

# Fusion F



## PRO-GENNAKER - MANUAL

You will require the following to fit Fusion Pro-Gennaker hardware to your boat -

- Posi Drive Screw Drivers (Size PZ2 & PZ3)
- Flat Blade Screw Driver (Medium)
- Adjustable Spanner or Mole Grips
- Acetone (or a similar evaporative cleaning spirit)
- A Clean Cloth

**Please allow 2 hrs to fit Fusion Pro Gennaker hardware to your boat!**

### Rating Yardstick for Racing

Portsmouth/Great Lakes yardstick numbers for racing.

- Any sail configuration, **EXCLUDING** gennaker – 1300 (1 or 2 crew)
- Any sail configuration, **INCLUDING** gennaker – 1275 (1 or 2 crew)

# 1. Parts Identification

Please check your Fusion Pro-Gennaker kit includes the following component parts:

1. POLE
2. HARDWARE PACK
3. RIGGING PACK
4. CHUTE SOCK
5. CHUTE MOUTH
6. GENNAKER



## The Hardware Pack Includes:

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. POLE LAUNCH TUBE</li> <li>2. EYE BOLT (X1)</li> <li>3. STAND UP BLOCK 20mm (X2)</li> <li>4. LOOSE BLOCK 20mm (X2)</li> <li>5. SWIVEL BLOCK 30MM (X2)</li> <li>6. CLEAT (X1)</li> <li>7. KEEPER (X1)</li> <li>8. CAGE (X1)</li> <li>9. WEDGE (X1)</li> <li>10. BOBBLE (X1)</li> <li>11. TIES (X4) – 4mm Black (0.3m)</li> <li>12. NYLON WASHERS (X2)</li> <li>13. STAINLESS CUP WASHERS (X7)</li> <li>14. POSI CSK MACHINE SCREW M8 x 35mm (X1)</li> <li>15. POSI CSK MACHINE SCREW M6 x 30mm (X1)</li> <li>16. POSI CSK SELF TAPPING SCREW 8 X 1 ½ (X2)</li> <li>17. POSI PAN SELF TAPPING SCREW 8 X ¾ (X2)</li> <li>18. POSI CSK CHIPB SCREW 5mm x 20mm (X12)</li> <li>19. POSI PAN MACHINE SCREW 5mm x 20mm (X2)</li> <li>20. POSI PAN MACHINE SCREW 5mm x 12mm (X2)</li> <li>21. Loctite 270</li> </ol> | <ul style="list-style-type: none"> <li>- Shroud Anchor</li> <li>- X1 Up-haul Block, X1 Downhaul Block</li> <li>- X1 Pole Launch Block, X1 Halyard Lead Block</li> <li>- X2 Sheet Blocks</li> <li>- Up-haul Cleat Assembly</li> <li>- Up-haul Cleat Assembly</li> <li>- Up-haul Cleat Assembly</li> <li>- Up-haul Cleat Assembly</li> <li>- X1 Down-haul Bobble</li> <li>- X3 Sock Ties, X1 Halyard Lead Block Tie</li> <li>- Sock &amp; Chute Mouth</li> <li>- Sock &amp; Chute Mouth</li> <li>- Pole Launch Tube</li> <li>- Pole Launch Tube</li> <li>- Up-Haul Cleat Assembly</li> <li>- Up-Haul Block</li> <li>- Sock &amp; Chute Mouth</li> <li>- Chute Mouth</li> <li>- Down Haul Block</li> <li>- Thread Lock</li> </ul> |
|--|--|

## The Rigging Pack Includes:

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. HALYARD –</li> <li>2. SHEET –</li> <li>3. SHROUDS –</li> </ol> | <p>4mm Red/White (14.25m)<br/>         6mm Neo Yellow (7m)<br/>         Inc. X3 Snap Shackles, X1 30mm Block/Shackle</p> |
|--|--|



## 2. Parts Fitting

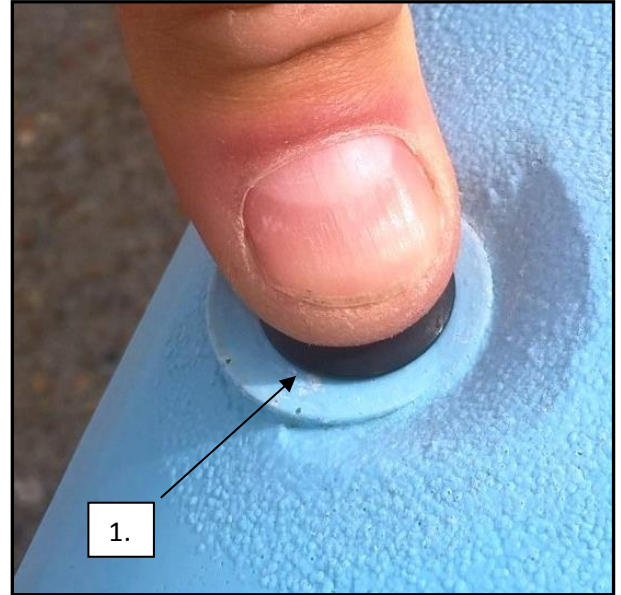
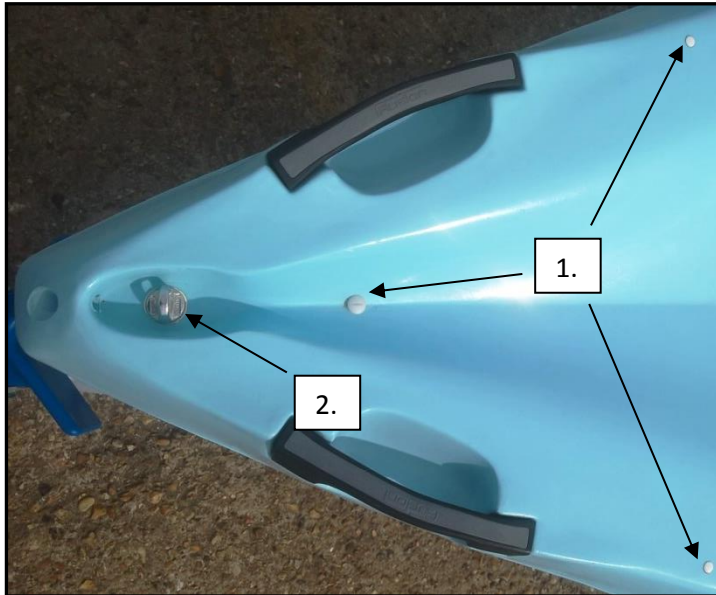
### 1. Remove The Following Cosmetic Blanking Caps –

(X1) **Launch Tube Rear** – Rear of the bow eye bolt. (Use a flat blade screwdriver turned anti-clockwise)

(X2) **Chute Bar** – Rear of the bow handles. (Use a flat blade screwdriver to pop the caps out)

(X2) **Shroud Anchor** – Gunwale edges aft of the foredeck. (Use a thumb pressed flat while turning anti-clockwise)

(X2) **Downhaul Block** – Lower edge of the port inner tank side. (Use a flat blade screwdriver to pop the caps out)



### 2. Remove The Bow Eye Bolt – Using an adjustable spanner or mole grips turned anti-clockwise.

**Note:** It is wise to place a cloth or rag over the eye bolt to prevent the spanner or mole grips “witness” marking the eyebolts polished surface.

### 3. Clean The Threads Of The Eye Bolt To Remove Any Residual Sikaflex - Using a rag in conjunction with acetone or a similar evaporative sprint.

4. **Fit The Port And Starboard Shroud Anchor Eye Bolts (X2)** – To the “moulded in” brass inserts on the gunwale edges using an adjustable spanner or mole grips turned clockwise until **just tight** in the orientation shown. (X1 eye bolt removed from the bow, X1 eye bolt supplied in the hardware pack)

**Note:** Loctite 270 (or a similar thread locking agent) **MUST** be used on the shroud eyebolt threads to prevent in service loosening **WHICH MAY RESULT IN MAST BREAKAGE!**



5. **Fit The Port And Starboard 30mm Sheet Blocks (X2)** - To the shroud anchor eye bolts with the block orientation (Locked by the rotation limiter plate) as shown.

6. **Fit The 20mm Down-Haul Block (X1)** - To the “moulded in” brass inserts at the lower edge of the port inner tank side using a PZ2 screwdriver and posi pan machine screws 5mm x 12mm. (X2)

7. **Fit The 20mm Up-Haul Block (X1)** – To the forward pilot holes in the mast deck plate using a PZ2 screwdriver and posi pan self-taping screws 8 X ¾. (X2)

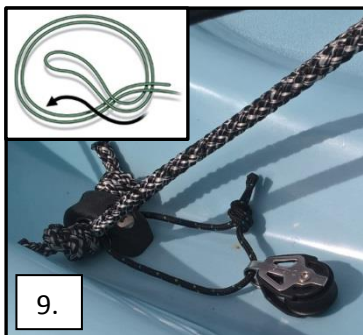
8. **Fit The Gennaker Up-Haul Cleat Assembly** – To the rear pilot holes of the mast deck plate using a PZ2 screwdriver and posi csk self-taping screws 8 X 1 ½. (X2)

**Note:** The gennaker up-haul cleat assembly consists of:

- Cleat with jaws orientated rear most
- Keeper with jaws orientated rear most
- Cage orientated with stainless rope guide rear most
- Wedge orientated with thick end rear most



7 & 8.



9.

9. **Fit The 20mm Halyard Lead Block** – Pass one of the 4mm black ties (0.3m) through the rear toe-strap fairlead (Underneath the toe-strap) before tying an overhand knot to join the two loose ends together as shown.

10. **Fit The Gennaker Pole Launch Tube** – To the “moulded in” brass inserts on the bow using posi drive screwdrivers (PZ2 & PZ3) and the following machine screws:

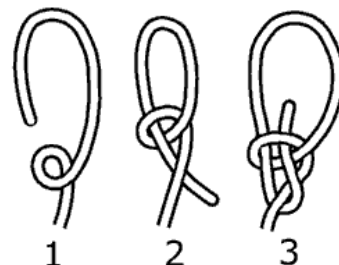
- X1 – Posi csk M8 x 35mm
- X1 – Posi csk M6 x 30mm



10 & 11.

11. **Fit The Gennaker Pole To The Launch Tube As Follows -**

- Remove the screw from the forward end of the pole (Temporarily) using a PZ2 screwdriver.
- Pass the forward end of the pole through the rear end of the launch tube until fully extended forwards.
- Replace the screw in the forward end of the pole using a PZ2 screwdriver.
- Pass the pole launch line (Red rope) around the 20mm block fastened to the aft end of the launch tube travelling in a vertically down/rearward direction.
- Tie the 20mm pole launch block to the end of the pole launch line (Red rope) using a bowline loop.
- Tie the rear end of the tack line (Grey rope) through the stainless FAIRLEAD of the 20mm up-haul block (Fastened to the mast deck plate) using a bowline loop.



1 2 3



10 & 11.

**Note:** Adjust the size of the bowline loop tied at the rear end of the tack line (Grey rope) to ensure the tack line bobble is tight up against the forward end of the pole when fully extended.



12. The Gennaker Chute Mouth and Sock **MUST** Be Fitted **EXACTLY** As Follows –

**Note:** Great care must be taken not to over-tighten and strip the threads created in the deck when using self-taping screws.

- A. On the port/left side, a 5mm x 20mm posi pan machine screw should pass through a stainless cup washer, the preformed hole in the gennaker socks seam and the slotted hole in the rear/outermost edge of the chute mouth footplate before being screwed loosely in to the “moulded in” brass insert in the boats deck. (Using a PZ2 screwdriver)
- B. On the starboard/right side, a 5mm x 20mm posi pan machine screw should pass through a nylon washer and the slotted hole in the rear/outermost edge of the chute mouth footplate before being screwed loosely in to the “moulded in” brass insert in the boats deck. (Using a PZ2 screwdriver)

**Centralise the chute mouth (left to right) before tightening the aforementioned machine screws completely PRIOR TO THE FITMENT OF ANY OF THE OTHER FASTENERS.**





- C. Both the remaining outer/forward-most footplate fasteners should be fitted next using a P22 screwdriver. (Both sides of the boat - 5mm x 20mm counter sunk, chipboard self-taping screws)
- D. The port/left, inner/rear footplate fastener should be fitted next using a P22 screwdriver. (5mm x 20mm counter sunk, chipboard self-taping screw)

- E. The starboard/right, inner/rear foot plate fastener should be fitted next using a P22 screwdriver.

**THIS MUST ALSO FIRST PASS THROUGH A NYLON WASHER AND THE GENNAKER SOCK AS SHOWN.**

**Note:** Ensure the lower surface of the sock passes between the footplates smoothly, just taugth with the socks tongue positioned on centreline!

- F. Both the remaining inner/forward footplate fasteners should be fitted next using a P22 screwdriver. (Both sides of the boat - 5mm x 20mm counter sunk, chipboard self-taping screws)

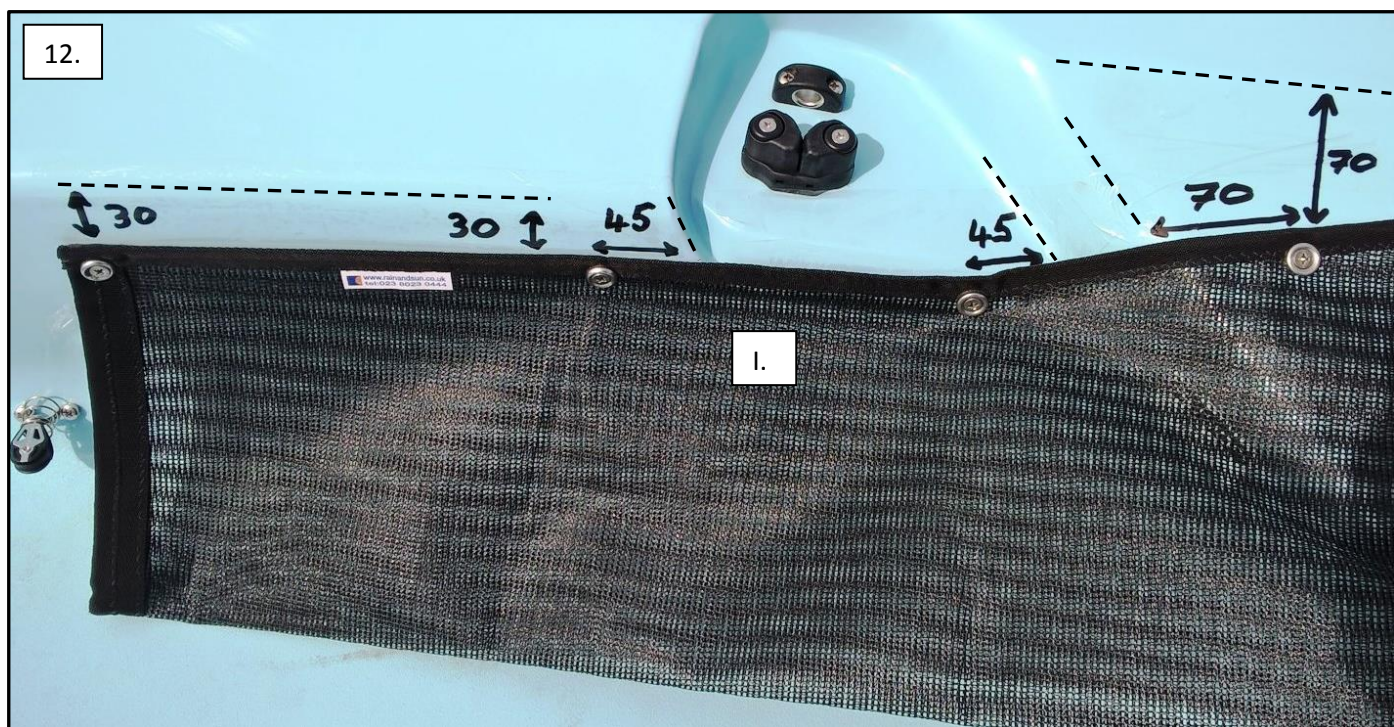
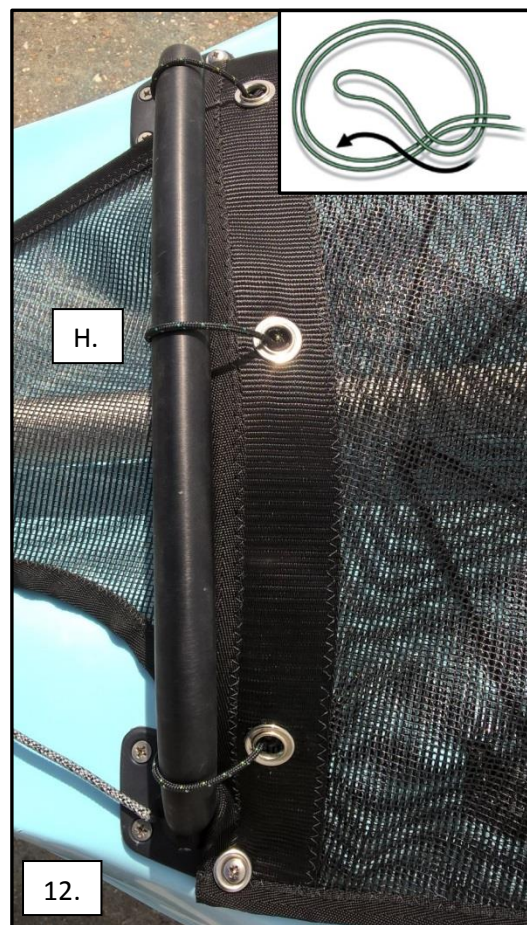
- G. The gennaker sock “tongue” fasteners can now be fitted (X2) using a P22 screwdriver. (Both sides of the boat - 5mm x 20mm counter sunk, chipboard self-taping screws and stainless cup washers)

**Note:** Ensure the sock tongue passes over the back of the pole launch tube smoothly and just taugth!

- H. The gennaker sock ties can then be passed through the sock eyes and around the gennaker bar before tying overhand knots to join the two loose ends together as shown.

- I. Pull the seam of the gennaker sock taugth aft-wards before fitting the final retaining fasteners (through the seam) in the positions shown. (4 OFF - 5mm x 20mm counter sunk, chipboard self-taping screws with cup washers)

**Note:** Start with the forward most fastener working aft/rearwards





# 3. Rigging The Gennaker

1. **Uncoil the halyard** - 4mm Red/White (14.25m) ensuring any twist memory is completely removed from the rope by running it "end to end" through your hands a couple of times.

2. **Tie a stopper knot** - In one end of the halyard. (Figure of eight)



3. **Feed the other end of the halyard:**

- A. In a forwards direction through the 20mm up-haul block. (Mounted on the mast deck plate)
- B. In a forwards direction under the gennaker sock and around the 20mm pole launch block. (The pole launch block is the one attached to the red rope led from the aft end of the pole)
- C. In an aft/rearwards direction through the gennaker up-haul cleat assembly. (Mounted on the mast deck plate)

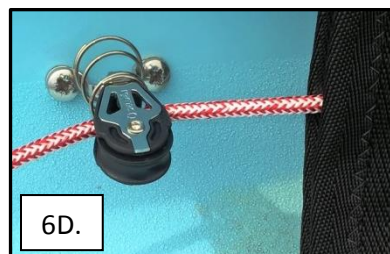
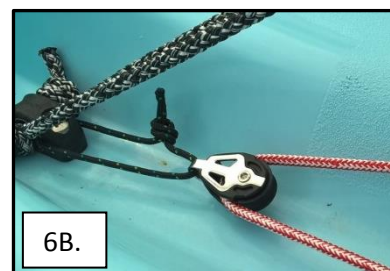


4. **Pull the halyard** - Through the up-haul cleat until the pole extends fully.

5. **Check the halyard has a clear run** - From the 20mm up-haul block to the up-haul cleat assembly. (Not twisted or passed around the grey tack line!)

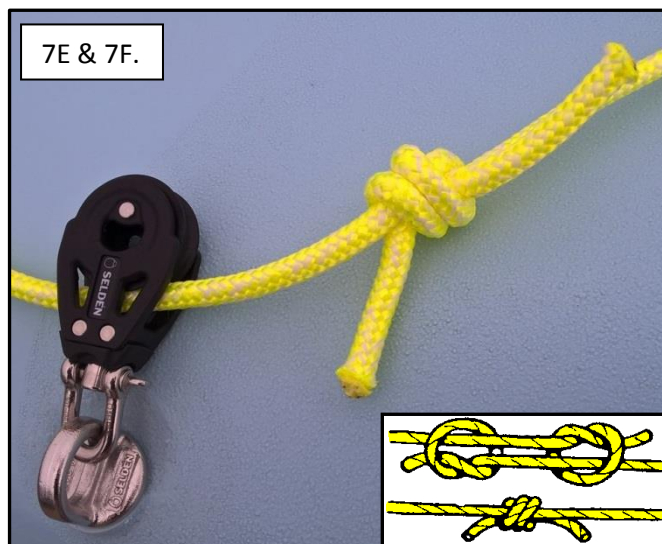
6. **Pass the untied end of the halyard -**

- A. In an aft/rearward direction down the starboard/right side of the cockpit.
- B. Underneath the rear toe-strap passing through the 20mm halyard lead block in a starboard/right to port/left direction.
- C. In a forward direction down the port/left side of the cockpit.
- D. In a forward direction through the 20mm down-haul block at the aft end of the gennaker sock.
- E. In a forward direction through the sock until you can reach it through the gennaker chute mouth.



7. **Unfold the gennaker -**

- A. Identify the tack. (Written on the sail)
- B. Tie the gennaker pole tack line (Grey line at the front of the gennaker pole) to the gennaker using a bowline.
- C. Identify the clew. (Written on the sail)
- D. Attach the sheet 6mm Neo Yellow (7m) to the clew of the gennaker by taking the centre of the sheet passing it 100mm through the clew cringle before passing the two loose ends through the loop formed.
- E. Pass the gennaker sheets aft/rear-ward, feeding one end through each of the 30mm gennaker sheet blocks in an outboard to inboard direction. (attached to the shroud anchor eye bolts)
- F. Tie the two sheet ends together using a fisherman's knot.



- G. Pass the untied end of the halyard through the lower downhaul patch ring on the port side of the sail in a upward direction
- H. Pass the halyard through the black plastic bobble before tying a figure of eight stopper knot approximately 300mm from the halyards end.
- I. Tie the halyard to the downhaul patch using a bowline loop.

**Note:** If the gennaker downhaul patches are spaced approximately 200mm apart using the bobble provided in conjunction with a knot tied in the downhaul halyard this makes a profound difference to both gennaker longevity and ease of retrieval!



**8. Un-cleat the halyard from the up-haul cleat assembly -**

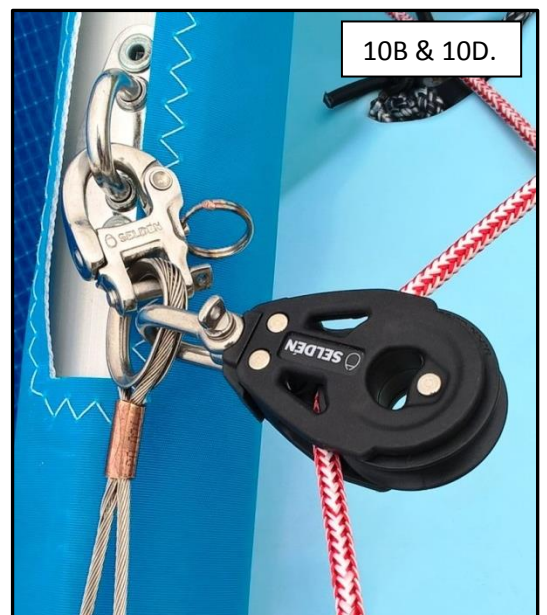
Retrieve the gennaker in to the sock by pulling the halyard aft/rear of the sock immediately behind the 20mm downhaul block. (Until only the tack, clew and head corners of the gennaker are visible at the chute mouth)



**9. Untie the knot -** In the halyard at the 20mm up-haul block end (On the mast deck plate) and pull the halyard until all spare rope it taken out of the system ready for raising the mast!

**10. Raising the mast -** To be completed after the sail & mast is rigged. (Section 4 of the standard Fusion rigging manual)

- A. Ensure the boat is positioned with the bow facing directly in to the wind. (head to wind)
- B. Clip the shrouds on to the masts upper eye plate with the 30mm halyard up-haul block facing forwards.
- C. Temporarily clip the lower end of each shroud to the vang eye plate near the bottom of the mast.
- D. Pass the loose end of the gennaker halyard through the 30mm up-haul block in a forwards direction.
- E. Temporarily tie the loose end of the gennaker halyard to the cunningham D-ring at the bottom of the sail.
- F. Ensure the gennaker sheets are running either side of the boat. (Clear of the mast step)
- G. Raise the mast ensuring the mast foot is not stepped through the gennaker halyard. (Halyard should stay clear ahead and to the right of the mast)





11. **Fit the boom** – Mainsheet and clew outhaul as usual.

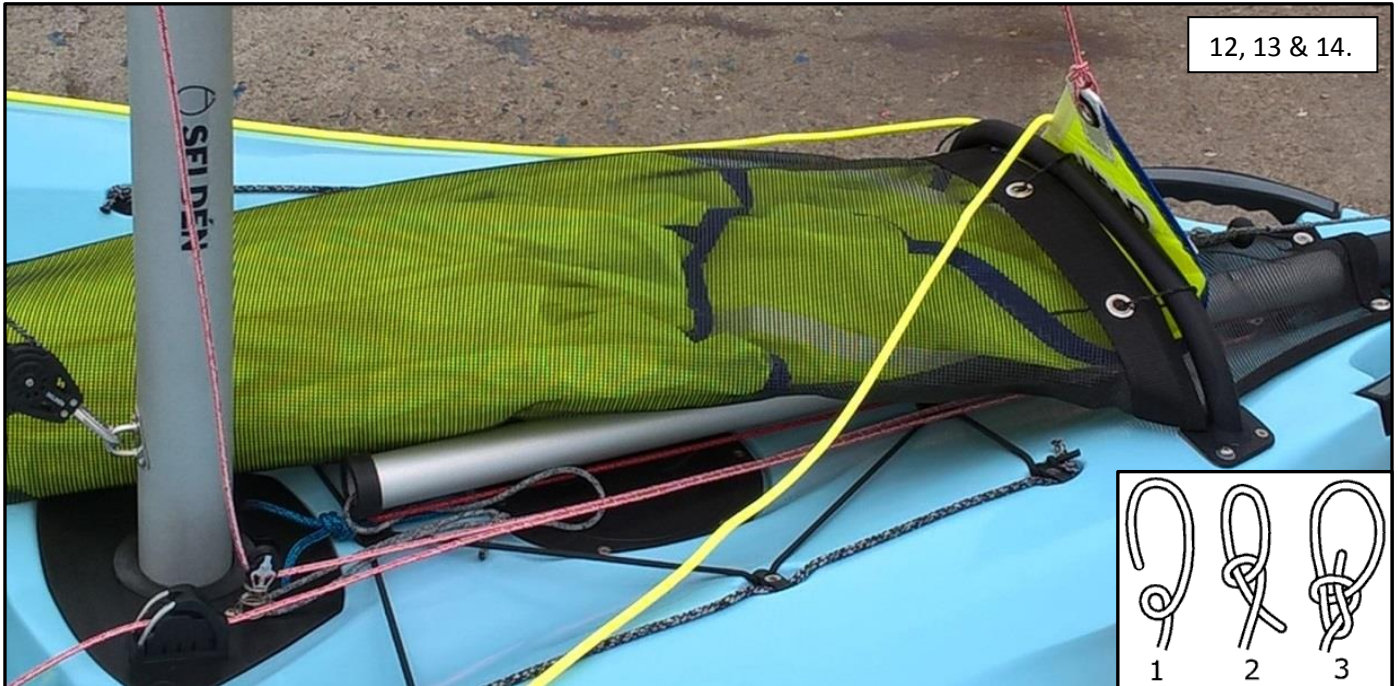
12. **Untie the gennaker halyard** – From the cunningham D-ring (where it was temporarily tied)

A. Identify the gennaker head. (written on the sail)

B. Tie the halyard to the head using a bowline.

13. **Unclip the shrouds** – From the vang eye plate. (where temporarily fastened)

14. **Fasten the vang**– To the vang eye plate near the bottom of the mast and apply moderate tension.



15. **Pull the mainsheet in hard** - Until the traveller and aft boom blocks are “block to block”.

**Note:** Failure to pull the mainsheet in hard until “block to block” will result in a scenario where the shrouds cannot be connected to the shroud anchor eye bolts.

**Explanation:** The temporary application of mainsheet tension required to attach the shrouds to the shroud anchor eye bolts ENSURES sufficient/correct rig tension when sailing.

16. **Connect the shrouds** – Outboard of the gennaker sheet blocks, on the shroud anchor eye bolts.

**THE SHROUDS MUST ALWAYS BE CONNECTED TO THE SHROUD ANCHOR EYE BOLTS WHEN GENNAKER SAILING!**

17. **Ease the mainsheet** – A residual amount of static mast-bend and shroud tension is usual and expected at this point.



**YOUR FUSION PRO  
GENNAKER IS NOW READY  
FOR SAILING!**



## 4. De-Rigging After Sailing

1. **Ensure the boat is** - Positioned with the bow facing directly in to the wind. (head to wind)
  2. **Pull the mainsheet in hard** - Until the traveller and aft boom blocks are “block to block”.
  3. **Disconnect the shrouds** – From the shroud anchor eye bolts.
  4. **Disconnect the boom and vang** - From the mast and sail.
  5. **Clip the shrouds** – On the vang eye plate.
- **If you wish to drop the mast until to your next outing** – Simply untie the halyard from the head of the sail and pull it free of the 30mm up-haul block (up the mast) before doing so.  
At this stage, tidy the loose halyard end and leave everything else ready for convenient re-rigging!
- **If you wish leave the mast up** – Simply pass the mainsail around the mast to roll the sail. (Without rotating the mast if possible as this can leave a twist in the gennaker halyard at the point of un-rolling!)

**TOP TIP: When e de-rigging the boat completely** – Temporarily untie X2 of the gennaker chute mouth ties to allow the mast to lay on foredeck (Posted through the chute mouth) enabling accurate top cover fitment as previous!