

Shadow X Kit fitting instructions

- 1) With the mast down, fit the new forestay in place of the old one. As the spinnaker will now go up above the hounds, tape up the hounds shackle and all wires etc. well to ensure there is nothing sharp in that area. Also tape up all of the copper ferrules on the new forestay to avoid any sharp edges.
- 2) Measure 300mm from the centre of the main hounds hole (where the big shackle goes) and mark on the mast. This is where the centre (ie mid length) of the new halyard eye will go. Position the new eye lengthways along the mast, mark and drill 4mm holes. Rivet the eye to the mast with the 4mm rivets using Duralac yellow paste on the fitting and rivets. This needs to be well sealed to avoid water getting into the mast, so put in the rivet plugs with sealant or Duralac.

(Tip- it's more accurate to drill and then rivet the first hole, then drill the second hole)

- 3) Attach the Ronstan swivel block to the new mast eye. Tape up the shackle, but make sure it can still swivel.
- 4) At the centre of the front beam, measure XXmm to the PORT side of the centre of the top rivet for the eye for the halyard block. Then measure DOWN XXmm. Drill a 4 or 5mm hole, then enlarge it carefully to 7mm. It needs to be 7mm to allow the pole pin (which is 6mm) a bit of movement and avoid stress on the beam tube.

- 5) Fix the 4mm Dyneema D12 line to the front beam by passing the LONGER loop up through the hole in the trampoline. Then thread the rest of the line through the loop and pull it tight. It needs to sit just to PORT of the hole in the beam, to allow room for the pole.



- 6) Fix the eye on the other end of the 4mm Dyneema D12 strop to the eye at the centre of the new forestay, using the 4mm shackle. Put the shackle between the two bridles. You need to pull the forestay aft to make it reach so the forestay lacing has to be loose. The distance from the forestay to the front beam should be 1700mm. The top of the "Dropper" line (1.3m) is also attached to this shackle with a bowline. Tape up the bridle intersection well to avoid the spinnaker snagging.



- 7) Tension the forestay lacing to give the correct mast rake and reasonably tight rig tension (but still allowing the mast to rotate). 160mm eye to shackle should be a good start but all rigs and forestay lengths vary a little so you have to find the right setting for your boat.

- 8) Shackle the pole ropes to the forestay plates where the old bridle used to be. The ropes for the middle of the pole need to come from the side of the shackle and the pole end ropes (longer ones) come from the ends of the shackles. Put the shackle pins in from the INSIDE, do them up tightly and tape them up.



- 9) Attach the pole to the front beam.

- 10) The pole mid ropes must be at the tape mark position and the Dropper must go IN FRONT of them, up against them. You can tape them to keep them in place.



- 11) Tension the "Dropper" rope so that the mid pole ropes are snug, but not too tight. If these are too tight, they can take load from the rig when you sheet in hard upwind, which you want to avoid. The pole should be about 700mm below the forestay intersection. Tie the dropper to the pole with a round turn and half hitches.

- 12) Attach the pole end ropes so that they fit up against the eye for the block. You can tape them for security. Note that the pole must be pre-bent downwards quite a lot. Pull it downwards to allow you to get them on. If the bend seems too much, you can lengthen the pole end ropes at their lower ends or let off the dropper a little, then re-adjust the pole mid rope.



- 13) Move the spinnaker blocks from their existing location to be tied on at the outer edge of the trampoline, fixed to the webbing loops that tension the trampoline sideways. You can use the tail of the same rope to do this, or a separate one if you prefer.

The spinnaker sheets now need to go **INSIDE** the Shrouds and **OUTSIDE** the trapeze elastic. (before, they were inside everything)

- 14) Thread the Halyard and tack line through the back-to-back block as before. These must go **UNDER** the pole mid ropes.

When attaching the tack line to the spinnaker, it needs to go **ABOVE** the pole end and mid ropes and the forestay bridle.

- 15) Adjust the pole end ropes, dropper and mid pole ropes to get the spinnaker luff tension right- about half a turn on your hand. But better too tight that too loose- you can always let the halyard down a bit. Make sure after doing this that the pole still has plenty of downwards pre-bend.



TIP: It's easiest to get the pole tip in the right place first, then use the dropper to pull in the pre-bend, then finally adjust the pole mid-ropes last. You can easily take the pole end ropes off again once you have them right, while you adjust the other bits, if you find that easier.

*TIP: You adjust the splices at the lower ends by pulling the **INNER** rope in the required direction to shorten or lengthen the eye of the splice. Then pull it tight again and tie 2 half hitches at the point the inner rope comes out, when the length is right, so it doesn't slip. Tape up any rope tails.*