# NEWPORT BERMUDA RACE 2018

# SAFETY REQUIREMENTS FOR MULTIHULLS

Multihulls competing in the 2018 Newport Bermuda Race must comply with the safety standards outlined in this document. Every boat entered in the race is subject to inspection both before and after the race. Failure to be in compliance may result in invalidation of entry or protest. The Newport Bermuda Race Safety Requirements ("NBRSR") are a version of US Sailing's United States Safety Equipment Requirements ("USSER"), which can be found on the US Sailing website (ussailing.org). The numbering system used below conforms to the USSER, and the absence of sequential numbers in this document indicates provisions not applicable to the Newport Bermuda Race.

## 1.0 GENERAL REQUIREMENTS

1.1 Purpose: The Newport Bermuda Race Safety Requirements establish uniform minimum equipment and training standards for Multihulls entered in the Newport Bermuda Race. These Requirements do not replace, but rather supplement, the requirements of the US Coast Guard, the Racing Rules of Sailing (RRS), the rules of Class Associations and all applicable rating rules. Use of the NBRSR does not guarantee total safety of the boat and her crew.

1.2 Responsibility of 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 4 and 46, who must ensure that the boat is seaworthy and manned by an experienced crew with sufficient ability and experience to face bad weather. S/he must be satisfied as to the soundness of hull, spars, rigging, sails, and all gear. S/he must ensure that all safety equipment meets the Newport Bermuda Race Safety

***Inspection Checklist***

*Instructions: This checklist is intended to aid the Race Entrant and Inspector during the Newport Bermuda Race pre- and post- race inspections (NOR §6.2). Not all items listed in this NBRSR are subject to inspection but are listed as a reminder of NOR or other race requirements. Items not subject to inspection do not contain a space on this checklist.*

*Prior to the inspection, Captain should verify all items are ready for inspection and initial in the space provided.*

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Requirements; 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. The person in charge shall also assign a person to take over his responsibilities in the event of his incapacitation ("Reserve Person In Charge").

1.2.1 Neither the establishment of the NBRSR, nor their use by Bermuda Race Organizing Committee, nor the inspection of a boat under the NBRSR, in any way limits or reduces the complete and unlimited responsibility of the Person in Charge.

1.3 Inspections: A boat may be inspected at any time by an equipment inspector or measurer appointed for the event. If she does not comply with these regulations, her entry may be rejected or she will be subject to a protest filed by the Technical Committee. A violation of the Safety Equipment Requirements may result in disqualification or a penalty other than disqualification.

1.4 Equipment Maintenance and Performance: All equipment required shall function properly, be regularly checked, cleaned and serviced, and be of a type, size and capacity suitable for the intended use and size of the boat and number of crew. The crew shall have practiced with the equipment. This equipment shall be readily accessible while underway and, when not in use, stowed such that deterioration is minimized.

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

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

1.7 Watertight: A boat's hull, including deck, coach roof, windows, hatches, and all other parts, shall form an integral watertight unit. Any openings in the hull shall be capable of

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| | being immediately secured to maintain this integrity. Centerboard and daggerboard trunks and the like shall not open to the interior of the hull unless the opening is watertight and situated entirely above the waterline. | | |
| 1.8 | Hull Construction Standards: A boat shall meet the standards requirements outlined in Appendix 1. | | |
| 1.9 | Sailing Without Power: The crew of a multihull must demonstrate that normal sailing functions (including but not limited to: raising and lowering sails; trimming sails; steering; raising and lowering dagger boards; positioning canting centerboards and moveable ballast; operating bilge pumps; rotating masts (if applicable); and deploying safety gear) can be performed in the event of a complete loss of power. | | |

## 2.0 HULL AND STRUCTURE CONSTRUCTION AND DESIGN GUIDELINES

A boat shall meet or exceed the following construction and design guidelines:

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| 2.1.1a | Exits: A Multihull shall have at least two (2) exits in each hull which contains accommodation. | | |
| 2.1.1b | Escape Hatches: A Multihull shall have an escape hatch in each hull that contains accommodation for access to and from the hull in the event of an inversion. | | |
| 2.1.1b-1 | A trimaran shall have at least two escape hatches complying with these requirements if first launch after 2002. | | |
| 2.1.1b-2 | Escape Hatches shall be at or near the midships station if first launch after 2000. | | |
| 2.1.1b-3 | Escape Hatches shall be on the side nearest the vessel's centerline if first launch after 2002. | | |
| 2.1.1b-4 | Escape hatches should be above the waterline when the boat is inverted. | | |
| 2.1.1b-5 | Escape Hatches shall have sufficient clearance to allow a crewmember to pass through fully clothed. A minimum clearance of 18" (450mm) will meet this requirement. | | |

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| 2.1.1b-6 Each Escape Hatch shall have been opened both from the inside and outside within six (6) months prior to the race. | | |
| 2.1.2 Hatch Boards: A boat's hatch boards or doors, 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. | | |
| 2.1.3 Watertight 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. | | |
| 2.1.4 Cockpit Drains: A boat's cockpit drains shall be capable of draining six (6) inches (152mm) of water in five (5) minutes. One (1) square inch (645 $mm^2$) of effective drain per eight (8) square feet (0.743$m^2$) of cockpit sole will satisfy this requirement. | | |
| 2.1.5.1 Cockpit Volume: A boat's maximum cockpit volume for FAQ cockpits not open to the sea, including any compartments capable of flooding, to the lowest points of coaming over which water can adequately escape, shall not exceed (.06 x LOA x Max. Beam x Freeboard Abreast the cockpit). The cockpit sole shall be at least (0.02 x LWL) above LWL. | | |
| 2.1.6 Openings below the Waterline: 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. A means of closing all openings shall be provided. | | |
| 2.2 Stability: Multihulls shall be designed and built to resist FAQ capsize and shall comply with Appendix 2. | | |
| 2.2.1 Flotation: Each hull shall contain watertight bulkheads and compartments (which may have permanently installed flotation material) to ensure that the boat is effectively unsinkable and capable of floating in a stable position with at least half the length of one hull flooded. | | |
| 2.2.2 Watertight Bulkheads: Multihulls shall have in each hull either a watertight "crash" bulkhead within 15% LOA from the bow (but abaft the forward waterline) or permanently | | |

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| | installed closed cell foam buoyancy effectively filling the forward 30% LOA of the hull. | | |
| 2.2.3 | Transverse Watertight Bulkheads: Multihulls shall have Transverse Watertight Bulkheads at intervals of not more than 13′-3″ (4m) in every hull without accommodation if first launch after 1998. | | |
| 2.2.4 | Any required watertight bulkhead shall be strongly built to take a full head of water pressure without allowing any leakage into the adjacent compartment. | | |
| 2.3.1 FAQ | Toilet: A boat shall be equipped with a head or a bucket which is fitted below deck and designated for this purpose only. | | |
| 2.3.2 | Sleeping arrangements: A boat shall have bunks sufficient to accommodate the off-watch crew. | | |
| 2.3.3 FAQ | Cooking: A boat shall be equipped with a stove with a fuel shutoff. | | |
| 2.3.4 | Potable Water: A boat shall have an installed water tank and delivery system. Care should be taken to ensure potable water is accessible to the crew in the event of a failure of the primary water delivery system. | | |
| 2.3.5 | Hand Holds: A boat shall have adequate hand holds below deck. | | |
| 2.4.1 | Enclosed Deck: The deck shall be enclosed from forward on each side and around the stern by a suitably strong enclosure, typically consisting of lifelines, cockpit coamings and pulpits, meeting the following requirements: | | |
| 2.4.2 | A boat's stanchion and pulpit bases must be within the working deck. | | |
| 2.4.4 FAQ | Lifelines must be uncoated stainless steel wire or High-modulus Polyethylene (HMPE). A multipart lashing not to exceed 4" (101 mm) per end termination for the purpose of tying lifelines to pulpits and pushpits is allowed. Lifelines shall be taut (defined as a deflection of less than 2″ (50mm) when a force of 9 lbs. (40N) is applied midway between stanchions). | | |
| 2.4.5 | The maximum spacing between the bases of lifeline supports (e.g. stanchions and pulpits) shall be 92" (2.3m). | | |

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| 2.4.7 Where practical, boats shall have at least two lifelines (or a similar enclosure) with 24" (610 mm) minimum height above deck, and a maximum vertical gap of 15" (381 mm). The minimum diameter for stainless steel lifelines will be 5/32" (4 mm) for boats to 43' (13.1 m) and 3/16" (5 mm) for boats over 43' (13.1 m). The minimum diameter for HMPE lifelines will be 3/16" (5mm) and it shall be protected from chafe and spliced in accordance with the manufacturer's recommendations. | | |
| When it is impractical for a multihull to comply with these requirements precisely, they shall be followed as closely as possible. | | |
| 2.5.1 Bilge Pumps: A boat shall have at least one permanently installed manual bilge pump of at least 10 gallons per minute (GPM) (37.8 liters per minute) capacity, capable of emptying each hull and whose operation is 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. | | |
| 2.5.2 Second Bilge Pump: A boat shall have a second portable manual bilge pump of at least 10 GPM capacity, mounted on a rigid board and rigged with intake and discharge hoses so that it may be deployed as necessary in any location on the boat. The handle shall be securely attached to the pump via a lanyard or catch. | | |
| 2.6 Mast Step: A boat shall have the heel of a mast that is stepped below deck securely fastened to the mast step or adjoining structure. | | |
| 2.7.1 Mechanical Propulsion: A boat shall have an engine that is quickly available and capable of propelling the boat at a minimum speed in knots equivalent to the square root of LWL in feet (1.81 times the square root of the waterline length in meters). | | |

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| 2.7.1(a) Fuel On Board: A boat shall carry sufficient fuel to provide a cruising range under power of at least 100 nautical miles after finishing. | | |
| 2.7.3 Engine Installation: A boat's engine and generator installation (if so equipped), shall conform to ABYC, ISO or U.S. Coast Guard standards or manufacturer's recommendations. | | |
| 2.8 Multihull Nets or Trampolines ("Nets"): Multihull nets shall be: | | |
| 2.8.1 Essentially horizontal. | | |
| 2.8.2 Made from durable woven webbing, water permeable fabric or mesh with openings not larger than 2" (5cm) in any dimension. Attachment points shall avoid chafe and the junction between net and boat shall present no risk of foot trapping. | | |
| 2.8.3 Solidly fixed at regular intervals on transverse and longitudinal support lines and shall be fine-stitched to a bolt rope or a metal rod serving the same purpose. | | |
| 2.8.4 Able to carry the full weight of the crew either in normal working conditions at sea or when the boat is inverted. | | |
| 2.9 Nets- Trimaran with Double Crossbeams: A trimaran with double crossbeams shall have nets on each side covering: | | |
| 2.9.1 The area formed by the crossbeams, central hull and outriggers | | |
| 2.9.2 The triangles formed by the aft end of the central pulpit, the mid-point of each forward crossbeam, and the intersection of the crossbeam and the central hull | | |
| 2.9.3 The triangles formed by the aftermost part of the cockpit or steering position (whichever is furthest aft), the midpoint of each after crossbeam, and the intersection of the crossbeam and the central hull; except that: | | |
| 2.9.4 NBRSR 2.9.3 is not a requirement when cockpit coamings and/or lifelines are present which comply with the minimum height requirements of 2.4.1. | | |

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2.10 Nets- Trimarans with Single Crossbeams: A trimaran with a single crossbeam shall have nets between the central hull and each outrigger on each side between two straight lines from the intersection of the crossbeam and the outrigger, respectively to the aft end of the pulpit on the central hull, and to the aftermost point of the cockpit or steering position on the central hull (whichever is furthest aft).

2.11 Nets- Catamarans: A catamaran shall have nets covering at least the area bounded:

2.11.1 Laterally between the hulls; and

2.11.2 Longitudinally between transverse stations through the forestay base and the aftermost point of the boom lying fore and aft. However, a catamaran with a central nacelle (non-immersed) may satisfy the regulations for a trimaran

## 3.0 SAFETY EQUIPMENT:

Portable and affixed safety gear shall include:

3.1.1 Lifejackets: Each crew member shall have a life jacket that provides at least 33.7 lbs. (150 N) of buoyancy, intended to be worn over the shoulders (no belt packs), meeting either U.S. Coast Guard or ISO specifications. Life jackets shall be equipped with crotch or leg straps, a whistle, a waterproof light, be fitted with marine-grade retro-reflective material, and be clearly marked with the boat or wearer's name, and be compatible with the wearer's safety harness. **After 1/1/2018, each life jacket intended for regular use while racing (one per crewmember) shall be equipped with an AIS personal crew overboard beacon.** If the life jacket is inflatable, it shall be checked for air retention regularly. Alternatively, each crewmember shall have a U.S. Coast Guard approved inherently buoyant offshore life jacket that provides at least 22 lbs. (100 N) of buoyancy equipped with crotch or leg straps, a whistle, a waterproof light, AIS personal crew overboard beacon and retro-reflective material, marked with the boat or wearer's name, which is compatible with a safety harness.

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3.1.4 Safety Harness: Each crew member shall have a safety harness and compatible safety tether not more than seven feet (2.13m) long with a breaking strength of 4,500 lbs (20 kN). The tether

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| | shall have a snap hook at its far end and a means to quickly disconnect the tether at the chest end. | | |
| 3.2.1 | Jack Lines: A boat shall have jack lines with a breaking strength of at least 4,500 lbs. (20 kN), that allow the crew to reach all points on deck and are connected to similarly strong attachment points. | | |
| 3.2.2 | Companionway Clipping Points: A boat shall have adequate clipping points or jack lines which allow the crew to clip on before coming on deck and unclip after going below. A trimaran with a rudder on the outrigger must have clipping points available for a crewmember to repair the steering mechanism while clipped in. | | |
| 3.2.3 | Underside Jack Lines and Nonskid Pathways: Multihulls shall have jack lines with a breaking strength of at least 4,500 lbs. (20 kN), running the length of the underwing deck adjacent to the escape hatches, which allow the crew to clip in before exiting the hull. On a trimaran, these shall be around the central hull. In addition, the underwing deck should be outfitted with nonskid pathways suitable for crew to cross between hulls and to access safety equipment while remaining clipped in. | | |
| 3.3.1 FAQ | Navigation Lights: A boat shall have navigation lights that meet U. S. Coast Guard requirements and are mounted above deck level in such a way that they will not be obscured by the sails. | | |
| 3.3.2 FAQ | Spare Navigation Lights: A boat shall have a second set of navigation lights that comply with U.S. Coast Guard requirements and which can be connected to a different power source than the primary lights. | | |
| 3.4 FAQ | Fire Extinguishers: A boat shall carry fire extinguisher(s) that meet U.S. Coast Guard requirements. | | |
| 3.5 FAQ | Horn: A boat shall carry a sound making device that meets U.S. Coast Guard requirements. | | |
| 3.6 FAQ | Flares: A boat shall carry: | | |
| 3.6.1 | Two (2) SOLAS orange smoke flares not older than the expiration date. | | |

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| 3.6.3 | Four (4) SOLAS red hand flares not older than the expiration date. | | |
| 3.6.5 | Flares stored inside of life rafts may not be used to satisfy the flare requirement. | | |
| 3.7.1 | Lifesling: A boat shall carry a Lifesling®, or equivalent man overboard rescue device, equipped with a self-igniting light and stored on deck ready for immediate use. | | |
| 3.7.2 | MOB Pole: A boat shall carry a man overboard pole and flag with a lifebuoy, a self-igniting light, a whistle, and a drogue attached. A self-inflating MOB 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 "quick release". | | |
| 3.7.3 | Heaving Line: A boat shall have a throwing sock-type heaving line of 50' (15 m) or greater floating line readily accessible to the cockpit. | | |
| 3.8.1 | Installed VHF Radio and Antenna: 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 permanently installed VHF radios shall have DSC capability, have an antenna of at least 15" (381 mm) 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 | Handheld VHF Radio: A boat shall have a watertight handheld VHF radio or a handheld VHF radio with waterproof cover. This radio shall have DSC/GPS capability with an MMSI number properly registered to the vessel. | | |
| 3.8.3 | Emergency VHF Antenna: A boat shall have an emergency VHF antenna equipped with sufficient coax to reach the deck. | | |
| 3.8.4 | VHF Operational Modes: A boat shall be equipped with VHF transceivers that are operational in International and USA channel mode. | | |
| 3.9 FAQ | AIS: All boats shall have an AIS Transponder, sharing a masthead VHF antenna via a low loss AIS antenna splitter. | | |

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| | An acceptable alternative is a dedicated AIS antenna that is a minimum of 15" (0.381 m), mounted with its base at least 3 meters above the water, and fed with coax that has a maximum 40% power loss. | | |
| 3.11 | Satellite Phone: A boat shall carry a satellite telephone or satellite communications system designed for use with a smartphone that: | | |
| | 3.11.1 is programmed to operate with a satellite communications provider of continuous, uninterrupted signals for two-way voice communications on the Western North Atlantic Ocean; | | |
| | 3.11.2 is powered or recharged by the boat's electrical system; | | |
| FAQ | 3.11.3 is operable below deck using a mounted external antenna; | | |
| | 3.11.4 shall remain "on" and ready to accept incoming voice calls, except when making necessary intermittent data connections while underway; and | | |
| | 3.11.5 shall have a telephone number that is provided to the BROC via the race website before close of Newport Check-in. | | |
| | If the method of complying with this requirement depends on the use of a smartphone, the handset shall be securely mounted in the living quarters of the boat via a docking station connected to the boat's electrical system; shall remain continuously connected to the satellite communication system during the race; and shall be set at a ringer volume sufficient to be heard over other ambient noise while at sea. | | |
| 3.14 | Global Positioning System: A boat shall carry a GPS receiver. | | |
| 3.15 FAQ | Man Overboard: A boat shall be equipped with an electronic means to record the position of a man overboard within ten seconds. This may be the same instrument used to comply with 3.14. | | |
| 3.16.1 | Emergency Position Indicating Radio Beacon: A boat shall carry a 406MHz EPIRB that is properly registered to the boat. Boats with more than one life raft must carry at least one EPIRB meeting the requirements of this section per life raft. | | |

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| | All EPIRBS purchased after 1/1/2016 must be equipped with an internal GPS. | | |
| 3.17 | Distance Measuring: A boat shall be equipped with a knot meter and/or distance measuring instrument separate from the GPS. | | |
| 3.18 | Depth Sounder: A boat shall be equipped with a permanently installed depth sounder that can register to a depth of at least 200 ft. (61 m). | | |
| 3.19.1 | Steering Compass: A boat shall have a permanently mounted magnetic compass independent of the boat's electrical system suitable for steering at sea. | | |
| 3.19.2 | Second Compass: A boat shall have a second marine compass suitable for steering a boat at sea which may be hand held. | | |
| 3.20 | Charts: A boat shall have non-electronic charts that are appropriate for the race area. | | |
| 3.21 FAQ | Sail Numbers: 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. | | |
| 3.22 | Tapered Soft Plugs: A boat shall have soft plugs of an appropriate material, tapered and of the appropriate size, attached or stowed adjacent to every through-hull opening. | | |
| 3.23 FAQ | Ground Tackle: A boat shall carry one anchor, meeting the anchor manufacturer's suggested size for the boat's size, with a suitable combination of chain and line. | | |
| 3.24.1 | Searchlight: A boat shall have a watertight, high-powered searchlight, suitable for searching for a person overboard at night or for collision avoidance. | | |
| 3.24.2 FAQ | Flashlights: A boat shall carry a watertight flashlight for each crewmember with spare batteries in addition to the above. | | |
| 3.25 FAQ | First Aid Gear: 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. | | |
| 3.26 | Radar Reflector: A boat shall have an 11.5" diameter or greater octahedral radar reflector or one of equivalent performance. | | |
| 3.27.1 | Buckets: A boat shall carry two (2) stout buckets of at least two gallons (7.6 liters) capacity, each with a lanyard attached. | | |

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| 3.28 FAQ | Safety Gear and Through Hull Diagram: A boat shall post a durable, waterproof diagram in the main accommodation area where it can be seen easily, identifying the location of the principal items of safety equipment and through hulls. | | |
| 3.29.1 FAQ | Emergency Tiller: A boat shall have an emergency tiller, capable of being fitted to a rudder stock (except when the principal method of steering is by means of an unbreakable metal tiller). | | |
| 3.30 | Tools and Spare Parts: A boat shall carry tools and spare parts, including an effective means to quickly disconnect or sever the standing rigging from the hull. | | |
| 3.31 | Marking of Safety Gear: All lifesaving equipment shall bear retro-reflective material and be marked with the boat'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's name shall be marked on such gear during the first servicing. | | |
| 3.32 | Knife: A boat shall carry at least one strong, sharp knife, sheathed and securely restrained, which is readily accessible from the deck and/or cockpit. In addition, a multihull shall carry a second knife meeting the requirements above which is accessible from the underside of the foredeck trampoline. | | |
| 3.33.1 | Reefing: A boat shall have mainsail reefs capable of reducing the area of the sail by an amount appropriate for the weather conditions possible on the race course. | | |
| 3.33.2 FAQ | Storm Trysail: A boat shall carry a storm trysail, with the boat's sail number displayed on both sides, that can be set independently of the main boom, has an area less than 17.5% of "E" x "P", and which is capable of being attached to the mast. Storm sails manufactured after 1/1/2014 must be constructed from a highly visible material. A rotating wing mast will meet this requirement. | | |
| 3.33.3 FAQ | Heavy Weather Jib: A boat shall carry a heavy weather jib (or heavy weather sail in a boat with no forestay) of area not greater than 13.5% height of the foretriangle squared. | | |
| 3.33.4 FAQ | Storm Jib: A boat shall carry a storm jib not exceeding 5% of the boat's "I" dimension squared, and, if dependent on a luff | | |

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| | groove, equipped with an alternative means of attachment to a stay. Storm sails manufactured after 1/1/2014 must be constructed from a highly visible material. | | |
| 3.33.5 | Mainsheet Release: The crew of a multihull must be able to manually release sufficient mainsheet or traveler to cause the end of the boom to move at least one (1) meter (3.3 feet) in under two (2) seconds from any steering or consistently manned trimming station while racing. | | |
| 3.34 | Search and Rescue Visibility: All multihulls must display a one square meter area of highly visible pink, orange or yellow showing when the boat is inverted. | | |
| 3.35 | Halyards: A boat shall not be rigged with any halyard that requires a person to go aloft in order to lower a sail. | | |
| 3.36.1 | Preventer or Boom Restraining Device: A boat shall have a preventer or boom restraining device, shall practice rigging it and shall be prepared to demonstrate its use to the satisfaction of BROC. | | |
| 3.36.2 | Boom Support: A boat shall have a means to prevent the boom from dropping if support from the mainsail or halyard fails. | | |
| 3.37 FAQ | Emergency Drinking 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. | | |
| 3.39 FAQ | Inflatable Life Raft(s): A boat shall carry adequate inflatable life raft(s) designed for saving life at sea with designed capacity for containing the entire crew. The raft(s) must be of proper design and construction for the conditions potentially faced on the ocean race course. Each raft shall be stored in such a way that it is capable of being launched within 15 seconds. Each life raft shall hold a current certificate of inspection. A boat shall have the life raft(s) 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 working deck. A multihull may alternatively stow the life raft in a valise not weighing over 88 lbs. securely below deck adjacent to the escape hatch(es) so long as the valise fits through the escape hatch without force. The end of a life raft painter shall be securely fastened | | |

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to the boat. On a Multihull, the life raft(s) shall be readily deployable whether or not the boat is inverted.

3.40 Grab Bag(s): A boat shall have a grab bag with a lanyard and clip for each life raft. The grab bag(s) shall have inherent flotation and be of a bright fluorescent color, and each grab bag shall contain a handheld VHF radio, either watertight or fitted with a waterproof cover. At least one VHF radio stored in a grab bag shall be DSC/GPS equipped. The VHF radio need not be in addition to the other requirements contained herein.

## 4.0 TRAINING AND SKILLS

4.1 FAQ Steering in an Emergency: 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 and be prepared to demonstrate it while sailing both upwind and downwind.

4.2 Annual Man Overboard Training: Annually, two-thirds of the boat's racing crew shall practice man-overboard procedures 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 re-boarding the crewmember.

4.3.1 FAQ Safety At Sea Seminar Attendance: The Person-In-Charge, Reserve Person-In-Charge, Navigator and at least one Watch Captain must hold a World Sailing Approved Offshore Personal Survival Course Certificate. At least 50% of the remaining crew shall have attended a one-day or two-day U.S. Sailing Offshore Safety at Sea Seminar. Any certificate obtained more than five (5) years prior to the start of the race or as a result of exclusively internet-based training will not be acceptable for the purposes of this paragraph.

5.3 Routine Training On Board: The Captain and not less than 80% of a boat's crew shall, prior to the start of the race, participate in on-board training, including man overboard practice, use of AIS and AIS personal crew overboard

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beacons, 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.

5.4 Safety Demonstration: A boat's crew shall be able to demonstrate, to the satisfaction of the BROC, an ability to return to a man-overboard in reasonable amount of time.

5.5 Digital Selective Calling (DSC): All crew shall review the FAQ emergency features of DSC, including the response to a DSC Distress Call.

5.6 CPR and First Aid: Two crewmembers must have current FAQ CPR and First Aid certifications.

5.7 Minimum Crew Experience: The racing crew of a multihull must comply with the following:

5.7.1 The Person in Charge, Reserve Person in Charge, Navigator and Watch Captain(s), must have participated in a documented offshore race of longer than 250 nm on a multihull at least 58ft Length on Deck during the last 5 years.

5.7.2 In addition, at least 80% of the crew shall have competed in an overnight passage aboard the specific boat entered in the NBR.

Vessel Name:_____

Captain or Designated Representative's Name: _____

Signature: _____

Date: _____

**THIS COMPLETED INSPECTION CHECKLIST MUST REMAIN ON THE YACHT PER THE NOTICE OF RACE AND MAY BE RE-EXAMINED IN BERMUDA.**

FAQ – *indicates more information can be found about this requirement in the FAQ section of bermudarace.com.*

## APPENDIX 1

## HULL CONSTRUCTION STANDARDS (SCANTLINGS)

1.2. Multihulls shall have been designed, built, maintained, modified or repaired in accordance with the requirements of:

c) the EC Recreational Craft Directive for Category A having obtained the CE mark, or

d) ISO 12215 Category A, with written statements signed by the designer and builder confirming that they have respectively designed and built the boat in accordance with the ISO standard,

e) and have written statements or approvals in accordance with c) or d) above for all significant repairs or modifications to the hull, deck, coach roof, keel or appendages, on board, except:

f) a race organizer or class rules may accept, when that described in c), d) or e) above is not available, the signed statement by a naval architect or other person familiar with the standards listed above that the boat fulfills these requirements

## APPENDIX 2

## MULTIHULL STABILITY

2.1. Multihulls shall demonstrate compliance with the requirements of ISO 12217-2:2015(E), paragraphs 7.8, 7.9, and 7.10, for Design Category A. All methods and values used in calculations shall be as specified in these paragraphs and as referenced therein.

2.2. Definitions of relevant terms may be found in ISO 8666: Small Craft-Principal Data.

2.3. Required calculations shall be performed by the boat's designer or builder, or by another recognized authority with the approval of the Organizing Authority. Calculations shall be presented to the Organizing Authority for review.

2.4. The person completing the calculations shall supply a signed declaration that all calculations are performed using required methodology and data relevant to the specific boat.