

Appendix A to the Notice of Race

Mandatory Equipment Requirements

1. PREAMBLE

- 1.1. Skipper's responsibility: The safety of a yacht and her crew is the sole and inescapable responsibility of the skipper who must do his best to ensure that the yacht is fully found, thoroughly seaworthy and manned by an experienced crew who are physically fit to face bad weather. He must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. He must ensure that all safety equipment is properly maintained and stowed and that the crew knows where it is kept and how it is to be used.
- 1.2. Neither the establishment of this mandatory equipment list, nor the inspection of a yacht for compliance with the list in any way limits the complete and unlimited sole responsibility of the skipper to ensure that both the crew and the yacht are fully prepared to complete in the race and to face the potentially severe weather conditions which can be encountered on Lake Ontario.
- 1.3. Fundamental Rule 4 of the International Yacht Racing Rules states: "It shall be the sole responsibility of each yacht to decide whether or not to start or to continue to race."
- 1.4. It shall be the responsibility of the skipper and crew to ensure that the yacht has been inspected and is in compliance with these requirements prior to the start of the race. Inspections may be completed by the Safety Officer or any Flag Officer of the Skipper's Yacht Club, or by the Safety Officer appointed by the Lake Ontario 300 Organizing Committee and any of his/her designates.
- 1.5. In addition to the mandatory pre-race inspection, a yacht may be inspected at any time from 0700 hrs on the day the race starts until 2 hours after her finish time. Any yacht found not to be in compliance with the requirements of Appendix A may have her entry rescinded or be subject to a Protest and possible disqualification.
- 1.6. All required equipment shall: a) function properly; b) be readily accessible; and c) be of a type, size and capacity suitable and adequate for the intended use and for the size of the yacht.
- 1.7. All yachts shall comply with the minimum requirements of governmental authority in the country of entry, and, if applicable with requirements of the class within which it is entered.

3.04	Stability – Monohulls
3.04.2	A yacht shall be designed and built to resist capsizes.
3.08	Hatches & Companionways
3.08.1	No hatch forward of the maximum beam station shall open in such a way that the lid or cover moves into the open position towards the interior of the hull (excepting ports having an area of less than 0.071m ² (110 sq in)).
3.08.2	A hatch shall be:
a)	So arranged as to be above the water when the hull is heeled 90 degrees. Hatches over lockers that open to the interior of the vessel shall be included in this requirement.
b)	Permanently attached
c)	Capable of being firmly shut immediately and remaining firmly shut in a 180 degree capsizes (inversion)
3.08.3	A companionway hatch extending below the local sheerline, shall:
a)	Not be permitted in a yacht with a cockpit opening aft to the sea (OSR 3.09.6)
b)	Be capable of being blocked off up to the level of the local sheerline, provided that the companionway hatch shall continue to give access to the interior with the blocking devices (e.g. washboards) in place
3.08.4	A companionway hatch shall
a)	Be fitted with a strong securing arrangement to the drop boards
b)	Have any blocking devices capable of being retained in position with the hatch open or shut
3.09	Cockpits
3.09.1	Cockpits shall be structurally strong, self-draining by gravity at all angles of heel and permanently incorporated as an integral part of the hull.
3.09.2	Cockpits must be essentially watertight, that is, all openings to the hull must be capable of being strongly and rigidly secured.
3.09.3	A cockpit sole shall be at least 2% LWL above LWL
3.09.4	A bow, lateral, central or stern well shall be considered a cockpit for the purposes of OSR 3.09
3.10	Sea Cocks or Valves
	Sea cocks or valves shall be permanently installed on all through-hull openings below the waterline except integral deck scuppers, speed indicators, depth finders and the like, however a means of closing such openings shall be provided. (Blanks)
3.12	Mast Step
	The heel of a keel stepped mast should be securely fastened to the mast step or adjoining structure. Recommended

3.14	Pulpits, Stanchions, Lifelines
3.14.2	Lifelines required in Special Regulations shall be “taut”.
a)	As a guide, when a deflecting force of 50 N (5.1 kgf, 11.2 lbf) is applied to a lifeline midway between supports, the lifeline should not deflect more than 50 mm. (2”).
3.17	Toe Rail or Foot – Stop
3.17.1	A toe rail, minimum height ¾", shall be permanently installed around the foredeck from abreast the mast, except in way of fittings and not further inboard from the edge of the working deck than one third of the local half-beam.
3.18	Toilet
3.18.2	A toilet, permanently installed with sufficient holding capacity.
3.20	Cooking Facilities
3.20.1	A cooking stove, permanently installed or securely fastened with safe accessible fuel shutoff control and capable of being safely operated in a seaway.
3.21	Drinking Water Tanks & Drinking Water
3.21	Drinking Water Tanks
a)	A yacht shall have a permanently installed delivery pump and water tank(s):
3.21.3	Emergency Drinking Water
a)	At least 9 litres (2 UK gallons, 2.4 US gallons) of drinking water for emergency use shall be provided in a dedicated and sealed container or container(s)
3.22	Hand Holds
	Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea. Recommended above deck.
3.23	Bilge Pumps and Buckets
3.23.1	No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.
3.23.2	Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)
3.23.3	Bilge pumps shall be readily accessible for maintenance and for clearing out debris.
3.23.4	Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss.
3.23.5	The following shall be provided:
d)	At least one permanently installed manual bilge pump operable with all cockpit seats, hatches and companionways shut
f)	Two buckets of stout construction each with at least 9 litres (2 K gallons, 2.4 US gallons) capacity. <u>Each bucket to have a lanyard.</u>

3.24	Compass
3.24.1	The following shall be provided:
a)	A marine magnetic compass, independent of any power supply, permanently installed and correctly adjusted with deviation card, and
b)	A compass which may be hand-held or integrated with binoculars.
3.25	Halyards
	No mast shall have less than two halyards, each capable of hoisting a sail.
	<i>Boom Support, some means must exist to present the boom from dropping if support from the mainsail and/or halyard fails. Topping lifts or supporting vang are acceptable for this purpose.</i>
3.27	Navigation Lights
*	<i>Emergency backup navigation lights shall be provided and demonstrated to the inspector.</i>
3.27.5	Spare bulbs for navigation lights shall be carried, unless lights are not dependent on bulbs, (L.E.D.).
3.28	Engines, Generators, Fuel
3.28.1	A propulsion engine shall be provided, inboard, or as an outboard engine with associated tanks and fuel supply systems, all securely fastened.
3.28.3	A propulsion engine shall:
a)	Provide a minimum speed in knots of (1.8 x square root of LWL in metres) or (square root of LWL in feet).
*	<i>Yachts shall start the race with a minimum of 6 imperial gallons (27.72 litres) of fuel. Yachts with outboard engines shall carry their fuel in an O.E.M. tank matching the engine.</i>
c)	Have adequate protection from the effects of heavy weather.
d)	When an electric starter is the only method for starting the engine, have a separate battery, the primary purpose of which is to start the engine.
e)	Have each fuel tank provided with a shutoff valve. Except for permanently installed linings or liners, a flexible tank is not permitted as a fuel tank.
3.29	Communications Equipment, EPFS (Electronic Position-Fixing System), Radar
3.29.1	The following shall be provided:
a)	A marine radio transceiver.
e)	A hand-held marine VHF transceiver, watertight or with a water proof cover. When not in use to be stowed in a grab bag or emergency container (see OSR 4.21)
i)	An EPFS (Electronic Position-Fixing System) (e.g. GPS)
*	<i>A radar reflector that is assembled and mounted is required and shall be operational from start to finish of race. It shall be located no lower than the height of the lower spreaders or 13 feet above the</i>

	<i>deck, whichever is lower.</i>
4.03	Soft Wood Plugs
	Soft wood plugs, tapered and of the appropriate size, shall be attached or stowed adjacent to the appropriate fitting for every through-hull opening. (See also 3.10)
4.04	Jackstays, Clipping Points and Static Safety Lines
4.04.1	The following shall be provided:
a)	Jackstays:- Designed for the purpose.
	Shall be provided-
i	Attached to through-bolted or welded deck plates or other suitable and strong anchorage fitted on deck, port and starboard of the yacht's centre line to provide secure attachments for safety harness:-
iv	20kN (2,040 kgf or 4,500 lbf) min breaking strain webbing is recommended;
4.04.2	Clipping Points:-
	Shall be provided-
a)	Attached to through bolted or welded deck plates or other suitable and strong anchorage points adjacent to stations such as the helm, sheet winches and masts, where crew members work for long periods.
b)	Which, together with jackstays and static safety lines shall enable a crew member-
i	To clip on before coming on deck and unclip after going below;
ii	Whilst continuously clipped on, to move readily between the working areas on deck and the cockpit(s) with the minimum of clipping and unclipping operations.
*	<i>A boarding ladder or other means of retrieving crew from the water is required. As the fittest crew are usually totally incapable of climbing a boarding ladder after only a relatively short time in the water, lifting tackle which would assist in retrieval is also required. A life sling or functional equivalent is a <u>highly recommended</u> addition to the safety equipment.</i>
4.06	Anchor(s)
*	<i>All yachts shall carry at least one anchor with 200 feet of rode, rigged for immediate use. (i.e., assembled if of the collapsible type),. Rodes shall be arranged for tangle free deployment with the bitter end securely attached to the boat. Yachts 30 ft or over shall carry a second anchor with 100 feet of rode. Rec. A combination chain and rope is recommended.</i>
4.07	Flashlight(s)
4.07.1	The following shall be provided:-
a)	A watertight, high-powered flashlight or spotlight, with spare batteries and bulbs, and
b)	A watertight flashlight with spare batteries and bulb.

4.08	First Aid Manual and First Aid Kit
4.08.1	A suitable First Aid Manual shall be provided
	In the absence of a National Authority's requirement, the latest edition of one of the following is recommended:-
b)	First Aid at Sea, by Douglas Justins and Colin Berry, published by Adlar Coles Nautical, London.
c)	Le Guide de la medicine a distance, by Docteur J Y Chauve, published by Distance Assistance BP33 F-La Baule, cedex, France. An English translation may be available.
4.08.2	A First Aid Kit shall be provided
4.08.3	The contents and storage of the First Aid Kit should reflect the guidelines of the Manual carried, the likely conditions and duration of the passage, and the number of people aboard the yacht.
4.08.5	At least one member of the crew shall be familiar with First Aid procedures, hypothermia and relevant communications systems. Medical profiles of crew members should be available on the boat.
*	<i>A minimum of two (2) blankets or sleeping bags are required. Warm clothing is essential. Survival suits are highly recommended.</i>
4.09	Foghorn
*	<i>A compressed air foghorn plus refill shall be provided.</i>
4.11	Navigation Equipment
4.11.1	Charts
	Navigational charts (not solely electronic), light list and chart plotting equipment shall be provided.
4.12	Safety Equipment Location Chart
	A safety equipment location chart in durable waterproof material shall be displayed in the main accommodation where it can best be seen, clearly marked with the location of principal items of safety equipment.
4.13	Depth
*	<i>A depth sounder shall be provided</i>
4.14	Speedometer or Distance Measuring Instrument (log)
4.14.1	A speedometer or distance measuring instrument (log) shall be provided.
4.15	Emergency Steering
4.15.1	Emergency steering shall be provided as follows:
a)	Except when the principal method of steering is by means of an unbreakable metal tiller, an emergency tiller capable of being fitted to the rudder stock; (Spare wood tiller).
b)	Crews must be aware of alternative methods of steering the yacht in any sea condition in the event of rudder loss. At least one method must have been proven to work on board the yacht. An inspector may require that this method be demonstrated.

4.16	Tools and Spare Parts
	Tools and spare parts, including effective means to quickly disconnect or sever the standing rigging from the hull shall be provided.
4.17	Yacht's name
	Yacht's name shall be on miscellaneous buoyant equipment, such as lifejackets, cushions, lifebuoys, lifeslings, grab bags etc.
4.18	Marine grade retro-reflective material
	Marine grade retro-reflective material shall be fitted to lifebuoys, lifeslings, liferafts and lifejackets.
4.22	Lifebuoys
4.22.1	The following shall be provided within easy reach of the helmsman and ready for instant use:
a)	A coastguard approved lifebuoy with a self-igniting light and a drogue or a lifesling equivalent with a self-igniting light and without a drogue.
4.22.3	Each inflatable lifebuoy and any automatic device (eg pole and flag extended by compressed gas) shall be tested and serviced at intervals in accordance with its manufacturer's instructions.
4.22.4	Each lifebuoy or lifesling shall be fitted with marine grade retro-reflective material (4.18).
4.23.2	The following light shall be provided and readily available for the purpose of collision avoidance.
b)	A watertight, high-powered white spotlight (searchlight) with spare batteries and bulbs. Plug to accessory switch or recharging unit recommended.
4.24	Heaving Line
a)	A heaving line shall be provided 15 m – 25 m (50 ft – 75 ft) length readily accessible to cockpit.
b)	The "throwing sock" type is recommended
4.25	Knife
*	<i>Personal knife for each crew member.</i>
4.26	Storm & Heavy Weather Sails
4.26.1	Design
a)	It is strongly recommended that persons in charge consult their designer and sailmaker to decide the most effective size for storm and heavy weather sails. The purpose of these sails is to provide safe propulsion for the yacht in severe weather – they are not intended as part of the racing inventory. The areas below are maxima. Smaller areas are likely to suit some yachts according to their stability and other characteristics.
4.26.2	High Visibility

4.26.3	Materials
b)	It is strongly recommended that a heavy-weather jib does not contain aromatic polyamides, carbon and similar fibers other than spectrallydyneema.
*	<i>A mainsail with at least one reefing to reduce the luff by at least 10%</i>
5.01	Lifejacket
5.01.1	Each crew member shall have a lifejacket as follows:-
a)	Equipped with a whistle
b)	Fitted with marine grade retro-reflective material (OSR 4.18)
c)	Compatible with the wearer's safety harness
d)	If inflatable, regularly checked for air retention
e)	Clearly marked with the yacht's or wearer's name
5.01.2	A lifejacket shall have Canadian coast guard approval
c)	A lifejacket light in accordance with SOLAS LSA code 2.2.3 (white, >0.75 candelas, >8 hours);
d)	If inflatable have a compressed gas inflation system, with manual inflation as backup.
e)	It is strongly recommended that a lifejacket has: A splashguard/sprayhood
5.02	Safety Harness and Safety Lines (Tethers)
5.02.1	Each crew member shall have a harness and safety line with a safety line not more than 2m in length.
a)	Warning it is possible for a plain snaphook to disengage from a U-bolt if the hook is rotated under load at right-angles to the axis of the U-bolt. For this reason the use of snaphooks with positive locking devices is strongly recommended.
5.02.4	A crew member's lifejacket and harness shall be compatible
5.02.5	It is strongly recommended that:-
a)	Static safety lines should be securely fastened at work stations;
c)	To draw attention to wear and damage, stitching on harness and safety lines should be of a colour contrasting strongly with the surrounding material recommended;
d)	Snaphooks should be of a type which will not self-release from a U-bolt (see OSR 5.02.1 (a) and which can be easily released under load (crew members are reminded that a personal knife may free them from a safety line in emergency);
e)	A crew member before a race should adjust a harness to fit then retain that harness for the duration of the race.
	US SAILING prescribes that the safety harness may be integrated with an inflatable personal floatation device (see OSR 5.01) and recommends that such devices be employed whenever conditions warrant, and always in rough weather, or cold water, or at night, or under conditions of reduced visibility or when sailing short-handed.

5.02.6	Warning – a safety harness is not designed to tow a person in the water and it is important that a harness is used to minimize or eliminate the risk of a person's torso becoming immersed in water outside the boat. The diligent use of a properly adjusted safety harness is regarded as by far the most effective way of preventing man overboard incidents.
5.09	Annual Man-Overboard Practice
	US SAILING prescribes that the "Quick-Stop" man-overboard procedure shall be practiced aboard the yacht at least once annually. A certificate of such practice shall be signed by crew members as defined in notice of race.
5.10	CPR Training
	US SAILING recommends that at least two members of the crew be currently certified in cardiopulmonary resuscitation.
5.11	Preventer or Boom Restraining Device
	A preventer or boom restraining device shall be rigged in such a manner that attachment can be easily and quickly made, with the boom fully extended (running) without leaving the deck or leaning overboard. A process and plan for its use should be part of the crew's training and practice. Recommended for all boats in all categories.
*	<i>A "Ditch" bag, rigged so as to float (e.g. attached to a fender) containing equipment for use in the event of abandoning ship (dye markers, flares, waterproof VHF (same radio as item 5.8(B), mirror, knife, etc.) is required.</i>

- * For ease of cross reference to the O.R.C. Special Regulations for Offshore Racing, 2008 to 2009, we are maintaining the page format, headings and reference numbering found therein. A comparison of that document and our Appendix A can easily show which requirements do not apply to this event. There are requirements for this race which do not appear in the Category 3 ORC regulations. These are shown in Italics with an asterisk, not numbered and are placed under the appropriate headings. We invite your questions and comments which should be addressed to Carson Woods, Chair, LO 300 Safety Subcommittee at cwoods@ewal.ca