

Trainee Crew

Pre-Sea Training Course



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1 Learning outcomes

It is a requirement of the South African Merchant Shipping (National Small Vessel Safety) regulations of 2007 that skippers/coxswains ensure that on each occasion before any vessel is operated that **every person on board** has received **essential safety information** appropriate to that persons functions on board, including:

- Information about the location on board of the safety appliances and equipment required to be carried on the vessel; and
- Instruction in the use of such appliances and equipment.

On completion of the course, you will be able to:

- Demonstrate the ability to point out the different parts of the boat, and understand basic nautical terms and expressions.
- Know the types of emergency equipment available on board, and its location.
- Understand the use of visual distress signalling equipment.
- Explain how to don a lifejacket or flotation aid and stay afloat and move in water while wearing a life jacket and floatation aid.
- Identify and understand how to operate fire extinguishers and hoses found on their boats.
- Explain the HELP and HUDDLE techniques in water.
- Know the drills for selected emergencies.
- Explain the correct procedure to deploy the life raft (if carried).
- Explain the correct procedure to activate the self-righting gear (if fitted).
- Know and understand the NSRI alcohol and drug policy.
- Explain how to position a casualty and stop bleeding on the boat.
- Know what to do when the vessel has capsized.



2 Terminology

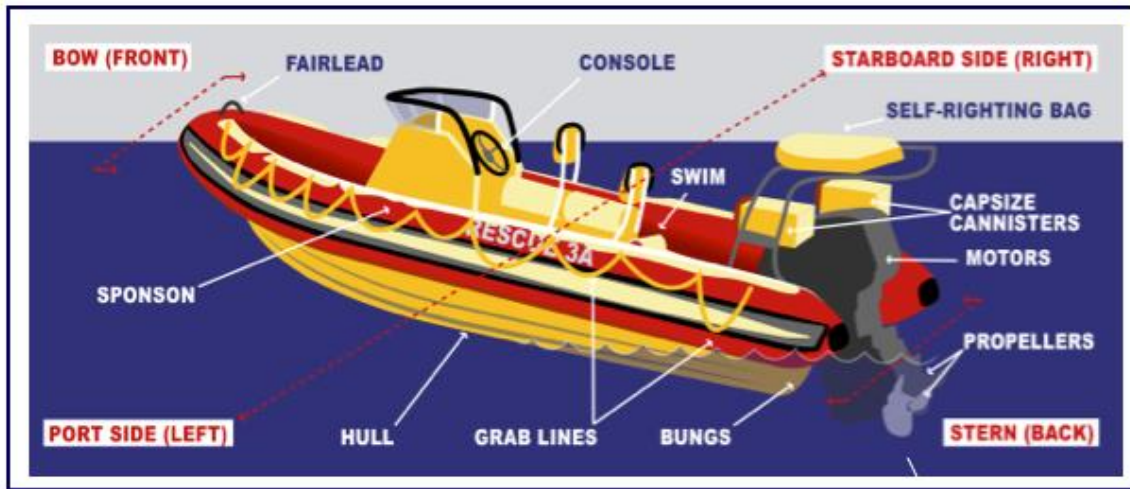


Figure 1: The general arrangement of a typical semi-rigid NSRI vessel

Terminology	
Abeam	Area or direction on the side of the vessel.
Anchor	A device lowered to the seabed and attached to the vessel with a rope and/or chain, used to hold the boat in position against wind and current.
Bollard	Strong fitting to secure a rope to (similar purpose as a "cleat").
Bow	Fore or front part of the vessel.
Bungs	These are plugs inserted into the drainage hole(s) at the stern of the boat and removed, for draining purposes, when the boat is out of the water.
Capsize bottle(s)	Watertight container(s) used to stow flares and safety equipment.
Console	The mounting on the deck that houses the steering wheel, motor controls and the various instruments.
Crewman	A trained person on the vessel, employed by the skipper/coxswain.

Deck	The horizontal area covering the top of the hull, or the area between the inflatable tubes on inflatable boats to which the console is attached.
Draft	The distance below the surface to which the deepest part of the vessel extends. This is the minimal depth of water that a vessel requires to float.
Fairlead	A strong fitting with an aperture used to lead a rope through.
Flare	A red pyrotechnic fired to attract attention when in distress. White can be used to illuminate an area.
Freeboard	This is the distance from the waterline to the level of the deck.
Grab lines	Rope becketed around the boat at the deck edge.
Gunwale	This is the section of the vessel's side that extends above the level of the deck on "decked in" vessels, or the top of the sponsons on Rigid Inflatable Boats (RIBs).
Hatch	A hinged or loose cover providing access to compartments.
Heaving line	A lightweight line and weight, thrown to make a connection.
Helm	Another name for the steering wheel on a vessel.
Hull	The main body of the boat; partly submerged when afloat.
Mooring	Rope used to secure a vessel to the dockside or another boat.
Outboard	Term for the outboard motor attached to the outside of the transom.
Painter	Rope permanently attached to the bow for securing the vessel.
Port	Left hand side of boat when looking ahead.



Propeller	A device rotated by the motor to propel the vessel through the water.
Safety equipment	The equipment to be carried for the safe navigation of the boat, and/or for use in the event of an emergency.
Scupper	Openings in the bulwarks for the purpose of draining water off the deck.
Skipper	The person in sole charge of the vessel and crew (coxswain in NSRI).
Sponsons	Inflatable tubes forming the sides of an inflatable boat (pontoons).
Starboard	Right hand side of the boat when looking ahead.
Stern	The rear part of the vessel. Also “aft” or “after end”.
Transom	Flat upright section of the stern upon which the motor(s) are mounted.
Waterline	This is the line where the surface of water reaches the side of the hull.

3 Voyage details

It is extremely important to leave your personal details and a contact number of immediate family members at the boat station you are leaving from. Leave voyage details with a family member, launch site office, local NSRI station, or your colleagues staying on shore.

Details should include the following:

- Boat name, colour, registration number and radio call sign.
- Skipper's Name, ID number.
- Names of all persons on board.
- Intended time of return.



- Basic description of trip including destination.
- Emergency call numbers for the area (Port Control, Radio Station, etc.)

4 Life jackets



Video 1: Life jackets save lives

There are different types of life jackets available. Generally speaking, a life jacket is a sleeveless buoyant or inflatable jacket that keeps a person afloat in water. The three types of life jackets we will introduce are inflatable, wrap around, and horse collar jackets.

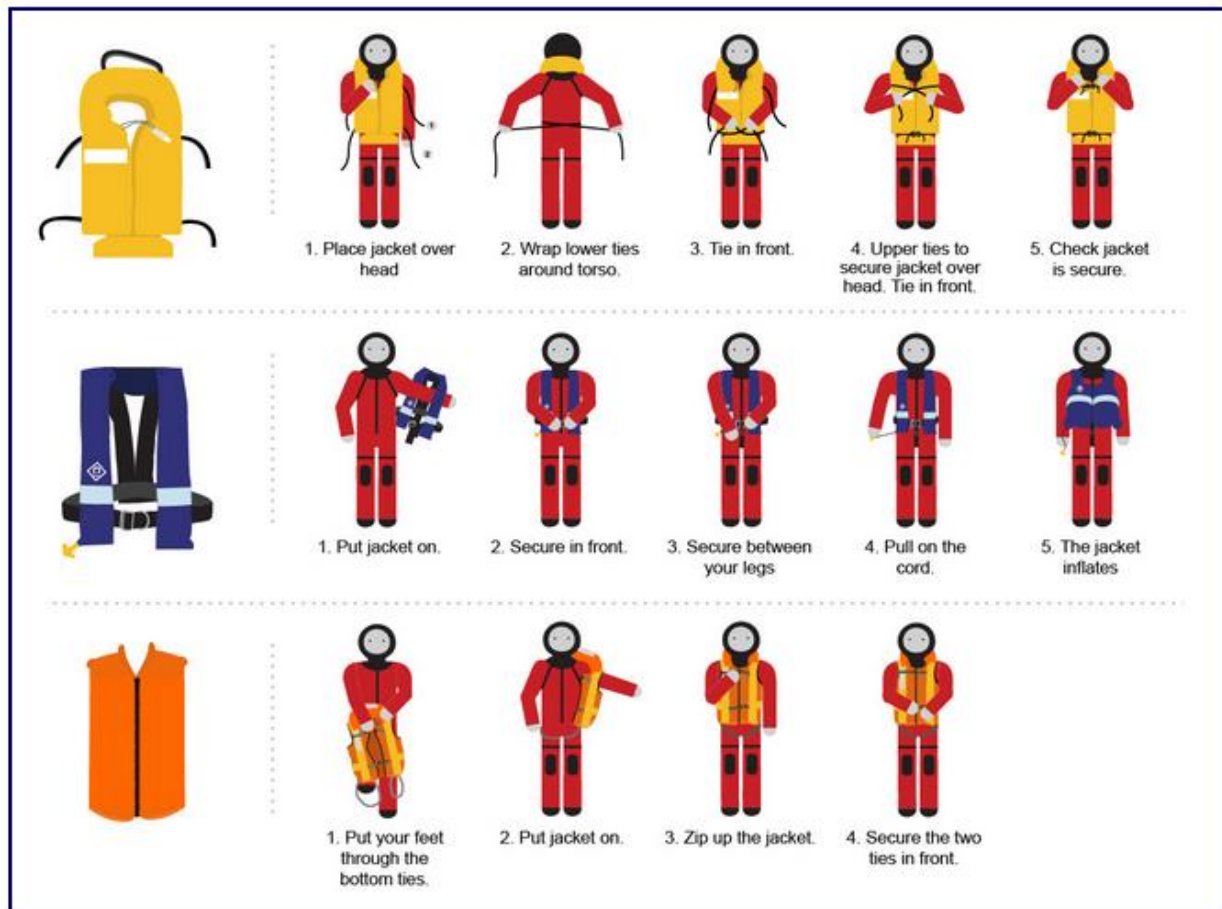


Figure 2: The correct way to fasten a life jacket

The law requires that on small vessels, a life jacket or buoyancy aid, also known as Personal Flotation Devices (PFDs), shall be worn by all crew and passengers when the vessel is proceeding through surf, heavy turbulent waters, or under inclement weather conditions. The skipper/coxswain makes the decision.

Important points to remember:

- a) Only life jackets approved by the South African Maritime Safety Authority (SAMSA) and the National Regulator for Compulsory Standards (NRCS) may be used on South African registered/licenced vessels. The SAMSA and SANS markings must be on the life jacket.

- b) Life jackets are further marked with their performance level. This is expressed in terms of the buoyancy in Newtons (275N, 150N, 100N, 50N). Levels 275N and 150N are for offshore use. Level 100N is for sheltered waters where rescue can be shortly expected, and 50N is for close inshore use to assist the casualty to swim ashore, or in an environment where help is close at hand.
- c) The skipper must ensure that life jackets are donned properly, and that all straps are firmly secure. All features of the life jacket, i.e. whistles, lights, etc. must be explained.
- d) Should any person, crew or passenger, refuse to don a life jacket when instructed to do so, the vessel shall return to port, and that person disembarked.
- e) Life jackets that are faded, worn, soiled with oil, or where the buoyancy material has been compressed, shall not be put into service.

It is NSRI policy that life jackets should be worn at all times while the rescue vessel is at sea. However, the coxswain of the rescue vessel has the authority to allow crew to remove their life jackets when circumstances dictate that it is relatively safe to do so.

Note that the SAMSA regulations in regard to small vessels states that a life jacket or personal buoyancy aid shall be worn by the occupants of the vessel during such times as the vessel is proceeding through surf, heavy turbulent waters or during inclement weather conditions, unless the skipper considers in any particular case that such action would not be in the best interest of the occupants.

The coxswain shall ensure that inexperienced crew such as new recruits, passengers and casualties don and secure their life jackets correctly.

5 Fire fighting



Video 2: A kitchen fire

Fire is an immediate threat to the vessel and safety of all aboard, and must be extinguished as quickly as possible. Immediately raise the alarm with the skipper/coxswain.

Safety first: If there is an immediate threat to your person, withdraw to a safe distance, close doors behind you, and direct crew to the location of the fire. If possible, use the nearest fire extinguisher to extinguish the fire.

5.1 The theory of fire

In order to understand the phenomenon of fire and fire extinction, it is necessary to take a closer look at the chemistry of combustion. There are three essential elements for combustion to take place. These are fuel, oxygen and heat.

5.1.1 Fuel

Combustible material surrounds us in our daily lives, and therefore fuel is ever present, i.e. flammable gases, flammable liquids and combustible solids. Solids, such as a wooden block, may be difficult to ignite, but broken down into wood shavings, these burn very easily. A piece of paper can start a major fire. When heat is applied to paper, it produces vapours, which ignite, in turn producing more heat. Solid fuels may require an external source of heat to raise them to a temperature to give off flammable vapours.

There are many flammable liquids that produce vapours. An empty petrol tank is more dangerous than a full one, as it will contain flammable vapour. Gases are existing vapours, which can ignite instantly. Some gasses are lighter than air, others heavier. If gas can be smelt, it indicates that there is already a substantial amount present, and due care must be exercised.

5.1.2 Oxygen

Just as the human body requires oxygen to survive, so does fire, and 21% of air is oxygen.

5.1.3 Heat

This is the source that is required to bring the article to, and maintain, a minimum temperature causing ignition, i.e. sparks, an open flame, friction etc. A critical temperature must be reached for ignition to take place, but once a fire has started it will generally maintain its supply of heat. Heat can be applied in any number of ways. It may be deliberate (arson), or it could be accidental, for example, fuel or oil coming into contact with a very hot surface, a heater placed too close to furnishings or paper, or power points being overloaded causing wiring to overheat. Also, blocked cooling vents or air inlets can result in machinery overheating and becoming a fire risk.

The above three elements combined is commonly known as the **Triangle of Combustion**.

Remove one or more and combustion will cease. This is the principle of firefighting.

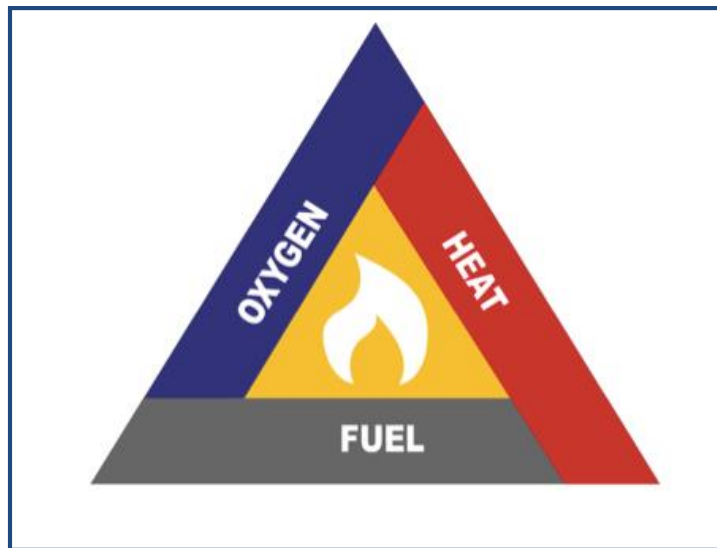


Figure 3: The Triangle of Combustion

On very small vessels, the first line of defence will be the fire-extinguisher. On the larger boats, water pumps will enable fire hoses to be used.

Remember, however, that water must never be sprayed on a liquid fuel fire as it could result in spreading the fire. The only exception is if a very fine mist spray is produced with a high water pressure nozzle.

Also note that it will be difficult to extinguish a fire that is being fed with a supply of fuel. To isolate any possible flow of fuel out of the tanks, fuel shut-off valves are fitted to fuel tanks. Provision is made to operate them remotely.

On the larger vessels with engine rooms, means are provided to shut off all vents that supply air to the engine room should this be the seat of the fire. On such vessels, a fixed fire extinguishing system is also fitted to administer a smothering gas such as CO₂.

5.2 Fire extinguishers

5.2.1 Colour coding

In terms of the latest South African Bureau of Standards (SABS) code, all fire extinguishers are to be **red** in colour, and the type extinguisher is to be distinguished by the label colour.

The label should indicate the following essential information:

1. The classes of fires for which it has been designed.
2. The content of the extinguisher.
3. The controlling method (operating instructions).

The extinguisher should also carry a service label, which must indicate:

1. The date of service.
2. The name of the technician.
3. The serial number of the technician.

The regulations provide for one 1.5kg dry power extinguisher per motor. On larger vessels with multiple compartments, there shall be one in each compartment.

Fire extinguishers must be serviced annually by a SAMSA accredited (Dotfas) dealer. Small fire extinguishers have an average discharge time of only about 20 seconds. It is therefore important to direct the jet of the extinguisher close to the base of the fire.

Immediate steps to be taken in the event of a fire:

- a) Turn the vessel so that smoke blows away, downwind, and clear of the vessel.
- b) Stop the engine and disconnect the fuel lines or operate remote fuel shut-off valves.
- c) Direct the fire extinguisher discharge at the base of the flame or smother with wet clothing.
- d) If in engine room, close all vents and operate the gas smothering valves.



5.3 Types of fire extinguishers

5.3.1 Water – red label

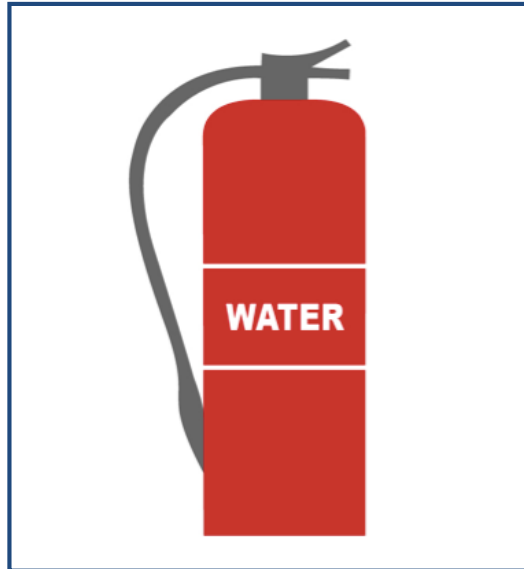


Figure 4: Water-based fire extinguisher

Can be used on paper, wood and textile fires.

Advantages

1. It is the cheapest extinguisher available for its size.

Disadvantages

1. It cannot be used on electrical fires since water conducts electricity.
2. Water in the quantity supplied by the hand extinguisher is not very effective on man-made fibres, plastics, rubber and various other substances.
3. The full extinguisher can weigh up to 15kgs.
4. The extinguisher is epoxy coated inside; however, even the smallest hole in the coating will cause the extinguisher to rust. When the extinguisher is operated this rust could block the

nozzle and prevent the proper operation of the extinguisher. Stainless steel ones are available, but are expensive.

5. Water can cause damage over and above that caused by the fire.

5.3.2 Foam extinguisher – cream label

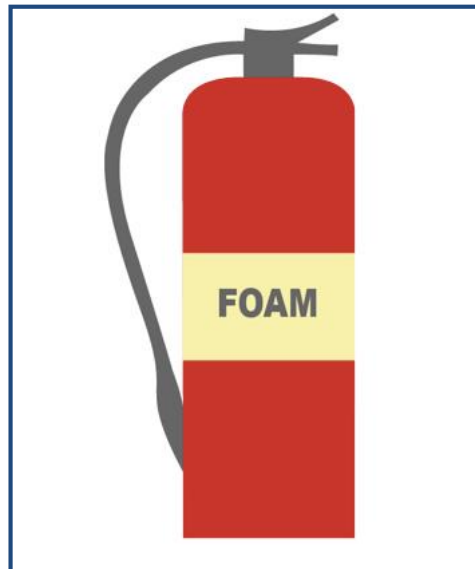


Figure 5: Foam-based fire extinguisher

Can be used on nearly all types of fires.

Advantages

1. It is very effective on plastic, rubber, petrol and oil fires.
2. Extinguishers through both cooling and excluding oxygen.

Disadvantages

1. The disadvantages 1, 3, 4 and 5 above for water extinguishers apply equally to foam.

5.3.3 Carbon dioxide or CO₂ extinguisher – black label

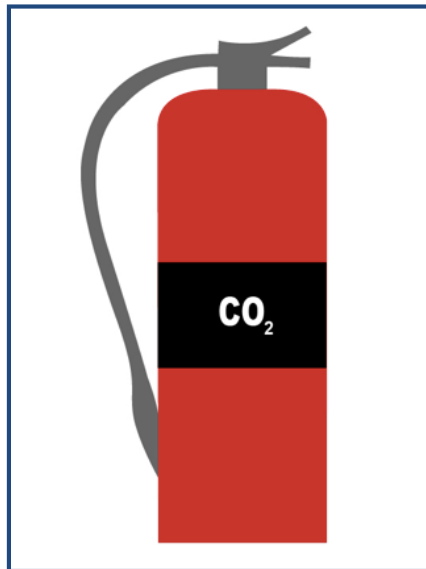


Figure 6: Carbon dioxide based fire extinguisher

Can be used on virtually all classes of fire.

Advantages

1. CO₂ is the most effective extinguisher for electrical fires.
2. Emission for the CO₂ can be stopped. The extinguisher can be used again if not totally empty. (Not advised)
3. Leaves no deposit.

Disadvantages

1. CO₂ extinguishes a fire by reducing the oxygen content of air to a stage where combustion cannot be sustained. However, should any glowing embers remain when CO₂ application is stopped, the fire can re-flash when sufficient oxygen is present.
2. Extreme caution should be taken when entering an enclosed area after CO₂ has been discharged into it.
3. The 4,5kg and 6,8kg CO₂ extinguishers are very heavy (18kg and 24kg respectively) and cannot readily be handled by a slightly built person.

4. Because of the thick steel cylinder required to contain the pressure of 0.53 bar, the extinguisher is expensive.
5. CO₂ has a very short “throw” and the operator has to be close to the fire. This may be impossible in the case of very hot fires.
6. Could be detrimental to very delicate equipment.

5.3.4 Dry powder extinguisher (dry chemical powder or DCP) – blue label

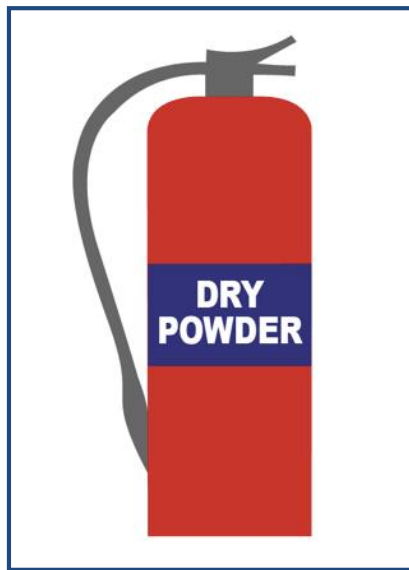


Figure 7: Dry powder based extinguisher

Can be used on virtually all classes of fires. The “all purpose” dry powder is better in extinguishing fires than “standard” powder and is much better in preventing flash-back of fires. However, it is more expensive.

Advantages

1. Is effective on most classes of fire (especially the all-purpose powder).
2. Powder has a long throw and the powder acts as a protective shield against the heat.
3. Emission of the powder can be controlled for approximately half an hour after first operating the extinguisher.
4. The 4,5kg extinguisher is light enough for a slightly built person to use.

5. Powder prevents flash-back (especially all-purpose powder).

Disadvantages

1. The gas cartridge operated dry powder has to be refilled immediately after use, even if the extinguisher has not been emptied.
2. If sprayed into a machine, electric motor, etc. the equipment may have to be dismantled to remove the powder.
3. Used in small, enclosed space the floating powder can quickly make breathing difficult.
4. The powder compacts with vibration.

6 Use of pyrotechnics

Red flares and orange smoke floats are used to indicate distress and summon immediate rescue.

White flares can be used for illumination purposes while conducting a SAR operation.

“Pyrotechnics” includes rocket-launched parachute flares, hand-held flares, projectile flares, and smoke floats.

Note that activating procedures may vary from brand to brand. It is essential to familiarize oneself with the instructions on the pyrotechnics carried on your vessel.

There may be little or no time to read instructions in the dark in an emergency situation.

It is a serious offence, with heavy penalties, to use distress pyrotechnics for any purpose other than to signal a distress situation. Time-expired pyrotechnics shall not be used for practice or ceremonial purposes.

Parachute flares are the most effective of all flares, being visible for over 11km. They must be launched downwind and held away from the body at an angle of approximately 15 degrees from the vertical. To use a parachute flare, refer to the instructions for the brand used on board your vessel.



Hand flares are effective over moderate distances up to 5km, or in line of sight. To use a hand flare, refer to the instructions for the brand used on board your vessel.

Projectile flare set (pencil flares): This consists of a launcher and six flares. To use a projectile flare:

1. Unscrew container
2. Remove cover and screw launcher into exposed thread
3. Aim vertically away from body, retract button fully and release

Orange smoke generators cannot be used at night. They are very effective for daytime detection by search aircraft, but a very strong wind can quickly disperse the smoke. To use an orange smoke generator, refer to instructions for the brand used on board your vessel.

Should a rocket or flare fail to ignite, wait a few seconds and then lower it carefully into the water, and let it go.

Do not examine a pyrotechnic that has failed to ignite. A rocket or flare once activated must be regarded as very dangerous.

6.1 Time-expired pyrotechnics

Rockets, flares and smoke markers have the actual date of manufacture and the date of expiry marked on the container. They usually have a safe life span of three years from date of manufacture. After this, chemical changes start taking place that render them unstable. **They can be dangerous and must never be fired.** Time expired pyrotechnics must be handed over to the nearest unit of the SA Police Water Wing for disposal.

7 Hypothermia

Hypothermia may be avoided or delayed by:

- a) Getting out of the water.



- b) Getting out of the wind.
- c) Replacing wet clothes with dry clothes or blankets.
- d) No alcohol.
- e) Giving hot liquids by mouth if the person can drink it themselves.
- f) Assuming the HELP or huddle positions.

7.1 In the water

7.1.1 The HELP position

The Heat Escape Lessening Position (HELP). This is the position to adopt in the water to ensure minimum heat loss and to slow down hypothermia.

The water flow around the body is reduced and onset of hypothermia is delayed. In the foetal position your arms and legs protect the areas of the body where heat is lost the quickest, i.e. where arteries are closest to the skin.

This is achieved by crossing your legs and bringing them as close to your chest as possible, holding your knees with your hands with your fingers interlocked – this reduces the chances of the hands losing their grip when hypothermia sets in.

Balance is maintained by pushing your head backwards as seen in the illustration below.

To be able to maintain this position a life jacket must be worn and donned correctly.



Figure 8: The HELP position

7.1.2 The huddle position

When several survivors are in the water together, this position helps to preserve body heat and allows them to maintain morale. As a group they create a much larger target to be seen by rescuers, and are able to float and monitor any injured survivors much easier.

This position is most effective if the group is as tight as possible, achieved by pulling the survivors on either side of you tightly against you. This reduces water flow around the body and delays the onset of hypothermia.

It is important to tie yourselves together with the lanyard on the life jacket because as hypothermia sets in, there is a good chance you will lose the ability to hold on to each other and therefore drift apart.

To be able to maintain this position a life jacket must be worn and donned correctly.



Figure 9: The huddle position

8 First aid

Care or First Aid on board is the responsibility of the skipper/coxswain, but any other qualified person or citizen has a moral duty to assist ill or injured people.

8.1 Emergency scene management

Often referred to as the **3 H's**:

	The 3H's of Emergency Scene Management
Hazards	Assess the safety of the scene (yourself, the patient, the environment) and make it safe before proceeding.
Hello	Check if the patient is responsive (awake).
Help	If not responsive, call for assistance from people around you and get the Skipper to radio for help on channel 16 or phone for help by dialing 112 on a cell phone.

8.2 The initial assessment of an injured person

The aim of the initial assessment is to identify life-threatening problems and resolve them immediately.

Identify and stop visible bleeding by direct pressure. Observe the patient's colour and check for signs of blood circulation (awake and responding or breathing well). If there is no circulation, the face and lips will turn blue.

If there is no sign of life (unconscious, pale, immobile, not breathing) begin chest compressions. Press hard and fast in the centre of the chest on the nipple line.

If the ill or injured person is unconscious but breathing well, turn them over on their side into the recovery position.

Provide other First aid/Emergency Care as necessary.

9 Alcohol and drugs

Alcohol or drugs shall not be taken aboard a vessel. Crew that are found to be under the influence of alcohol or drugs must be taken back to shore and disembarked.

Such persons pose a danger not only to themselves but also to the rest of the crew and the safety of the vessel.

A **skipper** under the influence of alcohol or drugs can expect to be dealt with very harshly by the law, especially should an accident occur while in charge of the vessel.

10 Collision, grounding, fire and capsize

It is difficult to establish hard and fast rules to deal with emergencies such as collisions, groundings and fires. However, priorities must be established when an emergency situation occurs, and this section provides some broad guidelines. Note that the first consideration

should always be toward the immediate safety of “life and limb”. Also, that in terms of the regulations, all serious incidents at sea must be reported within 25 hours to the nearest SAMSA Principal Officer in writing, giving full details. If any fatalities have occurred, the SA Police must also be advised and a statement given. No names must be given to the media.

10.1 Collision

1. Account for all persons on board by counting heads.
2. Rescue persons from entrapment if necessary, and possible, within the limits of safety.
3. Ascertain if anyone has been injured, and if so, and if necessary, remove them to a place of safety. Attend to or have someone attend to injuries.
4. Everyone to don life jackets as soon as possible, if not worn already, because cold may prevent it later.
5. Close and secure all watertight doors and hatches.
6. Check for ingress of water. Start pumps if necessary.
7. Check for signs of fire, either from damaged electrical cables or impact friction. Deal with this if necessary. Also isolate any electrical circuits in the area of damage.
8. Carry out damage assessment.
9. If vessels are embedded in one another, do not be too hasty to attempt separation. If there is a possibility that one of the vessels may sink, it will be easier to transfer the crew to the “safe vessel” while the two vessels are together.
10. Prepare lifesaving equipment.
11. If vessel is leaking badly, every attempt should be made to plug the leaks using mattresses, pillows, mats, blankets, etc. Remember that plugs will be more effective if fitted from the outside where water pressure will force them into the hold.
12. It may be possible to trim the vessel so that the damaged area is lifted clear of the water or closer to the surface.
13. If fuel tanks are damaged, isolate them to prevent contaminated fuel being supplied to the motors.



14. Use the radio to call for assistance.
15. Obtain particulars of the other vessel, i.e. name of vessel, port of registry, name of master, where bound, and nature of damage sustained.
16. Ensure that all details are well documented in the log book and that the position of the collision is plotted on the chart.

10.2 Grounding

1. Account for all persons aboard.
2. Ascertain if anyone has been injured, and if so, and if necessary, remove them to a place of safety. Have someone attended to injuries. Close and secure all watertight doors and hatches.
3. Prepare lifesaving equipment and don life jackets.
4. Carry out damage assessment.
5. If aground on shelving bottom and vessel is being pushed further ashore (especially on a rising tide), drop anchor - it may keep the bow into the surf and also reduce the rate of onshore drift.
6. Check if there is ingress of water. Start pumps if necessary.
7. If the vessel is aground on an obstruction, check the surroundings around the vessel to ascertain where she is being "held". Do not be too hasty to force the vessel off the obstruction with the motors. The damage may be exacerbated or a leak started where one did not exist. Also, if the vessel is holed she could sink once in deeper water. On a rising tide, and by trimming the vessel, it may be possible to get her off without any further damage.
8. Call for assistance.
9. Check fuel tanks for damage and isolate if necessary to prevent contaminated fuel being fed to the engines.



10. If situation looks hopeless and the shore is reasonably close, get a line ashore with a buoy.
11. If no one is standing by ashore and it is obvious that the vessel is too unstable to stay aboard, ask for a volunteer to swim a line ashore. This will be of great assistance to the weaker swimmers or the injured, or a guide line for the life raft.

10.3 Fire

1. Do a headcount to ensure that all crew are accounted for.
2. Make sure that no one is still in the area of the fire.
3. Don life jackets.
4. Stop the engine(s), operate the remote control or manual fuel shut-off cocks.
5. Close and secure all watertight doors and hatches.
6. Use the fire extinguisher by directing the jet at the base of the fire.
7. Where engine power is available, select a heading for the vessel relative to the prevailing wind to prevent the fire from spreading, and to disperse any smoke.
8. Prepare lifesaving equipment for use. Where necessary, remove life rafts and pyrotechnics away from the proximity of the fire.
9. Use radio or cell phone to call for assistance.
10. Isolate any electrical circuits in the area of the fire.
11. If you are not able to get the fire out prepare your crew to enter the water.

10.4 Capsize

1. Do a headcount to ensure that all crew are accounted for and that there are no injuries.
2. If anyone is missing, check under the boat if it is safe to do so.
3. Assist anyone in trouble, and stabilise injuries.



4. Collect the lifejackets and ensure that every one is wearing one.
5. Salvage any floating equipment.
6. Retrieve the capsize kit.
7. Attempt to get everyone out of the water and onto the upturned bottom. To this end, rig a line from the motor legs to the bow eye for a hand-hold.
8. Attempt to keep survivors on the hull well covered to prevent hypothermia.
9. Stream the sea anchor unless drifting towards the shore.
10. Swimming for the shore could be a fatal decision. Stay with the boat. Carefully weigh the options.
11. Use flares judiciously. Do not waste them.
12. Display the ID sheet.

It is possible to right a small craft using the body weight of one or two crew. A line must be secured to the gunwale on the one side of the vessel and led over the capsized bottom to the other side. Using the rope as a support, the crew person climbs onto the underside of the gunwale opposite, to stand or kneel, and then lean over backwards to pull the boat over. The drogue line would be ideal for this purpose. If the capsize has taken place in the surf line, keep the bow into the surf. If it is the intention to right the craft, then attempt to swim it out of the surf first. Submersion in sea water can result in damage to the outboard motor/s, especially if they were operating at the time. Even greater damage can be caused if sand gets in. It is important to try and right the vessel before it gets into the “shore dump”.





11 Life Raft

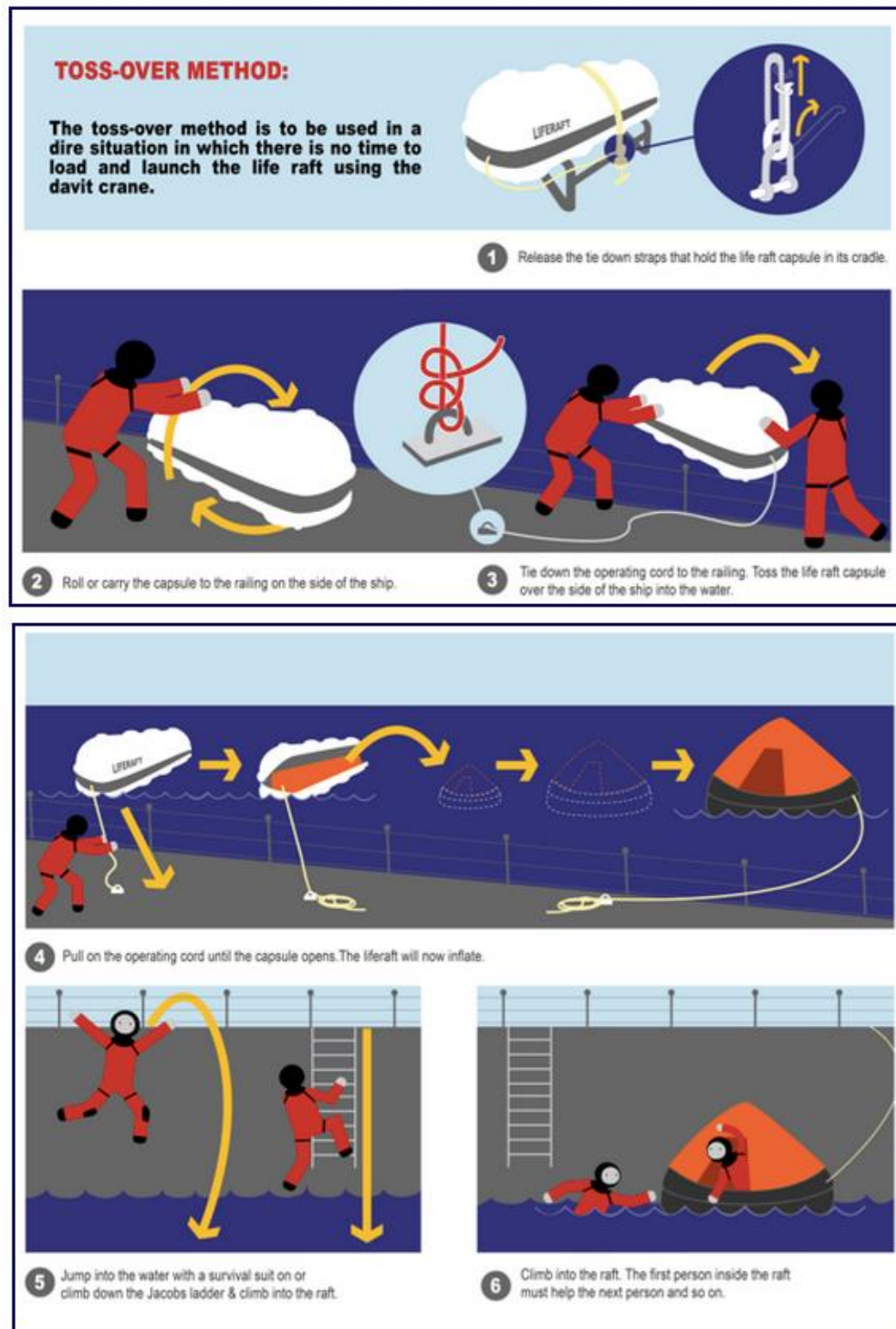


Figure 10: The correct way to release the life raft from its cradle

When deploying (launching) a life raft, the following must be observed:

- The life raft should only be deployed on the orders of the skipper/coxswain, or if the situation is critical and a responsible person is no longer aboard.
- Ensure that the painter (connecting line) is secured on the vessel before the canister/satchel is thrown overboard. It will be needed to activate the inflation process, and to prevent the inflated life raft drifting away before it can be boarded.
- Always check the water surface before throwing the life raft canister/satchel overboard. There may be persons already in the water below.
- Do not jump into the inflated life raft from a height. You could injure someone already aboard, or damage the life raft. If you cannot step into the life raft (after removing your shoes), then you will have to jump into the water first, and then board.
- When all persons are on board, release or cut the painter.
- Deploy the sea anchor to minimise drift.
- Close the entrance.
- Take anti sea-sick tablets.
- Bale out any water, and endeavour to keep the interior dry.



12 Self-righting gear



Video 3: Capsize self-righting

When activating the Self-righting Gear the following procedure must be observed:

- All persons must be accounted for. If anyone is missing check under the vessel.
- All persons must move to the stern as a group keeping a connection with the vessel, and with one another, making use of the grab lines.
- Retrieve the swim line and deploy. All persons must hold on to this line and move ± 5 metres away from the vessel. It is most important to maintain contact with the vessel as the wind could blow the vessel away faster than a swimmer could get to it.
- The coxswain or a designated person must then retrieve the activating handle on its short line, moving quickly away while holding the swim line.
- Activate the gear with a strong steady pull on the line – not a violent jerk.

- When vessel has righted itself, use the swim line to get back to it and board over the stern, using the OB motor cavitation plate as a step.
- Once on board, help others to board.
- Deploy the sea anchor to minimise drift.
- If circumstances warrant it, deflate the bag by means of the inflation valve.

