

THE “X” ONE DESIGN CLASS ASSOCIATION

CLASS RULES

These Class Rules together with the accompanying Constitution form the rules for the ‘X’ One Design Class of boat and the ‘X’ One Design Class Association.

PART I - GENERAL

SECTION A - FUNDAMENTAL RULES

A.1 CLASS RULES

A.1.1 These **Class Rules** became effective on 1st January, 1998.

A.2 ABBREVIATIONS

A.2.1	WS	World Sailing
	RYA	Royal Yachting Association.
	XODCA	“X” One Design Class Association.
	ERS	Equipment Rules of Sailing.
	RRS	Racing Rules of Sailing.

A.3 AUTHORITY

A.3.1 The authority of the class is the **XODCA**.

A.3.2 Neither **WS** nor the **RYA** nor the **XODCA** nor the **official measurer** is under any legal responsibility in respect of these **class rules** or accuracy of measurement and no claim arising from them can be entertained.

A.4 LANGUAGE

A.4.1 The words “shall” and “shall not” are mandatory and the word “may” is permissive.

A.4.2 The “Terms and Definitions” as defined in the **XODCA constitution**, shall apply to these **class rules**.

A.5 WS RULES

A.5.1 These **class rules** shall be read with the ERS and measurements shall be taken in accordance with these unless specified. Where a term is used in its defined sense, it is printed in “**bold**” type if defined in ERS , in “**bold italic**” if defined in the **constitution** and in “*italic*” type if defined in the RRS.

A.6 INTERPRETATION OF CLASS RULES

A.6.1 Any interpretation of the **class rules**, except as provided A.7, shall be made by the **committee**.

A.6.2 Where the same material aspect of the boat is defined in both the Official Class Drawings and the **class rules** and the definitions do not agree then the matter shall be referred to the **committee**.

A.7 INTERPRETATION OF THE CLASS RULES AT AN EVENT

A.7.1 Interpretations of the **class rules** at an event shall be carried out in accordance with the RRS and the race organising authority shall, as soon as practicable after the event, inform the **XODCA** of such an interpretation. (RRS 64.3)

A.8 AMENDMENTS TO CLASS RULES

- A.8.1 Amendments to these **class rules** shall be made in accordance with the **constitution**, rule 7.
- A.8.2 The use of **sails** or the fitting of apparatus not shown in the official class drawings or permitted in these **class rules**, and not in the spirit of the objectives of the constitution, may result in the **committee** proposing rules for the prohibition of such sails or apparatus, [see **constitution** rule 2].

SECTION B - ORGANISATION

B.1 ADMINISTRATION OF THE CLASS

- B.1.1 The functions as stated in the **class rules** shall be carried out by the **XODCA**.

B.2 CLASS BUILDING FEE

- B.2.1 The Build Fee shall be paid by the **owner** to the **XODCA**.

B.3 SAIL NUMBERS

- B.3.1 Sail numbers shall be issued by the **XODCA**. The **XODCA** shall only issue a sail number on receipt of a completed measurement form. The **XODCA** shall record the names and addresses of owners issued with sail numbers.

B.4 MEASUREMENT CERTIFICATE

- B.4.1 Provided the **committee** is satisfied that the requirements of these **class rules** are met, each **boat** that is or has been accepted by the present or past **committees** as being an **XOD boat**, shall be issued with a **measurement certificate**.

B.4.2

- a. Upon request, an **owner** is to return the **measurement certificate** to the **XODCA**.
- b. Notwithstanding anything contained herein, the **committee** may withdraw a **measurement certificate** provided that, within seven days of the decision being made, the **committee** shall advise the **owner**, in writing, of the grounds of such withdrawal.
- c. Boats shall be weighed on the following occasions:
 - i. When first built.
 - ii. If the boat has been altered, repaired or refitted in such a manner that its weight may have been changed.
 - iii. If the recorded corrector weights have been changed without a concurrent weighing.
 - iv. If the boat has been stored ashore for more than a year.At intervals of no more than five years if none of the above apply. This period is not necessarily coincident with the five yearly boat check [see C.1.3].

- B.4.3 The **XODCA** shall always retain a copy of the **measurement certificate**.

- B.4.4 The **measurement certificate** shall contain the following information:

The **hull** and sail number.

The **boat's** name.

The **boat's** builder and date when built, if known.

The name or names of the owner/s [the first named being the contact for administration purposes].

References to original build and subsequent hull measurements.

Reference to any dispensations or special conditions that may have been applied to the boat.

The signature by or on behalf of the **committee**.

The date of issue.

- B.4.5 A boat's **measurement certificate** shall remain valid until:

The **boat** is not available for inspection by a **divisional captain**, whatever the reason, for a

period greater than one year.

or The **boat** has been the subject of a protest and found not to comply with the requirements of the **class rules**.

or The **boat** has been altered, repaired, or refitted in such a manner that its weight or measurement may have changed.

or The recorded corrector weights have been changed.

or The boat has been found out of compliance with the Class "Boat Check List" and corrections have not been made within the required time limit.

The means by which an owner can have a **measurement certificate** re-issued is covered by B.4.6.

B.4.6 RE-ISSUE OF A MEASUREMENT CERTIFICATE

When a **measurement certificate** becomes invalid due to any of the reasons stated in B.4.5:

a. The **divisional captain** shall:

(i) Inform the boat's **owner/s** that the **measurement certificate** will have to be re-issued before the **boat** can participate in XOD races.

(ii) Report such action to the **secretary**.

b. Opportunity shall be given to the **owner** to rectify any deviations and the **divisional captain**, with the assistance of the division's technical representative, shall check that the boat conforms to the **class rules**.

When satisfied, the **divisional captain** shall inform the **secretary** who shall update the records and arrange for the **committee** to re-issue the revised **measurement certificate**.

c. If there is any question or doubt as to the boat conforming to the **class rules**, the matter shall be referred to the **committee**, who, with the advice of the **technical advisory committee**, may require the **boat**, or parts of the **boat**, to be re-measured by the **official measurer**.

d. In those cases where the measurement form indicates that the boat does not conform to the **class rules**, the **committee**, advised by the **technical advisory committee**, shall, whilst taking into account any past **committee** decisions relating to that **boat**, recommend what remedial action, if any, shall be undertaken prior to the **measurement certificate** being re-issued.

B.5 CHANGE OF OWNERSHIP OR BOAT NAME

B.5.1 Change of ownership invalidates the **measurement certificate**, but re-measurement is not required. The new **owner/s** shall apply to the **XODCA** for a new **measurement certificate**, returning the old certificate together with any entrance or subscription fees that may be required. A new **measurement certificate** shall then be issued to the new **owner**.

B.5.2 Change of the boat name invalidates the **measurement certificate**, but re-measurement is not required. The **owner/s** shall apply to the **XODCA** for a new **measurement certificate**, returning the old certificate together with details of the new name. A new **measurement certificate** shall then be issued to the **owner**.

B.6 DRAWINGS

B.6.1 Copies of the official drawings are available to members on payment to the **secretary**, but shall not be used for building an **XOD boat**, except with the permission of the **committee** under B.9.1.

B.6.2 A list of the latest amendment numbers and issue dates may be obtained from the **secretary**, who will hold a master set of drawings which shall be signed and dated by the **chairman of the technical advisory committee** and counter signed by the **class captain**, [see Appendix A].

B.7 REPAIRS AND ALTERATIONS

B.7.1 GENERAL

When repairs or alterations to the **hull**, **spars** or **sails** are to be undertaken that could

potentially involve a change in weight, a change in hull shape, performance, or may contravene the **class rules**, the **divisional captain** shall be so advised by the owner before work commences and given the opportunity of overseeing the repair or alteration. He will, if he thinks fit, instruct the owner to refer the overseeing of the repair or alteration to the **official measurer** who shall withdraw the **measurement certificate** until the relevant parts have been re-measured and the **measurement certificate** has been re-issued by the **XODCA**. It is the responsibility of the owner to ensure that the repairs comply with these rules, and that the boatyard is aware of them and their contents.

B.7.2 HULL

- a. Any alterations or repairs made to the **hull** and **hull appendages** of existing boats shall, whenever possible, be designed to bring them into line with the present **class rules**.
- b. If a keel is removed it shall be weighed and if the metal parts are altered in any way it shall be reweighed before refitting.
- c. If transferred to another boat it shall comply with the current official drawing in size and shape and weight. It shall be permanently marked on the top face with the number of the previous boat.

B.7.3 SPARS

- a. Before a **spar** is altered or repaired refer to B.7.1.
- b. Broken **spars** may be repaired by scarfing. [see F.2.2].
- c. Where a **mast** or **boom spar** becomes distorted in use, it may be repaired by gluing up the centre of the **spar** a layer of wood, similar to the remainder of the **spar**. The overall repair shall not be more than 20mm in thickness.
- d. Any alterations or repairs to a **mast** that was made before 1st January, 1964 shall be designed to bring the **mast**, wherever possible, into line with the shape and dimensions shown on the official class drawings and current **class rules**.

B.8 NEW CONSTRUCTION

- B.8.1 Any person may apply to the **XODCA** for permission to have an **XOD boat** built. A condition of giving assent to an application is that the **committee** approves the chosen builder on whose selection it may advise. The intending owner will be informed of conditions relating to membership of the **XODCA** and any other conditions applying to the consent.
- B.8.2 Having given consent and received the class building fee, the **committee** shall issue a licence to the builder to build one boat. He shall be advised of measurement procedures and any special conditions that apply.
- B.8.3 A new **XOD boat** shall only be built at the yard of the builder licensed by the **XODCA** and shall be monitored by the **official measurer** who shall measure the **boat**, using the measurement form, and report his findings. This form shall be lodged in duplicate with the **secretary** who shall arrange for the **committee** to issue a **measurement certificate**. In those cases where the measurement form indicates that the proposed **boat** does not fully conform to the **class rules**, the **committee** assisted by the **technical advisory committee**, may withhold the issuing of a **measurement certificate** until the **boat** has been rectified and re-measured, to the satisfaction of the **committee**.
- B.8.4 A new boat shall only be allocated a sail number on the correct issuing of the final measurement certificate in accordance with Rules B.9 and B.4. Sail numbers to be issued in numerical sequence.
- B.8.5 HULL MARKINGS
The **hull/sail** number shall be cut in either Roman or Arabic on the aft face of the beam immediately forward of the **mast**. The year of building shall be engraved in Arabic numerals in the same place. Alternatively the hull markings may be recorded on a plate approved by the Divisional representative and permanently epoxied in any visible place in the cockpit or on the foredeck beam.

PART II - MEASUREMENT

SECTION C - CONDITIONS FOR RACING

The crew and the **boat** shall comply with the rules in this section before the preparatory signal and when racing.

C.1 GENERAL CONDITIONS

C.1.1 DATABASE

In order to participate in XOD races a boat shall possess a valid measurement certificate, a valid weight check and a valid boat check. Records of these are held in the Class database. It is a condition of racing that all three records are compliant and in date.

C.1.2 WEIGHT CHECK

C.1.2.1 The weight check shall record the weight of the boat in the required condition, including correctors if fitted. If removed, correctors shall be weighed before refitting. If not removed their weight shall be estimated by calculation. All correctors shall be identified on the weight check record. Weight checks shall be undertaken by the **divisional captain** or his appointed representative, or by the divisional **technical representative** or by the **official measurer**.

C.1.2.2 Boats may race in Divisional events during the discretionary six week period allowed for water take up, with the agreement of the **divisional captain**. [See also C.7.1]

C.1.2.3 Boats that are due to be weighed in that year shall be weighed at the beginning of the season.

C.1.2.4 Any boat that has been out of the water for more than 50 hours during six weeks before Cowes Week for whatever reason, shall be weighed prior to racing, or within three days of the last race entered for Cowes Week results to stand.

C.1.3 BOAT CHECK

Each **boat** shall be checked according to the "Boat Check List" which may change from year to year as specified in the current year book. Any discrepancies in any of the rules may also be noted at the time of the boat check and referred to the Class **committee** through the boat's **divisional captain** if there is disagreement or a ruling is required. On completion of a satisfactory check, it shall be recorded as valid in the class database. The check shall be valid for five years from the date of the record unless further alterations are made requiring a new check. Boat checks shall be undertaken by the **divisional captain** or his appointed representative, or by the divisional **technical representative** or by the **official measurer**.

C.2 MEMBERSHIP

C.2.1 In any race which is restricted to the XOD class the helm or one crew member shall be a full or associate member of the **XODCA**.

C.2.2 In special events, and with the approval of the captain of the appropriate **division**, the helm and crew members need not be full or associate members of the **XODCA**.

C.3 CREW

C.3.1 Whilst racing the maximum number of persons that may sit or position themselves on the side deck or coaming at any one time shall be three, unless two of the persons are aged thirteen or under in which case the maximum number shall be four.

C.3.2 Professional crews may be used.

C.4 EQUIPMENT

C.4.1 MANDATORY

The following items shall be carried.

a. One or more anchors (none to exceed 11kg [25lbs] each in weight) and not less than 18m [10 fathoms] of chain and/or warp. The combined weight of the anchors and chain shall not be less than 7kg [15lbs] and not more than 23kg [50lbs].

- b. A sweep or an oar of a minimum length of 2438mm [8ft] and suitable crutch or rowlock, or as an alternative two paddles each with a minimum length of 1372mm [4ft 6ins].
- c. A bucket or bailer.
- d. A minimum of two hand held flares shall be carried, either red flares or orange smokes or one of each. They shall be in date when racing. Notices of Races may increase the class minimum requirement.

C.4.2 OPTIONAL

The following items may be carried.

- a. Electronic or mechanical timing devices.
- b. Adjustable mast chock/s may be fitted at deck level.
- c. Torches or navigation lights.
- d. Prescribed medical devices.
- e. Compasses that are reliant only upon the earth's magnetic forces.
- f. A light bamboo or cane not exceeding 19mm [³/₄in] in diameter and 1830mm [6ft] in length, or a lead line, may be used for sounding.
- g. A whisker pole for booming out the jib.
- h. A security line or lines attached at one end to the boat, below the level of the top of the cockpit coaming. These lines shall lead directly to the hand or hands and thereafter provide no means of support.
- i. Additional oars or paddles.
- j. Fitted Buoyancy bags.
- k. Tacktick Micro Compass (T060) only or any model approved by the **committee**.
- l. Fitted electric bilge pump of maximum flow of 4,500 litres/hour [approx 1,000 gallons/hour].
- m. A rescue quoit or throw bag with a least 15m of floating line.
- n. VHF radios and mobile telephones.
- o. Buoyancy. It is strongly advised that a personal flotation device for each crew member be carried at all times.
- p. A device may be fitted to the stem head to prevent the spinnaker sheets from falling from the bow. Any such device shall collapse, or bend upwards, in the event of a collision so that it does not cause additional damage.

C.4.3 LIMITATIONS

- a. Other than the equipment permitted in C.4.1 and C.4.2 no equipment shall be carried or used that utilises electrical power whether from batteries, solar panels or any other source.
- b. VHF radios and mobile telephones may be used in emergencies and as required or allowed by the sailing instructions. No other functions or capabilities are permitted to be used.
- c. No echo sounder may be installed or used.
- d. Other than the corrector weights required in D.7.3, inside ballast shall not be carried.
- e. The use of any apparatus, toe straps or contrivance inboard, outboard or extending inboard, outboard and attached to the hull, spars, rigging or crew, the purpose or effect of which is to support or assist in supporting a member of the crew outboard or partially outboard is prohibited. [This does not preclude the use of the security lines allowed in C.4.2 h.]

C.4.4 SAILS

Only sails that have been measured and marked, in accordance with G.1.4 shall be used whilst racing.

C.5 SPARS

C.5.1 MAST

- a. There is no restriction on the rake or position of the **mast** except that the **mast** shall be placed on the centre line of the boat with its forward face at least 1880mm [6ft 2in] and its after face no more than 2134mm [7ft] aft of the foremost part of the stem head. The measurements shall be taken on the upper side of the decking.
- b. The position of the heel of the **mast** shall be fixed whilst racing and no device, the purpose of which is to move the position of the heel of the **mast** whilst racing, shall be fitted.
- c. Upper and lower shroud lengths, or attachment points, shall not be altered during a race

- d. nor shall any device specifically designed to permit adjustment whilst racing, be fitted. Permitted methods of adjusting the upper and lower shrouds shall be locked and remain locked whilst racing.
- C.5.2 MAIN SPAR
The gooseneck of the **boom** shall either be fixed or, if it is able to slide, fitted with a permanent stop so that the forward projection of the top of the track fitted to the **boom** is never below the top of the lower black band with the **boom** horizontal.
- C.6 SETTING OF SAILS
- C.6.1 MAINSAIL
- a. The highest visible point of the **sail**, projected at 90° to the **mast** shall not be set above the lower edge of the upper black band. The leech, or its extension, shall not intersect the upper edge of the **boom** beyond the inner edge of the black band on the boom. **Luff** and **foot** sail slides shall be in or on sail tracks.
- b. The cloth at the **luff** and **foot**, when normally set, shall be clear of the tracking, i.e. bolt ropes running in luff grooves or similar devices are not permitted.
- c. The mainsail may be reefed.
- C.6.2 HEADSAIL
- a. The headsail shall be set so that the sailcloth in the foot at the tack is at least 102mm (4ins) above the level of the deck covering at the stem head.
- b. Headsails shall not be lowered or furled when the spinnaker is set during a race. If the headsail is lowered accidentally or lowered to free a fouled spinnaker, it shall be set as soon as practicable and the onus of showing that this has been done shall rest on the helmsperson concerned.
- c. If the spinnaker halliard is lost up the mast immediately prior to or during a race then the jib halliard may be used to hoist the spinnaker and the jib together for that race.
- d. The top of the headsail shall be set inside the forestay, in that the attachment points and halyard sheaves shall be behind and/or below the attachment points for the forestay.
- C.7 ADDITIONAL RULES
- C.7.1 LAUNCHING AND HAULING UP
- a. Each racing season a boat may be launched at the **owner's** wish, thereafter she shall not be out of the water for more than 50 hours in any consecutive 14 days, except in special circumstances and then only by leave of the **divisional captain**.
- b. To be eligible to race at Cowes Week, a boat shall have been launched prior to July 1st, except in special circumstances and then only by leave of the **divisional captain**.
- c. Subject to C.7.1.a above, or to rules enforced by a **division** for racing within that **division**, a **boat's** bottom may be scrubbed as frequently as an **owner** desires.
- C.7.2 POLISHING AND PAINTING
Polishing and painting of hull shell, deck and **hull appendages** is permitted.
- C.7.3 CHARTERED OR LOANED BOATS
An **X.O.D. boat** on loan or charter may race only if the charter is in accordance with the relevant WS rules in force at the time.
- C.7.4 ADVERTISING
Unless permission has been granted by the **committee** advertising shall be limited to Category A as defined in the RRS Appendix G3.
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SECTION D - HULL

- D.1 MEASUREMENT AND CERTIFICATION
- D.1.1 The **hull** shall comply with the **class rules** that were in force at the time of **fundamental measurement** unless specified otherwise in these **class rules**.

- D.1.2 Measurement shall be carried out in accordance with the **ERS**.
- D.1.3 It is recognised that the hulls of some of the **XOD boats** built prior to 1st January, 1964 do not comply precisely with the **class rules**. These minor variations are not considered to give such **boats** any unreasonable advantage in *racing* and **owners** are authorised to sign the declarations required by the WS notwithstanding such variations.
- D.2 BUILDERS
- D.2.1 Builders shall be licensed to build an XOD on a boat by boat basis, subject to their approval by the **committee** and their written acceptance of the terms of the license.
- D.2.2 The licensed builder shall, at his own expense, correct or replace any **hull** that does not comply with the **class rules** as a result of an omission or error by the builder, if the **hull** is submitted for **fundamental measurement** within twelve months of purchase.
- D.3 HULL SHELL
- D.3.1 MATERIALS
Materials for the **hull** shell shall be as specified in these **class rules** and in the latest issue of the official class drawings.
- D.3.2 DIMENSIONS
- a. The shape of the **hull** is defined by the latest issue of the official class drawings and the official templates, unless specified otherwise by the **class rules**.
- b. For general information the overall design dimensions of the **hull** are as follows:
- | | | |
|--|--------|---|
| Length Overall (LOA) | 6309mm | [20ft 8 ³ / ₈ in] |
| Design Waterline (DWL) | 5213mm | [17ft 1 ¹ / ₄ in] |
| Max Breadth (inc. overlap of covering board) | 1803mm | [5ft 11in] |
| Draught to DWL | 914mm | [3ft 0in] |
- c. All boats built since 1945 shall not exceed 6321mm [20ft 8 ⁷/₈in] in overall length or be less than 6296mm [20ft 7 ⁷/₈in]
- d. All boats built since 1945 shall have the respective template positions marked on the covering board, stem, wood keel, the horn timbers with small round-headed screws to enable the template positions to be quickly located.
- e. Divergence between **hull** and official templates shall not exceed 10mm [³/₈in] at any point measured at right angles to the tangent to the surface of the hull.
- f. The width on deck at Stations 2, 4 and 6 and at the transom shall be within 6mm [¹/₄in] of the design dimensions.
- D.3.3 PLANKING
- a. Planking shall be either Pitch Pine, or Mahogany of approx. 560kg/M³ [35 lbs/ft³] density, 16mm [⁵/₈in] finished.
- b. Not less than 13 planks or more than 14 planks shall be used on each side.
- c. Planking to be in one length if possible and shall be through fastened at each timber by two 10 gauge copper nails or alternatively if glued by two 1 inch by No.8 or larger stainless steel or bronze wood screws.
- d. The two planks nearest the keel may be laminated. The remainder shall be solid wood.
- e. Seams may be caulked with cotton and stopped. Wooden splines, close seams and filler are permitted.
- D.3.4 SCREW FASTENING, GLUEING AND LAMINATING
- a. Wherever screws are used to fasten planking or hull fittings they shall be of bronze or stainless steel.
- b. All structural joints may be glued.
- c. Laminated construction may be used for any part of the hull and fittings except where solid wood is specified in these Rules. Special rules apply to spars.
- D.3.5 TRANSOM
Planking shall be either English Elm or Mahogany 29mm [¹/₈in] thick, shaped to the official drawing and securely fastened to the stern frame.

- D.3.6 **KEEL**
The material used for the Keel shall be either English Elm or Iroko, sided and moulded to the 'table of offsets' in the official drawing.
- D.3.7 **DEADWOOD**
a. The after deadwood shall be made from English Elm or Iroko.
b. A metal plate may be fitted to protect the underside of the deadwood. The plate must not project outside the profile of the deadwood and shall not weigh more than 3.4kg [7 1/2lbs].
c. The after end of the deadwood adjacent to the fore end of the rudder maybe faired to not less than 51mm [2in] wide.
- D.3.8 **STEM**
a. The material used for the Stem shall be Oak 76mm [3in] sided at head grown to shape with the forefoot piece well scarfed to the stem through fastened to the fore end of the keel.
b. An alternative construction using Oak, Iroko or Mahogany laminations may be used to make the stem and forefoot piece as one.
- D.3.9 **STERN FRAME**
a. The material used for the Stern Frame shall be either Pitch Pine or Mahogany 102mm [4in] sided and moulded to the 'table of offsets' in the official drawing.
- D.3.10 **TIMBERS**
a. The material used for the Timbers shall be either American Elm or English Oak 16mm x32mm [5/8in x 1 1/4in] spaced 152mm [6in] centres.
b. Where possible the timbers shall run from gunwale to gunwale.
- D.3.11 **SHELF**
a. The material used for the Shelf shall be either Pitch Pine or Douglas Fir 76mm x 32mm [3in x 1 1/4in] through fastened to the timbers and planking.
- D.3.12 **STRINGER**
a. The material used for the Stringer shall be either Pitch Pine or Douglas Fir 63mm x 25mm [2 1/2in x 1in] through fastened to the timbers and planking, as shown on the Official Drawings.
- D.3.13 **BEAMS**
a. The material used for the Beams shall be either Pine or Douglas Fir 63mm x 35mm [2 1/2 in x 1 3/8 in] spaced as shown on the construction plans with ends dovetailed into the shelf and carlins.
b. Cockpit end beams 63mm x38mm [2 1/2in x 1 1/2 in].
c. Half beams in way of cockpit 51mm x 38mm [2in x 1 1/2 in].
- D.3.14 **CARLINS**
a. The material used for the Carlins shall be either Pine or Douglas Fir 28mm x 28mm [1 1/8 in x 1 1/8 in] dovetailed into beams at ends.
- D.3.15 **FLOORS**
a. The material used for the Floors shall be either Oak, Iroko or Mahogany, five in number, moulded and sided as on the official drawing.
b. The arms shall run up to the turn of the bilge.
c. Floors shall be through fastened on to the keel and planking.
d. Boats may be stiffened around the mast step by extra floors; these must not exceed the following dimensions:
Siding of extra floors in bow.....32mm [1 1/4 in]
Moulding at throat.....76mm [3in]
Moulding at points.....38mm [1 1/2 in]
Length of arms from centre line.....457mm [18in] Max.
- D.3.16 **KNEES**
a. The material used for the Knees shall be Oak, fitted where shown on the official drawings.

- D.3.17 HEIGHT OF MAST STEP
- a. No part of the mast step shall be at a height that is more than 250mm [$9\frac{27}{32}$ in] above the level top of the keelson (measured vertically). The top measurement will be taken at the highest point of the mast slot and shall include the shoe if used.
- D.4. DECK
- D.4.1 MATERIALS
The material used for the Deck shall be Pine of approx 515kg/cu metre [32lbs/cu ft] density, 16mm [$\frac{5}{8}$ in] thick.
- D.4.2 DIMENSIONS
Dimensions of the deck shall conform to the latest issue of the official class drawings, unless specified otherwise in the **class rules**. The mast slot shall be such that the forward face of the **mast** be at least 1880mm [6ft 2in] aft of the forward face of the stem post and the aftermost face no more than 2134mm [7ft] from the same point. (See also C.5.1.a)
- D.4.3 DECK COVERING
The deck shall be covered with canvas, plastic material or glass reinforced plastic. No other covering is permitted.
- D.4.4 COVERING BOARD
A Teak or Mahogany covering board 57mm x 19mm [$2\frac{1}{4}$ in x $\frac{3}{4}$ in] thick, to project 10mm [$\frac{3}{8}$ in] shall be fitted.
- D.4.5 COAMINGS
- a. The material used for the Coamings shall be either Teak or Mahogany 16mm [$\frac{5}{8}$ in] thick (tolerance + or - 1.5mm [$\frac{1}{16}$ in]) fastened to the carlins. A wooden, plastic or metal protective strip may be fitted to form the upper edge of the coaming.
- b. The coamings shall be to the shape shown on the Official Drawings.
The minimum height of the coaming (including the protective strip) above the surface of the deck shall be:
- | | |
|--|----------------------------|
| Fore end of coamings | 146mm [$5\frac{3}{4}$ in] |
| Station 3 (approx 2057mm [6ft 9ins] from aft end of cockpit) | 84mm [$3\frac{1}{4}$ in] |
| Station 4 (approx 1220mm [4ft] from aft end of cockpit) | 76mm [3ins] |
| Aft end coaming | 70mm [$2\frac{3}{4}$ ins] |
- c. A teak or mahogany beading shall be worked along the angle between the coaming and the deck.
- D.4.6 HOLES
No open holes are permitted in the deck or kingboards or covering boards except that, within 76mm [3in] of the fore and aft centreline of the deck, suitably sized through deck fittings may be fitted for the operation of control lines of up to 8mm maximum diameter. Side deck pumps shall be fitted with a watertight gaiter to preserve the watertight integrity of the deck.
- D.4.7 TOE RAILS
- a. Wooden toe rails shall be fitted on either side of the foredeck in accordance with the Class Drawings.
- b. For new construction boats and for replacement toe rails on existing boats, the following rule applies. The material shall be either teak or mahogany. The forward end of the toe rails shall be within 180mm [$7\frac{3}{32}$ in] of the stem and shall be a minimum length of 1800mm [$5\text{ft } 10\frac{7}{8}$ in] measured around the curve. The height shall taper from not less than 35mm [$1\frac{3}{8}$ in] at the forward end to not less than 20mm [$\frac{3}{4}$ in] at the aft end. The thickness at deck level shall be not less than 22mm [$\frac{7}{8}$ in].
- D.5 INTERNAL STRUCTURE
- D.5.1 BULKHEADS
- a. A rear bulkhead, constructed of solid teak or mahogany or veneered marine plywood 16mm ($\frac{5}{8}$ in) thick, shall be fitted as shown on the official drawings.

- b. The locker space under the quarter deck shall be accessible from the cockpit through a hatchway in the rear bulkhead.
- c. The hatchway in the rear bulkhead shall not exceed more than 250mm from the centre line of the boat.
- d. The hatchway in the rear bulkhead may be fitted with an optional cover.

D.5.2 SEATS

- a. The cockpit shall be fitted with side seats and/or cross benches of a usable seating area of at least 0.743m² [8sq. ft] in total.
- b. The seats shall be of wood and may be slatted or of solid planking.
- c. Any thwart included in the overall weight of the boat shall be permanently fixed in place.

D.5.3 FLOORING

- a. The flooring shall be either 16mm [⁵/₈in] to 20mm [³/₄in] timber (solid slatted or grating) or solid 12mm [¹/₂in] to 16mm [⁵/₈in] marine plywood and shall cover the whole area on top of the flooring bearers.
- b. The overall length of the flooring shall be not less than 2286mm [7ft 6in] forward of the after locker bulkhead, and the width shall extend to within 38mm [1 ½ in] of the side planking.
- c. At least one section of the flooring shall be made removable to give access to the bilges.
- d. Gaps between slats or in any grating area shall not exceed 25mm [1in] width.

D.5.4 FLOORING BEARERS

- a. The flooring shall rest on bearers 64mm x 38mm [2 ½ in x 1 ½ in] spaced as shown on the official drawing.
- b. The top of the bearers shall not be less than 190mm [7 ½ in] above the keelson.

D.5.5 MAINSHEET POST (optional)

If a mainsheet post is fitted, the following provisions shall apply:

- a. The mainsheet post shall be made of wood and shall be attached by bolts or brackets to one of the floors and/or a platform bearer.
- b. The maximum cross section of the mainsheet post shall be 102mm x 102mm [4in x 4in].
- c. No mainsheet post shall project above the level of the top of the sheer strake.

D.6 COMPLETE HULL

D.6.1 FITTINGS

- a. Fittings shall include a chain fairlead fitted on or close to the stem head and a teak or oak samson post and may include rowlock chocks and sockets.
- b. Fittings shall not be made of titanium.
- c. A kicking strap of any design may be fitted subject to it complying with F.2.3i.
- d. It is permitted to fit a device to transmit loads from the shrouds directly between the foot of the mast and the deck beam or shelf. The device shall consist of wire rope not less than 4mm in diameter attached to the highest practicable point on the structure adjacent to the forward chainplate, and attached to the foot of the mast step at the **owners** discretion. The device shall be tensioned by means of a bottle screw attached to the wire rope.
- e. Any new stemhead fitting, fitted since 1976, shall have a plate running for at least 152mm [6in] down the foreside of the stemhead and shall have integral attachment points for the forestay and headsail tack not more than 152mm [5in] from the front face of the fitting.
- f. Pre 1976 stemhead fittings are permitted provided the extension downwards of the line of the forestay intersects with the level of the deck at a point forward of the aft face of the stem.
- g. The headsail tack attachment for all fittings shall be such that, using a standard shackle or pin, the cloth of the headsail when set is not less than 102mm [4in] above the deck. The measurement shall be taken with the mast in its normal position and the luff stretched as if the boat is going to windward.
- h. A minimum of one and a maximum of three manually operated bilge pumps, with a combined weight of not more than 6kg [13.5lbs], shall be fitted. The weight of the suction and discharge piping shall not exceed 1kg per metre. The discharge overboard must be above the waterline. One sump not exceeding 30mm [¹/₁₆in] in depth and 161.3 sq.cm. [25sq.in] in area may be formed in the keelson to accommodate a pump suction.
- i. Suction bailers are not permitted.

- j. Bottle screws, lanyards, tackles, muscle boxes or levers are permitted. Any other tensioning devices, such as mastjacks, sheet and halyard winches, shall not be used.
 - k. If buoyancy bags are fitted they shall have a minimum total capacity of 650kg [1433lbs].
 - l. Where fitted, an electric bilge pump shall be fit for purpose and weigh no more than 4kg excluding battery. The pump battery shall not be included when the boat is weighed, under Rule C.4.1 and Rule D.7. The pipe, discharge and sump details in Rule D.6.1.h. shall apply.
 - m. A light weight solar panel may be fitted permanently on the deck aft of the rudder post to charge the bilge pump battery. If secured in place it need not be removed when the boat is weighed.
- D.6.2 For all parts of the hull and appendages, but not for spars, alternative timbers to those specified in the rules may be allowed where supply is difficult or unreasonably expensive provided they are of a similar density and appearance to the timber specified. Such alternatives will be authorised in writing by the committee for a specific boat.
- D.7 WEIGHT AND WEIGHING
- Boats shall be weighed at intervals not exceeding five years. The **class secretary** is to be informed of the boat and its weight on completion.
- D.7.1 WEIGHT
- a. **Boats** shall conform to a minimum weight of 1304kg [2875 lbs].
 - b. At the time of weighing there is to be no portable equipment, including the battery for the electric pump if fitted, aboard and the bilges are to be sponged dry. The **official measurer** may require compensating weights to be removed and weighed separately. The following shall be on board:
 - i) **Mast** and **boom** together with all standing and running **rigging**.
 - ii) Fixed thwarts and seats and all floor boards.
 - iii) Fitted bilge pumps.
 - iv) Any fitted buoyancy bags.
 - c. In order to allow for the initial absorption of water, weighing may be delayed no more than 6 weeks after first launching at the start of the season or before Cowes week if first launching is less than six weeks before the first day of racing.
 - d. Any material or fitting not completely defined by these **class rules**, and drawings, shall be no heavier than is reasonably necessary to fulfil its purpose in the judgement of the **official measurer**.
- D.7.2 WEIGHING EQUIPMENT
- a. **Boats** shall be weighed using the Class measuring link or a suitable measuring device, held by a **Division**, that has been calibrated to the full National standard within the last three years. In the event of a dispute the **official measurer** may resolve the matter by either re-weighing the boat in question using the Class measuring link or by calling for the **Division** device to be re-calibrated.
 - b. In the event of any discrepancy, the official measuring link shall prevail.
- D.7.3 COMPENSATING WEIGHTS
- a. When a **boat** is found to be below the minimum weight, compensating weights shall be added to bring the **boat** up to the correct weight as detailed in D.7.3.b and c.
 - b. Up to the first 27.2kg [60lbs], four slabs of lead of equal weight shall be permanently fitted to the inside of the planking in the following positions:
 - (i) Forward - one slab on each side fitted between the seventh and eighth timbers from the bow, as shown on the official drawing, and with the middle of the slab 559mm [22in] below the deck at side, measured around the planking.
 - (ii) Aft - one slab on each side fitted between the timbers next aft of the rudder trunk at the stern frame and with the middle 406mm [16in] below the deck at side, measured around the planking.
 - c. For weight in addition to the first 27.2kg [60lbs], two slabs of lead of equal weight shall be permanently fitted to the inside of the planking approximately amidships, one on each side with the centre of gravity of the slab 457mm [18ins] below the side deck, measured around the planking.
 - d. For weight in addition to the first 54.4kg [120lbs] six slabs of equal weight shall be permanently fitted closely adjacent to the six slabs fitted in accordance with sub-

paragraphs (b) and (c) above.

D.8 ADDITIONAL RULES

D.8.1 SHEATHING

The sheathing of the **hull** is prohibited (inclusive of Nylon, Glass Fibre, Kevlar, Copper or other similar substances).

SECTION E - HULL APPENDAGES

E.1 MEASUREMENT AND CERTIFICATION

E.1.1 The **hull appendages** shall comply with the **class rules** in force at the time of **fundamental measurement** unless specified otherwise in these **class rules**.

E.1.2 Measurement shall be carried out in accordance with the ERS except where varied herein.

E.1.3 Repairs and Alterations.

a. Before a **hull appendage** is altered or repaired refer to B.7

E.2 MANUFACTURERS

E.2.1 Manufacturers shall be approved by the **XODCA**. This restriction does not apply to replacement rudders.

E.2.2 The approved manufacturer shall, at his own expense, correct or replace any **hull appendage** that does not comply with the **class rules** as a result of an omission or error by the manufacturer, if the appendage is submitted for **fundamental measurement** within twelve months of purchase.

E.3 IRON KEEL

E.3.1 MATERIALS

The material used for the Iron Keel shall be Cast iron.

E.3.2 FITTINGS

The keel shall be secured, at the stations shown on the construction drawing, by 5 x 22mm [$7/8$ in] diameter wrought iron, galvanised mild steel or marine grade stainless steel bolts.

E.3.3 DIMENSIONS

a. The **keel** shall be cast at an approved foundry from the mould pattern owned by the Association.

b. The mould pattern shall conform to the official class drawings.

E.3.4 WEIGHT

a. A **keel** shall weigh not less than 635kg [12.5cwts] nor more than 660kg [13cwts] including the keel bolts, nuts and washers.

b. The weight of the **keel** and attachments shall be checked by the **official measurer**.

c. The weight of the **keel** may be adjusted within the above limits by the addition of heavier density materials positioned subject to the prior approval and direction of the **official measurer**, and subject to the **committee** re-issuing the **measurement certificate** on completion.

E.3.5 INFILL

The **keel** shall be finished off at ends with pieces of English elm or iroko to the required shape.

E.4 RUDDER

E.4.1 MATERIALS

The Rudder shall be made of English elm, mahogany or marine plywood.

E.4.2 FITTINGS

- a. The **rudder** arms may be wholly countersunk or faired by the use of wood, paint or cement. Either a hinge strap 51mm x 5mm [2in x $\frac{3}{16}$ in] thick shall be fitted to hold the rudder, or the foot of the **rudder** shall be secured with a pintle attached to the deadwood.
- b. If a pintle is fitted, the profile of the pintle fitting shall fall within the outline of the deadwood as shown on the Lines Plan.

E.4.3 DIMENSIONS

- a. The **rudder** shall be moulded to the Lines Plan and sided 38mm [1 ½ in] at fore edge tapered to 22mm [$\frac{7}{8}$ in] at 51mm [2 in] from the after edge.
- b. The after edge may be fairly tapered from 22mm [$\frac{7}{8}$ in] to nothing in the manner shown in the Class drawing, that is for a width of up to 51mm [2 in] wide between points B and C in the drawing, outside points B and C the limit of the fairing shall be evenly reduced in width to nil as indicated.

E.5 RUDDER STOCK AND TUBE

E.5.1 MATERIALS

- a. The stock shall be of solid construction, manufactured from stainless steel or galvanised iron and be split below the trunk to receive the **rudder**.
- b. The stock shall work in a stainless steel, galvanised iron or GRP tube.

E.5.2 FITTINGS

The rudder tube shall be fastened at its lower end to the horn timber and at the top with a flange fastened to a teak or mahogany chock fitted on deck.

E.5.3 DIMENSIONS

- a. Rudder stock - 25mm (1 inch) diameter.

E.6 TILLER

E.6.1 MATERIALS

- a. The tiller shall be of wood.

E.6.2 FITTINGS

Optional

E.6.3 DIMENSIONS

Optional

SECTION F - RIG

F.1 MEASUREMENT AND CERTIFICATION

- F.1.1 The **rig** shall comply with the **class rules** in force at the time of **fundamental measurement** unless specified otherwise in these **class rules**.
- F.1.2 Measurement shall be carried out in accordance with the ERS except where varied herein.
- F.1.3 New masts shall be initially measured with respect to the requirements and dimension of the bare or varnished wooden spar by the **official measurer** or his delegate before any finishing work is carried out. Measurement will be completed when the mast is ready for racing.

F.2 MAST

F.2.1 MANUFACTURER

The manufacturer is optional.

F.2.2 MATERIALS

- a. The **mast spar** shall be made of fir or spruce.
- b. The **mast spar** shall not be hollow.
- c. Between 76mm [3in] above the lower black band to the top of the **mast spar** may be made from up to six pieces of such wood glued together by scarfs each with a slope of not longer than 1 : 24.
- d. Not more than two pieces to be in any cross section except in way of scarfs.
- e. Lengths of wood not exceeding 300mm used to correct minor defects, and graving pieces fitted in the way of bolts through the **mast spar** for the attachment of upper and lower shrouds, shall be excluded from the above limitations.
- f. There is no restriction on the number of pieces of wood making up the **mast spar** below 76mm [3 in] above the lower black band.

F.2.3 FITTINGS

- a. The **mast spar** shall be dressed according to the official class drawing.
- b. The Jumper struts, length 381mm [1ft 3in] shall be set at an angle of 100 degrees, the limits of tolerance being plus or minus 10 degrees and plus 0 or minus 6mm [¹/₄ in] on length.
- c. The **spreaders** shall be of wood or metal. The distance from the face of the wooden mast to the inboard side of the shroud shall be 600mm plus or minus 10mm measured perpendicular to the mast. They shall be positioned fitted between 2642mm [8ft 8in] and 3251mm [10ft 8in] above the upper edge of the lower black band.
- d. The spinnaker boom attachment on the **mast** may be an eye(s), a swivel pin, or a cup; the fitting(s) may be on a slide attached to the mast.
- e. The spinnaker boom attachment shall not extend the spinnaker boom more than 2032mm [6ft 8in] from the face of the mast.
- f. A crane fitting at the **mast** head to carry the backstay clear of the mainsail roach is optional.
- g. The eye of the spinnaker halyard block shall be positioned not more than 5217mm [17ft 1in] above the upper edge of the lower black band (LBB) on the foremost face of the **mast spar** and shall be secured either on to a hole in the forestay tang, or to a fitting on the **mast spar**, at a point not more than 102mm [4in] forward of the foreside of the **mast spar**.
- h. Sail tracks, which run throughout the length of the **mast spar** between the top black band to within 914mm [3ft] of the bottom black band, shall be fitted.

F.2.4 DIMENSIONS

- a. The **mast** shall comply with the shape and dimensions shown on the official class drawings and these **class rules**.
- b. The point of attachment of the forestay to its mast fitting shall be no more than 5105mm [16ft 9in] above the upper edge of the lower black band (LBB) and shall be a maximum of 50mm [2in] from the forward face of the **mast**. The forestay and any tackle shall hang from the point of attachment and any turning block or sheave shall be entirely below that point. Any sheave or block shall be a maximum of 50mm in diameter. The headsail shall be set inside the forestay, in that the attachment points and halyard sheaves shall be behind and/or below the attachment points for the forestay.

- c. Tolerances [except as stated otherwise] shall be:

Length measurements	plus 0	minus 6mm [¹ / ₄ in]
Sections [exclude allowed protection material]	plus 3mm [¹ / ₈ in]	minus 0

d. **Mast** dimensions:

	<u>Minimum</u>	<u>Maximum</u>
Upper edge of lower band to:		
forestay	4900mm [16ft 1in]	5105mm [16ft 9in]
lower edge of upper band	7233mm [23ft 8 ³ / ₄ in]	7239mm [23ft 9in]
centre of spinnaker boom attachment	No min.	508mm [1ft 8in]
the level of the top of the wooden keelson		
[measured vertically]	1372mm [4ft 6in]	1422mm [4ft 8in]
Lower edge of upper band to:		
centre of sheave pin	375mm [1ft 2 ³ / ₄ in]	381mm [1ft 3in]

Mast section at:			
diameter at sheave pin	51mm [2in]	54mm	[2 ¹ / ₈ in]
diameter at forestay inter- section	76mm [3in]	79mm	[3 ¹ / ₈ in]
underside of deck to			
76 mm [3in] above } lower band }	89mm diameter [3 ¹ / ₂ in diameter]	92mm x 92mm	[3 ⁵ / ₈ in x 3 ⁵ / ₈ in]
Width of black bands	51mm [2in]	No max	
Heel (excluding tongue)	76mm x 51mm [3in x 2in]	89mm x 89mm	[3 1/2 x 3 1/2in]

- e. Reducing or scalloping the mast below a straight line drawn between the minimum cross sections at the measurement points is not allowed.
- f. Masts shall conform to a **tip weight** of not less than 11.8kg [26 lbs] including correctors permanently attached to the mast and /or fittings. [see Appendix B].

F.2.5 FINISH

- a. Black bands shall be painted on the **mast spar** in accordance with measurements given in F.2.4.
- b. **Mast spars** shall be clear finished, and not coloured in any way other than the black bands.
- c. A portion of the mast up to 1016mm [40in] above the lower black band and down to the mast heel may be covered with protective material. This may be coloured as long as the colour selected is in clear contrast to the black band.
- d. Additional clear glass cloth protection, the total sum of the length or lengths not to exceed 500mm [19 3/4 in], and may be fitted anywhere up the mast to avoid chafe.

F.3 BOOM

F.3.1 MANUFACTURER

Manufacturer is optional.

F.3.2 MATERIALS

- a. The **boom spar** shall be made of solid construction using fir or spruce.
- b. The **boom spar** shall be made up of two pieces of wood glued together with the grain reversed to form a circular section except for a flat to receive the sail track.
- c. As an alternative the **boom spar** shall be made of up to three pieces of wood glued together to form a rectangular section.
- d. The two lower corners of the **boom** may be protected against chafe by the spinnaker sheets. Any material may be used but not in a continuous length longer than 610mm [24in] and to extend no more than 25mm [1in] from the corners of the boom.

F.3.3 FITTINGS

- a. The **boom** shall be fitted with a sail track.
- b. Tackles to adjust the tension to the luff and foot, and position the tack may be fitted.

F.3.4 DIMENSIONS

- a. The **boom spar** shall be constructed straight. Length measurements shall be taken from the aft face of the **mast spar**, measured at the lower black band and excluding mast fittings. During measurement the **boom** shall be square to the mast.

b.		<u>minimum</u>	<u>maximum</u>
	Aft face of mast , at the black band, to:		
	inner face of black band	No min.	3480mm [11ft 5in]
	outer end of gooseneck fitting	No min.	914mm [3ft]
	Sail track:		
	inner end of aft face of mast	No min.	305mm [1ft]
	outer end to black band	No min.	152mm [6in]
	Circular boom spar cross section:		
	diameter	70mm [2 ³ / ₄ in]	73mm [2 ⁷ / ₈ in]
	Rectangular boom spar cross section:		
	Depth	76mm [3in]	79mm [3 ¹ / ₈ in]

Width	54mm	[2 ¹ / ₈]	57mm	[2 ¹ / ₄ in]
Corner radii	6mm	[¹ / ₄ in]	10mm	[³ / ₈ in]
Width of black band	51mm	[2in]	No max.	

- c. **Booms** made before 1st January 1976 may be altered to conform with F.3.2 and F.3.4, or may remain unaltered providing that their sectional measurements are not less at any point than those specified in F.3.4.
- d. At the owner's option, two battens 2210mm [7ft 3in] long x 19mm [³/₄ in] wide x 10mm [³/₈ in] deep at the sides tapering to not less than 3mm [¹/₈ in] at the inner end may be fitted to the outer end of circular booms at 120 degrees and 240 degrees to the diameter through the centre of the flat portion of the **boom spar**.
- e. The flat to receive the sail track shall not reduce the diameter at the centre of the circular **boom spar** by more than 3mm [¹/₈ in].
- f. **Boom** packing. Wood packing may be placed between the **boom spar** (defined by Rule F.3.2) and its sail track, the sole purpose of which is to enable a straight track in way of any straps around the **boom spar**. Packing may be used to a maximum height of 6mm and maximum width of 40mm. The maximum height of track and packaging combined shall not be more than 25mm.

F.3.5 FINISH

The **Boom spar** shall be clear finished and not coloured in any way other than that a black band shall be painted on the **boom spar**.

F.4 SPINNAKER POLE

F.4.1 MANUFACTURER

The manufacturer is optional.

F.4.2 MATERIALS

Materials are optional.

F.4.3 FITTINGS

Fittings are optional.

F.4.4 DIMENSIONS

Spinnaker pole length [including fittings]	<u>minimum</u> No min.	<u>maximum</u> 1981mm [6ft 6in]
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F.5 WHISKER POLE

F.5.1 The manufacturer, materials and dimensions are optional.

F.6 STANDING RIGGING

F.6.1 MANUFACTURER

The manufacturer is optional.

F.6.2 MATERIALS

- a. Standing rigging shall consist of galvanised plough steel wire, or stainless steel wire, or stainless steel rod.
- b. The forestay shall be bare stranded wire or solid rod and shall not be covered by a fairing of any kind.

F.6.3 FITTINGS

- a. Shrouds shall be secured to the chainplates with lanyards or rigging screws or simple stay adjuster plates.
- (i) Lanyards shall be no longer than 300mm [12in] from the lower end of the shroud to the chainplate.
- (ii) The centres of the chain plates shall be no closer than 254mm [10in] apart and positioned close to the deck edge as shown in the official drawings.
- b. The lower end of the backstay shall be attached, by means of a bottle screw or a lanyard or an adjustable tackle, to a plate on the transom. Alternatively the backstay may be led through a block attached to the transom.

- F.6.4 DIMENSIONS
The diameter of steel wire or rod rigging shall not be less than 4mm for the upper and lower shrouds and 3mm for the jumper, fore and back stays.
- F.7 RUNNING RIGGING
- F.7.1 The manufacturer, materials and dimensions are optional unless stated otherwise by these **class rules**.
- F.7.2 If a downhaul is attached to the tack of the jib then a stop, such as a Talurit swage, shall be fitted to maintain the clearance required by C.6.2.
- F.7.3 The main sheet system is optional provided that:-
- a. The mainsheet shall run through a block or blocks attached within 75mm (3 ins) of the outer end of the boom and through a block or blocks which may be fixed or moveable on the deck aft of the rudder stock.
- b. When the main sheet is led through a block or blocks attached to the boom and down into the cockpit any mainsheet block or blocks in the cockpit shall be attached to a single fixed point amidships.
- c. The hauling part of the mainsheet shall not be secured in any way other than by a quick release jamming cleat or block.
-

SECTION G - SAILS

- G.1 MEASUREMENT AND CERTIFICATION
- G.1.1 Sails shall comply with the **class rules** currently in force.
- G.1.2 Measurement shall be carried out in accordance with the ERS except where varied herein.
- G.1.3 Repairs and Alterations:
- a. Before the sail is altered or repaired refer to B.7.
- G.1.4 **Sails** shall carry the official **certification mark** near the **tack point**. The mark shall be signed and dated by the **official measurer**, the **divisional captain** or their appointed representatives.
- G.1.5 If a **sail** is re-measured, the **official measurer** shall attach a new official **certification mark** showing the new date of **fundamental measurement**.
- G.1.6 The weight in g/m² of the **body of the sail** shall be indelibly marked near the **head point** by the sail maker together with the serial number, date and his signature.
- G.1.7 The class insignia, and the **sail** numbers, as issued by the **XODCA**, shall comply with the RRS except where prescribed otherwise in these **class rules**.
- G.2 SAILMAKERS
- G.2.1 The sail maker is optional.
- G.3 MAINSAIL
- G.3.1 CONSTRUCTION
- a. The **body of the sail** shall be of **soft single ply** construction made of woven polyamide cloth or woven polyester cloth.
- b. Reinforcement shall consist of any materials permitted for the **body of the sail**.
- c. The **sail** shall have 3 **batten pockets** in the **leech**.
- d. A **window** or **windows**, if fitted, shall be covered by transparent **ply**.
- e. The highest point of the headboard shall be adjacent to the **luff** of the **sail**.

- f. Cross measurement points shall be taken from the **head point** at the **luff** down the **luff** and **leech** in a straight line.
- g. Loose footed mainsails are prohibited.
- h. Mainsails shall be fitted with **sail** slides attached to the **luff** and **foot** and set in or on tracks. A maximum of 25 slides shall be fitted to the **luff**, each being joined to the sail by an attachment not measuring more than 25mm [1in] along the **luff**.

G.3.2 DIMENSIONS

	<u>Minimum</u>		<u>Maximum</u>	
Luff length	7010mm	[23ft]		
Leech length	7390mm	[24ft 3in]	7620mm	[25ft]
Foot length	3325mm	[10ft 11in]		
Cross width at 610mm [2ft] [see G.3.1g]	No min.		460mm	[18in]
Cross width at 2438mm [8ft] [see G.3.1g]	1345mm	[4ft 5in]	1475mm	[4ft 10in]
Cross width at 4880mm [16ft] [see G.3.1g]	2435mm	[8ft]	2590mm	[8ft 6in]
Top width inc. headboard	No min.		130mm	[5in]
Top batten	No min.		610mm	[24in]
Lower batten	610mm	[24in]	915mm	[36in]
Centreline of top batten at the leech measured } to the Head-point }	1830mm	[6ft]	No max.	
Sail slide spacing	No min.		610mm	[2ft]
Windows - total area	No min		0.5m ²	[approx 5ft ²]
Distance of window to luff, leech or foot	150mm	[6in]	No max.	
Sail numbers and class insignia				
Height	375mm		No max.	
Width	50mm		No max.	
Ply weight of the body }			No max.	
of the sail }	245gsm		No max.	

G.3.3 IDENTIFICATION

- a. **Sail** numbers and class insignia shall be fixed to each side of the **sail**.
- b. The class insignia shall conform with the requirements as detailed in the diagram contained in Appendix C.

G.4 HEADSAIL

G.4.1 CONSTRUCTION

- a. The **body of the sail** shall be of **soft single ply** construction made of woven polyamide cloth or woven polyester cloth.
- b. Reinforcement shall consist of any materials permitted for the **body of the sail**.
- c. The headsail may have 2 **batten pockets** in the **leech**.
- d. A **window** or **windows**, if fitted, shall be covered by transparent **ply**.
- e. The shape of the **leech** shall not be convex.
- f. The shape of the **foot** shall be a continuous convex curve.

G.4.2 DIMENSIONS

	<u>Minimum</u>		<u>Maximum</u>	
Luff length	4850mm	[15ft 11in]	4880mm	[16ft]
Leech length [from the measurement point]	4370mm	[14ft 4in]	4420mm	[14ft 6in]
Foot length	2235mm	[7ft 4in]	2285mm	[7ft 6in]
Foot median [from the measurement point]	No min.		4610mm	[15ft 1 ¹ / ₂ in]

Foot roach	No min.		75mm	[3in]
Top width	No min.		25mm	[1in]
Windows total area	No min.		0.5m ²	[approx 5ft ²]
Distance of window to luff, leech or foot	150mm	[6in]	No max.	
Batten length	No min.		305mm	[12in]
Batten width	No min.		51mm	[2in]
Centre of batten to head point	915mm	[3ft]	No max.	
Centre of batten to clew point	915mm	[3ft]	No max.	
Ply weight of the body } of the cloth }			No max.	
	245gsm		No max.	

G.5 SPINNAKERS

G.5.1 CONSTRUCTION

- The **body of the sail** shall be of **soft single ply** construction made of woven polyamide cloth or woven polyester cloth.
- Reinforcement shall be made of any material allowable for the mainsail, jib or spinnaker.
- The **sail** shall be symmetrical in size, shape, cut, panel dimensions, material and orientation of cloth about a line joining the **head** to the **mid foot point**.
- Means of adjusting the **leech** tensions are prohibited.

G.5.2 DIMENSIONS

The upper measurement point is at the intersection of the centreline of the sail and the line through the highest point of the sail at 90° to the centreline.

	<u>Minimum</u>		<u>Maximum</u>	
Leech lengths [from the measurement point]	4800mm	[15ft 9in]	4880mm	[16ft]
Foot median [from the measurement point]	No min.		5410mm	[17ft 9in]
Foot length	2970mm	[9ft 9in]	3050mm	[10ft]
¾ Width	1295mm	[4ft 3in]	1375mm	[4ft 6in]
½ Width	2210mm	[7ft 3in]	2285mm	[7ft 6in]
¼ Width	2770mm	[9ft 1in]	2845mm	[9ft 4in]
Headboard	No min		114mm	[4½in]
Ply weight of the body of the sail }	36grms/sq.m		No max.	
Cloth width	No min.		1070mm	[42in]
Sail numbers				
Height	375mm		No max.	
Width	50mm		No max.	

Width of sail measured across an arc 300mm from head point: 430mm maximum.
Maximum radius of primary stiffening 260mm and secondary stiffening 365mm.

G.5.3 IDENTIFICATION

As a minimum, the **sail** numbers shall be shown on the outside of the **sail**.

PART III - APPENDICES

APPENDIX A

OFFICIAL CLASS DRAWINGS

	Drawn / Re-issued	Amendment / Date
Lines Plan, Table of offsets and Rudder dimensions	2001	1 - 19/1/01
Construction Plan	1998	0 - 1/4/98
Iron Keel Mould Plan	1998	0 - 1/4/98

Mast plan
Sail plan

2000
1998

1 - 28/2/00
0 - 1/4/98

OFFICIAL TEMPLATES

Station Templates
Transom Template
Stern Profile Template
Stem Profile Template
Keel mould

DRAWING INTERPRETATION

“ Maintaining the Shape of Pre 1964 Hulls”

Rule D.1.3 allows for hulls built prior to 1964 which do not comply precisely with the Class Drawings. This dispensation applies to the shape of the wooden hull as it was built even where this shape departs from the Class templates. It is not permitted to add material to change the shape of the hull, even if this may locally bring the shape closer to the templates, as selective change to the hull shape still within the templates could produce an unreasonable advantage in racing. Fairing of the hull is allowed providing the thickness is not significant (say 6mm or 1/4in) and there is no filler applied to the front of the stem, the bottom edge of the transom or in such a way as to extend the length of the waterline. A pre 1964 hull may forego this dispensation and opt to be measured against Class Lines Plan in all respects. This to be annotated on the boats measurement Certificate.

APPENDIX B

DEFINITIONS

TIP WEIGHT

The **mast** shall be fully rigged with all rigging in the sailing position except that the rigging may be supported separately from the **mast spar** below the level of the lower band. The **mast** itself shall be supported in line with the upper edge of the lower band and the tip weight shall be measured at the lower edge of the upper band.

Note: The Tinley kicker arm shall be removed, if present.

APPENDIX C

CLASS INSIGNIA

The class insignia shall be an 'X' as shown.



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 or similar.