

- 2009/2010 TP52 RULE

**For boats build before
1 november 2009.**

Final Version

14 October 2009

Changes from 2009 in

RED

TRANSPAC 52 RULE (TP52 RULE)

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— PART 1 - GENERAL

1.1 Class Name:
Transpac 52 Class (TP52 Class)

1.2 Purpose:

The Transpac 52 Rule (TP52 Rule) is intended to produce a class of fast, monohull keelboats for high quality level racing. Development is allowed in such factors as hull shape, foil shape, construction, interior, deck layout and rigging. However speed producing factors such as length, displacement, draft and sailarea are strictly controlled. Boats in this Class shall sail without time allowance. Any developments which are contrary to this purpose may give rise to rule changes.

Acknowledging that it is difficult to cover every condition and innovation, designers, builders, owners and crew carry the responsibility for complying with the intent and spirit of the TP52 Rule.

During 2009 the TP52 Rule was rewritten to the ISAF format and to new box dimensions and requirements. The change from the original rule to the new format will take place from the 1st of January 2011. Of course it is possible to build to the 2011 Rule before that date and race in other events than Class Events. The updated Rule is called the 2011 TP52 Rule.

In 2010 for MedCup and Worlds we will have in fact 2 rules, one for existing boats and one for new boats, both reworded according the decisions of the 2009 Annual Meeting. Both are intermediate rules to suit a class in transition.

New boats planning to compete in the 2010 MedCup and 2010 Worlds shall be build to the 2010 / 2011 TP52 Rule. Existing boats shall remain within the 2009 / 2010 TP52 Rule.

Existing boats are boats build before 1 november 2009. They may update to suit the 2009 / 2010 TP52 Rule with the exception of larger changes as replacing the rig, replacing the keelfin, moving the keelfin position, moving the rig / chainplate position in fore/aft plane (moving the chainplate to the sheer without altering the mast position and angle from chainplate to mast remains possible), or changing or modifying hull or deck. The masttube shall not be (locally) reduced in weight or be beefed up with extra laminate. When in doubt and planning modifications, contact the class manager first.

In case of damage beyond repair to a rig or repair that to the opinion of the class manager will limit a boat to be competitive a team may request replacing the existing rig by a new rig or a rig build before 1 november 2009. A new rig shall be build to the 2011 TP52 Rule requirements.

NOTE:

Masts and Booms build before 1 november 2009 to the 2009 or earlier TP52 Rules shall not be transferred to boats launched after 1 november 2009 and racing under the 2011 or later TP52 Rules. These boats shall have rigs build within the limits of the 2011 TP52 Rule.

However rigs build before 1 november 2009 to the 2009 or earlier TP52 Rules will be grand-fathered for racing after 2010 when used on boats build before 1 november 2009, as long as the rigs remain within the limits of the 2009/2010 TP52 Rule. This means that for instance booms might be marginally lighter and the masts vcg may differ from the requirements of the 2011 TP52 Rule.

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— 1.3 General:

No yacht shall be considered a Transpac 52 (TP52) or be eligible to race in a Transpac 52 race unless:

- a) It is in compliance with the TP52 Rule, the TP52 Bylaws and the TP52 Interpretations and has a valid TP52 Certificate on board when racing.
- b) It is owned by a Regular Member of the TP52 Class.
- c) It is measured by a TP52 Measurer and has a valid IMS certificate and a valid TP52 Certificate on file in the Chief Measurers office.

However it will be possible under this Rule to supply a TP52, owned by a person other than a TP52 Class Member, a "One Event – TP52 Certificate", on condition that:

- a) the event is approved by the TP52 ExCom as suitable for a "One Event – TP52 Certificate".
- b) the certificate is valid only for the duration of the Event.
- c) the TP52 supplies the TP52 Chief Measurer with a valid IMS Certificate.
- d) EUR 250.- is received with the application for the certificate.

1.4 Administration.

The sole authority for the TP52 Rule is the TP52 Class and the TP52 Rule shall be maintained and administered at the TP52 Class discretion. See also the TP52 Bylaws.

The TP52 Class may change or amend the TP52 Rule from time to time.

It is not possible for the TP52 Rule to cover every eventuality nor to anticipate every innovation in design and construction. The TP52 Class therefore reserves the right to refuse or to award a TP52 Certificate as it considers appropriate and to interpret clauses of the TP52 Rule at any time. The TP52 Class Manager may at any time issue Interpretations of the TP52 Rule and any such Interpretations shall be published and then deemed final unless and until overruled by the TP52 ExCom or the Members voting at the TP52 Annual Meeting.

The substance of any design feature or innovations presented for measurement or Interpretation shall be made available to any person on request.

1.5 TP52 Certificates.

TP52 Certificates shall be issued by the TP52 Chief Measurer. See TP52 Bylaws 4.2.11.

A levy for TP52 Certificates issued may be determined by the TP52 Class and shall be paid upon being invoiced.

1.5.1 A TP52 Measurer shall report to the TP52 Class Manager and/or the TP52 Chief Measurer anything which he considers to be unusual or to be against the general interest of the TP52 Rule. A TP52 Certificate may be withheld pending examination of the case to the discretion of the TP52 Chief Measurer.

1.5.2 To be valid the TP52 Certificate must bear the name and signature of the TP52 Class Manager and the TP52 Chief Measurer. No yacht shall have more than one valid TP52 Certificate at any time. Within the 12-month period beginning 1/1/2010, the maximum shall be 2 such certificates within any 12-month period as result of changes to the boat that require remeasurement. This number may be increased by the Class Manager in case of unforeseen revisions, for instance as the result of a repair.

1.5.3 A TP52 Certificate is automatically invalidated by a change of ownership or by a change to the yacht. These changes must be notified immediately to the TP52 Chief Measurer. The TP52 Chief Measurer shall withdraw, and may re-issue, the TP52 Certificate.

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— 1.5.4 When the TP52 Chief Measurer has reasonable evidence that, whether or not by her own fault, a yacht does not conform to her TP52 Certificate, or that she should never have received a TP52 Certificate, he shall withdraw the TP52 Certificate, subject to the provisions below, and may check the measurements of the yacht and correct the TP52 Certificate as required and may re-issue it.

a) When the yacht is not under the jurisdiction of a race committee, the TP52 Chief Measurer may withdraw the TP52 Certificate, and shall inform the Owner or his representative in writing of the reasons for this withdrawal.

b) When the TP52 Chief Measurer intends to withdraw a TP52 Certificate while the yacht is under the jurisdiction of a race committee, it shall report the matter to the race committee which shall then proceed under the RRS.

1.5.5 TP52 Certificates shall be of the form shown in Appendix 1.

1.5.6 A copy of the current TP52 Certificate shall always be on board the yacht.

1.5.7 The period of validity of the TP52 Certificate shall be a maximum of 1 calendar year. The TP52 Certificate is required to be revalidated annually by written application from the Owner to the TP52 Chief Measurer. The TP52 Chief Measurer must be satisfied that no change has been made to the yacht in any of the rule parameters and if not satisfied, shall order any appropriate re-measurement.

1.5.8 The TP52 Chief Measurer shall supply a copy of the TP52 Certificate to any person on payment of a copying charge.

1.6 Measurement:

The term "measurement" shall be taken to include also identification as to number, material, construction, etc. as may be determined by examination or declaration.

Only TP52 Measurers appointed by the TP52 Chief Measurer, in consultation with the TP52 Class Manager, and/or with the approval of the TP52 Executive Committee shall measure a yacht for a TP52 Certificate. The Measurer shall maintain records of all notes, sketches and worksheets used in preparing the measurement input.

No Measurer, assistant or office staff shall participate in the measurement or processing of measurements of a yacht owned, designed or built, wholly or partly, by himself or in which he is an interested party, or in which he has acted as a consultant or has a vested interest.

Except for reasonable and brief clarification of points in the Rules, this applies to any consultation or advice on rating values regardless of whether or not any payment is involved. In considering measurement procedures, measurement equipment and dimensions or points measured, the Measurer shall follow only that advice issued by and through the authority of the TP52 Chief Measurer, in consultation with the TP52 Class Manager, and/or the TP52 Executive Committee and not advice from any other party.

1.7 Structure of the Rule:

Compliance with other rules is required as part of this Rule. In the absence of specific changes provided for by this Rule, the applicable portion of other referenced rules shall apply. Anything that is not expressly permitted is prohibited. Teams are cautioned that there are no provisions in this Rule to correct for failure to fit within Class Limits.

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— 1.8 Applicable rules:

a) ISAF Offshore Special Regulations, a TP52 shall meet ISAF Offshore Special Regulations Category 1 for sections 1,2 and 3 of the OSR, and Category 3 (unless instructed differently in the NOR or Sailing Instructions) for sections 4, 5 and 6 of the OSR.

The cockpit volume and companionway hatch limitations shall be as per OSR 2006 - 2007, see TP52 Rule 3.7 and 3.8.

b) American Bureau of Shipping Guidelines for Building and Classing Offshore Racing Yachts 1994. The designer shall certify in writing that the plans for the yacht meet the requirement of the ABS Guidelines for Building and Classing Offshore Racing Yachts 1994. The builder shall certify in writing that the yacht was built in accordance with those plans. "L" in all structural calculations shall be 15.85m.

c) The ISAF Racing Rules of Sailing.

d) The ISAF Equipment Rules of Sailing.

e) The TP52 Bylaws.

f) The TP52 Interpretations.

1.9 The language of the TP52 Rule is English. In the case of a dispute over translation, English shall prevail.

1.10 The word "shall" is mandatory and the word "may" is permissive.

1.11 The Metric System shall be used for measurements under the TP52 Rule.

Length measurements shall be measured in meters to three decimal places on the Hull and Rig. Sails shall be measurements to two decimals places. Weight shall be in kilograms.

Inclining weights and crew weights shall be to one decimal place. All other weights to a kilo, unless specified different in the TP52 Rule or TP52 Interpretations.

1.12 Boats build to the TP52 Rule before 1 November 2009 and holding at any time a TP52 Certificate, and still within the limits and Rules as in force before 1 November 2009, can request the TP52 Class Manager to be grandfathered on aspects that are or might be seen different from the TP52 Rule at that time and the 2010 TP52 Rule. The decision on this rests solely with the TP52 Class Manager, with the option to ask a review on this decision from the TP52 Excom.

1.13 In case of a conflict between these rules and the Racing Rules of the ISAF and National Authorities; in such cases the TP52 Rules will govern, but when not in conflict, the rules of the ISAF shall be observed.

1.14 Age Allowance

After 1 July 2011 it will be evaluated whether **Boats** build to the 2009 or earlier versions of the TP52 Rule will be granted Age Allowance and if so from what age. During the 2010 season Age Allowance is not foreseen for MedCup and Worlds but it may be introduced on basis of consent by the TP52 Members participating for boats launched in 2006 or earlier. The 2009 Annual Meeting agreed on the option to add 2cm to the minimum vcg requirement, so go to - 0.890m for boats meeting the 2006 or earlier requirement.

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— PART 2 - LIMITS AND EXCLUSIONS

LOA Maximum 15.850m, check handmeasured	(see 4.24)
Beam Maximum 4.420m, check handmeasured	(see 4.29)
Beam Minimum 4.000m, check handmeasured	(see 4.29)
Displacement Minimum 7600kg	(see 10.7)
Displacement Maximum 7800kg	(see 10.7)
Draft Maximum 3.205m at SG 1.026, check handmeasured	(see 4.30)
FF Minimum 1.445m	(see 4.22)
FM Minimum 1.255m	(see 4.22)
FA Minimum 1.135m	(see 4.22)
Minimum mast weight 296 kg	(see 5.30.18)
Minimum height of VCG above sheer 9.000m	(see 5.30.18)
Minimum mast fore and aft dimension 0.280m	(see 5.30.9)
Maximum mast fore and aft dimension 0.340m	(see 5.30.9)
Minimum mast athwartship dimension 0.130m	(see 5.30.10)
IM Maximum 19.720m	(see 5.30.6)
J Maximum 6.190m	(see 5.30.2)
FSP Maximum 0.070m	(see 5.50)
LPG Maximum 6.300m	(see 5.49)
JGU Maximum 1.70m, JGM Maximum 3.20m	(see 5.48.d)
ISP Maximum 22.400m	(see 5.30.8)
STL Maximum 8.300m	(see 5.30.3)
P Maximum 20.420m	(see 5.30.12)
HB Maximum 0.150m	(see 5.56)
BAS Minimum 1.980m	(see 5.30.13)
BAS Maximum 2.130m	(see 5.30.13)
Mainsail Area Maximum 93.500m ²	(see 5.55.c)
Spinnaker Area Maximum 260.0m ²	(see 5.51.b)
Jib Area Maximum 65m ²	(see 5.48.l)
V1 Shroud base Minimum 3.500m	(see 5.21 / 5.30.17)
Twin Backstays	(see 5.16)
VCG between -0.870m and -0.700m	(see 11.1.b)
KW (Keel Width) maximum 0.800m.	(see 4.12)

Speed Under Power minimum 7 knots. With racing propeller, in smooth water and without assistance of wind.

No yacht shall use any material having a density greater than that of lead (11.34 kg/dm³) as ballast in any form or location on or within the yacht.

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— PART 3 – VARIOUS

3.1 Water ballast is not permitted.

3.2 Stanchion/pulpit/pushpit bases shall not be situated outboard of the edge of the working deck (see 4.27).

3.3 Pushpits, pushpit lower rails and/or stanchions shall be constructed in such a way that hiking is restricted to a maximum of 10 degrees when under a load representing the actual situation of crewmembers hiking during a race. Taken for the lower rail of the pushpit from the outboard end of the working deck to the inboard side of the lower rail and for the stanchions from centre of the lower wire guide.

NOTE:

1) Basically this means that pushpits and stanchions shall not be designed and build to bend outboard once loaded up by a crew hiking. As some "bending" might be unavoidable (and unintended) the limits of that are given in this rule.

2) Read also the ISAF - OSR Interpretation Number 6 – Lifelines, Stanchions & Pulpits.

3.4 Pushpits, stanchions and/or pulpits in any form or shape shall be constructed so that they do not flex in the direction of the lifelines under the load of any number of crew. The idea is that the top lifeline shall stay as tight as possible by being connected to solid outer anchor points.

Note:

1) Minor flex might be unavoidable, but the layout and construction of the combination of anchor and support points shall clearly show the intention to avoid flex. When in doubt, contact the Class Manager.

2) Rules 3.2, 3.3 and 3.4 are to be seen as additional to the requirements of OSR 3.14. Both have to be respected at any time.

3.5 Yachts shall not have a specially textured surface on the hull and/or appendages of which the purpose is, or could be, to reduce drag.

3.6 Except for the stability and trim ballast of the hull, and for trim ballast of the rig, all weights measured shall be the true weight associated with proper structural engineering and no weights shall be artificially increased through ballasting.

3.7 Interior ballast shall be fitted inside the "proper hull" of the yacht in such a way that it is not a structural part of the yacht, is easy removable without damaging the hull or internal structure of the yacht and is not covered or fitted in a way that makes checks and inspections impossible or difficult to execute.

3.8 All yachts constructed after 1/1/04 shall be capable of being lifted from a single point.

3.9 A companionway hatch extending below the local sheerline shall not be permitted. (Note: as per OSR 2006 - 2007)

3.10 The total volume of all cockpits (including the optional foredeck well) below the lowest coamings at the aftmost point of the cockpit shall not exceed 6.65m³. No extension of a cockpit aft of the working deck shall be included in the calculation of the cockpit volume. (Note: as per OSR 2006 - 2007, but volume quantified)

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— 3.11 All yachts constructed after 1/10/07 shall only have a provision to carry canister liferafts on deck, as close as practicle (considering crew movements) to the stearn of the yacht. Yachts constructed before 1/10/07 shall not retrofit a purpose-built liferaft locker as described in the ISAF OSR if they donot have one at that date.

3.12 All yachts constructed after 1/1/09 shall have their lifelines made of 1x19 stainless wire. All yachts shall accept that a TP52 Measurer during any event with a start for TP52's tensions and seals their lifelines.

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— PART 4 – HULL, DECK AND APPENDAGES

HULL AND DECK

4.1 Yachts shall be of monohull type only. Hulls in which the canoe body depth in any section decreases towards the center line shall not be measured. The hull surface may not contain hollows except in the forward 30% of LOA. Hollows with a depth of 0.001m under 1m in length, or a depth of 0.002m over 1m in length are permitted. Spray strakes are for the purpose of the Rule to be seen as appendages and thus not allowed.

4.2 Below the lower end of the hull to deck joint radius the hull section shall not increase in beam with increasing depth.

4.3 The sheer shall be a continuous curve without double inflections in both plan and profile. In plan, both the sheer and the outline of the canoe body, shall have a radius of curvature greater than 10 meters.

4.4 The deck may have cockpits as allowed, but may not have negative camber. A recess in the bow area to facilitate lowering the jib tackfitting shall not be larger than 0.015 m³ (measured to the level of the aft outer ends of the recess) and have adequate means to drain water from the recess to the sea.

4.5 The hull to deck joint from SFFP to the aft end of the working deck shall have a constant radius (builders tolerance allowed +/- 2mm) and shall meet the hull tangentially. The radius shall not be bumped at the freeboard measuring points or other points, like at deck fittings or stanchion positions. Forward of SFFP (around the bow) the radius shall be maintained as much as possible.

Furthermore the hull to deck radius shall also:

- a) meet the deck tangentially, or
- b) meet the deck with a sharp corner. In that case the point where the radius meets the hull tangentially shall be not be more than 0.07m below the intersection of hull and deck.

Between SFFP and the aft end of the working deck the vertical distance between the intersection of hull and deck and the point where the radius meets the hull tangentially shall not be smaller than the distance found at SFFP. In sideview the junction between hull and radius shall constitute a continuous curve without double inflections (builders tolerances allowed).

The intersection between hull and deck is defined as the intersection between the fair extension of the deck and the fair extension of the hull above the lower end of the hull to deck radius.

Along the sheer the hull to deck radius shall be either a) or b) as mentioned above , a mixture of a) and b) is not permitted.

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— APPENDAGES

4.6 Yachts shall be fitted with one midline keel, solid in profile, which may have a bulb, one normal centreline rigid-surface rudder, a bona fide propeller installation and the usual instrument transducers. Yachts having any other appendages, or what can be described as a dynamic ballast system of any sort, will not be measured.

A keel is classified as fixed when no part of the keel is adjustable when racing so as to alter the yacht's maximum draft and when the keel fin is attached to the hull in such a way that it does not move beyond the normal elasticity of the materials used, and can not be moved, when sailing.

4.7 The keel may not have a trim tab.

4.8 Except for coating and fairing, and for presenting a suitable surface for coating and fairing by laminating glass fiber over the fin surface, the permitted materials for the keel strut and ballast are lead, antimony or it's alloy's (max 4%), steel, stainless steel, or bronze.

4.9 The keel may have a weed knife and fairing for the weed knife. The weed knife may only travel in the centreline vertical plane of the leading edge of the keel and the weedknife system is permitted to be of any of the materials permitted for construction and equipment of the yacht.

4.10 The keel may have ballast pocket(s) and bolt pockets. Coating and fairing (see 4.8) in the pockets may exceed the limit of 4.11.

4.11 Coating and/or fairing is limited to 0.02m in depth in total and shall have a specific gravity less than 2 kg/dm³.

4.12 Keel Width (KW) shall be the maximum width in the athwardships plane of any part of the keel.

4.13 The rudder may not be multi surface and its axis of rotation shall be in the centerplane of the boat.

4.14 Conventional flexible fairings over the rudderpost are permitted.

4.15 An appendage may extend into the hull, however the Chief Measurer shall be satisfied that it is designed solely to attach the appendage to the hull and not to significantly contribute to the strenght or stiffness of the hull. The appendage shall be able to be removed without damaging the structural integrity of the hull.

— MEASUREMENT

4.15 Principle:

It is the principle of hull measurement under the TP52 Rule that the “lines” of the hull and appendages are recorded in considerable detail so as to yield, in combination with measurements afloat, hydrostatic data sufficiently accurate for establishing the Vertical Centre of Gravity (VCG). For the TP52 in the order of 700 measurement points are to be recorded. It is considered an attribute of the system that the exact location of measurement points is, to a large degree, at the discretion of the Measurer and cannot be accurately anticipated.

4.16 Hull Measurement Instrument (HMI) and Lines Processing:

Only hull measurement data obtained and processed with an TP52 approved Hull Measurement Instrument (HMI) and TP52 approved software may be used to produce a valid TP52 Certificate. The hull measurement data recorded in the field is rendered in the form of a Hull Offset File by means of approved TP52 software and operations which shall be taken as intrinsic to the hull measurement process, including editing of HMI field data files and, as authorized by the TP52 Class in certain circumstances, the inclusion of manual measurements of limited modifications to hull or appendages. Both the HMI field data file and the Hull Offset File shall be permanently retained.

4.17 Hull Offset File:

The Hull Offset File as processed by the TP52 Measurer shall define the yacht’s hull for the purpose of calculating the information required to create a valid TP52 Certificate until such time as there may be a change to the actual hull (including appendages).

4.18 Remeasurement:

A hull which has been modified will normally require hull remeasurement. A hull which has not changed shall not be remeasured and processed except where the TP52 Chief Measurer or Class Manager is satisfied that reasonable evidence of error exists.

Where it is determined that there is sufficient evidence to undertake remeasurement to validate a yacht’s certificate values, the following procedures shall be observed:

- a) The yacht shall be set up in trim identical to that for the current measurement except where trim itself is deemed not to comply with measurement procedures, in which case trim shall be corrected.
- b) Measurement station spacing shall be identical to that of the current measurement, except where a deficiency is identified in the spacing and/or location of stations in the current measurement. In this case, original station locations shall be fully replicated and any suspected deficiency rectified by adding stations to produce a comprehensive measurement file for evaluation and possible editing by the TP52 Measurer.
- c) Two measurers shall work together and the Certificate produced on the basis of the new measurements shall replace the previous certificate.

4.19 Machine Hull Measurement:

A hull shall be measured only when the Measurer is satisfied that it has been prepared in compliance with the requirements of 10.2. The Measurer will follow the procedures for set-up and operation of the HMI for hull measurement as set forth in the respective HMI Measurement Manuals for the approved instrument types.

4.19.1 Prior to commencing machine measurement the Measurer shall locate as accurately as possible the vertical centerplane of the hull, marking the centerline on the hull as may be appropriate for guiding the measurement process.

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- The Freeboard Points and Trim Points as defined under 4.21 and 4.23 shall be established and permanently marked prior to machine measurement. These points shall be recorded exactly with the HMI.

4.19.2 The HMI shall be used to record measurement points defining the hull surface at each selected section from the previously identified centerline to the sheerline or highest point of any bulwark or intersection of the transom and topsides. Rubbing strakes, cove mouldings and hull fittings shall normally be ignored. The sheer points as defined under 4.24 shall be recorded.

4.19.3 As detailed in the HMI Measurement Manual(s), the machine shall be positioned such that all points recorded lie on a hull section normal to the centerline of the hull.

4.19.4 Points shall be recorded and sections shall be selected and spaced longitudinally as may be judged appropriate to define the varying geometry of the hull surface. The distance of each section from the forward end of LOA shall be recorded. Stations shall be recorded on both sides of the hull, not necessarily in the same hull section.

In no case shall the distance between adjacent stations on the same side of the hull be greater than 1.58m nor that between adjacent stations on opposite sides of the hull be greater than 0.79m. Measurements within the forward 2.38m, between stations on opposite sides, spacing shall not be greater than 0.40m.

4.19.5 Except at sections specified in the HMI Measurement Manual(s), stations will normally be selected in a sequence alternating between port and starboard sides of the hull. Exceptions are sections where "double stations" are required; i.e., there shall be recorded both port and starboard stations at exactly the same distance from the forward end of LOA at double stations.

4.19.6 Where hull measurement Validity Gauges are available, two shall be used, one placed forward, the other aft. They shall be placed plumb longitudinally and transversely, fixed securely to prevent any movement and shall remain in place throughout measurement. Double stations are required in way of Validity Gauges which, where possible, should be located at Freeboard Stations (see 4.20) SFFP, SMFP, SAFFP, and at trailing edge of the keel and BMAX.

4.19.7 When submitting field hull measurement data, the Measurer shall include a schematic diagram of the hull profile including the stations recorded.

4.20 Freeboard Stations:

Freeboard stations shall be established forward, at the mast and aft, in which stations shall be located the freeboard points to which the flotation freeboards, FFM, FMM and FAM are referenced (see 4.21).

- a) The forward freeboard station: SFFP shall be 0.460 m (+ or - 20mm) aft of the stem.
- b) The mast freeboard station: SMFP shall be at the forward face of the mast at deck level.
- c) The aft freeboard station: SAFFP shall be established between 14.265m and 14.300 aft of the stem.

4.21 Freeboard Points:

At freeboard stations, freeboard points shall be established, at the sheer point, to provide unobstructed measurement of FFM, FMM and FAM. Freeboard points shall be permanently marked for future flotation measurements as in 4.19.1 above.

- a) Stem to Forward Freeboard Points (SFFP): SFFP shall be 0.460 m (+ or - 20mm) aft of the stem, measured as the horizontal distance from the forward end of LOA to the station of the forward freeboard points.

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- b) Stem to Mast Freeboard Points (SMFP): SMFP shall be the horizontal distance from the forward end of LOA to the station at the location where FM is calculated, at the forward face of the mast at decklevel.
- c) Stem to Aft Freeboard Points (SAFP): SAFP shall be established between 14.265m and 14.300m aft of the stem.

4.22 Flotation Freeboards adjusted to Nominal Seawater:

FF, FM and FA are FFM, FMM and FAM adjusted to a normalised flotation at an SG equal to 1.026 (nominal seawater).

4.23 Trim Points shall be chosen and marked on the centreline of the bow and stern, not further from flotation level than 0.5m. BTP (Bow Trim Point) and STP (Stern Trim Point) shall be noted in the TP52 Certificate.

NOTE: The Trim Points will give us an opportunity to do a quick check during events on the longitudinal trim and sink of a boat. All boats are required to have them, no grandfathering!

4.24 Length Overall (LOA):

The Length Overall of a yacht will be (hand)measured to include the whole hull. Spars, bowsprits, pulpits, pushpits and fixtures not intended for rigging stays and/or sheeting of sails are excluded. Shrouds and stays must terminate on the hull or deck, but not to outriggers. Exterior chainplates are permitted, but may not extend more than 12mm outside the hull. It will be measured from:

- a) A point forward being the forwardmost of the following points:
 - i) The stem of the yacht, whether carried above the deck level or not.
 - ii) The bulwarks of the yacht where these are extended above the stem.
- b) A point aft, being the extreme after end of the hull and bulwarks or taffrail of the yacht whether at, above, or below deck level. Rubbing strakes at the stern will be included.

4.25 Sheer Point:

The sheer point at any measurement station shall be defined by the following rules:

- a) The sheer point shall normally be the lowest point on the topsides of the hull where a tangent at 45 degrees can be rested on the hull. The sheer point shall not, however, be taken to any point that is above the lowest level of the deck, or its extension where it intersects the topsides at that station. Where any bulwark or rubbing strake is fastened to the yacht, it shall be ignored in determining the sheer point.
- b) Where any bulwark is a fair continuation of the line of the topsides of the yacht the sheer point shall be taken on the hull surface at the level of the lowest level of the deck at the station projected through the bulwark.
- c) Where the sheer point at any measurement station, as defined above in a or b, is more than 0.22m inboard of a vertical tangent to the hull at that station, the sheer point at that station will be at the point on the hull a distance of 0.22m inboard from the vertical tangent to the hull.
- d) A bulwark shall be interpreted to mean any rail or part of the topsides extending above the lowest level of the deck at that station.

4.26 The level of the deck at any transverse station shall be taken to be the lowest level to which the yacht is rendered watertight at that station.

Abreast a well or cockpit the sheer point shall be taken to the bulwark provided that this bulwark is in all respects a fair continuation of the hull surface. The sheer line on the bulwark shall be a fair continuation of the sheer line forward and/or aft of a well or cockpit.

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— 4.27 Sheer Line:

The sheer line is defined as the line passing through the sheer points defined above. The sheer line defined above will be used for all applicable references under the Rule. In yachts where the transom slopes down and aft, the aft end of the sheer line shall be where the stern drops away from a straight edge placed upon the deck at the sheer line. A shallow step, notch or similar discontinuity designed to clarify the point at which the stern drops away may be incorporated for the purpose of locating the aft end of the sheer line.

4.28 Edge of the Working Deck:

The edge of the working deck is defined as the most outboard point on the deck at the sheerline.

4.29 Maximum Beam (MB):

The Maximum Beam will be (hand)measured to include the whole hull. Stanchions and lifelines are excluded. Shrouds and stays must terminate on the hull or deck, but not to outriggers. Exterior chainplates are permitted, but may not extend more than 0.012m (12mm) outside the hull. It will be measured at the widest point.

4.30 Maximum Draft Including Keel (DHK0):

The Maximum Draft of the Hull including Fixed Keel (DHK0) shall be the vertical distance from the Measurement Trim plane of flotation to the lowest point of the hull or fixed keel, whichever is deeper. It shall be checked by handmeasurement.

4.31 Measurement Trim:

The yacht is measured afloat according to the Rules for condition of loading as set forth in 10.3.3 for the purpose of defining "local" measurement trim. At the time of flotation measurement, the local Specific Gravity is measured and recorded as SG. Measurement Trim for calculations is the trim derived by the LPP from converting flotation at local SG to a normalised flotation at an SG equal to 1.02528 (nominal seawater). Thus, all calculations for measurement purposes derive from the plane of flotation in nominal seawater.

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— PART 5 - RIG, **BOWSPRIT AND SAILS**

The sailplan shall be a fractional sloop (see 5.2). The mast shall be keel stepped (see 5.6). Masthead spinnakers are permitted. **A centerline bowsprit is allowed.**

RIG

The mast weight and VCG shall be determined in accordance with the TP52 Minimum and Maximum mast section dimension(s) which shall apply continuously between the deck and the forestay attachment point. Because ballast and other factors may vary, these minimums may not be adequate. Specific mast engineering should be completed for each individual design.

5.1 The upper end of any rigging shall not be attached to the mast below a point $0.225 \cdot IG$ above the sheerline (see 4.26).

5.2 P+BAS shall not be less than IG.

5.3 The mast, including integral mouldings, such as tangs, spreaders and/or jumper, shall be built in section throughout its entire length substantially of carbon fiber non-sandwich reinforced plastic having a maximum fiber modulus of 465 GPa by JISR 7601 or 452 GPa by SACMA SRM 16, measured between 1000 and 6000 microstrain.

Other applicable materials for masts and integral mouldings are: aluminum alloys, steel alloys, fiberglass reinforced plastic and glass fiber. Restrictions related to FRP construction do not apply, except for the restrictions on sandwich.

Note: **Walls of booms and bowsprits.** All permitted materials including carbon fibre having a maximum fiber modulus of 250GPa (SACMA SRM 16).

Restrictions related to FRP construction do not apply for booms. Also the restrictions on sandwich do not apply to booms.

PLEASE CHECK THE 2011 TP52 RULE FOR THE CONSTRUCTION LIMITS OF BOWSPRITS, THERE WILL BE NO GRANDFATHERING FROM 2010 to 2011 FOR BOWSPRITS:

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I.4.14 The **bowsprit** shall be built substantially of carbon fibre reinforced plastic having a maximum fibre modulus of 260 GPa by JISR 7601 or 250 GPa by SACMA SRM 16, measured between 1000 and 6000 microstrain.

I.4.15 The **bowsprit** may be of a sandwich construction. Any components used in the manufacture of the cores shall be of plastic foam or (Meta) Aramid Fibre paper honeycomb coated with a heat resistant phenolic resin. Specifically the so called Para-Aramid Fibre honeycombs based on N636 paper are not permitted under this rule.

I.4.16 Aluminium alloys of the 5000 and 6000 series, or steel or stainless steel alloys may be used for tapping plates, backing plates, etc.

I.4.17 The cure process shall be based on applying external heat of less than 105 degrees Celsius.

I.4.18 Pressure applied at any time during construction shall be less than 1 Atmosphere.

Note: this shall not prevent the use of construction methods using clamps, mechanical fastenings, wrapping, winding, etc.

I.4.19 Commercially available stock materials like plates and tubes constructed in excess of the limits on temperature and pressure as specified in this rule may be used for small components, but their use has to be approved in writing by the TP52 Chief Measurer.

I.4.20 Fastenings, like screws, rivets, bolts, nails, may be used if made of steel or stainless steel.

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- The mastbuilder/supplier shall certify in writing that the mast and boom supplied after 25 September 2007 are built in accordance with the TP52 Rule, specify the highest modulus of the carbon fibre used for each item, and also specify the weight and position of any corrector weights attached to the rig.

Bowsprit and bobstay.

I.5.5 The **bowsprit** and/or the bobstay arrangement shall not extend the effective sailing length.

I.5.6 The **bowsprit** shall be:

- (a) Removable from the **hull** without damaging the structural or watertight integrity of the **hull**.
- (b) Fastened to the **hull** by mechanical means only. This shall not preclude small quantities of non-structural sealing compound at the points of attachment to the **hull**.

I.5.7 The **bowsprit** shall not:

- (a) Be retractable; nor shall it pivot; nor shall it be removed when *racing*.
- (b) Extend below a plane 0.200m below the freeboard at FFS. However a bobstay is permitted to go below that plane.

I.5.8 The bobstay shall attach to the bowsprit in the forward 20% of the bowsprit (20% of the distance **hull** - outer end bowsprit). And attach to the hull not further from the waterline in measurement trim than 0.3m.

Standing Rigging.

5.7 Permanently bent spars are not permitted. A spar that will straighten when stresses imposed by the rigging are removed does not constitute a permanently bent spar.

5.8 Rotating masts are excluded. Masts shall be structurally continuous (non-articulating) from the masthead to the step.

5.9 Mast shall be keelstepped, meaning that the maststep arrangement shall be located directly on top of the structure that is required to take the loads in this area and this structure in no way is designed to artificially raise the position of the maststep.

5.10 From 1/11/2007 no rig supplied or altered after that date shall be measured with continuous athwartships standing rigging, or curved spreaders, or spreaders and/or spreader attachments of which the construction is intended to make it possible to adjust the spreader angle when racing. Also see 5.28.

5.11 Standing rigging except the backstays, **the bobstay** and the lower pendant of the forestay (see 5.15) shall be steel (**Nitronic 50**) and circular in shape.

5.12 A yacht must be fitted with a permanent bona-fide forestay. Forestay and shrouds shall be connected by conventional turnbuckles, toggles or link-plates. The mast may be steadied to balance a slacked off backstay only by use of a headsail halyard and its proper winch. The forestay length may be adjusted a maximum of 0.255 meters while racing.

5.13 The centerline of the upper end of the forestay when projected shall intersect with the longitudinal centerline of the masttube, and the front face of the mast. Hollows in the mast face shall be bridged. No device is permitted to move the forestay off centerline.

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- 5.14 A device for measuring forestay tension is permitted provided that it is incapable of adjusting the stay and has a possible movement of no more than 0.005m.

- 5.15 The construction material of the lower pendant of the **forestay**, the bobstay and of the **backstays** (not including the fittings) is unrestricted, except that the lower pendant of the forestay shall not contain carbon or titanium and the backstays and bobstay shall not contain carbon of a fibre modulus over 300 GPa by SACMA SRM 16 (intermediate modulus).

- 5.16 A yacht shall be fitted with two backstays, both attached to the mast no lower than the upper limit mark. They shall be attached to the **mast** in such a way that their attachment points are within 0.02m of the fair surface of the mast tube (or inside the mast tube).

- 5.17 **Runners and/or Checkstays** in any form are prohibited.

- 5.18 The backstays shall have a minimum breaking strain of 9250 kg.

- 5.19 The backstays shall be longer than 18.0m. **Under tension the backstay shall follow a straight line over its full length.** At the lower end of a backstay, a purchase may be used to adjust the tension.

- 5.20 **The backstay purchase attachment point(s) shall be aft of the main boom in the sense that if one follows the line of the backstay from the attachment at the mast to the hull, the intersection of the backstay with the hull is situated aft of the boom.**

- 5.21 The minimum V1 shroud base and width of the lower spreaders measured between the centers of the cap shrouds in each case shall not be less than 3.500m.

- 5.22 The main halyard shall be attached to the mainsail while sailing.

- 5.23 The main halyard from the head of the sail at full hoist, reefed, or when using a storm trysail, to its cleated position on deck or below deck level, shall have a minimum breaking strain of 3000kg.

- 5.24 The remaining part of the main halyard may have a minimum breaking strain of 2000kg.

- 5.25 **Spreader, spreader roots, spreader tip fittings shall form a rigid unit and be rigidly attached to the mast except that while racing they may move in vertical direction (following the rigs longitudinal axis) as result of the trim of rig and sails as allowed by this rule.**

- 5.26 The rigging and terminals that join in to the spreader tip fitting, or as the rigging passes' though the spreader tips shall be fixed.
With the exception of: The rigging's terminal fitting into the spreader tip fitting may rotate allowing it to seat. The center of the rotation may not move in the spreader tip fitting.

- 5.27 Halyard Locks:
Operating devices for securing halyards under tension aloft (e.g., halyard locks) shall be permitted only if they can be reliably released from deck level.

- 5.28 A sliding or adjustable gooseneck is not permitted. The gooseneck shall be permanently fitted to the mast and have one position to which the boom is fitted.

- 5.29 The boom shall be supported by a solid boomvang at all times.

— **MEASUREMENTS**

5.30 Measurements shall be taken parallel to the axis of the spar with the spar straight. Excluding a luff groove device, no hollows in the section are permitted. Any addition of material to the base mast section shall consist of the same primary structural material as the mast itself. The MDL1 measurement shall include any bona fide luff groove or track attached directly to or integral with the mast. Any secondary luff groove device otherwise attached shall not be included and the relevant boom and mainsail measurements shall be increased by the longitudinal dimensions of the device as determined by the Measurer.

5.30.1 Height of Deck:

The height of deck used as a datum for sail area measurements shall be the sheer line abreast the front of the mast.

5.30.2 Base of Foretriangle (J):

J shall be the actual foretriangle base measured horizontally from the foreside of the mast at its lowest point above the deck or coachroof to the center line of the foremost permanent stay on which jibs are set, extended if necessary, to intersect the level of the sheer line, or to a bowsprit if used. Where there is the capacity for the mast to be moved at the deck, J shall be measured with the mast at the aftermost limit of adjustment unless a 25mm contrasting band is provided. In this case J shall be measured to the aft edge of the band and the forward face of the mast may not move aft of this point. Also see: 9.7.1.

5.30.3 Bowsprit Length (STL):

Bowsprit Length is the longitudinal distance from the intersection of the fore side of the mast and the deck to the outer end of the bowsprit. The mast shall be in its aftmost point and upright when taking this measurement. STL shall not be extended by any device or means.

5.30.4 Height of Genoa Halyard (IG):

IG shall be the genoa height measured from the point of attachment of the forestay to the mast structure, or the intersection of the center line of the forestay with the foreside of the mast where the point of attachment is internal, to the level of the deck as defined in 5.33.1. NOTE: Also see the Equipment Rules of Sailing, F.7.4.

5.30.5 Height of Genoa Halyard Corrected(IGC):

IGC shall be the maximum height to which the head of a jib shall be hoisted. IGC shall be marked on the front of the mast till the middle of the mast in that section with a contrasting 0.025m wide (white or black) band at a level of 0.420m below IG.

5.30.6 Foretriangle Height (IM):

The formula for the foretriangle height is: $IM = (IG + IG * (GO - MW) / (J - GO + MW))$

5.30.7 Forestay Outrigger (GO). GO shall be the horizontal distance from the upper point of measurement used to determine IG to the after side of the mast or vertical projection of the after side of the mast.

5.30.8 Height of Spinnaker Halyard (ISP). ISP shall be the height of the uppermost spinnaker halyard. It shall be measured from the underside of the spinnaker halyard, when drawn horizontally forward from the mast, to the level of the sheer line abreast the mast as defined in 5.33.1.

5.30.9 Longitudinal Dimension of Mainmast (MDL1). MDL1 shall be the minimum thickness of the mast in the longitudinal direction occurring above 0.5*P.

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- At no point in the longitudinal direction of the mast between the deck and the forestay attachment point shall the maximum thickness exceed 0.340m or the minimum thickness be less than 0.280m.

5.30.10 Transverse Dimension of Mainmast (MDT1). MDT1 shall be the minimum thickness of the mast in the athwartships direction occurring above $0.5 \cdot P$.

5.30.11 Mast Width (MW):

MW is used for calculating IM (see 5.33.5) and shall be the minimum fore and aft width of the mast to be found at any point below the top of IG and above the lower spreader.

5.30.12 Mainsail Hoist (P):

P shall be the measured length of the hoist of a jib headed mainsail. It is the distance along the afterside of the mainmast from the highest level to which the head of the sail, or any part of a headboard carriage abaft the track or mast groove, may be set to the lowest position of the tack.

The highest point shall be taken as the top of the highest sheave used for the main halyard, or to the lower edge of a 0.025m (25mm) measurement band. The lowest position of the tack shall be marked by the upper edge of a 25mm measurement band around the mast from which the low point of P shall be measured. Usually this band shall be identical in position to the fair extension of the top of the boom or any external track or groove.

5.30.13 Boom above Sheerline (BAS):

BAS shall be the distance between the low point used in the determination of P and the level of the sheer at FM, measured with the mast in vertical position.

a) The maximum adjustment **downwards** (without applying for remeasurement), allowed from the position of BAS as measured, adjusted when not racing, is 0.004m (4mm).

b) A TP52 shall only be measured with BAS in the position as recorded on the TP52 Certificate.

c) The mastjack system shall be either not on the boat when racing, or if onboard be measured with the boat and recorded on the IMS-Certificate Page 2 for position and weight. Mastram(s) shall never in any way be connected to the yacht's hydraulic system as used for sailing functions like headstay adjustment, etc. Mastram(s) when racing shall never in any way be connected to the yacht's hydraulic system (as used for sailing functions like headstay adjustment, etc.) or a separate pump. So the ram(s) never shall be connected to any pump when racing. Whether the rams are in situ, ready for operation under the mast or jacking bar, or not.

5.30.14 Foot of Mainsail (E):

E shall be the length measured along the boom from the aft side of the mast including any external track or groove, or its fair extension parallel to the axis of the mast, to the aftermost position to which the sail is permitted to extend. Where this latter point is inside of the boom end, it shall be located by the inner edge of a 0.025m measurement band around the boom. Any part of the mast which extends abaft the aft side of the track or mast groove shall be ignored in determining E.

Under this Rule various mainsails can be used with each its own footlength. The E for each particular mainsail shall be indicated on the boom by a contrasting band of a different colour and this colour shall be repeated on the sail, near the clew.

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— 5.30.15 Sheeting Limit (BAL):

BAL shall be the distance from the outer measurement point of E to a contrasting measurement band denoting the limit on the boom beyond which no lead for the sheeting of headsails shall be attached. In the absence of such a band BAL shall be measured to the boom end. BAL shall not exceed 0.15m.

5.30.16 Boom Diameter (BD):

BD shall be the maximum dimension of the main boom measured in section inclusive of any structure used to stiffen the boom. A boom with a BD in excess of 0,360m is not permitted.

5.30.17 Chainplate Width (CPW):

CPW shall be the distance between the centers of the bearing points of the chainplates for the upper shrouds of the mainmast.

5.30.18 Rig Weight and Center of Gravity:

- a) The mast, together with standing rigging, shall be weighed and the weight found recorded as MWT.
- b) The vertical center of gravity shall be determined relative to the sheer at FM and recorded as MCG.
- c) The values for MWT and MCG shall be found by measurement at the single point of the center of gravity of the mast and rigging.
- d) All measurements above shall be taken with the components dry and the spars fitted only with components with which the yacht will actually race as specified below:

A) The mast shall be completely rigged with standing rigging, spreaders, jumpers, lights, antennae, wiring, luff groove device and all other permanently attached fittings, including those turnbuckles which are not permitted to be adjusted while racing.

B) Excluded for measurement shall be running rigging, rigging adjusters of any type (hydraulic or otherwise), except the internal hydraulic mastjack ram if fitted permanently, and any associated blocks and tackle, boom vang and reefing tackle.

Halyard messengers of not more than 4mm diameter and weighing not more than 15 grams per meter and only sufficient for convenient re-leading may be used to replace internal portions of running rigging.

C) All wiring, messengers and standing rigging shall be in their proper attached positions, and any slack stretched down and secured along the length of the mast with light material, such as lanyards or tape, with any tails hanging free at the butt.

D) Headboard, luff slides and any other adjustable devices shall be at their lowest limit of travel.

5.30.19 Rigging Plan:

The Sailplan and Mast are to be checked and confirmed by the Measurer to be according to the TP52 Rules and recorded on the TP52 Certificate as follows:

- a) Sailplan and Mast: Pass
- b) Stroke, forestay adjustment shall be recorded and not be longer than 0.255m: Pass
- c). Permanent backstay in place. The permanent backstay and tensioning lay-out shall be checked by the Measurer to be according to this Rule: Pass
- d) No Running Backstays. Fore and Aft Stays Below the Uppermost Backstay are not allowed under this Rule and their absence shall be recorded: Pass
- e) Halyard locks meet rule: Pass
- f) Corrector weights may be added to the mast or spreaders. They shall be declared and their weight and position noted on the certificate.
- g) Shims: number/thickness.

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— SAILS

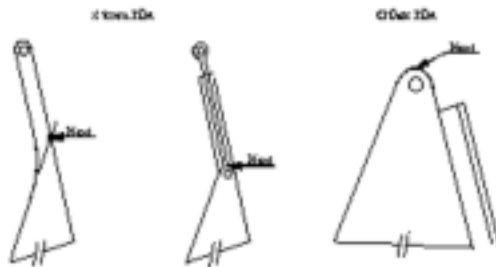
5.31 All sails must be set and trimmed in a manner consistent with the way they are measured. A sail shall not be constructed in such a manner that any portion may be completely detached.

5.32 In addition to the rules in this section, the measurement instructions and definitions of TP52 Rules Appendix 3, Sail Measurement, shall apply.

5.33 Any device or sail construction which, in the opinion of the Measurer, is used to artificially alter the length of a sail luff / girth position for measurement such as, but not limited to, nylon braid lightly seized to the luff independent of the bolt rope, is not permitted and shall be removed before measurement.

5.34 Measurement points at the corner of a sail shall be the intersection of the adjacent sides projected, except in the case of the head of a jib which shall be determined in accordance with the diagrams below. For jibs other than storm jibs, the head measurement point is the highest point of the sail. In the case of a storm jib the head measurement point is the lower of the highest point of the sail or the intersection of the adjacent sides projected. All other measurement points shall be at the extreme outside of rope, wire or fabric of the sail's edge.

5.35 Measurement points at the heads of Jibs:




5.36 Measurement and Marking of Sails. All sails shall be available for measuring and those marked shall include all spinnakers, all mainsails and all jibs. The Measurer shall mark the sails with a TP52 Class approved stamp or sticker (See examples below) issued by the TP52 Chief Measurer, enter the measurements found, sign and date them.

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— TP52 Sail Stamp or Sticker.

		MEASURER & DATE	
MAIN SAIL	SAIL ID.	JIB	SAIL ID.
HB		LP	
MGT	SAIL LIMIT REF	JGU	SAIL LIMIT REF
MGU		JGM	
MGM	SIGNED	ASYM	SIGNED
MGL		ALU	
MSW		ALE	
MSA		AMG	
SPARS	CHECKED	AF	CHECKED
P		ASA	
E			

5.37 The dimensions to be recorded are:

Mainsails: HB, MGT, MGU, MGM, MGL, E (as intended for this sail), MSA (see 5.59)

Jibs: LP, JGU, JGM

Spinnakers: ALU, ALE, AF, AGM and ASA (see 5.55.b)

5.38 The Measurer shall not apply the TP52 Sail Stamp or Sticker to any sail which does not comply with the appropriate definitions and restrictions for that sail as set forth in this paragraph.

5.39 Slab or flattening reefs are permitted along the foot only.
Cunningham holes are permitted.

5.40 Double luffed sails (those with thick or wrap-around luffs, not spinnakers) are not permitted.

5.41 Sail Inventory:

A yacht while racing shall not carry on board more sails of each type than the numbers set out below:

Jibs: 4

Staysails: 1

Spinnakers: 4

Mainsails: 1

Storm Trysails: 1

Storm Jibs: 1

Heavy - Weather Jibs: 1

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— 5.42 Jibs:

Sails in this category, must be set on stays permanently attached to the mast and tacked on the centerline of the yacht.

5.43 Staysails:

Staysails are those jibs having an LPG less than or equal to 6,3m, which shall only be set flying and tacked aft of the foremost point that defines J.

5.44 Storm and Heavy Weather Sails:

The specifications of storm and heavy weather sails are those of the Offshore Special Regulations Governing Offshore Racing, section 4.26.4.

Note: a staysail shall not be counted as a heavy weather jib for the purposes of the OSR.

Note: **stormjibs, trysails or heavy weather jibs** shall not be used as a staysail, read 5.46 in combination with 5.47.

5.45 The race organizer may modify these limitations to the kind(s) and number(s) of sails appropriate to the character of the race.

5.46 Bloopers are prohibited. When a spinnaker is set, no jib or spinnaker shall be tacked in such a way as to cause or permit the luff or forward edge of that sail to lie outside of the spinnaker or spinnaker sheet and, when a spinnaker is set, no sail shall be sheeted to the main boom.

5.47 Headsails, distinction between Jibs and Spinnakers:

Headsails: The word headsail is defined as a sail set in the foretriangle. It can be either a spinnaker or a jib.

Distinction between Spinnakers and Jibs: A sail shall not be measured as a spinnaker unless the mid girth is 75 per cent or more of the foot length.

5.48 Definition of Jibs:

A jib is defined as any sail, other than a spinnaker, set in the foretriangle, subject to the following limitations:

a) A fractional working jib may be carried and used.

b) Jibs shall be measured as specified in TP52 Rule 5.53 and 5.54.

c) The head of a jib shall not be greater than **0.15m**, when measured perpendicular from the luff, projected if needed at the jibs highest point, to the leach, projected if needed. See 5.36 and 5.38.

d) In any jib the upper girth (3/4 girth), JGU, and the midgirth (1/2 girth), JGM, shall not exceed in the same order **1.7m and 3.2m**. Nor shall the intermediate values between clew and head be proportionally above the given values. **Jibs shall not have any form of "disproportional leach hollows or recesses", or "local cloth choices" accommodating going around spreaders. The leach line shall be continuous and follow the "proper" leach of the sail between its fixing points near head and clew and not in any way accommodate the leach to locally "fold around" the spreader(s).**

e) The distance, measured on the surface of the sail, between the midpoint of the foot and the midpoint of the luff shall not exceed 55% of the length of the leech.

f) Clewboards shall not be used in jibs.

g) Headboards shall not be used in jibs.

h) Battens may be used in jibs only if the number of battens is limited to 4, which must be arranged with approximately equal spacing between head and clew (see also 9.8.1.d).

There shall be a maximum of 1 full length batten in a jib.

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- i) A yacht may use a luff groove device provided that such luff groove device is not made of carbon fibre and of constant section throughout its length and is either essentially circular in section or is free to rotate without restraint. Any permitted device on the forestay other than hanks shall be measured for FSP (see 5.54).
- j) Jibs shall be sheeted from only one point on the sail except in the process of reefing the sail. (Thus quadri-lateral or similar sails or sails in which the sailcloth does not extend to the cringle at each corner are excluded.)
- k) Aromatic polyamides, carbon fibres and other high modulus fibres shall not be used in the storm jib.
- l) **The area shall be measured by the following formula:**
 $HSA = 0.125 * LL * (2 * LPG + 3 * JGM + 2 * JGU)$

5.49 Measuring: Longest Perpendicular of Jibs (LPG):

- a) Jibs shall be measured on the perpendicular from the luff (outside edge of the sail and/or luff rope) to the clew (intersection of the lines of the foot and leech).
- b) **LPG shown on the rating certificate shall be the largest such dimension found on the jibs.**

5.50 Measuring: Forestay Perpendicular (FSP):

FSP is twice the maximum dimension, measured at right angles to the longitudinal axis, of a luff groove device.

5.51 Definition of Spinnakers:

- a) Spinnakers shall be Asymmetric. The luff shall be at least 5 percent longer than the leech (see 5.56).
- b) The area shall be measured by the following formula:
 $Spinnaker Area = SPA = ((ALU + ALE)/2) * (AF + (4 * AGM))/5 * 0.83$
- c) Spinnakers shall not have a mid girth of less than 75% of the foot length.
- d) Spinnakers shall not have a headboard.
- e) Spinnakers shall not have battens.
- f) Spinnakers shall not have a furling device.

5.52 Spinnaker Luff and Leech (ALU and ALE):

- a) ALU shall be the length of the longer edge (luff) of an asymmetric spinnaker measured along the edge of the sail from head to tack.
- b) ALE shall be the length of the shorter edge (leech) of an asymmetric spinnaker measured along the edge of the sail from head to clew.

5.53 Spinnaker Foot Length (AF):

Spinnaker foot length shall be the distance from tack to clew measured in the shortest path on the surface of the sail.

5.54 Spinnaker Mid Girth Length (AGM):

AGM shall be the distance between the midpoints of luff and leech measured in the shortest path on the surface of the sail.

5.55 MAINSAIL:

- a) Mainsail battens shall be unlimited in length, number or location.
- b) No device other than a normal leech line shall be employed to adjust the curvature of any mainsail batten.
- c) The mainsail area formula:
 $MSA = P/4 * (E + MGL)/2 + (P/4 * (MGL + MGM))/2 + (P/4 * (MGM + MGU))/2 + (P/8 * (MGU + MGT))/2 + (P/8 * (MGT + MHB))/2$

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- 5.56 Mainsail Headboard (HB): The wording of the 2009 Rule is replaced by the wording of the 2011 Rule:

MAINSAIL TOP WIDTH (MHB): Maximum 1.250m.

Mainsail Top Width is the distance between the head point and the aft head point.

5.57 Mainsail Girths (MGT, MGU, MGM, & MGL):

MGT, MGU, MGM and MGL shall be the length of the girths of the mainsail taken at points 7/8, 3/4, 1/2 and 1/4 of the leech from the clew respectively, measured in accordance with Appendix 3. The values for MGT, MGU, MGM and MGL shall be recorded for each mainsail used on the yacht.

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— PART 6 - ACCOMMODATION

6.1 Purpose:

The purpose of these requirements is to insure that all yachts racing under the TP52 Rule meet minimum standards of accommodation in order to provide for equal opportunities racing, reasonable comfort of crews and safe stowage of gear.

6.2 Compliance:

A yacht shall not race unless she complies with all the accommodation requirements.

6.3 Acknowledging that it is difficult to cover every condition and innovation, designers, builders and owners carry the responsibility for complying with the intent and spirit of the TP52 Accommodation Rules.

6.4 A standard Accommodation Compliance Form may be provided for certifying compliance. Where compliance has been documented to the satisfaction of the TP52 Measurer, the TP52 Certificate shall bear the notation " Pass" to that effect.

6.5 A yacht's compliance with the Accommodation Rules may be challenged by a competitor, a race organizing authority or the TP52 Measurers and TP52 Management. In the event of such a challenge, the authority shall render a decision in accordance with the fundamental requirements, the detailed requirements and the expressed intent of the Accommodation Rules. Nominal compliance with words and numbers but not with substance shall not be recognized as acceptable compliance.

6.6 Fundamental Requirements and Definitions:

All systems relating to living, eating, sleeping, and stowage specified in these regulations shall be arranged in a manner suitable for use at sea and shall operate so as to provide the service function normally associated with the system.

Items shall be presented as they are intended to be used. For example, any item intended for use as a berth shall be in place and its function declared at the time of inspection.

6.7 Designations such as berth, sink, stove, and so forth are intended to define the full utility of conventional equipment and whatever weight is customarily associated with it.

6.8 Designations such as locker, bin and drawer, specify fabric "soft bins" or rigid construction and full practicality for convenient and safe segregated stowage usable and accessible under offshore conditions. The contents of all compartments shall be fully secured by doors or other suitable devices.

6.9 "Permanently Installed" means the items are built in and may not be removed from their permanently installed position for or during racing.

6.10 In reference to any requirements for berths or settees, "hard bottom type" means built in, rigid and paneled construction which supports a hard-bottomed berth or settee when in its horizontal position.

6.11 Interior Volume:

Compliance with the provisions for Interior Volume is required.

The purpose of this requirement is to define an interior volume which is appropriate to the size of the yacht and which allows the arrangement of interior accommodations suitable for offshore racing.

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— 6.11.1 Interior Height:

Interior Height (IH) shall be 1.93m from the deepest fairbody section at the inside of the hull surface. Note that this level is independent of the actual height of the cabin sole.

6.11.2 Overhead Area at Interior Height: At IH there shall exist under the overhead a plane of length not less than 3.50m and area not less than 5.3 m², ignoring deck beams and deck stringers. The aft extent of this area at the centerline shall lie not forward of a point located 8.70m aft of the stem. For a length of 2.80m, found parallel to the centerline of the yacht, the outboard width of this plane shall be not less than 1.50m. Deck beams and deck stringers may be ignored.

6.11.3 The Overhead Area may have local intrusions. IH shall give the crew a safe working area while below decks. There shall be a box with a minimum length of 2.80m and minimum width of 1.50m, corners of the box shall lie under the overhead. The combined intrusions area shall not be greater than 0.10m², measured in the IH plane. Deck beams and stringers might be ignored. Other items in the IH plane, like lines, tubes, jammers, jammer platforms are to be deducted for the area they take up when calculating the Overhead Area.

6.12 Cabin Sole:

Cabin soles shall extend fore and aft over a length which provides convenient access to lockers, berths, galley, head, navigation area and other components making up the yacht's interior. Cabin soles may be discontinuous in height and interrupted in way of ring frames or other structural members.

6.12.1 The sole shall extend transversely to the inner skin of the hull or vertical faces of berth fronts, lockers or partitions.

6.12.3 The cabin sole shall be a structure independent of the inner skin of the hull. It may be of any permitted material provided it exhibits similar strength and stiffness characteristics to that of solid wood cabin soles when installed in accordance with good yacht practice.

6.12.4 The cabin sole is not required forward of the mast.

6.13 Berths:

Minimum number of berths qualifying under this rule shall be 4. At least 2 of those shall be of the hard bottom type.

6.13.1 Each berth shall be at least 1.9m in length measured to the inside of any structure of the berth, bulkheads or partitions encompassing the berth. The minimum width measured in a similar manner to length at the top surface of the mattress shall be 0.6m measured at 1/4 of the berth length.

6.13.2 A double berth shall be qualified as a single berth.

6.13.3 The foot and head ends of berths may taper as required by the hull shape.

6.13.4 With all berths in the horizontal position the minimum clearance above any mattress at the centerline over half of the length of the berth shall not be less than 0.5m.

6.13.5 Mattresses of a size covering the entire surface shall be fitted to all berths; they shall be of a thickness not less than 0.03m for soft bottom berths. For hard bottom berths the minimum thickness shall be 0.1m. Minimum mattress density shall be 8kg/m³.

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- 6.13.6 The minimum height of the bottom of any hard berth (excluding the mattress) shall be 0.30m above the cabin sole.

6.14 Personal Gear Stowage:

Minimum volume of personal gear stowage to qualify under this rule shall be 0.20m³.

6.14.1 Stowage for personal gear (clothing, toiletries and miscellaneous articles) shall be provided in the form of fabric "soft bins" or built in rigid lockers with doors or other suitable devices, bins with hatches, and drawers. Bilge areas located below the cabin sole shall not be included when measuring space for this stowage requirement. Space under berths shall not be counted except space in the form of fitted drawers which may comprise not more than 30% of the qualifying total volume.

6.15 Galley: All stoves must be gimbaled or fitted with high retaining rails to permit their safe operation underway. A yacht shall have a stove with at least 3 burners. An oven with its own burner or a microwave counts as one burner. To count as a burner, a microwave shall have a sufficient source of power at all times including extended passages at sea.

6.15.1 Sinks: A sink shall be permanently installed and fitted with a drainage system which permits use underway and of size in keeping with the accommodations of the yacht.

6.15.2 Galley Gear Stowage: Seaworthy stowage shall be provided, segregated for a normal complement of cooking utensils, cutlery, glasses, dishes, etc.

6.15.3 Food Stowage: To qualify, stowage for food shall be provided in rigid lockers, bins, or other suitable compartments. Spaces below the cabin sole shall not be considered as meeting the requirements. Minimum volume of food stowage to qualify under this rule shall be 0.30m³.

6.16 Head Compartment:

The head compartment shall be forward of the mast bulkhead and constructed in such a manner as to be totally separated from the main cabin by rigid partitions and one rigid or canvas door when in use. The door opening shall not be wider than 1.0m, measured in any horizontal direction. There shall be sufficient space and clearances within the head compartment with the door shut to permit crew to sit, stand, and turn around.

6.16.1 Toilet: Approved type permanently installed and operable in compliance with local regulations pertaining to Marine Sanitation Devices and their use. The toilet shall be of a type plumbed for the intake of seawater.

6.16.2 Wash Basin: A wash basin shall be permanently installed. It may be fixed, folding or sliding and shall be fitted with a drainage system which permits use underway.

6.16.3 Separate Discharge: Sinks and wash basins shall be fitted with separate discharge and not discharge through the toilet system. All seacocks shall be maintained as operational while racing.

6.17 Navigation Table:

A flat area suitable for chart work shall be required. The navigation table or area shall be built with storage for charts, navigational instruments, books, etc.

6.18 Fresh Water Capacity:

Minimum fresh water capacity shall be 160 litres.

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- 6.18.1 Fresh water pumps shall be installed at the sink and wash basin and fresh water shall be contained in permanently installed tankage either of rigid construction or of the bladder type.

6.19 Fuel Capacity:

Minimum fuel (diesel) capacity shall be 80 litres.

6.19.1 The engine shall be directly supplied from permanently installed fuel tankage.

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— PART 7 - PERMITTED MATERIALS & CONSTRUCTION

7.1 Any questions regarding the application of this regulation shall be referred to the TP52 Chief Measurer or TP52 Class Manager. The limitations apply also to modifications.

7.2 Hull and deck structure and appendages, internals and interior joiner work, the Permitted Materials are :

Wood, natural fibers and un-reinforced plastic. Plastic reinforced with fiber of any of the following materials: glass, aramid, polyester, polyamide, polyethylene and natural fiber. Iron, steel, lead, copper and their alloys; bronze, brass, monel and aluminum of the 5000 and 6000 series. High Strength Carbon (HSC) (see Notes:a below for definition)

7.3 Core material only of wood or plastic foam of nominal density not less than 70 kg/ m3.

7.4 Aramid paper honeycomb core material of minimum nominal density 48kg/m3 in the hull and deck structure.

7.5 Restrictions, requirements and remarks:

a) Restrictions related to FRP construction: Curing temperature and pressure limits apply. Externally applied heat shall not be greater than 105oC. Externally applied pressure shall not be greater than the ambient atmospheric pressure of the vacuum bag method.

b) Exterior hatches may be of the same material as the deck. Chainplates may be of the same material as the surrounding deck, but must be included in any required plan approval.

c) Cores of wood, plastic foam or other forms of non-metallic honeycomb irrespective of compliance with a minimum density requirement are permitted for internals and interior joinery work.

d) The maximum allowable cure temperature in association with honeycomb construction is 105°C. Externally applied pressure shall not be greater than the ambient atmospheric pressure of the vacuumbag method.

e) Hull Skin and Panel Construction Limits shall apply *(see 7.6 below).

Owners are reminded of their responsibility under TP52 Rule 9.3.4

f) Rudders/rudder stocks. All permitted materials, including HSC. Restrictions related to FRP construction do not apply. Core materials of any density can be used.

g) Steering systems, incl. steering quadrants, pedestals, wheels and tillers. All permitted materials, including HSC.

h) Sail battens, deck and spar fittings, chain plates. All permitted materials including HSC. Core materials of any density can be used.

Chain plates may be of the same material as the surrounding deck, but must be included in any required plan approval.

i) Winch drums, spindles and gears. All permitted materials excluding HSC. Carbon winch drums are not permitted.

j) Mainsail headboards, sail hardware. All permitted materials **including** HSC.

k) Walls of booms and bowsprits. All permitted materials including carbon fibre having a maximum fiber modulus of 250GPa (SACMA SRM 16). Restrictions related to FRP construction and on sandwich construction do not apply to booms.

l) Mast, including integral mouldings, such as tangs, spreaders and/or jumper, shall be built in section throughout its entire length substantially of carbon fiber non-sandwich reinforced plastic having a maximum fiber modulus of 465 GPa by JISR 7601 or 452 GPa by SACMA SRM 16, measured between 1000 and 6000 microstrain. Other applicable materials for masts and integral mouldings are: aluminum alloys, steel alloys, fiberglass reinforced plastic and glass fiber. Any addition of material to the base mast section shall consist of the same primary structural material as the mast itself. Restrictions related to FRP construction donot apply.

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- Masts and spreaders shall not be of sandwich construction. Mast construction is considered as “sandwich” where in any point of the structure there is a core of lighter materials between the fiber layers, the thickness of which exceeds the total thickness of the fiber reinforced laminate walls or the density of which is less than 300 kg/m³. Any addition of material to the base mast section shall consist of the same primary structural material as the mast of itself.
- m) Standing rigging which by the TP52 Rule is not allowed to be adjusted while racing. Steel wire and steel rod and circular of shape.

7.6 Hull Skin and Panel Construction Limits:

Resistance of Hulls to Local Impact. To limit damage from local impact, no yacht of fibre reinforced plastic sandwich hull construction shall race under the TP52 Rule if the hull skins and total panel weights are less than given below:

- a) High Strength Carbon Fiber Reinforcement with Epoxy or Vinylester Resin:
 - i) Outer skin: High Strength Carbon Fiber Reinforcement with Epoxy Resin: $W_s = 1300 \text{ g/m}^2$
 - ii) Inner skin: High Strength Carbon Fiber Reinforcement with Epoxy Resin: $W_s = 900 \text{ g/m}^2$
 - iii) Minimum Hull panel weight: 4600g/m²

In case any of the below materials is used, proportional values to those under a) to be calculated for inner skins and panel weights:

- b) E-Glass Reinforcement with Epoxy, Polyester or Vinylester Resin: $W_s = 1802 \text{ g/m}^2$
- c) S- or R-Glass Reinforcement with Epoxy or Vinylester Resin: $W_s = 1554 \text{ g/m}^2$
- d) Kevlar Reinforced with Epoxy or Vinylester Resin: $W_s = 1015 \text{ g/m}^2$

W_s = minimum required weight of reinforcement in g/m².

Notes:

- a) High Strength Carbon Fibre is defined as having a maximum fiber modulus of 250GPa (36,250,000 psi) and minimum tensile strain at failure of 1.4%.
- b) For hybrid laminates, weight is to be determined on percentage volume of each different reinforcing material in terms of total reinforcing volume.
- c) Core material density shall not be less than 70 kg/m³, except in the case of honeycomb core material where permitted, then material density shall not be less than 48 kg/m³.
- d) Polyethylene, polyester and natural fibres shall not count toward fibre reinforcement weight. Also, the number of plies in the outer hull skin is to be no less than 4 and in the inner skin no less than 3 plies for all types of reinforcement. A ply must have a minimum weight of 175 g/m².

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— PART 8 - ENGINE AND PROPELLER INSTALLATION

8.1 Each yacht must have a properly installed Yanmar inboard water-cooled diesel engine, oriented fore and aft and located on centreline, connected to a standard Yanmar sail drive with a 2-bladed folding propeller. Permitted Yanmar engine and sail drives are listed in 8.5. The Yanmar engine and Yanmar saildrive may be installed in either the "Z" or "C" configuration and shall be otherwise installed in their complete production configuration without modification, including specifically fairing over the cooling water intakes.

8.2 The Engine Weight (EW) shall be the manufacturers weight as mentioned in the manufacturers manual for the engine. The minimum EW is 233kg.

8.3 The propeller installation shall not have an EDL of less than 0.600m. EDL is defined as the distance from the center of the propeller (the intersection of the blade axis and shaft) along the propeller axis to the trailing edge of the keel.

8.4 Engines and Sail drives shall be installed such that they do not reduce keel bolt access nor do they interfere with the structure of the keel attachment.

8.5 Permitted Yanmar Engine & Saildrive combinations include:
Yanmar 4JH2CE x SD31, Yanmar 4JH3CE1 x SD40, Yanmar 4JH4CE X SD40,
Yanmar 4JH3-TCE x SD40T, Yanmar 4JH4CE X SD50
As these models are replaced other combinations will be added.

8.6 General Requirements:

The propeller shall at all times be ready for use and shall not be retracted or shielded except by the standard strut.

8.7 Propeller Type:

Folding Propeller. To qualify for measurement a "folding" propeller shall be a standard model in series production (note: under this Rule it is allowed to modify a standard model, but ONLY to reduce the PRD to suit the minimum requirements) having a minimum of two blades that fold together pivoting on an axis at right angles to the shaft line when not being used for propulsion. PRD (Propellor Diameter) shall not be less than 0.400 m.

8.8 Strut Drive Clearance (ST5). ST5 shall be the distance, measured perpendicular to the propeller shaft at the forward end of the strut, from the centerline of the shaft to the hull, or fair continuation of the hull. ST5 shall not be less than 0.260m.

— **PART 9 - OWNER'S RESPONSIBILITIES**

9.1 Owner's Signature:

Before a TP52 Certificate is valid it must be signed by the Owner of the yacht. The name of the individual who signs the TP52 Certificate shall also be printed on the Certificate. By this signature the Owner signifies that he or she understands the Owner's responsibilities under all parts of the TP52 Rule, a copy of which shall be aboard while racing.

9.2 Responsibility for Compliance:

The Owner shall have the primary responsibility for ensuring compliance with the TP52 Rules. When the person in charge of the yacht while racing is not the Owner, he shall be equally responsible for compliance.

Owner's responsibilities are divided into three categories:

- Owner's responsibilities prior to and during measurement.
- Owner's responsibilities after measurement.
- Owner's responsibilities whilst racing.

9.3 Owner's Responsibilities, Measurement:

The Owner is responsible for arranging measurement with the TP52 Measurers.

9.3.1 Measurement Ashore:

- a) He shall present the TP52 for measurement ashore in an accessible location, clear of obstructions, properly chocked and leveled (see Part 10 for details).
- b) From 1-10-2007 the TP52 Class will require each new boat to be fully measured, in other words using hullfiles of boats from the same mould or plug will not be allowed, whether the mould or plug was build before or after that date.
- c) The keel (fin and bulb assembled) shall be presented for measurement separately, before they are fitted to the hull for the measurement of the complete boat. Adequate lifting equipment shall be provided by the Owner to facilitate taking the weight of the keel, as well as to facilitate taking the VCG of the keel.

9.3.2 Measurement Afloat:

- a) He shall on another occasion make the yacht available at a suitable location agreed with the Measurer so that flotation measurements may be taken.
- b) He is responsible for preparing the yacht in measurement trim as specified in 10.3.2. He shall declare to the Measurer the weight and location of all ballast, except that contained in the external keel, and all other items mentioned in 10.3.3(i). He shall, together with the Measurer, complete and initial the Measurement Inventory and Check List (See Appendix 2).
- c) If the yacht has portable tanks he shall declare their size and intended location.
- d) From 2009 it is the intention to measure or check all TP52's that race in the same geographical area (like the Western Med) and that plan to be active in the same competition (like the MedCup) at the start of the season with the same equipment and by the same team during a fixed period (like one week) in the same location (like a port or town). If such an arrangement is made and announced at least 60 days prior to the actual dates of measuring not participating in this arrangement, to the discretion of the Chief Measurer, may be reason to refuse the TP52 Certificate, or to impose additional requirements for obtaining the TP52 Certificate.

Note: Results of the Measurements Afloat during 2008 are the reason for this proposal. The proposed "measuring week" is a possible improvement. Not a guaranteed one.

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— 9.3.3 Sail Areas:

He is responsible for declaring to the Measurer all spars and sails that he proposes to carry on the yacht and the location in which he proposes to set them, so that they may be properly measured.

9.3.4 Hull Construction and Spar Material:

He is responsible for declaring to the measurer the type of hull construction and material of which the hull and spars are built.

9.4 Owner's Responsibilities after Measurement:

It is the Owner's responsibility to declare to the TP52 Chief Measurer any changes made to the yacht, its rig, or its equipment which could change any of its measurements under the rule. Such changes could be:

- a) Changes of ballast in amount or location or configuration.
- b) Change of tankage, fixed or portable, in size or location.
- c) Any changes in the engine and/or propeller installation.
- d) Addition, removal or change of location of gear or equipment, or structural alteration to the hull, that affect the trim or flotation of the yacht.
- e) Movement of any measurement bands used in sail area measurement, or any changes in spars, spar location (see for limits 9.7.1) or headstay position.
- f) The Owner shall be responsible for ensuring that all mainsails, all spinnakers, and all jibs bear the official TP52 Sail Stamp and are marked by the Measurer as required under 5.42. He shall also be responsible for ensuring that the sails and these marked dimensions do not contravene the values stated or permitted for them on the TP52 Certificate.
- h) Changes to spars or standing rigging configuration, including elements of rigging identified as adjustable while racing.
- i) Changes to the Elements determining the VCG (Vertical Centre of Gravity) including hull, deck and appendage construction, spars, accommodation and rig configuration, etc.

9.5 Owner's Responsibilities while Racing:

The Owner is responsible for ensuring that the TP52 Rule, Bylaws and Interpretations are aboard the yacht and that all members of the crew fully understand and comply with the limitations which apply whilst racing.

9.6 Sails shall only be set in those areas declared for measurement, and no sail shall be carried on board that exceeds the limiting dimensions for such a sail as shown on the TP52 Certificate, nor is of a shape or has features not permitted by the Rule.

9.7 Restrictions on Masts:

9.7.1 Movement of mast at deck and step:

Altering the location of the mast at the step or deck whilst racing is not permitted. However, a natural movement of the mast at the deck not exceeding 10 per cent of the greatest fore and aft or transverse dimension of the mast at that point is permitted, as long as J is respected at all times. To this purpose movement of the mast shall be adequately restricted to not allow the mast to move aft of $J_{Max} = 6.19m$ at any time.

Whilst not racing the limits of movement without requiring remeasurement are:

A) At decklevel, restrictions as set by J.

B) At the step restrictions as set by 5.33.13 and along the centreline (fwd/aft movement) of plus or minus 0.015m from the point as measured with.

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— 9.7.2 Adjustment of Rigging:

Adjustment of rigging whilst racing is not permitted except as specifically set forth below. Otherwise all means of adjustment must be positively locked and/or bound up to prevent accidental adjustment whilst racing. The following adjustment is permitted while racing except where an element of rigging has been declared not adjustable for rating purposes:

- a) For purposes of safety, i.e. an exceptional adjustment of a stay to cure a fault.
- b) The forestay length may also be adjusted a maximum of 0.255 meters while racing.
- c) Inner forestays attached to the foremost mast between $0.225*IG$ and $0.75*IG$ above the sheerline.
- d) **Backstays.**

9.8 Restrictions on setting and Sheeting of Jibs:

9.8.1 Tack Points of Jibs:

- a) When a jib is set under a spinnaker or inside another jib, it shall not be tacked in such a position that, if the sail were trimmed flat along a parallel to the center line of the yacht, its clew would fall abaft the LP line (see b below).
- b) The LP line is defined as a line abaft and parallel to the foremost headstay and separated from it by the dimension of LP printed on the TP52 Certificate. The foremost headstay is defined as the line joining the upper measurement point of IG and the forward measurement point of J.
- c) No tack pennant greater than 0.75m may be used on a jib when set flying.
- d) No jib shall be so tacked that the forward end of any batten is aft of the center line of the mast.

9.8.2 Sheeting of Jibs:

Jibs may be sheeted to any part of the deck or rail, but to no fixed point higher than 0.20m above the deck or coachroof, or to the main boom, within the measurement limits (see 5.33.15), but may not be sheeted to any other spar or outrigger.

9.8.3 No jib may be set in conjunction with any other headsail so as by any means to simulate a double clewed or double luffed jib. (For example, except when changing sails, no two jibs may be carried simultaneously in a luff groove device and sheeted on the same side of the yacht.)

9.9 Restrictions on Setting (**tacking, hoisting and sheeting**) of Spinnakers:

9.9.1 Setting of spinnakers:

- a) Notwithstanding failure to meet the definition of a spinnaker (see 5.55) a bona fide jib (see 5.52) for which the yacht has been measured may be set as a spinnaker where either of the following conditions apply:
 - i) In heavy weather when no other sail is set in the foretriangle and the apparent wind is abaft the beam or
 - ii) When all spinnakers aboard have been damaged beyond repair during the race. **A jib so set may have its tack to the bowsprit.**

9.9.2 Tack position and sheeting of Spinnakers:

- a) **Spinnaker shall be tacked on or within 0.05m of the centreline forward of the intersection of the headstay and the deck.**
- b) **Spinnakers shall be sheeted from only one point on the sail.**
- c) **A spinnaker may be sheeted to any part of the working deck, so not to spars or outriggers.**

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— **9.10 Restrictions on Setting and Sheeting of Mainsails:**

Mainsails shall be either fully secured at the foot or fully loose footed and shall remain so whilst racing. A mainsail secured at the foot shall be provided with a bolt rope, track or tunnel slides, or similar boom attachment that prevents the foot from lifting away from the boom. A loose-footed mainsail shall be sheeted only from a single clew.

9.10.1 Spare Mainsails are not permitted to be carried on board.

9.10.2 Storm Trysails:

These, as distinguished from loose-footed mainsails, must be materially smaller than a normal close-reefed mainsail and of a strength consistent with their purpose viz. use in extremely severe weather (see ORC Special Regulations 4.24.b). Aromatic polyamides and other high modulus fibers shall not be used in the storm trysail.

9.10.3 Headboard Carriages:

These are permitted only if the sail is set and trimmed in a manner consistent with the way HB was measured (see 5.60).

9.11 Halyard Messengers:

Halyard Messengers are permitted while racing, but only to allow movement of the halyard between the sheave and the deck, not to totally remove the halyard from the rig when racing.

9.12 Engine and Propeller:

The Owner is responsible for ensuring that when the engine is run for any purpose the propeller does not rotate.

9.13 Shipping, Unshipping or Shifting of Ballast, Fixtures and Accommodation:

a) The removal for racing of fixtures and items of accommodation which were aboard for in-water measurement is not permitted.

b) Attention is called to Section 51 of the RRS - Moving Ballast: "All movable ballast shall be properly stowed, and water, dead weight or ballast shall not be moved for the purpose of changing trim or stability. Floorboards, bulkheads, doors, stairs and water tanks shall be left in place and all cabin fixtures kept on board".

c) Note that unwarranted quantities of stores shall be considered as ballast under this rule. Any liquid carried on board in excess of 2.5 litres of drinkable fluid per person per day of racing, in the tanks or in other containers, and any fuel in excess of the quantity needed to motor for 12 hours is not permitted. Race Organizers may waive this requirement by so specifying in the Notice of Race.

9.14 Tankage:

a) Tanks which are always to be empty when racing, may be declared as such and shall be empty at the time of measurement providing each declaration is entered on the TP52 Certificate and the Owner accepts responsibility that these limitations will be observed. One fuel tank normal for the installation shall, however, be operable. The condition of this tank shall be governed by Rule 10.3.3.j at the time of measurement.

b) Voids in the keel or any other appendage shall be declared at the time of measurement and shall be treated as tankage.

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— **9.15 Movement from Stowage While Racing:**

Portable equipment, gear, sails and stores may only be moved from stowage for use in their primary purpose. Stowage in this respect is the position for any item of equipment or stores, to be maintained for the duration of a race or series, when such item is not in use for its primary purpose. Note: Moving sails or equipment with the intention of improving performance is prohibited and shall be considered a contravention of RRS 51.

9.16 Energy Storage:

Other than bilge pumps, no device, unless permitted under RRS 52 Manual Power, may be used whilst racing which derives assistance from energy stored to do work.

9.17 Limit of Crew Weight:

Unless this rule is specifically exempted in the Sailing Instructions the Owner shall be responsible for ensuring that the weight of the crew, weighed in sailing shorts and T-shirt as used by the crew when racing, on board the yacht for any race does not exceed the Maximum Crew Weight. See TP52 Rule Part 12.

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— PART 10 - MEASUREMENT PROCEDURES

10.1 To secure an accurate and fair measurement, it is necessary to have close co-operation between Owner and Measurer. It is desirable, therefore, that the Owner be reasonably familiar with the requirements below.

10.2 Hull Measurement Ashore:

The hull and appendage measurements (Part 4) and propeller installation measurements (Part 8) shall be taken ashore with the yacht exactly level athwartships and approximately in the same longitudinal trim which it might reasonably be expected to assume when afloat in measurement trim.

10.2.1 The yacht shall be presented for measurement ashore in an accessible location, clear of obstructions (see 10.2.3 below), properly and firmly chocked and leveled as above. The yacht shall rest in its build or transport cradle and the keel shall be at least 0.10m of the floor and unsupported. Rigging shall be slack. All appendages shall be fitted and any fairings, as permitted under 4.14, shall be in place.

10.2.2 A Hull Measuring Instrument (HMI) incorporating a tripod base will be set abeam the hull and relocated from station to station along the length of the hull, both port and starboard. At each station, a taut string, or two wires, or a laser beam, will be extended from the HMI to the hull surface, recording measurement points from the deepest part of the hull or appendage up to the sheer line.

10.2.3 Clearance for the operation of the HMI must be provided around the hull, in the construction of the cradle and the means of supporting the keel. Nominally, clear areas (including the ground surface) are required 1.5m forward and abaft the hull and 2.0m on either side of the hull. With some HMIs the minima are 0.6m forward and abaft the hull and 1.0m on either side. The Measurer should be consulted for details. Cradle support struts and athwartships cradle bulkheads can usually be accommodated, but longitudinal cradle bulkheads and keel support channels prohibit reaching required measurement points.

10.3 Measurement Afloat:

Inclined stability, freeboards and trim points shall be measured on one occasion with the yacht afloat in measurement trim (see 10.3.2 below). Normally, the yacht's spinnaker pole(s) will be required for suspending the inclining weights and a dinghy or raft must be available for use by the Measurer. The Owner or the Owner's Authorised Representative (see Measurement Inventory Form, Appendix. 2) must be present for flotation measurement.

10.3.1 Specific Gravity (SG): The specific gravity of the water shall be measured at this time and recorded as SG. The water shall be sampled from a level 0.3m below the surface.

10.3.2 Measurement Trim: The Owner or his representative will put the yacht in measurement trim by following the procedure defined below. The Measurement Inventory set out in Appendix 2 shall be used to ensure and record compliance with the requirements. No substitutions are permitted during measurement afloat.

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- 10.3.3 The yacht shall be completed and equipped for sailing.
- a) All standing rigging and related fittings used whilst racing will be attached in their normal positions. Running rigging forward of the mast and all halyards and lifts shall be taken to the foot of the mast and hauled tight. All other pieces of running rigging abaft the mast shall be taken to their aftermost position and hauled tight.
All halyard tails shall be taken to their normal working positions. If the halyard weight varies significantly along its length, the tail shall be on the cabin floor for the inclining experiment, with the halyard fully hoisted, attached to a light messenger.
 - b) One set of sheets and any running rigging not carried permanently on spars and other portable deck gear used in sailing the yacht shall be stowed abaft the mast on the cabin sole.
 - c) The boom shall be secured on the centreline in horizontal position. Masts shall be raked aft to the limit of their adjustment. Where this limit is forward of the vertical the mast shall be set vertical.
 - d) No sails shall be aboard.
 - e) All mattresses, must be aboard during measurement and shall be stowed in their normal bunks. Safety gear, not to exceed the requirements of Offshore Special Regulations Race **Category 3**, navigational and cooking equipment shall be aboard and all portable gear normally stowed aft of the foremost mast shall be in its normal position for racing. All portable gear normally stowed forward shall be placed abaft the foremost mast on the cabin sole for measurement, unless otherwise specified in this Rule.
 - f) No clothing, bedding, food, stores, dinghy, man-overboard pole or liferafts shall be on board.
 - g) Additional equipment on board during measurement shall be itemised in the Measurement Inventory.
 - h) The yacht's head shall not be depressed through lying to a mooring.
 - i) Ballast shall be fixed below the cabin sole, or as low as possible at any station and sealed to the hull structure to prevent movement. The yacht shall not be ballasted in such a manner as to induce list. Anchors and chains shall be secured in clearly marked stowage. Yachts shall be measured with **two** anchors. (Those anchors shall remain properly secured at their stowage positions whilst racing, unless their intended use is required)
The batteries shall be secured in their proper stowage. The foregoing items shall be in, and not moved from, these stowages whilst racing except that the anchor and chain may be moved for the purpose of anchoring. The weights of these items and their distances from the stem will be recorded on the Measurement Inventory. (Where the height of the stowage is unusual it shall be noted.) Anchor rope shall not be forward of the foremost mast.
 - j) All tanks shall be empty at the time of measurement, except where the Measurer has authorized otherwise as follows.
 - k) Hydraulic systems including hydraulic tanks shall be full for measurement and shall remain full when racing.
 - l) Bilges and other areas where water may collect shall be dry. There must be no effort to artificially moisten decks, rig, equipment or gear.
 - m) No one shall be on board while flotation measurements are being taken.
 - n) Painted measurement bands on masts and booms shall be in place.

— 10.3.4 Freeboard Measurement:

The vertical height above the waterplane of the port and starboard, fore and aft freeboards shall be separately measured to the Freeboard Points (see 4.21) recorded and permanently marked at the time of hull measurement ashore.

a) Freeboard Forward Measured (FFM) shall be recorded as the average of the respective port and starboard freeboards forward.

b) Freeboard Mast Measured (FMM) shall be recorded as the average of the respective port and starboard freeboards at the mast.

c) Freeboard Aft Measured (FAM) shall be recorded as the average of the respective port and starboard freeboards aft.

10.4 Sail and Rig Measurement:

All sails, spars and standing rigging, adjustable or fixed, must be available to the Measurer for measuring or checking marked dimensions and declarations made as to the use of these while racing (see also 9.3.3, 9.4, 9.7.1).

10.5 Painted Measurement Bands:

Measurements may be taken to locations defined by painted bands, of black or other contrasting colour, only when these bands are in place at the time of measurement. Where measurements are taken to such bands, movement of the bands or a failure to display them whilst racing shall invalidate the TP52 Certificate.

10.6 Rig Limits compliance:

Assessment of Rig Limits compliance requires measurement and weighing of the rig. A rig shall be measured for total rig weight (MWT) and vertical center of gravity (MCG), prepared as specified under 5.33.18. For limits see Part 2.

10.7 Displacement Limits compliance:

Assessment of Displacement Limits compliance requires weighing of the yacht. Each Owner shall be responsible for loadcell rental as part of the measurement expense. The loadcell shall have been calibrated in the last 6 months, and shall have increments not larger than 5.0 kg. The actual weighing shall be part of the measurement process. The TP52 Measurer shall verify the boat is in measurement trim and observe the weighing.

The weighed displacement shall be recorded in the TP52 Certificate. Yachts shall be presented for weighing in TP52 measurement trim. All sea cocks shall be open and all tanks, pipes, pumps, manifolds, etc... shall be empty. This weighed displacement shall be DSPW and shall supersede DSPM as can be found on the IMS-Certificate that is required to race under this Rule. The difference between DSPW and DSPM shall not be more than 1% (approx 77.0 kg) of the DSPW.

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— PART 11 - STABILITY

11.1 Stability:

- a) Limit of Positive Stability (LPS): The calculated upper Limit of Positive Stability shall not be less than 125 degrees.
- b) The Vertical Center of Gravity (VCG) shall be between -0.823m and -0.610 measured from waterline in measurement trim.

11.2 Inclining Tests:

Inclining tests shall be made to determine the righting moment of the yacht. Except for inclining apparatus the yacht shall be in measurement trim as detailed in 10.3.2. The yacht shall be inclined as detailed below:

11.2.1 An electronic inclinometer, approved by the TP52 Class, shall be positioned athwart the yacht and connected to a computer positioned off the yacht, to be read by the measurer, stationed off the yacht as well.

11.2.2 Two poles shall simultaneously be positioned port and starboard at the MB station (SMB from the stem) and suspended outboard to provide arms for supporting inclining weights. The poles shall be arranged normal to the yacht's centerline and as nearly horizontal as is possible but allowing sufficient clearance to prevent the weights touching the water. The poles shall be approximately 7.2m in length and the yacht's pole or poles shall normally be used when available. If a yacht's pole is not used it shall not be on board.

11.2.3 A set of inclining weights shall be prepared (see 11.3.3). The weights shall be recorded in kilograms. The weights shall be measured and recorded to a level of precision not less than 0.1 of a kilogram. All weights together shall be recorded to a level of precision not less than 0.2 of a kilogram.

11.2.4 When the poles are rigged and all the weights suspended on one side the resulting angle shall be recorded four times in succession.

11.2.5 The weights shall be transferred at once to the other side, and the resulting angle shall be recorded four times in succession.

11.3.1 Weight Distance (WD):

Shall be the horizontal distance from the point of attachment of the starboard weight to the point of attachment of the port weight. It shall be measured with the weights distributed equally on the two pole ends. The weights shall be attached so that the weight distance is constant for all tests. The weight distance shall be of the order of MB+2.0*SPL.

11.3.2 List Angle (LA):

List Angle shall be the average of the port and starboard list angles. Port and starboard list angles shall be respectively the average of the four angles recorded as per 11.2.4 and 11.2.5. They shall be recorded to a tenth of a degree.

11.3.3 Weight (W):

Weight shall be the total amount of weight used to heel the boat on one side. It shall be of suitable magnitude to ensure that: List Angle = 3 degrees +/- 0.25 degrees.

11.4 Righting Moment at 1 degree in Measurement Trim:

$RM = W * WD / (2 * List Angle)$

11.5 During 2009 new boats shall make their keel available for a trial weight and VCG check.

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— PART 12 - CREW WEIGHT

12.1 It is widely recognized that crew weight has an effect on boat speed. Over the last few years, a tactic of drastic weight loss and rapid gain has been used in some classes. The TP52 Class shall not encourage this practice. It is the Owner's responsibility to encourage a healthy crew weight plan.

12.1.1 The crew weight maximum shall be **1100.0** kilos wearing a minimum of sailing shorts and T- Shirt as used by the crew when racing. A calibrated scale shall be used. The scale shall be provided by the race organizer or the Transpac 52 Class. The crewweight shall be recorded to one decimal place of kg.

12.1.2 The Owner/Regular Member may select a default weight of **100.0** kilos for their weight. If an entire crew is required to weigh more than once during an event, then the Owner/Regular Member is not required to reweigh and the first weight recorded shall be used.

12.1.3 At least 48 hours before the scheduled start of a Transpac 52 event, each yacht shall file a written crew declaration with all crew member names, including alternates. It shall be filed with the Class Official. A Jury approved change to the declaration shall be communicated with the Class Official.

12.1.4 A yacht shall sail with the same crew for the entire regatta. Any changes to the crew shall have proper reason, submitted in good faith to the Jury for their approval.

12.1.5 Within the restrictions of 12.1.3 and 12.1.4 a yacht may change crew members with alternate crew members, as long as the correct paper work is on file with the Class Official.

12.1.6 Unless a different method is specified in the NOR and/or Sailing Instructions crewweight checks can be executed to the discretion of the TP52 Class Official/TP52 Measurer as noted in A. Penalties shall be applied in accordance with B below. The TP52 Class Official/TP52 Measurer shall report to the Race Committee in case he finds the crewweight to be over 1100.0 kg. The Race Committee shall file a protest.

A:

One or more yacht's entire crew may be weighed after the last race of the day. The yacht(s) shall be notified within 10 minutes of finishing any of the races for that day. The crew is allowed one trial weighing and one official weighing. Between the two shall be no more than 15 minutes for the complete crew to be weighed. **The weighing of the entire crew shall be completed within 1 hour of their boat's finish of the last race of that day plus the time it takes to reach the dock from the finish at an average speed of 7 knots. The measurer in charge of the weight check may extend the timespan but it shall never extend beyond the protest time limit.**

B:

Any recorded excess of the Crew Weight value of 1100.0kg is not allowed under this rule.

B.1 When a crew weight is found to over 1100.0 kg and at or below 1105.0 kg, it shall lose three places for each race of that day.

B.2 When a crew weight is found to be over 1105.0 kg and at or below 1110.0. Kg, it shall lose six places for each race of that day.

B.3 When a crew weight is found to be over 1110.0 kg, it shall be scored DNS for each race of that day.

B.4 During an event, if a yachts crew weight is found to be over 1100.0 kg, the crew shall be reweighed each remaindering day of the event.

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— APPENDIX 2

MEASUREMENT CONDITION CHECK LIST & INVENTORY

This check list is intended to help the Owner prepare the yacht for measurement. The yacht shall be completed and equipped for sailing.

1. All sails, including stormsails, removed from the yacht.
2. Ballast sealed to hull structure and 2 anchors (ready to use, so with chain/rope) and batteries fixed in clearly marked stowage.
3. Heads, bowls, sinks, etc. are dry.
4. Bilges and other possible areas where water may collect are dry.
5. Tankage (empty) and voids condition (dry) checked.
6. Navigational and cooking equipment and tools stowed as specified.
7. No clothing, bedding, food or stores on board.
8. Mattresses stowed in normal position (dry).
9. No portable equipment in front of the mast.
10. Safety gear (Category 3) stowed in normal position, but not forward of the mast.
11. All stowages opened and checked.
12. No liferaft and/or dinghy on board.
13. Sheets, guys, etc. on cabin sole abaft the mast.
14. Measurement bands PAINTED on spars.
15. All standing rigging tight, BAS as on TP52 Certificate.
16. Mast positioned at deck and step as described in TP52 Rule 9.7.1.
17. Running rigging in normal position and tight. Halyards led to the foot of the mast.
18. Backstay tight, forestayram fully extended.
19. Hydraulic systems, including tanks, full for measurement and to remain full racing.
20. Boom horizontal, centred and secured against movement.
21. No spinnaker pole(s) aboard while measuring freeboards.

— **APPENDIX 3**

SAIL MEASUREMENT

1. Construction.

1.1 The term "sail" shall be taken to include the headboard, tabling, bolt and foot rope or tapes. It shall not include cringles which are wholly outside the sail.

1.5 In sails where windows are permitted, or not specifically prohibited, the total area of the transparent material of such windows shall not exceed one per cent of the nominal area of the sail or 0.3*0.3m, whichever is the greater. The nominal area of the sail shall be taken as 1/2 (length of luff x length of foot). Windows shall not be placed closer to the luff, leech or foot than 150 mm.

1.6 Openings in the sail, in addition to the normal cringles and reefing eyelets, are permitted provided that the sail is flat in the vicinity of the openings.

5. Sails to be dry when measured. Sails shall be measured in a dry state on a flat surface with just sufficient tension to remove wrinkles across the line of the measurement being taken.

2. Mainsail.

2.1. Head. [See ERS G.7.8, Mainsail Top Width.](#)

2.2 Clew. [See ERS G.4.1, Clew Point.](#)

2.3 Cross Widths. [See ERS G.7.4 to G.7.8. Also read ERS H.5.2 Hollows in Sail Edges.](#)

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— APPENDIX 4

RULES AND PROCEDURES FOR RACE ADMINISTRATION

Unless otherwise prescribed by the Sailing Instructions, the following shall apply to races conducted under the TP52 Rule.

1. Pre-race Inspection or Measurement.

When, as a result of any pre-race inspection or measurement, it is determined that a yacht does not conform to its TP52 Certificate:

a) When the nonconformance is considered to be minor and can be easily corrected, the yacht may be brought into conformance with her certificate, or, when necessary, a new certificate may be issued. The measurer appointed for the series shall report all such corrections to the protest committee.

b) When the protest committee considers that the nonconformance is major (even if it can be corrected) or that it cannot be corrected without requiring significant remeasurement, they shall act in accordance with RRS.

2. During a Race or Series.

When, as a result of an inspection, measurement, or protest during a race or series, it is determined that a yacht does not conform to its certificate, the facts shall be referred to the protest committee which shall act in accordance with the RRS.

a) When the nonconformance is considered to be minor (whether or not the yacht is issued with a new certificate), the original certificate shall be considered valid throughout the race or series.

b) When the nonconformance is not considered to be minor the yacht shall receive a 50% place penalty in any race in which her rating was incorrect.

c) When a yacht's TP52 Certificate is withdrawn by the TP52 Chief Measurer under the provisions of 1.5.4, the matter shall be referred to the protest committee which shall act in accordance with the RRS and may disqualify the yacht from all races in the series or take such other action as it deems proper.

d) The results of a race or series shall not be affected by measurement protests lodged after the prizegiving or such other time as the Sailing Instructions shall prescribe. Nothing in this paragraph shall bar action under the RRS concerning a yacht deliberately altered.

3. General.

a) When a yacht is checked at an event or as a result of a protest, the measurement shall be checked using the rule as it was in effect at the time of measurement upon which the certificate is based.

b) The TP52 Chief Measurer or TP52 Measurer in whose waters the yacht is racing would normally be the "authority qualified" referred to in the RRS to resolve questions involving TP52 Certificates. A protest committee considering a protest involving a TP52 Certificate may submit questions to them which shall provide all reasonable advice and assistance to resolve the protest. The measurements resulting from a protest remeasurement shall be used to issue any new Certificate.

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— 5. Investigation and Reporting of Rating Irregularities.

a) When, as a result of an action in a race or series or the withdrawal of a TP52 Certificate by the TP52 Chief Measurer, a yacht is remeasured and found not to comply with the TP52 Rule, the TP52 Chief Measurer shall further investigate the circumstances and report its findings to the TP52 ExCom which may take such further action as it deems proper.

b) Race and protest committees are asked to report all actions arising under 1(b), 2(b) and 2(c) above to the TP52 Chief Measurer. Such reports may be made through the TP52 Measurer of the area of organizing authority's event..

6. Other Actions.

This Appendix only concerns actions with respect to yachts. It does not limit in any way the rights and responsibilities of race and protest committees and of National Authorities to investigate or act with respect to individuals.

— **APPENDIX 5**

ADMINISTRATIVE RATING PROTESTS

1. The TP52 Chief Measurer or the TP52 Measurer in whose waters the yacht is lying would normally be the "authority qualified" referred to in the ISAF Rules to resolve questions involving TP52 Certificates. A protest committee considering a protest involving a TP52 Certificate may submit questions to them which shall provide all reasonable advice and assistance to resolve the protest.

2. Administrative Protests.

a) The administrative protest procedure permits protests involving a yacht's certificate without regard to whether the yacht was racing. An administrative protest shall be lodged with the TP52 Chief Measurer.

b) Any person or organisation which has a valid interest in a yacht's certificate may lodge an administrative protest, provided that:

- The protest is in writing and is signed and dated by the protestor;
- The protest includes a detailed description of the alleged defects and a full statement identifying the protestor as having a valid interest;
- The protest is accompanied by a copy of the certificate of the yacht being protested;
- The protest includes a statement of the issues the protestor wishes to have resolved, identification of the applicable rules and any relevant evidence.

c) The Owner of the protested yacht shall file a reply with the TP52 Chief Measurer as soon as possible. If he elects to concede the protest or refuses to cooperate in providing for remeasurement when required, the TP52 Chief Measurer shall invalidate the yacht's certificate and so advise all concerned.

d) The TP52 Chief Measurer may consult TP52 Measurers, external experts and/or the TP52 ExCom. He shall make his decision based on the available evidence and may order remeasurement of the yacht in whole or in part.

e) The decision of the TP52 Chief Measurer shall determine any measurement and processing costs of deciding the protest and determine which party will pay, as follows:

- When the correct data of the protested yacht do not differ from the data on the contested TP52 Certificate, or to the opinion of the TP52 Chief Measurer the difference is down to measurement inaccuracies or external reasons (like for instance temperature conditions), the protestor will be responsible for the measurement and processing costs. The filing fee will not be counted toward payment of costs.
- When the correct data of the protested yacht differ from the data on the contested TP52 Certificate for reasons that to the opinion of the TP52 Chief Measurer are a result of other reasons than described in Part 9 - Owners Responsibilities -, the TP52 Class will be responsible for the measurement and processing costs. The filing fee will not be counted toward payment of costs.
- When the correct data of the protested yacht differ from the data on the contested TP52 Certificate for reasons that to the opinion of the TP52 Chief Measurer are a result of neglect of the duties as described in Part 9 - Owners Responsibilities -, the measurement and processing costs will be borne (or shared) by the owner (with the TP52 Class) depending upon the determination of responsibility for the difference. The filing fee will be returned to the protestor.

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— 3. Redress from actions of the TP52 Chief Measurer.

a) When an Owner believes that his yacht's certificate is being withheld unreasonably or that any related actions of the TP52 Chief Measurer are unreasonable, he may seek redress from the TP52 ExCom, stating the relevant facts and the relief or redress requested.

b) The TP52 ExCom shall appoint a committee to investigate, hear, and decide on the request following the procedures of the ISAF Racing Rules. In the event that there is reasonable doubt as to the interpretation or application of the TP52 Rule for this specific reason, the TP52 ExCom shall be the "authority qualified" to resolve such questions.