

Safety device for rescuing a Man Overboard (MOB)

Operating Instructions 9 April 2011



PLEASE NOTE

- 1. BE AWARE REPEATED PRACTICE IS ESSENTIAL TO ATTAIN AND MAINTAIN PROFICIENCY, PARTICULARLY IN HEAVY CONDITIONS.
- 2. THIS DEVICE IS SIMILAR TO A SPINNAKER IT MUST BE PACKED, DEPLOYED AND USED IN AN ORDERLY AND STEREOTYPED SEQUENCE.
- **3.** BEFORE YOU TRY IT "YOUR WAY" PLEASE TRY "OUR WAY" FIRST. READ THESE INSTRUCTIONS VERY CAREFULLY.



STEP ONE – PREPARATION

The vessel must be properly set up.

1. The Yacht Sea Scoopa® can be rigged on either side of a vessel. However it must be placed on the same side as the cockpit engine controls. This ensures the helmsman can do three things simultaneously – continuously sight the MOB alongside, steer and operate the engine controls. The greatest danger is propeller injury, which can be fatal. The engine MUST ALWAYS be "out of gear" and the propeller not turning when the boat is coming alongside the MOB.

Also the winching apparatus should ideally be positioned on the same side as the Sea Scoopa[®] so that the MOB can be continuously monitored during lifting.

2. On a yacht the device must be positioned amidships adjacent to the shrouds. This ensures the rescuers, who should be wearing life jackets and clipped on with safety tethers, have something extra to hang onto. (Fig.1) It should also be positioned with its centre portion midway between two stanchions so the MOB can be rolled through the lifelines onto the deck. The height of the lowest lifeline should be checked and if there is insufficient space for a "roll-through" there should be a quick release mechanism fitted to the lower lifeline e.g. a pelican clip or cord lashings that can be cut.

Be aware that an inflated life jacket adds considerable girth and will not pass between most lifelines. The most efficient position for the quick release is between the two stanchions where the "roll-through" occurs so that it can be released instantly in an emergency. (**Fig.2**)









3. The points for attachment of the tack and clew of the Yacht Sea Scoopa® to the gunwale must be very strong as the loads will be high. If a substantial toe rail or docking cleats are not present, load certified pad eyes or U bolts with strong backingplates are preferred. If stanchions are to be used they must be extremely robust and securely bolted to the boat.

Depending on the type of strong point, the rings on the tack and clew can be attached with stainless steel or certified anodised aluminium carabiner clips, spectra rope, strong webbing loops etc. Ease of attachment in difficult conditions is paramount.

The purpose of the block and tackle is to pull the foot of the device taut, thus ensuring the MOB does not fall through any gap between the device and the gunwale.

4. The rope on the lifting apparatus, which on a yacht is usually a spinnaker halyard or topping lift should be pre marked with coloured whipping (Fig.3) so that when it is clipped to the halyard strop on the head ring of the Yacht Sea Scoopa® the 3 piece jockey pole which is permanently attached to the head ring at one end and the tack of the device at the other, is extended to 90% of its length so that the 3 sections can be joined together and held in tension by its internal shock cord. (Fig.4)





Fig.3



5. The yellow foreguy is a floating rope to help prevent propeller entanglement if it becomes detached from the cleat. It is clipped onto the foreguy strop (Fig.5), which is attached to the head ring, and the free end is led forward around a turning block on the pulpit and back to a locking mechanism such as a cleat or jammer located amidships. (Fig.6, Fig.7) It should be marked at this point so that the collapsible jockey pole is then positioned at right angles to the boat. This rope is best rigged as a permanent attachment on the gunwale ready to clip onto the foreguy strop during deployment. Depending on the geometry of the rig, during the later stages of the lifting operation the foreguy often needs to be eased to allow full and symmetrical elevation of the net.



6. The outer end of the carbon fibre pole is permanently attached to the head ring and the inner end to the tack. (Fig.8)

7. The Yacht Sea Scoopa® must be permanently stored in an accessible location where it is INSTANTLY available (similar to an EPIRB or a Grab Bag). In the critical emergency of MOB it should NOT be buried in the bottom of a locker. (Fig.9) The device is also designed so that in short handed situations it can be left in the bag permanently attached to the gunwale for instant deployment by the remaining crewmembers. In this circumstance extra circumferential Velcro locking straps may be beneficial.



Fig.8





8. The bag has a double zip system on its top to allow for either port or starboard deployment. As mentioned previously, the bag is placed on the same side of the boat as the engine controls. The zips are colour coded, red for port side and green for starboard side deployment. The device is set up at the factory for port side deployment. To set up for the starboard side the jockey pole must be disconnected at each end using a 10mm socket to remove the nut and reinstalled on the opposite side.

STEP TWO – DEPLOYMENT

With the shout of "man overboard", the Yacht Sea Scoopa® is brought on deck and deployed for scooping. With proper preparation and familiarisation, a single crewmember, wearing a safety harness can usually achieve this within 3-4 minutes; an expert can do it in 2 minutes.

1. The lifting halyard is attached to the red halyard strop (**Fig.10**) exposed at the middle of the bag and the yellow foreguy is clipped to the white foreguy strop (**Fig.11**). This is to ensure that during subsequent steps the whole apparatus cannot be lost overboard. The halyard is made up on the winch so that neither the headboard nor the net can drag in the water. The foreguy is also cleated off at a pre-marked point so the jockey pole is held at right angles to the boat.







Fig.11

2. The tack (labelled "bow") is attached to the forward strong point OUTSIDE the stanchions and lifelines. (Fig.12, Fig.13)







Fig.13

3. The clew (labelled "stern") is attached to the aft strong point OUTSIDE the stanchions and lifelines utilising a block and tackle arrangement.

4. The foot must be pulled VERY tight along the side of the gunwale using the mechanical advantage of the block and tackle so there is no possibility of the MOB slipping through any gap between the device and the hull. (Fig.14)





5. Only then is the bag fully unzipped.

6. The halyard is then raised to the first mark so that the jockey pole can be connected together.

7. The halyard is then lowered to a second marked point and the contents of the bag are dropped overboard. The halyard is further adjusted so that the jockey pole is about 300mm above the surface of the water and ready for scooping. The pole MUST be kept out of the water to avoid subjecting it to excessive stress especially in heavy weather and when turning the boat at speed. (Fig.15)

8. If the leech is not floating on the surface of the water the shock cord in the leech pocket should be further tightened to ensure the victim does not escape out of the aft end of the scoop. Normally the leech needs to be shortened by a factor of 50%.



Fig.15

PLEASE NOTE

A crease emanating from the tack towards the centre of the leech develops in the net with increasing boat speed. DO NOT let this cosmetic effect, which is due to the characteristics of the net worry you, as it disappears when the MOB is scooped and does not affect the functionality of the scooping process in any way.

STEP THREE – SCOOPING

Meanwhile the crew must perform all the usual MOB drill:

1. Keep the MOB under constant observation, throw floatation and marking aids and press the MOB GPS button.

2. Stop the vessel and drop or furl the headsail.

3. Start the motor, making absolutely sure no ropes or sheets entangle the propeller.

Always delegate the most competent helmsman to steer the boat as the MOB must be captured squarely in the centre of the net. The final approach should be up into the wind or against the current whichever is the greater and at a speed of between 1 to 2 knots to ensure steerage and manoeuvrability. The choice of tack is important and it must be the same tack as the side of Sea Scoopa deployment. For example, with port side deployment approach on port tack at an angle of approximately 30 degrees to the wind or current and at the last moment straighten up and come head to wind or current. The propeller must not be turning when the boat is coming alongside the MOB.



STEP THREE – SCOOPING

We have found that the MOB MUST be constantly sighted during this approach and NOT allowed to disappear out of sight under the bow, as this can result in both failure to capture or being struck by the boat. If possible try to scoop the victim head first as this allows the cleanest capture in the centre of the net. If the victim is wearing a life jacket they often lie facing the oncoming wind waves. However scooping can be done either feet first or side on if necessary. Try not to steer the boat too close to the MOB as the victim can slip between the net and the hull. Remember teamwork is essential and *"practice makes perfect !"*



Fig.16

Fig.17

If there is any difficulty in getting close to the MOB, a throw ring or Lifesling will assist in dragging a cooperative MOB alongside and into the scoop.

This manoeuvre can be assisted by the Sea Scoopa[®] boathook, which is designed with a special hook, a cushioned pusher and an attachment for manipulating the lifting halyard should there be any difficulty with the extendable jockey pole. (**Fig.17**)

PLEASE NOTE

Be careful not to subject the jockey pole to excessive stress. In particular, prior to scooping when manoeuvring the boat at speed and especially when turning, take care not to dip the pole in the water. The stresses on the pole become enormous and even the strongest spinnaker pole will break in this situation. So keep the net raised out of the water until scooping is imminent.

In the heat of battle, if these golden words of advice are not followed, the pole may fracture. However if you possess a **Sea Scoopa boat hook,** all is not lost, because it can be used to hold the scoop out.

STEP FOUR - PARBUCKLING (LIFTING)

Once the MOB is "Scooped and Netted" the halyard must be raised using either a winch on the mast or led via a block on the deck back to a cockpit winch or forward to the anchor winch (after disengaging the chain gypsy). The winch must be adequate for the task and of a capacity such that it could be used to safely haul a rigger up the mast for maintenance purposes. (Fig.18, Fig.19)

If winching were not possible, a less desirable alternative would be to use a block and tackle arrangement.

Be aware that the loads, especially with large persons and waterlogged clothing, can be very great and some form of mechanical advantage is absolutely essential. The Parbuckle itself generates a 2 to 1 mechanical advantage during the lift.

The MOB is then "Parbuckled" on board. This causes the body of the MOB to be rolled gently like a "chicken on a spit" as it is raised up to the gunwale. This is advantageous as the period of time when the person is flat on their back and at risk of aspiration of seawater and vomit into the lungs, is kept to a minimum. Also the "log rolling" procedure lessens the chances of aggravating a spinal injury.

Horizontal lifting with the parbuckle is particularly recommended for all victims and especially for those with more prolonged immersion and hypothermia who are prone to sudden death if lifted vertically, as can occur with other methods such as the "Lifesling".





Fig.18



On almost all vessels the lower lifeline will have to be released to allow a large MOB to "roll through" especially if the lifejacket is inflated.

The jockey pole can be left attached during the lift, as it becomes separated into its three component sections but is still held in continuity by the heavy shock cord.

Depending on the geometry of the vessel the foreguy may also need to be eased to allow full and symmetrical elevation of the net during the final stages of lifting.

Once the MOB is on deck, halyard tension must be maintained because if there is no toe rail or bulwark the victim may roll or be swept back into the water through the gap in the lifelines.

The net also acts as a barrier to stop any crew attending to the victim being swept overboard at this crucial stage. (Fig.20)



Fig.20

ABBREVIATED INSTRUCTIONS

The foregoing detailed instructions are for the initial set-up of the boat only and need to be streamlined for simplicity. For example-

- 1. Attach spinnaker halyard and foreguy to their marked strops.
- 2. Attach bow clip on bag to forward strong point on gunwale outside the lifelines and the stern clip to aft strong point and tension up the foot with block and tackle.
- 3. Open bag fully and raise halyard to first mark so the jockey pole can be connected together.
- 4. Lower halyard to second mark so that the net drops until the jockey pole is 300mm above surface of water and scoop up victim.
- 5. Winch victim up to deck whilst releasing foreguy.

REPACKING

The Yacht Sea Scoopa® - especially the zippers - should be washed with fresh water and dried before repacking.

The jockey pole which is permanently attached at both ends is folded into the bow third of the bag.

The lifting ring, top batten and ladder are placed in the middle third of the bag so that the bag will fold properly.

The luff is flaked with long folds in the bow third of the bag and the leech is flaked into the stern third of the bag. The bag is then zipped up from each end towards the centre.

The halyard strop is left exposed through the aft end of the aperture and the foreguy strop through the forward end.

The stern third of the bag is folded over first, followed by the bow third and the whole bundle is compacted by the 2 straps with snap buckles.



MAINTENANCE

As the Yacht Sea Scoopa® lives in a harsh marine environment it should be regularly checked for deterioration or damage.

The joints of the extendable jockey pole must be regularly lubricated with lanoline to ensure smooth action.

The chain in the luff pocket should be checked for corrosion and replaced if necessary.

Similarly the 8mm SOLCOR shock cord in the leech pocket may deteriorate with time and need replacement.

The shock cord inside the jockey pole should be replaced at 12 month intervals or sooner if any fraying or loss of elasticity is noted.

It is important to use the high quality 6mm solid core shock cord made by SOLCOR in New Zealand. This is done by unscrewing the pole ends and removing the old shock cord. The new cord is then reinserted in a continuous loop through the stainless eyes at each end. Before securely knotting and taping the ends together the length is adjusted so there is only JUST sufficient tension to hold the three segments together. This is important to ensure maximum length and elasticity of the shock cord.

The zippers on the bag must be washed with fresh water to prevent the accumulation of salt that may jam the mechanism. Special Teflon based zipper lubricant can be used but not silicone, which may interact with the salt and aggravate the problem.

THE SEA SCOOPA® BOATHOOK

This Boathook has been designed specifically to enhance the performance of the Yacht Sea Scoopa® but it can also be used as a conventional boathook. In this latter application it has several advantages over most currently available boathooks.

There are 3 components to the boathook.

- 1. The hook is used to pull the MOB by the clothing in circumstances where extra assistance is required to enter the mouth of the scoop. The specially curved area of this hook is also invaluable for picking up a dock line lying flat on the wharf whilst the operator is standing on a high deck.
- 2. The rubber cushioned tip may be required to push the MOB into an optimal position or to fend off other objects.
- 3. The long reverse hook is available to hold the scoop out from the vessel in the unlikely event of a malfunction of the carbon fibre pole. In addition it is useful for holding out a preformed rope loop to drop over a bollard or mooring pole.

The pole itself requires special consideration. It should be made of high quality timber approximately 35mm in diameter and should be as long as possible. On larger boats 3 metres is the recommended length to deal with most emergency situations. With a MOB situation, collapsible telescoping poles are both useless and dangerous as they collapse under the loads involved. Hence a long rigid pole must be used. Because of this, the pole component cannot be shipped with the boathook and separate purchase and assembly will be required.



PRACTICE SESSIONS

A word of caution - always exercise great care if using a human volunteer, as the potential for a mishap such as being struck by the hull, propeller injury, entanglement in the device, shark attack etc is always present.

In general it is safer to use a manikin such as the "LifeTec man-overboard rescue dummy" obtainable from www.lifetec.com.au. The manikin needs extra floatation added to the legs to make it more anatomical and float like a human volunteer. A new overall with extra floatation pockets in the legs is now available from the manufacturer.

It is strongly recommended that you obtain a clause in your Insurance Policy to cover MOB practice sessions. Most companies will supply this free of charge as it is in their interest to have the crew proficient in using this life saving equipment. Needless to say the volunteer should always wear a life jacket and also a wetsuit if the water is cold.

Only Professional Rescue Organisations with full emergency back-up including a standby inflatable rescue craft equipped with a RESCUE BOAT Sea Scoopa[®] should contemplate using volunteers in adverse circumstances such as strong wind, wave or current, poor visibility or low water temperature.

SEA SCOOPA BOARDING LADDER

The ladder has been designed as an optional extra to increase the functionality of the Yacht Sea Scoopa. It is contained in a compact bag that can be attached by 2 snap hooks to the metal rings on the centre of the Sea Scoopa or even elsewhere on the boat eg. toe rail, strong life lines etc. The ladder is instantly deployed when the person in the water pulls on the rope toggle hanging from the bottom of the bag.

There are 3 ways the ladder can be used.

- 1. To assist in short handed sailing situations, where for example a large man falls overboard and a small female companion is struggling to lift him aboard. If the man is still able bodied he can pull on the rope toggle, the ladder will be deployed and he can climb back on board. A word of warning however-the ladder should be left contained in its bag if the victim needs to be parbuckled aboard. In our trials we have discovered that if the ladder is hanging free whilst the body is being rolled, it could wrap around body parts possibly including the neck with grave consequences.
- 2. To convert the Sea Scoopa into a recreational SWIM OUT for vessels which do not have a stern boarding platform. For this application the Sea Scoopa is deployed in the conventional way, the net is raised a little to allow swimmers to recline in it and the ladder is attached to the central rings to allow reboarding. This should only be done when the yacht is at anchor or on a mooring. Certainly it should never be done whilst the vessel is under way under power as the risk of propeller injury would be very high. Similarly, fatalities have been recorded where crew have taken a swim mid-ocean and the boat has either sailed away without them or they have been unable to get back on board. This recreational deployment affords the crew excellent practice for real life emergency usage.
- 3. As a conventional ladder attached to a toe rail or very strong life lines for boarding the boat from the water, a dinghy or from the dockside.









YACHT SEA SCOOPA

International Patent Pending

WARRANTY

The Yacht Sea Scoopa® comes complete with a 1 year Guarantee from date of purchase. Within this period we will repair, free of charge any defects in an appliance delivered to us, which have resulted from faults in materials or workmanship.

This Guarantee does not cover damage caused by failure to follow these Operating Instructions, improper use, or normal wear and tear.

IN CONCLUSION

We are in the business of saving lives and we know that the Yacht Sea Scoopa® will assist in this endeavour.

However the device MUST be used in accordance with the foregoing instructions for satisfactory and safe results.

The necessity for regular MOB drill to ensure proficiency cannot be over emphasised.

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