

OFFICIAL HANDBOOK

of the

YACHTING WORLD DIAMOND

ASSOCIATION of AUSTRALIA

2006



THE NATIONAL YACHTING WORLD DIAMOND ASSOCIATION OF AUSTRALIA

OFFICIAL CLASS HANDBOOK AND CONSTITUTION

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INTRODUCTION

Here are the vital facts about the Yachting World Diamond, a single design class racer.

This exciting yacht is raced in five States in Australia and various parts of the World.

This 9 metre keelboat originated in England in 1960, when the editors of "Yachting World" magazine sought ideas for a reasonable priced yacht for national and international racing. The main requirements of the yacht were to be low cost and high performance. To meet these demands, an easily driven, light-displacement design was indicated. The well-known dingy designer, Jack Holt, was approached. Already Holt was famous for his "build-her-yourself" plywood dingy hulls, such as the Heron, G.P. 14, Y.W. Cadet and Hornet classes. Although not a big boat designer, Holt used his small boat knowledge to draw up a revolutionary yacht, which can properly be called a 9 metre dingy with a keel.

The prototype of the class was displayed at the National Boat Show in London in January 1961, and immediately aroused a great deal of interest. In July of that year, a Diamond was outright winner in a mixed fleet of 250 yachts in a race around the Isle of Wight. New registrations quickly followed and the class was established. The confidence that Yachting World Magazine had shown in Jack Holt was completely vindicated and here, at last, was a keelboat that would plane. Up until May, 1967, the yachts were known by the design name of "Yachting World Keelboat". The yachts were given the title of Diamond Class after the Australian Association approached the designer and the Yachting World Magazine, the holder of the name copyright.

The first Diamond in Australia was launched on Pittwater, in N.S.W., in January 1962.

DESIGN

The Diamond is 9 meters overall, 7.3 metres waterline, 2 metres beam and 1.3 metres draft. Displacement is 1075 kilograms of which weight, of which half is lead ballast. Total sail area is 29 square metres consisting of a 14.5 square metre Genoa and a 14.3 square metre mainsail. A 9 square metre jib is optional and the spinnaker area is approximately 42 square metres. The rig is a modern 7/8 ratio sloop rig and the standing rigging is such that runners have been eliminated.

The hull has a moderately fine entry and a long flat run aft giving ample planing surface. The topsides are unusually high which contributes to the dry sailing of the keelboat. The foredeck is well cambered, tapering aft to a fairly to a fairly flat aft deck. The cockpit is large and roomy making the boat a delight to work. It is divided by a box girder, which results in a separate helmsman's cockpit. The layout provides many advantages; the helmsman and crew have independent freedom of movement to windward and leeward, the box thwart is ideal for centre mainsail sheeting and at the same time, provides three storage lockers for small gear.

There is only perceptible weather helm on the wind and, properly tuned, a lifting breeze should bring an instant similar response from the yacht. On a reach with a good beam wind and spinnaker set, the Diamond will readily plane. Speeds of 15 knots are common with a strong wind aft. In the latter conditions, even at sea, the flared bow resists any tendency for the nose to bury in the waves.

MAY BE AMATEUR BUILT

The hull can be of any materials approved by the National Association. Sophisticated rigging and sail techniques allow the enthusiast to tune the boat for maximum performance, assuring close one class racing. The Diamond was designed for amateur construction in plywood and is consequently simple but strong. No bulkheads are included, strength being achieved by the glue-and-screw construction of the keel and chines and the box girder.

Five hardwood bearers support the ply fin, four laminated frames strengthen the bow and eight laminated beams support the foredeck. Two compression posts are fitted underneath the deck-stepped mast. The 32mm thick plywood fin is bolted to the keel by metal angle plates. The 508 kg lead ballast is bolted in two sections to the fin. Plywood thickness is 10 mm on the bottom, 9 mm on the sides and 8 mm on deck.

An important safety factor is the compulsory inclusion of 0.8 cubic metres of flotation material, evenly distributed and secured at the bow and stern. The yacht, full of water, will float and support the crew.

RESTRICTIONS

The Diamond is designed as a class racer and, although tolerances are allowed for errors in building, it is intended that the Diamond remains strictly a one-design class. For this reason, the measurement procedure covers 100 measurements of the hull, spars and sails. A boat must pass the examination of the official measurer before the State Association will issue a racing certificate.

Each new boat must have its own set of plans that are numbered, the plan number being the sail number. Plans are obtainable from the Y. W. Diamond Association of Australia and cost \$60.00, which includes Royalty payable to Jack Holt, printing of plans and postage.

To keep running costs to a sensible level, restrictions are placed upon the frequency of new sails. The total sail complement of a new boat is two genoas, one mainsail, two spinnakers and one jib, for the first year. Thereafter the acquisition of new sails is restricted to one only of any individual sail each year. The use of exotic sailcloth is prohibited.

Construction can be in materials other than plywood, such as fibreglass and aluminium provided the relevant specification is followed.

The box girder can be lowered from its plan position so long as the carlin and gunwale is braced and fixed to the skin and chines.

Winches are not allowed for halyards, down-hauls or kicking straps.

Permanently bent or rotating masts are prohibited.

Total sail complement while racing is one mainsail, two genoas, one jib and two spinnakers.

Headsails and spinnakers can be changed while racing.

Headsail reefing gear is permissible, but not as a reefing medium to windward.

The forestay can be pulled forward by the use of an elastic shock cord to prevent the forestay fouling the headsail reefing gear, but the luff of the furling headsail and the forestay must be independently capable of supporting the mast in the event of either breaking.

Loose-footed mainsails are permitted. Mainsail reefing equipment and/or reefing points are permitted and the mainsail may be reefed while racing.

Amateur builders should seek co-operation of their State Association, which is eager to help with advice and with making approved moulds available where possible.

ADMINISTRATION

AUSTRALIAN NATIONAL COUNCIL

STATE ASSOCIATIONS

N.S.W. VIC. TAS. W.A. QLD.

The Diamonds are nationally controlled by the National Yachting World Diamond Association of Australia. The affairs of this association are managed by a National Council which comprises delegates from the states.

The objectives of the Association are the promotion of the Yachting World Diamond Class in all States of Australia under uniform rules, the representation of the Class and the views of its members at National levels, co-operation with all other yachting bodies, the organisation of an Annual National Championship and other interstate events, the control of the Measurement Rules and Registration of boats, and to act as an instrument of liaison between State Associations.

The State Associations use uniform State Rules and may control various fleets in their states.

AUSTRALIAN ASSOCIATION RULES of the YACHTING WORLD DIAMOND CLASS

1. TITLE

The full title of the Association shall be “The National Yachting World Diamond Association of Australia” herein referred to as the Australian Association.

2. INSIGNIA

The insignia of the Australian Association shall be a black diamond measuring 450mm high and 380mm wide, and placed on the sails according to the ISAF Measurement Rules.

3. OBJECTS

The objects of the Australian Association shall be the promotion of the Yachting World Diamond in all States of Australia under uniform rules, to represent the class and the views of its members at National levels, co-operation with all other yachting bodies, the organisation of an Annual National Championship and other Interstate events, to maintain control over the measurement rules and registration of boats, and to act as liaison between the State Associations.

4. MEMBERSHIP

Membership of the Australian Association shall be open to all State Associations who have fulfilled their financial obligations to the Australian Association. The conditions of membership include the acceptance of the Uniform State Rules and the recognition of the Australian Association as the controlling body of the class in Australia.

5. MANAGEMENT

- a. The National Council shall manage the affairs of the Australian Association, from which shall be elected by a simple majority, a National President and a National Secretary. A National Treasurer may be elected.
- b. Chairmen and Secretaries will represent the State Associations on the National Council. Where a State Association has fewer than five boats, the Chairman only shall represent that Association.
- c. The National Council may, by a simple majority, dismiss its President, Secretary and treasurer and elect others.
- d. Meetings may be conducted in person, by letter, by telephone or by any other usual means of communication, but voting must be by letter. Unless otherwise stated in this Constitution, decisions are by a simple majority.

- e. State Associations may send substitute members to the National Annual General Meeting if the Chairman and/or Secretary are unable to attend.
- f. The Secretary must minute all decisions of the National Council, keep on record all communications from Council members, ensure Council members are immediately informed of voting results and other decisions of the Council, keep a register of owners, sail numbers and names of Yachting World Diamonds in Australia and perform all tasks consistent with the usual duties of a Secretary that the National Council may from time to time require. He may be required to act as Treasurer.
- g. The Treasurer shall have charge of the funds of the Association, making such disbursements as the Council may require. He shall keep an accurate record of the Association's financial affairs.
- h. If practical, the National Annual General Meeting should be held at the time and place of the Australian Championships. The National Council must examine in detail all recommendations put forward by members of State Associations at this meeting.
- i. Only the National Council or State Association may propose amendments to the National or Uniform State Rules and/or Rules of Measurement and Construction. A two-thirds majority vote by State Associations is necessary to alter the National or Uniform State Rules. State Association votes must be accompanied by a copy of the minutes of any State General Meeting where it is recorded that, by a two-thirds majority, the boat-owners of such State Association voted in favour of the alteration.
- j. The Rules of the Australian and State Associations are to be considered as one Constitution, and the Australian Association must observe the Uniform State Rules where it is not inconsistent with the Australian Rules.
- k. The Accounts of the Australian Association are subject to annual audit and the closing date will be 31st December.

6. SUBSCRIPTIONS

The subscriptions payable by the member State Associations shall be by a levy imposed by unanimous agreement of the Chairmen and Secretaries representing their State Associations on the National Council. The levy may be by equal contribution or based on the number of boats in a particular State or by any other method that may be considered equitable at the time.

7. MEASUREMENT

- a. The Australian Association has the responsibility for ensuring the observance of the Rules of Measurement and Construction.

- b. The National Council may, after due consideration and consultation where considered necessary with the designer, make an alteration to the Rules of Measurement and Construction. Such alteration must be by the unanimous vote of the Council members, and may only stand for one year from the date of the minuted approval. For such alteration to be permitted, the provisions of Section 5(i) shall apply.
- c. Any boat refused a Measurement Certificate by the State Measurement Committee for any reason whatsoever must have the Form of Measurement and comments from the Measurer and/or Secretary of the State Measurement Committee submitted to the National Council for their consideration. State Secretaries may issue certificates only to those boats whose measurements fall within the tolerance shown on the Measurement Form.
- d. A National Measurer shall be appointed to be a member of the National Council. He shall have a counselling and adjudicating role and shall act through the State Measurer on state measuring matters.
- e. A Measurement Committee consisting of a representative of each competing State shall be established for each National Championship to ensure all competing boats comply with the rules.
- f. All sails to be used in National Championships are to be declared, measured, stamped and signed on the measuring days immediately prior to the regatta.

8. REGISTRATION OF BOATS

It is the responsibility of the State Secretary to forward regular information concerning additions to their fleets, changing of ownership, and any other data affecting the National Boat Register. The Australian Association has control over the issuance of sail numbers.

UNIFORM STATE ASSOCIATION RULES of the NATIONAL YACHTING WORLD DIAMOND CLASS

To be read in conjunction with the Australian Association Rules.

1. TITLE

The full title of the Association shall be "The National Yachting World Diamond Association of (State)".

2. OBJECTS

The objects of the (State) Association shall be the promotion, control and regulation of the Yachting World Diamond Class in (State), to represent the views of its members to the Australian Association, to ensure the observance of the Australian Association Rules and the organization of the (State) Championship and other State events.

3. MEMBERSHIP

Membership of the Association shall be open to any person interested in the Yachting World Diamond.

4. SUBSCRIPTIONS

Each State's Associate shall determine the Annual Subscription payable by members.

5. MANAGEMENT

- a. All sails to be used in National Championships are to be declared, measured, stamped and signed on the measuring days immediately prior to the regatta. The affairs of the Association shall be managed by an elected Committee of six members, of whom no fewer than four are boat owners.
- b. (i) The Committee is to be elected by a simple majority at an Annual General Meeting of members, to be held during the months of May or June. At their first meeting after each A.G.M., the Committee shall elect one of their members to act as Chairman during the ensuing year.

(ii) All members of the committee shall retire annually, but shall be eligible for re-election.

- c. The Committee shall have power to co-opt another member to replace a committee member who retires before the A.G.M.
- d. The Committee shall have the power to elect sub-committees, whose minutes of meetings must be submitted to and approved by the elected Committee.
- e. The Chairman of the Committee shall appoint an Honorary Secretary, who shall keep minutes of all Committee and General Meetings, a register of members and shall be responsible for communicating the decisions of the Committee to members and others in such terms as the Committee may prescribe. The Committee may, however, by a majority decision, dismiss the Honorary Secretary and require the Chairman to appoint another.
- f. An Honorary Treasurer may be appointed by the Committee and shall have charge of the funds of the Association making such disbursements as the Committee requires. He shall keep an accurate record of the Association's financial affairs. A Statement of Accounts must be presented to the members at the A.G.M. and a copy forwarded to the Australian Association.
- g. An Honorary Fixtures Secretary, Social Secretary and Public Relations Officer may also be appointed by the Committee.
- h. The accounts of the Yachting World Diamond Association of (State) will be audited each year and circulated to all members.

5. CONDUCT OF MEETINGS

- a. The Annual General Meeting of the Association shall be held each year during the month of May or June, the time and place being at the Committee's discretion.
- b. General Meetings may be called by the Committee.
- c. Upon receipt by the Honorary Secretary of a request in writing, a Special General Meeting shall be called by the Chairman or Honorary Secretary, signed by not fewer than six members of the Association.
- d. At least fourteen days' notice with written agenda shall be given to any General
- e. Meeting. Items to be put on the Agenda should be received by the Honorary
- f. Secretary at least thirty days before such General Meeting
- g. At least twenty-four hours' notice shall be given of any Committee Meeting.
- h. At General and Committee Meetings, decisions shall be by a simple majority vote. Voting to be by a show of hands unless a poll is demanded by no fewer than three of the members present. At any Meeting, the Chairman shall have a casting vote.

- i. Motions for additions to or amendments of the Australian Association Rules, the Uniform State Rules or the Rules of Measurement and Construction, may only be voted upon by boat owners. Where a syndicate ownership exists, only one vote will be received from that syndicate. Such a motion may only be carried by a two-thirds majority.

6. MEASUREMENT AND REGISTRATION OF BOATS

Application should be made to the Honorary Secretary, Yachting World Diamond Association of (State) for a Measurement Form. Alternative names, in order of preference, should be submitted, as two similar names are not allowed in the class. The Official Measurer will measure the boat, record such measurements, and make pertinent comments, and submit these to the State Committee, who will instruct the State Secretary to issue a Racing Certificate, providing there are no discrepancies. Should a discrepancy exist, such Measurement Form, together with comments and recommendations shall be forwarded to the National Council for final decisions.

Certificates are to be renewed annually for a charge of \$10.00.

7. YACHTING WORLD DIAMOND FLEETS

A fleet will be recognised for three boats holding Racing Certificates and being members of a Yacht Club affiliated with the Yachting Association of the State.

8. BOATS ELIGIBLE TO RACE

Only boats that hold a valid Racing Certificate and whose owner is a member of the Yachting World Diamond Association of (State) will be awarded prizes or points for racing, unless at the discretion of the National Council.

For all classified or championship series a maximum of four or a minimum of three crew can be carried, and the same number of crew must be carried in the series as is carried in the first heat.

9. RACING RULES AND SAFETY REGULATIONS

All races shall be conducted under the Racing Rules of Sailing and Safety Regulations of the International Sailing Federation, and the Yachting Australia Prescriptions, and the special rules of the National Yachting World Diamond Association, all as modified by the Sailing Instructions. Any appeal against the decision of the Race Committee shall be referred to the Yachting Association of the State and shall be accompanied by the prescribed fee. Any decision of the Yachting Association of the State shall be final except where the Yachting Association of the State on its own motion refers it to another yacht racing authority.

10. METHODS OF SWINGING

In swinging a Yachting World Diamond two crew may use trapezes, any or all crew may use body or toe straps that shall not extend outboard of the gunwale.

These shall be the only methods of swinging.

MEASUREMENTS - PART A

1. GENERAL

The Yachting World Diamond is a one-design class. The tolerances on the measurement form are to cover unintentional errors in building, or changes in shape through age or use. The measurement form contains as many measurements as considered practical, but the boat, spars and sails should be to the designed size in all places. Errors at other parts of the hull could invalidate the certificate at the discretion of the Measurement Committee.

Builders are warned to check measurement No. 13 after turning the hull over and before fitting the deck, as the hog is inclined to spring.

2. DIMENSIONS OF THE HULL

Method of measuring: Set the hull up level on the datum. (For this purpose the centreline of the aft deck is level fore and aft.) Set up one straight edge or plum bob bearing on the centre of the transom at deck level, and another bearing on the stem head. These should be vertical and parallel. All length measurements are taken from one or the other of these edges. A string line is fixed between these verticals, supported at the centre, if necessary, to keep it straight. This is the datum line to which all outside measurements of height are taken using another straight edge touching this line and averaging the pairs of heights. The length measurements are taken parallel to this datum line. Alternatively use a builders/surveyors level and jack the boat to achieve an offset level line. Take a reading underside of the hull at the centreline of the transom and subtract this from the stem head. Adjust the jack/s until the difference is 730mm.

3. CONSTRUCTION OF THE HULL

The plans show the recommended form of construction and list of minimum scantlings. The sheets of ply skin (bottom 12mm chines, topsides 9mm and deck 8mm) are to B.S.S.1088 or local equivalent both in quality and thickness. Scarf joints are recommended and should be at least 460mm long. If butt joints are used, the straps should be at least 150mm in length, and of the same thickness as the ply they are joining. The foredeck only may be moulded from veneer or thinner sheets of ply to 10mm thickness. In this case all the foredeck beams, except the laminated beam under the mast and the king plank, may be omitted.

Fibreglass sandwich boats should be built by consulting Australian Standard 1799.4-1985. The hull shall conform with plywood yachts in respect to strength, weight and uniform thickness of construction and such will be deemed satisfied by compliance with Chapter 5 of the AS 1799.4-1985.

Natural E glass fibres only to be used (eg no Kevlar or carbon fibre or S glass). Alternative materials must conform to the specifications approved by the National Council.

4. WEIGHT OF BOAT

The overall weight of the hull, less all loose fittings but including buoyancy and its fixings shall be not less than 508.023kg. and the all-up weight which includes mast, spars and running rigging, flotation and fixed fittings but excludes sails, safety gear and anchor shall be 1075kg minimum. The weight also includes protective finish, either paint or plastics.

Correctors of any material up to a total of 22.5kg may be fitted to the underside of the deck at the position of the mast.

5. DECK PLAN

As per plans, there must not be any openings other than for halyard and downhauls. There must be handrails, splash boards and correct cockpit shape.

Rounded corners to a maximum radius of 0.229m on the corners of the cockpit are an optional feature of the cockpit layout.

An opening may be permitted on the foredeck portside for a spinnaker launching/retrieval tube.

The railings, splash boards, deck coamings and rubbing beads on boats launched after 1/2/1967 must comply with the measurement form.

6. THE KEEL

The keel must be as plan. The ply fin is to be of "Makori", Sapele, Utile, or similar quality B.S.S. 1088 or better. At least two-thirds of the veneers should run vertically. The keel could be specially made or made from standard boards glued together, such as two 8mm and two 9mm, giving 12 vertical veneers and 6 horizontal. Alternative materials must conform to the specifications approved by the National Council.

The alternative materials as listed below may be used in the construction of the fin.

Conventionally constructed ply to B.S.S 1088 standard or better may be used (6/13 vertical veneers) plus fibreglass reinforcing with one 400 g/m² unidirectional E glass and one 200 g/m² E glass each side using epoxy resin exclusively.

Fibreglass sandwich construction built on a core of 12mm closed cell PVC foam (75 kg/m³) with a total of 4424 g/m² E glass on each side. With solid glass top and bottom to accept the bolts for the lead and angle irons.

The plan shows the bevel on the fore and aft edge as 76mm., this is a maximum, and 30mm is the minimum thickness inclusive of paint or plastic finish. The ply fin is fixed to the hull as shown on plan, by two 76mm x 76mm metal angles the full length of the ply, and bolted through the floor in the hull.

The hull and fin may be faired to the metal angles, extending outboard from the metal angle a distance of 50mm maximum at the sides and 75mm at the fore and aft ends.

The lead ballast to be shaped as plan. That is with the cross section of the fitted leads aft from approximately 0.102 from the leading edge, being rectangular in shape with the corners curved to a maximum radius of 35mm.

The wood blocks at the rear of the lead may be faired through to the aft edge of the fin.

7. RUDDER AND TILLER

The rudder as the plan, the depth is measured vertically below the stock where it passes through the hog. The width at right angles to the leading edge and the thickness at its thickest part. The tiller is optional, but must be above the deck. The rudder stock shall be 32mm diameter solid steel or approved alloy. The minimum radius at the aft lower corner shall be 50mm (tangential).

The aft top edge of the rudder is permitted to be angled sufficiently only so that the rudder can be turned through 180 degrees.

8. MAST AND BOOM

The mast and boom may be of any material and construction. The chords of the section must not be less than those on the plan, and the stripped weight not less than 22.68 kg. The weight includes the spar and all fixed fittings, spreaders, jumpers and both gooseneck tracks. No rigging, rigging screws or goosenecks. Centre of gravity is to be a minimum of 4.4 metres from the heel of the mast.

The mast may be tapered at the top to a point a minimum of 6.1 metres above the top of the deck.

The luff of the mainsail may be attached to the mast by a luff rope groove internal or external or tracks or slides.

Permanently bent and rotating masts are prohibited.

No dimension on the section of the boom is to be greater than 150mm.

9. RIGGING OF MAST

Standing rigging shall consist of one forestay, one or two backstays to the transom centreline or quarters from the masthead, two main shrouds to forestay height over spreaders 635mm-686mm from mast, two lower shrouds from spreader roots and one pair of jumper struts at approximately forestay height, with rigging from the mast head to the spreader roots, and rigging screws for any or all of the standing rigging. Devices for slacking the rigging other than backstay/s when under way are not allowed.

Rigging screw/s above deck are allowed but are not to be adjusted while racing. The running rigging is one main halyard, one headsail halyard, one spinnaker halyard, main boom downhaul, spinnaker boom down haul and topping lift, sheets and kicking strap. Optional one main boom topping lift and flag pennants.

The standing rigging must be round section wire, but size and construction optional. The forestay only may be rod.

The running rigging is optional material and size.

The main, fore and spinnaker halyards may all lead down inside the mast.

Twin or single adjustable backstays are permitted, and they may come forward beneath the deck.

Jumper stays may terminate anywhere on the mast providing they pass through a point at the spreaders, as though they were anchored there.

The use of a preventer is acceptable and is to be used only when the spinnaker pole is in the elevated position. The maximum height to be as Measurement No.60, 1.905m to intersect the deck at any point on a straight line between the front face of the mast and the forestay. This preventer shall not be carried in the taut position unless a spinnaker is being flown.

10. SAILS

Laminated cloths are not permitted. (Such as Mylar or Kevlar).

The sizes on plans are maxima, but smaller sails are not allowed. This is the reason for minimum sizes on the measurement form.

The mainsail luff must be set between the black bands on the mast, the foot between the mast and the black band on the boom. The leech is measured from the head nearest to the mast in a straight line to the clew cringle, with no tension on the sail. There is no control of the fullness of the mainsail, only the half height and three-quarter height luff to leach across the shortest chord. The mainsail has 5 batten pockets extending the full width of the sail, luff to leach, dividing the sail into approximately 6 equal parts. For this rule, approximately means within 100mm of sail plan position. The battens may be of any length, material or number up to five, but not wider than 50mm.

The foresail measurements as plan.

The genoa luff and foot as plan, the leech may be hollow. Foot round on the genoa is limited to a maximum depth of 360mm measured as the maximum distance below and at right angles to the straight line taken between the measurement points of the tack and clew for the foot measurement.

The genoa and foresail set at any height in the foretriangle. The clew and tack measured as per ISAF, only the head measurement is class specific. The head of the foresails is the intersection of straight lines drawn, and extended as required, from the tack and clew measurement points to the fore and aft edges of the head board or cringle as appropriate.

The spinnaker as per plan, measured smoothed out on a flat surface. Only two spinnakers may be carried aboard.

The mainsail and spinnaker must have the class insignia as per ISAF/YA rules, and the class number beneath it, both at approximately half height of the sail.

All sails must be indelibly marked and numbered by the maker. This is in effect the maker's guarantee that the sails have been made in accordance to the plan and rules.

The measurer dates, signs and stamps each sail if it conforms to measurements.

11. METHOD OF MEASURING THE SPINNAKER

The sail shall be folded in half with the clews laid on top of each other and laid on the floor as flat as possible with sufficient tension to remove wrinkles along the luff, the middle fold and the foot of the sail.

- a. The length of the luffs (maximum 8.382m).
This measurement shall be the highest point of the sail on the headboard to the lowest point of the sail directly below the centre of clew cringle measured round the edge of the luffs.
- b. The half length of the foot (maximum 2.591m).
This measurement shall be taken round the edge of the sail from the lowest point of the sail directly below the centre of the clew cringle, to the lowest point on the middle fold.
- c. The length of the middle fold of the sail (maximum 9.373m).
This shall be the distance between the highest point of the sail on the headboard and the middle of the foot, measured round the middle fold of the sail.
- d. The half height cross measurement (maximum 2.743m, minimum 2.642m).

This shall be found by laying the highest point of the sail on the headboard directly over the centre of the clew cringles. The resulting fold at half height must be made free from wrinkles. The half height cross measurement is measured along the edge of this fold.

- e. The three-quarter height cross measurement (maximum 2.184m).
This shall be found by folding the highest point of the sail on the headboard back onto the fold just created (under iv) at the edge of the luffs. The resulting fold shall be made free from wrinkles. The three-quarter height cross measurement is measured along the edge of this fold.
- f. The foot and luffs shall be fitted with a non-stretch tape.
The sail shall be symmetrical about its centrefold.

12. BUOYANCY

Each boat must have at least 0.8 cubic metres of buoyant material, expanded plastics or similar, not air bags, not weighing more than 34kgs. securely fastened. The buoyancy must be distributed to allow the boat to float at gunwale level when settled. Fastenings shall be adequate and not to deck.

13. FITTINGS

Fittings as per list on plans and may be of any material, except the ballast and the keel angles which are lead and metal respectively.

Winches are not allowed for halyards, downhauls or kicking straps, except for backstays which can be optional.

Two winches are allowed for sheets and spinnaker guys, fitted as plan. Any number of blocks or parts in any sheet are permitted. Mooring cleats must be fitted bow and stern.

Anchor and 36 metres of line, minimum weight 11 kg. (for example 7 kg. CQR and 36m of 8 mm diameter nylon line). Two paddles.

14. BUILDER'S CERTIFICATE

- a. The builder shall sign the measurement form stating that:
- b. The construction of the hull is as stated in rule No. 3.
- c. The keel conforms to the plans and to the details given in rule No. 6.
- d. Buoyancy as required in rule No. 12 has been complied with.

15. CODE FLAG

Should be letter "F" (a Diamond).

NATIONAL YACHTING WORLD DIAMOND CLASS MEASUREMENT FORM

1. For plywood skinned boats built in accordance with the plans all measurements must be completed except those with a suffix "A"
2. For glass fibre hulls and aluminium hulls built in accordance with the plans all measurements must be completed, using the alternatives with a suffix "A"
3. For glass fibre hulls built in a mould approved by the National Yachting World Diamond Association of Australia, measurement of numbers 5 to 9 and 19 to 35 inclusive need not be taken, but the builders signature for these is needed and the actual measurements provided.

DEFINITION

The chine and the gunwale is the corner formed where the outside surfaces of the planking meet, or where, the angle is rounded, would meet if extended.

Measurement Number	Description	Minimum	Actual	Maximum
1	Dry weight of hull, fin, angles, rudder and tiller (no fittings)		508.023 kg	
2	All up weight (no anchor and chain)		1075 kg	
3	Length overall between verticals	9.131m		9.182m
4	Length aft vertical to centre of mast	4 5.321 m	2.730m	5.372m
5	Length aft vertical to fore end of aft deck			2.781m
6	Length aft vertical to aft end of foredeck	4.712m		4.762m
7	Horizontal width of side deck at aft end of foredeck from gunwale to inside of coaming	0.432m		0.483m
8	Horizontal width of side deck at fore end of aft deck from gunwale to inside of coaming	0.203m		0.254m
9	Beam, outside of skin at transom, gunwale height	1.022m		1.054m
10	Beam, outside of skin 2.743m from transom, gunwale height	1.988m		2.026m
11	Beam, outside of skin 4.572m from transom, gunwale height	2.051m		2.089m
12	Beam, outside of skin 1.829m from bow, gunwale height	1.213m		1.251m
13	Depth of hull, centreline of upper	0.775m		0.826m

Measurement Number	Description	Minimum	Actual	Maximum
	surface of deck to top of hog, at fore end of aft deck			
13a	Depth of hull, centreline of upper surface of deck to underside of hull, at fore end of aft deck	0.819m		0.870m
14	Depth of hull, centreline of upper surface of deck to top of hog, at aft end of foredeck	1.118m		1.168m
14a	Depth of hull, centreline of upper surface of deck to underside of hull, at aft end of foredeck	1.162m		1.213m
15	Top of deck to gunwale, aft end of foredeck	0.260m		0.298m
16	Forestay cuts centreline of deck, forward of centre of mast at deck	2.641m		2.692m
17	Centre of line between lower shroud plates, fixed to outside skin, aft of centre of mast at deck	0.432m		0.483m
18	Distance of lower shroud plate from outside skin at deck level	1.524m		1.562m
19	Beam, at 2.743m from aft vertical, to inside of skin, top of stringer at lower chine	1.505m		1.543m
19a	Beam, at 2.743m from aft vertical, at lower chine	1.810m		1.848m
20	Beam at 2.743m from aft vertical, to inside of skin at top of stringer at upper chine.	1.829m		1.854m
20a	Beam at 2.743m from aft vertical, at upper chine	1.549m		1.587m
21	Beam at 4.572m from aft vertical, to inside of skin at top of stringer at lower chine	1.549m		1.587m
21a	Beam at 4.572m from aft vertical, at lower chine	1.536m		1.562m
22	Beam at 4.572m from aft vertical, to inside of skin at top of stringer, at upper chine	1.860m		1.898m
22a	Beam at 4.572m from aft vertical, at upper chine	1.879m		1.905m
23	Lower chine beam at 6.400m forward of aft vertical	1.098m		1.130m
24	Transom beam outside of skin at upper chine	1.010m		1.048m
25	Transom beam outside of skin at lower chine	0.838m		0.854m
Numbers 26 and 27 set the Datum line for measuring.				
26	Datum line to underside of hull at centreline of transom	0.406m		
27	Datum line to underside of hull at 8.23m forward of aft vertical	0.349m		
28	Upper chines above datum at transom	0.654m		0.686m
29	Lower chines above datum at 0.514m transom	0.489m		

Measurement Number	Description	Minimum	Actual	Maximum
30	Lower chines above at 2.743 forward of aft datum	0.235m		0.260m
31	Datum line at 2.743m forward of aft vertical to underside of hull at centreline	0.111m		0.143m
32	Lowest point of hull or angles above	0.000m		0.070m above datum line
33	Lower chines above datum at 6.400m forward of aft vertical	0.273m		0.298m
34	Datum line at 6.400m forward of aft vertical to underside of hull at centreline	0.044m		0.070m
35	Underside of hull at centreline at transom forward of aft vertical	0.179m		0.229m
36	Aft edge of fin, where it meets skin, from aft vertical	3.543m		3.594m
37	Overall length of fin	2.184m		2.235m
38	Thickness of fin (including finish)	0.030m		0.038m
39	Fore end of ballast from aft vertical	4.966m		5.016m
40	Length of lead ballast	0.940m		1.016m
41	Depth of lead ballast	0.216m		0.241m
42	Thickness of lead ballast (each half)	0.101m		0.127m
43	Depth of keel from underside of hull at fore end of lead ballast	0.940m		0.990m
44	Centre of rudder post at skin from aft vertical	1.794m		1.870m
45	Length of rudder blade on line parallel to fore edge	0.762m		0.813m
46	Width of rudder blade at right angles to fore edge	0.419m		0.457m
47	Thickness at thickest part of rudder blade	0.038m		0.047m
48	Centreline of rudder stock from trailing edge measured along top of blade	0.229m		
49	Most aft point of rudder from aft vertical	1.310m		
50	Overall length of mast	8.992m		9.144m
51	Weight of bare mast and all fixed fittings (no rigging, rigging screws or goosenecks)	22.680kg		
52	Height of jumpers above deck	7.925m		
53	Length of jumpers (from fore of mast)	0.356m		0.406m
54	Angle between jumpers	80 degrees		100 deg
55	Top of spinnaker halyard sheave above top of deck			7.820m
56	Forestay cuts fore side of mast above top of deck	7.620m		7.671m

Measurement Number	Description	Minimum	Actual	Maximum
57	Top of foresail halyard sheave above top of deck	7.468m		7.671m
58	Height of spreaders above top of deck	4.699m		4.750m
59	Spreader length (from face of mast)	0.635m		0.686m
60	Spinnaker track or ring above top of deck			1.905m
61	Bottom of upper black band on mast to top of deck			8.839m
62	Top of lower black band on mast to top of off deck			0.686m
63	Fore side of black band on boom from centre of mast			3.570m
64	Overall length of spinnaker boom			3.048m
Sails are too measured in accordance with the ISAF/YA measuring manual, except where another method is proscribed by the Class Rules. Measurements 69 and 70 are total widths across the shortest chord.				
65	Main luff	8.001m		8.153m
66	Main foot	3.403m		3.505m
67	Width of head of sail from outside edge of headboard on leach to outside edge of rope on luff			0.152m
68	Straight line from forward, upper corner of Headboard to centre of clew cringle	8.611m		8.788m
69	Width of mainsail at $\frac{3}{4}$ height	1.194m		1.270m
70	Width of mainsail at $\frac{1}{2}$ height	2.159m		2.235m
71	Jib luff	7.240m		7.315m
72	Jib foot	2.675m		2.750m
73	Jib leach	6.665m		6.740m
74	Genoa luff	7.239m		7.315m
75	Genoa foot	3.962m		4.039m
76	Genoa leach	7.087m		7.163m
77	Spinnaker luff			8.382m
78	Spinnaker foot measured from clews to centre fold			2.591m
79	Length of the middle fold of the spinnaker			9.373m
80	Width of spinnaker at $\frac{3}{4}$ height			2.184m
81	Width of spinnaker at $\frac{1}{2}$ height	2.642m		2.743m
Railings				
82	Height above deck	0.045m		0.064m
83	Width, constant proportions to full length	0.025m		0.038m
84	cut-away sections	7		8
85	Length	2.100m		2.591m
86	Distance from bow of forward end of Handrail at the deck	0.915m		1.450m
87	Distance from gunwale to outer	0.229m		0.381m

Measurement Number	Description	Minimum	Actual	Maximum
	railing (railings to run parallel to gunwale) Splash boards edge of			
88	Length, each	1.120m		1.346m
89	Width	0.019m		0.032m
90	Height above deck at fore edge	0.102m		0.153m
9291	Height above deck at aft edge		0.051m	
	Position of foremost point forward of centre of mast	0.289m		0.340m
Deck coamings				
93	Height above deck	0.013m		0.051m
94	Width	0.019m		0.064m
Forward chainplate position				
95	Distance from gunwale to centre hole	0.076m		0.127m
Rubbing bead				
96	Distance of bead ends to ends of hull	0.000m		0.250m
97	Half-round shape, Diameter	0.019m		0.032m

STRIKE OUT NOT APPLICABLE

Has the mainsail not more than five batten pockets. From luff to leach, dividing the leach into Approximately six equal parts?	YES	NO
Is the class number carved into the hog in figures not less than 0.038m high at about 2.743m from the stern?	YES	NO
Are all sails signed as correct by measurer and stamped and numbered by sailmaker?	YES	NO
Have the mainsail and spinnaker the class insignia and class number on both sides, and the genoa the class number?	YES	NO
The insignia 457mm high and 380mm wide, and fitted back to back. The numbers to be 380mm high and 63mm wide and below the class insignia and positioned as in ISAF rules.	YES	NO
Has the builders certificate (part A14) been signed?	YES	NO

BUILDERS CERTIFICATE

Yacht Name: Owner: Number:

I certify that to the best of my knowledge:

- (i) The construction of the hull is as stated in Rule No. 3.
- (ii) The keel conforms to the plans and to the details given in Rule No. 6.
- (iii) Buoyancy as required by Rule No. 12 has been complied with.

Builders Name: Signature: Date: