

JANUARY 2008 - DECEMBER 2009

ISAF OFFSHORE SPECIAL REGULATIONS

CATEGORY 1 US SAILING SPECIFIED FOR THE

2009 MARION - BERMUDA RACE[®]

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SECTION 3 - STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT

3.21.3 Emergency water Page 25

- a) At least 9 liters (2 UK gallons, 2.4 US gallons) of drinking water for emergency use shall be provided in a dedicated and sealed container(s).

3.24 Compass Page 37

3.24.1 The following shall be provided:

- a) a marine magnetic compass, independent of any power supply, permanently installed and correctly adjusted with deviation card and
- b) a compass which may be hand-held.

3.29 Communications Equipment, EPFS, Radar, AIS Pages 34 - 36

Provision of GMDSS and DSC is unlikely to be mandatory for small craft during the term of the present Special Regulations However; it is recommended that persons in charge include these facilities when installing new equipment.

3.29.1 The following shall be provided:

- a) a marine radio transceiver (or if stated in the Notice of Race, an installed satcom terminal) and an emergency antenna when the regular antenna depends upon the mast.
- b) when the marine radio transceiver is VHF:
 - i it shall have a rated output power of 25W
 - iv it should include channel 72 (an international ship-ship channel which, by common use, has become widely accepted as primary choice for ocean racing yachts anywhere in the world)
- e) 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)
- f) independent of a main radio transceiver, a radio receiver capable of receiving weather bulletins.
Grundig Satellit 750 Emergency Radio (#EGR750) Page 36
- i) an EPFS (Electronic Position-Fixing System) e.g. GPS

SECTION 4 - PORTABLE EQUIPMENT and SUPPLIES for the yacht
(for water and fuel see 3.21 and 3.28)

4.03 Soft wood plugs Page 25

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 line Page 11

4.04.1 The following shall be provided:

a) jackstays

- i.** attached to through-bolted or welded deck plates or other suitable and strong anchorage fitted on deck, port and starboard of the yacht's centerline to provide secure attachments for safety harness
- ii.** comprising stainless steel 1 x 19 wire of minimum diameter 5 mm (3/16 in), or webbing of equivalent strength;
- iv.** 20kN (2,040 kgf or 4,500 lbf) min breaking strain webbing is recommended
- v.** at least two of which should be fitted on the underside of a multihull in case of inversion.

4.04.2 Clipping points Page 11

a) Attached to through-bolted or welded deck plates or other suitable and strong anchorage points adjacent to stations such as helm, sheet winches and masts, where crew members work for long periods.

b) Together with jackstays and static safety lines shall enable a crew member:

- i.** to clip on before coming on deck and unclip after going below.
- ii.** whilst continuously clipped on, move readily between the working areas on deck and the cockpit(s) with the minimum of clipping and unclipping operations.

c) The provision of clipping points shall enable two-thirds of the crew to be simultaneously clipped on without depending on jackstays.

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.

4.05 Fire extinguishers

4.05.1 Fire extinguishers, at least two, readily accessible in suitable and different parts of the yacht shall be provided.

4.07 Flashlight(s) Page 19

4.07.1 The following shall be provided:

- a)** a watertight high-powered flashlight or spotlight with spare batteries and bulbs, and
- b)** a watertight flashlight, with spare batteries and bulb.

4.08 First aid manual and first aid kit

4.08.1 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:

a) International Medical Guide for Ships, World Health Organization, Geneva, **Page 70**
or

b) A Comprehensive Guide to Marine Medicine, E. Weiss M.D., M. Jacobs, M.D. **Page 70**
*US SAILING endorses the above and additionally recommends the following manual: Advanced First Aid Afloat by Peter Eastman. **Page 70***

4.08.2 A First Aid kit shall be provided **Page 27**

- 4.08.3** 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 Page 18**
A foghorn shall be provided.
- 4.10 Radar reflector AIS (Automatic Identification System) Page 18**
- 4.10.1** A passive radar reflector shall be provided.
- a)** If the radar reflector is octahedral it must have a minimum diagonal measurement of 456 mm (18 in), or if not octahedral must have a documented RCS (radar cross-section) of not less than 10 m². The minimum effective height above water is 4.0 m (13 ft).
- b)** The passive and active devices referred to in these notes and in 4.10.1 are primarily intended for use in the X (9GHz) band.
- 4.11 Navigation equipment**
- 4.11.1 Charts Pages 45 - 46, 71**
Navigational charts (not solely electronic), chart plotting equipment, and light list shall be provided. *See appendix.*
- 4.11.2 Sextant Page 52**
Navigators are recommended to carry a sextant with suitable tables and a timepiece as a backup navigation system.
- 4.13 Echo sounder or lead line Page 36**
- 4.13.1** An echo sounder or lead line shall be provided.
- 4.16 Tools and spare parts Page 26**
Tools and spare parts, including effective means to quickly disconnect or sever the standing rigging from the hull, shall be provided.
- 4.18 Marine grade retro-reflective material Page 17**
- 4.18.1** Marine grade retro-reflective material shall be fitted to lifebuoys, Lifeslings and lifejackets.
- 4.19 EPIRBs and PLBs Pages 14**
- 4.19.1** A 406 MHz EPIRB shall be provided.
- b)** It is recommended that a 406 MHz EPIRB should include an internal GPS and also a 121.5 MHz transmitter for local homing.
- c)** A 406 MHz EPIRB shall be properly registered with the appropriate authority.
- d)** EPIRBs should be tested in accordance with manufacturer's instructions when first commissioned and then at least annually.
- g)** Beacons with only 121.5 MHz are no longer recommended for distress alerting. Satellite processing of 121.5 MHz is being phased out. 121.5 MHz will continue to be used for local homing by on-board D/F systems and for local homing by SAR units. Type "E" EPIRBs are no longer supported and should be replaced immediately.
- 4.20 Life rafts Pages 30 - 33**
- 4.20.2** Life raft(s) shall be provided capable of carrying the whole crew and shall comply with either:
- a)** OSR 4.20.1 (b) (SOLAS), or
- b)** for life rafts manufactured prior to 1/03, OSR Appendix A Part I (ORC), or
- c)** OSR Appendix A Part II (ISAF) when, unless otherwise specified by a race organizer, the floor shall include thermal insulation, or
- d)** ISO 9650 Part I Type I Group A (ISO) when each life raft shall contain at least a Pack 2
- i.** shall have a semi-rigid boarding ramp, and

- ii. shall be so arranged that any high-pressure hose shall not impede the boarding process, and
- iii. shall have a topping-up means provided for any inflatable boarding ramp, and
- iv. when the life raft is designed with a single ballast pocket this shall be accepted provided the life raft otherwise complies with ISO 9650 and meets a suitable test of ballast pocket strength devised by the manufacturer and
- v. compliance with OSR 420.2 (d) i-iv shall be indicated on the life raft certificate.

US SAILING recommends that life rafts be equipped with insulated floors for events which occur in waters of less than 68°F (20°C).

US SAILING prescribes that life rafts shall be equipped with canopies.

4.20.5 Life raft servicing and inspection

Call for more information: (800) 941-2219

IMPORTANT NOTICE: Recent evidence has shown that packaged life rafts are vulnerable to serious damage when dropped (e.g. from a boat onto a marina pontoon) or when subjected to the weight of a crew member or heavy object (e.g. anchor). Damage can be caused internally by the weight of the heavy steel CO₂ bottle abrading or splitting neighboring layers of buoyancy tube material. ISAF has instituted an investigation into this effect and as an interim measure requires that every valise-packed life raft shall have an annual certificate of servicing. A life raft should be taken for servicing if there is any sign of damage or deterioration (including the underside of the pack). Persons in charge should insist on great care in handling life rafts and apply the rules NO STEP and DO NOT DROP UNLESS LAUNCHING INTO THE SEA.

- a)** Servicing and/or inspection certificates or copies shall be kept on board the yacht. Every SOLAS life raft and every valise-packed life raft shall have a valid annual certificate of new or serviced status from the manufacturer or his approved service station.
- b)** A life raft built to OSR Appendix A Part I (“ORC”) packed in a rigid container or canister shall either be serviced annually or may, when the manufacturer so specifies, be inspected annually (not necessarily unpacked) provided the yacht has on board written confirmation from the manufacturer’s approved service station stating that the inspection was satisfactory.
- c)** A life raft built to OSR Appendix A part II (“ISAF”) packed in a rigid container or canister shall either be serviced annually or may, when the manufacturer so specifies, have its first service no longer than 3 years after commissioning and its second service no longer than 2 years after the first. Subsequent services shall be at intervals of not more than 12 months.
- d)** Life raft servicing certificates shall state the specifications to which the life raft was built. See OSR 4.20.2.

4.21 Grab bags see list on Page 24

4.21.2 Grab bag to accompany life rafts.

- a)** A yacht is recommended to have for each life raft, a grab bag with the following minimum contents: a grab bag should have inherent flotation, at least 0.1m² square area of fluorescent orange color on the outside, should be marked with the name of the yacht, and should have a lanyard and a clip.
- b)** Note: It is not intended to duplicate in a grab bag items required by other Special Regulations to be on board the yacht – these recommendations cover only the stowage of those items.

4.21.3 Grab bag recommended contents:

- a)** 2 red parachute and 2 red hand flares (SOLAS compliant) and cyalume-type chemical sticks
- b)** watertight hand-held EPFS (Electronic Position-Fixing System) (e.g. GPS) in at least one of the grab bags carried by a yacht
- c)** a SART (Search and Rescue Transponder) in at least one of the grab bags carried by a yacht
- d)** 406 EPIRB registered to the yacht in at least one of the grab bags carried by a yacht

- e) 9 liters (2.4 US gallons) water in re-sealable containers or a hand-operated desalinator plus containers for water
- f) a watertight hand-held marine VHF transceiver plus a spare set of batteries
- g) a watertight flashlight with spare batteries and bulb
- h) dry suits, thermal protective aids, or survival bags
- i) second sea anchor for the life raft (not required if the life raft already has a spare sea anchor in its pack) (recommended to ISO 17339 with a swivel and >30m line, diameter >9.5mm)
- j) two safety tin openers
- k) first-aid kit including at least 2 tubes of sunscreen. All dressing should be capable of being effectively used in wet conditions. The kit should be clearly marked and re-sealable.
- l) signaling mirror
- m) high energy food
- n) nylon string, polythene bags, seasickness tablets (min 6 pp recommended)
- o) watertight hand-held aviation VHF transceiver

4.22 Lifebuoy(s) Pages 12 - 13

4.22.1 The following shall be provided within reach of the helmsman and ready for instant use:

- a) a lifebuoy with a self-igniting light and a drogue or a Lifesling with a self-igniting light and without a drogue.
- b) in addition to a) above, one lifebuoy within reach of the helmsman and ready for instant use, equipped with:
 - i. a whistle, a drogue, a self-igniting light and
 - ii. a pole and flag. The pole shall be carried on board permanently extended, except that automatic extension (e.g. by compressed gas or spring action) is permitted provided the device activates fully in less than 20 seconds. The pole and flag shall be attached to the lifebuoy with 3 m (10 ft) of floating line and shall be so constructed that the flag flies at least 1.8 m (6 ft) off the water.

For Categories 0, 1, 2, 3, US SAILING prescribes that the lifebuoy in 4.22.1 a) shall be a Lifeling (without a drogue), equipped with a self-igniting light within easy reach of the helmsman and ready for instant use. (See IASF OSR Appendix D)

4.22.2 When at least two lifebuoys (and/or Lifeslings) are carried at least one of them shall depend entirely on permanent floatation (e.g. foam buoyancy).

4.22.3 Each inflatable lifebuoy and any automatic device (e.g. pole and flag extended by compressed gas) shall be tested and serviced at intervals in accordance with its manufacturer's instructions.

4.22.4 Each lifebuoy or Lifeling shall be fitted with marine grade retro-reflective material (4.18).

4.23 Pyrotechnic and light signals Pages 20 - 21

4.23.1 Pyrotechnic signals shall be provided conforming to SOLAS LSA Code Chapter III Visual Signals and not older than the stamped expiry date or if no expiry date stamped, not older than 4 years.

Category 1

6 Red parachute flares LSA III 3.1

4 Red hand flares LSA III 3.2

2 Orange smoke LSA III 3.3

4.23.2 The following lights shall be provided and readily available for the purpose of collision avoidance:

- a) a watertight white torch (flashlight) with spare batteries and bulb
- b) a watertight, high-powered white spotlight (searchlight) with spare batteries and bulbs

4.24 Heaving line Page 12

- a) A heaving line shall be provided (50 - 75') readily accessible to the cockpit.
- b) The "throwing sock" type is recommended (see IASF OSR Appendix D).

4.25 Cockpit knife Pages 22 - 23

A strong, sharp knife, sheathed, attached by a lanyard shall be provided readily accessible in each cockpit.

4.27 Drogue, sea anchor Pages 28 - 29

4.27.1 A drogue (for deployment over the stern) or alternatively a sea anchor or parachute anchor (for deployment over the bow) is strongly recommended (see IASF OSR Appendix F).

4.28 Man overboard alarm Page 16

4.28.1 A yacht is recommended to be equipped with an EPFS e.g. GPS capable of immediately recording a man overboard position from each helm station.

4.28.2 A yacht is recommended to be equipped with an EPFS e.g. GPS capable of immediately recording a man overboard position from each helm station (from January 2012).

SECTION 5 - PERSONAL EQUIPMENT

5.01 Lifejacket Pages 4 -5, 9

5.01.1 Each crew member shall have a lifejacket as follows:

- a) equipped with a whistle
- b) fitted with marine grade retro-reflective material (4.18)
- c) compatible with the wearer's safety harness
- d) If inflatable, regularly checked for air retention
- e) clearly marked with the yacht's or wearer's name

5.01.2 A lifejacket shall have:

- a) at least 150N buoyancy, arranged to securely suspend an unconscious man face upwards at approximately 45°F to the water surface – in accordance with ISO 12402 – 3 (level 150) or equivalent. For persons of larger than average build the ISO 12402-2 (level 275) jacket should be considered.
 - b) a crotch strap or thigh straps
 - c) a lifejacket light in accordance with SOLAS LSA code 2.2.3 (white, >0.75 candelas, >8 hours)
 - d) if inflatable, has a compressed gas inflation system
- It is strongly recommended that a lifejacket has:*
- e) a splashguard/sprayhood. See ISO 12402 – 8
 - f) a PLB unit(as with EPRIB, should be properly registered with proper authority)

US SAILING prescribes that OSR 5.01.2 b) shall not apply but recommends that lifejackets have a crotch strap or thigh straps.

US SAILING note: As is true of all of these regulations, the prescriptions above do not necessarily replace the requirements of other governing authorities.

5.02 Safety harness and safety lines (tethers) Page 11

5.02.1 Each crew member shall have a safety harness, and safety line which complies with EN 1095 (ISO 12401) or equivalent with a safety line not more than 2m long.

a) Warning: it is possible for a plain snaphook to disengage from a U-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 with either:

- a) safety line not more than 1m long, or
- b) a mid-point snaphook on a 2m safety line.

5.02.3 A safety line purchased in 01/01 or later shall have a colored flag embedded in the stitching, to indicate an overload. A line which has been overloaded shall be replaced as a matter of urgency.

5.02.4 A crew member's lifejacket and harness shall be compatible.

5.02.5 It is strongly recommended that:

- a) static safety lines should be securely fastened at work stations
- b) a harness should be fitted with a crotch strap or thigh straps
- c) to draw attention to wear & damage, stitching on harness and safety lines should be of a color contrasting strongly with the surrounding material
- d) snaphooks should be of a type which will not self-release from a U-bolt and which can be easily released under load (crew members are reminded that a personal knife may free them from a safety line in an emergency)
- e) a crew member before a race should adjust a harness to fit then retain that harness for the duration of the race

US SAILING prescribes that safety harnesses and PFDs shall be worn on Category 0 & 1 races from sundown to sun-up while on deck.

5.04 Foul weather suits Pages 74 - 91

a) A foul weather suit with a hood shall be supplied to each crew member.

b) It is recommended that a foul weather suit should be fitted with marine-grade retro-reflective material, and should have high-visibility colors on its upper parts and sleeve cuffs.

5.05 Knife Pages 22 - 23

A knife shall be supplied to each crew member.

5.06 Watertight flashlight Page 19

A watertight flashlight shall be supplied to each crew member.

5.07 Survival equipment Pages 14 – 15, 8

5.07.1 One set of survival equipment shall be supplied to each crew member to include:

d) Attention is drawn to the value of keeping on the person a combined 406 MHz/121.5 MHz PLB when on deck: this may aid location in a man overboard incident independent of the equipment carried by the parent vessel

e) All PLB units, as with other types of EPIRBs, should be properly registered with the appropriate authority.

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.

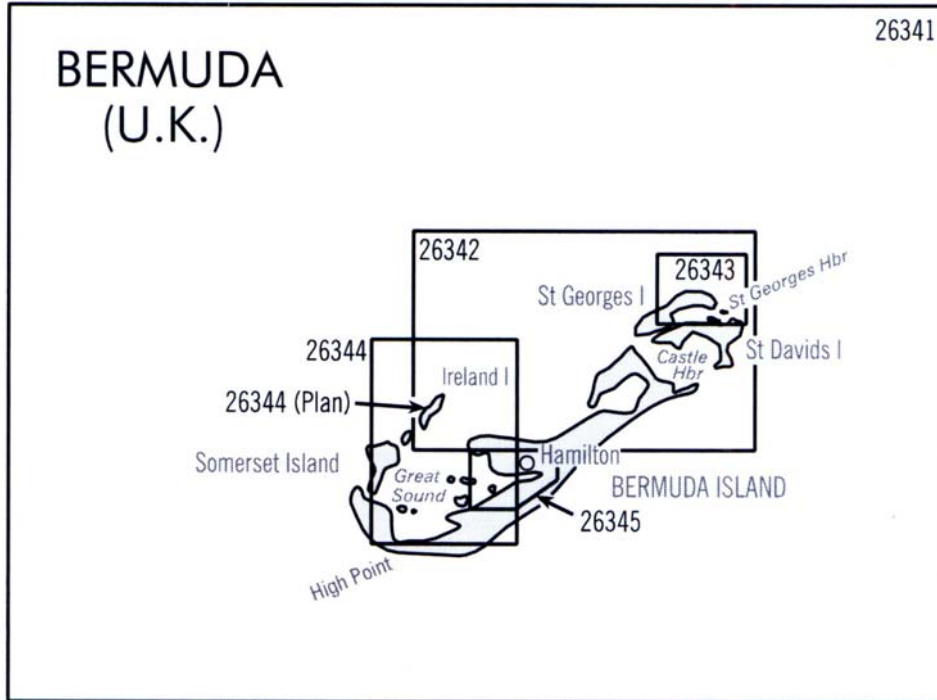
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NAVIGATION BOOKS & CHARTS APPENDIX

BOOKS

<u>ITEM #</u>	<u>TITLE</u>	<u>PRICE</u>	<u>PAGE</u>
BSR107	ISAF Offshore Special Regulations	\$15.00	68
BEN044	U.S.C.G. Light List Vol. 1	\$50.00	71
PD110	NIMA Light List 110	\$50.00	71
PN200	U.S. Coast Pilot Vol. 2	\$30.00	71
PD147	NIMA Sailing Directions Vol. 147	\$35.00	72
BHC088	2009 Commercial Almanac	\$24.95	53
BP001	2009 Eldridge Tide & Pilot Book	\$12.95	66
BP020	2009 Reed's East Coast N. Almanac	\$31.95	66
BPN001	2009 Atlantic Current Tables	\$16.95	71
BPN060	2009 Tide Tables East Coast of N. & S. America	\$13.95	71
BPA014	Navigation Rules	\$15.00	71

CHARTS Page 46



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