

COASTAL PERSONAL SAFETY RACE CLINIC





SKIPPER TRAINING NZ
- PRACTICAL MARITIME TRAINING -



Coastal Personal Safety

The course content is proudly supported by:

“Take your maritime career to the next level,
helping you succeed every step of the way.”



Course Outline:

- ❖ Safety Ethos & Safety Culture
- ❖ Skipper & Crew Responsibilities
- ❖ Safety Briefings & Crew Training
- ❖ Safety Equipment & Life Jackets
- ❖ Crew Overboard
- ❖ Hypothermia
- ❖ Emergency Situations
- ❖ Introduction to Life Rafts



Section One

- ✔ Safety Ethos
- ✔ Skipper & Crew Responsibilities
- ✔ Safety Briefings
- ✔ Crew Training



Why are you here?

▶▶▶ The safety of a yacht and her crew is the sole and inescapable responsibility of the skipper who must do their best to ensure that the yacht is fully found, thoroughly seaworthy and operated by an experienced crew who are physically fit to face bad weather*.

SKIPPER & CREW RESPONSIBILITY

* Yachting New Zealand Safety Regulations

What does a Safety Ethos mean to us?

Safety: the condition of being safe from undergoing or causing hurt, injury, or loss

Ethos: the distinguishing character, sentiment, moral nature, or guiding beliefs of a person, group, or institution

Safety Ethos

What are my responsibilities as the Skipper?

- ❖ Everything!
- ❖ Rules of the road
- ❖ Boat preparation
- ❖ Crew preparation
- ❖ Navigation
- ❖ Operation of the vessel
- ❖ Look after the crew!

Skipper Responsibilities



Its important to nominate a “Second in Charge” to replace the Skipper if something happens to them. They must be trained.

What are my responsibilities as a crew member?



Crew Responsibilities

- ✔ Contribute to a positive safety culture
- ✔ Learn about the vessel & equipment
- ✔ Speak up if something is wrong / unsafe
- ✔ Disclose medical information
- ✔ Look after your energy and fluid intake
- ✔ Look after the crew!
- ✔ Keeping a proper look out
- ✔ Manage fatigue
- ✔ Wake skipper when required
- ✔ Prepare for going on watch such as:
 - ✔ Suitable clothing
 - ✔ Sea sickness medication (if required)

We are heading off
on a coastal passage.

What training should we under
take prior to the voyage?

Knowledge

|

Training

|

Drills¹⁰



Knowledge

- ✓ Navigation
- ✓ Passage planning
- ✓ Weather
- ✓ Rules of the road
- ✓ Vessel hazards

Courses

- ✓ Coastal Personal Safety
- ✓ Marine Medic
- ✓ Radio Course



Crew Training

- ✓ Emergency equipment
 - ✓ Location
 - ✓ Operation
- ✓ Crew maneuvers
- ✓ Sail handling
- ✓ Reefing
- ✓ Use of the engine
- ✓ Storm sails



Drills

- ✓ COB
- ✓ Fire
- ✓ Hull breach
- ✓ Abandon vessel
- ✓ Medical emergency



Onboard Hazards

What hazards do we have onboard that we should brief?

- ❖ Hazardous zones
- ❖ Booms / Spinnaker poles
- ❖ Winches and jammers
- ❖ Open hatches
- ❖ Running rigging
- ❖ Gybing & downwind sailing
- ❖ Sail handling manoeuvres
- ❖ Slippery and angled surfaces
- ❖ Sail clews and flogging sheets

When and how will you deliver the brief?

Crew Briefings



What should be included in a crew brief?

- ❑ Passage overview
- ❑ Weather – current and expected
- ❑ Watch keeping routines
- ❑ Domestic operations (heads, galley, gas)
- ❑ Bilge pump and engine operation
- ❑ VHF and distress signalling
- ❑ Onboard hazards (winches, rigging etc)
- ❑ Safety equipment (location & operation)
- ❑ COB Button
- ❑ Safety drills
- ❑ Look out duties
- ❑ Delegation of responsibilities and roles

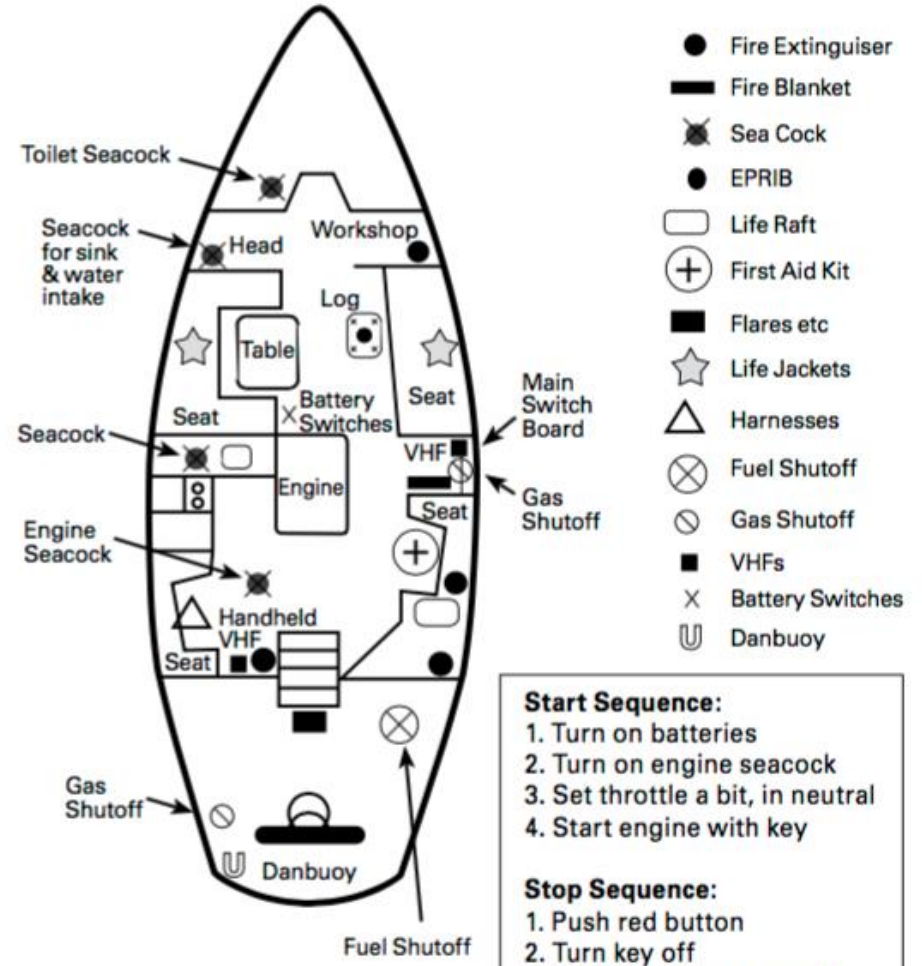
Crew Briefings





Yacht Manual Yacht Layout

Yacht Diagram Example



- Start Sequence:**
1. Turn on batteries
 2. Turn on engine seacock
 3. Set throttle a bit, in neutral
 4. Start engine with key
- Stop Sequence:**
1. Push red button
 2. Turn key off
 3. Turn off engine seacock
 4. Turn off batteries

Credit: Peter Tocker

Thanks to Brian Petersen (Ran Tan 2) for allowing us to use his Yacht Manual as an example.

What safety equipment should be on the upper deck?

- ✔ Life raft
- ✔ Life rings
- ✔ COB equipment
- ✔ Flares
- ✔ EPRIB
 - ✔ PLB's / AIS PLB's
- ✔ Jackstays & tethers
- ✔ Anchor
- ✔ Nav lights
- ✔ Cockpit drains
- ✔ Wash boards
- ✔ Guard rails / lifelines
- ✔ Emergency steering
- ✔ Anything else?



What safety equipment do we have below deck?

- ✔ Life jackets / PFDs
- ✔ Harness
- ✔ Grab bag
- ✔ Fire extinguishers
- ✔ VHF radio
- ✔ First aid kit
- ✔ Thru hull fittings
- ✔ PLB or EPIRB
- ✔ Flares
- ✔ Bilge pumps
- ✔ Navigation charts / pubs
- ✔ Navigation equipment
- ✔ Stowed anchor



What's in yours?



Grab
Bags



Key Points

- ✔ Safety culture
- ✔ Skipper & crew responsibilities
- ✔ Do good safety briefings & training
- ✔ Know your safety equipment



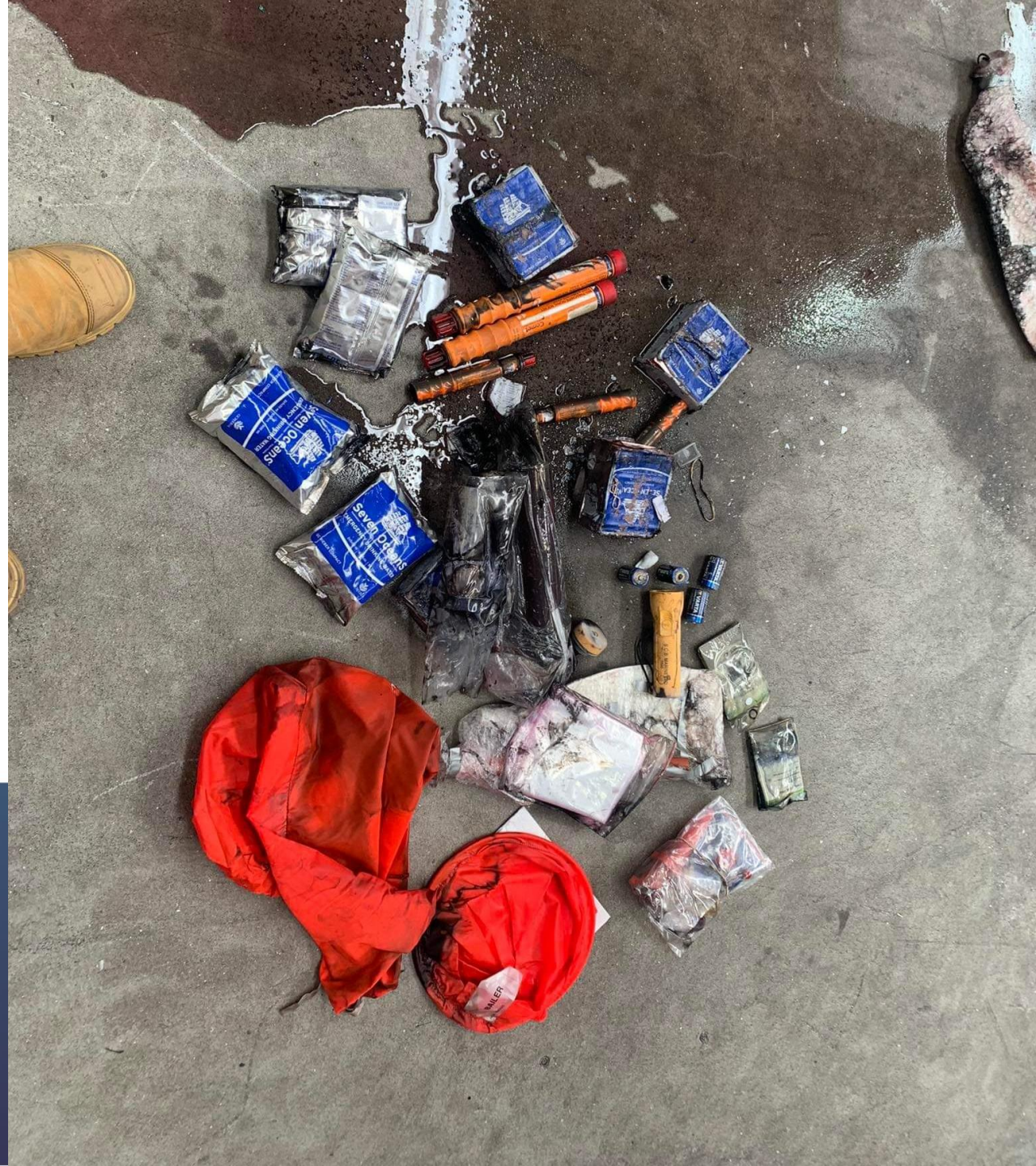
Section Two

- ✔ Safety Equipment Maintenance
- ✔ Life Jackets
- ✔ Harnesses
- ✔ Jack Stays & Strong Points



- ❑ PFD's – 1 Year
- ❑ Inflatable Dan/Jon Buoys & certificate – 1 Year
- ❑ Life rafts – OEM specifications
- ❑ Flares – 4 Years
- ❑ EPIRB / PLB – 5 to 10 Years
- ❑ Fire Extinguishers – 1 Year (tagged)

Safety Equipment Maintenance



Life Jackets

- ✔ When should we wear them?



Life Jackets



Life Jackets & Harnesses

- ❑ PFD vs Lifejacket
- ❑ Levels of buoyancy
- ❑ Auto v Manual

PFD v Life Jacket



How can we activate our PFD?

- ✔ Auto
- ✔ Manual
- ✔ Oral inflation

Activation



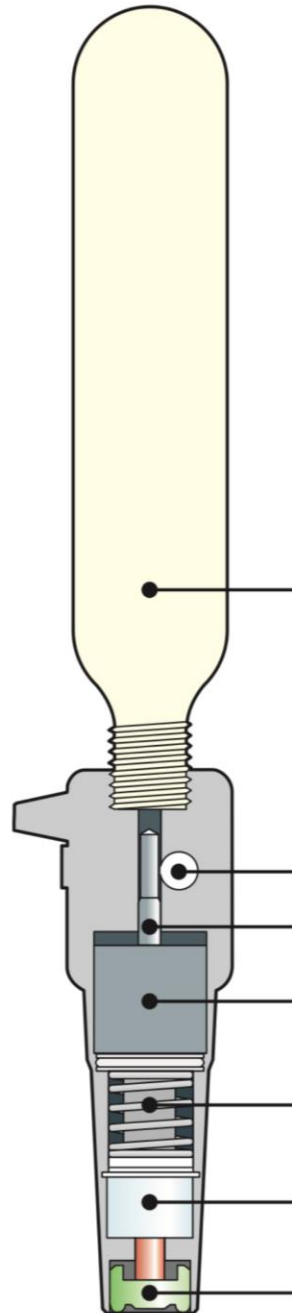
Bottle and autohead ready to go



Automatic Options

- ❖ Hydrostatic
- ❖ Dissolvable Tablet
- ❖ Paper element

Activation & Servicing



CO₂ cylinder

CO₂ inlet hole to lifejacket

Pin

Plunger

Compressed spring

Water reactive paper element

Green (unfired) indicator





Life Jacket Re-Arm Kits



Harnesses & Tethers



Harnesses & Tethers





Tether Unclip



Tether Unclip

Jacklines

- ❖ Best material to use?
- ❖ Where should they be attached?
- ❖ Minimise chance of going over the gunwhale



Jacklines & Strong Points



Key Points

- ✔ Know your equipment
- ✔ Brief your crew how to use it
- ✔ Multiple activation methods
- ✔ Run jack stays centrally



Section Three

- ✔ Distress Signalling Equipment
- ✔ Crew Over Board
- ✔ Hypothermia & Cold Water Shock





What does Distress mean?

How can we signal we are in Distress?

Signaling Distress

- ✓ Flares
- ✓ EPIRB
- ✓ PLB
- ▶▶▶ ✓ EPIRB
- ▶▶▶ ✓ AIS
- ✓ Radio (VHF / HF) DSC & Voice
- ✓ Waving of the arms
- ✓ Morse Code (Light and Sound)
- ✓ Continuous sounding of a horn
- ✓ Gun fired at 1 min intervals
- ✓ Orange "V" Sheet

Signaling Distress

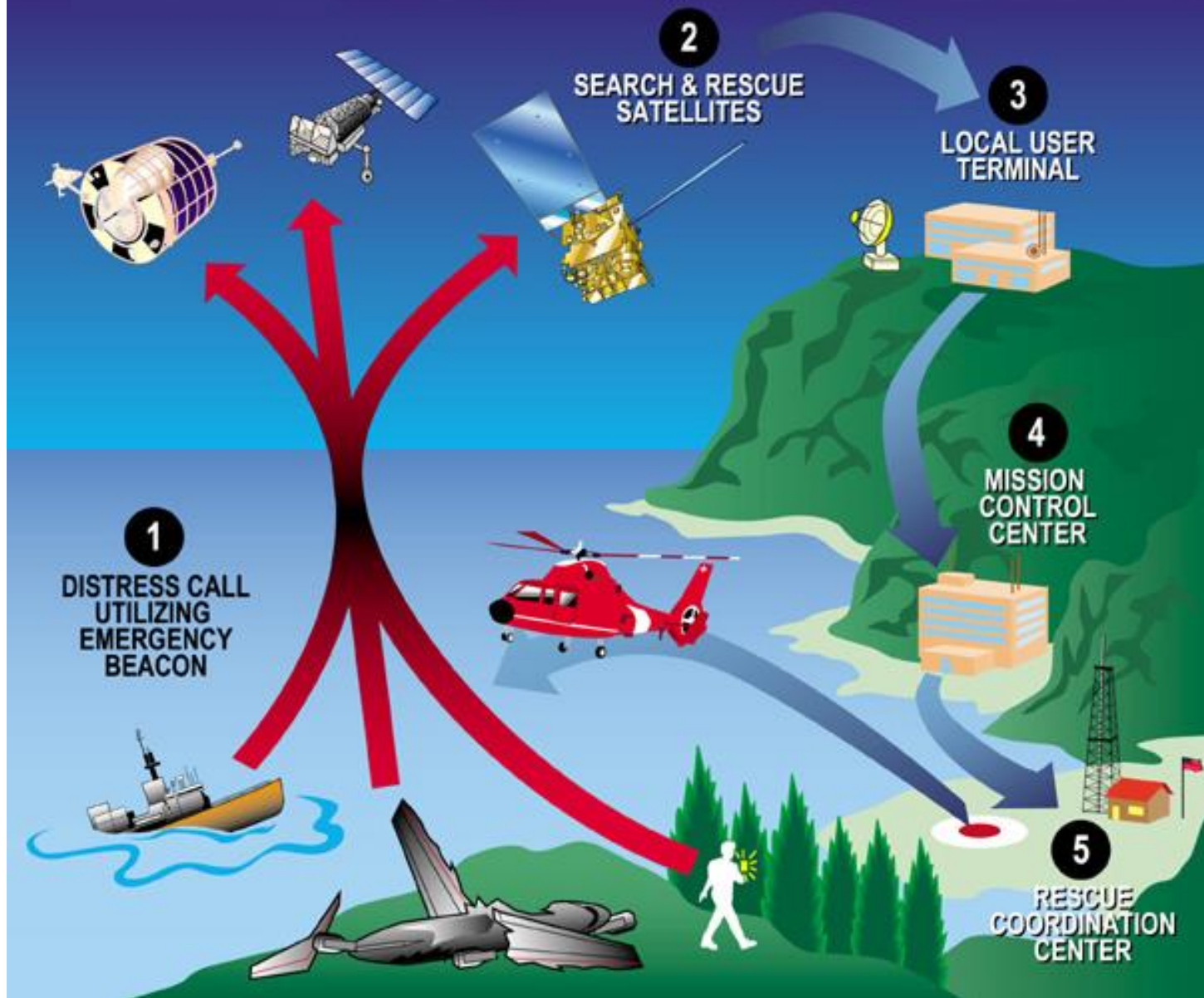


LED & Laser Flares

✓ EPIRB & PLB



COSPAS-SARSAT System Overview

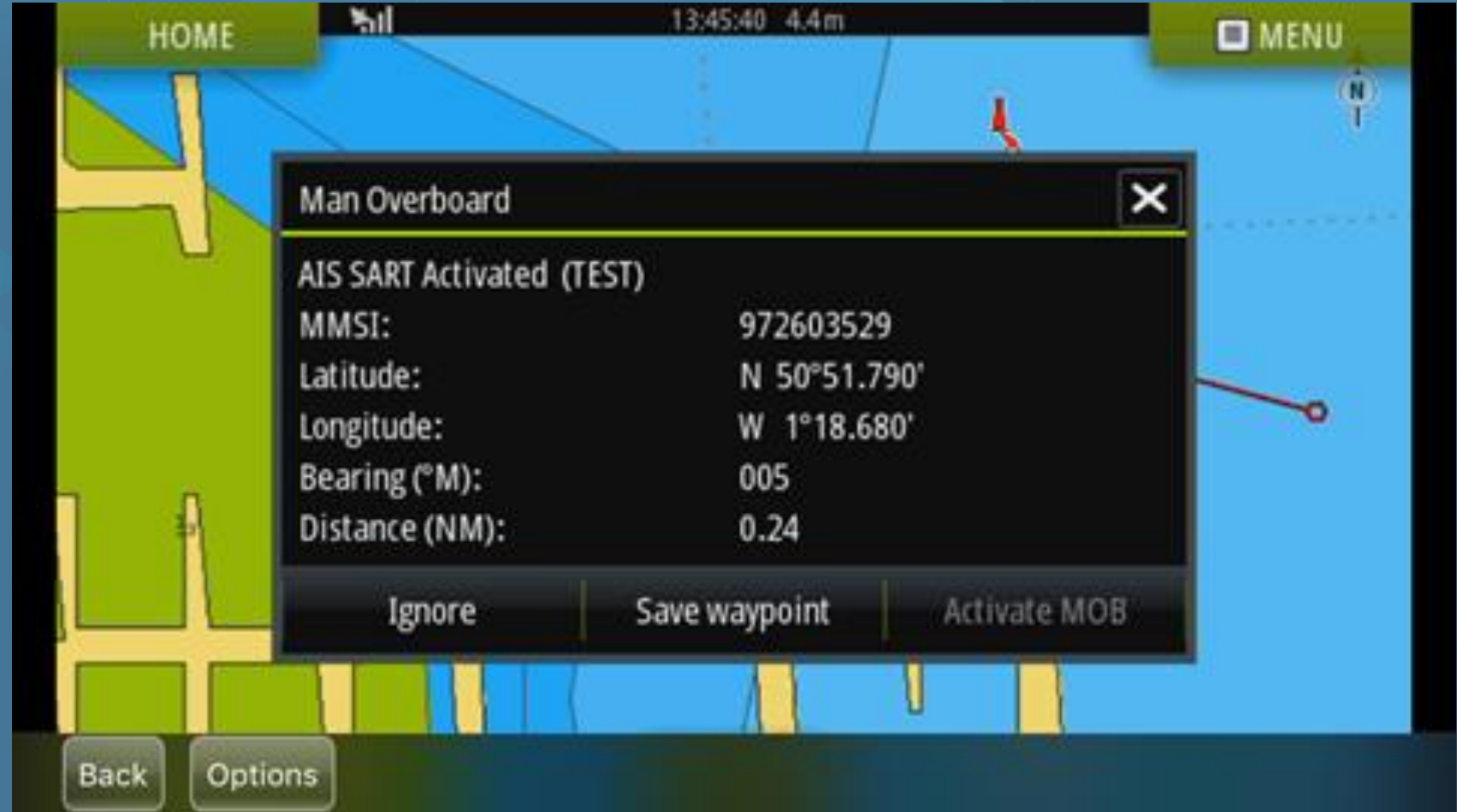


Where does the EPRIB Signal Go?



Where does the EPRIB Signal Go?

❖ AIS Personal Locator Beacon



- ✓ **Combined AIS EPIRB**
 - ✓ AIS EPIRBs are satellite distress beacons (EPIRBs) with an integrated AIS transmitter
- ✓ **Combined AIS PLB**
 - ✓ 5-year battery life
 - ✓ Over 24 hours of Operational Life
 - ✓ 406 MHz Distress Signal
 - ✓ 121.5 MHz Local Homing Signal
 - ✓ AIS (Automatic Identification System) Locating Signal



- ✓ Digital Selective Calling
- ✓ VHF
- ✓ Channel 16 hailing & distress
- ✓ M'aidez (Help me, Mayday)
- ✓ MF/HF
- ✓ Sat coms
- ✓ Maintain a Dual Watch



❖ **What Channel or Frequency would you use?**

VHF 16



Mayday x3

Identity (Name x3 Call sign once)

**Mayday
(Name & Call Sign)**

Position

Problem

People on board

Pertinent information

Over



✔ Group Activity

You come on watch and notice a significant amount of sea water sloshing around above the floor boards. On investigation you find the lower rudder bearing has failed and water is leaking in rather quickly. You are unable to stem the leak, and its clear your vessel will sink.

What message would you send by voice on a radio? Use your own vessels details. (Name, Call Sign etc etc)



Crew Over Board – 4 Stages

- ✔ Initial Actions
- ✔ Returning to the COB
- ✔ Recovering the COB onboard
- ✔ Post recovery actions

⚙ Equipment – What have you got onboard?

Crew Over Board

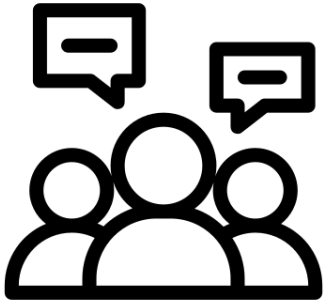




Initial Actions

What are our initial actions:

- ❖ Shout, Point, Throw, Push MoB Button, Mark GPS
- ❖ Stop/slow the boat
- ❖ Make distress call
- ❖ Check no sheets in the water – start motor
- ❖ Have throw line prepared



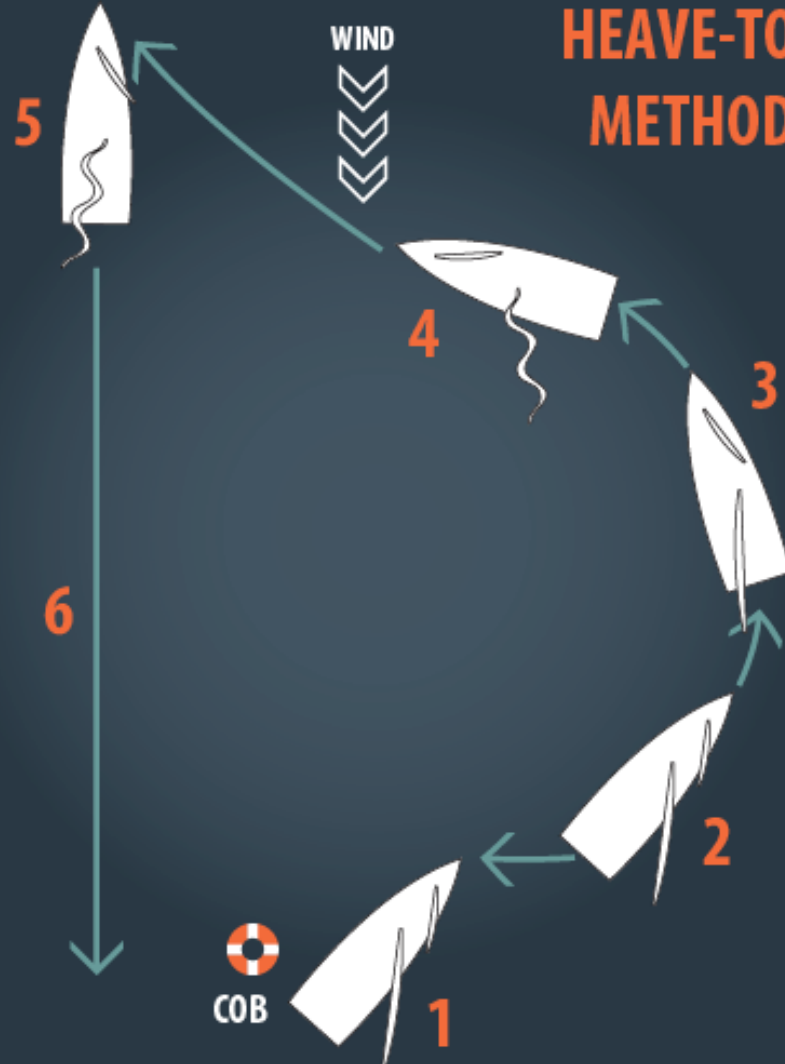
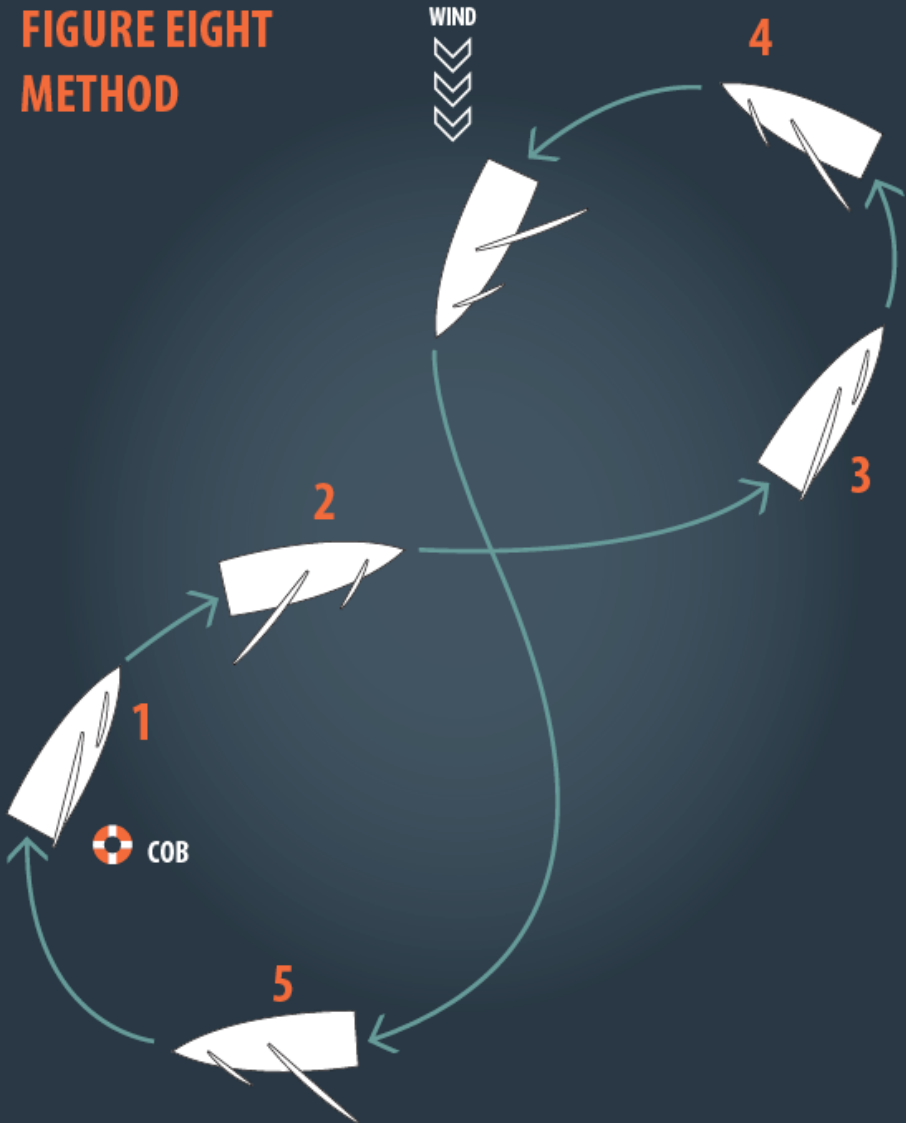
- ⚙️ What techniques do we have available to us
- ⚙️ What are our safety concerns?

Returning to
the COB



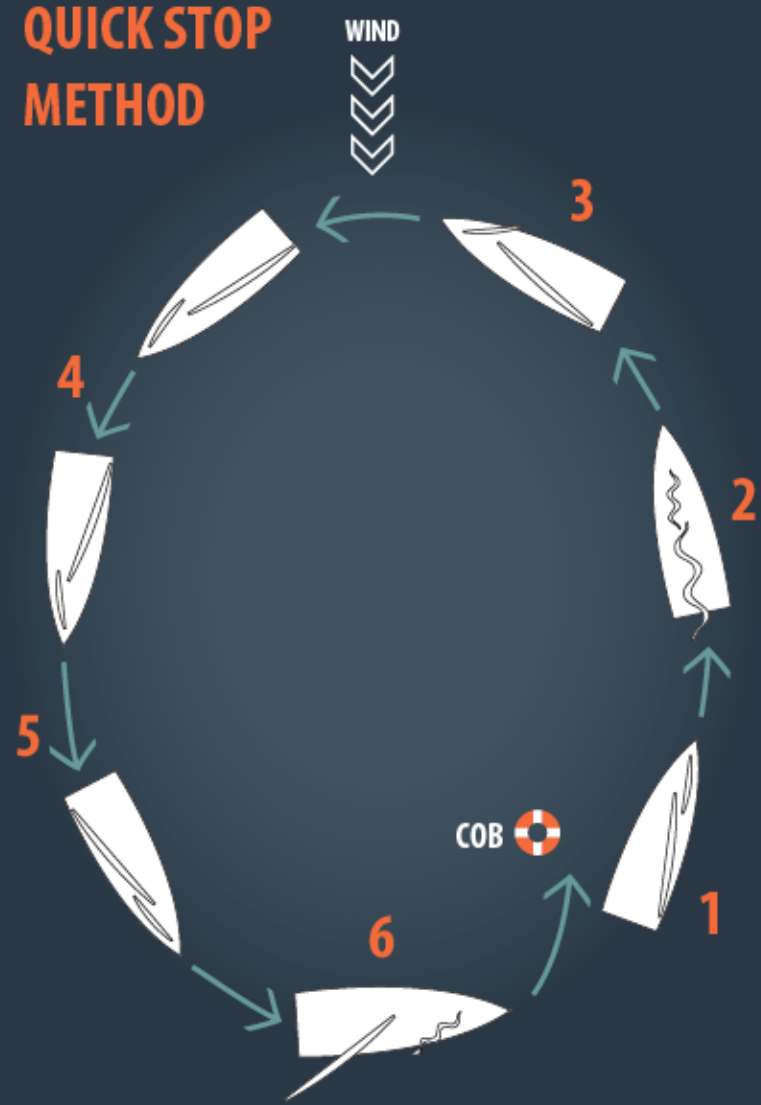
Monohull

FIGURE EIGHT METHOD

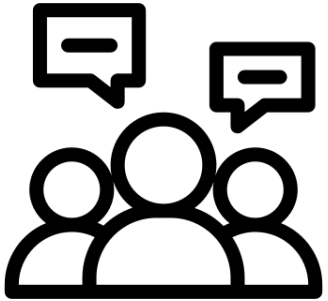
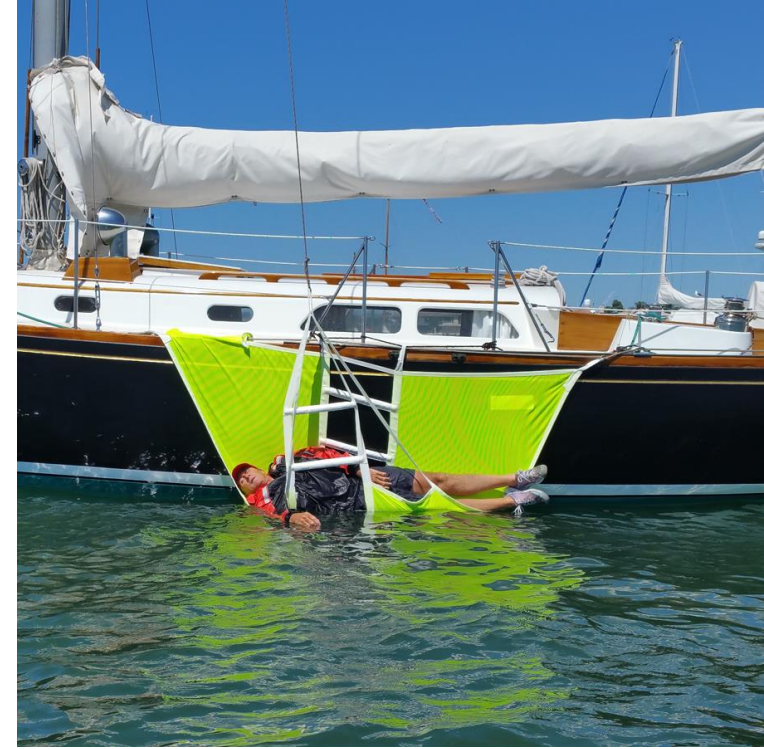


HEAVE-TO METHOD

QUICK STOP METHOD



⚙️ What techniques do we have available to us?



Recovering
the COB



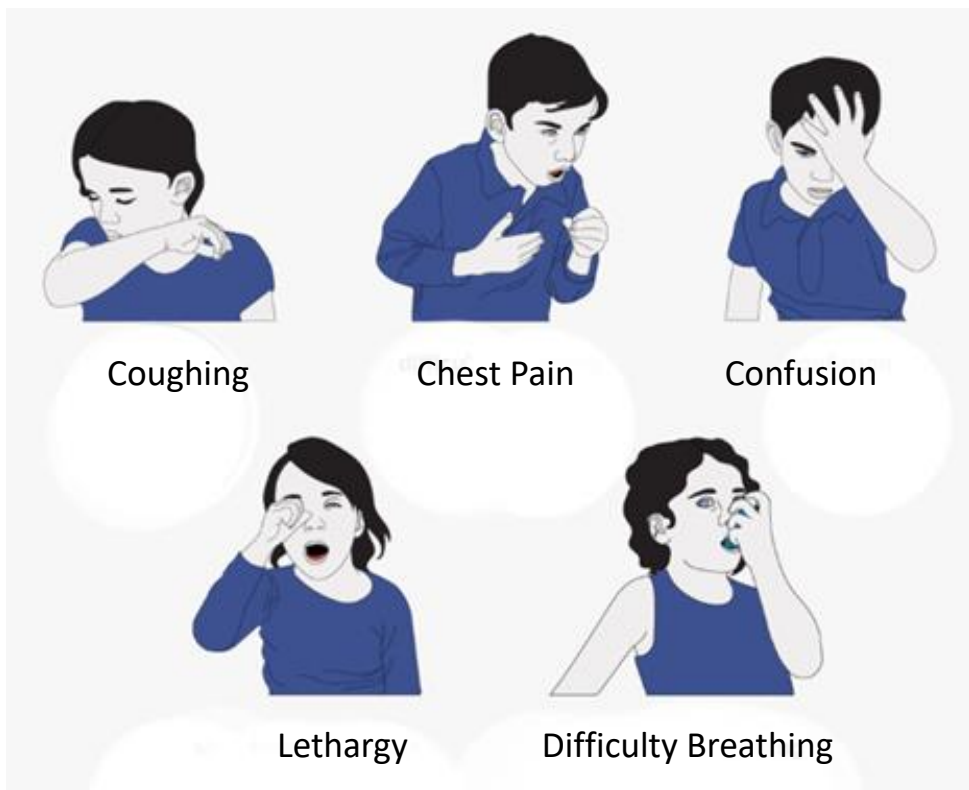
Now that we have recovered our COB, what are we concerned about?

- ❑ Cold
- ❑ Shock
- ❑ Drowning



Post recovery
actions





Secondary Drowning:

- ❖ Secondary drowning occurs when you inhale even a small amount of water into your lungs. Anytime a liquid gets into the lungs, it can cause inflammation and irritation, which makes breathing difficult.
- ❖ Symptoms may include:
 - coughing, vomiting, fever, diarrhoea, difficulty breathing, chest pain, and lethargy.

Secondary
Drowning



What if you're the person in the water?

- ✔ Stay calm
- ✔ Use your survival drills
- ✔ Hold up any bright coloured clothing
- ✔ Conserve energy
- ✔ Activate your AIS beacon



COB for performance and fully crewed vessels?

⚙️ When running fast, bear away and make a decent alteration of course, the change can be easily seen on the plotter.

Mark it.



COB at Speed

The body's physiological response to being immersed in cold water.

- ✓ Anything below 15°C is defined as cold water and can seriously affect your breathing and movement

Cold Water Shock

1 - 10 - 1

Cold Water Survival Principle

1 Minute

to control your breathing



10 Minutes

of meaningful movement for self rescue



1 Hour

until you pass out from hypothermia



Hypothermia may occur due to unavoidable circumstances but in many cases it can be prevented.



When heading out to sea ensure:

- Adequate equipment and protection from cold, wind and moisture. Wear appropriate clothing, stay dry and be aware of any potential for ‘wind chill’
- A regular intake of food and non-alcoholic drinks. Eat appropriate energy food such as fruit or warm sweet fluids, if available, and drink regularly

Hypothermia

✔ Prevention

What is good and not so good to wear?

- ❑ Wear layers
- ❑ No cotton
- ❑ Gore-tex will keep you dry, but not warm

Clothing



Hypothermia Symptoms & First Aid

Early Symptoms



shivering



fatigue



loss of
coordination



confusion or
disorientation

Late Symptoms



no
shivering



blue
skin



slowed pulse/
breathing



loss of
consciousness

First Aid

- ✓ Move person to a warm place (below decks if possible)
- ✓ Remove wet clothing
- ✓ Warm the centre of the body first
- ✓ Give warm drinks if conscious
- ✓ Wrap body and head in a warm blanket
- ✓ Administer DRS-ABCD if unconscious

Key Points

- ✔ Know how to use your gear!
- ✔ Practice COB
- ✔ Dress well



Section Four

- ✔ Emergency Procedures
- ✔ Life Raft Introduction





Emergency Situations





What are we going to do?

Wear your life jacket!

Emergency
Strategies

- ✓ Stop
- ✓ Assess
- ✓ Plan / Prioritise
- ✓ Act



What can we do?



Have we got a plan?



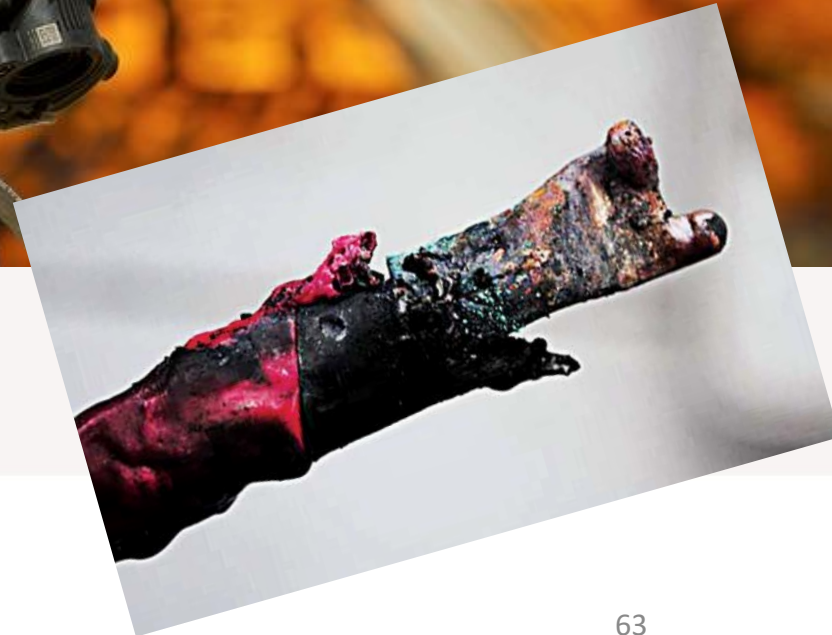
- ✔ Seek refuge / shelter
- ✔ Change course
- ✔ Call for help
 - ✔ Pan Pan
 - ✔ Mayday
- ✔ Proceeding to Anchor

Emergency
Strategies



Emergency Situations

Fire











Fire Blanket



Fire fighting
Using a fire blanket



www.OTEN.edu.au
Maritime Studies

Holing Flooding Grounding



How can we stem the flow of the leak?

What equipment do we have to remove water?

- ❖ Plug it with anything!
- ❖ Pumps, motivated person with a bucket

Flooding



How can we plug the hole?

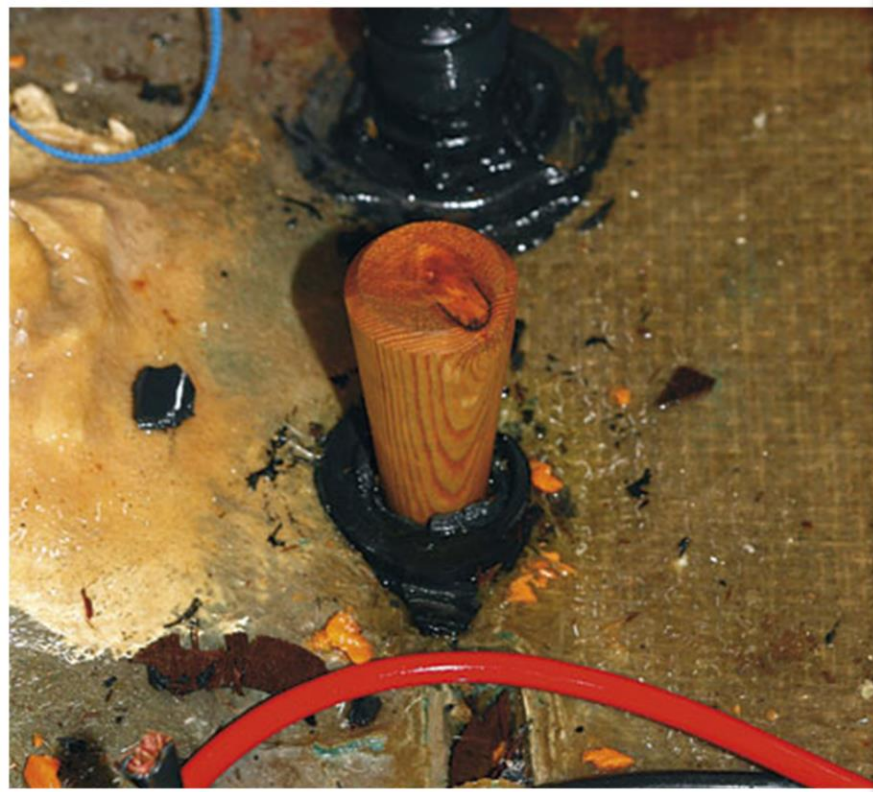
- ❗ With anything – wooden bungs, squabs, life jacket, or even a carrot!

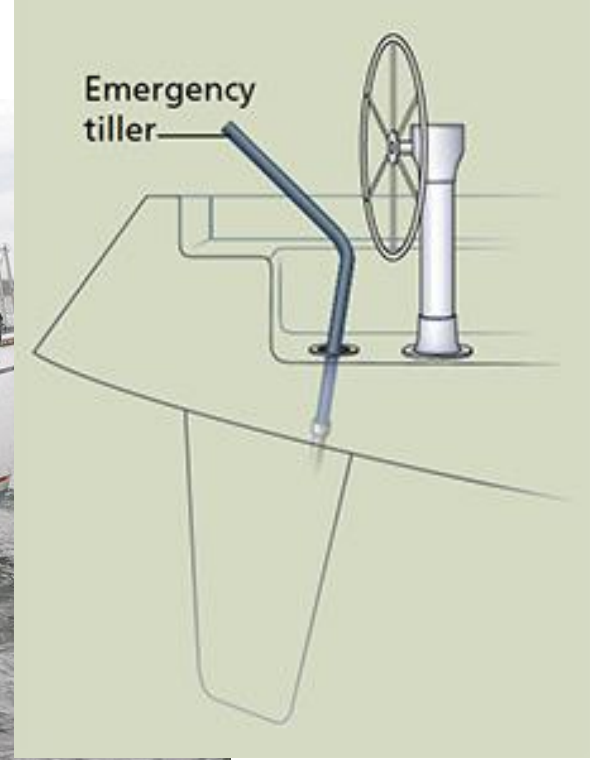


Holing









Steering Failure





Abandoning Ship

When do we get off?

Who makes the decision?





Abandoning Ship

Launching and inflating your raft

Where should we board if its rough?

Now What?

- ✔ Cut, Stream, Close, Maintain
- ✔ Vent for CO² every 30 mins
- ✔ Check equipment
- ✔ Dry out the raft
- ✔ Post a look out



Once in the
Life Raft



Reporting of Incidents

- ✔ Maritime New Zealand have specific definitions for:
 - ✔ Events, Incidents, Situations and Serious harm
 - ✔ Almost any kind of incident must be reported
 - ✔ Can be reported online or in paper form
- ✔ Organising Authorities need to know as well.

Key Points

- ✔ Emergency Procedures
- ✔ Have a Plan! Practice
- ✔ Know your equipment





COASTAL PERSONAL SAFETY RACE CLINIC



ROYAL NEW ZEALAND YACHT SQUADRON





COASTAL CLASSIC 2024

