2012 ISAF Offshore Special Regulations (OSR) with US Sailing Prescriptions

Monohull Category 1 CHANGES for 2012 (in red print)

2012 CHANGE SUMMARIES:

NEW PROCEDURES.

- ISAF has added the requirement to nominate a person to take over the responsibilities in the event of incapacitation of the Person In Charge/Captain (OSR 1.02.1)

NEW EQUIPMENT REQUIREMENTS.

- A spare magnetic steering compass independent of a power supply has been added by ISAF (OSR 3.24.1 b)
- ISAF requires that all rechargeable batteries replaced after 1/12 must be sealed (OSR 3.28.4 b)
- ISAF has added a requirement to have a fire blanket adjacent to every cooking device with an open flame. (OSR 4.05.4)
- ISAF requires that a Man Overboard Alarm capable of recording a position must be available at every helm station (from January 2012). (OSR 4.28.3)

PROCEDURE and EQUIPMENT CHANGES.

- ISAF has described the Plan Approval or Review process for new yachts over 24 m (OSR 3.03.1b and OSR3.03.2 b)
- ISAF has defined minimum clear opening sizes for new yachts (OSR 3.06.2)
- ISAF has redefined what synthetic rope can be used for lifelines and how to splice it (OSR 3.14.6 a & e)
- ISAF has added high modulus polyethylene rope to the list of approved materials for Jackstays/Jacklines. (OSR 4.04.1 ii)
- ISAF has combined light requirements for searching for a person in the water and for collision avoidance into a single searchlight. (OSR 4.07.1 a)
- ISAF has redefined the description of Radar Reflectors and Radar Target Enhancers. US SAILING's prescription is unchanged and still applicable (OSR 4.10)
- ISAF has defined a ship's 406 MHz EPIRB as one that has water and manual activation (not a PLB) (OSR 4.19 d)
- ISAF has clarified that liferafts must be serviced every three years (minimum) and that valises must be inspected annually (OSR 4.20.5 d and e)
- ISAF is recommending that lifebuoys should be of a safety color in the yellow-red range (not white) (OSR 4.22.5)
- ISAF has declared that 50% of the area of every storm jib must be high visible colored material (OSR 4.26.2 a)
- ISAF has defined the sheeting guidelines and sizes of storm jibs and storm trysails (OSR 4.26.4 b, c, i, and k)
- US Sailing has prescribed what lifejackets are allowed as options to the redefined ISO 12402 PFD requirements of ISAF (OSR 5.01)

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- ISAF has redefined the medical training requirements to accept STCW 95 First Aid Training (OSR 6.05 ii)
- ISAF has included a model first aid training course curriculum, for consideration (OSR 6.05.4)

This list applies to Monohull Category 1 sailboats racing in accordance with the 2012-2013 ISAF Offshore Special Regulations which are being prepared for publication and distribution by the Offshore Office at US SAILING.

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.

3.03 Hull Construction Standards (Scantlings)

3.03.1

a)

A yacht of less than 24m in hull length (measured in accordance with ISO 8666) with the earliest of Age or Series Date on or after 1 January 2010 shall have:

• been designed, built and maintained in accordance with the requirements of ISO 12215 Category A *

• on board a certificate of building plan review from a notified body recognized by ISAF.

• on board a declaration signed and dated by the builder to confirm the yacht is built in accordance with the plans reviewed by the Notified Body.

b)

A yacht of 24m in hull length and over (measured in accordance with ISO 8666) with the earliest of Age or Series Date on or after 1 January 2010 shall have:

• been designed, built and maintained in accordance with the requirements of a Classification Society recognized by ISAF

• on board a certificate of building plan review from a Classification Society recognized by ISAF

• on board a declaration signed and dated by the builder to confirm the yacht is built in accordance with the plans reviewed by the Classification Society .

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Monohull Category 1 CHANGES for 2012 (in red print)

3.03.2 Watertight Integrity of a Hull

a)

A yacht of less than 24m in hull length (measured in accordance with ISO 8666), with the earliest of Age or Series Date on or after 1 January 2010, if subject to any significant repair or modification to the hull, deck, coachroof, keel or appendages on or after the 1 January 2010, shall have

• the repair or modification designed and built in accordance with ISO 12215 Category A*

• on board a certificate of building plan review for the repair or modification from a notified body recognized by ISAF

• on board a declaration signed and dated by the builder to confirm that the repair or modification is in accordance with the requirements of ISO 12215 Category A *

b)

A yacht of 24m in hull length and over (measured in accordance with ISO 8666), with the earliest of Age or Series Date on or after 1 January 2010, if subject to any significant repair or modification to the hull, deck, coachroof, keel or appendages on or after the 1 January 2010, shall have

• the repair or modification designed and built in accordance with the requirements of a Classification Society recognized by ISAF

• on board a certificate of building plan review for the repair or modification from a Classification Society recognized by ISAF

• on board a declaration signed and dated by the builder to confirm that the repair or modification is in accordance with the plans reviewed by the Classification Society.

3.03.3

In cases when a builder no longer exists a race organizer or class rules may accept a signed statement by a naval architect or other person familiar with the requirements of 3.031 and 3.03.2 above and in lieu of the builders declaration required by 3.031 and 3.03.2 above.

3.03.4

A monohull with the earliest of Age or Series Date before the 1 January 2010 shall comply with 3.03.1, 3.03.2 and 3.03.3 above or with appendix M to these OSR.

(* or as from time to time specified by ISAF)

3.06 Exits – Monohulls

3.06.2

Yachts first launched on or after January 2014 have a hatch with the following minimum clear openings in compliance with ISO 9094:

- Circular shape: diameter 450mm;

- Any other shape: minimum dimension of 380mm and minimum area of 0.18m2. The dimension must be large enough to allow for a 380mm diameter circle to be inscribed.

The measurement of the minimum clear opening is illustrated in Figure 1.

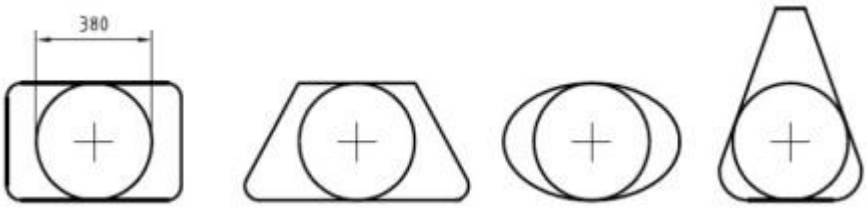

Figure 1 - Measurements of Minimum Clear Opening

3.14.6 Lifeline Minimum Diameters, Required Materials, Specifications

a) **Lifelines shall be of :**

- stranded stainless steel wire or

- Single-braided High Modulus Polyethylene (HMPE) (Dyneema®/Spectra® or equivalent) rope

US SAILING Note. An article describing the best techniques for using Dyneema line, particularily in the life line application is posted at http://offshore.ussailing.org/sas/htm

b) **The minimum diameter is specified in table 8 below.**

c) **Stainless steel lifelines shall be uncoated and used without close-fitting sleeving, however, temporary sleeving may be fitted provided it is regularly removed for inspection.**

d) **When stainless wire is used, Grade 316 is recommended.**

e) When HMPE (Dyneema®/Spectra®) is used, it shall be spliced in accordance with the manufacturer's recommended procedures.

f) **A taut lanyard of synthetic rope may be used to secure lifelines provided the gap it closes does not exceed 100 mm (4 in). This lanyard shall be replaced annually at a minimum.**

g) **All wire, fittings, anchorage points, fixtures and lanyards shall comprise a lifeline enclosure system which has at all points at least the breaking strength of the required lifeline wire.**

TABLE 8

under 8.5 m (28ft)	3 mm (1/8 in)
8.5m - 13 m	4 mm (5/32 in)
over 13 m (43 ft)	5 mm (3/16 in)

3.24 Compass

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 magnetic compass independent of any power supply, capable of being used as a steering compass which may be hand-held

3.28.4 Battery Systems

a)

When an electric starter is the only method for starting the engine, the yacht shall have a separate battery, the primary purpose of which is to start the engine

b)

All rechargeable batteries on board shall be of the sealed type from which liquid electrolyte cannot escape. Other types of battery installed on board at 1/12 may continue in use for the remainder of their service lives.

4.04 Jackstays (Jacklines), Clipping Points and Static Safety Lines (Tethers)

4.04.1 The following shall be provided:

a) Jackstays (Jacklines):-

shall be provided-

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 centre line to provide secure attachments for safety harness:-

ii

comprising stainless steel 1 x 19 wire of minimum diameter 5 mm (3/16 in), high modulus polyethylene (such as Dyneema/Spectra) rope or webbing of equivalent strength;

US SAILING prescribes that wire jackstays (jacklines) may be of configurations other than 1 X 19.

iii which, when made from stainless steel wire shall be uncoated and used without any sleeving;

iv *20kN (2,040 kgf or 4,500 lbf) min breaking strain webbing is recommended;*

4.05 Fire Extinguishers

Shall be provided as follows:

4.05.1 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

4.05.4 A fire blanket adjacent to every cooking device with an open flame

4.07 Flashlight(s) and Searchlight(s)

4.07.1 The following shall be provided:-

a)

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

4.10 Radar Reflector

4.10.1 A passive Radar Reflector (that is, a Radar Reflector without any power) shall be provided

a) If a radar reflector is :

i

octahedral with triangular plates making up each pocket it must have a minimum diagonal measurement of 456 mm (18in).

Ii

octahedral with circular sector plates making up each pocket it must have a minimum diameter of 304mm (12in).

iii

not octahedral it must have a documented RCS (radar cross-section) of not less than 10 m2 at 0° elevation and be capable of performance around 360° in azimuth.

US SAILING prescribes that in the US, radar reflectors shall have a minimum documented "equivalent echoing area" of 6 sq. m. Octahedral reflectors shall have a minimum diameter of 12 inches.

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 and 4.10.2 above are primarily intended for use in the X (9GHz) band*

4.10.2

The most effective radar response from a yacht may be provided by an RTE (Radar Target Enhancer) which may be on board in addition to the required passive reflector. An RTE should conform to ISO 8729-2:2009. An RTE is strongly recommended.

b)

The display of a passive reflector or the operation of an RTE is for the Person in Charge to decide according to prevailing conditions.

4.10.3

When available, a passive radar reflector in compliance with ISO8729-1:2010 will offer improved performance over earlier models and has a size typified by a cylinder of not more than weight 5kg, height 750mm and diameter 300mm.

4.10.4

S (3GHz) band radar is often used by ships in bad weather to complement X (9GHz) band radar. On S (3GHz) band a passive reflector offers about 1/10 the response obtained on the X (9GHz) band. Unless specifically designed to operate in the S(3GHz) band, an RTE will provide no response at all.

4.19 EPIRBs

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 121.5MHz transmitter for local homing.

c) Every 406 MHz EPIRB shall be properly registered with the appropriate authority.

d) Every ship's 406 MHz EPIRB shall be water and manually activated.

e)

EPIRBs should be tested in accordance with manufacturer's instructions when first commissioned and then at least annually.

f)

A list of registration numbers of 406 EPIRBs should be notified to event organizers and kept available for immediate use.

g)

Consideration should be given to the provision of a locator device (eg an "Argos" beacon) operating on non - SAR frequencies, to aid salvage if a yacht is abandoned.

h)

Beacons with only 121.5MHz are no longer recommended for distress alerting. Satellite processing of 121.5 MHz is being phased out. 121.5MHz 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.

US SAILING requires the use of 406 EPIRBs (with or without GPS input), as USCG advises that rescue efforts will be launched immediately upon receipt of a distress signal from these units. USCG also advises that PLB and INMARSAT "E" transmissions are not monitored by U.S. Rescue Coordination Centers and that slight delays are likely to occur while the commercial ground stations forward an alert to the USCG

4.20.5 Liferaft Servicing and Inspection

IMPORTANT NOTICE Recent evidence has shown that packaged liferafts 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. an anchor). Damage can be caused internally by the weight of the heavy steel CO2 bottle abrading or splitting neighbouring layers of buoyancy tube material. ISAF has instituted an investigation into this effect and as an interim measure requires that every valise-packed liferaft shall have an annual certificate of servicing. A liferaft should be taken for servicing if there is any sign of damage or deterioration (including on the underside of the pack). Persons in charge should insist on great care in handling liferafts and apply the rules NO STEP and DO NOT DROP UNLESS LAUNCHING INTO THE SEA.

a)

Certificates or copies, of servicing and/or inspection shall be kept on board the yacht. Every SOLAS liferaft and every valise-packed liferaft shall have a valid annual certificate of new or serviced status from the manufacturer or his approved service station.

b)

A liferaft 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 liferaft 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)

A liferaft built to ISO 9650 Part 1 Type Group A, packed in a rigid container or canister shall be serviced in accordance with the manufacturer's instructions but NOT less frequently than every three years

e) A liferaft built to ISO 9650 Part 1 Type Group A packed in a valise shall be inspected annually by an approved manufacturer's agent and serviced in accordance with the manufacturer's instructions but NOT less frequently than every three years.

f) Liferaft servicing certificates shall state the specification that the liferaft was built to. See OSR 4.20.2

4.22 Lifebuoys

4.22.1 The following shall be provided within easy 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.

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

b)

In addition to a) above, one lifebuoy within easy 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 either permanently extended or be capable of being fully automatically extended (not extendable by hand) in less than 20 seconds. It shall be attached to the lifebuoy with 3 m (10 ft) of floating line and is to be of a length and so ballasted that the flag will fly at least 1.8 m (6 ft) off the water.

4.22.2

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

4.23.3

Each inflatable lifebuoy and any automatic device (eg 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 lifesling shall be fitted with marine grade retro-reflective material (4.18).

4.22.5 It is recommended that the colour of each lifebuoy be a safety colour in the yellow-red range.

4.26.2 High Visibility

a)

Every storm jib shall either be of highly-visible coloured material (e.g. 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-visible colour.

4.26.4 The following shall be provided:-

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

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 x luff length x (luff perpendicular + 2 x half width))* To apply to sails made in January 2012 and after.

c)

a storm trysail which shall be capable of being sheeted independently of the boom with trysail area not greater than 17.5% mainsail hoist (P) 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.

US SAILING prescribes that a storm trysail shall be capable of being attached to the mast.

d)

the storm trysail as required by OSR 4.26.4 (c) shall have the yacht's sail number 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;

e)

a storm jib of area not greater than 5% height of the foretriangle squared, with luff maximum length 65% height of the foretriangle;

f)

US SAILING prescribes that in addition to the storm jib required by OSR 4.26.4 (e), 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 and without reef points;

h)

in the case of a yacht with an in-mast furling mainsail, the storm trysail must be capable of being set while the mainsail is furled.

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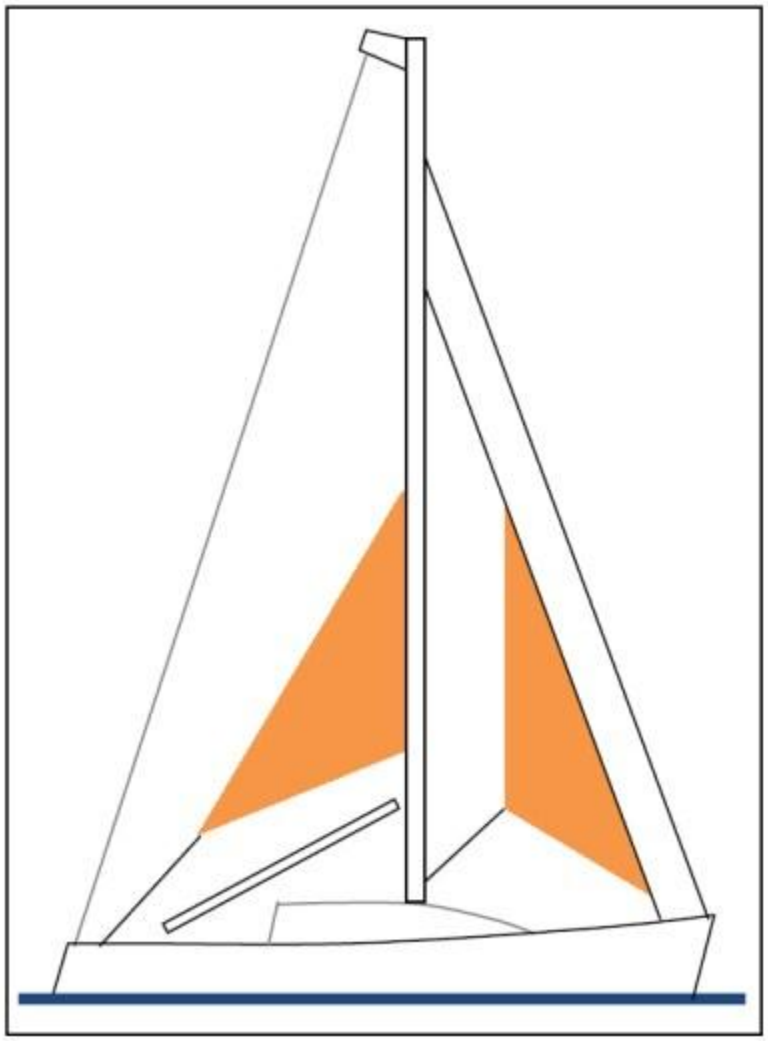
i) *A trysail track should allow for the trysail to be hoisted quickly when the mainsail is lowered whether or not the mainsail is stowed on the main boom.*

It is strongly recommended that a boat has either a dedicated trysail track permanently installed with the entry point accessible to a person standing on the main deck or coachroof, or a permanently installed stay on which to hank the trysail.

k)

It is strongly recommended that an inner forestay is provided either permanently installed or readily set up, on which to set the storm jib.

In addition, US SAILING prescribes mainsail reefing to reduce the luff by at least 10% for sails built after 1 January 1997.



4.28 Man Overboard Alarm

4.28.3

A yacht shall 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

US SAILING prescribes for Categories 0,1,2,and 3: either a lifejacket defined in OSR 5.01.1 (See Note 1), or a USCG approved Type I non-inflatable personal flotation device (PFD), or a USCG approved yoke-type inflatable with 33lb (150N) or greater buoyancy with or without crotch strap, face guard, or buddy line. Each inflatable PFD shall be inflated and inspected annually. Service dates shall be marked on each PFD. It is recommended that all inflatable PFDs be integrated with safety harnesses (see OSR 5.02) (See Note 2).

US SAILING Note 1: ISO 12402 is not currently approved by the USCG. Boats operating in US waters are not exempt from USCG requirements.

US SAILING Note 2: Many inflatable PFD's with built-in harnesses are designed for people greater than 5' 5" in height and are potentially dangerous if you are below that height.

US SAILING Note 3: Inflatable PFDs with the required buoyancy will generally have inflation cylinders containing 33g or more of CO2.

US SAILING Note 4: "Yoke-type" is defined as a PFD that is designed to keep its wearer face-up and head-up in the water and that provides buoyancy in front of the chest and behind the neck immediately when inflated

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

ii

Lifejackets manufactured after 1 January 2012 shall be in accordance 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

(a) 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.

b) fitted with either a crotch strap(s) / thigh straps or a full safety harness in 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.

c) fitted with a lifejacket light in accordance with SOLAS LSA code 2.2.3 (white, >0.75 candelas, >8 hours),

d) if inflatable have a compressed gas inflation system,

e) if inflatable, regularly checked for gas retention,

f) compatible with the wearer's safety harness,

g) clearly marked with the yacht's or wearer's name,

It is strongly recommended that a lifejacket has:

j) a splashguard / sprayhood See ISO 12402 – 8,

k) a PLB unit (as with other types of EPIRB, should be properly registered with the appropriate authority)

l) if of a gas inflatable type, a spare cylinder and if appropriate a spare activation head

US SAILING prescribes that all personnel on deck shall wear properly fitted personal floatation while starting and finishing. At other times during the race, floatation shall be worn on deck except when the Captain of the boat directs that it may be set aside.

5.01.4 The Person in Charge shall personally check each lifejacket at least once annually.

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

5.02.6 *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 (tether) 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 (tethers) 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 (tether) practicable is regarded as by far the most effective way of preventing man overboard incidents.*

6.05 Medical Training

At least two members of the crew

shall have a first aid certificate completed within the last five years meeting any of the following requirements:

i A certificate listed on the ISAF website www.sailing.org/specialregs of MNA recognised courses

ii STCW 95 First Aid Training complying with A-VI/1-3 – Elementary First Aid or higher STCW level

US SAILING recommends that at least two members of the crew be currently certified in cardiopulmonary resuscitation.

6.05.4 An example model first aid training course is included in Appendix N.