

## World Sailing Offshore Special Regulations ("OSR") for Monohulls and Multihulls for the 2023 Swiftsure International Yacht Race

**(Applies to the Four Long Courses: Swiftsure Lightship Classic, Hein Bank, Cape Flattery and Juan de Fuca)**

**Notes:** These requirements are extracts from World Sailing's 2022-2023 OSRs, Category 3

**"X" beside a requirement in the column labelled Monohulls means this is a mandatory requirement for monohull boats in the Four Long Courses**

**"X" beside a requirement in the column titled Multihulls means this is a mandatory requirement for multihull boats in the Four Long Courses**

"n/a" beside a requirement in either the Monohulls or Multihulls column means it is not applicable for that fleet

"R" beside a requirement in either the Monohulls or Multihulls column means it is not mandatory, but is highly recommended

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

Section Name	OSR #	Requirement	Monohulls	Multihulls
<b>SECTION 1 - FUNDAMENTAL AND DEFINITIONS</b>				
Purpose and Use	1.01.2	The OSR 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.	x	x
Responsibility of Person in Charge	1.02.1	Under RRS 3 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
	1.02.2	Neither the establishment of the OSR, nor their use by Organizing Authorities, nor the inspection of a boat under the OSR in any way limits or reduces the complete and unlimited responsibility of the Person in Charge.	x	x
<b>SECTION 2 - APPLICATION &amp; GENERAL REQUIREMENTS</b>				
Category 3	2.01.4	Races across open water, most of which is relatively protected or close to shorelines [This is applicable to the Four Long Courses in Swiftsure.]	x	x
Inspection	2.03	A boat may be inspected at any time. If she fails to comply with the OSR her entry may be rejected or she will be subject to protest	x	x
General Requirements	2.04.1	All equipment required by OSR shall: a) function properly b) be regularly checked, cleaned and serviced c) if it has an expiry date, it will not have exceeded its expiry date while racing d) when not in use be stowed in conditions in which deterioration is minimized e) be readily accessible f) be of a type, size and capacity suitable and adequate for the intended use and size of the boat	x	x
	2.04.2	Heavy items shall be permanently installed or securely fastened	x	x
<b>SECTION 3 - STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT</b>				
Strength of Build and Rig	3.01.1	Properly rigged, fully seaworthy and shall meet the OSR	x	x

	3.01.2	Equipped with shrouds and at least one forestay that shall remain connected to the mast and the boat while racing (not applicable to boats with free-standing masts)	x	x
	3.01.3	The forestay referenced above shall be sized and connected in a way that ensures it is capable of withstanding the full sailing loads independent of any headsail luff load capacity	x	x
Watertight and Structural Integrity of a Boat	3.02.1	Essentially watertight and all openings shall be capable of being immediately secured. Centreboard, daggerboard trunks and the like shall not open into the interior of a hull except via a watertight maintenance hatch with the opening entirely above the Waterline	x	x
	3.02.2	Effective 1 January 2022: Structural Inspection - Consult the owner's manual for any instructions for keel bolt checking and re-tightening. The following inspection to be conducted by a qualified person externally with the boat out of the water. Check that there are no visible stress cracks particularly around the keel, hull/keel attachment, hull appendages and other stress points, inside the hull, backing plates, bolting arrangements and keel floors. (See Appendix L - Model Keel and Rudder Inspection Procedure)  <b>NOTE:</b> Appendix L is at the bottom of this spreadsheet	R	n/a
	3.02.4	Effective 1 January 2022: Inspection after Grounding – an appropriately qualified person shall conduct an internal and external inspection after each unintentional grounding	x	x
Stability - Monohulls	3.04.1	Able to demonstrate compliance with ISO 12217-2* design category B or higher, either by EC Recreational Craft Directive certification having obtained the CE mark or the designer's declaration * The latest effective version of ISO 12217-2 should be used unless the boat was already designed to a previous version	R	n/a
Stability and Flotation - Multihulls	3.05.1	Watertight bulkheads and compartments (which may include permanently installed flotation material) in each hull, 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 (see OSR 3.13.2)	n/a	x
	3.05.2	Transverse watertight bulkheads at intervals of not more than 4 m (13'-3") in every hull without accommodation if with a First Launch after 1998	n/a	x
Stability and Flotation - Multihulls	3.05.3	Designed and built to resist capsize	n/a	x
Exits - Monohulls	3.06.1	At least two exits if 8.5 m (28') LH and greater and with a Primary Launch after 1994. One exit shall be located forward of the foremost mast except where structural features prevent its installation	x	n/a
	3.06.2	The following minimum clear hatch openings if First Launch after 2013: a) a circular hatch with diameter 450 mm (18"); or b) any other shape with minimum dimension of 380 mm (15") and minimum area of 0.18 m <sup>2</sup> (1.9 ft <sup>2</sup> )	x	n/a
	3.07.1	At least two exits in each hull which contains accommodations	n/a	x
Escape Hatches, Underside Clipping Points & Handholds - Multihulls	3.07.2	a) If 12 m (39'-4") LH and greater each hull which contains accommodation: i) an escape hatch for access to and from the hull in the event of an inversion; ii) a minimum clearance diameter through each escape hatch of 450 mm (18") or when an escape hatch is not circular, sufficient clearance to allow a crewmember to pass through fully clothed on boats if First Launch after 2002 iii) each escape hatch above the waterline when the boat is inverted; iv) each escape hatch at or near the midships station if First Launch after 2000 v) each escape hatch on the side nearest the vessel's central axis for a catamaran if First Launch after 2002 b) if a trimaran at least two escape hatches in compliance with the dimensions in OSR 3.07.2 a) ii if 12 m (39'-4") LH and greater if First Launch after 2002 d) each escape hatch shall have been opened both from inside and outside within 6 months prior to the race e) appropriate handholds/clipping points on the underside sufficient for all crew (on a trimaran these shall be around the central hull) f) a catamaran with a central nacelle first launched after 2002 shall have on the underside around the central nacelle, handholds of sufficient capacity to enable all persons on board to hold on and/or clip on securely	n/a	x

	3.07.3	If less than 12 m (39'-4") LH either escape hatches in compliance with OSR 3.07.2 a), b) and c) or: a) in each hull which contains accommodation, a station where an emergency hatch may be cut. The cutting line shall be clearly marked both inside and outside with an outline and the words "ESCAPE CUT HERE", and b) tools suitable for cutting the emergency hatch, ready for instant use, adjacent to the cutting site. Each tool shall be secured to the vessel by a lanyard.	n/a	x
Hatches & Companionways	3.08.1	Hatch covers forward of the maximum beam station shall not open toward the interior of the boat, except hatches in the side of a coachroof or ports having an area of less than 0.071 m <sup>2</sup> (110 in <sup>2</sup> )	x	x
	3.08.2	A hatch, including a hatch over a locker shall be: a) permanently attached and capable of being firmly shut immediately and remaining firmly shut in a 180° capsized b) above the water when the boat is heeled 90° A boat may have a maximum of two hatches on each side of centreline that do not conform to the requirement in b), provided that the opening of each is less than 0.071 <sup>2</sup> m (110 in <sup>2</sup> )	x	x
	3.08.3	Hatches not conforming with 3.08.1 and 3.08.2 shall be clearly labelled and used in accordance with the following instruction "NOT TO BE OPENED AT SEA"	x	x
	3.08.4	Companionway hatches: a) fitted with a strong securing arrangement which shall be operable from the exterior and interior even when the boat is inverted b) blocking devices: i) capable of being retained in position with the hatch open or shut ii) secured to the boat (e.g. by lanyard) for the duration of the race iii) permit exit in the event of inversion	x	x
	3.08.5	If a monohull with Open Cockpit(s): a) a companionway sill that does not extend below the local sheerline; or b) a companionway in full compliance with ISO 11812 category A	x	n/a
	3.08.6	If a monohull with Contained Cockpit(s) where the companionway extends below the local sheerline, panels capable of blocking the companionway up to the level of the local sheerline whilst giving access to the interior.	x	n/a
Cockpits	3.09.1	Cockpits that self-drain quickly by gravity at all angles of heel and are permanently incorporated as an integral part of the boat	x	x
	3.09.2	A cockpit sole at least 2% LWL above the waterline (or in IMS boats with First Launch before 2003, at least 2% L above the waterline)	x	x
	3.09.3	A bow, lateral, central or stern well is a cockpit for the purposes of OSR 3.09	x	x
Cockpit Volume	3.09.4	The maximum combined volume below lowest coamings of all contained cockpits shall be: a) primary launch before April 1992: 9% (LWL x maximum beam x freeboard abreast the cockpit) b) primary launch after March 1992 as above for the appropriate category except that "lowest coamings" shall not include any aft of the FA station and no extension of a cockpit aft of the working deck shall be included in calculation of cockpit volume	x	x
Cockpit Drains	3.09.5	Cockpit drain cross section area of unobstructed openings (after allowance for screens if fitted) shall be at least that of: a) 2 x 25 mm (1") diameter or equivalent for a boat less than 8.5 m (28') LH b) 4 x 20 mm (3/4") diameter or equivalent for a boat 8.5 m (28') LH or greater	x	x
Sea Cocks or Valves	3.10	Permanently installed sea cocks or valves on all through-hull openings below the waterline except for integral deck scuppers and instrument through-hulls	x	x
Sheet Winches	3.11	Sheet winches mounted in such a way that an operator is not required to be substantially below deck	x	x
Mast Step	3.12	The heel of a keel stepped mast securely fastened to the mast step or adjoining structure	x	x

Pulpits, Stanchions, Lifelines	3.14.1	<p>The perimeter of the deck surrounded by system of lifelines and pulpits as follows:</p> <p>a) Continuous lifelines fixed only at (or near) the bow and stern. However a gate on each side of a boat is permitted. Except at its end fittings and at gates, the movement of a lifeline in a fore-and-aft direction shall not be constrained. Temporary sleeving shall not modify tension in the lifeline.</p> <p>b) Minimum heights of lifelines and pulpit rails above the working deck and vertical openings:</p> <p>i) upper: 600 mm (24")</p> <p>ii) intermediate: 230 mm (9")</p> <p>iii) vertical opening: no greater than 380 mm (15") except that on a boat with a Primary Launch before 1993 where it shall be no greater than 560 mm (22")</p> <p>iv) a boat less than 8.5 m (28') LH may use a single lifeline system with a height between 450 mm (18") and 560 mm (22")</p> <p>c) Lifelines permanently supported at intervals of not more than 2.2 m (7'-2 1/2") and shall not pass outboard of supporting stanchions</p> <p>d) Pulpit and stanchion bases permanently installed with pulpits and stanchions mechanically retained in their bases</p> <p>e) The outside of pulpit and stanchion base tubes no further inboard from the edge of the working deck than 5% of maximum beam or 150 mm (6"), whichever is greater, nor further outboard than the edge of the working deck</p> <p>f) Stanchions straight and vertical except that:</p> <p>i) within the first 50 mm (2") from the deck, stanchions shall not be displaced horizontally from the point at which they emerge from the deck or stanchion base by more than 10 mm (3/8")</p> <p>ii) stanchions may be angled to not more than 10° from vertical at any point above 50 mm (2") from the deck (Continued in row immediately below)</p>	x	x
		<p>g) A bow pulpit may be open provided the opening between the pulpit and any part of the boat does not exceed 360 mm (14")</p> <p>h) Lifelines may terminate at or pass through adequately braced stanchions set inside and overlapping the bow pulpit</p> <p>i) When a deflecting force of 4 kg (8.8 #) is applied to a lifeline at the mid-point of the longest span between supports that are aft of the mast, the deflection shall not exceed:</p> <p>i) 50 mm (2") for an upper or single lifeline</p> <p>ii) 120 mm (4 3/4") for an intermediate lifeline</p>	x	x
Special Requirements for Pulpits, Stanchions, Lifelines on Multihulls	3.14.2	When on a boat it is impractical to precisely follow OSR regarding pulpits, stanchions, lifelines, the regulations for monohulls shall be followed as closely as possible	x	n/a
Lifeline Specifications	3.14.6	a) Lifelines of stranded stainless steel wire	x	
		a) Lifelines of either: stranded stainless steel wire or HMPE	HMPE not permitted	x
		c) Stainless steel lifelines shall be uncoated and used without close-fitting sleeving, however, temporary sleeving may be fitted provided it is regularly removed for inspection.	x	x
		d) A lanyard of synthetic rope may be used to secure lifelines provided the gap it closes does not exceed 100 mm (4"). This lanyard shall be replaced annually	x	x
		e) All components of the lifeline enclosure system shall have a breaking strength no less than the lifeline	x	x
Multihull Nets or Trampolines	3.15.1	<p>The words "net" and "trampoline" are interchangeable. A net shall be:</p> <p>a) essentially horizontal</p> <p>b) made from durable woven webbing, water permeable fabric, or mesh with openings not larger than 5 cm (2") in any dimension. Attachment points shall be planned to avoid chafe. The junction between a net and a boat shall present no risk of foot trapping</p> <p>c) solidly fixed at regular intervals on transverse and longitudinal support lines and shall be fine-stitched to a bolt rope</p> <p>d) able to carry the full weight of the crew either in normal working conditions at sea or in case of capsized when the boat is inverted</p>	n/a	x

Trimarans with Double Crossbeams	3.15.2	A trimaran with double crossbeams shall have nets on each side covering: a) the area formed by the crossbeams, central hull and outriggers b) 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 c) the triangles formed by the aftermost part of the cockpit or steering position (whichever is furthest aft), the mid-point of each after crossbeam, and the intersection of the crossbeam and the central hull; except that:- d) OSR 3.15.2(c) is not a requirement when cockpit coamings and/or lifelines are present which comply with the minimum height requirements in OSR 3.14	n/a	x
Trimarans with Single Crossbeams	3.15.3	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)	n/a	x
Catamarans	3.16.1 3.16.2	A catamaran shall have nets covering the area defined: a) laterally by the hulls; and b) longitudinally by 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	n/a	x
Toe Rail or Foot-Stop	3.17.1	Permanently installed toe rail of minimum height 25 mm (1"), located as close as practicable to the stanchion bases, around the foredeck from abreast the mast	x	n/a
	3.17.2	An additional lifeline of between 25-50 mm (1-2") high is permitted in lieu of a toe rail on a boat with Primary Launch before 1984	x	n/a
Toilet	3.18.2	Permanently installed toilet or fitted bucket	x	x
Bunks	3.19.2	Permanently installed bunks	x	x
Cooking Facilities	3.20	Permanently installed cooking stove, capable of being operated safely at sea, with fuel shutoff control	x	x
Emergency Drinking Water	3.21.3	At least 9 l (2.4 US Gal) of drinking water for emergency use in a dedicated and sealed container or container(s)	x	x
Hand Holds	3.22	Adequate hand holds fitted below deck	x	x
Bilge Pumps and Buckets	3.23.1	a) Two strong buckets, each with a lanyard and of at least 9 l (2.4 US Gal) capacity b) One permanently installed manual bilge pump	x	x
	3.23.2	All required permanently installed bilge pumps shall be operable with all cockpit seats, hatches and companionways shut and with permanently installed discharge pipe(s) of sufficient capacity	x	x
	3.23.3	Bilge pumps shall not be connected to cockpit drains and shall not discharge into a Closed Cockpit	x	x
	3.23.4	Bilge pumps shall be readily accessible for maintenance and for clearing out debris	x	x
	3.23.5	All removable bilge pump handles retained by a lanyard	x	x
Compass	3.24	a) Marine magnetic compass capable of being used as a steering compass: b) Permanently installed marine magnetic steering compass, independent of any power supply, correctly adjusted with deviation card c) A second compass which may be hand-held and/or electronic	x Deviation Card not Mandatory	x Deviation Card not Mandatory
Halyards	3.25	a) A minimum of two halyards, each capable of hoisting a sail, on each mast b) No halyard shall be locked, lashed or otherwise secured to the mast in a way that requires a person to go aloft in order to lower a sail in a controlled manner, except for a headsail in use with a furling device.	x	x

Navigation Lights	3.27.1	That conform to the International Regulations for Preventing Collisions at Sea (Part C and Technical Annex I) and shall be exhibited as required by those regulations	x	x
	3.27.2	Mounted above sheerline and so that they will not be masked by sails or the heeling of the boat	x	x
	3.27.3	Reserve lights having the same specifications as above, and that can be powered independently	x	x
	3.27.4	Spare bulbs (not required for LED)	x	x
Engines	3.28.1	a) Engines and associated systems installed in accordance with their manufacturers' guidelines and suitable for the size and intended use of the boat b) An engine which provides a minimum speed in knots of (1.8 x vLWL in metres) or (v LWL in feet)	x	x
		c) Either an inboard or outboard engine, with associated power supply systems, all securely fastened, or;	x	n/a
		c) Inboard engine, however if less than 12.0 m (39'-4") LH either an inboard engine, or an outboard engine together with permanently installed power supply systems	n/a	x
		d) An inboard combustion engine shall have a permanently installed exhaust, cooling system, fuel supply, fuel tank(s) and shall have adequate heavy weather protection e) An inboard electrical engine, when fitted, shall be provided with a permanently installed power supply, adequate heavy weather protection and have an engine control system.	x	x
Generators	3.28.2	If an optional generator separate from the propulsion engine is carried, it shall be installed in accordance with the manufacturer's guidelines	x	x
Liquid Fuel Systems	3.28.3	a) All fuel tanks for storage of liquid fuels shall be rigid (but may have permanently installed flexible linings) and shall have a shutoff valve b) At the start a boat with a combustion engine shall carry sufficient fuel to meet charging requirements for the duration of the race and to motor at the above minimum speed for at least 5 hours	x	x
Battery Systems	3.28.4	a) A dedicated engine/generator starting battery when an electric starter is the only method for starting the engine and/or separate generator b) Batteries installed after 2011 shall be of the sealed type from which liquid electrolyte cannot escape c) At the start a boat with an electric engine shall carry sufficient capacity to meet electrical requirements for the duration of the race and to motor at the above minimum speed for at least 5 hours	x Sealed Type not Mandatory	x Sealed Type not Mandatory
Communications Equipment, GPS, Radar, AIS	3.29.1	A marine radio transceiver with an emergency antenna when the regular antenna depends upon the mast	x	x
	3.29.2	If the marine radio transceiver is a VHF: a) a minimum rated output power of 25 W b) a masthead antenna and co-axial feeder cable with not more than 40% power loss c) be DSC capable if installed after 2015 d) DSC capable VHF transceivers shall be programmed with an assigned MMSI (unique to the boat), be connected to a GPS receiver and be capable of making distress alert calls as well as sending and receiving a DSC position report with another DSC equipped station	x Masthead Antenna not Mandatory	x Masthead Antenna not Mandatory
	3.29.5	A hand-held marine VHF transceiver, watertight or with a waterproof cover. When not in use to be stowed in a grab bag or emergency container (see OSR 4.21)	x	x
	3.29.6	Second radio receiver, which may be the handheld VHF in 3.29.5 above, capable of receiving weather bulletins	x	x
	3.29.8	A GPS	x	x

	3.29.13	An AIS Transponder which either: a) shares the masthead VHF antenna via a low loss AIS antenna splitter; or b) has a dedicated AIS antenna not less than 38 cm (15") in length mounted with its base not less than 3 m (10') above the Waterline and co-axial feeder cable with not more than 40% power loss	R	R
<b>SECTION 4 - PORTABLE EQUIPMENT</b>				
Sail Letters & Numbers	4.01.1	Identification on sails which complies with RRS 77 and RRS Appendix G	x	x
	NoR 1.11	Boats shall display their official sail numbers on both the port and starboard lifelines or hull while racing. Size of letters and numbers shall be similar to that required in the RRS Appendix G1.2(b) for sail numbers.	x	x
Soft Wood Plugs	4.03	Tapered soft wood plug stowed adjacent to every through-hull opening	x	x
Jackstays & Clipping Points	4.04.1	Permanently Installed fittings for jackstay ends and clipping points	x	x
	4.04.2	Jackstays which shall: a) be independent on each side of the deck b) enable a crewmember to move readily between the working areas on deck and the cockpit(s) with the minimum of clipping and unclipping operations c) have a breaking strength of 2040 kg (4500#) and be uncoated and non-sleeved stainless steel 1 x 19 wire of minimum diameter 5 mm (3/16"), webbing or HMPE rope	x	x
	4.04.3	Clipping points which shall: a) be adjacent to stations such as the helm, sheet winches and masts, where crewmembers work b) enable a crewmember to clip on before coming on deck and unclip after going below c) enable two-thirds of the crew to be simultaneously clipped on without depending on jackstays	R	R
Fire Fighting Equipment	4.05.1	A fire blanket adjacent to every cooking device	x	x
	4.05.2	2 fire extinguishers, each with 2 kg of dry powder or equivalent, in different parts of the boat	x	x
Anchors	4.06.2	One un-modified anchor that meets the anchor manufacturer's recommendation based on the boat's dimensions with suitable combination of chain and rope, ready for immediate assembly, and ready for deployment within 5 minutes	x	x
Flashlights & Searchlights	4.07	Watertight lights with spare batteries and bulbs as follows: a) a searchlight, suitable for searching for a person overboard at night and for collision avoidance b) a flashlight in addition to 4.07 a)	x	x
First Aid Manual and First Aid Kit	4.08	A First Aid Manual and First Aid Kit. The contents and storage of the First Aid Kit shall reflect the likely conditions and duration of the passage, and the number of crew	x	x
Foghorn	4.09	A foghorn	x	x
Radar Reflector	4.10.1	A passive radar reflector with: a) octahedral circular plates of minimum diameter 30 cm (12"), or b) octahedral rectangular plates of minimum diagonal dimension 40 cm (16"), or c) a non-octahedral reflector with a documented Root Mean Square minimum Radar Cross Section (RCS) area of 2 m <sup>2</sup> (22 ft <sup>2</sup> ) from 0-360° of azimuth and ±20° of heel	x	x
Navigation Equipment	4.11.1	Navigational charts, light list and chart plotting equipment	x	x
	NoR 1.9	Boats shall, in the absence of electronic means of navigation, have on board charts for the area in which they will be racing.	x	x
Safety Equipment Location Chart	4.12	A safety equipment location diagram in durable waterproof material, clearly displayed in the main accommodation, marked with the location of principal items of safety equipment	x	x

Depth, Speed and Distance Instruments	4.13.1	A knotmeter or distance measuring instrument (log)	x	x
	4.13.2	A depth sounder	x	x
Emergency Steering	4.15.1	An emergency tiller capable of being fitted to the rudder stock except when a) the principal method of steering is by means of an unbreakable metal tiller b) there are two methods (e.g. tillers, wheels) of controlling a rudder, neither of which shares components with the other except for the rudder stock.	x	x
	4.15.2	Proven method of emergency steering with the rudder disabled	x	x
Tools and Spare Parts	4.16.1	Tools and spare parts, suitable for the duration and nature of the passage	x	x
	4.16.2	An effective means to quickly disconnect or sever the standing rigging from the boat	x	x
Boat's Name	4.17	The boat's name on miscellaneous buoyant equipment, such as lifejackets, cushions, lifebuoys, recovery slings, grab bags etc.	x	x
Retro-reflective Material	4.18	Marine grade retro-reflective material on lifebuoys, recovery slings, liferafts and lifejackets	x	x
EPIRBs	4.19.1	A water and manually activated 406 MHz EPIRB	R	R
	4.19.2	A 406 MHz EPIRB registered after 2015 shall include an internal GPS	R	R
Grab Bags	4.21	Either a watertight compartment or a grab bag, readily accessible whether or not the boat is inverted, with the following minimum contents: a) a watertight hand-held marine VHF transceiver with spare batteries b) a watertight flashlight with spare batteries and bulb c) 3 red hand flares d) a watertight strobe light with spare batteries e) a knife f) if a grab bag is provided it shall have inherent flotation, at least 0.1 m <sup>2</sup> (1 ft <sup>2</sup> ) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip	R	R
Crew Overboard Identification and Recovery	4.22.3	A lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use	x	x
	4.22.6	Each inflatable lifebuoy and any automatic device shall be tested and serviced at intervals in accordance with its manufacturer's instructions	x	x
	4.22.7	A heaving line, no less than 6 mm (1/4") diameter, 15 - 25 m (50 - 75') long, readily accessible to cockpit	x	x
	4.22.8	A recovery sling which includes a: 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	x	x
Pyrotechnic & Light Signals	4.23	Pyrotechnic signals shall be provided conforming to SOLAS LSA Code Chapter III Visual Signals and not older than the stamped expiry date (if any) or if no expiry date stamped, not older than 4 years. a) 4 - Red Hand Flares LSA III 3.2 b) 2 - Orange Smoke Flares LSA III 3.3  OR	R	R
	OA	At a minimum, pyrotechnical signals as approved and required by Transport Canada or US Coast Guard	x	x



Cockpit Knife	4.25	A strong, sharp knife, sheathed and securely restrained shall be provided readily accessible from the deck or a cockpit.	x	x
Storm & Heavy Weather Sail Inventory	4.26.1	Either a storm trysail or mainsail reefing to reduce the luff by at least 40% (or rotating wing mast if suitable)	R	R
	4.27.3	A heavy-weather jib (or heavy-weather sail in a boat with no forestay) with: a) area of 13.5% height of the foretriangle squared b) readily available means, independent of a luff groove, to attach to the stay	R	R
<b>SECTION 5 - PERSONAL EQUIPMENT</b>				
Lifejacket (PFD)	5.01.1	Each crew member shall have a lifejacket which shall: a) i) if manufactured before 2012 comply with ISO 12402 - 3 (Level 150) or equivalent, including EN 396 or UL 1180 and: - if inflatable have a gas inflation system - have crotch/thigh straps (ride up prevention system (RUPS)) - have an integral safety harness in compliance with OSR 5.02 ii) if manufactured after 2011 comply with ISO 12402-3 (Level 150) and be fitted with a whistle, lifting loop, reflective material automatic/manual gas inflation system - crotch/thigh straps (ride up prevention system (RUPS)) - an integral safety harness in compliance with OSR 5.02 b) have an emergency position indicating light in accordance with either ISO 12402-8 or SOLAS LSA code 2.2.3 c) be clearly marked with the boat's or wearer's name  f) if inflatable, regularly checked for air retention	x	x
	5.01.2	A boat shall carry at least one gas inflatable lifejacket spare cylinder and, if appropriate, spare activation head for each type of lifejacket on board.	x	x
	5.01.4	The person in charge shall personally check each lifejacket at least once annually.	x	x
Safety Harness and Tethers	5.02.1	A harness that complies with ISO 12401 or equivalent	x	x
	5.02.2	A tether that shall: a) comply with ISO 12401 or equivalent b) not exceed 2 m (6'-6") including the length of the hooks c) have self-closing hooks d) have overload indicator flag embedded in the stitching e) be manufactured after 2000	x	x
	5.02.3	All of the crew shall have either: a) a tether not exceeding 1m (3'3") including the length of the hooks, or b) an intermediate self-closing hook on a 2 m (6'-6") tether	x	x
	5.02.5	A tether which has been overloaded shall be replaced	x	x
<b>SECTION 6 - TRAINING</b>				
Training Topics	6.02.2	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 one-day or two-day Safety at Sea Seminar within the last 5 years, or other courses as accepted by their National Authority.	R	R
Routine Training on-board	6.04	At least annually the crews shall practice the drills for: a) Crew-Overboard Recovery b) Abandonment of vessel	x	x

Medical Training	6.05.3	At least one member of the crew shall be familiar with First Aid procedures, hypothermia, drowning, cardio-pulmonary resuscitation and relevant communications systems	R	R
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**APPENDIX L**

**Model Keel and Rudder Inspection Procedure**

The model form is not the only means of meeting the needs of OSR 3.02.3 Evidence of Periodic Structural Inspection, Organizing Authorities may develop on-line forms.

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 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 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.