INTERNATIONAL SOTO 40 – OD CLASS RULES 2011

INDEX

INTRODUCTION

The Soto 40-OD is a One Design Class of fast, monohull keelboats for high quality level racing, created to enhance and maintain equality above all boats, where the ability of crews is the determining factor.

The intention of these International Soto 40-OD **Class Rules** is to ensure the boats are as identical as possible with regard to: performance, construction, hull shape, hull appendages, weight, weight distribution, equipment, rigging and sail plan. Therefore, coring, drilling out, rebuilding, replacement of material, grinding or relocating standard equipment, fairing interior or exterior parts of hull, hull appendages or rig that improves moments of inertia, or changes the standard shapes or contours shall be prohibited.

To achieve these goals and keep the cost of the boat under control, the International Soto 40-OD Class Association publish these **Class Rules**.

Only International Soto 40-OD sails may be manufactured by optional sailmakers, and electronic instrumental may be provided by optional suppliers, as long as they comply with these **class** rules. The rest of the equipment shall be the standard and original provided by the official builder (or its approved suppliers) and is not subject to the choice of the owners.

Hulls, hull appendages and rigging shall only be manufactured by the official licensed builders approved by the International S40-OD Class Association, following the requirements and specifications from the Designer.

The compliance of these Class Rules is mandatory for ALL the boats competing at the official SOTO 40-OD events or at those events competing as an independent **class**.

These are Closed Class Rules. Anything that is not expressly permited by the Soto 40-OD Class Rules is prohibited.

NOTE: This Class Rule will go to ISAF for approval. ISAF might require changes. These will be communicated and if required brought up for approval by the Class Members.

PART I – ADMINISTRATION

SECCIÓN A - GENERAL

A.1 LANGUAGE

A.1.1 The official language of the **class** is English, and in case of dispute over translation the English text shall prevail.

A.1.2 The word “shall” is mandatory and the word “may” denotes permissive.

A.2 ABREVIATIONS

A.2.1

ISAF	Internacional Sailing Federation
MNA	Member Nacional Authority
ICA	Internacional S40-OD Class Association
RCA	Regional Class Association
ERS	Equipment Rules of Sailing
RRS	Racing Rules of Sailing
OSR	Offshore Special Regulations
S40-OD	International Soto 40 One Design Class

A.3 AUTHORITIES

A.3.1 The international authority of the **class** is the ISAF, which shall co-operate with the ICA in all matters concerning these **Class Rules**.

A.3.2 In accordance with the S40-OD Class Bylaws, the Executive Committee is the maximum authority of the **class**.

A.4 ADMINISTRATION OF THE CLASS

A.4.1 ISAF has delegated its administrative functions of the **class** to Asociación Internacional de la Clase S40-OD (ICA).

A.4.2 The ICA may delegate part of its functions to a RCA.

A.4.3 The Management Group (MG) is the **class** executive body and it will be composed by:

(a) Two members of the Executive Committee
(one of whom should be the **class** vice-president, who will be the MG president)

(b) A representative of Studio Soto-Acebal (the designer)

(c) A representative of the builder-s

(d) A representative of World Sailing Management and

(e) Two external consultants (technical advisers), appointed by the Executive Committee

A.4.4 The MG shall appoint the **class** Chief Measurer.

A.4.4.1 Boats shall be measured only by **class** Measurers appointed by the **class** Chief Measurer and approved by the MG.

A.4.5 Events of special interest for the S40-OD **class** or big regional fleets may alter these **Class Rules**, provided that they not alter the technical specifications of the boat.

These changes shall be subject to the written approval of the MG.

A.5 ISAF RULES

A.5.1 These **class rules** shall be read in conjunction with the ERS.

A.5.2 Except where used in headings, when a term is printed in "**bold**" the definition in the ERS applies and when a term is printed in "*italics"* the definition in the RRS applies.

A.6 CLASS RULES VARIATIONS

A.6.1 At **class** events – see RRS 88.1.d) – ISAF Regulation 26.5(f) applies. At all other events RRS 86 applies

A.7 CLASS RULES AMENDMENTS

A.7.1 All the changes to the **Class Rules** shall be proposed by the MG. The Executive Committee only can veto them by unanimously consent of all the members, and after accepted by the special majority of the **class** members, according to what is written on the **class** bylaws.

A.7.2 Amendments to these **class rules** are subject to the approval of the ISAF in accordance with the agreement between the S40-OD **class** and the ISAF.

A.8 CLASS RULES INTERPRETATION

A.8.1 Interpretation of **class rules** shall be made in accordance with the ISAF Regulations.

A.9 INTERNATIONAL CLASS FEE AND ISAF BUILDING PLAQUE

A.9.1 The licensed hull builder shall pay the International Class Fee.

A.9.2 ISAF, after having received the International Class Fee for the hull, send the ISAF Building Plaque to the licensed hull builder. ISAF plaques were issued from boat number 0XX onwards.

A.10 SAIL LETTERS & SAIL NUMBERS

A.10.1 Sail letters shall correspond to the letters of the MNA where the boat belongs to. Sail numbers shall correspond to the identification hull number.

A.11 MEASUREMENT CERTIFICATE

A.11.1 A measurement certificate shall be issued by the **class** Chief Measurer, after receiving proof of payment of the fee and the documentation of the measurer that shall contain, in addition to all measures taken, the following information:

(a) Sail number

(b) Owner / Member of the **class**

(c) Name of the boat

(d) Identification number of the building plaque

(e) Date of issue of initial certificate

(f) Date of issue of certificate

(g) Builder details

(h) Rig manufacturer details

(I) Measurer identification

A.11.2 The measurement certificate must be signed by the Chief Measurer and the president of the MG to be valid.

A.11.3 The measurement certificate is unique per boat and a boat shall have only one measurement certificate at the same time. A copy of it shall be on board while racing.

A.11.4 The **class** will establish a fee for the emission of the measurement certificate

A.11.5 The maximum number of certificates issued to a boat per calendar year will be 1 (one).

Nonetheless, this number may increase as a result of a repair/breakdown, a re-measurement at the discretion of the MG or as a result of an inspection as specified in these rules.

An Owner is entitled to apply for a single annual review of the official weight. In case of changes to the information contained in the CM of the boat, a new certificate will be issued, upon payment of the corresponding fee set by the **class**.

A.11.6 The measurement certificate shall comply with the format in appendix 13 (Measurement Certificate)
A copy of anyone must be supplied to any owner who requests it. The **class** may establish a fee for this service.

A.11.7 The MG reserves the right to invalidate a certificate and will be executed if an owner or chartered has the clear intention of going against the spirit of these **class** rules.

This decision does not entitle the owner or the chartered to any claim.

A.11.8 A measurer shall inform to the Chief Measurer about any anomalies or deficiencies found during the measurement or inspection of a boat. The Chief Measurer in conjunction with the MG may invalidate the Measurement Certificate.

A.12 INITIAL CERTIFICATE

A.12.1 A boat shall meet the following requirements prior to receive its first measurement certificate:

(a) The builder shall submit to the MG the Building Compliance Certificate (BCC) and the Rigging Conformity Certificate (RCA).

(b) The measurer shall complete the measurement form.

(c) The documentation and proof of payment of the fee set by the **class** is sent to the Chief Measurer.

A.12.2 Upon receipt of all documents in a satisfactory manner, the Chief Measurer may issue the original certificate Measurement.

A.13 VALIDITY OF CERTIFICATE

A.13.1 A S40-OD certificate will be invalid or may be withdrawn by the MG if any of the following circumstances occurs:

(a) Date of expiry. As a general rule on 31 December of the year, except for those provisional certificates that will have the duration specified on the certificate.

(b) Change of owner / loss of membership in the **class**.

(c) Any modification or change on the boat, in whole or in parts, including the addition or subtraction of any party, which could alter the nature of the **class**, or could be considered as an improvement in performance, without written permission of the MG.

(d) Any significant repair or replacement of the hull, keel, rudder or rigging, without written permission of the MG.

(e) If an owner has a clear intention to go against the spirit of this rule, the MG may withdraw the measurement certificate of his boat.

(f) The measurer, in conjunction with the MG may withdraw a measurement certificate when it detects any defect or failure during the measurement or inspection of a boat.

(g) The issue of a new certificate.

A.14 RENEWAL OF CERTIFICATE

A.14.1 Once a certificate has expired, the owner must send to the Chief Measurer a renewal application (appendix 17 General Application), together with the corresponding proof of payment of the fee set by the **class**.

A new certificate will be issued when the Chief Measurer is satisfied that the boat has not undergone any change and still satisfies the **class** rules.

A.14.2 In case of change of ownership the new owner must send a renewal application, together with the corresponding proof of payment of the fee set by the **class**.

A new certificate will be issued when the Chief Measurer is satisfied that the boat has not undergone any change and still satisfies the **class** rules.

A.14.3 If due the annual review of the official weight (see F.3) any of the parameters of the certificate changes, the owner must send to the Chief Measurer a renewal application, along with the documentation from the measurer concerning the changes done/observed on the boat, with the corresponding proof of payment of the fee if so set by the **class**.

A new certificate will be issued when the Chief Measurer is satisfied, according to the information received, that the boat complies with the **class** rules.

A.15 RECORD OF MEASUREMENT

A.15.1 The Chief Measurer and the measurer involved in the measurement of a boat shall retain all documents relating the measurements made for the issue of a certificate.

SECTION B – BOAT ELEGIBILITY

B.1 CLASS RULES

B.1.1 No boat may be considered as a SOTO 40 One Design (S40-OD) or participate in a S40-OD **class** event unless it meets the following requirements:

(a) The S40-OD **class** bylaws, the S40-OD **class** rules and Interpretations and has a valid measurement certificate on board while racing.

(b) She is owned by a member of the International Soto 40 One Design Class, and up to date of payment of **class** fee established by the Executive Committee. This fee must be paid by each owner for each boat he owns.

(c) She is leased and the chartered is aware of the obligations contained in the S40-OD **class** bylaws and the S40-OD **class** rules, and has paid the fee of the **class** referred to in B.1.1 (b). The payment of this fee does not entitle the chartered to be considered a member of the **class** on the terms described at the S40-OD **class** bylaws.

B.2 PROTECTION OF THE CLASS

B.2.1 Each boat shall have a unique identification number that will correspond with the serial number corresponding to its construction order, starting at 001.This serial number must appear on the building plate, which shall be placed in the following positions:

(a) on the hull, it shall be located on the port side of the cockpit, in the stern,

(b) on the mast, it shall be located on the starboard side next to the bar of the mast jack,

(c) on the boom, it shall be located close to the "E" measurement band, and

(d) on the bowsprit, it shall be located on the starboard side.

B.2.2 The serial number has the following format (**class** name and serial number):

- S40OD-001, S40OD-002, S40OD-003, and so on.

In case of replacement of equipment (mast, boom or bowsprit) the suffix "R" will be added, followed by the number of replacement:

- S40OD-001**R1**, S40OD-002**R1**, S40OD-002**R2**, and so on.

B.2.3 In order to identify the boat during a race, the last two digits of its serial number, 80 cm high and of a contrasting colour, shall be displayed on the front of hull as far forward as possible.

B.2.4 The **class** logo will be placed on the floor of the cockpit, aft and centreed with the centreline.

B.2.5 The mainsail shall bear the **class** logo in contrasting colour on both sides of the sail. The colour combination, size and position are described in appendix 11 (Class Logo)

B.2.6 Sails shall carry the **class** measurement sticker (appendix 12 Measurement Sticker) and the **class** declaration sticker for the year of declaration.

PART II – REQUIREMENTS AND LIMITATIONS

The crew and the boat shall comply with the rules in Part II when racing. In case of conflict Section C shall prevail.

The rules in Part II are **closed class rules; anything not expressly permitted by these rules is prohibited.**

Measurements, measurement checks and inspections of equipment shall be carried out in accordance with the ERS except where otherwise specified in these rules.

SECTION C - CONDITIONS FOR RACING

C.1 GENERAL

C.1.1 Rules:

(a) ERS - Equipment Rules of Sailing

(b) RRS - Racing Rules of Sailing

(c) OSR - Offshore Special Regulations, changed as indicated on C.5.1.2

(d) Soto 40-OD **class** bylaws

C.1.2 Alterations of the Rules of C.1.1:

In alteration to RRS 42:

(a) The race committee may signal that pumping is permitted when after the starting signal a **boat** is sailing a course where the spinnaker could be hoisted and filled (change of RRS 42.2.a). The signals will be made according to RRS P5.

(b) The race committee shall state in the sailing instructions the minimum wind speed limit to implement Rule C.1.2.a. The S40-OD **class** recommends either no limit or a limit between 10 and 13 knots .

(c) Add 42.3(i): A **boat**'**s crew** may pump the mainsail repeatedly to release one or more inverted battens (change of RRS 42.3)

C.2 CREW AND HELMSMAN

C.2.1 CREW: For the purpose of regulating the composition of any **class** S40-OD crew, it shall be composed for members of Group 1 of the ISAF Sailors Classification Code. However, as unique exception, it will be accepted that any crew can include up to a maximum amount of 5 (five) crew **class**ified in Group 3, of the ISAF Sailors' Classification Code.

Nonetheless RCA's previous authorization of the MG, may establish different criteria.

C.2.2 HELMSMAN: Prior to any race or **class** event all the helmsman shall complete the Acceptance Class Form (appendix 14) which will be sent to the Management Group (MG) for approval.

It may not be helmsman in a S40-OD boat who in the past 10 years:

(a) Has been crew in an America's Cup boat, or

(b) has raced in Olympic competition, or

(c) has been crew in a Volvo Ocean Race boat.

C.2.3 CREW DECLARATION. Prior to any race or **class** event the boat representative shall complete the Sails & Crew Declaration Form (appendix 15), which will be presented at the race office of the event.

It is not allowed to alter the number of crew declared during an event.

C.2.4 CREW WEIGHT

NOTE: It is clearly recognized the effect of the weight of the crew on the boat speed. The owner is responsible for promoting a program of healthy crew weight.

(a) The maximum crew weight shall be 770 kg, including the captain and the helmsman. The crew, when doing a weight control, must wear at least shorts and t-shirts as those used by them when racing.

(b) For the weighing the organization of a S40-OD **class** event will use a calibrated scale that will be provided by the organizer or by the S40–OD **class**.

(c) The crew weight should be taken with one decimal of kg.

(d) Crews will be weighed before the first race of the event, and those that have complied with this rule are not subject to protest.

(e) There will be only one official weight control per boat.

C.2.5 CREW REPLACEMENT

C.2.5.1 It is allowed the replacement of crew, as long as they meet the criteria set out in section C.2.

C.2.5.2 It is not allowed crew changes after the first preparation signal for the day racing, except in case of a crew member accident which should be removed from the boat. In that case the replacement will be allowed after notifying the race committee. The crew replaced will be weighed as soon as possible and the new crew weight may not exceed those outlined in paragraph C.2.4 (a).

C.3 PERSONAL EQUIPMENT

C.3.1 Personal equipment shall comply with the minimum standard ISAF OSR Category 4.

C.4 ADVERTISING

C.4.1 It is permitted in accordance with Category C of the ISAF Advertising Code, restricted to the following:

The individual publicity of a boat will be free except that the following areas of the boat should be reserved for possible use by the organizing authority of the races:

- 25% of the front on both sides of the hull
- The bowsprit
- 25% of the aft part of the boom (both sides)
- Two areas of 20 x 50cm on the transom
- Two areas of 40 x 60cm on the sides of the cockpit
- Thee top side of the tiller or the pedestals of the steering wheels
- Two spaces of 200 x 30cm between the BAS mark and the first spreader

C.5 PORTABLE EQUIPMENT

C.5.1 The boat shall be equipped with the minimum standard ISAF Offshore Special Regulations Category 4, changed as indicated on C.5.1.2.

C.5.1.1 All safety equipment shall be in mass production, prohibiting the use of equipment modified or self-made.

C.5.1.2 The following are exceptions to the aforementioned safety equipment:

(a) Rule 3.18.2: A permanently installed toilet or a fixed bucket. It is allowed a bucket.

(b) Rule 3.19.2: Bunks permanently installed. The bunk beds may not be modified, except that it is allowed to NOT carry the associated mattresses.

(c) Rule 3.20.1: Kitchen permanently installed or fixed for safe sailing.

(d) Rule 4.01.2 Sail numbers and letters to be displayed by alternative means when none of the numbered sails is set.

(e) Rule: 4.26.4g: A trysail, or manner to reduce the area by more than 40%.

(f) Rule: 4.26.4f: A storm jib, with an alternative system of attachment to the forestay.

C.5.1.3 ANCHORING: with the intention of complying with chart 12 in 4.06.1 of OSR, it is established that all boats of the SOTO 40 OD **class** shall have, at least, one anchor (with or without chain) whose minimum weight be of 12 kg, with a minimum rope length of 25 m.
This is not part of the equipment for weighing the boat.

NOTE: The weight and length of rope is only a minimum requirement, to avoid the improvement of the boat's performance by the use of light weight equipment. The owner is responsible for choosing the right equipment for its boat.

C.5.2 Nevertheless RCA's, or the Notice of Race for a particular event, may provide different safety requirements, which can never be less than those established by these rules.

C.5.3 OPTIONAL EQUIPMENT

C.5.3.1 The original optional equipment (supplied by the builder) must be included in the Building Compliance Certificate (CCC).

C.5.3.2 The following items are permitted:

(a) Watches, chronographs and any timing device, electronic or digital.

(b) Binoculars, bearing compass, navigation instruments (depth sounder, speedometer, GPS ...).

(c) Tools.

(d) Sails repair kit.

(e) Spare parts.

(f) Water and food in reasonable quantities for the number of crew and the duration of the race, and they can only be removed from its location for consumption.

Excessive amounts of fluid, food or equipment shall be considered as extra ballast, not permitted by these rules.

C.5.3.3 It is specifically prohibited:

(a) Modems, telephones, telemetry or any other device used in order to access the internet and/or transmit or receive data from the boat.

(b) Laser guns, radar or any other device to calculate distances to a competitor.

(c) Instruments to measure wind direction or intensity at more than 1m away from the boat.

(d) Any form of ballast, other than those indicated at the measurement certificate.

(e) The movement of any equipment from its position while racing, other than for its use.

C.6 BOAT

C.6.1 DIMENSIONS. These are the basic dimensions of the S40-OD:

(a) LOA: 12.340m

(b) Beam: 3.756m

(c) Draft: 2.600m

(d) Bowsprit: 1.430m

(e) P: 16.300m

(f) I: 16.050m

(g) J: 4.850m

C.6.2 WEIGHT. The weight of the boat under the conditions described in appendix 1 (Measurement Conditions) shall not be less than 4290 kg.

C.6.3 The complete hull, the rig and its components and all the gear, including any replacements shall be produced only by manufacturers approved by the S40-OD **class**.

C.6.4 It is strictly prohibited any modifications or changes to the boat or to any part, including the addition or removal of any item that could alter the nature of the boat, or could be considered to improve the performance of the boat, unless expressly permitted by these rules. As examples:

(a) Modify, to make holes, rebuild, replace materials, sanding, grinding or relocate standard equipment or components, to reduce weight, to lower the centre of gravity and improve the moment of inertia, and directly or indirectly improve the performance of the boat.

(b) Change the profile of the hull, deck, interior, motor, motor sail drive, anodes, propeller, keel and rudder.

(c) Remove any moulded surface or painted, except lightly sanding previous to paint.

(d) Change any of the parameters collected by the Measurement Certificate.

C.7 RIGGING SETTINGS

C.7.1 It is forbidden to move the longitudinal or vertical position of the mast in the cockpit or on deck.

C.7.2 It is not allowed the adjustment of the shrouds or the forestay after the preparatory signal of a race, except in cases where is in danger the integrity of the mast. All shrouds settings must have a lock to prevent its accidental movement while the boat is racing.

C.7.3 The main halyard and at least three forward halyards must be in place while the boat is racing.

The employment of halyard messengers is permitted only for the movement of the halyard from the masthead sheave and the deck, never to remove the halyard from the mast, except for a change in case of a broken halyard.

C.8 SAILS INVENTORY

The intention of the SOTO 40-OD **class** is to limit the campaign costs of its members; this is why it is especially important to limit the sail program for each boat, so establishing limits on the type and number of sails an owner can declare each year, and the number of sails that can be used for an event.

C.8.1 MAXIMUM ANNUAL AND TYPE OF SAIL

(a) The owner of a SOTO 40-OD has the right to declare a maximum of 7 new sails per calendar year per boat.

(b) The new sails will not be different to:

- 1 mainsail
- 2 genoas
- 1 jib

- 3 asymmetric

C.8.2 DECLARATION STICKERS

The control of the declaration of new sails will be made through a sticker that the owner shall purchase from the **class**, after the payment of the corresponding fee. Therefore, an owner has the right to acquire 7 declaration stickers per calendar year per boat.

C.8.2.1 The declaration stickers that are not used during the calendar year shall not be used in subsequent years.

C.8.2.2 The declaration stickers are unique to each sail and non transferable between them (even if a sail is broken).

C.8.2.3 Sails (declaration stickers) shall be assigned to the boat, and, unless there was a written authorization from the MG, they shall not be transferred from one boat to another (including boats of the same owner).

C.8.3 SAIL REQUIREMENTS

Before to receive a declaration sticker, a sail shall be measured and stamped (**class** measurement sticker gathering sail dimensions) according to these **class** rules, and it shall be declared before the end of the calendar year.

In that case, it will receive a S40-OD **class** declaration sticker, which shall be placed at the starboard side, near the tack corner.

C.8.4 ALTERATIONS TO DECLARED SAILS

A sail that has been declared, and therefore received a declaration sticker, may be repaired or modified without the loss of the sticker, provided that the replaced sail area does not exceed the following percentages of the original sail (when it was declared):

- Mainsail: 20%
- Asymmetric: 30%
- Headsail (genoa and jib): 20%

If the alteration/repair occurs during an event, it shall require the approval of the event measurer. Otherwise it will require the approval of the **class** chief measurer.

C.8.5 DURING AN EVENT

C.8.5.1 The owner of a SOTO 40-OD may choose among all the sails on the inventory of his boat (ie, new and old) those it deems most appropriate to compete in a **class** event, provided that their number and type do not exceed the maximum specified in paragraph C.8.5.2. These sails shall have the **class** measurement sticker and the declaration sticker of the year of declaration.

C.8.5.2 The owner shall complete and sign the Sails and Crew Declaration form (appendix 15) prior to a **class** event (which will be presented at the race office of the event), where the owner shall state the sails to be used (with their corresponding sticker number), not exceeding the following:

(a) 1 mainsail

(b) 2 genoas

(c) 1 jib

(d) 3 asymmetric

C.8.5.3 All sails declared for an event shall be on board from the first until the last race of it. No sail shall be removed from a boat without the authorization of the event measurer or the **class** representative.

C.8.5.4 Sails entered for an event cannot be changed or modified during that time.

Sails that are damaged will be repaired or replaced at the discretion of the event measurer. In case of a replacement, the new sail shall only be one that has the **class** measurement sticker and the declaration sticker for the year of notification and shall not be in better condition than the originally replaced sail. This is at the discretion of the event measurer.

C.8.6 ADDITIONAL SAILS.

C.8.6.1 However what is described in C.8.1, each owner is entitled to declare and card a number of additional sails (additional declaration stickers), depending on the number of races, of the official calendar of the S40-OD **class**, that he has participated with the same boat and during the same year:

(a) After 10 races sailed 1 additional declaration sticker
(b) After 30 races sailed 1 additional declaration sticker
(c) After 50 races sailed 1 additional declaration sticker
(d) After 70 races sailed 1 additional declaration sticker

To make use of the additional declaration stickers, the owner shall complete and submit the form "Additional Sails" (appendix 16) to the chief measurer for approval.

There are no restrictions on the type of sails for the additional declaration stickers, except that they must comply with section C.8.3.

C.8.6.2 All the sails used in a chartered boat need to belong to the same owner (and to the same boat) and comply with C.8.5 in order to count as a “sailed races” for the purpose of additional sails.

C.8.6.3 Only those races where a boat starts and finishes or those where a boat starts but results DNF will count as a races sailed for the purpose of this rule 8.6

C.8.6.4 A boat shall not receive an additional declaration sticker while is racing at an event.

C.8.7 CHARTERED BOAT

C.8.7.1 An owner who rents another boat for an event may transfer its own sails inventory to the rented boat provided that it shall receive written authorization from the MG.

C.8.7.2 The chartered of a boat that is not member of the SOTO 40-OD **class** may choose to use the current inventory of the boat (according to the limits laid down in paragraph C.8.1), or may choose to declare and card a new sails inventory as described in paragraph C.8.1 (and the additional sails described in paragraph C.8.5), provided that it shall receive written authorization from the MG.

Nonetheless, the same chartered shall only purchase one complete sail inventory annually, regardless of different boats he/she may rent.

The intention of the **class** is to avoid any speculation that grants charterers a competitive advantage over owners.

C.8.8 SECOND HAND BOAT

The buyer of a second hand boat will have two options in regard to new sails for the current year:

(a) using the current boat inventory, within the limits laid down in paragraph C.8.1, or
(b) declare and card a new inventory (within the limits of point C.8.1). The buyer shall submit a statement of resignation of the old sail inventory, which must be approved by the MG prior to the acquisition of the new sail inventory.

C.9 PROHIBITIONS

C.9.1 During a race is strictly prohibited:

(a) any element whose only function is to increase the weight
(b) sails with parts that are removed
(c) sails with multiple surfaces or where the section thickness increases inflating
(d) additional winches
(e) running backstays or any device that deflect de backstay in any manner
(f) the addition of additional shims at the base of the mast
(g) movement of the mast in both the step and on deck
(h) use additional devices and switching gear differently to that intended by the designer, except as permitted by Rule Interpretations and Q & A posted on the official website of the **class**.
(i) modify, remove or use in a different way, any of the construction elements and equipment supplied by the builder, unless expressly permitted by these rules.

C.9.2 EXCEPTIONS. The following are exceptions to the above:

(a) The installation of shell valves for permitted equipment (log, echo-endoscope) and the installation of windows for viewing the keel and rudder in the locations specified by the builder.

(b) Painting any surface, in accordance with rule 57 of the RRS Skin Friction.

(c) The following additional equipment not supplied by the builder is allowed on deck:

i) Fairleads

ii) Rope bags

iii) Winch handle holders/pockets

iv) Footrests

v) Clam cleats

vi) Cleats

vii) Fixed points

C.9.3 OUTSIDE ASSISTANCE

A boat shall not receive any outside assistance after having leaved the dock and until she has finished the last race of the day, except in emergency case.

It thus prohibits the use of support vessels in the racing area during an event.

C.10 BREAKAGE

In case of breakage, a boat may return to port to make repairs. The boat must receive permission from the race committee or the event measurer to complete the repair at the first reasonable opportunity. All repair works shall conform to these **class** rules.

Repair and replacement of damaged parts during an event must be approved by the event measurer.

C.11 LIMITS FOR A RACE

C.11.1 A race committee shall not start a S40-OD race when the wind speed measured by them does not steadily exceed 6kts.

C.11.2 A race committee shall not start a S40-OD race when the wind speed measured by them steadily exceeds 6kts.

SECTION D - CONSTRUCTION

D.1 GENERAL

D.1.1 The hull, deck, internal bulkheads, internal structure, keel, rudder, rigging, deck hardware, engine, sail drive, interior arrangements and other construction details shall comply with the designer construction specifications, with these **class** rules and with the ISAF OSR Category 4.

D.1.2 The materials used during the boat construction, appendages and rigging shall be as specified in the construction plans of the designer.

D.1.3 There shall be moulds for the hull, deck, bulb, rudder, interiors, internal structure and other construction details. The moulds shall be manufactured by the builder and shall be approved by the Chief Measurer.

D.1.4 The keel fin will be generated from the 3D drawings supplied by the designer of the boat.

D.1.5 All shell valves below the waterline must be operable at all times. The shell valves installed by the builder shall not be removed under any circumstances.

D.1.6 Any repair that is not a surface damage of the hull shall have the written approval of the MG and the chief measurer before starting the work. All repairs must be designed and executed to retrieve the geometry, stiffness, and original hardness, and as a result of the work, the boat weight shall not be lighter than the original.

After each repair of the hull, deck, structure or rigging, the ship may be subject to partial or complete re-measurement at the discretion of the MG.

D.2 HULL

D.2.1 LENGTH (LOA): 12340 mm.

D.2.1.1 Hull length is the measure, with the boat levelled, between the perpendiculars of the outer part of the bow (stem) and the transom.

D.2.2 The hull shall be built according to D1, and the shape shall only be built on the moulds referred on paragraph D.1.3. All components of the boat, including bulkheads, internal structure, engine compartment, engine and sail drive shall be installed by the builder.

Ay alteration of the mentioned items without written permission of the MG shall invalidate the measurement certificate or it will disqualify the boat to obtain it.

D.2.3 The hull shall be built in E Glass/Epoxy and PVC foam according to the construction specifications.

D.2.4 The Builder shall weigh the hull as it is lifted from the hull mould, with the structural grid attached to it, all bulkheads except the “G”, the stern longitudinal reinforcements, the bow stiffeners and the structural berths laminated, and its weight shall be between 800 kg and 830 kg.The weight shall be recorded on the construction certificate of conformity (CCC).

D.2.5 BEAM: 3756 mm + / - 5 mm

D.2.5.1 The maximum width will be the measure, with the boat levelled, between the perpendiculars of the outermost part of the sides, at 8790 mm of the bow.

D.3 INTERIOR

D.3.1 The internal structure shall build according to the design plans and shall be weighed and recorded before putting it in place. This internal structure will not be moved, removed or modified.

D.3.2 The weight of the structural grid shall be minimum 90 kg and maximum 105 kg.

D.4 DECK

D.4.1 The deck shall be built according to D1, and the shape shall only be built on the moulds referred on paragraph D.1.3. All components of the deck, including deck hardware, shall be installed by the builder.

Any alteration of the mentioned items without written permission of the MG, shall invalidate the measurement certificate or it will disqualify the boat to obtain it

D.4.2 The builder shall weigh the deck when it leaves the mould, with the longitudinal bulkhead and the "G", faired, painted, after trimming the sheer and openings and its weight shall be between 250 kg and 260 kg. The weight must be recorded on the construction certificate of conformity (CCC).

D.4.3 Distribution of deck hardware must comply with the Deck Plan (appendix 4) and shall not be altered except as permitted by these rules, interpretations and Q & A posted on the website of the **class**.

D.4.4 DECK LAY OUT, RIGS AND SYSTEMS

D.4.4.1 The fairleads, rope bags, handle carriers, footrests, clam cleats, cleats or fixed points are the only additional equipment allowed.

All teams must comply with ISAF Offshore Special Regulations for category 4 with the modifications specified in paragraph C.5.1.2.

(a) GENOA TRACKS

i) The working length measured between the faces of the endings or the ends of the extrusion shall be 530 mm + /-15 mm

ii) The inner end, or the centreline end, shall be at a distance of 5585 mm +/-15 mm measured from the bow to the centre of the track, and at 446 mm +/-5 mm from the centreline. The outer edge, or the side end, shall be at a distance of 5583 mm + /-15 mm measured from the bow to the centre of the track.

(b) GENOA CARS

i) The genoa cars must have a minimum working load of 1.043 kg

ii) The genoa car inhauler shall have a 4:1 reduction. The location of the cleats is specified on appendix 4 (Deck Plan).

(c) WINCHES. They shall be placed at the position specified at the designer plans and shall not be altered. These are their dimensions:

i) The halyard winches, with a 250 mm long handle shall have a maximum speed ratio of 40.2:1.

ii) The genoa sheet winches: with a 250 mm long handle shall have a maximum speed ratio of 50:1.

iii) The mainsheet winches, with a 250 mm long handle shall have a maximum speed ratio of 46.5:1.

iv) The backstays winches, with a 250 mm long handle shall have a maximum speed ratio of 46.5:1.

(d) UP AND DOWN

i) It shall have a maximum reduction of 36:1.The location of the cleats is specified on the appendix 4 (Deck Plan).

(e) MAINSHEET TRAVELLER

i) The total length including the endings shall be 2000 mm.

ii) It shall be placed perpendicular to the centreline, and at a distance of 1346 mm + /- 15 mm to the transom.

iii) It shall have a 6:1 purchase and a safe working load of 1500 kg.

(f) OUTHAUL

i) It shall have a 4:1 reduction in the boom and 8:1 below deck, and 2 outputs on the cockpit floor, as specified on appendix 4 (Deck Plan).

(g) MAINSAIL CUNINGHAM

i) It shall have a maximum reduction of 8:1.The location of the cleats is specified on appendix 4 (Deck Plan).

(h) VANG

i) It shall have a maximum reduction of 4:1 on deck and 12:1 below deck according to the Designer's drawings. The location of the cleats is specified on appendix 4 (Deck Plan).

(i) FOOTREST

i) The builder shall supply the mainsail trimmer and helmsman footrests (in case of a tiller steered boat) and they shall not be modified or replaced. The location shall be within 300mm of the position provided by the builder.

(j) LIFELINES, STANCHIONS AND PULPITS. They shall be in accordance with ISAF OSR Category 4.

i) Lifelines required in Special Regulations shall be "taut", when a deflecting force of 50 N (5.1 kgf, 11.2 lbf) is applied to a lifeline midway between supports, the lifeline should not deflect more than 50 mm.

ii) Llifelines shall be uncoated and used without close-fitting sleeving, however, temporary sleeving may be fitted provided it is regularly removed for inspection.

(k) RUNNING RIGGING

i) It shall be the one described in appendix 4 (Deck Plan)and it shall comply with the specifications in appendix 7 (Running Rigging Specifications).

ii) MAIN HALYARD. It shall have a 2:1 purchase and have below deck on the mast a jammer to hold it. It may be redirected through a block at the mast base to one of the genoa winches.

iii) BOW HALYARDS. The bow halyards (genoa and two asymmetric at the top) shall be blocked on the jammers that are on deck behind the mast. The use of halyard messengers is limited to what is written on C.7.3.

iv) BACKSTAYS. They shall be two per boat and approved by the builder, with a length of 18570 mm. They shall be connected to a 3:1 reduction on the transom at 300 mm of the centreline. They shall be made of PBO (Powerlite) with a diameter of 12.5 mm. It is allowed the use of elastic ropes (bungy) to keep the leeward backstay close to the mast, provided that the elastic rope don't pull the upwind backstay and are mounted on the mast's exterior, fully accessible for inspection by the measurer

D.5 KEEL

D.5.1 Keel means the whole blade (fin) and bulb.

D.5.2 The keel fin can only be built according to D.1 and referred to the plans indicated on D.1.4.

D.5.3 The keel may be faired and painted on its surface.

D.5.4 It is forbidden to shape the steel blade and the lead of the bulb.

D.5.5 If a keel has an unusually thick paint or other alteration of the geometry specified by the designer, it will be checked with templates provided by the builder. The tolerances are:

- Ø In profile + / - 3 mm
- Ø Section thickness + / - 2 mm.

D.5.6 The keel assembled shall be weighed with fastening keel bolts and nuts but not washers. Weight shall not weight less than 2170 kg and no more than 2180 kg.

D.5.7 Removing or drilling steel or lead to meet rule weight limits is not permitted.

D.5.8 The keel shall be checked by the Measurer for location on the boat, and shall be within the following limits measured from the intersection of the transom with the hull centreline (appendix 8 Appendages Plan):

(a) Position of the trailing edge top 5870 mm +/- 10 mm
(b) Position of the trailing edge bottom 6395 mm +/- 10 mm
(c) Position of the bulb aft end 5480 mm +/- 10 mm

D.5.9 The depth of the keel measured from the lowest bulb point to the nearest flat part of the hull shall not exceed 2280 mm (appendix 8 Appendages Plan).

D.5.10 The shortest distance from the point on the trailing edge to the leading edge shall be:

(a) Upper position 596 mm +/- 5 mm
(b) Lower position 445 mm +/- 5 mm

D.5.11 The profile of the trailing edge shall not deviate more than 2 mm from a straight line over a distance of 1990 mm.

D.6 RUDDER

D.6.1 The rudder shall be built according to D.1, and the shape shall be built in the moulds referred to in D.1.3. Materials used in the building of the rudder shall be the ones specified by the Designer.

D.6.2 The rudder may be faired and painted on its surface.

If a rudder appears to have an unusual thick paint system or had any other geometrical shape than the one specified by the Designer, it shall be checked for conformance with templates built and supplied by the Builder. Tolerances:

- Ø In profile + / - 2 mm
- Ø Section thickness + / - 2 mm

D.6.3 The rudder shall be weighed in a painted and finished condition, including stainless bearing sleeves, but without bushings, quadrants or steering hardware. Weight shall be neither lighter than 17 kg, not heavier than 22 kg.

D.6.4 The distance measured at the centreline from the lowest transom point to the highest trailing edge point in the rudder shall not be more than 1237 mm nor less than 1227 mm. (appendix 8 Keel & Rudder Plan).

D.6.5 The following dimensions of the rudder shall be measured:

(a) Gap between the hull and the top of rudder shall neither be neither more than 5mm, nor less than 1 mm anywhere.

(b) The shortest distance from surface of the hull to the lowest tip of the rudder shall neither be more than 1978 mm, nor less than 1968 mm.

(c) Maximum thickness of the top section shall not be less than 58 mm, no more than 62 mm.

D.7 ENGINE, SAIL DRIVE AND PROPELLER

D.7.1 The engine and its sail drive shall be supplied, and properly mounted, by the Builder, and shall be from the standard Volvo D1 30 series.

D.7.2 Sail Drive location. Distance from the trailing edge of the engine sail drive to the transom, measured on the surface of the hull centreline shall not be more than 5355 mm, nor less than 5335 mm (appendix 8 Appendages Plan).

D.7.3 Sail Drive depth. Distance measured at right angles to the propeller axis from the propeller midpoint to the hull shall be neither less than 310 mm, nor more than 320 mm.

D.7.4 Its surface may be slightly sanded for painting. Drilling, removing aluminum, addition of material, leg fairing or propeller fairing is prohibited. Any paint applied to the sail drive shall be the standard thick of standard paint. The zinc anode of the engine sail drive may be faired.

D.7.5 The propeller shall be folding, of GORI brand and with a minimum diameter, of 410 mm a minimum blade width at the widest point of 100 mm and a maximum pitch of 300 mm.

D.7.6 All through hulls under the waterline shall be operable at all times. Through hulls installed by the Builder shall not be removed.

D.7.7 The Builder shall record batteries weight in the CCC. Minimum weight shall be of 54 kg and the maximum of 85 kg.

SECTION E - RIG

E.1 GENERAL

E.1.1 The whole rigging and its components including the spare parts shall be supplied by a manufacturer approved by the SOTO 40 OD **class** and shall comply with its Rules, with the Rigging's Drawings and the Bowsprit's Drawings supplied by the Designer and the builder's construction details.

E.1.2 The mast, boom and bowsprit shall not be modified from the approved Rigging Drawings supplied by the Designer without prior allowance of the MG. It shall only be permitted their sanding before varnishing or painting them.

E.1.3 The standing rigging shall comply with the specifications in appendix 6 (Standing Rigging Specifications).

E.1.4 The mast shall have sheave boxes, sheaves and pins for:

(a) 1 mainsail halyard
(b) 2 asymmetric spinnaker halyards on top
(c) 2 genoa halyards

Notwithstanding the above, there are minimum requirements a boat shall comply when racing. See C.7.3.

E.1.5 Minimum breaking strength of halyards shall conform to the specifications in appendix 7 (Running Rigging Specifications).

E.1.6 All the measurements shall be taken with the spar fully rigged and dry, according to E.2.

E.2 MEASUREMENT CONDITIONS

E.2.1 Except for the weighing of the single tube (see E.3) the mast shall be fully rigged:

- tube and bolt rope system,
- spreaders,
- shrouds with turnbuckles but without hook screws,
- forestay,
- tuff-luff © or similar (see G.4.1.4),
- backstays without blocks or rigging, and
- halyard messenger lines with a maximum diameter of 4mm.

E.2.2 The weighing shall be taken hoisting the mast from a single lifting point, corresponding to its Centre of Gravity.

E.2.3 Two white bands 25mm wide shall be indelibly marked on the mast, corresponding to the upper and bottom limit for the P (see E.7).

E.3 SINGLE TUBE

E.3.1 The weight of the single tube (including the bolt-rope system) shall be neither less than 105 kg, nor more than 109 kg.

E.3.2 The centre of gravity of the single tube (including the bolt-rope system) shall be neither less than 6910 mm, nor more than 6950 mm to the top edge of the lower band of P (see also E.8).

E.4 MAST SECTION

E.4.1 At any point, between the deck and the intersection of the forestay with the foreside of the mast, the mast sections can be different from:

(a) MDL1: fore and aft dimension – minimum 261 mm, maximum 264 mm

(b) MDT1: side to side dimension – minimum 132 mm, maximum 134 mm

E.4.2 The dimensions of the mast at the top band of P shall be:

(a) MDL2: fore and aft dimension – minimum 185 mm, maximum 188 mm
(b) MDT2: side to side dimension – minimum 120 mm, maximum 123 mm

E.5 SPREADERS

E.5.1 The mast shall have two pairs of aluminium spreaders, removable for transportation. Their position shall not be altered and shall be checked with the mast in horizontal position on at least three easels and on measurement conditions.

E.5.2 SPREADERS HEIGHT: The upper and lower spreaders' position shall be measured from the top edge of the lower band of P (BAS band).

(a) S1 minimum 3847 mm, maximum 3857 mm to the centre of the section.
(b) S2 minimum 9300 mm, maximum 9310 mm to the centre of the section.

E.5.2 SPREADERS LENGTH: It shall be measured as the distance between the high shrouds, in their intersection with the corresponding spreaders.

(a) S1 minimum 2990 mm, maximum 3010 mm between the centres of the shrouds' sections.
(b) S2 minimum 2590 mm, maximum 2610 mm between the centres of the shrouds' sections.

E.5.4 SPREADERS BACKWARDNESS: Upper and lower spreaders' backwardness shall be the shortest measurement from the stern side of the mast (excluding the bolt rope) to the line that joins the spreaders' centres:

(a) S1 minimum 414 mm, maximum 434 mm
(b) S2 minimum 321 mm, maximum 341 mm

E.6 RIG WEIGHT AND CENTRE OF GRAVITY

E.6.1 The weight of the Complete Mast in measurement conditions shall be neither less than 177 kg nor more than 184 kg.

E.6.2 The centre of gravity shall be neither less than 6360 mm nor more than 6440 mm from the top edge of the lower band of P.

E.6.3 Corrector weights (if required) shall be fastened on the external downside of the appropriate spreader, to reach minimum weight and centre of gravity established by these Rules

E.7 MAINSAIL HOIST LIMIT (P)

E.7.1 P is defined as the distance, measured along the mast on its back side, between two white bands 25 mm wide and indelibly marked, the bottom one at the boom position (BAS) and the top one that indicates the limit to hoist the mainsail.

E.7.2 The distance between them (P) shall not be more than 16300 mm nor less than 16292 mm measured to the inside of both bands.

E.8 MAST HEIGHT (BAS)

E.8.1 BAS is the distance between the top edge of the lower band of P with the intersection of the foreside of the mast and a plan at the height of the tangent of 45 degrees on its side (appendix 5 (BAS). BAS shall be measured with the mast as vertical as possible.

E.8.2 BAS shall not be more than 1690 mm.

E.8.3 It is allowed to add shims at the base of the mast in order to adjust the BAS value when measuring the boat. The shims shall be declared and recorded by the Measurer when measuring the BAS and shall always be on board. Adding additional shims is strictly forbidden.

E.9 FORESTAY

E.9.1 The intersection of the projection of the forestay centre with the forward side of the mast, with the mast as straight as possible and with the forestay on its normal position, shall not be less than 14365 mm or more than 14375 mm from the top edge of the mast lower band (BAS band).

E.10 CAP SHROUD ATTACHMENT

E.10.1 The attachment point of the top shroud on the mast shall not be less than 14300 mm or more than 14320 mm from the top edge of the low band of the mast (BAS band).

E.11 SPINNAKER HOIST

E.11.1 The height of the top asymmetric spinnaker halyards shall not be more than 16425 mm or less than 16415 mm measured from the low part of the halyard eyes to the top edge of the low band (BAS band).

E.12 FORE TRIANGLE BASE (J)

E.12.1 J is the base of the fore triangle. It shall be the horizontal distance between the intersection of the foreside of the mast and deck, and the intersection of the forestay's projection with the deck.

E.12.2 Base of fore triangle (J): shall not be more than 4850 mm.

E.12.3 SFJ shall be the horizontal distance from the forward end of J, to the boat's stem. It shall be 180 mm +/- 5 mm.

E.13 BOOM

E.13.1 The section of the boom shall be made of aluminium in accordance with construction Drawings of Rigging supplied by the Designer.

E.13.2 The maximum dimensions of the boom section, fittings excluded shall be 200 mm +/- 2 mm height and 116 mm +/- 2 mm width.

E.13.3 The completed boom (with all fittings attached, but excluding the vang and the reef lines) shall weigh not less than 43 kg or more than 46 kg.

E.13.4 A white band 25 mm wide shall be indelibly marked on the boom with the forward edge not more than 5800 mm from the aft face of mast (measured from the bolt-rope system) and with the boom forming a 90 degree angle, parallel to centreline. This distance shall be known as E.

E.14 VANG

E.14.1 The vang shall be capable of supporting the weight of the boom and mainsail. It shall weigh not less than 5 kg or more than 7 kg.

E.15 BOWSPRIT

E.15.1 The bowsprit shall be made of carbon in accordance with the building's Drawings

supplied by the Designer.

E.15.2 The bowsprit length measured on centreline from the intersection of the forestay projection with the deck to the forward bowsprit edge shall not be more than 1.590 mm.

In spite of what was mentioned above, the bowsprit may have a batten or similar of not more than 300 mm from its front end, with the unique purpose of preventing loosing asymmetrical sheets from falling into the water and getting underneath the bow. It is forbidden to drill the bowsprit to fit this device.

E.15.3 The complete bowsprit weight, holdings included, shall not be less than 3 kg or more than 5 kg.

E.15.4 The bowsprit bobstay shall be in accordance with appendix 7 (Running Rigging Specifications) and appendix 9 (Bobstay Plan).

SECTION F – BOAT WEIGHT

F.1 WEIGHT

F.1.1 The completed hull, deck, interior, keel, steering system, mast and rigging, and all the standard equipment in appendix 2 (Boat Weight) weighed under the conditions described in appendix 1 (Measurement Conditions) shall not be less than 4290 kg.

F.1.2 Weight correctors shall be added if necessary, as described in F.2, to bring the total weight to the minimum.

F.2 CORRECTOR WEIGHTS

F.2.1 In case a boat does not reach the construction minimum weight of 4290 kg, official S40 lead plates shall be added and fixed permanently at a height of 340 mm from the lateral bunks on each side next to the hull, and fixed to the “E” bulkhead situated abaft the engine (appendix 10 Corrector Weights). These S40 lead plates are standard and the measurer together with the owner shall choose the best combination of them to reach the necessary amount. They can’t be cut.

F.2.2 Corrector weights shall be recorded on the Measurement Certificate and may not be altered by the Owner.

F.2.3 Corrector weights may only be altered as a result of an official re-weighing as described in F.3

F.3 RENEWAL OF BOAT WEIGHT

F.3.1 A boat shall only require a re-weighing under the following circumstances:

(a) if the boat underwent important repairs, with prior allowance of the MG, or

(b) if the MG requests so, or

(c) if the Notice of Race for a SOTO 40 OD event requires so, or

(d) if the owner requests so to the MG, limited to an annual renewal

F.3.2 This official weighing shall be done by the Measurer in compliance with F.1 to check for conformance to the minimum “Construction Weight” of 4290 kg.

F.3.3 If a result of a re-weighing a boat has to add or remove corrector weights, a new measurement certificate shall be request. A fee of US$100 shall be paid by the Owner if for the re-issue of a new certificate. Such cost might be reviewed by the Executive Board.

SECTION G – SAILS

G.1 GENERAL

G.1.1 Sails shall be built and measured in accordance with the max dimensions present in appendix 3 (Sail Plan). All sails shall have the **class** measurement sticker and the **class** declaration sticker corresponding to its measurement year on their starboard side tack.

G.1.2 Carbon fibre is allowed on mainsails according to G.3.2.d and on genoas according to G.4.2.2.d. Asymmetric spinnakers where carbon fibre has been incorporated in the sail cloth shall neither be measured nor taken on board while racing. Sail cloth containing PBO shall be prohibited to be used in the construction of any sails.

G.2 PERMITTED ITEMS

G.2.1 Sails shall comply with G.1 and may have the following permitted construction details:

(a) reefing eyelets,
(b) mainsail cunningham eyelets,
(c) batten pockets,
(d) leech and foot adjustment lines,
(e) camber stripes,
(f) chafing patches,
(g) windows in sails (not greater than 1 m^2),
(h) retrieval lines on asymmetric spinnakers,
(i) tell tales,
(j) T Rings© for Genoas and Jib clews, and
(k) support for the asymmetric lazy sheet, near the tack.

G.3 MAINSAIL

G.3.1 The **class** emblem shall be placed on both sides of the sail (see also B.2.5), between batten number 2 and number 3. It shall be of contrasting colour and in accordance with the specifications stated in appendix11 (Class Logo).

G.3.2 CONSTRUCTION. Permitted materials for mainsails are:

(a) Polyester fibres.

(b) Aramid fibres.

(c) High-modulus polyethylene fibres (HMPE-Spectra) and high-performance polyethylene (HPPE-Dyneema).

(d) The above mentioned fibres combined with carbon fibres, as long as the amount of carbon fibres is not greater than 60% of the total amount of fibres that make up the sail.

G.3.3 DIMENSIONS

G.3.3.1 The mainsail shall comply with maximum dimensions specified on appendix 3 (Sail Plan), and shall be measured in accordance with the ISAF ERS.

G.3.3.2 The angle of the head, measured between the sail top and the luff shall be not greater than 90º.

G.3.4 BATTENS. The sail shall have 6 battens on the leech; the two top battens may be of “full batten” type. Carbon battens are only permitted for the mainsail two top battens.

G.3.5 WEIGHT

G.3.5.1 The mainsail, excluding battens and bag, shall have a minimum weight of 21 kg.

G.3.5.2 Any mainsail which is under-weight shall have corrector weights at the head within 200

mm of it.

G.3.5.3 Excessive reinforcement shall be not permitted at the tack, clew or head, or adjusting ropes in foot and leach of excessive diameter. Other type of reinforcements or elements intended to increase the sail's weight shall be not permitted either.

G.4 HEADSAILS

G.4.1 GENERAL

G.4.1.1 A headsail is a sail set forward of the mast spar, with at least the 90% of the luff attached to the rig, tacked on centreline and within the dimensions specified on appendix 3 (Sail Plan).

G.4.1.2 The S40-OD **class** has two different types of headsails, depending on their maximum dimensions: genoas and jibs.

G.4.1.3 Carbon battens on the headsails are not allowed.

G.4.1.4 LUFF GROOVE DEVICE. The luff grove device for the "headsails" should be the Tuff Luff 1706 © or equivalent. The maximum dimension of the device, measured at right angles to the longitudinal axis thereof, shall neither be less than 32 mm. nor more than 34mm.

G.4.2 GENOA

G.4.2.1 GENERAL. It will be considered as Genoa any headsail which complies with the definition of "headsail" in ERS, and with G.4.1.1 and that does not meet the requirements for a Jib according to these S40-OD **Class** rules.

G.4.2.2 CONSTRUCTION. Permitted materials for genoas are:

(a) Polyester fibres

(b) Aramid fibres

(c) High-modulus polyethylene fibres (HMPE-Spectra) and high-performance polyethylene (HPPE-Dyneema)

(d) The above mentioned fibres combined with carbon fibres, as long as the amount of carbon fibres is not greater than 60% of the total amount of fibres that make up the sail.

G.4.2.3 DIMENSIONS. Genoas shall comply with maximum dimensions specified in appendix 3 (Sail Plan), and shall be measured in accordance with the ISAF ERS.

G.4.2.4 BATTENS. The sail may have a maximum of 4 battens, equally and regularly distributed along the leech. The top one may be of the "full batten" type.

G.4.3 JIB

G.4.3.1 GENERAL. It will be considered as Jib any headsail which complies with the definition of "headsail" in ERS, and with G.4.1.1.

G.4.3.2 CONSTRUCTION. Permitted materials for jibs are:

(a) Polyester fibres

(b) Aramid fibres

(c) High-modulus polyethylene fibres (HMPE-Spectra) and high-performance polyethylene (HPPE-Dyneema) when they come from suppliers of free availability to anyone (non-exclusive)

(d) Materials such as 3DL, 4D, Fusion, 3Di, Genesis or another one exclusively belonging to a certain sails brand or that are customized, are not permitted.

G.4.3.3 DIMENSIONS. Jibs shall comply with maximum dimensions specified in appendix 3 (Sail Plan), and shall be measured in accordance with the ISAF ERS.

G.4.3.4 BATTENS. The sail may have a maximum of 4 battens, equally and regularly distributed

along the leech. The top one may be of the "full batten" type.

G.5 ASYMMETRIC SPINNAKER

G.5.1 GENERAL. They shall comply with the ISAF ERS definition of “Spinnaker”.

National letters and distinctive numbers shall be placed at the top of the asymmetric spinnakers in accordance with what is stated in the ISAF RRS

G.5.2 CONSTRUCTION. Nylon sail cloth is the permitted material for asymmetric spinnakers and its weight shall be 30 gr/m2 minimum.

G.5.3 DIMENSIONS. They shall comply with the following minimum and maximum measures:

(a)

	MAXIMUM	MINIMUM
SLU:	19.55 m	19.86 m
SLE:	16.85 m	17.68 m
ASF:	11.10 m	11.34 m
¾ Girth	6.05 m	6.46 m
½ Girth	10.58 m	11.12 m
¼ Girth	11.70 m	12.20 m

The measures for the girths at ¾ G, ½ G and ¼ G shall be taken from the three points obtained by folding the luff and the leech in four equal parts, indicated in appendix 3 (Sail Plan).

(b) ¾ G measure shall be taken from the folded point nearest to the top obtained on the luff, to the folded point nearest to the top obtained on the leech.

(c) ½ G measure shall be taken from the mid folded point obtained on the luff to the mid folded point obtained on the leech.

(d) ¼ G measure shall be taken from the folded point nearest to the tack obtained on the luff to the folded point nearest to the clew obtained on the leech.

SECTION H – MEASUREMENTS

H.1 GENERAL

It is a Fundamental Principle of the measurement under the Soto 40-OD class rules that all measurements shall be manually taken with measuring tapes (minimum Class II) or, in case of weights, with certified scales, with the necessary rigor and the equipment used in good working condition.

H.2 MEASURERS

Yachts shall only be measured by measurers appointed by the Chief Measurer and approved by the MG (A.4.4.1).

It is strongly recommended that every RCA has its own measurers, according to A.4.4.1.

H.3 MEASUREMENT UNITS

H.3.1 Lengths shall be measured in millimetres, except for sails, that shall be measured in centimetres.

H.3.2 Weights shall be measured in Kilograms, with the exception of crew members' weight that shall be taken in Kilograms followed by a decimal.

(a) Scales for hull and keel weight shall have increments of not more than 5 kg (it is strongly recommended to use 1 kg increment scales).

(b) Scales for rig weight shall have increments of not more than 0.500 kg (it is strongly recommended to use 0.200 kg increment scales).

(c) Scales for the crew weight shall have increments of not more than 0.100 kg.

(d) Scales shall be calibrated and certified at least once per year, or after every 15 measurements.

H.4 TOLERANCES

All tolerances referenced in this rule are intended to contemplate differences in the manufacturing only and shall not be used for optimization of the boats' performance.

H.5 COOPERATION

To secure an accurate and fair measurement, it is necessary to have close cooperation between Measurer and Owner. It is desirable that the owner should be familiar with all parts of the Rules. At least two (2) crew members shall be available to the Measurer during the whole measurement procedure.

H.6 HULL MEASUREMENTS

H.6.1 Hull measurement shall be carried out with the boat at level.

H.6.2 Keel shall be presented for weighing before it is joined into the hull.

H.6.3 Boat shall be on an accessible area, clean and without any obstruction, seatted on a cradle with a clearance from the floor.

H.7 RIG AND SAILS MEASUREMENTS

H.7.1 All rig and sails measurements shall follow the guidance of the ISAF ERS.

H.7.2 The rig measurement bands shall be of a contrasting colour and permanent. It is forbidden to remove those bands after the measurement. Such movement or a non-visible band during a **class** event may invalid the measurement certificate.

APPENDIX 1

MEASUREMENT CONDITIONS

1. GENERAL PROCEDURE

To secure an accurate and fair measurement, it is necessary to have close cooperation between Measurer and Owner. It is desirable that the owner should be familiar with all parts of the Rules. At least two (2) crew members shall be available to the Measurer during the whole measurement procedure. The following conditions shall be met:

A. The measurement shall be not carried out in the rain, or under windy conditions that may interfere in the correct measurement procedure.

B. The boat shall be dry, not only the deck but also the interior, and totally clean (bottom, hull, deck, and interior).

C. If the boat is equipped with any of the items mentioned below during the measurement procedure, the following values will be discounted from the scales reading:

1. Electronic equipment: 20 kg
2. Rope bags, winch handle pockets and other related canvas work: 5 kg
3. Diesel (it shall be calculated according to the level)
4. Batteries (according to 12.7) = (real weight – 54) kg
5. Any other permanent equipment (weight shall be calculated according to the Measurer's judgment)

2 HULL MEASUREMENT PROCEDURE

Hull measurement shall be carried out with the boat being at level.
Keel must be presented separated from hull for the first weighing.

APPENDIX 2

BUILDING WEIGHT

"Building weight" shall include the completed hull, deck, keel, steering system, mast, riggings, interior and deck fittings completed and finished with the following included:

Engine and its components

Hatches and windows

Electrical system – panel, lights, batteries and wiring

Bilge pump ORC cat 4.

Floorboards

Deck fittings: blocks, snatch blocks, genoa tracks and traveller, cars, clamps, stoppers, organizers, pulpits, stanchions, lifelines, winches and 2 handles, compass, pad eyes, fittings for forestay, shrouds and both backstays

Completed mast, boom and bowsprit

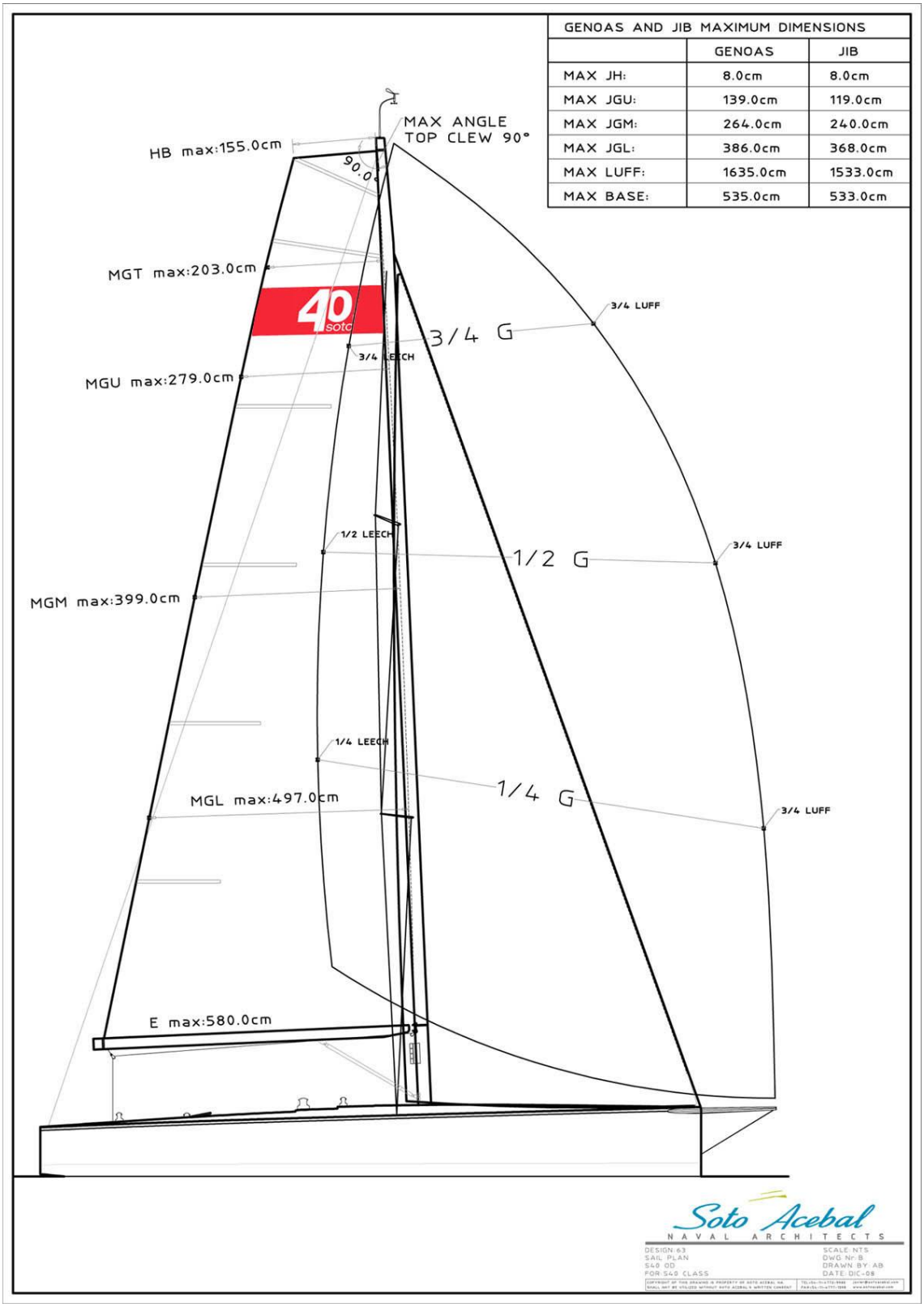
Completed WC (optional, but if included, it shall count into the total boat's weight)

The Boat Weight" under the above conditions and with corrector weights if necessary

(according to 14.2) shall not be less than 4290 kg.

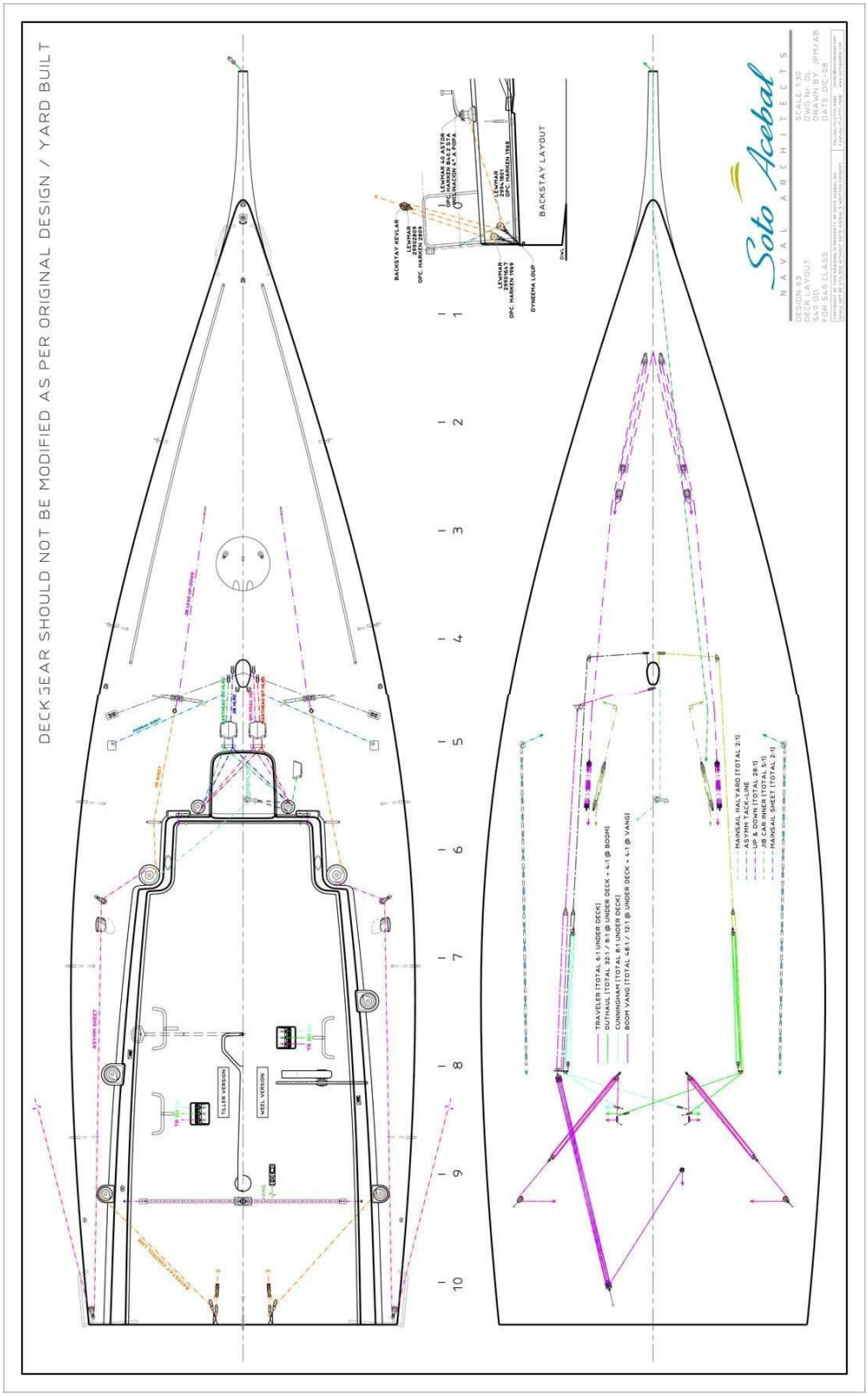
APPENDIX 3

SAIL PLAN



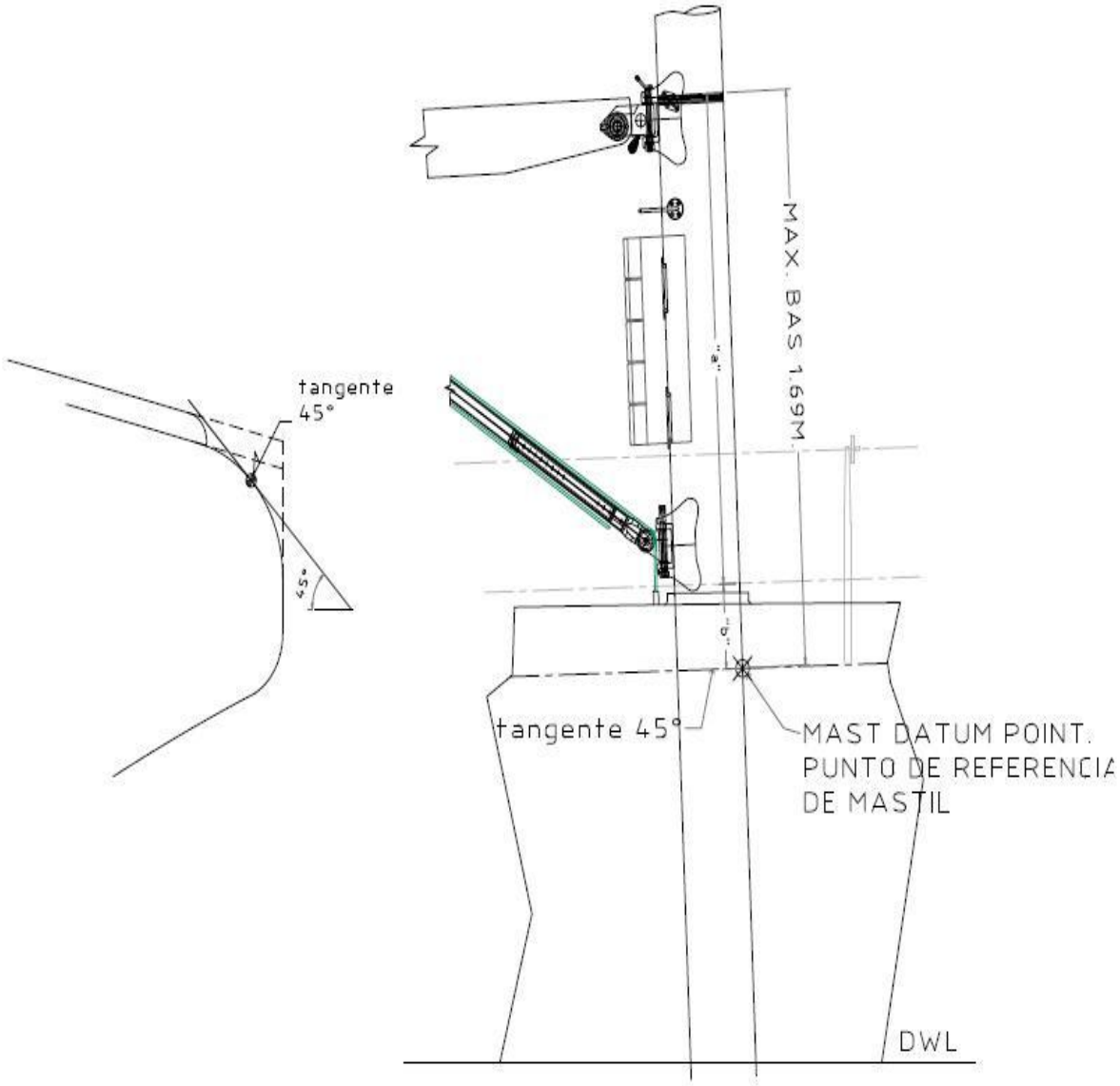
APPENDIX 4

DECK PLAN



APPENDIX 5

MAST HEIGHT



APPENDIX 6

STANDING RIGGING SPECIFICATION

ITEM	Qty.	Min. Diam. (inches)	Length (mm)	Material	Comments
V1 2	2	7/16	5519	PBO	Powerlite
V2/D3	2	3/8	10542	PBO	Powerlite
D1 2	2	7/16	5524	PBO	Powerlite
D2 2	2	5/16	5488	PBO	Powerlite
Backstay	2	1/2	18585	PBO	Powerlite
Forestay	1	8.38 mm		Nit 50	#17

Notes:

1. All measurements shall be taken from the inner face of hammers or from the terminals bolts centre part.

2. Wires shall be measured in accordance with the tension recommended by the manufacturer.

Tolerance in wire length shall be of +/- 5mm

APPENDIX 7

RUNNING RIGGING SPECIFICATIONS

ITEM	Working load	Qty.	Min Diam.	Min Length	Material	Comments
	kg		mm	m		
Main halyard 2:1	850	1	8	28.0	Vectran	14 m without cover
		1	6	32.0	Polyester	
Top assymetric halyard	930	2	9	43.0	Spectra SK 75	14 m without cover
Frac assymetric halyard	760	1	9	39.0	Vectran	10 m without cover
Genoa halyard	1290	1	9	38.0	Vectran	10 m without cover
Reef 1	2290	1	10	16.0	Spectra K900	
Main sheet	940	1	10	42.0	Spectra K900	May be continuous
Genoa sheets	1080	2	10	10.0	Spectra SK 75	
Assymetric sheet	620	2	8	35.0	Spectra SK75	3.5 m without cover
Traveller (1:1)	560	2	5	2.4	Ocean 12 HC	without cover
Traveller (6:1)	130	1	6	25.0	Spectra K900	with cover
Genoa barber (1:1)	500	2	6	0.9	Spectra SK 75	without cover
Genoa barber (4:1)		2	6	4.5	Spectra SK 60	with cover
Genoa up and down (1:1)	1300	2	6	4.5	Spectra SK 75	without cover
Genoa up and down (2:1)		2	5	2.7	Spectra SK 75	without cover
Genoa up and down (3:1)		2	5	6.1	Spectra SK 75	without cover
Genoa up and down (6:1)		2	6	9.0	Spectra SK 60	with cover
Vang strop (1:1)	1050	1	8	2.8	Spectra SK 75	without cover
Vang strop (2:1)		1	8	8.0	Spectra SK 75	without cover
Vang strop (2:1)		1	6	4.5	Spectra SK 75	without cover
Vang strop (6:1)		1	6	19.0	Spectra SK 60	with cover
Cunningham (1:1)		1	4	7.0	Spectra SK 75	without cover
Cunningham (2:1)		1	3	2.5	Spectra SK 75	without cover
Cunningham (4:1)		1	6	15.0	Spectra SK 60	with cover
Foot (1:1)	700	1	8	0.8	Spectra SK 75	without cover
Foot (2:1)		1	3	5.8	Spectra SK 75	without cover
Foot (2:1)		1	5	19.0	Spectra SK 75	without cover
Foot (2:1)		1	5	2.4	Spectra SK 75	without cover
Foot (4:1)		1	6	15.0	Spectra SK 60	with cover
Assymetric tack	1870	1	8	17.5	Vectran	
Bowsprit guy rope strop	3550	1	5	1.4	Dynex 75	without cover
Backstays Stropes	1400	4	10	0.5	Spectra SK75	with cover
Backstays (3:1)	700	2	10	11.0	Vectran	with cover
		2	8	13.0	Polyester	
Mast-hole guy rope		2	6	1.2	Vectran	without cover
Top lifelines		2	5	11.2	Stainless steel	
Low lifelines		2	5	11.0	Stainless steel	
Back lifelines		3	5	3.6/3.3/3.2	Stainless steel	

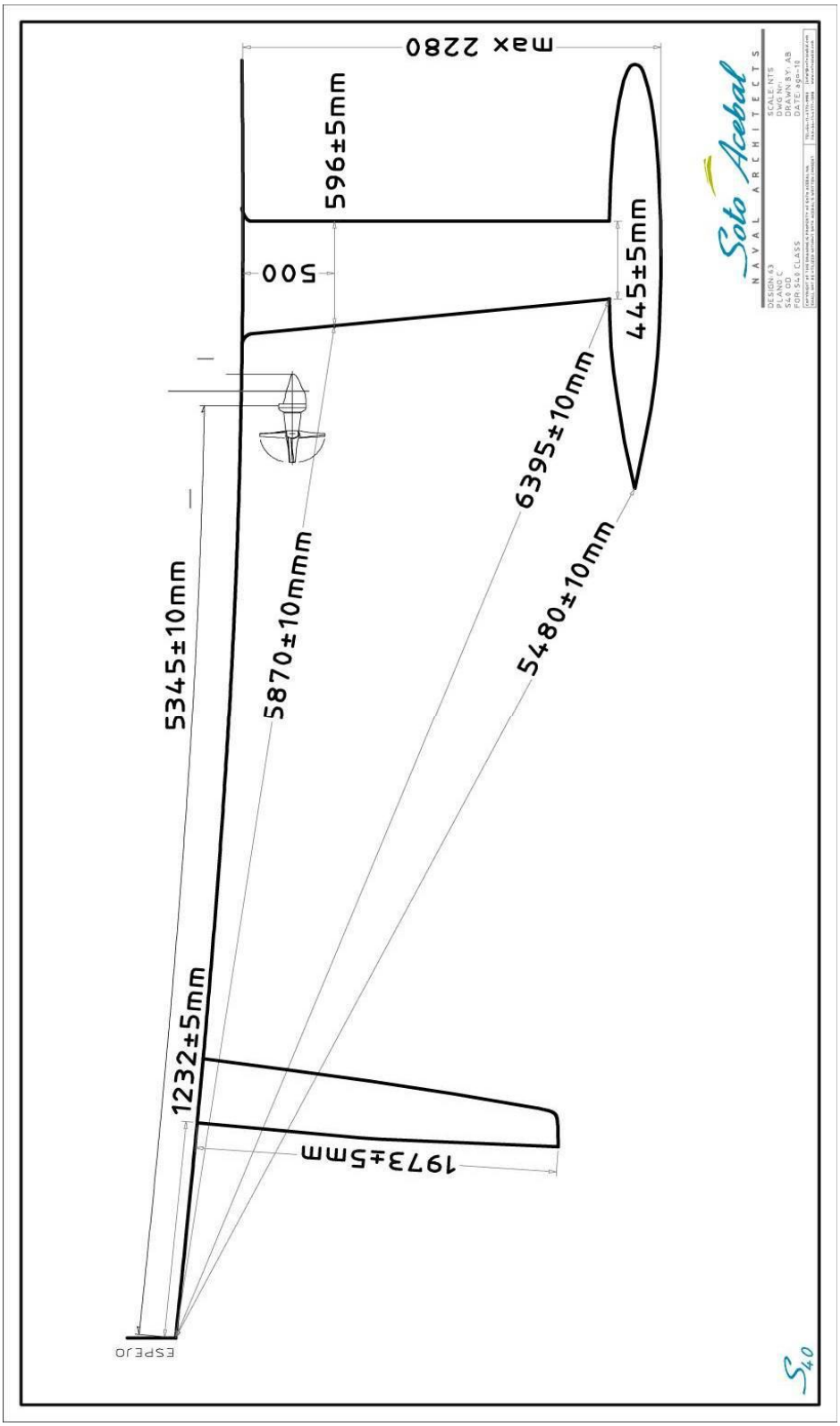
Notes:

1. Every rope shall comply with the breaking strength and the minimum diameters established in the chart.
2. Covers for protection may be added in the areas where maximum effort is made.
3. Eyes are permitted on the rope ends to facilitate their use.
4. The ropes' minimum diameter shall be applied to the external diameter of their cover.
5. The use of carbon ropes is not permitted.

APPENDIX 8

APPENDAGES PLAN

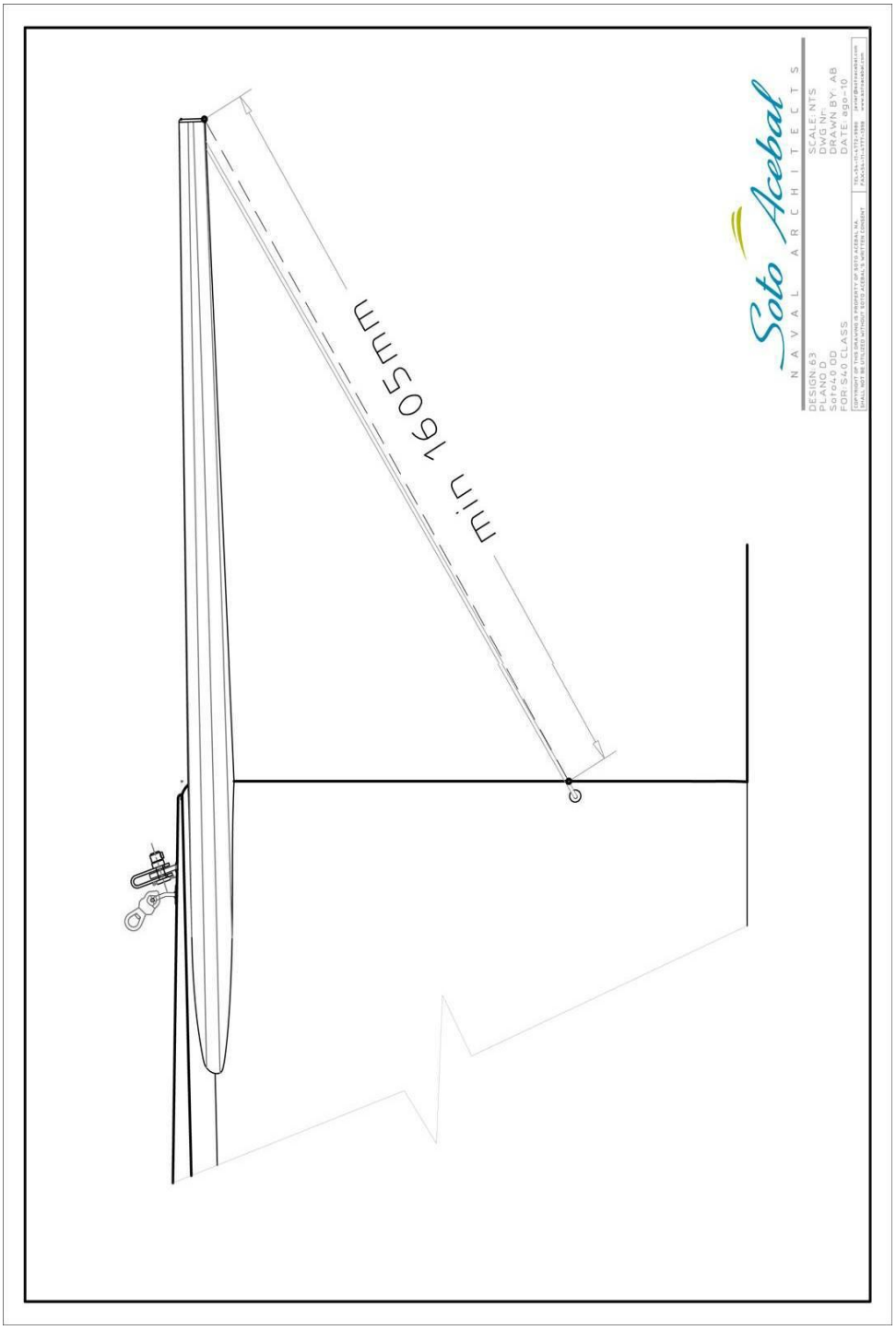
DRAWING C - HULL MEASUREMENTS



APPENDIX 9

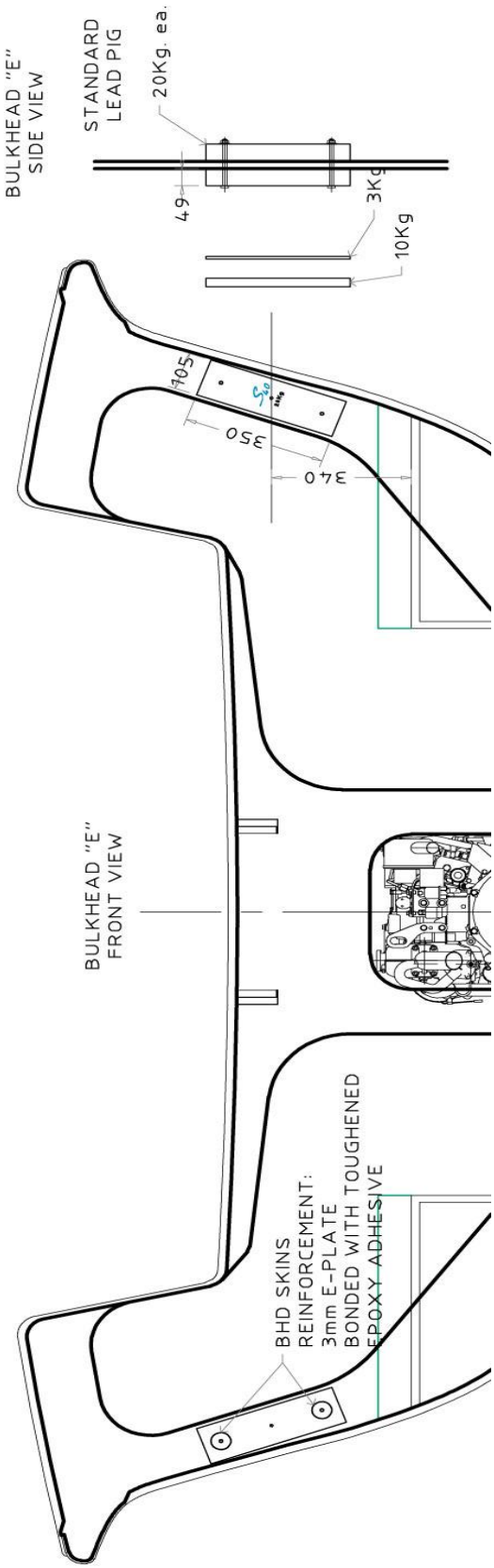
BOBSTAY LENGTH

DRAWING D - BOWSPRIT



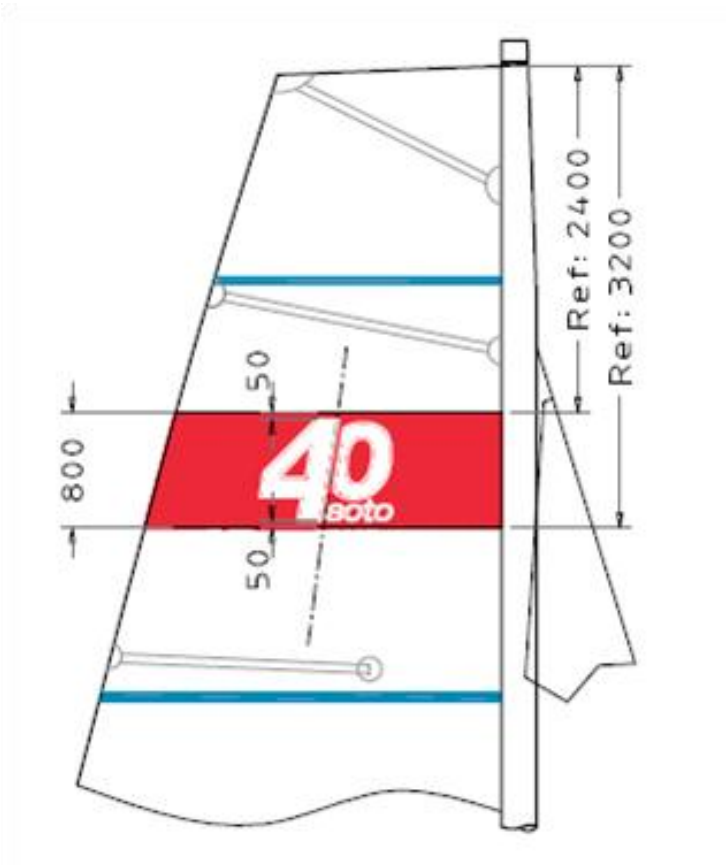
APPENDIX 10

DRAWING E - POISITIONING OF CORRECTOR WEIGHTS



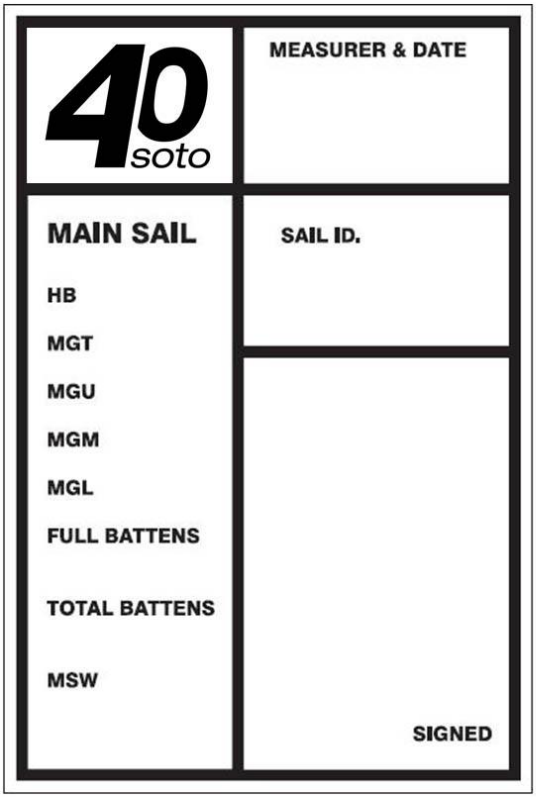
APPENDIX 11

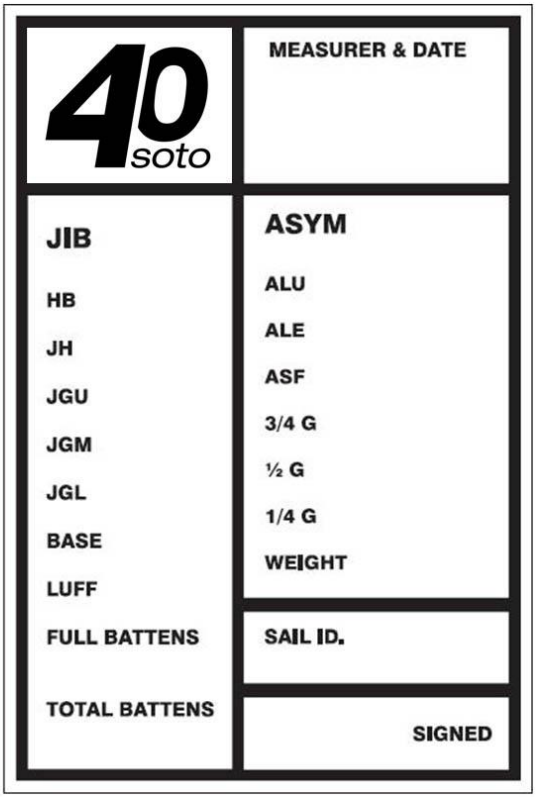
POSITIONING OF THE SOTO 40 OD CLASS EMBLEM



APPENDIX 12

SAILS OF THE SOTO 40 OD CLASS





APPENDIX 13

SOTO 40 – OD Class

MEASUREMENT CERTIFICATE - 2011

Yacht description

Name:

Sponsor:

Sail No:

Builder:

Steering:

Age:

Certificate details

Certificate No:

Issue Date:

Not Valid After:

Measurer:

Chief Measurer:

Management Group:

Owner details

Name:

E-mail:

Club:

Representative:

E-mail:

Signature:

Note: I have read and understand the S40-OD Rules and will conform to them while racing.

Data

Building Compliance Certificate (CCC) on file:

Rigging Compliance Certificate (CCA) on file:

Measurement Checking List (MCL) on file:

Keel weight (rule 10.2):

Rudder weight (rule 11.2):

Mast weight & VCG (rule 15.3):

Corrector weights:
– S1:
– S2:
– Bottom:

Boat TOTAL weight (rule 14):
Corrector weights:
– Er:
– Br:

Keel draft (rule 10.4):

Keel dimensions and Geometry (rule 10.1):

Keel location (rule 10.3):

Rudder draft (rule 11.4):

Rudder dimensions and Geometry (rule 11.1):

Rudder location (rule 11.3):

Engine & sail drive installation (rule 12):

General dimensions (LOA – Hull Beam – J – STL- SFJ- ...):

Deck gear layout (rule 9.3):

BAS (rule 15.4..c):

Mast Shims (rule 15.4.6.d):
–Height:

Comments

APPENDIX 14

HELMSMAN ACCEPTANCE CLASS FORM

APLLICATION FORM TO BE AN S40OD HELMSMAN

Boat: _____

Event: _____

Full name: _____

ISAF Code: _____

ISAF Classification: _____

In the past 10 years (keep as appropriate):

- I was a crew member in America's Cup's teams YES NO
- I took part in an Olympic competition YES NO
- I was a crew member in the Volvo Ocean Race YES NO

Should any of the items above be positive please specify which duties you carried out in those teams you took part of:

_____

_____

_____

_____

This Affidavit must be completed without omitting, amending or including any false information. Should any part of the information above not be true, the undersigned would be punishable by rule 69 of ISAF's RSS

_____ _____

Helmsman's name Signature

_____ _____

Date Place

APPENDIX 15

SAILS AND CREW DECLARATION FORM

SAIL	STICKER Nº	YEAR #
Main		
Genoa 1		
Genoa 2		
Jib		
Asymmetric 1		
Asymmetric 2		
Asymmetric 3		

	Name		ISAF ID	ISAF Group	Weight (kg)
1.		(Helmsman)			
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					

I declare that all sails mentioned in the list above, that comply with the SOTO 40 OD Class Rules and with the respective buttons, are the only ones that shall be used in this Competition, and that the crew list mentioned above complies with the SOTO 40 OD Class Rules. (Please include the ISAF ID Code for all competitors in Group 1).

RACE _____ HULL # _____

NAME OF BOAT _____ SAIL # _____

SIGNATURE _____ DATE ____/____/____

OWNER/REPR.

APPENDIX 16–

ADDITIONAL SAILS FORM

Official SOTO 40 OD **class** raced regattas Affidavit

Hull Number: _____ Owner: _____

Events raced during 20___ (keep as appropriate):

Event / Championship Name	Nº of sailed races
…….....	.....
…….....	.....
…….....	.....
…….....	.....

By means of this Affidavit, I declare to have participated in the abovementioned events with the same boat of my own. I hereby request the sails measurement button number _____ corresponding to year 20___.

_____ _____

Owner's signature Owner's name

__/__/20__

Date

APPENDIX 17

SOTO 40 – OD Class

GENERAL APPLICATION FORM

Yacht description

Name:

Sponsor:

Sail No:

Builder:

Steering:

Age:

Application form is for:

1st Certificate / renewal with changes

Annual renewal without changes

Annual stickers

Additional annual stickers

Sail reparation

Hull reparation

Owner details

Name:

E-mail:

Club:

Date:

Representative:

E-mail:

Signature:

1st MEASUREMENT CERTIFICATE: I the undersigned declare that my yacht has not suffered any alteration not contemplated on the S40-OD class

ANNUAL REVALIDATION: I the undersigned declare that my yacht has not suffered any alteration not contemplated on the S40-OD class rules.

REVALIDATION in case the yacht has suffered any alteration contemplated on the S40-OD class rules or approved by the MG.

ANNUAL STICKERS: *please, tick the type of sail you are requesting the stickers for.*
MAINSAIL - GENOA - GENOA - JIB - ASYM - ASYM - ASYM

ADDITIONAL STICKERS: *please, tick the type of sail you are requesting the stickers for.*
MAINSAIL - GENOA - ASYM. To attach APPENDIX 10 of the class rules ***"Additional Sails Form"****, properly filled.*

SAIL REPARATION: *please, tick the type of sail you are requesting permission to repair and the button year and number:* year: number:
MAINSAIL - GENOA - GENOA - JIB - ASYM - ASYM - ASYM

HULL REPARATION: *please, write brief detail of the jobs to be done, and send pictures or drawings. The MG may require re-measurement after the reparation.*

Note: I, as the undersigned, declare I have read, understood and accepted the S40 Class Rules, and that I am informed of the owner's obligations stipulated at the S40-OD ClassRrules.
I have read and understand the S40-OD Rules and will conform to them while racing.

S40-OD General Application Form