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MAN OVERBOARD

Tactics that really work for couples

The *YM* team get wet to see how well the MOB process works for shorthanded sailing. Here are our findings...

Finding yourself in a man overboard (MOB) situation probably ranks near the top of every sailor's list of biggest fears. Even close to shore this can be a potentially fatal situation, which is why MOB manoeuvres are included in many training courses and exam situations.

Though many examiners for Yachtmaster have their own areas they like to focus on in an exam – the syllabus being too wide-ranging to cover everything in a single exam setting – MOB always features. It's also a good demonstration of boat-handling ability as well as a key safety manoeuvre.

Many of the suggested steps to get back to an MOB, however, assume more than one crew left aboard, which is of little use to the vast majority of us who spend our time sailing two-up. The question is, what happens when there is just one person left on board? Is it possible to carry out the whole procedure to the letter, or are there non-essential or even dangerously distracting elements that should be omitted from your man overboard procedure if it's just you on the boat?

We decided to spend a day on the water interrogating the MOB process from incident to having the casualty safely alongside. Of course once an MOB is alongside there is still work to be done to recover them fully back onboard, which we will address in another article, but for the purposes of this article we are going to examine the boathandling procedure and techniques

that are often overlooked by shorthanded crews.

Ahead of the day, the key areas we were interested in were: the speed in which we were able to return to the casualty; distance between the casualty and the boat at any given time; and suggested actions that might hinder returning to the casualty if needing to return to them singlehanded.

Most of us will be familiar with the basic steps suggested to get back to a MOB, to sail away on a beam reach and return to the casualty on a close reach, controlling the sails and raising the alarm at the same time.

However, as each step of the process is laid out in so much detail, we wondered if this level of detail is in itself a hindrance, being overcomplicated for a situation that is, by its nature, fluid and stressful for a single sailor left on board. When in the midst of a manoeuvre to return to a casualty, there is a lot of information that needs to be remembered in a time of high stress. We wondered if there were any steps that could be dropped or simplified to make things more intuitive for a lone crew member.

We decided to test the MOB process on a relatively calm day on the Solent



A man overboard is one of the biggest fears for most sailors. Are you prepared for shorthanded retrieval?

Starting point

To ensure we were using a robust man overboard procedure that most sailors will find familiar, we turned to the RYA recommended method for Yachtmaster candidates. This broadly breaks down into two sets of instructions; one for the skipper of the yacht and one for the remaining crew, as follows:

MOB PROCESS – SKIPPER

- Sheet in the mainsail and heave-to in order to take the way off your boat.
- Pass buoyancy to the casualty and mark with a dan buoy.
- Instruct a crewmember to point at MOB.
- Retrieve any warps from the water and start the engine.
- Furl or drop the headsail.
- Make ready the throwing line.
- Manoeuvre the boat downwind of the MOB, keeping the MOB in sight.
- Approach the MOB into the wind, so that the mainsail is de-powered.
- Pick up the MOB on the leeward side, aft of the mast.



MOB PROCESS – CREW

- Shout 'man overboard' to alert crew.
- Press the MOB button on the GPS.
- Throw a life buoy and dan buoy to the MOB. Mark the MOB with a buoyant smoke flare.
- Allocate a crewmember to point at the MOB in the water.
- Send a DSC distress alert and a Mayday.
- Keep pointing; don't lose sight of the MOB.
- If the motor has been started, Prepare a throwing line.
- The skipper will bring the boat alongside the MOB, with the boat pointing into the wind and the propeller stopped.
- Get a line around the MOB and get them aboard.



Even a cursory glance at this list of processes reveals it would be nigh-on impossible for a single person to perform them all. Before we headed to Hamble Point Marina, where Hamble Point Sailing School had kindly lent us one of their boats for the day, we already had given a fair amount of thought to which processes might need to be removed. It was clear that we would not be pointing at the casualty for any stretch of time while trying to fulfil the rest of the criteria, for example. It is this thinking ahead that is one of the biggest improvements you can make to your single-handed MOB procedure, as we later discovered.

FINDING A PROCESS THAT WORKS

In order to arrive at a process that really works for a singlehanded sailor left onboard, we felt it was important to start with the full list and remove steps from the process on each further attempt in order to achieve what we feel is real-world list of steps in order to best get a single sailor back to a MOB casualty.

We also felt it was vital to understand the experience both from onboard and for the casualty, so I 'volunteered' to be the real-life man overboard.

Even in benign conditions, putting a person in cold water in the vicinity of moving boats is a genuine safety situation. Although we had a safety RIB standing by we felt it would be prudent to keep the number of times we had an actual casualty in the water to a minimum and decided we would make two attempts with an actual casualty in the water but would resort to the tried-and-tested bucket-and-fender as a casualty simulation for the majority of our attempts while we refined our process.

We tried a 'real' MOB on two occasions, but used a bucket and a fender thereafter



All images: Richard Langdon / Ocean Images

SHORTHANDED MOB

What needed changing?

CALLING FOR HELP

With a casualty in the water, the instinct is to let rescuers know and indeed, a DSC and Mayday call are listed in the RYA process for MOB. On our first attempt at picking up the casualty singlehandedly, we followed the procedure to the letter.

Anyone who is familiar with the Mayday procedure will know how long the full script is. Indeed, just reading through the script with little pause for any potential back-and-forth with the rescue services took a full 50 seconds. On this first attempt we used the main VHF at the Nav station. Rushing below and hurriedly reading through the script and heading back on deck took over a minute – during which there are no eyes on the casualty nor anyone controlling the boat.

Coming back on deck it took quite a long time to spot the casualty again. In any significant seaway or breeze, going below would increase the likelihood of losing sight of the MOB altogether. Best practice is to have either a command mic for your fixed VHF on deck, or a, powerful, fully-charged handheld VHF in reach of the wheel, plus a copy of the Mayday script on deck.

Of course, most fixed-set VHF radios have digital selective calling (DSC), are linked to a



GPS position, and have a distress button; some handheld VHF radios also have this functionality. Make sure your unit is set up correctly with your MMSI number and GPS position. In reality, simply pressing the

distress button, ideally on deck, is the easiest way to raise the alarm and summon help while you get on with the manoeuvre.

The best means of rescue for a MOB is you and the vessel from which the casualty has fallen. If you do lose sight of the casualty, you need to have marked their position. If you are wearing lifejackets and these are fitted with AIS MOB beacons, this will be done automatically and will broadcast their position to all surrounding vessels.

If you don't have this, then hitting the MOB button on your GPS or chartplotter will help you return to the casualty. The test boat had a chartplotter at the wheel which made this step very simple, and this should be pressed as early as possible. With a chartplotter down below, it creates the same problem as the Mayday call. Consider at what point during the incident you could or would press this in your MOB process.



EYES ON THE MOB

Returning from being below was disorientating and it took some time to find the MOB again



RADIO ON DECK

Either a handheld VHF or command mic for your fixed VHF in reach of the wheel is essential



VHF BELOW

It takes time to get below and either make a distress call or mark the MOB's location



MARKING POSITION

There are a variety of options available; our test boat had a plotter at the helm with MOB button



AIS/MOB OPTIONS

It is well worth considering an AIS MOB beacon on your lifejacket if you are sailing shorthanded

KEEPING CLOSE

The more we repeated process, the more it became clear that without someone designated to spot the casualty, keeping them close and minimising manoeuvring was a priority. We were all surprised by how long it took to spot the MOB again, even after something as simple as furling the headsail.

Official MOB procedure gets you to sheet on the mainsail and heave to in order to take way off the boat, but without turning around.

The quickest and easiest way to heave to singlehanded is to crash tack, dump the mainsheet and leave the headsail sheeted on. This will quickly stop you and allow you to roughly hold station, depending on your boat. At this point, throw the dan buoy and life ring to the casualty. We also found we were close enough to the person in the water to consider omitting furling the headsail and circling round.

The first time we tried this process the boat drifted towards the MOB who was downwind and slightly aft of the shrouds. Once we were hove to, we were within easy sight of the MOB and moving little. We were then able to perform a line check and start the engine. Astern power helped us position the person in the water off our leeward bow and alternating forward and astern power helped us 'feather' the boat downwind.

Several attempts at doing this saw us average one minute from the person going over the side to them back alongside and attached to the boat, all without being much more than a handful of boat lengths away. This does depend on your point of sail; clearly it may not work if you're sailing downwind under spinnaker. Nevertheless, stopping the boat quickly and having control over it once you have done so is a priority.

ISSUES TO ADDRESS

Crash tacking seemed far more favourable than sailing away, furling a headsail and



HEAVE TO

However you go about it, heaving to is key to stopping and controlling the boat



ENGINE ON

If you are hove to, after a quick check for lines over the side you can start the engine for added control

looping back. The trouble, however, is that in order to complete the crash tack, keep sight of the person in the water, switch the engine on and get ourselves alongside, there was no time for a Mayday call.

Given the difficulties in keeping sight of the casualty, we all felt getting the dan buoy and life ring in the water was key. We discovered we could throw this to the MOB while the engine was on and we had full control of the boat. The Mayday call is a slightly more difficult matter. It is not possible to do this manoeuvre and make a Mayday call at the same time.



CRASH TACK

Singlehanded, the quickest way to stop the boat and heave to is to crash tack, leaving the genoa

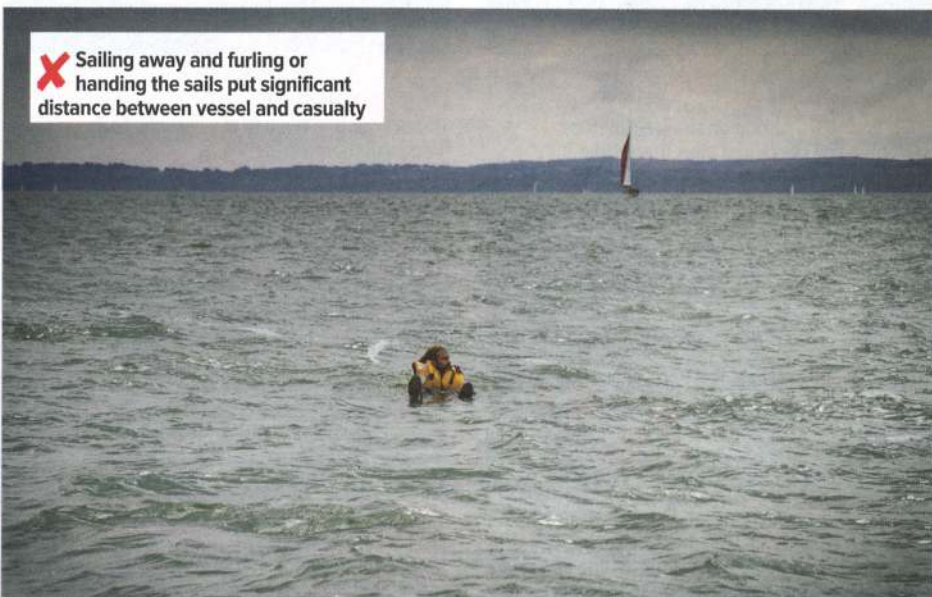


CONTROL SAILS

If you cannot get to the MOB on the first attempt you may need to furl the jib and motor round

We knew that with the speed of the new procedure we had significantly increased the chance that even if we might not be spot on to pick up the casualty immediately, we were close enough to drop in the dan buoy and horseshoe buoy. Whilst there, it makes sense that if you are close enough to the casualty, you also make every effort to get the MOB alongside.

Even if this didn't work the first or second time, it did not significantly add to the time of recovery, and increased the chances of a fast recovery. On one attempt, we missed the first time, then attempted, with the help of the motor, to tack and then tack back, but missed again. Happy we had the dan buoy near the casualty, we furled the headsail, motorsailed away and back while making a Mayday call and properly lining the casualty up from a distance. The total time from MOB to properly alongside was five minutes.



SECOND APPROACH

A traditional pick-up with headsail furled is easier but takes more time

SHORTHANDED MOB

Our conclusions

However much you approach this sort of testing with an open mind, we still had some preconceptions. We knew that continuously pointing at the casualty was going to fall by the wayside and were certain going below would prove unwise – though we had underestimated how disoriented we would be when returning to deck. We also assumed we would be quicker returning to the casualty with crew than without. While this assumption was incorrect, it would be easy to get yourself in a time-consuming tangle if you tried to carry out a fully crewed MOB procedure singlehanded.

When sailing with two remaining crew onboard, our time from casualty going over the side to casualty alongside and attached to the boat was 4 minutes 22 seconds. Total time with one crew remaining on the boat was 4 minutes 46 seconds, a negligible difference. The issue is that following the official procedure necessitates a longer time frame for one person. Our first change, of moving the Mayday call to a handheld VHF, saved some time, though the biggest plus point was keeping the casualty in sight.

What was particularly notable was the difference a bit of practice made. All those

onboard were experienced sailors and all have done MOB drills in the past. For each attempt, we were also on deck, alert and awake. If the MOB occurred when the other crew was below or asleep, as is often the case, it is possible their reactions would be much slower, if the alarm was raised at all.

We were all, however, able to shave almost a full minute off our time after a few attempts until we were averaging around 3 minutes 50 seconds to get back to the casualty. Practice is key and I've come away vowing to run through the procedure more often.

Marking the MOB on a GPS is critical, as is getting a dan buoy near the person in the water. However, we felt that notifying the emergency services should not be done at the expense of the safety of the person in the water, if the recovery can be made quickly. However, we would only dispense with the Mayday with the following caveats.

If conditions or other factors are such that you do not believe you are likely to get the MOB back onboard, then emergency services should be notified as soon as possible. We also feel there is time to alert the services if you miss the person on a first attempt to retrieve them quickly. This method

also requires a good degree of skill and care. Crash tacking and starting the motor all within the vicinity of someone in the water is not without risk and requires caution.

In all our testing, we never got too close to person in the water, as there is the inherent risk of putting a large yacht close to a person in the water. We do feel, however, that there is more significant risk, when sailing alone, in allowing more separation between the MOB and the boat than is absolutely necessary.

By the end of our day on the water, we had refined a process that we believed to be an effective method to get a casualty back alongside in a shorthanded situation as quickly as possible. This process worked for us on the day, with the boat and crew we had, and in those conditions. For another boat and crew, with different conditions, the process might vary.

Finally, this manoeuvre requires practice and the ability to adapt on your feet. What is apparent is that trying it out for yourself and making decisions about what to do ahead of a real emergency will save valuable minutes, prevent unnecessary mistakes or confusion, and greatly increase your chances of safely recovering a man overboard.

YM'S SHORTHANDED MOB PROCESS



SHEET OUT AND TACK

Completely let off the mainsheet and crash tack onto the headsail to stop the boat



COME ALONGSIDE

Approach the MOB with main eased and genoa backed. You may need the engine to get there



MOB BUTTON AND START ENGINE

Press your MOB button on the chartplotter, perform a line check and start the engine



GET ATTACHED

Prepare the boathook and a retrieval line and bring the casualty alongside, attached to the boat



DAN BUOY

Throw your dan buoy to the casualty to help keep them visible



TRY AGAIN

If you miss first time, motor away, make a distress call and return under engine with furled headsail

KIT USABILITY

It should go without saying that safety-critical kit for a MOB situation should be ready to go at a moment's notice. Checking this should be a part of your leaving harbour checks. Throughout the course of the day there were a few things we noticed that were snagging points.



Some dan buoys – offshore variants – have an extending pole. These are often the twist-to-lock type. Are you familiar with your dan buoy? We certainly threw ours over several times during the day without extending the pole or failing to lock it off once extended. Also, the dan buoy flag should be rolled around itself (above) and not around its pole, otherwise it will not unfurl once in the water, reducing its use as a visual aid.

Boat hooks go from a useful tool to essential safety kit in these circumstances, as we found it the easiest way to establish a link with a MOB close to the boat, especially if they were unconscious. A boat hook that is shoved at the bottom of a locker will be hard to reach in a hurry. It is easier if it is stowed on deck within easy reach of the helm, and if it's telescopic it needs to be easy to use and lock off.

EXPERT VERDICT



James Stevens,
former RYA chief
examiner, says...

'It is a good plan to stop the boat as soon as possible by tacking or gybing into the heave to position

upwind of the casualty. A gybe is quick for yachts going upwind but more dangerous if there is any crew left on board. Use the engine to drift accurately down to the MOB. If that fails throw over the yellow stuff and go into the quick stop or reach-tack-reach. If you can see the MOB, don't go below, sail back keeping eye contact.

If you can't see the MOB, press the red button on the ship's radio and select the MOB function. If your DSC radio is connected to a GPS the CG will know your yacht MMSI, its position and that you have a MOB. Reply when you can but don't waste time spelling your boat name. Good boat handlers have a greater success rate.

5 WAYS TO GET A CASUALTY ON BOARD

Yachting Monthly has tested many different MOB recovery methods. Here are the main options



1 LADDER

If it isn't too rough and the casualty is conscious, a bathing or rescue ladder is a quick way out of the water. In rough weather, going to the stern is a bad idea and a casualty may be too weak to climb out.



2 HALYARD

Winching someone up a mast is hard work. Winching a casualty in wet clothing out of the water may be impossible using just a halyard and manual winch. A powered windlass or winch might be enough.



3 MECHANICAL PURCHASE

For manual winching, a purchase is essential. If you have snap shackles on your mainsheet, use this off the boom.



4 ATTACHING THE MOB

Keeping hold of the casualty is essential. A boat hook helps establish contact, but a line to the lifejacket is best.



5 MOB MAT OR JONBUOY

If the casualty is unconscious or has been in the water for any length of time, a horizontal lift is preferable, as a loss of hydrostatic pressure can result in a fatal drop in blood pressure. The MOB mat works well, as does an inflatable Jonbuoy.



& FIND WHAT WORKS FOR YOU

As is often the case, a surprising number of people have safety kit they have never actually used in practice. Whatever method you intend to use, ensure it is suitable for you, your boat, and your crew.

SHORTHANDED MOB

The view from the water

Though the focus of our test was on getting the boat back to a casualty, there were some points of note that are worth flagging up should you find yourself in the drink. We had three sailors for the day, Luke Hamble, Point Sailing School Skipper, *Yachting Monthly* editor Theo Stocker, and me. Luke needed to stay with the boat for insurance purposes and with Ed pulling rank, I was deemed the guinea pig for the day.

There is little you can do from the water to improve the situation for yourself. Assuming you were wearing a lifejacket (which hopefully you were, as it does make a big difference in the water) then you can at least wave to try and stay visible from a distance. There are different schools of thought on boots but I found it well worth removing your sailing boots as these tend to be buoyant and will force your feet to the surface. This makes it much harder to wave or use your hands. Also, keeping your boots on will just be that much more weight when it comes to hauling yourself out (or being hauled out) of the water.

Sea state for our test was relatively benign but even with the slight chop on the Solent it was clear that it would not take much bigger waves for them to become an issue, particularly if you are trying to shout. Your feet will act as a sea-anchor and your lifejacket as a sail so that you will be facing into the wind. Any lifejacket worth its salt

Making yourself as visible and as loud as possible will help those left on board



will include a decent sprayhood, a necessity if you are considering any night sailing or passages in windier weather.

We discovered over the course of the day that if you are down below, even knowing we were planning on doing MOB drills, it was almost impossible to hear the splash as a MOB hits the water. With just two on board, you are reliant on the person below hearing you, so should you be

unfortunate enough to go over the side then make as much noise as you can seems important, though this goes against the advice for acclimatising to cold water shock. Having done the drill on a number of occasions I can safely say that, should I ever go over the side in these circumstances the first thing I will be reaching for is the whistle on my lifejacket.

Clearly an automatically inflating jacket would be important, but even if I had a manually inflating jacket on, in most conditions I would be getting a whistle in my mouth before worrying about anything else.

Finally, it is surprising just how far away the boat can get from you in a short space of time. And with waves, when you are at water height, even in a short chop, I lost sight of the boat on a number of occasions. With a RIB standing by, and a boat that knew what to expect and was coming back for me, I could still feel a degree of unease creep in as I watched the boat sail off into the distance. It was easier on the second attempt. We all know we think more clearly and behave smarter when we are not panicking, and I would advise anyone who had not simulated a MOB to do so in a controlled manner, with safety coverage on a calm day.

