

# Are you aware of what the National Small Vessel Safety Regulations require of you?



The Merchant Shipping (National Small Vessel Safety) Regulations, 2007, place the onus on the owner and in some cases the master as well, to ENSURE that the vessel and the crew comply with the requirements of the regulations at all times. SAMSA surveyors and SAS safety officers do NOT replace the owners and crew in matters of safety and their main function is to ensure that the owner, master and crew are in fact making reasonable efforts to apply regulations and maintain safety standards.

To assist the vessel's owner, owner's representative or skipper to manage safety aboard, the following checklist (and guideline) has been compiled for your attention. The checklist is to be checked and completed prior to the safety survey by the Owner or Skipper and any deficiencies noted are to be rectified prior to the safety survey.

Please note that this document only covers the main issue. Copies of the regulations and amendments are published in both English and Afrikaans in the Government Gazette. However SAMSA legal department have produced an electronic copy in English which incorporates all of the gazetted amendments. These are available on the SAMSA and SAS web sites.

**APPLICATION: Category A Power Driven Pleasure Vessels <100gt (that are not passenger vessels) surveyed by South African Sailing Safety Officers.**

**Definitions:**

- Category A:** vessels operating any distance from shore
- Power driven:** a vessel propelled primarily by mechanical means
- Gross Tonnage (gt) >15hp** Determined by a formula based on enclosed volume. NOT displacement (weight) means total engine power of more than 15hp, but not equal to 15hp
- Pleasure vessel:** a vessel that is used solely for sport or recreation
- Commercial vessel:** a vessel that is not a pleasure vessel
- Passenger vessel:** a vessel that carries more than 12 passengers
- Passenger:** any person carried on a vessel, except persons employed or engaged as crew; rescued survivors and infants under one year of age

**Owner(s) Declaration:**

I, the owner/skipper/responsible person of the vessel, have read and completed this checklist in preparation for the vessel's Local General Safety Certificate (LGSC) survey or Certificate of Fitness (CoF) inspection. I hereby declare that the vessel meets the requirements defined in the checklist and that no modifications other than those listed below have been carried out to the vessel's construction, fittings and arrangements since the last survey.

\_\_\_\_\_  
Vessel Name and Number

\_\_\_\_\_  
Name and Signature of owner/skipper/responsible person

\_\_\_\_\_  
Date

**Summary of modifications to vessel's construction, fittings or arrangements (if any).**

## **DOCUMENTATION REQUIRED FOR YOUR SURVEY**

1. This safety checklist must be completed by the owner/owner's representative/skipper before the safety inspection and brought to the safety inspection.
2. You must have a copy of the following documentation to give the safety officer for submission to SAS
  - a. Proof of payment
  - b. Your EPIRB registration (if applicable)
  - c. A copy of your foreign registration certificate (if applicable)
  - d. In the case of a vessel >24m LOA, a copy of the certificate proving that your vessel is <100GT.
3. You must have the following documentation available for inspection
  - a. Your vessel's Certificate of Listing and your previous Certificate of Fitness (CoF). Note that any vessel with an SA or ZA marking must be correctly listed by SAS in the name of the current owner.
  - b. Your ship station radio license.
  - c. The current inspection certificate for your liferaft.

**Please note that if the safety checklist has not been completed, the safety officer cannot go ahead with the safety inspection.**

<b>Vessel and Owner Particulars</b>	
Name of Vessel	
Approved Marking	
Marina where normally moored (or normally launched for a trailer-borne vessel)	
Length of Vessel	
Maximum number of persons permitted to be carried on board	
EPIRB ID (15 digit hexadecimal code)	
Radio call sign if applicable (from radio license)	
MMSI number if applicable (from radio licence)	
Colour of hull and deck	
Name of Owner	
ID Number of owner or company registration number	
Telephone number of owner	
Email Address of owner	
Postal address of owner	

### **USE OF CHECKLISTS – Pleasure vessels**

Surveyors and Safety Officers must receive a completed copy of the checklist at or before the time of survey. Pages 1 and 2 of the checklist must be retained by the safety officer and submitted to SAS together with the notification of completion of survey for filing and audit purposes. The remaining pages must be retained by the boat owner for guidance and future reference.

### **HAVE YOU PROVIDED SAFE ACCESS TO YOUR VESSEL?**

Owners and skippers are advised that SAMSA regards the non-provision of safe access to vessels in a serious light. Safe access is a requirement for ALL persons requiring access to vessels (not just surveyors). SAMSA surveyors are instructed to issue a PROHIBITION ORDER where safe access is not provided. All work on board is to be stopped until safe access is provided to the satisfaction of the surveyor. (Merchant Shipping Act, 57 of 1951 section 9(5))

<b>General</b>		✓
Commercial Vessels Regulation 2	The National Small Vessel Safety Regulations define a pleasure vessel as a vessel that is used solely for sport and recreation. Any other vessel is a commercial vessel. A SAS CoF is for pleasure vessels only. By ticking the block to the right, the owner acknowledges that he has understood that he may not use his vessel for commercial purposes.	
Foreign going vessels	Vessels going foreign must be registered by SAMSA and require a Local General Safety Certificate issued by SAMSA. If you plan to go foreign you need to get your survey done by a SAS safety officer authorised to do safety surveys on foreign going recreational vessels, otherwise your safety survey will have to be redone when you go foreign.	
Passenger vessels Regulation 2	Any vessel carrying more than 12 passengers is defined as a passenger vessel and has to meet additional safety requirements beyond the scope of the SAS safety inspection. By ticking the block to the right, the owner acknowledges that he has understood that he may not carry more than 12 passengers.	
Crewing Regulation 14	The vessel has to be under the constant guidance of a person holding an appropriately endorsed Certificate of Competence. This certificate of competence (or a certified copy) must be available for inspection at all reasonable times.	
Manning Regulation 14	In addition to having a qualified skipper on board, the owner must ensure that the vessel is sufficiently and efficiently manned. There are to be sufficient competent persons on board with regards to the requirements of other safety provisions, i.e. such as keeping a proper lookout and the manning (minimum number of crew) of the vessel.	
Essential Safety Information Regulation 7	On EVERY occasion and BEFORE the vessel goes to sea, all skippers must ensure that: 1. Every person aboard receives essential and appropriate safety information; such as the location of the safety appliances and equipment aboard as well as instruction in the use of such items. 2. The safety appliances and equipment are inspected, fit and ready for use.	
Fuel reserve Regulation 8	A reserve of not less than 25% over and above the requirement for the intended voyage	
Operational Limits Regulation 10	No person may operate a vessel beyond the distance from shore for the category it is licensed.	
Carrying persons in excess Regulation 11	It is illegal to exceed the number of persons specified on the vessel's safety certificate, except in an emergency such as in the case of a search and rescue operation.	
Voyage information Regulation 12	Before a vessel goes to sea, the particulars of the vessel and the names of the crew are to be left with the harbour master, at the launch site, or in certain cases, relatives, a police station or responsible person. However, where local authorities or authorized agents have implemented reporting mechanisms, these shall be complied with. Upon returning from sea or the voyage, the person or authorities with whom the voyage information were left, must be informed accordingly.	
Assisting vessels in distress and reporting dangers to navigation Regulation 13	It is the duty of a skipper to report dangers to navigation and assist vessels in distress.	
Radio watchkeeping on VHF while at sea. ITU Radio Regulations.	If you have a VHF radio, it is an ITU requirement to keep a listening watch, when practicable, on channel 16 while at sea. If you have a DSC VHF radio, you are also required to keep a listening watch on Ch70 while at sea.	
Physical and mental fitness Regulation 17	No person may operate a vessel or vessel's equipment whilst under the influence of alcohol or drugs. (Maximum of 0,05 gram/100 ml alcohol in blood or 0,24 mg/1000 ml alcohol in breath). No person may refuse that a specimen of blood or breath be taken. No person may operate a vessel if he/she is not physically able to do so and/or of sound mental health.	
Reporting Marine Incidents Merchant Shipping Act Sect 259	The master or owner is required to report all serious marine safety incidents to SAMSA. This includes loss or serious damage to a vessel, loss of life or serious injury, or a situation of great peril. See Marine Notice 8 of 2011 or any update to that marine notice.	

<p>Requirements for water-skiing Regulation 36</p> <p>Water-skiing is only allowed in areas indicated by the regulating authority and it is not allowed at night;</p>	<p>The towing vessel may not use a steel or other metallic rope; In addition to the skipper, there must be a competent person in the towing boat observing the water-skier; A vessel may not follow closer than 100 metres in the wake of another towing vessel - towing a skier, person, aquatic or airborne device. A water-skier:</p> <ul style="list-style-type: none"> <li>• must wear a suitable buoyancy aid and must have knowledge of the standard hand signals in use;</li> <li>• may not purposefully let go of the rope in congested areas;</li> <li>• may not create a nuisance or danger for other water users.</li> </ul>	
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<b>Construction Requirements – Annex 1</b>		✓
CONSTRUCTION REQUIREMENTS Regulation 6	It is an offence to sell a vessel which does not comply with the construction requirements except where accompanied by a letter or certificate detailing the extent to which the vessel does not or cannot comply	
DOCKING/SLIPPING Regulation 5 Regulation 23  Initial inspections for COF will require the external structure and fittings of the vessel to be inspected by the surveyor..	<p><u>COF Annual Checks:</u> <u>Trailer-borne vessels:</u> Ensure the vessel’s structure, equipment, appliances arrangements and material continues to be in compliance with the regulations. <u>Non-trailer-borne vessels:</u> Owners are required to maintain their vessels in a safe condition and document their efforts to do so [see: HULL INSPECTIPON RECORD]. Surveyors and Safety Officers may require vessels to be removed from the water for external hull inspection, if the condition of the vessels hull or fittings requires additional inspection at the time of annual survey.</p>	
SUFFICIENT RESERVE POSITIVE STABILITY Regulation 6	Careful consideration of vessel stability required when considering modifications to the vessel or changes in the vessels operation which increase the load carried by the vessel.	
INGRESS OF WATER Regulation 6	Decked vessels shall not have any point of possible ingress of water, except for scuppers, less than 200 mm above the surface of the water. Careful consideration required when modifications to scupper arrangements are considered. (Changes to as-built arrangements.)	
COLOUR OF DECK Regulation 9	To assist with search and rescue, the deck is to be painted or pigmented in a colour which is readily visible from above in any sea condition. (Or the vessel may carry a pigmented canvas extending the full the width of the vessel, but not less than 2m x 2m).	
Navigation lights Collision Regulations (Colregs)	Any vessel going to sea at night must have properly fitted navigation lights in accordance with Colregs. Lights must be of an approved type; must show the correct sectors; wiring to be neat, secured and waterproof.	
Kill switch Regulation 7(5) and (6)	To be fitted on power driven vessels of more than 15HP outboard engines of 9 metres or less in overall length To be attached to the skipper or operator at all times <u>except</u> when launching or beaching the vessel through surf.	
Hatches on deck (Paragraph 2)	Hatches on the open deck must be provided with hatch covers that are watertight when dogged down. Special care is to be given to flush deck hatches. All watertight hatches should be able to withstand a hose test. Where a fishing hatch can be opened to the sea, the cover must be capable of being secured in an emergency.	
Guard rails (Paragraph 3)	All open decks or walk ways on <u>power driven vessels</u> should be protected as follows: Vessels 9 metres or more - 600 mm high Vessels less than 9 metres - 450 mm, high <u>Surf operated vessels are exempted if they have bulwarks at least 450 mm forward and 300 mm aft.</u> <u>Vessels with cabin tops which extend nearly to the ship’s side, with a crew access forward are exempt if provided with a toe rail of at least 50 mm along the outer edge of the deck and substantial, secure handrail on each side of the cabin.</u>	
Towing arrangements (Paragraph 4)	Every vessel must be provided with an efficient means of securing a tow rope or anchor cable at the bow and at the stern. (Capability to tow and to be towed)	

Underwater hull fittings (Paragraph 5)	Inlet and discharge pipes attached to the <u>underwater</u> part of the hull must be properly flanged to the hull and provided with a valve or shut-off cock inserted in the line as close as possible to the hull. <u>Definition of underwater for power vessels:</u> The maximum loaded waterline when the vessel is heeled to 7 degrees.	
Ventilators (Paragraph 6)	Vents serving engine or accommodation spaces to be provided with proper closing devices or water traps to prevent water ingress into the compartment. Vents serving only engine spaces must be able to shut off air flow in case of fire.	
Engine power (Paragraph 7)	Every power vessel must have an engine capable of propelling the vessel in its fully loaded condition at a speed of at least 5 knots. If operating in surf, each engine must be capable of propelling the vessel at a safe speed when operating in surf conditions. (rough conditions)	
Number of outboard engines (Paragraph 7)	If outboard propulsion is used, every category A, B and C vessel must be provided with at least two outboard engines.	
Inboard Petrol Engines (Paragraph 7 (4))	Engine installed in a compartment protected from spray and flooding and is adequately ventilated Manual bilge pump fitted in engine compartment Battery to be stowed outside of engine bay, protected by spray and flooding Marinised carburettor with flash arrester fitted Sparkless alternator and starter Flameproof extractor fitted to engine bay, runs for 30s before engine starts Remote controlled fire extinguishing system If fitted with only one inboard petrol engine, an auxiliary outboard engine required	
Exhaust Pipes and Silencers Paragraph 7(5)	Water cooled or lagged.	
Fuel tanks (Paragraph 8)	To be efficiently secured and constructed of suitable material; Outlets of built in tanks to have shut off valves (or approved automatic shut off or anti-siphoning devices). If not readily accessible the valves should be able to be operated remotely; Filler pipes must have threaded plugs or caps. Only non-corrosive materials may be used; Breather pipes should not leak even if the vessel is heeled to 50°; Fuel levels should be able to be determined and where gauge glasses are fitted, they must be fitted with self-closing valves; All fuel tanks holding PETROL must be fitted or stored outside engine and battery compartments.	
Electrical installations (Paragraph 9) (Power driven vessels)	Vessel to be provided with at least two identical banks of batteries. If engines are provided with hand start arrangements only one bank of batteries may be fitted. A suitable battery charging appliance must be provided for each bank of batteries; If there is more than one engine, then each engine must be provided with a battery charging appliance capable of charging both banks of batteries. A single bank of batteries must be capable of providing 12 hours auxiliary power for navigation lights, electric bilge pumps (if provided) and fixed radio equipment. Installation to conform to good marine practice.	
Emergency steering Annex 1 Para 10	Fitted except where steered by means of a tiller. May be portable but must be accessible for rapid attachment) Alternative emergency steering to be practical and demonstrated.	

Bilge pumping arrangements for category A decked power driven vessels Annex 1 Para 11 (2)  Two (2) power driven bilge pumps (capacity 3000 litres per hour each)	Each bilge pump must have its own prime mover and may be driven off the vessel's main engines if more than one main engine is installed; otherwise, the configuration must be such that one pump is driven off the main engine and the other by a standby engine. The pump driven off the standby engine may be electrically powered.  All bilge pumps must be fitted with piping arrangements, valves, suction and strainers for pumping out all compartments except for the fish hatch, (if it can be flooded and the vessel still maintains positive stability or adequate buoyancy).  Underwater discharges need sufficient non-return valves fitted to prevent back flooding.  The requirement for bilge pumps does not apply to: <ol style="list-style-type: none"> <li>1. Ski-boats having self-draining decks</li> <li>2. Inflatable or semi-rigid inflatable vessels having self-draining decks</li> </ol> but such vessels must be provided with an efficient bailing device	
Visibility at steering position (Paragraph 12)	Where a steering position is not in the open, clear visibility is required, through safety-toughened clear glass ( <i>i.e. not through opaque and starred plastic</i> ), forward, from two points abaft the beam on each side (112½° to port and starboard of the centre line). Protection of glare from the sun may be afforded by portable tinted screens (or the roll-down type) and <u>not fixed/stuck to the glass.</u>	
Maintenance of propulsion and steering machinery (Paragraph 13)	Periodically serviced and maintained according to the manufacturers specifications by competent persons.	
Gas appliances (Paragraph 15)	All gas appliances and tubing must be maintained in good working order at all times. A safety cut-off device that is activated automatically if the flame is blown out is highly recommended.	
Dive boats ( <u>ONLY</u> applies to diving vessels) (Paragraph 17)	If operated through the surf, fitted with adequate seating and grab points other than on the gunwale (except for inflatable vessels).  To provide adequately secured racks for accommodating all the dive tanks.	

## Safety Appliances and Equipment – Annex 2

Item No	Description	Remarks	✓
1	Approved <u>Life-jacket</u> Above to be fitted with the following items Whistle Lifting loop Retro – reflective material Light for vessels operating at night	One life-jacket per person aboard. Level 150 – Offshore conditions for vessels operating more than 15 miles offshore (SANS 12402-3). Single chamber 150N inflatable lifejackets to SANS 12402-3 are now accepted for all categories of vessel. Level 275 – Extreme offshore conditions for vessels operating South of 40 degrees South latitude (SANS 12402-2) Refer to the latest Marine Notice: New Compulsory standards for lifejackets used on South African Vessels	
2	Approved Buoyancy aid (Also called working lifejackets or PFD's)  To be fitted with the following: a) Whistle b) Lifting loop c) Retro–reflective material  PFD' are comfortable to wear and provide some buoyancy but not sufficient to turn an unconscious person face-up.	It is accepted that it may be impractical to wear certain approved lifejackets (e.g. foam lifejackets) for specific operations on board. It is not mandatory for recreational vessels to carry buoyancy aids in addition to approved life jackets. However, SAS and World Sailing strongly recommend wearing comfortable inflatable single chamber 150N lifejackets with integrated harnesses where appropriate. These are accepted as lifejackets for all categories of vessel. 150N is the minimum required to turn an unconscious person face-up.  Life jackets or PFD's are to be worn 1. by every child under twelve (12) years of age on deck when the vessel is underway. 2. When launching or returning through the surf 3. When directed by the skipper 4. When water skiing	
3	Lifebuoy	<u>Only</u> on non-planing vessels	
4	Dan buoy	<u>Only</u> on trawlers and on sailing vessels over 9m in length.	
6	Four (4) hand-held red distress flares	Unexpired SAMSA approved and marked with vessel name.	
7	Four (4) Red rocket parachute flares	It is an offence to tamper with expiry dates, besides being very dangerous.	
8	One floating orange smoke marker	( <i>Note: All expired pyrotechnics are to be handed in at the SAPS explosives unit for disposal.</i> )	

10	One (1) waterproof torch, spare batteries and a spare bulb	<u>ONLY</u> required on vessels operating at night - Spare batteries and bulb to be kept in a watertight container	
11	Hand-held spotlight with own 12 V battery	<u>ONLY</u> required on dive boats operating at night.	
12	Sound signalling device (other than a life-jacket whistle) <u>ONLY</u> required on vessel operating WEST of Port Alfred	Frequency range 250Hz - 700Hz, audible not less than 1 kilometre over water in still conditions. It is highly recommended by SAMSA that vessels operating East of Port Alfred also carry a sound signalling device.	
13	Ships bell or sound signalling device capable of making the signal "R"	<u>ONLY</u> required on vessels of 20m or more in overall length. ("R" is Morse Code • — • )	
14	Code Flags "N" and "C"	One of each	
15	Code Flag "A" (rigid)	<u>ONLY</u> required on dive boats	
16	Two (2) black balls or shapes, at least 400mm in diameter	<u>ONLY</u> required on vessels of 12 (twelve) metres or more in overall length.	
17	Radar reflector of at least 400mm in diameter (or patent type of equivalent echoing capability)	<u>To be carried by all vessels</u> <u>Power Driven vessels</u> of 9 metres or more in overall length operating west of Port Alfred must permanently fit the radar reflector. It is strongly recommended by SAMSA that vessels less than 9 metres in overall length and vessels operating East of Port Alfred also permanently fit their radar reflector.	
18	Fixed mount marine VHF radio. A 29 MHz radio is no longer accepted. See Marine Notice 6 of 2015.	Capable of operating on Ch 16 and at least one other working channel A current ship station licence from ICASA is required. The skipper is required to have a Restricted Radio Telephone Operators Certificate (Marine), a Short Range Certificate or Long Range Certificate.	
19	MF/HF SSB Radio		
20	EPIRB  Capable of transmitting distress alerts through the COSPAS – SARTSAT Satellite service, operating in the 406Mhz band  To be registered with the MRCC. The MRCC EPIRB registration form is available on the SAS web site. Look under the "Regulatory" tab.	SAMSA have agreed that a float free arrangement with hydrostatic release is not required on sailing vessels. Once a month (or when the boat is next used if it is not used for more than a month) the following checks are required: <ol style="list-style-type: none"> <li>1. An EPIRB self-test. The safety officer may request the owner to demonstrate a self-test during the safety inspection.</li> <li>2. Check that battery life has not expired.</li> <li>3. Check for damage and adequate securing arrangements</li> </ol> <u>Requirement to register EPIRB's</u> : The skipper/owner must ensure that each EPIRB carried on the vessel is registered with the MRCC and that the registered particulars are up to date and correct. A copy of the EPIRB programming certificate and the completed MRCC registration form must be kept on board. A copy of the MRCC registration form must be given to the safety officer. Under no circumstances may an EPIRB be transferred from one vessel to another without correct re-registration with the MRCC.	
21	Depth sounding device or hand lead line	<u>ONLY</u> required on dive boats	
22	Steering Magnetic Compass	Compass to be illuminated on vessels operating at night. If the steering compass is electronic, a suitable waterproof marine handheld compass must be carried.	
23	Navigation charts for the voyage, or area of operation	Corrected in accordance with the South African Notices to Mariners or renewed every six (6) years.	
24	Suitable approved fire extinguishers. Serviced annually by an approved SAMFAS station.	One <u>per engine</u> , and, in decked vessels of 9 (nine) metres or more in length, one (1) in each compartment formed by a complete transverse bulkhead (e.g. galley, sleeping accommodation and wheelhouse). See latest Marine Notice for SAMSA approved SAMFAS Stations	
27	Grab-line fitted to outside of gunwale	<u>Required ONLY</u> for dive boats. Not required for vessels equipped with a secured boarding ladder extending into the water.	
28	Capsize rope for use when vessel is inverted in the water	<u>ONLY</u> for inflatable vessels and ski-boats less than 9 (nine) metres in overall length. Rope to be attached when proceeding to sea.	
31	Suitable sea-anchor, fitted with hawser and tripping line (rigged and ready for use)	<u>ONLY</u> required on surf launched vessels of less than 9 (nine) metres in overall length.	

32	Proper <u>patent</u> anchor and chain, with a suitable length of rope for the area of operation	<i>Length of chain:</i> Vessels of 6 (six) metres and more - at least 5m Vessels under 6 (six) metres - at least 3m <i>Length of Rope:</i> At least 100 metres Inspect weak link.	
33	Watertight capsize bottle attached to vessel with rope readily accessible in event of capsize	Containing flares, survival and emergency equipment. The rope length must not be less than 1.5 times the length of the vessel and manufactured to be non-slip.	
34	Space blankets	2 off	
35	Drinking water	One litre per person	
36	First-aid kit	To be suitable for the vessel's size, compliment and intended operation, to the satisfaction of the surveyor or safety officer. To include an elementary first-aid manual such as the publication entitled <i>First on the Scene</i> , published by <i>St Johns Ambulance</i> .	
37	Suitable air bellows and repair kit	<u>ONLY</u> required on inflatable vessels	
38	SAMSA Approved self-inflating life-raft capable of carrying all persons aboard. Serviced according to the manufacturers' instructions.	Stowed on deck or in a readily accessible position. SAMSA strongly recommend fitting a hydrostatic release unit. Refer to the latest Marine Notice regarding provision of life-rafts	
39	Spares	Adequate for the purpose of carrying out emergency repairs to machinery and essential equipment aboard.	
40	Tools		
41	Highly visible 2m x 2m canvas	Only applies to vessels not painted in visible colours. To be pigmented in a colour which is readily visible from above in any sea condition.	
	Marking of equipment Annex 2 Para 3(1)	All life-jackets, buoyancy aids, life-buoys, Dan-buoys, flares, oars, paddles and life-rafts are to be permanently marked with the vessel's name or "approved marking".	
	Marking of trailer Annex 2 Para 3(2)	Where any vessel is launched from a trailer other than a dolly at a private launching site the trailer must be marked in a conspicuous position, with the vessel's name, or approved marking and with the owner's name and emergency contact number.	

**Additional safety equipment strongly recommended by SAS.** It is important to recognise that the regulations define an absolute minimum requirement. It is up to the owner/skipper to decide what additional equipment is appropriate for a specific voyage. The list below would be considered by many skippers to be a minimum list of additional equipment. For a more complete list the World Sailing Offshore Special Regulations (available on the SAS web site) provides a useful reference.

Satellite phone in a transparent waterproof pouch (e.g. Aquapac)	Recommended for an offshore passage to provide back-up emergency voice communication in the event of capsize, swamping, flooding or DC power failure.	
Portable waterproof VHF radio	For back-up communication close to shore or use in a life raft.	
A suitable combination of navigational instruments appropriate for the voyage	A suitable combination of the following navigational instruments viz:; chart plotter, GPS, log, depth sounder, radar and AIS.	
Back up handheld GPS	Independent of the yachts power supply	
Hand bearing compass	For use in navigation and as a back-up to the ship's steering compass.	
Jack stays and secure clip on points	To allow crew to clip on in adverse weather conditions	
Floating light or lights attached to the danbuoy and/or horse shoe ring	To assist with MOB recovery at night.	
Portable LED spotlight	To help locate a MOB at night	