

Safety Equipment Requirements ("SERs") for Monohulls for the 2017 Swiftsure International Yacht Race

Note: "X" beside a requirement in the column 'Coastal' means this is a mandatory requirement for the Four Long Courses (4th column)

"X" beside a requirement in the column 'Inshore' means this is a mandatory requirement for the Swiftsure Inshore Classic (5th column)

"NR" beside a requirement in either the 'Coastal' or 'Inshore' means it is not a mandatory requirement for that course(s)

"Recommended" beside a requirement in either the 'Coastal' or 'Inshore' means it is not mandatory but is highly recommended

"OA" means Organizing Authority (represented by the Swiftsure Event Chair)

Section Name	SER #	Requirement	Coastal (applies to the Four Long Courses; i.e. Swiftsure Lightship Classic, Hein Bank, Cape Flattery and Juan de Fuca)	Inshore (applies to the Swiftsure Inshore Classic)
Definition	1.0.1	Races of long distance and well offshore, where boats must be completely self sufficient for extended periods of time, capable of withstanding heavy storms and prepared to meet serious emergencies without the expectation of outside assistance. [This applies to 'Ocean' category and is not applicable to any Swiftsure courses.]	Not Applicable	Not Applicable
Definition	1.0.2	Races of extended duration along or not far removed from shorelines or in large unprotected bays or lakes, where a high degree of self-sufficiency is required of the boat. [This applies to 'Offshore' category and is not applicable to any Swiftsure courses.]	Not Applicable	Not Applicable
Definition	1.0.3	Races across open water, most of which is relatively protected or close to shorelines [This applies to 'Coastal' category and is applicable to the Four long Courses in Swiftsure.]	X	Not Applicable
Definition	1.0.4	Short races, close to shore in relatively warm or protected waters normally held in daylight [This applies to the 'Inshore' category and is applicable to the Swiftsure Inshore Classic.]	Not Applicable	X
Definition	1.0.5	Short races, close to shore in relatively warm and protected waters where adequate shelter and/or effective rescue is available all along the course, held in daylight only. [This applies to the 'Nearshore' category and is not applicable to any Swiftsure courses.]	Not Applicable	Not Applicable

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Overall	1.1	These SERs do not replace, but rather supplement, the requirements of governmental authority, Classification Society certification, the Racing Rules of Sailing (RRS), Equipment Rules of Sailing (ERS), class rules and Rating Systems. Use of these rules does not guarantee total safety of the boat and her crew. Particular attention is drawn to the description of equipment requirements for inshore racing which includes that adequate shelter and or effective rescue is available all along the course. This is not included in more onerous requirement categories.	X	X
Overall: Responsibility	1.2	Under RRS 4 the responsibility for a boat's decision to participate in a race or continue racing is hers alone. The safety of a boat and her crew is the sole and inescapable responsibility of the Person in Charge who shall do his best to ensure that the boat is fully found, thoroughly seaworthy and manned by an experienced and appropriately trained crew who are physically fit to face bad weather. The person in charge shall also assign a person to take over his responsibilities in the event of his incapacitation.	X	X
Overall: Inspections	1.3	A boat may be inspected at any time by an 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 RC. A violation of the Safety Equipment Regulations may result in a penalty other than disqualification.	X	X
Overall: Equipment	1.4	All equipment required by these SERs shall: a) function properly b) be regularly checked, cleaned and serviced c) when not in use be stowed in conditions in which deterioration is minimised d) be readily accessible e) be of a type, size and capacity suitable and adequate for the intended use and size of the boat.	X	X
Overall: Secure Storage	1.5	Heavy items shall be permanently installed or securely fastened	X	X
Overall: Strength of Build	1.6	A boat shall be strongly built, watertight and, particularly with regard to hulls, decks and cabin trunks, capable of withstanding solid water and knockdowns. A boat shall be properly rigged and ballasted, be fully seaworthy and shall meet the standards set forth herein. A boat's shrouds and at least one forestay shall remain attached at all times.	X	X

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Overall: Watertight Integrity	1.7	A boat's hull, including, deck, coach roof, windows, hatches and all other parts, shall form an integral watertight unit and any openings in it shall be capable of being immediately secured to maintain this integrity.	X	X
Overall: Scantlings	1.8	Hull Construction Standards - Scantlings with plan review approval - (See Appendix - Stability).	NR	NR
Hull and Structure: Hull Openings	2.1.1	A boat's companionway(s) shall be capable of being blocked off to main deck level. The method of blocking should be solid, watertight and rigidly secured, if not permanent.	X	X
Hull and Structure: Hull Openings	2.1.2	A boat's hatch boards, whether or not in position in the hatchway, shall be secured to the boat (e.g. by a lanyard) for the duration of the race to prevent their being lost overboard.	X	X
Hull and Structure: Cockpit	2.1.3	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.	X	X
Hull and Structure: Cockpit	2.1.4	A boat's cockpit drains shall be capable of draining six inches of water in 5 minutes. One square inch (645mm ²) of effective drain per eight square feet (0.743m ²) of cockpit sole will meet this requirement.	X	x
Hull and Structure: Cockpit	2.1.5.1	A boat's maximum cockpit volume for cockpits not open to the sea, including any compartments capable of flooding, to lowest points of coaming over which water can adequately escape, shall not exceed 0.06 x LOA x Max. Beam x Freeboard aft. The cockpit sole shall be at least 0.02 x L above LWL.	NR	NR
Hull and Structure: Cockpit	2.1.5.2	A boat's maximum cockpit volume for cockpits not open to the sea, including any compartments capable of flooding, to lowest points of coaming over which water can adequately escape, shall not exceed 0.08 x LOA x Max. Beam x Freeboard aft. The cockpit sole shall be at least 0.02 x L above LWL.	X	X
Hull and Structure: Through Hulls	2.1.6	A boat's through-hull openings below the waterline shall be equipped with sea cocks or valves, except for speed transducers, depth finder transducers and the like; however a means of closing such openings shall be provided.	X	X

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Hull and Structure: Stability	2.2.1	The boat shall comply with at least one of the following: demonstrate compliance with ISO 12217-2 design category A or higher, either by EC Recreational Craft Directive certification (having obtained the CE mark) or the designer's declaration a minimum STIX value of 32 and AVS not less than $130 - 0.002 * m$ (Where "m" is the mass of the boat in the minimum operating condition as defined by ISO 12217-2.); the stability index/ AVS in ORC Rating System of not less than 115; or IRC SSS Base value of not less than 35	NR	NR
Hull and Structure: Stability	2.2.2	The boat shall comply with at least one of the following: demonstrate compliance with ISO 12217-2 design category A or higher, either by EC Recreational Craft Directive certification (having obtained the CE mark) or the designer's declaration a minimum STIX value of 32 and AVS not less than $130 - 0.002 * m$ (Where "m" is the mass of the boat in the minimum operating condition as defined by ISO 12217-2.); the stability index/ AVS in ORC Rating System of not less than 110; or IRC SSS Base value of not less than 28	NR	NR
Hull and Structure: Stability	2.2.3	The boat shall comply with at least one of the following: demonstrate compliance with ISO 12217-2 design category A or higher, either by EC Recreational Craft Directive certification (having obtained the CE mark) or the designer's declaration a minimum STIX value of 32 and AVS not less than $130 - 0.005 * m$ (Where "m" is the mass of the boat in the minimum operating condition as defined by ISO 12217-2.); the stability index/ AVS in ORC Rating System of not less than 103; or IRC SSS Base value of not less than 15	Recommended	Recommended
Hull and Structure: Stability	2.2.4	A boat with moveable or variable ballast (water or canting keel) shall comply with the requirements of Appendix A of the Offshore Special Regulations (OSR). http://www.sailing.org/tools/documents/OSR2016AppA16122015-19841.pdf	Recommended	Recommended
Hull and Structure: Accommodations	2.3.1	A boat shall be equipped with a head or a fitted bucket.	X	NR

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Hull and Structure: Accommodations	2.3.2	A boat shall have bunks sufficient to accommodate the off-watch crew.	X	NR
Hull and Structure: Accommodations	2.3.3	A boat shall have a stove with a fuel shutoff.	X	NR (But if a stove exists it must have a fuel shutoff)
Hull and Structure: Accommodations	2.3.4	A boat shall have an installed water tank and delivery system.	NR	NR
Hull and Structure: Accommodations	2.3.5	A boat shall have adequate hand holds below decks.	X	NR
Hull and Structure: Lifelines	2.4.1	A boat's deck, including the headstay, shall be surrounded by a suitably strong enclosure, typically consisting of lifelines and pulpits, meeting the requirements in rules 2.4.2 to 2.4.8.	X	Recommended
Hull and Structure: Lifelines	2.4.2	A boat's stanchion and pulpit bases shall be within the working deck.	X	X
Hull and Structure: Lifelines	2.4.3	Bow pulpits may be open, but the opening between the vertical portion of stanchion/pulpit and any part of the boat shall not exceed 14.2" (360mm).	X	X
Hull and Structure: Lifelines	2.4.4.1	Lifelines SHALL be uncoated stainless steel wire. Coated stainless steel wire is also permitted if installed within the last 10 years and the Person in Charge has visually inspected them. High molecular weight polyethylene (HMPE) line is NOT permitted. A multipart-lashing not to exceed 4" per end termination for the purpose of attaching lifelines to pulpits is allowed. Lifelines shall be taut (see Appendix- Lifelines for requirements).	X	See SER # 2.4.4.2 for Lifeline Requirement

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Hull and Structure: Lifelines	2.4.4.2	If lifelines are installed they SHALL be either uncoated stainless steel wire or high molecular weight polyethylene (HMPE) line with spliced terminations or terminals specifically intended for the purpose. Coated stainless steel wire is also permitted if installed within the last 10 years and the Person in Charge has visually inspected them. A multipart-lashing not to exceed 4" per end termination for the purpose of attaching lifelines to pulpits is allowed. Lifelines shall be taut (see Appendix- Lifelines for requirements).	See SER # 2.4.4.1 for Lifeline Requirement	X
Hull and Structure: Lifelines	2.4.5	The maximum spacing between the bases of lifeline supports (e.g. stanchions and pulpits) shall be 87" (2.2m).	X	X
Hull and Structure: Lifelines	2.4.6	Boats under 28 feet (8.5m) 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 as per Appendix- Lifelines.	X	Recommended
Hull and Structure: Lifelines	2.4.7	Boats 28 feet and over (8.50m) shall have at least two lifelines with 24" (762mm) minimum height above deck, and a maximum vertical gap of 15" (381mm). The minimum diameter shall be as per Appendix- Lifelines.	X	Recommended
Hull and Structure: Lifelines	2.4.8	Toe rails shall be fitted around the foredeck from the base of the mast 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 between 1-2" (25-51mm) above the deck will satisfy this requirement for boats without toerails.	X	X
Hull and Structure: Lifelines	2.4.9	Deleted as not applicable to monohulls.	NR	NR
Hull and Structure: Dewatering pumps	2.5.1	A boat shall have a permanently installed manual bilge pump of at least a 10 gallons per minute (GPM) (37.8 liter per minute) capacity and which is operable from on deck with the cabin closed with the discharge not dependent on an open hatch. Unless permanently attached to the pump, the bilge pump handle shall be securely attached to the boat in its vicinity via a lanyard or catch. A bilge pump discharge shall not be connected to a cockpit drain. The bilge pump shall not discharge into a cockpit unless that cockpit opens aft to the sea.	X	NR

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Hull and Structure: Dewatering pumps	2.5.2	A boat shall have a second permanently installed manual bilge pump of at least 10 GPM (37.8 liter per minute) capacity, operable from below deck, meeting the same criteria as 2.5.1 above.	NR	NR
Hull and Structure: Dewatering pumps	2.5.3	A boat shall have a manual bilge pump of at least a 10 GPM (37.8 liter per minute) capacity.	NR	X
Hull and Structure: Mast and Rigging	2.6	The heel of a keel-stepped mast shall be securely fastened to the mast step or adjoining structure.	X	NR
Hull and Structure: Mechanical Propulsion	2.7.1	A boat shall have a mechanical propulsion system that is ready for immediate use and capable of driving 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 in meters) for at least 10 hours.	X	NR
Hull and Structure: Mechanical Propulsion	2.7.2	A boat shall have a mechanical propulsion system that is ready for immediate use 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 at least 4 hours.	NR	X
Hull and Structure: Mechanical Propulsion	2.7.3	The boat's engine and generator installation (if so equipped) must conform to ABYC, ISO or the standards of the national safety authority where the boat is registered.	X	X
Safety Equipment: Personal	3.1.1	Each crewmember shall have a life jacket that provides at least 33.7lbs (150N) of buoyancy, to be worn over the shoulders (no belt pack), meeting either Coast Guard/National Safety Authority of the OA 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'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. Alternatively, each crewmember shall have a Coast Guard approved inherently buoyant off-shore life jacket /National Safety Authority of the OA approved inherently buoyant off-shore life jacket equipped with crotch or leg straps, a whistle, a waterproof light, retro-reflective material, marked with the boat or owner's name, which is compatible with a safety harness.	X	Recommended

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Safety Equipment: Personal	3.1.2	Each crewmember shall have a life jacket that provides at least 15lbs (66.7N) of buoyancy, to be worn over the shoulders (no belt pack), meeting either Coast Guard/National Safety Authority of the OA or ISO specifications. Life jackets shall be clearly marked with the boat's or wearer's name. If the life jacket is inflatable, it shall be regularly checked for air retention. Alternatively, each crewmember shall have a Coast Guard approved inherently buoyant life jacket /National Safety Authority of the OA approved inherently buoyant life jacket marked with the boat or owner's name.	NR	X (This is a minimum requirement; recommend SER # 3.1.1)
Safety Equipment: Personal	3.1.3	Each crewmember shall have alternatively; a Coast Guard approved Type III or Type V life jacket /National Safety Authority of the OA approved equivalent that is intended for small boat sailing or other active boating for each crewmember or a life jacket as described above in 3.1.2.	NR	NR
Safety Equipment: Personal	3.1.4	Any personal flotation worn by crewmembers must comply with the category under which that yacht is racing	X	X
Safety Equipment: Personal	3.1.5	Each crewmember shall have a safety harness and compatible safety tether not more than 7 feet (2.13m) long with a minimum tensile strength of 4500 lb. (20kN). The tether shall have a snap hook at its far end and a means to quickly disconnect the tether at the chest end while under load.	X	Recommended
Safety Equipment: Deck Safety	3.2.1	A boat shall carry jacklines with a breaking strength of at least 4500 lb. (20kN) which allow the crew to reach all points on deck, connected to similarly strong attachment points, in place while racing.	X	Recommended
Safety Equipment: Deck Safety	3.2.2	A boat shall have adequate clipping points or jacklines that allow the crew to clip on before coming on deck and to unclip after going below.	Recommended	NR
Safety Equipment: Deck Safety	3.2.3	Deleted as not applicable to monohulls.	NR	NR
Safety Equipment: Navigation Lights	3.3.1	A boat racing between sunset and sunrise shall carry navigation lights that meet Coast Guard/National Safety Authority of the OA requirements mounted so that they will not be obscured by the sails nor be located below deck level.	X	X

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Safety Equipment: Navigation Lights	3.3.2	A boat shall have a second set of navigation lights that comply with Coast Guard/National Safety Authority of the OA requirements and which can be connected to a different power source than the primary lights.	X	NR
Safety Equipment: Fire Extinguishers	3.4	A boat shall carry fire extinguisher(s) that meets Coast Guard/National Safety Authority of the OA requirements, when applicable.	X	X
Safety Equipment: Sound Producing Equipment	3.5	A boat shall carry a sound-making device that meets Coast Guard/National Safety Authority of the OA requirements, when applicable.	X	X
Safety Equipment: Visual Distress Signals	3.6.1	A boat shall carry the number of SOLAS orange smoke flares indicated, not older than the expiration date.	NR	NR
Safety Equipment: Visual Distress Signals	3.6.2	Intentionally left blank	NR	NR
Safety Equipment: Visual Distress Signals	3.6.3	A boat shall carry the number of SOLAS red hand flares indicated, not older than the expiration date.	NR	NR
Safety Equipment: Visual Distress Signals	3.6.4	A boat shall carry either Coast Guard/National Safety Authority of the OA approved flares or Coast Guard/National Safety Authority of the OA approved S.O.S. Distress light meeting day-night requirements, In either case, not older than the expiration date.	X	X
Safety Equipment: Visual Distress Signals	3.6.5	Flares stored inside of life rafts may not be used to satisfy the flare requirement.	X	X

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Safety Equipment: Man Overboard	3.7.1	A boat shall carry a recovery sling which includes: a) buoyant line of length no less than the shorter of 4 times LH or 36m (120') b) buoyancy section (horseshoe) with no less than 90 N (20#) buoyancy c) minimum strength capable to hoist a crewmember aboard The horseshoe shall bear retro-reflective material and be marked with the boat's name.	X	X
Safety Equipment: Man Overboard	3.7.2	A boat shall have a man overboard pole and flag, with a lifebuoy, a self-igniting light, a whistle, and a drogue attached. The pole shall be either permanently extended or be capable of being fully automatically extended. 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 a "quick release". The lifebuoy shall bear retro-reflective material and be marked with the boat's name.	X	NR
Safety Equipment: Man Overboard	3.7.3	A boat shall have a heaving line, no less than 6 mm (1/4") diameter, and 15 m (50') long, readily accessible to cockpit	X	X
Safety Equipment: Man Overboard	3.7.4	A boat shall carry a Coast Guard/National Safety Authority of the OA approved "throwable device". If the device carried under 3.7.1 satisfies this requirement, then no additional device is required.	X	X
Safety Equipment: Emergency Communications	3.8.1	A boat shall have a permanently installed 25-watt VHF radio connected to an masthead antenna by a co-axial feeder cable with no more than a 40% power loss. Radios manufactured after 01/01/2015 shall have DSC capability, have an antenna of at least 15" (381mm) in length, be connected to or have an internal GPS, and have the assigned MMSI number (unique to the boat) programmed into the VHF.	X (A masthead antenna is not mandatory)	X (A masthead antenna is not mandatory)
Safety Equipment: Emergency Communications	3.8.2	A boat shall have the listed number of watertight handheld VHF radios or handheld VHF radios with waterproof cover. Radios manufactured after 01/01/2015, shall have DSC/GPS capability. Note: for Nearshore and Inshore, a boat which complies with SER 3.8.1 and has a remote station on deck shall be considered compliant with 3.8.2	1 (Handheld VHF radios with DSC must have a Maritime Identity or MMSI number programmed into it)	1 (Handheld VHF radios with DSC must have a Maritime Identity or MMSI number programmed into it)

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Safety Equipment: Emergency Communications	3.8.3	A boat shall have an emergency VHF antenna. The emergency antenna shall be equipped with sufficient coax to reach the deck.	X	NR
Safety Equipment: Emergency Communications	3.9	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 0.9 meters long, mounted with its base at least 3 meters above the water, and fed with coax that has a maximum 40% power loss.	NR	NR
Safety Equipment: Emergency Communications	3.10	A boat shall carry a cellular phone in a waterproof container.	X (A satellite telephone is an acceptable alternative. Waterproof container is not mandatory)	X (A satellite telephone is an acceptable alternative. Waterproof container is not mandatory)
Safety Equipment: Emergency Communications	3.11	A boat shall carry a satellite telephone in a waterproof container.	NR	NR
Safety Equipment: Emergency Communications	3.12	A boat shall carry man overboard alarms for each crewmember based on AIS or other method.	NR	NR
Safety Equipment: Emergency Communications	3.13	A boat shall have a method of receiving weather information in addition to the fixed mount and hand held VHF radios.	NR	NR
Safety Equipment: Navigation	3.14	A boat shall carry a GPS receiver.	X	NR
Safety Equipment: Navigation/MOB	3.15	A boat shall carry an electronic means to record the position of a man overboard within ten seconds. This may be the same instrument listed in 3.14.	X	X

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Safety Equipment: Emergency Communications	3.16.1	A boat shall carry a 406MHz EPIRB that is properly registered to the boat. This device shall either have an internal GPS (self-locating) or be connected to a continuously functioning external GPS. After 01/01/2016, this device shall be equipped with an internal GPS.	NR	NR
Safety Equipment: Emergency Communications	3.16.2	A boat shall carry either a 406MHz EPIRB which is properly registered to the boat, or a floating 406MHz Personal Locator Beacon, registered to the owner with a notation in the registration that it is aboard the boat. After 01/01/2016, this device shall be equipped with an internal GPS.	NR	NR
Safety Equipment: Navigation	3.17	A boat shall have a knotmeter or distance-measuring instrument.	X	NR
Safety Equipment: Navigation	3.18	A boat shall have a permanently installed depth sounder.	X	Recommended
Safety Equipment: Navigation	3.19.1	A boat shall have a permanently mounted magnetic compass independent of the boat's electrical system suitable for steering at sea.	X	Recommended
Safety Equipment: Navigation	3.19.2	A boat shall have a second magnetic compass suitable for steering at sea which may be handheld.	X	NR
Safety Equipment: Navigation	3.20	A boat shall have non-electronic charts that are appropriate for the race area.	X	X
Safety Equipment: Damage Control	3.21	A boat shall have the ability to display sail numbers and letters of the size carried on the mainsail by an alternative means when none of the numbered sails is set.	NR (But see Rule 1.7 in the NOR for the Four Long Courses)	NR (But see Rule 1.5 in the NOR for the Swiftsure Inshore Classic)
Safety Equipment: Damage Control	3.22	A boat shall carry soft plugs of an appropriate material, tapered and of the appropriate size, attached or stowed adjacent to every through-hull opening.	X [Alternatively, some soft plugs (e.g., Forespar Tru Plug) and/or Stay Afloat Instant Leak Plug & Sealant may be stored in an easy-to-obtain place and the location identified on the Safety Equipment Chart per SER #3.28]	X [Alternatively, some soft plugs (e.g., Forespar Tru Plug) and/or Stay Afloat Instant Leak Plug & Sealant may be stored in an easy-to-obtain place and the location identified on the Safety Equipment Chart per SER #3.28]

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Gear: Anchoring	3.23.1	A boat shall carry two commercially made, unmodified, anchors, meeting the anchor manufacturer's recommendations based on the yacht's size, with a suitable combination of chain and line, ready for immediate assembly and ready for deployment within five minutes. For a boat less than 8.5 m (28') LH there shall be 1 suitable anchor with rode.	NR	NR
Gear: Anchoring	3.23.2	A boat shall carry one commercially made anchor, meeting the anchor manufacturer's recommendations based on the yacht's size, with a suitable combination of chain and line, ready for immediate assembly and ready for deployment within five minutes	X	X
Gear: Lights	3.24.1	A boat shall carry a watertight, high-powered searchlight, suitable for searching for a person overboard at night or for collision avoidance.	X	NR
Gear: Lights	3.24.2	A boat shall carry a watertight flashlight for each crewmember with spare batteries in addition to the above.	NR	NR
Gear: Lights	3.24.3	A boat shall carry at least two watertight flashlights with spare batteries in addition to the requirement of 3.24.1.	X	NR
Gear: Medical Kits	3.25	A boat shall carry a first aid kit and first aid manual suitable for the likely conditions of the passage and the number of crew aboard.	X	X
Gear: Radar Reflectors	3.26	A boat shall carry an octahedral passive radar reflector with circular sector plates of minimum diameter 30 cm (12") or a reflector with a documented minimum Radar Cross Section (RCS) of area of 2 m ² .	X	X
Gear: Dewatering	3.27	A boat shall carry the number of sturdy bucket(s) indicated, which shall be of at least two gallons (8 liters) capacity with lanyards attached.	2	1
Gear: Safety Diagram	3.28	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.	X	X
Gear: Emergency Steering	3.29.1	A boat shall have an emergency tiller, capable of being fitted to the rudder stock. Boats with twin rudders and twin tillers connected directly to the rudders are exempt from this requirement.	X	NR

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Gear: Emergency Steering	3.29.2	Wheel steered boats shall have an emergency tiller, capable of being fitted to the rudder stock.	X	X
Gear: Spare Parts	3.30.1	Tools and spare parts, suitable for the duration and nature of the event	X	X
Gear: Spare Parts	3.30.2	An effective means to quickly disconnect or sever the standing rigging from the boat	X (Includes haivng tools for this purpose)	X (Includes haivng tools for this purpose)
Gear: Identification	3.31	(Requirement is included within SER # 3.1.1, SER # 3.1.2, SER # 3.7.1 and SER # 3.7.2)		
Gear: Cockpit Knife	3.32	A strong, sharp knife, sheathed and securely restrained shall be provided readily accessible from the deck or a cockpit.	X	X
Sails: Storm Sails	3.33.1	The maximum area of storm sails shall be lesser of the areas below or as specified by the boat designer or sailmaker	NR	NR
Sails: Heavy Weather Jib	3.33.2	A heavy-weather jib (or heavy-weather sail in a boat with no forestay) with: i. area of 13.5% height of the foretriangle (IG) squared ii. readily available means, independent of a luff groove, to attach to the stay	Recommended	NR
Sails: Headsails/ Mainsail reefing	3.33.3	Mainsail reefing to reduce the luff by 12.5% or a heavy-weather jib (or heavy-weather sail in a boat with no forestay)	X (12.5% is changed to 10% for reefing reduce the luff of the mainsail)	X (12.5% is changed to 10% for reefing to reduce the luff of the mainsail)
Sails: Headsails	3.33.4	A storm jib with: i. area of 5% height of the foretriangle (IG) squared ii. maximum luff length 65% of IG iii. permanently attached means, independent of a luff groove, to attach to the stay	NR	NR
Sails: Storm trysail	3.33.5	A storm trysail (or rotating wing mast if suitable) with: i. area of 17.5% mainsail hoist (P) x mainsail foot length (E) ii. no headboard iii. no battens iv. sail number and letters on both sides, as large as practicable v. in the case of a boat with an in-mast furling mainsail, the storm trysail shall be capable of being set while the mainsail is furled	NR	NR

Section Name	SER #	Requirement	Coastal (applies to the Four Long Courses; i.e. Swiftsure Lightship Classic, Hein Bank, Cape Flattery and Juan de Fuca)	Inshore (applies to the Swiftsure Inshore Classic)
Sails: Main reefing	3.33.6	Either a storm trysail as defined in 3.33.5 or mainsail reefing to reduce the luff by at least 40%	NR	NR
Rigging: Halyards	3.35	A boat shall not be rigged with any halyard that requires a person to go aloft in order to lower a sail.	X	X
Rigging: Boom Support	3.36	A boat over 30' LOA (9.14m) shall have a means to prevent the boom from dropping if support from the mainsail or halyard fails.	X	Recommended
Supplies: Water	3.37	A boat shall carry 1 gallon (3.785 liters) per crewmember of emergency drinking water in sealed containers in addition to any other water carried aboard the boat and it shall be aboard after finishing.	NR	NR
Supplies: Rations	3.38	A boat shall carry adequate food, energy bars, and snacks to maintain crew stamina as described in the Notice of Race.	NR	NR
Gear: Life Rafts	3.39	A boat shall carry adequate inflatable life raft(s) designed for saving life at sea with designed capacity for containing entire crew. The raft shall be SOLAS, ISAF, ISO 9650, or ORC approved. The raft shall be stored in such a way that it is capable of being launched within 15 seconds. The life raft shall hold a current certificate of inspection. Boats built after 01/06/ 2001 shall have the life raft stowed in a deck mounted rigid container or stowed in watertight or self draining purpose built, rigid compartment(s) opening adjacent to the cockpit of the working deck.	NR	NR
Gear: Life Rafts	3.40	A boat shall have for each life raft, a grab bag with a lanyard and clip. The grab bag shall have inherent flotation and be of a bright fluorescent color containing at least an EPIRB, and a watertight handheld VHF radio. The VHF Radio and EPIRB need not be in addition to the prior requirements.	NR	NR
Skills: Emergency Steering	4.1.1	A boat's crew shall be aware of multiple methods of steering the boat with the rudder disabled, and shall have chosen and practiced one method of steering the boat with the rudder disabled and be prepared to demonstrate said method of steering both upwind and downwind.	NR	NR
Skills: Emergency Steering	4.1.2	Crews must be aware of methods of steering the yacht with the rudder disabled.	X (All boats must have a secondary steering mechanism. A sea drogue system is acceptable.)	X (All boats must have a secondary steering mechanism. A sea drogue system is acceptable.)

Section Name	SER #	Requirement	Coastal (applies to the Four Long Courses; i.e. Swiftsure Lightship Classic, Hein Bank, Cape Flattery and Juan de Fuca)	Inshore (applies to the Swiftsure Inshore Classic)
Skills: Man Overboard	4.2	Annually, at least 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 reboarding the crewmember.	X	X
Skills: Safety Training	4.3.1	At least 30% of those aboard the boat, but not fewer than two members of the crew, unless racing single-handed, including the person in charge, shall have attended a one-day or two-day Safety at Sea Seminar within the last 5 years, or other courses as accepted by their National Authority.	NR	NR
Skills: Safety Training	4.3.2	At least 30% of those aboard the boat, but not fewer than two members of the crew, unless racing single handed, including the person in charge, shall have attended a half-day, one-day, or two-day Safety at Sea Seminar within the last 5 years, or other courses as accepted by their national authority.	Recommended	Recommended

NOTE: Source is PIYA Safety Equipment Requirements (effective Date: 03/01/2017), but with some modifications

Appendix - Stability

[http://www.sailing.org/tools/documents/OSR2016All23032016-\[20554\].pdf](http://www.sailing.org/tools/documents/OSR2016All23032016-[20554].pdf)

Ocean = OSR Category 1

Offshore= OSR Category 2

Coastal= OSR Category 3

Inshore= OSR Category 4

Nearshore= OSR Category 5

Appendix - Lifelines

Lifeline deflection shall not exceed the following:

When a deflecting force of 50 N (5.1 kg or 11.2 lb.) is applied to a lifeline midway between supports of a lifeline, the lifeline shall not deflect more than 100mm. This measurement shall be taken at the widest span between supports that are aft of the mast. For purposes of measuring sag, any elastic tensioning mechanism shall be released prior to measurement.

Lifeline Minimum Diameters, Required Materials, Specifications

- (a) The minimum diameter is specified in table below.
- (b) Stainless steel lifelines shall be uncoated and used without close-fitting sleeving, however temporary sleeving may be fitted provided it can be regularly removed for inspection.
- (c) When stainless wire is used, Grade 316 is recommended
- (d) When HMPE (Dyneema/Spectra) is used, it shall be spliced in accordance with the manufacturer's recommended procedures.
- (e) A lanyard of synthetic rope may be used to secure lifelines provided the gap it closes does not exceed 100mm (4in). This lanyard shall be replaced annually at a minimum.
- (f) All wire, rope, fittings, anchorage points, fixtures and lanyards shall comprise a lifeline enclosure system which has at all points at least the breaking strength of the required lifeline.

Minimum Required Diameter

LOA	wire		Single braid Dyneema rope		Braid on braid Dyneema cored rope	
	Under 8.5m(28ft)	3mm (1/8")		4mm (5/32")		4mm (5/32")
8.5m-13m	4mm (5/32")		5mm (3/16")		5mm (3/16")	
Over 13m (43ft)	5mm (3/16")		5mm (3/16")		5mm (3/16")	