

# COMMENTS ON VARIOUS ISAF and US SAILING EQUIPMENT REQUIREMENTS for the 2007 MARION BERMUDA RACE

## Purpose.

This document is intended to help compliance with the equipment requirements of the 2007 Race that are defined in the Notice of Race (NOR) and in the ISAF Special regulations 2006-2007. Both of these are available in hard copy form and/or they can be downloaded from our web pages:  
<http://www.marionbermuda.com>

These Comments should be used in conjunction with the Equipment Inspection Checklist while preparing boats for the race and during equipment inspection. These Comments will hopefully help you to meet the spirit as well as the letter of the requirements for safe participation, but are not intended to be all-inclusive. **Our courtesy inspections in no way constitute any assurance that a yacht is seaworthy or capable of extended offshore passages. Full responsibility for a safe passage, appropriate equipment and a seaworthy vessel rests solely with the captain of each vessel.**

## Content.

The ISAF Special Regulations and the Notice of Race are specific and generally self-explanatory. Still, during the past races many questions surfaced about interpretation and about solutions toward compliance. These Comments only address those issues where questions may arise. We hope that you will find satisfactory solutions before the inspections in the spring.

## New for 2007

***Highlighted in bold Italics are additions and changes for the 2007 race, which reflect changes in ISAF or needed further clarification.***

## Multihulls

Modifications and charges unique to multihulls have been underlined with normal text.

## Inspectors.

The role of the inspectors is important. While their primary responsibility is to check on compliance with equipment requirements, they are also a great source of information for you to prepare your vessel for a safe passage. Call an inspector from the list soon and arrange for an early inspection, allowing ample time for corrective measures and reinspection in case the inspector finds non-conformance during inspection. Be aware that some things may take a long time (for example EPIRB registration may take two months). **The inspectors are unpaid volunteers. Please respect their time and have all required gear out and available for inspection. Do not schedule inspection unless you feel confident that all requirements have been fulfilled.** A yacht will not be registered for the race unless all requirements are met; all defects are corrected and are so noted on the Checklist by the inspector making the reinspection.

## Recommended items.

In addition to the compulsory requirements, several items are strongly recommended and are listed as such on the Inspection Checklist. These are to make your passage safer. (See comments at the end of the Required items).

## Regulation numbers.

These Comments follow the organization and numbering sequence of the ISAF Special Regulations. *Please notice that the Special Regulations again renumbered many items since the last race, but the alphabetic index in the back of the ISAF Booklet is directly connecting to the Regulation numbers referenced here.* Similarly the Checklist also references the same ISAF numbers, although the Checklist is organized for the convenience of inspection in five groups: ON DECK, BELOW DECKS, NAVIGATION, SAFETY and STRONGLY RECOMMENDED EQUIPMENT.

- 1.02 All the good advice and the inspection process notwithstanding the ISAF emphasis will apply: "The Safety of a yacht and her crew is the sole and inescapable responsibility of the owner, or owners representative who must do his best to assure that the yacht is fully found, thoroughly seaworthy and manned by an experienced crew...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." Neither the ISAF Regs, nor any of the Race publications or inspectors advice in any way limits or reduces the complete and unlimited responsibility of the owner or owner's representative.
- 1.03.2 Throughout the race documents the words "shall" and "must" are mandatory, and "should" and "may" are permissive.
- 2.01 This is an ISAF Category 1 Race. You must comply with the requirements marked with "1" on the margin of the **US Edition 2006-2007 ISAF Offshore Special Regulations booklet as prepared by US Sailing**, unless otherwise specified in the NOR. The text shown in our web pages only contains the requirements applicable to Category 1 *Monohulls* (we have already filtered out other race categories).
- 2.03 All required equipment shall function properly, be readily accessible and be of a type, size and capacity suitable and adequate for the intended use and size of the yacht. All ordinary cruising gear (such as cabin tables, galley equipment, etc.) must be aboard in their usual cruising position during the Race.
- Special attention should be given to assuring that all heavy items are securely fastened to remain in place during heavy weather and even in 180° capsize. Among other things all anchors, floorboards, ballast, cooking stoves, gas bottles, ice chest covers, etc., as well as deck gear and items stored on deck (including life raft, portable fuel tanks, water containers, etc.) are to comply with this requirement. Positive latches are required for all drawers and compartment doors.
- 3.01 The general structural integrity and watertight hull requirements apply.
- 3.03 Hull construction standards (Scantlings) do not apply. This is for both mono and multi-hulls.
- 3.06 Yachts built 1/95 and after must have two exits, one of them forward of the foremost mast.
- 3.07 Item .2 (i) Amend to require only one escape hatch for trimarans over 12m.
- 3.08 Hatches should be constructed to provide watertight integrity in heavy weather and capsizes. No hatches forward of the maximum beam station shall open inward, unless they have an area of less than 110 square inches. A hatch must be above the water when the hull is heeled 90 degrees. All hatches shall be permanently fitted so that they can be closed quickly and will remain closed in a 180° capsize.
- The main companionway hatch should be fitted with a strong securing arrangement that can be operated from above and below. All blocking arrangements (e.g. washboards) must be capable of being secured in position with the hatch open or shut and should have provision (such as a lanyard) to avoid loss overboard.
- 3.09 Cockpits must be strong, watertight and self-draining by gravity. The cockpit sole shall meet 3.09.4. All openings to the hull must be capable of being well secured and essentially watertight. **Anchor wells and other above deck storage lockers must be considered in addressing this requirement. For reducing the possible water volume in anchor lockers, fenders or empty jugs can be used to fill some of the space.**

To provide quick reliable emptying of flooded cockpit drains should be at least the size specified in 3.09.8 and must be readily accessible for cleaning. It is suggested that the owners test the rate of emptying by filling the cockpit with water and see how long it takes to drain.

- 3.10 Seacocks are required on all through hull openings below LWL. Check for operability of seacocks and valves. It is recommended that a thru hull opening diagram be aboard and the crew become familiar with it.

**Soft wood tapered plugs of appropriate size shall be easily accessible for each thru hull fitting. Since these are designed to swell when driven into a wet aperture, it is recommended that they be stored in a waterproof bag prior to use. Plugs of teak or other hard woods are not acceptable. Plastic plugs specifically designed for a particular fitting, such as depth sounder, are acceptable.**

- 3.12 Pinning or bolting the heel of the mast to the mast step satisfies this requirement. In case of keel stepped masts this is compulsory and for cabin-top stepped masts this is strongly recommended.

- 3.13 For our race, we will waive the requirements of .1 and .2 for multihulls.

- 3.14 Bow pulpits may be open but the opening between the pulpit and any part of the boat shall never be greater than 14.2" (this requirement shall be checked by presenting a 14.2" circle inside the opening).

Taut lifelines and pulpits must go around the entire vessel, which, with pulpits, shall form an effectively continuous barrier around a working deck for man-overboard prevention. Lifeline shall be permanently supported at intervals of not more than 86.6" and shall not pass outboard of the supporting stanchions. Lifelines must be double with a height no less than 24 in above deck and no vertical opening more than 15 in.

Stanchions and pulpits must be securely attached with thru bolting of bases and the members fitted to these bases. A lifeline should not deflect anywhere more than 2" when a deflecting force of 11 lb. is applied.

All lifelines must be stranded stainless steel wire of minimum diameter specified in the ISAF, except for this Race the lower lifeline minimum diameter may be 1/8" regardless of the LOA of the yacht. ***We will not require the sleeving to be removed from existing lifelines. However, due to the danger of concealed rusting inside permanent sleeving, the inspector can ask that the covering be removed for a distance to inspect the wire and fittings.***

A taut lanyard of synthetic rope may be used to secure lifelines, provided the gap it closes does not exceed 4" and it has at least the breaking strength of the required lifeline wire. **Recently there have been two cases where these rope lanyards have been allowed to deteriorate over time and parted under strain. A cursory glance at these lanyards may not be sufficient to verify their condition. We should recommend that a wise and inexpensive precaution is annual renewal of these lines.**

- 3.17 A toe rail of 1 in minimum shall be permanently installed around the foredeck. (For yachts built before 1/81 a min of 3/4 in is acceptable.)

- 3.18-3.20 Toilet, bunks, galley facilities, ice chest cover, cooking stove, etc. are to be secured against capsizing. (See also 2.03)

**A strap at the cooking stove to support the cook in a seaway is recommended.**

- 3.21.1 The race must be started with a minimum of 10 gallons of water per crewmember, in two separate permanently installed tanks. In addition there must be at least 2.4 gallons of water for emergency use, available in one or more containers separate from the regular supply.

We strongly recommend a manual back pump for those that have only one electric pressure pump for the water supply.

In addition to the water supplies, food provisioning “stores” for 14 days for each crewmember must also be aboard.

- 3.22 Adequate handholds should be fitted below deck so that crewmembers may move about safely in a seaway.
- 3.23 The requirement in 3.23.5a pertaining to bilge pumps is modified per NOR to read: “Two manual bilge pumps, one securely fitted to the yacht’s structure; one operable above deck, the other below deck. One shall be operable with all cockpit seats, hatches and companionways shut.”

All bilge pumps must be tested to prove that they can effectively pump water. ***If the pump is constructed of aluminum it should be flushed with fresh water each time it used to pump sea water.*** Bilge pump handles shall be attached (e.g. with lanyard) to prevent accidental loss.

Two stout handled buckets, with lanyards attached must be on board (approximately 2.4 gallons each).

- 3.24 Two magnetic compasses, independent of any power supply must be provided. One of these must be permanently installed and correctly adjusted with deviation card.
- 3.25 No mast shall have less than two halyards. In addition equipment to prevent the boom from dropping is required. Topping lifts or supporting vang’s are acceptable. In addition a preventor and/or boom brake to avoid dangerous accidental jibing is required (see ISAF 5.10).
- 3.27 Navigation lights shall be so mounted that they will not be masked by sails or heeling.

Navigation lights located in the hull, just below deck level (as on some Tartan and other boats) are acceptable. Lights should be of suitable variety complying with COLREGS. International vertical filament lights and several spare bulbs are strongly recommended.

Reserve navigation lights are required. These lights must meet the same requirements as the primary navigation lights. A separate power supply and wiring are required for these lights.

Masthead tricolor lights are strongly recommended. If they are mounted in addition to primary lights, then the tricolor is an acceptable backup, provided, it can be powered from a separate battery and its own wiring. A small 12 Volt motorcycle battery of sufficient capacity secured at the base of the mast is acceptable as the alternate power source.

Flashlight type lights do not fulfill the spare navigation light requirement. Tricolor and primary lights should not be run at the same time, as it will cause two white lights appear

astern, possibly confusing other boats and this practice is illegal. Use of strobes should be confined to emergencies.

3.28 Permanently installed inboard Propulsion Engine is required capable of providing a speed in knots of (square root of LWL in feet) in moderate seas. See table below. During the Race the propeller shaft must be locked to prevent rotation. Keeping the transmission in reverse is a satisfactory solution.

The NOR requires that the boat must have sufficient fuel aboard, in permanently installed tanks, to provide a cruising range of at least 250 miles.

A drawing showing the location of tanks and utilities is recommended to be posted for all crewmembers.

The following table may be helpful in determining if a boat has sufficient built in fuel tank capacity:

LWL FT.	SPEED KTS.	HOURS TO STEAM 250 MI	MINIMUM GALLONS REQUIRED PER GALLONS CONSUMED PER HR							G/HR
			0.5	0.75	1.0	1.25	1.5	1.75	2.0	
25.0	5.0	50.0	25	38	50	63	75	88	100	
27.5	5.25	47.6	24	36	48	60	72	84	96	
30.3	5.5	45.5	23	35	46	57	68	80	91	
33.0	5.75	43.5	22	33	44	55	65	77	87	
36	6.0	41.7	21	32	42	53	63	73	84	
39	6.25	40.0	20	30	40	50	60	70	80	
42.3	6.5	38.5	19	29	39	49	58	68	77	
49.0	7.0	35.7	18	27	36	45	54	63	72	

The above table is for monohulls only. Multihulls will have to certify that their fuel on board will provide a cruising range of 250 miles. We will allow outboard fuel tanks for multihulls provide they are securely fastened to the vessel and will remain secure in case of capsiz.

3.28.2 A separate generator for electricity is optional. Yachts in this race may carry a portable generator, which must be adequately secured both when stowed and when in use on deck.

A portable generator shall never be operated inside the yacht.

3.29 The following radio equipment is required:

a) A VHF radio, permanently installed with a masthead antenna or an antenna mounted on a permanently mounted pole at least 12 feet above the water line, such as a radar mount and with channel 72 (International ship to ship) capability in addition to other standard channels 9, 16 and 69. It shall have a minimum power of 25 watts.

**As it will be difficult to enforce a) iii, we should be assured that the VHF is operating properly and that all of the coaxial connections have been checked for corrosion and have been properly assembled.**

b) An emergency antenna for the VHF.

c) An additional VHF that is hand held and waterproof.

d) A radio receiver capable of receiving single side band (SSB) weather broadcasts.

- e) **A SSB transceiver or a satellite phone must be aboard and in good working order.**
- f) An automatic position fixing device (e.g. GPS) or radio direction finder must be aboard. Its use by those in the “Celestial” divisions is restricted by the NOR to use within 20 miles of the US coast, 50 miles of Bermuda, or in an emergency.
- g) **Station license for VHF is a FCC requirement for use outside the USA and therefore it must be obtained and displayed on the vessel.**

- 4.01 Sails must carry numbers at least two digits long. Two weather cloths with numbers at least 16” high are required to be used. Numbers on sails and weather cloths must be identical. National letters are not required.
- 4.02 To assist in SAR (Search and Rescue) locating the vessel, the hull should show on the coach roof, deck, or topside at least one square meter area of highly visible color (e.g. dayglo pink, orange or yellow). This can be accomplished in case of emergency by fastening one square meter color panel or fabric (e.g. colored sailcloth) with grommets and lanyards to the coachroof or to the deck. The inspectors will check that the properly preassembled equipment is aboard and is readily deployable.
- 4.03 Softwood plugs (see 3.10).
- 4.04 Special attention should be given to the layout of jackstays and anchorage points for safety harnesses. The objective should be a system that allows a crewmember to clip on before coming on deck and remain clipped on while moving about the decks.

Many people like a harness with two lanyards, which allows changing anchorage points while still securely attached via one lanyard for extra security while moving about deck. Also, anchorage points should be provided adjacent to working stations such as at the helm and the mast. Jackstays may be of 1x19 stainless wire 3/16” minimum diameter, or webbing or line with a breaking strength of at least 4500 lb. Nylon lines are not acceptable because of their excessive stretching.

- 4.05 At least two fire extinguishers of proper type are required to be readily accessible in different parts of the boat. For boats 40 ft and over three extinguishers are recommended. One may be permanently fixed (e.g. in the engine compartment) and all must be secured to avoid accidental loss.
- 4.06 Two anchors with rodes (line, chain, cable, strap or combinations) must be aboard and secured in compliance with 2.03.
- 4.07 Two (or more) watertight flash lights must be aboard with spare batteries and bulbs. One of them must be high powered spot light.
- 4.08** A suitable first aid kit and medical manual should be aboard that reflects the likely conditions, duration of the passage and the number of people aboard. Their location is to be posted.

***It is required that at least one member of the crew be familiar with First Aid procedures, hypothermia and relevant communications systems for obtaining medical advice by radio. We recommend that at least one other member of the crew has similar qualifications.***

- 4.10 In lieu of ISAF4.10, the following shall apply.**

**A suitable radar reflector shall be aboard and must be hoisted at least 13 ft above the water, at least until the yacht passes south of the New York shipping channels (South of 39 deg North). Use for the entire race is encouraged. For this race the the US Sailing prescription for the US will apply and the radar reflectors shall have a minimum documented " equivalent echoing area" of 6 sq. m. Octahedral reflectors shall have a minimum diameter of 12 inches.**

- 4.11 Printed charts (not solely electronic) for both navigation and harbor detail must be aboard and readily accessible.

Sextant, sight reduction tables, almanacs and plotting sheets must be available for those sailing in the "Celestial" group. An accurate timepiece must be aboard. (Also see NoR 13).

Those using "Electronic" navigation option shall have no restriction on the use of position indicating electronics; however they must have on board a separately powered backup position indicating system. The sextant and other celestial gear qualify as backup only if the captain or a crew member is qualified for celestial navigation.

- 4.12 A durable stowage chart must be displayed, showing locations of the principal items of safety equipment.
- 4.13 Depth measuring capability is required. Typically, echo sounder is used with lead line as backup.
- 4.14 Speedometer and log (distance measuring instrument) is required. A backup distance log is recommended.
- 4.15** Emergency steering must be facilitated. For yachts, which are normally steered by any means other than a tiller fitted directly to the rudderstock; an emergency tiller capable of being fitted to the rudderstock must be readily accessible.

**The crew must be aware of alternative methods of steering in any sea condition in the event of rudder loss. At least one method must have been proven to work on the yacht and the necessary hardware must be readily accessible. The inspector may require that the method be demonstrated.**

Use of autopilots (battery, engine or wind operated) is permitted, provided input is derived from compass, GPS, or on-board wind instrumentation. As most autopilots depend on the boat's rudder, they are not acceptable as emergency steering in case of rudder loss. Some wind vane operated steering systems have large enough independent rudders and these are acceptable as emergency steering.

- 4.16 Tools and spare parts adequate for self-sufficiency at sea must be aboard and readily accessible. Crewmembers must be able to locate them, not only the captain/owner. It is recommended that a "Tools and spare parts list" be posted. The tool kit must include means of quickly severing or disconnecting standing rigging in case of need (drift punch and heavy hammer and/or hydraulic or explosive wire cutter).
- 4.17 All buoyant equipment, including life jackets, oars, cushions, life buoys, life slings, etc. must be marked with the yacht's name.** Inflatable MOB devices must be repacked when life rafts are and must be marked by the boat's name.
- 4.18 Life buoys, life rafts and life jackets must also be fitted with marine grade retro-reflective material.

- 4.19** A properly registered 406 MHz EPIRB is required. **The EPIRB registration process may take up to two months, and we require a copy of the registration ID card.** It is recommended that the EPIRB be tested annually (and certainly before the Race) in accordance with manufacturer's instruction. The 406 MHz EPIRB should if possible include a GPS position fixing chip (that makes it a GPIRB). Inmarsat type E EPIRBs include GPS positioning.  
**A suitable registered EPIRB may be rented.**
- 4.20** The inspectors will check for availability of proper size life raft, properly stowed in compliance with ORC requirements 4.20 and Appendix A part 1 or 2. They will also check the currency of the certification form. If the raft is not aboard at time of inspection, it will be noted on the checklist as a deficiency.  
**We strongly recommend that the life rafts be equipped with insulated floors. Marking the boat name on the life rafts is strongly recommended, but not compulsory, considering that many boaters are renting them for the trip. This modifies Appendix A part 1.3.**
- 4.21** **Grab bag per 4.21.2 is strongly recommended and it is to be kept closely to the companionway. It should have a lanyard and clip to accompany the life raft.**
- 4.22** Two life buoys must be within easy reach of the helmsman and ready for instant use. One of them may be a life sling (without drogue) equipped with self-igniting light. The other must be a life buoy meeting 4.22.1b specifications. Assure that all batteries are fresh. At least one life buoy (sling) shall depend entirely on permanent (eg foam) buoyancy. Inflatable devices must be tested and serviced according to manufacturers instructions.
- 4.23** **Sixteen (16) SOLAS flares are required** in addition to those in the life raft and to the mini-flares. These must be not older than the stamped expiry date, or not older than 4 years. They shall be stored in waterproof containers. Additional packs of mini-flares for each crewmember are recommended, but not required.
- 4.24** Heaving line of 50-75 ft (possibly in "throwing sock") is to be readily accessible to the cockpit.
- 4.25** **A strong, sharp knife, sheathed and securely restrained shall be provided readily accessible from the deck or a cockpit.**
- 4.26** Three (3) sails are mandatory for the Race:  
(a) one storm trysail  
(b) one storm jib  
(c) one heavy weather jib.

Each of these must conform to ISAF 4.26 and the inspectors will check for proper attachment points and sheeting. Both storm and heavy-weather jibs (if they were designed for luff groove mounting) must have an alternate method of attachment to the stay. Spare line for sheeting must be aboard.

We **require** both storm sails should either be of highly visible colored material (e.g. Day-Glo pink, orange or yellow), or have a colored patch added on each side. For existing storm sails, a color patch (not less than one sq. m.) can be heat laminated or stitched to each side of the sail. This modifies ISAF 4.26.2. We **strongly recommend** that the yacht's sail number be marked on the storm sails or the colored patch. This modifies ISAF 4.26.4.d.

**It is strongly recommended that a trysail track be installed to enable the trysail to be hoisted quickly, independent of the mainsail groove. However this is not mandatory. (4.26.4.j).**

In addition to the mandatory sails yachts may carry and use the following sails:

- one sail hoisted on and attached to each mast
- one mizzen staysail
- one regular cruising forestay sail, hoisted on or in its permanently rigged stay
- three other sails, which may be any combination of jibs, forestay sails and mizzen stay sail
- one asymmetrical spinnaker that is tacked down at the bow of the yacht, or at the end of a bow-sprit, or a permanently installed sprit.

There are no limitations or restrictions on sailcloth materials, except for heavy weather sails per ISAF 4.26.3.

**All jibs and stay sails must be continuously attached to a permanent forestay or head stay.** According to NOR 13d "hoisting a fore staysail is only permitted if your yacht has a permanent inner forestay and you have declared it on your Americap II rating". Your inspector will check for the declaration and for a properly installed forestay to pass the "permanent installation" test. A well-anchored deck fitting with appropriate pelican hook and running back stays are acceptable. You may fly multiple headsails simultaneously.

**Your jibs and staysails** must pass the "headsail test". According to RRS 50.4 the difference between a headsail and a spinnaker is that the mid-girth of a headsail, measured from the midpoints of its luff and leach, does not exceed 50 % of the length of its foot; and no other intermediate girth exceeds a percentage similarly proportional to its distance from the head of the sail.

**In this Race we do not permit the use of poled symmetrical spinnakers, mizzen spinnakers, or bloopers of any kind. If these or other additional sails are carried aboard for use during the return trip, they must be clearly marked "NOT FOR RACING" and must be stowed separately to avoid accidental use.**

- 4.27** *ISAF strongly recommends carrying a drogue (for deployment over the stern), or alternatively a sea anchor (for deployment over the bow). Since deployment and retrieval of sea anchors is very difficult and its application for monohulls is highly controversial, captains must use special training and extreme caution and discretion.*

- 5.01** The NOR modified the ISAF life jacket requirement. We now prescribe that one Type 1 US Coast Guard approved Personal Floatation Device must be aboard the yacht for each person aboard, regardless whether inflatable PFD's are aboard or not. **A light, a whistle and marine grade retro-reflective marking shall be fitted on each. Crotch straps are recommended but not compulsory. Inflatable PFDs should be tested for air leakage for 24 hours by inflation with a hand air pump.CO2 cartridge and automatic inflation "hockey pucks" should be checked or replaced before each race.**

The Canadian Department of Transportation approved Standard Life Jacket for Adults (providing over 25 lb. buoyancy force) meets or exceeds the USCG Type 1 specifications and it is an acceptable substitute for the Race. The Canadian DOT Type A, B, C and their recreational PFD are not acceptable.

- 5.02 One safety harness for each crewmember is compulsory. These must meet 5.02 specifications and they may be integrated with life jackets. Safety lines in good condition are acceptable without "overload" flag in the stitching if purchased before 1/2001.**

A strobe light and/or personal EPIRB, and /or mini-flare is recommended to be attached on a person when on deck at night. Foul-weather clothing, knife, torch, dry-suit for each crewmember are recommended, but they are not compulsory.

- 5.09 Man-overboard procedure must have been practiced by the crew. A certificate of such practice signed by each crewmember shall be kept aboard.**
- 5.10 We strongly recommend that at least two members of the crew be currently certified in CPR.**
- 5.11 The NOR made the US Sailing recommendation for anti jibing device a compulsory requirement. It shall be rigged so that attachment can easily and quickly made, with the boom fully extended (running), without the crew leaving the deck or leaning overboard. A word of caution: boom-brakes can prevent or slow down the jibe of the boom, but their effectiveness is very dependent on their proper rigging and adjustment. Some examples will be shown at the Spring Seminar, however it is entirely the captain's responsibility to assure that the proper device and settings are used.**
- 6.0 ISAF requires that at least 30% of a crew including the skipper shall have undertaken training on prescribed safety, maintenance and other subjects. These are specified for this race in the NOR. Inspectors will check that the required compliance form is signed off by the captain.**

#### **Recommended items.**

- (a) Marking of life rafts: We did not make it compulsory to permanently mark the boat name on the life raft, because so many entrants rent them. Otherwise ISAF 4.17 requires the boat name on everything buoyant. (e.g. life jackets, oars, cushions, lifeslings, lifebuoys etc.)
- (b) Masthead tricolor (see Comments 3.27)
- (c) Diagrams are recommended to be posted for the location of thru hulls, tools, medical supplies and spare parts. Posting of stowage chart showing location of safety items is now compulsory (4.12).
- (d) Strap for cook should be provided in order to secure the cook in the galley when both hands are used for cooking.
- (e) It is recommended that at least two members of the crew be currently certified in Cardio Pulmonary Resuscitation (CPR).
- (f) Because of possible malfunction a second (spare) depth sounder and knot meter are highly recommended.
- (g) While SSB receiver is a requirement; SSB transceiver is strongly recommended as an effective safety device. Its use is controlled by the communications restrictions defined in the NOR.
- (h)&(i) For those planning to dock in Bermuda five large fenders, four proper docking lines and 100 feet of shore power cable are required because of the tight "Med." style (stern to dock) berthing at the RHADC.
- (j) In addition to the required **16** SOLAS flares per 4.23; individual mini-flare packs are recommended to be attached to the life jackets of each crewmember.
- (k) Sea anchor and/or drogue per 4.27 are strongly recommended.

- (l) It is strongly recommended that a "grab bag" be maintained close to the companionway. For recommended contents of the grab bag **see ISAF Special Regulations 4.21.3**

If you have any questions about the equipment requirements and/or inspection, please call your inspector. You can select any one on the List of Inspectors. If you have any difficulty, you can call the Inspection Committee Chair, Paul Goldberg, (603-765-8650) or Jules Siegel (781-862-3519 or 781-223-6802)

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