

The logo for the Volvo Ocean Race 2008-2009. It features the words "VOLVO", "OCEAN", and "RACE" stacked vertically in a blue, serif font. A large, light grey, curved brushstroke graphic is positioned behind the text, sweeping from the top right towards the bottom left. A thin red horizontal line is located below the word "RACE". Below the red line, the text "2008 - 2009" is written in a blue, sans-serif font.

VOLVO
OCEAN
RACE

2008 - 2009

NOTICE OF RACE

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VOLVO OCEAN RACE ROUND THE WORLD 2008-2009

Starting 04 October 2008

ORGANISING AUTHORITY: VOLVO EVENT MANAGEMENT UK LIMITED

**Entries are invited for the Volvo Ocean Race 2008-2009 for
Volvo Open 70 class yachts**

Race Headquarters

Volvo Event Management UK Limited
Ocean House
1490 Parkway
Whiteley
Fareham
Hampshire
PO15 7AF
United Kingdom

Telephone: +44 (0) 1489 564 555
Facsimile: +44 (0) 1489 564 333
E-mail: Organising.Authority@VolvoOceanRace.org

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VOLVO OCEAN RACE ROUND THE WORLD 2008-2009

IMPORTANT NOTICE

SPECIFIC ATTENTION IS DRAWN TO RRS FUNDAMENTAL RULE 4, WHICH STATES: “THE RESPONSIBILITY FOR A BOAT’S DECISION TO PARTICIPATE IN A RACE OR TO CONTINUE RACING IS HERS ALONE”.

OCEAN GOING YACHT RACING IS A HAZARDOUS ACTIVITY. ANYONE INTENDING TO PARTICIPATE IN OR BECOME INVOLVED WITH THE RACE EITHER AS A PARTICIPANT, TEAM MEMBER OR OTHERWISE DOES SO AT THEIR OWN RISK AND SUCH INDIVIDUALS SHOULD RECOGNISE THAT THEY MAY SUFFER DEATH, INJURY AND/OR LOSS OR DAMAGE AS A RESULT OF SUCH INVOLVEMENT.

THE ORGANISING AUTHORITY, THE AFFILIATED CLUB OR ASSOCIATION, AND ANY OTHER PARTY INVOLVED WITH THE ORGANISATION OF THE RACE DISCLAIM ANY AND ALL RESPONSIBILITY WHATSOEVER FOR ANY DEATH, LOSS, DAMAGE, INJURY OR INCONVENIENCE THAT MIGHT OCCUR TO PERSONS AND GOODS, BOTH ASHORE AND AT SEA, AS A CONSEQUENCE OF PARTICIPATION IN THE RACE EXCEPT AS SPECIFICALLY SET OUT BELOW.

THOSE PARTICIPATING IN OR OTHERWISE VOLUNTARILY BECOMING INVOLVED WITH THE RACE RECOGNISE THAT SUCH EXCLUSIONS AND INDEMNITIES ON THE PART OF AND FOR THE BENEFIT OF THE ORGANISING AUTHORITY AND OTHERS INVOLVED IN THE MANAGEMENT AND ORGANISATION OF THE RACE ARE APPROPRIATE AND REASONABLE IN THE CIRCUMSTANCES AND RECOGNISE THEIR OWN OBLIGATION TO SECURE APPROPRIATE INSURANCE AND TO BRING THIS NOTICE AND THESE EXCLUSIONS AND INDEMNITIES TO THE NOTICE OF ANY THIRD PARTY WHOM THEY INVOLVE OR SEEK TO INVOLVE IN ANY WAY IN THE RACE.

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AMENDMANTS

Amendment 1, 4th January 2007. Section 2.1 (d) Leg 4, Leg 5 & Leg 8 and (f)

VOLVO OCEAN RACE ROUND THE WORLD 2008-2009**NOTICE OF RACE****PART 1: INTRODUCTION****1.1 DEFINITIONS**

- (i) **Assembly Area:** The area within a *Port* where *Boats* berth prior to starting and after finishing a race. In *Ports* where the haul out area is in the immediate vicinity to the on water *Assembly Area*, the haul out area may be counted as the *Assembly Area*.
- (ii) **Boat:** The sports equipment used by the crew to take part in a race. It comprises the hull, hull appendages, ballast, rig, sails and associated fittings and all other items of sports equipment used, excluding consumables and personal equipment.
- (iii) **Commercial Participation Agreement:** The agreement entered into between the *Participant* and Volvo Event Management UK Limited.
- (iv) **Crew Member:** any person, who has signed the *Crew Member Agreement* and who may be on board the *Boat* for the purposes of racing.
- (v) **Crew Member Agreement:** The agreement between Volvo Event Management UK Limited and a *Crew Member*.
- (vi) **In Port Race:** A race held in the vicinity of a *Port*.
- (vii) **Leg:** A race between two *Ports*.
- (viii) **Participant:** The syndicate company, the owner(s) of the *Boat*, the entity(s) that run(s), sponsor(s) or fund(s) the *Boat* and the entity/entities that enter(s) into the *Commercial Participation Agreement* relating to the *Boat*.
- (ix) **Person in Charge:** A *Crew Member* who is the sole representative of the *Participant*, duly authorised by the *Participant* in writing, and who has signed the *Person in Charge Agreement*.
- (x) **Person in Charge Agreement:** The agreement between Volvo Event Management UK Limited, and the *Person in Charge*.
- (xi) **Pit Stop:** A short stop over between *Legs* where special rules may apply.
- (xii) **Port:** Any port that has a *Leg* start or finish.
- (xiii) **Pro-Am Race:** A race held in the vicinity of a *Port* nominally the day following the *In Port Race*.
- (xiv) **Race:** The Volvo Ocean Race Round The World 2008-2009 including all *Legs*, *In Port Races* and *Pro-Am Races* and supplementary or incidental activities.

- (xv) **Racing Appendages:** A limited number of appendages used during *In Port Races* or *Legs* and declared to the RMG. Appendages are defined at Volvo Open 70 Rule Version 2 Section 2.14. *Racing Appendages* shall be declared as one of four types with quantities as indicated; one or two rudders, two dagger boards, one ballast keel fin or one ballast keel bulb. Emergency rudder(s) are not *Racing Appendages*. See NOR Section 5.1(c) Documentation.

1.2 OFFICIAL LANGUAGE

The official language for all race matters will be English. In the event of conflict with any translation, the English version will prevail.

1.3 INFORMATION AND INTERPRETATIONS

Any request for information by a *Participant*, including clarification or interpretation of any of the rules, with the exception of the Volvo Open 70 Rule, shall be in writing to the Organising Authority. Only written responses will have validity. Both the questions and answers will be available to all *Participants*.

1.4 TIMES

Unless otherwise stated, all times in the Notice of Race (NOR) and sailing instructions are local.

1.5 NOTICES TO COMPETITORS

Notices to competitors will be posted on the official notice board located at: <http://NoticeBoard.VolvoOceanRace.org>.

VOLVO OCEAN RACE ROUND THE WORLD 2008-2009**NOTICE OF RACE****PART 2: COURSE, QUALIFICATION AND ASSEMBLY****2.1 THE RACE**

- (a) The Volvo Ocean Race 2008 – 2009 will consist of 11 ocean *Legs*, 8 Inshore Races and 8 *Pro-Am Races*. The total distance for the *Race* is approximately 39,000 miles.
- (b) The *Race* will start with an *In Port Race* on Saturday 4 October 2008 in the port of Alicante, Spain. *Leg 1* will start at 1400 on 11 October 2008 from Alicante, Spain.
- (c) The finish will be in the Baltic Sea on or about 20 June 2009.
- (d) The 11 ocean *Legs* will consist of:

Leg 1: Alicante to South Africa, an approximate distance of 6,500 n.m., leaving the Archipelago of Fernando de Noronha, which shall be a scoring waypoint, to port.

Leg 2: South Africa to the Middle East, an approximate distance of 5,000 n.m. starting 16 November 2008. There will be scoring waypoint at the latitude of 20 degrees South.

Leg 3: Middle East to India, an approximate distance of 1,600 n.m., and starting 20 December 2008.

Leg 4: India to South East Asia, an approximate distance of 2000 n.m., leaving the island of Palau Weh, Indonesia, which will be a scoring waypoint to starboard and starting 3 January 2009

Leg 5: South East Asia to China (port 1), an approximate distance of 2,200 n.m. and starting 24 January 2009.

Leg 6: China (port 1) to China (port 2), an approximate distance of 300 n.m. and starting 08 February 2009.

Leg 7: China (port 2) to Brasil, an approximate distance of 12,000 n.m. with a scoring waypoint at the latitude of 36 degrees South, leaving Cape Horn, which shall be a scoring waypoint to port and starting 22 February 2009. The course may include provision to reduce the risk of sailing through areas of significant ice.

Leg 8: Brasil to the North East United States, an approximate distance of 4800 n.m. leaving the Archipelago of Fernando de Noronha to port, which shall be a scoring waypoint and starting 18 April 2009.

Leg 9: North East United States to Western Europe an approximate distance of 2500 n.m. and starting 16 May 2009. There will be a scoring waypoint on the longitude of St John, Newfoundland.

Leg 10: Western Europe to Sweden an approximate distance of 1500 n.m. and starting 6 June 2009..

Leg 11: Sweden to Finish an approximate distance of 250 n.m on a flexi-course (specific course will be detailed in the Sailing Instructions) and starting 19 June 2009

- (e) The following *Ports* are designated as *Pit Stops*: China (Port 1)

- (f) *In Port Races* will be conducted in Alicante, the Middle East, South East Asia, China (port 2), Brasil, North East United States, Western Europe and Sweden. Each *In Port Race* shall be approximately two hours in length.
- (g) *Pro-Am Races* will be held the same ports as the *In Port Races* and will normally be held the day after the *In Port Races*. The *Pro-Am Races* will be approximately 2 hours in length.
- (h) Details of the *Legs*, *In Port Races* and *Pro-Am Races* will be described in the sailing instructions and their addendums.

2.2 QUALIFICATION

- (a) Each *Boat* must complete a non-stop open ocean qualification race or passage, approved by the Organising Authority in advance, of approximately 2000 nautical miles prior to the start of the *Race*.
- (b) A crew list for the qualification race or passage shall be supplied to the Organising Authority before the qualification is undertaken.

2.3 RACE EQUIPMENT AND SERVICES FEES

- (a) The race equipment and services fee will be £325,000 plus Value Added Tax (VAT) at the appropriate UK rate (currently 17.5%). payable on or before the 1 July 2008
- (b) Each *Participant* shall also lodge a deposit of £50,000 against unpaid invoices and fines imposed under the terms of the *Commercial Participation Agreement*. Any remaining portion of the deposit will be repaid to the *Participant*.

2.4 REFUND OF FEES

- (a) If a *Participant* can demonstrate that an amendment of the race rules prior to the start of the *Race* would consequentially cause that *Participant* a loss, or to incur costs, exceeding the total value of payments of the race equipment and services fee to that date, that *Participant* may within 28 days of publication of such an amendment, by written notice to the Organising Authority, withdraw its reserved entry or entry. In this case the Organising Authority will refund payments made by the *Participant* to that date less the cost of equipment and services provided to that *Participant* if the *Participant* decides to keep the equipment. This paragraph sets out the exclusive remedy of any *Participant* for any amendment to the race rules and the Organising Authority will have no other liability for any consequences for the *Participant*, or any third party, of such amendment to the race rules.
- (b) When an entry is withdrawn, other than in accordance with the provision above, the Organising Authority has the power to retain any money paid.

2.5 RESERVED ENTRIES AND LATE ENTRIES

- (a) An entry may be reserved, if vacancies exist, by making a payment of £15,000 + VAT, with a further stage payment of £25,000 + VAT by 1 February 2007 and with the balance of the race equipment and services fee + VAT, together with the £50,000 deposit, paid by 1 July 2008.
- (b) Late entries may be accepted; however a 50% additional premium on the race equipment and services fee may apply.

2.6 ASSEMBLY

- (a) In Alicante, *Boats* shall be berthed in the *Assembly Area* for 21 days before the start of the *Race*. Pre *Race* start berthing positions will be determined by the Organising Authority.
- (b) In all other *Ports*, except as required in NOR 2.6 (e) *Boats* shall be berthed in the *Assembly Area* from midday on the Friday approximately 8 days before the start of each *Leg* until the race committee has given permission to leave. The race committee reserve the right to alter this assembly time.
- (c) *Boats* may be absent from an *Assembly Area* during assembly periods with the written approval of the race committee. Approval will be given on the basis that at least 50% of *Boats* remain in the *Assembly Area*.
- (d) On the day of an *In Port* or *Pro-Am Race* *Boats* must return directly to the *Assembly Area* after finishing that race unless permission to do otherwise is obtained from the race committee.
- (e) After finishing a *Leg*, *Boats* shall proceed directly to the *Assembly Area* unless permission to do otherwise is obtained from the race committee.
- (f) Further to NOR 2.6(e) above, when a *Leg* finishes at a *Pit Stop*, *Boats* shall proceed directly to the *Assembly Area* after finishing or retiring from the *Leg* unless permission to do otherwise is obtained from the race committee.

VOLVO OCEAN RACE ROUND THE WORLD 2008-2009**NOTICE OF RACE****PART 3: RULES AND REGULATIONS****3.1 THE RULES**

The *Race* will be governed by the rules as defined in the Racing Rules of Sailing (RRS). The prescriptions of national authorities will not apply.

- (a) Between sunset and sunrise, when a *Boat* cannot determine with certainty what tack another *Boat* is on, she shall keep clear of that *Boat*.
- (b) The Organising Authority reserves the right to reject the entry of any *Boat* for any reason.
- (c) Appendix Q of the Racing Rules of Sailing as amended by the sailing instructions will apply for the *In Port Races* and may apply for *Pro-Am Races*.
- (d) RRS 26 is amended so that the warning signal is the Volvo Open 70 Class Flag and it will be made 10 minutes before the starting signal and the preparatory signal will be made 5 minutes before the start signal.
- (e) The text of RRS 28.1 replaced with:
A *Boat* shall *start*, leave each *mark* or position on the required side in the correct order, and *finish*, so that a string representing her wake after *starting* and until *finishing* would when drawn taut pass each *mark* or position on the required side and touch each rounding *mark* or rounding position. She may correct any errors to comply with this rule. After finishing she need not cross the finishing line completely.
A radius of 10 meters around a position required to be rounded or passed is designated as an obstruction.
- (f) The race committee may amend the course for a *Leg* while *Boats* are racing by communicating to *Boats* by whatever means available the remaining course in full from the rounding mark or gate from where the change is effective. This may only be done for reasons of safety or a likelihood of *Boats* not finishing with enough time to be properly prepared for another stage in the *Race*. This amends RRS 32 and 33.
- (g) The text of RRS 60.2 is deleted and replaced with:
A race committee or the Rule Management Group may
 - (a) Protest a *Boat* but not as a result of a report from an interested party or information in an invalid protest or in a request for redress;
 - (b) request redress for a *Boat*; or
 - (c) report to the protest committee requesting action under rule 69.1(a).
- (h) RRS 61.1 is amended only in that a *Boat* intending to protest need not display a red flag.
- (i) The text of RRS 64.1(a) is replaced with:
When the International Jury decides that a *Boat* that is a *party* to a protest hearing has broken a *rule*, it may waive penalties and / or impose penalties other than disqualification, including financial penalties. A penalty shall be imposed whether or not the applicable *rule* was mentioned in the *protest*.

- (j) RRS 78.3 is deleted
- (k) Race Signals, Other Signals – Flag L Ashore shall not apply. This changes Race Signals, Flag L.

3.2 PENALTIES FOR BREAKING RULES OF THE RRS PART 2

- (a) For the *In Port* and *Pro-Am Races*, Rules 44.1 and 44.2 are changed so that only one turn, including one tack and one gybe is required.
- (b) RRS 44.1 is changed in that the penalty for causing injury, serious damage or gaining significant advantage by a breach shall be determined by the Jury.
- (c) RRS 44.3 is deleted and replaced with; After 3 hours from the start signal of a *Leg a Boat* may take a scoring penalty by informing the race committee as soon as reasonably possible. The *Boats* scoring penalty shall be at the discretion of the Jury.

3.3 AMENDMENTS

The Organising Authority may make amendments to the Notice of Race and the RMG may make amendments to the Volvo Open 70 Rule Version 2. Amendments and interpretations of the Notice of Race, and amendments and interpretations of the Volvo Open 70 Rule Version 2 will be posted on an electronic notice board at <http://NoticeBoard.VolvoOceanRace.org>

3.4 SAILING INSTRUCTIONS

Sailing Instructions will be published in several parts. The 'Leg Sailing Instructions' will be available at least 1 month before the start of *Leg 1*. The *Leg* specific addendums will be published at least five (5) days before the start of each *Leg*. The 'In Port Race Sailing Instructions' will be published at least 1 month before the start of the first *In Port Race*.

3.5 INTERNATIONAL JURY

- (a) An International Jury will be appointed in accordance with RRS Appendix N.
- (b) RRS 64.1(a) is changed to permit the International Jury to waive penalties and/or impose penalties other than disqualification, including financial penalties.

3.6 ADVERTISING

The *Race* is recognised as a Special Event in accordance with ISAF Regulation 20. Attention is drawn to the *Commercial Participation Agreement* with respect to advertising.

- (a) The Organising Authority will require *Boats* to display logos on the topsides, on both sides of the hull, aft of the bow and forward of the transom. The logos shall not be wider than 1.8m. The first and last 2.0m of the topsides of both sides of the hull shall be a single uninterrupted colour. No other logo shall be placed within 1m of the Organising Authority supplied bow and stern logos.
- (b) The whole of the main boom shall be for the sole use of advertising as prescribed by the Organising Authority.
- (c) Provision shall be made for an Organising Authority prescribed advertising logo, 100 mm x 300 mm, to be displayed in the navigation station in such a way that it is visible to the camera installed in that area.

- (d) Unless expressly authorised in advance, or unless required or prescribed by the Organising Authority, *Participants* shall ensure that no trademark, name, logo or other symbol or device is displayed on any external or visible surface or part of any equipment supplied or to be supplied by the Organising Authority and shall further ensure that no right to display such words or symbols has or will be granted by the *Participant* to any third party, in each case effective from the date of delivery of the equipment to the *Participant* until the expiry of the protest time limit for the final *Leg*. *Participants* shall ensure that all such trademarks, names, logos or other symbols or devices so authorised, required or prescribed by the Organising Authority shall be displayed prominently and visibly at all times during such period on such equipment and shall not be obscured other than as may be required by the Race Rules, (including, without limitation ISAF Regulation 20.3.2).
- (e) The Volvo Ocean Race Trade Marks shall appear on both of the upper outer sleeves of all *Crew Members'* foul weather and mid-layer clothing. The size, colour and location shall be agreed with the Organising Authority.
- (f) The Organising Authority may limit the proportion of *Boats* advertising a particular type of product to approximately 20% of the total entry.
- (g) The class insignia (described in Volvo Open 70 Rule Version 2 Appendix A) shall be placed as close to the top of the mainsail as reasonably possible leaving a gap no less than 0.30m between the insignia and the top of the mainsail. If the sail is opaque in the area of the class insignia, the class insignia may be placed at the same height on both sides of the mainsail. If the sail is not opaque in this area then the class insignia shall be placed at different heights on the two sides of the sail with the starboard side being uppermost. Advertising may only be displayed below a horizontal line 0.30m below the class insignia, measured from the lowest point of the insignia on the port side, provided the national letters and sail numbers are not obscured in any way.
- (h) The placement and size of the national letters and sail numbers on mainsails, shall be in accordance with RRS Appendix G.

3.7 MOVEABLE BALLAST

RRS 51 is changed in that:

- (a) sails, non-sealed equipment and stores may be shifted to any position inside the hull,
- (b) sails and unsealed deck equipment, may be stowed anywhere within the working deck of a *Boat*, and
- (c) no action shall be taken to alter stability by retaining or moving water or other fluids other than in the aft ballast tank. (Volvo Open 70 Rule Version 2 Section 4.3.4).

3.8 SAILS

Volvo Open 70 Rule Version 2, Section 7.9 shall apply except for *Pro-Am Races*.

- (a) The sails, including ID numbers, which are to be used in a *Leg* or *In Port Race*, shall be declared to the RMG by 0800 on the day of that race start.
- (b) Only sails declared as per (a) above shall be on board when the *Boat* leaves the dock on the day of an *In Port Race* or *Leg* start and shall be the only sails on board prior to and whilst racing.

- (c) Should more than one race be sailed on any one day, each *Boat* may change the sails carried for the following race. If changed, the sails for the following race shall be declared to the RMG, including ID numbers, prior to the warning signal for that race. These sails shall remain on board from the warning signal until the *Boat* finishes or retires from that race.

3.9 SEALING ARRANGEMENTS

- (a) Prior to a *Leg* start, items not to be moved while racing, such as life rafts, anchors, chain and warp, propeller shafts, retractable or “kick-up” rudders, emergency water, and emergency rudder, or not to be opened, such as swimmer of the watch bag, emergency fuel tank, and Emergency Equipment Locker, (Volvo Open 70 Rule Version 2 Section 8.7), will be sealed. See also NOR 5.4(c) (vi)
- (b) Cable-tie like sealing straps will be used to fix items not to be moved to permanent fixtures in the *Boat*. The minimum diameter of holes through which the sealing straps can be passed shall be 6mm. The maximum distance to a fixing point shall be 500mm.

3.10 EQUIPMENT SUPPLIED BY THE ORGANISING AUTHORITY

- (a) Equipment to be supplied by the Organising Authority and detailed in Appendix 1:
 - (i) may be available to *Participants* from 1 February 2008 with the payment of that part of the race equipment and services fee sufficient to cover the cost of the equipment at which time the equipment shall become the property of the *Participant*,
 - (ii) shall be fitted by the *Participant* to the requirements set out in Appendix 1 and the associated equipment installation instructions. Commissioning shall be arranged in conjunction with the Organising Authority,
 - (iii) shall be maintained according to any associated instructions and only used for its intended purpose. Equipment shall not be modified in any way without prior written permission from the Organising Authority,
 - (iv) shall be on board while racing except that items listed in Appendix 3 may be removed for *In Port* and *Pro-Am Races*.
 - (v) shall be fully accessible for inspection by the Organising Authority at any time. Any failure of the equipment that is covered under manufacturers warranty or pre-agreed maintenance contract will be repaired at Organising Authority expense. Any repairs arising from damage not covered by the manufacturers warranty or agreed maintenance contract shall be undertaken, at the *Boat's* expense, by Organising Authority appointed personnel. Details of maintenance contracts can be obtained from the Organising Authority
- (b) The failure of any equipment supplied by the Organising Authority shall not be grounds for redress. This changes RRS 62.1(a).
- (c) Where possible and at the discretion of the Organising Authority, medical supplies will be replenished between *Legs*. Each *Boat* shall, approximately 48 hours before finishing or as soon as possible after retiring from a *Leg*, supply a list of medical equipment requirements to the Organising Authority medical coordinator. Medical supplies consumed before the start of the *Race* will be replenished by the Organising Authority at the *Participants* expense.

- (d) The Organising Authority reserves the right to alter, substitute or withdraw any equipment, products, materials, services or facilities, and undertakes to use its reasonable endeavours in this event to supply a reasonably equivalent replacement within a reasonable period. Where this is not possible a placebo unit may be fitted.

3.11 ADDITIONAL EQUIPMENT REQUIREMENTS

Additional equipment required while racing, including required safety equipment, is listed in Appendix 2, except that items listed in Appendix 3 may be removed for *In Port* and *Pro-Am Races*.

3.12 COMMUNICATIONS WHILE RACING (Amends RRS 41)

- (a) Except for 3.13 (d) below, data communication is only permitted via the satellite communications terminals provided by the Organising Authority (see Appendix 1). Data Communication through the Large and Small Voice and Data Antennae is only permitted via race headquarters (see Volvo Open 70 Rule 2.2.10 (a) and Notice of Race Appendix 1).
- (b) Internet access is not permitted.
- (c) Encryption is not permitted. This does not include normal signal encryption used by communication equipment provided or required by the Organising Authority.
- (d) Meteorological information may only be obtained from the Organising Authority, publicly broadcast radio or publicly broadcast satellite transmissions. Meteorological information from the Organising Authority will be provided mainly as data in GRIB format and distributed at least twice daily via satellite. Additional information may be supplied such as surface analysis charts, satellite images and/or QuikSCAT images. Failure of the Organising Authority to send, or of *Boats* to receive, meteorological information shall not be grounds for redress. This amends RRS 62.1(a).
- (e) Unless specifically permitted in NOR 3.12 (d), the receiving of e-mails from FTP-to-email, Internet-to-email, WWW-to-email or email subscription services (paid or unpaid) is not allowed.

3.13 MEDIA REQUIREMENTS

- (a) While racing, *Boats* shall be required to transmit media material ashore. The requirements for each *Leg* will be specified in the sailing instructions.
- (b) Any effect of fulfilling these requirements shall not be grounds for redress. This changes RRS 62.1.
- (c) The race committee may require media representatives to go on board after the finish of a race.

VOLVO OCEAN RACE ROUND THE WORLD 2008-2009**NOTICE OF RACE****PART 4: CREW MEMBERS AND GUESTS****4.1 CREW MEMBERS ON BOARD WHILE RACING**

- (a) While racing:
- (i) the *Person In Charge* shall be on board the *Boat* at all times,
 - (ii) the minimum number of *Crew Members* on board shall be 7,
 - (iii) At least 30% of *Crew Members* on board at the start of each race shall not have had their 30th birthday before the scheduled day of the start of the *Race* unless all crew members on board at the start of each race had their 50th birthday on or before the scheduled day of the start of the *Race*.
- (b) During a *Leg*:
- (i) the maximum number of *Crew Members* on board, where less than 5 are female, shall be 11,
 - (ii) the maximum number of *Crew Members* on board, where at the start of each race at least 5 are female and at least 1 is male, shall be 12 and
 - (iii) the maximum number of *Crew Members* on board, for an all female crew, shall be 14.
 - (iv) One *Crew Member* shall be designated as the Media Crew Member. They shall be fully trained in the use of all the on board media equipment and shall carry out media and environmental duties nominated by the Organising Authority. The Organising Authority may further define these duties in the Leg Sailing Instructions or Addendums. The Media Crew Member shall not participate in the sailing of the *Boat*, in navigation nor in the maintenance or repair of the *Boat*.
 - (v) At least 2 *Crew Members* shall:
 - 1. have nationally recognised, current, (within 2 years), first aid certificates, that are acceptable to the Organising Authority and that include cardio-pulmonary resuscitation, as well as certification that they are able to competently manage an air-way, apply simple strapping and plaster casts, undertake skin suturing, insert intravenous cannulae and give intravenous fluids, give both intra-muscular and intravenous injections, and apply a temporary dental filling,
 - 2. be appropriately licensed to use on board radio equipment.
- (c) During an *In Port Race*:
- (i) the maximum number of *Crew Members* on board, where less than 5 are female, shall be 12 and at least 10 shall have sailed the previous *Leg* or will sail the next *Leg* of the *Race*,

- (ii) the maximum number of *Crew Members* on board, where at least 5 are female and at least 1 is male, shall be 13 and at least 11 shall have sailed the previous *Leg* or will sail the next *Leg* of the *Race* and
 - (iii) the maximum number of *Crew Members* on board, for an all female crew, shall be 15 and at least 13 shall have sailed the previous *Leg* or will sail the next *Leg* of the *Race*.
- (d) During a *Pro-Am Race*:
- (i) the maximum number of *Crew Members* on board, where less than 5 are female, shall be 8, and at least 6 shall have sailed the previous *Leg* or will sail the next *Leg* of the *Race*,
 - (ii) the maximum number of *Crew Members* on board, where at least 5 are female and at least 1 is male, shall be 9 and at least 7 shall have sailed the previous *Leg* or will sail the next *Leg* of the *Race* and
 - (iii) the maximum number of *Crew Members* on board, for an all female crew, shall be 11 and at least 9 shall have sailed the previous *Leg* or will sail the next *Leg* of the *Race*.
- (e) At least 50% of the *Crew Members* who start each *Leg* of the *Race* shall have participated in an approved qualification race or passage or a previous *Leg* of a Volvo Ocean Race (since 2000)
- (f) All *Crew Members* shall have undergone a medical examination no more than 6 months before the start of the *Race*. Medical and Dental certificates, available from the Organising Authority, shall be completed and signed by the examining doctor and the examining dentist.

4.2 GUESTS ON BOARD WHILE RACING

- (a) Numbers of Guests; RRS 47.2 is changed in that:
- (i) During a *Leg*, up to 3 guests nominated by the *Person in Charge* may be on board only after the race committee has approved the guests and the timeframe of their stay onboard.
 - (ii) One guest nominated by the race committee may be onboard for a pre-determined period of no more than 3 hours after the start of a *Leg*
 - (iii) Unless otherwise instructed by the race committee, three guests shall be on board during *In Port Races*, 2 of which will be nominated by the race committee, 1 of which will be a media person. The third guest shall be nominated by the *Person in Charge* and approved by the race committee. Any such race committee instructions will be posted on the official notice board by 0900 hours on the day it takes effect.
 - (iv) Unless otherwise instructed by the race committee, 6 guests shall be on board during the *Pro-Am Races*, 4 of which will be nominated by the *Person in Charge* and approved by the race committee and 2 shall be nominated by the race committee. Any such race committee instructions will be posted on the official notice board by 0900 hours on the day it takes effect.

- (b) Except during *Pro-Am Races* guests shall not place any part of their body outside the sheer line of the *Boat* to improve stability or performance.
- (c) During a *Leg*, when guests are not below decks they shall remain aft of the mast.
- (d) During *In Port Races* guests shall remain aft of the helm. However one guest may be stationed in, or in transit to or from, the companionway entrance provided at least 2 guests remain aft of the helm. The *Person in Charge* may allow a guest to helm while the *Boat* is on the last leg of that race.
- (e) Except during *Pro-Am Races*, guests shall not take part in the sailing of the *Boat*, nor act to improve its performance in any way except as allowed in clause 4.2 (d) above.
- (f) Any effect that the carrying of guests on board may have shall not be grounds for redress. This changes RRS 62.1(a).
- (g) All guests on board while racing shall have signed an Indemnity and Release form.

4.3 BRIEFINGS AND TRAINING

- (a) *Crew Members* shall:
 - (i) attend the 2 day safety course organised by Volvo Event Management UK Ltd either within the 21 days prior to the start of the *Race* in the vicinity of the *Race* start port or in the UK in July 2008
 - (ii) be able to demonstrate at any time from 21 days prior to the start of the *Race* until the finish of the *Race*, emergency drills, the operation of safety equipment and the operation of all communications equipment on board, including the making of distress calls, and
 - (iii) together with senior syndicate members, attend a full day of media training to be held within the 21 days prior to the start of the *Race*.
- (b) The *Crew Members* referred to in NOR 4.1(b)(v) shall attend a 1 day medical briefing to be held within 21 days prior to the start of the *Race* and may be required to attend a refresher course to be conducted at a *Port* during the *Race*.
- (c) *Crew Members* who join after these briefings or training days may be required to attend similar briefings at a time to be determined by the Organising Authority.
- (d) Persons in Charge and navigators shall attend a half day briefing at the MRCC Falmouth in August 2008.
- (e) One *Crew Member* from each *Boat* shall attend a one day Volvo Penta training day during the 21 days prior to the start of the *Race*.

VOLVO OCEAN RACE ROUND THE WORLD 2008-2009**NOTICE OF RACE****PART 5: DOCUMENTATION, MEASUREMENT, REPAIRS AND REPLACEMENTS****5.1 DOCUMENTATION**

- (a) No later than 1 August 2008 each *Participant* shall supply the Organising Authority with:
- (i) a Race Entry Form, available from the Organising Authority from 1 June 2008, together with the full race equipment and services fee, or balance where applicable, and deposit,
 - (ii) a *Commercial Participation Agreement* signed by the *Participant*,
 - (iii) a *Person in Charge Agreement* signed by the *Person in Charge*,
 - (iv) the signed declarations at Appendix B of the Volvo Open 70 Rule V2 and
 - (v) a completed *Boat Information Form*.
- (b) No later than 21 days before the start of the *Race*, each *Person in Charge* shall supply the Organising Authority with:
- (i) a declaration stating compliance with clause 18.1 and clause 18.2 of the *Commercial Participation Agreement*,
 - (ii) the *Crew Member Agreements* signed by each *Crew Member*
 - (iii) completed Crew Medical Certificates, (NOR 4.1(f)),
 - (iv) completed Crew Personal Details forms,
 - (v) a copy of first aid and medical competency certificates, or similar, for at least 2 *Crew Members*, (NOR 4.1(b)(v)(i)) and
 - (vi) a Satellite Antenna Safety Instructions document, available from the Organising Authority, signed by each *Crew Member*
- (c) Prior to a *boat* being issued its first Volvo Open 70 Class Certificate, the *Person in Charge* shall declare to the RMG the *Racing Appendages* to be used in the first scheduled race (not including *Pro Am Races*). This declaration shall be accompanied by plan form and section drawings of the *Racing Appendages*. If a *boat* wishes to modify a *Racing Appendage* a new declaration shall be made to the RMG and new drawings provided prior to the modification being made.
- (d) No later than 2 days before the start of a race, each *Person in Charge* shall supply the Organising Authority with:
- (i) any amendments or additions to the forms or certificates already held by the Organising Authority and
 - (ii) the list of names of the *Crew Members* who are to sail in the *Leg, In Port Race* or *Pro-Am Race*.

Changes may be made after this date with the approval of the race committee.

- (e) No later than 24 hours before the start of a *Leg*, each *Person in Charge* shall supply the race committee with a signed declaration that the *Boat* has had a thorough inspection, necessary repairs have been carried out and that the *Boat* is adequately prepared to compete or to continue in the *Race* without any additional modifications.
- (f) No Later than 0800 on the day of an *In Port Race* or *Leg* start, provide a list of sails as per NOR 3.8 (a).
- (g) *Boats* shall have a valid VO 70 (Version 2) certificate at the start of a *Leg* or *In Port Race*.

5.2 MEASUREMENT AND INSPECTIONS

All *Boats* shall:

- (a) Be available for pre *Race* measurement during the 21 days prior to the start of the *Race*,
- (b) be available and accessible for inspection, scrutiny or re-measurement by the RMG or the race committee at any time during the 7 days before the start of the *Race* until the final Prize Giving,
- (c) be available for a pre start scrutiny from 0800 hours on the day of any start with items to be sealed while racing in place,
- (d) have sails measured at a time allocated by the measurer during the 14 days before the start of *Leg 1* or between each *Leg*.

5.3 COST OF MEASUREMENT

The *Participant* shall pay for any measurement completed more than 21 days before the start of the *Race* and any ancillary measurement costs as a result of replacements, additions, modifications, repairs or protests during the *Race*.

5.4 REPAIRS, REPLACEMENTS AND MODIFICATIONS

- (a) All repairs, non like-for-like replacements and modifications, including those made while racing, shall be reported at the earliest opportunity to the race committee.
- (b) Organising Authority supplied equipment may be replaced or repaired at any time with the approval of the race committee. This changes RRS 41 and 47.1.
- (c) From a *Boat* being issued its first Volvo Open 70 Class Certificate (Volvo Open 70 Rule Version 2 Section 1.4.1) for the *Race* until the expiry of the protest time limit for the final *Leg*:
 - (i) Hull shapes shall not be intentionally modified.
 - (ii) A modification to a *Racing Appendage* is defined as the intentional change to the plan form and/or section of the *Racing Appendage*. The same modification applied to other *Racing Appendages* in the same appendage category is considered only 1 modification.

- (iii) A modification to a *Racing Appendage* and a subsequent return to the original plan form and/or section are defined as 2 modifications.
 - (iv) *Racing Appendages* may be replaced. If the replacements have the same plan form and section as the *Racing Appendages* they replace this shall not be considered a modification.
 - (v) Each modification to a *Racing Appendage* shall result in a deduction of 3 points from the *boat's* overall score.
 - (vi) Any spare appendages on board whilst racing shall be sealed in place.
- (d) When a *Leg* finishes at a *Pit Stop*, *Boats* failing to comply with NOR 2.6(f), *Boats* leaving the *Assembly Area* without permission and *Boats* that use a crane for any purpose shall have 3 points deducted from their overall score. Permission to leave will only be given to satisfy corporate or media commitments and will not be given for repairs, replacements, modifications or testing for the next *Leg*.
- (e) Copies of all change, modification and repair requests will be posted on the notice board.

5.5 REPLACEMENT BOATS

- (a) When a *Boat* has sustained damage that would preclude it from further participation in the *Race*, the race committee may authorise the use of a fully measured and certified Volvo Open 70 as a replacement.
- (b) An additional race equipment and services fee will not be levied, however, the cost of any equipment supplied by the Organising Authority shall be borne by the *Boat*.

VOLVO OCEAN RACE ROUND THE WORLD 2008-2009**NOTICE OF RACE****PART 6: SCORING AND PRIZES****6.1 SCORING**

- (a) RRS Appendix A will not apply.
- (b) For each *Leg*, each *Boat* will receive points equal to the number of entries at the start of the *Race* less the number of *Boats* placed above her on that *Leg*, amended when appropriate by penalties or redress awarded by the International Jury.
- (c) For each *In Port Race* and scoring waypoint, *Boats* will receive points equal to half the number of entries at the start of the *Race* less half the number of *Boats* placed above her in that race or at that scoring waypoint, amended when appropriate by penalties or redress awarded by the International Jury. Points scored at scoring waypoints count only toward the overall score and do not affect *Leg* places.
- (d) For each *Pro-Am Race* a *Boat* shall have 3 points deducted from her overall score if, in the opinion of the race committee, she fails to make a reasonable attempt to comply with RRS 28.
- (e) A *Boat* that,
 - (i) starts a *Leg* or *In Port Race* and does not finish, (DNF), or
 - (ii) retires after finishing (RAF) a *Leg* or *In Port Race* but before the hearing of any protest against her,will score finish points equal to those that would have been gained by the last *Boat* to finish that race, had all the *Boats* that started that race finished.
- (f) Waypoint points acquired during a *Leg* prior to retirement (DNF), but not points for RAF, shall be counted.
- (g) A *Boat* that is disqualified from a *Leg* or *In Port Race*, (DSQ), or does not start a *Leg* or *In Port Race*, (DNS), will receive no points.
- (h) The overall *Race* winner will be the *Boat* with the most points. The others will be ranked accordingly.

6.2 TIES

When there is a tie on total points between two or more *Boats*, the tie will be broken in favour of the *Boat* with the most first places counting *Legs* and *In Port Races*, and, if the tie remains, the most second places, and so on. If after completing the procedures described above a tie still exists, it will be broken in favour of the *Boat* that has the highest place on the last *Leg*. Any ties still remaining shall be broken in favour of the *Boat* that has the highest place on the next-to-last race (*Leg* or *In Port race*) and so on until all ties are broken.

6.3 PRIZES AND TROPHIES

- (a) For each *Leg*, prizes or trophies will be awarded to the *Boats* placed first, second and third.
- (b) For each *In Port Race* a prize or trophy will be awarded to the *Boats* placed first, second and third.
- (c) For each *Pro-Am Race* a prize or trophy will be awarded to the *Boat* placed first.
- (d) *Boats* awarded first place in a *Leg* or *In Port Race*, and the *Boat* leading overall, will be presented with a flag or other indication of their achievement. These flags shall be flown in a prominent position while the mast is stepped.
- (e) Overall Race trophies will be awarded to the 3 *Boats* with the highest points.
- (f) A *Boat* that does not make every reasonable attempt to complete all *Legs* and *In Port Races* will be ineligible for an overall Race trophy, unless, in the view of the Organising Authority, it was reasonable for a *Boat*, not to have started or completed a *Leg* or *In Port Race*.
- (g) Prizes or trophies will also be given for:
 - (i) the longest Great Circle distance achieved in 24 hours, in each *Leg* and overall,
 - (ii) the *Boat* having the highest average speed between a location or gate off the New Zealand coast (to be detailed in the sailing instructions) and Cape Horn, (the Roaring Forties Trophy) and
 - (iii) a Communication Prize for each *Leg* and Overall.

Other trophies may be awarded at the discretion of the Organising Authority.

6.4 PRIZE GIVINGS

A prize giving will be held at each *Port*, except those *Ports* designated as a *Pit Stop*, normally within a week of the start of the subsequent *Leg*, to award prizes for the previous *Leg*. The final Prize Giving will be held shortly after the completion of the *Race*.

VOLVO OCEAN RACE ROUND THE WORLD 2008-2009**NOTICE OF RACE****PART 7: LIABILITY AND RESPONSIBILITY**

- (a) The Organising Authority's responsibilities in relation to *Participants*, *Crew Members*, *Participant Representatives* and *Persons in Charge* are set out in the race rules as may be amended from time to time. The Organising Authority shall have no liability to any other individual involved in the *Race* or to any other individual involved in any manner in the *Race* for negligence and shall not be responsible for any loss, damage, or injury of whatsoever kind, howsoever arising, (other than for death or personal injury caused by the negligence of the Organising Authority), misrepresentation, breach of duty or otherwise to the maximum extent permitted by Law.
- (b) The Organising Authority shall not be liable to any other party for any loss of profits, loss of revenue, or any incidental, indirect, consequential or special damages of any kind or nature arising under or relating to the Notice of Race, whether such liability is asserted on the basis of contract, tort (including negligence or strict liability) or otherwise, save where the same is caused by the other party's wilful misconduct, or that of its employees, sub-contractors or agents.
- (c) Insofar as any of the other exclusions of liability set out in this notice of race fail to exclude any liability the Organising Authority may have for injury, loss or damage suffered by any third party in respect of any activities undertaken by, or for the benefit of, any one *Participant*, such *Participant* shall indemnify the Organising Authority in respect of such liability and all costs and expenses attributable to such claim. *Participants* shall generally indemnify the Organising Authority for any loss or damage sustained by the Organising Authority as a result of *Participants'* breach of the race rules including without limitation those required by Part 3 of this Notice of Race.
- (d) *Participants* and any others involved with the *Race* shall be deemed to have notice of these exclusions and indemnities and shall not make any claims or bring any proceedings of any nature in relation to or arising out of the *Race* against anyone involved in the organisation or management of the *Race* other than the Organising Authority and against the Organising Authority only in accordance with the race rules. Without prejudice to the generality of the foregoing the benefit of all exclusions and indemnities in the race rules shall apply not only to the Organising Authority but also to the individual members of the Organising Committee and Race Committee and anyone else involved in the organisation or management of the *Race* from time to time and the term Organising Authority or Volvo (as the case may be) in the race rules shall be construed accordingly.
- (e) Acceptance of these exclusions of liability and provision of these indemnities shall be a condition of entering or participating in the *Race* and shall be effective as against *Participants* and any others involved with the *Race*. It is the responsibility of *Participants* entering the *Race* to ensure that the above provisions are brought to the attention of anyone involved with the *Participant* in connection with the *Race* including but not limited to team members and any others involved with the *Race*.
- (f) Force Majeure. The Organising Authority shall not be liable to any *Participant* and any others involved with the *Race* who have notice of the provisions of this Notice of Race for any actual or construed, loss or damage, costs, expenses or other claims for compensation arising as a direct or indirect result of any cause beyond the reasonable control of the Organising Authority including (without limitation) any act of God, war, military operations, terrorism, riot, accident, breakdown of plant or machinery, failure or shortage of power supplies, abnormally inclement weather, fire, flood, hurricane, drought, explosion, lightning, strike, lock out, trade dispute or labour disturbance, the act or omission of, or refusal of any licence or permit by any Government, national or international sailing authority, highway authority, public telecommunications operator or administrative or other competent national or international authority, or difficulty, delay or failure in provision, manufacture, production or supply by third parties of any information, goods or services.

VOLVO OCEAN RACE ROUND THE WORLD 2008-2009**NOTICE OF RACE****APPENDIX 1: ORGANISING AUTHORITY SUPPLIED EQUIPMENT****A1.1 PROPULSION AND AUXILIARY ENGINES**

- (a) **One Volvo Penta D2-75** and propeller mounted according to Volvo Open 70 Rule Version 2 Section 9.1.
- (b) **One Volvo Penta D1-30** auxiliary engine mounted according to Volvo Open 70 Rule Version 2 Section 9.2.
- (c) **One emergency starting device**, for the D2-75

A1.2 SAFETY EQUIPMENT

- (a) **Two 12-man life rafts** each containing a standard survival pack plus a Search and Rescue Transponder (SART), an EPIRB, a PUR 06 Hand held desalination unit and a hand held emergency VHF radio, mounted as per Volvo Open 70 Rule 2.6.

Dimensions: 1100mm x 650mm x 370mm
Approximate weight: 138kgs for each life raft

The life raft certificates shall be carried on board at all times whilst racing.

- (b) **Two Jonbuoy recovery modules** each containing a Personal Locator Beacon. These shall be mounted at the transom, facing outboard, one immediately on either side of the centre line and ready for immediate use. The use of remote activation lines, protected against accidental deployment, is advised.

Approximate weight: 7.5kgs each module

- (c) **A foam life buoy with drogue**, connected to a self-igniting 15-minute smoke unit and a separate light unit. They shall be mounted within reach of the helm and ready for instant use.

Approximate combined weight: 5.1kgs

- (d) **Two foam lifebuoys with drogues** and light units. These shall be stored down below. The light units shall be stored in the Emergency Equipment Locker.

Approximate total weight: 2kgs

- (e) **Flares**, consisting of,

12 red parachute flares to SOLAS Regulation 35
4 red hand flares to SOLAS Regulation 36
2 buoyant smoke units to SOLAS Regulation 37
4 white hand flares similar to SOLAS Regulation 36
6 white parachute illumination flares similar to SOLAS Regulation 35.

Half of each type shall be contained in each Grab Bag, to be stored in the Emergency Equipment Locker, except that 2 of the white hand flares shall be stored ready for immediate use within reach of the main companionway hatch.

Approximate total weight: 9.5kgs

A1.3 POSITION REPORTING EQUIPMENT

- (a) **Two battery powered satellite tracking beacons.** The units are similar in size and appearance to an EPIRB. The weight of each is approximately 1.6kgs. The working unit shall be mounted on the lifelines, stanchion or pulpit, within 1m of the transom. The spare unit shall be stored in the Emergency Equipment Locker.
- (b) **One EPIRB, with hydrostatic release,** mounted behind one of the aft support legs of the Large Satellite Voice and Data Antenna (See Volvo Open 70 Rule Version 2 Section 2.1.10). Approximate weight is 2.2kgs. Two additional EPIRBs will be pre-packed inside the supplied life rafts. All supplied EPIRBs will be registered by the Organising Authority.
- (c) **Three Search and Rescue Transponders, (SARTs).** One is to be stored in the Emergency Equipment Locker; the remaining two will be pre-packed in the life rafts.
- (d) **Two hand held dual frequency (121.5/123.1 MHz AM) VHF** sets for boat/aircraft communications. One radio shall be stored in each Grab Bag in the Emergency Equipment Locker. The approximate weight is 0.6 kg each.
- (e) **One Argos MAR VR beacon.** The MAR VR beacon is designed to be used for location of the yacht in the event of a capsized. Each unit comprises an antenna and a separate beacon. The beacon shall be attached to the hull or a bulkhead within 3m of a seacock / through hull valve. In the event of an inversion the aerial, which is custom made to fit the seacock, should be attached to the unit and passed through the seacock, allowing transmission through the upturned hull. This unit will transmit for 100 days. The total weight of the unit including antenna is 1 kg.

A1.4. SATELLITE COMMUNICATION AND MEDIA EQUIPMENT

(a) Large Satellite Voice and Data Antenna

The antenna shall be mounted as per Volvo Open 70 Rule Version 2 Section 2.2.10.

The main control unit shall be mounted on the reverse side of the Media Station back plate (Volvo Open 70 Rule Version 2 Section 8.3.2). The upper most edge of the unit shall be no more than 150mm below the local deck head.

The main control unit requires 24 volts DC supply and consumes approximately 40 watts receive and 150 watts transmit. A remote isolator switch, supplied, shall be mounted near the helmsman so that the transmission from the antenna can be shut off should a *Crew Member* need to go aft of the helm position while the antenna is transmitting. The associated red LED transmission indicator light, supplied, shall be mounted on the forward face of the antenna support structure in clear view of the isolator switch, and shall be wired as per the installation instructions.

Weights and Dimensions:

Array Unit incl. dome:	45kg, height 1047mm, diameter 925mm
Main Control Unit:	4kg, 380mm x 70mm x 373mm

Handset:	0.3kg, 56mm x 45mm x 215mm
Remote isolator switch:	0.8kg, approx.100mm x 100mm x 100mm
Distress Alarm Unit:	0.3kg, 228mm x 35mm x 90mm
Cable 0.238 kg/m:	approx. 2.3kg
Miscellaneous mounting equipment:	3kg
Approximate total weight:	55.7kg

Please note that the Large Satellite Voice and Data service will not be activated until the *Person in Charge* has signed and returned Satellite Antenna Safety Document to the Organising Authority. This form is available from the Organising Authority.

(b) **Small Satellite Voice and Data Antenna**

The antenna shall be mounted as per Volvo Open 70 Rule Version 2 Section 2.2.10.

The main control unit shall be mounted on the reverse side of the back plate of either the Media Station or the Navigation Station (Volvo Open 70 Rule 8.3.2). The upper most edge of the unit shall be no more than 200mm below the local deck head.

The minimum safe distance from the antenna while it is transmitting is 2 metres.

The main control unit requires 10-32 volts DC supply and consumes 15 watts during standby and 50 watts during transmission.

Weights and Dimensions:

Antenna Unit:	8kg, height 400mm, diameter 400mm
Control unit:	1.5kg, 310mm x 180mm x 80mm
Cables & misc. attachments:	approx. 1.6kg
Approximate total weight:	11.1kg

(c) **Two Inmarsat Standard C transceivers with antenna**

One Inmarsat Standard C is for positioning and data reporting and one is for text communication.

One Inmarsat Standard C antenna shall be mounted as described in Volvo Open 70 Rule Version 2 Section 2.2.10 and the below deck transceiver connected to the Data Computer (see below).

The other antenna shall be mounted on the port side of the *Boat* within 300mm of the transom and more than 500mm from the edge of the working deck measured from the vertical projection of the centre of the antenna. The antenna shall be mounted above the height of the lifelines. The antenna has a safe distance of 610mm and for maximum efficiency should be no closer than 1.0m to a vertical radiation obstruction (for example the stern aerial mast). *Boats* shall attach their own computer to the transceiver connected to this antenna. This shall be the primary means of text communication between the *Boats* and race headquarters. Software for this function will be provided.

The two below deck transceivers shall be mounted in separate watertight compartments and the mounting shall not restrict the use of the emergency functions on the transceiver units. If the compartment in which a transceiver is mounted becomes flooded, the equipment and any auxiliary equipment necessary to its function shall not be under water in calm conditions.

Weights and dimensions for each unit:

Antenna Unit:	1.10kg, 146mm x 163mm
Interconnection box	0.24kg, 22mm x 64mm x 117mm
Remote Alarm/Distress Box:	0.35kg, 50mm x 90mm x 90mm
Cable & misc. attachments:	1.0kg approx.
Approximate total weight (each unit):	2.7kg

(d) **Uninterrupted Power Supply (UPS)**

For the Inmarsat Standard C units.

A UPS shall be fitted between the *Boats* main battery power supply and each Inmarsat Standard C unit. This will ensure that if there is a loss of power from the *Boats* batteries the Inmarsat Standard C units will be able to run for at least one hour. The approximate weight of each UPS is 1kg.

(e) **Cameras, Microphones and Media Recording**

This system will consist of five cameras and microphones connected to a switching unit. The switching unit, cameras, microphones and recording devices may be controlled through any of the on board computers that are connected to the wired LAN provided with the media desk. An instant recording facility with retrospective recording will be provided. A remote control button (supplied) shall be located within reach of the helmsman to activate the retrospective recording. A headset and microphone for live video conferencing will be supplied. Hand-held camcorders will be supplied by the Organising Authority. A video connection breakout box (supplied) shall be positioned in close proximity to the main hatch.

The four above deck fixed cameras shall be positioned as per Volvo Open 70 Rule Version 2 Section 2.2.10(c), Section 6.1.2(d)(i) and (ii). Additionally one mini camera shall be mounted in the navigation station with a clear view of a person seated at the navigation station.

Microphones

- (i) The mast camera and navigation station camera will have associated microphones.
- (ii) One gun microphone shall be mounted internally on the deck head forward of the main hatch pointing out of the main hatch to pick up all ambient background noise.
- (iii) Two radio microphones in water resistant cases with the receiver built into the media desk.

All camera cables will be the same size and weight as Enhanced Cat 5 cable.

Weights and dimensions:

Cable & misc. attachments:	approx. 4kg
Navigation station camera	1.00kg.
Sound equipment:	1.0kg.
Video breakout box:	0.5Kg, approx. 120mm x 80mm x 60mm
Approximate total weight:	6.5kg.

The estimated power consumption is less than 40 watts when all in use.

(f) Media control equipment – Media Desk

The video capture, editing, compression and transmission system will be provided ready built and will be designed to fit inside the Media Station desk. The Media Station desk shall be formed by installing the carbon fibre chassis enclosure provided by the Organising Authority. The chassis will have external dimensions as described in the Volvo Open 70 Rule Version 2 Section 8.3.2. Drawings of the chassis are available from the Organising Authority.

The system will interface the on-board cameras to the Small and Large Satellite Voice and Data antennae, the microwave transmission system and the on board LAN. The system will comprise pre-built units, installed inside the media station desk, a laptop and media recorders, supplied with housings, that shall be located on the upper surface of the desk top plate (lid) and a video switching control unit and wireless access antenna that shall be located on the forward face of the back plate (see Volvo Open 70 Rule Version 2 Section 8.3.2). The first 400mm of the back plate, measured from the desk top plate, shall be kept clear to allow mounting the control unit, access antenna and miscellaneous equipment. The Small and Large Satellite Voice and Data Antenna handsets may be mounted in this 400mm.

Weights and dimensions:

Media Station (delivered pre built):	28 kg approx. (including chassis weight)
Video Switching Control Unit:	3.0kg, 260mm x 260mm x 75mm
Laptop Computer:	3.5 kg approx.
Media recorders in housing:	5.0kg, mounted on media desk lid
Wireless access antenna:	1.0kg each
Cable & misc. equipment:	10Kg approx.
Approximate total weight:	50.5 kg.

The estimated nominal power consumption is 25 Watts standby, 60 Watts when retrospective recording and 200 Watts maximum power consumption.

(g) Data Computer

A small self-contained computer, powered from the media desk, shall be connected to the onboard instruments, the Inmarsat Standard C position reporting transceiver and the Wave Height Sensor (described below). The cable to connect the Inmarsat Standard C to the data computer will be approximately 1.0m long. The following fully populated output NMEA sentences shall be provided by the *Boats* instrument system, from a single source, for input into the data computer with the format as detailed below.

Data Format: NMEA 0183 version 3.01
 Talker ID: Unrestricted
 Frequency: 1 HZ

Sentence: Containing:
 VHW True boat heading and boat speed in knots
 MWD True wind direction and boat speed in knots
 MTW Water temperature in degrees Celsius

Weights and Dimensions:

Computer:	1kg, 180mm x 140mm x 80mm (IP68 rated case)
Cable & misc. attachments:	1kg.
Approximate total weight:	2 kg.

The system runs on 12-24 volts and has a nominal average power consumption of 2 watts.

(h) **Wave Height Sensor**

The wave height sensor is a small self-contained computer interfaced to the Data Computer via a single connection. The enclosure shall be mounted on the centre line at or below the waterline, either on or immediately aft of the inside forward face of the main engine box (Volvo Open 70 Rule Version 2 Section 9.4.3). The unit has a cable exit at the top and requires 80mm clearance (bend radius). The unit will also measure on-board motion and heel.

Dimensions:	120mm x 120mm x 75mm
Weight:	1kg
Power consumption:	6 watts

(i) **Microwave Transceiver**

This system, predominantly used during *In Port Racing*, consists of a transceiver in a weatherproof housing connected to the video switching unit and to the Microwave Antenna (Volvo Open 70 Rule Version 2 Section 2.2.10 (a)(iii)). The transceiver, mounted in the aft watertight compartment, shall be connected to the antenna by no more than 5 meters of low loss cable. Any input to the video switching unit can be selected as the source for the microwave output.

Dimensions of transceiver box	420mm x 350mm x 240mm
Transceiver weight:	15kg
Power consumption:	up to 200 watts transmitting

(j) **Media Equipment Weight**

The exact final weight of media equipment is not yet known. For the purposes of Measurement Afloat (Volvo Open 70 Rule 4), the total weight of media equipment provided will be no more than 170kg and any shortfall may be made up by a corrector weight provided by the Organising Authority. Syndicates may apply to the Organising Authority to use any spare weight to carry additional media equipment. This will not include the normal hand held video and still cameras and audio equipment the *Boat* shall carry. The Organising Authority will be the sole arbiter of what constitutes media equipment and the weights of any equipment.

A1.5. 121.5 MHZ PERSONAL LOCATOR BEACONS AND DIRECTION FINDER

15 Personal Locator Beacons (PLB's) and a personal locator beacon direction finder. The direction finder shall be mounted immediately under the platform on the stern aerial mast on the opposite side to the camera. Persons in Charge shall demonstrate that the installation works satisfactorily through an arc from 70 degrees to port to 70 degrees to starboard through the bow.

Weight:	approx. 1.5kgs
Dimensions:	to be established

A1.6. PERSONAL MAN OVERBOARD ALARM SYSTEM

A man overboard alarm system that operates via Sonar and 4 personal identity beacons (id-pods) per *Crew Member* plus spares. The id-pods shall be permanently mounted on each *Crew Members* foul weather jacket, foul weather trousers and constant wear survival suit in

a location that will be constantly underwater should a *Crew Member* fall overboard wearing that item of clothing. The forth unit is recommended to be worn at all times when not wearing foul weather clothing. Drawings of the id-pods will be available from the Organising Authority. The receiver, similar in dimension to a through hull depth transducer fitting, shall be fitted aft of the main engine and forward of the aft bulkhead in a location where it is most likely to remain in contact with the sea. The alarm display head shall be mounted on deck in clear view of the main cockpit and shall be connected to the *Boats* permanently mounted GPS unit. When the system is activated it records the location of the activation on the *Boats* GPS unit.

Ongoing development of this product is expected and should a tracking variant be available and tested before the equipment delivery time, this will be substituted for the above system. To facilitate accurate detection of the id-pod it is believed the tracking system will incorporate two through hull transducers to allow triangulation. The alarm display head may become larger to allow for direction indication as well as the man overboard alert.

id-pod (expected to be) approx.	100mm x 40mm x 8mm
id-pod weight, (expected to be)	<100 grams

A1.7. MEDICAL KIT

The medical kit will be contained in three waterproof Pelican cases, two large and one small. There will also be a splint. The large cases, including contents and the splint shall be stored in the Emergency Equipment Locker.

Large case dimensions:	616mm x 494mm x 220 mm
Weight:	approx. 25kgs each
Small case dimensions:	486mm x 392mm x 192 mm
Weight:	approx. 12kgs

A1.8 CAMERAS

(a) Two hand held video cameras and two digital stills camera as follows:

- (i) Video Camera 1 - To be advised
- (ii) Video Camera 2 - To be advised
- (iii) Stills Camera 1 - To be advised
- (iv) Stills Camera 2 - To be advised

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APPENDIX 2: SAFETY REGULATIONS AND NON-SUPPLIED EQUIPMENT REQUIREMENTS

A2.1 RESPONSIBILITY OF PERSON IN CHARGE

- (a) The safety of the *Boat* and the persons on board is the sole and inescapable responsibility of the *Person in Charge* who must take suitable measures to ensure that the *Boat* is fully found, thoroughly seaworthy and manned by an experienced crew who are physically fit to face the extremely bad weather and severe conditions likely to be encountered in the Race. The *Person in Charge* must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. The *Person in Charge* must ensure that all safety equipment is properly maintained and stowed and that the persons on board know where it is kept and how it is to be used.
- (b) The *Person in Charge* is to ensure that current written emergency instructions are clearly displayed onboard and comprehensively understood by all persons on board to cover the following: man overboard, fire, recovery from capsize, collision/flooding response, chain of command, response to piracy attack, helicopter transfer, boat transfer, abandonment of the vessel.

A2.2 GENERAL REQUIREMENTS

- (a) All equipment shall function properly, be regularly checked, cleaned and serviced and when not in use, be stowed on board in conditions in which deterioration is minimised. It shall also be readily accessible and ready for immediate use and be of a type size and capacity suitable and adequate for the intended use and size of the *Boat*.
- (b) All heavy items including but not limited to internal ballast and fittings (such as batteries, stoves, gas bottles, tanks, engines, outboard motors, sewing machines, etc.) and anchors, chain and rode shall be securely fastened so as to remain in position should the *Boat* be fully inverted 180 degrees.

A2.3 SAFETY EQUIPMENT MINIMUM REQUIREMENTS

- (1) **Anchors and cables:** Two anchors having a combined weight of not less than 54kgs and, 60kgs of 13mm galvanised chain and 80 metres of 18mm nylon warp shall be on board.
- (2) **Boat righting instructions:** written instructions prominently and clearly displayed supplied by the designer and outlining the designers recommendations on how to right the *Boat* after a capsize. All persons on board shall have a thorough knowledge of righting procedures and be practised in their implementation.
- (3) **Buckets:** Two buckets of stout construction each with at least 9 litres capacity. Each bucket is to have a lanyard.
- (4) **Charts:** Appropriate for the course to be sailed and not solely electronic, as well as a light list and plotting equipment.
- (5) **Compasses:** Two marine magnetic compasses, independent of any power supply, at least one of which shall be permanently installed and correctly adjusted with deviation card.

- (6) **Cyalume light sticks:** Five per grab bag.
- (7) **Desalination Units:** Two (additional to the one stowed in each life raft) hand desalination units, one of which shall be capable of desalinating 100 litres per day. This unit shall have an ergonomically sound mounting to facilitate routine water production in the event of a failure in the motor driven desalination units. The second unit shall be capable of desalinating 25 litres of water per day. Both shall be stored in the Emergency Equipment Locker.
- (8) **Echo sounder**
- (9) **Emergency drinking water:** 50 litres of water for emergency use in at least two dedicated portable containers.
- (10) **Fire extinguishers:** Three, each of 2kgs minimum weight of dry powder or equivalent, readily accessible in suitable and different parts of the *Boat*. Additionally, at least one **fire blanket** shall be stowed close to the galley ready for immediate use.
- (11) **Flashlights:** One watertight flashlight, with spare batteries and bulbs, shall be stored in each of the 2 Grab Bags. At least one high intensity spotlight powered by the ships main power supply and suitable for signalling.
- (12) **Flashlights and Strobes (personal):** A watertight flashlight for each *Crew Member* on board and high intensity strobe lights for 150% of the number of *Crew Members* on board, both with spare batteries. The high intensity Strobe lights shall be attached to, or carried on, the person when on deck at night.
- (13) **Foghorn**
- (14) **Fuel:** The emergency fuel tank (Volvo Open 70 Rule 4.3.3(c)), shall be full. *Boats* may carry one portable fuel container, meeting recognised specifications, which shall have a maximum capacity of 5 litres.
- (15) **Full foul weather clothing with hood,** at least one set for each person on board. For all foul weather gear carried on board, the hood, shoulders and arms shall have retro reflective patches and at least 50% of the combined area shall be a bright colour: Orange, yellow, pink or red are recommended; blue, green and white are not permitted as bright colours.
- (16) **Global Positioning Systems:** One GPS unit permanently mounted and two waterproof hand-held units with spare batteries stored one in each of the two Grab Bags. A remote man overboard button shall be installed in close proximity to all helm positions and connected to a permanently mounted GPS unit.
- (17) **Grab Bags:** Two waterproof, buoyant grab bags, stored in the Emergency Equipment Locker.
- (18) **Heaving line:** 15 to 25 metres in length readily accessible from the cockpit. (The 'throwing sock' is recommended by the ORC).
- (19) **Knife:** One for each person on board. It is recommended to be carried at all times by all *Crew Members*.
- (20) **Life raft documentation,** including:
 - (a) Instructions for on board maintenance of life-saving appliances.

- (b) A copy of “Life-saving signals and rescue methods, SOLAS No 1” prominently displayed below decks.
 - (c) A life-saving training manual.
- (21) **Marine grade retro-reflective material:** fitted to life buoys, life-slings, life jackets, safety harness and the hood, shoulders and upper arms of all foul weather clothing.
- (22) **Name of the boat** on miscellaneous buoyant equipment, such as life jackets, oars, cushions, life buoys and life-slings, etc.
- (23) **Navigation lights:** Reserve navigation lights having the same minimum specifications as in Volvo Open 70 Rule Version 2 Section 2.2.8, with a separate power source and wiring from that used for the normal navigation lights. Spare bulbs or equivalent for all navigation lights shall also be carried.
- (24) **Radar:** The *Boats* radar shall have a power output of not less than 4 kilowatts PEP and be ready for immediate operation. The radar shall be mounted on the front of the mast and in such a way that it remains level at normal angles of heel. No part of the radar casing or base, when the mast is vertical, shall be less than 5.5m above the Reference Point Mid Lower (RPL), (Volvo Open 70 Rule Version 2 Section 3.2.3(c)), in measurement condition. The rotating scanner array shall have a maximum dimension not less than 533mm (21 inches).
- (25) **Radar reflector:** Non electric / electronic radar reflector having a documented 'equivalent echoing area' of not less than 10m². Attention is drawn to ISO 8729, marine radar reflectors.
- (26) **Sextant:** With suitable tables and accurate timepiece.
- (27) **Soft wood plugs:** Tapered and of the appropriate size, attached adjacent to the appropriate fitting for every through-hull opening.
- (28) **Speedometer:** Or distance measuring instrument (log).
- (29) **Stowage chart:** Durable and prominently displayed clearly showing the locations of the principal items of safety equipment.
- (30) **Swimmer Of The Watch Bag:** A bag, stored ready for immediate use within reach of the main companionway hatch, to facilitate the recovery of a man overboard by a swimmer of the watch and containing a minimum of;
- (i) at least 50 metres of buoyant 8mm rope,
 - (ii) a pair of swim fins,
 - (iii) the semi-automatic life jacket (see A2.4 below) and
 - (iv) suitable clothing to effect a man overboard recovery in cold water.
- (31) **Tools and spare parts:** including adequate means to disconnect or sever the standing rigging from the hull.
- (32) **Portable satellite telephone and spare battery,** to be carried in one of the grab bags located in the Emergency Equipment Locker.
- (33) **Emergency hydraulic oil.** 30 litres of hydraulic oil. Sealed as per NOR 3.9(a).
- (34) **Active radar transponder** – an active radar transponder that operates in the X-band, fitted so as not to affect the function of the radar.

A2.4 LIFE JACKET, HARNESS AND SURVIVAL SUIT MINIMUM REQUIREMENTS

1. Life jackets shall be provided for each person on board with one spare. All shall be inflatable and provide not less than 150 N of buoyancy and be fitted with a crutch strap, arranged so that an unconscious person will be securely suspended face upward at approximately 45 degrees to the water surface. The spare jacket shall be fitted for semi-automatic inflation and may be included in the contents of the swimmer of the watch bag. The remaining life jackets shall be fitted for fully automatic inflation. Spare inflation cylinders and actuating devices shall be carried for 30%, rounded up, of the full outfit. All life jackets shall be fitted with a splashguard, a whistle, light, name of boat and reflective tape. Inflatable life jackets shall be checked annually for air retention. The lifejacket light shall meet SOLAS International Life-Saving Appliance (LSA) Code 2.2.3.

Life jackets that meet EN 396 Standard or equivalent, fitted with a crutch strap, reflective tape and automatic inflation will be accepted as meeting the above requirement.

Persons on board may be of a size and choose to wear clothing that makes a 150 N life jacket less than ideal, in which case it is strongly recommended that they use 275 N life jackets with splashguard that comply with EN 399.

2. Safety harnesses: with fitted crutch strap, safety tether line and retro-reflective tape, for each person on board plus a spare. **Attention is drawn to ISO 12401.** Each *Boat* will be required to demonstrate that two-thirds of the persons on board can be adequately attached to strong points on the *Boat*. Safety tether lines shall have a snap hook at each end that can be readily opened whilst under load. It is possible for a plain snap hook 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 snap hooks shall have a positive locking device.**

A safety harness meeting British Standard 4224 / EN 1095 or equivalent fitted with a crutch strap meets the above requirement.

Additionally, extra safety tether lines shall be carried for not less than 30% of the persons on board.

NOTE: COMBINED LIFEJACKET AND HARNESSES THAT COMPLY WITH ALL OF THE ABOVE STANDARDS ARE PERMITTED. THE DILIGENT USE OF A PROPERLY ADJUSTED HARNESS IS REGARDED AS BY FAR THE MOST EFFECTIVE WAY OF PREVENTING MAN OVERBOARD INCIDENTS.

3. Constant wear survival suit: One for each person who intends to be on board for more than the first or last 12 hours of a *Leg*, designed to be routinely worn in anticipation of accidental immersion in cold water, but permitting physical activity by the wearer to such an extent that normal duties may be undertaken without undue encumbrance. The suit shall generally comply with the following specifications.

- (a) The constant wear survival suit shall be sufficiently durable to withstand regular and continuous wearing by persons on board over the duration of the Race and designed in such a way as to minimize the risk of snagging.
- (b) If any part of the suit relies upon air or gas inflation in order to achieve the performance levels set out within this standard then each part of the assembly namely: oral inflation tubes, inflation operating head, the gas cylinder, and the inflatable buoyancy chamber shall all meet the requirements of EN 399.

- (c) The coloured portions of the suit exposed above the water surface, when the wearer is in the water, should predominantly be a bright colour such as yellow, orange or bright red (not green, white or blue), excluding such components as webbing zips and other fittings.
- (d) A total area of not less than 400cm² of retro-reflective material shall be provided. At least 100cm² of which shall be affixed to the hood and at least 250cm² shall be clear of the water and visible in the suit's normal in-water position. At least one piece of 50cm² shall be affixed to the back of the suit so as to be visible when the wearer is floating in the face down position.
- (e) A person wearing the suit shall be able to walk easily, climb freely and jump vertically into water from a height of not less than 4.5m without any damage to the suit or injury to the person. It shall not prevent the wearer from having a good field of vision.
- (f) The wearer shall be able to secure any secondary suit closures** (if fitted) within 2 minutes of entering the water.
- (g) A person wearing the suit system correctly donned, shall be able to swim and to board a platform 250mm above the sea level.
- (h) A person wearing the suit system correctly donned, both the primary* and secondary closure** systems closed (if fitted), and wearing an inflated 150 N Lifejacket, shall naturally adopt a face up position in the water.
- (i) The suit shall incorporate a cover that can be placed in front of the face of the wearer in order to reduce or eliminate surface spray from entering the airways.
- (j) The suit may incorporate additional items, such as safety harnesses or safety tether lines, whistles, light and buddy lines, none of which shall impair its performance with respect to the requirements, either by their presence or their use, and, then they shall comply with EN 394.

*Primary suit closure: Any closure used in the donning of the suit for normal purposes.

**Secondary suit closure: Any additional closure that may be operated by the wearer in the water.

A2.5 COMMUNICATIONS EQUIPMENT

- (a) The following communications equipment is required:
 - (i) A GMDSS marine HF radio transmitter covering the band 1.6 to 27.5MHz and receiver covering the band 500KHz to 29.999 MHz with a minimum PEP of 125 watts and with digital selective calling. This equipment shall meet Class E specification.
 - (ii) A suitable and effective HF antenna and earth plane shall be fitted.
 - (iii) An emergency HF whip antenna not less than 2.7m in length with a suitable mounting point.
 - (iv) A GMDSS marine VHF radio transmitter/receiver with a minimum PEP of 25 watts and digital selective calling covering all International and USA marine channels. This equipment shall meet Class D specification.
 - (v) A main masthead mounted VHF antenna (of unity gain or better) using RG213 co-axial cable from masthead antenna to VHF receiver.

- (vi) An emergency VHF antenna independent of the main mast, which shall be stored in the Emergency Equipment Locker.
- (vii) A waterproof hand held marine VHF radio transmitter/receiver with a minimum PEP of 5 watts covering all International and USA marine channels. The radio with three battery packs shall be stowed ready for immediate use.

(b) Installation

The HF and the VHF shall be mounted in such a way that if the compartment in which they are located becomes flooded, the equipment and any auxiliary equipment necessary for it to function, will not be under water (or if under water shall function normally) in still conditions.

(c) Approvals and Licence

- (i) All radio equipment carried must be approved by the *Boat's* national authority to meet the standards prescribed in the International Telecommunications Union (ITU) regulations and must be properly installed.
- (ii) A station licence as described in Article 24 of the ITU regulations must be held.

A2.6 COMPUTER

A computer, running a Windows operating system, is required for Inmarsat Standard C text-based communication between the *Boat* and race headquarters. This computer may be used for other purposes.

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APPENDIX 3: EQUIPMENT THAT MAY BE REMOVED DURING IN PORT AND PRO-AM RACES

Equipment from Appendix 1

A1.2 Safety Equipment

- (a) **Two 12-man life rafts** each containing a standard survival pack plus a Search and Rescue Transponder (SART), an EPIRB, a PUR 06 Hand held desalination unit and a hand held emergency VHF radio.
- (d) **Two foam lifebuoys with drogues** and light units.
- (e) **Flares**

A1.3 Position Reporting Equipment

- (a) **Two Battery Operated Satellite Tracking Beacons.**
- (c) **Three Search and Rescue Transponders.**
Note:- two are pre-packed in the life rafts – See A 1.2 (a) above
- (d) **Two hand held single frequency (121.5 MHz AM) VHF** sets for boat/aircraft communications

A1.5. Personal Locator Beacons and Direction Finder

15 Personal Locator Beacons (PLB's)

Note: - The direction finding antenna and wiring shall not be removed.

A1.7. Medical Kit

The two large cases, including contents, and the splint. The small case and contents shall be on board for *In Port and Pro-Am Races*.

A1.8 CAMERAS

Note: - Only hand held video and stills cameras may be removed.

Equipment from Appendix 2

A2.3 SAFETY EQUIPMENT

- 6) **Cyalume light sticks.**
- 7) **Desalination Units:** Two (additional to the one stowed in each life raft) hand desalination units.
- 9) **Emergency drinking water.**
- 11) **Flashlights.**

- 12) **Flashlights and strobes (personal).**
- 16) **Global Positioning System.**
Note: - Only the two waterproof hand-held GPS units and spare batteries.
- 17) **Grab Bags**
- 20) **Life raft documentation**, including:
 - (a) Instructions for on board maintenance of life-saving appliances.
 - (c) A life-saving training manual.
- 24) **Radar** including all associated brackets, casing and base as well as the associated wiring which would be removed with the mast and which is included in the measurement of MWT (see Volvo Open 70 Rule Version 2 Section 6.1.2).
- 25) **Radar reflector**
- 26) **Sextant:** With suitable tables and accurate timepiece.
- 32) **Portable satellite telephone and spare battery.**
- 33) **Emergency hydraulic oil.**
- 34) **Active radar transponder.**

A2.4 SURVIVAL SUITS

3. Constant wear survival suits.

A2.5 COMMUNICATIONS EQUIPMENT

- (a)
 - (iii) An emergency HF whip antenna not less than 2.7m in length with a suitable mounting point.
 - (vi) An emergency VHF antenna independent of the main mast, which shall be stored in the Emergency Equipment Locker.

Equipment from the Volvo Open 70 Rule

- 10) **Emergency Steering System** all equipment relating to the Emergency Steering System not required onboard when in Measurement Afloat Condition.