# Extracts for: Category 3 Monohulls including Sail Canada and R2K Prescriptions

**Because this is an extract, not all paragraph numbers will be present**

Guidance notes and recommendations have been removed from the Regulations and are available at:

https://d7qh6ksdplczd.cloudfront.net/sailing/wp-content/uploads/2025/12/05110802/WS_Offshore_Special-Regulations_2026-2027_v1_wcover.pdf

The use of the masculine gender shall be taken to mean any gender.



Guidance notes and recommendations have been removed from the Regulations and are available on https://www.sailing.org/inside-world-sailing/rules-regulations/offshore-special-regulations/

The use of the masculine gender shall be taken to means any gender.

**Administration**

The Offshore Special Regulation are administered by the World Sailing Special Regulation Sub-Committee whose terms of reference are as follows:
(www.sailing.org/rules-regulations)
World Sailing Regulation 6.9.8.3 - The Special Regulations Sub-Committee shall advise and report to the Oceanic & Offshore Committee on:

a) the maintenance, revision and changes to the World Sailing Offshore Special Regulations governing offshore racing, under licence from ORC Ltd. Such changes shall be biennial with revised editions published in January of each even year, except that matters of an urgent nature affecting safety may be dealt with by changes to the Regulations on a shorter time scale;

b) monitor developments in offshore racing relative to the standards of safety and seaworthiness.

**For any queries regarding Sail Canada prescriptions please email:** offshore@sailing.ca **For any queries about these R2K Safety Requirements, please email: R2K@MimicoCrusingClub.com**

# SECTION 1 – FUNDAMENTAL AND DEFINITIONS

## 1.01 Purpose and Use

**1.01.1**The purpose of the Offshore Special Regulations (OSR) is to establish uniform minimum equipment, accommodation and training standards for monohull and multihull (excluding proa [asymmetrical catamaran]) boats racing offshore.

**1.01.2** The OSR do not replace, but 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.

**1.01.3** Use of the OSR does not guarantee total safety of the boat and her crew. Particular attention is drawn to the description of OSR 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 OSR categories.

## 1.02 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 all weather. The *person in charge* shall also assign a person to take over his responsibilities in the event of his incapacitation.

**1.02.2** Neither the establishment of the OSR, nor their use by *organising 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*.

**1.02.3** By participating in a race conducted under the OSR, the *person in charge*, each competitor and boat owner agrees to reasonably cooperate with the *organising authority* and World Sailing in the development of an independent incident report as specified in OSR 2.02.

## 1.03 Definitions, Abbreviations, Word Usage

**1.03.1** Table 1 – Definitions of Terms used in this document

| Abbreviation | Description |
|---|---|
| # | Pound force (lbf) |
| ABS | American Bureau of Shipping |
| AIS | Automatic Identification Systems |
| Coaming | The part of the cockpit, including the transverse after limit, over which water would run when the boat is floating level and the cockpit is filled to overflowing |
| COLREGS | International Regulations for Preventing Collisions at Sea |
| Contained Cockpit | A cockpit where the combined area open aft to the sea is less than 50% maximum cockpit depth x maximum cockpit width |
| Crewmember | Every person on board |
| DSC | Digital Selective Calling |
| EN | European Norm |

| | |
|---|---|
| EPIRB | Emergency Position-Indicating Radio Beacon |
| ERS | World Sailing - Equipment Rules of Sailing |
| First Launch | Month & year of the first launching when the individual boat, was completed and equipped for sailing |
| GMDSS | Global Maritime Distress & Safety System |
| GNSS | Global Navigation Satellite System |
| Hatch | The term hatch includes the entire hatch assembly including the lid or cover as part of that assembly |
| HMPE | High Modulus Polyethylene (Dyneema®/Spectra® or equivalent) |
| IBRD | International Beacon Registration Database |
| IMO | International Maritime Organization |
| ISAF | International Sailing Federation – (now World Sailing) |
| ISO | International Standard Organization or International Organization for Standardization |

| | |
|---|---|
| Jackstay | A securely fastened webbing or rope which permits a crewmember to move from one part of the boat to another without having to unclip a deck safety harness tether |
| $L_H$ | Hull Length as defined by the ERS |
| Lifeline | Rope or wire line rigged as guardrail/guardline around the deck |
| LSA | IMO International Life-Saving Appliance Code |
| $L_{WL}$ | (Length of) loaded waterline |
| Moveable Ballast | Material carried for the sole purpose of increasing weight and/or influencing stability and/or trim and which may be moved transversely but not varied in weight while a boat is racing |
| ORC | Offshore Racing Congress (formerly Offshore Racing Council) |
| OSR | Offshore Special Regulation(s) |
| Permanently Installed | The item is effectively built-in by e.g. bolting, welding, glassing etc. and may not be removed for or during racing |
| PLB | Personal Locator Beacon |

| | |
|---|---|
| Rode | Rope, chain, or a combination of both, which is used to connect an anchor to the boat |
| RRS | World Sailing – Racing Rules of Sailing |
| Securely Fastened | Held strongly in place by a method (e.g. rope lashings, wing nuts) which will safely retain the fastened object in severe conditions including a 180° capsize and allows for the item to be removed and replaced during racing |
| SOLAS | Safety of Life at Sea Convention |
| SSS | The Safety and Stability Screening numeral |
| STCW | Standards of Training, Certification and Watchkeeping for Seafarers |
| STIX | ISO 12217-2 Stability Index |
| Tether | A line or webbing used to connect a deck safety harness to a strong point or jackstay |
| Variable Ballast | Water carried for the sole purpose of influencing stability and/or trim and which may be varied in weight and/or moved while a boat is racing. |
| World Sailing | formerly the International Sailing Federation or ISAF |

1.03.2 The words “shall” and “must” are mandatory, and “should” and “may” are permissive.

# SECTION 2 – APPLICATION & GENERAL REQUIREMENTS

### 2.01 Categories of Events

*Organising authorities* shall select from one of the following categories and may modify the OSR to suit local conditions.

### 2.01.4 Category 3

Races across open water, most of which is relatively protected or close to shorelines.

### 2.02 Incident Reporting

The *organising authority* of a race will establish whether any incidents occurred, which if reported would likely be relevant to evolving the Offshore Special Regulations, the plan review process, or in increasing safety. The *organising authority* will follow any guidelines issued by World Sailing concerning incident reporting.

### 2.03 Inspection

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.

### 2.04 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 whilst racing,
d) when not in use to be stowed in conditions which minimise deterioration,
e) be readily accessible, and
f) be of a type, size and capacity suitable and adequate for the intended use and size of the boat.

**2.04.2** Heavy items shall be permanently installed or securely fastened.

# SECTION 3 – STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT

A boat shall be/have:

### 3.01 Strength of Build and Rig

**3.01.1** Properly rigged, fully seaworthy and shall meet the OSR.

**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).

**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.

### 3.02 Watertight and Structural Integrity of a Boat

**3.02.1** Essentially watertight and all openings shall be capable of being immediately secured. Centreboard or 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.

### 3.02.4 R2K highly recommends that

At a haul-out within 2 years prior to the event, the owner or his/her representative shall inspect the integrity of the keel and rudder following the recommendations in Appendix L.

### 3.02.5 R2K highly recommends that

Inspection after Grounding – an appropriately qualified person shall conduct an internal and external inspection after each unintentional grounding.

### 3.04 Stability – Monohulls

**3.04.1** c) Compliant with ISO 12217-2[a] design category B, or higher or the requirements of OSR 3.04.2, OSR 3.04.3 or OSR 3.04.4.

[a] This can be demonstrated either by EC Recreational Craft Directive certification having obtained the CE mark or by 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.

**3.04.2** Table 2 – STIX, AVS and m*$A_{GZ}$

| Race Category | 0,1,2 | 3 |
|---|---|---|
| minimum ISO 12217-2 Stability Index (STIX) | 32 | 23 |
| minimum ISO 12217-2 Angle of Vanishing Stability (AVS) | 130- 130-0.002*$m_c$ | 0.005*$m_c$ |
| but AVS always >= | 100° | 95° |
| a minimum righting energy m*AGZ (where AGZ is the positive area under the righting lever curve in the minimum operating condition, expressed in kg metre degrees from upright to AVS) | 172 000 | 57 000 |

c where “m” is the mass of the boat in the minimum operating condition as defined in ISO 12217-2.

**3.04.3** Table 3 – ORC Stability Index Race Category

| Race Category | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| minimum Stability Index in ORC Rating System, or | 120 | 115 | 110 | 103 |

| | | |
|---|---|---|
| For tables 2 and 3, Sail Canada Prescribes that if the minimum righting energy (above) is not available, the boat shall have a minimum sailing weight “m” of: | 3 000 kg | 1 500 kg |

**3.04.4** Table 4 – IRC Safety and Stability Screening numeral (SSS)

| Race Category | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| SSS may only be used if the series date is before | | | 1995 | 2000 |
| minimum IRC Safety and Stability Screening numeral (SSS) Base value | | | 28 | 15 |

### 3.06 Exits – Monohulls

**3.06.1** If the series date is after 1994 and Lh is 8.5m (28’) and greater, a boat shall have at least two exits. One exit shall be located forward of the foremost mast except where structural features prevent its installation.

**3.06.2** If first launched after 2013, the minimum clear hatch openings shall be:

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 m2 (1.9 ft2).

### 3.08 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 m2 (110 in2).

**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° capsize,
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 m2 (110 in2).

**3.08.3** Hatches not conforming with OSR 3.08.1 and OSR 3.08.2 shall be clearly labelled and used in accordance with the following instruction “NOT TO BE OPENED AT SEA”.

**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, and
  iii) permit exit in the event of inversion.

**3.08.5** If a monohull with cockpit(s) that is/are not contained cockpit(s) a boat shall have:

a) a companionway sill that does not extend below the local sheerline, or
b) a companionway in full compliance with ISO 11812 category A.

**3.08.6** If a monohull with contained cockpit(s) where the companionway extends below the local sheerline, a boat shall have panels capable of blocking the companionway up to the level of the local sheerline whilst giving access to the interior.

**3.09 Cockpits**

**3.09.1** General

a) cockpits shall self-drain quickly by gravity at all angles of heel and are permanently incorporated as an integral part of the boat,

b)a cockpit sole shall be at least 2% $L_{WL}$ above the waterline (or in IMS boats with first launch before 2003, at least 2% Lwl above the waterline), and
c) a bow, lateral, central, or stern well is a cockpit for the purposes of OSR 3.09

**3.09.2** Cockpit Volume

The maximum combined volume below lowest coamings of all contained cockpits shall be:

b) series date before April 1992: 9% ($L_{WL}$ x maximum beam x freeboard abreast the cockpit),
c) series date after March 1992 as above for the appropriate category except that "lowest coamings" shall not include any aft of the FA station (the transverse station at which the upper corner of the transom meets the sheerline) and no extension of a cockpit aft of the working deck shall be included in calculation of cockpit volume.

**3.09.3** Cockpit Drains

Cockpit drain cross section area of unobstructed openings (after allowance for screens if fitted) shall be at least that of:

a) if less than 8.5m (28') Lh: 2 X 25mm (1") diameter or equivalent,
b) if 8.5m (28') Lh or greater: 4 X 20mm (3/4") diameter or equivalent.

## 3.10 Sea Cocks or Valves

Permanently installed sea cocks or valves on all through-hull openings below the waterline except for integral deck scuppers and instrument through-hulls.

## 3.11 Sheet Winches

Sheet winches mounted in such a way that an operator is not required to be substantially below deck.

## 3.12 Mast Step

The heel of a keel stepped mast securely fastened to the mast step or adjoining structure.

## 3.14 Pulpits, Stanchions, Lifelines

**3.14.1** General

The perimeter of the deck surrounded by system of lifelines and pulpits as follows:

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,

b) minimum heights of lifelines and pulpit rails above the perimeter of the deck and vertical openings:

i) upper: 600 mm (24”),
ii) intermediate: 230 mm (9”),
iii) vertical opening: no greater than 380 mm (15”) except that on a boat with a series date before 1993 where it shall be no greater than 560 mm (22”),
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”).

c) lifelines permanently supported at intervals of not more than 2.2 m (7’-2 1/2”) and not passing outboard of supporting stanchions,

d) pulpit and stanchion bases permanently installed with pulpits and stanchions mechanically retained in their bases,

e) the outside of pulpit and stanchion base tubes no further inboard from the perimeter of the deck than 5% of boat beam or 150 mm (6”), whichever is greater, nor further outboard than the perimeter of the deck. If a boat’s series date is after 2024 the perimeter of the deck is defined as the hull and deck intersection at an angle of not more than 15° to the horizontal in a transverse plane when the boat is upright,

f) stanchions straight and vertical except that:
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”),
ii) stanchions may be angled to not more than 10° from vertical at any point above 50 mm (2”) from the deck.

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”),

h) lifelines may terminate at or pass through adequately braced stanchions set inside and overlapping the bow pulpit,

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:
i) 50 mm (2”) for an upper or single lifeline,
ii) 120 mm (4 3⁄4”) for an intermediate lifeline.

### 3.14.3 Lifeline Specifications

a) lifelines of stranded stainless steel wire,

c) The minimum diameter is specified in table 5 below,

d) **R2K Modifies 3.14.3D to Vinyl coated lifelines are permitted in R2K events.**

**Skippers are required to remove the coating to either side of any apparent rust and verify the integrity of the lifelines; this is particularly important for older yachts with original lifelines or yachts that have been exposed to salt water in the past.**

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,

e) 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,

f) All components of the lifeline enclosure system shall have a breaking strength no less than the lifeline,

Table 5 – Lifeline Diameter Requirements

| $L_H$ | Wire Min. lifeline diameter | HMPE rope (Single braid) min. lifeline diameter | HMPE Core (Braid on braid) min. lifeline outside diameter |
|---|---|---|---|
| under 8.5 m (28’) | 3 mm (1/8”) | 4 mm (5/32”) | 6 mm (1/4”) |
| 8.5m – 13 m | 4 mm (5/32”) | 5 mm (3/16”) | 7 mm (9/32”) |
| over 13 m (42’ 8”) | 5 mm (3/16”) | 5 mm (3/16”) | 7 mm (9/32”) |

### 3.17 Toe Rail or Foot-Stop

**3.17.1** Permanently installed toe rail of minimum height 25 mm (1”), located at or no more than 100 mm (4”) inboard of the perimeter of the deck from at least forward of the mast.

**3.17.2** On a boat with series date before 1984, an additional lifeline of between 25–50 mm (1–2”) high is permitted in lieu of a toe rail

### 3.18 Toilet

**3.18.2 R2K modifies 3.18.2 to delete fitted bucket. Black water discharge is not permitted on Lake Ontario.**

Permanently installed toilet or fitted bucket.

### 3.19 Bunks

**3.19.1** Permanently installed bunks.

### 3.20 Cooking Facilities

Permanently installed cooking stove, capable of being operated safely at sea, with fuel shutoff control.

### 3.21 Drinking Water Tanks & Drinking Water

**3.21.1** Drinking Water Tanks

c) permanently installed delivery pump and water tank(s), or reusable container(s) capable of providing drinking water for the likely duration of the passage.

**3.21.3** Emergency Drinking Water

a) at least 2 L (0.5 US Gal) per person of drinking water for emergency use in a dedicated and sealed container or container(s).

### 3.22 Hand Holds

Adequate hand holds fitted below deck.

### 3.23 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,

c) one permanently installed manual bilge pump,

**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.

**3.23.3** Bilge pumps shall not be connected to cockpit drains and shall not discharge into a contained cockpit.

**3.23.4** Bilge pumps shall be readily accessible for maintenance and for clearing out debris.

**3.23.5** All removable bilge pump handles retained by a lanyard.

### 3.24 Compass

Marine magnetic compass capable of being used as a steering compass:

a) Permanently installed marine magnetic steering compass, independent of any power supply, correctly adjusted with deviation card,
b) a second compass which may be hand-held and/or electronic.

### 3.25 Halyards

**3.25.1** A minimum of two halyards, each capable of hoisting a sail, on each mast.

**3.25.2** No halyard shall be locked, lashed, or otherwise secured to the mast in a way that requires a person to go aloft to lower a sail in a controlled manner, except for a headsail in use with a furling device.

### 3.27 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.

**3.27.2** Mounted above sheerline and so that they will not be masked by sails or the heeling of the boat.

**3.27.3** Reserve lights having the same specifications as above, and that can be powered independently.

**3.27.4** Spare bulbs (not required for LED).

### 3.28 Engines, Generators, Fuel

**3.28.1** Propulsion Engines

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 √ $L_{WL}$ in metres) or (√$L_{WL}$ in feet),

e) either an inboard or outboard engine, with associated power supply systems,
all securely fastened,

f) an inboard combustion engine shall have a permanently installed exhaust, cooling system, fuel supply, fuel tank(s) and shall have adequate heavy weather protection,

g) 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.

**3.28.2** Generator

If an optional generator separate from the propulsion engine is carried, it shall be installed in accordance with the manufacturer's guidelines.

**3.28.3** Liquid Fuel Systems

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.

**3.28.4** Battery Systems

a) batteries installed after 2011 shall be of the sealed type from which liquid electrolyte cannot escape,
b) 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.
c) a dedicated engine/generator starting battery when an electric starter is the only method for starting the engine and/or separate generator,

**3.29 Communications Equipment, GNSS, Radar, AIS**

**3.29.1** A hand-held marine VHF transceiver, with minimum 5 W output power, for each grab bag, watertight or with a waterproof cover. When not in use to be stowed in the grab bag (see OSR 4.21).

**3.29.4** A second radio receiver, which may be the handheld VHF in OSR 3.29.1 above, capable of receiving weather bulletins.

**3.29.5** A marine radio transceiver with an emergency antenna when the regular antenna depends upon the mast.
Sail Canada prescribes that a boat shall have a VHF radio transceiver in accordance with 3.29.6.

**3.29.6** If the marine radio transceiver is a VHF:

a) a minimum rated output power of 25 W,

b) if installed after 2015 be DSC capable,

e) a masthead antenna and co-axial feeder cable with not more than 40% power loss,

f) DSC capable VHF transceivers shall be programmed with an assigned MMSI (unique to the boat), be connected to a GNSS receiver and be capable of making distress alert calls as well as sending and receiving a DSC position report with another DSC equipped station,

h) if the number of crewmembers is fewer than 3, have an external speaker in the cockpit.

**3.29.7** **R2K highly recommends 3.29.7 a) b)**
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.

**3.29.8** A GNSS.

# SECTION 4 – PORTABLE EQUIPMENT

### 4.01 Sail Letters & Numbers

**4.01.1** Identification on sails which complies with RRS 77 and RRS Appendix G.

**4.01.2** An alternative means of displaying identification as required under RRS Appendix G for a mainsail, to be displayed when none of the numbered sails are set.

### 4.03 Soft Wood Plugs

A tapered soft wood plug stowed adjacent to every through-hull opening.

### 4.04 Jackstays and Clipping Points

**4.04.1** Permanently Installed fittings for jackstay ends and clipping points.

**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.

**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,

### 4.05 Fire Fighting Equipment

**4.05.1** A fire blanket adjacent to every cooking device.

**4.05.2** 2 fire extinguishers, each with 2 kg of dry powder or equivalent, in different parts of the boat.

### 4.06 Anchors

**4.06.1** 2 un-modified anchors that meet 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 except that for a boat less than 8.5 m (28') LH there shall be 1 anchor meeting the same criteria.

### 4.07 Flashlights and Searchlights

Flashlights and searchlights need to be watertight (min IP67 rated), need to have spare batteries or be rechargeable, have spare bulbs or be an LED type, and need to provide at least 400 Lumens. The following need to be provided:

a) a searchlight, suitable for searching for a person overboard at night and for collision avoidance,

b) stowed in each grab bag (see OSR 4.21), a flashlight.

c) for boats with only two crewmembers, the searchlight detailed in 4.07 a) shall be accessible from the cockpit without having to go below deck.

### 4.08 First Aid Manual and First Aid Kit

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 crewmembers.

### 4.09 Foghorn

A foghorn.

### 4.10 Radar Reflector

**4.10.1** A passive radar reflector with:

a) octahedral circular plates of minimum diameter 30 cm (12"),
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 m2 (22 ft2) from 0–360° of azimuth and ±20° of heel.

### 4.11 Navigation Equipment

**4.11.1** Navigational charts (not solely electronic) and chart plotting equipment.

### 4.12 Safety Equipment Location Chart

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.

### 4.13 Depth, Speed and Distance Instruments

**4.13.1** A knotmeter or distance measuring instrument (log).

**4.13.2** A depth sounder.

### 4.15 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.

**4.15.2** A proven method of emergency steering with the rudder disabled.

### 4.16 Tools and Spare Parts

**4.16.1** Tools and spare parts, suitable for the duration and nature of the passage.

**4.16.2** An effective means to quickly disconnect or sever the standing rigging from the boat.

### 4.17 Boat's Name

The boat's name on miscellaneous buoyant equipment, such as lifejackets, cushions, lifebuoys, recovery slings, grab bags, etc.

### 4.18 Retro-Reflective Material

Marine grade retro-reflective material on lifebuoys, recovery slings, liferafts and lifejackets.

### 4.21 Grab Bags (R2K requires)

**4.21.1** A grab bag shall have inherent flotation, at least 0.1 m2 (1 ft2) area of highly visible colour (e.g. dayglo yellow or orange) on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip. If a grab bag has to accompany a specific life raft, it shall be clearly marked with the identity of its corresponding raft

**4.21.4** The following shall either be stowed with a liferaft or a in grab bag. The grab bag shall be readily accessible whether or not the boat is inverted:

a) 3 hand flares,

b) watertight strobe light with spare batteries (may be part of the flashlight),

c) knife, and

d) whistle.

**4.22 Crew Overboard Identification and Recovery**

**4.22.2** GNSS Crew Overboard Position

a) For boats with only two crewmembers, a GNSS capable of recording a crew overboard position, within 10 seconds, and monitoring that position without having to go below deck.

**4.22.3** Lifebuoys

a) a lifebuoy with a self-igniting light, a whistle, and a drogue within reach of the helmsman and ready for immediate use,
e) each inflatable lifebuoy and any automatic device shall be tested and serviced at intervals in accordance with its manufacturer's instructions.

**4.22.4** Heaving Line

A heaving line, no less than 6 mm (1/4") diameter, 15–25 m (50–75') long, readily accessible to cockpit.

**4.22.5** Recovery Sling

A recovery sling which includes a:

a) buoyant line of length no less than the shorter of 4 times $L_H$ or 36m (120'),

b) buoyancy section (horseshoe) with no less than 90 N (20#) buoyancy,

c) minimum strength capable to hoist a crewmember aboard.

### 4.23 Pyrotechnic and Light Signals

**R2K accept Governmental authority requirements for pyrotechnic and light signals in accordance with vessel registry, modifying 4.23 a) and b)**

Pyrotechnic signals shall be provided conforming to 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) 2 orange smoke LSA III 3.3,
b) 4 red hand flares LSA III 3.2.

### 4.25 Cockpit Knife

A strong, sharp knife, in a securely restrained sheath shall be readily accessible from the deck or a cockpit.

### 4.26 Storm & Heavy Weather Sail Inventory

**R2K requires an adequate means of reefing the mainsail by at least 30% of the luff length shall be installed (12% shall suffice if a storm jib, number 4 jib or roller furling genoa is on board ). This modifies the entirety of 4.26 and 4.27**

the following storm & heavy weather sails as specified in OSR 4.27:

**4.26.3** either a storm trysail or mainsail reefing to reduce the luff by at least 40% (or rotating wing mast if suitable),

**4.26.5** heavy weather jib,

### 4.27 Storm & Heavy Weather Sail Specifications

Where required by OSR 4.26, the specifications of heavy weather sails shall follow:

**4.27.1** Design

a) the material of the body of a storm sail purchased after 2013 shall have a highly visible colour (e.g. dayglo pink, orange or yellow),

b) aromatic polyamides, carbon and similar fibres shall not be used in a trysail or storm jib, but HMPE and similar materials are permitted,

c) sheeting positions on deck for each storm and heavy-weather sail,

d) sheeting positions for the trysail independent of the boom, and

e) A storm jib may not be set in conjunction with any other sail set forwards of the forward mast spar.

4.27.2 A Storm Trysail with:

a) area not greater than 17.5% mainsail hoist (P) x mainsail foot length (E),

b) the storm trysail area shall be calculated as (0.5 x leech length x shortest distance between tack point and leech),

c) no headboard,

d) no battens,

e) sail number and letters on both sides, as large as practicable,

f) 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, and

g) designed to provide propulsion and steerage in Beaufort scale 8 and on all points of sail.

**4.27.3** A Heavy Weather Jib (or Heavy Weather Sail in a Boat with no Forestay) with:

a) area, in unreefed condition, not greater than 13.5% height of the foretriangle squared,
b) heavy weather jib area shall be calculated as: (0.255 x luff length x (luff perpendicular + 2 x half width)),
c) readily available method, independent of a luff groove, to attach to the stay, and
d) designed to provide propulsion and steerage in Beaufort scale 6 and on all points of sail.

# SECTION 5 – PERSONAL EQUIPMENT

Each crewmember shall have:

**5.01 Lifejacket**

Sail Canada prescribes:

A gas inflatable lifejacket manufactured after 2011, with at least 150N buoyancy, compliant with either UL1180C, and which shall be fitted with items a) through e) below, each equivalent to or complying with ISO 12402-3 or ISO 12402-8:

Or

5.01.1 A gas inflatable lifejacket which shall comply with ISO 12402-3 (Level 150) and have been manufactured after 2011. It shall be fitted with the following, each complying with ISO 12402-3 or ISO 12402-8:

Sail Canada note – ISO 12402 is not currently approved by Transport Canada.

a) a manual or automatic gas inflation system,
Sail Canada prescribes:

- a whistle secured by a cord or line
- retro-reflective material

b) a ride up prevention system (crotch strap or thigh straps),

c) an emergency position indicating light,

d) a sprayhood,
It shall also:

e) a deck safety harness (attachment),

Sail Canada prescribes:

• that is integrated with the lifejacket and complies with OSR 5.02

g) be of the appropriate size range for the crewmember as marked on the PFD, and
h) have been indelibly marked with the name of the owner or boat.

**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.

**R2K modifies 5.01.2 in addition to recommend crewmembers each have a personal MOB device that is conducive with search and rescue efforts on behalf of the boat they are racing on and the assets of the Joint Rescue Coordination Centre (JRCC)Trenton. The JRCC is able to receive DSC distress signals from all points on Lake Ontario.**

**5.01.4** The *person in charge* shall personally check that each lifejacket has been serviced in accordance with the manufacturer's recommendation by an approved service station and that the next service date as marked on the lifejacket has not been exceeded.

Sail Canada prescribes that where the manufacturer permits the lifejacket owner/user to perform the recommended service, the owner/user is considered to be an approved service station.

**5.02 Deck Safety Harness and Tethers**

**5.02.1** A harness that complies with ISO 12401 or equivalent.

**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 hook(s),
c) have self-closing hook(s),
d) have overload indicator flag embedded in the stitching, and
e) be manufactured after 2000.

**5.02.3** either:

a) a tether not exceeding 1 m (3'-3") including the length of the hook(s), or
b) an intermediate self-closing hook on a 2 m (6'-6") tether.

**5.02.5** A tether which has been overloaded shall be replaced.

# SECTION 6 – TRAINING

## 6.01 Training

**6.01.2** Sail Canada prescribes that at least 30% but not fewer than two crewmembers, including the *person in charge* shall have a Sail Canada-accredited Coastal Personal Survival Training course, or training accepted as equivalent by the *organizing authority*, within the five years before the start of the race.

**6.01.5** A refresher course may be taken to renew a certificate if the refresher course is completed within 2 years of the expiration of the individual's most recent Offshore Personal Survival Course certificate.

## 6.02 Training Topics

6.02.1 Giving Assistance to Other Craft
6.02.2 Personal Safety Gear, theory and practice
6.02.3 Care and Maintenance of Safety Gear
6.02.4 Fire Precautions and Firefighting, theory and practical
6.02.5 Crew Overboard Prevention and Recovery
6.02.6 Hypothermia, Cold Shock and Drowning
6.02.7 Crew Health
6.02.8 Marine Weather
6.02.9 Heavy Weather
6.02.10 Storm Sails
6.02.11 Damage Control
6.02.12 Search and Rescue Organisation
6.02.13 Pyrotechnics and Signalling Gear, theory and practical
6.02.14 Emergency Communications, theory and practical
6.02.15 Liferafts and Abandon Ship, theory and practical
6.04 Routine Training Onboard

At least annually the crews shall practice the drills for:

a) crew-overboard recovery, and
b) abandonment of vessel.

## 6.05 Medical Training

**6.05.3** At least two crewmembers shall be familiar with First Aid procedures, hypothermia, drowning, cardio-pulmonary resuscitation, and relevant communications systems.

**APPENDICES TO THE OFFSHORE SPECIAL REGULATIONS**