# ISAF OFFSHORE SPECIAL REGULATIONS

JANUARY 2014 - DECEMBER 2015 (Incorporating Amendments Effective 1<sup>st</sup> January 2015) www.sailing.org/specialregs



#### **Extract for Race Category 3 Multihulls**

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

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

## **Language & Abbreviations Used**

Mo - Monohull

Mu - Multihull

" \*\* " means the item applies to all types of yacht in all Categories except 5 for which see Appendix J or 6 for which see Appendix L.

RED TYPE indicates a significant changes in 2015

Guidance notes and recommendations are in italics

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

#### Administration

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

ISAF Regulation 6.8.8.3 - The Special Regulations Sub-Committee shall: (a) be responsible for the maintenance, revision and changes to the ISAF Offshore Special Regulations governing offshore racing, under licence from ORC Ltd. Such changes shall be biennial with revised editions published in January of each even year, except that matters of an urgent nature affecting safety may be dealt with by changes to the Regulations on a shorter time scale;

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

Any queries please E-Mail: technical@isaf.co.uk

#### **SECTION 1 - FUNDAMENTAL AND DEFINITIONS**

#### 1.01 Purpose and Use

1.01.1 It is the purpose of these Special Regulations to establish uniform minimum equipment, accommodation and training standards for monohull and multihull yachts racing offshore. A Proa is excluded from these

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- regulations.
- 1.01.2 These Special Regulations do not replace, but rather supplement, the requirements of governmental authority, the Racing Rules and the rules of Class Associations and Rating Systems. The attention of persons in charge is called to restrictions in the Rules on the location and movement of equipment.
- 1.01.3 These Special Regulations, adopted internationally, are strongly recommended for use by all organizers of offshore races. Race Committees may select the category deemed most suitable for the type of race to be sailed.
- 1.02 Responsibility of Person in Charge
- 1.02.1 The safety of a yacht and her crew is the sole and inescapable responsibility of the person in charge who must do his best to ensure that the yacht is fully found, thoroughly seaworthy and manned by an experienced crew who have undergone appropriate training and are physically fit to face bad weather. He must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. He must ensure that all safety equipment is properly maintained and stowed and that the crew know where it is kept and how it is to be used. He shall also nominate a person to take over the responsibilities of the Person in Charge in the event of his incapacitation.
- 1.02.2 Neither the establishment of these Special Regulations, their use by race organizers, nor the inspection of a yacht under these Special Regulations in any way limits or reduces the complete and unlimited responsibility of the person in charge.
- 1.02.3 Decision to race -The responsibility for a yacht's decision to participate in a race or to continue racing is hers alone RRS Fundamental Rule 4.
- 1.03 Definitions, Abbreviations, Word Usage
- 1.03.1 Definitions of Terms used in this document

TABLE 1				
Age Date	Month/year of first launch			
AIS	Automatic Identification Systems			
CEN	Comité Européen de Normalisation			
CPR	Cardio-Pulmonary Resuscitation			
Coaming	Includes the transverse after limit of the cockpit over			
	which water would run in the event that when the yacht			
	is floating level the cockpit is flooded or filled to			
	overflowing.			
DSC	Digital Selective Calling			
EN	European Norm			
EPFS	Electronic Position-Fixing System			
EPIRB	Emergency Position-Indicating Radio Beacon			
FA Station	The transverse station at which the upper corner of the			
	transom meets the sheerline.			
Foul-Weather	A foul weather suit is clothing designed to keep the			
Suit	wearer dry and maybe either a jacket and trousers worn			
	together, or a single garment comprising jacket and			
	trousers.			
GMDSS	Global Maritime Distress & Safety System			
GNSS	Global Navigation Satellite System			
GPIRB	EPIRB, with integral GPS position-fixing			
ITU	International Telecommunications Union			
GPS	Global Positioning System			
Hatch The term hatch includes the entire hatch assemble				
	also the lid or cover as part of that assembly (the part			
	itself may be described as a hatch).			

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INMARSAT	This is Inmarsat Global Limited, the private company that
	provides GMDSS satellite distress and safety
	communications, plus general communications via voice,
	fax and data
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
ISAF	International Sailing Federation.
ISO	International Standard or International Organization for
	Standardization.
Lifeline	Rope or wire line rigged as guardrail / guardline around
	the deck
LOA	Length overall not including pulpits, bowsprits, boomkins
	etc.
LWL	(Length of) loaded waterline
Monohull	Yacht in which the hull depth in any section does not
	decrease towards the centre-line.
Moveable	Lead or other material including water which has no
Ballast	practical function in the boat other than to increase
	weight and/or to influence stability and/or trim and which
	may be moved transversely but not varied in weight
	while a boat is racing.
ORC	Offshore Racing Congress (formerly Offshore Racing
	Council)
OSR	Offshore Special Regulation(s)
Permanently	Means the item is effectively built-in by e.g. bolting,
Installed	welding, glassing etc. and may not be removed for or
	during racing.
PLB	Personal Locator Beacon
Proa	Asymmetric Catamaran
RRS	ISAF - Racing Rules of Sailing
SAR	Search and Rescue
SART	Search and Rescue Transponder
Series Date	Month & Year of first launch of the first yacht of the
	production series
SOLAS	Safety of Life at Sea Convention
Safety Line	A tether used to connect a safety harness to a strong
	point
Securely	Held strongly in place by a method (e.g. rope lashings,
Fastened	wing-nuts) which will safely retain the fastened object in
	severe conditions including a 180 degree capsize and
	allows for the item to be removed and replaced during
	racing
Static Ballast	Lead or other material including water which has no
	practical function in the boat other than to increase
	weight and/or to influence stability and/or trim and which
	may not be moved or varied in weight while a boat is
racing.	
Static Safety	A safety line (usually shorter than a safety line carried
Line	with a harness) kept clipped on at a work-station
Variable	Water carried for the sole purpose of influencing stability
Ballast	and/or trim and which may be varied in weight and/or
	moved while a boat is racing.
The worde "chall	' and "must" are mandatony and "should" and "may" are

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

	Cotogories of Events	
2.01	Categories of Events	**
	In many types of race, ranging from trans-oceanic sailed under adverse conditions to short-course day races sailed in protected waters, seven	<i>~~</i>
	categories are established, to provide for differences in the minimum	
	standards of safety and accommodation required for such varying	
	circumstances:	
2.01.4	Category 3	
	Races across open water, most of which is relatively protected or close to shorelines.	MoMu,3
2.02	Inspection	
	A yacht may be inspected at any time. If she does not comply with these Special Regulations her entry may be rejected, or she will be liable to disqualification or such other penalty as may be prescribed by the national authority or the race organizers.	**
2.03	General Requirements	
2.03.1	All equipment required by Special Regulations 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 yacht.	**
2.03.2	Heavy items:	
a)	ballast, ballast tanks and associated equipment shall be permanently installed	**
b)	heavy movable items including e.g. batteries, stoves, gas bottles, tanks, toolboxes and anchors and chain shall be securely fastened	**
c)	heavy items for which fixing is not specified in Special Regulations shall be permanently installed or securely fastened, as appropriate	**
2.03.3	When to show navigation lights	**
a)	navigation lights (OSR 3.27) shall be shown as required by the	**
ŕ	International Regulations for Preventing Collision at Sea, (Part C and Technical Annex 1). All yachts shall exhibit sidelights and a sternlight at	
	the required times.	
SECTIO	N 3 - STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT	
3.01	Strength of Build, Ballast and Rig	
	Yachts shall be strongly built, watertight and, particularly with regard to hulls, decks and cabin trunks capable of withstanding solid water and knockdowns. They must be properly rigged and ballasted, be fully seaworthy and must meet the standards set forth herein. Shrouds shall	**
3.02	never be disconnected.  Watertight Integrity of a Hull	
3.02.1	A hull, including, deck, coach roof, windows, hatches and all other parts,	**
3.02.1	shall form an integral, essentially watertight unit and any openings in it shall be capable of being immediately secured to maintain this integrity.	
3.02.2	Centreboard and daggerboard trunks and the like shall not open into the interior of a hull except via a watertight inspection/maintenance hatch of which the opening shall be entirely above the waterline of the yacht floating level in normal trim.	**
3.02.3	A canting keel pivot shall be completely contained within a watertight enclosure which shall comply with OSR 3.02.2. Access points in the watertight enclosure for control and actuation systems or any other	**
3.02.4	purpose shall comply with OSR 3.02.1.  Moveable ballast systems shall be fitted with a manual control and actuation secondary system which shall be capable of controlling the full sailing load of the keel in the event of failure of the primary system. Such	**

failures would include electrical and hydraulic failure and mechanical failure of the components and the structure to which it mounts. The system must be capable of being operational quickly and shall be operable at any angle of heel. It would be desirable if this system was capable of securing the keel on the centreline.

	capable of securing the keel on the centreline.	
3.05	Stability and Flotation - Multihulls	Mu0,1,2,3,4
3.05.1	Attention is drawn to ISO 12217-2.  Adequate watertight bulkheads and compartments (which may include permanently installed flotation material) in each hull shall be provided to ensure that a multihull is effectively unsinkable and capable of floating in a stable position with at least half the length of one hull flooded. (see	<i>Mu0,1,2,3,4</i> Mu0,1,2,3,4
3.05.2	OSR 3.13.2).  Multihulls built on or after Jan 1999 shall in every hull without accommodation be divided at intervals of not more than 4m (13ft 3") by one or more transverse watertight bulkheads	Mu0,1,2,3,4
3.05.3 <b>3.07</b>	A yacht shall be designed and built to resist capsize.  Exits and Escape Hatches - Multihulls	Mu0,1,2,3,4 <b>Mu0,1,2,3,4</b>
3.07.1	Exits	
a)	In a multihull of 8m (26.2ft) LOA and greater, each hull which contains accommodation shall have at least two exits.	Mu0,1,2,3,4
b)	In a multihull of less than 8m (26.2ft) LOA each hull which contains accommodation shall have at least two exits.	Mu0,1,2,3
3.07.2	Escape Hatches, Underside Clipping Points & Handholds	
a)	In a multihull of 12m (39.4ft) LOA and greater each hull which contains accommodation shall:-	Mu0,1,2,3,4
i	have an escape hatch for access to and from the hull in the event of an inversion;	Mu0,1,2,3,4
ii	when first launched on or after January 2003 have a minimum clearance diameter through each escape hatch of 450mm or when an escape hatch is not circular, sufficient clearance to allow a crew member to pass	Mu0,1,2,3,4
iii	through fully clothed; when first launched prior to January 2003, if possible have each escape	Mu0,1,2,3,4
<i>'''</i>	hatch in compliance with the dimensions in OSR 3.07.2(a)(ii);	11110,1,2,3,7
iv	when the yacht is inverted have each escape hatch above the waterline;	Mu0,1,2,3,4
V	when first launched on or after January 2001 have each escape hatch at or near the midships station;	Mu0,1,2,3,4
vi	in a catamaran first launched on or after January 2003 have each escape hatch on the side nearest the vessel's central axis.	Mu0,1,2,3,4
b)	A trimaran of 12m (39.4ft) LOA and greater first launched on or after 1/03 shall have at least two escape hatches in compliance with the dimensions in OSR 3.07.2(a) (ii)	Mu0,1,2,3,4
c)	Each escape hatch must have been opened both from inside and outside within 6 months prior to an intended race	Mu0,1,2,3,4
d)	A multihull shall have on the underside appropriate handholds/clipping points sufficient for all crew (on a trimaran these shall be around the central hull).	Mu0,1,2,3,4
e)	A catamaran first launched on or after 1/03 with a central nacelle shall have on the underside around the central nacelle, handholds of sufficient	Mu0,1,2,3,4
f)	capacity to enable all persons on board to hold on and/or clip on securely In a catamaran with a central nacelle, it is recommended that each hull has an emergency refuge, accessible via a special hatch in the side of the hull nearest the vessel's central axis, which hatch may be opened and closed from the inside and outside	Mu0,1,2,3,4
3.07.3	A multihull of less than 12m (39.4ft) LOA shall either have escape hatches in compliance with OSR 3.07.2 (a)(b) and (c)or shall comply with OSR 3.07.3 (a) and (b):	Mu2,3,4
a)	each hull which contains accommodation shall have, for the purpose of cutting an escape hatch, appropriate tools kept ready for instant use adjacent to the intended cutting site. Each tool shall be secured to the	Mu2,3,4

b)	vessel by a line and a clip, and in each hull at 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	Mu2,3,4
<b>3.08</b> 3.08.1	Hatches & Companionways  No hatch forward of the maximum beam station, other than a hatch in	**
	the side of a coachroof, shall open in such a way that the lid or cover moves into the open position towards the interior of the hull (excepting ports having an area of less than 0.071m2 (110 sq in)).	
3.08.2	A hatch fitted forward of the maximum beam station, located on the side of the coachroof, opening into the interior of the boat ,and of area greater than 0.071m2 shall comply with ISO12216 design category A and be clearly labelled and used in accordance with the following instruction:	**
3.08.3	"NOT TO BE OPENED AT SEA" Attention is drawn to SR 3.02.1 A hatch shall be:	
b)	permanently attached	**
c)	capable of being firmly shut immediately and remaining firmly shut in a 180 degree capsize (inversion)	**
3.08.4	A companionway hatch shall:	
a)	be fitted with a strong securing arrangement which shall be operable from the exterior and interior including when the yacht is inverted	**
b)	have any blocking devices:	**
İ 	capable of being retained in position with the hatch open or shut	**
ii	whether or not in position in the hatchway, secured to the yacht (e.g. by lanyard) for the duration of the race, to prevent their being lost overboard	**
iii	permit exit in the event of inversion	**
3.08.7	A companionway hatch extending below the local sheerline and shall comply with either (a) or (b):	Mu0,1,2,3,4
a)	be capable of being blocked off up to the level of the local sheerline, whilst giving access to the interior with the blocking devices (e.g. washboards) in place with a minimum sill height of 300 mm.	Mu0,1,2,3,4
b)		
i	A companionway hatch shall be in compliance with ISO 11812 – Watertight cockpits and quick-draining cockpits to design category A	Mu0,1,2,3
<b>3.09</b> 3.09.1	Cockpits - Attention is Drawn to ISO 11812 Cockpits shall be structurally strong, self-draining quickly by gravity at all	**
5.05.1	angles of heel and permanently incorporated as an integral part of the hull.	
3.09.2	Cockpits must be essentially watertight, that is, all openings to the hull must be capable of being strongly and rigidly secured	**
3.09.3	A bilge pump outlet pipe shall not be connected to a cockpit drain. See OSR 3.09.8 for cockpit drain minimum sizes	**
3.09.4	A cockpit sole shall be at least 2% LWL above LWL (or in IMS yachts first launched before 1/03, at least 2% L above LWL)	**
3.09.5	A bow, lateral, central or stern well shall be considered a cockpit for the purposes of OSR 3.09	**
3.09.6	In cockpits opening aft to the sea structural openings aft shall be not less in area than 50% maximum cockpit depth x maximum cockpit width.	**
3.09.7	Cockpit Volume	
i)	earliest of age or series date before April 1992	
	the total volume of all cockpits below lowest coamings shall not exceed 9% (LWL x maximum beam x freeboard abreast the cockpit).	Extract MoMu2,3,4
ii)	earliest of age or series date April 1992 and after	
	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	Extract **
	the working deck shall be included in calculation of cockpit volume	
	IMS-rated boats may instead of the terms LWL, maximum beam, freeboard abreast the cockpit, use the IMS terms L, B and FA.	Extract **

3.09.8	Cockpit Drains	
	See OSR 3.09.1. Cockpit drain cross section area (after allowance for	
	screens if fitted) shall be:-	
a)	in yachts with earliest of age or series date before 1/72 or in any yacht	**
,	under 8.5m (28ft) LOA - at least that of 2 x 25mm diameter (one inch)	
	unobstructed openings or equivalent	
b)	in yachts with earliest of age or series date 1/72 and later - at least that	**
D)	of 4 x 20mm diameter (3/4 inch) unobstructed openings or equivalent	
3.10	Sea Cocks or Valves	
3.10	Sea cocks or valves shall be permanently installed on all through-hull	**
	openings below the waterline except integral deck scuppers, speed	
	indicators, depth finders and the like, however a means of closing such	
	openings shall be provided.	
3.11	Sheet Winches	ale ale
	Sheet winches shall be mounted in such a way that an operator is not	**
	required to be substantially below deck.	
3.12	Mast Step	
	The heel of a keel stepped mast shall be securely fastened to the mast	**
	step or adjoining structure.	
3.13	Watertight Bulkheads	
	multihulls also see OSR 3.05	<i>Mu0,1,2,3,4</i>
3.13.1	A hull shall have either a watertight "crash" bulkhead within 15% of LOA	Mo0Mu0,1,2,3,4
	from the bow and abaft the forward end of LWL, or permanently installed	
	closed-cell foam buoyancy effectively filling the forward 30% LOA of the	
	hull.	
3.13.2	Any required watertight bulkhead shall be strongly built to take a full	Mo0Mu0,1,2,3,4
	head of water pressure without allowing any leakage into the adjacent	, , , ,
	compartment.	
3.14	Pulpits, Stanchions, Lifelines	
3.14.1	When due to the particular design of a multihull it is impractical to	Mu0,1,2,3,4,
• · · · · · ·	precisely follow Special Regulations regarding pulpits, stanchions, lifelines,	, = , = , = , . ,
	the regulations for monohulls shall be followed as closely as possible with	
	the aim of minimising the risk of people falling overboard.	
3.14.2	Lifeline deflection shall not exceed the following:	**
a)	When a deflecting force of 4 kg/f (39.2 N) is applied to a lifeline midway	**
a)	between supports of an upper or single lifeline, the lifeline shall not	
	deflect more than 50mm. This measurement shall be taken at the widest	
<b>L</b> )	span between supports that are aft of the mast.	**
b)	When a deflecting force of 4 kg/f (39.2 N) is applied midway between	4-4-
	supports of an intermediate lifeline of all spans that are aft of the mast,	
	deflection shall not exceed 120mm from a straight line between the	
2 1 4 2	stanchions.	**
3.14.3	The following shall be provided:	
c)	lifelines (guardlines) supported on stanchions, which, with pulpits, shall	**
	form an effectively continuous barrier around a working deck for man-	
	overboard prevention. Lifelines shall be permanently supported at	
	intervals of not more than 2.20m (86.6") and shall not pass outboard of	
	supporting stanchions	
d)	upper rails of pulpits at no less height above the working deck than the	**
	upper lifelines as in Table 7.	
e)	Openable upper rails in bow pulpits shall be secured shut whilst racing	**
f)	Pulpits and stanchions shall be permanently installed. When there are	**
	sockets or studs, these shall be through-bolted, bonded or welded. The	
	pulpit(s) and/or stanchions fitted to these shall be mechanically retained	
	without the help of the life-lines. Without sockets or studs, pulpits and/or	
	stanchions shall be through-bolted, bonded or welded.	
g)	The bases of pulpits and stanchions shall not be further inboard from the	**
5,	edge of the appropriate working deck than 5% of maximum beam or 150	
	mm (6 in), whichever is greater.	
	(- ·// ·····	

h)	Stanchion or pulpit or pushpit bases shall not be situated outboard of a working deck. For the purpose of this rule the base shall be taken to include a sleeve or socket into which the tube is fitted but shall exclude a baseplate which carries fixings into the deck or hull.	**
i)	Provided the complete lifeline enclosure is supported by stanchions and pulpit bases effectively within the working deck, lifeline terminals and support struts may be fixed to a hull aft of the working deck	**
j)	Lifelines need not be fixed to a bow pulpit if they terminate at, or pass through, adequately braced stanchions set inside and overlapping the bow pulpit, provided that the gap between the upper lifeline and the bow pulpit does not exceed 150 mm (6 in).	**
k)	Lifelines shall be continuous and fixed only at (or near) the bow and stern. However a bona fide gate shall be permitted in the lifelines on each side of a yacht. Except at its end fittings, the movement of a lifeline in a fore-and-aft direction shall not be constrained. Temporary sleeving in 3.14.6 (c) shall not modify tension in the lifeline.	**
l)	Stanchions shall be straight and vertical except that:-	**
í	within the first 50 mm (2 in) from the deck, stanchions shall not be displaced horizontally from the point at which they emerge from the deck	**
ii	or stanchion base by more than 10 mm (3/8 in), and stanchions may be angled to not more than 10 degrees from vertical at any point above 50 mm (2 in) from the deck.	**
m)	It is strongly recommended that designs also comply to ISO 15085	**
3.14.4	Special Requirements for Pulpits, Stanchions, Lifelines on Multihulls	Mu0,1,2,3,4
	The following shall be provided:-	
a)	on a trimaran - a bow pulpit on the main hull, with lifelines around the main hull supported on stanchions. The lifelines may be interrupted where there are nets or crossbeam wings outboard of the main hull	Mu0,1,2,3,4
b)	on a trimaran - where a net joins the base of a bow pulpit on the main hull, an additional lifeline from the top of the pulpit to the forward crossbeam at or outboard of the crossbeam mid-point.	Mu0,1,2,3,4
c)	on a trimaran - at a main or emergency steering position on an outrigger with or without a cockpit, lifelines protecting an arc of 3 meters diameter centred on the steering position. (When measuring between lifelines their	Mu0,1,2,3,4
15	taut, undeflected positions shall be taken for this purpose).	
d)	on a catamaran - lifelines from bow to stern on each hull and transverse lifelines to form an effectively continuous barrier around the working	Mu0,1,2,3,4
	area for man-overboard prevention. The transverse lifelines shall be	
	attached to bow and stern pulpits or superstructure. A webbing, strop or	
	rope (minimum diameter 6mm) shall be rove zig-zag between the	
	transverse lifelines and the net.	
3.14.5	Lifeline Height, Vertical Openings, Number of Lifelines	

# 3.14.5 Lifeline Height, Vertical Openings, Number of Lifelines

TABLE 7 \*\*

LOA	earliest of age/seriesdate	minimum requirements	Category
under 8.5 m(28 ft)	before January 1992	single lifeline at a height of no less than 450 mm (18 in) above the working deck. No vertical opening shall exceed 560 mm (22 in).	**
under 8.5 m(28 ft)	January 1992 and after	as for under 8.5 m(28 ft) in table 7 above, except that when an intermediate lifeline is fitted no vertical opening shall exceed 380 mm (15 in).	**
8.5 m (28 ft) and over	before January 1993	double lifeline with upper lifeline at a height of no less than 600 mm (24 in) above the working deck. No vertical opening shall exceed 560 mm (22 in)	**

8.5 m (28	January	/ 1993	as 8.	5 m (28 ft) and over	in Table 7	**	
ft)and	and aft	er	abov	e, except that no ver	tical opening		
over				exceed 380 mm (15			
all	all			achts with intermedia		**	
	un		,	ntermediate line shall			
				230 mm (9 in) above			
				• •	tile working		
l ifalina Min	: F	Niama atawa	deck.				
Lifelines shall		nameters,	Kequ	ired Materials, Spe	cirications	**	
						**	
		ess steel wir		AE) (D			# slasla
_			•	PE) (Dyneema®/Spec	tra® or	Mo4,N	⁄lu**
equivalent) re				•			
The minimun						**	
				d and used without o	_	**	
	-	•	_	may be fitted provide	ed it is		
regularly rem		•					
		•		is recommended.		**	
When HMPE	(Dyneen	na®/Spectra	a®) is	used, it shall be prot	ected from	Mo4,N	1u**
chafe and sh	all be sp	liced in acco	rdanc	e with the manufactu	rer's		
recommende	d proced	lures.					
A taut lanyar	d of synt	hetic rope r	nay be	e used to secure lifeli	nes provided	**	
the gap it clo	ses does	not exceed	l 100 r	nm (4 in). This lanya	rd shall be		
replaced ann	ually at a	a minimum.					
•	•		s, fixtı	ures and lanyards sha	all comprise a	**	
				all points at least the			
strength of th				F	· · · · · · · · · · · · · · · · · · ·		
TABLE 8 - Mi	•		• .			**	
LOA		wire		HMPE rope (Single	HMPE Core (B	raid	
2071		******		braid)	on braid)		
under 8.5m	(28ft)	3mm (1/8	in)	4mm (5/32 in)	4mm (5/32 in)	1	
8.5m - 13m		4mm (5/32		5mm (3/16 in)	5mm (3/16 in)		
over 13m (4		5mm (3/16		5mm (3/16in)	5mm (3/16in)	<u>/</u>	
Multihull No				311111 (3/1011)	311111 (3/1011)		
				the word "trampoline	o"	Mun 1	224
A net shall be		i Changeabh	C WILLI	the word trampoling	5		.,2,3,4 2.3.4
essentially ho		ovon wobbi	na w	stor normoshla fshric	or mach	-	.,2,3,4
				ater permeable fabric		Muu,1	.,2,3,4
		_	•	2 inches) in any dime			
		•		avoid chafe. The junc	tion between		
		•		of foot trapping	المحمدية الما	MO 1	224
	_			sverse and longitudir	iai support	Muo, 1	.,2,3,4
lines and sha				•	يد مانداد	M. O 1	224
•		-		either in normal wo	_	Muo, 1	.,2,3,4
			-	when the yacht is inv		14.0	
				e the nets should be	•	Mu0,1	1,2,3,4
		ousiy connec	tea to	more than four attac	enment points		
per connectii	_		•				
Trimarans v							
	ith doub	ie crossbear	ns sha	III have nets on each	side		
covering:-							
_		•		ns, central hull and o			,2,3,4
		•		he central pulpit, the	•	Mu0,1	.,2,3,4
	crossbe	am, and the	inter	section of the crossbe	eam and the		
central hull	_						
_		•		part of the cockpit or	_	Mu0,1	.,2,3,4
•				mid-point of each af			
•		ntersection (	of the	crossbeam and the c	entral hull;		
except that:-							

**3.14.6** a)

b) c)

d)

f)

g)

**3.15** 3.15.1

a) b)

c)

d)

e)

b) c)

d)

**3.15.2** a)

e)	the requirement in OSR 3.15.2(d) shall not apply when cockpit coamings and/or lifelines are present which comply with the minimum height requirements in Table 7	Mu0,1,2,3,4
<b>3.15.3</b> a)	<b>Trimarans with Single Crossbeams</b> A trimaran with a single crossbeam shall have nets between the central hull and each outrigger:-	Mu0,1,2,3,4
b)	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)	Mu0,1,2,3,4
3.16	Catamarans	
a)	On a catamaran the total net surface shall be limited: laterally by the hulls; and	Mu0,1,2,3,4
b)	longitudinally by transverse stations through the forestay base, and the aftermost point of the boom lying fore and aft. However, a catamaran with a central nacelle (non-immersed) may satisfy the regulations for a trimaran	Mu0,1,2,3,4
<b>3.18</b>	Toilet	MaMu2 4
3.18.2 <b>3.19</b>	A toilet, permanently installed or fitted bucket <b>Bunks</b>	MoMu3,4
3.19.2	Bunks, permanently installed	**
3.20	Cooking Facilities	
3.20.1	A cooking stove, permanently installed or securely fastened with safe accessible fuel shutoff control and capable of being safely operated in a seaway.	MoMu0,1,2,3
3.21	Drinking Water Tanks & Drinking Water	MoMu0,1,2,3
3.21.1	Drinking Water Tanks	MoMu0,1,2,3
a)	A yacht shall have a permanently installed delivery pump and water	MoMu0,1,2,3
2 21 2	tank(s):	MaM::0 1 2 2
<b>3.21.3</b> a)	Emergency Drinking Water At least 9 litres (2 UK gallons, 2.4 US gallons) of drinking water for	<b>MoMu0,1,2,3</b> MoMu1,2,3
	emergency use shall be provided in a dedicated and sealed container or container(s)	, ,
3.22	emergency use shall be provided in a dedicated and sealed container or container(s)  Hand Holds	
3.22	container(s)	**
3.22	container(s) <b>Hand Holds</b> Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.	**
	container(s) <b>Hand Holds</b> Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea. <i>A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.</i>	**
<b>3.22 3.23</b> 3.23.1	container(s)  Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets	**
3.23	container(s) <b>Hand Holds</b> Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea. <i>A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.</i>	
<b>3.23</b> 3.23.1 3.23.2	container(s)  Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)	** **
<b>3.23</b> 3.23.1	container(s)  Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance	**
<b>3.23</b> 3.23.1 3.23.2	container(s)  Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided	** **
<b>3.23</b> 3.23.1 3.23.2 3.23.3	container(s)  Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris	** ** **
<b>3.23</b> 3.23.1 3.23.2 3.23.3 3.23.4	Hand Holds Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss  The following shall be provided: multihulls shall have provision to pump out all watertight compartments	** ** **
3.23.1 3.23.2 3.23.3 3.23.4 3.23.5 c)	Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss  The following shall be provided: multihulls shall have provision to pump out all watertight compartments (except those filled with impermeable buoyancy).	**  **  **
3.23 3.23.1 3.23.2 3.23.3 3.23.4 3.23.5	Hand Holds Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss  The following shall be provided: multihulls shall have provision to pump out all watertight compartments (except those filled with impermeable buoyancy). two buckets of stout construction each with at least 9 litres (2 UK gallons,	**  **  **  Mu0,1,2,3,4
3.23.1 3.23.2 3.23.3 3.23.4 3.23.5 c)	Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss  The following shall be provided: multihulls shall have provision to pump out all watertight compartments (except those filled with impermeable buoyancy).	**  **  **  Mu0,1,2,3,4
3.23.1 3.23.2 3.23.3 3.23.4 3.23.5 c) f) 3.24 3.24.1	Hand Holds Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss  The following shall be provided: multihulls shall have provision to pump out all watertight compartments (except those filled with impermeable buoyancy).  two buckets of stout construction each with at least 9 litres (2 UK gallons, 2.4 US gallons) capacity. Each bucket to have a lanyard.  Compass  The following shall be provided:-	**  **  **  Mu0,1,2,3,4  **
3.23 3.23.1 3.23.2 3.23.3 3.23.4 3.23.5 c) f)	container(s)  Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss  The following shall be provided:  multihulls shall have provision to pump out all watertight compartments (except those filled with impermeable buoyancy).  two buckets of stout construction each with at least 9 litres (2 UK gallons, 2.4 US gallons) capacity. Each bucket to have a lanyard.  Compass  The following shall be provided:- a marine magnetic compass, independent of any power supply,	**  **  **  Mu0,1,2,3,4
3.23 3.23.1 3.23.2 3.23.3 3.23.4 3.23.5 c) f) 3.24 3.24.1 a)	container(s)  Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss  The following shall be provided:  multihulls shall have provision to pump out all watertight compartments (except those filled with impermeable buoyancy).  two buckets of stout construction each with at least 9 litres (2 UK gallons, 2.4 US gallons) capacity. Each bucket to have a lanyard.  Compass  The following shall be provided:- a marine magnetic compass, independent of any power supply, permanently installed and correctly adjusted with deviation card, and	**  **  Mu0,1,2,3,4  **
3.23.1 3.23.2 3.23.3 3.23.4 3.23.5 c) f) 3.24 3.24.1	container(s)  Hand Holds  Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.  A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.  Bilge Pumps and Buckets  No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.  Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)  Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris  Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss  The following shall be provided:  multihulls shall have provision to pump out all watertight compartments (except those filled with impermeable buoyancy).  two buckets of stout construction each with at least 9 litres (2 UK gallons, 2.4 US gallons) capacity. Each bucket to have a lanyard.  Compass  The following shall be provided:- a marine magnetic compass, independent of any power supply,	**  **  **  Mu0,1,2,3,4  **

3.27	Navigation Lights (see	OSP 2 03 3)	
3.27.1	Navigation lights shall be	**	
	sails or the heeling of the	•	
3.27.2	Navigation lights shall no	**	
3.27.3	no less height than immediately under the upper lifeline.  Navigation light intensity		
3.27.13	TABLE 11		
	LOA	Guide to required minimum power rating for	
	day 12 ya (20 4 ft)	an electric bulb in a navigation light	
	under 12 m (39.4 ft) 12 m (39.4 ft) and	10 W 25 W	
	above	25 W	
3.27.4		shall be carried having the same minimum	MoMu0,1,2,3
	•	gation lights above, with a separable power	
	source, and wiring or sup for the normal navigation	oply system essentially separate from that used	
3.27.5		n lights shall be carried, or for lights not	**
	dependent on bulbs, app	, ,	
3.28	Engines, Generators,	Fuel	ale ale
<b>3.28.1</b> a)	Propulsion Engines Engines and associated s	systems shall be installed in accordance with their	** **
a)		s and shall be of a type, strength, capacity, and	
		ne size and intended use of the yacht.	
b)	• •	igine when fitted shall: be provided with a	**
	• •	haust, coolant, and fuel supply systems and fuel ered; and have adequate protection from the	
	effects of heavy weather	· · · · · · · · · · · · · · · · · · ·	
c)	A propulsion engine requ	ired by Special Regulations shall provide a	MoMu0,1,2,3
		of (1.8 x square root of LWL in metres) or	
f)	(square root of LWL in feet) Boats of less than 12.0 m hull length may be provided with an inboard		Mu1,2,3
')		outboard engine together with permanently	1101,2,3
	installed fuel supply syste	ems and fuel tank(s) may be used as an	
3.28.2	alternative.		
3.28.2	<b>Generator</b> A separate generator for	electricity is optional. However, when a separate	**
		all be permanently installed, securely covered,	
		ntly installed exhaust, cooling and fuel supply	
	systems and fuel tank(s) of heavy weather.	, and have adequate protection from the effects	
3.28.3	Fuel Systems		
a)	Each fuel tank provided v	with a shutoff valve. Except for permanently	MoMu0,1,2,3
		a flexible tank is not permitted as a fuel tank.	
b)		hall have a minimum amount of fuel which may e of Race but if not, shall be sufficient to be able	MoMu0,1,2,3
	-	ments for the duration of the race and to motor	
	at the above minimum sp		
3.28.4	Battery Systems	to the early months of Courses the extremely a reason than	M-M-0 1 2 2
a)		is the only method for starting the engine, the ate battery, the primary purpose of which is to	MoMu0,1,2,3
	start the engine	de battery, the primary purpose of which is to	
b)	All rechargeable batteries	s on board shall be of the sealed type from which	MoMu0,1,2,3
	•	escape. Other types of battery installed on board	
3.29		use for the remainder of their service lives.  pment, EPFS (Electronic Position-Fixing	**
J.23	System), Radar, AIS	pinding Er 13 (Electionic rosition-1 ixing	
	Provision of GMDSS is un	nlikely to be mandatory for small craft during the	MoMu0,1,2,3
	term of the present Spec	cial Regulations.	

2 20 1	The following shall be provided:	**
3.29.1	The following shall be provided:  A marine radio transceiver (or if stated in the Notice of Pace, an installed	
a)	A marine radio transceiver (or if stated in the Notice of Race, an installed	MoMu0,1,2,3
i	satcom terminal), and	MoMuO 1 2 2
I	an emergency antenna when the regular antenna depends upon the	MoMu0,1,2,3
b)	mast. When the marine radio transceiver is VHF:	MoMu0,1,2,2
i)	it shall have a rated output power of 25W	MoMu0,1,2,2 MoMu0,1,2,3
ii	it shall have a masthead antenna, and co-axial feeder cable with not more	MoMu0,1,2,3
11	than 40% power loss	140140,1,2,3
iii	the following types and lengths of co-axial feeder cable will meet the	MoMu0,1,2,3
***	requirements of OSR 3.29.1 (b)(ii): (a) up to 15m (50ft) - type RG8X	7 101 100/1/2/3
	("mini 8"); (b) 15-28m (50-90ft) - type RG8U; (c) 28-43m (90-140ft) -	
	type 9913F (uses conventional connectors, available from US supplier	
	Belden); (d) 43-70m) 140-230ft - type LMR600 (uses special connectors,	
	available from US supplier Times Microwave).	
iv	it should include channel 72 (an international ship-ship channel which, by	MoMu0,1,2,3
	common use, has become widely accepted as primary choice for ocean	
	racing yachts anywhere in the world)	
V	VHF transceivers installed after 31 December 2015 shall be DSC capable	MoMu1,2,3
vi	DSC capable VHF transceivers shall be programmed with an assigned	MoMu1,2,3
	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	MaNut 2.2.4
e)	A hand-held marine VHF transceiver, watertight or with a waterproof	MoMu1,2,3,4
	cover. When not in use to be stowed in a grab bag or emergency container (see OSR 4.21) The handheld receiver should have Digital	
	Selective Calling (DSC) and be equipped with GPS.	
f)	Independent of a main radio transceiver, a radio receiver capable of	**
')	receiving weather bulletins	
i)	An EPFS (Electronic Position-Fixing System) (e.g. GPS)	MoMu0,1,2,3
0)	An AIS Transponder is recommended	MoMu3
3.29.2	Yachts are reminded that no reflector, active or passive, is a guarantee of	**
	detection or tracking by a vessel using radar.	
a)	The attention of persons in charge is drawn to legislation in force or	**
	imminent affecting the territorial seas of some countries in which the	
	carriage of an AIS set is or will be mandatory for certain vessels including	
	relatively small craft.	
	N 4 - PORTABLE EQUIPMENT & SUPPLIES for the yacht	
•	ter & fuel see OSR 3.21 and OSR 3.28)	
4.01	Sail Letters & Numbers	aleale
4.01.1	Yachts which are not in an ISAF International Class or Recognized Class	**
	shall comply with RRS 77 and Appendix G as closely as possible, except	
4.01.2	that sail numbers allotted by a State authority are acceptable.  Sail numbers and letters of the size carried on the mainsail must be	**
4.01.2	displayed by alternative means when none of the numbered sails is set.	
4.02	Hull marking (colour blaze)	Mo0,1,Mu0,1,2,3,4
4.02.1	To assist in SAR location:-	1-100/1/100/1/2/J/ <del>4</del>
4.02.1	Multihulls shall show on the underside, where they can be seen when	Mu0,1,2,3,4
	inverted, an solid area of highly-visible colour (e.g. Day-Glo pink, orange,	
	or yellow) of at least 1m^2	
4.03	Soft Wood Plugs	
	Soft wood plugs, tapered and of the appropriate size, shall be attached or	**
	stowed adjacent to the appropriate fitting for every through-hull opening.	
4.04	Jackstays, Clipping Points and Static Safety Lines	
4.04.1	Jackstays shall be provided-	MoMu0,1,2,3
a)	attached to through-bolted or welded deck plates or other suitable and	MoMu0,1,2,3
	strong anchorage fitted on deck, port and starboard of the yacht's centre	
	line to provide secure attachments for safety harness:-	
b)	comprising stainless steel 1 x 19 wire of minimum diameter 5 mm (3/16	MoMu0,1,2,3

		in), high modulus polyethylene (such as Dyneema/Spectra) rope or webbing of equivalent strength;	
c)		which, when made from stainless steel wire shall be uncoated and used	MoMu0,1,2,3
d,	)	without any sleeving; 20kN (2,040 kgf or 4,500 lbf) min breaking strain webbing is	MoMu0,1,2,3
e)	)	recommended; at least two of which should be fitted on the underside of a multihull in	Mu0,1,2,3
4.	04.2	case of inversion.  Clipping Points:- shall be provided-	
a)	)	attached to through-bolted or welded deck plates or other suitable and strong anchorage points adjacent to stations such as the helm, sheet winches and masts, where crew members work for long periods:-	MoMu0,1,2,3
b)	)	which, together with jackstays and static safety lines shall enable a crew member-	MoMu0,1,2,3
i ii		to clip on before coming on deck and unclip after going below; whilst continuously clipped on, to move readily between the working areas on deck and the cockpit(s) with the minimum of clipping and unclipping operations.	MoMu0,1,2,3 MoMu0,1,2,3
c)		The provision of clipping points shall enable two-thirds of the crew to be simultaneously clipped on without depending on jackstays	MoMu0,1,2,3
d)	)	In a trimaran with a rudder on the outrigger, adequate clipping points shall be provided that are not part of the deck gear or the steering mechanism, in order that the steering mechanism can be reached by a crew member whilst clipped on.	Mu0,1,2,3
<i>e)</i>	) . <b>05</b>	Warning - U-bolts as clipping points - see OSR 5.02.1(a)  Fire Extinguishers	MoMu0,1,2,3
	05.1	Shall be provided as follows: Fire extinguishers, at least two, readily accessible in suitable and different parts of the yacht	**
4.	05.2	Fire Extinguishers, at least two, of minimum 2kgs each of dry powder or equivalent	MoMu0,1,2,3
	05.4 . <b>06</b>	A fire blanket adjacent to every cooking device with an open flame  Anchor(s)	**
	06.1	An anchor or anchors shall be carried according to the table below: The following anchors shall be provided	**
i		For yachts of 8.5 m LOA (28 ft) and over there shall be 2 anchors together with a suitable combination of chain and rope, all ready for immediate use	MoMu1,2,3
ii <b>4</b> .	.07	For yachts under 8.5 m LOA (28 ft) there shall be 1 anchor together with a suitable combination of chain and rope, all ready for immediate use <b>Flashlight(s)</b> and <b>Searchlight(s)</b>	MoMu1,2,3
	07.1	The following shall be provided:- A watertight, high-powered searchlight, suitable for searching for a person overboard at night and for collision avoidance with spare batteries and bulbs, and	**
b)		a watertight flashlight with spare batteries and bulb	** Mu2 /
c)		for Mu3,4 the watertight flashlight in OSR 4.07.1 (b) shall be stowed in the grab bag or emergency container	Mu3,4
	. <b>08</b> 08.1	First Aid Manual and First Aid Kit A suitable First Aid Manual shall be provided	** **
		In the absence of a National Authority's requirement, the latest edition of one of the following is recommended:-	**
b,	)	First Aid at Sea, by Douglas Justins and Colin Berry, published by Adlard Coles Nautical, London	MoMu2,3,4
c)	)	Le Guide de la medecine a distance, by Docteur J Y Chauve, published by Distance Assistance BP33 F-La Baule, cedex, France.	**
d,	)	'PAN-PAN medico a bordo' in Italian edited by Umberto Verna. www.panpan.it	MoMu2,3,4

<i>e)</i>	Skipper's Medical Emergency Handbook by Dr Spike Briggs and Dr	**
4.00.0	Campbell Mackenzie www.msos.org.uk	**
4.08.2 <i>4.08.3</i>	A First Aid Kit shall be provided  The contents and storage of the First Aid Kit should reflect the guidelines	**
	of the Manual carried, the likely conditions and duration of the passage, and the number of people aboard the yacht.	
4.09	Foghorn	
	A foghorn shall be provided	**
4.10	Radar Reflector	**
4.10.1	A passive radar reflector shall be carried with:  Octahederal circular sector plates of minimum diameter 300 mm (12") or	**
	Octahederal rectangular plates of minimum diagonal dimension 405 mm	
	(16") or a non-Octahederal reflector with a documented Root Mean Square	
	minimum Radar Cross Section (RCS) area of 2 m2 from 0-360 degrees in	
	azimuth and +/- 20 degrees in heel.	
4.11	Navigation Equipment	
4.11.1	Charts	
	Navigational charts (not solely electronic), light list and chart plotting	**
	equipment shall be provided	
4.12	Safety Equipment Location Chart	
	A safety equipment location chart in durable waterproof material shall be	**
	displayed in the main accommodation where it can best be seen, clearly	
	marked with the location of principal items of safety equipment.	
4.13	Echo Sounder or Lead Line	
4.13.1	An echo sounder or lead line shall be provided	MoMu1,2,3,4
4.14	Speedometer or Distance Measuring Instrument (log)	
	A speedometer or distance measuring instrument (log) shall be provided	MoMu0,1,2,3
4.15	Emergency Steering	
4.15.1	Emergency steering shall be provided as follows:	
a)	except when the principal method of steering is by means of an	MoMu0,1,2,3
	unbreakable metal tiller, an emergency tiller capable of being fitted to the rudder stock;	
b)	crews must be aware of alternative methods of steering the yacht in any	MoMu0,1,2,3
	sea condition in the event of rudder loss. At least one method must have	
	been proven to work on board the yacht. An inspector may require that this method be demonstrated.	
116		
4.16	<b>Tools and Spare Parts</b> Tools and spare parts, including effective means to quickly disconnect or	**
	sever the standing rigging from the hull shall be provided.	
4.17	Yacht's name	
1127	Yacht's name shall be on miscellaneous buoyant equipment, such as	**
	lifejackets, cushions, lifebuoys, lifeslings, grab bags etc.	
4.18	Marine grade retro-reflective material	
	Marine grade retro-reflective material shall be fitted to lifebuoys,	**
	lifeslings, liferafts and lifejackets. See OSRs 5.04, 5.08.	
4.21	Grab Bags	
4.21.1	Grab Bag or Emergency Container for Multihulls Without	Mu3,4
	Liferafts	
a)	A multihull without a liferaft shall have, readily accessible whether or not	Mu3,4
	the yacht is inverted, either a watertight compartment or a grab bag with	
	the following minimum contents. A grab bag shall have inherent	
	flotation, at least 0.1 m^2 area of fluorescent orange colour on the	
	outside, shall be marked with the name of the yacht, and shall have a	
<i>(-</i> )	lanyard and clip.	M . 2 . 4
<i>b)</i>	Note: it is not intended to duplicate in a grab bag etc. items required by	Mu3,4
2)	other OCDs to be an heard the weekt this requisition assume and the	•
	other OSRs to be on board the yacht - this regulation covers only the	•
c)	other OSRs to be on board the yacht - this regulation covers only the stowage of those items a watertight hand-held marine VHF transceiver plus a spare set of	Mu3,4

	batteries					
d)	a watertight flashlight with spare batteries and bulb			Mu3,4		
e)	2 red parachute and 3 red hand flares			Mu3,4		
f)	a watertight strobe light			Mu3,4		
g)	a knife	with spare batteries		Mu3,4		
<b>4.22</b>	Lifebuoys			1105, 1		
4.22.1	The following shall be pr	ovided within reach o	f the helmsman and re	×* vbc		
1.22.1	for instant use:	Ovided Within reach o	r the helmsman and re	Lady		
a)	a lifebuoy with a self-ign	uiting light and a drogu	10	**		
4.22.3	Each inflatable lifebuoy a					
4.22.3		•	`			
	extended by compressed			IIS III		
4 22 4	accordance with its man		-	ctivo **		
4.22.4	Each lifebuoy or lifesling	snall be fitted with m	arine grade retro-refie	ctive **		
4 22 5	material (4.18).	11		ır in **		
4.22.5	, , ,					
	the yellow-red range.					
4.23	Pyrotechnic and Light			11		
4.23.1	Pyrotechnic signals shall	•	_			
	Chapter III Visual Signal			e (if		
	any) or if no expiry date					
	red parachute flares	red hand flares LSA		race		
	LSA III 3.1	III 3.2	III 3.3	category		
	6	4	2	MoMu0,1		
	4	4	2	MoMu2,3		
		4	2	Mo4		
	2	4	2	Mu4		
	TABLE 13			<u> </u>		
4.24	<b>Heaving Line</b>			**		
a)	a heaving line shall be p	rovided 15 m - 25 m (	50 ft - 75 ft) length re	adily **		
-	accessible to cockpit.			-		
<i>b)</i>	the "throwing sock" type	e is recommended - se	ee Appendix D	**		
c)	A lifesling shall be provide		, ,	MoMu0,1	1,2,3	
4.25	Cockpit Knife			,	, ,	
	A strong, sharp knife, sh	eathed and securely r	estrained shall be prov	vided **		
	readily accessible from the		·			
4.26	Storm & Heavy Weath	-				
4.26.1	Design					
a)	it is strongly recomme	ended that persons	in charge consult t	heir **		
• •	designer and sailmak					
	storm and heavy wea			to		
	provide safe propulsion					
	not intended as part of	<u>-</u>		-		
	maxima. Smaller area		-			
	to their stability and o	_	<del>-</del>	9		
4.26.2	High Visibility		<b>51</b>			
a)	Every storm jib shall eith	ner he of highly-visible	coloured material (e d	י **		
uj	• •	<u> </u>				
	dayglo pink, orange or yellow) or have a highly-visible coloured patch at					
	least 50% of the area of the sail (up to a maximum diameter of 3m)					
	added on each side; and also that a rotating wing mast should have a					
	highly-visible coloured patch on each side. A storm sail purchased after January 2014 shall have the material of the body of the sail a highly-					
	•	the material of the bo	buy of the sail a highly	_		
61	visible colour.  it is strongly recommended that the storm trycail should either he made. **					
<i>b)</i>	it is strongly recommended that the storm trysall should either be made					
4 36 3	of or have a patch of highly visible colour.					
<ul> <li>4.26.3 Materials</li> <li>a) aromatic polyamides, carbon and similar fibres shall not be used in a trysail or storm jib but spectra/dyneema and similar materials are</li> </ul>						
	trysail or storm jib but sp					

b) it is strongly recommended that a heavy-weather jib does not contain aromatic polyamides, carbon and similar fibres other than spectra/dvneema.

#### 4.26.4 The following shall be provided:-

sheeting positions on deck for each storm and heavy-weather sail; a)

b) for each storm or heavy-weather jib, a means to attach the luff to the \*\* stay, independent of any luff-groove device. A heavy weather jib shall have the means of attachment readily available. A storm jib shall have the means of attachment permanently attached; Storm and heavy weather jib areas shall be calculated as:

 $(0.255 \times 1)^*$  To apply to sails made in January 2012 and after.

when a storm trysail is required by OSR 4.26.4 (g) it shall be capable of c) being sheeted independently of the boom with trysail area not greater than 17.5% mainsail hoist (P) luff length x mainsail foot length (E). The storm trysail area shall be measured as (0.5 x leech length x shortest distance between tack point and leech). The storm trysail shall have neither headboard nor battens, however a storm trysail is not required in a yacht with a rotating wing mast which can adequately substitute for a trysail. The method of calculating area applies to sails made in January 2012 and after.

if a storm trysail is required by OSR 4.26.4 (g) the yacht's sail number d) and letter(s) shall be placed on both sides of the trysail (or on a rotating wing mast as substitute for a trysail) in as large a size as practicable; f)

Extract MoMu 3,4

Extract MoMu 3

a heavy-weather jib (or heavy-weather sail in a yacht with no forestay) of area not greater than 13.5% height of the foretriangle squared:

MoMu3

\*\*

\*\*

either a storm trysail as defined in OSR 4.26.4(c), or mainsail reefing to reduce the luff by at least 40%.

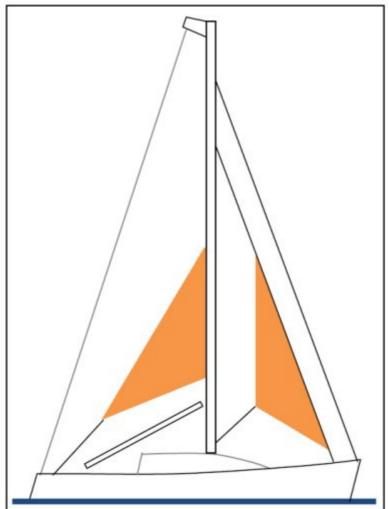


Figure 3

g)

#### **SECTION 5 - PERSONAL EQUIPMENT** 5.01 Lifejacket \*\* 5.01.1 Each crew member shall have a lifejacket as follows:-\*\* a) i In accordance with ISO 12402 – 3 (Level 150) or equivalent, including EN 396 or UL 1180 \*\* Lifejackets manufactured after 1 January 2012 shall be in accordance ii with ISO 12402-3 (Level 150) and shall be fitted with:-• an emergency light in accordance with either ISO 12402-8 or SOLAS LSA code 2.2.3. • a sprayhood in accordance with ISO 12402-8. • a full deck safety harness in accordance with ISO 12401 (ISO 1095) including a crotch or thigh strap (holding down device) as specified in ISO 12401 (ISO 1095). If of an inflatable type either automatic, manual and oral inflation or (b) manual and oral inflation Notes: ISO 12402 requires Level 150 lifejackets to be fitted with a mandatory whistle and retro-reflective material. Also, when fitted with a safety harness, ISO 12402 requires that this shall be the full safety harness in accordance with ISO 12401. Any equivalent lifejacket shall have equal requirements. Persons of larger than average build are generally more buoyant than those of average build and so do not require a lifejacket with greater levels of flotation. Wearing a Level 275 lifejacket may hamper entry into liferafts. fitted with either a crotch strap(s) / thigh straps or a full safety harness in b) accordance with ISO 12401, Note: The function of lifejacket crotch/thigh straps is to hold the buoyancy element down. A crew member before a race should adjust a lifejacket to fit then retain that lifejacket for the duration of the race. Correct adjustment is fundamental to the lifejacket functioning correctly. fitted with a lifejacket light in accordance with SOLAS LSA code 2.2.3 \*\* c) (white, >0.75 candelas, >8 hours), if inflatable have a compressed gas inflation system, \*\* d) if inflatable, regularly checked for gas retention, \*\* e) compatible with the wearer's safety harness, f) clearly marked with the yacht's or wearer's name, g) j) It is strongly recommended that a lifejacket has a splashguard / MoMu1,2,3,4 spravhood See ISO 12402 - 8. 5.01.4 The person in charge shall personally check each lifejacket at least once annually. 5.02 **Safety Harness and Safety Lines (Tethers)** MoMu0,1,2,3 5.02.1 Each crew member shall have a harness and safety line that complies MoMu0,1,2,3 with ISO 12401 or equivalent with a safety line not more than 2m in length. Harnesses and safety lines manufactured prior to Jan 2010 shall comply with either ISO 12401 or EN 1095. Harnesses and safety lines manufactured prior to Jan 2001 are not permitted. Warning it is possible for a plain snaphook to disengage from a U a) MoMu0,1,2,3 bolt if the hook is rotated under load at right-angles to the axis of the U-bolt. For this reason the use of snaphooks with positive locking devices is strongly recommended. 5.02.2 At least 30% of the crew shall each, in addition to the above be provided MoMu0,1,2,3 with either:-

MoMu0,1,2,3

MoMu0,1,2,3

MoMu0,1,2,3

a safety line not more than 1m long, or

a mid-point snaphook on a 2m safety line

A safety line purchased in January 2001 or later shall have a coloured flag

a) b)

5.02.3

	embedded in the stitching, to indicate an overload. A line which has been			
5.02.4	overloaded shall be replaced as a matter of urgency.  A crew member's lifejacket and harness shall be compatible	MoMu0,1,2,3		
5.02. <del>1</del>	It is strongly recommended that:-	MoMu0,1,2,3		
a)	static safety lines should be securely fastened at work stations;	MoMu0,1,2,3		
b)	A harness should be fitted with a crotch strap or thigh straps.	MoMu0,1,2,3		
D)	Trianess should be need with a croten strap of thigh straps.	1101100,1,2,3		
c)	to draw attention to wear and damage, stitching on harness and safety lines should be of a colour contrasting strongly with the surrounding material;	MoMu0,1,2,3		
d)	snaphooks should be of a type which will not self-release from a U-bolt (see OSR 5.02.1(a)) and which can be easily released under load (crew members are reminded that a personal knife may free them from a safety line in emergency);	MoMu0,1,2,3		
<i>e)</i>	a crew member before a race should adjust a harness to fit then retain that harness for the duration of the race.	MoMu0,1,2,3		
5.02.6	Warning - a safety line and safety harness are not designed to tow a person in the water and it is important that the shortest safety line length possible be used with a harness to minimise or eliminate the risk of a person's torso becoming immersed in water outside the boat, especially when working on the foredeck. 1m safety lines or the midpoint snaphook on a 2m line should be used for this purpose. The diligent use of a properly adjusted safety harness and the shortest safety line practicable is regarded as by far the most effective way of preventing man overboard incidents.	**		
5.04	Foul Weather Suits			
<i>b)</i>	it is recommended that a foul weather suit should be fitted with marine- grade retro-reflective material, and should have high-visibility colours on its upper parts and sleeve cuffs. See OSR 4.18	**		
5.07	Survival Equipment	Mo0,1,2Mu0,1,2,3,4		
5.07.2	It is strongly recommended that an immersion suit should be supplied to each crew member in a multihull in conditions where there is a potential for hypothermia	Mu1,2,3,4		
SECTIO	ON 6 - TRAINING			
6.04	Routine Training On-Board	**		
6.04.1	It is recommended that crews should practice safety routines at	**		
6.05.3	reasonable intervals including the drill for man-overboard recovery  At least one member of the crew shall be familiar with First Aid procedures, hypothermia, drowning, cardio-pulmonary resuscitation and relevant communications systems (see OSR 6.02.7 and 6.03.3).	MoMu3,4		
6.05.4	An example model first aid training course is included in Appendix N.	**		
APPENDICES TO SPECIAL REGULATIONS				

Appendix B - A guide to ISO and other Standards
Appendix C - Standard Inspection Card
Appendix D - Quickstop & Lifesling
Appendix E - Hypothermia
Appendix F - Drogues and sea anchors

end of file