



NEWPORT BERMUDA RACE 2020

SAFETY REQUIREMENTS FOR MONOHULLS

Monohulls competing in the 2020 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).

1.0 GENERAL REQUIREMENTS

- 1.1 Purpose: The Newport Bermuda Race Safety Requirements for Monohulls establish uniform minimum equipment and training standards for Monohull 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 these 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).

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

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

	<u>Captain</u>	<u>Inspector</u>
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.		
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 <u>Inspections</u> : 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 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 <u>Equipment Maintenance and Performance</u> : 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 <u>Heavy Items</u> : A boat's heavy items – such as batteries, stoves, toolboxes, anchors and chain, and internal ballast – shall be secured.	_____	_____
1.6 <u>Strength of Build</u> : A boat shall be strongly built, watertight and, particularly with regard to hulls, decks, and cabin trunks, capable of withstanding solid water and knockdowns. Boats 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 <u>Watertight</u> : 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 being immediately secured to maintain this integrity.	_____	_____
1.8 <u>Hull Construction Standards</u> : A boat shall meet the scantling requirements outlined in Appendix 1.		

- 1.9 Sailing Without Power: The crew 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 keels 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

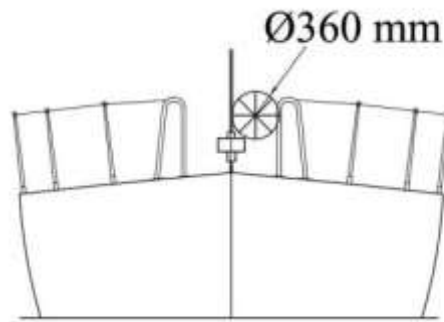
A boat shall meet or exceed the following construction and design guidelines:

- 2.1.1 Companionways: A boat's companionway(s) shall be capable of being blocked off to main deck level. The method of blocking must be solid, watertight and rigidly secured, if not permanent.
- 2.1.2 Hatch Boards: A boat's hatch boards, whether or not in position in the hatchway, shall be in a way which prevents 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 at any angle of heel. One (1) square inch (645 mm²) of effective drain per eight (8) square feet (0.743m²) of cockpit sole will satisfy this requirement.
- 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 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

Captain Inspector

Captain Inspector

- 2.2.1 Stability Index: (ORR SI = Limit of Positive Stability + Capsize Increment): Boats not subject to Appendix 2 must have an ORR SI of 115 or greater.
- 2.2.3 Moveable and Variable Ballast: Boats with movable ballast (water or canting keel) shall comply with Appendix 2.
- 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 bunks sufficient to accommodate the off-watch crew.
- 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.
- 2.4.1 Enclosed Deck: The deck, including the headstay and open transom (if applicable), shall be surrounded by a suitably strong enclosure, typically consisting of lifelines and pulpits, meeting the following requirements:
 - 2.4.2 A boat's stanchion and pulpit bases must be within the working deck.
 - 2.4.3 Bow pulpits may be open, but the opening between the vertical portion of the pulpit and any part of the boat shall not exceed 14.2" (360 mm). See diagram below.



3.11.3 is operable below deck using a mounted external FAQ 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 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. 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.

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

- 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.
- 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 racecourse.
- 3.33.2 Storm Trysail: A boat shall carry a storm trysail, with the FAQ 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.
- 3.33.4 Storm Jib: A boat shall carry a storm jib not exceeding 5% of the boat's "I" dimension squared, and equipped with an FAQ alternative means of attachment to a stay. Storm sails manufactured after 1/1/2014 must be constructed from a highly visible material.
- 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 Emergency Drinking Water: A boat shall carry 1 gallon (3.785 liters) per crewmember of emergency drinking water in FAQ sealed containers in addition to any other water carried aboard the boat, and it shall be aboard after finishing.

Captain	Inspector
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_____	_____
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_____	_____
_____	_____

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

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 racecourse. 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 built after June 2001 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. Boats built prior to June 2001 may alternatively stow the life raft in a valise not weighing over 88 lbs. securely below deck and adjacent to the companionway.

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 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
FAO than two members of the crew in addition to the Person-In-

Captain Inspector

Charge (PIC) 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 that occur after the date that the certificate was issued. For the 2020 race only, if a crew cannot meet this requirement due to the “International Offshore Safety at Sea with hands-on training” course not being available, the requirement may be met by completing either (1) the US Sailing “Online Offshore Safety at Sea” course or (2) the one day in-person classroom only “Offshore Safety at Sea” course.

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 (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. **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 BROCC, 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.

5.6 CPR and First Aid: Two crewmembers must have current CPR certificates completed within the past two years and valid First Aid certificates completed within the past five years. For the 2020 race only, if a crew cannot meet this requirement due to hands-on training not being available the requirement may be met by completing online

courses. Acceptable online First Aid and CPR courses are offered by the National CPR Foundation and the American Health Care Academy. The American Heart Association and the American Red Cross offer “blended” courses that have an online course followed by a classroom course. If a sailor takes the online portion of the American Heart Association or American Red Cross course and cannot find an in-person course to finish the certification, the race will accept the certificate of completion only of the online portion of the course.

ACKNOWLEDGEMENT:

Captain or Designated Representative’s Name: _____

Signature: _____

Vessel Name: _____ Date: _____

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

APPENDIX 1

HULL CONSTRUCTION STANDARDS (SCANTLINGS)

1.8.1

- a) A boat of less than 24m (78.74 feet) in hull length with the earliest of Age or Series Date on or after 1 January 2010 shall have:

- been designed, built and maintained in accordance with the requirements of ISO 12215 Category A.
- on board a certificate of building plan review from a Notified Body recognized by ISAF.
- on board a declaration signed and dated by the builder to confirm the boat is built in accordance with the plans reviewed by the Notified Body.

A list of Notified Bodies recognized by ISAF can be found at http://www.sailing.org/classesandequipment/offshore/plan_review.php.

- b) A boat of 24m (78.74 feet) or greater in hull length with the earliest of Age or Series Date on or after 1 January 2010 shall have:

- been designed, built and maintained in accordance with the requirements of a Classification Society recognized by ISAF.
- on board a certificate of building plan review from a Classification Society recognized by ISAF.
- on board a declaration signed and dated by the builder to confirm the boat is built in accordance with the plans reviewed by the Classification Society.

A list of Classification Societies recognized by ISAF can be found at http://www.sailing.org/classesandequipment/offshore/plan_review.php.

1.8.2

- a) A boat of less than 24m (78.74 feet) in hull length, with the earliest of Age or Series Date on or after 1 January 2010, if subject to any significant repair or modification to the hull, deck, coach roof, keel or appendages on or after the 1 January 2010, shall have:

- the repair or modification designed and built in accordance with ISO 12215 Category A.
- on board a certificate of building plan review for the repair or modification from a Notified Body recognized by ISAF.

- on board a declaration signed and dated by the builder to confirm that the repair or modification is in accordance with the requirements of ISO 12215 Category A.

b) A boat of 24m (78.74 feet) in hull length and over, with the earliest of Age or Series Date on or after 1 January 2010, if subject to any significant repair or modification to the hull, deck, coach roof, keel or appendages on or after the 1 January 2010, shall have

- the repair or modification designed and built in accordance with the requirements of a Classification Society recognized by ISAF.
- on board a certificate of building plan review for the repair or modification from a Classification Society recognized by ISAF.
- on board a declaration signed and dated by the builder to confirm that the repair or modification is in accordance with the plans reviewed by the Classification Society.

1.8.3

A boat with the earliest of Age or Series Date before 1 January 2010 shall comply with NBR SR 1.8.1 or 1.8.2 above or with 1.8.4.

1.8.4

a) A boat with the earliest of Age or Series Date before the 1 January 2010 not complying with 1.8.1 or 1.8.2 shall have been designed built, maintained, modified and repaired in accordance with the requirements of one of the following:

- the ABS Guide for Building and Classing Offshore Yachts in which case the boat shall have on board either a certificate of plan approval issued by ABS, or written statements signed by the designer and builder which confirm that they have respectively designed and built the boat in accordance with the ABS Guide.
- ISO 12215 Category A, with written statements signed by the designer and builder which confirm that they have respectively designed and built the boat in accordance with the ISO standard, except that a race organizer or class rules may accept, when those standards described above is not available, the signed statement by a naval architect or other person familiar with the standards listed above that the boat fulfills the above requirements.
- the EC Recreational Craft Directive for Category A (having obtained the CE mark).
- except that a race organizer, when that described above is not available, may permit a boat to compete if there is successful past race or passage making history for the boat.

At the sole discretion of the race organizer, a boat otherwise required to comply with 1.8.1 or 1.8.2 may be permitted to compete based on compliance with 1.8.4, except that successful past race or passage making history for the boat shall not be sufficient for consideration in such cases.

APPENDIX 2

WORLD SAILING OFFSHORE SPECIAL REGULATIONS APPENDIX K MOVEABLE AND VARIABLE BALLAST

Notwithstanding the maximum length limit of 24m in the standard, this Appendix invokes International Standard ISO 12217-2, Small craft – Stability and buoyancy assessment and categorization – Part 2: Sailing boats of hull length greater than or equal to 6m. The functions FKR (Knockdown Recovery Factor) and FIR (Inversion Recovery Factor) are defined in ISO 12217-2, except as modified by this Appendix.

This Appendix applies to Monohulls only. Unless specifically stated, a requirement applies to Special Regulations Categories 0, 1, 2, 3 and 4. This Appendix does not apply to boats racing under Category 5.

1 Stability

1.1 Boat Condition

In the calculation of stability data:

- (a) Deck and other enclosed volume above the sheerline and cockpit volume shall be taken into account.
- (b) Mass shall be taken as Minimum Operating Mass as defined by ISO 12217-2, paragraph 3.5.3.

1.2 General Standards

In the assessment of ISO category for boats fitted with moveable and/or variable ballast, ISO 12217-2, paragraph 6.1.4 b shall not apply. Boats shall comply with paragraphs 6.2.3, 6.3.1 and 6.4. Calculations shall be for the ballast condition that results in the most adverse result when considering each individual stability requirement. ISO 12217-2 Annex C, paragraph C.3.3, first sentence, the word 'may' is replaced with 'shall'. ISO 12217-2 Annex C, paragraph C.3.4 shall not be used in the calculation of righting lever.

1.3 Knockdown Recovery

Boats with moveable/variable ballast shall comply with a minimum Knockdown Recovery Factor (FKR) of 0.9, calculated in accordance with ISO 12217-2 paragraph 6.6.4 with the modification that the reference to ISO 8666 paragraph 5.5.2 changed to incorporate actual mainsail area and center of effort. The lesser of FKR90 and FKR-90 shall be used:

Boats with age date prior to 11/04 may seek dispensation from this section 1.3 by application to ISAF.



2020 NEWPORT BERMUDA RACE®

DEFERRED INSPECTION CHECKLIST

Yacht: _____

Captain: _____

The following items may not be compliant at the time of the pre-race inspection. For each item indicated below, the Captain agrees that he will ensure compliance prior to the June 19, 2020 start. Should any of the following items be found not in compliance with these Newport Bermuda Race Safety Requirements and/or the Notice of Race during a post-race inspection, the Captain understands that the yacht will be subject to protest and penalties up to and including disqualification.

(Circle One)

NOR 6.2 (d)/NBR SR 5.3 On Board Training Certificate: Compliant / Not Compliant

NBR SR 3.1.1 Lifejackets: Compliant / Not Compliant

NBR SR 3.1.4 Safety Harnesses: Compliant / Not Compliant

NBR SR 3.10 Personal AIS Beacons: Compliant / Not Compliant

NBR SR 3.11 Satellite Phone: Compliant / Not Compliant

NBR SR 3.39 Inflatable Life Raft (if rented): Compliant / Not Compliant

NBR SR 3.11 Steering in an Emergency: Compliant / Not Compliant

By my signature below, I attest that the above-noted inspection deficiencies will be corrected prior to Newport check-in. I understand that I may be re-inspected upon completing the race in Bermuda.

Signature: _____

Date: _____

Name: _____

ORGANIZED BY THE CRUISING CLUB OF AMERICA AND THE ROYAL BERMUDA YACHT CLUB

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