



2005

Transpac 52 Box Rule ©

1.0 Purpose:

The Transpac 52 Box Rule is intended to produce a class of fast, monohull keelboats. Reliability and self-sufficiency are primary objectives.

Development is allowed in such factors as hull shape, foil shape, construction, interior, deck layout and rigging. However speed producing factors such as length, minimum displacement, maximum draft, and maximum sail area are strictly controlled. Yachts in this class shall race without time allowance. Any developments which are contrary to this purpose may give rise to rule changes.

1.1 Authority:

This rule is owned and administered by the Transpac 52 Class and may only be amended by 80% of the regular members in good standing voting at the Transpac 52 Annual Class Meeting. No yacht shall be considered a Transpac 52 or be eligible to race in a Transpac 52 race unless it holds a valid TP52 Class Certificate.

1.2 Class Name: Transpac 52

1.3 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. Designers and builders of new boats are cautioned that there are no provisions in this rule available to correct for failure to fit within the maximum and/or minimum limits. Special attention is called to minimum freeboards and maximum draft.

2.0 Applicable rules:

2.1 Language and Measurement

2.1.1 The language of the class is English, in the case of a dispute over translation, English shall prevail.

2.1.2 The word “shall” is mandatory and the word “may” is permissive.

2.1.3 The metric system shall be used for measurement.

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

2.1.5 Weight shall be in kilograms. Inclining weights shall be to one decimal place. All other weights to a kilo, unless specified in the TP52 rule or Q&A.

2.2 Yacht shall meet ISAF Offshore Special Regulations Category 1.

2.2.1 Cockpit volume shall meet ISAF Offshore Special Regulations Category 2.

2.3 American Bureau of Shipping guidelines for yachts:

The designer shall certify in writing that the plans for the yacht meet the requirement of the American Bureau of Shipping Guide 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 taken as the LOA.

2.4 The Racing Rules of Sailing

2.5 International Measurement System (IMS)

2.5.1 A valid IMS certificate is required. The following modifications apply:

2.5.2 305 (d) is modified such that a permanent main backstay is required.

2.5.3 305 (e) is modified such that running backstays in any form are prohibited.

2.5.4 Mainsail battens shall be unlimited in length, number or location.

2.5.5 Carbon winch drums are not permitted.

2.5.6 An additional manual freeboard measurement, FBI, shall be taken at the location where HBI is calculated.

2.5.7 In addition to the IMS calculated displacement, an actual weight shall be required. Each owner shall be responsible for load cell rental as part of the measurement expense. The load cell shall have been calibrated in the last 6 months, and shall have increments not larger than 5 kg. The actual weighing shall be part of the measurement process. The IMS measurer shall verify the boat is in measurement trim and observe the weighing. The weighed displacement shall be recorded in the comments section of the IMS certificate.

Yachts shall be presented for weighing in IMS measurement trim. All sea cocks and ballast tank valves shall be open and all tanks, pipes, pumps, manifolds, etc... shall be empty. This weighed displacement shall be DSPW and shall supersede DSPM.

2.5.8 The forestay may be removed for jibing, but must be reattached at the first reasonable opportunity. The forestay length may also be adjusted a maximum of 0.255 meters while racing. Such removal and adjustment is not in violation of IMS rules 203.7 and 305.2

2.6 International Measurement System (IMS) Regulation

2.6.1 Section 201 shall be modified to read: The calculated limit of positive stability shall be 125 degrees or greater.

2.6.2 Materials shall be limited to those permitted by Section 203. Per section 1d, aramid paper honeycomb is permitted with a density of not less than 48 kg/m³.

2.6.3 The maximum cure temperature shall be amended as follows.

Externally applied heat shall not be greater than 105 degrees C.”
Appendix I regarding minimum outer skin thickness shall apply.

2.6.4 Section 206 regarding halyard locks is modified such that locks can be located aloft providing a reliable release mechanism is operable from deck level.

2.6.5 Part 3 Racing Division Accommodation Regulations shall apply. The accommodation length shall be 14.36m. Two exceptions are that fabric "soft bins" are allowed in place of rigid bins, lockers, and drawers (308) and an opaque curtain may be substituted for a rigid head door (310).

3.0 Elements specific to the Transpac 52 Box Rule

3.1 HullShape

3.1.1 The hull surface may not contain hollows except in the forward 30% of LOA.

3.1.2 The hull section shall not increase in depth with increasing beam.

3.1.3 The hull to deck joint shall have a continuous radius and shall not be bumped at the freeboard measuring points.

3.1.4 The sheer shall be a continuous curve without 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 10 meters.

3.1.5 The deck may have cockpits as allowed, but may not have negative camber

3.2 Engine:

Each yacht must have a properly installed Yanmar inboard water-cooled diesel engine, oriented fore and aft and located on centreline connected to a Yanmar sail drive with 2-bladed folding propeller. Permitted Yanmar engine and sail drives are listed below. 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. The propeller installation shall not have an EDL (Strut Drive Length) of less than 1.50 x PRD (Propeller Diameter). EDL is defined as the distance from the center of the propeller along the propeller axis to the trailing edge of the keel. Engines and Saildrives shall be installed such that they do not reduce keel bolt access nor do they interfere with the structure of the keel attachment.

The sail drive installation shall have a PIPA of not less than 0.0036 square meters, using the following formula:

$$\text{PIPA} = 0.06 \times \text{ST1} \times (\text{ST5} - 0.5 \times \text{ST4}) + 0.4 \times (0.8 \times \text{ST4})^2$$

- ST 1 Minimum Projected Strut Thickness
- ST 4 Strut Drive Hub Diameter
- ST 5 Strut Drive Clearance

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 others combinations will be added.

3.3 Foils:

A maximum of one keel and one rudder is allowed. The keel shall be fixed and may not have a trim tab. The rudder may not be multi surface and its axis of rotation shall be in the centerplane of the boat. The permitted materials for the keel strut and ballast are lead, steel, stainless steel, or bronze. The permitted keel material is amended to permit fairing and weed knife fairing. The maximum width of the keel shall not exceed 0.793m.

3.4 Freeboard:

FF: SFFP shall be 0.460 m aft of the stem
FBI: Shall be at the forward face of the mast
FA: SAFP shall not be less than 14.265m of the stem

3.5 Sailplan:

3.5.1 The sail plan shall to be a fractional sloop. The mast shall be keel stepped. Masthead spinnakers and one masthead loose luff jib are permitted.

3.5.2 A spinnaker pole or a fixed centerline sprit is allowed, but not both. A fixed centerline sprit may not extend effective sailing length.

3.6 Mainsails

3.6.1 The mainsail may be reefed, but may not be lowered solely for the purpose of tacking or jibing.

3.6.2 The mainsail area formula:

$$\text{MSA} = P/4*(E+MGL)/2 + (P/4*(MGL+MGM)/2) + (P/4*(MGM+MGU)/2) + (P/8*(MGU+MGT)/2) + (P/8*(MGT+HB)/2)$$

3.7 Jibs:

3.7.1 A masthead roller furling jib may be carried and used. It shall have a loose luff and tack to the hull, deck, spinnaker pole or sprit.

3.7.2 A fractional working jib may be carried and used.

3.7.3 Jib shall be measured as specified in IMS rule 812, 813, and 814.

3.7.4 No jib shall have jib roach.

3.7.5 The head of a jib shall not be greater than 100mm, when measured perpendicular from the luff, projected if needed at the jibs highest point, to the leach, projected if need.

3.8 Spinnakers:

3.8.1 Spinnakers may be symmetrical or Asymmetrical and the area shall be measured by the following formula:

$$\text{Spinnaker Area} = (SLU + SLE) * SF/4 + (SMG - SF/2) * (SLU + SLE)/ 3$$

3.8.2 No spinnaker may have a mid girth of less than 75% of the foot length.

4.0 The following limits shall apply:

| | | Limit |
|-------------------------------|---------|-----------------------|
| LOA | Maximum | 15.850 m |
| Beam | Maximum | 4.420 m |
| Beam | Minimum | 3.962 m |
| Displacement | Minimum | 7484 kg |
| Displacement | Maximum | 7711 kg |
| Draft | Maximum | 3.200 m |
| Freeboards | | |
| FF | Minimum | 1.448 m |
| FBI (by mast) | Minimum | 1.265 m |
| FA | Minimum | 1.143 m |
| IM | Maximum | 19.720 m |
| J | Maximum | 6.188 m |
| LP Approx 1.03%) | Maximum | 6.370 m |
| LP of Masthead Loose Luff Jib | Maximum | 9.300 m |
| ISP | Maximum | 22.403 m |
| SPL/TPS | Maximum | 7.620 m |
| P | Maximum | 20.422 m |
| HB | Maximum | 0.152 m |
| BAS | Minimum | 1.980 m |
| BAS | Maximum | 2.134 m |
| Mainsail Area | Maximum | 91.510 m ² |
| Spinnaker Area | Maximum | 247.6 m ² |
| V1 Shroud base | Minimum | 3.505 m |
| Backstay Crane | Maximum | 0.305 m |

- 4.1 Vertical Center of Gravity- Maximum -0.823m above measured waterline, Minimum - 0.610m above measured waterline.
- 4.2 All yacht constructed after 1/1/04 shall be capable of being lifted from a single point.
- 4.3 Water ballast is not permitted.

5.0 Mast and Rigging:

The mast weight and VCG shall be determined in accordance with the IMS Minimum mast section dimensions 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

| | |
|---|---------|
| Minimum mast weight shall be: | 295 kg |
| Minimum height of VCG above sheer shall be: | 8.992 m |
| Minimum mast fore and aft dimension | 0.277 m |
| Minimum mast athwartship dimension | 0.131 m |

5.2 Standing rigging except the backstay shall be steel and circular in shape.

5.3 The backstay shall be steel or aramid, with a minimum breaking strain of 9250 kg.

5.3.1 The backstay shall be attached to the masthead crane and be longer than 18.0m.
At the lower end of the backstay, a purchase or hydraulic system may be used to adjust the length or tension.

5.3.2 The backstay purchase or hydraulic systems lower attachment point(s) shall be aft of the main boom. It shall attach to the deck or hull no higher than 1.30m from the water plane when in measurement trim.

5.3.3 No device shall be used to deflect the backstay or purchase system between the masthead crane and the deck or hull attachment point(s).

5.4 The lower pendant of the forestay is unrestricted.

5.5 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 the number specified.

5.6 Mast head crane shall be a measurement from the center of the backstay to the aft side of the mast. It shall be measured at the underside of the upper P band and shall be perpendicular to the mast at that point.

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

5.7.1 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 3000 kg and a minimum diameter of 9mm.

5.7.2 The remaining part of the main halyard may be tapered and have a minimum breaking strain of 2000 kg.

5.8 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.

6.0 Crew Weight:

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.

6.1. The crew weight maximum shall be 1273.0 kilos wearing a minimum of sailing shorts and T-Shirt. A calibrated scale shall be used. The scale shall be provided by the race organizer or the Transpac 52 Class.

6.2 The owner/regular member of the class may select a default weight of 102.0 kilos for their weight. If an entire crew is required to weigh more than once during an event, then the owner/regular member of the class is not required to reweigh and the first weight recorded shall be used.

6.3 A yacht may change crew members with alternate crew members, as long as the correct paper work is on file with the class official.

6.4 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 and weights, including alternates. It shall be filed with the class official. Any change to the declaration shall be approved by the class official.

6.5 Between 36 & 18 hours before the scheduled start of a TP52 race, the TP52 class official shall select from several crew weighing options and post it on the official notice board. If Section A is selected, then at least two choices shall be used in addition to either section 6.6.6 or 6.6.7. In the event that Section A is not selected, then Section B is the default crew weighing option.

SECTION A

6.6 All yacht's crew members shall be weighed before the event.

6.6.1 The first and third place yachts to finish in any of the days races may have their entire crews weighed within 1 hour after finishing the last race of the day.

6.6.2 A yacht's crew member(s) may be weighed before the start of a day's race. If the crew member(s) is found to be over the declared weight of more than 1 kilo, the entire crew shall be weighed. Notice of the crew(s) name, weigh in time and weigh in location shall be posted on the notice board at least three hours before the scheduled start of a day's race.

6.6.3 Any yacht's crew member(s) may be weighed after that days racing. The yacht(s) shall be notified within 5 minutes after finishing the last race of the day. The crew member(s) selected to weigh shall complete the weigh-in within 1 hour of that yacht(s) finishing its last race of the day. If a crew member(s) is found to be over the declared weigh by more than 1 kilo, the entire crew shall be reweighed. All crew(s) shall be weighed within 1 hour of finishing the last race of the day.

6.6.4 A yacht's entire crew may be weighed before the yacht leaves the dock for that days racing. Notice of the yachts name shall be posted on the official notice board at least three hours before the scheduled start of that day's race.

6.6.5 One or more yacht's entire crew may be weighed after the last race of the day. The yacht(s) shall be notified within 5 minutes of finishing the last race for that day. The crew weighing shall be completed within 1 hour of the last yacht to finish the last race of that day.

6.6.6 No yacht may protest any other yacht or yachts over crew weight.

6.6.7 Any yacht may protest another yacht or yachts over weight.

SECTION B.

6.7 No crew weighing by the TP52 class or Race Committee. Any yacht may protest another yacht or yachts over crew weight.

SECTION C.

6.8.0 When a crew weight is found to over 1273.0 kg and at or below 1278.0 kg, it shall lose three places for each race of that day.

6.8.1 When a crew weight is found to be over 1278.0 kg and at or below 1283.0. kg, it shall lose six places for each race of that day.

6.8.2 When a crew weight is found to be over 1283.0 kg, it shall be scored DNS for each race of that day.

6.8.3 During an event, if a yachts crew weight is found to be over 1273.0 kg, the crew shall be reweighed each remaindering day of the event.

7.0 Class Officials

7.1 Executive Director:

The TP 52 Class shall have an Executive Director. The Executive Director shall represent the class, manage the business of the TP52 Class, set the Agenda for the Annual Class Meeting, collect annual class dues on behalf of the class, and have the final authority to resolve all disputes. The Executive Director shall serve at the leisure of regular members of the Class unless 80% of the regular members voting at an annual class meeting agree to fill the position with another Executive Director. The Executive Director in consultation with the Chief Measurer and Class Technical Committee shall issue interpretations of the Transpac 52 Box Rule.

7.2 Chief Measurer:

The TP 52 class shall have a Chief Measurer. Decisions shall be made in consultation with the Executive Director. The Chief Measurer shall be appointed by the Executive Director for a three year period. At the first TP52 Annual Class Meeting after January 1st 2008 the position shall be voted on by TP52 Owners for another three year period. The Chief Measurer shall appoint other class measurers who shall report their measurements and findings in a timely manner back to the Chief Measurer.

7.3 TP52 Class Certificates.

TP52 Class Certificates shall be issued by the Chief Measurer in consultation with the Executive Director. Each yacht shall also hold a valid IMS certificate. A copy of the most current IMS Certificate shall be sent to the Chief Measurer. The first TP52 Class Certificate issued each year shall be free and then \$150 per certificate thereafter.

7.4 Changes and Revalidation:

A Class certificate is only valid when the measurements and data are correct. It is the owner's responsibility to ensure that his yacht complies with the TP52 rule and to report any changes to a TP52 measurer. At the end of each year, the Chief Measurer shall send a revalidation questionnaire to the owner of each yacht. It shall be reviewed with the current IMS certificate by the Chief Measurer. When the yacht's measurements and data comply with the TP52 class rule, a new certificate shall be issued. The certificate shall be valid until the last day of the calendar year of issue unless changes are made to the yacht, at which time an updated certificate may be issued.

7.5 Inspection:

A yacht shall carry on board its current TP52 Class certificate, and IMS certificate. A TP52 Class Measurer or the Executive Director may inspect a yacht at any time. If the yacht is found not to comply with the TP52 Class rules, or notice of race, they shall report their findings to the local Race Committee, Event Measurer, and to the Chief Measurer.

End 5/05