

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 and have been amended in accordance with the XODCA constitution at subsequent Class General Meetings.

A.2 ABBREVIATIONS

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|-------|--------------|-----------------------------------|
| 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 word "shall" is 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 CLASS RULES INTERPRETATIONS AND DISPENSATIONS

- A.6.1 Any interpretation of the **class rules**, except as provided A.7, shall be made by the **committee**. The **committee** may specify the date when any such interpretation shall come into effect. A list of current interpretations shall be maintained and posted on the Class website.
- 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.6.3 A boat **owner** or the **official measurer** may apply to the **committee** for a dispensation for the need to comply with a class rule by a specified boat when compliance would require disproportionate expenditure or be impractical. The **committee** shall take advice from the **technical advisory committee** before granting any dispensation. Such a dispensation may have caveats or time limits and generally should not be granted if the non-compliance gives any significant racing advantage. A list of current dispensations shall be maintained and posted on the Class website.

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.

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 **XOD boat's** name.
 - The **XOD 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 **XOD boat**.
 - The signature by or on behalf of the **committee**.
 - The date of issue.

- B.4.5 An **XOD boat's measurement certificate** shall remain valid until:
 The **XOD boat** is not available for inspection by a **divisional captain**, whatever the reason, for a period greater than one year.
 or The **XOD boat** has been the subject of a protest and found not to comply with the requirements of the **class rules**.
 or The **XOD 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 **XOD 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:
- The **divisional captain** shall:
 - Inform the **XOD boat's owner/s** that the **measurement certificate** will have to be re-issued before the **XOD boat** can participate in XOD races.
 - Report such action to the **secretary**.
 - 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 **XOD 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**.
 - If there is any question or doubt as to the **XOD 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 **XOD boat**, or parts of the **XOD boat**, to be re-measured by the **official measurer**.
 - In those cases where the measurement form indicates that the **XOD 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 **XOD 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 **XOD 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 (page 36)).
- 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 **XOD 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 **XOD 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** 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 **XOD 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 **technical 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 **XOD 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 from the date of record until the 1st March in the 5th year, 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 one light emitting diode (LED) flare, either white or red, or two hand held flares, either red flares or orange smokes or one of each, shall be carried. 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) or any other similar compass that complies to C.4.2.e above.
- l. Fitted electric bilge pump of maximum flow of 4,500 litres/hour (approx 1,000 gallons/ hour).
- m. A step or stirrup to aid the recovery of a crew member.
- 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 nor shall any device specifically designed to permit adjustment whilst racing, be fitted.
- d. 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 at the tack is at a minimum of 102mm (4ins) and a maximum of 152mm (6ins) above the level of the deck covering at the stem head on all points of sailing.
- 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 **XOD 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

Advertising is prohibited unless permission has been granted by the **committee** or it is required by an Organising Authority and stated in the Notice of Race.

- C7.5 The use of titanium is not permitted.

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 **XOD 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 boat** 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 11 in)
Draught to DWL	914mm	(3ft 0 in)

- c. All boats built since 1945 shall not exceed 6321mm (20ft 8⁷/₈ in) in overall length or be less than 6296mm (20ft 7⁷/₈ in)
 - d. All boats built since 1945 shall have the respective template positions marked on the covering board, stem, wood keel and 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 (3/8 in) 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 (1/4 in) 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 (5/8 in) 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 (1¹/₈ in) 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 (7¹/₂ lbs).
 - c. The after end of the deadwood adjacent to the fore end of the rudder may be 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 x 32mm (5/8 in x 1 1/4 in) 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 1/4 in) 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 1/2 in x 1 in) 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 x 38mm (2 1/2 in x 1 1/2 in).
- c. Half beams in way of cockpit 51mm x 38mm (2 in 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 (3 in)
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 7/8 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/m³ (32lbs/cu ft) density, 16mm (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 (2¼ in x ¾ in) thick, to project 10mm (3/8 in) shall be fitted.

D.4.5 COAMINGS

a. The material used for the coamings shall be either Teak or Mahogany 16mm (5/8 in) thick (tolerance + or - 1.5mm (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 (5¾ in)
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Station 3 (approx 2057mm (6ft 9ins) from aft end of cockpit)	84mm (3¼ in)
---	--------------

Station 4 (approx 1220mm (4ft) from aft end of cockpit)	76mm (3 in)
--	-------------

Aft end coaming	70mm (2¾ in)
-----------------	--------------

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 (3 in) 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 (7¾ in) of the stem and shall be a minimum length of 1800mm (5ft 10¾ in) measured around the curve. The height shall taper from not less than 35mm (1¾ in) at the forward end to not less than 20mm (¾ in) at the aft end. The thickness at deck level shall be not less than 20mm (¾ in).

D.5 INTERNAL STRUCTURE

D.5.1 BULKHEADS

- a. A rear bulkhead, constructed of solid teak or mahogany or veneered marine plywood 16mm (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 19mm (3/4 in) to 20mm (3/4 in) timber (solid slatted or grating) or solid 12mm (1/2 in) to 16mm (5/8 in) 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 (1½ 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 (2½ in x 1½ in) spaced as shown on the official drawing.
- b. The top of the bearers shall not be less than 190mm (7½ 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. A vang (kicking strap or gnav) of any design may be fitted. The attachment point for the vang may be incorporated into the gooseneck fitting.
- c. 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 **owner's** discretion. The device shall be tensioned by means of a bottle screw attached to the wire rope.

- d. 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. The stemhead fitting shall not be more than 12mm (6/8in) from the front side of the stem.
- e. 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.
- f. 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.
- g. 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 (13/16 in) in depth and 161.3 sq.cm. (25sq.in) in area may be formed in the keelson to accommodate a pump suction.
- h. Suction bailers are not permitted.
- i. 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.
- j. If buoyancy bags are fitted they shall have a minimum total capacity of 650kg (1433lbs).
- k. 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.
- l. 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 six 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 **XODCA**.
- 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 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 (1½ in) at fore edge tapered to 22mm (7/8 in) at 51mm (2 in) from the after edge.
- b. The after edge may be fairly tapered from 22mm (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 (1inch) 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** shall be made of solid construction using Fir or Spruce, with no voids containing fittings, plates or spacers fitted internally. Main halyard sheaves, main halyard locks and kicking strap levers may be inlaid into the mast. All fittings and mast tracks can be secured using screws, nuts and bolts and through Mast bearings ferrules/spacers.
- b. The **mast** shall not be hollow.
- c. Between 76mm (3in) above the lower black band to the top of the **mast** 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** 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** below 76mm (3 in) above the lower black band.

F.2.3 FITTINGS

- a. The **mast** 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** and shall be secured either on to a hole in the forestay tang, or to a fitting on the **mast**, at a point not more than 102mm (4in) forward of the fore side of the **mast**.
- h. A sail track shall be fitted to the aft side of the **mast** and run throughout the length of the **mast** to within 914mm (3ft) of the top of the bottom black band and to the bottom of the top black band as a minimum. The track and any associated packing shall have a maximum size of 26mm fore and aft and 35mm athwartships.

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. **Mast dimensions:**

	Minimum (mm)	(ft/in)	Maximum (mm)	(ft/in)
Upper Edge of lower black band to:				
forestay	4900	16ft 1in	5105	16ft 9in
lower edge of upper band	7233	23ft 83/4in	7239	23ft 9in
centre of spinnaker boom attachment	no min		508	1ft 8 in
the level of the top of the wooden keelson (measured vertically)	1372	4ft 6in	1422	4ft 8in
Lower edge of upper band to:				
centre of sheave pin	375	1ft 23/4in	381	1ft 3in
Mast section at:				
diameter at sheave pin – clause F.2.4.e	51	2in	54	21/8in
diameter at forestay inter-section	76	3in	79	31/8in
underside of deck to 76mm (3in) above lower black band	89	31/2in	92 x 92	35/8 x 35/8in
Width of black bands	51	2in	no max	
Heel (excluding tongue)	76 x 51	3in x 2in	89 x 89	31/2 x 31/2in
Flat on back of mast for sail track	19.5	3/4in	20.0	3/4in

- d. Reducing or scalloping the mast below a straight line drawn between the minimum cross sections at the measurement points is not allowed. The diameter of the **mast** at the main halyard sheave pin shall be a minimum of 51mm (2in) including any masthead fitting and shall be a maximum of 54 mm (2 1/8in) excluding any masthead fitting.
- e. The 19.05mm (3/4in) flat on the back of the **mast** to accommodate the sail track shall extend to within 60mm (2 1/8in) of the main halyard sheave pin. Masts shall conform to a **tip weight** of not less than 11.8kg (26lbs) including correctors permanently attached to the mast and /or fittings. (see Appendix B (page 37)).

F.2.5 FINISH

- a. Black bands shall be painted on the **mast** in accordance with measurements given in F.2.4.
- b. **Masts** 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** shall be made of solid construction using fir or spruce.
- b. The **boom** 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** 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.
- e. **Booms** may be protected against chafe by the shrouds by the fitting of a section of protection on each side of the **boom** with a maximum size of 200mm (8in) in length measured along the **boom** fitted on the surface of the **boom** structure with a maximum thickness of 3mm (1/8in).

F.3.3 FITTINGS

- a. The **boom** shall be fitted with a sail track.
- b. Tackles to adjust the tension of the luff, the leech and the foot of the mainsail may be fitted. Control lines may be carried vertically through the **boom**. Turning blocks can be fitted inside the **boom** structure if positioned outside the **boom** black band or if positioned within 200mm (8in) of the aft face of the **mast** (F.3.4.a).
- c. The **boom** shall be attached to the mast with a gooseneck fitting. The **boom** side of the gooseneck fitting can be installed inside or on the outside of the **boom**. If fitted on the outside of the **boom** the gooseneck fitting cannot be inlaid into the **boom** structure. If fitted inside the **boom** the gooseneck fitting shall consist of a spigot with a maximum square cross section of 15mm x 15mm or a circular cross section of 15mm diameter and may be inlaid into the boom to a maximum length of 200mm from the aft face of the **mast** (F.3.4.a). The gooseneck fitting shall be positioned such that the top of the sail track on the **boom** shall be at or above the top of the lower black band.

MAST PLAN.

SCALE :- 1" = 1 FOOT.

(ALL MASTS MADE AFTER 31ST DECEMBER 1963 TO COMPLY WITH THIS PLAN.)

MAST TO BE SOLID WOOD. (IT MAY BE SAWN LENGTHWISE, GRAIN REVERSED & GLUED.)

DIAMETERS :- MINUS 0. PLUS $\frac{1}{8}$
LENGTH :- MINUS $\frac{1}{4}$ PLUS 0.

MAST MATERIALS - FOR CR SERVICE

3/4" WIDE FLAT SURFACE ON AET FACE TO TAKE TRACK.

AND REDUCING OR SCALLOPING BELOW THE STRAIGHT LINE BETWEEN THE MINIMUM CROSS SECTIONS AT THE MEASUREMENT POINTS

SECTION AT SHEAVE

FULL SIZE

MAXIMUM DIAMETER 2 1/8"
MINIMUM DIAMETER 2"

SECTION AT FORESTAY.

SECTION AT DECK.	MAXIMUM	3 5/8" SQUARE
FULL SIZE.	MINIMUM	3 1/2" DIAMETER

SPREADERS: 2'-0" IN LENGTH FROM SIDE OF MAST TO GROOVE FOR CAP SHROUD, TO BE FITTED TO MAST NOT LESS THAN 8'-0" OR NOT MORE THAN 10'-0" ABOVE LOWER BLACKBAND.

JUMPER STRUTS:- $\frac{l}{3}$ IN LENGTH FROM SIDE OF MAST TO GROOVE FOR STAY, ANGLE OF JUMPER STRUTS 100° PLUS OR MINUS 10°

BLACK BANDS: 2 IN WIDTH TO BE PAINTED ON MAST AT POSITIONS SHOWN.

RULES IN CLASS HANDBOOK: - MATERIALS - F.2.3, DIMENSIONS - F.2.4, FINISH - F.2.5, REPAIRS - F.1.3.

Confirmed as an Official Drawing of the XOD Class.
Chairman of Technical Advisory Committee
Captain of the Class

F.3.4 DIMENSIONS

- a. The **boom** shall be constructed straight. **Boom** length measurements shall be taken at the top of the lower black band from the flat on the **mast** to which the **mast** sail track is fitted or, if necessary, the projection of this face to the top of the lower black band, with the **boom** square to the **mast**.

b.

	Minimum (mm)	(ft/in)	Maximum (mm)	(ft/in)
Aft face of mast , at the black band, to:				
inner face of black band	no min		3480	11ft 5in
outer end of gooseneck fitting	no min		914	3ft
Sail track:				
inner end to aft face of mast	no min		305	1ft
outer end to black band	no min		152	6in
Circular boom cross section:				
diameter	70	23/4in	73	27/8in
Rectangular boom cross section:				
depth	76	3in	79	31/8in
width	54	21/8in	57	21/4in
corner radii	6	1/4in	10	3/8in
Width of black band	51	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. The flat to receive the sail track shall not reduce the diameter of the circular **boom** by more than 3mm (1/8in).
- e. Wood packing may be placed between the **boom** and the sail track to enable the sail track to be straight in the way of any straps, strops or fittings around the **boom**. For both round and rectangular section **booms** the height of the **boom** sail track shall be measured from the lowest point of the sail track structure and wood packing (if fitted).

F.3.5 FINISH

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

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	Minimum	Maximum
Including fittings	no min	1981mm (6ft 6in)

The interpretation includes the diameter of the ring or dimension of the apparatus used on a fly away pole system to bring the spinnaker sheet to the end of the

pole.

F.5 WHISKER POLE

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

F.6 STANDING RIGGING

F.6.1 MANUFACTURER (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.
- c. The minimum length of the wire part of the backstay is 5000mm (16ft 5in).
- d. The minimum length of the wire part of each jumper is 4500mm (14ft 9in).
- e. The minimum length of the wire part of the forestay is 4600mm (15ft).

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, shall be fitted to maintain the clearance required by C.6.2.

F.7.3 The mainsheet system is optional provided that:

- a. The mainsheet shall run through a block or blocks attached within 75mm (3ins) 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 jam 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 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

- The **body of the sail** shall be of **soft single ply** construction made of woven polyamide cloth or woven polyester cloth.
- Reinforcement shall consist of any materials permitted for the **body of the sail**.
- The **sail** shall have **3 batten pockets** in the **leech**.
- A **window** or **windows**, if fitted, shall be covered by transparent **ply**.
- The highest point of the headboard shall be adjacent to the **luff** of the **sail**.
- Cross measurement points shall be taken from the **head point** at the **luff** down the **luff** and **leech** in a straight line.
- Loose footed mainsails are prohibited.
- 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

	Minimum (mm)	(ft/in)	Maximum (mm)	(ft/in)
Luff length	7010	23ft		
Leech length	7390	24ft 3in	7620	25ft
Foot length	3325	10ft 11in		
Cross width at 610mm (2ft) (see G.3.1.g)	no min		460	18in
Cross width at 2438mm (8ft) (see G.3.1.g)	1345	4ft 5in	1475	4ft 10in
Cross width at 4880mm (16ft) (see G.3.1.g)	2435	8ft	2590	8ft 6in
Top width including headboard	no min		130	5in
Top batten	no min		610	24in
Lower batten	610	24in	915	36in
Centreline of top batten at the leech measured to the Headpoint	1830	6ft	no max	
Sail slide spacing	no min		610	2ft

Windows - total area	no min		0.5m ²	approx 5ft ²
Distance of window to luff, leech or foot	150	6in	no max	
Sail numbers and class insignia:				
height	375			no max
width	50			no max
Ply weight of the body of the sail	245gsm			no max

G.3.3 IDENTIFICATION

- Sail numbers and class insignia** shall be fixed to each side of the **sail**.
- The class insignia shall conform with the requirements as detailed in the diagram contained in Appendix C (see page 37).

G.4 HEADSAIL

G.4.1 CONSTRUCTION

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

G.4.2 DIMENSIONS

	Minimum (mm)	(ft/in)	Maximum (mm)	(ft/in)
Luff Length	4850	15ft 11in	4880	16ft
Leech length (from the measurement point)	4370	14ft 4in	4420	14ft 6in
Foot length	2235	7ft 4in	2285	7ft 6in
Foot median (from the measurement point)	no min		4610	15ft 11/2in
Foot roach	no min		75	3in
Top width	no min		25	1in
Windows total area	no min		0.5m ²	approx 5ft ²
Distance of window to luff, leech or foot	150	6in	no max	
Batten length	no min		305	12in
Batten width	no min		51	2in
Centre of batten to head point	915	3ft	no max	
Centre of batten to clew point	915	3ft	no max	
Ply weight of the body of the cloth	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.

	Minimum (mm)	(ft/in)	Maximum (mm)	(ft/in)
Leech lengths (from the measurement point)	4800	15ft 9in	4880	16ft
Foot median (from the measurement point)	no min		5410	17ft 9in
Foot length	2970	9ft 9in	3050	10ft
3/4 Width	1295	4ft 3in	1375	4ft 6in
1/2 Width	2210	7ft 3in	2285	7ft 3in
1/4 Width	2770	9ft 1in	2845	9ft 4in
Headboard	no min		114	4 1/2in
Ply weight of the body of the sail	36grmsm ²		no max	
Cloth width	no min		1070mm	42in
Sail numbers				
height	375		no max	
width	50		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 show 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	2000	1-28/2/00
Sail Plan	1998	0-1/4/98

OFFICIAL TEMPLATES

Station Templates

Transom 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 for 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 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 **boat's measurement Certificate**.

MEASUREMENTS

All measurements shall be taken with a Class 1 measurement tape or rule.

APPENDIX B

DEFINITION

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.

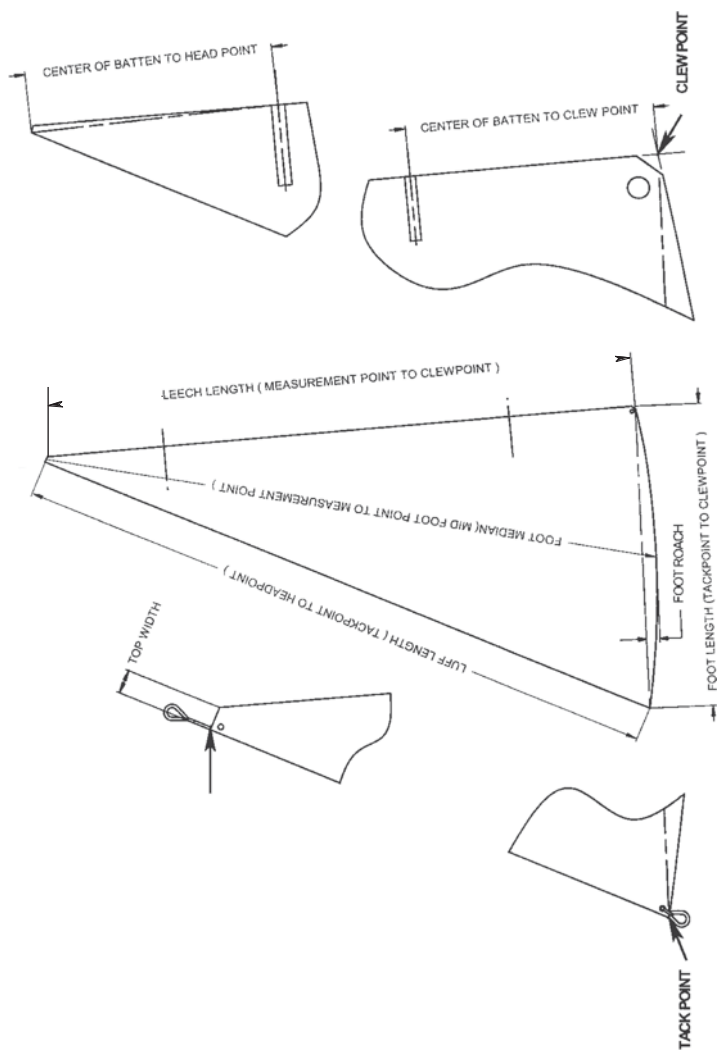
APPENDIX C

CLASS INSIGNIA

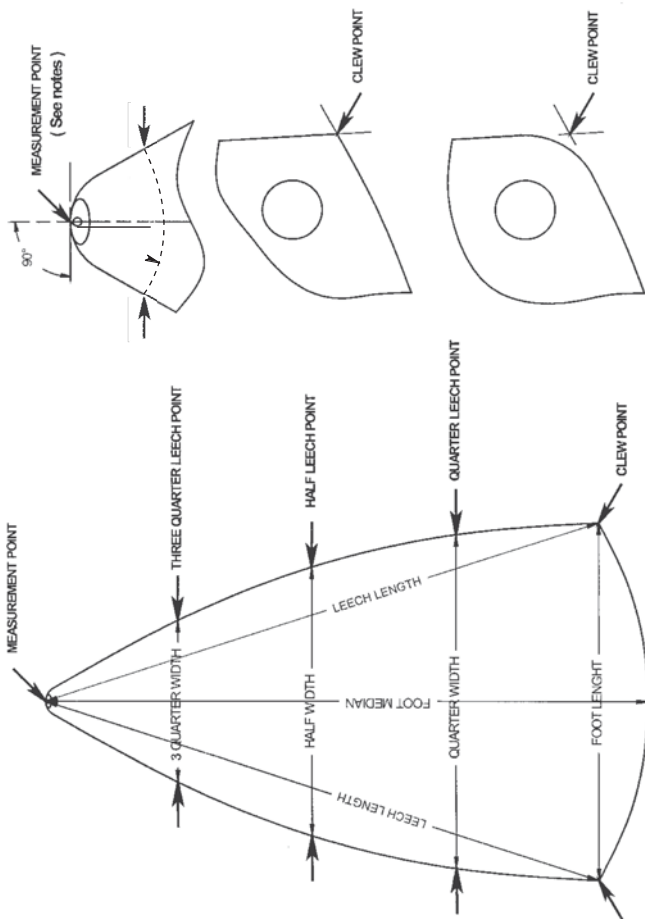
The class insignia shall be an 'X' as shown.

Type face: Helvetica/Arial or similar.



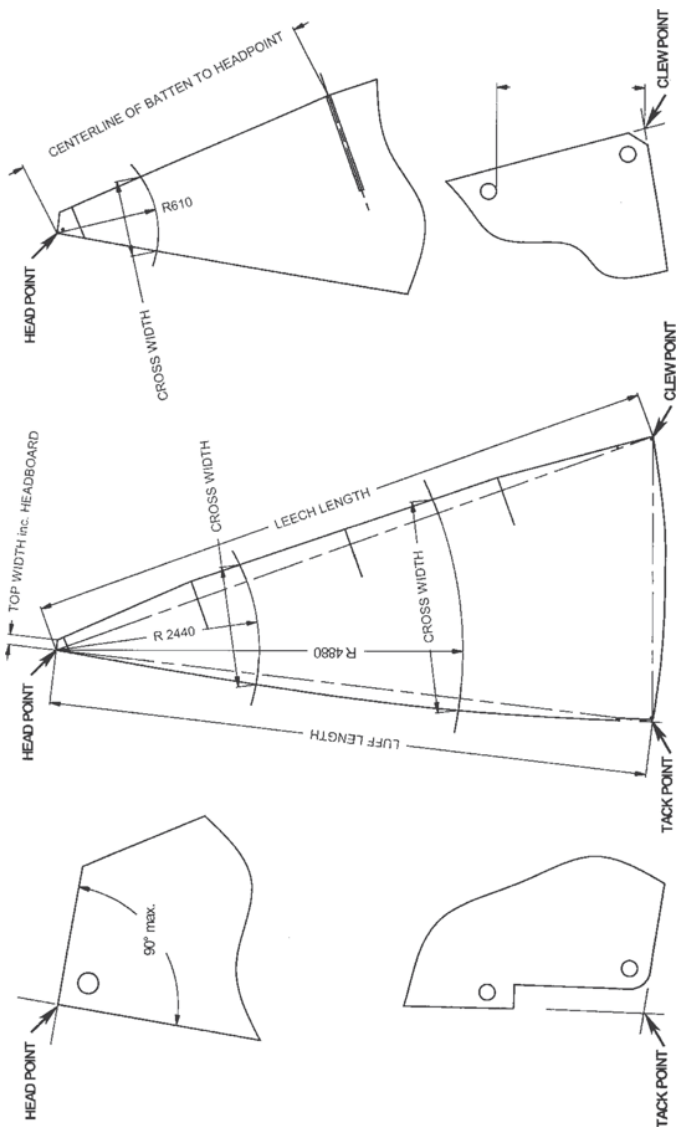


For measurements see Class Rules.
 For detailed information regarding sail measurement refer to the "Equipment Rules of Sailing"



For measurements see Class Rules.

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