OFF SOUNDINGS CLUB

2025 EDITION

SAFETY EQUIPMENT REQUIREMENTS

Publication
by the
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Boat Name/Sail #_____

Fundamental Application

The following Requirements and Recommendations are based on the US Safety Equipment Requirements (USSER) issued by US Sailing (Effective Date: 01/01/2025, version 2025.0). Note: The numbers in parentheses following some items (e.g., 1.1) refers the applicable USSER # (s).

The Safety Equipment Requirements establish uniform minimum equipment and training standards for a variety of boats racing in differing conditions. These regulations do not replace, but rather supplement, the requirements of applicable local or national authority for boating, the Racing Rules of Sailing (RRS), the rules of Class Associations and any applicable rating rules. (1.1)

Note: The last item on this safety checklist identifies that a self-inspection has been completed by the Skipper or Designated Representative.

Overall Responsibility

- ☐ The safety of a boat and her crew is the sole and inescapable responsibility of the "person in charge", as per RRS 46, who SHALL ensure that the boat is seaworthy and manned by an experienced crew with sufficient ability and experience to face bad weather. S/he SHALL be satisfied as to the soundness of hull, spars, rigging, sails and all gear. S/he SHALL ensure that all safety equipment is at all times properly maintained and safely stowed and that the crew knows where it is kept and how it is to be used. (1.2)
- ☐ 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 RC. A Violation of the Safety Equipment Requirements may result in a penalty other than disqualification. (1.3)
- ☐ 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 the size of the crew. This equipment SHALL be readily accessible while underway and, when not in use, stored in such a way that deterioration is minimized. (1.4)

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Structural Features, Strength of Build, Watertight Integrity, Hatches, Companionway(s), Cockpit, Engine & Accommodations

- ☐ A boat SHALL be strongly built, watertight and, particularly with regard to hulls, decks and cabin trunks, capable of withstanding solid water and knockdowns. A boat SHALL be properly rigged and ballasted, be fully seaworthy and SHALL meet the standards set forth herein. A boat's shrouds and at least one forestay SHALL remain attached at all times. (1.6)
- ☐ A boat's hull, including, deck, coach roof, windows, hatches and all other parts, SHALL form an integral watertight unit and any openings in it SHALL be capable of being immediately secured to maintain this integrity. (1.7)
- ☐ A boat's companionway(s) SHALL be capable of being blocked off to main deck level. The method of blocking should be solid, (essentially) watertight and rigidly secured, if not permanent. (2.1.1)
- ☐ A boat's hatch boards, whether or not in position in the hatchway, SHALL be secured in a way (e.g., by lanyard) that prevents their being lost overboard. (2.1.2)
- ☐ 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. (2.1.3)
- ☐ A boat's cockpit drains SHALL be capable of draining six inches of water in 5 minutes. One square inch (645mm2) of effective drain per eight square feet (0.743m2) of cockpit sole will meet this requirement. (2.1.4)
- ☐ A boat's maximum cockpit volume for cockpits not open to the sea, including any compartments capable of flooding, to lowest points of coaming over which water can adequately escape, should not exceed 0.08 x LOA x Max. Beam x Freeboard aft. The cockpit sole should be at least 0.02 x LOA above LWL. (2.1.5.2)
- ☐ A boat's through-hull openings below the waterline SHALL be equipped with sea cocks or valves, except for integral deck scuppers, speed transducers, depth finder transducers and the like; however, a means of closing such openings SHALL be provided. (2.1.6)
- ☐ A boat's heavy items such as batteries, stoves, toolboxes, anchors, chain and internal ballast SHALL be secured. (1.5)

- ☐ A boat SHALL have a mechanical propulsion system that is quickly available and capable of driving the boat at a minimum speed in knots equivalent to the square root of LWL in feet (1.8 times the square root of the waterline in meters) for 4 hours. (2.7.2)
- ☐ A boat SHALL be equipped with a head or a fitted bucket. (2.3.1)
- ☐ Keel & Rudder Inspection – At a haul-out within 4 years prior to the event, the owner or owner's representative should inspect the integrity of the keel and rudder following the recommendations in US Sailing SER Appendix L (copy attached). Additionally, an inspection should be conducted after a significant, unintentional, grounding. (2.12, 2.13)

Lifelines, Bow Pulpits & Toe Rails

- ☐ On boats that, BY DESIGN, do not meet the following lifeline, bow pulpit and toe-rail requirements (e.g., Melges 24, Various Multihulls) all crew members MUST wear Life Jackets at all times while racing.

OR

- ☐ A boat's deck including the headstay SHALL be surrounded by a suitably strong enclosure, typically consisting of lifelines and pulpits. (2.4.1)
- ☐ A boat's stanchion and pulpit bases SHALL be within the working deck. (2.4.2)
- ☐ Bow pulpits may be open, but the opening between the vertical portion of stanchion pulpit and any part of the boat SHALL not exceed 14.2" (360mm). (2.4.3)
- ☐ Lifelines SHALL be uncoated stainless-steel wire. A multipart-lashing segment not to exceed 4" per end termination for the purpose of attaching lifelines to pulpits is allowed. Lifelines SHALL be taut. (2.4.4)
- ☐ The maximum spacing between lifeline supports (e.g. stanchions and pulpits) SHALL be 87" (2.2m). (2.4.5)
- ☐ Boats under 30' (9.14m) SHALL have at least one lifeline with 18" (457mm) minimum height above deck, and a maximum vertical gap of 18" (457mm). Taller heights will require a second lifeline. The minimum diameter SHALL be 1/8" (3mm). (2.4.6)
- ☐ Boats 30' and over (9.14m) SHALL have at least two lifelines with 24" (762mm) minimum height above deck, and a maximum vertical gap of

15" (381mm). The minimum diameter will be 5/32" (4mm) for boats to 43' (13.1m) and 3/16" (5mm) for boats over 43' (13.1m). (2.4.7)

- ☐ Toe rails SHALL be fitted around the foredeck from the base of the mast (except in the way of deck hardware that could serve as toe hold) with a minimum height of 3/4" (18mm) for boats under 30' (9.14m) and 1" (25mm) for boats over 30'. An additional installed lifeline that is 1-2" (25-51mm) above the deck will satisfy this requirement for boats without toe-rails. (2.4.8)

Bilge Pump(s)

- ☐ Boats that, BY DESIGN, do not have a permanently installed manual bilge pump, SHALL be equipped with a portable manual bilge pump of at least a 10 GPM (37.8 liter per minute) capacity.

OR

- ☐ A boat SHALL have at least one permanently installed manual bilge pump that is either operable from below deck or (preferably) operable from on deck. The permanently installed manual bilge pump SHALL have a capacity of at least a 10 GPM (37.8 liter per minute) and the discharge SHALL not be 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. (2.5.1)
- ☐ The "Person in Charge" should ensure the manual bilge pump(s) is tested at least once annually.

Life Jackets, Jacklines, Safety Harnesses and Tethers

- ☐ As a minimum, each crewmember SHALL have a life jacket intended for small boat sailing or other active boating (no belt packs). Each such life jacket SHALL be USCG or ISO approved. Life jackets SHALL be equipped with a whistle, be fitted with marine grade retro-reflective material, should be marked with the boat's or wearer's name and be compatible with the wearer's safety harness. If the life jacket is inflatable, it SHALL be regularly checked for air retention. (3.1.1, 3.1.2)

- ☐ Boats should carry jacklines and the jacklines should be rigged prior to severe weather conditions.
- ☐ Boats should be equipped with an adequate number of safety harnesses and tethers to accommodate the minimum number of crew that must be on deck during severe weather conditions.
- ☐ Safety tethers should not be more than 6'7" (2m) long and should have a minimum tensile strength of 4500 Ib. (20kN). The tether should have a snap hook at its far end and a means to quickly disconnect the tether at the chest end. (3.1.4)
- ☐ The jacklines should have a breaking strength of at least 4500 lb. (20kN), should allow the crew to reach all points on deck and should be connected to similarly strong attachment points. (3.2.1)
- ☐ Multihulls should have jacklines or attachment points that are accessible when the vessel is inverted.
- ☐ The "Person in Charge" should ensure that each life jacket, jackline, safety harness and tether is inspected at least once annually.

Navigation Lights

- ☐ A Boat racing between sunset and sunrise SHALL be equipped with navigation lights (either permanent or temporary) that meet U. S. Coast Guard or applicable government requirements and mounted so that they will not be obscured by the sails nor be located below deck level. (3.3.1)

Note: The "person in charge" is advised that U.S.C.G. rules require navigation lights to be exhibited from sunrise to sunset in restricted visibility.

Fire Extinguishers

- ☐ A boat SHALL carry fire extinguisher(s) that meets U.S. Coast Guard or applicable government requirements, when applicable. (3.4)
- ☐ Fire extinguisher(s) should be readily accessible and when two or more are required (based on LOA of yacht) they should be stored in suitable and different parts of the boat.
- ☐ A boat should have a fire blanket adjacent to the stove. (2.3.3.1)

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Communication & Navigation

- ☐ A boat should be equipped with a permanently installed 25-watt VHF radio. A masthead antenna is preferred, but optional. If this is not practical, the boat SHALL be equipped with a watertight handheld VHF radio. Additionally, if the handheld radio is the only radio on board, there SHALL be a means to recharge the handheld radio or there SHALL be a fully charged back-up battery pack on board. (3.8.1, 3.8.2)
- ☐ A boat should carry a cellular phone in a waterproof container.
- ☐ A boat SHALL carry a GPS receiver. (3.14)
- ☐ Crew Overboard Button - A boat SHALL carry an electronic means to record the position of a man overboard within ten seconds. This may be the same instrument listed in 3.14 above. For boats with only two crewmembers, this device SHALL be accessible without having to go below deck. (3.15)
- ☐ A boat SHALL have a permanently mounted magnetic compass independent of the boat's electrical system suitable for steering at sea. (3.19.1)
- ☐ A boat SHALL have non-electronic charts that are appropriate for the race area. (3.20)
- ☐ A boat should have a permanently installed depth sounder that can measure to depths of at least 200 ft. (61m). (3.18)

Man Overboard Equipment

- ☐ A boat SHALL carry a Lifesling or equivalent man overboard rescue device equipped with a self-igniting light stored on deck and ready for immediate use. (3.7.1)
- ☐ A boat SHALL carry a Coast Guard or applicable government approved "throwable device". If the device carried above satisfies this requirement, no additional device is needed. (3.7.4)
- ☐ A boat SHALL have a throwing sock-type heaving line of 50' (15m) or greater of floating polypropylene line readily accessible to the cockpit. (3.7.3)

Additional Safety Equipment

- ☐ A boat SHALL carry sound-making devices that meets U.S. Coast Guard or applicable government requirements, when applicable. (3.5)

- ☐ A boat SHALL carry U.S. Coast Guard flares meeting day-night requirements not older than the expiration date. Alternately a boat may carry U.S. Coast Guard approved non-pyrotechnic visual distress signals. (3.6.6)
- ☐ A boat SHALL carry soft plugs of an appropriate material, tapered and of the appropriate size, attached or stowed adjacent to every through-hull opening. (3.22)
- ☐ A boat SHALL carry one anchor, meeting the anchor manufacturer's recommendations based on the yacht's size, with a suitable combination of chain and line. The anchor should be readily accessible. (3.23)
- ☐ A boat SHALL carry at least two watertight flashlights with spare batteries. (3.24.3)
- ☐ 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. (3.25)
- ☐ A boat SHALL carry an 11.5" (292mm) diameter or greater octahedral radar reflector or one of equivalent performance. (3.26)
- ☐ A boat SHALL carry two sturdy buckets of at least two gallons (8 liters) capacity with lanyards attached. (3.27.1)
- ☐ A boat SHALL post a durable, waterproof diagram or chart locating the principal items of safety equipment and through hulls in the main accommodation area where it can be easily seen. (3.28)
- ☐ Wheel steered boats SHALL have an emergency tiller, capable of being fitted to the rudder stock. (3.29.2)

Sails, Halyards, Boom Support & Preventer

- ☐ A boat should have main sail reefing capable of reducing the area of the sail by an amount appropriate for the weather conditions that are possible on the racecourse. (3.33.1)
- ☐ Boats that may not be capable of motoring to safe harbor in heavy weather (e.g., outboards) should consider this and develop a plan that may include heavy weather sails and/or significant reefs in the mainsail.
- ☐ A boat SHALL not be rigged with any halyard that requires a person to go aloft in order to lower a sail. (3.35)

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- ☐ A boat over 30' LOA (9.14m) SHALL have a means to prevent the boom from dropping if support from the mainsail or halyard fails. (3.36)
- ☐ A boat should be prepared to rig a "preventer" or boom restraining device to mitigate an "auto gybe", as conditions warrant.

Crew 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. (4.2)
- ☐ At least 30% of those aboard the boat, but not fewer than two members of the crew, unless racing single handed, including the person in charge, should have a valid Coastal, Offshore or International Offshore Certificate from US Sailing, or the equivalent from another national authority. (4.3.2)
- ☐ The person in charge SHALL ensure that all crew members know where all emergency equipment is located and how to operate the equipment. In addition, the person in charge and crew should discuss how to handle various emergency situations including Crew Overboard, Grounding, Loss of steering, Flooding, Fire, Dismasting, and Abandon Ship. (4.4)
- ☐ Lifejackets should be worn by all crew on deck in any conditions where recovery may be difficult. It is recommended that lifejackets be worn by all crew on deck unless the person in charge has indicated that they may be set aside. (4.6)

☐ Self-Inspection Completed

_____ Date_____

(Skipper/Designated Rep. Signature)

Seamanship is an acquired skill. We learn by our own experience and by the experience of others, for there is never an end to our learning. Refer to Heavy Weather Sailing by Adlard Coles.

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.

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