

# Taipan 4.9 Class Rules

(1<sup>st</sup> April 2015)

## PREFACE

Due to the large number of changes in the edition of the rules a separate document has been published outlining the changes.

## 1. GENERAL

- a. The official language of the class is English and in the event of any dispute over interpretation English shall prevail.
- b. These rules shall take precedence over the measurement forms and plans.
- c. None of the Designers, their associated companies, Goodall Design or TCAA accepts legal responsibility in respect of these Class Rules or for any claim arising therefrom.
- d. The purpose of these Class Rules and restrictions is to provide uniform specifications for the Taipan 4.9 class of catamaran, which is referred to in these Class Rules as the Taipan 4.9.
- e. These rules shall be administered by TCAA.
- f. "The Designers" refers to John James (Jim) Boyer and Gregory Ernest (Greg) Goodall.
- g. "TCAA" is a reference to the Taipan Catamaran Association of Australia Inc.
- h. "Goodall Design" refers to Goodall Design International Pty. Ltd.

## 2. REVIEW OF RULES AND RESTRICTIONS

- a. These rules and restrictions shall come up for review on the 1st of July each year.
- b. Proposals shall be put to the highest level of the class association, which shall coordinate all aspects of the changes.
- c. All Taipan 4.9 owners who are full financial members of TCAA are eligible to vote.
- d. The committee shall make a reasonable attempt to send voting forms and explanations (where required) to all financial members from the previous year.
- e. Votes not returned by 1st March shall be invalid.
- f. A majority of 55% of returned votes is required to adopt a proposal.

g. Revised rules shall come into force on the 1st of April each year. The new edition of the rules shall be prefaced with the changes from the previous edition. Where a preface isn't practical due to a large number of changes a second document outlining changes shall be published and distributed in parallel.

### **3. BUILDING FEE**

a. For each Taipan 4.9 hull built, and each Taipan catamaran sail built, the Builder shall pay to Goodall Designs a building fee, which shall be set by Goodall Design. Refer Appendix B at rear of this document for schedule of applicable building fees.

b. The building fee is payable regardless of whether the Taipan 4.9 is subsequently measured or raced.

c. On payment of the building fee, an official Sail Number, Building Receipt, and Building Registration Card shall be issued to the owner by Goodall Design. These shall be numbered consecutively. The Builder may reserve a sail number up to ten ahead by payment of a fee set to Goodall Design.

d. If boats are built which are essentially the same as the Taipan 4.9, but sold under another name, the above rules do not preclude the designers or Goodall Design from taking action against the builder to recover damages, building fees, and costs.

### **4. BUILDERS**

Taipan hulls may be built by:

- i. Amateur Builders, who may build one Taipan 4.9 for their own use each year.
- ii. Professional Builders licensed by the TCAA who may contract to build a Taipan 4.9 for the owner. The building fee shall be paid before work commences.

Licence to build may be withdrawn if:

- i. A builder is shown to be acting against the interests of TCAA.
- ii. Is not competent to build the Taipan 4.9.
- iii. Has not produced a Taipan 4.9 for one year.

Moulds must be registered with Goodall Design and can only be built from plugs approved by Goodall Design. These plugs shall not be modified in any way without written permission being first obtained from Goodall Design and TCAA.

## **5. REGISTRATION**

- a. No Taipan 4.9 shall be allowed to race in the class unless it has a valid class Measurement Certificate.
- b. No Taipan 4.9 shall be allowed to race in the class unless it has a valid Building Registration Card.
- c. The Registered Boat Number applies to a pair of hulls. A hull may be replaced because of serious damage but it is subject to measurement. A new pair of hulls, for any reason, requires a new boat number.
- d. No two Taipan Catamaran 4.9's in the class shall have the same name.
- e. Application for measurement and registration shall be the responsibility of the owner. Each time a Taipan 4.9 is submitted for measurement a fee may be charged.
- f. The owner shall arrange for an approved Measurer to measure the boat. The Measurer, if satisfied, shall complete the Measurement Summary Form.
- g. The Measurement Summary Form, when complete, shall be retained by the owner. The TCAA shall then enter the Taipan 4.9 on its official Class Register.
- h. Change of ownership invalidates the Measurement Summary Form. Re-registration may be effected by returning the old Measurement Summary Form to the TCAA, together with an application in writing, containing the name and address of the new owner and the appropriate re-registration fee. Re-measurement is not necessary. The TCAA shall issue a new Measurement Summary Form to the owner, and amend its Class Register accordingly.

## **6. MEASUREMENT**

Hulls, centreboards, rudders, mast sections, and beam sections supplied from a mould or die registered with Goodall Design are deemed to measure.

- a. This is a restricted class. Measurement tolerances are intended to allow for genuine errors only and shall not be deliberately used to alter the design. The measurer shall report to the TCAA anything which he considers departs from the intended nature and design of the Taipan 4.9, or to be against the general interest of the class.
- b. Only an official measurer appointed by the TCAA shall measure a Taipan 4.9 and sign the declaration on the Measurement Summary Form that it complies with the Class Rules.
- c. A measurer shall not measure a Taipan 4.9 owned and/or built by himself.
- d. It shall be the responsibility of its owner to see that a Taipan 4.9 is correctly measured and to ensure that it thereafter complies with the current Class Rules.

e. All certified Taipan 4.9 catamarans shall be liable to re-measurement at the discretion of the Race Committee, but only by an official measurer. Any Taipan 4.9 re-measured at a class meeting and found not to comply with the Class Rules may be disqualified by protest.

f. A certificate may be invalidated by structural alteration, replacement of components, or repair of the Taipan 4.9. The Taipan 4.9 shall be re-measured in respect of the affected parts by an official measurer.

g. New sails shall be measured by the sail maker. An official Sail Measurement Tag shall be affixed to the sail within 400mm of the tack. The Sail Measurement Tags shall be obtained from Goodall Design. Sails may be measured by an official measurer.

## **7. WEIGHT (mass)**

a. The weight of the complete boat, rigged to race, when in a dry condition to the measurer's satisfaction, shall be not less than **102kg for a sloop rigged boat**, and **100kg for a cat rigged boat**. Corrector weights shall be added to the boat to achieve the required weight.

## **8. RECOGNITION MARK**

a. The yacht's class, name and sail number shall be permanently written across the rear beam or on the rear section of the hull in letters a minimum of 45 mm high.

b. The Building Registration Cards shall be soaked in resin and permanently glued inside the hull where they are clearly visible through the rear hatch covers.

c. The Registered Boat Number; and class emblem shall be displayed on both sides of the mainsail in accordance to ISAF rule G1.2.

## **9. HULL MEASUREMENT**

Moulded plastic hulls built by an approved Professional Builder from an approved mould registered with Goodall Design are deemed to comply with section 9 of these rules without formal measurement.

The hull shall be inverted. The bow template shall be placed on the hull so that all three lugs touch the hull. The hull shall be set up such that the bow datum point and the aft most point of the keel are in a horizontal plane. Positions for measurement templates in section 8c shall be determined by measuring around the curve of the hull with a tight tape from the bow datum point.

a. There shall be not more than 10mm gap between the bow template and the hull, except in the stem area where it shall not be more than 3mm, and the bow tip area which is not measured.

- b. When a plumb line is put against the bow the top (deck) tip shall be raked aft 5 mm.
- c. Each of the templates positioned 950, 2400, 3300, 4430, 4930 mm abaft the bow datum point of the bow template shall touch the hull at, either the centreline inscribed on the template, or within the raised section on the template and on both sides of the inscribed centreline.
- d. A line of sight shall pass through the holes in the templates to the notch in the bow template.
- e. The clearance between any template and the hull shall not exceed 10 mm, except that within 10mm of the centreline inscribed on the respective template the clearance shall not exceed 2 mm.
- f. The sheer lines at all stations shall not be above or below the tolerance marks on templates 2400, 3300, 4430, and 4930mm.
- g. The under sides of the rear beam shall be 5mm above the inner shear line 5mm. The under sides of the striker strap shall be in line with the inner shear line 10mm.
- h. The centreline of the forestay tang shall intersect the hull within the tolerances marked on the 2400mm template.
- i. The distance from the bow datum point to aft most point of the keel shall be 4945mm +/- 15mm. When measured with a tight tape around the hull curve.
- j. The centre planes of each hull and its centreboard case shall coincide.
- k. The aft edge of the centre case shall be raked back 5 (+/-2) degrees to the deck.
- l. With the deck crown template normal to the mid or rear deck and square across the hull, the clearance between deck and template shall be not more than 5mm except in way of recesses or pads for ports and fittings.
- m. It is recommended that each hull, when swamped, shall support 50kg.
- n. The projection of the top surface of the fore deck shall intersect the front beam at a point within the top 10mm of the beam.
- o. The foredeck templates shall be fitted such that they touch the hull sides and are hard down on the deck. There shall be no more than 5mm gap anywhere under the template.
- p. A line of sight shall pass through the holes in the deck templates to the notch in the bow template. (This means that the top surface of the fore deck is to be straight.)

q. Positions of fixtures on the hulls. All measurements taken from the bow tip measured along the centreline of the hull.

MIN MAX

Forestay tang. 960mm - 990mm to centre line of tang at intersection with hull. Measured perpendicular to the centreline of the hull.

Mast step. 2400mm - 2425mm Projected back along beam to centreline of mast step.

Side chainplate. 2890mm - 2930mm o centreline of chain plate at shear line measured perpendicular to the centreline of the hull.

Aft edge of centreboard 3615mm - 3635mm when fitted to hull.

Front edge of rear beam. 4420mm - 4440mm

r. Hull Material

Carbon fibre, graphite, metals and semi-metals (other than normal fittings, fastenings and backing plates) are prohibited in the hulls. Copper ties along the keel are permitted. After consultation with the committee, the measurer may drill small test holes to check for the presence of these materials.

s. The hulls shall not have hollows or bumps designed to deliberately match the measurement templates.

t. The original hulls on Taipan Catamaran number 001 are exempt from sections 8b, c, d, e, f, h, r.

Any modification to Taipan 001 must comply with these restrictions.

## **10. PLATFORM**

a. The maximum width of the platform including all fittings shall not exceed 2340mm.

b. The centreline separation at the top and bottom tips of the bow and the keel at the transom shall be in a 20mm range.

## **11. BEAMS**

a. The hulls shall be joined by a main beam and rear beam. There shall be no beam or strut attached to the hulls other than the main beam and rear beam and there shall be no beam or strut connecting the main beam and rear beam.

b. The main beam and rear beam shall each be straight aluminium alloy tube of constant section along its length, except that where a section with integral track is used, the track may be opened or cut away, to provide an entry for a trampoline bolt rope. Holes may only be drilled in the beams for fastenings and fittings.

c. Front Beam

i. Front beam shall be a mast section which complies with section 15b of these restrictions.

ii. The strut shall have a minimum length of 240 mm when measured from the top of the main beam to the bottom of the striker strap and shall be a minimum of 22mm in diameter. The strut shall be made of Aluminium alloy with a minimum wall thickness of 3mm. or stainless steel with a minimum wall thickness of 1.6mm.

iii. The striker strap shall be made of solid Stainless Steel and shall be a minimum of 3mm thick and a minimum of 38mm wide. Lightening holes are prohibited. The Original striker straps on Taipan Catamarans No's. 1 to 28 are exempt from this rule. Replacement striker straps must comply.

d. Rear Beam

i. The rear beam shall be made of extruded aluminium.

Minimum wall section:

- 2mm.

Maximum Minimum

- Height 60mm - 50mm
- Width 70mm - 45mm

ii. Total height of beam and the traveller track not to exceed 80mm. The track for the traveller car may be extruded onto this section. A track for the trampoline deck may be recessed into the lower surface.

e. Titanium bolts are prohibited in the beams.

## 12. CENTREBOARDS

a. Two centreboards shall be fitted one per hull.

b. The centreboards shall have no moving parts except that up haul / down haul cords are allowed.

c. Centreboards may be made of any material, but must be capable of floating in fresh water.

d. Profile and section of centreboards is not restricted.

e. Dimensions: Min. Max.

- Width at keel in down position 290mm - 330mm.
- Thickness at keel in down position 21mm - 26mm.
- Overall length 850mm - 1100mm.

f. When positioned in the hull and viewed from ahead or behind, centreboards to be symmetrical around a straight vertical axis.

### **13. RUDDERS**

- a. The rudder boxes are to be held captive to the transoms to prevent loss due to capsize.
- b. With the rudders in the fore and aft position the centre planes of each hull and its rudder shall coincide.
- c. Two rudders shall be fitted, one to each transom.
- d. Rudders may be made of any material but must be capable of floating in fresh water.
- e. Rudders must be capable of being lifted or swung up when the Taipan Catamaran is beached. Fixed rudders are prohibited.
- f. Dimensions and shape of rudders are de-restricted.
- g. The rake of the rudders, stocks or any rudder components may not be actively adjustable underway. For the purposes of clarification, this rule is not intended to prevent rudders being raised in light conditions.
- h. When in sailing position and viewed from ahead or behind, rudders are to be symmetrical around a straight vertical axis and be no thicker than 22mm.

### **14. TRAMPOLINE**

- a. A trampoline shall cover the area between the main beam, rear beam and the inner sheer lines, except that a maximum gap of 100mm is allowed for lacing.
- b. There shall be no trampoline or other covering whatsoever in front of the main beam or behind the rear beam. (Note. the purpose of this rule is to prevent forward or aft trampolines. It is acceptable for the trampoline and/or hiking strap material to be wrapped around the beams so long as it doesn't project more than two material thicknesses beyond the beam and doesn't change the projected profile shape of the beam.)
- c. Trampolines must be made of woven material. A net trampoline is not permitted. (For the purpose of this rule, net shall be defined as a material where the intersection of warp and weft are knotted, welded or in any way treated to space the warp and the weft apart.)



## **15. MAST**

- a. The length of the mast section shall be 8500 (+/-25) mm.
- b. The mast shall be an inherently straight aluminium alloy extrusion of constant section, with integral track. The exterior surface shall be designed to be smooth; however, the interior may be altered by inclusion of ribs. Mast sections shall be permitted only when the design has been approved by the designers.
- Major axis shall be not less than 144mm or more than 151mm. Measured externally.
  - Minor axis shall be not less than 57mm or more than 64mm. Measured externally.
  - All newly registered boats (after 1st April 2009) must carry the standard Superwing (sloop) mast.
- c. The forestay and shrouds shall be attached to the mast at a single point, within 35mm of the extrusion surface and not more than 6025mm nor less than 5975mm from the lower end of the mast extrusion. The hound fitting shall be fitted externally on the mast.
- d. The trapeze lines may be rope or wire and shall have a minimum breaking strain of 320kg. Wire shall be a minimum of 2.0mm dia. and of 1x19 construction. Rope shall be a minimum of 2.5mm dia.
- e. The mast shall be stepped on the centreline of the boat.
- f. Measurement bands shall be painted around the mast such that the inner distance between bands is not greater than 8100mm. Measurement bands shall be in a colour contrasting with that of the spar and have a minimum width of 25mm.
- g. When stepped, the lower end of the mast extrusion shall be not more than 70mm above the top of the main beam.

## **16. BOOM**

- a. The boom shall be of Aluminium or Aluminium Alloy and shall be of constant section throughout its length.
- b. Excluding fittings, the boom shall pass through a 100mm diameter circle.

## **17. STANDING RIGGING**

- a. There shall be one shroud only attached to each hull. The attachment point being the side chain plate.
- b. The mast shall carry one pair of diamond stays only, which shall be rigged below the hounds. Diamond stays may be passed through a fairlead, permanently attached to the mast above the lower attachment point. The distance between the diamond upper attachment point, and the lower attachment point, or the fairlead's, shall not be less than 5300mm.

- c. The points of intersection of the diamond wires and the spreaders shall be not less than 600mm or more than 700mm apart measured in a straight line.
- d. There shall be one forestay only, which shall be attached to a strop between the hulls.
- e. The point of intersection of the lines of the forestay and each half of the forestay strop shall lie on the centreline of the boat and, shall be not less than 600mm from a straight line joining the deck crown where they intersect the plane of the forestay bridle.  
This measurement shall be taken with the forestay strop in a vertical plane and with an upward force of not less than 2kg and not more than 6kg applied vertically at the centreline of the boat.
- f. Struts, stays, or devices which limit the natural fore and aft movement of the forestay and forestay strops are prohibited.
- g. There shall be no other standing rigging.
- h. All standing rigging shall be stainless steel wire, circular in section and shall have no fairings. Rod rigging is prohibited. The minimum diameter of the shrouds, diamond wires, forestay and forestay strop shall be a minimum of 3mm diameter and have a minimum breaking strain of 900kg. Diamond arms may have fairings.
- i. Adjusting the standing rigging whilst racing is prohibited  
Standing rigging shall be adjusted only by means of rigging screws or turnbuckles, shackles, shroud adjuster plates and lashing.  
All of these shall be locked, wired or otherwise firmly secured while racing.

## **18. SAILS**

The ISAF Guide to Sail Measurement 1997 - 2000 shall apply where no conflict with these rules arises. Battens shall be removed from the mainsail for measurement.

Refer Appendix C at rear of this document for Designer statement of intent in relation to sail construction.

- a. New sails shall be measured by the sail maker. When measured and found to be in accordance with these Class Rules, a completed Sail Measurement Tag shall be legibly and permanently endorsed with the date of measurement and the Sail makers' signature and shall be affixed to the sail within 400mm of the tack. Substantially altered sails shall be re-measured by the sail maker and the Sail Measurement Tag endorsed with the new measurements.
- b.
  - i. For a Taipan 4.9 sloop, the rig shall consist of a mainsail and a headsail.
  - ii. For a Taipan 4.9 cat-rig, the rig shall consist of a mainsail only.

c. Headsail (The sail maker shall certify on the Sail Measurement Tag that items ii to xii correctly measure.)

i. The headsail shall be carried on the forestay. The tack shall not extend below the intersection of the forestay with the forestay stop. A device shall be used to prevent adjustment of the tack below this point.

ii. Only zip, 'Velcro', and sleeve luff's are allowed.

iii. The 'Triangulation' method of measurement shall be used if the width of the sail at the head exceeds 50mm. For the purpose of this rule the width at the head shall be measured at right angles to the luff through the highest point of the sail on the luff, to the line of the leech, extended if necessary.

iv. The length of the leech shall be not more than 5040mm.

v. The length of the luff shall be not more than 5100mm.

vi. The length of the foot shall be not more than 1730mm.

vii. The maximum foot round will be 50mm.

viii. At a point on the leech 200mm down from the head, the nearest point on the luff shall be not more than 100mm distant.

ix. At the half leech point the nearest point on the luff shall be not more than 790mm distant. The half leech point shall be found by folding head to clew and smoothing the sail out flat.

x. Up to two battens are allowed in the leech only. Each batten shall be perpendicular to the leech, not be more than 200mm in length and not more than 20mm in width.

xi. The leech shall be in no place convex

xii. Headsail clew boards larger than 60mm in any dimension are prohibited. Only one sheet attachment point is permitted.

d. Mainsail: (The Sail maker shall certify on the Sail Measurement Tag that items viii to xiv correctly measure.)

i. 'Head' shall be the highest point of the sail projected perpendicular to the luff or its extension. 'Tack' shall be the point of intersection of the line of the foot with the line of the aft edge of the mast. 'Clew' shall be the point of intersection of the line of the foot with the line of the leech from the bottom batten pocket.

ii. The mainsail shall be hoisted in the integral luff groove of the mast extrusion, and shall not be fitted with a sleeve or double luff or other fairing device.

iii. The mainsail shall be set within the inner edges of the measurement bands on the mast.

iv. The sail shall be loose-footed and shall be attached to the boom or boom fittings at the clew.

v. There shall be a maximum of 11 battens and no batten may exceed a width of 30mm or protrude more than 100mm beyond the leech of the sail.

vi. The battens shall have no moving parts.

vii. The battens shall not incorporate carbon fibre.

viii. The leech shall be straight or concave between batten pockets and from the top batten pocket to the head. Any hollows in the leech in way of width measurement points shall be bridged with straight lines for measurement.

ix. The top of the sail shall not exceed 950mm measured perpendicular to the head.

x. Measured to include the boltrope:

- At the 1/4 leech point, the nearest point on the luff shall be not more than 2015mm distant.
- At the 1/2 leech point, the nearest point on the luff shall be not more than 1780mm distant.
- At the 3/4 leech point, the nearest point on the luff shall be not more than 1410mm distant.
- At the 7/8 leech point, the nearest point on the luff shall be not more than 1095mm distant.
- The 1/2 leech point shall be found by folding the head to clew and smoothing the sail flat.
- The 1/4 and 3/4 leech points shall be found by folding the clew and the head to the 1/2 leech point and smoothing the sail flat.
- The 7/8 leech point shall be found by folding the head to the 3/4 leech point and smoothing the sail flat.

xi. The distance from the head to the clew shall be not more than 7950mm.

xii. The distance from the clew to the tack shall be not more than 2100mm measured to include the boltrope.

xiii. The foot round when smoothed out for measurement shall be a maximum of 50mm.

## **19. MAINSHEET TRAVELLER**

A mainsheet traveller system shall be fitted and run across the rear beam only. The track shall run within the width of the rear beam.

## **20. MISCELLANEOUS**

a. No hiking aid shall be allowed except for foot loops, toe straps, trapeze gear, and any line for retaining crew positions on gunwale. The trapeze gear may be used by both crew at any time, who shall have at least one foot in contact with the boat.

b. The following are prohibited:

Foresail booming out spars, foresail booms, radial vang, mast jacks, hydrofoils, outriggers, ballast, suction bailers, keel bands, rubbing strakes, spray deflectors, chines, and any projection from the skin other than normal fittings.

## **21. PERSONS ON BOARD**

For a sloop, the crew (including helmsman) shall consist of two persons. For a cat-rig, the crew shall consist of helmsman only.

## APPENDIX A

### TAIPAN CATAMARAN 4.9 MEASUREMENT SUMMARY FORM

This form shall be completed in accordance with Rule 5 & 6.

Measurer:

Date measured:                /    /

Passed:            YES            :            NO

If NO, state rule number/s at fault.

Signature (Only if passed)

\_\_\_\_\_

Sail number:

Boat Name:

Build date:                /    /

Hull construction:    GRP from registered moulds            /            Timber

Builder:

Owner Address:

Phone number:

I, being the owner of the Taipan catamaran 4.9 listed above agree to comply with all the rules of the Taipan Association. Any alterations performed on the Taipan Catamaran 4.9 listed above after this certificate is issued, will comply with all the rules dated from 1st April 2008.

SIGNED

## **APPENDIX B**

### **SCHEDULE OF BUILDING FEES**

Building Fees payable to Goodall Design International Pty Ltd for each Taipan Catamaran hull built and each Taipan Catamaran sail built as set by Goodall Design:

- Per Hull: \$65.00
- Per Mainsail: \$25.00
- Per Headsail: \$10.00

## **APPENDIX C**

### **SAIL CONSTRUCTION STATEMENT OF INTENT**

1 December 1999

Taipan Catamaran Association

4.9 Taipan 1999 Rules - Sail Construction Intent

When designing and defining the Sails for the 4.9 Catamaran it was my intent that the following aspects of sail construction would be de-restricted and without limit within the overall perimeter boundaries of the sails defined by the Class Rules:

- Primary Reinforcement
- Secondary Reinforcement
- Flutter Patches
- Chafing Patches
- Batten Pocket Patches
- Seams
- Ply Number and Weight
- Tabling
- Windows

Greg Goodall

Taipan 4.9 Catamaran Designer