

Offshore Special Regulations 2018-2019 Extract for Multihulls Category 2



World Sailing Offshore Special Regulations

Extract for Race **Category 2 Multihulls**

JANUARY 2018 - DECEMBER 2019

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With Sail Canada Prescriptions



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

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Official interpretations shall take precedence over these Special Regulations and will be indexed, numbered, dated and displayed on the World Sailing web site www.sailing.org/specialregs

This document is a transcription of the World Sailing Offshore Special Regulations. Sail Canada prescriptions shall take precedence; otherwise if there is a conflict between the two versions, the World Sailing version will govern.

Language & Abbreviations Used

Mo - Monohull

Mu - Multihull

" ** " means the item applies to all types of boat in all Categories except 5 for which see Appendix B or 6 for which see Appendix C.

RED TYPE indicates a significant change in 2018

ITALIC TYPE indicates a term defined in Offshore Special Regulation 1.03.1

BOLD BLUE TYPE indicates a Sail Canada Prescription

Guidance notes and recommendations have been removed from the Regulations and are available on www.sailing.org/documents/offshorespecialregs/index.php

The use of the masculine gender shall be taken to mean either 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/regulations)

World Sailing Regulation 6.9.8.3 - The Special Regulations Sub-Committee shall:

- be responsible for 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;*
- monitor developments in offshore racing relative to the standards of safety and seaworthiness.*

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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*) boats racing offshore.
- 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.
- 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*s 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 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.**
- 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.
- 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 organizing authority and World Sailing in the development of an independent incident report as specified in 2.02.

1.03 Definitions, Abbreviations, Word Usage

- 1.03.1 Definitions of Terms used in this document

TABLE 1

Abbreviation	Description
#	Pound force (lbf)
ABS	American Bureau of Shipping
Age Date	Month/year of <i>first launch</i>
AIS	Automatic Identification Systems
CEN	Comité Européen de Normalisation
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
CPR	Cardio-Pulmonary Resuscitation
Crewmember	Every person on board
DSC	Digital Selective Calling
EN	European Norm
EPIRB	Emergency Position-Indicating Radio Beacon
ERS	<i>World Sailing</i> - Equipment Rules of Sailing
FA Station	The transverse station at which the upper corner of the transom meets the sheerline
First Launch	Month & year of first launch of the individual boat
Foul-Weather Suit	Clothing designed to keep the wearer dry and which may consist of one piece or several
GMDSS	Global Maritime Distress & Safety System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System

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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 Organisation
IMSO	The International Mobile Satellite Organisation, the independent, intergovernmental organisation that oversees <i>Inmarsat's</i> performance of its Public Service Obligations for the <i>GMDSS</i> and reports on these to <i>IMO</i>
INMARSAT	Inmarsat Global Limited is the private company that provides <i>GMDSS</i> satellite distress and safety communications, plus general communications via voice, fax and data
ISAF	International Sailing Federation (now World Sailing)
ISO	International Standard Organization or International Organization for Standardization
ITU	International Telecommunications Union
Jackstay	A <i>securely fastened</i> webbing or rope which permits a <i>crewmember</i> to move from one part of the boat to another without having to unclip a safety harness <i>tether</i> .
L _H	Hull Length as defined by the <i>ERS</i>
Lifeline	Rope or wire line rigged as guardrail / guardline around the deck
LSA	<i>IMO</i> International Life-Saving Appliance Code
LWL	(Length of) loaded <i>waterline</i>
Monohull	A boat with one hull
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
Multihull	A boat with more than one hull
Open Cockpit	A cockpit that is not a <i>contained cockpit</i>
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
Primary Launch	Month & Year of <i>first launch</i> of the first boat of the production series or <i>first launch</i> of a non-series boat
Proa	Asymmetric Catamaran
Rode	Rope, chain, or a combination of both, which is used to connect an anchor to the boat.
RRS	ISAF <i>WS</i> Racing Rules of Sailing
Safety Line	A tether used to connect a safety harness to a strong point
SAR	Search and Rescue
SART	Search and Rescue Transponder
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
Static Ballast	Material carried for the sole purpose of increasing weight and/or to influencing stability and/or trim and which is not moved or varied in weight while a boat is racing
Static Safety Line	A safety line (usually shorter than a <i>safety line</i> carried with a harness) kept clipped on at a work-station

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STIX	<i>ISO 12217-2</i> Stability Index
STWC	Standards of Training - Certification of Watchkeeping
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
Waterline	The water surface when the boat is floating in measurement trim
World Sailing	World Sailing, formerly the International Sailing Federation or <i>ISAF</i>
WS	World Sailing, formerly the International Sailing Federation or <i>ISAF</i>

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

1.03.3 The word "yacht" shall be taken as fully interchangeable with the word "boat"

SECTION 2 - APPLICATION & GENERAL REQUIREMENTS

2.01 Categories of Events

Organizing Authorities shall select from one of the following categories and may modify the *OSR* to suit local conditions

2.01.3 Category 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 boats

2.02 Incident Reporting

The Organizing Authority of a race will establish whether any incidents occurred, which if reported would be likely to be relevant to evolving the Offshore Special Regulations, the plan review process, or in increasing safety. The Organizing 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) 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.

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

3.02 Watertight Integrity of a Boat

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*

3.03.2 A *monohull* with *primary launch* between 1987 and 2010, and all *multihulls*, shall have been designed, built, maintained, modified or repaired in accordance with the requirements of:

- c) the EC Recreational Craft Directive for Category A having obtained the CE mark, or
- d) *ISO 12215* Category A, with written statements signed by the designer and builder confirming that they have respectively designed and built the boat in accordance with the *ISO* standard, and
- e) have written statements or approvals in accordance with a), or b) or c) and d) above for all significant repairs or modifications to the hull, deck, coach roof, keel or appendages, on board, except
- f) that a race organizer or class rules may accept, when that described in (a), (b), (c), (d) or (e) above is not available, the signed statement by a naval architect or other person familiar with the standards listed above that the boat fulfils these requirements

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3.05 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*)
- 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
- 3.05.3 Designed and built to resist capsize

3.07 Exits and Escape Hatches - Multihulls

3.07.1 Exits

At least two exits in each hull which contains accommodations

3.07.2 Escape Hatches, Underside Clipping Points & Handholds

- a) If 12 m (39'-4") L_H 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") L_H and greater if *first launch* after 2002
 - c) each escape *hatch* shall have been opened both from inside and outside within 6 months prior to the race
 - d) appropriate handholds/clipping points on the underside sufficient for all crew (on a trimaran these shall be around the central hull)
 - e) 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
- 3.07.3 if less than 12 m (39'-4") L_H 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.

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 *Hatches* not conforming with 3.08.1 shall be clearly labelled and used in accordance with the following instruction "NOT TO BE OPENED AT SEA"
- 3.08.3 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
- 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
- 3.08.7 if a *multihull* with a companionway *hatch* extending below the local sheerline either:
 - a) have a minimum sill height of 300 mm (12") and be capable of being blocked off up to the level of the local sheerline whilst giving access to the interior with the blocking device(s) in place; or
 - b) be in compliance with *ISO 11812* to design category A

3.09 Cockpits

- 3.09.1 Cockpits that self-drain quickly by gravity at all angles of heel and are permanently incorporated as an integral

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- part of the boat
- 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*)
- 3.09.3 A bow, lateral, central or stern well is a cockpit for the purposes of *OSR* 3.09
- 3.09.4 Cockpit Volume**
The maximum combined volume below lowest *coamings* of all *contained cockpits* shall be:
- primary launch* before April 1992: 9% (*LWL* x maximum beam x freeboard abreast the cockpit)
 - 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
- 3.09.5 Cockpit Drains**
Cockpit drain cross section area of unobstructed openings (after allowance for screens if fitted) shall be at least that of:
- 2 x 25 mm (1") diameter or equivalent for a boat less than 8.5 m (28') *L_H*
 - 4 x 20 mm (3/4") diameter or equivalent for a boat 8.5 m (28') *L_H* or greater
- 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
- 3.13 Watertight Bulkheads**
- 3.13.1 Either a watertight "crash" bulkhead within 15% of *L_H* from the bow and abaft the forward end of *LWL*, or *permanently installed* closed-cell foam buoyancy effectively filling the forward 30% *L_H* of the hull
- 3.13.2 Any required watertight bulkhead to be strongly built to take a full head of water pressure without allowing any leakage into the adjacent compartment
- 3.14 Pulpits, Stanchions, Lifelines**
- 3.14.1 The perimeter of the deck surrounded by system of *lifelines* and pulpits as follows:
- 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 in 3.14.3 c) shall not modify tension in the *lifelines*.
 - Minimum heights of *lifelines* and pulpit rails above the working deck and vertical openings:
 - upper: 600 mm (24")
 - intermediate: 230 mm (9")
 - 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")
 - Lifelines* permanently supported at intervals of not more than 2.2 m (7'-2 1/2") and shall not pass outboard of supporting stanchions
 - Pulpit and stanchion bases *permanently installed* with pulpits and stanchions mechanically retained in their bases
 - 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
 - Stanchions straight and vertical except that:
 - 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")
 - stanchions may be angled to not more than 10° from vertical at any point above 50 mm (2") from the deck
 - A bow pulpit may be open provided the opening between the pulpit and any part of the boat does not exceed 360 mm (14")

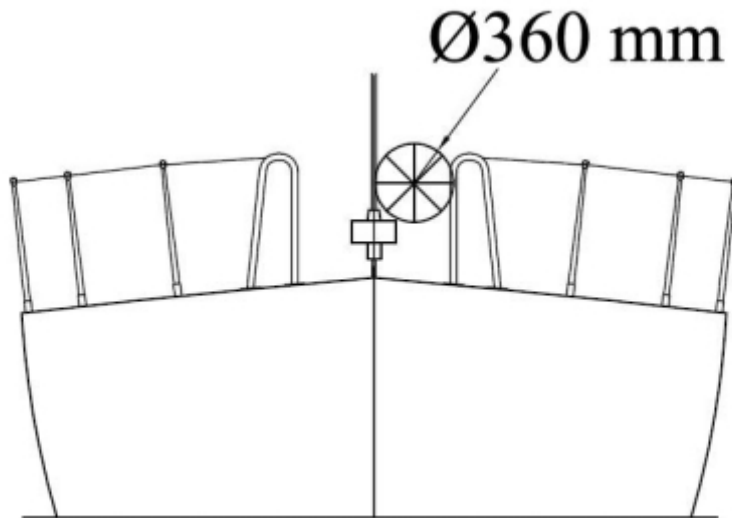


Figure 2 - Diagram Showing Pulpit Opening

- 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 ¾") for an intermediate *lifeline*

3.14.2 Special Requirements for Pulpits, Stanchions, Lifelines on Multihulls

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

3.14.6 Lifeline Specifications

- a) *Lifelines* of either:
 - i stranded stainless steel wire or
 - ii *HMPE*
- b) The minimum diameter as specified in table 8 below
- 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.
- 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
- e) All components of the *lifeline* enclosure system shall have a breaking strength no less than the *lifeline*
- f) When *HMPE* is used, it shall be protected from chafe and spliced in accordance with the manufacturer's recommended procedures

TABLE 8 - Minimum Diameters

L_H	Wire	<i>HMPE</i> rope (Single braid)	<i>HMPE</i> Core (Braid on braid)
under 8.5 m (28')	3 mm (1/8")	4 mm (5/32")	4 mm (5/32")
8.5 m - 13 m	4 mm (5/32")	5 mm (3/16")	5 mm (3/16")
over 13 m (42'-8")	5 mm (3/16")	5 mm (3/16")	5 mm (3/16")

3.15 Multihull Nets or Trampolines

3.15.1 The words "net" and "trampoline" are interchangeable. A net shall be:

- a) essentially horizontal
- 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
- c) solidly fixed at regular intervals on transverse and longitudinal support lines and shall be fine-stitched to a bolt rope
- d) able to carry the full weight of the crew either in normal working conditions at sea or in case of capsize when the boat is inverted.

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3.15.2 Trimarans with Double Crossbeams

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

3.15.3 Trimarans with Single Crossbeams

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)

3.16 Catamarans

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

3.18 Toilet

3.18.1 *Permanently installed* toilet

3.19 Bunks

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

Permanently installed delivery pump and water tank(s)

3.21.3 Emergency Drinking Water

At least 9 l (2.4 US Gal) 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

b) one *permanently installed* manual bilge pump

c) provision to pump out all watertight compartments (except those filled with impermeable buoyancy).

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 ~~Closed~~ *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

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

3.27 Navigation Lights

3.27.1 mounted above sheerline and so that they will not be masked by sails or the heeling of the boat

3.27.2 having light intensity meeting *COLREGS*. When incandescent bulbs are used the minimum power rating shall be:

a) For L_H less than 12 m (39'-4"), 10 W

b) For L_H 12 m (39'-4") and greater, 25 W

3.27.3 reserve lights having the same specifications as above, and that can be powered independently

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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 $(1.8 \times \sqrt{LWL}$ in metres) or $(\sqrt{LWL}$ in feet)
- c) inboard engine, however if less than 12.0 m (39'-4") L_H either an inboard engine, or an outboard engine together with *permanently installed* fuel supply systems and fuel tank(s)
- d) an inboard engine shall have a *permanently installed* exhaust, cooling system, fuel supply, fuel tank(s) and shall have adequate heavy weather protection

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 Fuel Systems

- a) All fuel tanks shall be rigid (but may have *permanently installed* flexible linings) and shall have a shutoff valve
- b) At the start a boat 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 8 hours

3.28.4 Battery Systems

- a) a dedicated engine starting battery when an electric starter is the only method for starting the engine
- b) batteries installed after 2011 shall be of the sealed type from which liquid electrolyte cannot escape

3.29 Communications Equipment, GPS, Radar, AIS

3.29.01 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 3.29.02

3.29.02 if the marine radio transceiver is a VHF:

- a) a minimum rated output power of 25 W
- b) a masthead antenna not less than 38 cm (15") in length 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

3.29.05 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)

3.29.06 a second radio receiver, which may be the handheld VHF in 3.29.5 above, capable of receiving weather bulletins

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

SECTION 4 - PORTABLE EQUIPMENT

A boat shall have:

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

4.02 Search and Rescue Visibility

4.02.1 A 1 m² (11 ft²) solid area of highly-visible pink, orange or yellow capable of being displayed on the coachroof and/or deck

4.02.2 A 1 m² (11 ft²) area of highly-visible pink, orange or yellow showing when the boat is inverted

4.03 Soft Wood Plugs

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

4.04 Jackstays and Clipping Points

Permanently installed fittings for *jackstay* ends and clipping points

4.04.1 *Jackstays* which shall:

- a) be independent on each side of the deck

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- 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
- 4.04.2 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*
 - d) on a trimaran with a rudder on the outrigger, permit a *crewmember* to repair the steering mechanism whilst attached to a clipping point
- 4.05 Fire Fighting Equipment**
- 4.05.1 A fire blanket adjacent to every cooking device with an open flame
- 4.05.2 2 fire extinguishers, each with 2 kg each of dry powder or equivalent, in different parts of the boat
- 4.06 Anchors**
- 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') L_H there shall be 1 anchor meeting the same criteria.
- 4.07 Flashlights and Searchlights**
- 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)
- 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 crew
- 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"), 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 m² (22 ft²) from 0-360° of azimuth and ±20° of heel
- 4.11 Navigation Equipment**
- Navigational charts (not solely electronic), light list 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 the principal method of steering is by means of an unbreakable metal tiller
- 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, recover slings, grab bags etc.
- 4.18 Retro-reflective material**
- Marine grade retro-reflective material on lifebuoys, recovery slings, liferafts and lifejackets
- 4.19 EPIRBs**
- 4.19.1 A water and manually activated 406 MHz *EPIRB*
- 4.19.2 A 406 MHz *EPIRB* registered after 2015 shall include an internal *GPS*
- 4.19.3 All *EPIRBs* registered with the appropriate authority associated with the country code in the hexadecimal

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identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat *IBRD* if the country does not provide a registration facility and the country has allowed direct registration in the *IBRD*

4.20 Liferafts

4.20.1 Liferaft Construction

- a) One or more inflatable liferafts with a total capacity to accommodate at least the total number of people on board which complies with:
 - i *SOLAS LSA* Code 1997 Chapter IV or later version; or
 - ii *ISO 9650-1: 2005*, Type 1, Group A - Small Craft Inflatable; or
 - iii *ISAF* liferafts manufactured before 2016 until replacement is due at end of service life; or
 - iv *ORC* liferafts manufactured before 2003 until replacement is due at end of service life

4.20.2 Minimum Liferaft Equipment

Sail Canada prescribes that liferafts shall be equipped with an insulated floor

- a) A *SOLAS* liferaft shall contain at least a *SOLAS* A pack;
- c) An *ISO 9650* liferaft shall contain as a minimum Pack 2 (less than 24 hour pack);
- d) The minimum contents of the *ISO* liferaft equipment packs are listed below. Not all items are necessarily packed within the liferaft. Some items are permitted to be carried within an accompanying waterproof grab bag which shall be in a readily accessible location:
 - i Portable buoyant bailer easily operable by hand
 - ii 2 sponges
 - iii Pair of buoyant paddles with handles (not mitts) tied into raft adjacent to an entrance
 - iv Whistle
 - v Waterproof torch with 6 h duration and
 - vi Spare waterproof torch or spare battery and bulb
 - vii Signalling mirror
 - viii 6 anti-seasickness pills per person *
 - ix Seasickness bag per person, each with a simple, effective, closure system *
 - x 3 hand flares in accordance with *SOLAS LSA* Code Chapter III, 3.2.
 - xi 2 red parachute flares in accordance with *SOLAS LSA* Code Chapter III, 3.1. 1 may be stowed in the grab bag.
 - xii Kit to repair leaks in most inflatable compartments, operable in wet conditions and during violent motion
 - xiii Hand operable air pump, capable of and ready for immediate use to inflate most compartments. Loose parts captive to the pump.

* may be packed in grab bag instead of liferaft

4.20.3 Liferaft Packing and Stowage

- a) Each liferaft shall be packed either in:
 - i a rigid container stowed on the working deck, in the cockpit or in an open space; or
 - ii a rigid container or valise securely stowed in a dedicated weather tight locker containing liferaft and abandon ship equipment only which is readily accessible and opens onto the cockpit or working deck, or transom
- b) In a boat with *primary launch* before June 2001, a liferaft may be packed in a valise not exceeding 40 kg securely stowed below deck adjacent to a companionway
- c) On a *multihull* or on a *monohull* with *moveable ballast* the liferaft shall be readily deployable whether or not the boat is inverted
- d) The end of each liferaft painter should be *securely fastened* to the boat
- e) Each raft shall be capable of being got to the *lifelines* or launched within 15 seconds

4.20.5 Liferaft Servicing

- a) A liferaft shall be serviced at a manufacturer authorized service station at the following maximum intervals:
 - i *SOLAS* liferafts annually
 - ii *ISO 9650* canister packed liferafts every 3 years
 - iii *ISO 9650* valise packed liferafts every 3 years except that hired liferafts shall be serviced annually
 - iv *ISAF* liferafts annually
 - v *ORC* liferafts annually
- b) Servicing certificates (original or a copy) on board

4.21 Grab Bags

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- f) If a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip

4.22 Crew Overboard Identification and Recovery

4.22.1 Locator Beacons

- b) An *AIS* personal crew overboard beacon for each crew member
- d) Where possible every *PLB* shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat *IBRD* if the country does not provide a registration facility and the country has allowed direct registration in the *IBRD*.

4.22.2 *GPS* Crew Overboard Position

- c) A *GPS* capable of recording a crew overboard position, within 10 seconds, and monitoring that position

4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue

4.22.4 In addition to 4.22.3 above, within reach of the helmsman and ready for instant use, a second lifebuoy equipped with:

- a) a whistle, a drogue, a self-igniting light and
- b) a pole and flag. The pole shall be either permanently extended or be capable of being fully automatically extended

4.22.5 At least one lifebuoy shall depend entirely on permanent buoyancy (e.g. foam)

4.22.6 Each inflatable lifebuoy and any automatic device shall be tested and serviced at intervals in accordance with its manufacturer's instructions

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

4.22.8 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

Pyrotechnic signals 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 as follows:

4.23.1 4 red hand flares *LSA* III 3.2

4.23.2 2 orange smoke *LSA* III 3.3

4.25 Cockpit Knife

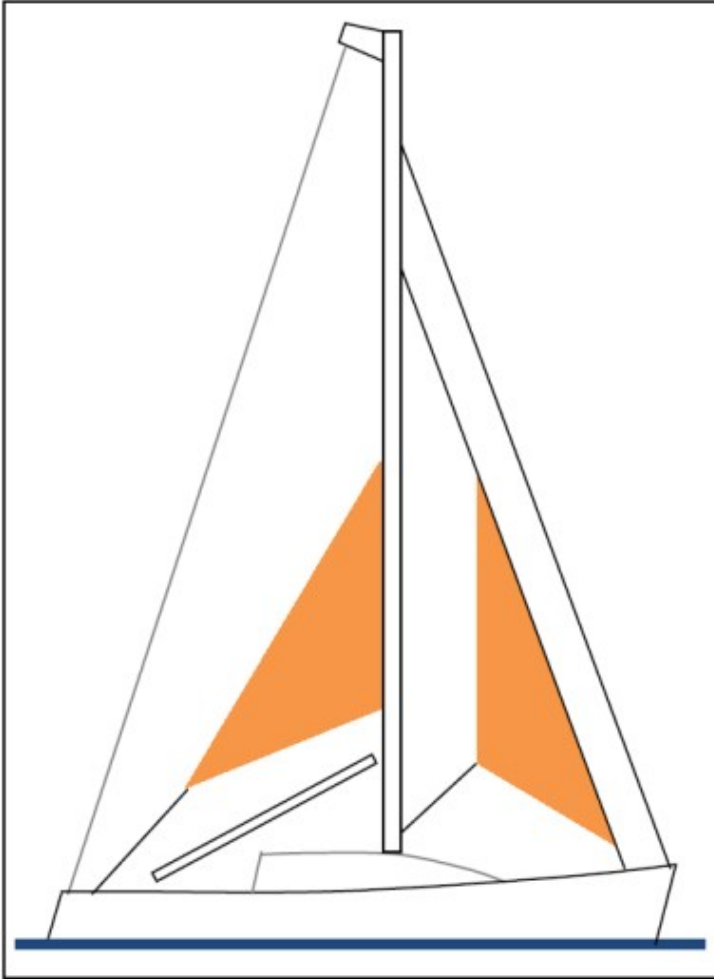
A strong, sharp knife, sheathed, securely restrained and readily accessible from the deck or a cockpit

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4.26 Storm & Heavy Weather Sails

4.26.1 Design

Figure 3



- 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

4.26.2 Sail Areas

The maximum area of storm sails shall be lesser of the areas below or as specified by the boat designer or sailmaker

- a) 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
- b) **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
- c) For sails made after 2011: The storm and heavy weather jib areas calculated as: $(0.255 \times \text{luff length} \times (\text{luff perpendicular} + 2 \times \text{half width}))$
- d) **A storm trysail (or rotating wing mast if suitable) with:**
 - i area of 17.5% mainsail hoist (P) x mainsail foot length (E)
 - ii For sails made after 2011: The storm trysail area calculated as $(0.5 \times \text{leech length} \times \text{shortest distance between tack point and leech})$

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- iii no headboard
- iv no battens
- v sail number and letters on both sides, as large as practicable
- vi 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

SECTION 5 - PERSONAL EQUIPMENT

Each crew member shall have:

5.01 Lifejacket

5.01.1 A lifejacket shall:

Each crew member shall have personal flotation device which shall:

- a) i if manufactured before 2012 comply with *ISO* 12402 - 3 (Level 150) or equivalent, including *EN* 396 or *UL* 1180 and:
Sail Canada prescribes that the words "if manufactured before 2012" above are deleted and that 5.01.1 a) ii, below, is deleted in its entirety.
 - 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 and:
 - crotch/thigh straps (ride up prevention system (RUPS))
 - an integral safety harness in compliance with *OSR* 5.02

Sail Canada note - *ISO* 12402 is not currently approved by Transport Canada

- 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
- d) have a sprayhood in accordance with *ISO* 12402-8
- f) if inflatable, regularly checked for air retention**

Unless otherwise specified by a boat's applicable class rules or by sailing instructions, personal flotation devices shall have at least 150 N (34 #) buoyancy, arranged to securely suspend an unconscious man face upwards at approximately 45° to the water surface.

5.01.2 A boat shall carry at least one gas inflatable lifejacket spare cylinder and, if appropriate, a spare activation head.

5.01.3 A boat shall carry a spare at least one spare lifejacket as required in *OSR* 5.01.1, ~~except a PLB described in 5.01.1~~ **Note - the text above was deleted since it doesn't apply to this race category**

5.01.4 The person in charge shall personally check each lifejacket at least once annually.

5.02 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 hooks**
- c) have self-closing hooks**
- d) have overload indicator flag embedded in the stitching
- e) be manufactured after 2000

5.02.3 ~~30%~~**All** of the crew shall have either:

- a) a *tether* not more than 1 m (3'-3") long, or
- b) an intermediate self-closing hook on a 2 m (6'-6") *tether***

5.02.4 A *tether* which has been overloaded shall be replaced

SECTION 6 - TRAINING

6.01.2 At least 30% but not fewer than two members of a crew, including the Person in Charge shall have undertaken training within the five years before the start of the race in *OSR* 6.02 Training Topics

6.01.4 Except as otherwise provided in the Notice of Race, an in-date certificate gained at a *World Sailing/ISAF* Approved Offshore Personal Survival Training course shall be accepted by a race organizing authority as evidence of compliance with Special Regulation 6.01. See Appendix G - Model Training Course, for further details.

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6.02 Training Topics

- 6.02.01 Giving Assistance to Other Craft
- 6.02.02 Personal Safety Gear, theory and practice
- 6.02.03 Care and Maintenance of Safety Gear
- 6.02.04 Fire Precautions and Firefighting, theory and practical
- 6.02.05 Crew Overboard Identification and Recovery
- 6.02.06 Hypothermia, Cold Shock and Drowning
- 6.02.07 Crew Health
- 6.02.08 Marine Weather
- 6.02.09 Heavy Weather
- 6.02.10 Storm Sails
- 6.02.11 Damage Control
- 6.02.12 Search and Rescue Organization
- 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 On-Board

At least annually the crews shall practice the drills for:

- 6.04.1 Crew-Overboard Recovery

6.04.2 Abandonment of vessel

6.05 Medical Training

6.05.2 At least one *crewmember* shall have a valid first aid certificate completed within the last five years meeting:

- a) A certificate listed on the *World Sailing* website www.sailing.org/specialregs of MNA recognised courses
- b) *STCW* First Aid Training complying with A-VI/1-3 - Elementary First Aid or higher *STCW* level

Sail Canada prescribes that the following are MNA recognized courses provided the certificate is in-date at the start of the race:

- **Standard First Aid and CPR level A**
- **Marine First Aid and CPR level A**
- **Marine Advanced First Aid and CPR level A**
- **Marine Medical Care and CPR level A**
- **Canadian professional accreditations (e.g. paramedic, nurse, physician)**

APPENDICES TO THE OFFSHORE SPECIAL REGULATIONS

Appendix A - Moveable and Variable Ballast

Appendix B - For Inshore Racing

Appendix C - For Inshore Dinghy Racing

Appendix D - A guide to ISO and other Standards

Appendix E - World Sailing Code for the organisation of Oceanic Races

Appendix F - Standard Inspection Card

Appendix G - Model Training Course

Appendix H - Model First Aid Training Course

Appendix J - Hypothermia

Appendix K - Drogues and sea anchors