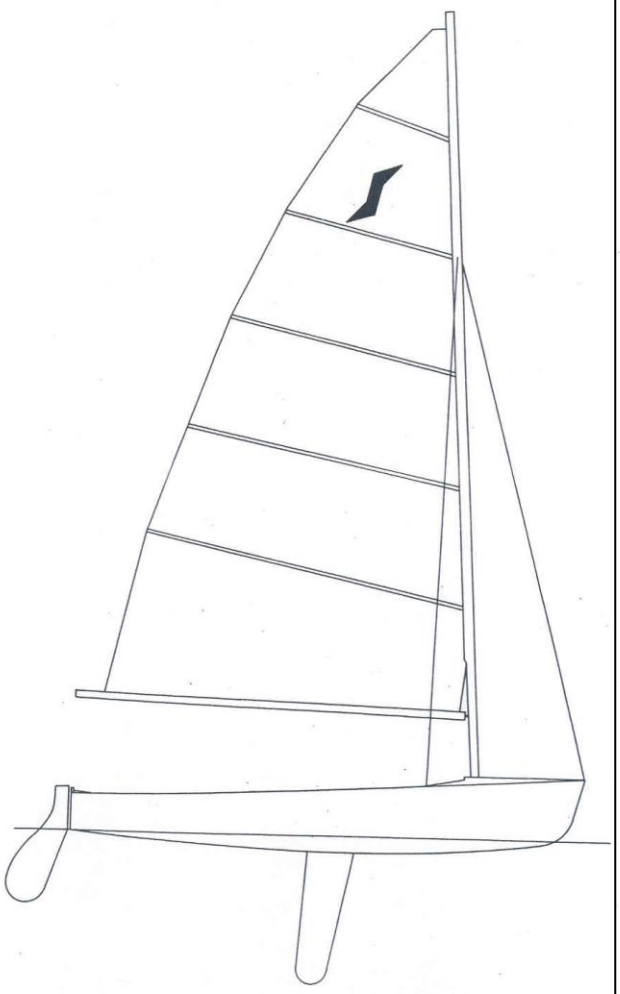
NATIONAL SOLO™ CLASS RULES



RYA

March 2010

NATIONAL SOLO™ CLASS - CLASS RULES
1 March 2010

PART A - ADMINISTRATION

1 GENERAL

The National Solo is a single handed one design racing dinghy. To ensure the administration of the Class and the objectives of the class rules are maintained, before any National Solo may be raced, the following documents must have been issued and the requirements adhered to:-

(a) Building fee receipt

(b) Measurement Certificate

(c) Buoyancy Endorsement

These documents are obtained as follows:

2 BUILDING FEE RECEIPT

A building fee must be paid by the builder on each boat at the commencement of building whether or not it is subsequently measured and certificated. Payment shall be made to the RYA in sterling and on receipt of payment the RYA will issue a building fee receipt and a sail number.

3 MEASUREMENT CERTIFICATE

First Certification

For boats not previously certificated, the owner shall have the boat measured in accordance with Part D of these rules. Only an RYA Approved National Solo Class Measurer shall undertake measurement. On completion of satisfactory measurement, the Measurer will supply the owner with a Measurement Form completed and signed in respect of Section 3.

The owner shall ensure that Sections 1 and 2 of the Measurement Form are completed and then apply to the RYA for a Measurement Certificate, enclosing the completed Measurement Form and a certification fee. Upon receipt of these the RYA may issue the first Measurement Certificate to the owner.

Re-Certification

Should a Certificate become invalid due to the reasons (a) or (b) below, the owner shall apply to the RYA for a new Certificate returning the old Certificate together with details of all changed particulars and the certification fee. Upon receipt of these the RYA may issue a new Measurement Certificate to the owner.

Should a Certificate become invalid due to the reasons (e) or (f) below, then the owner shall have the necessary items of the boat re-measured in accordance with Part D of these rules. Only an RYA Approved National Solo Class Measurer shall undertake measurement. On completion of satisfactory measurement, the Measurer will supply the owner with a Measurement Form completed and signed in respect of the necessary items or will endorse the changes on the old Certificate.

The owner shall then apply to the RYA for a new Measurement Certificate, enclosing the completed Measurement Form, if applicable, together with the old Certificate and the certification fee. Upon receipt of these the RYA may issue a new Measurement Certificate to the owner.

Validity of Measurement Certificate

A Measurement Certificate is only valid provided:-

(a) It has not expired.

(b) There is no change of ownership.

(c) All sails have been measured and endorsed in accordance with Rule A4 and comply with these class rules or the class rules effective at the time when they were endorsed.

(d) The hull, spars, foils and equipment comply with these class rules.

(e) No alteration, replacement or repair is made to the hull, which might change the dimension of an item measured by these rules.

(f) No alteration is made to the weight of the boat or its correctors, if fitted.

(g) Any alteration, replacement or repair made to the spars, sails or equipment comply with these class rules.

(h) The buoyancy endorsement is current.

4 SAIL ENDORSEMENTS

Owners shall have all sails measured in accordance with Part C of these rules.

5 BUOYANCY ENDORSEMENTS

Owners shall carry out a buoyancy test/inspection in accordance with Part B of these rules. On completion of satisfactory test/inspection, the owner shall sign and date the buoyancy endorsement on the measurement certificate and arrange for such signature to be witnessed and endorsed by a club official. Subject to rule A5, buoyancy endorsements shall remain valid only for a period not exceeding twelve months from the date of the last endorsement.

6 ALTERATIONS AND REPLACEMENTS

For the Measurement Certificate, sail and buoyancy endorsements to be valid, all hulls, spars, sails and equipment shall comply with the current class rules or those class rules applying to them at the time when the original Measurement Certificate was issued. Any alterations, replacements or repairs shall comply with the current class rules.

7 CHECK MEASUREMENTS

All hulls, spars, sails and equipment shall be liable to re-measurement at the discretion of the RYA or a race committee at any time and it is the owner's responsibility to ensure that they comply with the appropriate class rules at all times. Notwithstanding anything contained herein, the RYA has the right to refuse to grant or withdraw a Measurement Certificate and/or sail and buoyancy endorsement from any boat at any time.

8 NOTES OF RESPONSIBILITY

The RYA the Class Owners Association and an RYA Measurer is under no legal responsibility in respect of these Rules, plans or accuracy of measurement and no claim arising therefrom can be entertained. It shall also be made clear that it is the owner's responsibility to contact an appropriate Measurer and to make their own contractual agreement with that measurer.

9 ISAF ADVERTISING CODE

Advertising on the boat as chosen by the owner or person in charge is unrestricted.

10 CHANGES TO CLASS RULES

The safety requirement of sailing instructions shall take precedence of these class rules.

PART B - MEASUREMENT RULES

1 GENERAL

1.1 The Solo is a one design class and the object of these rules is to ensure that in hull form, hull weight, and spars the boats are as nearly alike as possible.

1.2 These rules are complementary to the plans and measurement form. Any interpretation shall be made by the RYA, which may consult the National Solo Class Association (NSCA.).

1.3 All boats shall be built in accordance with the class rules, specifications, Measurement Form and Measurement Diagrams.

1.4 Where a particular item or measurement is detailed in Part C of these rules and the plans, Part C shall prevail. Where a particular item or measurement is detailed in both the text in Part B of these rules, or the diagrams in Part C or the plans, the text shall prevail.

1.5 Measurement tolerances are intended to allow for genuine building errors and change of shape through age, and shall not be deliberately used to alter the design. The Measurer shall report on the measurement form anything that is considered to be a departure from the intended nature and design of the boat, or to be against the general interest of the class, and a certificate may be refused, even if the specific requirements of the rules are satisfied.

2 CONSTRUCTION

2.1 GRP mouldings shall be produced only by moulders licensed by the RYA.

2.2 Apart from the restriction above the Solo may be built by any professional or amateur builder.

2.3 Boats shall be constructed of wood, glass reinforced plastic (GRP), GRP foam sandwich, plywood/foam/plywood panel or a combination of wood, plywood/foam/plywood panel, GRP and GRP/foam sandwich (composite) except as detailed elsewhere in Part B of these rules.

2.4 Resin and glass used in GRP mouldings shall be of materials approved for boats. The lay-up shall be uniform except for normal variations, with local reinforcing and stiffening as necessary (i.e. no attempt to give a ballast advantage) corners in the GRP mouldings other than the chines may be moulded up to a radius of 13mm.

2.5 It is not obligatory to comply with the cutting list in respect of the species and size of timber, except that items listed as timber shall be of solid or laminated wood or plywood and items listed as plywood shall be of plywood or plywood/foam/plywood sandwich panel. Structural fillets of a material other than wood may be used as detailed elsewhere in Part B of these rules.

2.6 A protective coating of paint, enamel, varnish or plastic is permitted, such coating shall be in addition to the thickness of ply skin and shall be included in the weight. Glass tape may be used in conjunction with structural fillets and as a recognised repair material in the boat.

2.7 Composite boats shall have a GRP shell integral with the centreboard case and the transom. The bulkhead and tank sides shall be either a separate GRP member or constructed in timber and/or plywood. Where the bulkhead and tank sides are constructed of timber and/or plywood they shall, as far as practicable, conform to the timber construction plan and the bulkhead shall be bonded to the hull shell so as to form three buoyancy tanks. The transom may be clad internally with wood or plywood. The decks, toe rails, thwart, rubbing beads and internal construction items where required by the rules shall be of timber or plywood to conform with the plans.

2.8 GRP boats shall have a GRP shell integral with centreboard case and transom with the bulkhead tank sides and deck as one moulding bonded to the shell at the floor and sheerline. Toe rails, thwart and trim shall be wood or GRP. Longitudinal floor battens shall be optional in the GRP hull.

2.9 The buoyancy tanks in wood, GRP and composite boats shall be made as plans with not less than one drain hole per tank except that the shape of the INTERNAL knees and stiffening is optional. All boats shall have not less than one ventilation hole per tank in addition to the drain hole(s). All drain holes shall be effectively stoppered. Ventilation holes shall be closed in a water-tight manner with detachable covers capable of resisting dislodgement whenever the boat is afloat, capsized, or full of water. Fittings shall not be recessed into the deck or buoyancy tanks.

2.10 In GRP and composite boats fitted with fewer than three individual buoyancy tanks, solid buoyant foam shall be securely fixed inside each tank such that there is not less than $0.04m^3$ in each side tank not more than 1524mm from the stem and not less than $0.03m^3$ in the bow tank not more than 762mm from the stem.

2.11 The mast step may be of any material.

2.12 Washboards may be fitted but shall be not more than 61mm above the deck. Plan 6 shows washboards from centreline to gunwale forward of shroud plates.

2.13 The round on all chines shall extend not more than 15mm from the point at which the outer faces of the hull panels would meet if extended. This rule shall not apply forward of Section 1.

2.14 The keel band(s) and chine rubbing bands shall be of metal, plastic, or solid resilient hardwood with a minimum width 12mm and minimum projection 3mm. For GRP and composite boats these bands may be moulded integrally with the hull. For wooden boats, wooden bands may be used and shall be part of the hull shell construction prior to finishing. Epoxy fillet may be used over the bow curve, no more than 20mm from either end of the curved section. The wood chosen must be sufficiently hard to resist denting/crushing (balsa,obeche,spruce,cedar etc are not considered suitable for this purpose)

2.15 Toe rails (centreboard case capping) may be extended forward from the front end of the centreboard slot by a maximum of 300mm. The maximum width

dimension specified in measurement 32 shall apply to such extension but not the minimum width dimension. Toe rails shall have two toe holes each side of the hull centreline. (measurement 33, thickness of toe rails, shall apply to the extension.)

2.16 The thwart may be tapered in thickness over the deck and, where fixed to the deck, shall be fixed directly to the top surface of the deck only. Any gap between the thwart and the deck may be filled. The width of the thwart shall be not less than 71mm or more than 81mm.

2.17 The inside faces of the centreboard case may be lined with a plastic or similar non-metallic wear resistant material.

2.18 A separate wooden bead to cover the exposed edge of the deck panel may be fitted on each side but if fitted shall be over the full length of the inside of the side buoyancy tanks at their junction with the side deck, and shall be not more than 22mm in depth and not more than 11mm in width.

2.19 Fillets of any structural material may be fitted to the edges of the buoyancy tanks. If fitted, the fillet shall be not more than 15mm in depth and not more than 15mm in width.

2.20 The toe rail shall be supported by:

(a) Not more than four knees of not more than 18mm nor less than 12mm in thickness, not more than 95mm in depth and not more than 75mm in width, two each side of the centreboard case at any fore and aft position. Such may be incorporated as part of the centreboard case end cappings and or

(b) Two wooden or structural epoxy fillets of not more than 20mm nor less than 15mm in depth and not more than 20mm nor less than 15mm in width, one on each side of the centreboard case.

2.21 Not more than two floor battens may be fitted each side. If fitted each batten shall be continuous and not less than 1300mm in length. Each batten shall be not more than 20mm nor less than 8mm in depth. If two floor battens are fitted each side then each batten shall be not more than 52mm in width and, except for 200mm from their ends, not less than 25mm in width across the batten top. If only one floor batten is fitted each side then the width shall be not more than 75mm and may be shaped.

2.22 A mainsheet pulley mounting block may be fitted as either an integral part of or added to the rear of the centre thwart. If fitted the block shall be not more than 150mm in width or more than 100mm in length. A fairing radius to the thwart of not more than 30mm is permitted.

2.23 The bulkhead shall be bonded to the hull with internal structural fillets or fashion pieces.

2.24 Buoyancy tank sides shall be bonded to the bulkhead and the transom with internal structural fillets or battens.

2.25 Transoms of less than 8mm in thickness shall be bonded to the hull with lower fashion pieces. Transoms of not less than 8mm in thickness shall be bonded to the floor and tank sides with structural fillets or lower fashion pieces.

2.26 The internal surface of the cockpit floor may be finished flush if the floor thickness is not less than 11mm in thickness. The floor thickness shall be not more than 15mm.

2.27 Bedlogs and chine stringers may be replaced with structural epoxy fillets in accordance with Diagrams 12 and 13 in Part C of these rules.

2.28 The centreboard case may be clad with wood, plywood, plastic, of uniform thickness over the full length. Optional reinforcement pads, one each side of the centreboard case, may be fitted around the centreboard pivot hole.

3 IDENTIFICATION MARKS

3.1 Wooden hulls shall carry the sail number cut into the hog aft of the centreboard case in figures not less than 25mm high. GRP hulls shall have a plate permanently fixed inside the transom with the sail number, mould number and builder's serial number stamped thereon.

4 HULL MEASUREMENT

4.1 As many measurements as considered practicable to check the shape have been listed on the measurement form, but the intention is that in all particulars the boats shall conform to the designed shape.

4.2 Length measurements of the hull shall be taken parallel to the base line and depth measurements perpendicular to the base line. Beam measurements shall be taken at the sheerline defined as the intersection of the lines of the top of the deck and the outside of the skin, projected if necessary. Measurement sections including the aft edge of the transom shall be perpendicular to the base line.

4.3 Measurement sections 1, 2, 3, 4 and 5 shall be at 3050mm, 2440mm, 1830mm, 1220mm and 610mm respectively from the aft edge of the transom, which for the purpose of the rules excludes normal rudder fittings, covers for transom ports, GRP deck overlap and bead of the composite boat.

4.4 The base line shall be fixed at 76mm and 137mm below the bottom of the keel band at section 1 and the aft edge of the transom respectively.

4.5 The length overall shall include the stem band and stem head fittings, but excluding GRP deck overlap and bead of composite boat.

4.6 The plan width of the side deck, excluding the inboard bead if fitted, shall be measured parallel to the beam measurements from the sheerline to the vertical projection of the intersection of the buoyancy tank side and the deck.

4.7 The maximum depth of the rubbing bead below the sheerline shall be 40mm. The rubbing bead shall not extend above the line continuing the top of the deck.

4.8 The beam of the hull measured between points 15mm aft of face of the stem band measured perpendicular to the stem from a point 435mm above the base line measured along the line of the stem including stem band shall be not less than 88mm nor more than 102mm.

5 BUOYANCY

5.1 A buoyancy endorsement is valid for twelve months from the date of the original buoyancy test/inspection or any subsequent test/inspections carried out in accordance with rule B.5.2 below, provided that the measurement certificate is suitably endorsed in accordance with rule A.5.

5.2 The owner shall examine each tank and be satisfied that it is adequately constructed and maintained. If the owner is in any doubt the boat shall either:

a) be swamped on its beam ends with the stepped mast approximately horizontal, supporting a weight of not less than 68kg above the waterline for ten minutes each side, both to port and starboard.

or

b) have each tank air tested as follows:

Hatches shall be closed normally using only the boats hatch covers and fastenings.

Draining holes shall be closed with their normal stoppers except where tubes to a pressure source and gauge are connected.

Equipment for producing a pressure differential between the tank and the atmosphere and a water gauge for measuring the differential shall be connected to the tank.

Air pressure shall be applied to the tank to produce a differential reading of at least 125mm on the water gauge.

After isolating the buoyancy tank from the pressure source, the pressure differential shall not reduce from 125mm to 50mm in less than 30 seconds.

6 FITTINGS

6.1 The fittings as shown on the plans are the type required. The materials and design are optional but their general design shall not be altered to incorporate other uses.

6.2 The following fittings are permitted in addition to those shown on the plans. No fitting that is not on the plans or listed below is permitted. All fittings may include mounting blocks.

(i) Suction bailers having a total effective cross sectional area of not more than 1291mm^2.

(ii) Toe straps

(iii) Devices for controlling the kicking strap

(iv) Main sheet cleats or jamming blocks

(v) Fittings on boom for alternative main sheet lead

(vi) Carrying handles fixed on deck

(vii) Sliding gooseneck.

(viii) Mooring rings or cleats

(ix) Devices for controlling main sheet traveller.

(x) Booming-out spar and/or a pair of shock cords passing each side of the mast and connected between the stem fitting and the kicking strap.

(xi) Sockets for rowlocks

(xii) A main sheet traveller track or horse fitted directly to the top of the thwart and/or transom. The length is optional. The track or horse may be fitted on the thwart in such a manner as to permit a maximum of 457mm each side of the centreline to be horizontal. If fitted to the thwart, no part of the track or horse shall be more than 64mm above the surface of the thwart. If fitted to the transom, no part of the track or horse shall be more than 64mm above the surface of the transom.

(xiii) Devices for controlling the luff and foot of the sail

(xiv) Twin keel bands

(xv) Two transom ports each no larger than 203mm by 76mm or set nearer than 89mm from vertical centreline, or 35mm from the outside of the skin. These ports shall have hinged covers and may have a device to hold them closed.

(xvi) Fittings for securing loose equipment.

(xvii) Compass(es) may be mounted for vertical or horizontal display:

(a) directly to any existing surface;

(b) recessed in the centreboard case capping (toe rails) forward extension (see 2.15); and/or

(c) using a “mounting bracket” whose dimensions must not exceed 300mm transverse x 300mm vertical x 300mm deep; and/or

(d) an L shaped bracket to the front of the centreboard case capping (toe rails); the maximum height above the top of the capping to be 320mm; the maximum projection from the front of the centreboard capping to be 300mm; the maximum width to be 200mm; or

(e) mast; or

(f) boom.

No additional beams surfaces or supports other than those mentioned may be fitted or used for compass fitment. For clarification, fitment by (a), (b), (c) or (d) will be included in boat weight measurement to satisfy rule 7.2 but fitment to (e) and (f) will not.

(xviii) Wind indicators (non -electrical).

(xviv) Any device or devices that indicate, transmit, or collate data related to wind speed, or boat location are prohibited from being fitted to the boat or worn be the helmsperson while racing. Devices that indicate time, wind direction and wind variation, or boat direction are permitted on the boat or helmsperson provided they cannot receive or transmit data.

(xx) Not more than two toe strap blocks may be fitted to the floor each side of the hog. They may either span two adjacent floor battens and be not more than 50mm x 20mm in cross section nor more than 250mm in length or be fitted to the floor and be not more than 100mm x 100mm in plan. Alternatively, toe straps may be fitted directly to the floor battens and or hog and or transom support. If required for fixing support, a maximum of two additional toe strap blocks, not more than 100mm by 100mm in plan, may be fitted to the floor or hog to facilitate a central toe strap. These shall be located on the boat centre-line between the rear of the centreboard case and the transom.

(xxi) Water bottle carrier(s) and bottle(s). For clarification the bottle carrier, when permanently attached to the hull will be included in weight 7.2 but the bottle constitutes loose equipment so will not be included in weight 7.2.

(xxii) Timepieces and Course Charts may be attached to any fitting or spar. This overrules 6.1 for these items.

7 WEIGHT

7.1 The weight of the hull in dry condition including all permanent fixed fittings and correctors if fitted but with the centreboard removed shall be not less than 70kg.

7.2 If the weight of the hull is less than 70kgs, correctors of any material with a total weight of not more than 3kgs shall be fixed at the aftermost end of the centreboard case. The weight and number of correctors shall be recorded on the certificate and each corrector shall have its weight stamped upon it. If the corrector(s) are removed, the boat shall be reweighed by an approved Measurer and a new Measurement Certificate issued.

8 CENTREBOARD

8.1 The centreboard shall comply with these class rules.

8.2 The centreboard construction is optional except that the following are prohibited: carbon fibre and metals other than those permitted by 8.5.

8.3 When fully extended, that part of the centreboard profile below the keel band shall be generally as profile shown in the diagram in Part C of these rules within the tolerance shown on the measurement form. The maximum width shall be at the keel when fully extended, the lower end shall be within ± 25mm of a semi-circular profile with a radius of 115mm.

8.4 The fairing or streamlining of the section of any part that may extend below the keel is optional. The part of the centreboard which is always in the case may be built up to prevent rocking.

8.5 The edges may be protected by an outer metal strip which shall not extend more than 25mm from the edge.

9 RUDDER AND TILLER

9.1 The rudder blade and stock shall comply with these class rules.

9.2 The rudder blade and stock construction is optional except that the following are prohibited: carbon fibre and metals other than those permitted in 9.5.

9.3 The profile of the rudder blade and rudder stock shall not differ from the profile shown in the diagram in Part C of these rules by more than 13mm at any point, except that the blade may be either fixed or pivoted to the stock. The rudderstock, whether the blade is fixed or pivoted, shall be not less than 9.5mm in thickness on each side of the rudder blade.

9.4 The fairing or streamlining of the blade and the method of controlling the blade angle to the stock is optional.

9.5 The edges may be protected by an outer metal strip which shall not extend more than 25mm from the edge.

9.6 Shape, size and material of the tiller and extension are optional. The tiller shall operate through the tiller port in the transom.

9.7 The angle of the blade to the stock is optional.

10 MAST

10.1 For the purpose of measurement the heel of the mast shall not include the tenon.

10.2 The mast shall be constructed from aluminium alloy. Materials of fittings is optional. Corrector weights of any material are permitted provided they are permanently fixed to the mast.

10.3 The aluminium alloy mast shall have a minimum sectional dimension of 50mm from the heel to the hounds and may be tapered above the hounds to a minimum of 48mm x 44mm.

10.4 The bending characteristics of the alloy mast shall be controlled as follows. The mast shall be laid, with sail track uppermost, on two supports one at the top band and the other 50mm above the heel (i.e. 5932mm apart) and a 25kg weight suspended from the mast at a point 3048mm from the heel. The deflection measured at a point 2895mm from the heel shall not exceed 152mm.

10.5 The weight of the mast including halyards, normal fittings and correctors, if fitted, but excluding standing rigging, shall not be less than 6.7kg.

10.6 Measurement bands of a contrasting colour shall be painted on the mast as follows:

No 1 whose upper edge shall be not less than 952mm above the heel
No 2 whose lower edge shall be not more than 5982mm above the heel

10. 7 The mast shall be limited to 26mm movement at deck within the slot tolerance.

10.8 The heel of the mast shall not be moved whilst racing.

10.9 The shrouds and forestay shall be detachable.

10.10 A wooden mast constructed as plan is optional.

10.11 Mast Chock. The movement of the mast in the mast slot (gate) may be constrained in the fore and aft direction by a wedge and/or T-shaped flat plates of any material. Adjustment of the chock(s) positioning and their quantity may be made manually during a race. No other form of mast bend control at deck level is permitted. A method of retention to hull or mast is permitted. The chock(s) will at all times constitute a loose fitting and not be included in the weight 7.2.

11 BOOM

11.1 The minimum overall length of boom shall be 2700mm and shall meet the sectional requirements of rule B11.2 throughout this length.

11.2 The boom shall be constructed from aluminium alloy. The boom cross section between the gooseneck end and 2700mm from the gooseneck end:-

	Minimum	Maximum
Vertical	50mm	72mm
Transverse	50mm	66mm

beyond this length the section is optional.

11.3 A measurement band of contrasting colour shall be painted on the boom so that when the boom is fitted to the gooseneck at 90° to the mast the inner edge of the band shall be not more than 2693mm from the aft edge of the sail track or groove extended to the level of the boom if necessary.

11.4 A wooden boom constructed as plan is optional.

12 STANDING AND RUNNING RIGGING

12.1 The mast shall be supported by one pair of shrouds and one forestay.

12.2 The mast shall have a main halyard and sheaves, and a flag halyard may be fitted.

12.3 The type and materials of all running rigging is optional.

13 SAILS

Rule 13 shall be read in conjunction with the ISAF Equipment Rules of Sailing. Where an item is printed in **bold,** the definition in the ERS applies. **Certification control** shall be carried out in accordance with the ERS Section H.

These shall be effective immediately for all IHC approved lofts and from the 1st March 2010 for all other applications.

13.1 PARTS

13.1.1 MANDATORY

(a) Mainsail

13.2 GENERAL

13.2.1 RULES

(a) **Sails** shall comply with the **class rules** in force at the time of **certification**.

13.2.2 CERTIFICATION

(a) The **official measurer** shall **certify mainsail**s in the **tack** and shall sign and date the **certification mark**.

(b) The RYA may appoint one or more persons at a sailmaker to measure and **certify sails** produced by that manufacturer in accordance with the ISAF In-house Certification Guidelines.

13.2.3 SAILMAKER

(a) No licence is required.

13.3 MAINSAIL

13.3.1 IDENTIFICATION

(a) The class insignia and sail numbers shall be placed in accordance with RRS 77 Appendix G.

(b) The emblem shall comply with the measurements of the Class emblem diagram contained in Diagram 2 of the Appendices

(c) The emblem shall be placed approximately perpendicular to the upper middle batten pocket.

13.3.2 MATERIALS

(a) The **ply** fibres of the **body of the sail** are optional.

(b) **Stiffening** shall consist of:

(1) A Headboard of optional material.

(2) Battens of optional material

(c) **Sail reinforcement** material is optional

13.3.3 CONSTRUCTION

(a) The construction shall be: **single ply**, **soft sail**

(b) The **sail** Plan A shall have 5 batten pockets**.**

(c) The **sail** Plan B shall have 4 batten pockets**.**

(d) The method for tensioning battens at the outboard end of the batten pocket is optional.

(e) The following are permitted: Seams, stitching, glues, tapes, bolt ropes, tabling, corner eyes, headboard with fixings, Cunningham eye or block, batten pocket **patches**, batten pocket end caps, mast and boom slides, leech line with cleat, **windows**, tell tales, sail shape indicator stripes and items as permitted or prescribed by other applicable rules.

13.3.4 DIMENSIONS – SAIL PLAN A

	maximum
Leech length.....	5558 mm
Top width ..... ….....	150 mm

Distance between the **luff** and **leech**, as measured along the centreline of the batten pocket, extended as necessary;

	minimum	maximum
Top batten	700 mm	778 mm
Second batten	1309 mm	1387 mm
Third batten	1767 mm	1845 mm
Fourth batten	2122 mm	2200 mm
Bottom batten	2427 mm	2505 mm
Batten pocket **width**: inside		60 mm
Luff to batten pocket end cap		20 mm

Head point to intersection of **leech** and centreline of:

Top batten pocket	801 mm	921 mm
Second batten pocket	1724 mm	1844 mm
Third batten pocket	2564 mm	2684 mm
Fourth batten pocket	3410 mm	3530 mm
Bottom batten pocket	4238 mm	4358 mm

Head point to intersection of **luff** and centreline of:

Top batten pocket	763 mm	863 mm
Second batten pocket	1626 mm	1726 mm
Third batten pocket	2490 mm	2590 mm
Fourth batten pocket	3354 mm	3454 mm
Bottom batten pocket	4217 mm	4317 mm

13.3.5 DIMENSIONS – SAIL PLAN B

	maximum
Leech length	4668 mm
Foot length	2505 mm
Top width	150 mm

Distance between the **luff** and **leech**, as measured along the centreline of the batten pocket, extended as necessary;

	minimum	maximum
Top batten	700 mm	778 mm
Second batten	1309 mm	1387 mm
Third batten	1767 mm	1845 mm
Bottom batten	2122 mm	2200 mm
Batten pocket **width**: inside		60 mm
Luff to batten pocket end cap		20 mm

Head point to intersection of **leech** and centreline of:

Top batten pocket	811 mm	911 mm
Second batten pocket	1750 mm	1820 mm
Third batten pocket	2595 mm	2670 mm
Bottom batten pocket	3438 mm	3529 mm

Head point to intersection of **luff** and centreline of:

Top batten pocket	763 mm	863 mm
Second batten pocket	1626 mm	1726 mm
Third batten pocket	2490 mm	2590 mm

Bottom batten pocket ..... 3354 mm ... 3454 mm

FIT SPARS

(Old rule13.3 retained) The sail shall fit the mast and boom by its luff and foot ropes, but in Sail Plan B the foot rope is optional and the sail may be loose footed.

13.3.6 MAINSAIL USE

No part of the **sail** shall extend beyond the inner edge of the **boom outer limit mark** or the lower edge of the mast **upper limit mark**. The forward extension of the upper edge of the boom shall meet the mast at or above the upper edge of the mast lower limit mark.

14.1 There shall be only one person on board during racing.

15 ANCHOR

15.1 An anchor need be carried only when specifically required in the sailing instructions.

DIAGRAM 2
CLASS EMBLEM

Tolerance on 508 mm dimension ± 10 mm.
Tolerance on all other dimensions ± 5 mm.

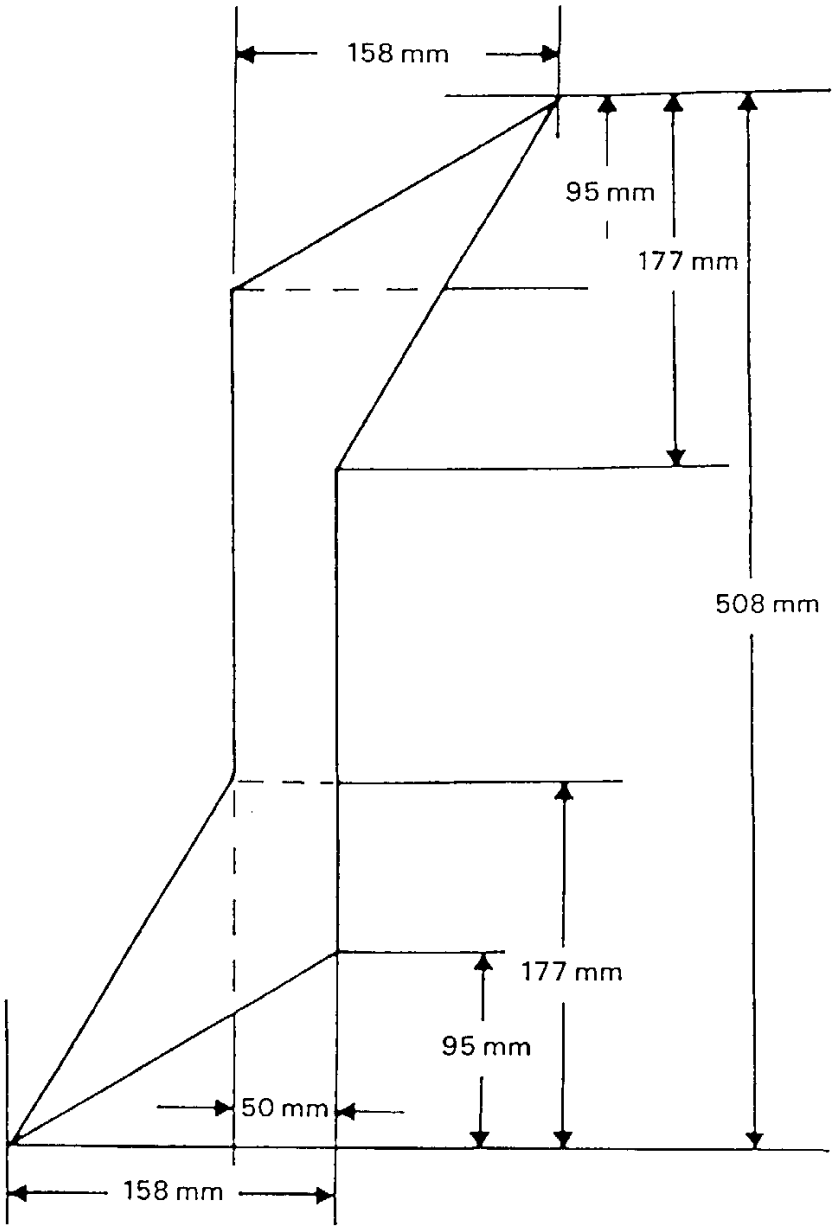
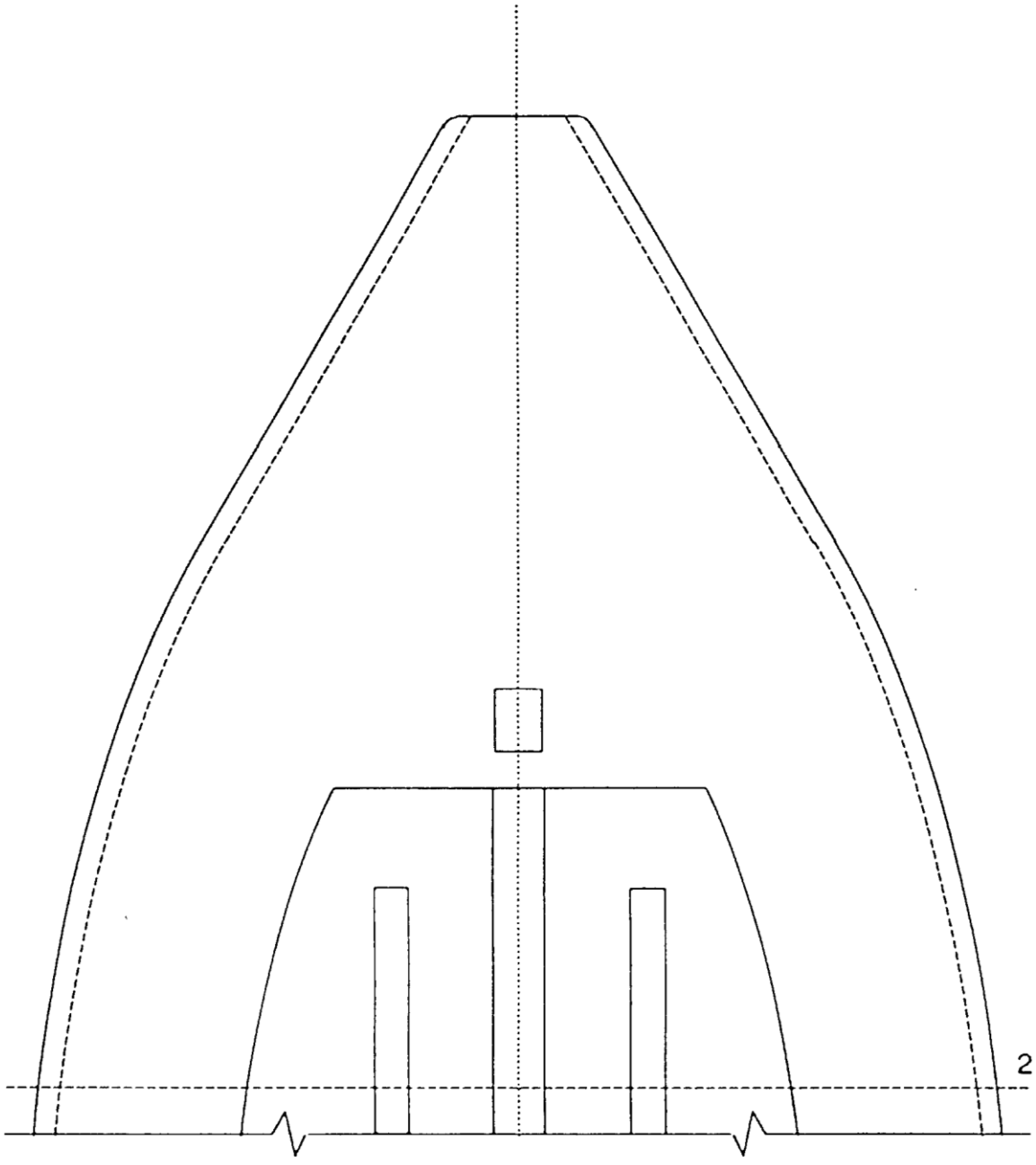


DIAGRAM 3
PLAN - STEM to SECTION 2



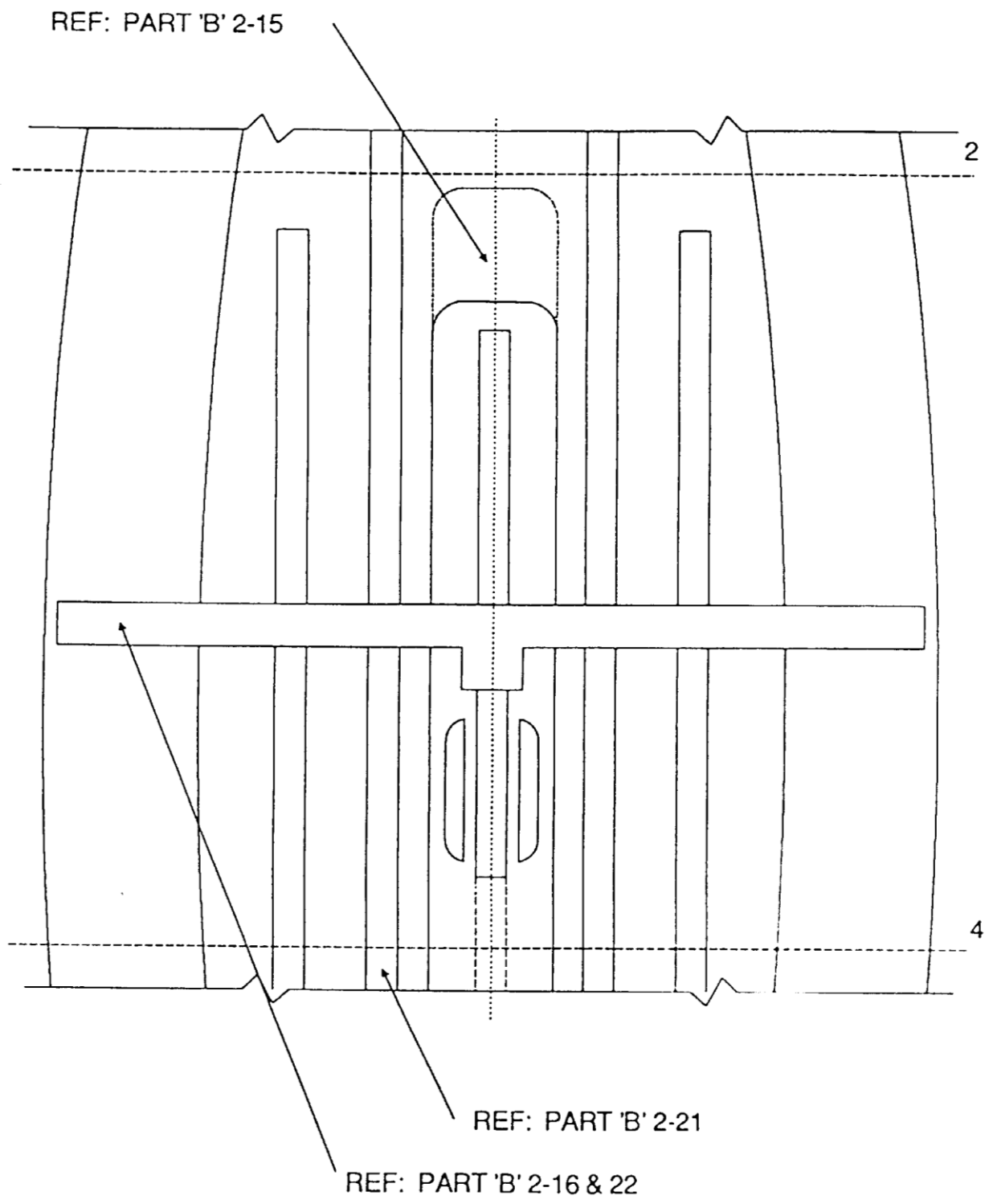


DIAGRAM 4
PLAN - SECTION 2 to SECTION 4

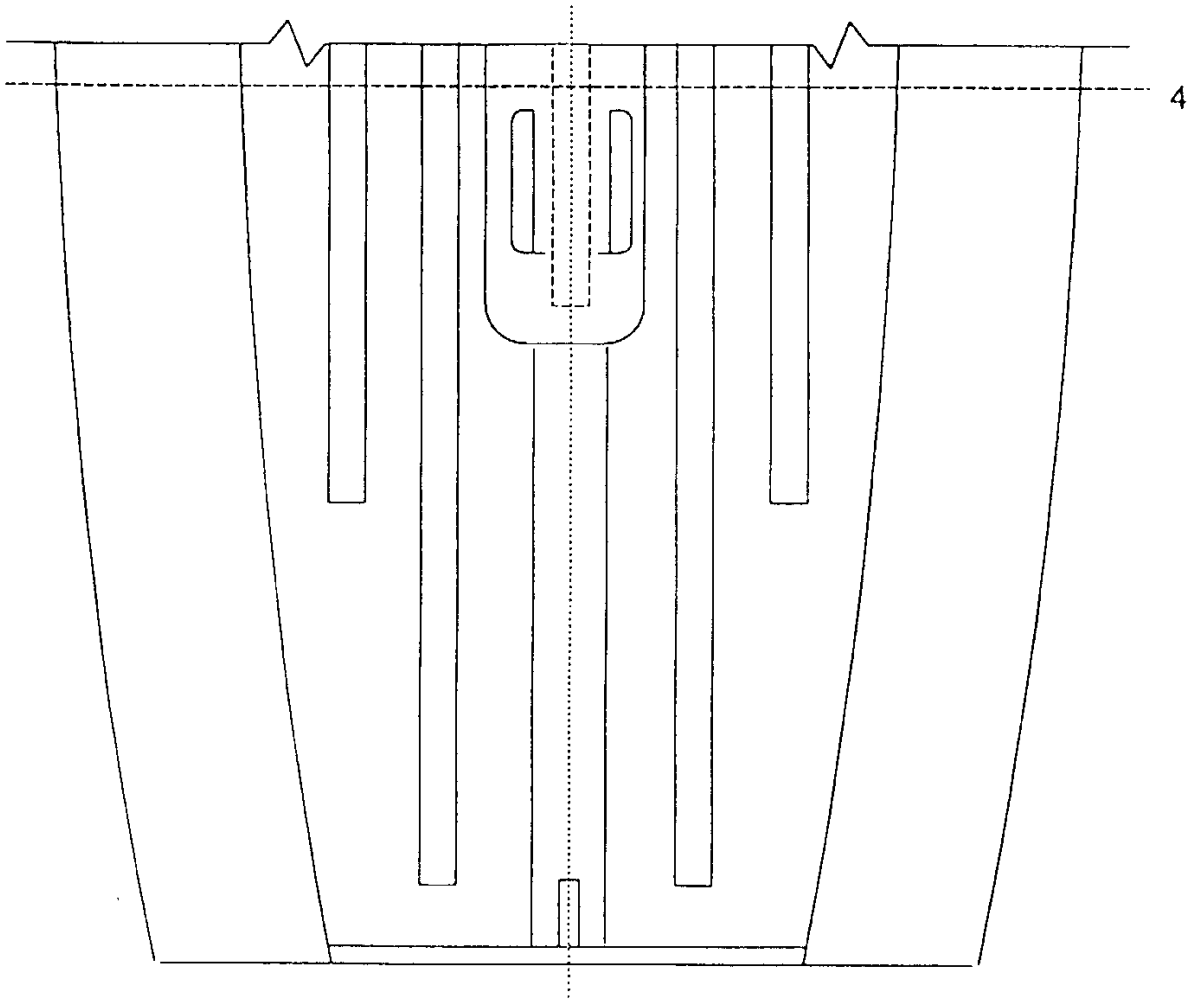
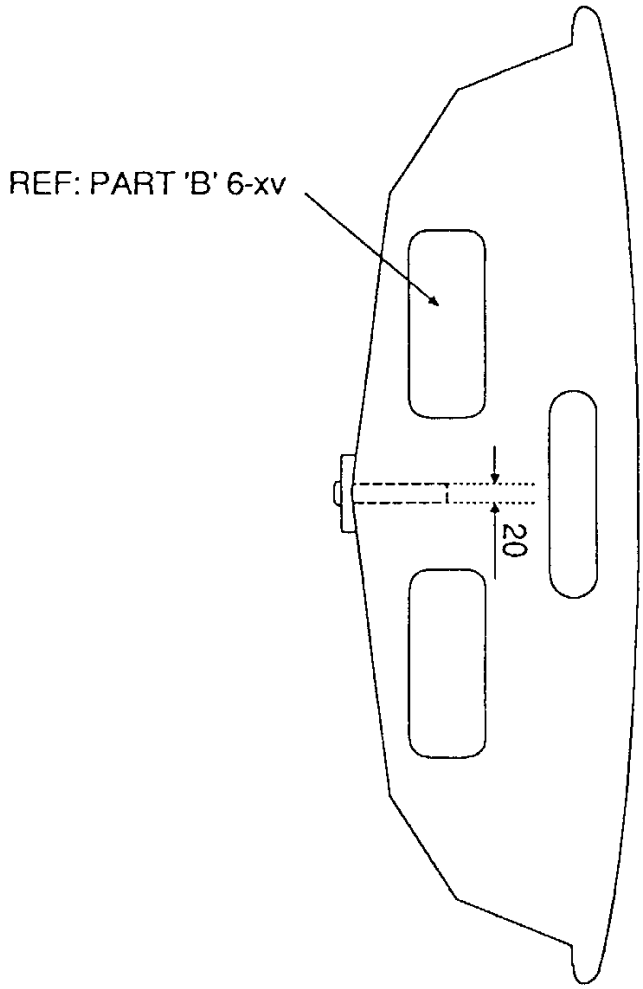
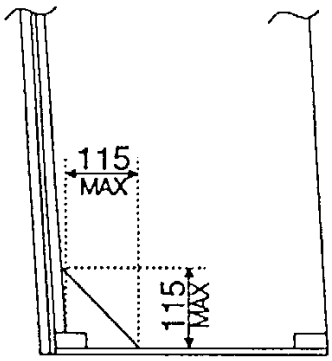


DIAGRAM 5
PLAN - SECTION 4 to TRANSOM





KNEE IS OPTIONAL

DIAGRAM 6
TRANSOM

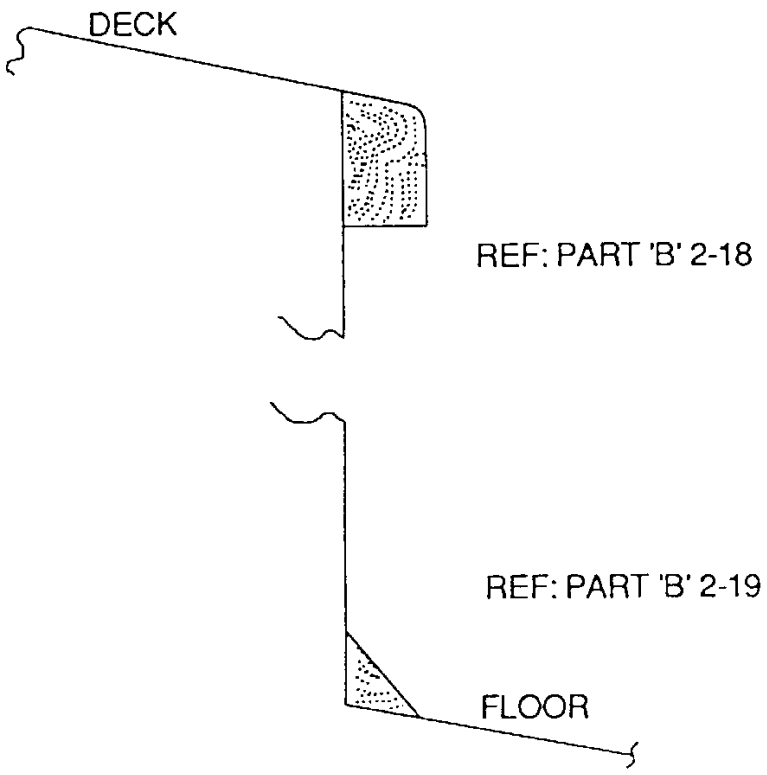
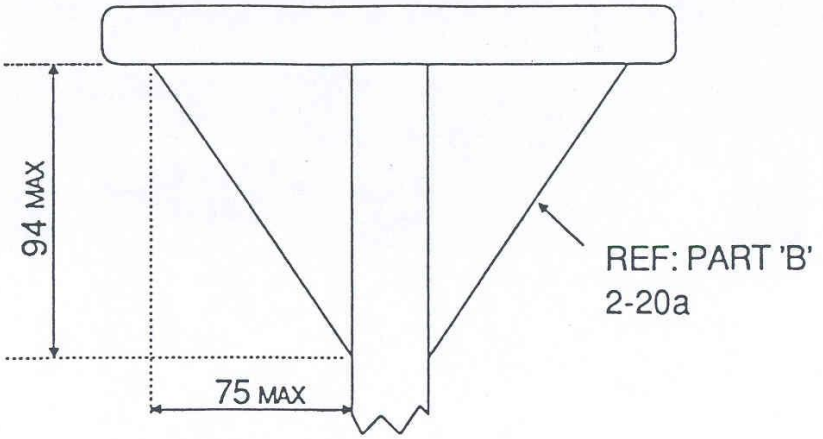
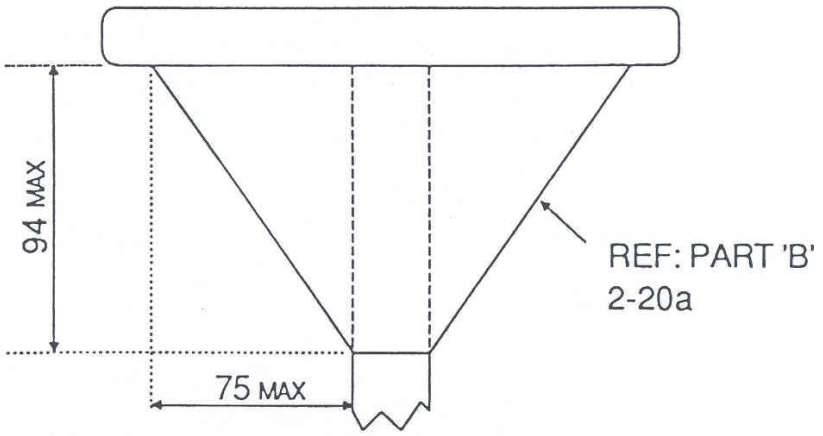


DIAGRAM 7
BUOYANCY TANK SIDE BEAD





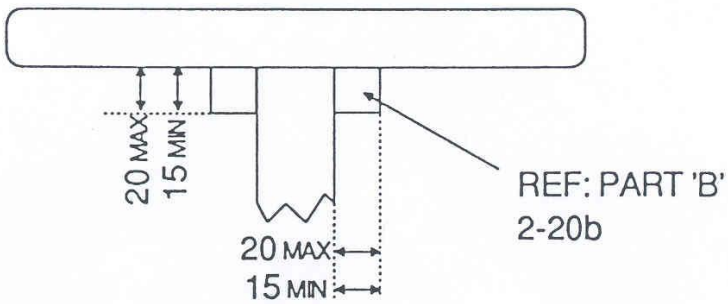
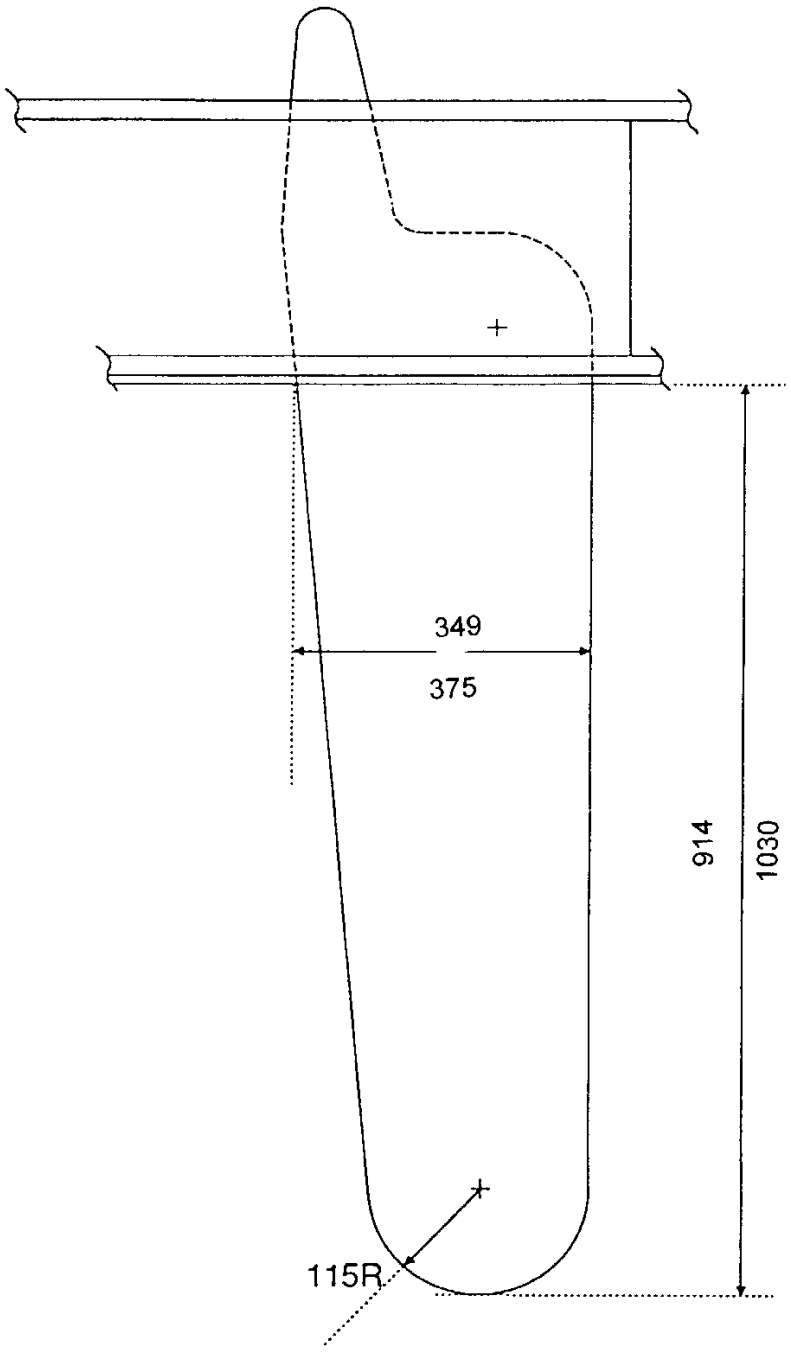


DIAGRAM 8
TOE RAIL SUPPORT

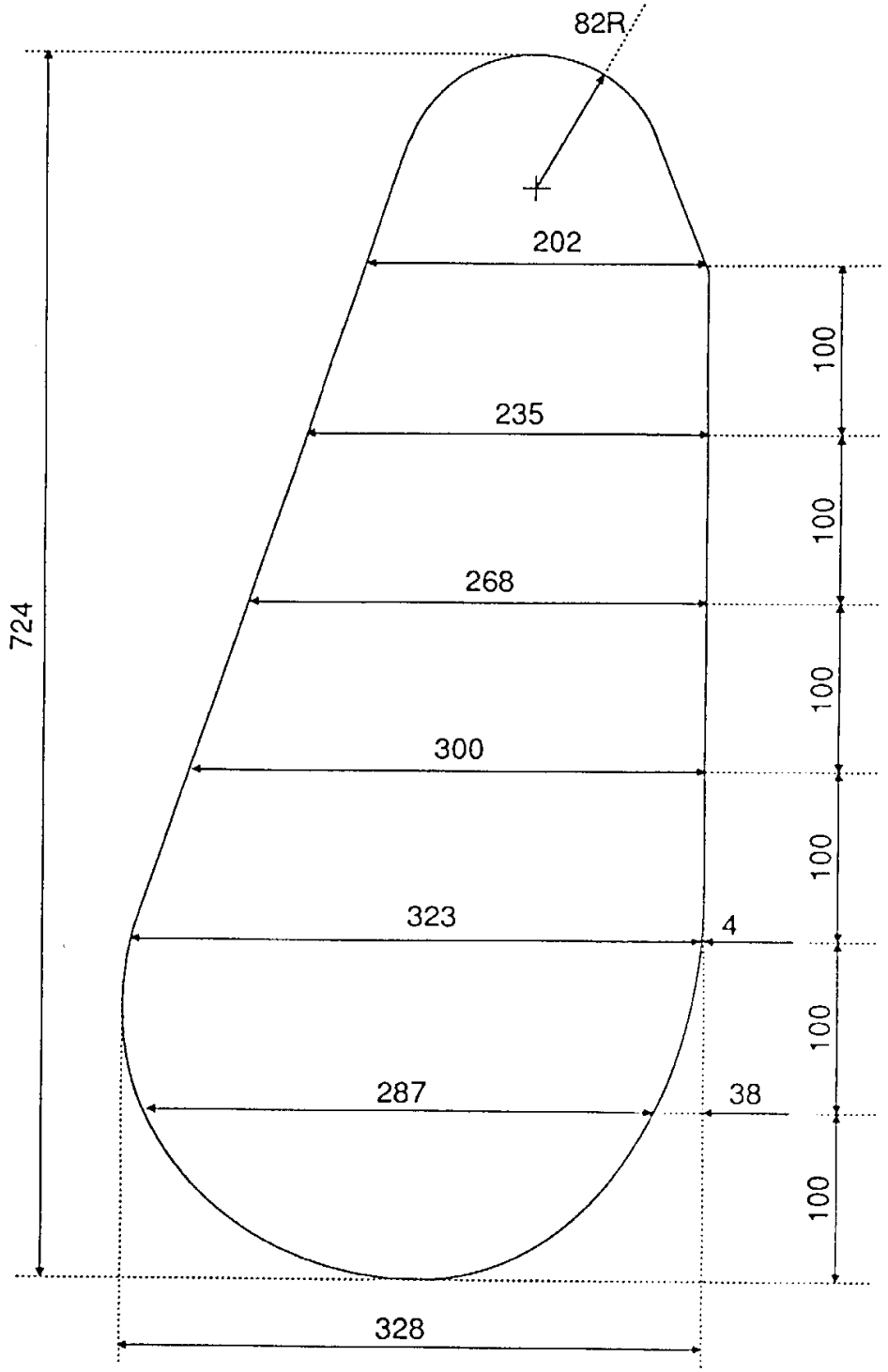
DIAGRAM 9
CENTREBOARD



(REF: PART 'B' 8 & 'D' 70 & 71)

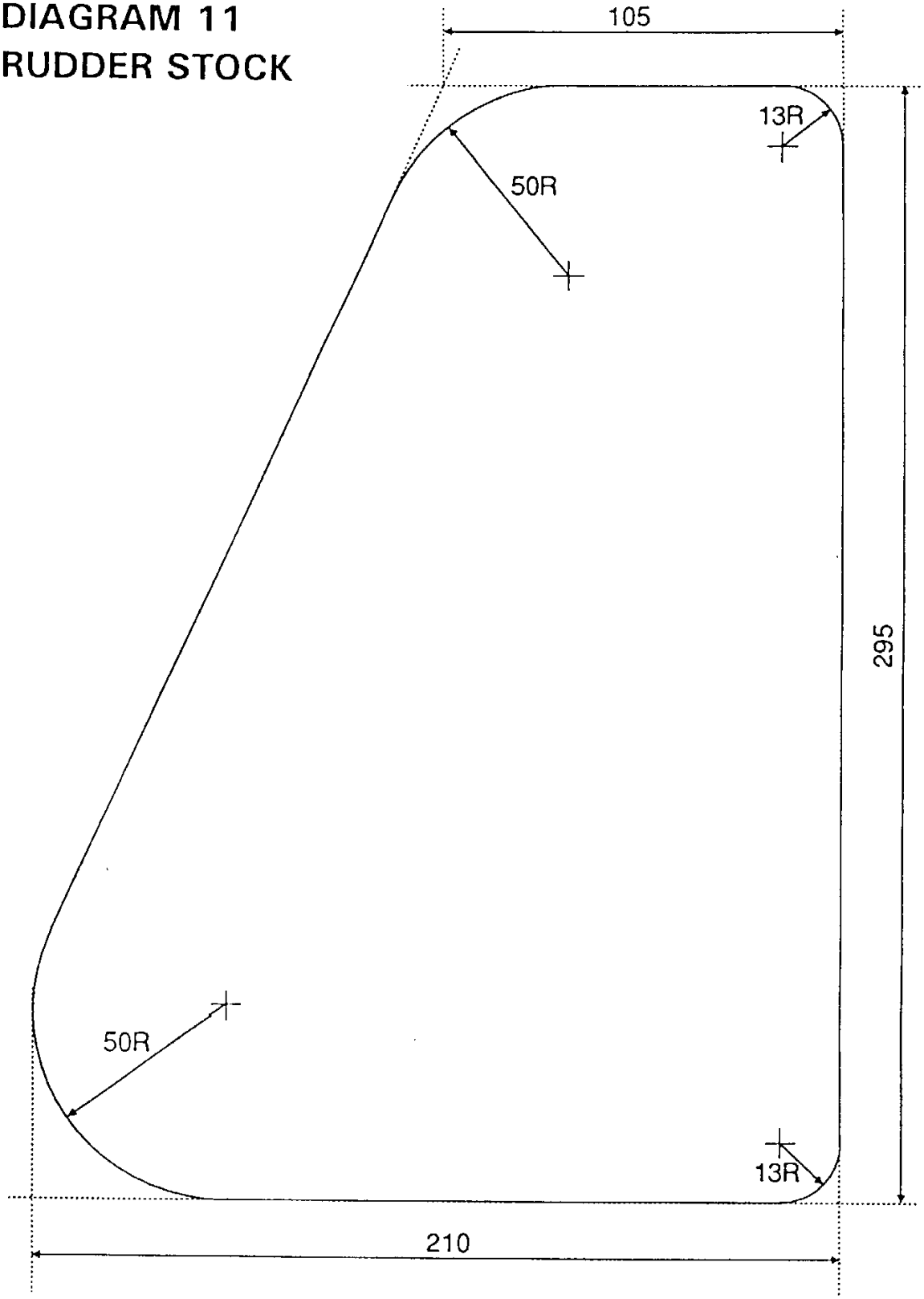
DIAGRAM 10
RUDDER

A FAIR SHAPE MUST BE PRODUCED



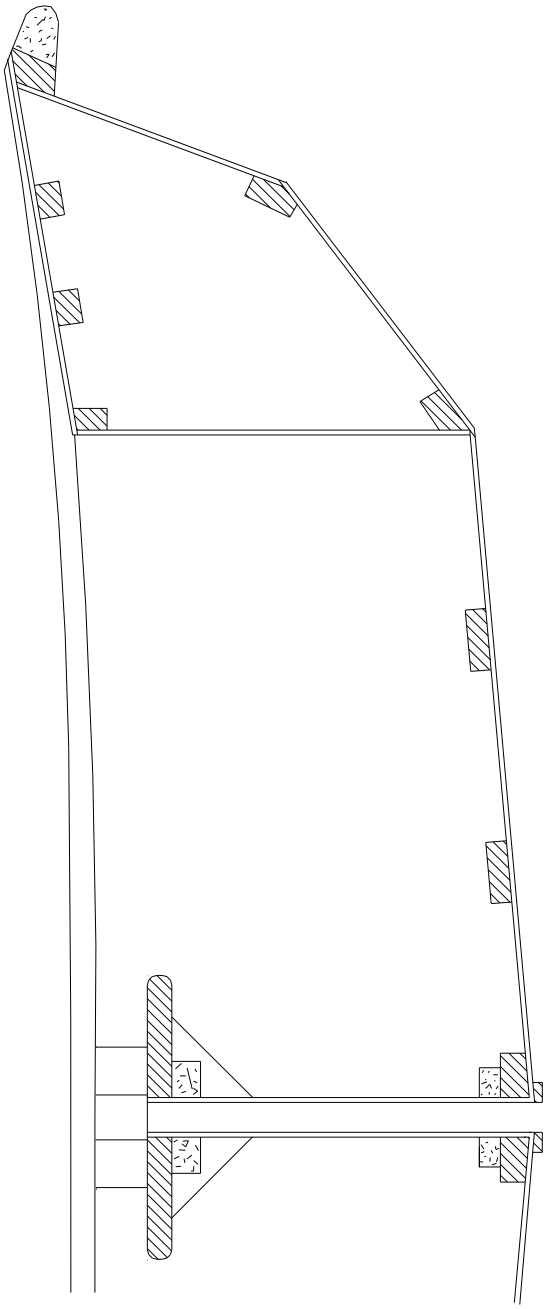
(REF: PART 'B' 9 & 'D' 72 & 73)

DIAGRAM 11
RUDDER STOCK



(REF: PART 'B' 9)

DIAGRAM 12

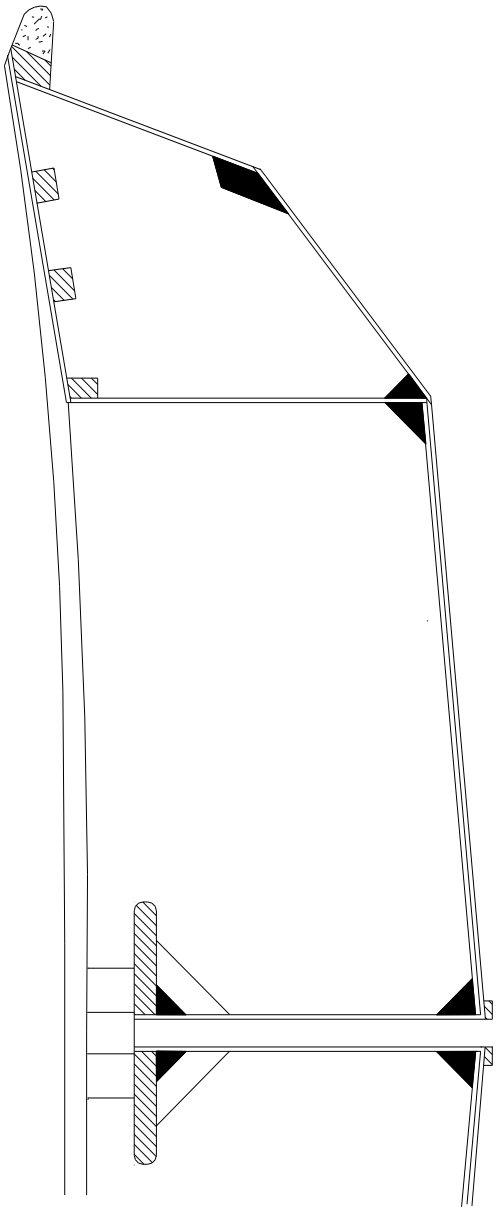


SECTION THROUGH CENTREBOARD CASE

CONVENTIONAL CONSTRUCTION

DIAGRAM 13

= STRUCTURAL FILLET



SECTION THROUGH CENTREBOARD CASE

ALTERNATIVE CONSTRUCTION

PART D - MEASUREMENTS

The following are those measurements required to be taken by an RYA Approved National Solo Class Measurer and entered on the Measurement Form. On completion of measurement the Measurer will supply the owner with the completed and signed Measurement Form which shall be forwarded to the RYA with a request for a certificate, in accordance with Part A of these rules.

No boat is entitled to use the Class name National Solo until it has been issued a Measurement Certificate by the RYA.

No	Rule	Measurement	Minimum	Maximum
1	B3	For wooden boats is the sail number in recessed figures aft of the plate case in characters of at least 25mm in height?	Yes	No
2	B3	For GRP or composite boats is a plate fixed inside of the transom engraved with the sail number, mould number and serial number?	Yes	No
3	B7	Weight of stripped hull.	70	
4	B7	Weight of correctors if fitted.		3
5	B2	Thickness of plywood skin bottom panel nominally 6mm.	5.3	15
6	B2	Thickness of plywood skin chine panel, topsides and deck nominally 5mm.	4.35	
7	B4	Overall length from aft edge of transom.	3758	3798
8	B4	Aft edge of transom to foreside of mast slot at deck.		3010
9	B4	Aft edge of transom to after side of mast slot at deck.	2921	
10	B4	Aft edge transom to aft edge of foredeck.	2883	2909
11	B4	Aft edge of transom to foreside of centre thwart.	1650	1728
12	B4	Aft edge of transom to eye of chainplate.	2590	2616
13	B4	Aft edge of transom to fore end of centreboard slot.	2121	2147
14	B4	Aft edge of transom to aft end of centreboard slot.	901	927
15	B4	Fore end of slot to centre of centreboard pivot bolt.	89	115
16	B4	Width of centreboard slot.	25	32
17	B2	Height of washboards from deck if fitted.		61
18	B4	Beam measured to sheerline at Section 1.	925	951
19	B4	Beam measured to sheerline at Section 3.	1486	1512

No	Rule	Measurement	Minimum	Maximum
20	B4	Beam measured to sheerline at Section 4.	1475	1501
21	B4	Beam measured to sheerline at transom.	997	1023
22	B4	Projection of rubbing bead beyond sheerline. This may be tapered to less than 30mm for not more than 610mm from either end.	30	51
23	B4	Depth of rubbing bead.		40
24	B4	Plan width of side deck at the transom.	174	210
25	B4	Plan width of side deck at Section 3.	279	305
26	B4	Plan width of side deck at aft edge of foredeck.	253	293
27	B4	Depth of inboard edge of deck below sheerline at Section 3.	50	76
28	B4	Underside of keel band to top of tiller port in transom.	257	283
29	B4	Width of tiller port in transom.		260
30	B4	Top of mast step to sheerline at aft edge of foredeck.	412	452
31	B4	Camber of deck above sheerline at aft end of foredeck.	38	64
32	B2	Distance between outer edges of the toe rails over full length of centreboard slot.	196	222
33	B2	Thickness of toe rails.	16	24
34	B4	Baseline to underside of keelband at transom.	137	137
35	B4	Baseline to underside of keelband at Section 1.	76	76
36	B4	Baseline to underside of keelband at Section 2.	22	42
37	B4	Baseline to underside of keelband at Section 3.	15	29
38	B4	Baseline to underside of keelband at Section 4.	31	51
39	B4	Baseline to underside of keelband at Section 5.	76	96
40	B5	Extension of foreside of stem including stem band meets baseline from aft of transom.	3582	3624
41	B4	Distance from point 170mm from baseline measured along the extension of the foreside of the face of the stem including stem band to nearest point on keelband.	30	50
42	B4	Width 15mm aft of face of stem at 435mm from the baseline along extension of straight face of foreside of stem including stem band.	88	102
43	B4	Baseline to lower chine at Section 1.	165	185
44	B4	Beam at lower chine at Section 1.	470	496
45	B4	Baseline to upper chine at Section 1.	283	309

No	Rule	Measurement	Minimum	Maximum
46	B4	Beam at upper chine at Section 1.	713	739
47	B4	Baseline to sheerline at Section 1.	548	574
48	B4	Baseline to lower chine at Section 2.	100	126
49	B4	Beam at lower chine at Section 2.	777	817
50	B4	Baseline to upper chine at Section 2.	221	247
51	B4	Beam at upper chine at Section 2.	1092	1132
52	B4	Baseline to lower chine at Section 3.	79	105
53	B4	Beam at lower chine at Section 3.	952	978
54	B4	Baseline to upper chine at Section 3.	203	223
55	B4	Beam at upper chine at Section 3.	1269	1295
56	B4	Baseline to sheerline at Section 3.	462	502
57	B4	Baseline to lower chine at Section 4.	99	125
58	B4	Beam at lower chine Section 4.	993	1019
59	B4	Baseline to lower chine at Section 5.	137	163
60	B4	Beam at lower chine Section 5.	896	936
61	B4	Baseline to lower chine at transom.	180	194
62	B4	Beam at lower chine at transom.	647	673
63	B4	Baseline to upper chine at transom.	263	283
64	B4	Beam at upper chine at transom.	883	909
65	B4	Baseline to sheerline at transom.	404	430
66	B4	Projection of keel below skin including keelband.	12	20
67	B2-B6	Stem and keel band width.	12	
68	B2-B6	Chine rubber length.	1194	
69	B4	Underside of keelband to top of centreboard case at Section 3.	292	318
70	B8	Width of centreboard at widest part below keel measured at 90° to leading edge.	349	375
71	B8	Extension of centreboard when fully lowered below keel.	914	1030
72	B9	Length of pivoted rudder blade including part in stock.	698	750
73	B9	Width of rudder blade at widest point.	297	349
74	B10	Weight of mast in accordance with Rule 10.5.	6.7	
75		Not used		
76	B10	Upper edge of band No.1 above heel.	952	

No	Rule	Measurement	Minimum	Maximum
77	B10	Lower edge of band No.2 above heel.		5982
78	B10	Point of intersection of the line of the shrouds with the side of the mast above heel.	4254	4332
79	B10	Point of intersection of the line of the forestay with the foreside of the mast above the heel.	4177	4255
80	B10	Fore and aft chord of wood mast between hounds and 457mm from band No.1.	70	76
81	B10	Fore and aft chord of wood mast at deck level.	60	
82	B10	Athwartships chord of wood mast between hounds and band No.1.	60	68
83	B10	Fore and aft chord of metal mast between hounds and 457mm from band No.1.	50	76
84	B10	Fore and aft chord of metal mast at deck level.	50	
85	B10	Athwartships chord of metal mast between hounds and band No.1.	50	68
86	B10	Fore and aft clearance between mast and slot.		26
87	B11	Boom band to aft side of mast.		2693
88	B11	Length of boom meeting sectional requirements of items 89 and 91.	2700	
89	B11	Wood boom width and depth 610mm from tack to band.	50	58
90	B11	Metal boom section dimensions: Vertical	50	72
91	B11	Metal boom section dimensions: Transverse	50	66

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