the hulls parallel on the ground approximately 1,5 meter apart. Have the front and rear crossbar ready. With the supplied spanner, unscrew the parts that are fixed onto the hulls.

**2**

Lift the right hull into an upright position. One person straddles the hull to hold in position. Taking the front crossbar, position it into the crossbar moulding in the deck. Push the crossbar into position over the support casting fastened in the crossbar moulding.



**3**

Take one long bolt and one anchor bar without thread. Insert the bold through the anchor bar and push it up through the inside hole in the hull/deck join (on the internal side). Tighten loosely with the Allen wrench supplied.

**4**

Now take a short bolt and one anchor bar with thread. Push bold down through the hole in the corner casting and align the bolt with the hole in the anchor bar. Fasten loosely. Repeat this operation for the other side.



NB : an application of silicone spray will make assembly easier.

**5**

Position the rear crossbar (with trampoline lacing system facing rear) into the crossbar mouldings. This time use the small bolts and anchor bars without thread for the inside. Fasten loosely. For the rear outboard, use the two remaining long bolts and the two remaining anchor bars with thread. Align and fasten.

**6**

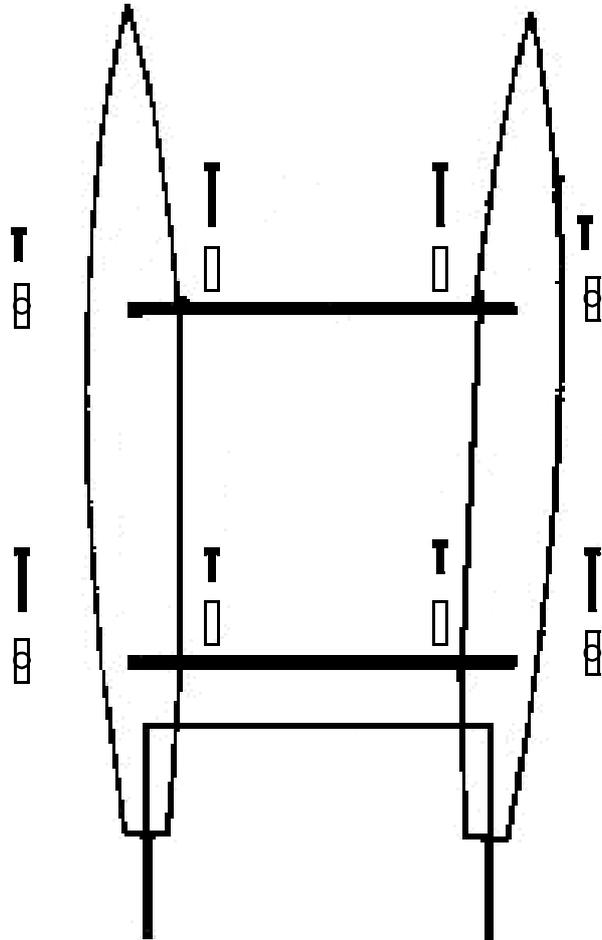
All go round the boat and tighten all eight bolts. Insert plastic caps in the bolt heads.



**NB : Periodically check the tightness of all 8 bolts.**

Anchor bars & bolts

-  Long Bolt
-  Short bolt
-  Anchor bar without thread
-  Anchor bar with thread



## TRAMPOLINE FITTING

1

Unfold the trampoline. Note that the side tension lines are prethreaded. Insert the front sealed bolt rope edge into the trampoline track of the front crossbar. Continue feeding the trampoline into the trampoline track and position it in the centre. Line up the grommet in the centre of the front edge of the trampoline with the dolphin striker post. This will position the trampoline in the centre.



2

Pull the trampoline to the back of the boat and insert the fibreglass rod into the rear flap of the trampoline. Leave an equal amount protruding from each side.



**CAUTION : do not touch the hulls with the fibreglass rod it may cause scratches !!**

3

Commence lacing the rear of the trampoline. The lacing line ties off on the lacing post at the left rear of the rear beam. Pass the line around the rod and back around the first lacing post. Lead the line around the second lacing post and pass it around the rod on the first trampoline cut out. Now, come back around the second lacing post and continue towards the third. Continue all the way across the beam in the same fashion and tie off loosely. Do not attempt to tighten the rear lacing too much at this stage.



**4**

Tensioning the sides : starting at the right rear corner, take the line that emerges from the trampoline. Lead it through the eye strap on the rear beam and then through the grommet/eyelet. Tie it off with a bowline knot or similar.

**5**

Move to the front right corner of the trampoline. Pull on the line as firmly as possible and tie a bowline knot or loop in the line as close to the trampoline edge as possible. This will enable a 4:1 purchase to be used for tensioning. Tie off once tensioned to secure.

**6**

Now lead the end of the line through the eyestay on the rear of the front beam and back through the loop. Lead the end back through the eyestay and apply as much tension as possible. Maintaining the tension, lead the line through the grommet and back to the eyestay. Next, lead the line through the grommet in the front edge of the trampoline and tie off securely. Repeat procedure for port side.

**7**

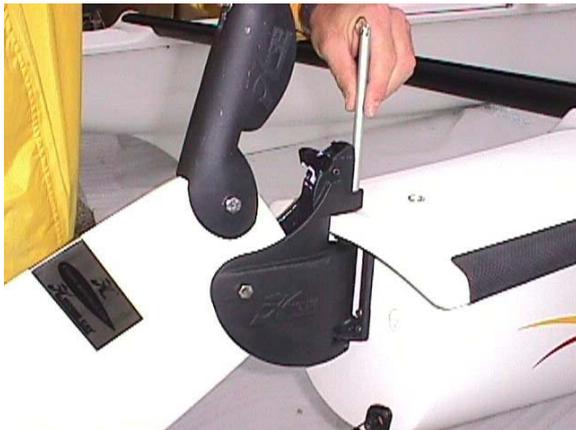
Retighten rear lacing from left to right. Tie the rear lacing off securely at the eyelet posts on the right hand end of the rear beam. **NB** : It is important that the trampoline lacing is kept very tight. Check the trampoline tension on a regular basis. Remember : all ropes stretch!



## RUDDER ASSEMBLY

**1**

Identify the right rudder from the left rudder (look for the green and red stickers on the rudder arms). Locate the rudder pins (2), nylon washers and ring clips (4). Take the right rudder, place one nylon washer as shown in photograph and align the hole in the front of the lower casting with the hole in the deck and the gudgeon.



**2**

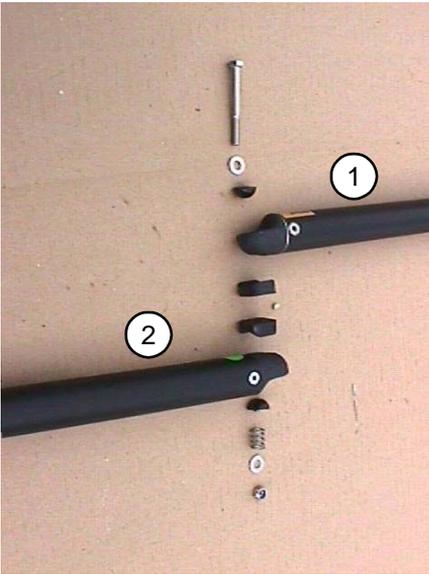
Insert the gudgeon.

**3**

Install two ring clips per pin: one at the top, one at the bottom.

Repeat the process for the left rudder assembly.



**Tiller Crossbar Dragon Club****4**

Locate the tiller crossbar and identify the left and right hand ends. NB: the tiller crossbar (1) locates on top of the tiller/rudder arms (2). Locate the tiller connector kits and install as shown on the photographs.

**Tiller crossbar Dragon Race & Xtrème****5**

Take the tiller crossbar and insert the right side on the right rudder arm and the left side on the left rudder arm.

**Tiller extension Dragon Club, Race & Xtrème****5**

Locate the tiller extension and secure it to the tiller crossbar using the clevis pin and ring clip provided.





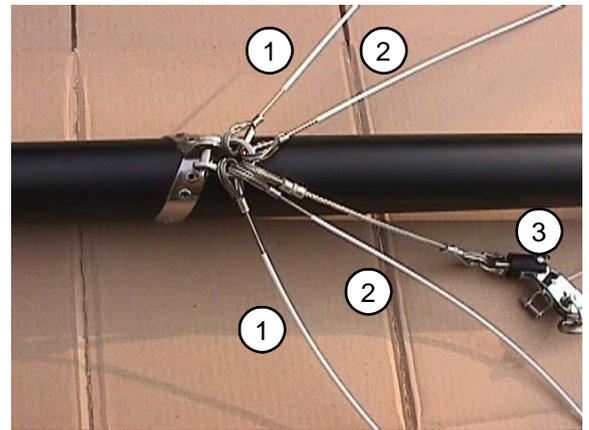
**CAUTION - DANGER ALUMINIUM MAST  
STAY CLEAR FROM OVERHEAD  
ELECTRIC WIRES**

**Mast and rigging**



**1**

Take the main and jib halyard lines in the ropes bags. Unroll the main halyard wire that is secured at the head of the mast. Using a bowline knot, secure the main halyard line to the thimble at the end of the halyard wire. Now, secure both ends at the base of the mast.



**2**

take all the wires in the wires bag and unroll them. Ensure that all twists are removed. Locate the 8 mm tang shackle and shackle the five wires to the mast tang, as per photograph. Ensure that the shackle is tightened securely.

- 1. Trapeze
- 2. Shrouds
- 3. Pigtail forestay and jib halyard

**Jib Furler**

**3**

Using a bowline knot secure the jib halyard line to the small block on the end of the jib halyard wire. Now secure both ends at the base of the mast.



**4**

Locate the Jib furler and shackle it to the bridles using the 6 mm shackle provided. Ensure that the exit hole in the furler is pointing at the furler cleat on the front crossbar. Check that the screw on the underside of the furler is tight. This prevents the outer cover from rotating.

## Preparation of the mast



**6**

With the base of the mast facing towards the front of the boat, lay the mast on top of the boat. (place some padding under the mast to prevent scratching).

**7**



Find the package containing the stay adjusters, twist toggles, clevis pins and split rings. Assemble by pinning the twist toggle into the bottom of the stay adjuster.



**8**

Next, fasten the shrouds into the stay adjusters. To begin with, fasten the shroud about half way up the adjuster. This position can be adjusted later. The position influences mast rake. Now fasten the twist toggles to the anchor bar pins on each side of the boat. You can pull the cover partially over the stay adjusters at this time. The assembly of the trapeze wires can wait until after you have raised the mast.

## Stepping the mast

**9** Now, ensure that the forestay wire is not twisted around any other wires and you are ready for raising the mast.

For safety, two people should raise the mast. One person positions the hook on the mast base under the pin in the mast step, whilst the other person supports the head of the mast. One person stands on the trampoline supporting the mast whilst the person supporting the top of the mast starts walking towards the boat and lifting at the same time.

When the person on the trampoline can support the weight of the mast, the second person walks around the front of the mast and pushes down on the mast base. This provides added security and prevents the base from popping out of the step whilst the person on the trampoline fully raises the mast.



**10** With the person on the trampoline supporting the mast, the other person takes the forestay and connects it to the stay adjuster fixed to the jib furler. Pin the forestay towards the top of the adjuster. Now, provided all the clevis pins have the split rings fitted, the mast is supported by the shrouds and forestay.

**11**



**(Club & Race)** Wind the furler up in a clockwise direction. Leave enough furler line to reach the furler cleat.

**Fitting of the Trapeze**

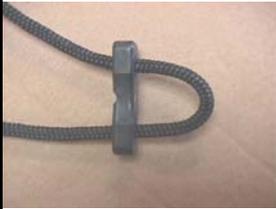
**12**

With the mast now secure, the trapeze wires can be fitted with the handles, rope locks and adjuster lines as shown in the photograph. Use a bowline knot to secure the line to the trapeze shock cord.

the height of trapezing can be adjusted by changing the position of the rope lock.



**How to mount the rope lock**

1



2



3



4

**NOTA : on the Dragon Extreme, there is a double trapeze**



**13**

Now the rig can be tensioned. One person can pull down on a trapeze handle whilst the other person re positions the clevis pin in the stay adjuster. Ensure that the two shrouds are pinned at the same height in both adjusters. If too much tension is applied it may become difficult for the mast to rotate freely. Check this before proceeding with raising the sail.

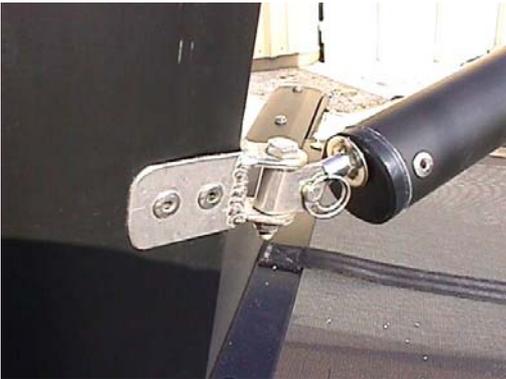
1

Slide the outboard end of the boom through the webbing loop attached to the clew of the mainsail.



2

Connect the boom to the mast using the hinge vertex, clevis pin and split ring.



3

Connect the shackle on the boom outhaul line to the grommet in the clew of the mainsail.



4

Tie one end of the rotation line to the front of the clamcleat on top of the boom. Pass the other end of the line through the end of the rotation arm on the mast. Take the line back through the clamcleat and fit a plastic ball stopper at the end.





**1**

Unfold the mainsail and lay on a flat clean surface. Undo the set of battens and identify which batten goes in which batten pocket. Insert the battens into the pockets.  
NOTE : the second batten pocket from the bottom takes the longest batten.



**2**

Using the straps and clips on the leech of the mainsail, secure each batten into it's respective pocket (as per photograph). Push the battens in reasonably hard - sufficient to remove any wrinkles from the pocket.  
NOTE : it is important to relieve the tension on the battens after each day's sailing. This will prolong the life of the sail.

**BEFORE RAISING THE MAINSAIL, MAKE SURE THAT THE BOAT IS POINTING INTO THE WIND. IF THE WIND CHANGES DIRECTION, MOVE THE BOAT.**



**3**

Place the sail on the trampoline, the battens clips towards the back. Undo the main halyard wire from the mast and shackle it to the head board of the mainsail. Now, feed the bolt rope at the head of the sail into the cut out in the sail track on the mast.



**4**

Now, pull on the main halyard line whilst feeding the sail into the track cut out.



**5**

When the sail is all the way up, position the stopper on the wire halyard so that it engages in the halyard lock.



**6**

Lead the halyard behind the shroud and trapeze wire and secure at the halyard cleat on the side of the mast. Do not pull too hard as you may disengage the halyard lock. Store the excess halyard into the trampoline pocket.



1

Unroll the jib and open the zipper on the luff. Using the 4mm bow shackle connect the tack to the stay adjuster.



2

Shackle the jib head to the jib halyard. Then position the jib and the halyard line against the forestay. Close the zipper ensuring that the halyard line remains inside the zipper. As you pull down on the halyard line close the zipper as the sail is raised.



3

Once the jib is fully raised, take the jib luff tensioner line and secure it to the bottom holes in the stay adjuster.



4

Now pass the line through the small pulley at the end of the jib halyard, then back down through the cleat on the tack of the jib. Remove the jib halyard line and stow it in the trampoline pocket.

- 3 Attach the jib clew blocks to the clew of the jib using the wide throat shackle provided.



4

Thread the jib sheet line through the jib sheet blocks. Fasten the sheet to the top of the blocks using a bowline knot. Ensure that there are no twists in the sheet and that the sheet is led behind the mast.

5

The jib can now be furled by pulling on the furler line and cleating it off in the jam cleat. The jib will not furl fully if the jib sheet is cleated on.

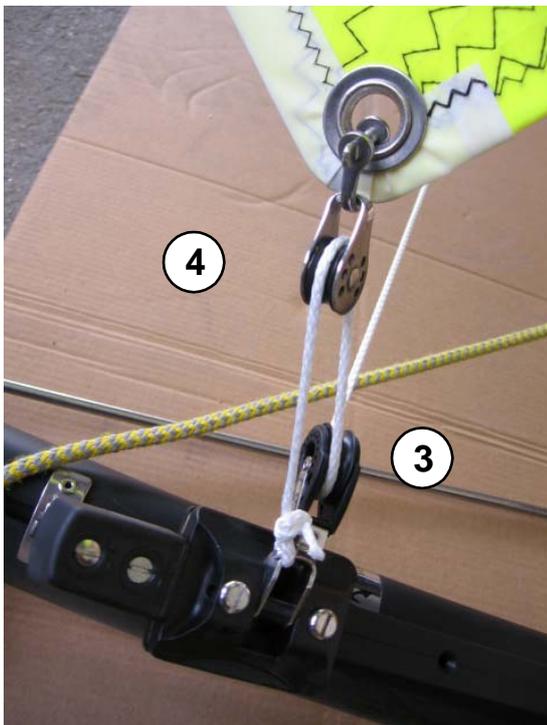
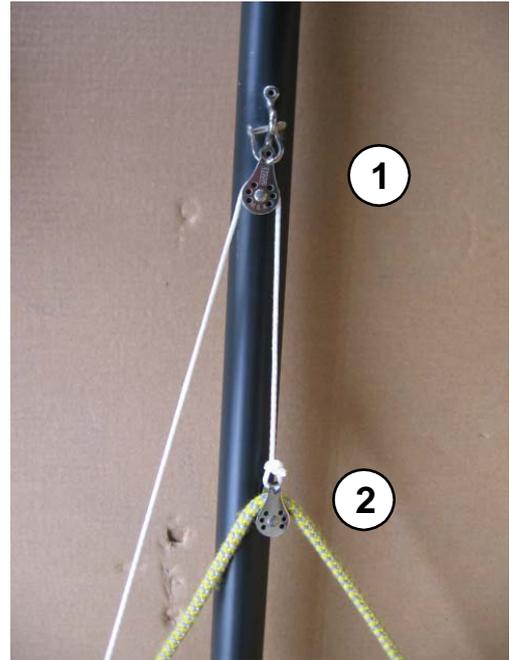
Shackle the small pulley (1) onto the pad-eye located on the spi pole.

Feed the white spectra line through it and attach the end on the jibsheet block (2) with a bowline knot.

Feed the other end of the white spectra line in the carbo block (3) that is on the self tacker track traveller, then in the jib clew block (4) and finally attach the end on the traveller using a bowline knot.

Attach the jib sheet line on the pad-eye that is on the right casting of the crossbar (5)

Lead it through the jib sheet block (2) and then in the clam cleat that is on the other side (left) of the cross bar (6).



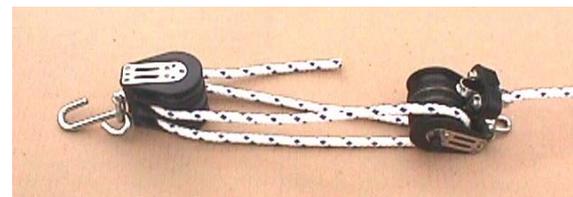
**1**

Position the triple ratchet block and the triple top block as indicated in the photograph. Carefully follow the threading sequence shown in the photographs and you should have no problems. There should be no crossovers or twists in a properly threaded 6:1 system.



**2**

Fasten the mainsheet ratchet block onto the top of the main traveller. The mainsheet system is now ready to be headed to the clew of the mainsail. NB : It is best to leave the top block unhooked until the boat is in the water.



**3**

Thread the tail of the mainsheet line through the travellet cleat and fairlead of the traveller car and then secure with a figure 8 knot at the eyesstrap on the aft edge of the rear cross-bar.



**4**

## Cunningham

- ⇒ Locate the cunningham line and the cunningham double block with hook
- ⇒ Attach the hook to the tack of the mainsail.
- ⇒ Fasten one end of the cunningham line to the cleat mounted at the bottom of the sail track on the mast.
- ⇒ Pass the other end through one of the sheaves on the block and then back down around the cleat.
- ⇒ Thread the line through the remaining sheave and then pull down on the line to remove the wrinkles from the front of the mainsail. Tie the line off on the cleat.
- ⇒ The stronger the wind, the more cunningham tension is required.

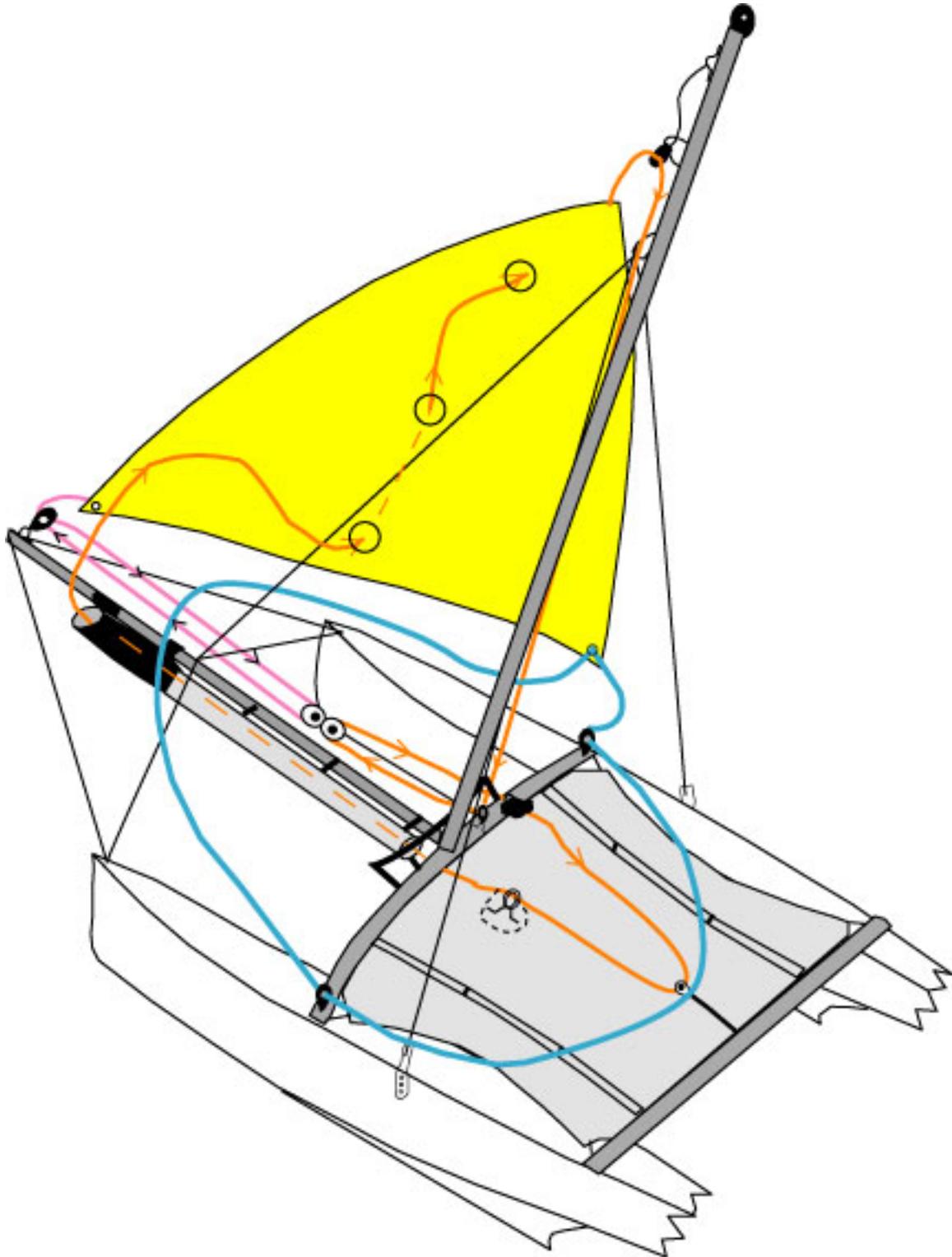


## **5** Righting line

Tie a knot about 35 cm from the end of the line and pass the short end down through the grommet at the centre front of the trampoline. Then pass the line through the eyestay mounted underneath the mast step and tie a figure 8 knot in the end.

Now, stow the rest of the righting line in the trampoline pocket. A knot in the righting line just above the grommet will prevent the righting line from slipping down and dragging in the water.

The "trumpet" spinnaker kit is delivered as an option with the Dragon Club and as serial equipment with the Dragon Extreme.  
Follow the drawing hereunder to fix the jib halyard and the spsheet.



# CAREFULLY READ BEFORE SAILING

- ◆ Whether on land or on the water,  **watch for overhead power lines**. Contact with power lines can cause serious injury or death.
- ◆ **DO NOT** sail while under the influence of alcohol and/or drugs 
- ◆ Only sail in conditions in which you feel comfortable and where you feel confident that you can safely sail the boat. **Never go out in conditions beyond your ability**.
- ◆ Everyone on board should **wear a life jacket at all times**. 
- ◆ If you are in the water, remain in contact with the boat, even if it is capsized. A sailboat can drift away faster than a person can swim.
- ◆ Never sail without a righting line. 
- ◆ **Wear appropriate clothes**. Wear a wet suit or dry suit in cold weather or cold water conditions. 
- ◆ Learn the **right of way rules** and when in doubt, give way to others. 
- ◆ When not sailing, always **keep the boat pointed into the wind** whether in the water or on the beach.
- ◆ Read the instruction manual carefully. 
- ◆ **Make sure everyone on the boat reads and understands these safety instructions**.
- ◆ **ALWAYS** check that the **drain plugs** are screwed in before launching your catamaran. 