

7 MAN OVERBOARD PROCEDURES

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Overview

Man Overboard (MOB) is an extremely serious and potentially fatal event that every CRV crew could experience at least once in their career. A well-trained Skipper and crew have a far greater chance of succeeding at recovering the person alive. (See Module Personal Safety – Sea Survival)

It is vital that drills are conducted frequently with regular crew members. It is a legal requirement for the Skipper or designated crew member to brief any new crew or passengers on the procedure, and as with other emergency procedures to record training drills in the vessel log / SSM manual.

Primary Actions

The immediate response taken by the crew member witnessing a MOB or realising that a crew member is missing;

- Shout.
- Throw.
- Point.

Shout

Shout "*Man overboard*". This will alert all crew to the emergency situation.

Throw

Deploy a 'Dan buoy', life ring or similar to provide a floating datum. It does not matter if the person is visible at this time or not. The person in the water may see the flotation device/marker and be able to get to it, if not it serves as a reference point for manoeuvring the boat back to the MOB.



CRV crew wear lifejackets at all times while underway, so the primary function of any equipment thrown in a MOB situation is not necessarily additional flotation, but as a reference day or night.

The equipment thrown should be;

- Highly visible (brightly coloured / reflective tape / flag attached)
- Have a light / strobe attached.
- Be able to be deployed quickly.
- Be affected as little as possible by the wind.

The same equipment would be suitable for use as a floating datum in any subsequent search. (See Module Search Techniques)

Point

The crewmember who shouted the alert now points continuously with outstretched arm at the MOB (if still visible) or Dan buoy / marker, ensuring that visual contact is maintained. This will also indicate the MOB's location to the Skipper / helm. It is imperative that this crew member does this and nothing else until relieved from this duty by the Skipper.

Secondary Actions

- Initiate turn.
- Press MOB button on GPS.
- Transmit distress call by VHF (if necessary – see notes on Distress Call).
- Assess, approach, and brief & delegate crew on appropriate actions for recovery.

Initiate Turn

In large vessels a common practice is for the initial turn to be made towards the side which the MOB fell from, to reduce the chances of the vessels propellers striking the MOB. The size of most CRV's means that the crew member on the helm is unlikely to respond quickly enough for this to be relevant. Given a reaction time of 3 seconds from the person falling overboard to the helm being put over;

- At 6kts the vessel will have travelled 9m
- At 12kts the vessel will have travelled 18m

Initiating an immediate turn to avoid 'propeller strike' is not only irrelevant for most CRV's, but a potential hazard - risking injury to other crew or even a second MOB.

There are different methods that can be employed to turn the CRV back towards the MOB. Regardless of which method is employed one thing that the crew member on the helm must be able to establish is the reciprocal course. The reciprocal of any course is found by adding or subtracting 180°.

- For courses less than 180° add 180°.
- For courses more than 180° subtract 180°.

For example;

- Course 050° reciprocal is $050^{\circ} + 180^{\circ} = 230^{\circ}$.
- Course 315° reciprocal is $315^{\circ} - 180^{\circ} = 135^{\circ}$.



The design of many marine compasses allows the helmsman to see the course the vessel is on, and the reciprocal at the same time. Another useful aid is a reciprocal table displayed by the helm position.

N				NE				W				SE			S			
000	010	020	030	040	050	060	070	080	090	100	110	120	130	140	150	160	170	180
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	000
S				SW				W				NW						N

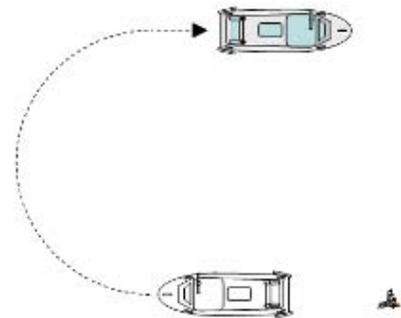
Methods for Turning

This module describes three commonly used methods that can be used to turn a vessel back towards a MOB.

- Williamson Turn.
- Simple Turn.
- Stop / Slow & Turn.

Williamson Turn

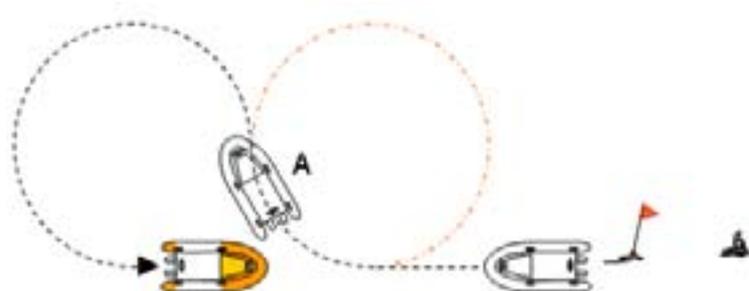
The Williamson Turn was developed primarily for large vessels, whose turning circle was such that the MOB would almost certainly be out of sight by the time the vessel had turned around. The size of the turning circle also meant that merely turning 180 might put the vessel on a reciprocal course, but it would be nowhere near its reciprocal water track. (Diagram opposite)



To execute a Williamson Turn;

- The same speed is maintained throughout the manoeuvre until the vessel is on its reciprocal course.
- Vessel is first turned until the heading is approx 60° - 70° from the original course.
- The helm is then reversed with the same amount of helm applied the opposite way as was used in the initial turn, (for example one full turn of the wheel to starboard then back to midships and one full turn of the wheel to port) until the vessel is on the reciprocal of the original course.
- The vessel turns and initially describes $\frac{1}{4}$ of a circle, when the helm is reversed it then describes $\frac{3}{4}$ of an identical sized circle.

What needs to be known for this method to be fully effective is at what point on the initial turn is the helm reversed?



This can only be established through practice and training.

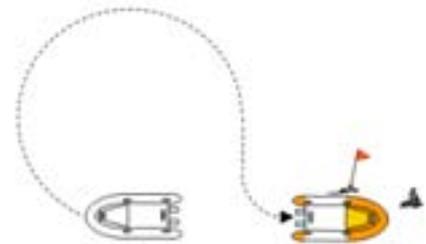
Simple Turn

An alternative method is;

- Maintain or reduce speed.
- Turn the vessel around.
- Use the still visible wake / floating datum to turn onto the reciprocal water track.

While simpler than a Williamson turn, this method depends heavily on the wake and / or floating datum being visible. Both may be rapidly lost from sight in bad weather especially at night or in poor visibility.

The size of the turning circle will determine at which point the vessel returns to cross its original water track. With a large turning circle there is a small, but potential risk of running over the floating datum or even MOB if reference to either is lost during the turn.



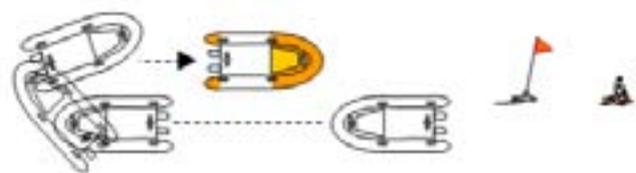
The need to keep a visual reference on the floating datum or wake means that this method needs a relatively small turning circle to be effective.

Stop / Slow and Turn

Unlike the previous two methods the first step is to slow down to a near or full stop, then;

- Turn short around.
- Motor ahead on the reciprocal course
- The manoeuvrability of most CRV's means they can be turned in little more than a boat length. As the vessel was slowed down without altering course, the wake will be clearly visible off the stern (lining up the centre of the residual wake and the floating datum means there isn't a need to calculate a reciprocal heading)

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Whatever method is used in a MOB situation the helmsman must alert the other crew members prior to any manoeuvre.



- Any manoeuvre should be preceded by a loud and clear warning from the helmsman. For example; *'Turning starboard!'*
- Followed by a pause of 1-2 seconds before initiating the manoeuvre.

This is a practice which should be a Standard Operating Procedure at all times, not just in a MOB.

MOB Button

The MOB function on the CRV's GPS should be activated at the first opportunity; this will provide a back up to the floating datum, and automatically displays bearing and distance to the MOB waypoint.

Distress Call

Sending out a distress call will ensure that assistance will be available if it becomes necessary. It can always be cancelled should the situation be resolved.

Whether the Distress call is sent immediately or at a later stage is at the discretion of the Skipper.

The average CRV carries four crew as its normal complement, and in the event of a MOB there will be two crew needed to help in the recovery of the MOB, and one on the helm. While turning around, sighting the Mob, then preparing to approach and recover, sending a Distress Call may be an unwarranted distraction.

In the event of an un witnessed MOB, or where the CRV fails to locate the MOB a then Distress Call must be made.

If the MOB is lost from sight, a structured search must be initiated. Being unable to locate a fellow crew member will be highly stressful for all aboard. For the search to be successful correct procedures must be followed. (See Module Search Techniques)

Crew Tasks

Having sighted the MOB and assessed the situation, the Skipper or crew in charge (Skippers are not immune to falling overboard) will allocate positions to the crew and brief them on appropriate recovery actions. (See Module Victim Recovery)

Post Rescue

The following points must be considered after rescuing the MOB:

- Cancel any Distress Call.
- Continue to monitor the patient's condition – ABCs and treat for shock as required. (See Module Victim Recovery)
- Complete the necessary Unit and Maritime NZ forms as required for a MOB incident.