# NEWPORT BERMUDA RACE 2026
# SAFETY REQUIREMENTS FOR MULTIHULLS

Multihulls competing in the 2026 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 derived from US Sailing's Safety Equipment Requirements ("USSER") and are modified as needed for the Newport Bermuda Race. The USSER can be found on the US Sailing website (ussailing.org).

## 1.0 GENERAL REQUIREMENTS

1.1 Purpose: The Newport Bermuda Race Safety Requirements establish uniform minimum equipment and training standards for Multihull vessels 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 shall ensure that all safety equipment meets the Newport Bermuda Race Safety 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 requirements, her entry may be rejected or she may be subject to protest. 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.

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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. A boat must be properly rigged, be fully seaworthy and shall 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 hulls and amas, 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. 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 when floating level in normal trim.

1.8 Hull Construction Standards: A boat shall meet the 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); deploying safety gear and navigating to a safe port) can be performed in the event of a loss of electrical power.

## 2.0 HULL AND STRUCTURE CONSTRUCTION AND DESIGN GUIDELINES

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

2.1.1a Exits: A boat shall have at least two (2) exits in each hull which contain accommodations.

2.1.1b Escape Hatches: A boat 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 Escape hatches shall be on the side nearest the vessel's centerline if first launched after 2002.

2.1.1b-2 Escape Hatches shall be above the waterline when the boat is inverted.

2.1.1b-3 Escape Hatches shall have a minimum clearance of 18" (450mm) in diameter or, when an escape hatch is not circular, sufficient clearance to allow a crewmember to pass through fully clothed.

2.1.1b-4 Each Escape Hatch shall have been opened from both 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 in a way that prevents them from 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.

2.1.6 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.

2.1.7 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.

2.2.1 Stability: Multihulls shall be designed and built to resist capsize and shall comply with Appendix 2.

FAQ 2.3.1 Toilet: A boat shall be equipped with a head or a bucket that is fitted below deck and designated for this purpose only.

2.3.2 Sleeping arrangements: A boat shall have sufficient bunks to accommodate the off-watch crew.

FAQ 2.3.3 Cooking: A boat shall have 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.

2.5.1 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 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 portable manual bilge pump of at least 10 GPM capacity capable of dewatering any part of the boat. The handle shall be securely attached to the pump via a lanyard or catch. When not in use, the pump shall be attached to the boat.

2.5.3 Trimaran Pumps: Each ama of a trimaran shall have a minimum of three independent compartments of significant volume, completely separated by watertight bulkheads, such that flooding of one section does not jeopardize flooding in the others. Alternatively, a trimaran shall have plumbing permanently installed in each ama allowing provision to pump out all compartments in the ama without having to open an access hatch in the ama.

2.5.4 Emergency Dewatering Pump: A boat shall have either fixed or portable electric pump(s) to remove ingress water from any compartment. This

FAQ pump shall have a minimum rated capacity of 3,000 gal/hr, be operated by battery, main engine power or a separate engine. If portable electric-powered, power cables shall have connectors suitable for connection to the boats electrical system and 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.

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) for 20 hours.

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: Multihull nets or trampolines 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.

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 Enclosed Deck: Each multihull shall have a combination of netting, coamings, bulwarks, railings, lifelines or jacklines, extending from the aft most part of the cockpit or steering station to the aft most part of the central pulpit or forestay, to keep the crew aboard while sailing and sail handling in conditions expected for Offshore racing. If lifelines are used, they may be either stainless or HMPE with a minimum diameter of 3/16" (5mm), they must be taut, supported at distances of no greater than 87" (2.2 m), and be a minimum of 24" (762 mm) above the deck with a maximum vertical gap of 15" (381mm).

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).

2.10.1 Nets- Trimarans with Double Crossbeams: A trimaran with double crossbeams shall have nets on each side covering:

2.10.1.1 The area formed by the crossbeams, central hull and outriggers

2.10.1.2 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

2.10.1.3 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.

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.

2.12 Rudder Inspection: At a haul-out not more than 4 years prior to the event, the owner or his/her representative shall have the integrity of the rudder(s) inspected fin accordance with the recommendations in Appendix 3 and documenting said inspection on the form included in Appendix 3. It is the responsibility of the Owner to undertake any repairs.

2.13 Rudder Inspection after Grounding: An appropriately qualified person shall conduct an internal and external inspection after each unintentional grounding. It is the responsibility of the Owner to undertake any repairs.

## 3.0 SAFETY EQUIPMENT:

Portable and affixed safety gear shall include:

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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. Each life jacket intended for regular use while racing (one per crewmember) shall have a knife suitable for cutting through the trampolines on the boat. 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, meeting either U.S. Coast Guard or ISO specifications and equipped with crotch or leg straps, a whistle, a waterproof light, a knife suitable for cutting through the trampolines on the boat and retro-reflective material, marked with the boat or wearer's name, which is compatible with a safety harness.

3.1.4 Safety Harness: Each crew member shall have a safety harness and compatible safety tether not more than 6' 7" (2m) long with a breaking strength of 4,500 lbs (20 kN). The tether shall have a snap hook at its far end and a means to quickly disconnect the tether at the chest end. FAQ

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 Trimaran Clipping Points: A trimaran with a rudder on the outriggers must have clipping points available for a crewmember to repair the steering mechanisms while clipped in.

3.2.3 Underside Jack Lines and Nonskid Pathways: Boats 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 (if there is one) 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 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. FAQ

3.3.2 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. FAQ

3.4 Fire Extinguishers: A boat shall carry fire extinguisher(s) that meet U.S. Coast Guard requirements. FAQ

3.4.1 Fire Blanket: A boat shall carry a fire blanket in the vicinity of every cooking device with an open flame.

3.5 Horn: A boat shall carry a sound making device that meets U.S. Coast Guard requirements. FAQ

3.6 Flares: A boat shall carry a minimum of 6 flares aboard made up of the following inventory: FAQ

3.6.3 Four (4) SOLAS red hand flares not older than the expiration date.

3.6.4 Two (2) additional flares which may be any combination of SOLAS orange smoke flares or SOLAS red parachute signal rocket flares, none of which can be 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 of at least 15" (381 mm) in length by a co-axial cable with no more than a 40% power loss. The boat's primary VHF radio shall have an internal GPS or be connected to an external GPS, be equipped with DSC capability and have the assigned MMSI number (unique to the boat) programmed into it.

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 AIS: All boats shall have an AIS Transponder, sharing a masthead VHF antenna via a low loss AIS antenna splitter. An acceptable alternative is a dedicated AIS antenna that is a minimum of 3 feet (0.9 m), mounted with its base at least 9.8 feet (3 m) above the water, and fed with coax that has a maximum 40% power loss.

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3.10 Personal AIS Beacons: Each crewmember shall have a dedicated AIS personal crew overboard beacon. This shall be on the crewmember's person while on deck.

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;

3.11.3 is operable below deck using a mounted external antenna;

FAQ

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 Bermuda Race Organizing Committee (BROC) via the race website in accordance with timelines specified in the Sailing Instructions, and

3.11.6 shall be configured to send and receive text messages.

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 and connected to the boat's electrical system; shall remain continuously connected to the satellite communication system during the race; shall be set at a ringer volume sufficient to be heard over other ambient noise while at sea and shall be configured in such a manner that no password or authentication is needed to make or receive a call, or to send or receive a text.

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 and 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 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.

FAQ

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. All EPIRBS must be equipped with an internal GPS.

Any EPRIB purchased after January 1, 2026, shall be equipped with AIS transmit capabilities.

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 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.

FAQ

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 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.

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3.24.1 Searchlight: 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 Flashlights: A boat shall carry a watertight flashlight for each crewmember with spare batteries in addition to the above.

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3.25 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. FAQ

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) sturdy buckets of at least two gallons (7.6 liters) capacity, each with a lanyard attached.

3.28 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. FAQ

3.29.1 Emergency Steering: A boat must be able to be steered after the failure of any one component of the primary steering system. FAQ

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 each trampoline.

3.33.1 Reefing: A boat shall have well-reinforced mainsail reef points with installed reef lines capable of reducing the area of the sail by an amount appropriate for the weather conditions possible on the race course.

3.33.2 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 boat with a mainsail reefing capable of reducing the luff length by at least 60% shall be deemed to meet this requirement. FAQ

3.33.4 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 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. FAQ

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 fifteen (15) degrees in arc in under two (2) seconds from all steering or any consistently manned trimming station while racing. Hydraulics manufacturer design specifications or video are acceptable means of demonstrating compliance with this requirement.

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 single roller-furling headsail of no larger than 125% LP may be lashed to a swivel at the top of the forestay. No other sail (mainsail or headsail) may be rigged so that a person must go aloft to hoist or drop it.

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.

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 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. FAQ

3.39 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 racecourse. Any raft purchased after July 1, 2024 must meet SOLAS or ISO 9650-1 standards. Each life raft shall hold a current certificate of inspection. Each raft shall be stored in such a way that it is capable of being launched within 15 seconds. 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 FAQ

hatch without force. 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 Steering in an Emergency: A boat's crew shall be aware of multiple methods FAQ 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 Safety At Sea Seminar Attendance: At least 30% but not fewer than two FAQ members of the crew including the Person-In-Charge (PIC) and for multi-hulls the Reserve Person-in-Charge (RPIC) must hold a World Sailing Approved Offshore Personal Survival Course Certificate earned by attending (1) a two-day US Sailing approved "International Offshore Safety at Sea course with Hands-on Training" course (the first day may be online training), or (2) a World Sailing approved "Offshore Personal Survival Course". A certificate will be honored for the purposes of this paragraph for the three Newport Bermuda Races scheduled after the date that the certificate was issued.

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

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 a reasonable amount of time and the gear used to recover the victim aboard.

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

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5.6 Medical Training: At least two crewmembers shall have a certificate of current medical training that includes First Aid and hands-on CPR training. Courses offered in the United States that meet this requirement are: American Heart Association - Heartsaver First Aid CPR AED; American Red Cross - Adult First Aid CPR/AED; and STCW First Aid Training complying with A-V1/1-3 Elementary First Aid or higher STCW. Courses available in other countries that meet this requirement may be found at: https://www.sailing.org/inside-world-sailing/activities-services/technical-offshore/technical-services/technical-and-offshore-safety/offshore-safety/osr-recognised-first-aid-qualifications/

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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 200 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.

## 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 12215-7 Category A[1], 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

[1] NOTE: For the purposes of Appendix 1, §1.2 (d), ISO 12215 will apply to all multihulls, irrespective of their designed purpose or crew.

## 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.

## APPENDIX 3

US SAILING SAFETY EQUIPMENT REQUIREMENTS - APPENDIX L

## MODEL KEEL AND RUDDER INSPECTION PROCEDURE

Consult the Owners' Manual for the specific boat, steering system and type of keel (e.g. fin, lifting, swinging, full length). Inspect in detail any high-load areas: keel attachment, keel floor, steering systems, rudder(s). Pay special attention to prior repairs, especially following groundings.

**Internal Inspection:** Check backing plates, bolting arrangements, sump area and keel floors for any signs of cracking, weakening, or de-laminated tabbing. Lead or lead alloy keels may require tightening of bolts to ISO standards due to lead creeping. Inspect keel bolt nuts for corrosion. Check bolt holes for "ovaling." Visually inspect for possible de-bonding of the supporting structure.

**External Inspection:** Check there are no signs of stress cracks (not gelcoat cracks) around the keel attachments to hull, or movement or opening around the keel/hull interface which may allow water ingress and consequent keel bolt crevice corrosion. If in doubt, sand back bottom paint/gel coat to identify depth of crack. Check keel tip deflection (try to move keel with boat suspended) to insure immediate return and no internal concomitant movement in the keel floor. Visually check high stress regions, particularly around the forward and aft hull attachment areas of the keel, for signs of paint or gelcoat cracking or large, deep blisters, which can indicate separation and structural weakness.

**Rudder/Steering system:** Check bearing area for any damage/stress cracks; check rudder shaft and blade integrity, especially at any shaft joins and at upper connections to hull/deck. Undertake a tip deflection test to identify any excessive movement. If applicable, check rudder straps and gudgeons for corrosion or cracking.

**Lifting and swing keels:** In addition to above, check there are no significant stress cracks in structure around pins supporting the keel. Check for extensive corrosion on pins, cylinders and supporting metal structure.

## BROC STATEMENT - RUDDER INSPECTIONS

Understanding that there is broad variety in rudder designs for boats which race in the Newport-Bermuda race and that it would be challenging to be precisely prescriptive about how to assess the condition and readiness of all types of rudder designs, these structural systems need attention and maintenance in order to be depended on in conditions that may be found on the racecourse.

**Ongoing Preventative Maintenance:** Rudder Bearings, steering systems, and centerboards all require ongoing maintenance. Time during practice, deliveries and racing all count toward a service interval for any moving part of the boat. Following manufacturer's recommendations for cycles of service and maintenance steps to be taken is critical for continued performance and dependability.

**Rudder Bearings:** Verify installation aligns with bearing manufacturer's specifications. Specifically verify that the hull structure is tightly fitted around the bearings such that the hull is taking the loads from the bearings as opposed to relying on the mounting bolts.

**Dropping the Rudder:** The BROC strongly encourages boat owners to drop their rudders at least once every three years and inspect the bearings, housings, etc… in accordance with the bearing manufacturers' recommendations.

## Keel and Rudder Inspection Procedure

Structural Inspection of a boat shall be completed by a qualified person both internally (may be in the water) and externally (out of the water). The purpose of this inspection is to identify and report to the Owner the condition of the rudder(s), keel and keel structure observed during this inspection. It is the responsibility of the Owner to undertake any repairs.

Consult the Owners' Manual for the specific boat, steering system and type of keel (e.g. fin, lifting, swinging, full length). Inspect in detail any high-load areas: keel attachment, keel floor, steering systems, rudder(s). Pay special attention to prior repairs, especially following groundings.

Internal Inspection: Check backing plates, bolting arrangements, sump area and keel floors for any signs of cracking, weakening, or de-laminated tabbing. Lead or lead alloy keels may require tightening of bolts to ISO standards due to lead creeping. Inspect keel bolt nuts for corrosion. Check bolt holes for "ovaling." Visually inspect for possible de-bonding of the supporting structure.

External Inspection: Check there are no signs of stress cracks (not gelcoat cracks) around the keel attachments to hull, or movement or opening around the keel/hull interface which may allow water ingress and consequent keel bolt crevice corrosion. If in doubt, sand back bottom paint/gel coat to identify depth of crack. Check keel tip deflection to ensure immediate return and no internal concomitant movement in the keel floor. Visually check high stress regions, particularly around the forward and aft hull attachment areas of the keel, for signs of paint or gelcoat cracking or large, deep blisters, which can indicate separation and structural weakness.

Rudder/Steering system: Check bearing area for any damage/stress cracks; check rudder shaft and blade integrity, especially at any shaft joins and at upper connections to hull/deck. Verify that the structure of the vessel is supporting the upper bearing, not just the mounting bolts. Undertake a tip deflection test to identify any excessive movement. If applicable, check rudder straps and gudgeons for corrosion or cracking. On spade rudder type vessels, inspect installation of upper rudder bearing to ensure tight fit between bearing and vessel structure to ensure loads are carried by the boat's construction (as opposed to the bearing bolts).

Lifting and swing keels: In addition to above, check there are no significant stress cracks in structure around pins supporting the keel. Check for extensive corrosion on pins, cylinders and supporting metal structure.

# Newport-Bermuda Race Keel and Rudder Inspection Form 2026

| | | | |
|---|---|---|---|
| Boat Name: | | | Sail Number: |
| Owner Name: | | | Designer: |
| Address: | | | |
| Owner email: | | | Builder: |
| Expected Launch Date: | | Hull ID Number | : |
| Date Rudder was last dropped and bearings inspected: | | | |

**The following checks may be completed with boat in the water:**

| Item: | Action: | Inspector's Notes: |
|---|---|---|
| Keel Bolts | Check for excessive corrosion. | |
| Internal Hull Structure | Check for signs of structural failure and/or laminate separation especially in area around keel structure, keel floor and other stress points. | |

**The following checks to be conducted externally with boat out of the water:**

| Item: | Action: | Inspector's Notes: |
|---|---|---|
| External Hull Condition | Check for hull stress cracks around leading and trailing edge attachment point to structure, hull appendages and keel sumps. Inspect keel/hull interface for signs of damage by tip deflection test. | |
| Keel Bolts | Torque to manufacturer's specs. | |
| Rudder | Check for cracking of the rudder bearing/hull assembly. Inspect rudder for integrity by tip deflection test. Ensure that the structure of the hull is carrying the torque load of the upper and lower rudder bearings (not just the bolts). | |

**Declaration of Completed Inspection:**

| | |
|---|---|
| Location: | |

This visual inspection has been conducted to observe and report on visually noticeable indications that may compromise the structural integrality of the vessel's keel and rudder. It does not ensure that the vessel is seaworthy or that the Owner has repaired identified problems.

| | | |
|---|---|---|
| Print name (person conducting inspection): | | Signature: |
| Address: | | |
| Email: | | |