Safety At Sea Studies - Lifesling® Clinic

RUNNING A LIFESLING® CLINIC

INTRODUCTION

This manual is designed to enable a skilled sailor to teach the use of the Lifesling®. The Sailing Foundation, which has developed this system, has found that a lecture format followed by on-the-water instruction is the most effective way to teach the use of the Lifesling®. The Sailing Foundation has accomplished successful retrievals in sail and power vessels in wind conditions up to 35 knots of wind. It is important to note that sailors who are not to accomplish basic tasks of tacking, gybing, raising and lowering sails are not likely to be successful at Crew Overboard (COB) retrieval. For students who can accomplish these basic tasks, The Sailing Foundation methods have proven to be successful.

The Sailing Foundation method focuses on the most difficult COB situation, specifically that of a two person crew with one overboard which necessitates a single-handed pickup in fresh wind and sea conditions exacerbated by cold water commonly present in northern waters. The method is also effective when used by more than the single-handed crew. It is successful when used students with a large variety of boats and wind conditions.

An instructor should be thoroughly familiarize him/herself with the history of the Lifesling® including the case histories as well as other recommended methods commonly found in published material. Most other methods have not been tested, few of them work, and in fact may be dangerous. It is important to be aware that students may come to the clinic with preconceived ideas about COB retrieval, which may include those other methods. The teacher should be able to deal with questions about those methods. Most of your students will not realize how difficult COB recovery really is. The students must avoid improvising on the methods taught and follow the step-by-step instructions in this manual. You will need to communicate the methods in this manual at least 4 times. You may find that after communicating the method 3 times that there will be a few students who will forget some of the steps, however, after completing the on-the-water drills should become proficient at the Lifesling® recovery method.

The Lifesling® is a patented device in the United States and Canada and is trademarked in The United Kingdom, Sweden, Australia, New Zealand, and Germany.

The Lifesling® is available in most marine stores throughout The United States, Canada, Europe, Australia and New Zealand.

The Sailing Foundation is a nonprofit education foundation dedicated the advancement of sailing in the Pacific Northwest. It was founded in 1971 and has conducted a wide variety of educational programs.

I. THE EQUIPMENT

Note: For the purposes of this manual, Lifesling® means Lifesling®, Lifesling® 2 or The Inflatable Lifesling®.

The Lifesling® is a horse collar device having a minimum of 20 pounds of flotation measuring 70 inches end to end and containing a lifting strap with D rings or loop in the end for the trailing line.

The trailing line connecting the Lifesling® to the boat is polypropylene and floats. It is high visibility red or yellow and should be approximately three times the length of the boat. The standard length of the Lifesling® is 150', the Lifesling® 2 has 125'. If a boat has a wide turning radius a longer length of line may be required. It is also recommended that the Lifesling® owner tie overhand knots in the Lifesling® starting at the end of the bowline at about every 9" to a point which is above the lifelines of their boat. These knots can be used

for a crew assisted lifting of a COB back on to the boat.

The line and Lifesling® is stowed in a stuff bay or hard container so that upon deployment the line will come out without fouling. The container has several attachment options which are available for different types vessels. Generally, the Lifesling® should be attached to a pushpit within easy reach of the person doing the recovery.

The lifting device is a block and tackle of three, four or five parts. The length of line in the block and tackle should be of sufficient length to be able to have the top part of the block and tackle 10' above the top life line or hand rail. The block and tackle should be set up to assure that the top block have the exit of the fall.

The Lifesling® has a pocket which is designed to hold an ACR L8-7BP Lifesling® water activated light (See last sentence of this paragraph, the pocket is no longer recommended for the ACR light.), The Inflatable Lifesling® has a pocket in the lifting strap for an ACR L8-7BP water activated light. The Lifesling® 2 should have the ACR L8-7BP water activated light attached to it with plastic wire ties. It is recommended that the user install the water activated light to their Lifesling®. Recent tests by The Sailing Foundation recommend that the ACR L8-7BP water activated light be attached to the inside of the towing strap near the loops for the towing line for all Lifesling®'s

The Lifesling® does not come with SOLAS retro-reflective tape on it (The commercial vessel version does but looses its Coast Guard Approval when used on a recreational vessels.). It is recommended that the user wrap the SOLAS tape around the front of the bollards on their Lifesling®.

II. THE CLINIC: HOW TO TEACH THE LIFESLING® METHOD

A. FORMAT

The clinic format takes three parts: 1. Lecture, slides and/or video; 2. Manually rigging each boat; and 3. On-the-water drills.
Do not get bogged down. You will be faced with people who want to debate small details, discuss the rigging of individual boats and related their own methods and experiences. A response indicating that all boats rig differently and each boat owner must adapt the gear to his/her own boat usually suffices. Also remember that rigging questions are best handled during the boat rigging portion of the clinic.
With regard to questions such as "wouldn't it be better if …" The Sailing Foundation finds the best response is to short. If you have historical data (The Case Histories become valuable here.) available for your answer, use it. If the question is theoretical, try to deal with it as quickly as possible and get back to the point. Beware of "armchair experts" taking control and confusing your students. The important thing is to get the essential points down and get them out on the boat. Many questions have self-evident answers seen quickly during the training process.

1. Giving the Lecture

The lecture should begin with any one of the several Case Histories which illustrate the need for the Lifesling® method. It is also necessary to get their attention and convince them that it is a serious subject. The text of the lecture follows, but several points are important to stress:

a. Repetition

It is necessary to make at least 4 repetitions of the procedure. Once in the beginning of the lecture in brief, once using the gear as a prop, once using diagrams (An easel prepared showing the steps of recovery is very helpful.), and once during the slide show.

b. Clarity

It is essential that your lecture be well organized and that all points be simply and clearly stated. Make sure your students understand, but do not allow questions until after the slide show. Questions during your lecture will only cause confusion.

c. Common Questions

There are several questions that are commonly asked that you should be prepared for. Studying the history and research will give you some insight on how to respond. One example is the person (There is always one) who will insist that the boarding ladder is the solution. In examining the Case Histories, you will find at least three documented cases of deaths involving use of a boarding ladder. There are also statistics illustrating the weakness and loss of strength occurring immediately following immersion and preventing use of the ladder. It's important to note that upon immersion in cold water that within 5 minutes that strength in the fingers is substantially lost.
There are many typical questions and new ones at each clinic. Familiarize yourself with the supporting data and keep it available during your first few lectures.

2. Length of the Lecture

The Sailing Foundation recommends that an hour and a half works best. This will allow you about 45 minutes for the lecture and about ½ hour for slides and/or video with 15 minutes for questions.

3. Text of the Lecture

Each lecturer's) will develop their own style, but be sure to cover the essential points. The following is a suggested lecture and standard slide show commentary. Copies of the slides are available from The Sailing Foundation at for the cost of duplication and mailing costs. The Sailing Foundation has found this format to be effective and suggest that you follow it closely.

THE LECTURE

You are about to learn the only tested and proven method for a successful single-handed pickup of a COB. The method also works very well in picking up someone with a full crew. However, this method focuses on the most extreme case and that is a two person crew with one over the side in fresh air conditions.
To coin an old saw, until The Sailing Foundation commenced its research program, a lot of people had talked about the COB situation, but no one had ever done anything about it. It presents a very serious situation which I would like to illustrate by the discussion of a case history. This case presents problems in classical style. A skipper on a typical cruising sailboat slipped over the side while the jib was being pulled down. The wind was blowing at approximately 20 knots and seas were running four feet. The crew was wearing both a harness and a PFD. Unfortunately, the harness tether line was long and although still connected to the boat, was completely over the side and in the water. The crew stopped the boat and attempted to lift the COB aboard by grasping the shoulder portion the harness. The harness slips off the COB resulting in the COB being disconnected from the boat. The crew got the boarding ladder over the side, but the COB was unable to climb up the ladder. The COB feet were slipping off the lower rungs and the COB finally fell back into the water exhausted. The crew then threw the COB a line, started the engine and started to back down toward the COB. Unfortunately, as often happens when maneuvering under power in these situations, the line got wrapped around the propeller shaft and the boat was disabled. The COB drifted away and was recovered by the Coast Guard approximately 2 hours later. The COB never recovered consciousness.

There are three critical problems presented by the COB. The first is maintaining visibility. It only takes a wave this high (Illustrate using your hands a distance of about one foot vertically) to hide a man's head from view. Thus, if you cannot maintain visual contact, the situation will be hopeless from the outset. The second problem is maneuvering to pick the COB up, this is made even more difficult in heavy going, particularly in attempting to come alongside and immediately stopping to pick up someone. The Sailing Foundation has

found through testing that a boat under bare poles in over 15 knots of wind will start drifting between one and three knots away from the victim. Therefore, you must maintain contact with the COB at all times. The third problem is one of lifting. A heavy man with water soaked may easily weigh as much as 250-300 pounds, and it is going to take a very large effort to get the COB back on board. The COB will not be of much assistance and even if you have a gorilla left aboard, you are going to need some sort of mechanical advantage to recover the COB.

The Sailing Foundation rescue system address these problems. The first thing you do when someone goes over the side is called a "Quick Stop". You stop the boat by driving the boat head to wind. This will keep you near the victim and maintain that critical visibility. The second step is to deploy the Lifesling® on the trailing line which essentially makes your boat 125-150' longer and by encircling you will make contact with the COB. You maintain that contact by pulling the COB in the Lifesling® to the boat. The third problem is to use the Lifesling® as a lifting device together with a block and tackle and a winch to lift the COB back aboard. (This is the first summary of the procedure. As you will note, you have only covered the bare essentials, but it is the first repetition in a series necessary to drive all the points home.)

The equipment that you use consists of the Lifesling®, the trailing line, the stuff bag or container and the block and tackle. First, the Lifesling®. (Pick up the Lifesling® and hold it up to the audience.) This device is very similar to the standard horse collar used by the Coat Guard and the military to pick people out of the water from helicopters or large vessels. However, it has been revised to include 20 pounds of flotation which is equivalent to a Type IV buoyancy device. It as a lifting strap and 2 "D" rings, or in the case of the Lifesling® 2 loops. It is connected to the boat by means of a trailing polypropylene line. The line is designed to have high visibility and to float. The standard length is 125' or 150' and this is the length that you will probably be using today although sometimes it varies depending upon the length of the boat. One end on this trailing line is attached to the Lifesling® with a bowline and the other end of the trailing line is made fast to your boat permanently at some secure point. The trailing line is inserted in the stuff bag or hard container so that it will not foul when paying out. You will note that both ends of the trailing line are made fast by means of bowlines and the knots are taped or otherwise secured to keep them from coming undone. The length of the bowline on the Lifesling® is important because you want to have the knot on that bowline at the level of your boat rail when the victim is alongside and ready to be pulled out. This is so because you will be affixing your block and tackle to the inside of that bowline so that the size of it will have to be varied with the freeboard of your boat. Once you have deployed the Lifesling® to the victim, the COB can use the Lifesling® as a flotation device and by the time you have the COB alongside, the COB will want to get into it like this (put the Lifesling® over your head and show how it fits under your arms) so that the COB is ready to be lifted out. (Then hold up the bowline to show where the lifting attachment is to connect.)

Once you have your victim alongside, then you get out the third piece of gear which is this block and tackle. (Now hold up the block and tackle to the audience.) With our modern day racing sailboats we have become unaccustomed to using what was once a very standard piece of gear on every sailboat. This is a three (or four) part block and tackle with a carabiner (or snap shackle) at either end and this pulling part here is what we call the tackle fall. (Show the tackle fall.) It will be important in this procedure to have the right end of the tackle up; therefore, this is one can be marked red or some other method used to identified as the top. When the tackle is used the lower end is first hooked into the bowline on the Lifesling®; then you will take of the main halyard from the headboard of your main sail and haul the upper block of the tackle 10' for more from the main deck and make the main halyard fast. Now you have the mechanical advantage to lift someone aboard and you will probably need a through understanding of the details of the procedure. (This is where the already prepared diagrams showing the procedure will be used, if you don't have this available and have a white board or other device you will use this to diagram the procedure.)
Man Overboard!! (Draw an X on the writing surface in the center.) The first thing you do is the "Quick Stop", that is go head to wind. (Draw wind direction in a vertical direction down.) To maintain visibility and steer near this victim, you have t stop the bat as soon as possible. It does not make any difference whether you are reaching, running, or beating; you simply must stop the boat. A lot of the standard methodologies talk about taking bearings, reciprocal courses and all that sort of thing, but our method requires you to first stop the boat. This is absolutely essential. Even if you take a broach. Even though a broach is unpleasant, it is far more important to stay close to this COB. You stop the boat by driving right dead into the wind and letting your sails luff. Now and only now you leave the wheel or tiller and you go aft, pull the Lifesling® out

of the container and deploy it. You return to the helm. Now you start circling the victim in the water. (Draw this) It is going to be a lot easier if you let the bow of the boat fall off from the eye of the wind so the jib is aback. (Draw this) This is not absolutely essential, but it will make your maneuvering much easier and will allow you to circle the victim in the water without touching jib sheet. If you are going to have difficulty in gybing because your main is too far out, the time to get your main in is when you have gone head to wind. Now start your circling. (Draw this) As you do so the trailing line and the Lifesling® will follow your stern in a circular fashion and either the line or the Lifesling® will come in contact with the COB somewhere between the first and third pass. You will find that this portion of the drill is remarkable easy. Keep your eye on the Lifesling® and do not sail over it or the trailing line. Keep your eye on the COB and make sure you do not run down the COB. If you have any difficulty in falling down wind too fast with your jib aback, you can release the jib.

Now that you have made contact between the trailing line or Lifesling® and the COB. (Draw this.) Quick stop a second time, that is drive your boat head to wind. (Draw this.) You are really "stuffing" your boat head to wind again to stop it and this is very important. The only danger in this part of the procedure is the possibility of towing your COB and that occurs if you take off at speed after he has the Lifesling®. It will not occur right away because the Lifesling® is inside the circle and will move a lot slower than the boat. You must be careful to drive the boat head to wind as soon as your COB has made contact with the trailing line or Lifesling®. Sailing off after the COB has made contact with the Lifesling® is very dangerous and must be avoided. Okay, we have driven the boat head to wind and stopped the boat, the next important thing to do is get the sails down. You do this before you bring the COB along side because again, it is important to stabilize the boat. You drop your jib first. If you have hanks on the jib, you may need to tie down the head of the sail because hanked sails sometimes will climb back up and you do not want your boat to take off. Remember it is very important to slow down and stop your boat after you have made contact with the Lifesling®. After the jib is down, drop the main. Neatness here is not a consideration. Now you have both sails down and the boat is essentially immobilized. It may be drifting between 1 and 3 knots so you want to get the COB alongside. You do this hand over hand or with a winch and pull the COB alongside. The Sailing Foundation recommends you pull the COB alongside on the windward side of the broad because even though that is slightly less comfortable for the COB than the leeward side you will have less sail clutter there. In other words, you will not have your mainsail flogging over the side and the boom will be out of the way. You pull the COB firmly up to the boat, take a good strain and tie off the COB. You may want to use a winch for this.

This is a very important part of the procedure. (Draw the COB being hauled up out of the water along side the boat and made fast to the boat. Draw a profile of the boat so that you can show on this diagram how the block and tackle is going to be rigged.) Now you have actually saved your COB. The COB will last a long time before hypothermia has any effect. The real danger in these overboard situations is sudden drowning. The COB is not going to drown because of being tied along side and the majority of the COB is out of the water and hypothermia should not be a problem for at least ½ hour. Now were not recommending that you go below and make yourself a sandwich hand have a beer, but the crisis is over. The only remaining work to be done is to mechanically getting the COB over the rail and into the boat. This may not be a simple task for those of you that have not worked with a block and tackle.
The first thing you want to do is avoid two blocking your tackle before you get the COB on board. (Demonstrate to the class what 2 blocking is.) The COB is tied off as we have discussed before and is tied off on the windward rail. Get out your block and tackle and you hook it to the lifeline or the bowline. (Demonstrate hooking the block and tackle to the bowline.) The next thing you do is detach your main halyard from the head of the main sail and hook up the block and tackle to the halyard-remember the part of the block and tackle that has the fall is at the top. Now you pull this top block a minimum of 10 feet off the deck. (Indicate the 10' on the illustration.) The 10' is essential because you have to get the COB over the lifelines. So now with the top block well up in the air you make the main halyard fast. Some people have the strength to just manually pull someone aboard with a 4 to 1 block and tackle. However, that does not necessarily work for everyone. The Sailing Foundation has also found that winches alone are not adequate to haul the COB aboard. What is recommended is that you use the block and tackle in conjunction with a winch. The best way to do this is to take your normal cockpit winch used for a jib fair lead. (Show on the illustration.) This is important because if you use a wrong lead you may get an override when you victim is half out of the water and you are going to have release the COB at that point and start over again. Use the

normal jib car and cockpit winch and you will avoid an override situation. It's now just a matter of cranking the COB on board with the use of the block and tackle and the winch.

B: RIGGING THE BOATS

The step-by-step process of rigging the boats has been taught in the lecture. It is essential that ALL boat handlers rig the boats at the dock prior to the drills to thoroughly understand the process and work out any questions. This part of the process contains the most room for deck seamanship errors so adequate attention MUST directed to it. The process itself appears in the lecture section and in attachments, but several points should be stressed.

1. Rigging

Each instructor shall take the gear to each boat for rigging. (Some boats may have their own gear so this should be used.) It is suggested that all clinic boats be in one spot to save time.

2. Block and Tackle

Many people are not familiar with use of block and tackle. The top block identification should be stressed so that all the students know which end (The end with the fall.) should be at the top.

3. Height Above Deck

Make sure students physically hoist the tackle to at least 10' above the deck so that they can see what height is required. A person standing on the deck will help to illustrate the height requirement.

4. Tail of the Block and Tackle

Depending upon the length of line in the block and tackle, you may have to be careful of hoisting the top of the block and tackle too high and losing the tail of the line out of the fair lead and around the winch. A stopper knot may not be a good idea as it may not pass through a fair lead to a winch. For clinic purposes and make sure that block and tackles contain at least 65 feet of line on a 3:1 block and tackle should normally be adequate for most boats.

5. Fair leads

The tail of the block and tackle must have a deck fair lead to a winch. Generally a jib car serves the purpose, but each boat has its own requirement. A normal lead to the winch will avoid the override. Make sure your students understand the set up and can duplicate it in an emergency.

6. Twists in the Block and Tackle Line

It is well to illustrate the problems that will be caused by twists in the tackle line and make sure students understand the block and tackle well enough to sort it out.

7. Tying COB Off

Illustrate the need to get the COB high up on the side of the boat and designate the appropriate place and method of securing the trailing line.

8. Lifesling® Attachment to the Boat

Stress the need to tape or seize the bowline at the deck attachment. The polypropylene line may undo itself

quickly without the seizing being done.

9. Block and Tackle Outside the Life Lines

Make sure your students practice, several times, hooking the block and tackle to the bowline in the Lifesling® OUTSIDE the lifelines. It is a common mistake to inside the lifelines.

10. Keep It Simple

Try to utilize existing leads and gear that is always on deck. Remember that during an emergency the rigging for a pickup should be automatic, non- complicating and quick.

C. ON-THE -WATER DRILLS

Common problems are found in the section "Problem Areas". This is intended as a guide.

1. Instructor

Each boat must have an on-the-water instructor. The instructor must be a competent sailor familiar with the method and comfortable working on different boats. The instructors are there to coach and to PREVENT serious problems. This means taking the helm if necessary in dangerous situations.

2. Sail Selection

The head sail selected should be appropriate for the wind range. To be a little underpowered is all right. There may be problems if a boat is overpowered.

3. Number of Pickups

Each boat should do at least one pickup for each student on board. If time allows, additional pickups can be done.

4. Weather and Sea Conditions

This is a judgment call. Light air can be frustrating but power can be used in the circling only. THE ENGINE MUST BE TURNED OFF ONCE THE COB HAS CONTACTED THE Lifesling®.
Heavy air maneuvers (15-30 knots) are surprisingly quick and easy. The competence of your students is the controlling factor. Above 30 knots of wind may or may not be suitable for classes. Again, ability of the students should be the determining factor. (It is interesting to note the very frequently The Sailing Foundation clinics have many novice sailors who have had to been given basic sailing lessons.)

D. COMMON QUESTIONS

1. Boarding Ladder

(Used as an example in the lecture section) The main points here are the difficult of getting to the first rung and the probable weakness of the victim particularly in rough seas. See Case Histories 13, 22 and 50.

2. Use of Another Halyard

People commonly suggest use of a spinnaker halyard instead of a main halyard. If a spinnaker halyard is used the COB must be taken much farther forward to be raised from the water or the halyard must be

brought back aft of the mast outboard of the shrouds. On some boats a halyard may jump the sheave if taken past the mid-ship aft. The use of a spinnaker halyard entails more time spent getting rigged to the block and tackle. The spinnaker halyard may also hang up on the spreaders if it is brought aft. Use of the main halyard seems best but remember each boat is different. Use a halyard that will not jump the sheave.

3. Won't the Main Halyard Jump the Sheave?

It is possible, however in 100's of drills held by The Sailing Foundation, it has not happened. Use of the spinnaker or jib halyard can work.

4. Aren't My Winches Big Enough to Eliminate the Tackle?

Possibly, but only those boats which have large halyard winches, usually 45' and above. The problem using halyards is having a long enough tail which will reach down over the life line and attach to the bowling and still be able pull up the victim and NOT come off the sheave. It is important that the COB may weigh as much a 300 pounds.

5. Why not Heave-To Instead of Dropping sails?

A proper heave-to can be very effective. Lashing the helm down, releasing the main sheet and dousing the jib will immobilize the boat. However while a boat is hove to it can still drift. The Sailing Foundation sticks the standard "Quick Stop" method for the clinic.

6. Doesn't Dropping the Slotted Main Cause Problems?

It may be messy, but it normally is not a problem. In an emergency the neatness of the deck is not important. The Sailing Foundation has successful held many tests with slotted mains with no resulting problems.

7. Do You Use Pole and Horseshoe?

Our tests and those of the Naval Academy indicate the pole and horseshoe get deployed too far from the victim for the horseshoe to be usable. If the horseshoe is attached to the pole has shown in tests to foul the Lifesling®. However the pole by itself my help mark the vicinity of the COB. It is not recommended as a part of The Sailing Foundation method.

8. What Do I Do With the Spinnaker Up?

The procedure is the same. With training the crew can drop the spinnaker down on the deck as the boat "stuffed" to windward. The most important thing is to stop the boat as close as possible to the COB. If done correctly, the boat will not broach (The boat must be turned very quickly into the wind.). A broach may be unpleasant, but it does stop the boat. It should be practiced with crews familiar the specific boat.

9. What Do I Do With the Tiller?

It may be necessary to have some means to quickly tie off the tiller so that the boat will remain head to wind when you lower the sails. Sometimes the tail of a jib sheet can be used. If the boat doesn't stay head to wind while lowering the sails the boat can sail off towing the COB.

10. Can I Use My Tackle Without a Winch Back Up?

Generally not. It may be possible. It is best to try with the weakest person lifting the heaviest person.

11. Can I Just Lift the COB with the Main Sheet or Vang from the Boom?

No, the victim will not clear the lifelines.

12. What Side of the Boat do I Bring the Victim to?

Generally the windward side. The main sail and the boom will not be in the way, however, it has been done successfully done on the leeward side.

13. What About an Unconscious Victim?

If it is a single handed recovery, your chances are VERY slim. A boat hook MIGHT be used. If more than one rescuer is available, you are able to put a line on a crew member, drop the crew near the victim and the crew can assist the COB into the Lifesling® and both then lifted into the boat. This is obviously a very risky situation and the potential loss of two people MUST be considered.

14. Crewed Pickups

On some boats a single handed pickup might not be realistic, i.e. some large boats or very complicated boats.
Even though this method was developed for single handed pickup, crewed pickups are fine for the clinic. It may be a question of confidence and having a hand might enable a person to learn the method. Whatever the situation, remember, our job is to teach the method in the form which best used by a particular boat.

E. COMMON PROBLEMS

1. Towing

Probably the most dangerous part of the whole procedure is the potential of towing a victim. The Sailing Foundation tests show that at 4 knots the water is coming over the COB's head and at 4 ½ knots you will drown them quickly. (It is important to note her that victims are best towed with their back to the boat [180 degrees from the lifting position]). The boat must be stopped immediately upon the COB's contact with the Lifesling® and remain immobile as possible until the sails are dropped. Constant observation of the victim must be maintained. For drill purposes, The Sailing Foundation recommends the COB start with their arm in the Lifesling® and get into the Lifesling® when the boat is stopped and the sails are dropped.

2. Running over the Trailing Line

This is very probable and is accountable to ability to handling of a boat and its turning radius which may be strange for the students on a boat they don't normally handle. Fin keel boats are more likely to run over the line. Sometime having students handle the boat prior putting a COB in the water helps to get familiar handling characteristics.
If it does happen as you turn with the backed jib, quickly release the jib sheet and let the jib blow to the other side. This will allow you to steer clear of the line.
If your line is run over, you may be able to sail it clear. If not, you may have to use the boat hook, undo the bitter end and pull it through.

3. Running Over the COB

Again, taking the jib across when in danger of running down the COB will allow you to steer clear of the COB. Do not steer too close when upwind of the COB.

4. Tiller Falling Off

There need to be a means of lashing the tiller amidships or keeping one person on the helm to prevent the tiller from falling off and the sails filling causing the victim to be towed.

5. Tackle Upside Down

Make sure the students understand the fall of the block and tackle is at the top. Standard 3:1 block and tackle sold by West Marine for this purpose have color coded blocks. Otherwise using tape can help to mark the top.

6. Twists in the Tackle

Twists in block and tackles create friction which make lifting the COB difficult if not impossible. Twists occur when the bottom block turns, usually when the set is not 2 blocked. It is important to show the students that storing the block and tackle in a 2 blocked position will prevent twists from happening. If kept in a 2 blocked position prior to use will prevent a friction problem.

F. RESPONSIBILITIES OF THE INSTRUCTORS

1. Be alert to problems and be ready for solutions. This requires qualified sailors who can adapt to different boats and recognize problems and react to them when they occur.

2. Try not to give too much advice during pickups. Advice is best given to all the students at the end of a pickup.

3. If holding the clinic around Vessel Traffic Lanes be sensitive to commercial. The best advice is to stay clear of Vessel Traffic Lanes.

4. Watch for other vessel traffic, especially private power boat traffic. Many power boaters do not pay a lot of attention to where they are going. Having the whole group of students stand up and waving their arms and point to the COB

5. Watch the COB constantly. The instructor is responsible for the safety of the COB.

6. Have all of the students practice handling the boat prior to doing COB drills so they have a feel for how the clinic boat their on handles.

7. Give clear short explanations.

8. Monitor VHF constantly. It is usually best that clinic organizers monitor the same frequency such as channel 68.

III. HOW TO ORGANIZE A CLINIC

Organization is essential in creating a successful clinic. The format that follows has been successful in reaching the largest number of students.

1. BASIC ELEMENTS

a. Place for a lecture, slides and diagrams.
b. Moorage for boats, preferably close to together.
c. One instructor per boat.
d. One victim per boat.
e. Charging a basic fee (optional) to cover the costs for donuts and coffee and to cover costs for rentals

(purchase) of wet/dry suits and any other expenses.

2. COMPOSITION

It is recommended to combine the boat owners with other participants. This allows you to teach the method to larger numbers of students. On boats 25' and under, 2-3 students is recommended. On boats 25-40', 3-5 participants is recommended. Boats over 40', 6-7 people could be accommodated.

3. ADVERTISING

You may not need to advertise to have an adequate class, however, remember you will have to advertise in local magazines (paper) at least 4-6 weeks prior to the clinic date because of deadlines. Signing up and committing individuals is important to monitor class size for committed boats, instructors and COB's. If a fee is required, confirming with a check is suggested.

4. INSTRUCTORS

On-the-water instructors should have enough time spent so they are very familiar with the recovery method and are familiar with potential problems. They should also be matched with boat in the size range in which they are comfortable. (Don't put a dingy sailor on a 50' her.)

5. COB's

COB's should be people you know who are in good health, are scuba divers or at a very minimum are comfortable in jumping off boats in wet/dry suits. Accepting COB's at the last minute is NOT recommended.

6. HOLD HARMLESS AGREEMENT

It is highly recommended that Hold Harmless Agreement be drafted and signed by ALL participants including the teaching staff and students.

7. TIMING

As mentioned previously, at very least, 4-6 weeks prior to the planned clinic advertising should go out.

8. COSTS

If you charge $10-15 you should make enough to cover costs for moorage, wet/dry suit rental, postage and printing. Any additional "profit" can be used to purchase wet/dry suits and cover any other future costs.

9. SUGGESTED FORMAT

08:30-09:00 Registration/Coffee
09:00-11:00 Lecture and slides
11:00-12:00 Rigging boats & students eat their lunch
12:00-16:00 On-the-water Drills

10. DAY OF THE CLINIC

Arrive at 08:00 to 08:15. Have name tags ready for students. Start coffee. Start Clinic at 09:00 promptly. Make boat assignment at end of clinic

POWER BOAT ADDENDUM

This addendum is a suggestion for recovery of COB from a power boat. It should be noted that this is only a recommendation. Because of the different configurations of power boats available in the market each power boat skipper should work on and develop a method which works best for their boat. To help develop a recovery technique, attaching a fender to a bucket in the water to simulate a COB works well.

A. EQUIPMENT REQUIRED

1. Lifesling®
2. 5 to 1 Lifesling® block and tackle. Please note that a special 5 to 1 block and tackle has been developed especially for use in COB recovery on a power boat.
3. Lifting point such as a stainless steel eye mounted as high as possible on the boat and hopefully near a gate on the boat.

B. RECOVERY TECHNIQUE

Two methods of recovery can work for the power boat. The first method is to stop the boat immediately, turn the boat and approach the COB keeping the COB in sight at all times, approach to windward until the COB is abeam of the boat. Stop the boat and SHUT DOWN THE ENGINE(S) allowing the boat to drift down on the COB. Throw the Lifesling® to the COB. Pull the COB along side the boat tying the COB off on a cleat. Rig the 5 to 1 block and tackle to the lifting point (the portion with the cam cleat on the top) and then to the Lifesling® bowline, release the COB from the cleat and lift the COB on to the boat.

The second method of recovery of a COB in a power boat situation in not unlike a sailboat recovery. They same basic techniques used in sailboat recoveries except the engine is used for the recovery. Also it should be known maneuvering will be different if a boat is single or double screw.

This portion assumes that the steering station of the boat and the Lifesling® are stowed on the starboard side of the boat.

1. Stop the boat. Pull the throttle(s) back to idle, pull the gear shift(s) to neutral and then to reverse. Put full throttle(s) on to stop the boat. Once boat is stopped, pull the throttle(s) to idle and gear shift to neutral.
2. Once the boat is stopped, throw the Lifesling® into the water and then start turning to starboard keeping the COB in sight at all times. Circle the COB making sure that the boat does not come close to the COB.
3. When the COB acquires the Lifesling® or trailing line, SHUT DOWN THE ENGINE(S), pull the COB along side the boat, open the gate if necessary, hook up the top (the portion with the cam cleat on the top) of the 5 to 1 block and tackle to the lifting point on the boat and the bottom to the eye of the bowline and lift the COB on to the boat.

KEEP IN MIND THAT WHILE YOU ARE ATTEMPTING TO RECOVER THE COB TO KEEP SAFELY AWAY FROM THE VICTIM BECAUSE THE TURNING OF THE SCREW(S) UNDER THE BOAT CAN BE EXTREMELY FRIGHTENING FOR THE VICTIM AND A PERSON CAN BE SEVERELY INJURED BY TURNING SCREW(S).

SUGGESTED Lifesling® CLINIC SLIDE SHOW NARRATIVE

Slides and narrative for the slides are available from The Sailing Foundation upon request for cost of duplication and shipping.

CURRENT CASE HISTORIES

The Sailing Foundation, Safety at Sea Committee continually updates is Case Histories of COB cases. The current Case Histories document is available from The Sailing Foundation for cost of duplication and shipping.