

Preparing Your Boat for the Annapolis to Bermuda Race



**Complying with the 2020
A2B Safety Equipment Regulations**



Michael Lehmkuhl

A2B Committee Chair
USCG Master Near Coastal 50GRT
5 races to BDA

Brian Barone

A2B Safety Chair
3 races to BDA



Getting Your Boat Ready for the Race

1. Getting the Boat Ready

- A. Are YOU ready?
- B. ISAF, US Sailing, and A2B Safety Equipment Regulations (SERs)
- C. Changes and Repairs: Assessing time and cost

2. The safety inspection process

- A. Inspections
- B. Waivers

3. Questions





ISAF RULES & US SAILING



- International Sailing Federation (“ISAF”)
- US Sailing is part of ISAF
- US Sailing has its own Safety at Sea Committee which has its Safety Equipment Requirements (“SERs”)
- SERs are based on the ISAF Requirements but are easier to understand
- A2B follows SERs with minor differences
- Also NOTE: rules v. recommendations



2020 A2B Offshore SERs

The Fundamentals

- General requirements
- Structural Requirements
- Equipment and Personal Gear
- Training and Crew Requirements



2020 A2B Offshore SERs

The Fundamentals

ISAF Racing Rules of Sailing (RRS)

Rule 4: DECISION TO RACE

The responsibility for a yacht's decision to participate in a race or to continue racing is hers alone.



2020 A2B Offshore SERs
The Fundamentals:

1.2 Responsibility of the Person In Charge

The safety of a boat and her crew is the sole and inescapable responsibility of the "person in charge," as per RRS 46, who shall ensure that the boat is seaworthy and manned by an experienced crew with sufficient ability and experience to face bad weather.



2020 A2B Offshore SERs

The Fundamentals: Person In Charge

- Be satisfied as to the soundness of hull, spars, rigging, sails and all gear
- Ensure that all safety equipment is properly maintained and stowed and,
- The crew know where safety gear is kept and how to use it
- Nominate a person to take over the responsibilities in case of incapacitation.



2020 A2B Offshore SERs

General Requirements: Inspections

2020 A2B Notice of Race:

7.1 All boats competing in this race must be inspected by a person appointed by the OA for compliance with the A2B SER. Boats may be subject to inspection and re-inspection either before or after the race, including immediately after finishing. Inspection will be conducted according to procedures set forth by the OA Safety Committee. These procedures will be supplied to all boats that enter.



2020 A2B Offshore SERs General Requirements

1.4 All equipment must:

- function properly
- be regularly checked, cleaned and serviced
- when not in use be stowed in conditions in which deterioration is minimized
- be readily accessible
- be of a type, size and capacity suitable and adequate for the intended use and size of the yacht.



2020 A2B Offshore SERs General Requirements

1.4 Know Your Boat

- Rigging Inspection
- Structural bulkheads & tabbing
- Condition of decks and fiberglass
- Condition of Systems



2020 A2B Offshore SERs

General Requirements: Secure Storage

1.5 A boat's heavy items such as batteries, stoves, toolboxes, anchors, chain and internal ballast shall be secured.



2020 A2B Offshore SERs

General Requirements: Strength of Build

1.6 A boat shall be strongly built, watertight and, particularly with regard to hulls, decks and cabin trunks, capable of withstanding solid water and knockdowns. A boat shall be properly rigged and ballasted, be fully seaworthy and shall meet the standards set forth herein. A boat's shrouds and at least one forestay shall remain attached at all times.



2020 A2B Offshore SERs

General Requirements: Watertight Integrity

1.7 A boat's hull, including, deck, coach roof, windows, hatches and all other parts, shall form an integral watertight unit and any openings in it shall be capable of being immediately secured to maintain this integrity.



2020 A2B Offshore SERs

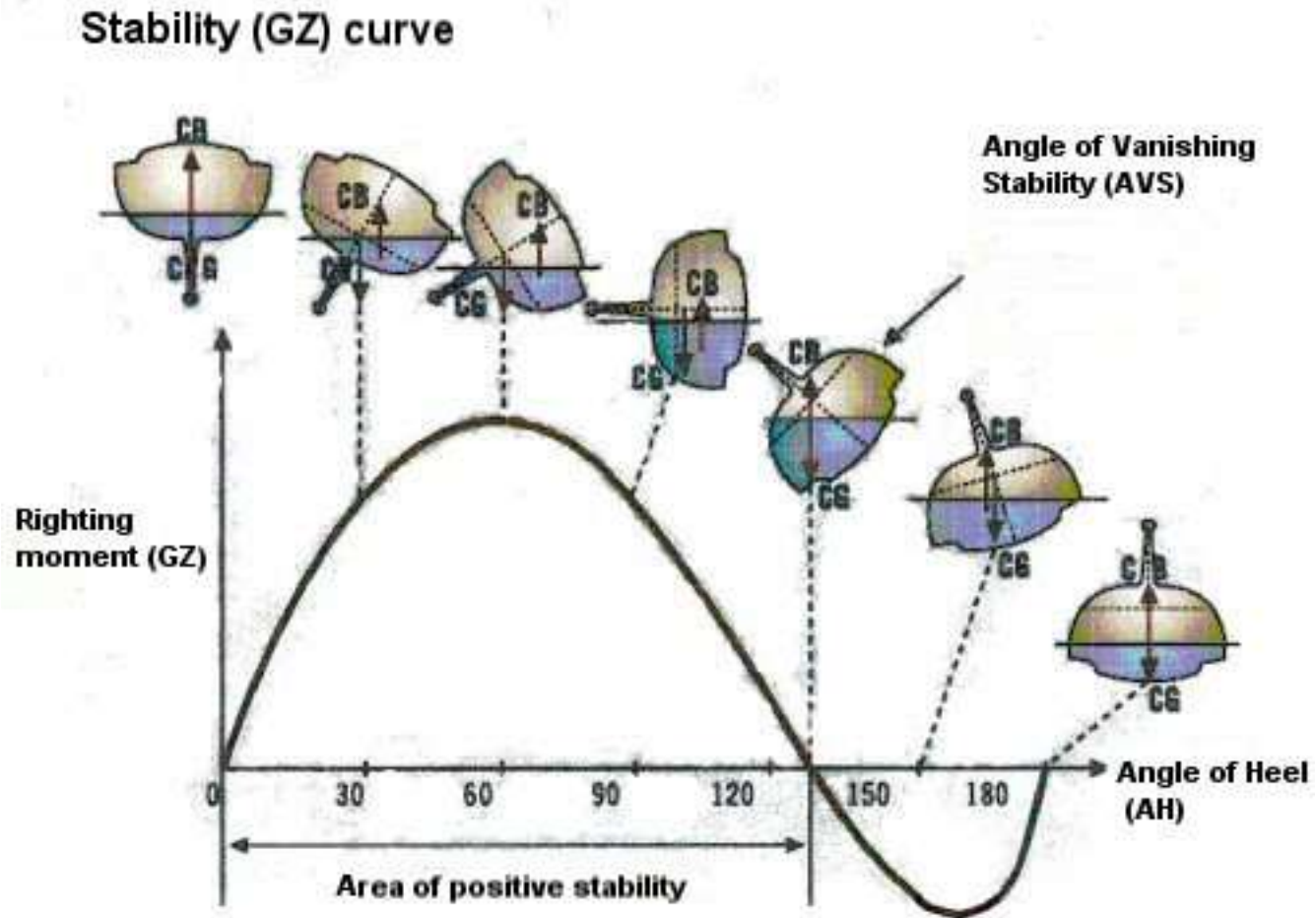
Structural Requirements: Stability Index

- US Sailing Ocean limit is 110.
- At this time A2B does not enforce a specific limit.
- We advise everyone to be familiar with the stability index of their boat and take seriously their decision to race.
- See SER 1.2



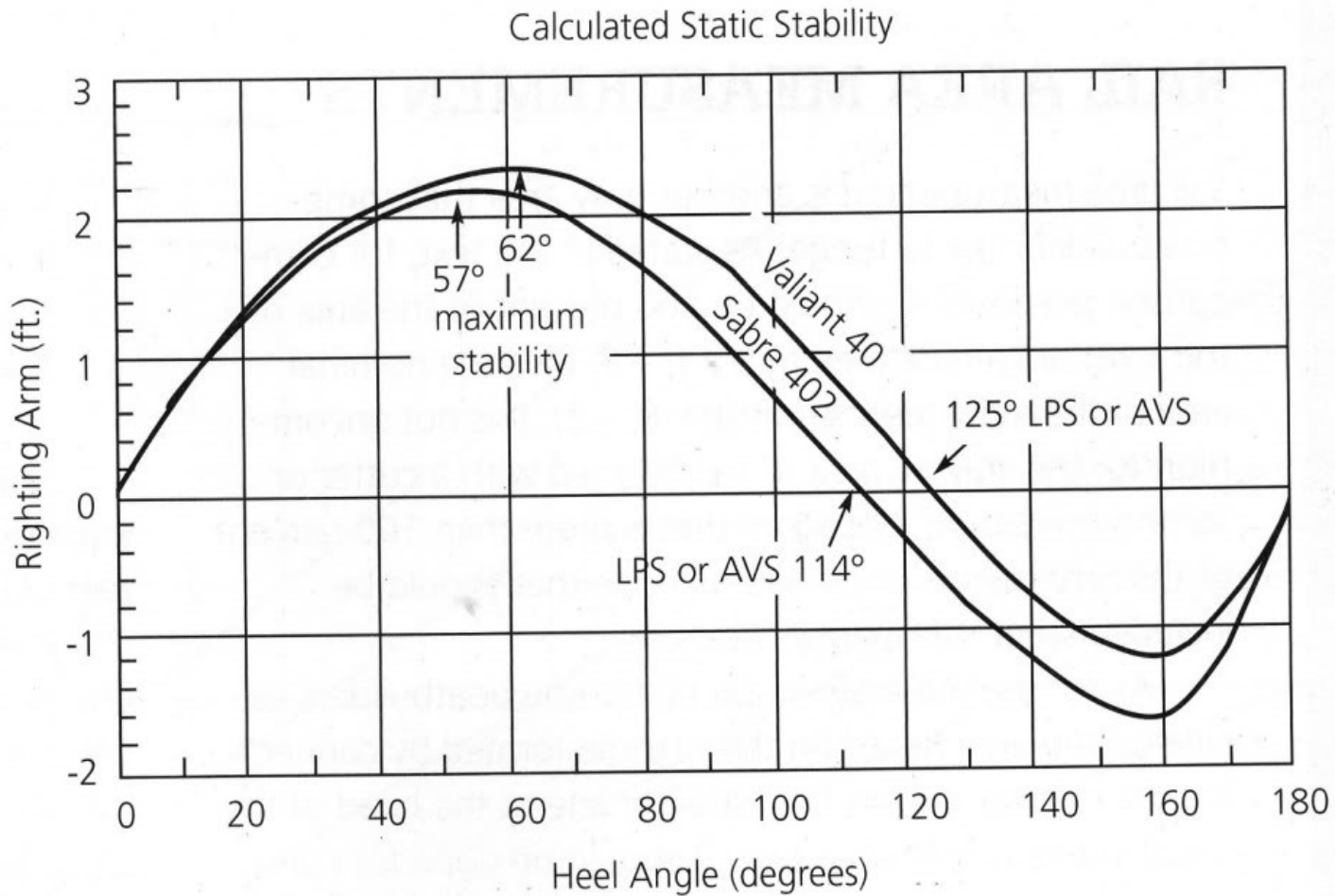
2020 A2B Offshore SERs

Structural Requirements: Stability Index



2020 A2B Offshore SERs

Structural Requirements: Stability Index



2020 A2B Offshore SERs

Hull & Structure:

Structural Features, Stability, Fixed Equipment

- Companionway
- Hatchboards
- Cockpits & Scuppers
- Through Hulls
- Stability Index
- Moveable Ballast
- Head
- Bunks
- Stove
- Water Tanks
- Handholds
- Lifelines & Stanchions
- Bow Pulpit
- Toe Rails
- Bilge Pumps
- Mast Heel
- Engine



2020 A2B Offshore SERs

Hull & Structure: Companionway & Hatches

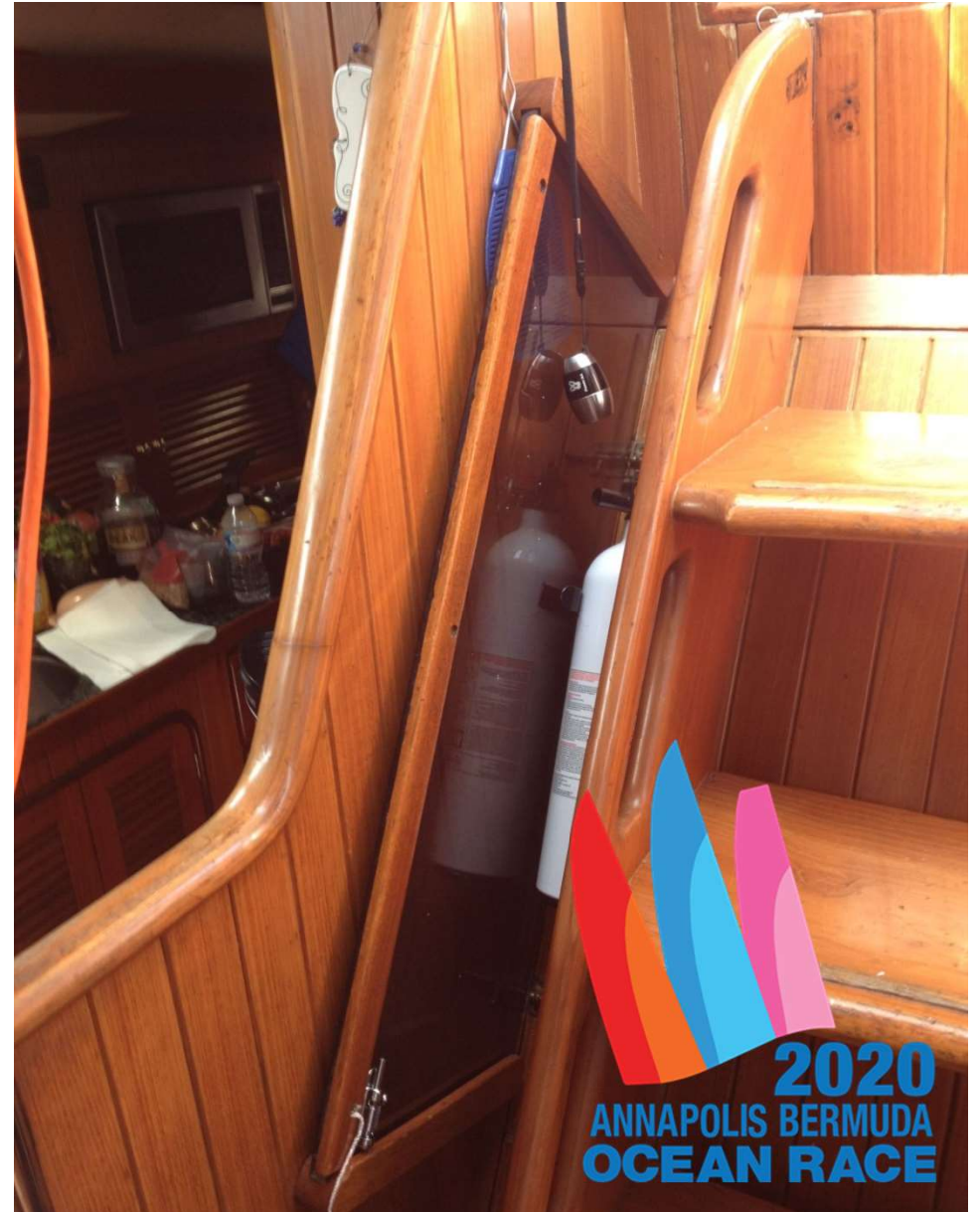
2.1.1 A boat's companionway(s) shall be capable of being blocked off to main deck level. The method of blocking should be solid watertight and rigidly secured, if not permanent.

2.1.2 A boat's hatch boards, whether or not in position in the hatchway, shall be secured to the boat (e.g. by a lanyard) for the duration of the race to prevent their being lost overboard. Hatchboards must be fitted with a strong securing arrangement which **shall be operable from the exterior and interior including when the yacht is inverted.**



2020 A2B Offshore SERs

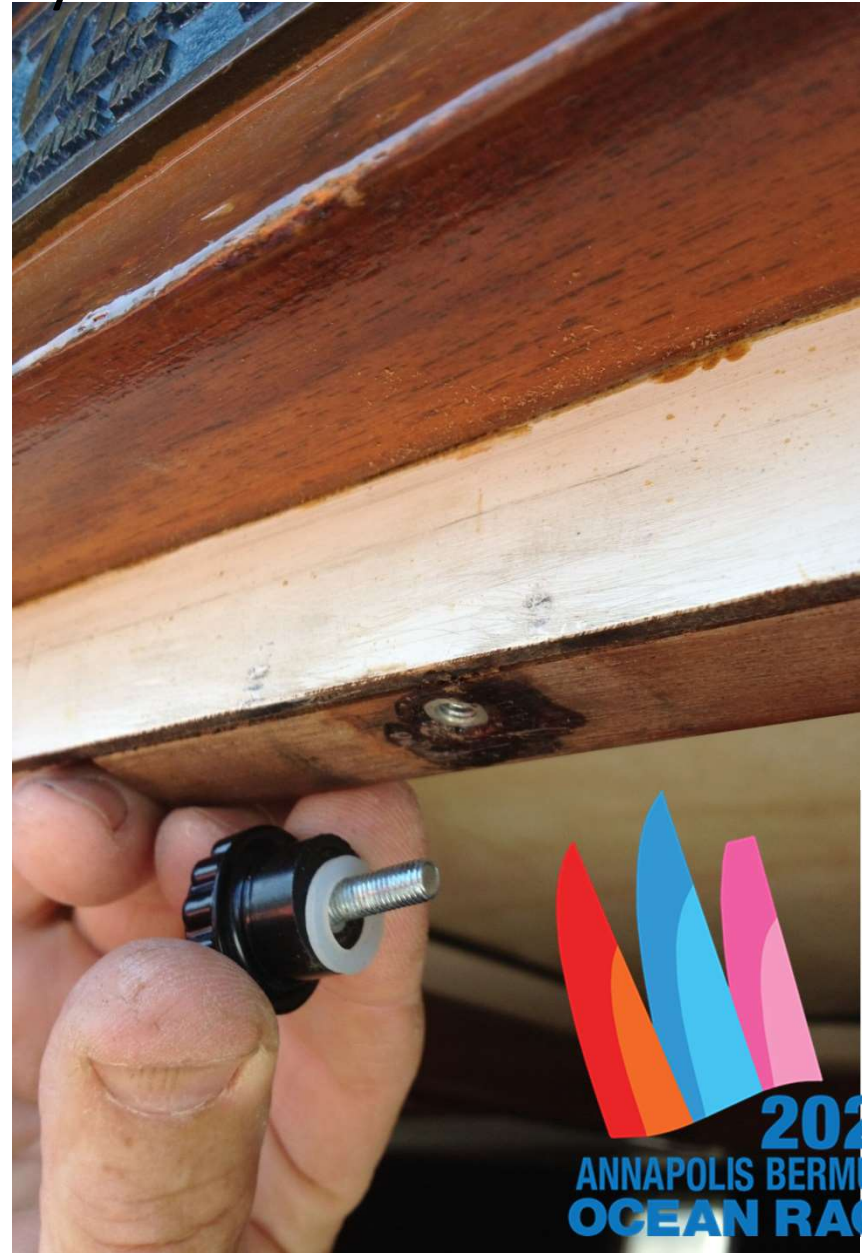
Hull & Structure: Companionway & Hatches



2020
ANNAPOLIS BERMUDA
OCEAN RACE

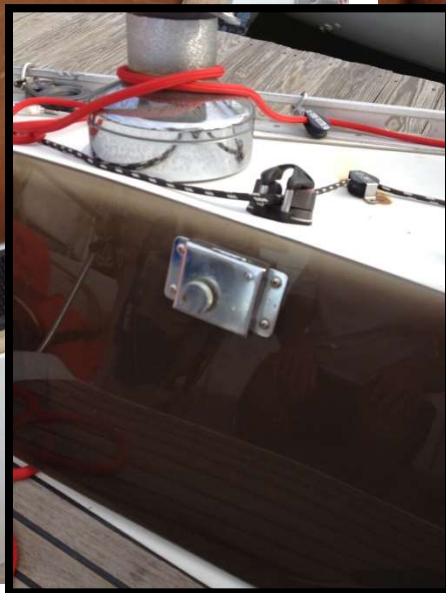
2020 A2B Offshore SERs

Hull & Structure: Companionway & Hatches



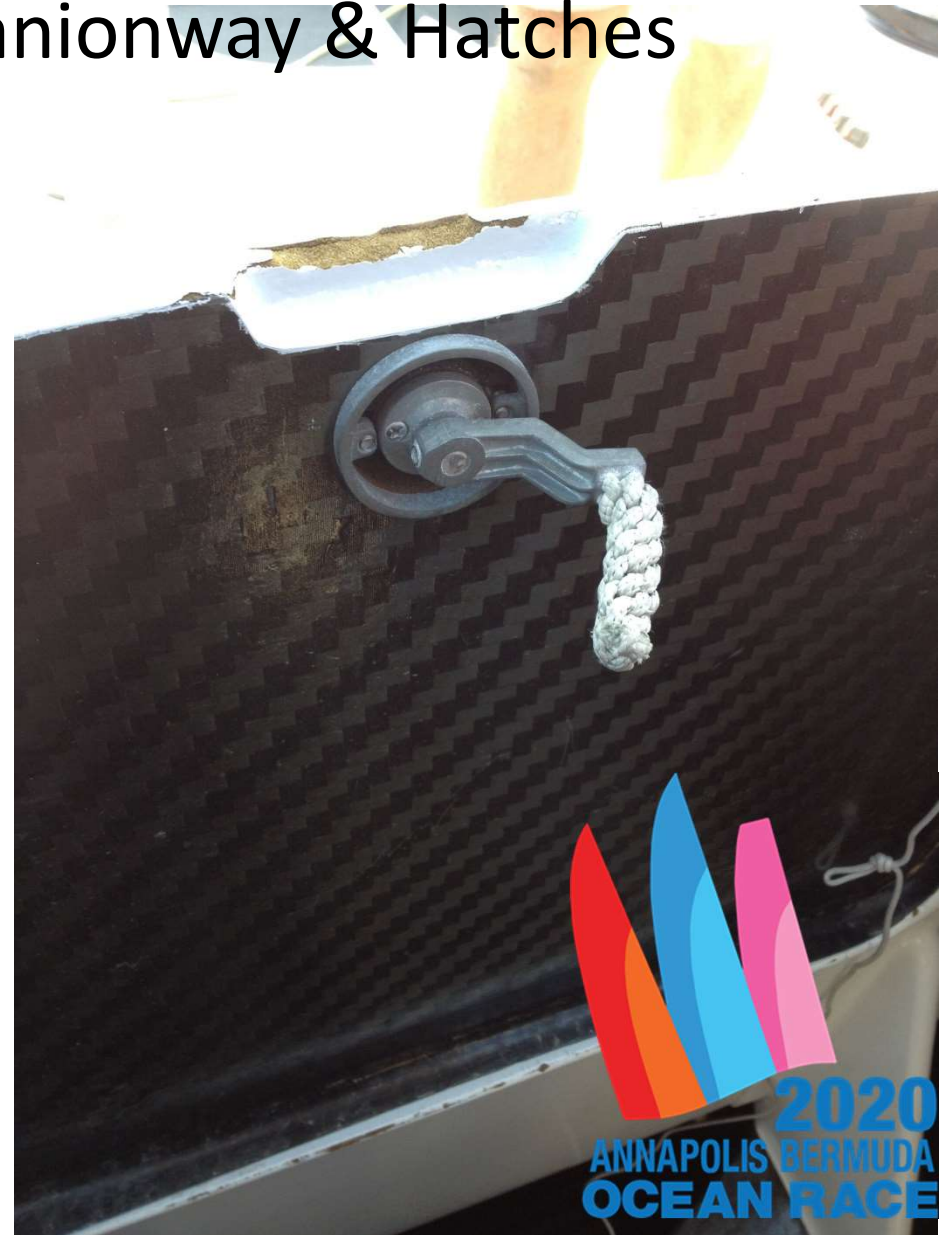
2016 A2B Offshore

Hull & Structure: Companionway & Hatches



2020 A2B Offshore SERs

Hull & Structure: Companionway & Hatches



2020 A2B Offshore SERs

Hull & Structure: Cockpits

2.1.3 Cockpit: A boat's entire cockpit shall be solid, watertight, strongly fastened and/or sealed. Weather-tight seat hatches are acceptable only if capable of being secured when closed.

2.1.5.1 Cockpit Volume: A boat's maximum cockpit volume for cockpits not open to the sea, including any compartments capable of flooding, to lowest points of coaming over which water can adequately escape, shall not exceed $0.06 \times \text{LOA} \times \text{Max. Beam} \times \text{Freeboard aft}$. The cockpit sole shall be at least $0.02 \times \text{L}$ above LWL.

2020 A2B Offshore SERs

Hull & Structure: Cockpits

2.1.4 A boat's cockpit drains shall be capable of draining six inches of water in 5 minutes. One square inch (645mm^2) of effective drain per eight square feet (0.743m^2) of cockpit sole will meet this requirement.



2020 A2B Offshore SERs

Hull & Structure: Through Hulls

2.1.6 A boat's through-hull openings below the waterline shall be equipped with sea cocks or valves, except for integral deck scuppers, speed transducers, depth finder transducers and the like; however a means of closing such openings shall be provided.



2020 A2B Offshore SERs

Hull & Structure: Accommodations

Care & Feeding of Crew

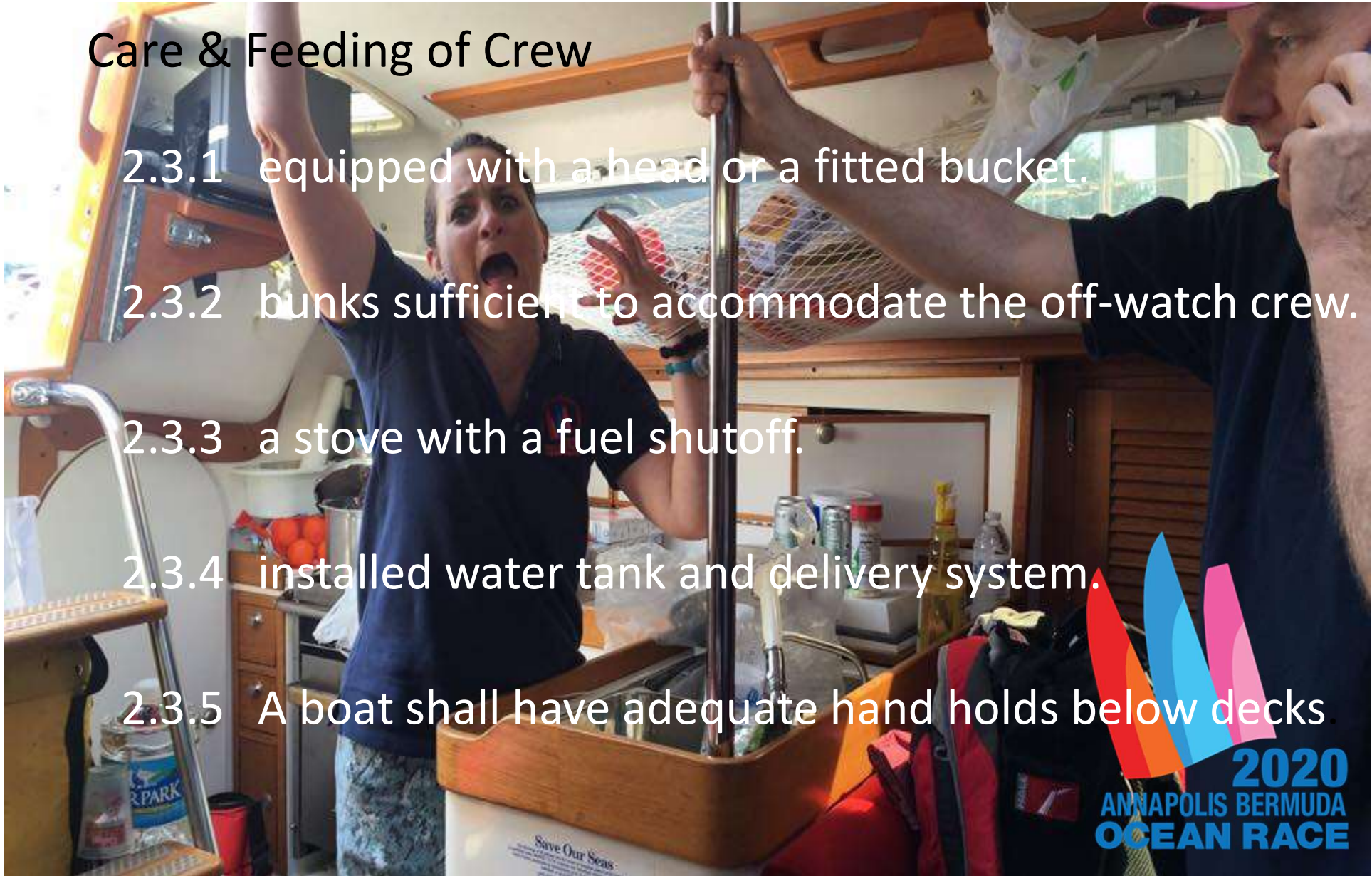
2.3.1 equipped with a head or a fitted bucket.

2.3.2 bunks sufficient to accommodate the off-watch crew.

2.3.3 a stove with a fuel shutoff.

2.3.4 installed water tank and delivery system.

2.3.5 A boat shall have adequate hand holds below decks.

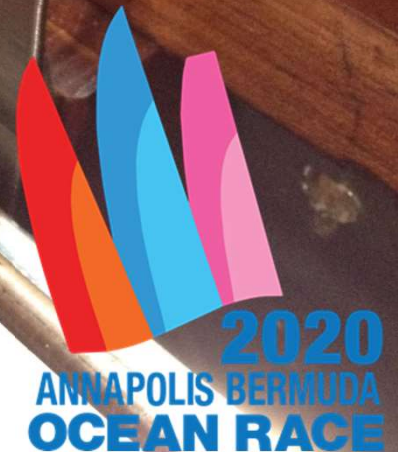


2020 A2B Offshore SERs

Hull & Structure: Accommodations

ISAF Rules: A cooking stove, permanently installed or securely fastened with safe accessible fuel shutoff control and capable of being safely operated in a seaway.

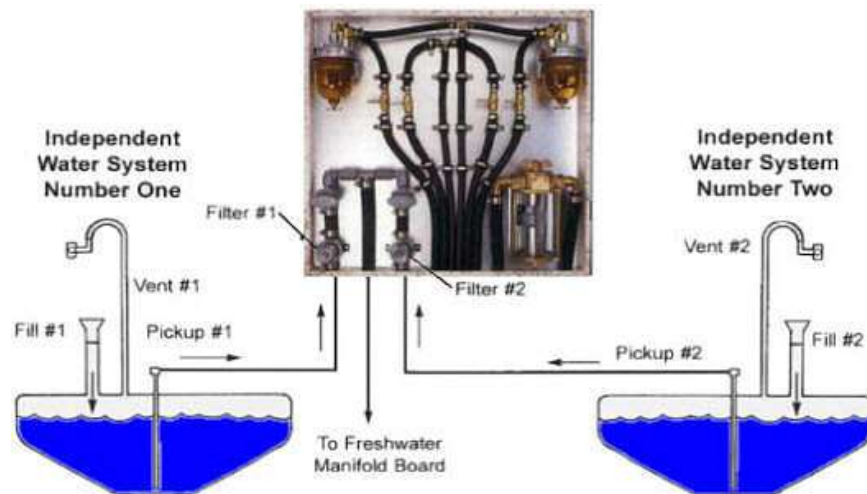
1.5 Secure Storage: A boat's heavy items such as batteries, stoves, toolboxes, anchors, floorboards, chain and internal ballast shall be secured.



2020 A2B Offshore SERs

Hull & Structure: Accommodations

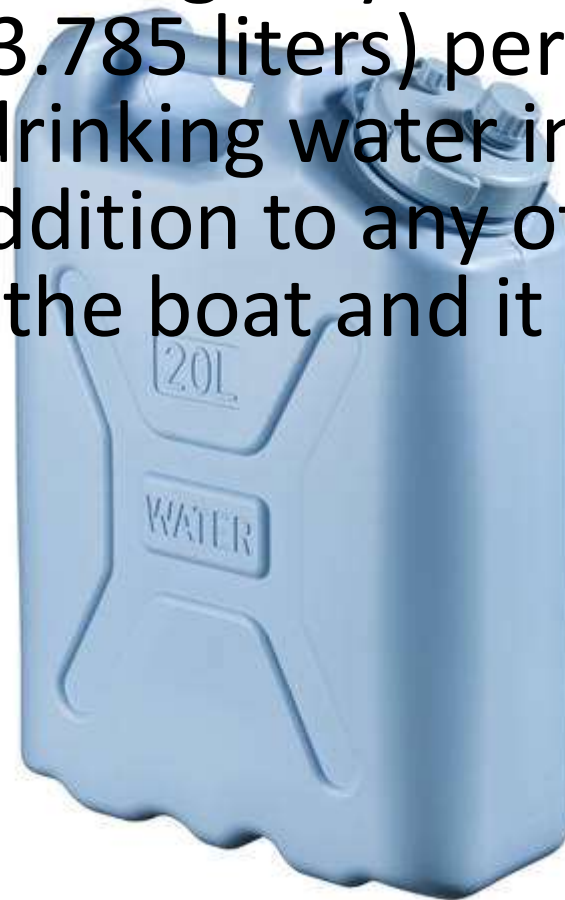
2.3.4 A boat shall have a permanently installed water tank and delivery system. The tanks shall be capable of carrying a minimum of 5 gallons of potable water per crew person, in addition to the emergency drinking water required in 3.37



2020 A2B Offshore SERs

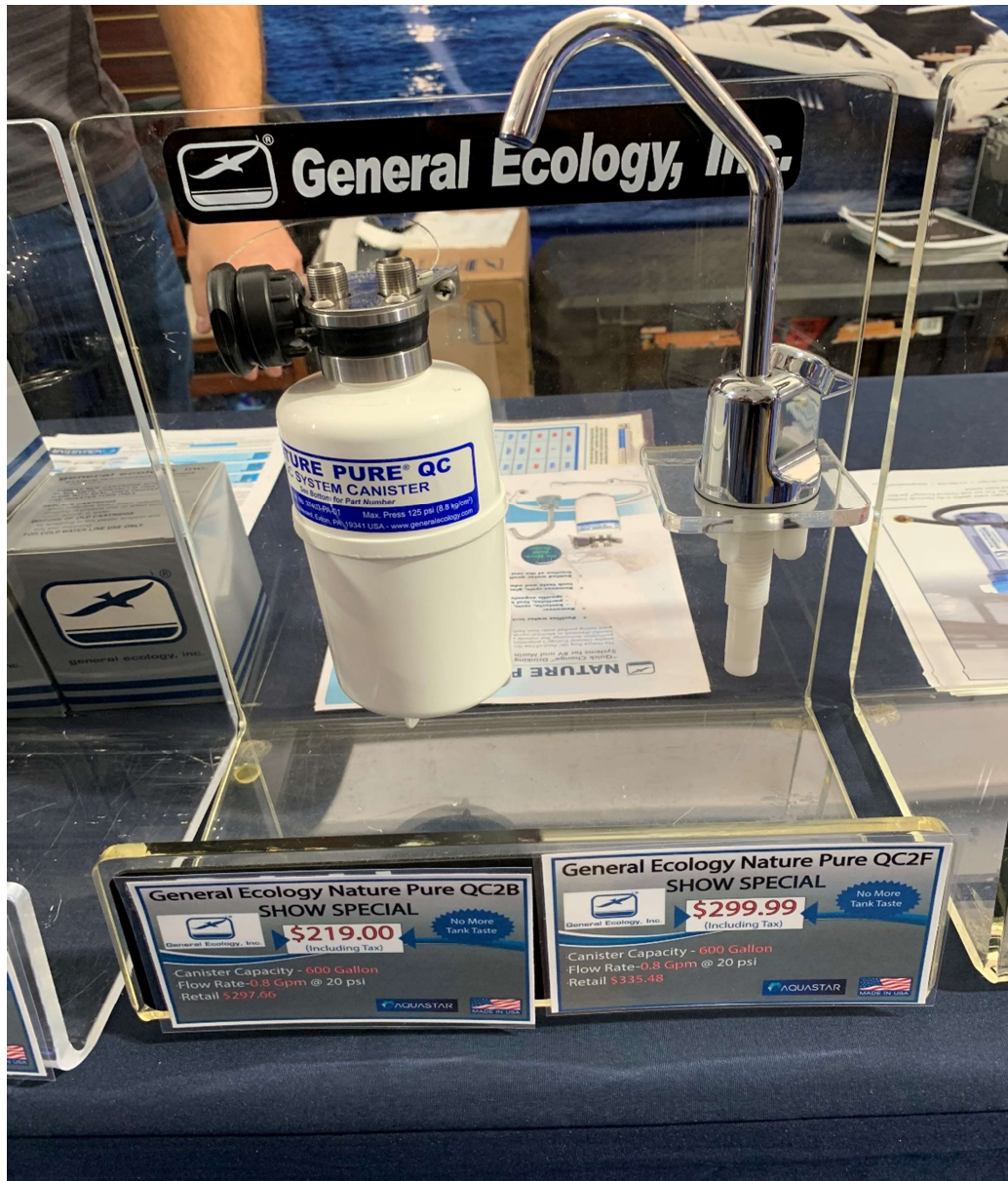
Hull & Structure: Accommodations

3.37 Supplies: Emergency Water: A boat shall carry 1 gallon (3.785 liters) per crewmember of emergency drinking water in sealed containers in addition to any other water carried aboard the boat and it shall be aboard after finishing.



2020 A2B Offshore SERs

Hull & Structure: Accommodations



2020 A2B Offshore SERs

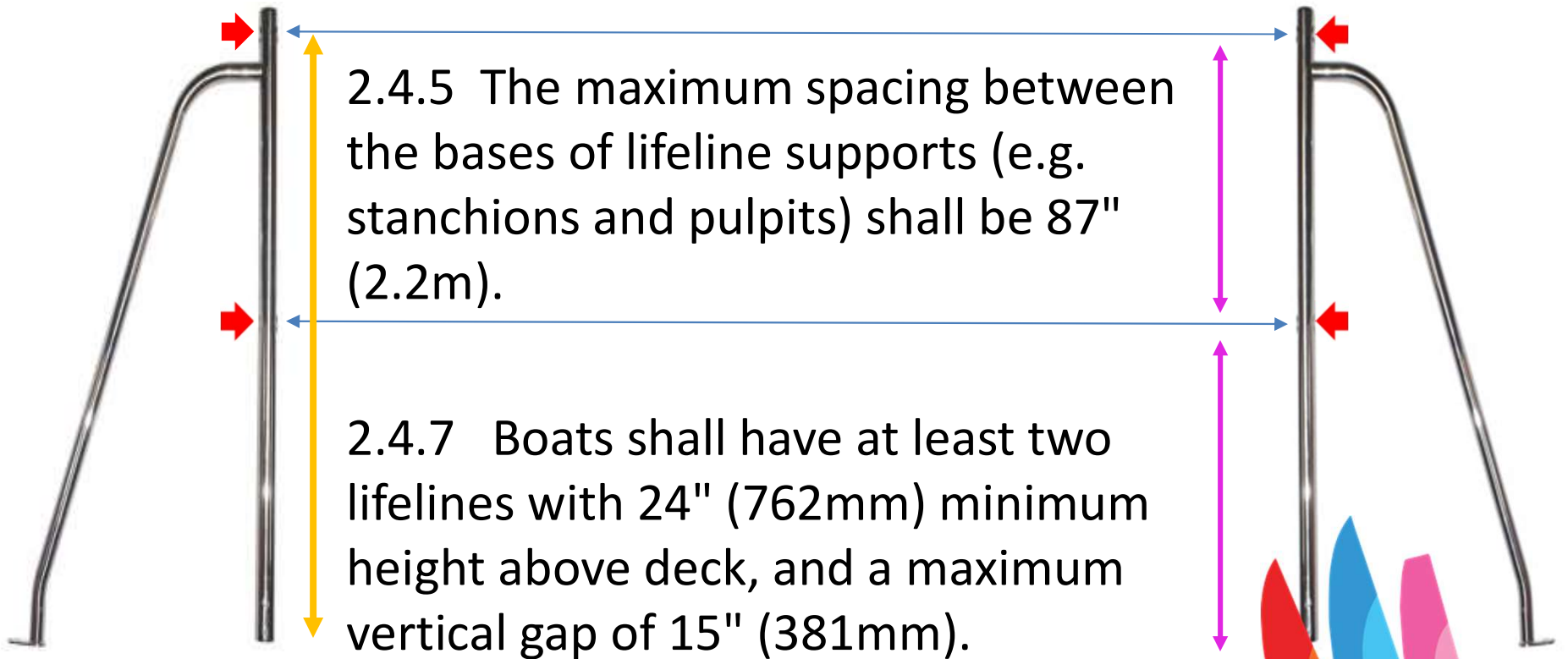
Hull & Structure: Lifelines

2.4.1 A boat's deck including the headstay shall be surrounded by a **suitably strong enclosure**, typically consisting of lifelines and pulpits

2.4.2 Stanchions and Pulpits shall be within the working deck



Hull & Structure: Lifelines & Stanchions



2020 A2B Offshore SERs

Hull & Structure: Lifelines & Pulpit



2.4.3 Bow pulpits may be open, but the opening between the vertical portion of stanchion pulpit and any part of the boat shall not exceed 14.2" (360mm).



2020 A2B Offshore SERs

Hull & Structure: Lifelines

2.4.4 Lifelines shall be uncoated stainless steel wire.

A multipart-lashing segment not to exceed 4" per end termination for the purpose of attaching lifelines to pulpits is allowed.

Lifelines shall be taut (meaning a deflection of less than 2" (50mm) when a force of 11.24 lbs. (50N) is applied midway between stanchions).



2020 A2B Offshore SERs

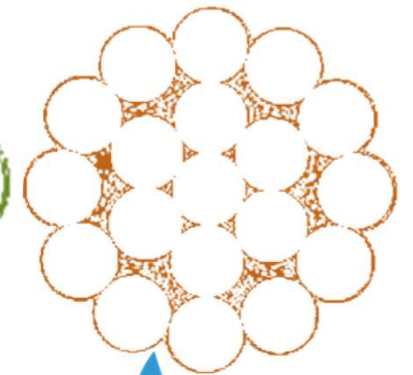
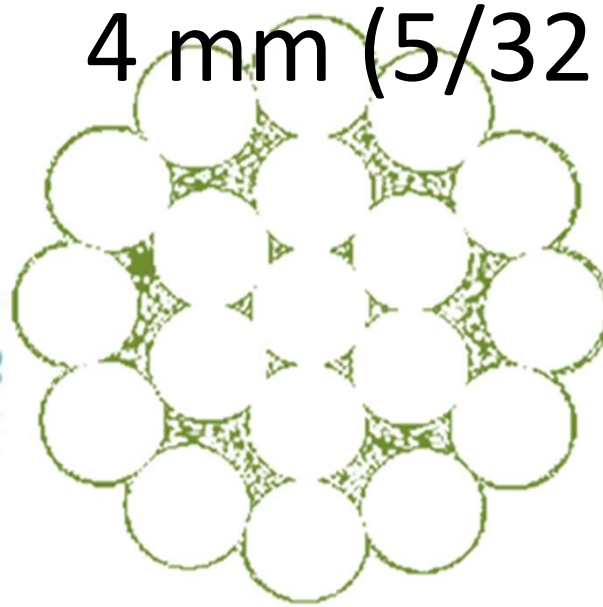
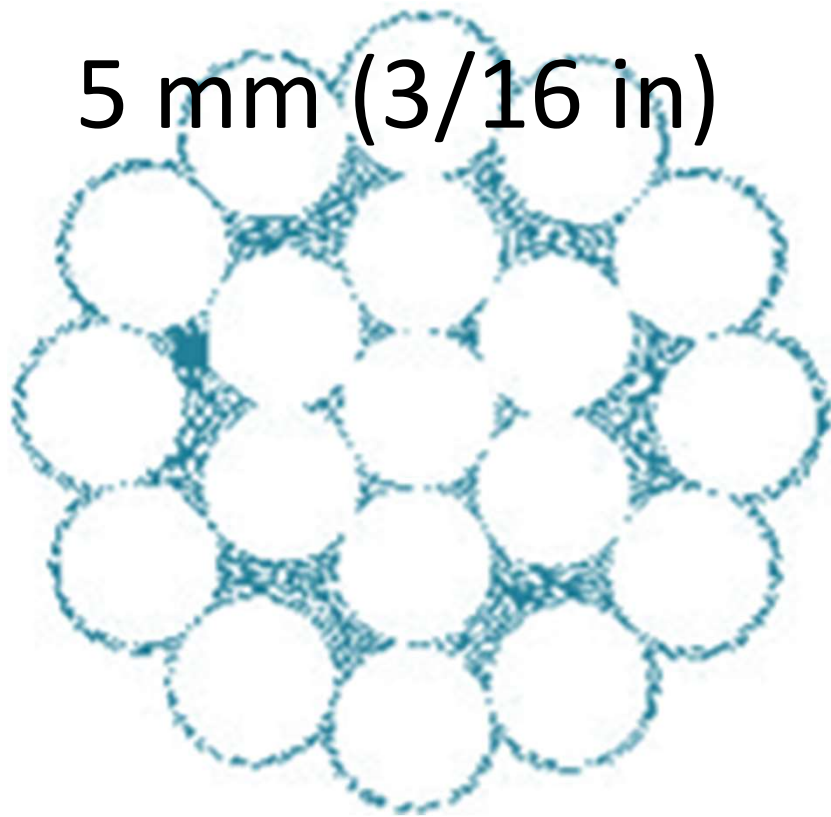
Hull & Structure: Lifelines: Minimum Diameters

13 m + (>43 ft)

9.1m - 13 m (<43 ft)

5 mm (3/16 in)

4 mm (5/32 in)

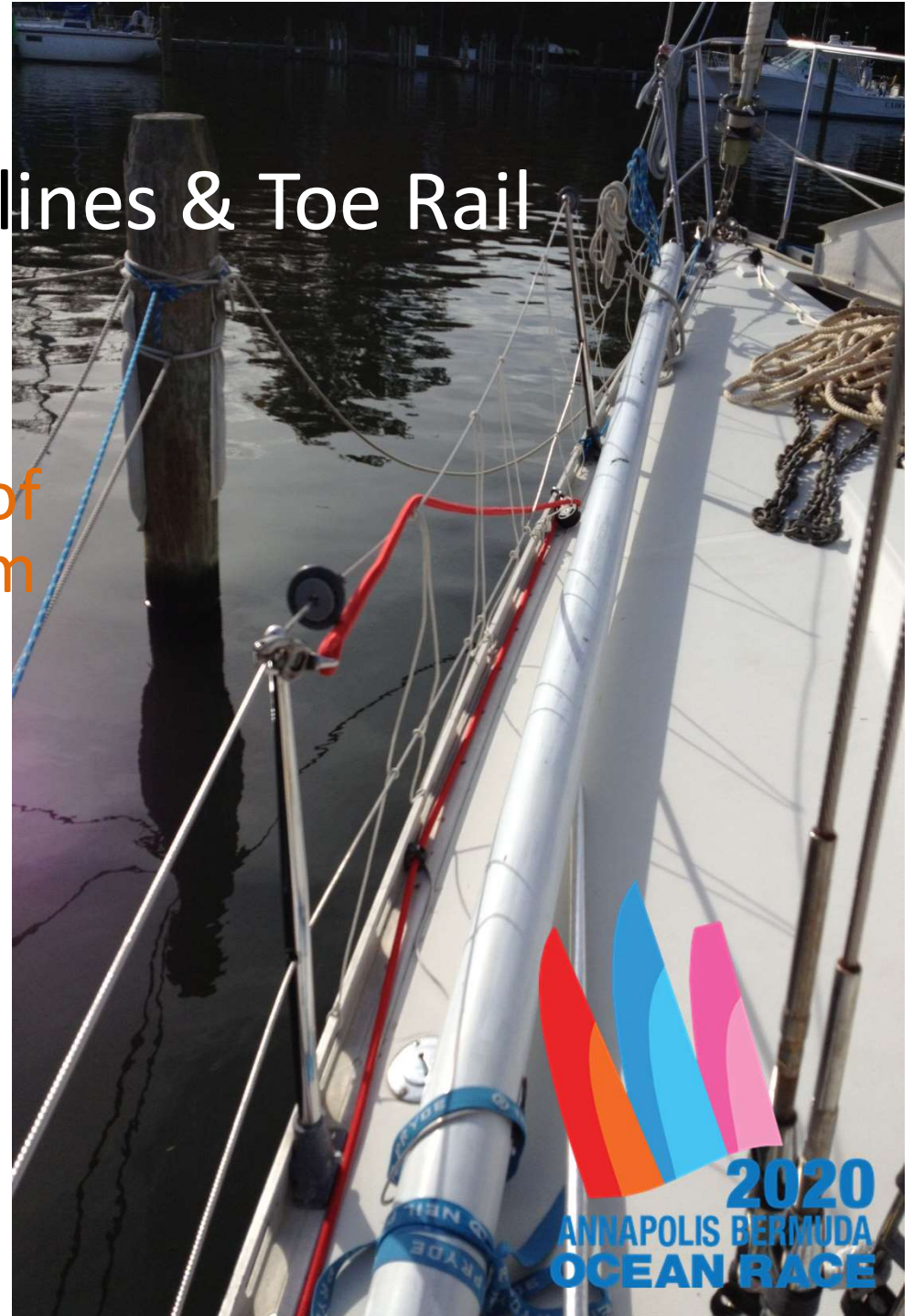


2020 A2B Offshore SERs

Hull & Structure: Lifelines & Toe Rail

2.4.8 Toe rails shall be fitted around the foredeck from the base of the mast with a minimum height of 1" (25mm) for boats over 30'.

An additional installed lifeline that is 1-2" (25-51mm) above the deck will satisfy this requirement for boats without toerails.



2020 A2B Offshore SERs

Hull & Structure: Multihulls

2.4.9

- Catamarans are exempted from the lifeline requirement where there is a trampoline outboard of the main hull, except that a lifeline must run from the top of a bow pulpit to the forward crossbeam at the outboard edge of the bow net or foredeck.
- Catamarans with trampoline nets between the hulls are exempted from the lifeline requirement.
- All catamarans are exempted from the need for pulpits and lifelines across the bow.

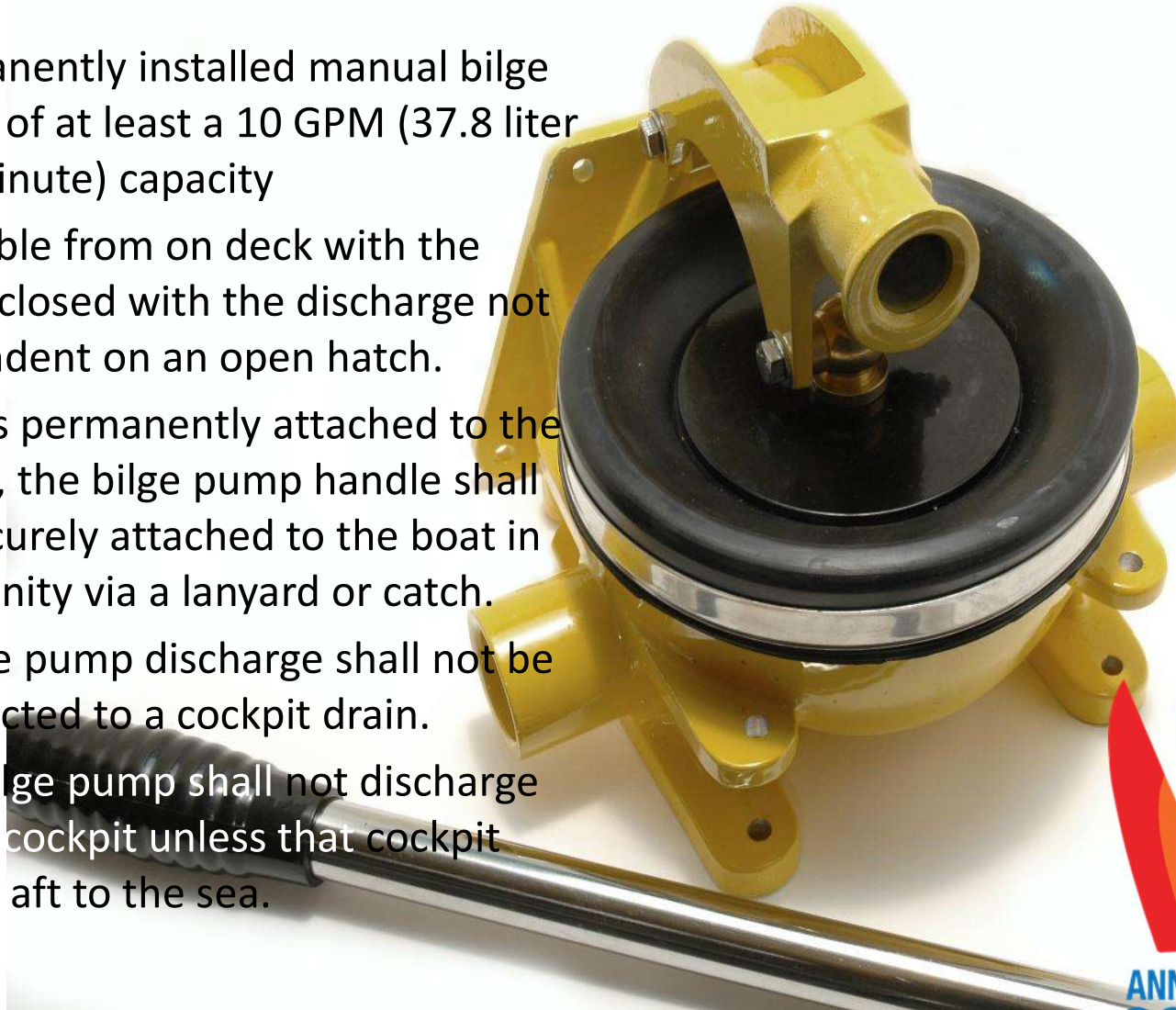
3.2.3 Multihulls must have jacklines or attachment points that are accessible when the vessel is inverted.



2020 A2B Offshore SERs

Hull & Structure: Dewatering Pumps

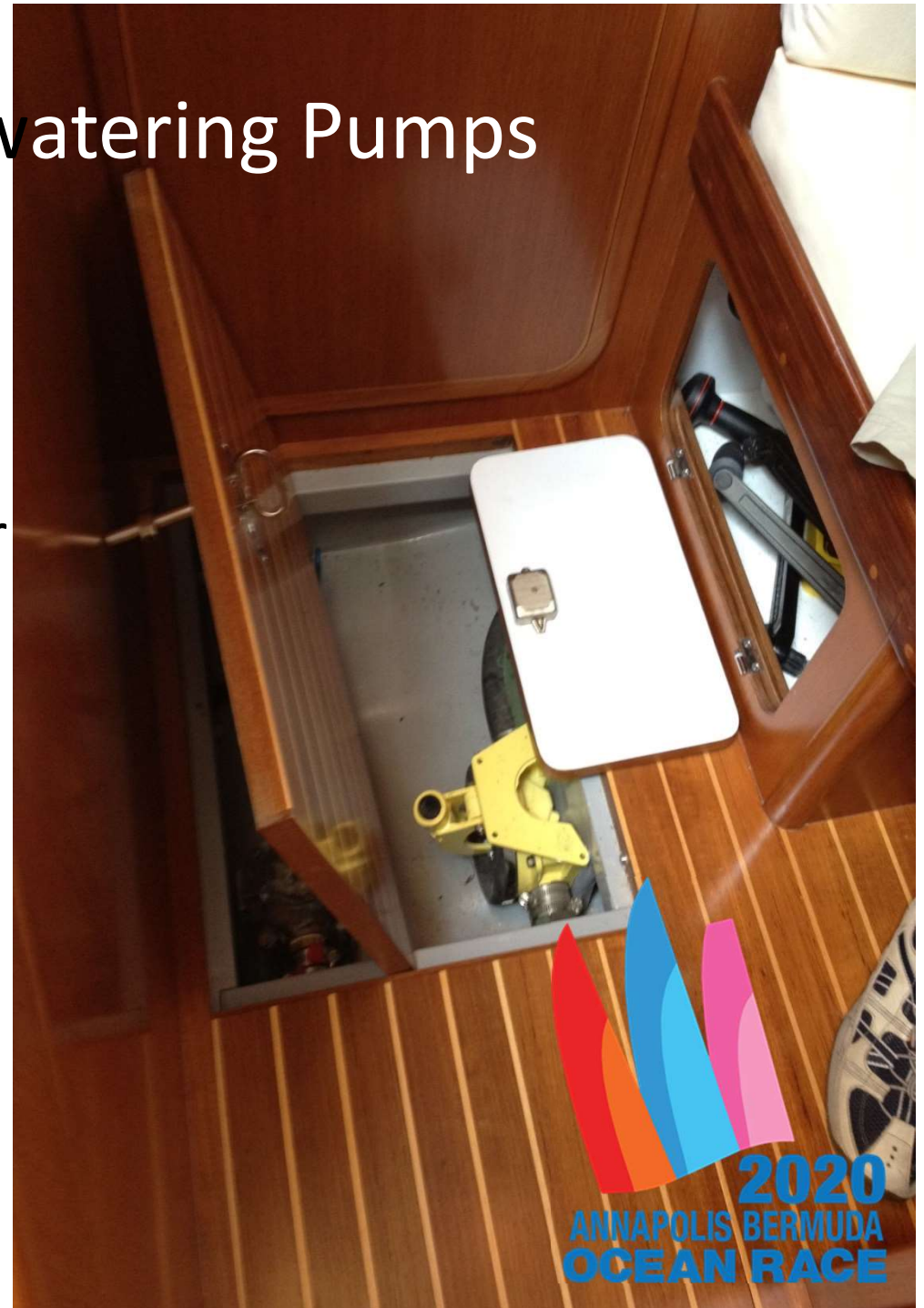
- permanently installed manual bilge pump of at least a 10 GPM (37.8 liter per minute) capacity
- operable from on deck with the cabin closed with the discharge not dependent on an open hatch.
- Unless permanently attached to the pump, the bilge pump handle shall be securely attached to the boat in its vicinity via a lanyard or catch.
- A bilge pump discharge shall not be connected to a cockpit drain.
- The bilge pump shall not discharge into a cockpit unless that cockpit opens aft to the sea.



2020 A2B Offshore SERs

Hull & Structure: Dewatering Pumps

2.5.2 A boat shall have a second manual bilge pump of at least 10 GPM (37.8 liter per minute) capacity, operable from below deck, either permanently installed or board mounted meeting the same criteria as above.



2020
ANNAPOLIS BERMUDA
OCEAN RACE

Hull & Structure: Dewatering Pumps



- A bilge pump discharge shall not be connected to a cockpit drain.
- operable with the cabin closed with the discharge not dependent on an open hatch.
- The bilge pump shall not discharge into a cockpit unless that cockpit opens aft to the sea.

2020 A2B Offshore SERs

Hull & Structure: Mast & Rigging

2.6 A boat shall have the heel of a keel-stepped mast securely fastened to the mast step or adjoining structure.



2020 A2B Offshore SERs

Hull & Structure: Mechanical Propulsion

2.7.1 A boat shall have a mechanical propulsion system that is quickly available and capable of driving the boat at a hull speed for 10 hours.

2.7.3 The boat's engine and generator installation (if so equipped) must conform to ABYC, ISO, or U.S. Coast Guard standards.



2020 A2B Offshore SERs

Safety Equipment

- Yacht Identification
- SAR Signaling & Flares
- Wood Plugs & Emergency Equipment
- PDFs, tethers, jacklines etc.
- Lifebuoys and MOB equipment
- Fire Fighting
- Anchors
- Flashlights
- First Aid
- Foghorn
- Radar Reflector
- Navigation & Charts
- Location charts
- Depthsounder
- Emergency Steering
- Tools & spares
- EPIRB
- Liferafts
- Grab Bag
- Life Buoys & Heaving Line etc.
- Flares
- Cockpit Knife
- Storm Sails
- Heavy Weather Gear
- Preventer

2020 A2B Offshore SERs

Safety Equipment: Life Jackets

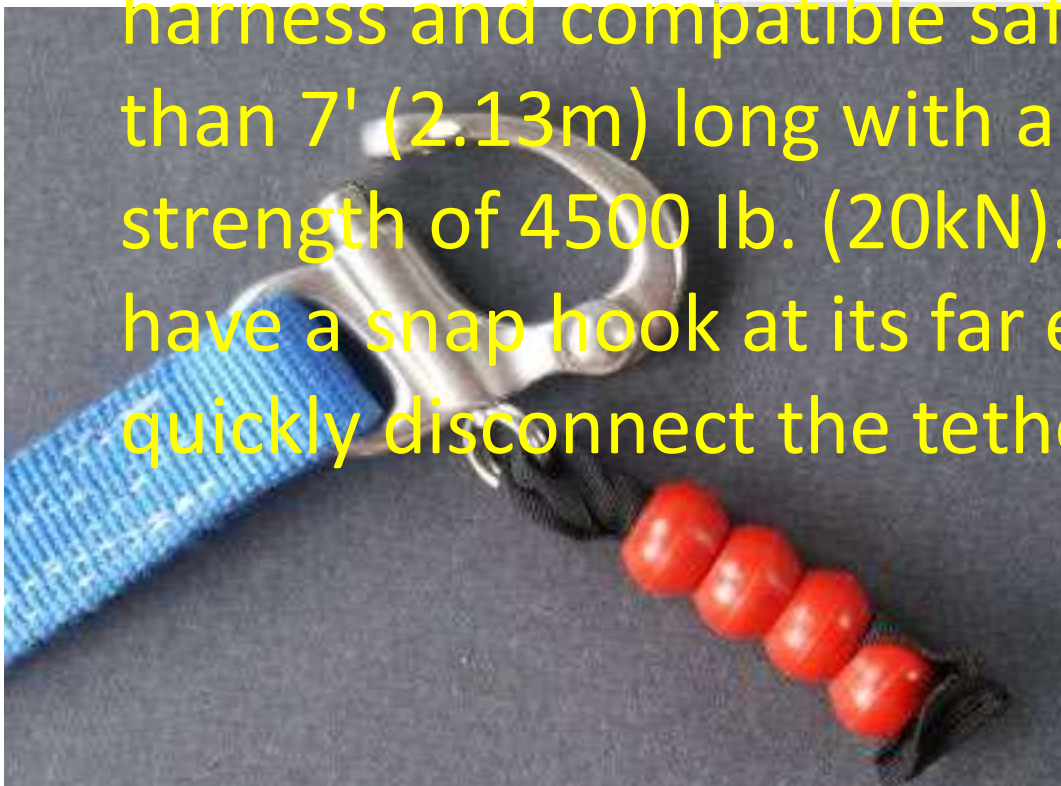
- Must provide at least 33.7lbs (150N) of buoyancy, intended to be worn over the shoulders (no belt pack), meeting either U.S. Coast Guard or ISO specifications.
- Equipped with crotch or leg straps, a whistle, a waterproof light, be fitted with marine-grade retro-reflective material
- be clearly marked with the boat's or wearer's name, and be compatible with the wearer's safety harness. Inflatables shall be regularly checked for air retention.
- Inherently buoyant offshore 100N approved by USCG also permitted. Regardless of the type of lifejackets carried, a yacht must carry life jackets that comply with USCG requirements.



2020 A2B Offshore SERs

Safety Equipment: Tethers

3.1.4 Each crewmember shall have a safety harness and compatible safety tether not more than 7' (2.13m) long with a minimum tensile strength of 4500 lb. (20kN). The tether shall have a snap hook at its far end and a means to quickly disconnect the tether at the chest end.



2020 A2B Offshore SERs

Safety Equipment: Jacklines

3.2.1 A boat shall carry jacklines with a breaking strength of at least 4500 lb. (20kN) which allow the crew to reach all points on deck, connected to similarly strong attachment points, in place while racing.



2020 A2B Offshore SERs

Safety Equipment: Clipping in Points

3.2.2 A boat shall have adequate clipping in points or jacklines that allow at least two-thirds of the crew to clip on before coming on deck and unclip after going below.



2020 A2B Offshore SERs

Safety Equipment: Multihulls

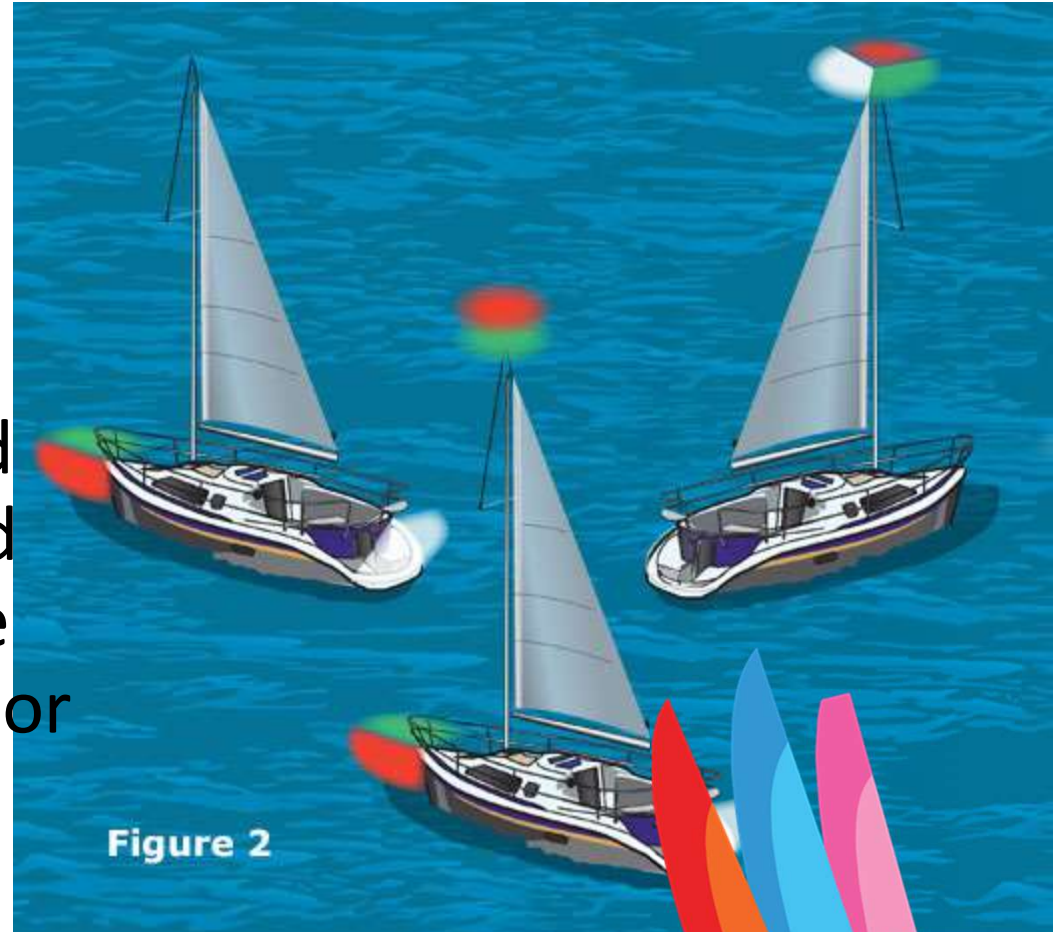
3.2.3 Multihulls must have jacklines or attachment points that are accessible when the vessel is inverted.



2020 A2B Offshore SERs

Safety Equipment: Navigation Lights

3.3.1 A boat racing between sunset and sunrise shall carry navigation lights that meet U. S. Coast Guard requirements mounted so that they will not be obscured by the sails nor be located below deck level.



2020 A2B Offshore SERs

Safety Equipment: Navigation Lights

3.3.2 A boat shall have a second set of navigation lights that comply with US Coast Guard requirements and which can be connected to a different power source than the primary lights.



2020 A2B Offshore SERs

Safety Equipment: Fire Extinguishers

3.4 A boat shall carry fire extinguisher(s) that meets U.S. Coast Guard requirements, when applicable.



2020 A2B Offshore SERs

Safety Equipment: Sound



3.5 A boat shall carry a sound-making device that meets U.S. Coast Guard requirements, when applicable.



2020 A2B Offshore SERs

Safety Equipment: Visual Distress Signals

- ~~6 SOLAS Parachute Flares~~
(Recommend at least 2 flares)
- 4 SOLAS Handheld Flares
- 2 SOLAS Smoke
- Flares stored inside liferaft don't count

2020 A2B Offshore SERs

Safety Equipment: Man Overboard

3.7.1 A boat shall carry a Lifesling or equivalent man overboard rescue device equipped with a self igniting light stored on deck and ready for immediate use.

3.7.2 A boat shall have a man overboard pole and flag, with a lifebuoy, a self-igniting light, a whistle, and a drogue attached. A self-inflating Man Overboard Module, Dan Buoy or similar device will satisfy this requirement. Self-inflating apparatus shall be tested and serviced in accordance with the manufacturer's specifications. These items shall be stored on deck, ready for immediate use, and affixed in a manner that allows for a "quick release".

3.7.3 A boat shall have a throwing sock-type heaving line of 50' (15m) or greater of floating polypropylene line readily accessible to the cockpit.

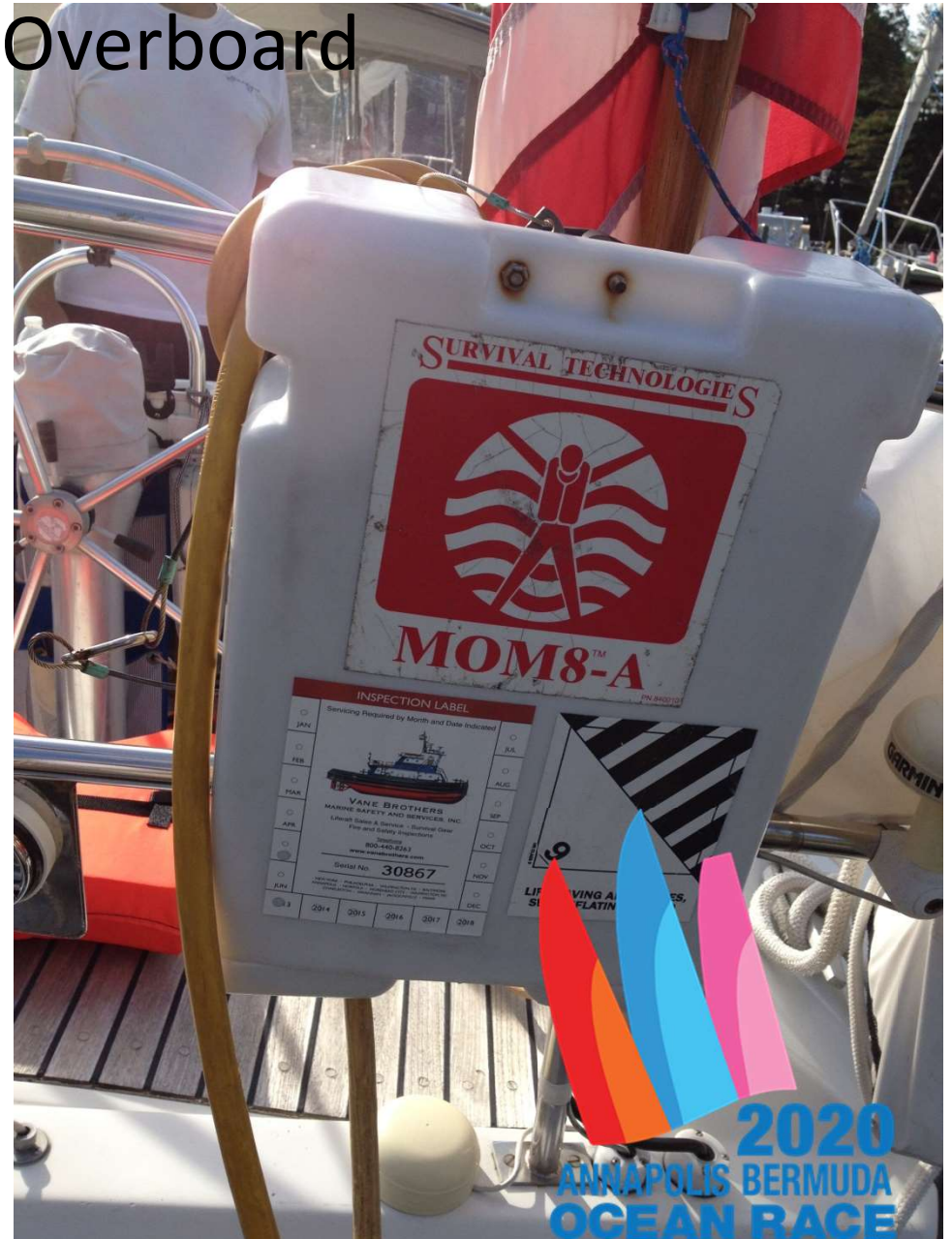
3.7.4 A boat shall carry a Coast Guard approved "throwable device". If the device carried under 3.7.1 or 3.7.2 satisfies this requirement, then no additional device is needed.

2020 A2B Offshore SERs

Safety Equipment: Man Overboard MOM or Dan Bouy

3.7.2 ... A self-inflating Man Overboard Module, Dan Buoy or similar device will satisfy this requirement. **Self-inflating apparatus shall be tested and serviced in accordance with the manufacturer's specifications.** These items shall be stored on deck, ready for immediate use, and affixed in a manner that allows for a "quick release".

3.7.4 A boat shall carry a Coast Guard approved "throwable device". If the device carried under 3.7.1 or 3.7.2 satisfies this requirement, then no additional device is needed.



2020 A2B Offshore SERs

Safety Equipment: Man Overboard

3.7.3 A boat shall have a throwing sock-type heaving line of 50' (15m) or greater of floating polypropylene line readily accessible to the cockpit.



2020 A2B Offshore SERs

Safety Equipment: Emergency Communications

REQUIRED:

- A permanently installed 25w VHF
 - connected to mast-mounted antenna at least 15” long with coaxial cable
 - with no more than 40% power loss
 - Must have DSC with MMSI
 - Connected to or using a GPS
- A watertight hand-held marine VHF.
- Emergency antenna with coax to reach deck and >15” antenna
- Independent radio receiver capable of receiving weather bulletins
- GPS
- Satphone
- EPIRB



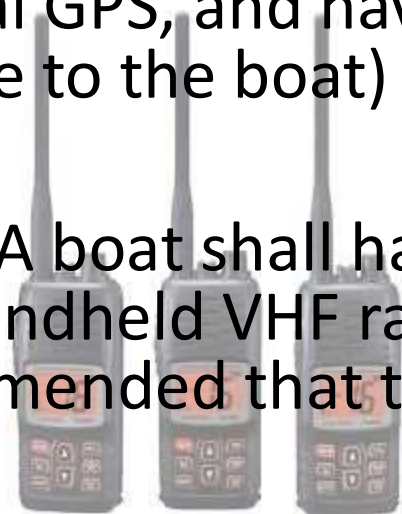
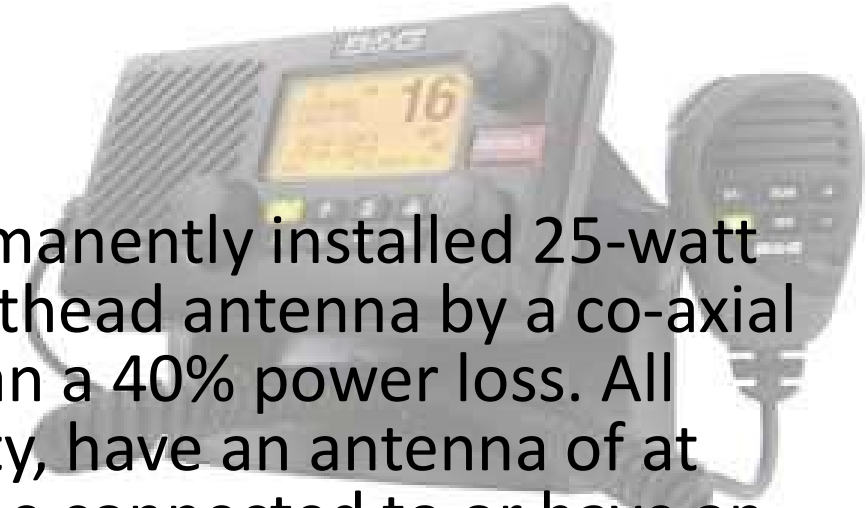
2020 A2B Offshore SERs

Safety Equipment: Emergency Communications

VHF Radio

3.8.1 A boat shall have a permanently installed 25-watt VHF radio connected to a masthead antenna by a co-axial feeder cable with no more than a 40% power loss. All radios shall have DSC capability, have an antenna of at least 15" (381mm) in length, be connected to or have an internal GPS, and have the assigned MMSI number (unique to the boat) programmed into the VHF.

3.8.2 A boat shall have a watertight handheld VHF radio or a handheld VHF radio with waterproof cover. It is recommended that this radio have DSC/GPS capability.



2020 A2B Offshore SERs

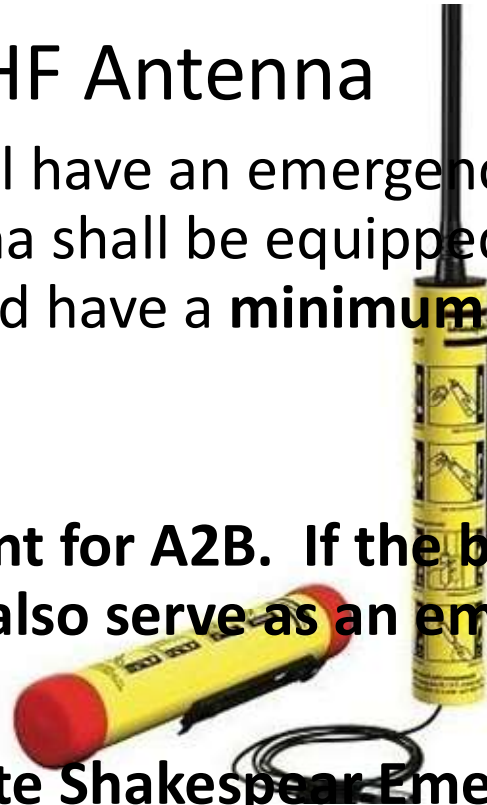
Safety Equipment: Emergency Communications

Emergency VHF Antenna

3.8.3 A boat shall have an emergency VHF antenna. The emergency antenna shall be equipped with sufficient coax to reach the deck, and have a **minimum antenna length of 15" (381mm)**.

No AIS requirement for A2B. If the boat has a dedicated AIS antenna, it could also serve as an emergency VHF Antenna.

Note that the white Shakespear Emergency VHF antenna is not 15" long



2020 A2B Offshore SERs

Safety Equipment: Emergency Communications

WX RX

3.13 A boat shall have a method of receiving weather information in addition to the fixed mount and hand held VHF radio.



Use Channel	Ship Tx	Ship Rx	Type
Bermuda Radio	2049.0	2582.0	Duplex
USCG Working	2670.0	2670.0	Simplex
Emergency/Watchkeeping	450	4125.0	4125.0 Simplex Intership
	452	4149.0	4149.0 Simplex
Offshore Weather	424	4134.0	4426.0 Duplex
Offshore Weather	601	6200.0	6501.0 Duplex Watchkeeping
	650	6215.0	6215.0 Simplex
Intership	652	6227.0	6227.0 Simplex
Watchkeeping	850	8291.0	8291.0 Simplex
Offshore Weather	816	8240.0	8764.0 Duplex
Offshore Weather	1205	12242.0	13089.0 Duplex Watchkeeping
	1250	12290.0	12290.0 Simplex
Offshore Weather	1625	16432.0	17314.0 Duplex Working &
Distress	1650	16420.0	16420.0 Simplex



2020 A2B Offshore SERs

Safety Equipment: Emergency Equipment

GPS

3.14 A boat shall carry a GPS receiver.

3.15 A boat shall carry an electronic means to record the position of a man overboard within ten seconds. This may be the same instrument listed in 3.14.



2020 A2B Offshore SERs

Safety Equipment: Emergency Communications EPIRBs

3.16 A boat shall carry a 406MHz EPIRB that is properly registered to the boat. This device shall either have an internal GPS (self-locating) or be connected to a continuously functioning external GPS. After 01/01/2020, this device shall be equipped with an internal GPS.

- **Personal EPIRBs do not count**
- **Must have proof of NOAA Registration**



2020 A2B Offshore SERs



United States 406 MHz Beacon Registration

[My Profile](#) [Register](#) [Account](#) [Beacons](#) [Contact Us](#)

[Owner/Operator](#) [Beacon](#) [Contacts](#) [Confirmation](#)

Start Beacon Registration

Please have the following information available before you begin the registration process:

- Beacon ID, manufacturer, and model number
- Beacon owner/operator name, address, phone numbers
- Names and phone numbers of two emergency contacts
- Vessel or vehicle name, type, capacity, length, usage (if applicable)
- Radio equipment, call sign, MMSI, INMARSAT, and cell numbers (if applicable)
- Aircraft tail number, state/federal registration number (if applicable)

If you are ready to register, enter your beacon ID to begin.

Beacon ID

[Cancel Beacon Registration](#)

SARSAT Sites
[Beacon Registration Forms](#)
[Frequently Asked Questions](#)
[Lost or Stolen Beacon](#)
[SARSAT Home](#)
[Emergency Beacon Testing](#)
[Prevent False Alerts](#)
[SARSAT Privacy Policy](#)
[Contact Us](#)

COSPAS-SARSAT Sites
[Beacon Decode](#)
[Disposal of Old Beacons and Old Batteries](#)
[Testing Your 406-MHz Beacon](#)
[Beacon Manufacturer Contact Information](#)
[International COSPAS-SARSAT](#)



2020 A2B Offshore SERs

Safety Equipment: Emergency Communications

The screenshot shows a web browser window with the URL <https://beaconregistration.noaa.gov/rgdb/>. The page header includes the NOAA Satellite and Information Service logo and the text "National Environmental Satellite, Data, and Information Service (NESDIS)". A search bar for "Search and Rescue Satellite-aided Tracking" is visible in the top right.

The main heading is "UNITED STATES 406 MHz BEACON REGISTRATION DATABASE SYSTEM". Below this, there is a "Need help with this page?" link.

The central content area features a registration confirmation page. On the left, there is a sidebar with a red link "Any mail to the previo" and a list of instructions: "Please note that a Be...", "Click [New Registrati](#)", "Click [Access Beacon](#) beacon registration.", "Click [Access Beacon](#)", "Click [Forgot Passwo](#)", "Click [Create Block A](#) passwords to create a b", "Click [Access Block c](#) que registration. By the event that your beacon is activated the information you provided will be coordinated with the Coordination Center. This information is critical for Search and Rescue (SAR) teams and could possibly save your life.", and "Click [Forms](#) to get el".

The main content area shows a framed receipt with the NOAA logo, the text "SARSAT Beacon Regis", "EPOPS, FIM 3020, F0-4", "NOAA", "5200 Auth Road", "Gutland MD 20716-4304", and the date "May 17, 2006". The receipt also displays the beacon ID "2DCE47D402FFBFF". Below the receipt, the text "Beacon ID: 2DCE47D402FFBFF" is repeated.

At the bottom of the page, there is a footer with links: "[[Log Out](#) | [Home](#) | [Help](#) | [Feedback Survey](#) | [Registration FAQs](#) | [Contact Us](#) | [Privacy Policy](#)]".

In the bottom right corner, there is a logo for the "2020 ANNAPOLIS BERMUDA OCEAN RACE" featuring three stylized sails in red, blue, and pink.

2020 A2B Offshore SERs Safety Equipment: Instruments

Knot meter
Depth Sounder
GPS
Compass



2020 A2B Offshore SERs

Safety Equipment: Compass

3.19.1 A boat shall have a **permanently mounted** magnetic compass independent of the boat's electrical system suitable for steering at sea.

3.19.2 A boat shall have a second magnetic compass suitable for steering at sea which may be **handheld**.



2020 A2B Offshore SERs

Safety Equipment: Charts

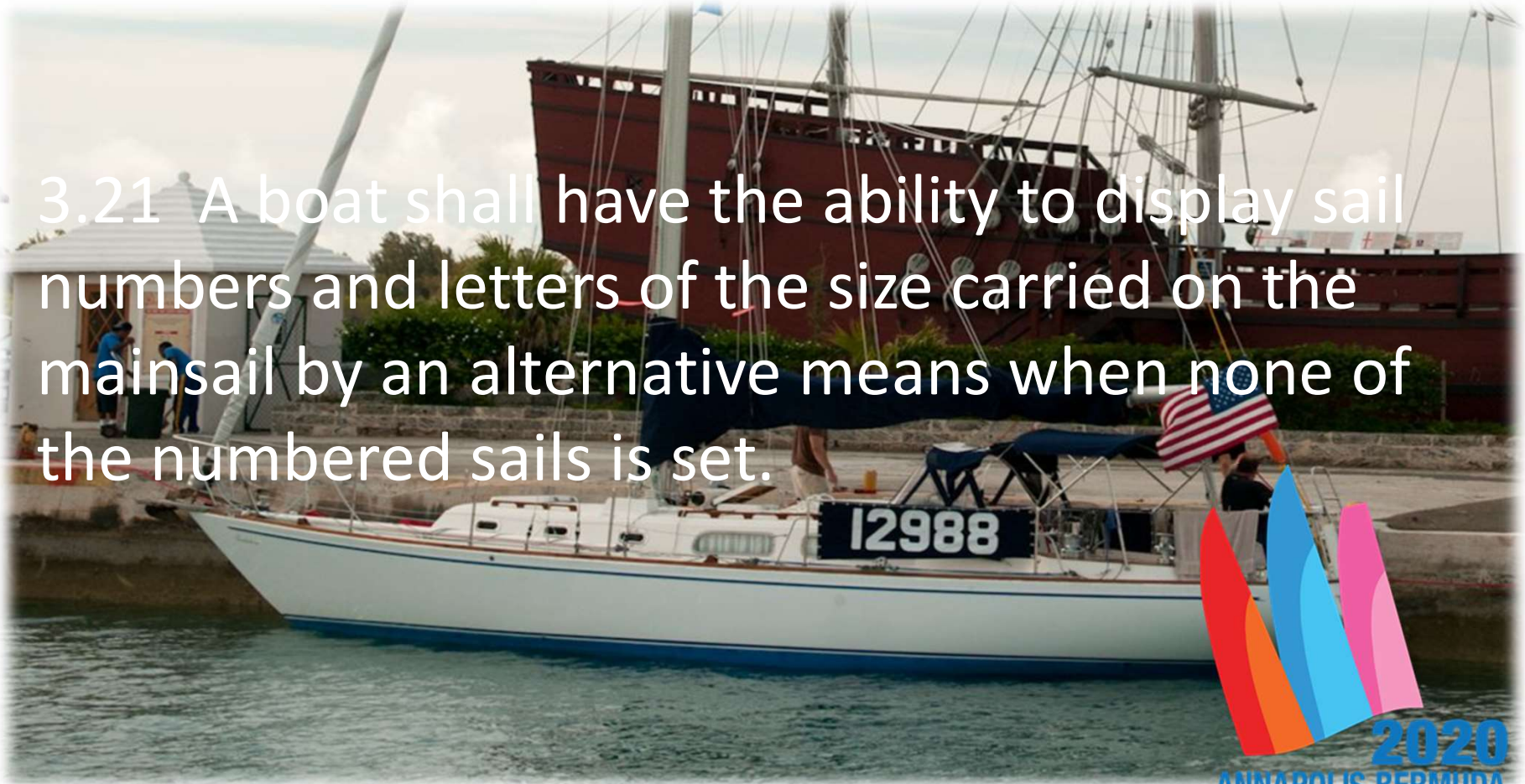
3.20 A boat shall have non-electronic charts that are appropriate for the race area.



2020 A2B Offshore SERs

Safety Equipment: Boat Identification

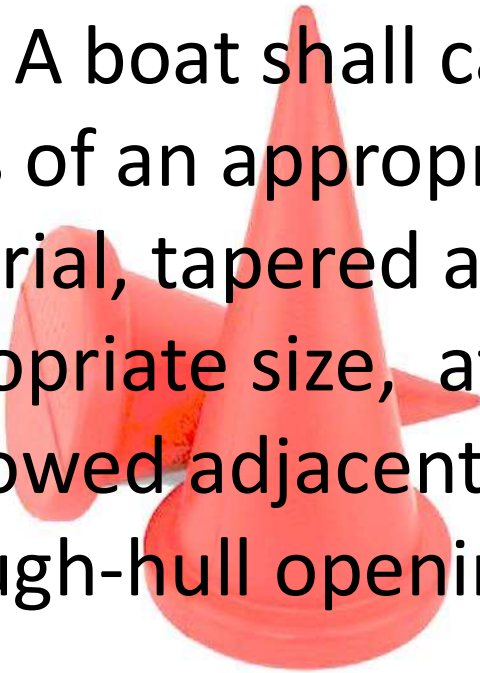
3.21 A boat shall have the ability to display sail numbers and letters of the size carried on the mainsail by an alternative means when none of the numbered sails is set.



2020 A2B Offshore SERs

Safety Equipment: Soft Plugs

3.22 A boat shall carry soft plugs of an appropriate material, tapered and of the appropriate size, attached or stowed adjacent to every through-hull opening.



2020 A2B Offshore SERs

Safety Equipment: Anchors

3.23 A boat shall carry one anchor, meeting the anchor manufacturer's recommendations based on the yacht's size, with a suitable combination of chain and line.

- We recommend 300' minimum rode for anchoring in Bermuda



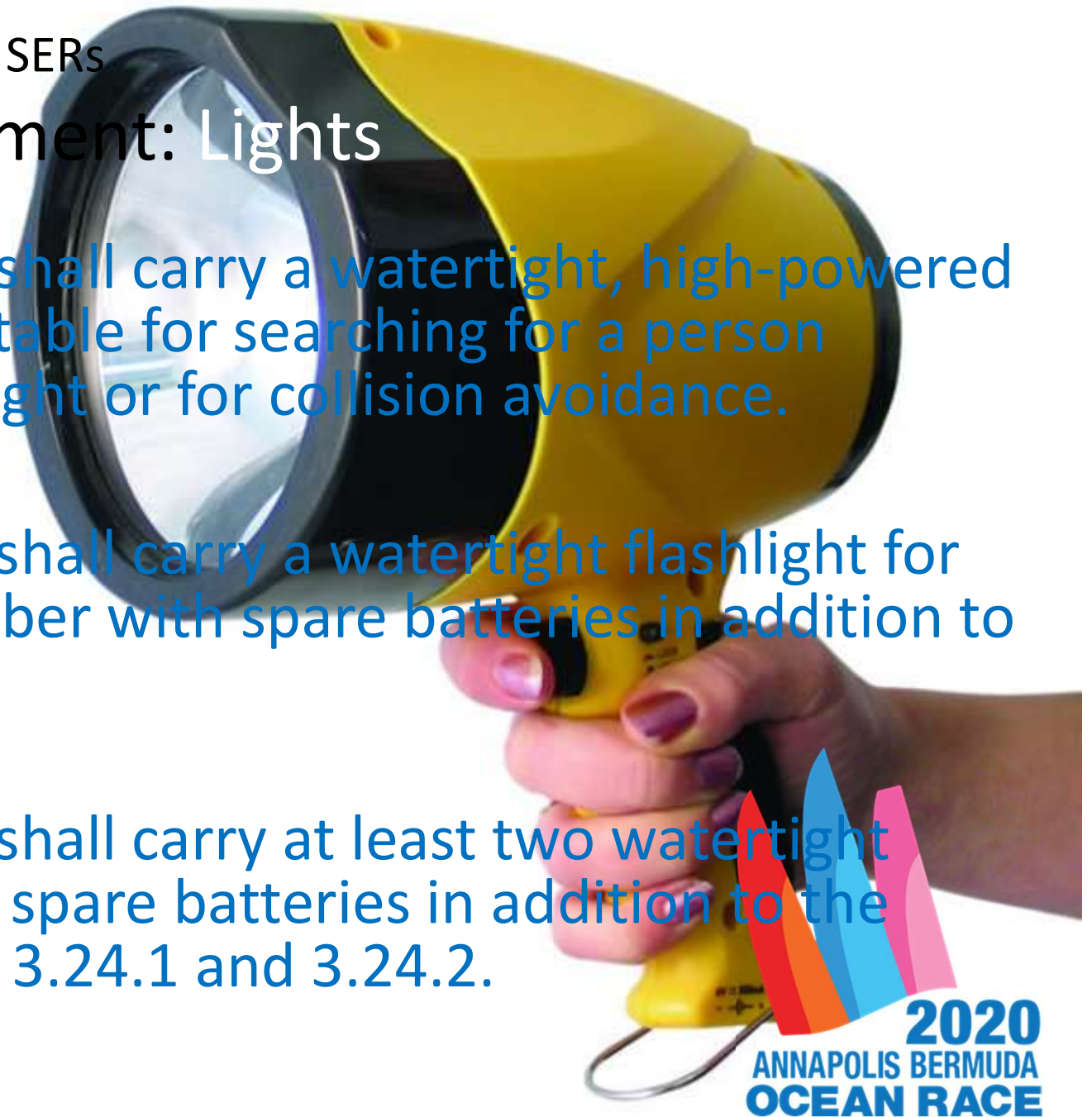
2020 A2B Offshore SERs

Safety Equipment: Lights

3.24.1 A boat shall carry a watertight, high-powered searchlight, suitable for searching for a person overboard at night or for collision avoidance.

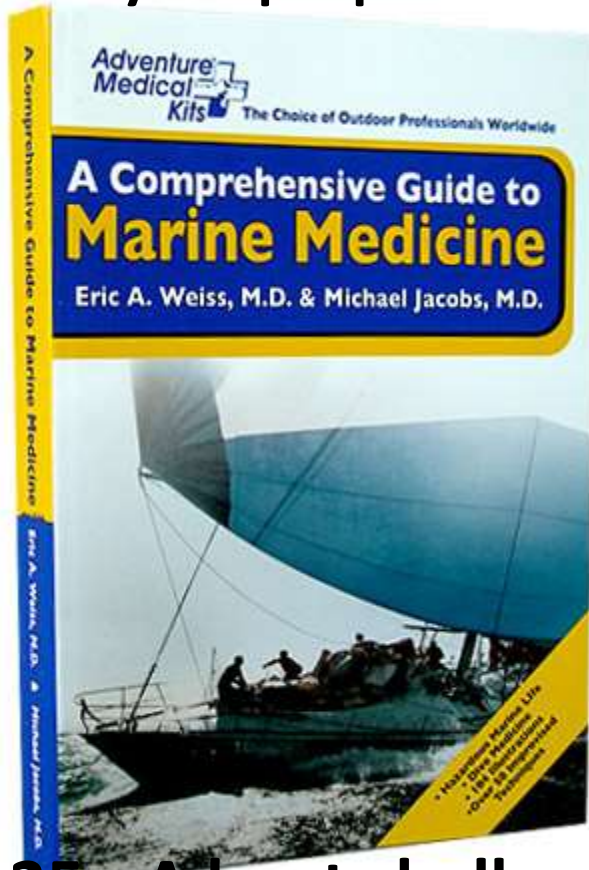
3.24.2 A boat shall carry a watertight flashlight for each crewmember with spare batteries in addition to the above.

3.24.3 A boat shall carry at least two watertight flashlights with spare batteries in addition to the requirement of 3.24.1 and 3.24.2.



2020 A2B Offshore SERs

Safety Equipment: First Aid



3.25 A boat shall carry a first aid kit and first aid manual suitable for the likely conditions of the passage and the number of crew aboard.



2020 A2B Offshore SERs

Safety Equipment: Radar Reflectors

3.26 A boat shall carry an 11.5" (292mm) diameter or greater octahedral radar reflector or one of equivalent performance.

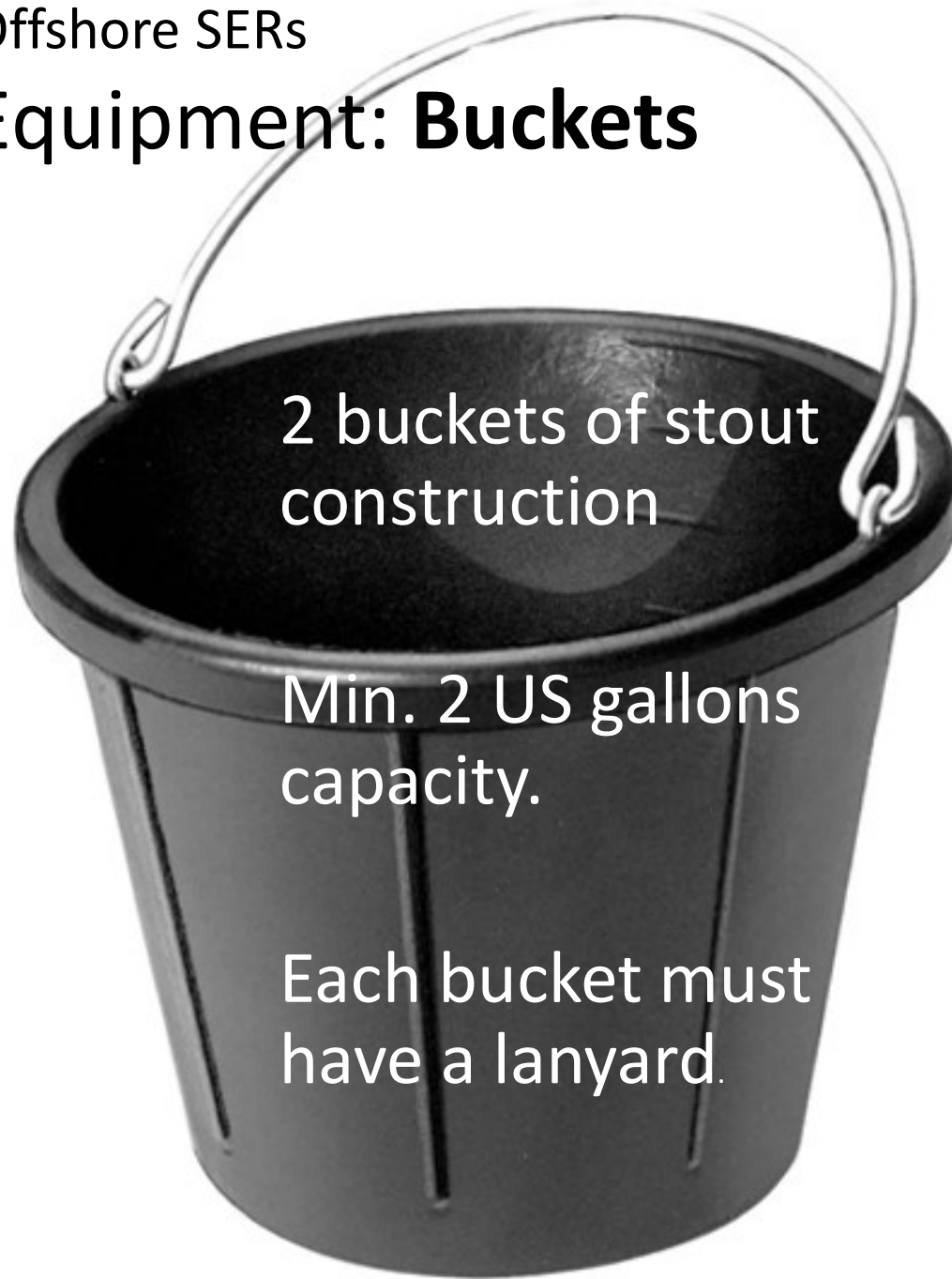
- ECHOMAX
 - ❖ "equivalent echoing area" of 6 m².
 - ❖ The minimum effective height above water is 13 ft.
 - ❖ Per ISAF: The display of a passive reflector or the operation of an Radar Target Enhancer is for the person in charge to decide according to prevailing conditions.
 - ❖ Note: the MOBRI reflectors do not meet the threshold



2020
ANNAPOLIS BERMUDA
OCEAN RACE

2020 A2B Offshore SERs

Safety Equipment: **Buckets**



2 buckets of stout construction

Min. 2 US gallons capacity.

Each bucket must have a lanyard.

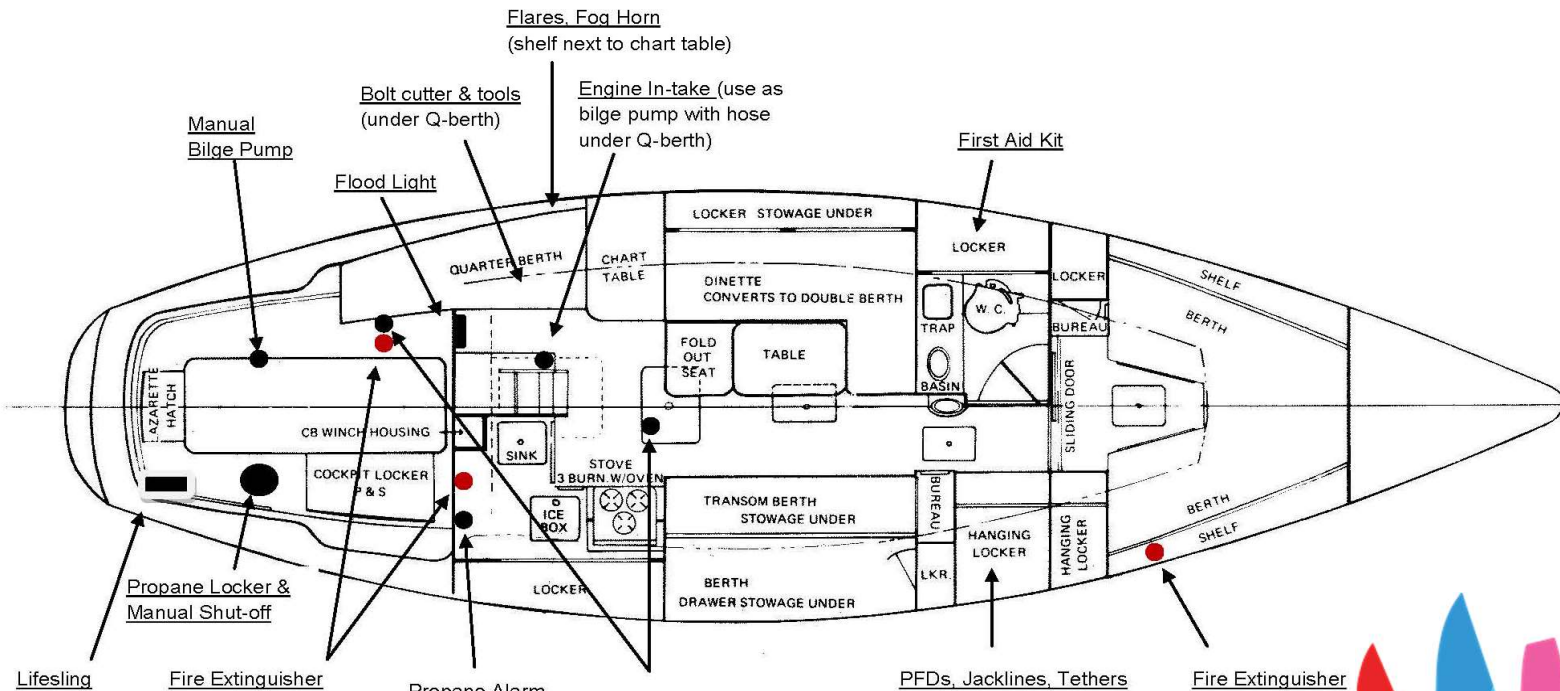


2020 A2B Offshore SERs

Safety Equipment: Safety Diagrams

TRCUBA00R12900-197 Pearson 3

SAFETY EQUIPMENT LOCATION

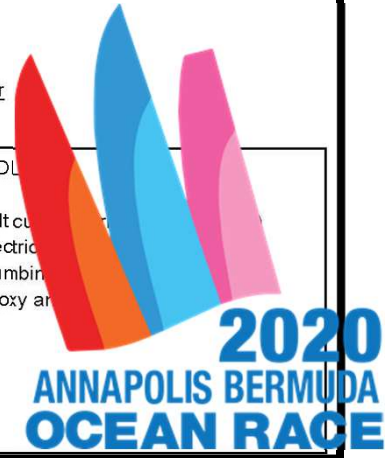


- MOB**
- Lifesling (starb. cockpit)
 - PFDs, Jacklines, tethers (hanging locker)
- LIFERAFT** (port cockpit)
- EPIRB** (starb. cockpit)
- FLARES, etc.**
- SOLAS flares & fog horn (shelf next to chart table)
 - Flood Light (cabinet at port companionway)

- PROFANE ALARM AND SOLENOID CONTROL**
- FIRST AID**
- Head locker top shelf
- FIRE**
- Extinguishers (port cockpit locker, starb. companionway, starb. v-berth)
 - Propane (manual shutoff in cockpit, alarm shutoff in galley)
 - Electrical shutoff under companionway

- PUMPS**
- Manual Bilge Pump in port cockpit
 - Auto Bilge pump in port cockpit locker
 - Auto Bilge Pump in forward bilge
 - Engine in-take can be used with hose located under port Q-berth

- TOOLS**
- Bolt cutter
 - Electric
 - Plumbing
 - Epoxy



2020 A2B Offshore SERs

Safety Equipment: Emergency Tiller

3.29.1 A boat shall have an emergency tiller, capable of being fitted to the rudder stock.



2020 A2B Offshore SERs

Safety Equipment: Spare Parts & Tools

3.30 A boat shall carry tools and spare parts suitable for the likely conditions of the passage, including an effective means to quickly disconnect or sever the standing rigging from the hull.



2020 A2B Offshore SERs

Safety Equipment: Equipment Identification

3.31 All lifesaving equipment shall bear retro-reflective material and be marked with the yacht's or wearer's name. The exception would be for new equipment or rented equipment (e.g. life rafts) that would require the unpacking of sealed equipment in order to meet this requirement. The boat name shall be stenciled on during the first servicing of any new equipment.



2020 A2B Offshore SERs

Safety Equipment: Cockpit Knife

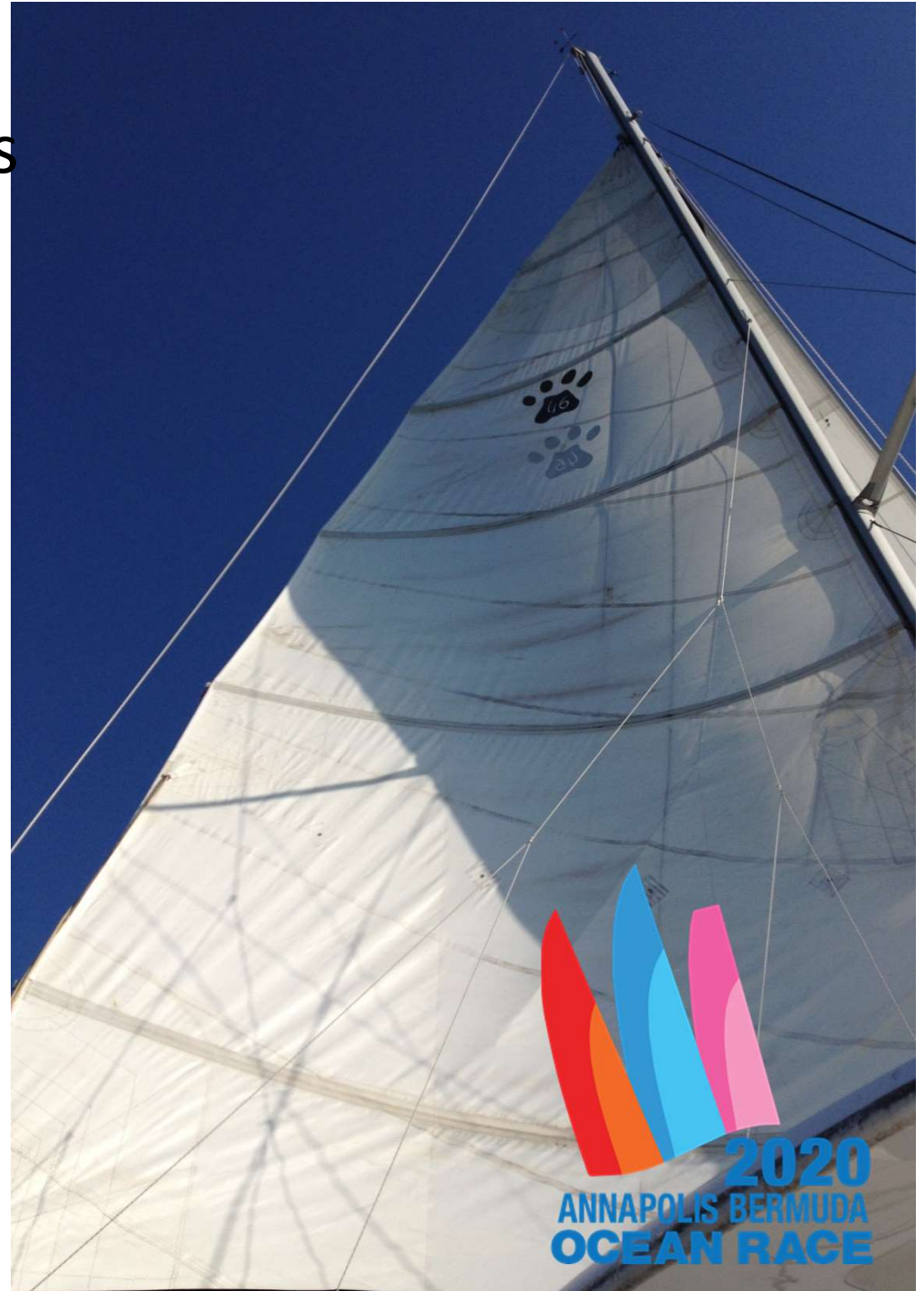
3.32 A boat shall carry a strong, sharp knife, sheathed and securely restrained which is readily accessible from the deck and/or cockpit. A knife carried by each crew member is recommended.



2020 A2B Offshore SERs

Safety Equipment: Sails

3.33.1 A boat shall have a mainsail reefing system capable of reducing the area of the sail by an amount appropriate for the weather conditions possible on the race course.



2020 A2B Offshore SERs
Safety Equipment: Sails

High Visibility colored material for storm jibs and trysails applies to all sails made after January 1, 2014



2020 A2B Offshore SERs

Safety Equipment: Trysail

3.33.2 Trysail are strongly recommended.

- Boat's sail number displayed on both sides
- Be set independently of the main boom
- Have an area less than 17.5% of E x P
- Be capable of being attached to the mast



2020 A2B Offshore SERs

Safety Equipment: Heavy Weather Jib

3.33.3 A boat shall carry a heavy-weather jib (or heavy-weather sail in a yacht with no forestay) of area not greater than 13.5% height of the foretriangle squared.



2020 A2B Offshore SERs

Safety Equipment: Storm Jib

3.33.4 A boat shall carry a storm jib

- not exceeding 5% of the yacht's I dimension squared
- equipped with an alternative means of attachment to the headstay in the event of a failure of the head foil.

It is strongly recommended that an inner forestay is provided either permanently installed or readily set up, on which to set the storm jib.



2020 A2B Offshore SERs

Safety Equipment: Rigging

3.35 A boat shall not be rigged with any halyard that requires a person to go aloft in order to lower a sail.

3.36 A boat over 30' LOA (9.14m) shall have a means to prevent the boom from dropping if support from the mainsail or halyard fails.



2020 A2B Offshore SERs
Safety Equipment: Boom Preventer

A yacht shall have a preventer or boom restraining device, shall practice rigging it and shall be prepared to demonstrate its use.



2020 A2B Offshore SERs

Safety Equipment: Emergency Water and Rations

3.37 A boat shall carry 1 gallon (3.785 liters) per crewmember of emergency drinking water in sealed containers in addition to any other water carried aboard the boat and it shall be aboard after finishing.

3.38 A boat shall carry adequate food, energy bars, and snacks to maintain crew stamina as described in the Notice of Race.



2020 A2B Offshore SERs

Safety Equipment: Liferaft

3.39 A boat shall carry adequate inflatable life raft(s) designed for saving life at sea with designed capacity for containing the entire crew.



2020 A2B Offshore SERs

Safety Equipment: Liferaft

Must be SOLAS, ISAF, ISO 9650-1 or ORC approved

Liferafts built for extended offshore use



2020 A2B Offshore SERs Safety Equipment: Liferaft Cannister

Stored in such a way that it is capable of being launched within 15 seconds.

Boats built after 01/06/2001 shall have the life raft stowed in a deck mounted rigid container or stowed in watertight or self-draining purpose built rigid compartment(s) opening adjacent to the cockpit or the working deck.

Painter should be permanently fastened to the boat.

If on deck, must be unimpeded when opened



2020 A2B Offshore SERs

Safety Equipment: Liferaft Valise

If in a boat built before June 2001, a liferaft may be packed in a valise not exceeding 88lbs securely stowed below deck adjacent to a companionway.

there have been reports that the integrity of valise-packed life rafts can be compromised by mishandling, poor storage, and other factors, and that such conditions may indicate a need for servicing more frequently than is recommended by manufacturers.



2020 A2B Offshore SERs

Safety Equipment: Liferaft

- The certificate should identify to what standard it was built.
- Keep certificate on the boat and a copy to the Entries Committee.

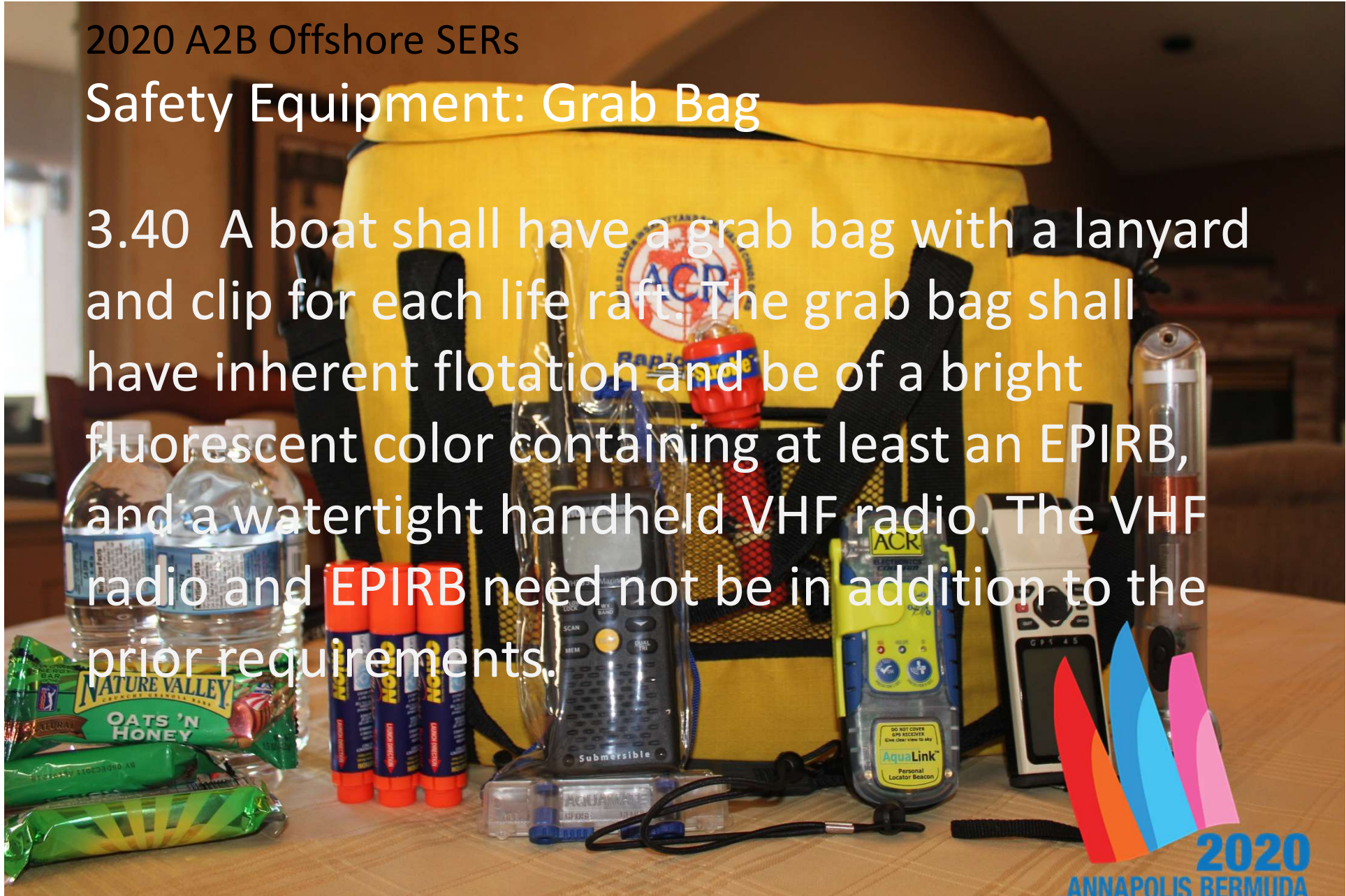


- New liferafts generally certified by manufacturer for 3 yrs.
 - Canisters generally inspected and certified every 3 yrs
 - Valise liferafts , after the initial 3 years are inspected annually.

2020 A2B Offshore SERs

Safety Equipment: Grab Bag

3.40 A boat shall have a grab bag with a lanyard and clip for each life raft. The grab bag shall have inherent flotation and be of a bright fluorescent color containing at least an EPIRB, and a watertight handheld VHF radio. The VHF radio and EPIRB need not be in addition to the prior requirements.



2020 A2B Offshore SERs

Skills: On-board Training Certificate

- The captain and not less than 80% of the boat's racing crew shall, prior to the start of the race, participate in on-board training...



2020 A2B Offshore SERs

Skills: On-board Training Certificate

...including

- annual man-overboard procedures,
- operation of DSC radios, AIS Transponder, and GPS MOB activation (including personal MOB applications),
- sailing with the storm trysail,
- use of the life raft, lifejackets, safety harnesses, main boom preventer, communications equipment, pyrotechnics, EPIRB(s), fire prevention, firefighting and the procedures for abandoning ship, dismasting and rudder/steering loss or failure.
- All participating crew shall sign and date the On Board Training Certificate.



2020 A2B Offshore SERs

Skills: Emergency Steering

4.1.1 Emergency Steering

A boat's crew shall be aware of multiple methods of steering the boat with the rudder disabled, and shall have chosen and practiced one method of steering the boat with the rudder disabled and be prepared to demonstrate said method of steering both upwind and downwind.



2020 A2B Offshore SERs

Skills: Emergency Steering

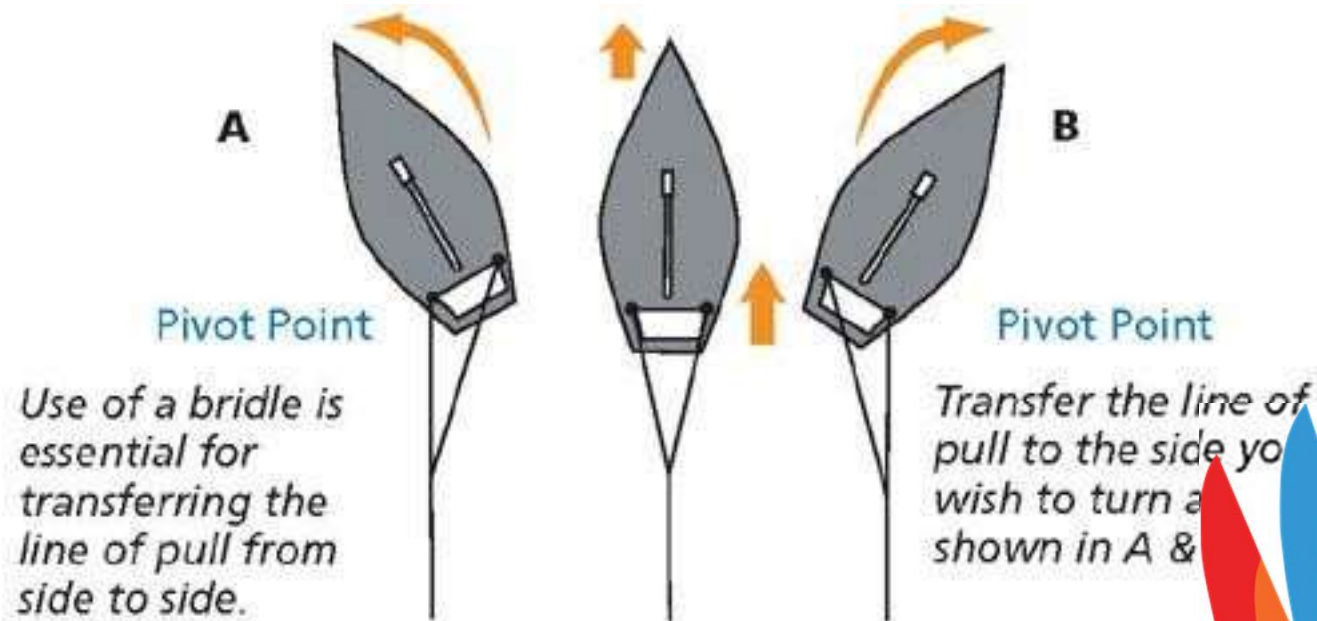
NO RUDDER ?

NOT A PROBLEM



2020 A2B Offshore SERs

Skills: Emergency Steering



2020 A2B Offshore SERs

Skills: Annual Man Overboard Drill

4.1.2 Annual man overboard procedures shall be appropriate for the boat's size and speed. The practice shall consist of marking and returning to a position on the water, and demonstrating a method of hoisting a crewmember back on deck, or other consistent means of reboarding the crewmember.



2020 A2B Offshore SERs

Skills: Safety at Sea Training

Requirements Common for All COB Scenarios:

Deploy "Man Overboard" loud enough so entire crew (as well as any boats nearby) are made aware

Deploy flotation and other floating/visible aids towards victim

Designate a spotter (get nearest crew member to set a yellow flag on victim to serve as guidance for helm)

Activate MOB function on GPS (operator should augment spotter info with range/bearing and update as requested)

Get boat slowed, into a maneuverable state and aimed back in the direction of victim ASAP

Start engine and maintain a steady speed (absolute minimum 5 knots) (do not stop in the water)

4.2 At least 30% of those aboard the boat, but not fewer than two members of the crew, unless racing single-handed, including the person in charge, shall have attended a one-day or two-day US Sailing Safety at Sea Seminar within the last 5 years.



2020 A2B Offshore SERs

Skills: CPR & First Aid

First

At least two members of the crew shall have a First Aid **AND** CPR certificate completed within the last five years

- Recognized First Aid & CPR courses in the U.S. are posted at http://www.sailing.org/classesandequipment/offshore/osr_recognized_first_aid_qualifications.php
- STCW 95 First Aid Training complying with A-VI/1-3 - Elementary First Aid or higher STCW level
- CAPCA offers a compliant course

Aid



2020 A2B Offshore SERs

Changes for 2020 & Recommended Equipment

- No rules regarding Batteries
- Board-mounted below-deck bilge pump OK
- SOLAS Parachute Flares recommended
- AIS transceivers not required
- Personal location not required
- No DSC required for Handheld
- Trysails recommended but not required in lieu of reefing

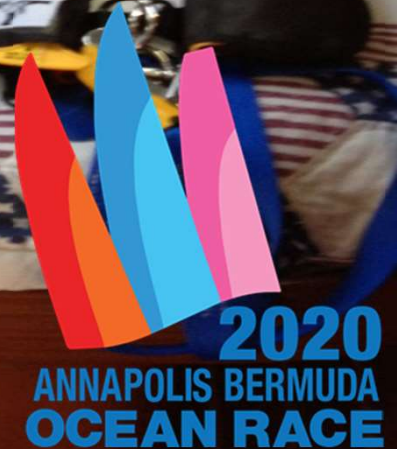


Safety Inspection Process

1. Checklist will be posted after January 1
2. Start Signing up at the end of April
3. Conducted throughout the month of May

Safety Inspection Process

- Have everything out, ready and organized
- Certifications can be submitted at time of inspection



Safety Inspection Certificate

2016 ANNAPOLIS TO BERMUDA RACE COURTESY SAFETY INSPECTION CERTIFICATION

Boat Name: _____ Captain or Person in charge: _____
Inspection Date: _____ Inspector: _____
On-board Training Certificate? _____ EPIRB Reg. No. _____
Life-raft Certification? _____ Satellite Phone No. _____

Deficiencies:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Any and all deficiencies must be corrected before the entrant may participate in the race. The signature of the Person in charge below certifies that the above deficiencies have been corrected.

1.2 Responsibility: The safety of a boat and her crew is the sole and inescapable responsibility of the "person in charge," as per RRS 46, who shall ensure that the boat is seaworthy and manned by an experienced crew with sufficient ability and experience to face bad weather. S/he shall be satisfied as to the soundness of hull, spars, rigging, sails and all gear. S/he shall ensure that all safety equipment is at all times properly maintained and safely stowed and that the crew knows where it is kept and how it is to be used.

1.2.1 Neither the establishment of these 2016 A2BSRs, their use by race organizers, nor the inspection of a boat under these regulations in any way limits or reduces the complete and unlimited responsibility of the person in charge.

1.2.2 Decision to race -The responsibility for a yacht's decision to participate in a race or to continue racing is hers alone -RRS Fundamental Rule 4.

I am the Captain or Person in Charge; I have read and understand the 2016 A2B SRs and hereby certify that the boat complies with those rules and that all deficiencies noted above have been corrected.

Signature: _____ Date _____

I have inspected the above referenced boat and found it satisfies the 2016 A2B SRS

Signature: _____ Date _____

**THIS DOCUMENT MUST BE PRESENTED WITH BOTH SIGNATURES AT CHECK-IN
TO SATISFY THE ENTRY REQUIREMENTS OF THE RACE.**

ENTRIES THAT HAVE NOT ASSOCIATED THIS DOCUMENT WITH THEIR ENTRY MAY BE DISQUALIFIED.



WAIVERS

1. The request must be in writing and state the specific rule or rules in question.
2. The request must be made by the owner or captain of a vessel that is currently registered for the A2B.
3. The request for waiver will be considered where it would not unfairly disadvantage other competitors, and:
 - a) The underlying purpose of the rule(s) would not be served or would be frustrated by application of the rule, or ;
 - b) In view of unique or unusual circumstances, application of the rule would be unfair , and there exists no reasonable alternative , or;
 - c) The Committee deems exemption of the rule for all competitors appropriate



Questions?

Brian Barone safety@bermudaoceanrace.com

Michael Lehmkuhl chair@bermudaoceanrace.com

