Offshore Special Regulations

Re-Draft of the OSRs

A submission from the Working Party on re-drafting the OSRs

Purpose or Objective

To re-draft the Offshore Special Regulations (OSR) to improve their clarity for all Sailors, Inspectors and Race Organizers. The categories of events are to remain unchanged and the intent of each clause is not to be changed.

Proposal

The Working Party was created to undertake a re-drafting of the OSRs with the following mandate:

To have the OSR to be the yacht safety regulations, much as the Racing Rules of Sailing (RRS) are the regulations for racing competition, and to have three primary components:

- The Offshore Special Regulations including a comprehensive checklist for owners and inspectors. This would also include Appendices; Checklist should be dynamic within the OSR generator to avoid version problems.
- A training manual “Guide to Offshore Personal Safety” where the recommendations presently in the OSR together with additional information of personal and vessel safety. This would be a training manual;
- A guideline manual, which would complement the OSR to give guidance to Owners, Inspectors and Race Organizers. This could take the form of a guideline format to define what a suitable size anchor would be for a vessel as an example,

The format and layout would be designed for electronic formats such as Apps and sorting by Category as are now incorporated in the website. This allows for layering of information.

Current Position

Existing 2014-2015 OSR edition 2

Reason

The current OSRs contain are reported by sailors to be confusing with a mixture of regulations and suggestions.

The OSR Sub Committee has developed a safety training manual where the suggestions and recommendations can be located, ‘Guide to Personal Offshore Safety’.

Please also check on the web the de-draft OSRs at:


Here you can download the Inspection List for each Category and the click on the heading which will take you to the exact clause that it refers to.
Copyright

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- request copyright permission from ISAF and ORC Ltd (normally given free of charge)
- display a copyright acknowledgement with the reprint (similar to © ORC Ltd. 2002, all amendments from 2003 © International sailing Federation, (IOM) Ltd.)
- make any amendments by deleting contrary provisions and indicating that changes have been made
- supply a copy of the reprint to each of ISAF and ORC Ltd

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

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 changes in 2016

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

Administration

The Offshore Special Regulation are administered by the ISAF Special Regulation Sub-Committee whose terms of reference are as follows: www.sailing.org/specialregs

ISAF Regulation 6.8.8.3 - The Special Regulations Sub-Committee shall:

(a) be responsible for the maintenance, revision and changes to the ISAF 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.

Any queries please E-Mail: technical@isaf.co.uk
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, the Racing Rules of Sailing (RRS), Equipment Rules of
Sailing, class rules and Rating Systems.
** 1.01.3 Use of the OSR does not guarantee total safety of the boat and her crew.

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. He 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.

1.03 Definitions, Abbreviations, Word Usage

** 1.03.1 Definitions of Terms used in this document

<table>
<thead>
<tr>
<th>#</th>
<th>Pound force (lbf)</th>
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</thead>
<tbody>
<tr>
<td>ABS</td>
<td>American Bureau of Shipping</td>
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<tr>
<td>AIS</td>
<td>Automatic Identification Systems</td>
</tr>
<tr>
<td>CEN</td>
<td>Comité Européen de Normalisation</td>
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<tr>
<td>Coaming</td>
<td>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</td>
</tr>
<tr>
<td>COLREGS</td>
<td>International Regulations for Preventing Collisions at Sea</td>
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<tr>
<td>Contained Cockpit</td>
<td>A cockpit where the combined area open aft to the sea is less than 50% maximum cockpit depth x maximum cockpit width</td>
</tr>
<tr>
<td>CPR</td>
<td>Cardio-Pulmonary Resuscitation</td>
</tr>
<tr>
<td>Crewmember</td>
<td>Every person on board</td>
</tr>
<tr>
<td>DSC</td>
<td>Digital Selective Calling (Reference)</td>
</tr>
<tr>
<td>EN</td>
<td>European Norm</td>
</tr>
<tr>
<td>EPIRB</td>
<td>Emergency Position-Indicating Radio Beacon</td>
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<tr>
<td>ERS</td>
<td>ISAF Equipment Rules of Sailing</td>
</tr>
<tr>
<td>FA Station</td>
<td>The transverse station at which the upper corner of the transom meets the sheerline</td>
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<tr>
<td>First Launch</td>
<td>Month &amp; year of first launch of the individual boat</td>
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<tr>
<td>Foul-Weather Suit</td>
<td>Clothing designed to keep the wearer dry and which may consist of one piece or several</td>
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<tr>
<td>GMDSS</td>
<td>Global Maritime Distress &amp; Safety System</td>
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<tr>
<td>GNSS</td>
<td>Global Navigation Satellite System</td>
</tr>
<tr>
<td>GPSPIRB</td>
<td>EPIRB, with integral GPS position-fixing</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System or an equivalent Electronic Position-Fixing System</td>
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<tr>
<td>Hatch</td>
<td>The term hatch includes the entire hatch assembly including the lid or cover as part of that assembly</td>
</tr>
<tr>
<td>HMPE</td>
<td>High Modulus Polyethylene (Dyneema®/Spectra® or equivalent)</td>
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<tr>
<td>IMO</td>
<td>International Maritime Organisation</td>
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<td>IMS</td>
<td>International Measurement System as administered by the ORC</td>
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<tr>
<td>IMSO</td>
<td>The International Mobile Satellite Organisation, the independent, intergovernmental organisation that oversees Inmarsat's performance of its Public Service Obligations for the GMDSS and reports on these to IMO</td>
</tr>
<tr>
<td>INMARSAT</td>
<td>Inmarsat Global Limited is the private company that provides GMDSS satellite distress and safety communications, plus general communications via voice, fax and data</td>
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<tr>
<td>IRC</td>
<td>IRC Rating System</td>
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<tr>
<td>ISAF</td>
<td>International Sailing Federation.</td>
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<td>ISO</td>
<td>International Standard or International Organization for Standardization (see appendix D)</td>
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<td>ITU</td>
<td>International Telecommunications Union</td>
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<tr>
<td>Jackstay</td>
<td>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 safety harness tether.</td>
</tr>
<tr>
<td>$L_H$</td>
<td>Hull Length as defined by the ERS.</td>
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<tr>
<td>Life Sling</td>
<td>Lifesling® or functional equivalent</td>
</tr>
<tr>
<td>Lifeline</td>
<td>Rope or wire line rigged as guardrail / guardline around the deck</td>
</tr>
<tr>
<td>LWL</td>
<td>(Length of) loaded waterline</td>
</tr>
<tr>
<td>Monohull</td>
<td>A boat with one hull</td>
</tr>
<tr>
<td>Moveable Ballast</td>
<td>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</td>
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<tr>
<td>Multihull</td>
<td>A boat with more than one hull</td>
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<tr>
<td>Open Cockpit</td>
<td>A cockpit that is not a Contained Cockpit.</td>
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<tr>
<td>ORC</td>
<td>Offshore Racing Congress (formerly Offshore Racing Council)</td>
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<tr>
<td>OSR</td>
<td>Offshore Special Regulation(s)</td>
</tr>
<tr>
<td>Permanently Installed</td>
<td>The item is effectively built-in by e.g. bolting, welding, glassing etc. and may not be removed for or during racing</td>
</tr>
<tr>
<td>PLB</td>
<td>Personal Locator Beacon</td>
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<tr>
<td>Primary Launch</td>
<td>Month &amp; Year of first launch of the first boat of the production series or first launch of a non-series boat</td>
</tr>
<tr>
<td>Proa</td>
<td>Asymmetric Catamaran</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<td>------------</td>
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<tr>
<td>Rode</td>
<td>Rope, chain, or a combination of both, which is used to connect an anchor to the boat.</td>
</tr>
<tr>
<td>RRS</td>
<td>ISAF Racing Rules of Sailing</td>
</tr>
<tr>
<td>Safety Line</td>
<td>A tether used to connect a safety harness to a strong point</td>
</tr>
<tr>
<td>SAR</td>
<td>Search and Rescue</td>
</tr>
<tr>
<td>SART</td>
<td>Search and Rescue Transponder</td>
</tr>
<tr>
<td>Securely Fastened</td>
<td>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</td>
</tr>
<tr>
<td>SOLAS</td>
<td>Safety of Life at Sea Convention</td>
</tr>
<tr>
<td>SSS</td>
<td>The Safety and Stability Screening numeral</td>
</tr>
<tr>
<td>Static Ballast</td>
<td>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</td>
</tr>
<tr>
<td>Static Safety Line</td>
<td>A safety line (usually shorter than a safety line carried with a harness) kept clipped on at a work-station</td>
</tr>
<tr>
<td>Variable Ballast</td>
<td>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</td>
</tr>
<tr>
<td>Waterline</td>
<td>The water surface when the boat is floating in measurement trim</td>
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</tbody>
</table>

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

2.01.1 Category 0

MoMu0 Trans-oceanic races, including races which pass through areas in which air or sea temperatures are likely to be less than 5°C (41°F) other than temporarily, where boats must be completely self-sufficient for very extended periods of time, capable of withstanding heavy storms and prepared to meet serious emergencies without the expectation of outside assistance

2.01.2 Category 1

MoMu1 Races of long distance and well offshore, where boats must be completely self-sufficient for extended periods of time, capable of withstanding heavy storms and prepared to meet serious emergencies without the expectation of outside assistance

2.01.3 Category 2

MoMu2 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

2.01.4 Category 3

MoMu3 Races across open water, most of which is relatively protected or close to shorelines

2.01.5 Category 4

MoMu4 Short races, close to shore in relatively warm or protected waters normally held in daylight

2.01.6 Category 5 - for inshore racing

MoMu5 Short races, close to shore in relatively warm and protected waters where adequate shelter and/or effective rescue is available all along the course, held in
daylight only (refer to Appendix B)

2.01.7 **Category 6 - for inshore racing**
Short races in boats that may not be self-sufficient, with rescue boats available all along the course, held in daylight only (refer to Appendix C)

2.02 **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

2.03 **General Requirements**

** 2.03.1 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.

** 2.03.2 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, Ballast 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 **Hull Construction Standards (Scantlings)**

Mo0,1,2 3.03.1 If a monohull with a Primary Launch after 2009:
Mo0,1,2 a) less than 24 m (78'-9") L:\ shall:
Mo0,1,2 i) be designed, built and maintained in accordance with the requirements of ISO 12215 Category A
Mo0,1,2 ii) have an ISAF building plan review certificate issued from a notified body recognized by ISAF
Mo0,1,2 b) 24 m (78'-9") L:\ and greater shall:
Mo0,1,2 i) be designed, built and maintained in accordance with the requirements of a Classification Society recognized by ISAF
Mo0,1,2 ii) have an ISAF building plan review certificate issued from a Classification Society recognized by ISAF
Mo0,1,2 c) have a Builder’s Declaration signed and dated by the builder to confirm the boat is built in accordance with the reviewed plans. In cases when a builder no longer exists, a race organizer or class rules may accept a signed statement by a naval architect or other person familiar with the requirements of above in lieu of the Builder’s Declaration, and
Mo0,1,2 d) have an additional ISAF certificate of building plan review in accordance with a) or b) and c) above for any significant repair of modification to the hull, deck, coachroof, keel or appendages.

Mo0,1,2 3.03.2 A boat with Primary Launch between 1987 and 2010 shall have been designed, built, maintained, modified or repaired in accordance with the requirements of:
Mo0,1,2 a) OSR 3.03.1, or
Mo0,1,2 b) the ABS Guide for Building and Classing Offshore Yachts and have on board either an ABS certificate of plan approval, or written statements signed by
the designer and builder confirming that they have respectively designed and built the boat in accordance with the ABS Guide, or
Mo0,1,2

c) the EC Recreational Craft Directive for Category A having obtained the CE mark, or
Mo0,1,2
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
Mo0,1,2
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
Mo0,1,2
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

3.04 Stability - Monohulls
Mo0,1,2

3.04.1 Able to demonstrate compliance with ISO 12217-2* design category A or higher, either by EC Recreational Craft Directive certification having obtained the CE mark or the designer's declaration
Mo3

3.04.1 Able to demonstrate compliance with ISO 12217-2* design category B or higher, either by EC Recreational Craft Directive certification having obtained the CE mark or the designer's declaration
Mo0,1,2,3

* The latest effective version of ISO 12217-2 should be used unless the boat was already designed to a previous version
Mo0,1,2,3

3.04.2 Where compliance in accordance with 3.04.1 cannot be demonstrated, able to demonstrate either:
Mo0,1,2

a) a minimum STIX value of 32 and AVS not less than 130 - 0.002*m (where "m" is the mass of the boat in the minimum operating condition as defined by ISO 12217-2); or
Mo3

a) a minimum STIX value of 23 and AVS not less than 130 - 0.005*m (where "m" is the mass of the boat in the minimum operating condition as defined by ISO 12217-2); or
Mo0

b) Stability Index in ORC Rating System of not less than 120; or
Mo1

b) Stability Index in ORC Rating System of not less than 115; or
Mo2

b) Stability Index in ORC Rating System of not less than 110; or
Mo3

b) Stability Index in ORC Rating System of not less than 103; or
Mo0,1

c) IRC SSS Base value of not less than 35
Mo2

c) IRC SSS Base value of not less than 28
Mo3

c) IRC SSS Base value of not less than 15
Mo0

3.04.3 Capable of self-righting from an inverted position with or without reasonable intervention from the crew and independent of the condition of the rig

3.05 Stability and Flotation - Multihulls
Mu0,1,2,3,4

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)
Mu0,1,2,3,4

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
Mu0,1,2,3,4

3.05.3 Designed and built to resist capsize

3.06 Exits - Monohulls
Mo0,1,2,3,4

3.06.1 At least two exits if 8.5 m (28’) Lh, and greater and with a Primary Launch after 1994. One exit shall be located forward of the foremost mast except where structural features prevent its installation
Mo0,1,2,3,4

3.06.2 The following minimum clear hatch openings if First Launch after 2013:
Mo0,1,2,3,4

a) a circular hatch with diameter 450 mm (18’’); or
Mo0,1,2,3,4  b) any other shape with minimum dimension of 380 mm (15”) and minimum area of 0.18 m² (1.9 ft²) (see figure 1)

Figure 1 - Measurements of Minimum Clear Opening

3.07  Exits and Escape Hatches - Multihulls

3.07.1  Exits

Mo0,1,2,3,4

Mu4  At least two exits in each hull which contains accommodations

Mo4  At least two exits in each hull which contains accommodations if 8 m (26'-3") $L_H$ and greater

3.07.2  Escape Hatches, Underside Clipping Points & Handholds

Mo0,1,2,3,4  a) If 12 m (39'-4") $L_H$ and greater each hull which contains accommodation:

Mo0,1,2,3,4   i  an escape hatch for access to and from the hull in the event of an inversion;

Mo0,1,2,3,4   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

Mo0,1,2,3,4   iii each escape hatch above the waterline when the boat is inverted;

Mo0,1,2,3,4   iv each escape hatch at or near the midships station if First Launch after 2000

Mo0,1,2,3,4   v each escape hatch on the side nearest the vessel’s central axis for a catamaran if First Launch after 2002

Mo0,1,2,3,4   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

Mo0,1,2,3,4   c) each escape hatch shall have been opened both from inside and outside within 6 months prior to the race

Mo0,1,2,3,4   d) appropriate handholds/clipping points on the underside sufficient for all crew (on a trimaran these shall be around the central hull)

Mo0,1,2,3,4   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:

Mo2,3,4  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

Mo2,3,4  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

Mo0,1,2,3,4  b) above the water when the boat is heeled 90°
Mo0,1,2,3,4  A boat may have a maximum of two hatches on each side of centerline that do not conform to the requirement in b), provided that the opening of each is less than 0.071² m (110 in²)

** 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

Mo0,1,2,3,4  if a monohull with Open Cockpit(s):
Mo0,1,2,3,4  a) a companionway sill that does not extend below the local sheerline; or
Mo0,1,2,3,4  b) a companionway in full compliance with ISO 11812 category A

Mo0,1,2,3,4  if a monohull with Contained Cockpit(s) where the companionway extends below the local sheerline, panels capable of blocking the companionway up to the level of the local sheerline whilst giving access to the interior.

Mu0,1,2,3,4  if a multihull with a companionway hatch extending below the local sheerline either:
Mu0,1,2,3,4  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
Mu0,1,2,3,4  b) be in compliance with ISO 11812 to design category A

Mu0,1,2,3,4  b) be in compliance with ISO 11812 to design category B

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 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

3.09.7 Cockpit Volume

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

MoMu0,1  a) primary launch before April 1992: 6% (LWL x maximum beam x freeboard abreast the cockpit)
MoMu2,3,4  a) primary launch before April 1992: 9% (LWL x maximum beam x freeboard abreast the cockpit)

MoMu0,1  b) primary launch after March 1992 as above for the appropriate category except that “lowest coamings” shall not include any aft of the FA station and no extension of a cockpit aft of the working deck shall be included in calculation of cockpit volume

MoMu0,1  IMS-rated boats may instead of the terms LWL, maximum beam and freeboard abreast the cockpit, use the IMS terms L, B and FA.

3.09.8 Cockpit Drains

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

a) 2 x 25 mm (1") diameter or equivalent for a boat less than 8.5 m (28') Lₗₕ
b) 4 x 20 mm (3/4") diameter or equivalent for a boat 8.5 m (28') Lₗₕ 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
3.12 Mast Step
**
The heel of a keel stepped mast securely fastened to the mast step or adjoining structure

3.13 Watertight Bulkheads
Mo0 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
Mo0 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
Mo0 3.13.3 At least two watertight transverse main bulkheads in addition to any bulkheads positioned within the forward and aft 15% of \( L_h \)
Mo0 3.13.4 Outside deck access for inspection and pumping shall be provided to every watertight compartment terminated by a hull section bulkhead, except that deck access to extreme end “crash” compartments is not required
Mo0 3.13.5 An access hatch in every required watertight bulkhead (except a “crash” bulkhead). The access hatch shall have means of watertight closure permanently attached to the main panel, or lid, or cover of the hatch. The closure shall not require tools to operate

3.14 Pulpits, Stanchions, Lifelines
** 3.14.1 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 in 3.14.3 c) shall not modify tension in the lifeline.
** b) Minimum heights of lifelines and pulpit rails above the working 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 Primary Launch before 1993 where it shall be no greater than 560 mm (22”)
MoMu3,4 iv a boat less than 8.5 m (28’) \( L_h \) 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 shall not pass 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 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
** 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”)

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:

- 50 mm (2”) for an upper or single lifeline
- 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 stranded stainless steel wire

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>
<thead>
<tr>
<th>L_H</th>
<th>Wire</th>
<th>HMPE rope (Single braid)</th>
<th>HMPE Core (Braid on braid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>under 8.5 m (28’)</td>
<td>3 mm (1/8”)</td>
<td>4 mm (5/32”)</td>
<td>4 mm (5/32”)</td>
</tr>
<tr>
<td>8.5 m - 13 m</td>
<td>4 mm (5/32”)</td>
<td>5 mm (3/16”)</td>
<td>5 mm (3/16”)</td>
</tr>
<tr>
<td>over 13 m (42”- 8”)</td>
<td>5 mm (3/16”)</td>
<td>5 mm (3/16”)</td>
<td>5 mm (3/16”)</td>
</tr>
</tbody>
</table>
3.15 Multihull Nets or Trampolines
Mu0,1,2,3,4 3.15.1 The words “net” and “trampoline” are interchangeable. A net shall be:
Mu0,1,2,3,4 a) essentially horizontal
Mu0,1,2,3,4 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
Mu0,1,2,3,4 c) solidly fixed at regular intervals on transverse and longitudinal support lines
and shall be fine-stitched to a bolt rope
Mu0,1,2,3,4 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.

3.15.2 Trimarans with Double Crossbeams
Mu0,1,2,3,4 A trimaran with double crossbeams shall have nets on each side covering:
Mu0,1,2,3,4 a) the rectangles formed by the crossbeams, central hull and outriggers
Mu0,1,2,3,4 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
Mu0,1,2,3,4 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
Mu0,1,2,3,4 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 Table 7

3.15.3 Trimarans with Single Crossbeams
Mu0,1,2,3,4 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
Mu0,1,2,3,4 On a catamaran the total net surface shall be limited:
Mu0,1,2,3,4 a) laterally by the hulls; and
Mu0,1,2,3,4 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

3.17 Toe Rail or Foot - Stop
Mo0,1,2,3 3.17.1 Permanently installed toe rail of minimum height 25 mm (1”), located as close as
practicable to the stanchion bases, around the foredeck from abreast the mast
Mo0,1,2,3 3.17.2 An additional lifeline of between 25-50 mm (1-2”) high is permitted in lieu of a
toe rail on a boat with Primary Launch before 1984.

3.18 Toilet
MoMu0,1,2 3.18.1 Permanently installed toilet
MoMu3,4 3.18.2 Permanently installed toilet or fitted bucket

3.19 Bunks
MoMu0 3.19.1 Permanently installed bunk for each crewmember
MoMu1,2,3,4 Permanently installed bunks

3.20 Cooking Facilities
MoMu0,1,2,3 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
MoMu0 3.21.1.1 Permanently installed delivery pump and water tanks dividing the water supply
into at least three compartments
MoMu1 3.21.1.2 Permanently installed delivery pump and water tanks dividing the water supply
into at least two compartments
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.21.2</td>
<td><strong>Drinking Water</strong>&lt;br&gt;Equipment (which may include watermakers and tanks containing water) permanently installed to provide at least 3 l (0.8 US Gal) of drinking water per person per day for the likely duration of the voyage</td>
</tr>
<tr>
<td>3.21.3</td>
<td><strong>Emergency Drinking Water</strong>&lt;br&gt;At least 9 l (2.4 US Gal) of drinking water for emergency use in a dedicated and sealed container or container(s)</td>
</tr>
<tr>
<td>a)</td>
<td>in the absence of a power driven watermaker, at least 1 l (0.26 US Gal) per person per day in at least two separate containers shall be provided for the expected duration of the voyage</td>
</tr>
<tr>
<td>b)</td>
<td>when a power-driven watermaker is on board, at least 500 ml (0.13 US Gal) per person per day in at least two separate containers shall be provided for the expected duration of the voyage</td>
</tr>
<tr>
<td>c)</td>
<td>facilities shall be provided to collect rainwater for drinking purposes including when dismasted</td>
</tr>
<tr>
<td>3.22</td>
<td><strong>Hand Holds</strong>&lt;br&gt;Adequate hand holds fitted below deck</td>
</tr>
<tr>
<td>3.23</td>
<td><strong>Bilge Pumps and Buckets</strong>&lt;br&gt;</td>
</tr>
<tr>
<td>3.23.1</td>
<td>a) two strong buckets, each with a lanyard and of at least 9 l (2.4 US Gal) capacity</td>
</tr>
<tr>
<td>b)</td>
<td>two permanently installed manual bilge pumps, one operable from above, the other from below deck</td>
</tr>
<tr>
<td>b)</td>
<td>one permanently installed manual bilge pump</td>
</tr>
<tr>
<td>c)</td>
<td>provision to pump out all watertight compartments (except those filled with impermeable buoyancy).</td>
</tr>
<tr>
<td>3.23.2</td>
<td>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</td>
</tr>
<tr>
<td>3.23.3</td>
<td>Bilge pumps shall not be connected to cockpit drains and shall not discharge into a Closed Cockpit</td>
</tr>
<tr>
<td>3.23.4</td>
<td>Bilge pumps shall be readily accessible for maintenance and for clearing out debris</td>
</tr>
<tr>
<td>3.23.5</td>
<td>All removable bilge pump handles retained by a lanyard</td>
</tr>
<tr>
<td>3.24</td>
<td><strong>Compass</strong>&lt;br&gt;Marine magnetic compasses, independent of any power supply, capable of being used as a steering compass:</td>
</tr>
<tr>
<td>a)</td>
<td>a compass, permanently installed and correctly adjusted, with deviation card</td>
</tr>
<tr>
<td>b)</td>
<td>a second compass which may be hand-held</td>
</tr>
<tr>
<td>b)</td>
<td>one manual bilge pump</td>
</tr>
<tr>
<td>c)</td>
<td>provision to pump out all watertight compartments (except those filled with impermeable buoyancy).</td>
</tr>
<tr>
<td>3.25</td>
<td><strong>Halyards</strong>&lt;br&gt;A minimum of two halyards, each capable of hoisting a sail, on each mast</td>
</tr>
<tr>
<td>3.26</td>
<td><strong>Bow Fairlead</strong>&lt;br&gt;Bow fairlead, closed or closable and a cleat or securing arrangement, suitable for towing, permanently installed</td>
</tr>
<tr>
<td>3.27</td>
<td><strong>Navigation Lights</strong>&lt;br&gt;Mount above sheerline and so that they will not be masked by sails or the heeling of the boat</td>
</tr>
<tr>
<td>a)</td>
<td>For ( L_H &lt; 12 \text{ m (39'-4')} ), 10 W</td>
</tr>
<tr>
<td>b)</td>
<td>For ( L_H \geq 12 \text{ m (39'-4')} ) and greater, 25 W</td>
</tr>
</tbody>
</table>
3.27 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 \((1.8 \times \text{LWL in metres})\) or \((\text{LWL in feet})\)

c) inboard engine

c) if less than 12.0 m (39' 4") \(\text{LH}\) 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

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 (Loss Estimator)

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

e) a marine VHF DSC radio covering all international and US marine channels and meeting ITU class D

3.29.03 at least two hand-held satellite telephones, watertight or with waterproof covers and internal batteries. When not in use each to be stowed in a grab bag (see OSR 4.21)

3.29.04 at least two hand-held marine VHF transceivers each with min 5 W output power, watertight or with waterproof covers. When not in use to be stowed in a
MoMu1,2,3,43.29.05a 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)

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

MoMu0 3.29.07a direction-finding radio receiver operating on 121.5 MHz to take a bearing on a PLB or EPIRB, or an alternative device for crew overboard location when each crew member has an appropriate personal unit (see OSR 5.07);

MoMu0,1,2,33.29.08a GPS
MoMu0 3.29.09a Standard-C satellite terminal (GMDSS) shall be permanently installed and permanently powered up for the duration of the race and for which the race committee shall have polling authority.

MoMu0 3.29.10an MF/HF marine SSB transceiver (GMDSS/DSC) with at least 125 W transmitter power and frequency range from at least 1.6 to 29.9 MHz with permanently installed antenna and earth.

MoMu0 3.29.11an active radar set permanently installed either:
MoMu0 a) a pulse (magnetron) unit with not less than 4 kW PEP and an antenna unit with a maximum dimension not less than 533 mm; or
MoMu0 b) a frequency modulated continuous wave (FMCW) Broadband Radar™ unit. The radar antenna unit shall remain essentially horizontal when the boat is heeled and at least 7 m (23’) above the water. Installations in place before January 2006 shall comply as closely as possible with OSR 3.29.11 a).

MoMu0 3.29.12a class A AIS Transponder which either:
MoMu1,2 3.29.13an AIS Transponder which either:
MoMu0,1,2 a) shares the masthead VHF antenna via a low loss AIS antenna splitter; or
MoMu0,1,2 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 (Loss Estimator)

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 solid area of highly-visible pink, orange or yellow

MoMu0,1,2,3,4 4.02.1 A 4 m² (43 ft²) area of highly-visible pink, orange or yellow on the coachroof and/or deck
Mu0,1,2,3,4 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
MoMu0,1,2,3 Permanently Installed fittings for jackstay ends and clipping points
MoMu0,1,2,34.04.1 Jackstays which shall:
MoMu0,1,2,3 a) enable a crewmember to move readily between the working areas on deck and the cockpit(s) with the minimum of clipping and unclipping operations
MoMu0,1,2,3 b) 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
MoMu0,1,2,34.04.2 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 (Guidance)

| **4.05.1** | A fire blanket adjacent to every cooking device with an open flame |
| **MoMu0** | 3 fire extinguishers, each with 2 kg of dry powder or equivalent, in different parts of the boat, one system of which is to deal with fire in a machinery space |
| **MoMu1,2,3** | 2 fire extinguishers, each with 2 kg each of dry powder or equivalent, in different parts of the boat |
| **MoMu4** | 2 fire extinguishers in different parts of the boat |

### 4.06 Anchors

| **MoMu0** | Anchors and rodes which comply with relevant class rules or the rules of a recognised Classification Society (e.g. Lloyd’s, DNV, etc.) |
| **MoMu1,2,3** | 2 suitable anchors with rode, ready for immediate use, except that for a boat less than 8.5 m (28’) L_{H} there shall be 1 suitable anchor with rode |
| **MoMu4** | 1 suitable anchor with rode, readily accessible |

### 4.07 Flashlights and Searchlights

| **MoMu0** | 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)** |
| **c) the watertight flashlight in OSR 4.07 b) shall be stowed in the grab bag or emergency container** |
| **MoMu0** | d) a high-intensity heavy duty searchlight powered by the boat’s batteries, instantly available for use on deck and in the cockpit |

### 4.08 First Aid Manual and First Aid Kit

| **MoMu0** | 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

| **MoMu0** | A foghorn |

### 4.10 Radar Reflector

| **MoMu0** | A passive radar reflector with: |
| **4.10.1** | octahedral circular plates of minimum diameter 30 cm (12”), or |
| **4.10.2** | octahedral rectangular plates of minimum diagonal dimension 40 cm (16”), or |
| **4.10.3** | 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 |

| **MoMu0** | A Radar Target Enhancer (RTE) which complies with ISO 8729-2:2009 or equivalent |

### 4.11 Navigation Equipment

| **MoMu0** | Navigational charts (not solely electronic), light list and chart plotting equipment |

### 4.12 Safety Equipment Location Chart

| **MoMu0** | 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

| **MoMu0** | A knotmeter or distance measuring instrument (log) |
4.15 Emergency Steering
MoMu0,1,2,3.4.15.1 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
MoMu0,1,2,3.4.15.2 A proven method of emergency steering with the rudder disabled (Resource)

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, Life Slings, grab bags etc.

4.18 Retro-reflective material
** Marine grade retro-reflective material on lifebuoys, Life Slings, liferafts and lifejackets

4.19 EPIRBs
MoMu0 4.19.1 Two water and manually activated 406 MHz EPIRBs
MoMu1,2 4.19.1 A water and manually activated 406 MHz EPIRB
MoMu0,1,2 4.19.2 A 406 MHz EPIRB registered after 2015 shall include an internal GPS
MoMu0,1,2 4.19.3 All EPIRBs 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

4.20 Liferafts
4.20.1 Liferaft Construction
MoMu1,2 a) One or more inflatable liferafts with a total capacity to accommodate at least the total number of people on board which complies with:
MoMu1,2 i SOLAS LSA Code 1997 Chapter IV or later version; or
MoMu1,2 ii ISO 9650-1:2005, Type 1, Group A - Small Craft Inflatable; or
MoMu1,2 iii ISAF liferafts manufactured before 2016 until replacement is due at end of service life; or
MoMu1,2 iv ORC liferafts manufactured before 2003 until replacement is due at end of service life
MoMu0 b) A sufficient number of liferafts so that in the event of any one liferaft being lost or rendered unserviceable, sufficient aggregate capacity remains for all crewmembers
MoMu0 c) Liferafts shall comply with SOLAS LSA code 1997 Chapter IV or later version

4.20.2 Minimum Liferaft Equipment
MoMu0,1,2 a) A SOLAS liferaft shall contain at least a SOLAS A pack
MoMu1,2 b) Table 15 (not in extracts)

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Pack 1 &gt; 24 h</th>
<th>Pack 2 &lt; 24 h</th>
<th>In Liferaft</th>
<th>In Liferaft or Grab Bag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portable buoyant baler easily operable by hand</td>
<td>1</td>
<td>1</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sponge</td>
<td>2</td>
<td>2</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pair of buoyant paddles with handles (not mitts) tied into raft adjacent to an entrance</td>
<td>1</td>
<td>1</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>First Aid Kit, clearly marked and re-sealable with 2 tubes of sunscreen. All</td>
<td>1</td>
<td>0</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
In accordance with the SOLAS LSA Code, the following items are required for all life raft crews:

### Essential Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whistle</td>
<td>1</td>
<td>Operable by hand and ready for immediate use to inflate most compartments.</td>
</tr>
<tr>
<td>Waterproof torch and spare waterproof torch or spare battery and bulb</td>
<td>2</td>
<td>Operable in wet conditions and during violent motion.</td>
</tr>
<tr>
<td>Signalling mirror</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Anti sea-sickness pills, per person</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Sea-sickness bag with simple effective closure system, per person</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Red hand flares in accordance with SOLAS LSA Code Chapter III, 3.2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Red parachute flares in accordance with SOLAS LSA Code Chapter III, 3.1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Thermal protective aids in accordance with SOLAS LSA Code Chapter III, 2.5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Kit to repair leaks in most inflatable compartments, operable in wet conditions and during violent motion</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hand operable air pump, capable of and ready for immediate use to inflate most compartments. Loose parts captive to the pump.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Drinking water per person, in containers of not more than 500 ml</td>
<td>1.5 l</td>
<td>0.5 l</td>
</tr>
<tr>
<td>Food per person</td>
<td>10 000 kJ</td>
<td></td>
</tr>
</tbody>
</table>

*Drinking water in the grab bag (if any) may be replaced with a desalinator device.

---

**MoMu1**

An ISO 9650 life raft shall contain, as a minimum, a Pack 1 (greater than 24 hour pack) with the following minimum contents:

**MoMu2**

An ISO 9650 life raft shall contain, as a minimum, a Pack 2 (less than 24 hour pack) with the following minimum contents:

1. Portable buoyant bailer easily operable by hand
2. 2 sponges
3. Pair of buoyant paddles with handles (not mitts) tied into raft adjacent to an entrance
4. Whistle
5. 2 waterproof torches and
6. Waterproof torch and
7. 2 spare waterproof torches or 2 spare batteries and bulbs
8. Spare waterproof torch or spare battery and bulb
9. Signalling mirror
10. 6 anti-seasickness pills per person *
11. Seasickness bag per person, each with a simple, effective, closure system *
12. 6 red hand flares in accordance with SOLAS LSA Code Chapter III, 3.2. As many as 3 may be stowed in the grab bag
13. 3 red hand flares in accordance with SOLAS LSA Code Chapter III, 3.2
2 red parachute flares in accordance with SOLAS LSA Code Chapter III, 3.1. One may be stowed in the grab bag.

Kit to repair leaks in most inflatable compartments, operable in wet conditions and during violent motion.

Hand operable air pump, capable of and ready for immediate use to inflate most compartments. Loose parts captive to the pump.

First Aid Kit, clearly marked and re-sealable with 2 tubes of sunscreen. All dressings shall be effectively useable in wet conditions.

2 thermal protective aids in accordance with SOLAS LSA Code Chapter III, 2.5

500 ml container of drinking water per person

2 additional 500 ml container of drinking water per person, or desalinator

10 000 kJ food per person

may be packed in grab bag instead of liferaft

### 4.20.3 Liferaft Packing and Stowage

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 stowed in a dedicated locker which is weather tight, contains liferaft and abandon ship equipment, is readily accessible and opens to the cockpit, working deck or transom.

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.

On a multihull or on a monohull with moveable ballast the liferaft shall be readily deployable whether or not the boat is inverted.

The end of each liferaft painter should be securely fastened to the boat.

Each raft shall be capable of being got to the lifelines or launched within 15 seconds.

### 4.20.4 Liferaft Servicing

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

Servicing certificates (original or a copy) on board.

### 4.21 Grab Bags

Either a watertight compartment or a grab bag, readily accessible whether or not the boat is inverted, with the following minimum contents:

- a watertight hand-held marine VHF transceiver with spare batteries
- a watertight flashlight with spare batteries and bulb
- 2 red parachute and 3 red hand flares
- a watertight strobe light with spare batteries
- a knife

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 Lifebuoys

- Within reach of the helmsman and ready for instant use:
  
  4.22.1 a lifebuoy with a self-igniting light and a drogue
In addition to 4.22.1 above, one 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

c) Each lifebuoy shall be equipped with a sachet of fluorescein dye

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

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

** 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
4.23.3 6 red parachute flares LSA III 3.1
4.23.4 4 red parachute flares LSA III 3.1
4.23.5 2 red parachute flares LSA III 3.1

4.24  Heaving Line

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

4.25  Cockpit Knife

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

4.26  Storm & Heavy Weather Sails

4.26.1 Design

Figure 3
a) 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) Sheetings positions on deck for each storm and heavy-weather sail

d) Sheetings positions for the trysail independent of the boom

e) Storm and heavy weather jib areas calculated as: \((0.255 \times \text{luff length} \times (\text{luff perpendicular} + 2 \times \text{half width}))\) *

f) The storm trysail area calculated as \((0.5 \times \text{leech length} \times \text{shortest distance between tack point and leech})\) *

* Applies to sails made after 2011

4.26.2 Sails

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) A storm trysail (or rotating wing mast if suitable) with:
   i) area of 17.5% mainsail hoist (P) x mainsail foot length (E)
MoMu0,1,2 ii no headboard
MoMu0,1,2 iii no battens
MoMu0,1,2 iv sail number and letters on both sides, as large as practicable
MoMu0,1,2 v in the case of a boat with an in-mast furling mainsail, the storm trysail shall be capable of being set while the mainsail is furled
MoMu3 d) either a storm trysail as defined in OSR 4.26.2 c), or mainsail reefing to reduce the luff by at least 40%

4.27 Drogue, Sea Anchor
MoMu0 A drogue for deployment over the stern, or a sea anchor or parachute anchor for deployment at the bow, complete with all necessary gear (see Appendix L)

4.28 Crew Overboard Alarm
MoMu0 4.28.1 A crew overboard alarm including an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the ship’s navigational software
MoMu0,1,2 4.28.2 A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position

4.29 Deck Bags
Mo0 4.29.1 If permitted by the Notice of Race, Sailing Instructions or Class Rules, bags for storing sails on deck shall be:
Mo0 a) so constructed to ensure rapid draining of water
Mo0 b) securely fastened in such a way that the integrity of deck fittings e.g. stanchions and lifelines, is not compromised

SECTION 5 - PERSONAL EQUIPMENT

** Each crew member shall have:

5.01 Lifejacket
** 5.01.1 A lifejacket as follows:
** a) i in accordance with ISO 12402 - 3 (Level 150) or equivalent, including EN 396 or UL 1180
** a) ii if manufactured after 2011 shall be in accordance with ISO 12402-3 (Level 150) and fitted with:
** • an emergency light in accordance with either ISO 12402-8 or SOLAS LSA code 2.2.3
** • a sprayhood in accordance with ISO 12402-8
** • a full deck safety harness in accordance with ISO 12401 (ISO 1095) including a crotch or thigh strap (holding down device) as specified in ISO 12401 (ISO 1095)
** • If of an inflatable type either:
** a) automatic, manual and oral inflation, or
** b) manual and oral inflation
** b) fitted with either a crotch strap(s) / thigh straps or a full safety harness in accordance with ISO 12401
** c) fitted with 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
** e) compatible with the wearer’s safety harness
** f) clearly marked with the boat’s or wearer’s name
MoMu0 g) fitted with a splashguard / sprayhood in accordance with ISO 12402 - 8
MoMu0 h) fitted with a PLB unit (as with other types of EPIRB, should be properly registered with the appropriate authority)

MoMu0 5.01.2 For every gas inflatable lifejacket a spare cylinder and if appropriate a spare activation head shall be carried.
MoMu0 5.01.3 A spare lifejacket or lifejacket(s) as required in OSR 5.01.1 sufficient for at least 10% of the total number of crewmembers (minimum one spare lifejacket). At
least one of the required spare lifejacket(s) shall be semi-automatic for use in crew overboard recovery.

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

5.02 **Safety Harness and Tethers (Guidance)**

MoMu0,1,2,3 5.02.1 A harness that complies with ISO 12401 or equivalent and a tether that:

MoMu0,1,2,3 a) is not more than 2 m (6'-6") in length
MoMu0,1,2,3 b) complies with ISO 12401 (or EN 1095 if manufactured prior to 2010)
MoMu0,1,2,3 c) have overload indicator flag embedded in the stitching
MoMu0,1,2,3 d) be manufactured after 2000
MoMu0,1,2,3 30% of the crew shall have either:
MoMu0,1,2,3 a) a tether not more than 1 m (3'-3") long, or
MoMu0,1,2,3 b) a mid-point snap hook on a 2 m (6'-6") tether
MoMu0  c) a boat shall carry spare harnesses and tethers as required in OSR 5.02.1 above sufficient for at least 10% of the crewmembers (minimum one unit)

MoMu0,1,2,3 5.02.3 A tether which has been overloaded shall be replaced

5.03 **Personal Location Lights**

MoMu0  Two packs of miniflare s or two personal location lights (either SOLAS or strobe): one to be attached to, or carried on, the person when on deck at night

5.04 **Foul Weather Suits**

MoMu0  A foul weather suit with hood

5.05 **Knife**

MoMu0  A knife, to be worn on the person at all times

5.06 **Flashlight**

MoMu0  A buoyant watertight flashlight

5.07 **Survival Equipment**

MoMu0  5.07.1 One set of Survival Equipment which includes:

MoMu0  a) an immersion suit (attention is drawn to EN ISO 15027-1 constant wear suits, and EN ISO 15027-2 abandonment suits and the LSA Code Chapter II, 2,3);
MoMu0  b) a PLB (Personal Locator Beacon) equipped with 406MHz and 121.5Mhz;
MoMu0  c) a personal unit in addition to the PLB in OSR 4.07.1 b) if the location device carried by the boat in accordance with OSR 3.29.1 h) requires it;
MoMu0,1,2  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.

MoMu0  5.08 **Diving Equipment**

MoMu0  At least two diving suits each to cover the entire body and including gloves, fins and portable air supplies

**SECTION 6 - TRAINING**

MoMu1,2  6.01 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 topics which include practical, hands-on sessions.

MoMu0  6.01.2 Every member of a crew including the Person in Charge shall have undertaken training as in OSR 6.01

MoMu0,1,2  6.01.4 Except as otherwise provided in the Notice of Race, an in-date certificate gained at an 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 H - Model Training Course, for further details.

MoMu0  6.05 **Medical Training**

MoMu0  6.05.1 At least one crewmember shall have a valid STCW 95 A-VI/4-2 (Proficiency In
Medical Care) certificate or equivalent

MoMu0 6.05.2 In addition to 6.05.1 another crewmember shall have a valid first aid certificate completed within the last five years meeting:

MoMu1 At least two crewmembers shall have a valid first aid certificate completed within the last five years meeting:

MoMu2 At least one crewmember shall have a valid first aid certificate completed within the last five years meeting:

MoMu0,1,2 a) A certificate listed on the ISAF website www.sailing.org/specialregs of MNA recognised courses

MoMu0,1,2 b) STCW 95 First Aid Training complying with A-VI/1-3 - Elementary First Aid or higher STCW level

MoMu3,4 6.05.3 At least one member of the crew shall be familiar with First Aid procedures, hypothermia, drowning, cardio-pulmonary resuscitation and relevant communications systems

MoMu0 6.06 Diving Training

MoMu3,4 6.06.1 At least 30% of the crew shall have received appropriate diving training to enable them to carry out basic repairs underwater and to provide assistance if necessary in recovery of a crew overboard

APPENDICES TO THE OFFSHORE SPECIAL REGULATIONS

** 7.a Appendix A - Moveable and Variable Ballast
** 7.b Appendix B - Category 5 - For Inshore Racing
** 7.c Appendix C - Category 6 - For Inshore Racing
** 7.d Appendix D - A guide to ISO and other Standards
** 7.e Appendix E - Hull Construction Standards (Scantlings)
** 7.f Appendix F - ISAF Code for the organisation of Oceanic Races
** 7.g Appendix G - Standard Inspection Card
** 7.h Appendix H - Model Training Course
** 7.j Appendix J - Model First Aid Training Course
** 7.k Appendix K - Hypothermia
** 7.l Appendix L - Drogues and sea anchors
APPENDIX A
Moveable and Variable Ballast

Notwithstanding the maximum length limit of 24m in the standard, this Appendix invokes International Standard ISO 12217-2, Small craft - Stability and buoyancy assessment and categorization - Part 2: Sailing boats of hull length greater than or equal to 6m. The functions KFR (Knockdown Recovery Factor) and FIR (Inversion Recovery Factor) are defined in ISO 12217-2, except as modified by this Appendix.

This Appendix applies to Monohull Yachts only. Unless specifically stated, a requirement applies to Special Regulations Categories 0, 1, 2, 3 and 4. This Appendix does not apply to boats racing under Category 5.

A1 Stability
A1.1 Boat Condition

In the calculation of stability data:

a) Deck and other enclosed volume above the sheerline and cockpit volume shall be taken into account.

b) Mass shall be taken as Minimum Operating Mass as defined by ISO 12217-2, paragraph 3.5.3.

A1.2 General Standards

In the assessment of ISO category for yachts fitted with moveable and/or variable ballast, ISO 12217-2, paragraph 6.1.4 b) shall not apply. Boats shall comply with paragraphs 6.2.3, 6.3.1 and 6.4. Calculations shall be for the ballast condition that results in the most adverse result when considering each individual stability requirement. ISO 12217-2 Annex C, paragraph C.3.3, first sentence, the word 'may' is replaced with 'shall'. ISO 12217-2 Annex C, paragraph C.3.4 shall not be used in the calculation of righting lever.

A1.3 Knockdown Recovery

Boats with moveable/variable ballast shall comply with the following minimum values of Knockdown Recovery Factor (FKR) calculated in accordance with ISO 12217-2 paragraph 6.4.4 with the modification that the reference to ISO 8666 paragraph 5.5.2 changed to incorporate actual mainsail area and centre of effort. The lesser of FKR_{90} and FKR_{-90} shall be used:

a) FKR = 1.0
    - Mo0
    - Mo1,2
    - Mo3
    - Mo4

Boats with age date prior to 11/04 may seek dispensation from section A1.3 by application to ISAF.

A1.4 Capsize Recovery

A1.4.1 For boats racing under Special Regulations Category 0, Regulation 3.04.1 is modified to read:

"Either with, or without, reasonable intervention from the crew, a yacht shall be capable of self-righting from an inverted position. Self-righting shall be achievable whether or not the rig is intact. Boats with moveable/variable ballast shall comply with this requirement in flat water using manual power only and shall demonstrate that any equipment to be used in re-righting the boat is ready for use at all times and will function and is useable by the crew with the boat inverted. Re-righting the boat shall not require flooding any part of the boat.

Boats with moveable/variable ballast shall comply with the following minimum
values of Inversion Recovery Factor (FIR) calculated in accordance with ISO 12217-2: FIR=0.9"

Mo0

Boats with age date prior to 11/04 may seek dispensation from section A1.4 by application to ISAF.

Mo0

A1.4.2 When there is a moveable or variable ballast system, written instructions on how to right the boat after a capsize shall be prominently and clearly displayed. All persons on board shall have a thorough knowledge of the righting procedures.

Mo0,1,2,3,4

A1.5 Watertight Integrity of a Boat

Mo0,1,2,3,4 A1.5.1 A canting keel pivot shall be completely contained within a watertight enclosure which shall comply with OSR 3.02.2. Access points in the watertight enclosure for control and actuation systems or any other purpose shall comply with OSR 3.02.1.

Mo0,1,2,3,4 A1.5.2 Moveable ballast systems shall be fitted with a manual control and actuation secondary system which shall be capable of controlling the full sailing load of the keel in the event of failure of the primary system. Such failures would include electrical and hydraulic failure and mechanical failure of the components and the structure to which it mounts. The system must be capable of being operational quickly and shall be operable at any angle of heel. It would be desirable if this system was capable of securing the keel on the centreline.

Mo0,1,2,3,4

A1.6 Stability - Monohulls

Mo0,1,2,3,4 A1.6.1 Tanks for variable ballast shall be permanently installed and shall be provided with a system of isolating valves and pump(s) capable of manual operation at any angle of heel. A plan of the plumbing system shall be displayed aboard the boat.

Mo0,1,2,3,4 A1.6.2 A boat fitted with moveable and/or variable ballast shall have a maximum static heel angle in the condition of Light Craft Condition (see ISO 12217-2) with moveable ballast moved fully to one side and variable ballast in the condition that produces maximum angle of heel of not greater than 35°
APPENDIX B
CATEGORY 5 SPECIAL REGULATIONS
for Inshore Races

Category 5 Special Regulations are intended for use in short races, close to shore in relatively warm and protected waters where adequate shelter and/or effective rescue is available all along the course, held in daylight only.

SECTION 1 - FUNDAMENTAL AND DEFINITIONS

** 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, the Racing Rules of Sailing (RRS), Equipment Rules of Sailing, class rules and Rating Systems.

** 1.01.3 Use of the OSR does not guarantee total safety of the boat and her crew.

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. He 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.

SECTION 2 - APPLICATION & GENERAL REQUIREMENTS

2.01.6 Category 5 - for inshore racing
Short races, close to shore in relatively warm and protected waters where adequate shelter and/or effective rescue is available all along the course, held in daylight only (refer to Appendix B)

2.03 General Requirements

** 2.03.1 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.

SECTION 3 - STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT

** 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
A hatch, including a hatch over a locker shall be:

- permanently attached and capable of being firmly shut immediately and remaining firmly shut in a 180° capsize
- above the water when the boat is heeled 90°

A boat may have a maximum of two hatches on each side of centerline that do not conform to the requirement in b), provided that the opening of each is less than 0.071² m (110 in²).

Companionway hatches:

- fitted with a strong securing arrangement which shall be operable from the exterior and interior even when the boat is inverted
- blocking devices:
  - capable of being retained in position with the hatch open or shut
  - secured to the boat (e.g. by lanyard) for the duration of the race
  - permit exit in the event of inversion

If a monohull with Open Cockpit(s):

- a companionway sill that does not extend below the local sheerline; or
- a companionway in full compliance with ISO 11812 category A

If a monohull with Contained Cockpit(s) where the companionway extends below the local sheerline, panels capable of blocking the companionway up to the level of the local sheerline whilst giving access to the interior.

If a multihull with a companionway hatch extending below the local sheerline either:

- 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
- be in compliance with ISO 11812 to design category B

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

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)

A bow, lateral, central or stern well is a cockpit for the purposes of OSR

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

- primary launch before April 1992: 6% (LWL x maximum beam x freeboard abreast the cockpit)
- 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

IMS-rated boats may instead of the terms LWL, maximum beam and freeboard abreast the cockpit, use the IMS terms L, B and FA.

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') L₁
- 4 x 20 mm (3/4") diameter or equivalent for a boat 8.5 m (28') L₁ or greater
3.23 Bilge Pumps and Buckets
3.23.1 a) one strong bucket with a lanyard and of at least 9 l (2.4 US Gal) capacity
   b) one manual bilge pump

3.24 Compass
   b) a compass which may be hand-held

**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

** 4.05 Fire Fighting Equipment (Guidance)
  4.05.1 A fire blanket if the boat is equipped with a cooking device with an open flame
  4.05.2 1 fire extinguisher if the boat is equipped with an electrical system, an engine or a cooking device with an open flame

** 4.06 Anchors
   1 suitable anchor with rode, readily accessible

** 4.17 Boat’s name
   The boat’s name on miscellaneous buoyant equipment, such as lifejackets, cushions, lifebuoys, Life Slings, grab bags etc.

** 4.18 Retro-reflective material
   Marine grade retro-reflective material on lifebuoy or Life Sling and on lifejacket

** 4.22 Lifebuoys
   Within reach of the helmsman and ready for instant use:
   4.22.1 a lifebuoy with a drogue or a Life Sling without a drogue

** 4.24 Heaving Line
   4.24.1 A heaving line, no less than 6 mm (1/4”) 15 - 25 m (50 - 75’) long, readily accessible to cockpit

**SECTION 5 - PERSONAL EQUIPMENT**

Each crew member shall have:

** 5.01 Lifejacket
   ** 5.01.1 A lifejacket as follows:
   a) equipped with a whistle
   ** 5.01.4 The person in charge shall personally check each lifejacket at least once annually.
### APPENDIX E

**HULL CONSTRUCTION STANDARDS (SCANTLINGS)**

*for Monohulls pre-2010 and Multihulls*

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mo0,1,2</td>
<td>E.1 A monohull with the earliest of Primary Launch before the 2010 shall comply with OSR 3.03.1, 3.03.2 and 3.03.3 or with this appendix.</td>
</tr>
<tr>
<td>Mu0,1,2</td>
<td>A multihull shall comply with this appendix.</td>
</tr>
<tr>
<td>MoMu0</td>
<td>E.2 A boat with Primary Launch after 1985 shall have been designed built, maintained, modified and repaired in accordance with the requirements of either:</td>
</tr>
<tr>
<td></td>
<td>A boat:</td>
</tr>
<tr>
<td></td>
<td>a) 12 m (39'-4&quot;) (L_H) and greater with Primary Launch after 1986, or</td>
</tr>
<tr>
<td></td>
<td>b) less than 12 m (39'-4&quot;) (L_H) with Primary Launch after 1987</td>
</tr>
<tr>
<td>MoMu1,2</td>
<td>shall have been designed built, maintained, modified and repaired in accordance with the requirements of either:</td>
</tr>
<tr>
<td>MoMu0,1,2</td>
<td>a) the EC Recreational Craft Directive for Category A (having obtained the CE mark), or</td>
</tr>
<tr>
<td>MoMu0,1,2</td>
<td>b) the ABS Guide for Building and Classing Offshore Yachts in which case the yacht shall have on board either a certificate of plan approval issued by ABS, or written statements signed by the designer and builder which confirm that they have respectively designed and built the yacht in accordance with the ABS Guide, or</td>
</tr>
<tr>
<td>MoMu0,1,2</td>
<td>c) ISO 12215 Category A, with written statements signed by the designer and builder which confirm that they have respectively designed and built the yacht in accordance with the ISO standard, or</td>
</tr>
<tr>
<td>MoMu0,1,2</td>
<td>d) except that a race organizer or class rules may accept when that described in (a), (b), or (c) above is not available, the signed statement by a naval architect or other person familiar with the standards listed above that the yacht fulfils the requirements of (a), (b), or (c).</td>
</tr>
<tr>
<td>MoMu0,1,2</td>
<td>E.3 Any significant repairs or modifications to the hull, deck, coachroof, keel or appendages, on a yacht defined in table 2 shall be certified by one of the methods above and an appropriate written statement or statements shall be on board.</td>
</tr>
</tbody>
</table>