2020-2021 Offshore Special Regulations

Governing Offshore Racing for Monohulls & Multihulls



sport / nature / technology

World Sailing

THE WORLD SAILING
OFFSHORE SPECIAL REGULATIONS

for 2020 – 2021

Governing Offshore Racing for Monohulls & Multihulls

Structural Features · Yacht Equipment
Personal Equipment · Training

World Sailing

Offshore Racing Environmental Code

World Sailing is committed to the promotion of care for the environment. In offshore racing we will

- use holding tanks where fitted and empty at a pump-out station or more than 3 miles offshore
- in the bilges use oil collection pads and dispose properly ashore
- use environmentally-friendly cleaning products suitable for the marine environment
- retain garbage on board for recycling or disposal ashore except on a long voyage when biodegradable waste may be discharged overboard
- avoid the use of 2-stroke engines (except advanced models with pollution control)
- use shore toilets when in port
- observe IMO guidelines on biofouling
- use solar, water power or wind charging when appropriate
- encourage new offshore racing yachts (OSR Cat 0, 1 & 2) constructed after 2022, to produce at least 20% of their power requirements using renewable energy sources whilst racing

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Appendices
Appendix A,B,C,F,L are minimum standards; D,E,G,H,J,K are advisory;

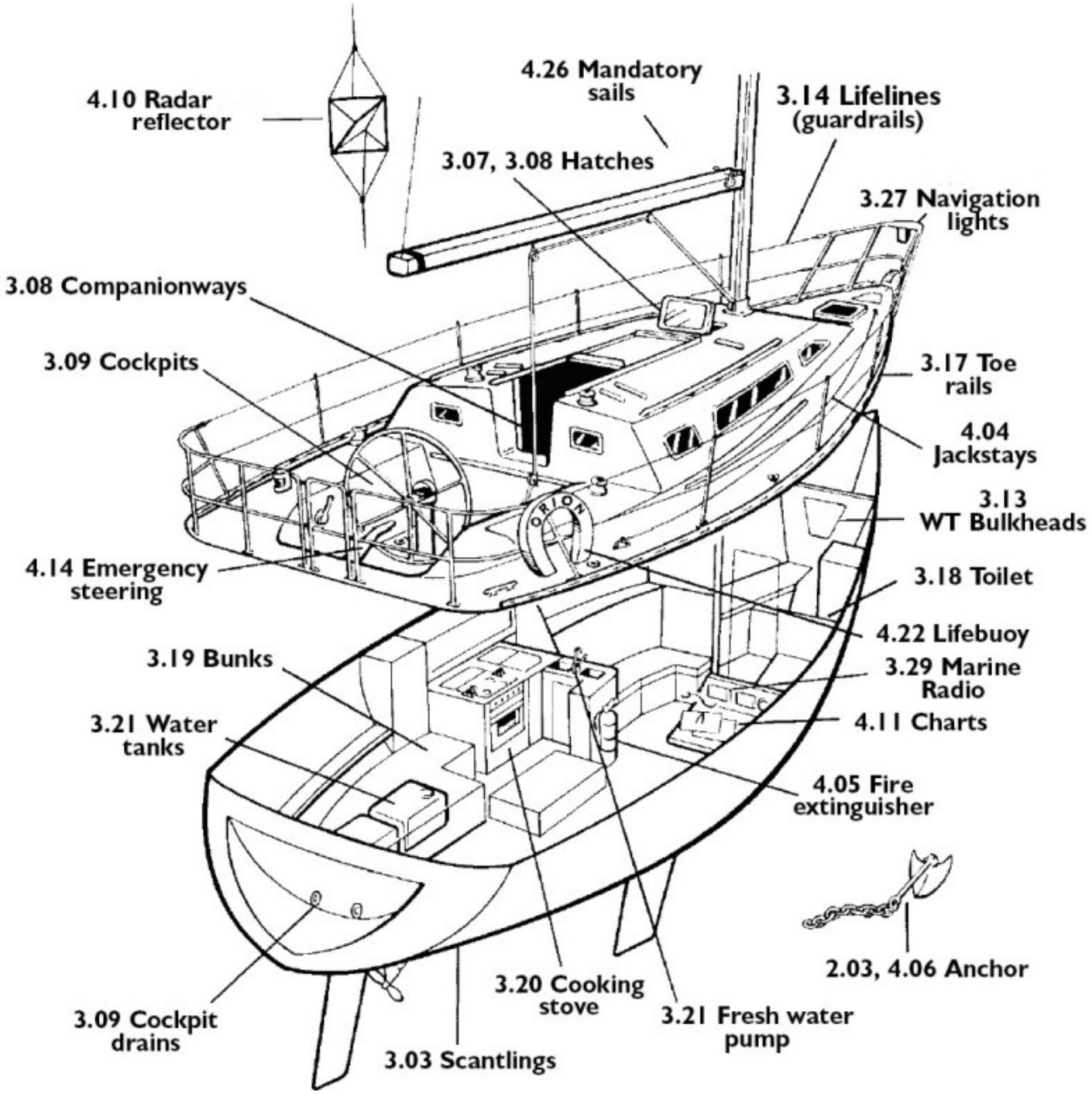
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The Special Regulations Sub-Committee was created in 1967 by the newly formed Offshore Rule Co-ordinating Committee, later the Offshore Racing Council now the Offshore Racing Congress. As the horizons of offshore racing extended into round-the world and multihull activities, so too did the scope of Special Regulations, which now cover racing in seven categories.. Interpretations, amendments, and also extract files for particular categories and boat types, are available on the World Sailing web site (www.sailing.org/specialregs).

DIAGRAMMATIC GUIDE

(see also alphabetical index)



JANUARY 2020 - DECEMBER 2021

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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

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 significant changes in 2020

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:
(a) 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;
(b) monitor developments in offshore racing relative to the standards of safety and seaworthiness.
Any queries please E-Mail: technical@sailing.org

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 OSRs 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

Abbreviation	Description
#	Pound force (lbf)
ABS	American Bureau of Shipping
Age Date	Month/year of first launch
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	World Sailing - 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 may consist of one piece or several
GMDSS	Global Maritime Distress & Safety System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System

Hatch	The term hatch includes the entire hatch assembly including the lid or cover as part of that assembly
HMPE	High Modulus Polyethylene (Dyneema®/Spectra® or equivalent)
IMO	International Maritime Organisation
IMSO	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
INMARSAT	Inmarsat Global Limited is the private company that provides GMDSS 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 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.
LH	Hull Length as defined by the ERS
Lifeline	Rope or wire line rigged as guardrail / guardline around the deck
LSA	IMO International Life-Saving Appliance Code
LWL	(Length of) loaded waterline
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 Contained Cockpit.
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 first launch of the first boat of the production series or first launch 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 - 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 safety line carried with a harness) kept clipped on at a work-station
STIX	ISO 12217-2 Stability Index
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 — formerly the International Sailing Federation or ISAF

** 1.03.2 The words "shall" and "must" are mandatory, and "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

** 2.01 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 Special Regulations - 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)

2.01.7 Special Regulations - for Inshore Dinghy 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 Incident Reporting

2.02 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

** 2.03 A boat may be inspected at any time. If she fails to comply with the OSR her entry may be rejected or she will be subject to protest

2.04 General Requirements

** 2.04.1 All equipment required by OSR shall:

** a) function properly

** b) be regularly checked, cleaned and serviced

** c) if it has an expiry date, it will not have exceeded its expiry date whilst racing

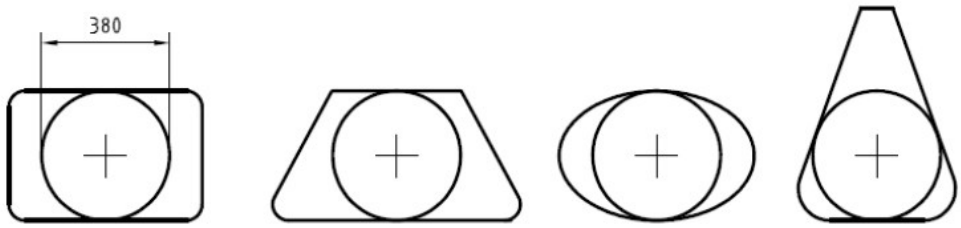
** d) when not in use be stowed in conditions in which deterioration is minimised

** e) be readily accessible

** f) be of a type, size and capacity suitable and adequate for the intended use and size of the boat.

**	2.04.2	Heavy items shall be permanently installed or securely fastened
SECTION 3 - STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT		
**		A boat shall be/have:
	3.01	**Strength of Build and Rig**
**	3.01.1	Properly rigged, fully seaworthy and shall meet the OSR
**	3.01.2	Equipped with shrouds and at least one forestay that shall remain connected to the mast and the boat while racing
	3.02	**Watertight and Structural Integrity of a Boat**
**	3.02.1	Essentially watertight and all openings shall be capable of being immediately secured. Centreboard, 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
Mo0,1,2,3	3.02.2	Effective 1 January 2021: Structural Inspection - Consult the owner's manual for any instructions for keel bolt checking and re-tightening. The following inspection to be conducted by a qualified person externally with the boat out of the water. Check that there are no visible stress cracks particularly around the keel, hull/keel attachment, hull appendages and other stress points, inside the hull, backing plates, bolting arrangements and keel floors. (See Appendix L - Model Keel and Rudder Inspection Procedure)
Mo0,1,2,3	3.02.3	Effective 1 January 2021: Evidence of a structural inspection in accordance with 3.02.2 within 24 months before the start of the race or after a grounding whichever is the later
Mo0,1,2,3	3.02.4	Effective 1 January 2021: Inspection after Grounding – an appropriately qualified person shall conduct an internal and external inspection after each unintentional grounding
	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") LH shall:
	a) i)	be designed, built and maintained in accordance with the requirements of ISO 12215 Category A
	a) ii)	have a World Sailing / ISAF building plan review certificate issued from a notified body recognized by World Sailing, unless higher classification has been obtained from a Classification Society recognised by World Sailing. World Sailing will publish a list of waived plan review certificates.
Mo0,1,2	b)	24 m (78'-9") LH and greater shall be designed, built and maintained in accordance with the requirements of a Classification Society recognized by World Sailing
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 World Sailing/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.
MoMu0,1,2	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:
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
MoMu0,1,2	c)	the EC Recreational Craft Directive for Category A having obtained the CE mark, or
MoMu0,1,2	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
MoMu0,1,2	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
MoMu0,1,2	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 * 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)	i a STIX value not less than 32; and
Mo0,1,2		ii AVS not less than 130 - 0.002*m, but always >= 100°, (where "m" is the mass of the boat in the minimum operating condition as defined by ISO 12217-2); and
Mo0,1,2		iii a minimum righting energy m*AGZ>172000 (where AGZ is the positive area under the righting lever curve in the minimum operating condition, expressed in kg metre degrees from upright to AVS); or
Mo3	a)	i a STIX value not less than 23; and
Mo3		ii AVS not less than 130 - 0.005*m, but always >= 95°, (where "m" is the mass of the boat in the minimum operating condition as defined by ISO 12217-2); and
Mo3		iii a minimum righting energy not less than m*AGZ>57000 (where AGZ is the positive area under the righting lever curve in the minimum operating condition, expressed in kg metre degrees from upright to AVS); or
Extract Mo0	b)	Stability Index in ORC Rating System of not less than 120; or
Extract Mo1	b)	Stability Index in ORC Rating System of not less than 115; or
Extract Mo2	b)	Stability Index in ORC Rating System of not less than 110; or
Extract Mo3	b)	Stability Index in ORC Rating System of not less than 103; or
Extract Mo0,1	c)	IRC SSS Base value of not less than 35
Extract Mo2	c)	IRC SSS Base value of not less than 28
Extract 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)
Mo0,1,2,3,4		
		Figure 1 - Measurements of Minimum Clear Opening
	3.07	**Exits and Escape Hatches - Multihulls**
	3.07.1	**Exits**
Mu0,1,2,3	3.07.1	At least two exits in each hull which contains accommodations
Mu4	3.07.1	At least two exits in each hull which contains accommodations if 8 m (26'-3") LH and greater
	3.07.2	**Escape Hatches, Underside Clipping Points & Handholds**
Mu0,1,2,3,4	a)	If 12 m (39'-4") LH and greater each hull which contains accommodation:
Mu0,1,2,3,4	i	an escape hatch for access to and from the hull in the event of an inversion;
Mu0,1,2,3,4	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
Mu0,1,2,3,4	iii	each escape hatch above the waterline when the boat is inverted;
Mu0,1,2,3,4	iv	each escape hatch at or near the midships station if First Launch after 2000
Mu0,1,2,3,4	v	each escape hatch on the side nearest the vessel's central axis for a catamaran if First Launch after 2002
Mu0,1,2,3,4	3.07.2 b)	if a trimaran at least two escape hatches in compliance with the dimensions in OSR 3.07.2 a) ii if 12 m (39'-4") LH and greater if First Launch after 2002
Mu0,1	3.07.2 c)	if a trimaran at least one escape hatch in compliance with the dimensions in OSR 3.07.2 a) ii if less than 12 m (39'-4") LH if First Launch after 2002
Mu0,1,2,3,4	c)	each escape hatch shall have been opened both from inside and outside within 6 months prior to the race
Mu0,1,2,3,4	3.07.2 d)	appropriate handholds/clipping points on the underside sufficient for all crew (on a trimaran these shall be around the central hull)
Mu0,1,2,3,4	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
Mu2,3,4	3.07.3	if less than 12 m (39'-4") LH either escape hatches in compliance with OSR 3.07.2 a), b) and c) or:
Mu2,3,4	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
Mu2,3,4	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	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)
	3.08.3	Hatches not conforming with 3.08.1 and 3.08.2 shall be clearly labelled and used in accordance with the following instruction "NOT TO BE OPENED AT SEA"

**	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	3.08.5	if a monohull with Open Cockpit(s):
Mo0,1,2,3,4	3.08.5 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	3.08.6	if a monohull with Contained Cockpit(s) where the companionway extends below the local sheerline, panels capable of blocking the companionway up to the level of the local sheerline whilst giving access to the interior.
Mu0,1,2,3,4	3.08.7	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	b)	be in compliance with ISO 11812 to design category A
Mu4		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
****	**3.09.4**	**Cockpit Volume**
**		The maximum combined volume below lowest coamings of all contained cockpits shall be:
Extract MoMu0,1	a)	primary launch before April 1992: 6% (LWL x maximum beam x freeboard abreast the cockpit)
Extract MoMu2,3,4	a)	primary launch before April 1992: 9% (LWL x maximum beam x freeboard abreast the cockpit)
**	b)	primary launch after March 1992 as above for the appropriate category except that "lowest coamings" shall not include any aft of the FA station and no extension of a cockpit aft of the working deck shall be included in calculation of cockpit volume
	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:
**	a)	2 x 25 mm (1") diameter or equivalent for a boat less than 8.5 m (28') LH
**	b)	4 x 20 mm (3/4") diameter or equivalent for a boat 8.5 m (28') LH or greater
	3.10	**Sea Cocks or Valves**
**	3.10	Permanently installed sea cocks or valves on all through-hull openings below the waterline except for integral deck scuppers and instrument through-hulls
	3.11	**Sheet Winches**
**	3.11	Sheet winches mounted in such a way that an operator is not required to be substantially below deck
	3.12	**Mast Step**
**	3.12	The heel of a keel stepped mast securely fastened to the mast step or adjoining structure
	3.13	**Watertight Bulkheads**
Mo0Mu0,1,2,3,4	3.13.1	Either a watertight "crash" bulkhead within 15% of LH from the bow and abaft the forward end of LWL, or permanently installed closed-cell foam buoyancy effectively filling the forward 30% LH of the hull
Mo0Mu0,1,2,	3.13.2	Any required watertight bulkhead to be strongly built to take a full head of

3,4		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 LH
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 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') LH may use a single lifeline system with a height between 450 mm (18") and 560 mm (22")
**	c)	Lifelines permanently supported at intervals of not more than 2.2 m (7'-2 1/2") and 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")

**

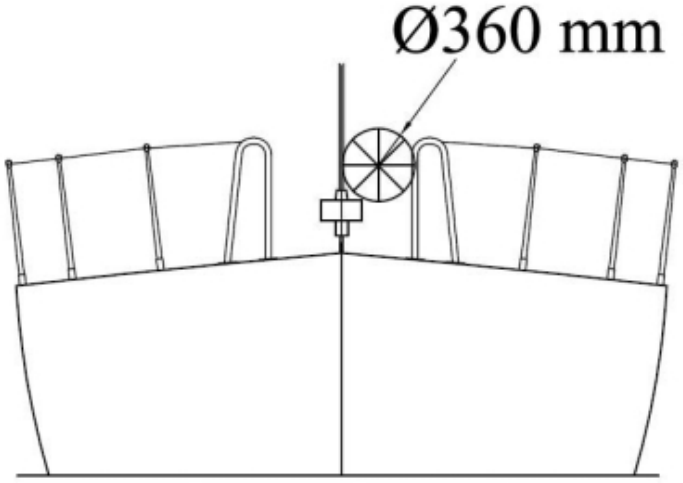


Figure 2 - Diagram Showing Pulpit Opening

**	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:
**	i	50 mm (2″) for an upper or single lifeline
**	ii	120 mm (4 ¾″) for an intermediate lifeline
Mu0,1,2,3,4	**3.14.2**	**Special Requirements for Pulpits, Stanchions, Lifelines on Multihulls**
Mu0,1,2,3,4	3.14.2 a)	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
	3.14.3	Spare number
	3.14.4	Spare number
	3,14.5	Spare number
	3.14.6	**Lifeline Specifications**
Mo0,1,2,3	3.14.6 a)	Lifelines of stranded stainless steel wire
Mo4,Mu**	3.14.6 a)	Lifelines of either:
Mo4,Mu**	3.14.6 a) i	stranded stainless steel wire
Mo4,Mu**	3.14.6 a) ii	HMPE
**	3.14.6 b)	The minimum diameter is specified in table 8 below
**	3.14.6 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.
**	3.14.6 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
**	3.14.6 e)	All components of the lifeline enclosure system shall have a breaking strength no less than the lifeline
Mo4,Mu**	3.14.6 f)	When HMPE is used, it shall be protected from chafe and spliced in accordance with the manufacturer's recommended procedures

LH	Wire Min. lifeline diameter	HMPE rope (Single braid) min. lifeline diameter	HMPE Core (Braid on braid) min. lifeline diameter
under 8.5m (28')	3mm (1/8")	4mm (5/32")	4mm (5/32")
8.5m - 13m	4mm (5/32")	5mm (3/16")	5mm (3/16")
over 13m (42' 8")	5mm (3/16")	5mm (3/16")	5mm (3/16")

	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	3.15.1 a)	essentially horizontal
Mu0,1,2,3,4	3.15.1 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	3.15.1 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	3.15.1 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**
	3.15.2	A trimaran with double crossbeams shall have nets on each side covering:-
Mu0,1,2,3,4	3.15.2 a)	the area formed by the crossbeams, central hull and outriggers
Mu0,1,2,3,4	3.15.2 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	3.15.2 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	3.15.2 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**
Mu0,1,2,3,4	3.15.3	A trimaran with a single crossbeam shall have nets between the central hull and each outrigger on each side between two straight lines from the intersection of the crossbeam and the outrigger, respectively to the aft end of the pulpit on the central hull, and to the aftermost point of the cockpit or steering position on the central hull (whichever is furthest aft)
	3.16	**Catamarans**
Mu0,1,2,3,4	3.16.1	A catamaran shall have nets covering the area defined:
Mu0,1,2,3,4	3.16.1 a)	laterally by the hulls; and
Mu0,1,2,3,4	3.16.2 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	3.19.2	Permanently installed bunks
	3.20	**Cooking Facilities**
MoMu0,1,2,3	3.20	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 a)	Permanently installed delivery pump and water tanks dividing the water supply into at least three compartments
MoMu1	3.21.1 a)	Permanently installed delivery pump and water tanks dividing the water supply into at least two compartments
MoMu2,3	3.21.1 a)	Permanently installed delivery pump and water tank(s)
	3.21.2	**Drinking Water**
MoMu0	3.21.2 a)	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
	3.21.3	**Emergency Drinking Water**
MoMu1,2,3	3.21.3 a)	At least 9 l (2.4 US Gal) of drinking water for emergency use in a dedicated and sealed container or container(s)
MoMu0	3.21.3 b)	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
MoMu0	3.21.3 c)	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
MoMu0	3.21.3 d)	facilities shall be provided to collect rainwater for drinking purposes including when dismasted
	3.22	**Hand Holds**
**	3.22	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
Mo0,1,2	3.23.1 b)	two permanently installed manual bilge pumps, one operable from above, the

		other from below deck
Mo3Mu0,1,2	3.23.1 b)	one permanently installed manual bilge pump
Mo4	3.23.1 b)	one manual bilge pump
Mu0,1,2,3,4	3.23.1 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 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**
MoMu0,1,2,3	3.24 a)	Marine magnetic compass capable of being used as a steering compass:
MoMu0,1,2,3,4	3.24 b)	Permanently installed marine magnetic steering compass, independent of any power supply, correctly adjusted with deviation card
MoMu0,1,2,3	3.24 c)	a second compass which may be hand-held and/or electronic
	3.25	**Halyards.**
**	3.25 a)	A minimum of two halyards, each capable of hoisting a sail, on each mast
MoMu0,1,2,3	3.25 b)	No halyard shall be locked, lashed or otherwise secured to the mast in a way that requires a person to go aloft in order to lower a sail in a controlled manner, except for a headsail in use with a furling device.
	3.26	**Bow Fairlead**
Mo0	3.26	Bow fairlead, closed or closable and a cleat or securing arrangement, suitable for towing, permanently installed
	3.27	**Navigation Lights**
	3.27.1	that conform to the International Regulations for Preventing Collisions at Sea (Part C and Technical Annex I) and shall be exhibited as required by those regulations.
**	3.27.2	mounted above sheerline and so that they will not be masked by sails or the heeling of the boat
MoMu0,1,2,3	3.27.3	reserve lights having the same specifications as above, and that can be powered independently
**	3.27.4	spare bulbs (not required for LED)
	3.28	**Engines, Generators, Fuel**
	3.28.1	**Propulsion Engines**
**	3.28.1 a)	engines and associated systems installed in accordance with their manufacturers' guidelines and suitable for the size and intended use of the boat
MoMu0,1,2,3	3.28.1 b)	an engine which provides a minimum speed in knots of (1.8 x √LWL in metres) or (√ LWL in feet)
Mo0,1,2Mu0	3.28.1 c)	inboard engine
Mu1,2,3	3.28.1 c)	inboard engine, however if less than 12.0 m (39'-4") LH either an inboard engine, or an outboard engine together with permanently installed power supply systems
Mo3	3.28.1 c)	either an inboard or outboard engine, with associated power supply systems, all securely fastened
**	3.28.1 d)	an inboard combustion engine shall have a permanently installed exhaust, cooling system, fuel supply, fuel tank(s) and shall have adequate heavy weather protection
**	3.28.1 e)	an inboard electrical engine, when fitted, shall be provided with a permanently installed power supply, adequate heavy weather protection and have an engine control system.
	3.28.2	**Generator**
**	3.28.2	If an optional generator separate from the propulsion engine is carried, it shall

		be installed in accordance with the manufacturer's guidelines
	3.28.3	**Liquid Fuel Systems**
MoMu0,1,2,3	3.28.3 a)	All fuel tanks for storage of liquid fuels shall be rigid (but may have permanently installed flexible linings) and shall have a shutoff valve
MoMu0,1,2,3	3.28.3 b)	At the start a boat with a combustion engine shall carry sufficient fuel to meet charging requirements for the duration of the race and to motor at the above minimum speed for at least 5 hours
	3.28.4	**Battery Systems**
MoMu0,1,2,3	3.28.4 a)	a dedicated engine/generator starting battery when an electric starter is the only method for starting the engine and/or separate generator
**	3.28.4 b)	batteries installed after 2011 shall be of the sealed type from which liquid electrolyte cannot escape
**	3.28.4 c)	At the start a boat with an electric engine shall carry sufficient capacity to meet electrical requirements for the duration of the race and to motor at the above minimum speed for at least 5 hours
	3.29	**Communications Equipment, GPS, Radar, AIS**
MoMu0,1,2,3	3.29.1	a marine radio transceiver with an emergency antenna when the regular antenna depends upon the mast
MoMu0,1,2,3	3.29.2	if the marine radio transceiver is a VHF:
MoMu0,1,2,3	3.29.2 a)	a minimum rated output power of 25 W
MoMu0,1,2	3.29.2 b)	a masthead antenna not less than 38 cm (15") in length and co-axial feeder cable with not more than 40% power loss
MoMu3	3.29.2 b)	a masthead antenna and co-axial feeder cable with not more than 40% power loss
MoMu1,2,3	3.29.2 c)	be DSC capable if installed after 2015
MoMu1,2,3	3.29.2 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
MoMu0	3.29.2 e)	a marine VHF DSC radio covering all international and US marine channels and meeting ITU class D
MoMu0	3.29.3 a)	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)
MoMu1	3.29.3 b)	One hand-held satellite telephone, watertight or with waterproof cover and internal battery.
MoMu0	3.29.4	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 grab bag (see OSR 4.21)
MoMu1,2,3,4	3.29.5	a hand-held marine VHF transceiver, watertight or with a waterproof cover. When not in use to be stowed in a grab bag or emergency container (see OSR 4.21)
**	3.29.6	a second radio receiver, which may be the handheld VHF in 3.29.5 above, capable of receiving weather bulletins
MoMu0	3.29.7	a 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 4.22.1);
MoMu3	3.29.8	a GPS
MoMu0	3.29.9	a 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	3.29.10	an 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	3.29.11	an active radar set permanently installed either:
MoMu0	3.29.11 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	3.29.11 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).
Mu0	3.29.12	a class A AIS Transponder which either:
Mo0,1,2,3 Mu1,2,3	3.29.13	an AIS Transponder which either:
MoMu0,1,2,3	3.29.13 a)	shares the masthead VHF antenna via a low loss AIS antenna splitter; or
MoMu0,1,2,3	3.29.13 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
MoMu0,1,2,3	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**
MoMu0	4.02.1	A 4 m² (43 ft²) area of highly-visible pink, orange or yellow on the coachroof and/or deck
Mo1,Mu1,2	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.
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**
**	4.03	A tapered soft wood plug stowed adjacent to every through-hull opening
	4.04	**Jackstays and Clipping Points**
MoMu0,1,2,3	4.04.1	Permanently Installed fittings for jackstay ends and clipping points
MoMu0,1,2,3	4.04.2	Jackstays which shall:
MoMu0,1,2,3	4.04.2 a)	be independent on each side of the deck
MoMu0,1,2,3	4.04.2 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
MoMu0,1,2,3	4.04.2 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
MoMu0,1,2,3	4.04.3	Clipping points which shall:
MoMu0,1,2,3	4.04.3 a)	be adjacent to stations such as the helm, sheet winches and masts, where crewmembers work
MoMu0,1,2,3	4.04.3 b)	enable a crewmember to clip on before coming on deck and unclip after going below
MoMu0,1,2,3	4.04.3 c)	enable two-thirds of the crew to be simultaneously clipped on without depending on jackstays
Mu0,1,2,3	4.04.3 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
MoMu0	4.05.2	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	4.05.2	2 fire extinguishers, each with 2 kg of dry powder or equivalent, in different parts of the boat
MoMu4	4.05.2	2 fire extinguishers in different parts of the boat
	4.06	**Anchors**
MoMu0	4.06.1	Anchors, chain and rope which comply with relevant class rules or the rules of a recognised Classification Society (e.g. Lloyd's, DNV, etc.)
MoMu1,2,3	4.06.2	2 un-modified anchors that meet the anchor manufacturer's recommendation

		based on the boat's dimensions with suitable combination of chain and rope, ready for immediate assembly, and ready for deployment within 5 minutes except that for a boat less than 8.5 m (28') LH there shall be 1 anchor meeting the same criteria.
MoMu4	4.06.2	1 un-modified anchor that meets the anchor manufacturer's recommendation based on the boat's dimensions with suitable combination of chain and rope, ready for immediate assembly, and ready for deployment within 5 minutes.
	4.07	**Flashlights and Searchlights**
**	4.07.1	Watertight lights with spare batteries and bulbs as follows:
MoMu0,1,2,3	4.07.1 a)	a searchlight, suitable for searching for a person overboard at night and for collision avoidance
MoMu0,1,2,3	4.07.1 b)	a flashlight in addition to 4.07 a)
Mu3,4	4.07.1 c)	the watertight flashlight in OSR 4.07 b) shall be stowed in the grab bag or emergency container
MoMu0	4.07.1 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**
**	4.08	A First Aid Manual and First Aid Kit. The contents and storage of the First Aid Kit shall reflect the likely conditions and duration of the passage, and the number of crew
	4.09	**Foghorn**
**	4.09	A foghorn
	4.10	**Radar Reflector**
**	4.10.1	A passive radar reflector with:
**	4.10.1 a)	octahedral circular plates of minimum diameter 30 cm (12"), or
**	4.10.1 b)	octahedral rectangular plates of minimum diagonal dimension 40 cm (16"), or
**	4.10.1 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
MoMu0	4.10.2	A Radar Target Enhancer (RTE) which complies with ISO 8729-2:2009 or equivalent
	4.11	**Navigation Equipment**
**	4.11	Navigational charts (not solely electronic), light list and chart plotting equipment
	4.12	**Safety Equipment Location Chart**
**	4.12	A safety equipment location diagram in durable waterproof material, clearly displayed in the main accommodation, marked with the location of principal items of safety equipment
	4.13	**Depth, Speed and Distance Instruments**
MoMu0,1,2,3	4.13.1	A knotmeter or distance measuring instrument (log)
MoMu,1,2,3,4	4.13.2	A depth sounder
MoMu0	4.13.2	Two independent depth sounders
	4.14	**Spare Number**
	4.15	**Emergency Steering**
MoMu0,1,2,3	4.15.1	An emergency tiller capable of being fitted to the rudder stock except when
MoMu0,1,2,3	4.15.1 a)	the principal method of steering is by means of an unbreakable metal tiller
MoMu0,1,2,3	4.15.1 b)	there are two methods (e.g. tillers, wheels) of controlling a rudder, neither of which shares components with the other except for the rudder stock.
MoMu0,1,2,3	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**
**	4.17	The boat's name on miscellaneous buoyant equipment, such as lifejackets, cushions, lifebuoys, recovery slings, grab bags etc.
	4.18	**Retro-reflective material**

**	4.18	Marine grade retro-reflective material on lifebuoys, recovery 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	4.20.1 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	4.20.1 a) i	SOLAS LSA Code 1997 Chapter IV or later version; or
MoMu1,2	4.20.1 a) ii	ISO 9650-1:2005, Type 1, Group A - Small Craft - Inflatable; or
MoMu1,2	4.20.1 a) iii	ISAF liferafts manufactured before 2016 until replacement is due at end of service life; or
MoMu1,2	4.20.1 a) iv	ORC liferafts manufactured before 2003 until replacement is due at end of service life
MoMu0	4.20.1 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	4.20.1 c)	Liferafts shall comply with SOLAS LSA code 1997 Chapter IV or later version
	4.20.2	**Minimum Liferaft Equipment**
MoMu0,1,2	4.20.2 a)	A SOLAS liferaft shall contain as a minimum a SOLAS A pack;
MuMo1	4.20.2 b)	An ISO 9650 liferaft shall contain as a minimum Pack 1 (greater than 24 hour pack);
MuMo2	4.20.2 c)	An ISO 9650 liferaft shall contain as a minimum Pack 2 (less than 24 hour pack);
MoMu1,2	4.20.2 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:

Equipment	Pack 1 > 24h	Pack 2 < 24h	In liferaft	In liferaft or in grab bag
Portable buoyant baler easily operable by hand	1	1	X	
Sponge	2	2	X	
Pair of buoyant paddles with handles (not mitts) tied into raft adjacent to an entrance	1	1	X	
First-Aid Kit including at least 2 tubes of sunscreen. All dressings must be capable of being effectively used in wet conditions. The first aid kit shall be clearly marked and shall be re-sealable.	1	0		X
Whistle	1	1	X	
Waterproof torch with 6 h duration and separate battery and bulb or complementary torch	2	1	X	
Signalling mirror	1	1	X	
Anti-seasickness pills, per person	6	6		X
Seasickness bag with simple effective closure system, per person	1	1		X
Red hand flares in accordance with SOLAS LSA Code	6	3	3 min	X

	Chapter III, 3.2				
	Red parachute flares in accordance with SOLAS LSA Code Chapter III, 3.1	2	2	1 min	X
	Thermal protective aids in accordance with SOLAS LSA Code Chapter III, 2.5	2	0		X
	Repair outfit to enable survivors to repair leaks in any or all of the inflatable compartments. Repair systems must work when wet and be capable of being applied during violent motion.	1	1	X	
	Air pump or bellows which shall be simple, robust and complete, with all necessary connections (loose parts shall be captive to the main apparatus) ready for instant use to enable air to be pumped into any or all of the inflatable compartments. The air pump or bellows shall be designed and built specifically for easy operation by hand	1	1	X	
	Drinking water per person, in containers of each not more than 500mL	1.5 L	0	X 0.5 L	Xa
	Food per person	10 000 kJ	0		X
	* Drinking water in the grab bag (if any) may be replaced with a desalinator device				

	4.20.3	**Liferaft Packing and Stowage**
MoMu0,1,2	4.20.3 a)	Each liferaft shall be packed either in:-
MoMu0,1,2	4.20.3 a) i	a rigid container securely stowed on the working deck, in the cockpit or in an open space; or:-
MoMu0,1,2	4.20.3 a) 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
MoMu1,2	4.20.3 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
MoMu0,1,2	4.20.3 c)	On a multihull or on a monohull with moveable ballast the liferaft shall be readily deployable whether or not the boat is inverted
MoMu0,1,2	4.20.3 d)	The end of each liferaft painter should be securely fastened to the boat
MoMu0,1,2	4.20.3 e)	Each raft shall be capable of being got to the lifelines or launched within 15 seconds
	4.20.4	**Spare Number**
MoMu0,1,2	**4.20.5**	**Liferaft Servicing**
MoMu0,1,2	4.20.5 a)	A liferaft shall be serviced at a manufacturer authorized service station at the following maximum intervals:
MoMu0,1,2	4.20.5 a) i	SOLAS liferafts annually
MoMu0,1,2	4.20.5 a) ii	ISO 9650 canister packed liferafts every 3 years
MoMu0,1,2	4.20.5 a) iii	ISO 9650 valise packed liferafts every 3 years except that hired liferafts shall be serviced annually
MoMu0,1,2	4.20.5 a) iv	ISAF liferafts annually
MoMu0,1,2	4.20.5 a) v	ORC liferafts annually
MoMu0,1,2	4.20.5 b)	Servicing certificates (original or a copy) on board
	4.21	**Grab Bags**
Mo3Mu3,4	4.21	Either a watertight compartment or a grab bag, readily accessible whether or not the boat is inverted, with the following minimum contents:
Mo3Mu3,4	4.21 a)	a watertight hand-held marine VHF transceiver with spare batteries
Mo3Mu3,4	4.21 b)	a watertight flashlight with spare batteries and bulb

Mo3Mu3,4	4.21 c)	3 red hand flares
Mo3Mu3,4	4.21 d)	a watertight strobe light with spare batteries
Mo3Mu3,4	4.21 e)	a knife
**	4.21 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
MoMu0	4.22.1 a)	A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member
MoMu0,1,2	4.22.1 b)	An AIS personal crew overboard beacon for each crew member
MoMu0	4.22.1 c)	A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it;
MoMu0,1,2	4.22.1d)	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
MoMu0	4.22.2 a)	A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and
MoMu0	4.22.2 b)	connected to 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 GPS
MoMu1,2	4.22.2 c)	A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position
MoMu3,4	4.22.3	a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use
MoMu0,1,2	4.22.3	a lifebuoy with a self-igniting light, a whistle and a drogue
MoMu0,1,2	4.22.4	In addition to 4.22.3 above, within reach of the helmsman and ready for immediate use, a second lifebuoy equipped with:
MoMu0,1,2	4.22.4 a)	a whistle, a drogue, a self-igniting light and
MoMu0,1,2	4.22.4 b)	a pole and flag. The pole shall be either permanently extended or be capable of being fully automatically extended
MoMu0	4.22.4 c)	Each lifebuoy shall be equipped with a sachet of fluorescein dye
MoMu0,1,2	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
MoMu0,1,2,3	4.22.8	A recovery sling which includes a:
MoMu0,1,2,3	4.22.8 a)	buoyant line of length no less than the shorter of 4 times LH or 36m (120')
MoMu0,1,2,3	4.22.8 b)	buoyancy section (horseshoe) with no less than 90 N (20#) buoyancy
MoMu0,1,2,3	4.22.9 c)	minimum strength capable to hoist a crewmember aboard
	4.23	**Pyrotechnic and Light Signals**
**	4.23	Pyrotechnic signals shall be provided conforming to SOLAS LSA Code Chapter III Visual Signals and not older than the stamped expiry date (if any) or if no expiry date stamped , not older than 4 years.

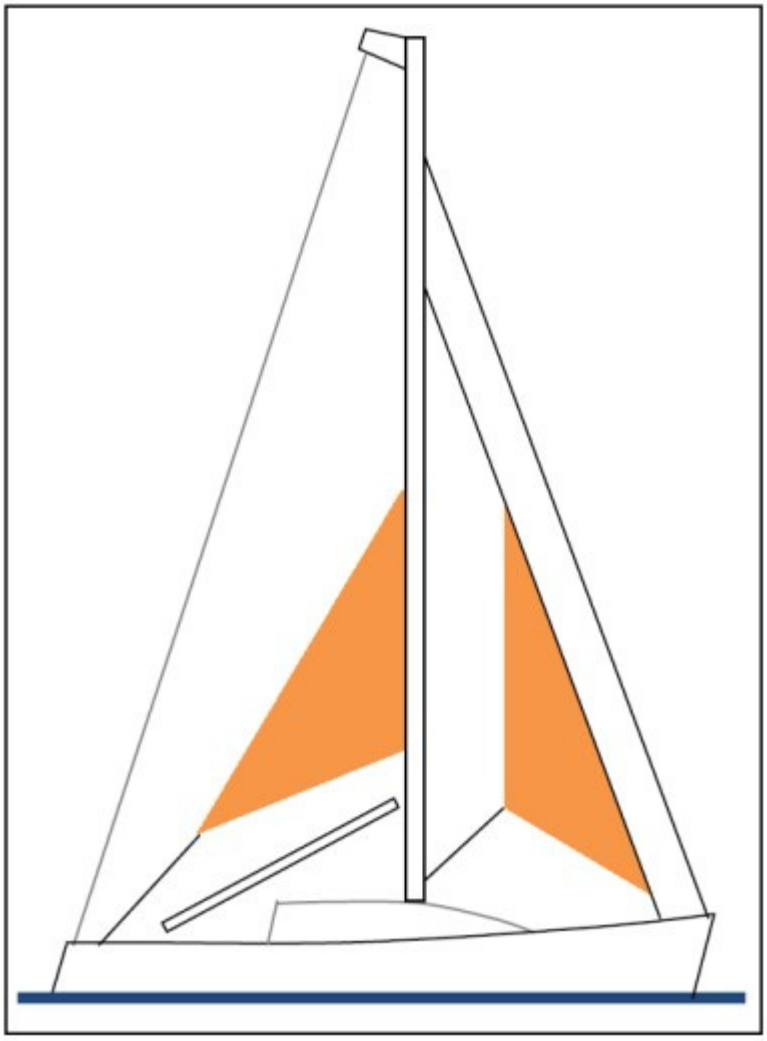
Race Category	Red Hand Flares LSA III 3.2	Orange Smoke Flares LSA III 3.3
MoMu0,1,2,3	4	2
MoMu4		2

	4.24	Spare Number
	4.25	**Cockpit Knife**
**	4.25	A strong, sharp knife, sheathed and securely restrained shall be provided readily accessible from the deck or a cockpit.

4.26 Storm & Heavy Weather Sails

4.26.1 Design

Figure 3



MoMu1,2		
**	4.26.1 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)
**	4.26.1 b)	Aromatic polyamides, carbon and similar fibres shall not be used in a trysail or storm jib but HMPE and similar materials are permitted
**	4.26.1 c)	Sheeting positions on deck for each storm and heavy-weather sail
**	4.26.1 d)	Sheeting positions for the trysail independent of the boom
**		

4.26.2 Sail Areas

**	4.26.2	The maximum area of storm and heavy weather sails shall be lesser of the areas below or as specified by the boat designer or sailmaker
MoMu0,1,2, 3	**4.26.2 a)**	**A heavy-weather jib (or heavy-weather sail in a boat with no forestay) with:**
**	4.26.2 a) i	area of 13.5% height of the foretriangle (IG) squared
**	4.26.2 a) ii	readily available means, independent of a luff groove, to attach to the stay
MoMu0,1,2	**4.26.2 b)**	**A storm jib with:**
MoMu0,1,2	4.26.2 b) i	area of 5% height of the foretriangle (IG) squared
MoMu0,1,2	4.26.2 b) ii	maximum luff length 65% of IG
MoMu0,1,2	4.26.2 b) iii	permanently attached means, independent of a luff groove, to attach to the stay
**	4.26.2 c)	For sails made after 2011: Storm and heavy weather jib areas calculated as: (0.255 x luff length x (luff perpendicular + 2 x half width))

MoMu0,1,2	**4.26.2 d)**	**A storm trysail with:**
MoMu0,1,2	4.26.2 d) i	area not greater than 17.5% mainsail hoist (P) x mainsail foot length (E)
MoMu0,1,2	4.26.2 d) ii	For sails made after 2011:The storm trysail are calculated as (0.5 x leech length x shortest distance between tack point and leech)
MoMu0,1,2	4.26.2 d) iii	no headboard
MoMu0,1,2	4.26.2 d) iv	no battens
MoMu0,1,2	4.26.2 d) v	sail number and letters on both sides, as large as practicable
MoMu0,1,2	4.26.2 d) 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
	4.26.3	**Sail Inventory**
MoMu1,2	4.26.3 a) i	either a storm trysail as defined in OSR 4.26.2 d), or mainsail reefing to reduce the luff by at least 50% (or rotating wing mast if suitable)
MoMu3	4.26.3 a) ii	either a storm trysail as defined in OSR 4.26.2 d), or mainsail reefing to reduce the luff by at least 40% (or rotating wing mast if suitable)
MoMu4	4.26.3 a) iii	either mainsail reefing to reduce the luff by 12.5% or a heavy-weather jib as defined in 4.26.2 a) (or heavy-weather sail in a boat with no forestay)
	4.27	**Drogue, Sea Anchor**
MoMu0	4.27	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 K)
	4.28	Spare Number
	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	4.29.1 a)	so constructed to ensure rapid draining of water
Mo0	4.29.1 b)	securely fastened in such a way that the integrity of deck fittings e.g. stanchions and lifelines, is not compromised
	4.30	**Emergency Pumps**
Mo0,1,2	4.30.1	either fixed or portable pump to remove ingress water from any compartment.
Mo0,1,2	4.30.1 a)	This pump shall:
Mo0,1,2	4.30.1 b)	have a minimum rated capacity of 200 l/min
Mo0,1,2	4.30.1 c)	be operated by battery, main engine powered or a separate engine
Mo0,1,2	4.30.1 d)	if portable electric-powered, power cables to be terminated with alligator clips
Mo0,1,2	4.30.1 e)	have sufficient hose to discharge directly overboard or into the cockpit.
Mo0,1,2	4.30.1 f)	A combination of permanently installed and portable pumps may be combined to meet the above requirement.
		SECTION 5 - PERSONAL EQUIPMENT
**		Each crew member shall have:
	5.01	**Lifejacket**
**	5.01.1	A lifejacket which shall:
**	5.01.1 a)i)	if manufactured before 2012 comply with ISO 12402 - 3 (Level 150) or equivalent, including EN 396 or UL 1180 and:
**	5.01.1 a)i)	if inflatable have a gas inflation system
**	5.01.1 a)i)	have crotch/thigh straps (ride up prevention system (RUPS))
MoMu0,1,2	5.01.1 a)i)	have an integral safety harness in compliance with OSR 5.02
**	5.01.1 a) 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
**	5.01.1 a) ii	crotch/thigh straps (ride up prevention system (RUPS))
MoMu0,1,2	5.01.1 a) ii	an integral safety harness in compliance with OSR 5.02
MoMu0,1,2,3	5.01.1 b)	have an emergency position indicating light in accordance with either ISO 12402-8 or SOLAS LSA code 2.2.3
**	5.01.1 c)	be clearly marked with the boat's or wearer's name

MoMu0,1,2,3	5.01.1 d)	have a sprayhood in accordance with ISO 12402-8
MoMu0	5.01.1 e)	have a PLB unit (as with other types of EPIRB, should be properly registered with the appropriate authority)
**	5.01.1 f)	if inflatable, regulalrly checked for air retention
MoMu0,1,2,3	5.01.2	A boat shall carry at least one gas inflatable lifejacket spare cylinder and, if appropriate, spare activation head for each type of lifejacket on board.
MoMu0,1,2	5.01.3	A boat shall carry at least one spare lifejacket as required in OSR 5.01.1, (a spare PLB described in 5.01.1(e) is not required)
**	5.01.4	The person in charge shall personally check each lifejacket at least once annually.
	5.02	**Safety Harness and Tethers**
MoMu0,1,2,3	5.02.1	A harness that complies with ISO 12401 or equivalent
MoMu0,1,2,3	5.02.2	A tether that shall:
MoMu0,1,2,3	5.02.2 a)	comply with ISO 12401 or equivalent
MoMu0,1,2,3	5.02.2 b)	not exceed 2 m (6'-6") including the length of the hooks
MoMu0,1,2,3	5.02.2 c)	have self-closing hooks
MoMu0,1,2,3	5.02.2 d)	have overload indicator flag embedded in the stitching
MoMu0,1,2,3	5.02.2 e)	be manufactured after 2000
MoMu0,1,2,3	5.02.3	All of the crew shall have either:
MoMu0,1,2,3	a)	a tether not exceeding 1m(3'3") including the length of the hooks, or
MoMu0,1,2,3	b)	an intermediate self-closing hook on a 2 m (6'-6") tether
MoMu0	5.02.4	a boat shall carry spare harnesses and tethers as required in OSR 5.02 above sufficient for at least 10% of the crewmembers (minimum one unit)
MoMu0,1,2,3	5.02.5	A tether which has been overloaded shall be replaced
	5.03	**Personal Location Lights**
MoMu0	5.03	Two packs of miniflares 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	5.04	A foul weather suit with hood
	5.05	**Knife**
MoMu0	5.05	A knife, to be worn on the person at all times
	5.06	**Flashlight**
MoMu0	5.06	A buoyant watertight flashlight
	5.07	**Survival Equipment**
MoMu0	5.07	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);
	5.08	**Diving Equipment**
MoMu0	5.08	The boat shall have at least two diving suits each to cover the entire body and including gloves, fins and portable air supplies
		SECTION 6 - TRAINING
MoMu0	6.01.1	Every member 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
MoMu0,1,2	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
MoMu3	6.01.3	When there are only two crewmembers, at least one shall have undertaken training within the five years before the start of the race in OSR 6.02 Training Topics
MoMu0,1,2	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.
	6.02	**Training Topics**
	6.02.1	Giving Assistance to Other Craft

	6.02.2	Personal Safety Gear, theory and practice
	6.02.3	Care and Maintenance of Safety Gear
	6.02.4	Fire Precautions and Firefighting, theory and practical
	6.02.5	Crew Overboard Identification and Recovery
	6.02.6	Hypothermia, Cold Shock and Drowning
	6.02.7	Crew Health
	6.02.8	Marine Weather
	6.02.9	Heavy Weather
	6.02.10	Storm Sails
	6.02.11	Damage Control
	6.02.12	Search and Rescue 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
	6.03	Spare Number
	6.04	**Routine Training On-Board**
**	6.04	At least annually the crews shall practice the drills for:
**	6.04 a)	Crew-Overboard Recovery
**	6.04 b)	Abandonment of vessel
	6.05	**Medical Training**
MoMu0	6.05.1	At least one crewmember shall have a valid STCW 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	6.05.2	At least two crewmembers shall have a valid first aid certificate completed within the last five years meeting:
MoMu2	6.05.2	At least one crewmember shall have a valid first aid certificate completed within the last five years meeting:
MoMu0,1,2	6.05.2 a)	A certificate listed on the World Sailing website www.sailing.org/specialregs of MNA recognised courses
MoMu0,1,2	6.05.2 b)	STCW 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
	6.06	**Diving Training**
MoMu0	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 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

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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 boats 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 the Category for Inshore Racing.

1 Stability

1.1 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.

1.2 General Standards

In the assessment of ISO category for boats 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.

1.3 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:

SR Category	0	1, 2	3	4
FKR	1.0	0.9	0.8	0.7

Boats with age date prior to 11/04 may seek dispensation from this section 1.3 by application to World Sailing.

1.4 Capsize Recovery

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

3.04.1 Either with, or without, reasonable intervention from the crew, a boat 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:

SR Category	0
FIR	0.9

Boats with age date prior to 11/04 may seek dispensation from this section 1.4 by application to World Sailing.

APPENDIX B
SPECIAL REGULATIONS for inshore racing

Special Regulations for inshore racing 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.

All the items relevant to Special Regulations for inshore racing are shown in Appendix B.

Part A Basic

The following regulations shall be observed:-

Regulation	Item
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/her responsibilities in the event of his/her incapacitation.
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.

3.02	Watertight Integrity of a Boat A boat shall be 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

Part B Portable Equipment
The following shall be provided:-

Regulation	Item
3.23	one strong bucket with a lanyard and of at least 9 litres (2.4 US Gal) capacity
3.24	one compass (a hand-held is acceptable)
4.05	one fire extinguisher required if electrical system, engine or stove on board
4.06	one anchor
4.22	a lifebuoy with a drogue
4.22.5	A heaving line, no less than 6 mm (1/4") diameter, 15 - 25 m (50 - 75') long, readily accessible to cockpit
4.25	A strong, sharp knife, sheathed and securely restrained shall be provided readily accessible from the deck or a cockpit.
5.01.1	each crew member shall have: A personal flotation device which shall: (a) be equipped with a whistle (b) clearly marked with the boat's or wearer's name (c) 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 150N buoyancy, arranged to securely suspend an unconscious man face upwards at approximately 45 degrees to the water surface.

APPENDIX C
SPECIAL REGULATIONS
for inshore dinghy racing

Special Regulations for inshore dinghy racing are intended for use in races where:-

- participating boats may not be self-sufficient
- the races are short in duration and close to a single manned shore base, in relatively warm and protected waters, in daylight and good visibility
- participating boats can be observed by race organisers at all times
- safety/rescue boats are available all along the course sufficient to enable any competitor to be returned to the shore base in a timely manner
- safety/rescue boats are of a suitable design and properly equipped and are manned by adequately trained and competent personnel including, for each race, at least one skilled in first aid

That the Requirements for Special Regulations for inshore dinghy racing are:-

Unless otherwise prescribed in Notice of Race and/or Sailing Instructions, where class rules include items of safety such rules shall override the corresponding part of these Regulation.

All equipment required by Special Regulations for inshore dinghy racing shall:-

- function properly
- be regularly checked, cleaned and serviced
- when not in use be stowed in conditions in which deterioration is minimised
- be readily accessible
- be of a type, size and capacity suitable and adequate for the intended use and size of the boat.

All boats sailing under Special Regulations for inshore dinghy racing shall be fitted with:-

- A strong point for the attachment of a tow and/or anchor line.

All boats sailing under Special Regulations for inshore dinghy racing shall carry:-

- A personal flotation device (PFD) for each person aboard to ISO 12402-5 -Level 50 or equivalent
- A knife
- If the hull is not self-draining or is able to carry more than 150 litres of free water, a bucket or bailer of not less than 1 litre capacity
- If a trapeze harness is carried it shall be to ISO 10862
- A paddle or means of propelling the boat when not under sail

APPENDIX D
A Guide to ISO and other standards

Application and Development Policy

Whenever possible a relevant ISO Standard, CEN Norm, SOLAS regulation or other internationally-recognised standard is called up by OSR. Changes and developments in international standards are reviewed by the Special Regulations sub Committee and may replace part of Special Regulations. Significant changes will when possible affect new boats and/or new equipment only.

ISO

ISO, the International Organization for Standardization is a world-wide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO Technical Committees. Each member body interested in a subject for which a Technical Committee has been established has the right to be represented on that committee. International organisations governmental and non-governmental, including eg World Sailing, take part in the work. Copies of International Standards may be obtained from a national standards body.
The following International Standards (or Draft Standards) are mentioned in Special Regulations:-

ISO standard	Subject	Special Regulation
8729-1	marine radar reflectors	4.10
8729-2	marine radar reflectors	4.10
9650	liferafts	4.20
11812	watertight & quick draining cockpits	3.09
12401	deck safety harness (also published as EN 1095)	5.02
12402	Personal Flotation Devices	5.01
12215	hull construction standards	3.03
12217-2	assessment of stability and buoyancy	3.04.4, 3.05
15085	guardlines (lifelines) trampolines, nets, stanchions, hooking points	3.14, 3.15
17339	sea anchors	4.27

CEN

CEN standards (Norms) are developed in Europe by CEN (European Committee for Standardization – Committée Européen de Normalisation) which publishes ENs (European Norms) and which works closely with ISO. In OSR the following are mentioned:-

EN standard	Subject	Special Regulation
394,399	lifejacket accessories	5.01
396	lifejackets	5.01
1095	deck safety harness (also published as ISO 12401)	5.02
1913-1-3	immersion suits	5.07

ABS

ABS Guide for Building and Classing Offshore Yachts. This Guide to scantlings (construction standards) was originally published by ABS (American Bureau of Shipping) in co-operation with the Offshore Racing Council.

RCD

The RCD (Recreational Craft Directive) is published with the authority of the EC under which “notified bodies” may approve construction standards of boats which may then be entitled to display a CE mark permitting sale in the EC (see OSR 3.03).

SOLAS

The SOLAS (Safety of Life At Sea) Convention is published by IMO (International Maritime Organisation) at which World Sailing has Consultative Status. SOLAS Chapter III, Regulation 3, 10 refers to the LSA (Life Saving Appliances) Code (published as a separate booklet) to which OSR makes the following references:-

LSA Code	Subject	Special Regulation
Chapter III, 3.1, 3.2, 3.3	Flares (pyrotechnics)	4.23
Chapter II, 2.2.3	Lifejacket lights	5.01
Chapter IV, 4	Liferafts	4.20
Chapter II, 2.3	Immersion suits	5.07.1
Chapter II, 2.5	Thermal protective aids	4.20

Addresses

CEN Central Secretariat,
rue de Stassart 36,
B-1050 Brussels,
Belgium
tel +32 2 550 08 11
fax +32 2 550 08 19
www.cenorm.be

ISO Central Secretariat,
1 rue de Varembé,
Case Postale 56,
CH-1211 Genéve 20,
Switzerland
email: central@isocs.iso.ch
tel +41 22 749 01 11
fax + 41 22 733 34 30
www.iso.org

IMO International Maritime Organization,
4 Albert Embankment,
London EC1 7SR,
Great Britain
email: info@imo.org
tel +44 207 735 7611
fax +44 207 587 3210
www.imo.org

APPENDIX E
World Sailing Code for the Organisation of Oceanic Races

An Oceanic Race is defined as any Offshore race over 800 miles.

1. Organisers of Oceanic Races should consult with the **SAR (Search and Rescue) authorities** through whose areas a race is proposed to pass. Topics to be considered should among others be;
   - Mutual responsibilities
   - Resources
   - Satellite communications coverage
   - Position reporting systems
   - Safety equipment on board
   - Lessons learned from recent events
   - Exchange of communication addresses, phone numbers etc

2. A **Risk Analysis** should be made, covering topics like;
   - Meteorological conditions (icebergs, major currents, fogbanks, eddies etc)
   - Commercial traffic, separation zones etc
   - Stability requirements
   - SAR assets and coverage
   - Piracy and other security matters etc

3. **Environmental aspects** as wild life protective zones should be considered.

4. A **Notice to Mariners** about the race should be produced, usually in cooperation with the organizers national authorities.

5. An **Organization Chart** shall be established with key appointments like the Race Director (when applicable), Chairman of the Race Committee, Principal Race Officer, Safety Officers, Medical Officer, media personnel etc.

6. The Race Organizer should from the participating boats require;
   - Crew lists with names, nationalities, contact details, PLB data and telephone numbers to next of kin
   - For all boats all data that is registered for radio and data communications like call signs, Maritime Mobile Service Identity(MMSI), EPIRBs etc
   - Boat details and descriptions (including electronic pictures)
   - Owners/Helmsman declaration regarding liability

7. A **Race Control Centre** should be organized with Duty Officer 24/7. The watch roster should include relevant means to reinforce the working capacity. It may be appropriate to arrange a training course for the duty officers before the race, including potential incident scenarios. A visit for skippers and navigators to the Race Control Centre may be arranged before the start of major long races, if possible also to appropriate Maritime Rescue Co-Ordination Centres (MRCC).

At the Race Control Centre a Log Book should be maintained. A format for daily situation reports (sitreps) should be developed. A Voice recorder should be available to record radio communications and crisis management.

8. A **Safety Information Package** about the race, boat descriptions and details (including electronic pictures), safety equipment, radio communication and medical resources, key personnel at the Race Control etc should be distributed to participating boats as well as the appropriate MRCC´s.

9. A **Crisis Management Group** should be organized with the Chairman of the Race Committee, the Safety officer, Medical officer and others as relevant. The team should include media and legal representatives from the organizing body.

10. A **Crisis Support Group** with psychologists, medical and clerical personnel should be available for major incidents, both for immediate support to crews and dependants as well as for crew debriefings at later stages. This may be arranged by the Race Committee or the authorities controlling the area.

11. There may occur incidents that are significant, but still not that serious that MRCC and SAR units will get engaged. For such incidents the Race Organizer should consider to maintain a network of contacts and resources across the racing area to be able to support with towing, transport of equipment etc.

12. The organizer shall produce a **Safety Contingency Plan**, including typical series of actions at accidents as derived from the Risk Analysis. One topic to be covered is when and how to contact dependants, sponsors etc at various stages of lost contact, requests for assistance or emergency calls.

13. All boats shall be equipped to standards which at least comply with the relevant level of Special Regulations as adopted by World Sailing. Additional requirements may be prescribed, like additional radio and medical equipment.

14. In accordance with Special Regulations, an adequate number of crew members on each boat shall have **Survival Training**. Apart from the basic requirements for ISAF/World Sailing Personal Survival Course as stipulated in Special Regulations Appendix G, the Race organizer can also prescribe :

- What level of sailing together in the actual boat that may be required
- Which practical training sequences that shall be required to by the crew to be performed, like MOB drills, helicopter evacuations etc.

15. A **Safety Check** should be performed before the start, it should include;
- Safety equipment
- Appropriate certificates for radio and satellite communication equipment
- Check of individual and collective training
- Endurance capacity and redundancy of capabilities characteristic for oceanic races like water provision, medical training etc

The full responsibility for safety however always remains with the Person in Charge.

16. A **Positioning Reporting system** should be available, linked to the official race webpage.

17. **Meteorological services** may be allowed to be downloaded from public meteorological centres or may be centrally provided from the Race Organizer to reduce satcom costs.

18. Races shall be conducted in compliance with the World Sailing Racing Rules of Sailing and the COLREGS, whenever it is appropriate for these rules and regulations to be applied. Special attention should be given to traffic separation zones and to give way to commercial traffic.

19. A race organizer when appropriate should, in addition to supplying the relevant SAR authorities of the event, also supply;
- a **Telemedical Service Assistance Service (TMAS)** or inform a TMAS that the organizers have available on demand the following;
- for each boat:
    - a list of medicines and medical equipment
    - details of any TMAS or private medical service arranged by the boat

- for each crew member:
- name and contact details of physician who certified the crew members fit for entry (when applicable)
- name and contact details of the crew members home physician
- methods for gaining quick access to medical records if necessary
- details of first aid and medical training received

20. The **Notice of Race** may include ;
    - Insurance requirements
    - Which individual and collective training that is required
    - What meteorological data and forecasts that will be allowed
    - Other matters as appropriate

21. The **Sailing Instructions** may include instructions;
    - To continuously monitor VHF Channel 16
    - To have the AIS active at all times or to activate the AIS in reduced visibility and passages with extensive commercial traffic
    - For any other safety matters as appropriate

22 A **Lessons Learned meeting** about safety issues should be arranged after the race.

APPENDIX F
Standard Inspection Cards

Standard inspection cards for each category can be found on the World Sailing website.

http://www.sailing.org/documents/offshorespecialregs/index.php

TRAINING
Model Training Course Offshore Personal Safety

With acknowledgements to IMO (International Maritime Organisation), Australian Sailing, RYA (Royal Yachting Association) and US Sailing whose publications have been consulted in the preparation of Appendix G. A possible model course follows.

INTRODUCTION

1 Purpose of the model course: to provide an example of training under World Sailing Offshore Special Regulation Section 6. The model course is not the only means of providing such training. Other courses satisfying the needs of Section 6 may apply to the appropriate MNA for World Sailing Approval (see Introduction paragraph 6). The MNA is vested with the authority to decide which courses meet the requirements and which do not.

2 Use of the model course. The course should be adjusted to address the experience and knowledge of the trainees. In addition to offshore sailing experience, trainees should be familiar with the topics in OSR Special Regulations 6.02. A trainee with particular, suitably documented skills may be excused from that part of the course, e.g. professional medical knowledge.

3 Presentation. Particular presentations may need repeating until the instructor is satisfied that the trainees understand each topic.

4 Evaluation. The final activities on each day are exercises/exams to test the attendees' knowledge. A score of 70% in each of the marked units, plus the instructors' continuous assessments, will provide an overall evaluation.

5 Structure of the model course:

Part A describes the course framework, including suggestions for teaching facilities and equipment.
Part B provides a sample outline of lectures and hands-on sessions with suggested timetable, which should be adjusted to ensure trainees achieve proficiency in the required skills.
Part C describes a possible syllabus, including learning objectives. For more detail on a suggested model course, see the website link shown above.

6 World Sailing Approved Training Courses and Trainee Certification.

6.1.1 The status of "World Sailing Approved" together with authority to use the World Sailing logo may only be awarded to a training course by a World Sailing MNA (Member National Authority), which must be satisfied that the course delivers training as required by OSR Special Regulation Section 6.01 and 6.02.

6.1.2 A grant of approved status requires the MNA to ensure the course provider delivers appropriate training and the MNA must remove such approved status if and when it judges this necessary.

6.2.1 It is not necessary for a training course to follow the Appendix G Model Training Course in order to be approved as in 6.1 above, but the course must deliver the training required by Special Regulation 6.02.

6.2.2 An MNA which lacks experience in offshore training or which, for other reasons, needs or desires advice should contact the World Sailing Secretariat – Offshore and Technical Department.

6.3 A sailor holding an in-date "pass" certificate (each has a validity of 5 years) from an ISAF/World Sailing Approved Offshore Personal Survival Course shall be accepted by a race organiser as having complied with the requirements of World Sailing Offshore Special Regulation 6.01 and 6.02.

6.4 "Pass" certificates issued at an ISAF/World Sailing Approved course shall carry the statement "ISAF/World Sailing Approved Offshore Personal Survival Course" and may carry the ISAF/World Sailing logo.

6.5 Unless otherwise stated in the Notice of Race, it is not mandatory that a training course for compliance with SR 6.01 and 6.02 is "ISAF/World Sailing Approved," however this status is encouraged wherever possible.

Part A Framework

A1 Class Size: While the class size for the lecture sections of the curriculum may be larger, the maximum recommended group size for hands-on training is twenty (20) with smaller sub-groups as needed for effective communication of specific lessons.

A2 Instructors should have:

- wide experience with offshore sailing including in severe weather

- thorough knowledge of the course material and the requirements of the World Sailing Offshore Special Regulations
- a sound understanding of teaching methods
- a current ISAF/World Sailing approved Offshore Personal Survival Course pass certificate
- experience with liferaft and lifejacket use for in-water training

A3 Facilities and equipment

A 3.1 A classroom with desks or tables and chairs should allow movement of the furniture to create a variety of room arrangements. Ideally, extra rooms will allow the class to split into smaller work groups

A 3.2 The main room should have equipment suitable for all audio-visual presentations positioned appropriately and wired safely.

A 3.3 Group rooms should include table, chairs, display board and writing materials for instructors and trainees.

A 3.4 A warm-water swimming pool, deep enough to float everyone, is most suitable for demonstration/training with lifejackets and liferafts and must include all appropriate safety equipment, personnel and facilities.

A 3.5 An outdoor location with proper safety equipment, personnel and facilities is required for demonstration and training with pyrotechnics and fire extinguishers.

A4 Reference and Display Material

To be modified appropriately by course providers for their own geographic areas.

A 4.1 For the Instructors to understand and have available to trainees in the classroom:

- World Sailing Offshore Special Regulations
- World Sailing RRS (The Racing Rules of Sailing)
- COLREGS (International Regulations for Preventing Collisions at Sea)
- Appropriate Notices to Mariners
- Appropriate World Sailing MNA Training Book, or, if not available, World Sailing's Guide to Offshore Personal Safety or US Sailing's Safety at Sea, Guide to Safety Under Sail and Personal Survival.

A 4.2 Recommended further study, books on material such as:

- The Offshore Special Regulations Handbook by Alan Green (Adlard Coles)
- The Grab Bag Book (F & M Howorth, Adlard Coles)
- Instant Weather Forecasting (A Watts, Adlard Coles)
- Heavy Weather Sailing (A Coles & P Bruce, Adlard Coles)
- Essentials of Sea Survival (F Golden and M Tipton, Human Kinetics)

Part C Suggested Course Outline

Introduction: Explanation of assessment required for ISAF/World Sailing certificate; OSR overview (structural design requirements, vessel portable safety equipment, personal safety equipment, training both in formal sessions and on-board practice); Responsibility of the person in charge (leadership); Responsibility of each crew member for his/her own safety as well as the safety of the vessel and other crew (situational awareness); Importance of crew briefings and displayed stowage chart; Safety ethos

Session 1 - Giving Assistance to Other Craft
Learning Objectives: Laws that cover providing assistance; Moral imperative; Responding to a distress call; Assessing whether you can help; Stages of a typical rescue; Types of assistance you can provide; Maneuvering close to a sinking vessel; Tactics if the other vessel is on fire; Towing and being towed.

Session 2 - Personal Safety Gear, Theory and Practice
Learning Objectives: Life jacket performance factors; Life jacket classification systems; Pros and cons of different inflation systems; Maintaining inflatable life jackets; Using harnesses, tethers, and jack lines/stays; Personal signalling devices.

Session 3 – Care and Maintenance of Safety Gear
Learning Objectives: Pre-departure and under-way inspections; Vessel systems; Safety gear preparation and maintenance; Crew overboard equipment maintenance.

Session 4 – Fire Precautions and Firefighting, theory and practical
Learning Objectives: Common causes of on-board fire; Classes of fires; Fire prevention; LPG (Propane) and alcohol stoves; Extinguisher types and regulations; Firefighting techniques.

Session 5 – Crew Overboard Prevention and Recovery
Learning Objectives: Crew overboard (COB) prevention; Challenges of COB rescue; What a Person in the Water (PIW) can do; Maneuvers to return to the PIW; Dangers of the vessel's proximity to the PIW; Getting the

PIW back on board; Using COB beacons to signal for help; Techniques for high-performance, fully-crewed boats.

Session 6 – Hypothermia, Cold Shock and Drowning
Learning Objectives: Human thermoregulation; Causes of hypothermia; Phases of cold water immersion; Survival in cold water; Classifications of cold exposure; Assessment, care, and treatment; Drowning.

Session 7 – Crew Health
Learning Objectives: Crew responsibility; Contagious diseases; Dehydration; Caloric depletion, low blood sugar; Seasickness; Sprains and strains; Wound management, infection; Burns; Sun injury; Head trauma; Heart attack; Shock; Anaphylactic shock.

Session 8 – Marine Weather
Learning Objectives: Global weather systems; Weather maps; Lows; Squalls and thunderstorms; Thermals; Storm avoidance; Weather forecast models and sources; Wave Dynamics – Wave development, Significant Wave Height (SWH) definition, Unusual waves, currents, and seamounts, Effects of shoaling and lee shores.

Session 9 – Heavy Weather
Learning Objectives: Preparation & evaluation of boat and crew; On-deck safety; Securing the vessel; Preparing the galley; Being a responsible shipmate; Adjusting the plan; Sea state; Heavy weather techniques; Storm tactics; Seeking shelter; After the storm.

Session 10 – Storm Sails
Learning Objectives: Depowering the rig; Reducing sail; Mast support; Reefing the main; Rigging and setting storm headsails and storm trysails.

Session 11 – Damage Control
Learning Objectives: Priorities of damage control; Question of abandoning the boat; Types of damage and breakdowns; Tools and spares; Short-term fixes; Damage control examples; Grounding hazards and consequences.

Session 12 – Search and Rescue Organization
Learning Objectives: When and how to ask for help; Local Rescue Coordination Center (RCC) organization and assets; Commercial ships (AMVER); Transferring to a ship; Helicopter evacuation; Meeting the RCC halfway

Session 13 – Pyrotechnics and Signalling Gear, theory & practical

Learning Objectives: Sound signals; Lights; Visual signals; Pyrotechnic pointers; Deploying flares safely.

Session 14 – Emergency Communications, theory & practical
Learning Objectives: Emergency procedure words; Marine communication options; Making a Mayday call; VHFs and antennas; Know local VHF channels; Digital Selective Calling (DSC) and AIS; GMDSS and why it is important; Crew overboard alarms; Cellular telephone vs VHF; EPIRBs; Single sideband; Satellite data and voice systems.

Session 15 – Liferafts and Abandon Ship, theory & practical
Learning Objectives: Life raft categories; International standards; Valise or canister; Servicing your raft; Emergency packs; Raft storage; Grab or "Ditch" bags; When to launch; Life raft stability; Boarding the raft; Righting after a capsize; Maximizing your chance of survival on-board the raft.

End of each day Evaluations/Exams:
Instructor to facilitate small group discussions of challenging scenarios, which require crucial decision-making, with solutions shared among the entire class and/or administer written exam(s) comprising about 15 minutes of multiple choice questions, plus 2 short essays/listings with 5 minutes for marking after swapping the papers amongst the class. Overall assessment for the course will be a combination of the discussions/exams plus the instructor's overall assessment during both theory and practical sessions.

Part B Outline Timetable *(2 pages)*

World Sailing Offshore Special Regulations Appendix G Model Training Course Part B Day 1

Session	SR	Topic	Theory	start	stop
		Introduction: OSRs, Safety Ethos,Responsibility of PIV, Leadership	00:30	09:00	09:30
1	6.02.1	Giving Assistance to Other Craft	00:30	09:30	10:00
2	6.02.3	Care and Maintenance of Safety Gear, theory	00:45	10:00	10:45
3	6.02 5	Crew overboard prevention and recovery	00:30	10:45	11:15
4	6.02.6	Hypothermia, Cold Shock & Drowning	00:30	11:15	11:45
5	6.02.7	Crew Health	00:30	11:45	12:15
		Break, with demonstrations	01:00	12:15	13:15
6	6.02.8	Marine Weather	00:30	13:15	13:45
7	6.02.9	Heavy Weather Techniques	00:30	13:45	14:15
8	6.02.10	Storm sails	00:30	14:15	14:45
		Break	00:30	14:45	15:15
9	6.02.11	Damage Control	00:30	15:15	15:45
10	6.02.12	Search and Rescue Organization	00:30	15:45	16:15
		Test Scenarios from Lessons Learned and/or exam	00:45	16:15	17:00
		Day 1 total tuition including breaks	08:00		

World Sailing Offshore Special Regulations Appendix G Model Training Course Part B Day 2

Session	SR	Topic	Theory	Practical	Start	Stop
		Introduction to Hands-On Training	00:15		08:30	08:45
11	6.02.3	Care and Maintenance of Safety Gear, practical		00:30	08:45	09:15
12	6.02.2	Personal Safety Gear, theory & practice		00:30	09:15	10:30
13	6.02.15	Life Rafts and Abandon Ship, theory & practice	00:30	00:45	10:30	11:45
		Lunch Break, with demonstrations			11:45	12:30
14	6.02.4	Fire Precautions/Fire Fighting, theory & practice	00:20	00:40	12:30	13:30
15	6.02.14	Emergency Communications, theory & practice	00:20	00:40	14:30	15:30
16	6.02.13	Pyrotechnics & Signalling Gear, theory & practice	00:20	00:40	15:30	16:00
		Exam & Wrap-up	00:30		16:00	16:30
		Day 2, Total Hours including break = 08:00	03:15	04:00		

Part D - Guidelines for an Offshore Personal Survival Refresher Course

For sailors whose certificates have expired, a refresher training course of about 8 hours training may be arranged. It should contain these sessions:

Session 1 (1 hr)	Update on recent changes in Offshore Special Regulations, national relevant documents or any other changes of importance
Session 2 (1 hr)	Update on new safety equipment
Session 3 (1 hr)	Update on recent lessons learned from fatal accidents and incidents in offshore races
Session 4 (1 hr)	Update on national/regional changes in Maritime Search and Rescue organisations, resources, locations etc as well as in relevant meteorological services
Session 5 (2 hrs)	In water training with life vests, liferafts, lifeslings etc
Session 6 (1½ hrs)	Medical and/or fire-fighting training as appropriate regarding national regulations.
Session 7 (½ hr)	Written exam

Detailed contents are to be developed by the appropriate Member National Authority. After the course has been passed with accepted written exam, a new certificate for another five year period may be issued.

APPENDIX H
MEDICAL TRAINING
Model Training Course for an "OSR Compliant First Aid Course"

Part 1 – Introduction

1 General

Below is the framework for an MNA to establish a minimum First Aid training course suitable for offshore racing.

2 Target

The target of this course is to provide the Person in Charge of an offshore racing yacht with a crew member that is capable of taking care of common injuries and illnesses on board, as well as to take charge of the immediate medical actions at a major incident on board. Furthermore to advise the Person in Charge when a request for outside assistance is needed, as well as to advise when to retire from the race and proceed to nearest harbour.

3 Use of the model course.

Instructors should have a knowledge of the unique situation of offshore sailing in terms of delivering medical care. It is suggested that instructors be suitably trained and ideally a medical doctor, paramedics or nurse.

For an MNA wanting to establish a course without the specialist knowledge to correctly train and administer instructors it is suggested that they approach a suitable training partner. Training partners could be STCW training centres or land based first aid training providers who have personnel with suitable sailing experience but crucially an understanding of the liability issues. Should an MNA require advise please contact the World Sailing Secretariat – Technical and Offshore Department.

4 Evaluation. The final activities of the day should be an examination, which should be used together with instructors' continuous assessments to provide an overall evaluation. The pass mark is to be taken as 70% in each of the marked/evaluated units.

5 Implementation Detailed requirements are given below. Thorough preparation is the key to successful implementation of the course.

6 Literature

The following books for further study are not endorsed by World Sailing but merely are books suitable for background reading:

- Medical Emergency Afloat

- First Aid at Sea (Douglas Justin and Colin Berry, Adlard Coles Nautical, London) ISBN ISBN 9781408105993
- First Aid Afloat (Dr Robert Haworth) ISBN 9780906754887
- Skipper's Medical Emergency Handbook (Author Dr Spike Briggs, Dr Campbell Mackenzie) ISBN 9780713689372
- Doctor on Board: A Guide To Dealing With Medical Emergencies (Author Jurgen Hauert) ISBN 9781408112724
- MCA Ship Captain Medic book is now available free at http://www.mcga.gov.uk/c4mca/mcga07-home/workingatsea/mcga-medicalcertandadvice/mcga-dqs_st_shs_ships_capt_medical_guide.htm
- International Medical Guide for Ships, World Health Organisation, Geneva

General First Aid

- First Aid Manual 9th Edition (Author St John's Ambulance Brigade) ISBN 9781405335379

Non-English Publications

- Pan Pan Medico A Bordo (http://www.panpan.it/)
- Le Guide de la medecine a distance, by Docteur J Y Chauve, published by Distance Assistance BP33 F-La Baule, cedex, France. An English translation is being planned.

Part 2 - Syllabus

The course is planned for 8 hours and includes following sessions;

Session 1 Introduction

1.0 Marine medical environment and characteristics
1.1 Literature

Session 2 First aid kits for the Special Regulations races categories

2.0 Cat 4 contents (recommendations)
2.1 Cat 2-3 contents (recommendations)
2.2 Cat 1-0 (if relevant)

Session 3 Tele medical communications

3.0 Support options (Medical advice services through official bodies)
3.1 Radio/Mobile phone options for support
3.2 Licences/certificates for VHF/HF radio communications

Session 4 First Aid – The basics

4.0 Basic anatomy/physiology

4.1 L-ABCDE (Scene safety, Airway and cervical spine control, Breathing, Circulation and bleeding, Disability, Expose and protect from the environment)
4.2 Stopping of serious external bleeding

Session 5 Offshore accidents and actions onboard
5.0 Typical accidents onboard (wounds, cuts, sprained wrist etc)
5.1 General illnesses, fatigue etc
5.2 Actions and treatment
5.3 Helicopter evacuation
5.4 Transfer of casualty to rescue vessel

Session 6 Special offshore medical conditions
6.0 Seasickness
6.1 Hypothermia (Person recovered from sea)
6.2 Dehydration
6.3 Brain concussion
6.4 Keeping the blood sugar level up (what to eat and drink)

Session 7 Cardiac and respiratory arrest
7.0 Cardiopulmonary resuscitation (CPR)
7.1 Artificial respiration
7.2 Use of Defibrillator

Session 8 Systematic Accident management
8.0 Damage and causality evaluation
8.1 Decisions and actions – when to call for outside assistance, when to retire and proceed to nearest harbour
8.2 Observation and treatment of patients

Session 9 Psychology Treatment
9.0 Human reactions in distress
9.1 Treatment of psychological breakdowns
9.2 Crisis group management
9.3 Debriefing procedures

Session 10 Practical training
10.0 CPR
10.1 Patient observations and treatment
10.2 Radio medical training
10.3 Decision making – When to call for assistance, when to retire?

Session 11 Examination
11.0 A questionnaire of 25 questions, requirement >70 % correct.

APPENDIX J
Hypothermia

WHAT IS IT?
A condition in which exposure to cold air and/or water lowers body core temperature. Death can result from too low a brain and heart temperature.
WHY BE CONCERNED?
Hypothermia, even mild cases, decreases crew efficiency and increases risk of costly accidents. ***Proper planning against hypothermia can give a winning competitive edge.***
PREVENTION
- Wear warm clothing and a lifejacket/harness. Have proper foul-weather kit for all crew. Dry suits are excellent. Insulate all areas of the body, especially the high heat-loss areas: head, neck, armpits, sides of chest and groin. Keep warm and dry, but avoid sweating; wear layered clothes.
- Rotate watch frequently.
- Get plenty of rest, prevent fatigue.
- Eat and drink normally, *no alcohol*.
- Prevent dehydration; watch urine colour (drink more if colour becomes more intense).
- Avoid seasickness.
- Take into account special medical problems of crew members.
- Regularly train crew in Man Overboard recovery.
- Have two or more crew trained in CPR (Cardio-pulmonary Resuscitation).

SURVIVAL IN COLD WATER (under 75°F, 25°C)
- **If boat is in trouble**, put on dry or survival suits if carried. Radio for help; give position, number of crew, injuries, boat description. Make visual distress signals. Stay below if possible. Remain aboard until sinking is inevitable.
- **If going overboard**, launch life raft and EPIRB (Emergency Position Indicating Radio Beacon). Take grab bag, visual distress signals and waterproof hand-held VHF. Get into raft, stay out of water as water conducts heat out of the body 20 times faster than air. Remain near boat if practicable.
- **If in the water**, crew should stay together near the boat. This makes everyone easier to find, helps morale. Enter life raft, keep dry suit or survival suit on if worn.
- **If not wearing dry suit or survival suit**, make sure you wear a lifejacket, keep clothes and shoes on for some insulation and flotation. Keep hat on to protect head. Get all or as much of body out of water as soon as possible – into raft or swamped boat or onto flotsam. Avoid swimming or treading water, which increases heat loss. Minimise

exposed body surface. A splashguard accessory on the lifejacket greatly improves resistance to swallowing seawater and also accommodates involuntary “gasping” when plunged into cold water.

WARNING

- First aid for severe and critical hypothermia is to add heat to stabilise temperature only. Rapid re-warming, such as a hot shower or bath, may be fatal; it will, at least, cause complications. Allow body to re-warm itself slowly.
- Body core temperature lags behind skin temperature during re-warming. Keep victim protected for extended period after apparent full recovery or medical help arrives. *Many hours are required for full return to normal temperature even though victim says he has recovered.*
- Always assume hypothermia is present in all man overboard situations in which victim has been exposed for more than 10–15 minutes
- Victims may also be suffering from near drowning, thus needing oxygen. Observe for vomiting.
- In a helicopter rescue, protect victim – including the head – from rotor blast wind chill

HYPOTHERMIA FIRST AID
ALL CASES

- Keep victim horizontal
- Move victim to dry, shelter and warmth
- Allow to urinate from horizontal position
- Handle gently
- Remove wet clothes – cut off if necessary
- Apply mild heat (comfortable to your skin) to head, neck, chest and groin – use hot water bottles, warm moist towels
- Cover with blankets or sleeping bag; insulate from cold – including head and neck
- Report to Doctor by radio

HYPOTHERMIA FIRST AID

MILD CASES

- Primary task is to prevent further heat loss and allow body to re-warm itself
- Give warm, sweet drinks – *no alcohol – no caffeine*
- Apply mild heat source to stabilise temperature and/or
- Re-heat to point of perspiring
- Keep victim warm and horizontal for several hours

MODERATE CASES

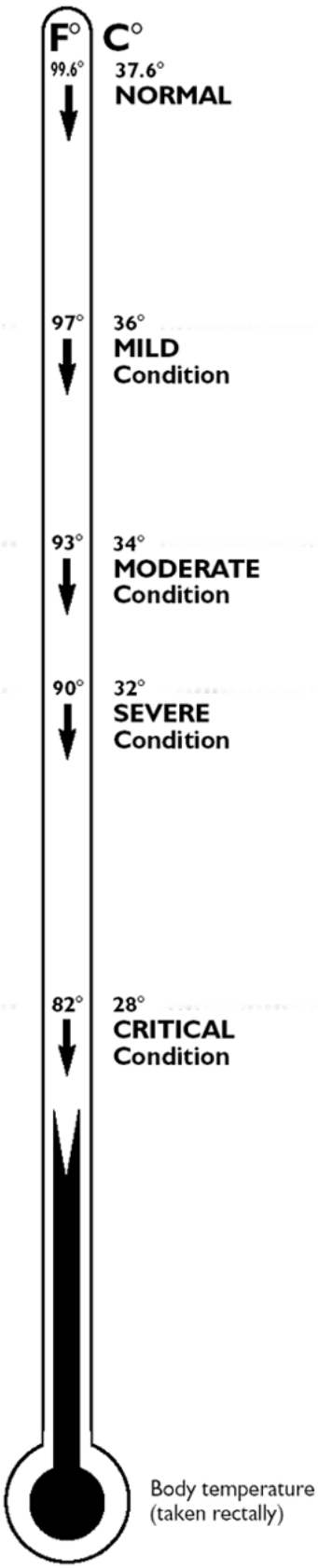
- Same as above
- Offer sips of warm liquid only if victim is fully conscious and able to swallow without difficulty – *no alcohol – no caffeine*
- Have victim checked by doctor

SEVERE CASES

- Obtain medical advice as soon as possible using your radio
- Assist victim, but avoid jarring him – rough handling may cause cardiac arrest or ventricular fibrillation of heart
- No food or drink
- Observe for vomiting and be prepared to clear airway
- *Ignore pleas of "Leave me alone, I'm OK" victim is in serious trouble* – keep continuous watch over victim
- Lay victim down in bunk, wedge in place, elevate feet, keep immobile; no exercise
- Apply external mild heat to head, neck, chest and groin – keep temperature from dropping, but avoid too rapid a temperature rise

CRITICAL CASES

- *Always assume the patient is revivable – hypothermic victims may look dead* don't give up – pulse very difficult to feel, breathing may have stopped
- Handle with extreme care
- Tilt the head back to open the airway – look, listen and feel for breathing and pulse for *one to two full minutes*
- If there is any breathing or pulse, no matter how faint or slow, do not give CPR, but keep a close watch on vital sign changes
- Stabilise temperature with available heat sources, such as naked chest to back warming by other crew member (leave legs alone)
- If no breathing or pulse for one or two minutes, *begin CPR immediately. Do not give up until victim is thoroughly warm – alive or dead.*
- *Medical help imperative – hospitalisation needed*



RANGES OF HYPOTHERMIA SYMPTOMS

MILD CONDITIONS (97-93°F, 36-34°C)

- Shivering, cold hands and feet
- Still alert and able to help self
- Numbness in limbs, loss of dexterity, clumsiness
- Pain from cold

MODERATE CONDITIONS (93-90°F, 34-32°C)

- Same as above
- Confusion, loss of time estimation and reasoning power

SEVERE CONDITIONS (90-82°F, 32-28°C)

- Shivering decreases or stops
- Further loss of reasoning and recall, confusion, abnormal behaviour.
- Victim appears drunk; very clumsy, slurs speech, denies problem and may resist help
- Unable to help themselves
- Victim semiconscious to unconscious
- Muscular rigidity increasing

CRITICAL CONDITIONS (82°F, 28°C and below)

- Unconscious, may look dead
- Little or no apparent breathing
- Pulse slow and weak, or no pulse found
- Skin cold, may be bluish-grey colour
- Very rigid

Note: Most physical symptoms vary with each individual and may be unreliable indicators of core body temperature. Only a low temperature rectal thermometer gives reliable core temperature (the mouth cools too rapidly). In general, as body temperature fails, symptoms will increase.

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APPENDIX K

Drogues and Sea Anchors

TERMINOLOGY

The term "***drogue***" generally means a device dragged from the stern of a vessel which continues to make steerage way through the water but at reduced speed. The term "***sea anchor***" generally means a device streamed from the bows of a vessel practically halted in the water by the action of the sea anchor.

LIFERAFTS

Every liferaft has a sea anchor supplied as part of its equipment. A sea anchor is critical to the safe use of a liferaft and dramatically reduces the chance of liferaft capsize. Its secondary function is to limit drift. A spare sea anchor may be carried in a grab bag. Sea anchors in liferafts should comply with ISO 17339 and the opportunity should be taken at service intervals to ensure this.

DROGUES ON SAILING BOATS

A number of research programmes have been conducted including one for the RORC by the Southampton University Wolfson Unit. In tests drogue deployment repeatedly prevented typical sailing boat forms from being slewed sideways and rolled in heavy breaking seas.

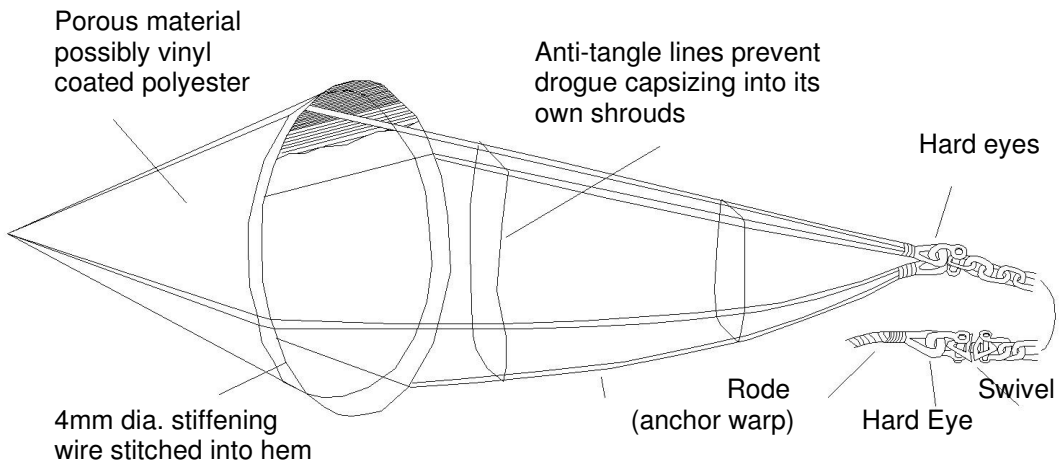
Deployment of a drogue over the stern means that heavy water will break over that part of the sailing boat, so all openings must be properly secured shut.

A "series-drogue" invented by Donald Jordan has the ability to continue to provide drag even if part of the device is "surfing" under a wave crest.

SEA ANCHORS ON SAILING BOATS

The most common form of sea anchor for sailing boats is the “parachute” anchor developed from aviation parachutes. Specialist manufacturers have accumulated much data to demonstrate the effectiveness of the device which can enable a vessel to take seas bows-on, reduce drift to the order of one knot, and resist capsize.

SAILMAKER’S DROGUE (Not to scale)



Typical Dimension

LWL	Mouth dia (Min)	Slope Length (Min)	Shroud Lines (Min)
10m (33ft)	1m (3ft 4ins)	1.3m (4ft 3ins)	1.3m (4ft 3ins)
13 m (43ft)	1.3m (4ft 3ins)	1.7m (4ft 11ins)	1.7m (4ft 11ins)

APPENDIX L
Model Keel and Rudder Inspection Procedure

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

Structural Inspection of a boat shall be completed by a qualified person both internally (may be in the water) and externally (out of the water). The purpose of this inspection is to identify and report to the Owner the condition of the keel and keel structure observed during this inspection. It is the responsibility of the Owner to undertake any repairs.

Consult the Owners' Manual for the specific boat, steering system and type of keel (e.g. fin, lifting, swinging, full length). Inspect in detail any high-load areas: keel attachment, keel floor, steering systems, rudder(s). Pay special attention to prior repairs, especially following groundings.

Internal Inspection: Check backing plates, bolting arrangements, sump area and keel floors for any signs of cracking, weakening, or de-laminated tabbing. Lead or lead alloy keels may require tightening of bolts to ISO standards due to lead creeping. Inspect keel bolt nuts for corrosion. Check bolt holes for "ovaling." Visually inspect for possible de-bonding of the supporting structure.

External Inspection: Check there are no signs of stress cracks (not gelcoat cracks) around the keel attachments to hull, or movement or opening around the keel/hull interface which may allow water ingress and consequent keel bolt crevice corrosion. If in doubt, sand back bottom paint/gel coat to identify depth of crack. Check keel tip deflection to insure immediate return and no internal concomitant movement in the keel floor. Visually check high stress regions, particularly around the forward and aft hull attachment areas of the keel, for signs of paint or gelcoat cracking or large, deep blisters, which can indicate separation and structural weakness.
Rudder/Steering system: Check bearing area for any damage/stress cracks; check rudder shaft and blade integrity, especially at any shaft joins and at upper connections to hull/deck. Undertake a tip deflection test to identify any excessive movement. If applicable, check rudder straps and gudgeons for corrosion or cracking.

Lifting and swing keels: In addition to above, check there are no significant stress cracks in structure around pins supporting the keel. Check for extensive corrosion on pins, cylinders and supporting metal structure.

Model Keel and Rudder Inspection Form

Boat Name:	Sail Number:
Owner Name:	Designer:
Address:	
Owner email:	Builder:
Primary Launch Date:	Hull Identification Number:
World Sailing Plan Review Certificate Number:	

The following checks may be completed with boat in the water:

Item:	Action:	Inspector's Notes:
Keel Bolts	Check for excessive corrosion. Torque to manufacturer's specs.	
Internal Hull Structure	Check for signs of structural failure and/or laminate separation especially in area around keel structure, keel floor and other stress points.	

The following checks to be conducted externally with boat out of the water:

External Hull Condition	Check for hull stress cracks around leading and trailing edge attachment point to structure, hull appendages and keel sumps. Inspect keel/hull interface for signs of damage by tip deflection test.	
Rudder	Check for cracking of the rudder bearing/hull assembly. Inspect rudder for integrity by tip deflection test.	

Declaration of Completed Inspection:

Location:	Date:	

This visual inspection has been conducted to observe and report on visually noticeable indications that may compromise the structural integrality of the vessel's keel and rudder. It does not ensure that the vessel is seaworthy or that the Owner has repaired the identified problems.

Print name:	Signature:
Address:	

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2020/2022

OFFSHORE SPECIAL REGULATIONS

ESTRATTO RELATIVO ALLE CATEGORIE DI REGATA 3 E 4 (MONOSCAFI)

OFFSHORE SPECIAL REGULATIONS “OSR”

per il biennio 2020- 2021

Estratto relativo alle Categorie di Regata 3 e 4 (Monoscafi)

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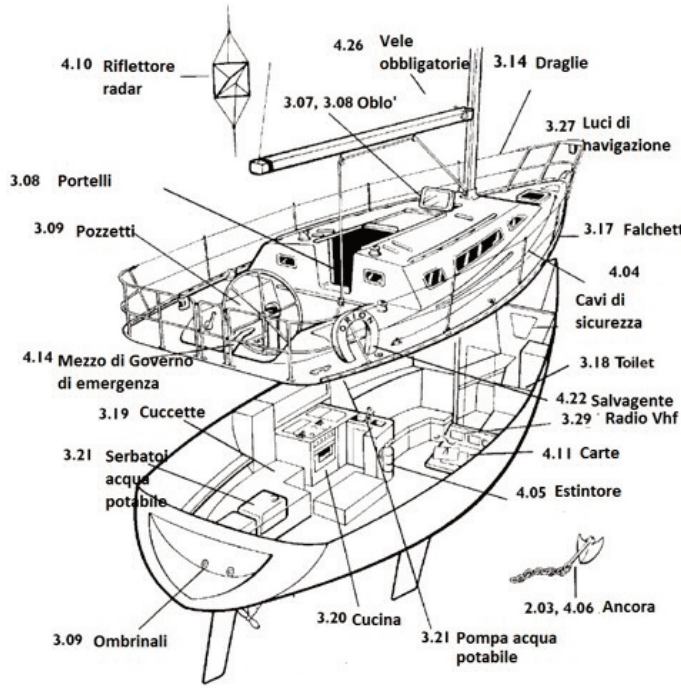
a cura di Francesco Sette - Segretario Uvai

CODICE AMBIENTALE NELLE REGATE D' ALTURA

World Sailing è impegnata nella promozione della cura dell' ambiente. Pertanto nelle regate d'altura si osserverà quanto segue:

- quando istallati, i serbatoi delle acque nere devono essere utilizzati curandone lo svuotamento a stazioni di rifornimento dotate di svuotatore ovvero a non meno di tre miglia dalla costa;
- utilizzare appositi panni per raccogliere olio in sentina, eliminandoli a terra in appositi contenitori;
- utilizzare prodotti per la pulizia ecocompatibili adatti allo specifico ambiente marino;
- mantenere a bordo tutti i rifiuti, possibilmente differenziandoli, ed eliminandoli a terra con la sola eccezione di lunghe traversate ove è ammissibile lo scarico in mare;
- evitare l' utilizzo di motori a due tempi eccetto quelli di ultima generazione con specifico dispositivo anti inquinamento;
- utilizzare i bagni del marina quando ormeggiati in porto;
- osservare le linee guida dell' IMO sul bioinquinamento;
- utilizzare strumenti di carica solari, eolici od a corrente marina ove possibile.

DIAGRAMMA DI RIFERIMENTO



SEZIONE 1 | PRINCIPI FONDAMENTALI E DEFINIZIONI

** **1.01 Uso e Scopo**

1.01.1 Lo scopo delle OSR è di stabilire delle indicazioni uniformi minime di equipaggiamento, di sistemazioni interne e di addestramento dell' equipaggio per monoscafi (e multiscafi) impegnati in regate d' altura offshore.

1.01.2 Le presenti prescrizioni non sostituiscono ma integrano le applicabili normative nazionali cogenti, la certificazione della "Classification Society", il Regolamento di Regata (RRS), le Regole sull' Equipaggiamento (ERS), le Regole di Classe e le Regole di Stazza.

1.01.3 L'uso delle prescrizioni OSR non garantisce una totale sicurezza della barca e dell' equipaggio. Si richiama una particolare attenzione sull' indicazione delle OSR per le regate inshore di prevedere la disponibilità di adeguati ridossi ovvero mezzi di soccorso. Ciò non si applica a regate di categorie superiori.

1.02 Responsabilità del Comandante (Responsabile di bordo)

** **1.02.1 Ai sensi della RRS 4 la responsabilità della decisione di una barca di partecipare o proseguire una regata è unicamente sua. La sicurezza della barca e del suo equipaggio è responsabilità solamente ed ineludibilmente del suo comandante che dovrà fare il suo meglio per assicurarsi che la barca sia pienamente equipaggiata, atta a navigare in sicurezza e condotta da un equipaggio appropriatamente addestrato e fisicamente in grado di affrontare condizioni di tempo avverso. Il comandante dovrà altresì aver cura di nominare un suo sostituto per il caso di sua sopravvenuta incapacità.**

** 1.02.2 L' implementazione delle OSR, il loro utilizzo da parte della Autorità Organizzatrice, il controllo preventivo delle OSR non limitano o riducono la totale ed illimitata responsabilità del Comandante.

** 1.02.3 Partecipando ad una regata condotta applicando le OSR, il comandante, ciascun regatante ed armatore consentono a cooperare ragionevolmente con l'Autorità Organizzatrice e World Sailing per la redazione di un "Rapporto indipendente di Incidente" come appresso previsto al 2.02.

** 1.03 DEFINIZIONI, ABBREVIAZIONI ED USO DEI TERMINI

1.03.1 Definizione dei termini utilizzati in questo documento:

ABBREVIAZIONE	DESCRIZIONE
#	pound force
ABS	Istituto Americano di Navigazione
Age Date	Data di varo
AIS	Sistema di identificazione automatico delle imbarcazioni
CEN	Comitato europeo per l'uniformalizzazione
Coaming	Paraonde, inteso come la parte del pozzetto, incluso il limite trasversale posteriore sopra il quale l' acqua defluirebbe se, con la barca in assetto orizzontale, il pozzetto fosse allagato fino a traboccare
COLREGS	Regolamenti Internazionali per la prevenzione delle collisioni in mare
Contained cockpit	Un pozzetto in cui l' area aperta a poppavia è minore del 50% della massima profondità del pozzetto x la massima larghezza del pozzetto
CPR	Rianimazione cardio-polmonare
Crewmember	Ogni persona a bordo
DSC	Chiamata digitale selettiva (di soccorso)
EN	Norma Europea
EPIRB	Radio trasmettitore elettronico di posizionamento
ERS	Regolamento per l'Equipaggiamento di World Sailing
FA Station	La sezione trasversale dove l' angolo superiore dello specchio di poppa interseca il cavallino ("sheerline")
First Launch	Mese ed anno di varo della barca
Foul Weather Suit	un abbigliamento, composto di uno o più pezzi, atto a mantenere asciutto chi lo indossa
GMDSS	Sistema Marittimo Globale di Pericolo e Sicurezza
GNSS	Sistema Globale di Navigazione Satellitare
GPS	Sistema Globale di Posizionamento
Hatch	Portello, ivi includendo l' intera struttura inclusa la chiusura
HMPE	Polietilene ad alto modulo (Dyneema, Spectra ed equivalenti)
IMO	Organizzazione Marittima Internazionale
IMSO	Organizzazione intergovernativa che sovraintende l'operatività di Inmarsat
INMARSAT	Società privata che fornisce le comunicazioni gmdss di pericolo e sicurezza via voce, fax e data
ISAF	Federazione Internazionale Vela, ora World Sailing
ISO	Standard Internazionale od Organizzazione Internazionale per la
ITU	Unione Internazionale per le Telecomunicazioni
Jackstay	Cavo di sicurezza assicurato saldamente alla barca che permette al membro dell' equipaggio di muoversi lungo la barca senza sganciarsi

LH	Lunghezza dello scafo come definita nelle ERS
Lifeline	Draglia
LSA	Codice Internazionale dell'IMO per il Life Saving Appliance
Monohull	Monoscafo
Multihull	Multiscafo
Open cockpit	Un pozzetto che non è un "Contained Cockpit" (vedi sopra)
ORC	Offshore Racing Council
OSR	Prescrizioni Speciali per l'Altura
Permanently Installed	oggetto fissato in modo inamovibile ad es. imbullonato, saldato, resinato
PLB	Radio faro di localizzazione personale (individuale)
Primary launch	Mese ed anno di varo della prima barca di una serie o di una barca prototipo
Proa	Catamarano asimmetrico
Rode	Catena, cima od una combinazione delle due per collegare l'ancora
RRS	Regolamento di Regata
Safety line	Ombelicale
SAR	Ricerca e Soccorso
Securely	Tenuto fermamente in posizione da un sistema (legature, galletti ecc.)
Fastened	che trattenga l'oggetto in posizione anche se severamente sollecitato, incluso capovolgimento a 180°, ma che può essere rimosso o sostituito durante la regata
SOLAS	Convenzione per la sicurezza in mare
SSS	Indice di Sicurezza e Stabilità
Static ballast	Zavorra: Piombo od altro materiale imbarcato con il solo scopo
Static Safety Line	Cavo di sicurezza generalmente più corto di un ombelicale, agganciato presso un posto di lavoro
STIX	Indice di Stabilità ISO 12217-2
Variable ballast	Acqua imbarcata al solo scopo di mutare assetto e/o stabilità e che può essere variata o spostata durante la regata
Waterline	Superficie dell' acqua quando la barca sta galleggiando in assetto di misurazione
World Sailing	Ente subentrato ad ISAF

SEZIONE 2 | APPLICABILITA' E REQUISITI GENERALI

** **2.01 Categorie di Eventi**

L'Autorità Organizzatrice selezionerà per l'evento una delle seguenti categorie e può modificare le OSR per adattarle alle condizioni locali:

……

3 2.01.4 **Categoria 3**

Regate in acque aperte, la maggior parte delle quali è relativamente protetta o vicino alla costa

4 2.01.5 **Categoria 4**

Regate brevi, vicino alla costa, in acque relativamente calde e protette, generalmente in ambito diurno

3+4 **2.02 Rapporto di Incidenti**

L'Autorità Organizzatrice della regata determina se è occorso un incidente che sia opportuno riportare in quanto rilevante per lo sviluppo delle OSR, il processo di revisione o comunque per l'aumento della sicurezza. L'Autorità Organizzatrice si atterrà alle eventuali linee guida emesse da World Sailing in merito al processo di predisposizione del rapporto di incidenti

** **2.03 Controlli**

Un'imbarcazione può essere controllata in qualsiasi momento. Qualora non in regola con le OSR la sua iscrizione può essere rifiutata ovvero essere assoggettata a protesta

** **2.04 Requisiti Generali**

** 2.04.1 Tutti gli equipaggiamenti richiesti dalle OSR dovranno:

a) funzionare regolarmente
b) essere regolarmente controllati, puliti e manutenuti
c) se hanno una data di scadenza, non deve essere superata durante la regata
d) se non in uso essere riposti in condizioni che ne assicurino la corretta conservazione
e) essere di pronto utilizzo
f) essere di tipo, dimensionamento e capacità adeguati all'uso ed al dimensionamento della barca

** 2.04.2 Gli oggetti pesanti devono essere saldamente fissati

SEZIONE 3 | CARATTERISTICHE STRUTTURALI, STABILITA', ATTREZZATURE FISSE

** Un imbarcazione dovrà essere/avere:

3.0 Solidità di costruzione ed attrezzatura

** 3.01.1 Appropriatamente attrezzata, perfettamente atta a navigare e conforme alle OSR

** 3.01.2 equipaggiata con sartie ed almeno uno strallo che deve rimanere sempre fissato durante la regata

** 3.01.2 equipaggiata con sartie ed almeno uno strallo che deve rimanere sempre fissato durante la regata

**** **3.02 Integrità stagna e strutturale dello scafo**

** 3.02.1 Tutte le aperture devono poter essere prontamente chiuse. Le casse e simili non devono aprire verso l' interno dello scafo se non a mezzo di aperture di manutenzione a tenuta stagna con apertura completamente sopra la linea di galleggiamento

3 3. 02. 2 Omissis

3 3. 02. 3 Omissis

3 3. 02. 4 Omissis

**** **3.04 Stabilita' - Monoscafi**

3.04.1 L'imbarcazione deve essere in verificabile conformità con l'ISO 12217-2 categoria di progetto B o superiore, in virtù o di certificazione come unità da diporto con marchio CE oppure con apposita dichiarazione del proggettista. Deve essere utilizzata l' ultima versione dell' ISO 12217-2 disponibile salvo che l'imbarcazione non sia stata progettata in vigenza di una precedente

3.04.2 Qualora la conformità al punto 3.04.1 non possa essere dimostrata, l'imbarcazione dovrà avere:

a) 1) un valore STIX di non meno di 23 e
2) un AVS non inferiore a 130-0,005*m, ma sempre >= 95 gradi (ove "m" è la massa della barca alle condizioni operative minime come definite dagli ISO12217-2), e
3) un raddrizzamento di non meno di m*AGZ>57000 (ove AGZ è l'area positiva sotto la curva di raddrizzamento alle condizioni operative minime espresse in Kg metri al di sopra dell'AVS) oppure

b) avere uno Stability Index nell'ORC Rating System di non meno di 103, oppure

c) avere un IRC SSS Base value di non meno di 15

** **3.06 Uscite – Monoscafi**

3+4 3.06.1 Le imbarcazioni da 28 piedi (8,50 mt) in sù con un Primary Launch dopo il 1994 devono essere dotate di almeno due uscite di cui almeno una deve essere posta a proravia dell' albero più a prua, salvo che le caratteristiche strutturali ne impediscano l' istallazione

3+4 3.06.2 Le imbarcazioni con First Launch posteriore al 2013 devono avere:

a) un oblò circolare con diametro di 450 mm, oppure

b) un apertura con qualsiasi altra forma con dimensione minima di 380 mm ed area minima di 0,18 mq (vedi figura 1)

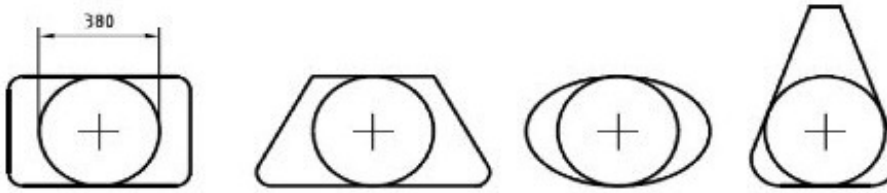


FIGURA 1

** **3.08 Portelli e Boccaporti**

** 3.08.1 Le chiusure dei portelli a proravia della sezione del baglio massimo, salvo i portelli posti sul lato della tuga ovvero quelli con un area minore di 0,071 mq, non devono aprirsi verso l'interno della barca

** 3.08.2 Un portello, incluso un portello sopra uno stivaggio, dovrà essere:

a) permanentemente fissato ed in grado di essere immediatamente chiuso e rimanere saldamente chiuso in caso di capovolgimento a 180°

b) sopra il livello dell'acqua in caso di un inclinazione a 90°. Un'imbarcazione può avere un massimo di due portelli su ciascun lato della mezzeria non conformi a questo requisito b) purchè le loro aperture non superino 0,071 mq

** 3.08.3 I portelli non conformi alle prescrizioni 3.08.1 e 3.08.2 saranno chiaramente marcati ed usati conseguentemente, come "NON APRIRE IN MARE"

** 3.08.4 Un boccaporto di discesa dovrà essere:

a) dotato di un solido dispositivo di chiusura che permetta di essere operato sia dall'esterno che dall' interno anche con l' imbarcazione capovolta

b) dotato di un sistema di chiusura:

i) in grado di rimanere in posizione con il boccaporto aperto o chiuso

ii) assicurato alla barca con una ritenzione di sicurezza (ad es. una cima) per la durata della regata

iii) che permetta l' uscita in caso di capovolgimento

3+4 3.08.5 Nel caso di imbarcazioni monoscafo con il pozzetto aperto:

a) la soglia del boccaporto di discesa non deve essere inferiore alla linea di sheerline ovvero,

b) avere un boccaporto di discesa conforme a ISO 11812 categoria A

3+4 3.08.6 Nel caso di un monoscafo con pozzetto chiuso, ove il boccaporto di discesa si estenda al di sotto della sheerline, deve avere pannelli in grado di bloccare il boccaporto al livello di sheerline permettendo al tempo stesso l'accesso all'interno

** **3.09 Pozzetti**

** 3.09.1 Pozzetti devono essere autosvuotanti rapidamente per gravità a tutti gli angoli di inclinazione e costituenti parte strutturalmente unita allo scafo

** 3.09.2 Il piano di calpestio del pozzetto deve essere al di sopra della LWL di almeno il 2% della stessa (ovvero per imbarcazioni IMS con il First Launch anteriore al 2003, almeno il 2% L sopra la linea di galleggiamento

** 3.09.3 Qualsiasi recesso a prua, poppa, laterale o centrale è un pozzetto ai fini dell' OSR 3.09

** **3.09.4 Volume del Pozzetto**

** Il volume massimo combinato di tutti i pozzetti chiusi al di sotto del paraonde sarà:

a) con Primary Launch anteriore all' Aprile 1992 il 9% di LWL x larghezza baglio massimo x bordo libero al traverso del pozzetto, ovvero

b) con Primary Launch posteriore al Marzo 1992, come sopra per le relative categorie salvo che per la determinazione del paraonde più basso non si dovrà includere nulla a poppa della sezione FA ed ogni estensione del pozzetto a poppa della coperta praticabile non sarà calcolata nel computo del volume del pozzetto

** **3.09.10 Ombrinali del pozzetto**

L'area della sezione degli ombrinali (tenuto conto di eventuali filtri se montati), dovrà essere almeno di:

a) 2x25 mm di diametro, o equivalente, per barche di meno di 8,5 m LH

b) 4x20 mm di diametro, o equivalente, per barche di 8,5 m LH o maggiori

** **3.10 Prese a mare o valvole**

3.10.1 Su tutte le aperture attraverso lo scafo al di sotto della linea di galleggiamento ad eccezione degli ombrinali di coperta interni e dei fori per strumenti, devono avere permanentemente istallate prese a mare o valvole

** **3.11 Verricelli delle scotte**

I verricelli delle scotte devono essere istallati in modo tale che l' operatore non debba trovarsi prominentemente al di sotto del piano di coperta

** **3.12 Piede d'Albero**

3.12.1 Il piede d' albero passante deve essere saldamente fissato alla scassa od una struttura adiacente

3.14 Pulpiti, Candelieri, Draglie

** 3.14.1 Il perimetro di un ponte contornato da un sistema di draglie e pulpiti sarà:

** a) draglie continue e fissate solo a prua ed a poppa (o nella prossimità). Comunque un apertura a cancello è permessa su ciascun lato. Tranne che ai suoi terminali fissi di prua e poppa ed all' apertura a cancello, il movimento di scorrimento della draglia deve essere libero. Guaine temporanee non devono ostacolare tale movimento

** b) l'altezza minima delle draglie e del colmo dei pulpiti al di sopra della coperta e delle aperture verticali dovrà essere:

** i) la superiore 600 mm

** ii) l'intermedia 230 mm

** iii) l'apertura verticale: non superiore a 380mm salvo per una barca con Primary Launch anteriore al 1993 per la quale non dovrà essere superiore a 560 mm

3+4 iv) una barca inferiore a 8,5mt LH può usare un sistema di singola draglia con un altezza tra 450 mm e 560 mm

** c) le draglie devono essere permanentemente supportate (dai candelieri) a distanza non superiore a 2.2 mt e non devono passare all' esterno dei candelieri

** d) le basi di pulpiti e candelieri saranno istallate permanentemente con le rispettive basi fissate con sistemi di ancoraggio meccanico

** e) l'esterno di pulpiti e basi tubolari di candelieri non dovrà essere posizionato all' interno della falchetta per più del 5% del baglio massimo o 150 mm quale che sia il maggiore, né all' esterno del bordo della falchetta

** f) i candelieri saranno dritti e verticali eccetto che:

i) entro i primi 50 mm dalla coperta i candelieri non possono essere disposti orizzontalmente dal punto dove escono dalla coperta o dalla loro base per più di 10 mm

ii) i candelieri possono essere angolati di non più di 10° dalla verticale in qualsiasi punto sopra i 50 mm dalla coperta

** g) un pulpito di prua può essere aperto purchè l'apertura tra il pulpito e qualsiasi parte della barca non ecceda 360 mm

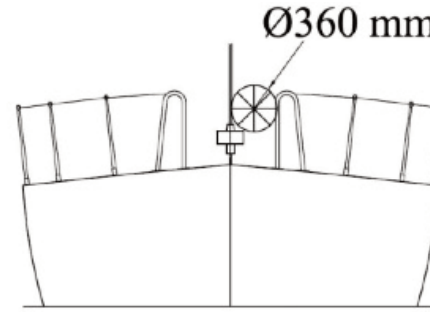


FIGURA 2
DIAGRAMMA DELL' APERTURA DEL PULPITO

** h) le draglie possono terminare a dei, ovvero passare attraverso, candelieri adeguatamente rinforzati sistemati all' interno del pulpito ed ad esso sovrapposti

** i) se una forza di flessione di 4 kg è applicata alla draglia nel punto mediano della maggiore apertura tra i suoi supporti che siano a poppa dell' albero, la flessione non dovrà eccedere:
i) i) 50 mm per una draglia superiore o singola
ii) ii) 120 mm per una draglia intermedia

3.14. 3 Numero vuoto

3.14. 4 Numero vuoto

3.14. 5 Numero vuoto

3.14.6 Specifiche delle draglie

3+4 3.14.6 Le draglie dovranno essere di:

3 a) i) cavo spiroidale di acciaio inossidabile

4 a) ii) HMPE (cima di polietilene ad alto modulo di resistenza)

** b) il diametro minimo è specificato nella Tavola 8 appresso

TAVOLA 8

LH	Cavo acciaio	HPME
Sotto 8,5 mt	3mm	4mm
Tra 8,5 e 13 mt	4mm	5mm
Sopra 13 mt	5mm	5mm

** c) le draglie in acciaio inox devono essere prive di rivestimento ed utilizzate senza guaine, purtuttavia guaine temporanee possono essere montate purchè prontamente rimuovibili per ispezione

** d) una sagola di materiale sintetico può essere usata per tesare le draglie purchè il tratto interessato non ecceda 100mm. La sagola deve essere sostituita annualmente

** e) tutte le componenti del circuito delle draglie devono avere un punto di rottura non inferiore alle draglie stesse

4 f) quando viene usato il HMPE deve essere impiombato secondo le specifiche e procedure del produttore

3.17 Falchetta o ferma piedi

3 3.17.1 Una falchetta di altezza minima di 25mm posta il più possibile vicino alle basi dei candelieri deve essere posta attorno alla parte di prua della coperta dal traverso dell'albero

3 3.17.2 Una draglia addizionale al posto della falchetta è ammessa su barche con un Primary Launch anteriore al 1984

3.18 Toilet

3+4 3.18.2 Una toilette fissa od un bugliolo attrezzato

3.19 Cuccette

3+4 3.19.2 Cuccette permanentemente istallate

3.20 Cucina

3 3.20.1 Fornelli permanentemente istallati che possano essere usati in sicurezza in mare, dotati di rubinetto di intercettazione

3.21 Serbatoi di acqua potabile & Acqua potabile

3.21.1a) Serbatoi di acqua potabile

3 3.21.1 Serbatoi di acqua potabile e relativa pompa di erogazione

3.21.3 Acqua potabile di emergenza

3 a) almeno 9 litri di acqua potabile per uso di emergenza stivati in contenitori all' uopo destinati e sigillati

3.22 Tientibene

** 3.22.1 Devono essere istallati adeguati tientibene sotto coperta

3.23 Pompe di sentina e Secchi

** 3.23.1a) due secchi di fattura robusta, ciascuno munito di cimetta e con capacità di almeno 9 litri

4 3.23.1b) una pompa di sentina manuale istallata permanentemente

** 3.23.2 Tutte le prescritte pompe di sentina devono poter essere operate con tutte le sedute del pozzetto, i boccaporti e le discese chiuse e devono avere un tubo di scarico permanentemente istallato di sufficiente capacità di scarico

** 3.23.3 Le pompe di sentina non devono confluire negli scarichi del pozzetto e non devono scaricare in un pozzetto chiuso

** 3.23.4 Le pompe di sentina devono essere facilmente accessibili per manutenzione e pulizia di residui

** 3.23.5 Tutte le pompe di sentina amovibili devono essere assicurate con una cimetta

3.24 Bussola

3 3.24 a) una bussola magnetica marina che possa esere usata come bussola di governo

3+4 3.24 b) una bussola magnetica marina permanentemente istallata, compensata e con tabella di compensazioni

3 3.24 c) una seconda bussola che può essere portatile od elettronica

3.25 Drizze

** 3.25 a) un minimo di due drizze, ciascuna in grado di issare la vela, su ciascun albero

3 3.25 b) nessuna drizza sarà bloccata, legata o comunque assicurata all' albero in modo che richieda alla persona di alzarsi per poter ammainare la vela in maniera controllata, salvo per una vela di prua con sistema di rullaggio

3.27 Luci di Navigazione

3.27.1 conformi alle Regole Internazionali per la Prevenzione delle Collisioni in mare (Parte C e Allegato Tecnico C) e verificabili come richiesto da tale normativa

** 3.27.2 montate sopra la sheerline in modo tale da non essere oscurate dalle vele o dallo sbandamento della barca

3 3.27.3 luci di riserva, conformi alle specifiche di cui sopra, operabili in modo indipendente

** 3.27.4 lampadine di scorta (non richieste per i Led)

3.28 Motori, Generatori, Carburante

3.28.1 Motori di navigazione

** a) motori e relativi sistemi istallati secondo le specifiche costruttive ed adeguati alle dimensioni ed all'uso richiesto della barca

3 b) un motore che fornisce una velocità minima in nodi di (18x√LWL)

3 c) un motore entrobordo o fuoribordo, relativi serbatoi e sistema di alimentazione, il tutto saldamente fermato

** d) un motore entrobordo avrà un sistema di scarico permanentemente istallato, un sistema di raffreddamento, alimentazione e serbatoio(i) di carburante e sarà adeguatamente protetto da consistenti intemperie

** e) un motore elettrico entrobordo, quando istallato, dovrà essere provvisto con una fonte di energia permanentemente istallata, essere adeguatamente protetto dalle intemperie e dotato di un sistema di controllo

3.28.2 Genereatore

** 3.28.2 Se un generatore ausiliario separato dal motore di propulsione è imbarcato, dovrà essere istallato secondo le specifiche del produttore

3.28.3 Sistemi di Combustibili liquidi

3 3.28.1a) tutti i serbatoi di carburante saranno rigidi (ma possono avere rivestimenti flessibili istallati stabilmente) e dotati di valvola di intercettazione

3 3.28.3b) alla partenza una barca con un motore a combustione imbarcherà carburante sufficiente per assicurare la ricarica durante tutta la regata e per procedere a motore alla sopradetta velocità minima per cinque ore

3.28.4 Sistemi di Batterie

3 a) una batteria indipendente dedicata all' accensione del motore e del generatore quando l'accensione elettrica è l' unico modo di partenza del motore e/o generatore

** b) le batterie istallate dopo il 2011 saranno di tipo sigillato che non permette fuoriuscita di liquido elettrolita

** c) alla partenza una barca con un motore elettrico sarà dotata di sufficiente capacità per assicurare le necessità elettriche durante tutta la regata e per procedere a motore alla sopradetta velocità minima per cinque ore

3.29 Apparati di Comunicazione, GPS, Radar, AIS

3 3.29.1 Una ricetrasmittente radio marina con antenna di emergenza qualora l'antenna standard dipenda dall' albero

3 3.29.2 Se l'apparato radio marino è un VHF avrà:

3 a) una potenza minima certificata di uscita di 25W

3 b) un antenna di testa d' albero ed un cavo coassiale di trasmissione con non più del 40 % di dispersione di potenza

3 c) funzione DSC se istallata dopo il 2015

3 d) i VHF dotati di DSC verranno programmati con un assegnato codice MMSI (proprio della barca), collegato ad un ricevitore GPS, in grado di effettuare chiamate di allerta assistenza e capace di inviare e ricevere indicazione di posizionamento DSC in collegamento con un altro apparato DSC

3+4 3.29.5 un ricetrasmettitore radio marino portatile impermeabile o con custodia impermeabile, da stivare, quando non in uso, in una grab bag od altro contenitore d' emergenza (vedi OSR 4.21)

** 3.29.6 un secondo ricevitore radio, che può essere il VHF portatile di cui sopra la 3.29.05 sopra, in grado di ricevere bollettini meteo

3 3.29.8 Un GPS

3 3 29.13 Un trasponditore AIS che:

3 a) utilizza l' antenna VHF in testa d'albero attraverso uno sdoppiatore AIS d' antenna a bassa perdita, oppure,

3 b) un antenna AIS dedicata di non meno di 38 cm di lunghezza montata con la sua base posta a non meno di 3mt dal galleggiamento e fornita di cavo coassiale con perdita non superiore al 40%

SEZIONE 4 | EQUIPAGGIAMENTI PORTATILI

Una barca dovrà avere:

4.01 Lettere e Numeri Velici

** 4.01.1 Identificazione sulle vele conforme con RRS 77 e RRS Appendice G

2 4.01.2 Un sistema alternativo di identificazione, come prescritto da RRS Appendice G per la Randa, da utilizzare quando nessuna delle vele che mostrano la normale identificazione è issata

4.03 Tappi di legno tenero

** 4.03.1 Tappo di legno tenero rastremato adiacente ad ogni presa a mare

4.04 Cavi di Sicurezza e Punti di ancoraggio

3 4.04.1 Agganci per terminali di cavi di sicurezza e per punti di ancoraggio

3 4.04.2 I cavi di sicurezza dovranno essere:

3 a) indipendenti su ciascun lato del ponte

3 b) in grado di permettere al membro dell' equipaggio di muoversi rapidamente tra le aree di lavoro sul ponte ed il pozzetto con il minimo di operazioni di sgancio e riaggancio

3 c) con un punto di rottura di 2040kg, non inguainate od incamiciate, in acciaio inox 1x19 di filare e diametro minimo 5mm oppure a cintura o cavo HMPE

3 4.04.3 I punti di ancoraggio saranno:

3 a) adiacenti alle postazioni di lavoro come il timone, i winches e gli alberi, dove i membri dell' equipaggio operano

3 b) in grado di permettere al membro dell' equipaggio di agganciarsi prima di salire in coperta e di sganciarsi dopo essere sceso sotto coperta

3 c) in grado di permettere a due terzi dell' equipaggio di essere agganciati contemporaneamente senza dipendere dai cavi di sicurezza

4.05 Equipaggiamento antincendio

** 4.05.1 Una coperta antifiamma adiacente ciascun apparecchio di cottura a fiamma aperta

3 4.05.2 Due estintori, ciascuno da 2 kg ciascuno a polvere o equivalente, in parti diverse della barca

4.05.2 Due estintori in parti diverse della barca

4.06 Ancore

3 4.06.2 Due ancore originali, conformi alle specifiche del costruttore, correlate alle dimensioni della barca, con un appropriata combinazione di catena e cima, pronte per assemblaggio immediato e pronte per essere in uso

entro cinque minuti, salvo che una barca di meno di 8,5 mt. potrà avere una sola ancora corrispondente ai medesimi requisiti sopra

4 4.06.2 Un ancora originale, conforme alle specifiche del costruttore, correlata alle dimensioni della barca, con un appropriata combinazione di catena e cima, pronta per assemblaggio immediato e pronta per essere in uso entro cinque minuti

4.07 Torce e Proiettori

** 4.07 luci impermeabili con batterie e lampadine di scorta (come segue):

3 4.07.1a) un proiettore da ricerca adatto per la localizzazione di un uomo fuori bordo di notte e per evitare collisioni

3 4.07.1b) una torcia in aggiunta al 4. 07 a)

4.08 Pronto soccorso: Manuale ed Equipaggiamento

** 4.08.1 Un manuale ed una cassetta di Pronto Soccorso. Il contenuto e lo stivaggio del Kit devono essere conformi alla prevedibile durata della traversata ed al numero dei componenti dell' equipaggio

4 09 Corno da nebbia

** 4.09.1 Un corno da nebbia

4.10 | Riflettore Radar

** 4.10.1 Un riflettore radar passivo con:

** a) piatti ottaedrici di diametro minimo di 30 cm. ovvero

** b) piatti ottaedrici di dimensione minima diagonale di 40 cm

** c) un riflettore non ottaedro dovrà avere un area RCS = sezione radar trasversale certificata di 2 mq da 0-360° di azimuth e + o - 20° di piede

4.11 Equipaggiamento per la navigazione

** 4.11.1 Carte di navigazione (non solo elettroniche), elenco fari e fanali/portolano, strumenti da carteggio

4.12 Diagramma di stivaggio dell' equipaggiamento di Sicurezza

** 4.12.1 Un diagramma della collocazione degli equipaggiamenti di sicurezza realizzato in materiale resistente ed impermeabile, affisso nel locale principale con evidenziata la localizzazione delle principali dotazioni di sicurezza

4.13 Strumenti per la profondità, velocità e distanza

3 4.13.1 Uno strumento di misurazione della velocità e della distanza (log)

3+4 4.13.2 Un ecoscandaglio

4.14 Numero vuoto

4.15 Mezzo di Governo di emergenza

3 4.15.1 Una barra di emergenza che possa essere fissata all' asse del timone salvo:

3 a) laddove i sistema primario di timoneria sia costituito da una barra metallica non soggetta a rottura ovvero

3 b) vi siano due indipendenti sistemi di governo (ruote o barre) che non condividono alcun componente del sistema salvo l' asse del timone

3 4.15.2 Un comprovato sistema alternativo di governo d' emergenza con timone non funzionante

4.16 Attrezzi e ricambi

** 4.16.1 Attrezzi e parti di ricambio conformi alla durata e natura della traversata

** 4.16.2 un efficace strumento in grado di rapidamente scollegare o tagliare le manovre fisse dallo scafo

4.17 Nome della barca

** 4.17.1 il nome della barca deve essere riportato sui vari oggetti galleggianti, come salvagenti, anulare, cinture di salvataggio, imbracature, cuscini, contenitori d' emergenza

4.18 Materiale riflettente

** 4.18.1 Materiale riflettente marino deve essere posto su salvagenti, imbracature, zattere di salvataggio, cinture di salvataggio

4.20 Zattere di Salvataggio

N.B. Le zattere di salvataggio sono prescritte dalla categoria 2 in sù e pertanto a stretto rigore esulano da questo estratto. Poiché però spesso le AO di regate offshore di una certa consistenza in categoria 3 le inseriscono come Prescrizione "aggiuntiva", abbiamo riportato la pertinente porzione delle OSR

a) una o più zattere di salvataggio gonfiabili con una capacità complessiva per accogliere almeno il numero totale di persone a bordo in conformità con:

a) i) SOLAS LSA Codice 1997 Capitolo IV o versione successiva, oppure

a) ii) ISO 9650-1:2005, Tipo1, Gruppo A - Piccoli Battelli - Gonfiabili, oppure

a) iii) zattere ISAF costruite prima del 2016 fino a scadenza di rimpiazzo per fine di vita utile, oppure

a) iv) zattere ORC prodotte prima del 2003 fino a scadenza di rimpiazzo per fine di vita utile

4.20.2 Equipaggiamento minimo della Zattera

a) una zattera SOLAS dovrà contenere almeno una dotazione SOLAS A

c) una zattera ISO 9650 dovrà contenere almeno un Pack 2 (dotazione inferiore a 24 ore)

d) i contenuti minimi di una zattera ISO sono elencati qui di seguito. Non tutti tali contenuti sono necessariamente inseriti nella zattera. Alcune dotazioni possono essere trasportate in una grab bag stagna contigua, posta in una collocazione di facile accesso:

omissis

4.20.3 Contenitore e Stivaggio della zattera di salvataggio

a) ciascuna zattera sarà chiusa in:

a) i) un contenitore rigido saldamente alloggiato sul ponte di lavoro o nel pozzetto o in uno spazio aperto, oppure

a) ii) un contenitore rigido o una "valigia" saldamente alloggiati in un gavone stagno contenente solamente la zattera ed equipaggiamenti per abbandono nave che sia facilmente accessibile e apra verso il pozzetto o il ponte di lavoro o lo specchio di poppa

b) in una barca con Primary Launch anteriore al giugno 2001 la zattera può essere contenuta in una valigia da non più di 40kg saldamente assicurata sotto coperta in prossimità di un boccaporto

c) su un monoscafo a zavorra mobile la zattera dovrà essere di pronto impiego anche se la barca è capovolta

d) l'estremità della sagola di attivazione di ciascuna zattera dovrebbe essere assicurata alla barca

e) ciascuna zattera deve poter essere portata alle draglie o lanciata entro 15 secondi

4.20.4 Numero vuoto

4.20.5 Revisioni della Zattera

a) una zattera di salvataggio dovrà essere revisionata presso un punto di assistenza autorizzato dal costruttore ai seguenti massimi intervalli:

a) i) zattere SOLAS annualmente

a) ii) zattere ISO 9650 a contenitore rigido ogni tre anni

a) iii) zattere ISO 9659 a valigia ogni tre anni, eccetto che zattere a noleggio devono essere revisionate annualmente

a iv) zattere ISAF annualmente

a) v) zattere ORC annualmente

b) il certificato di revisione (in originale o copia) deve essere a bordo

4.21 Sacche di abbandono (Grab bags)

3+4 4.21 un compartimento stagno ovveroun grab bag, facilmente accessibili anche con la barca capovolta, con il seguente contenuto minimo:

3+4 4.21 a) un vhf marino stagno con batterie di scorta

3+4 4.21 b) una torcia stagna con batterie e lampadine di scorta

3+4 4.21 c) tre fuochi a mano rossi
3+4 4.21 d) una luce stroboscopica stagna con batterie di scorta
3+4 4.21 e) un coltello
** 4. 21 f) se una sacca di abbandono è imbarcata dovrà avere una intrinseca capacità di galleggiamento, un area di almeno 0,1mq di colore arancione fluorescente esterno, essere contrassegnata con il nome della barca ed essere dotata di cimetta e gancio

4.22 Uomo a mare, localizzazione e salvataggio

3+4 4.22.3 Un salvagente con luce automatica, fischietto e spera a portata del timoniere pronto per uso immediato
** 4.22.6 Tutti i salvagenti gonfiabili ed altri equipaggiamenti automatici dovranno essere testati e manutenuti regolarmente secondo le specifiche del costruttore
** 4.22.7 una cima da lancio di almeno 6mm di diametro con lunghezza 15-25.mt prontamente accessibile dal pozzetto
3 4.22.8 una sacca da recupero che includa:
3 a) una cima galleggiante di lunghezza non inferiore a quattro volte l' LH ovvero 36mt
3 b) un salvagente a ferro di cavallo con galleggiamento non inferiore a 90N
3 c) una robustezza sufficiente a recuperare il membro di equipaggio

4.23 Segnali pirotecnici e luminosi

4.23.1 i segnali pirotecnici dovranno essere conformi al Codice SOLAS LSA Capitolo III Segnali Visivi e non più vecchi della data di scadenza stampigliata od, in mancanza, di quattro anni

CATEGORIA	RAZZI ROSSI CON LANCIO A MANO	FUMOGENI ARANCIONI
3	4	2
4		2

4.24 Numero vuoto

4.25 Coltello da pozzetto

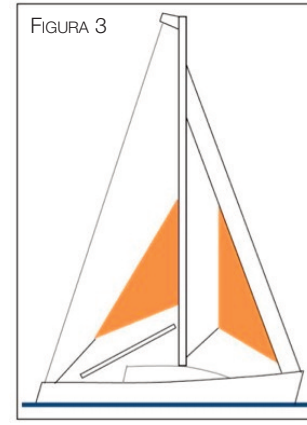
** 4.25.1 Un coltello robusto ed affilato inguainato e fermato dovrà essere disponibile nel pozzetto od in coperta

4.26 Vele da tempesta e da tempo duro

4.26.1 Figura 3

** a) il materiale della struttura di un vela da tempesta comprata dopo il 2013 sarà di colore ad alta visibilità (ad es, rosa, arancio o giallo fluorescenti)

FIGURA 3



** b) poliammidi aromatici, fibre di carbonio e fibre similari non possono essere usati nella randa o nel fiocco da tempesta, mentre sono permessi materiali in HMPE e simili

** c) punti di scotta sul ponte per ciascuna vela da tempesta o da tempo duro

** d) punti di scotta per la randa da tempesta indipendente dal boma

4.26.2 Area delle Vele

** 4.26.2 l'area massima delle vele da tempesta dovrà essere inferiore delle aree sotto riportate o secondo specifiche del progettista della barca o del velaio

3 Un fiocco da vento duro (o una vela da vento duro in una barca senza strallo)

** a) i) un area del 13,5 % del quadrato dell' altezza del triangolo di prua (IG)

** a ii) un sistema prontamente disponibile di attacco dell' inferitura allo strallo indipendente dalla canaletta

** c) per vele realizzate dopo il 2011: le aree della tormentina e del fiocco da vento duro saranno calcolate come: (0,255 x lunghezza dell' inferitura x (perpendicolare all' inferitura + 2 x mezza larghezza)

3 a) ii) una randa di cappa come definita alle OSR 4. 26.2.d), o una randa con terzaroli in grado di ridurre l' inferitura di almeno il 40 % (od albero ad ala rotante se applicabile)

3 a) iii) una randa con terzaroli in grado di ridurre l' inferitura del 12,5 % oppure un fiocco da vento duro, come definito al 4. 26.2.a) (o un vela da vento duro in una barca senza strallo)

4.28 Numero vuoto

SEZIONE 5 | EQUIPAGGIAMENTO INDIVIDUALE

** Ciascun membro dell' equipaggio dovrà avere

**** **5.01** **Giubbotto di salvataggio**

** 5.01.1 Un giubbotto di salvataggio dovrà:

** a) i) se prodotto prima del 2012, essere conforme con ISO 12402-3 (Livello 150) od equivalente, incluso EN 396 o UL1180 e:

** a) i) se gonfiabile, avere un sistema di gonfiaggio a gas

** a) i) avere cinghie cosciali od inguinali (sistema di prevenzione per la risalita (RUPS)

** a) ii) se prodotto dopo il 2011, essere conforme all' ISO 12402-3 (Livello 150) e dotato di fischietto, cintura di sollevamento, materiale riflettente, sistema di gonfiaggio a gas ad attivazione automatica o manuale

3 b) avere una luce di posizionamento di emergenza conforme ad ISO 12402-8 oppure SOLAS LSA Codice 2.2.3

** c) essere chiaramente marcato con il nome della barca o della persona

3 d) avere un cappuccio paraspruzzi conforme all' ISO 12402-8

3 5.01.2 la barca porterà almeno un cilindro di scorta per il sistema di gonfiaggio e, se del caso, una testata di attivazione di scorta per ciascun tipo di giubbotti a bordo

** 5.01.4 La persona responsabile di bordo controllerà personalmente ciascun giubbotto almeno annualmente

**** **5.02** **Cinture di Sicurezza e Cime di Sicurezza ("ombelicali")**

3 5.01 Una cintura conforme all' ISO 12401 od equivalente

3 5.02 Una cima di sicurezza che dovrà:

3 a) essere conforme all' ISO 12401 od equivalente

3 b) essere non più lunga di 2mt inclusi i ganci

3 c) avere ganci autobloccanti

3 d) avere un segno di sovraccarico inserito nelle cuciture

3 e) essere stata prodotta dopo il 2000

3 5.03 Tutto l' equipaggio sarà dotato di:

a) una cima di sicurezza da 1mt oppure

b) una cima di sicurezza da 2mt con un moschettone autobloccante nel mezzo

3 5.02.5 Una cima di sicurezza che ha subito un sovraccarico deve essere sostituita

SEZIONE 6 | ADDESTRAMENTO

3 6.01.3 Quando vi sono solo due membri di equipaggio, almeno uno deve aver ricevuto adeguato addestramento entro cinque anni dalla partenza della regata sugli argomenti di cui alle OSR 6.02 “argomenti di addestramento”

6.02 Argomenti per l’addestramento:

1 dare assistenza ad un'altra imbarcazione
2 apparati di sicurezza personale teoria e pratica
3 apparati di sicurezza personale cura e manutenzione
4 precauzioni antincendio e contrasto dell’ incendio, teoria e pratica
5 individuazione e recupero dell’ uomo in mare
6 ipotermia, colpo di freddo, annegamento
7 salute dell’ equipaggio
8 condizioni meteomarine
9 tempo duro
10 vele da tempesta
11 controllo di danni
12 organizzazione di ricerca e soccorso
13 apparati pirotecnici e di segnalazione, teoria e pratica
14 comunicazioni di emergenza, teoria e pratica
15 zattere di salvataggio ed abbandono nave, teoria e pratica

6.03 Numero vuoto

6.04 Esercitazioni periodiche a bordo

** 6.04 Almeno annualmente l’equipaggio praticherà le procedure per:
- recupero dell’ uomo a mare
- abbandono nave

6.05 Addestramento medico

3+4 6.05.3 Almeno un membro dell’equipaggio dovrà essere familiare con le procedure di primo soccorso, ipotermia, annegamento, rianimazione cardio-polmonare e le relative procedure di comunicazione