

WORLD CRUISING CLUB

SAFETY EQUIPMENT REGULATIONS

2021



The following safety equipment requirements have been drawn up to ensure the minimum acceptable level of safety equipment for yachts participating in World Cruising Club Events. The World Sailing Offshore Special Regulations have been used as a guideline to compile these regulations.

Division II (Racing) is run under World Sailing Offshore Special Regulations for Category 1 and these Safety Equipment Requirements.

These safety equipment requirements do not override any greater safety requirement demanded by the yacht's national or flag country, maritime authorities or appropriate regulatory bodies.

Yacht owners considering taking fare paying guests or crew should consider the implication in relation to their national or flag regulations as required by the appropriate proper authorities.

The regulations are in two sections:

Section One - Mandatory Safety Equipment Requirements.

This equipment must be carried and all items will be sighted during the safety equipment inspection prior to the start. Failure to comply may lead to disqualification from the Rally.

Section Two - Recommended Safety Equipment.

Whilst equipment in this section is not mandatory the organisers strongly suggest that all the recommendations in this section are complied with. The Safety Equipment Officer will be available to discuss points made in this section during the inspection.

GENERAL REQUIREMENTS

Whilst everyone on board plays a part in the safe operation of the yacht, it is the sole and inescapable responsibility of each skipper to ensure that all necessary safety precautions are taken in respect of themselves, the crew and the yacht.

All safety equipment that requires regular servicing must be in date, at the start of the Rally, and remain in date for the duration of the Rally. (The Test Certificate for the liferaft will be inspected during the Safety Equipment Inspection).

All safety equipment carried must:

- a. be of type, size and capacity commensurate with the size of yacht and crew
- b. function correctly
- c. be easily accessible

Each crew member must be fully conversant with the stowage location and operation of all safety equipment on board.

SECTION ONE: MANDATORY SAFETY EQUIPMENT REQUIREMENTS

Liferaft

One or more purpose made, self-inflating, liferafts of sufficient capacity for at least all the crew on board shall be either:

- i. "ISO Standard 9650" Type 1 Group A with service Pack 1 (>24 hours), or equivalent made up of service Pack 2 (<24 hours) and a grab bag, or
- ii. ISAF liferafts manufactured before 2016 until replacement is due at end of service life plus food and water equivalent to (i) above, or
- iii. SOLAS LSA Code 1997 Chapter IV or later containing a SOLAS A pack
 - a. Each raft shall be mounted externally or capable of being at the lifelines ready to launch within 15 seconds. Additionally for multihulls the raft shall be deployable whether inverted or not.
 - b. If a liferaft is stowed in a locker that locker will be dedicated to the stowage of the liferaft and will not have stowed in it anything else that is likely to hinder access to the liferaft or cause damage to it.
 - c. The end of each liferaft painter line shall be permanently made fast to a strong point on board the yacht.
 - d. Each liferaft shall have a valid inspection certificate from the manufacturer or approved servicing agent, valid for the period of the Event.

(See the [World Sailing website](#) for the full text of the World Sailing Offshore Special Regulations).

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Liferaft Servicing

- a. Liferafts based on type are to be serviced at a service station approved by the manufacturer at the following maximum intervals:
 - i. SOLAS liferafts annually.
 - ii. ISO 9650 canister packed liferafts no less frequently than every 3 years.
 - iii. ISO 9650 valise packed liferafts no less frequently than 3 years except that hired valise liferafts shall be serviced annually.
 - iv. ISAF liferafts annually
- b. The servicing certificate, or a copy, shall be carried on the yacht.

EPIRB

Emergency Position Indicating Radio Beacon. A floating, water and manually activated EPIRB transmitting on 406MHz and 121.5MHz or AIS, correctly registered with the appropriate home authority. A 406 MHz EPIRB registered after 2015 shall include an internal GPS. Personal locator beacons (PLBs) carried do not replace the requirement for a yacht's EPIRB.

Long Range Communications Equipment

A satellite communications system (or an SSB radio with pactor modem) capable of sending and receiving E-mail messages whilst at sea.

This paragraph does not apply to ARC Portugal, ARC DelMarVa, ARC Channel Islands, or ARC Baltic.

SSB HF Radio

World ARC yachts must be fitted with a Digital Selective Calling (DSC) capable marine SSB HF radio transceiver covering the 2 – 22 MHz bands, with an independent aerial for DSC operation.

VHF

A VHF DSC capable (WSS 3.29.02 if fitted after 2015) radio transceiver having a rated output power of 25W and capable of working on all standard international channels must be fitted. An external cockpit extension speaker should also be fitted to the set. The radio shall have a masthead antenna, and an emergency antenna shall also be carried.

Handheld VHF Transceiver

With min 5w output power, watertight or with waterproof covers. (It is recommended the handheld receiver should have (DSC) and be equipped with GPS).

Passive Radar Reflector

Permanently mounted in, or capable of being hoisted to, a position at least 5m (15 feet) above deck. Octahedral circular sector plates of minimum diameter 300 mm (12"), or octahedral rectangular plates of minimum diagonal dimension 405 mm (16"). Non octahedral radar reflectors must have a documented minimum RCS (radar cross-section) of not less than 10m². Smaller cylindrical reflectors do not meet this RCS requirement. (Where fitted a Radar Target Enhancer does not replace the requirement for a passive radar reflector).

Automatic Information System (AIS)

- i. **World ARC, ARC, ARC+, ARC Caribbean 1500, ARC USA.** A transponder is a mandatory requirement. The AIS Transponder shall share the masthead VHF antenna via a low loss AIS antenna splitter or a dedicated AIS antenna that is a minimum of 381 mm long, mounted with its base at least 3 meters above the water, and fed with coax cable that has a maximum 40% power loss.
- ii. **ARC Portugal, ARC Channel Islands, ARC DelMarVa.** An AIS receiver shall be fitted as a minimum; a transponder is strongly recommended for long distance offshore events.
- iii. An AIS personal crew overboard beacon for each crew member appropriately fitted to lifejackets for activation method of each device.

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Flares

Shall be pyrotechnic SOLAS compliant, and not older than the stamped expiry date, or four years from date of manufacture, for the end date of the event.

Pyrotechnic flares to be stowed in a watertight container, with protective gloves and goggles, with as a minimum:

- 4 red hand held flares (2 of which may be eVDS)
- 2 buoyant orange smoke

These flare requirements are in addition to any flares carried in liferafts and their supplementary service packs or grab bags.

Crew Overboard Recovery

Lifebuoys, within reach of the helmsman for instant use:

1. Either:

One lifebuoy with a drogue, a self-igniting light and whistle attached,

Or:

A recovery sling which includes a buoyant line (minimum 36m in length), buoyancy section (horseshoe) with no less than 90N (20lb) buoyancy, capable to hoist a crewmember aboard with a self-igniting light.

And, in addition to 1 above,

2. A MOB Module or a lifebuoy equipped with a whistle, drogue, a self-igniting light and a pole and flag (a danbuoy). The pole shall be either permanently extended or be capable of being fully automatically extended.

At least one lifebuoy or recovery sling shall depend entirely on permanent (e.g. foam) buoyancy. Each inflatable lifebuoy and any automatic device shall be tested and serviced at intervals in accordance with its manufacturer's instructions.

Every lifebuoy shall have the yacht's name on it and must be fitted with marine grade retro-reflective material.

Throwing/Heaving line

Throwing/Heaving line (floating) 15–25m (50–75ft) length, readily accessible to cockpit.

Bilge pumps

Two securely fitted manual bilge pumps, one operable from on deck. Multihulls shall have provision to pump out all watertight compartments (except those filled with impermeable buoyancy). All required permanently installed bilge pumps shall be operable with all cockpit seats, companionways and hatches shut. All removable bilge pump handles shall be retained by a lanyard, to prevent accidental loss.

Additionally for World ARC and highly recommended for all other events – (High Capacity) Emergency pump

Either fixed or portable pump to remove ingress water from any compartment. This pump shall:

- a. have a minimum rated capacity of 200 l/min
- b. be operated by battery, main engine powered or a separate engine
- c. if portable electric-powered, power cables to be terminated with alligator clips
- d. have sufficient hose to discharge directly overboard or into the cockpit

A combination of permanently installed and portable pumps may be combined to meet the above requirement.

Navigation lights

Navigation lights must be fitted so that the yacht shall, at all times, comply with the International Regulations for Preventing Collision at Sea. Two independent sets of navigation lights are required. For example, the primary set (bow and stern lights), the secondary set (masthead tricolor – up to 20m); battery operated navigation lights are not acceptable. Spare bulbs of correct wattage shall also be carried for non LED navigation lights. LED navigation lights are known to fail, and consideration should be given to carrying spare units.

High Powered Search Light

A watertight high-intensity heavy duty searchlight powered by the ships' batteries, instantly available in the cockpit for use on deck, with spare bulbs. The searchlight shall be capable of continuous use. If rechargeable the searchlight shall be capable of operating whilst being charged.

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Lifejacket/Combined Harness

Shall have a whistle, a light, yacht name (or lifejacket owner's name), retro-reflective tape, a crotch strap, spray hood, Personal AIS Beacon appropriately fitted, and a 2m (6'6") safety line with self-closing hooks at each end, and an intermediate self-closing hook.

Spare re-arming kits and gas bottles appropriate for each make of lifejacket onboard shall also be carried.

There shall be a lifejacket/combined harness provided for each member of the crew, or a permanent buoyancy jacket for children weighing under 40kg (88lb).

For USA flagged yachts where Type 1 inherently buoyant PFDs are carried, an offshore inflatable lifejacket/harness (preferably USGC Type II approved) shall also be carried.

Jackstays and Clipping Points

Jackstays/jacklines:

Independent along port and starboard side decks and elsewhere as necessary to enable a crewmember to move readily between the working areas on deck and the cockpit(s) with the minimum of clipping and unclipping operations.

Clipping Points:

Attached to through bolted or welded deck plates, or similar, in positions close to the helm, and to enable crew to clip on before coming on deck, and unclip after going below.

Heavy equipment

All heavy equipment (i.e. anchor, batteries, gas bottles and stoves) shall be firmly secured to prevent damage from possible knockdown or capsizing.

The following equipment shall also be fitted/carried:

- Emergency grab bag (see [Appendix 1](#))
- Navigational charts (not solely electronic), tide tables and pilots for the route of the event
- A recognised secondary or alternative method of navigation
- Securely fitted taut double lifelines/guardrails around the entire deck of stainless steel or high modulus polyethylene (Spectra®/Dyneema® or equivalent) rope (braid on braid is recommended). When HMPE (Dyneema®/Spectra®) is used, it shall be protected from chafe and shall be spliced in accordance with the manufacturer's recommended procedures.
- Anchor of sufficient weight plus a suitable combination of chain and rope
- Fire extinguishers (at least two)
- Fire blanket (secured near the galley)
- Companionway hatches/washboards to be capable of being secured shut independently and with lanyards or similar device to prevent accidental loss
- Bungs or softwood plugs – securely attached/stowed adjacent to each fitting to enable any through hull fitting (below and above waterline) to be closed off
- A watertight torch/flash light with spare batteries and bulbs
- Emergency tiller capable of being fitted to the rudder stock; or a secondary steering method (for example tiller, wheel or autopilot) capable device of controlling a rudder, neither of which shares components with the other except for the rudder stock
- A proven method of emergency steering with the rudder disabled
- Hacksaw and spare blades, bolt croppers, or suitable method for cutting away rigging fitted.
- Medical kit and manual
- Foghorn
- Buckets (at least two) of stout construction and fitted with lanyards; capacity to be at least 2 gallons (9 litres)
- Echo sounder and boat speed/distance log

SECTION TWO: RECOMMENDED SAFETY EQUIPMENT

It is recommended that the following equipment be carried:

- A safety equipment location chart in durable waterproof material displayed in the main accommodation where it can best be seen, clearly marked with the location of principal items of safety equipment.
- Personal 406MHz Locator Beacon (PLB) for individual adult crew members
- One complete spare lifejacket
- Dinghy and oars
- Second anchor, plus a suitable combination of chain and rope
- Sextant and nautical almanac (or tables for astro navigation)
- Storm jib
- Storm trysail or 3rd reef in mainsail (to reduce luff by at least 50%)
- A 1m² (11ft²) area of highly-visible pink, orange or yellow capable of being displayed on the coachroof and/or deck
- Red parachute flares
- White parachute flares (to provide illumination for Search and Rescue)
- Mast-step. The heel of a keel-stepped mast should be securely fastened to the mast-step or adjoining structure
- Drogue or Sea Anchor. A drogue (for deployment over the stern), or alternatively a sea anchor, or parachute anchor (for deployment over the bow), is strongly recommended as a means to reduce the risk of capsize in heavy breaking seas

It is highly recommended that each person on board carries a knife at all times whilst at sea.

APPENDIX 1: RECOMMENDED GRAB BAG CONTENTS

A yacht is to have a grab bag for each liferaft with the following recommended contents, which need not be additional to the items required by the Safety Equipment Requirements. The grab bag offers a suitable place to stow items where they will be quickly found and readily carried to the liferaft. A grab bag should have inherent flotation, be marked with the name of the yacht, and have a lanyard and clip.

- second sea anchor and line
- two safety can openers (if food or water is in cans)
- waterproof hand-held VHF transceiver
- watertight flashlight with spare batteries (and bulb if not LED)
- EPIRB
- first aid kit, including sunscreen and medical supplies for pre-existing medical conditions
- graduated plastic drinking vessel for rationing water
- two "Cyalume" sticks or two watertight floating lamps
- one daylight signaling mirror and one signaling whistle
- two red hand flares, compliant with SOLAS, which may be eVDS
- additional high energy food
- additional drinking water in a dedicated and sealed container, or a hand operated desalinator, plus containers for water
- string, polythene bags, seasickness tablets

APPENDIX 2: RECOMMENDED CREW TRAINING

The skipper and at least one crew member should have undertaken training within the five years before the start of the Rally in both theoretical and practical sessions in the following training topics. World Sailing recommends that all crew members do likewise.

- Giving Assistance to Other Craft
- Personal Safety Gear, theory and practice
- Care and Maintenance of Safety Gear
- Fire Precautions and Firefighting, theory and practical
- Crew Overboard Identification and Recovery
- Hypothermia, Cold Shock and Drowning
- Crew Health
- Marine Weather
- Heavy Weather - crew routines, boat handling, drogues
- Storm Sails
- Damage Control
- Search and Rescue Organization
- Pyrotechnics and Signalling Gear, theory and practical
- Emergency Communications, theory and practical
- Liferafts and Abandon Ship, theory and practical

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(amendments are shown as underlined text)