RSCAT16

Rigging Manual V12.1

RSCAT16

Contents

RSCAT16

1. INTRODUCTION

Congratulations on the purchase of your new RS Cat 16 and thank you for choosing an RS product. We are confident that you will have many hours of great sailing and racing in this truly excellent design.

The RS Cat 16 is an exciting boat to sail and offers fantastic performance. This manual has been compiled to help you to gain the maximum enjoyment from your RS Cat 16, in a safe manner. It contains details of the craft, the equipment supplied or fitted, its systems, and information on its safe operation and maintenance. Please read this manual carefully and be sure that you understand its contents before using your RS Cat 16.

This manual will not instruct you in boating safety or seamanship. If this is your first boat, or if you are changing to a type of craft that you are not familiar with, for your own safety and comfort, please ensure that you have adequate experience before assuming command of the craft. If you are unsure, RS, your RS dealer, or your national sailing federation – for example, the Royal Yachting Association – will be able to advise you of a local sailing school, or a competent instructor.

RS Sailing highly recommends using RS supplied equipment for usage and storing of your craft. Deviation from using RS supplied equipment, such as sails and storage solutions, will require consultation with RS Sailing. Failure to do so may affect Warranty claims and Goodwill outcomes

Please keep this Rigging guide in a secure place and hand it over to the new owner if you sell the boat.

Please also see the Owners Manual for the technical summary and Capsize recovery technique. You should familiarise yourself with the procedure before venturing afloat. The risks associated with capsizing a catamaran include: Entrapment under the upturned hull and if it is windy, separation of the crew from the craft. Removal of a mast head flotation device will increase the risk of inversion and entrapment.

For further information, spares, and accessories, please contact:

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Fax: +44(0)1794 278418
E-mail: www.info@rssailing.com
For details on your local RS dealer, please visit www.rssailing.com

2. COMMISSIONING

2.1 Preparation

Your RS Cat 16 comes complete with all the components necessary to take the boat sailing. In order to commission it, you will need the following tools:

- Pliers or a shackle key
- Small Pozidrive screwdriver
- 17mm Spanner
- PVC electrician's tape

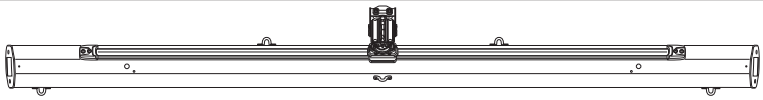
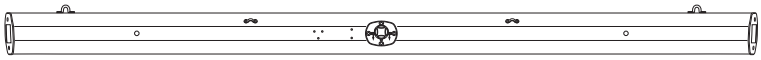
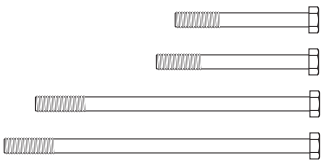
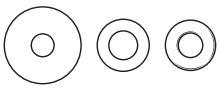
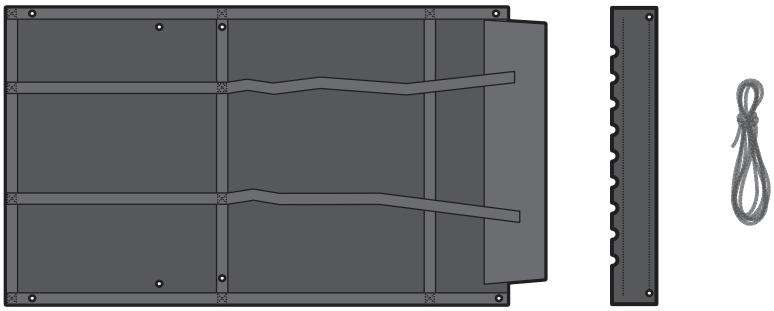
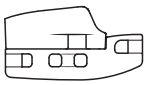
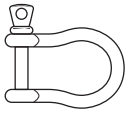
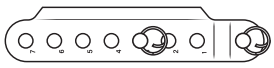
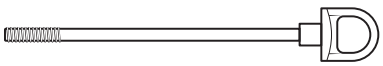
Whilst your RS Cat 16 has been carefully prepared, it is important that new owners should check that shackles and knots are tight. This is especially important when the boat is new, as travelling can loosen seemingly tight fittings and knots. It is also important to check such items prior to sailing regularly. Also regularly check the beam bolts are tight.

DO NOT use a knife or other sharp object to cut through packaging containing parts - you may damage the contents!

2.2 Unpacking

Having unpacked your RS Cat 16, you should check that you have all of the items listed on the contents pages before throwing away any of the packing, as there may be some small items still wrapped.

RSCAT16 3.1 COMPONENTS LIST

	Hulls x 2
	Rear beam x 1
	Front beam x 1
	① Bolt x 2 ② Bolt x 2 ③ Bolt x 2 ④ Bolt x 2
	Large metal washers x 8 Large nylon washers x 4 Small nylon washers x 8
	Tramp set x 1 Side tramp ties x 2
	Long 6mm batten x 1
	Short 6mm batten x 1
	8mm batten x 2
	Cleat x 2
	Righting line x1
	Top rigging shackle x 1
	Shroud verniers x 2
	Shroud eyebolts x 2
	Beam recess bar x 8
	Shroud recess bar x 2
Note: Club and S Spec ONLY 	Forestay ring x 1

RSCAT16 3.1 COMPONENTS LIST

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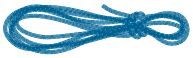
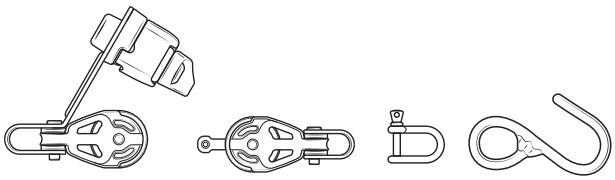
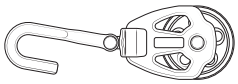
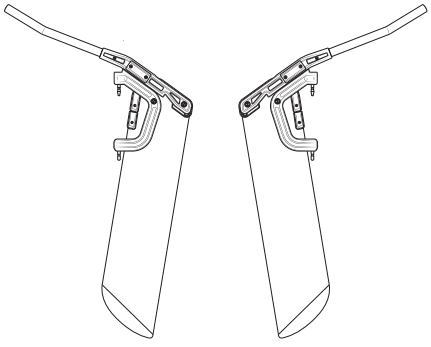
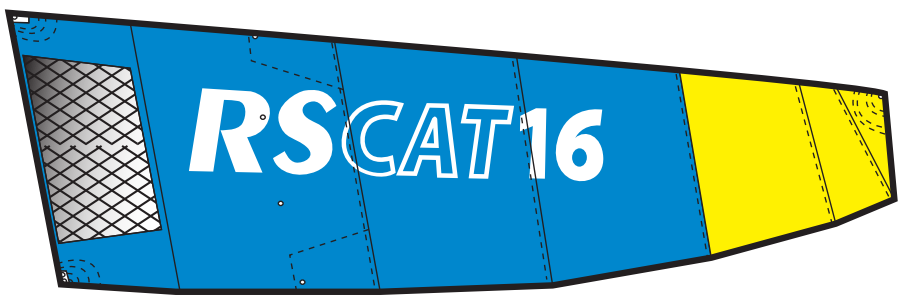
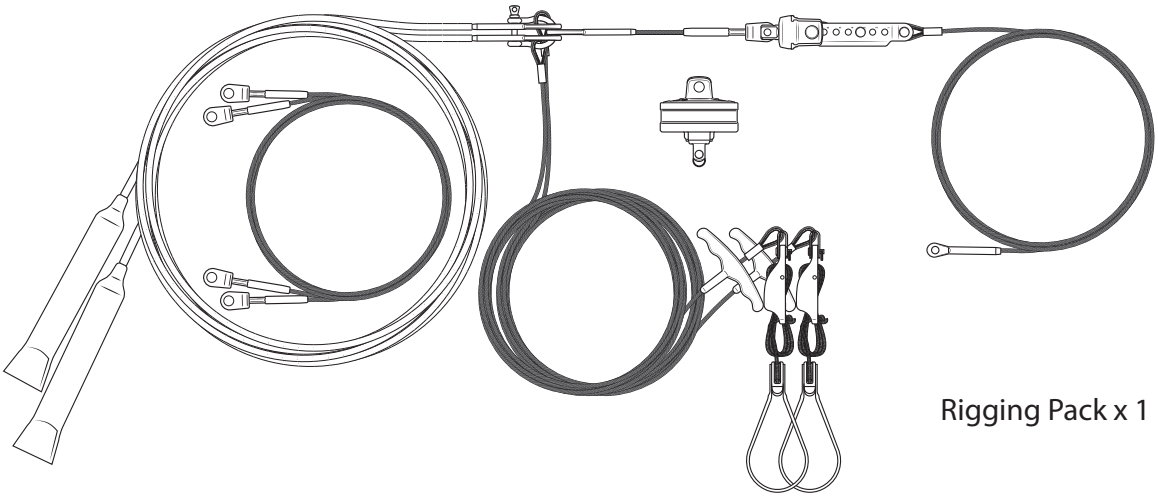
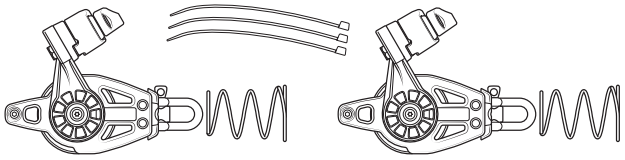
	Mast Pin x 1
	Toestrap ties x1
	Forestay line x 1
	Rear tramp ties x 1
	Downhaul line x 1
	Downhaul blocks x 2
	Mainsheet block x 1
	Mainsheet x 1
	Com bar x 1
	Tiller extension x 1
	Foil set x 1
	Mainsail x 1

RSCAT16 3.2 ADDITIONAL COMPONENTS - S AND XL

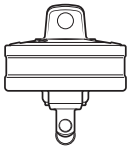
Striker bar x 1



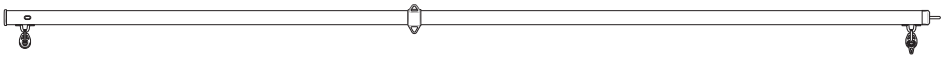
Rigging Pack x 1



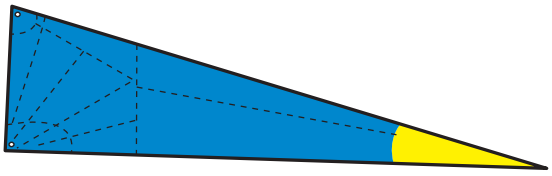
Jib cleats x 2



Jib furler x 2

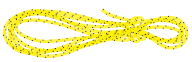


Spinnaker Pole x 1



Jib x 1

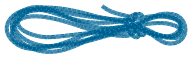
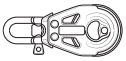
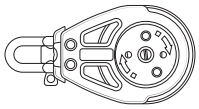
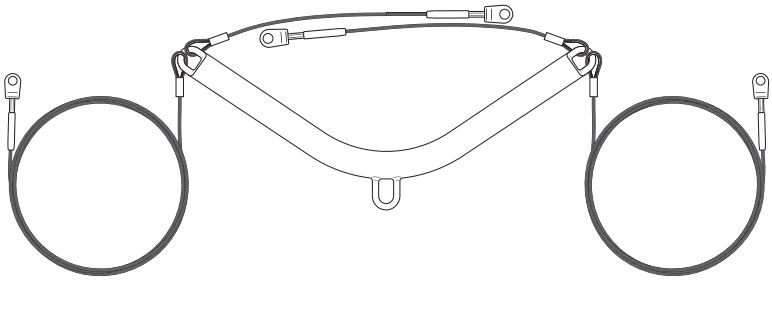
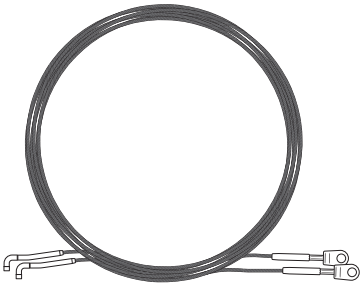
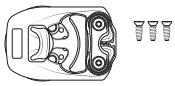
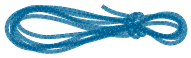
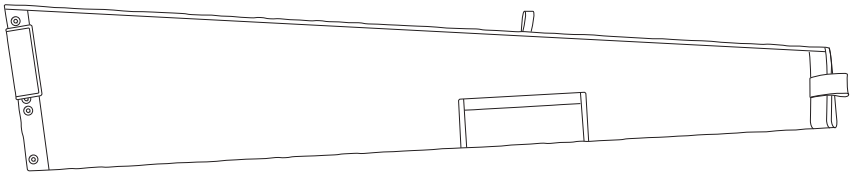
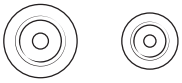
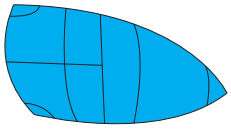
Jib halyard x 1



Jib sheets x 1

Trapeze elastic x 2

RSCAT16 3.3 ADDITIONAL COMPONENTS - XL ONLY

	Spinnaker halyard x 1
	Block ties x 2
	Spinnaker sheet turning block x 2
	Spinnaker halyard turning block x 3
	Ratchet block x 2
  	XL Rigging Pack x 1
	Spinnaker sheet x 1
	Tack line x 1
	Chute x 1
	Front chute tie x 1 Rear chute tie x 1 Long front chute tie x 1
	Small rope bobble x 4 Large rope bobble x 1
	Rear halyard takeaway elastic x 1
	Large plastic ring x 1
	Halyard furler elastic x 1
	Spinnaker x 1

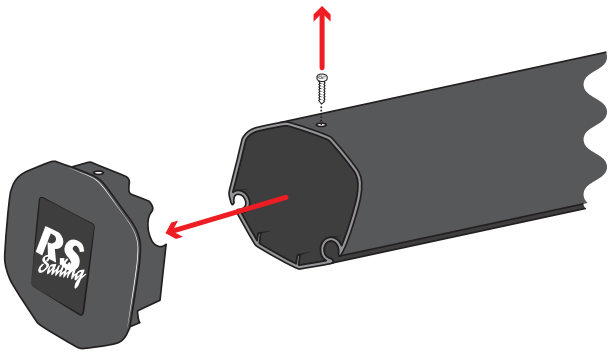
RSCAT16

4.1
Assembly Guide
Hulls

PLEASE FOLLOW ASSEMBLY GUIDE IN CORRECT ORDER.

RSCAT16

1.

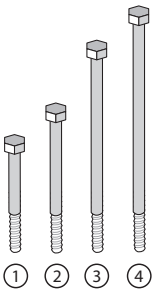


Using a screwdriver, remove all 4 screws.

Remove all 4 end caps from beams.

2.

STERN BEAM



Use 17mm spanner.

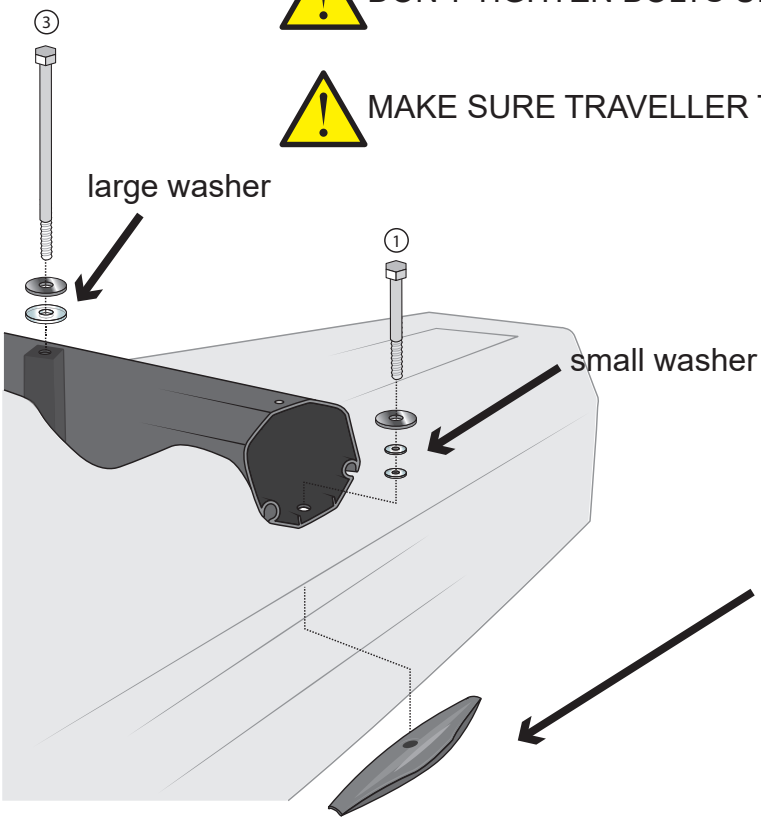
Add bolt ① into outboard hole with two nylon washers and one metal washer.

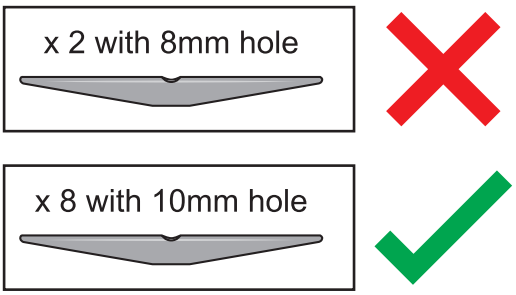
Add bolt ③ into outboard hole with one metal and one nylon washer.

ONLY ATTACH THE PORT SIDE.

DON'T TIGHTEN BOLTS UNTIL ALL BEAMS ARE CONNECTED.

MAKE SURE TRAVELLER TRACK FACES FORWARDS.





3. BOW BEAM

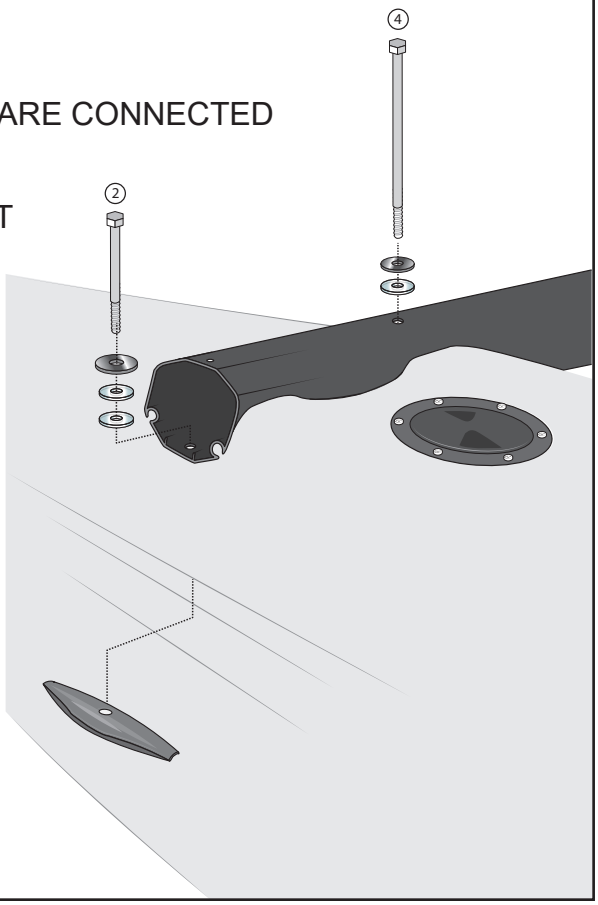
DON'T TIGHTEN BOLTS UNTIL ALL BEAMS ARE CONNECTED

MAKE SURE JIB EYELETS ARE FACING AFT

Add bolt ② into outboard hole with one metal and two nylon washers.

Add bolt ④ into inboard hole with one metal and one nylon washer.

DO NOT RE-ATTACH THE ENDCAPS YET



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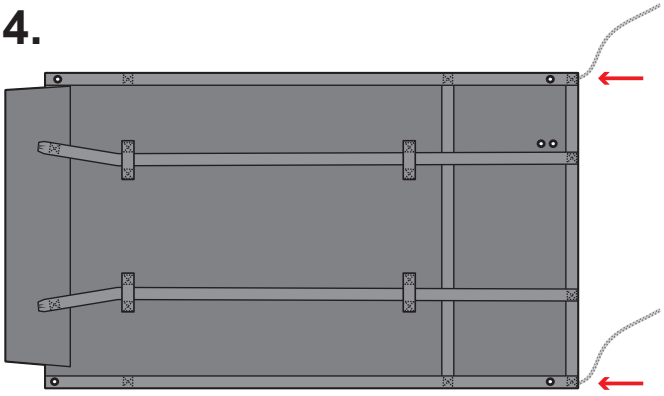
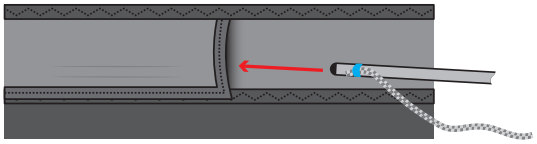


Using longest 6mm batten, poke tramp ties down seam pockets on both sides.

The best way to do this is to tape the end of the rope to the end of the batten and poke through.



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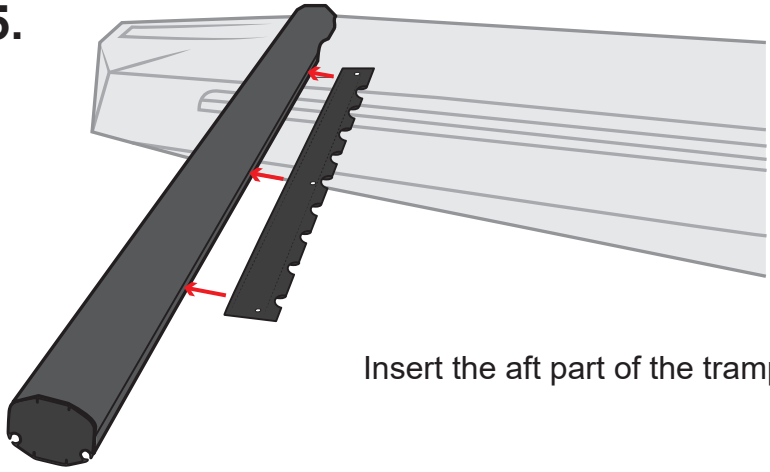
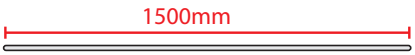


Insert the aft part of the tramp into the track on the stern beam.

There are four battens for the tramp.

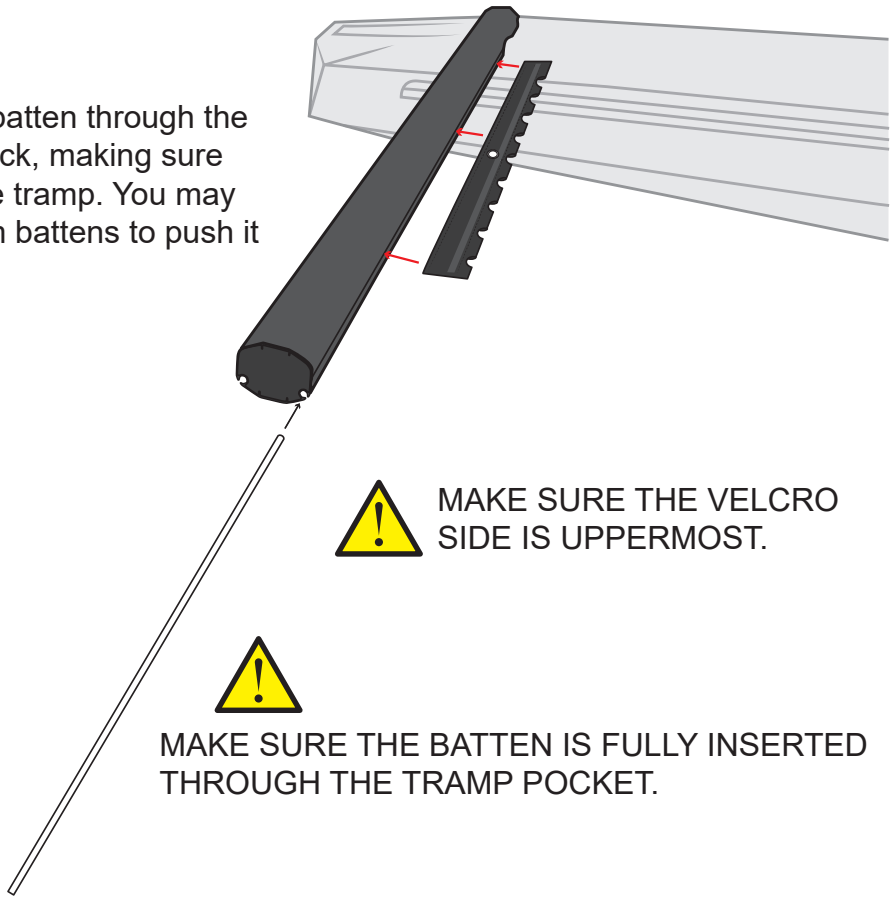
8mm battens

6mm battens



6.

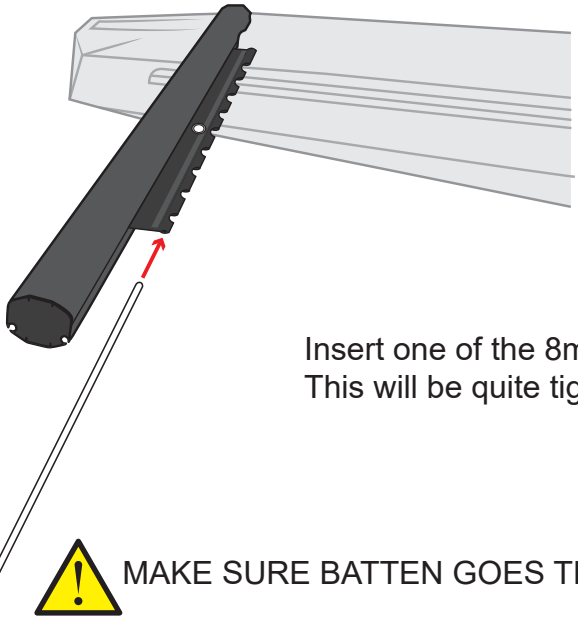
Insert the 6mm x 1540mm batten through the end of the beam into the track, making sure it goes inside the slot on the tramp. You may need to use one of the 8mm battens to push it through.

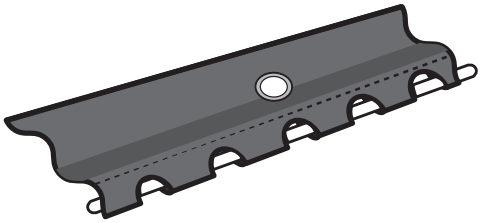


MAKE SURE THE VELCRO SIDE IS UPPERMOST.

MAKE SURE THE BATTEN IS FULLY INSERTED THROUGH THE TRAMP POCKET.

7.





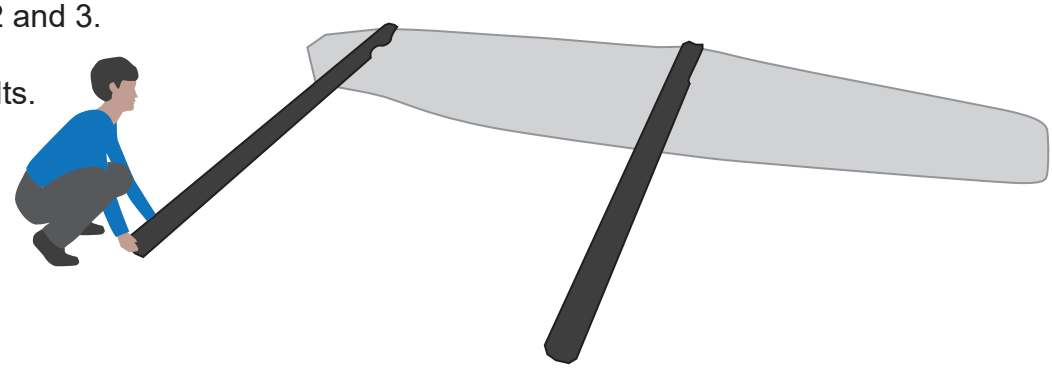
Insert one of the 8mm battens into the pocket on the tramp. This will be quite tight.

MAKE SURE BATTEN GOES THROUGH THE DOUBLE REINFORECMENT.

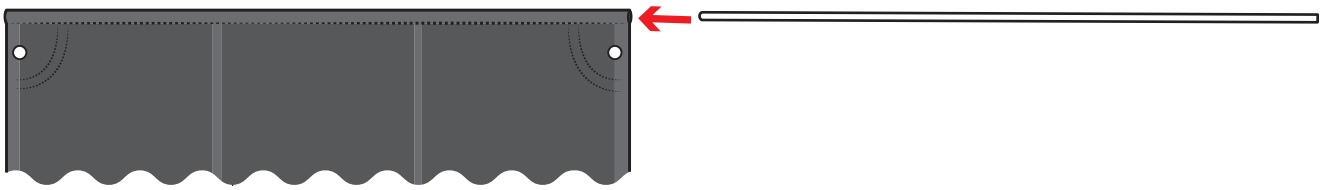
8. Lift up and place the second hull under the beams.

Repeat step 2 and 3.

Tighten all bolts.



9. Push the 6mm x 1860mm batten through the reinforcement pocket in the front edge of the tramp.



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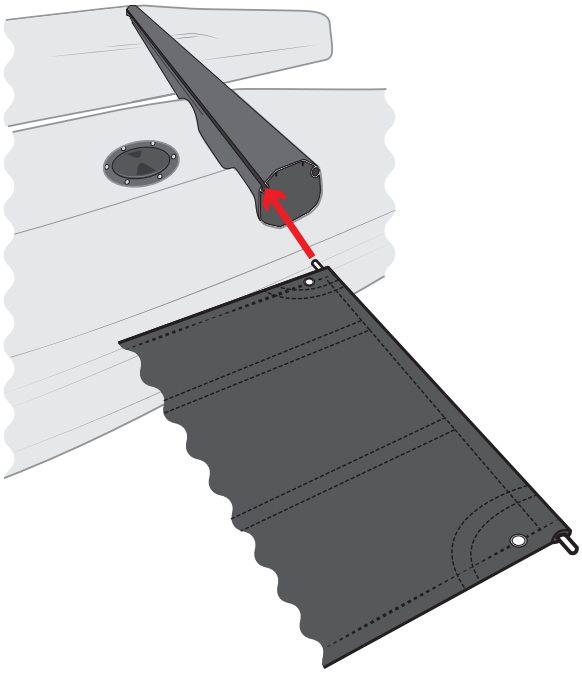


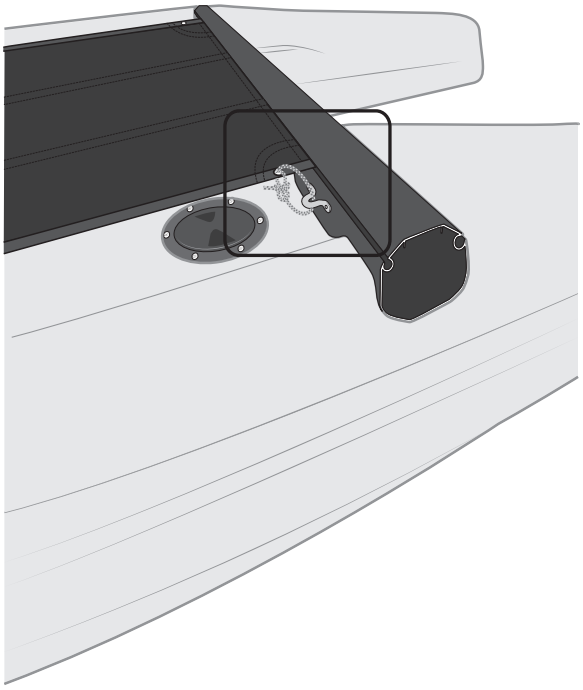
Slide the front edge of the tramp (with the batten inserted) into the track on the front beam.

MAKE SURE THE TRAMP IS THE RIGHT WAY UP.

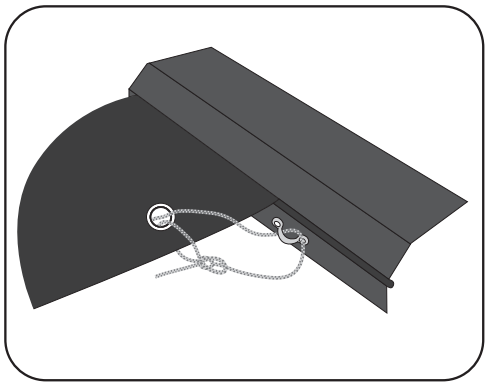
MAKE SURE THE BATTEN GOES THROUGH THE ENTIRE POCKET.

MAKE SURE THE TRAMP IS IN THE MIDDLE OF THE BEAM.

11.



Take the forward end of the tramp tie (that you passed down the side seam in step 4).



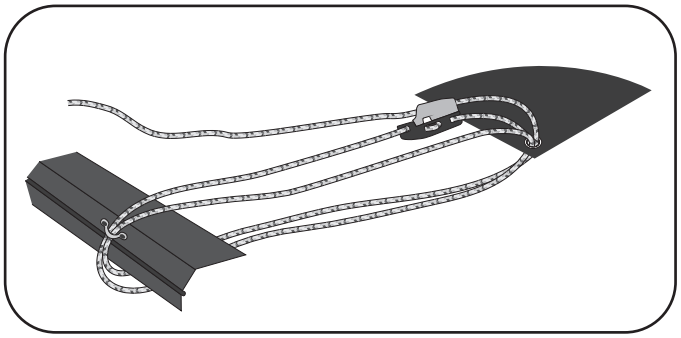
Pass the tramp tie through the front tramp cringle.

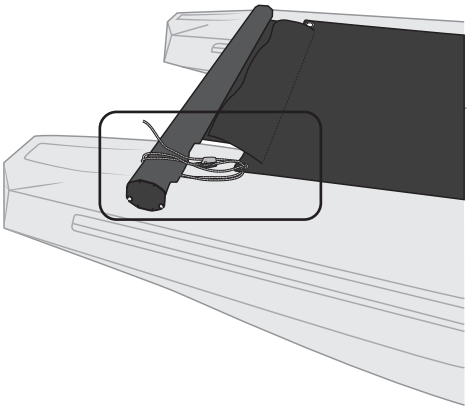
Pass the tramp tie through the eyelet.

Tie **knot #2** through the cringle.

Repeat on other side.

12.





Pass rope through rear tramp cringle.

Pass rope over beam and down through eyelet, then back under beam.

Pass rope through cringle.

Pass rope through cleat base (making sure cleat is tight to cringle).

Pass rope over beam and through eyelet, then back under beam.

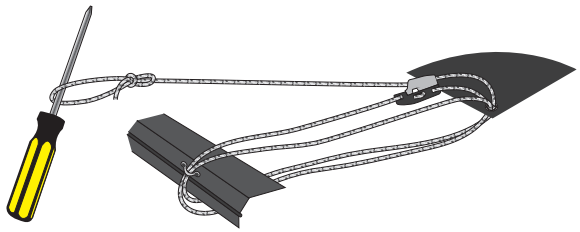
Pass rope through cringle.

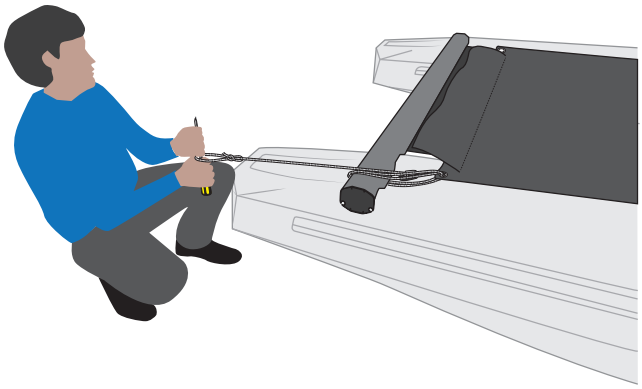
Pass rope through cleat.

DON'T TIGHTEN UNTIL BOTH SIDES ARE DONE.

PULL ON BOTH SIDES EVENLY OR TRAMP WILL BE PULLED OFF CENTRE.

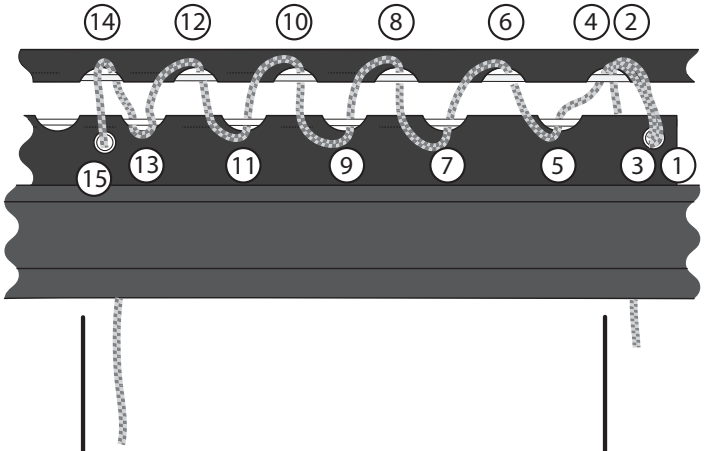
13.

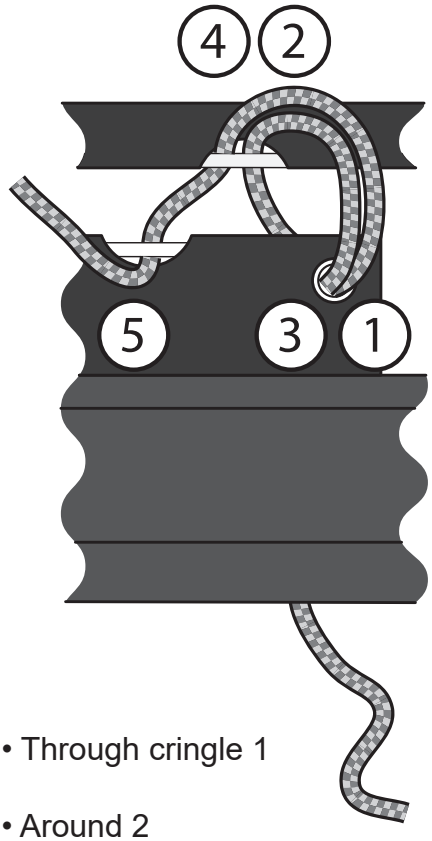


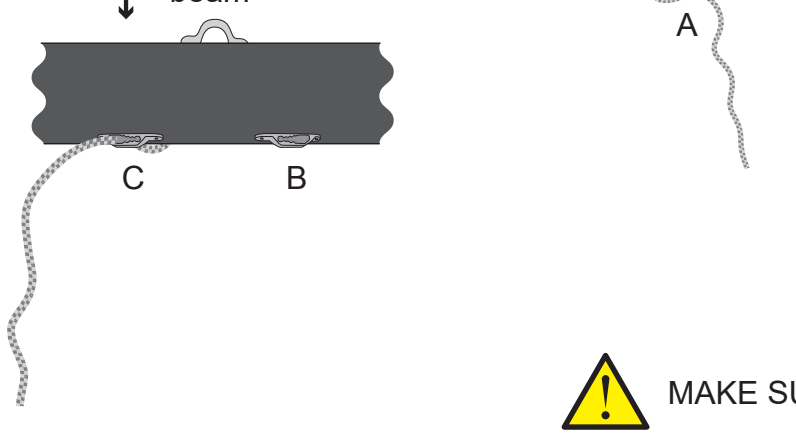


14.

Use the rear tramp ties. Start from cleat A.





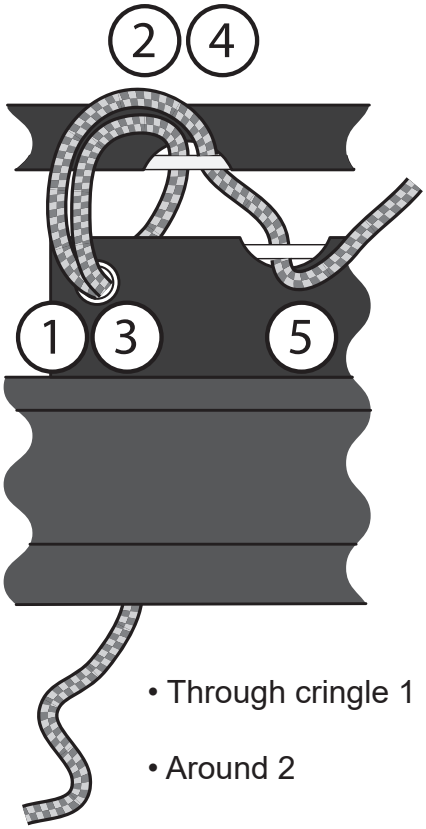


- Through cringle 1
- Around 2
- Around 1
- Around 2
- Around 3-12
- Through cleat C.

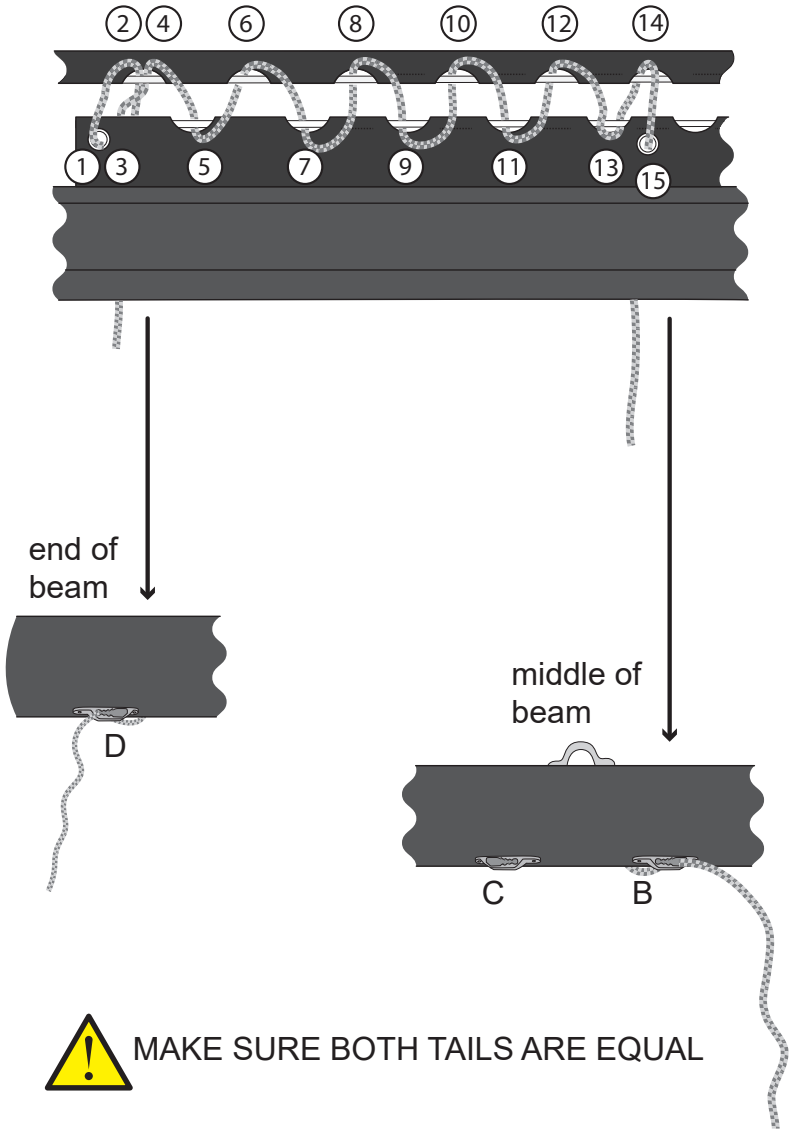
MAKE SURE BOTH TAILS ARE EQUAL.

15.

Use one of the rear tramp ties. Start from cleat D.



- Through cringle 1
- Around 2
- Around 1
- Around 2
- Around 3-12
- Through cleat B

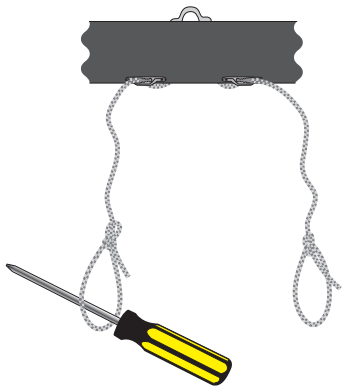


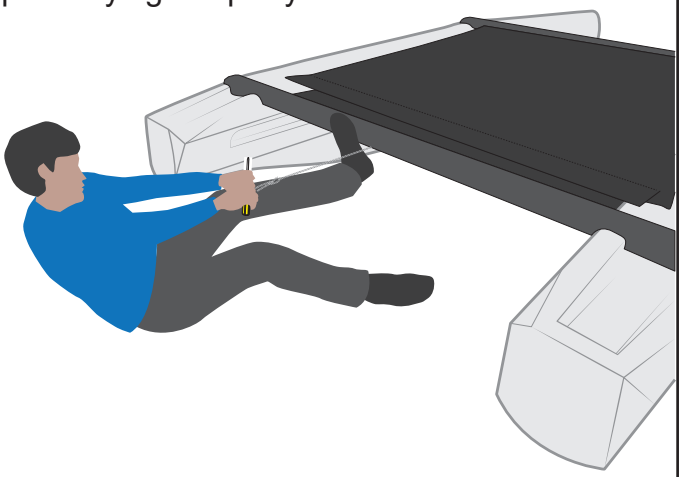
MAKE SURE BOTH TAILS ARE EQUAL

16.

Tie **knot #2** in each of the four tails.

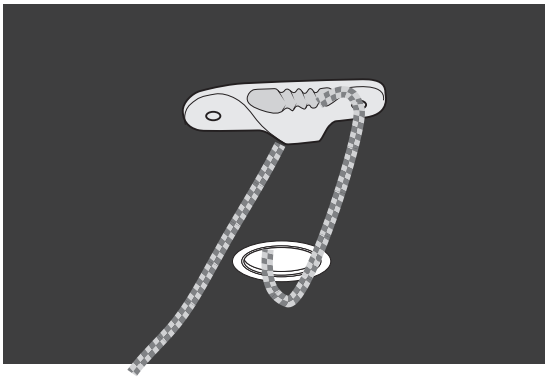
Use a screwdriver or rig tensioner to pull very tight equally.

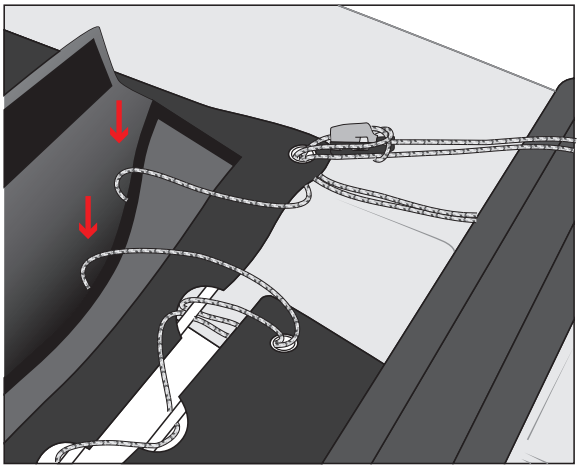




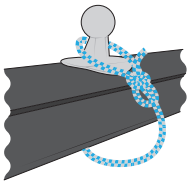
17.

Tidy up tails by passing them through the cringle and into the velcro pocket.

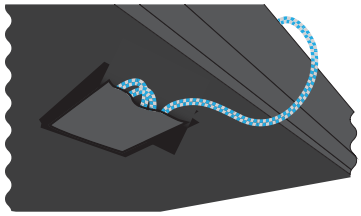




18.



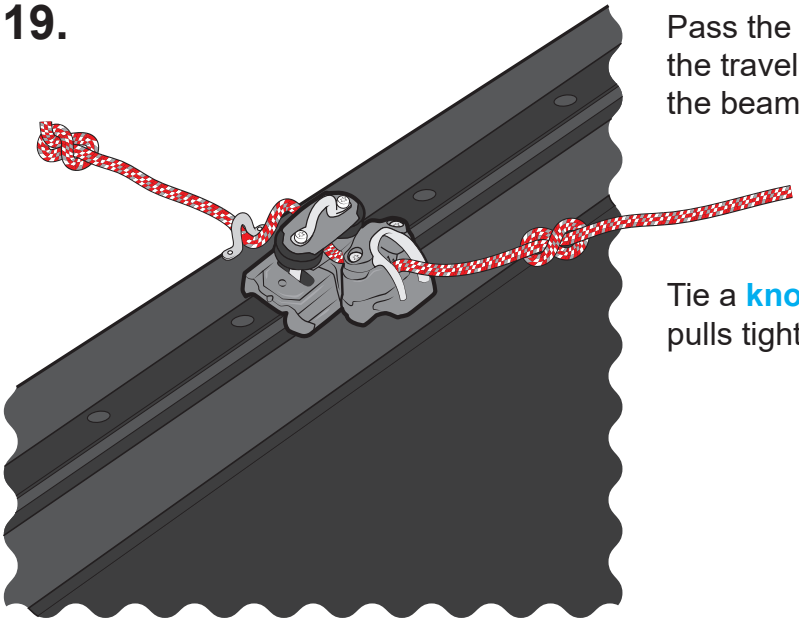
Tie the righting line around the mast step with **knot #2**.



Stow the other end in the pocket under the tramp.

YOU MUST NOT GO SAILING WITHOUT A RIGHTING LINE FITTED.

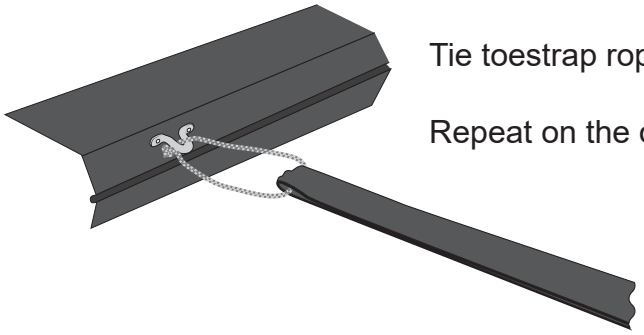
19.



Pass the traveller line through the cleat on the traveller car and through the eyelet on the beam.

Tie a **knot #3** knot in the tail so that the rope pulls tight before the car hits the end stop.

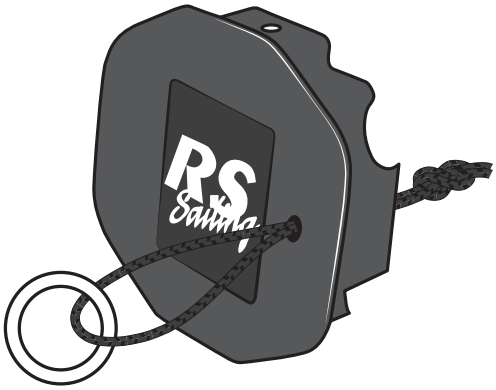
20.



Tie toestrap ropes through toestraps and knot through eyelet.

Repeat on the other side of the boat.

21.

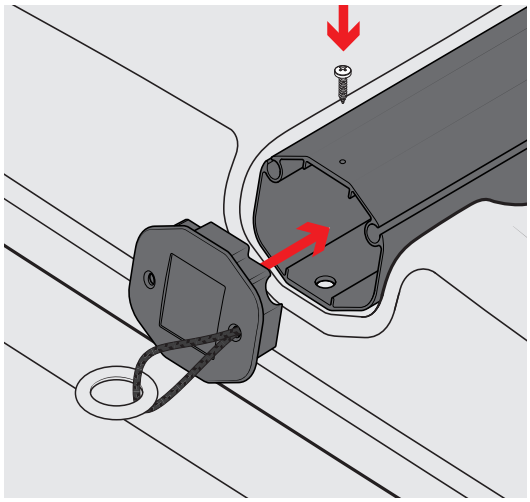


Pass one end of the tie through the plastic ring and then pass both ends through the hole in the FRONT beam end cap.

Tie **knot #3** in the end.

Repeat on the other side of the boat.

22.

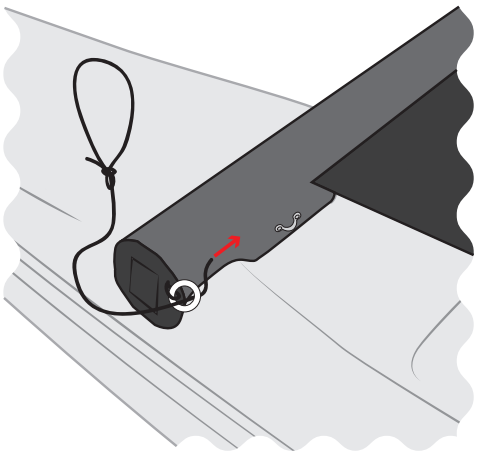


Replace the end caps and screws.

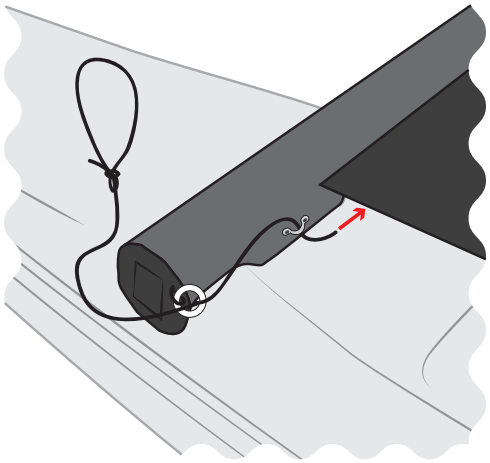
23.

Tie **knot #2** in one end of the trapeze elastic. This will be for the crew's trapeze.

Feed the other end through the plastic ring at one end of the beam.

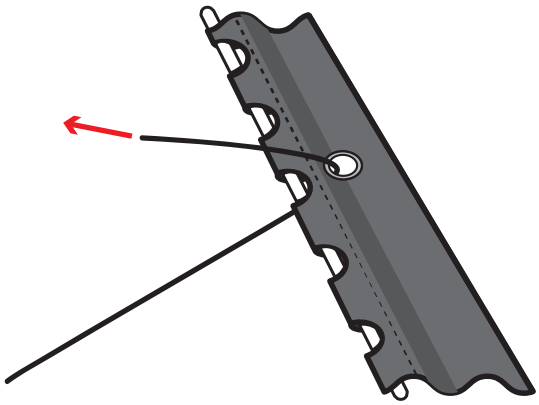


24.



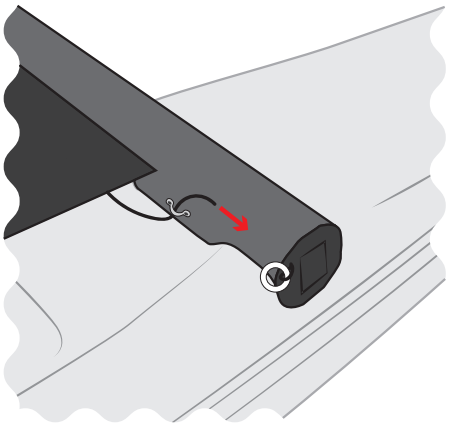
Feed the end down through the eyelet on the aft face of the beam and down under the tramp.

25.



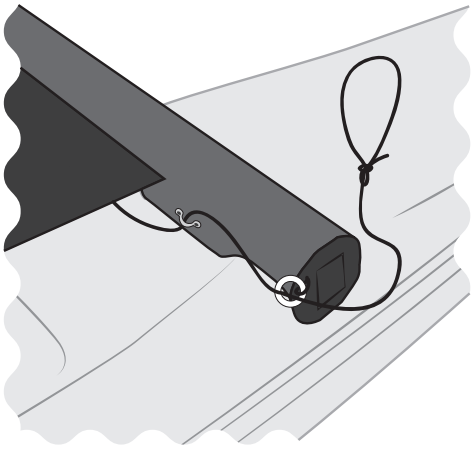
Pass the elastic back to the transom and through the cringle at the back of the tramp.

26.



Pass the elastic back under the tramp to the opposite side of the boat and up through the eyelet on the aft face of the beam (mirroring the process from the other side of the boat).

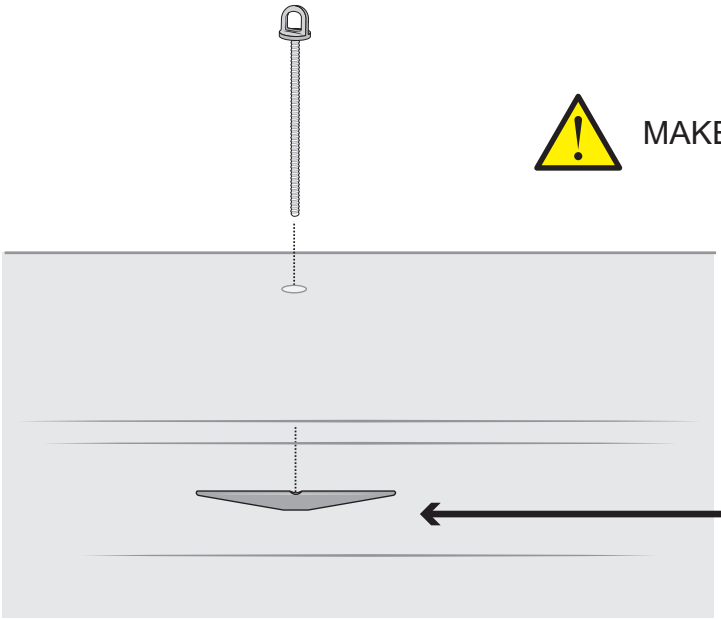
27.



Pass the elastic through the plastic ring at the end of the beam and tie **knot #2** in the end.

28.

Add shroud bolts and recess bar.



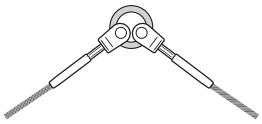
MAKE SURE EYE BOLTS ARE TIGHT

Recess bars to have 8mm holes.

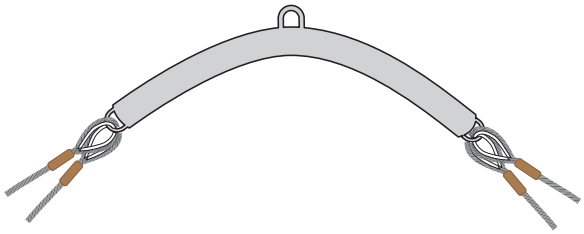
29.

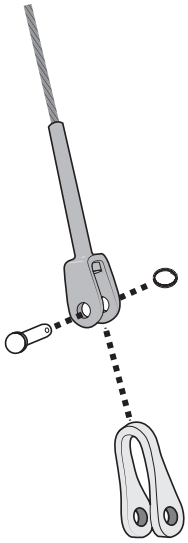
Attach the two wires from the tack ring (S) or the two longest wires from the tack bar (XL) onto the striker bar shackles.

S - specification



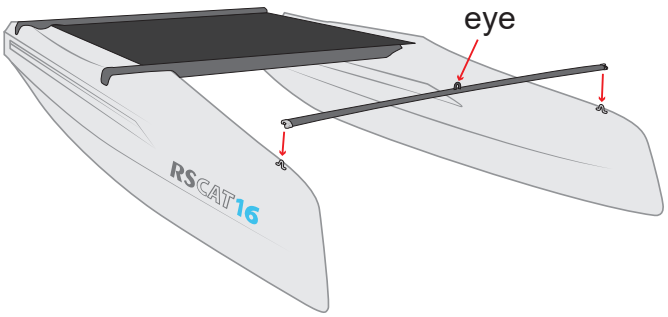
XL - specification

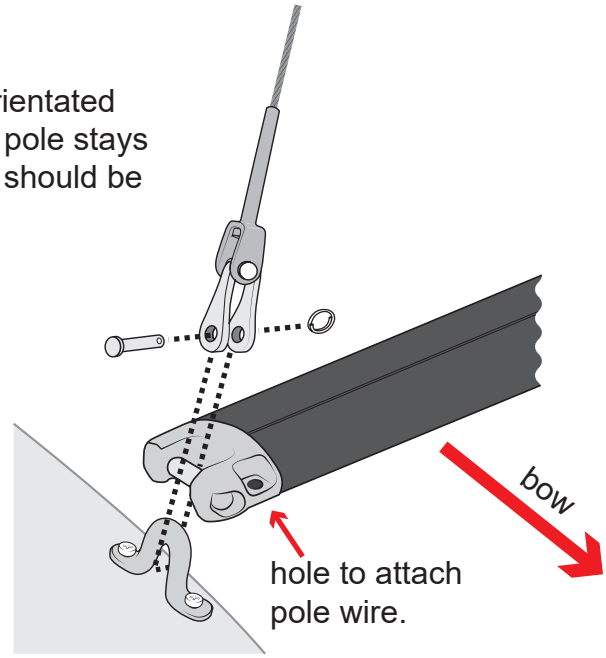




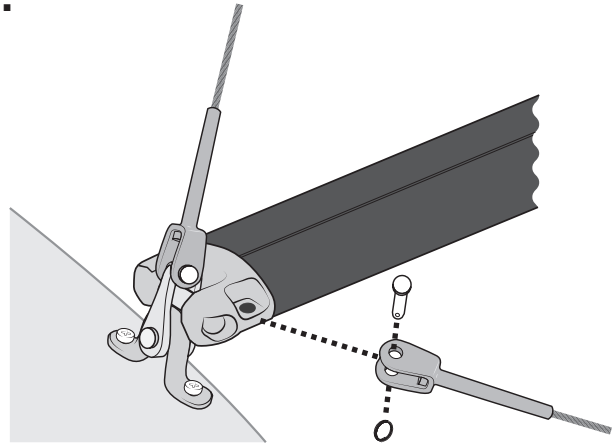
30.

Attach the striker bar, making sure it is orientated correctly. The holes where the spinnaker pole stays attach should be at the front and the eye should be at the top.





31.

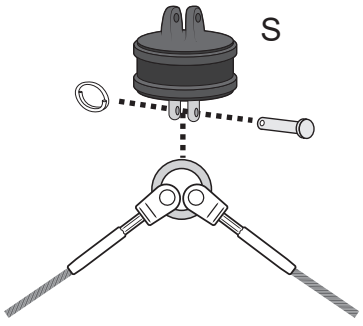


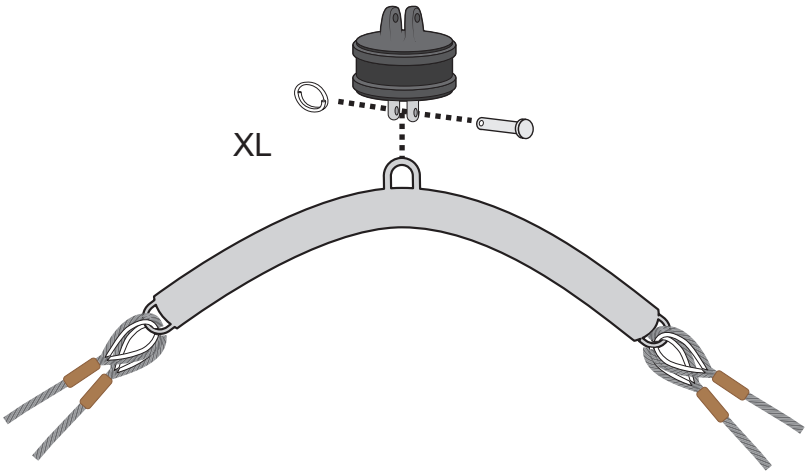
XL SPEC ONLY

Add the spinnaker pole stays to the striker bar endcaps.

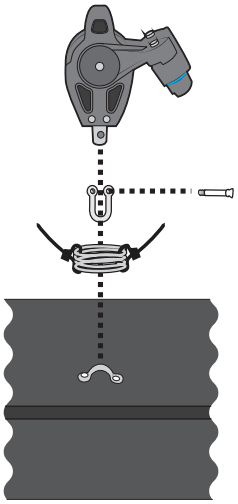
32.

Attach the furler unit to the tack bar/ring.

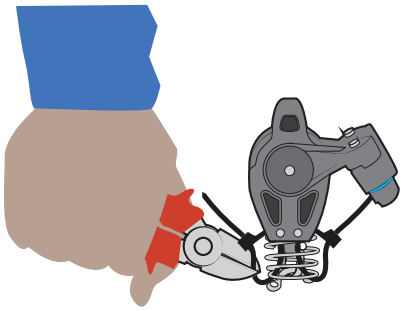




33.



Add jib blocks to front beam. This will be easier if you use cable ties to compress the spring then cut zip ties once jib blocks are shackled on.

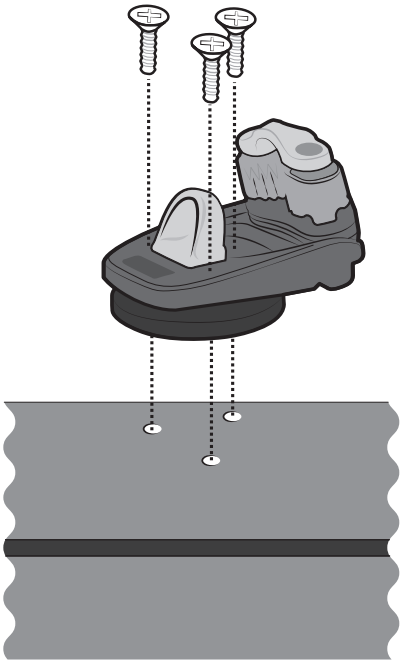


34.

XL SPEC ONLY

Remove plastic inserts from front beam.

Add the spinnaker cleat using the screws provided. You will need to rotate the top of the cleat to access the holes in the base.



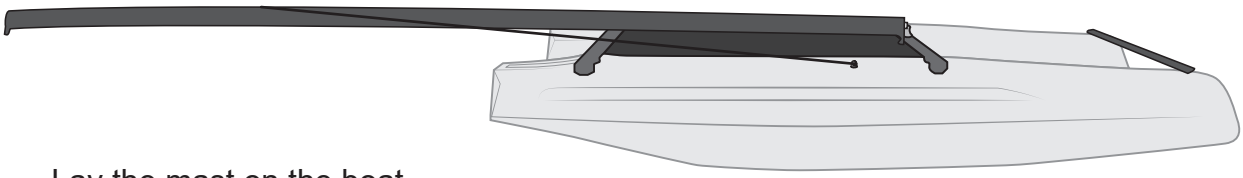
RSCAT16

4.2
Assembly Guide
Mast

PLEASE FOLLOW ASSEMBLY GUIDE IN CORRECT ORDER.

RSCAT16

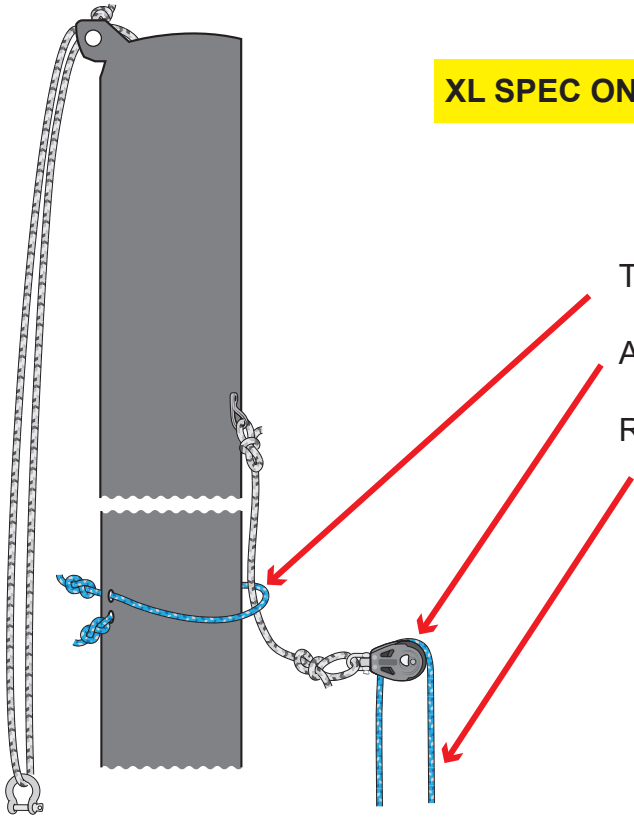
1.



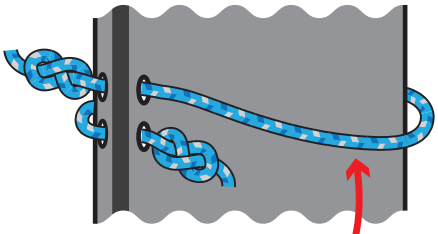
Lay the mast on the boat.

Follow steps 1-7 before erecting the mast.

2.



XL SPEC ONLY



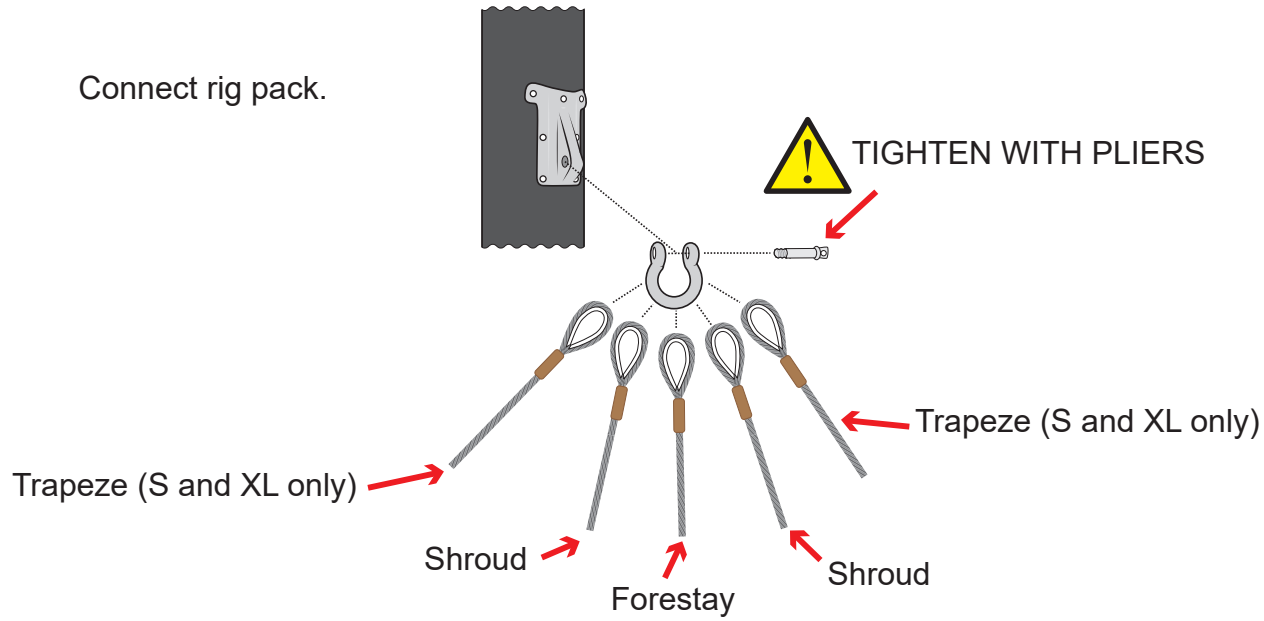
Tie the spinnaker halyard strop.

Add the swivel block to the halyard strop.

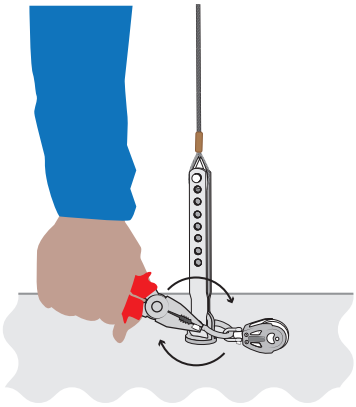
Rig spinnaker halyard.

3.

Connect rig pack.



4.



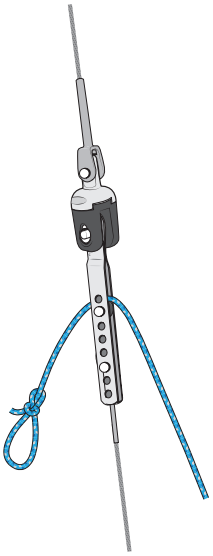
Connect shroud verniers to eye bolt.

On XL add shackle and ratchet block to eye bolt as you connect the vernier.

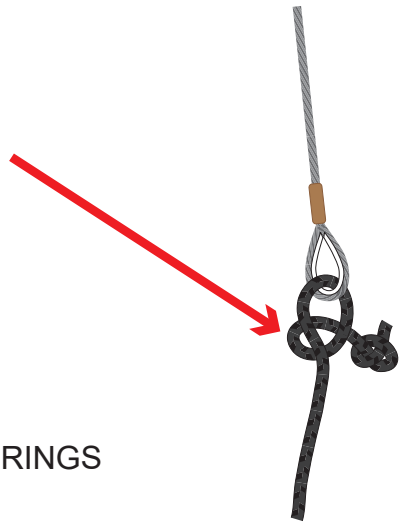
Tighten with pliers.

Connect the shrouds to the top hole of the verniers.

5.

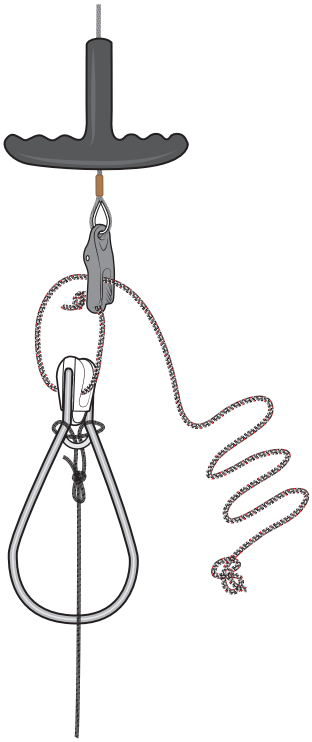


Add forestay tie.



TAPE ALL SPLIT RINGS

6.

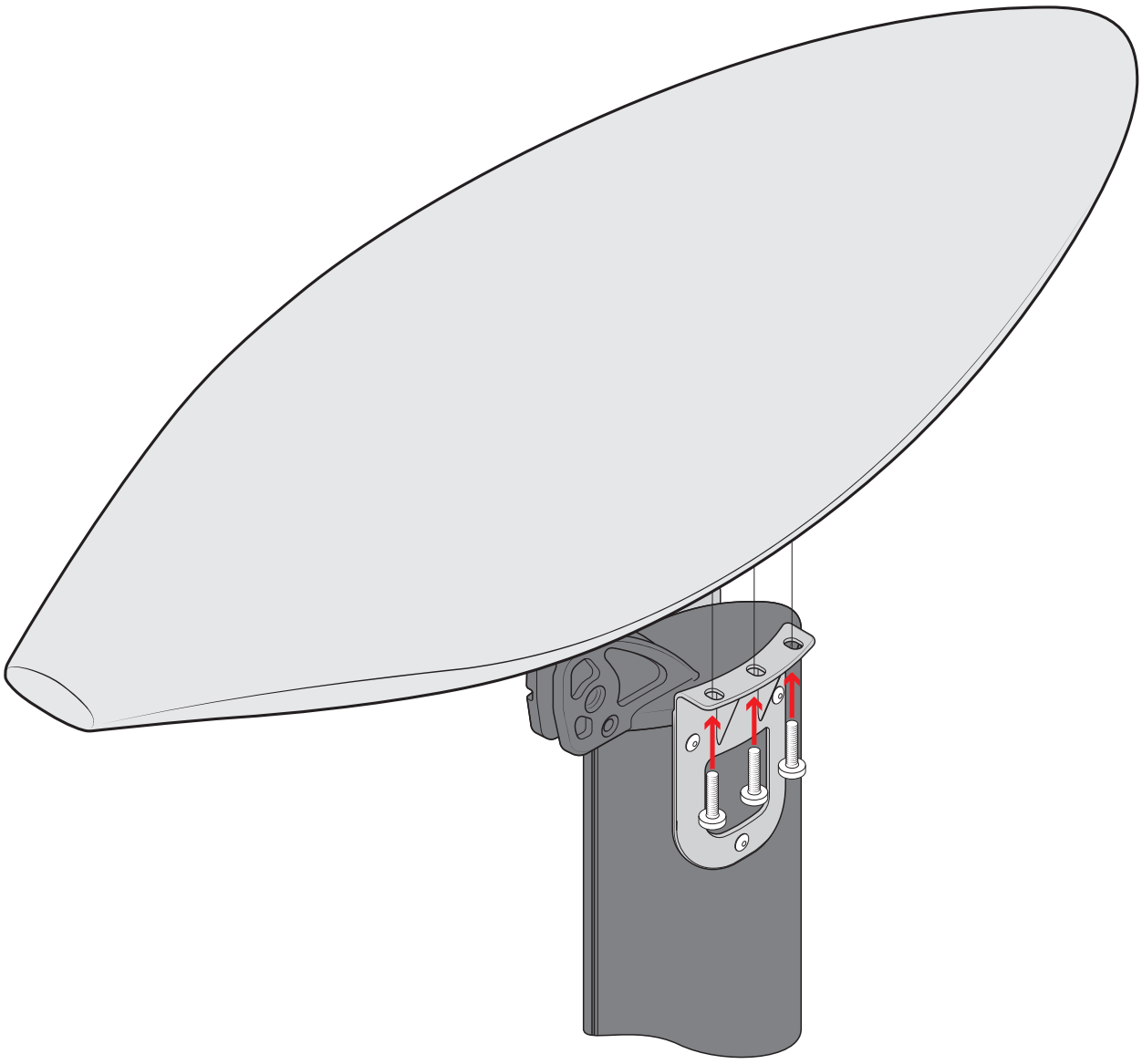


Connect trapeze wires to elastic.

7. Attaching the Masthead Float

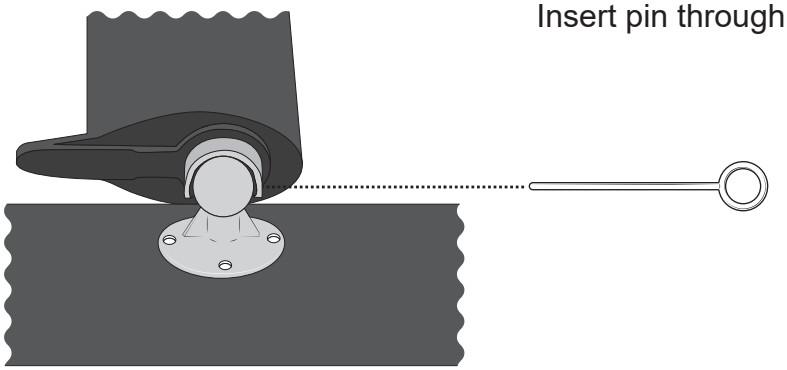
The fixed masthead float must be fitted before stepping the mast in the boat.

a) Attach the bracket to the masthead float using the six M6 x 12 machine screws provided.



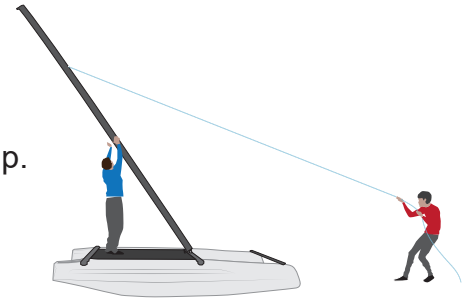
8.

Insert pin through mast step.



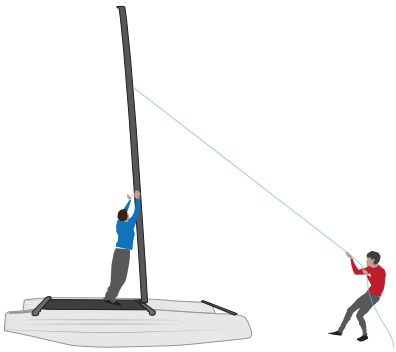
9.

Use forestay, spinnaker halyard, or trapeze wires to pull mast up.



DO NOT DO THIS NEAR OVERHEAD POWER LINES

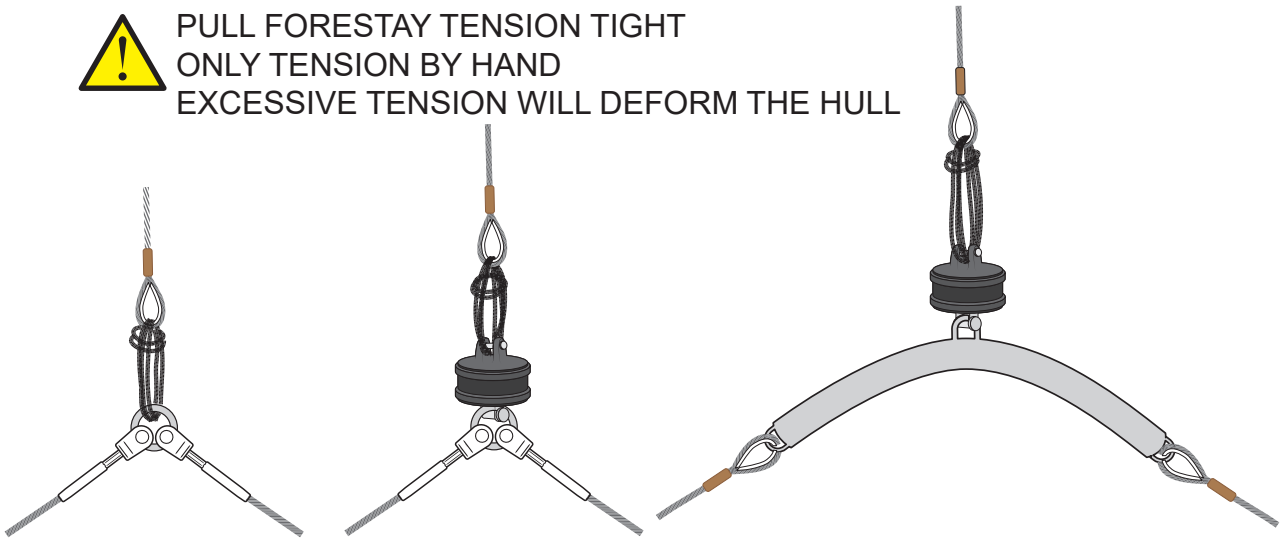
DON'T DO THIS IN WINDY CONDITIONS.



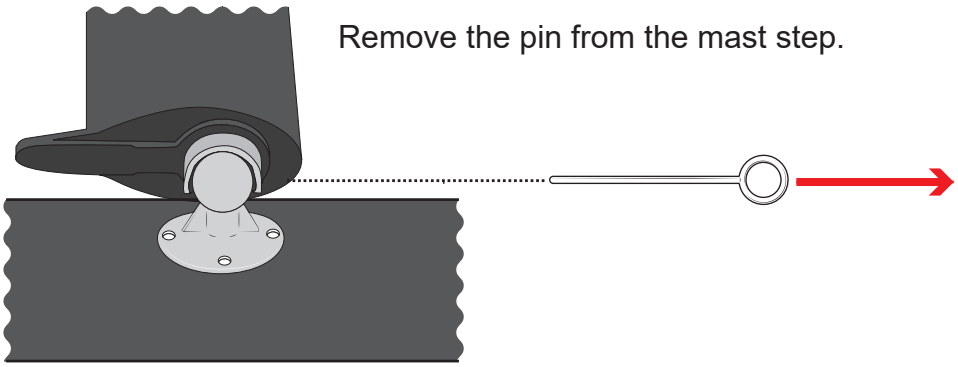
10.

Attach forestay.

PULL FORESTAY TENSION TIGHT
ONLY TENSION BY HAND
EXCESSIVE TENSION WILL DEFORM THE HULL



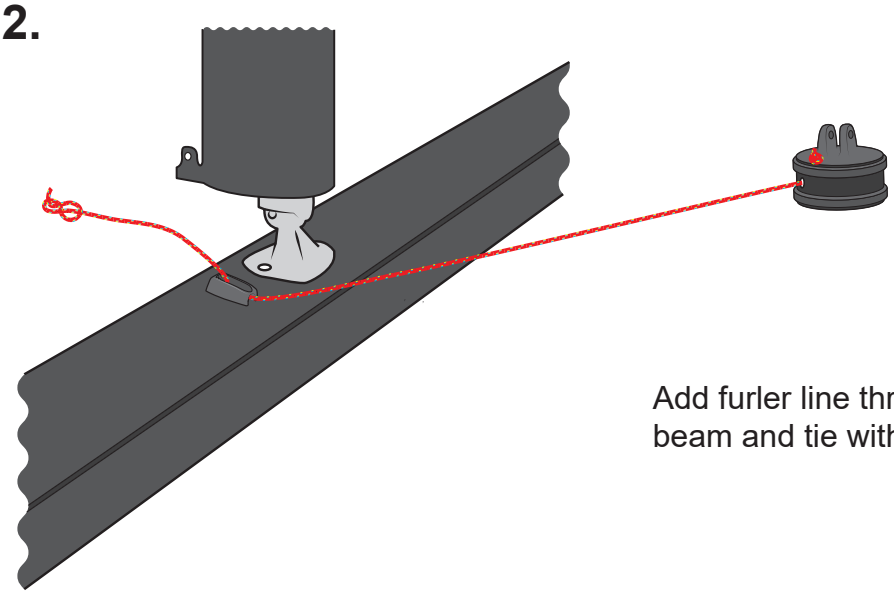
11.



Remove the pin from the mast step.

IT IS VERY IMPORTANT TO DO THIS BEFORE SAILING THE BOAT!

12.



Add furler line through cleat on front beam and tie with **knot #3**.

RSCAT16

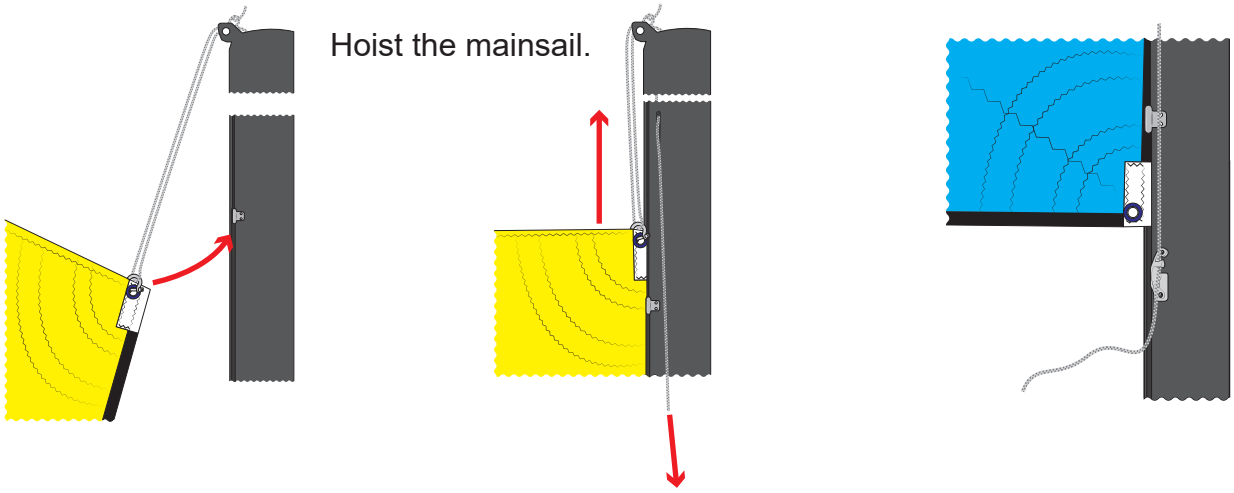
4.3
Assembly Guide
Sails

PLEASE FOLLOW ASSEMBLY GUIDE IN CORRECT ORDER.

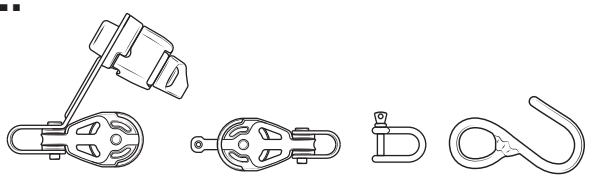
RSCAT16

1.

Hoist the mainsail.

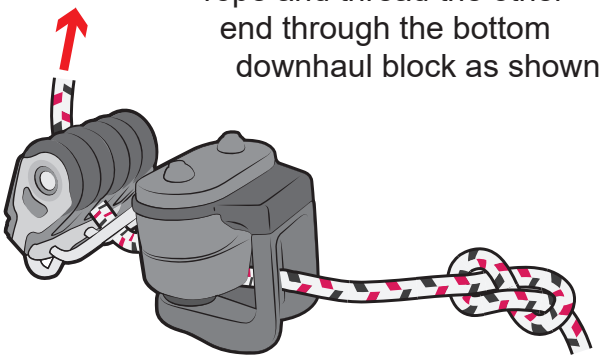


2.

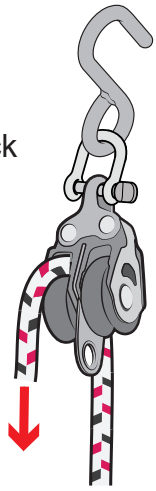


Locate the downhaul and downhaul blocks in the pack.

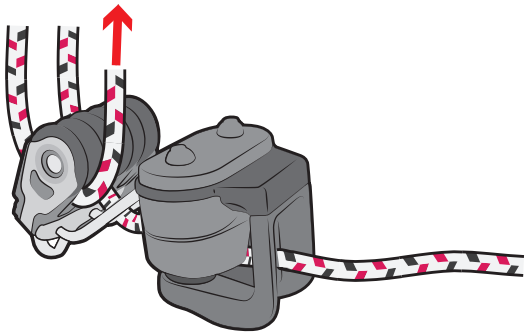
Tie **knot #3** in one end of the rope and thread the other end through the bottom downhaul block as shown.



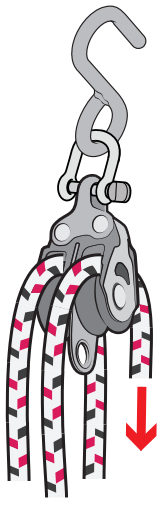
3. Pass the tail through the top downhaul block as shown.



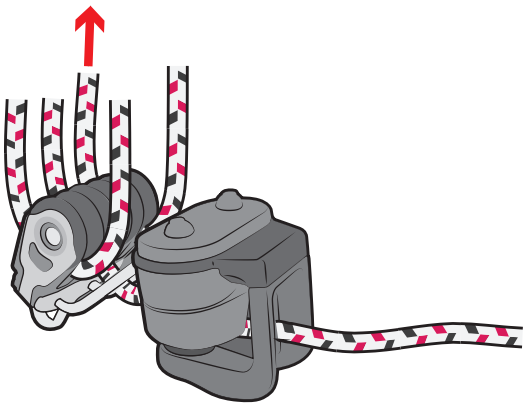
4. Pass the end back through the bottom downhaul block as shown.



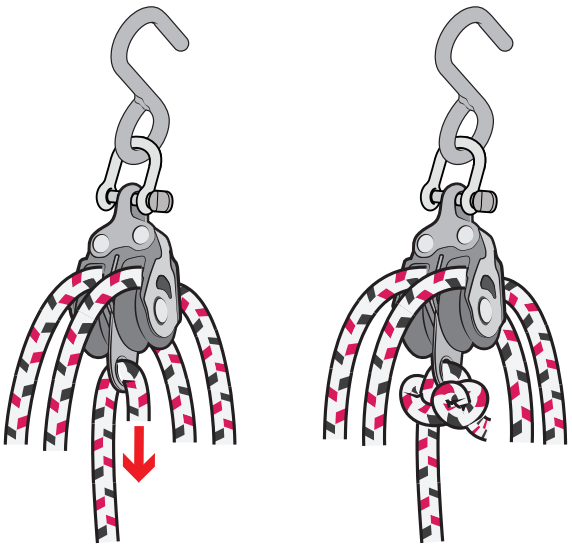
5. Pass the tail back through the top block as shown.



6. Pass the tail back through the bottom block as shown.



7.

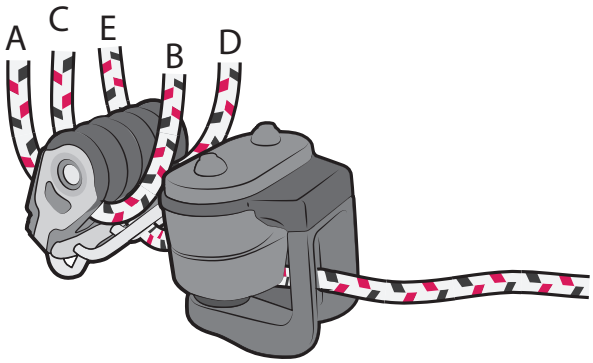


Pass the tail back up to the top block and tie onto the becket with **knot #1**.

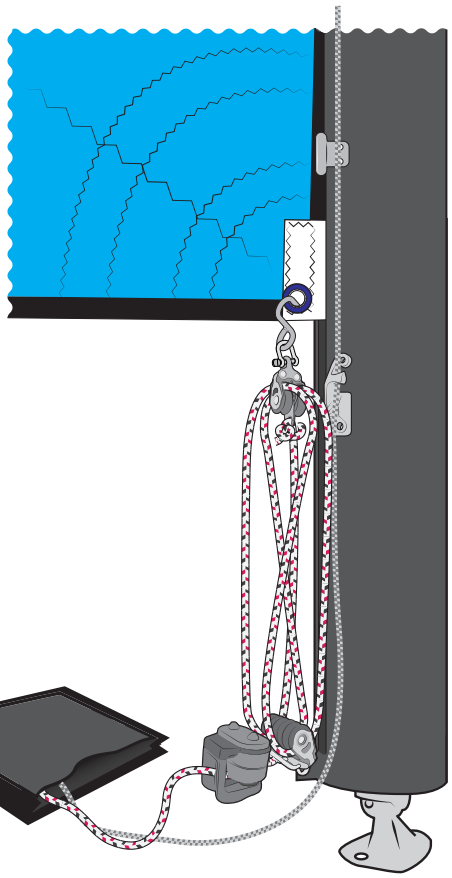
8.

Attach the downhaul.

The bottom block shackles onto the bottom of the mast and the hook goes through the tack of the sail.



Note the blocks are orientated 90º out from each other.

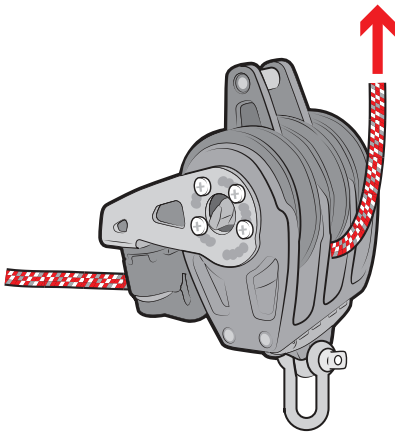


Tidy the tails of ropes into the velcro pocket.

9.

Locate the mainsheet and mainsheet blocks in the pack.

Thread the mainsheet through the bottom mainsheet block as shown.

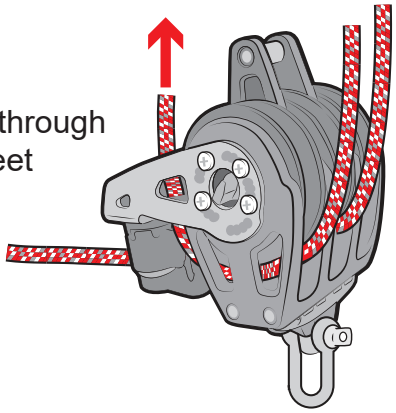


10.

Pass the other end through the top mainsheet block as shown.

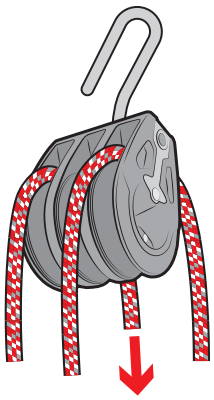
11.

Pass the end back through the bottom mainsheet block as shown.



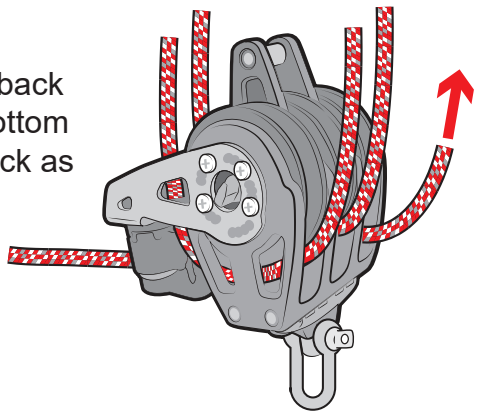
12.

Pass the end back through the top mainsheet block as shown.



13.

Pass the end back through the bottom mainsheet block as shown.

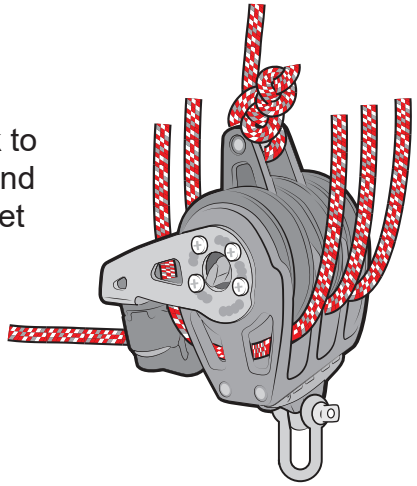


14.

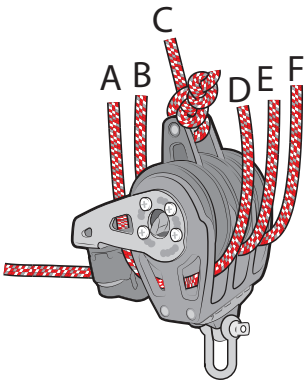
Pass the end back through the top mainsheet block as shown.

15.

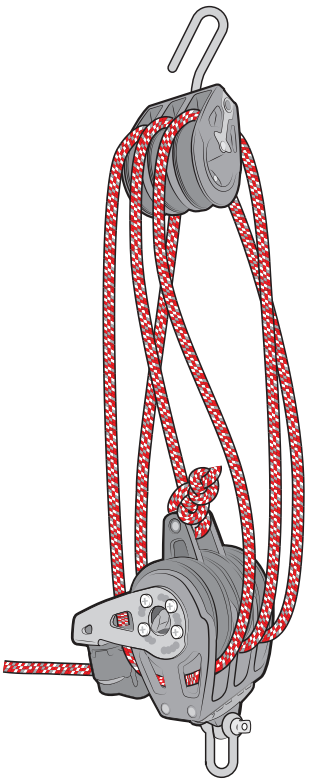
Pass the end back to the bottom block and tie it onto the becket with **knot #1**.



16.



The mainsheet should look like this if you have threaded it correctly.

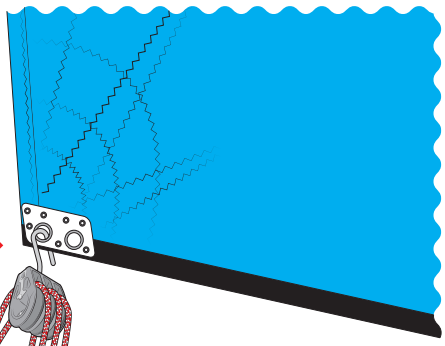


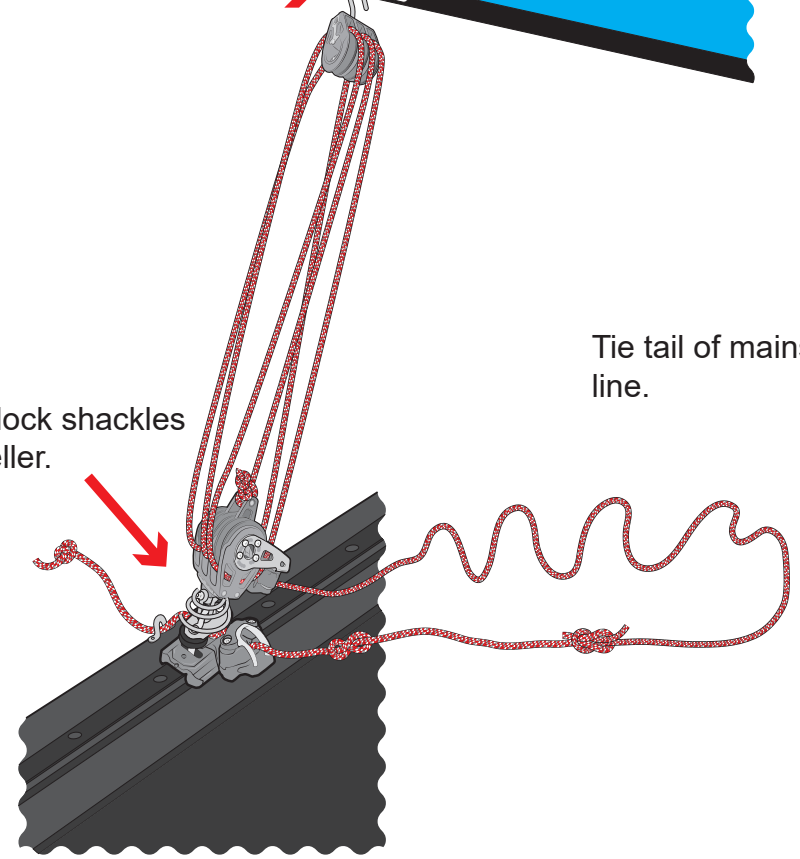
Note the blocks are orientated 90º out from each other.

17.

Attach mainsheet.

The top block hooks onto the clew of the mainsail.

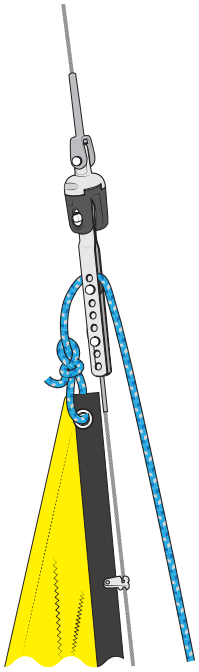




Tie tail of mainsheet to traveller line.

The bottom block shackles onto the traveller.

18.

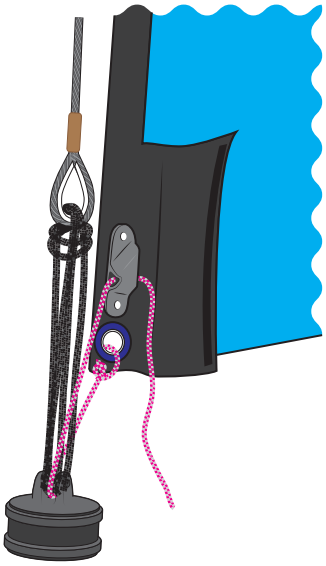


S AND XL SPEC ONLY

Attach the jib halyard.

Attach the hanks onto the forestay and hoist jib by pulling on halyard.

19.



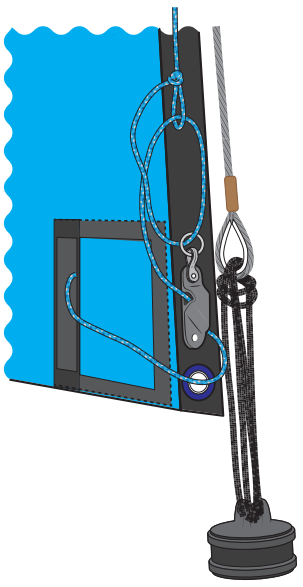
S AND XL SPEC ONLY

Add tack line through furler and back through cleat.

20.

Add jib halyard tension by pulling on rope.

Tail goes in pocket.



RSCAT16

4.4
Assembly Guide
Spinnaker

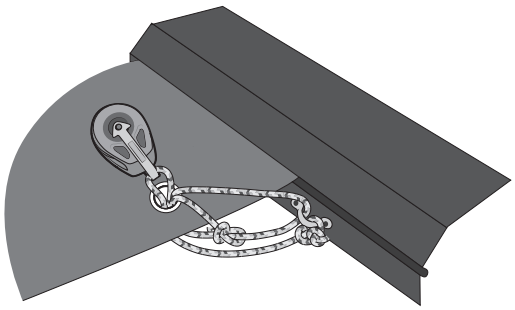
XL SPEC ONLY

PLEASE FOLLOW ASSEMBLY GUIDE IN CORRECT ORDER.

RSCAT16

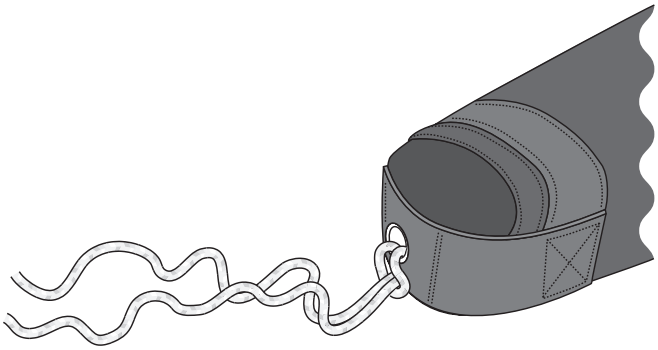
1.

Tie the turning blocks to the tramp.



2.

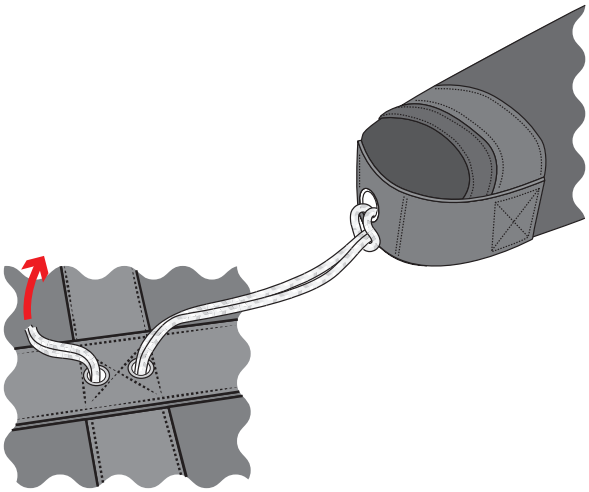
Locate the chute tie and attach to the chute with **knot #6**. Make sure the tails are of equal length.



3.

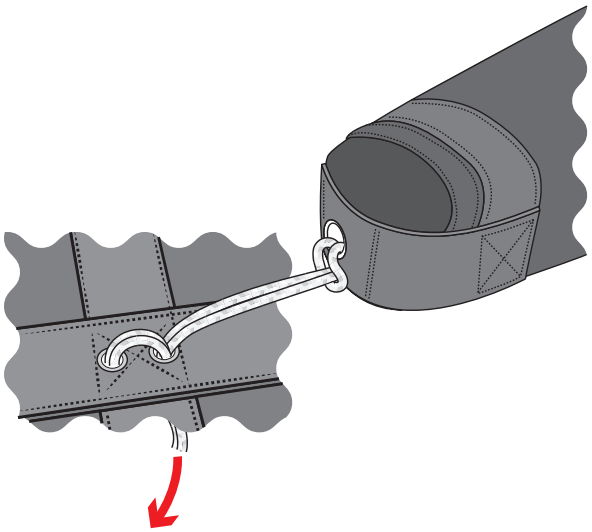
There are two cringles towards the port side of the tramp, just aft of where the chute ends.

Pass the two ends of the chute tie down through the forward cringle in the tramp and up through the aft one.



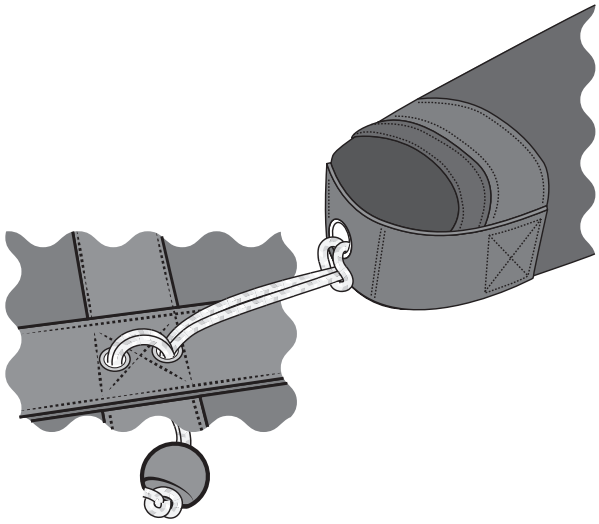
4.

Pass both ends back down through the forward cringle.



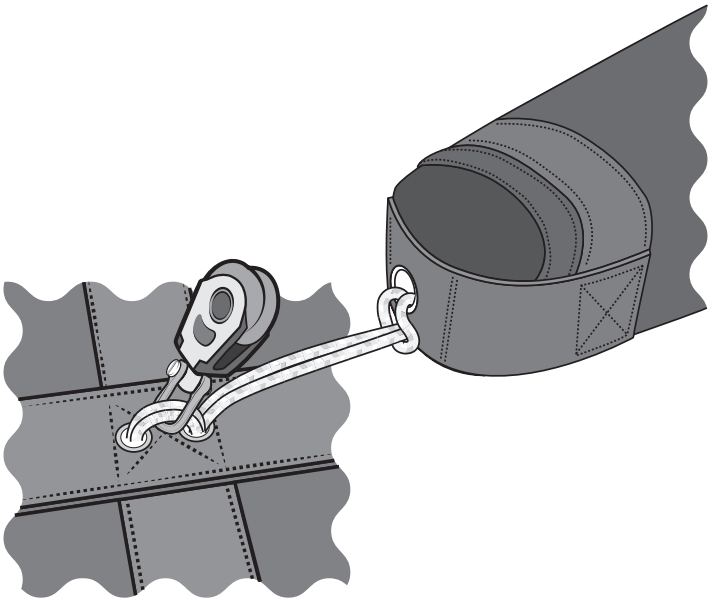
5.

Pass both tails through the plastic bobble and tie off.



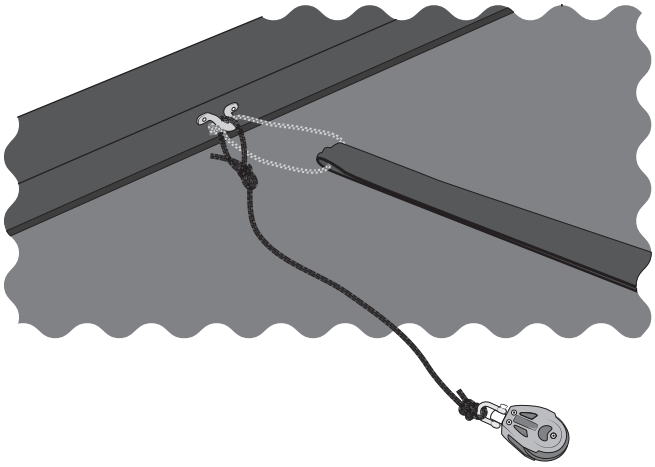
6.

Shackle downhaul block onto the rope loop which you have formed between the two cringles.

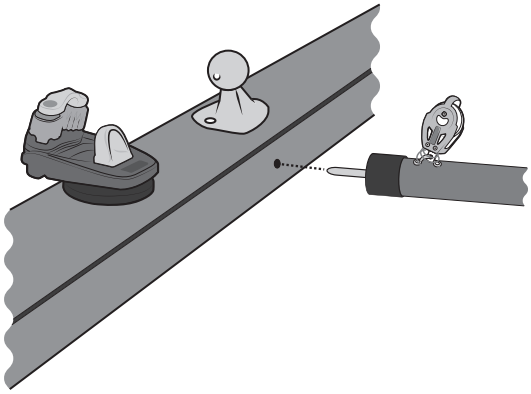


7.

Attach the spinnaker takeaway block with the elastic onto the rear starboard toestrap.



8.

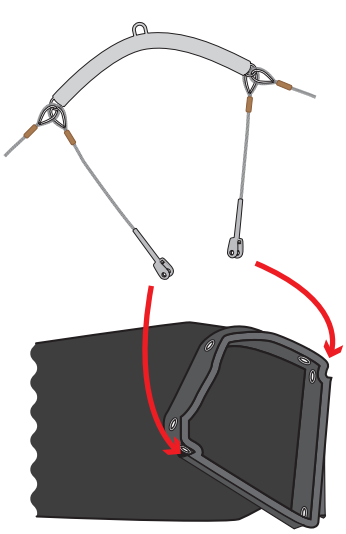


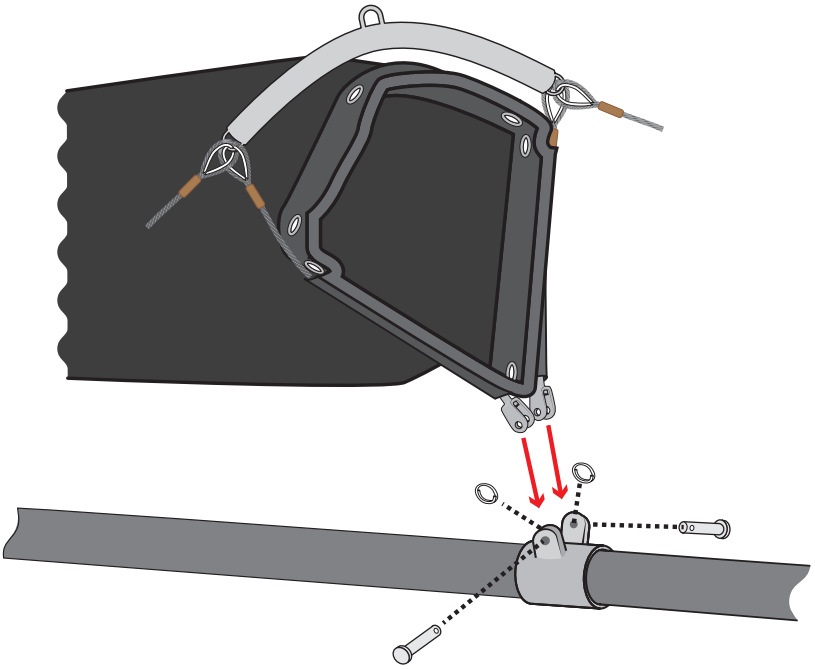
Remove the plastic cap from front beam.

Insert spinnaker pole.

9.

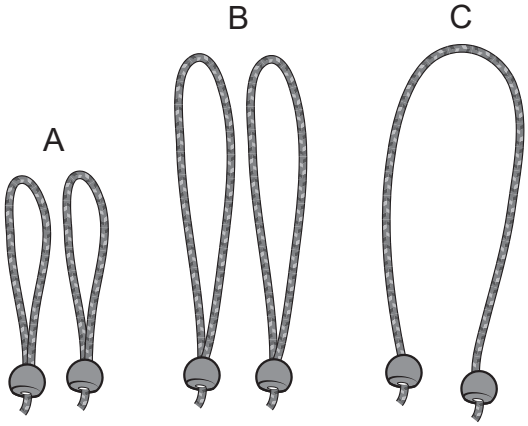
Pass the two short wires from the tack bar through the seam pockets on both sides of the spinnaker chute and attach to pole using the clevis pins and split rings.





10.

There are four rope hoops and one rope with plastic bobbles provided with the spinnaker pack.

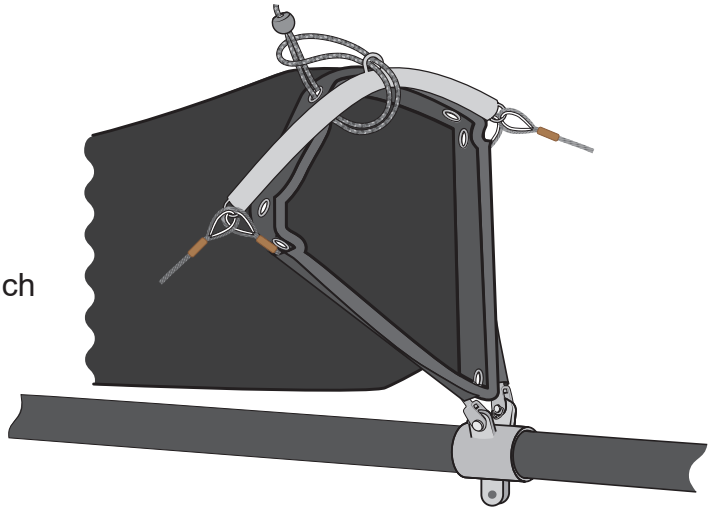


11.

Use rope loop B.

Pass the loop through one of the middle cringles in the spinnaker chute, under the tack bar, back through the hoop and over the plastic bobble as shown. (It will be much tighter than shown here).

Repeat on the other side.



12.

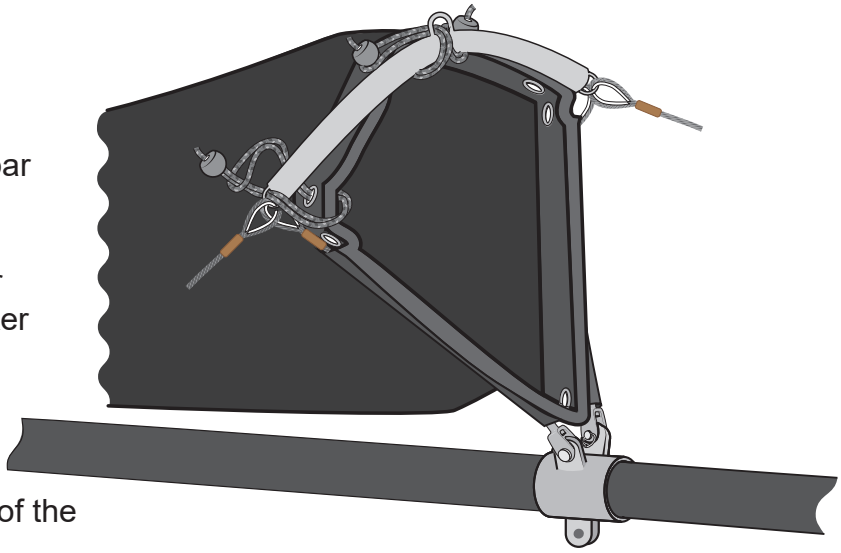
Use rope loop A.

Pass the loop through the tack bar from the rear.

Pass the rope through the upper cringle in the side of the spinnaker chute.

Pass the rope loop over the top of the plastic bobble.

Repeat on the other side.

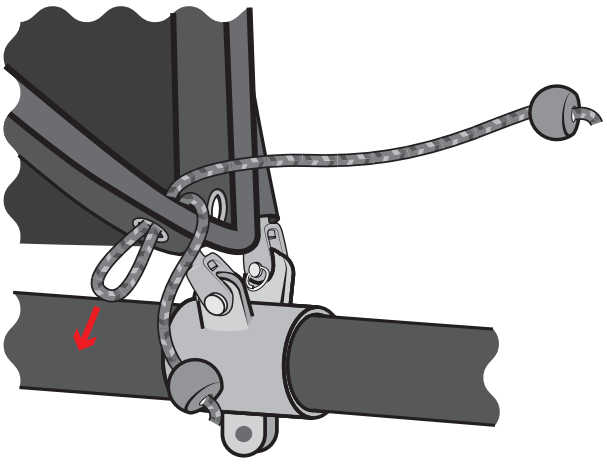


13.

Use rope C.

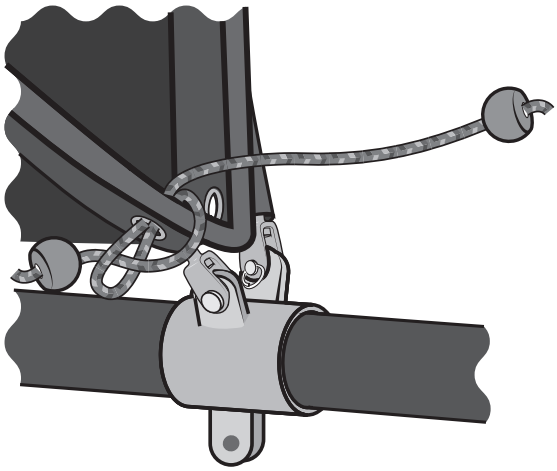
Form a loop in one end.

Pass this loop through one of the lower cringles on the spinnaker chute.



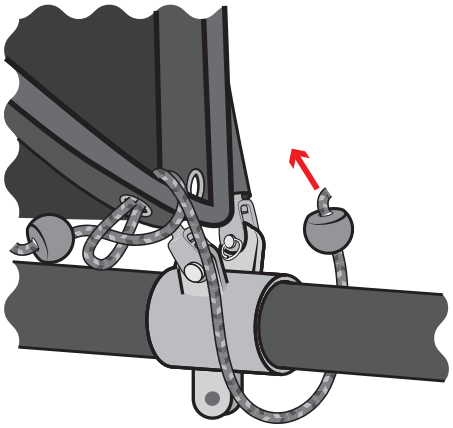
14.

Pass this loop over the plastic bobble on the shorter end.



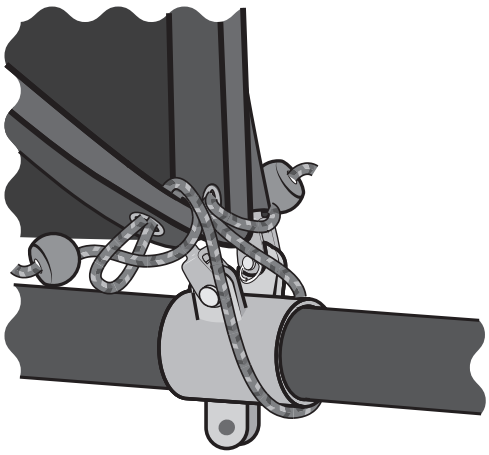
15.

Pass the other end of the rope underneath the spinnaker pole.



16.

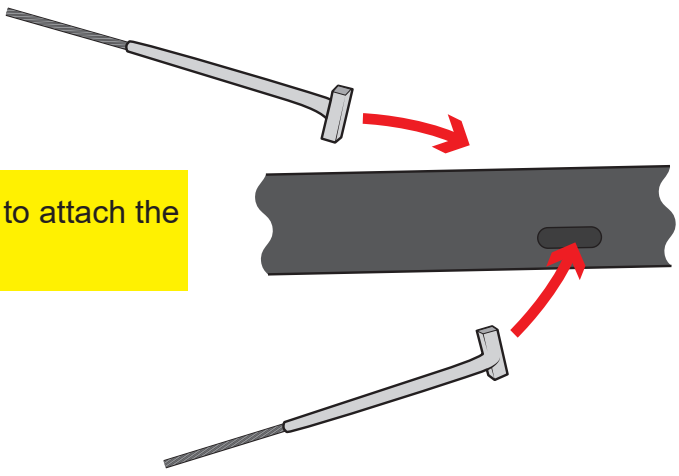
Repeat step 11-12 on the other side.



17.

Attach the stays to the spinnaker pole.

You will need to bend the pole downward to attach the stays. This is easier with 2 people.

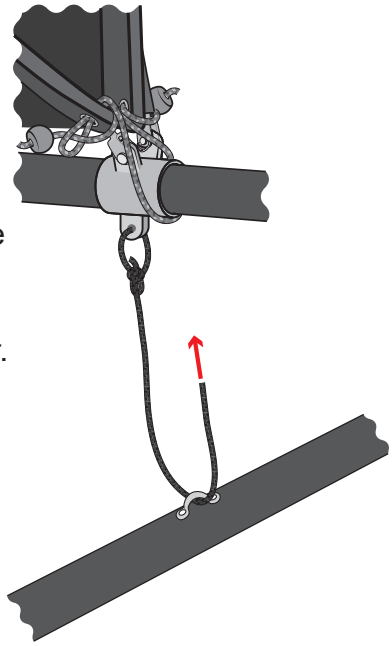


18.

Use the spinnaker pole to striker bar tie.

Tie **knot #2** to the eye on the bottom of the spinnaker pole below the mouth of the spinnaker chute.

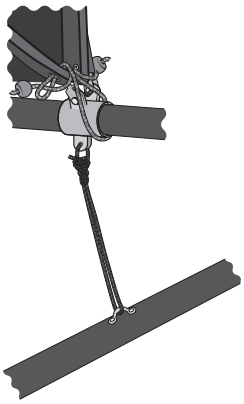
Pass the rope through the eye on the top of the striker bar.



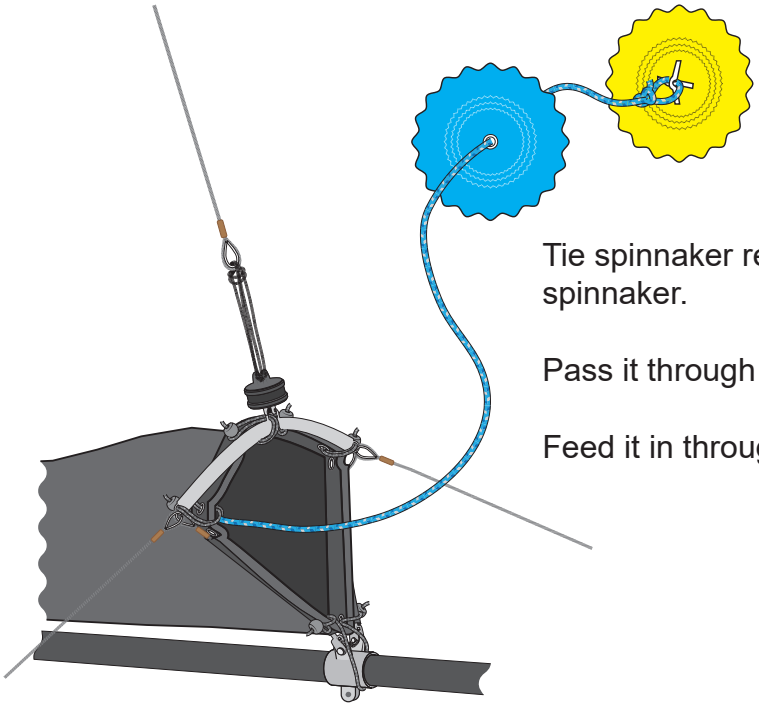
19.

Pass the rope back up and through the loop of **knot #2**.

Remove the slack from the rope and tie off. This rop should not be pulled very tight.



20.



Tie spinnaker retrieval line to eyelet on the back of the spinnaker.

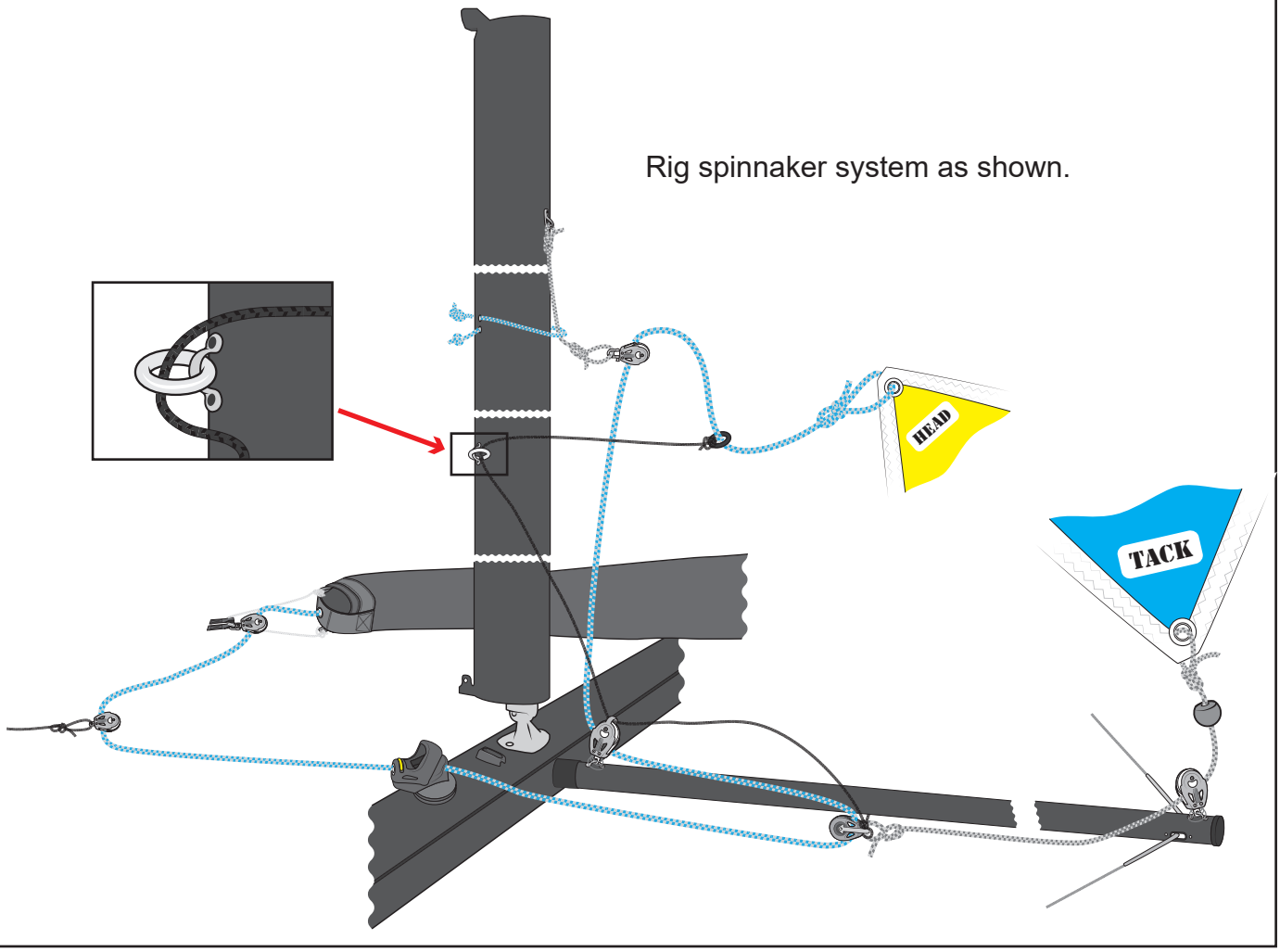
Pass it through the hole in the middle of the spinnaker.

Feed it in through the spinnaker chute.

21.

Spinnaker System

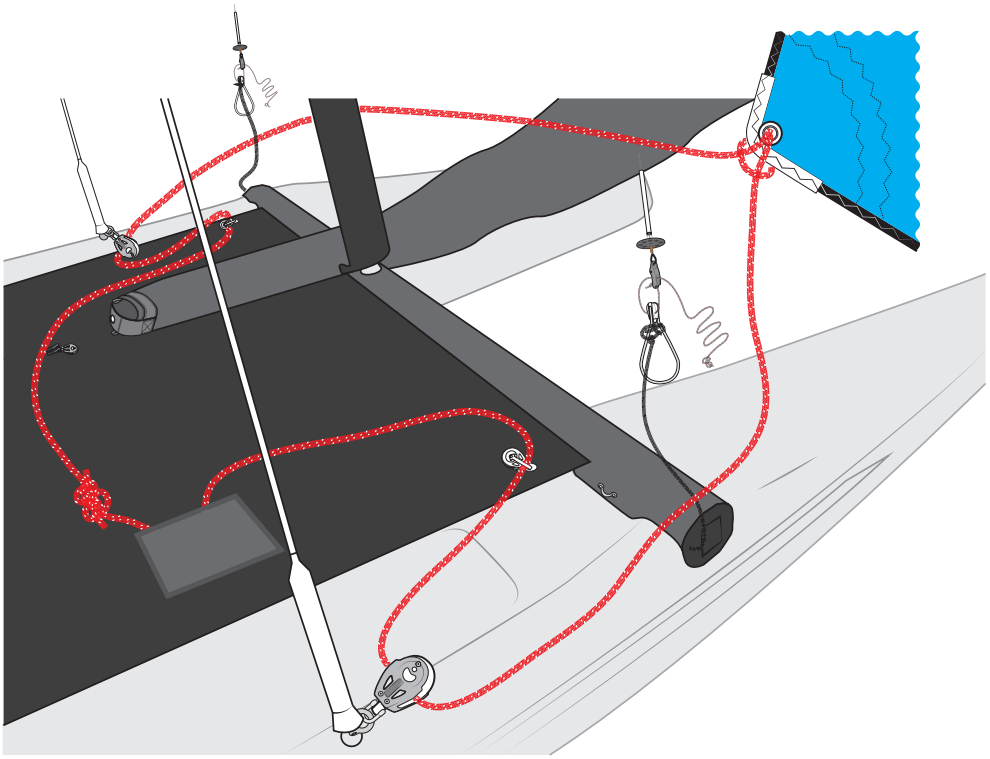
Rig spinnaker system as shown.



22.

Add spinnaker sheet.

Tidy slack into pocket.



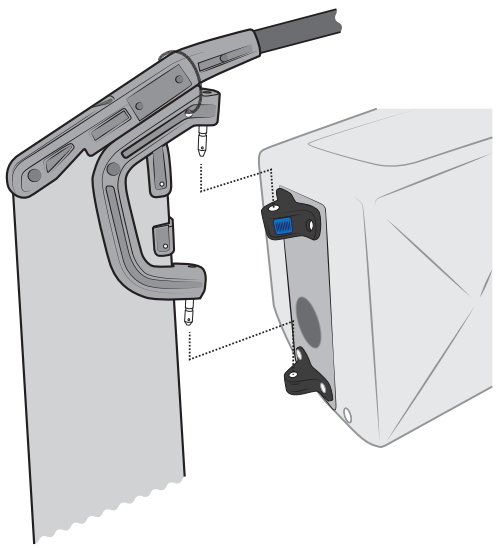
RSCAT16

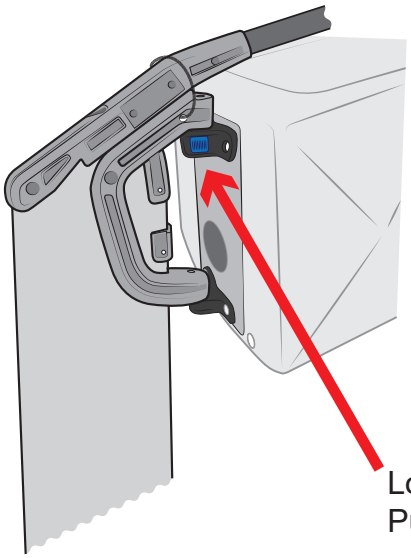
4.5
Assembly Guide
Foils

PLEASE FOLLOW ASSEMBLY GUIDE IN CORRECT ORDER.

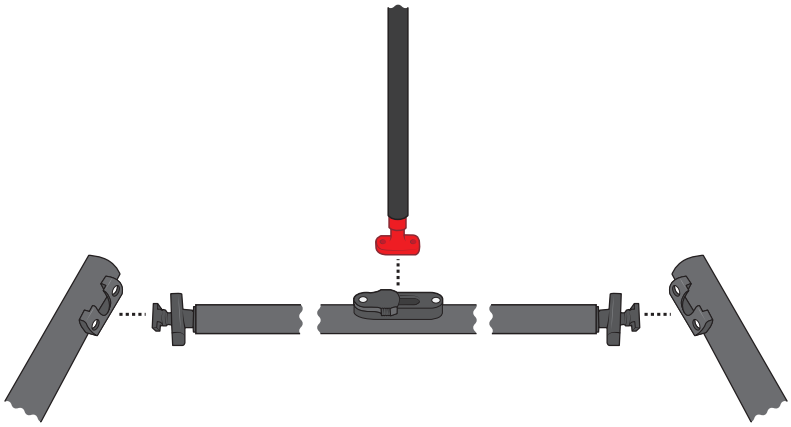
RSCAT16

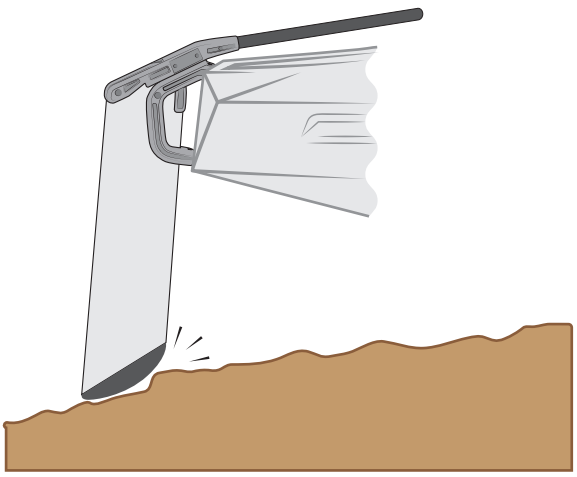
1.

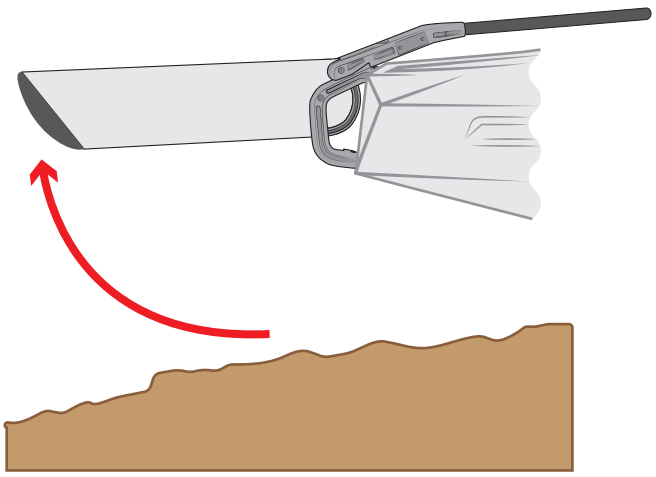




2.







5. SAILING HINTS

5.1 Introduction

The RS Cat 16 is a very rewarding boat to sail – to fully appreciate its handling, you should be comfortable with the basic techniques of sailing small catamaran. If you lack confidence or feel that a refresher is in order, there are many approved sailing schools which use the RS cat 16.

See www.rya.org.uk for more information, or follow the link from www.rssailing.com to find your local RS Academy.

While we offer you a few hints to aid your enjoyment of your new boat, they should not be considered as a substitute for an approved course in dinghy sailing. In order to build your confidence and familiarise yourself with your new boat, we recommend that you choose a fairly quiet day with a steady wind for your first outing.

5.2 Launching.

Before launching you must read the owners manual.

With the sails fully hoisted, attach the rudders to the transom. The boat should be wheeled into the water, keeping it head to wind as far as possible. If you have a crew, s/he can hold the boat head to wind whilst the trolley is stowed ashore.

TOP TIP
If the tide is coming in as you launch, make sure that you leave the trolley far enough up the beach that it will not be swept away.

5.3 Leaving the Beach

The easiest way to get going is for the helm to hop aboard while the crew holds the boat. The helm should push gently on the tiller to lower some of the rudder blade. Then, s/he may instruct the crew to push the bow off the wind and climb in.

The singlehanded sailor may choose to ask someone to help them to launch. If launching alone, stand in the water alongside the gunwhale, holding the boat head to wind. Lower part of rudder, and then push the bow off the wind while hopping in.

Top Tip

If you are using the jib, pulling this sail in as you leave the beach will ensure that the bow continues to swing away from the direction that the wind is blowing from.

As soon the water is deep enough, make sure that you lower the rudder blade fully by pushing back and down on the tiller. You will know it is fully down if you feel a gentle “thud” as the front face of the blade hits the front face of the stock. Pull the sail in and you are away!

For the best performance, you should ensure that you and your crew position yourselves so that the boat is sailing through the water as flat as possible. Watch the trim (fore and aft) and the heel. The boat should always be sailed as upright as possible.

Top Tip

As a general rule, sit further forward in lighter winds and further aft in stronger breezes.

5.4 Sailing Close-Hauled and Tacking

When sailing close-hauled, or as close as possible to the wind, it is important to get the mainsail as near as possible to the centreline, especially when sailing the RS Cat 16 with the mainsail and jib. The Downhaul should be firmly tensioned for upwind work. To pull it on, quickly put the boat head to wind. You should hold the tiller extension across your body, with a knuckles-up grip, enabling you to use one or two fingers as a temporary cleat when adjusting the mainsheet.

The jib sheet should be pulled in fairly hard when sailing upwind – tighter in stronger winds and less so in lighter winds. Sail to the jib tell-tails, keeping the one on the back of the sail streaming and the one closest to you either streaming or lifting upwards slightly.

To tack, push the tiller extension away from you and, as the boat starts to turn, Keep the Jib cleated until you are on the new tack and step across the Tramp facing forwards and pass the extension behind the mainsheet, Once the boat has completed the turn, bring the tiller back into the centre before sitting down on the new side, with the tiller extension behind your back. When you are settled, swap the mainsheet and the tiller extension into the new hands.

If the boat slows right down and feels lifeless when close-hauled, you could be sailing too close to the wind. Ease the mainsheet and ‘bear off’ away from the wind for a while to get the boat going again.

5.5 Sailing Downwind and Gybing

When sailing downwind, you could reduce the amount of downhaul on the mainsail. Let the jib out to allow the tale tales to flow, the mainsail needs to be reduced slightly in mainsheet tension and dropped down on the traveller. Single-handed sailors should adopt a relaxing, reclined pose on the tramp. To gybe, pull the tiller towards you and, as the boat starts to turn, step across the tramp facing forward.

Once the boat has completed the turn, pass the tiller behind the mainsheet bring the tiller back into the centre before sitting down on the new side, with the tiller extension behind your back. Often, the Sail will not want to come across until you have nearly completed the gybe, so it often pays to give the mainsheet a tweak to encourage the mainsail over at the moment that you want it to come! Once you are settled, swap the mainsheet and the tiller extension into the new hands.

5.6 Using the Gennaker

If you are inexperienced in using a gennaker, choose a fairly quiet day for you first excursion. A gennaker nearly doubles your sail area, and should be treated with a healthy degree of respect!

For your first hoist you should be sailing downwind on a broad reach, with the wind coming over the helm's left shoulder. The crew should sit in the centre of the tramp, and hoist the gennaker by pulling the gennaker halyard from the spinlock cleat on the front beam.

The gennaker halyard pulls the tack of the sail to the outboard end of the gennaker pole– when the gennaker is hoisted, you are ready to go. The crew, or the helm if sailing singlehanded, should now pull gently on the leeward gennaker sheet until the gennaker has filled.

Gennakers may be effectively used from a close reach to a broad reach so, to get downwind, one should become adept at gybing. It is not possible to tack with the gennaker hoisted. For the best effect, the gennaker sheet should always be eased as far as possible, so that the luff is just on the point of curling.
Gybing with the gennaker is fairly straightforward. Like the jib, it should be pulled across at the same time as the mainsail comes across. As soon as it has been pulled in and filled with wind, it should again be immediately eased for maximum efficiency and speed. If sailing singlehanded, the mainsail should be cleated, and the helm should hold the gennaker sheet at all times.

To drop the gennaker, reverse the procedure used to hoist. The boat should be sailing on a broad reach, and the slack in the gennaker downhaul is pulled in from the left hand halyard block. As the gennaker downhaul goes tight, the gennaker halyard should be popped out of the cleat. Then, pull the remainder of the gennaker downhaul through until the gennaker is pulled sharply into the chute. Dropping the gennaker on tighter reaches is harder, and requires more effort on the gennaker downhaul. If possible, this should be avoided when sailing singlehanded.

TOP TIP

Tie a rope bobble onto the gennaker halyard, about 10 cm from the bowline (knot #2) that is attached to the head of the gennaker. This will make dropping the gennaker easier.

HINT

The gennaker can "bunch up" when entering the chute. This can be minimised by keeping some tension on the gennaker sheet, preventing the clew from being sucked into the chute with the main body of the gennaker.

When the gennaker is fully lowered, tidy the sheets and the halyard to keep in the pockets on the tramp.

5.7 Reefing

Reefing enables the less-experienced or younger sailor to continue sailing in stronger winds.

Roll the excess mainsail and using sail ties through the reefing eyes. Make sure that there is enough tension in the luff by pulling on the main

TOP TIP
Make sure that you are in plenty of clear water when reefing.

HINT
The jib is a very effective strong wind sail area because it is low down and maintains a balanced helm. So slab reef before you lose the jib – it's more fun for the crew!

Strong wind sailing can be the best fun of all, so become familiar with the reefing systems and get back out there!

6. MAINTENANCE

6.1 Boat Care

The RS Cat 16 is made using Comptec PE3, a three-layer polyethylene construction. This is stiff and light, but will dent if subjected to point loading. The boat should be supported ashore on an approved RS trolley, as the hull may distort if not supported properly. For long-term storage, it is better to support the boat on a rack, in slings, or another type of support that spreads the weight and avoids point loads. The hull can also be stored on the transom, but never store the boat for long periods on its side. When dealing with a marine environment, equipment gets wet; this in itself is not a problem. The problem starts when moisture is trapped for any length of time. Therefore, it is very important to store the boat properly ashore.

Keep your dinghy drained and well ventilated.

Ensure that the boat is stored with the bow raised to allow water to drain away.

Wash with fresh water. Fresh water evaporates far more quickly than salt water so, if your dinghy has been sailed in salt water, rinse it thoroughly. The fittings will also work better if regularly washed. Any stubborn marks on the hull can be removed with a light detergent, such as washing up liquid. Always test cleaning products on a small, inconspicuous part of the deck before applying to the whole boat.

Hull damage falls into three categories:

• **SERIOUS** – large hole, split, crack, or worse. Don't be too distressed! Get the remnants back to RS Sailing or send us a picture for assessment.

• **MEDIUM** – small hole or split. If this occurs during an event, sailing can often be continued as long as leaking can be prevented by drying the area and applying strong adhesive tape. CAUTION – if the damage is close to a heavily loaded point, then the surrounding area should be closely examined to ensure that it will accept the loads. Get the damage professionally repaired as soon as possible.

• **SMALL** – dents, scratching. This type of damage is not boat threatening.

Comptec PE3 cannot be repaired in the same way as fibre glass. Some scratching can be removed by RS Sailing staff, but dents cannot. Therefore we suggest you treat your boat with as much care as you would if it were fibre glass. More serious repairs can be carried out by RS Sailing staff; however, the repair will never be invisible, due to the nature of the material.

The joy of owning an RS Cat 16 is that it is very hard wearing, and any dents and scratches it receives will not affect the structural integrity of the hull.

6.2 Foil Care

RS Cat 16 Rudder blades are manufactured from anodised Aluminium extrusions with injection moulded glass reinforced Nylon ends. Lower mouldings are bonded in with polyurethane adhesive sealant. Upper mouldings are riveted or screwed in. Lower mouldings are sealed, however over time there may be some water ingress. If this occurs the blade should be inverted to allow water removal through the drain holes in the top of the moulding. Rudder blades contain closed cell foam to ensure buoyancy and limit potential water ingress.

Maintenance

- Foils should be rinsed with fresh water after use.
- Anodising will prevent surface corrosion, however if surface damage does occur the aluminium should be polished with wax polish e.g. car polish.
- Nylon mouldings are maintenance free but can be replaced if damaged.

If you are going to trail your boat frequently, you may wish to invest in an RS Sailing padded rudder bag. This will protect your RS Cat 16 from any damage caused by the foil.

6.3 Spar Care

The mast are aluminium. Wash with fresh water as often as possible, both inside and out. Check all of the riveted fittings on a regular basis for any signs of corrosion or wear.

6.4 Sail Care

The mainsail should be rolled and stored dry, out of direct sunlight. When using a new sail for the first time, try to avoid extreme conditions as high loads on new sailcloth can diminish the racing life of the sail. If your sail is stained in any way, try to remove it using a light detergent and warm water. **DO NOT** attempt to launder the sail yourself.

A sail can be temporarily repaired using a self-adhesive cloth tape, such as Dacron or Mylar. The sail should be returned to a sail maker for a professional repair. Check for wear and tear, especially around the batten pockets, on a regular basis.

6.5 Fixtures and Fittings

All of the fixtures and fittings have been designed for a specific purpose in the boat. These items may break when placed under any unnecessary load, or when used for a different function to their intended purpose. To ensure optimum performance, wash the fixtures and fittings with fresh water regularly, checking shackles, bolts, etc. for tightness.

7. WARRANTY

1. This warranty is given in addition to all rights given by statute or otherwise.

2. RS Sailing warrants all boats and component parts manufactured by it to be free from defects in materials and workmanship under normal use and circumstances, and the exercise of prudent seamanship, for a period of twelve (12) months from the date of commissioning by the original owner. The owner must exercise routine maintenance and care.

3. This warranty does not apply to defects in surface coatings caused by weathering or normal use and wear.

4. This warranty does not apply if the boat has been altered, modified, or repaired without prior written approval of RS Sailing. Any changes to the hull structure, deck structure, rig or foils without the written approval of RS Sailing will void this warranty.

5. Warranty claims for materials or equipment not manufactured by RS Sailing can be made directly to the relevant manufacturer. RS Sailing warrants that these parts were installed correctly and according to the instructions provided by the manufacturer.

6. Warranty claims shall be made to RS Sailing as soon as practicable and, in any event, within 28 days upon discovery of a defect. No repairs under warranty are to be undertaken without written approval of RS Sailing.

7. Upon approval of a warranty claim, RS Sailing may, at its expense, repair or replace the component. In all cases, the replacement will be equal in value to the original component.

8. Due to the continuing evolution of the marine market, RS Sailing reserves the right to change the design, material, or construction of its products without incurring any obligation to incorporate such changes in products already built or in use.

Knot #1

Knot #2

Knot #3

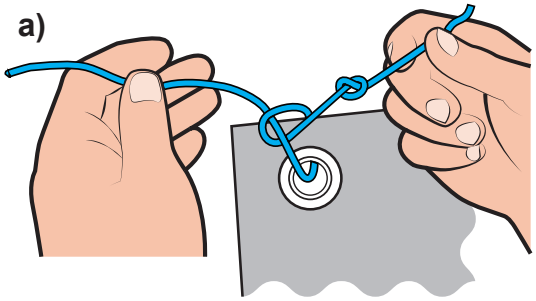
Knot #4

Knot #5

Knot #6

Knot #1 - Knot on knot

a)



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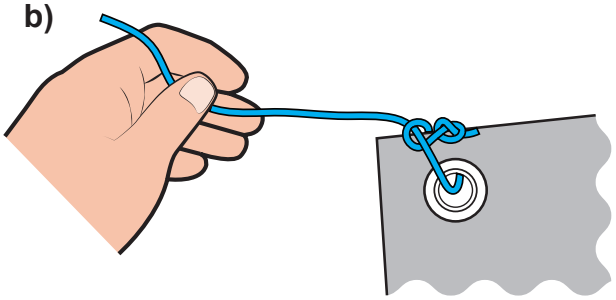
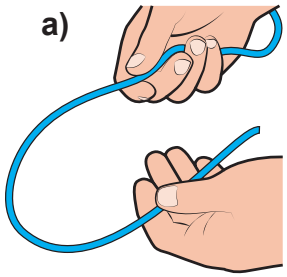


Knot #2 - Bowline

a)



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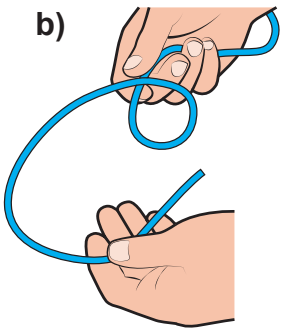

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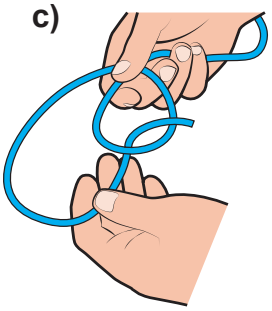
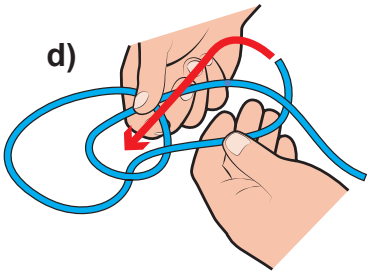
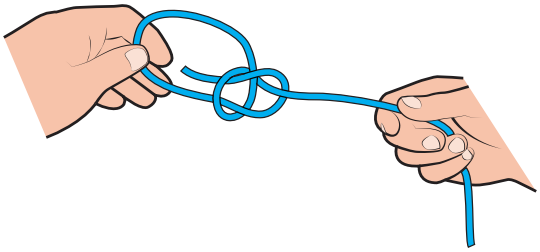


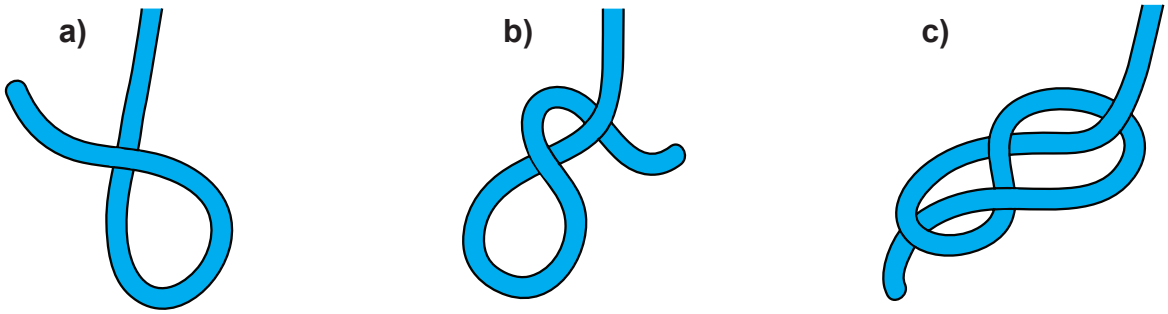
d)



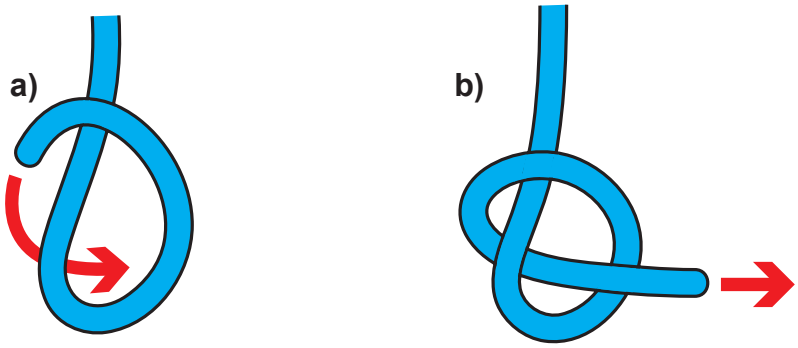
e)



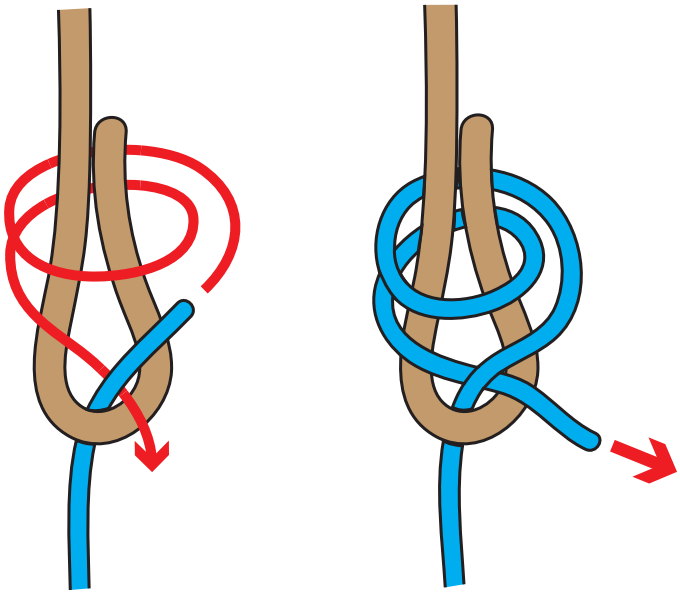
Knot #3 - Figure of eight



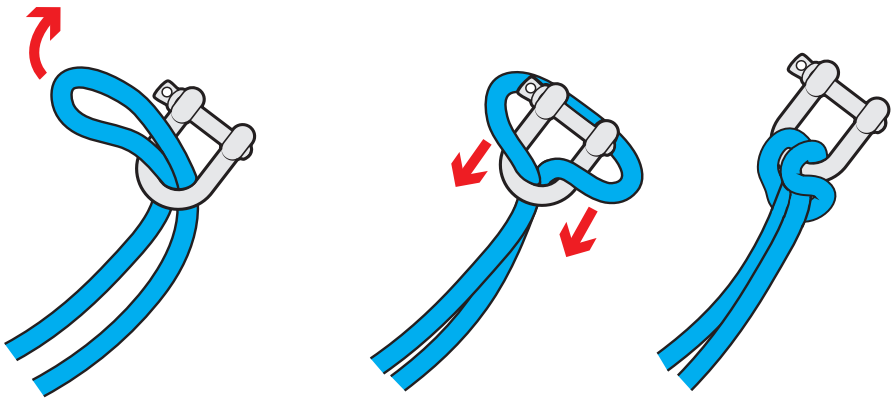
Knot #4 - Overhand knot



Knot #5 - Double sheet bend



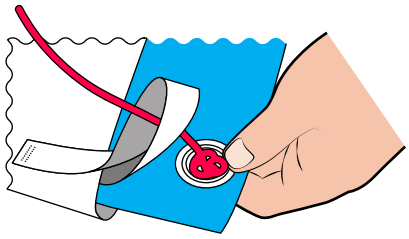
Knot #6 - Cow hitch



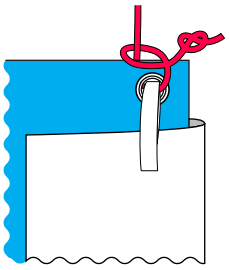
Rigging an Inflatable Masthead Float

1. Inflate the mast-head float

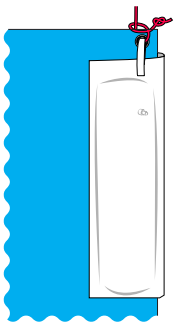
2. Place the webbing straps of the mast-head float either side of the metal eye in the head of the mainsail, and feed the main halyard through.



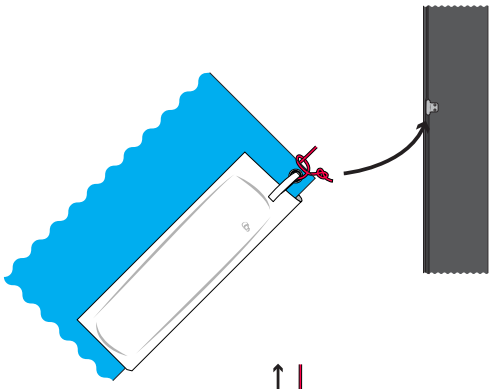
3. Tie the main halyard off using a knot-on-knot.



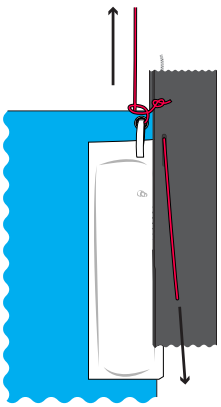
4. Fold the mast-head float loosely around the luff of the mainsail.



5. Gently feed the mainsail and the mast-head float into the mast track.



6. Pull on the main halyard to hoist the mainsail.



7. When the mainsail is at the top of the mast, cleat the main halyard, coil the excess halyard, and stow it in the halyard bag.

9. Glossary

A

Aft	At the back
Anchor Line	Rope that attaches the anchor to the boat
Astern	Behind the boat
Asymmetric	Gennaker flown from a retractable pole at the bow

B

Back	To ‘back the sail’; allowing the wind to fill the back of the sail
Bailer	A bucket or other container used for bailing water
Batten	A thin strip of wood/plastic inserted in the sail to keep it flat
Batten Key	A key used to adjust the batten
Batten Pocket	A pocket on the sail that holds the batten
Beam	Width of the boat at the widest point of the side of the boat. The phrase ‘wind on the beam’ means that the wind is coming from the side.
Bear away	To turn downwind
Beat	To sail a zig-zag course to make progress upwind
Beaufort Scale	A measure of wind strength, from Force 1 to Force 12
Bilge Rail	The moulded line that marks the transition from the side to the bottom of the hull
Block	A pulley used for sail control lines
Boom	The spar at the bottom edge of sail
Boom Pad	The pad that fits onto the boom
Bow	The front of the boat
Bow Lifting Handle	The handle at the front of the boat, used for lifting
Bowline	A useful and reliable knot, with a loop in it
Bow Snubber	The part of the trolley that the bow rests on
Builder’s Plate	Plate that contains build information
Bung	A stopper for the drain hole

Buoy	Floating object attached to the bottom of sea – used variously for navigation,mooring, and to mark out a race course
Buoyancy Aid	Helps you to stay afloat if you fall in the water
Buoyancy Compartment	Water-tight compartment in the hull that maintains buoyancy
Burgee	Small flag at the top of the mast to show wind direction

C

Capsize	To overturn
Capsize Recovery	To right, or recover, the boat after a capsize
Catamaran	A boat with two hulls
Centreboard	The foil that sits below the hull to counteract the sideways push of the wind, and to create forward motion
Centreboard Case	The casing in the hull in which the centreboard sits
Centreline	An imaginary line that runs through the centre of the hull, from the bow to the stern
Chart datum	Depths shown on a chart, at the lowest possible tide
Cleat	A device to grip ropes and hold them in place – some grip automatically, while others need the rope tying around them
Clew	Lower corner of the sail, closest to the stern
Close hauled	Sailing as close to the wind as you can; point of sailing to sail upwind
Cockpit	The open area in the boat providing space for the `helm and the crew
Collision Regulations	The ‘rules of the road’ to avoid collisions
Compass Rose	The compass shown on a chart to aid navigation
Crew	Helps the helmsman to sail the boat, and usually handles the jib sheets
Cutter	A boat with two headsails or jibs

D

Dacron	A brand of polyester sailcloth that is wrinkle-resistant and strong
Deck	A floor-like surface occupying part of the hull
Deck Moulding	A moulded deck
Downhaul	Applies downwards tension to a sail
Downwind	To sail in the direction that the wind is blowing
Drain Hole	A hole in the hull from which trapped water can be drained

Draught	The depth of the vessel below the surface

E

Ease	To ‘ease sheets’ means to let the sail out gently

F

Fairlead	A pulley block used to guide a rope to avoid chafing
Foils	The daggerboard and the rudder
Foot	The bottom edge of a sail
Fore	Towards the front of the boat
Forestay	The wire line that runs from the front of the mast to the bow of the hull, holding the mast in position
Furl	To gather a sail into a compact roll and bind it against the mast or forestay

G

Gennaker	A large sail that is hoisted when sailing downwind
Gennaker Chute	Webbing pocket in which the gennaker is stowed when not hoisted
Gennaker Pole	The sprit that protrudes from the front of the hull, to which the tack of the gennaker is attached
Gnav Bar	Bar that sits between the mast and the boom, performing the same function as a kicking strap
Gnav Control Line	Line that applies and releases tension to the gnav
Gooseneck	The ‘jaws’ of the boom that clip onto the mast
Gunwhale	The top edge of the hull, that you sit on when leaning out to balance the boat
Gybe	To change tack by turning the stern of the boat through the wind.

H

Halyard	The rope used to hoist sails
Halyard Bag	Bag attached to the hull, in which the halyards can be stowed
Head	The top corner of a sail

‘Head to Wind’	To point the bow in the direction that the wind is blowing from, causing the sails to flap
‘Heave to’	To stop the boat by easing the main sheet and backing the jib
Heel	A boat ‘heels’ when it leans over due to the sideways force of the wind
Helm/Helmsman	The person who steers the boat, or another name for the tiller
Hoist Block	Block behind which the gennaker halyard is pulled when hoisting the gennaker
Hull	The hollow, lower-most part of the boat, floating partially submerged and supporting the rest of the boat

I

‘Into the Wind’	To point the bow in the direction that the wind is blowing from, causing the sails to flap
Inversion	A capsize where the boat turns upside down, or ‘turtles’

J

Jammer	Another word for a cleat
Jib	The small sail in front of the mast
Jib Sheet	The rope used to control the jib

K

Kicking strap	The rope system that is attached to the base of the mast and the boom, helping to hold the boom down
Knot	A measurement of speed, based on one minute of latitude

L

Launching	To leave the slipway

Latitude	Imaginary lines running parallel round the globe from east to west. They help you measure position and distance on a chart.
Leech	The back edge of the sail
Leeward	The part of the boat furthest away from the direction in which the wind is blowing
Leeway	The amount of sideways drift caused by the wind
Leverage	The result of using crew weight as a 'lever' to counteract heel caused by the wind
Lie to	A way of stopping the boat temporarily by easing sheets on a close reach
Lifejacket	Unlike a buoyancy aid, a lifejacket will keep a person fully afloat with their head clear of the water
Longitude	Imaginary lines running round the globe from north to south, like segments of an orange. Used with lines of latitude to measure position and distance
Lower Furling Unit	The fitting at the bottom of the forestay that enables the jib to be furled
Luff	The front edge of the sail

M

Mainsail	The largest sail on a boat
Mainsail Clew Slug	The fitting that sits in the track on the boom, to which the clew of the mainsail is attached
Mainsheet	The rope used to control the mainsail
Mainsheet Bridle	The rope runs across the transom of the boat, to which the mainsheet is attached
Mainsheet Centre Block	The main block, usually fixed to the cockpit floor, through which the mainsheet passes
Man Overboard Recovery	The act of recovering a 'man overboard' from the water
Mast	The spar that the sails are hoisted up
Mast Foot	The bottom of the mast
Mast Gate	Fitting which closes across the front of the mast at deck level, holding the mast in place

Mast Lower Section	The bottom section of a two-piece mast
Mast Step	The fitting on the deck that the mast fits into
Mast Top Section	The top section of a two-piece mast
Meteorology	The study of weather forecasting
Moor	To tie the boat to a fixed object
Mylar	A brand of strong, thin, polyester film used to make racing sails

N

National Sailing Federation	Body that governs sailing in a nation. In the UK, this is the Royal Yachting Association
Navigation	To find a way from one point to the other
Neap Tide	Tides with the smallest tidal change

O

'Off the Wind'	To sail in the direction that the wind is blowing
Outboard Bracket Kit	Bracket which enables an outboard engine to be attached to the transom
Outboard Engin	Small portable engine that attaches to the transom
Outhaul	The control line that applies tension to the foot of the sail, by pulling the sail along the boom
Outhaul Hook	The fitting on the boom that hooks the eye at the back of the sail, and to which the outhaul is attached

P

Painter	The rope at the bow used to tie the boat to a fixed object
Pontoon	A floating jetty to moor your boat to
Port	The left-hand side of the boat, when facing forwards

R

RS Dealer	A third-party who sells the RS range
Reach	Sailing with the wind on the side of the boat

Reef	To make the sails smaller in strong winds
Retaining Pin	On a trolley, to hold the launching trolley to the road base
Road Base	A trolley that you place your boat and launching trolley upon to trail behind a vehicle
Rowlocks	U shaped fittings that fix onto the gunwale and holds your oars in position while rowing
Rowlock Holes	The holes in the gunwhale into which the rowlocks fit
Rudder	The foil that, when attached to the stern, controls the direction of the boat
Rudder Blade	The large, rigid, thin part of the rudder
Rudder Downhaul	The control line that enables you to pull the rudder into place
Rudder Pintle	The fitting on the transom onto which the rudder stock fits
Rudder Stock	The top part of the rudder, usually including the tiller, into which the rudder blade fits, and which then attaches to the rudder pintle
Run	To 'run with the wind', or to sail in the direction that the wind is blowing

S

Safety-Boat Cover	Support boats, usually RIBs, in case of emergency
Sail	An area of material attached to the boat that uses the wind to create forward motion
Sailmaker	A manufacturer of sails
Sail Number	The unique number allocated to a boat, displayed on the sail when racing
Sail Pressure	A sail has 'pressure' when it is working with the wind to create motion
Sailing Regatta	An event that usually comprises of a number of sailing races
Shackle	A metal fitting for attaching ropes to blocks, etc.
Shackle Key	Small key used to undo tight shackles
Sheet	A rope that controls a sail
Shroud	The wires that are attached to the mast and the hull, holding the mast up
Side Safety Line	The line that runs along the side of the hull
Single Handed	To sail a boat alone
Single-Line Reefing System	An efficient method of reefing with one line

Slider	Sliding fitting on the boom to which the gnav bar is attached
Soundings	The numbers on a chart showing depth
Spars	The poles, usually carbon or aluminium, to which the sail is attached
Spreaders	Metal fittings attached to the mast which hold the shrouds out
Spring Tide	The tides with the biggest range and strongest currents
Starboard.	The right-hand side of the boat, when facing forwards
Stern	The back of the boat
Stern Lifting Handles	The handles at the stern, used for lifting the boat
Stopper Knot	A form of knot used to prevent a rope from sliding through a fitting, such as a pulley or a cleat

T

Tack	a) To change direction by turning the bow of the boat through the wind b) The bottom front corner of a sail
Tack Bar	The bar at the bow of the hull, to which the tack of the jib is attached
Tack Line	The rope that emerges from the front of the gennaker pole, to which the tack of the gennaker is attached
Tender	A small vessel, usually used to transport crew to a larger vessel
Tidal height	The depth of water above chart datum
Tidal range	The difference between the depth of water at low and high tide
Tidal stream	The direction in which the tide is flowing
Tiller	The stick attached to the rudder, used to steer the boat
Tiller Extension	A pole attached to the tiller to extend its reach, usually used when hiking
Toe Straps	The straps to tuck your feet under when you lean out to balance the boat.
Top Furling Unit	Fitting at the top of the forestay which enables the jib to be furled
Towing Line	A rope attached to the boat, used to connect to a towing vessel
Transit	An imaginary line between two fixed objects, used to ensure that you are staying on course
Transom	The vertical surface at the back of the boat
Trim	Keeping the boat level fore and aft
Trimaran	A boat with three hulls
Trolley	A wheeled structure, used to move the boat around on land
Trolley Supports	The part of the trolley in direct contact with the hull

U

‘Under Weigh’	A term derived from the act of ‘weighing’ anchor, meaning to be in motion
Upwind	To sail against the direction in which the wind is blowing

W

Wetsuit	Neoprene sailing suit designed to keep you warm when wet
Windward	The part of the boat closest to the direction in which the wind is blowing

INTERNATIONAL MARINE CERTIFICATION INSTITUTE
International Non-Profit Association

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EXAMINATION REPORT

We hereby certify that the product below manufactured by

RS Sailing
10 Premier Way, Abbey Park - SO51 9DQ - ROMSEY - GREAT BRITAIN

Recreational Craft
RS CAT 16

Scope	Design & Construction
Module type	Aa
Boat type	Sail
Boat design category	C or D
Length of hull [m]	4,7
Beam of hull (Craft) [m]	2,35
Draught, maximum [m]	0,25
Loaded displacement mass [kg]	460 or 530
Number of persons recommended	4 or 5
Maximum recommended load [kg]	320 or 390
Certificate number	BRSSA002

meets the requirements of the Recreational Craft Directive 94/25/EC as amended by 2003/44/EC in accordance with the Essential Safety Requirements 3.2 for Stability and Freeboard and 3.3 for Buoyancy and Flotation

INTERNATIONAL MARINE CERTIFICATION INSTITUTE IMCI BRUSSELS CE

ING. UDO WOLFF PP.
Ulrich Heinemann (Managing Director)
for EU - Notified Body : 0609
2014-02-28

This certificate is valid for craft identified as
2014 or 2015 model

References to the relevant standard(s) used are given on the Declaration of Conformity

BELAC NBN EN45011 accredited organisation - Certificate No 228-PROD