



INTERNATIONAL *49er* CLASS RULES

2009



The 49er Class was designed in 1995 by Julian Bethwaite and was adopted as an ISAF International Class in 1999.

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INTRODUCTION

This introduction only provides an informal background and the International 49er Class Rules proper begin on the next page.

49er hulls, hull appendages, rigs and sails are manufacturing controlled.

49er hulls, hull appendages, rigs and sails shall only be manufactured by licensed manufacturers – in the class rules referred to as licensed manufacturers. Equipment is required to comply with the International 49er Builders Construction Manual and is subject to an ISAF approved manufacturing control system.

49er hulls, hull appendages, rigs and sails may, after having left the manufacturer, only be altered to the extent permitted in Section C of the class rules.

Owners and crews should be aware that compliance with rules in Section C is responsibility of the sailor. Rules regulating the use of equipment during a race are contained in Section C of these class rules, in ERS Part I and in the Racing Rules of Sailing.

PLEASE REMEMBER

THESE RULES ARE CLOSED CLASS RULES WHERE IF IT DOES NOT SPECIFICALLY SAY THAT YOU MAY – THEN YOU SHALL NOT.

COMPONENTS AND THEIR USE, ARE DEFINED BY THEIR DESCRIPTION

PART I – ADMINISTRATION

Section A –General

A.1 LANGUAGE

- A.1.1 The official language of the class is English and in case of dispute over the translation, the English text shall prevail.
- A.1.2 The word “shall” is mandatory and the word “may” is permissive.

A.2 ABBREVIATIONS

- A.2.1 ISAF International Sailing Federation
- MNA ISAF Member National Authority
- ICA International 49er Class Association
- NCA National Class Association
- ERS Equipment Rules of Sailing
- RRS Racing Rules of Sailing
- CRH Copyright Holder

A.3 AUTHORITIES AND RESPONSIBILITIES

- A.3.1 The international authority of the class is the ISAF, which shall cooperate with the ICA in all matters concerning these **class rules**.
- A.3.2 ISAF nor the ICA is under any legal responsibility in respect of these **class rules**.

A.4 ADMINISTRATION OF THE CLASS

- A.4.1 ISAF have delegated its administrative functions of the class to the ICA.

A.5 ISAF RULES

- A.5.1 These **class rules** shall be read in conjunction with the ERS.
- A.5.2 Except where used in headings, when a term is printed in “**bold**” the definition in the ERS applies and when a term is printed in “*italic*” the definition in the RRS applies.

A.6 CLASS RULE VARIATIONS

- A.6.1 ISAF Regulation 26.5(f) applies

A.7 CLASS RULE AMENDMENTS

- A.7.1 Amendments to the **class rules** require the approval of ISAF in accordance with the ISAF Regulations after the adoption by a simple majority vote of the members in a general meeting of the ICA and in accordance with its constitution.

A.8 CLASS RULE INTERPRETATIONS

- A.8.1 Interpretation of **class rules** shall be made by ISAF in consultation with the class and CRH
- A.8.2 Interpretation of **class rules** at an event shall be carried out in accordance with the RRS and the race organising authority shall, as soon as practical after the event, inform the ISAF and ICA of such a ruling.

A.9 INTERNATIONAL CLASS FEE AND ISAF BUILDING PLAQUE

- A.9.1 The licensed hull builder shall pay the International Class Fee.
- A.9.2 ISAF shall, after having received the International Class Fee for the hull, send the ISAF Building Plaque to the licensed hull builder.

A.10 LICENSED MANUFACTURERS

- A.10.1 49er equipment shall be manufactured by those appointed and licensed by the CRH in consultation with ISAF and referred to as licensed manufacturers in these **class rules**.

A.11 SAIL NUMBERS

- A.11.1 Sail numbers shall correspond to the number shown on the ISAF International Class building plaque except where stated otherwise in these **class rules**.

A.12 CERTIFICATION

- A.12.1 Written **certification** is not issued.

Section B – Equipment Eligibility

For a **boat** to be eligible for *racing*, it shall comply with the rules in this section.

B.1 CLASS RULES

B.1.1 The boat shall be in accordance with the **class rules**.

B.2 CLASS ASSOCIATION MARKINGS

B.2.1 **Sails** shall carry an ICA **sail** label.

B.3 EVENT INSPECTION

B.3.1 GENERAL

A role of **Equipment Inspectors** at an event is to verify that equipment has been produced by a Licensed Manufacturer and has not been subsequently altered (other than as is permitted within these rules) using whatever inspection methods they deem appropriate, including comparison with a standard or a sample of other equipment presented for Inspection. Should this comparison reveal deviation greater than the Equipment Inspector considers being within manufacturing tolerances the procedure of class rule A.8.2 shall apply. Such situations shall be reported to ISAF and the ICA technical committee for investigation and a decision on the legality of the equipment after the event.

B.4 EVENT LIMITATION MARKS

B.4.1 If an event uses **event limitation marks** these marks shall not be removed during the event. If the **event limitation mark** becomes damaged or lost this shall be reported to the race committee as soon as possible.

PART II – REQUIREMENTS & LIMITATIONS

The **crew** and the boat shall comply with the rules in Part II when *racing*. In case of conflict Section C shall prevail.

The rules in Part II are **closed class rules**. Equipment control and **equipment inspection** shall be carried out in accordance with the ERS except where varied in this Part.

Section C – Conditions for Racing

C.1 GENERAL

C.1.1 RULES

- (a) RRS 50.4 shall not apply.
- (b) RRS 42 shall apply as amended below:
RRS 42.3 is changed as follows:
 - (i) *A boat's crew may pump the mainsail repeatedly to release one or more battens.*
 - (ii) *A boat maybe sculled before the start if the sculling does not propel the boat.*

C.2 CREW

C.2.1 LIMITATIONS

The **crew** shall consist of two persons

C.2.2 MEMBERSHIP

In international events each **crew** member shall be a current member of the ICA.

C.3 PERSONAL EQUIPMENT

C.3.1 MANDATORY

- (a) The boat shall be equipped with **personal flotation devices** (PFD) for each crew member to the minimum standard ISO 12402-5 Level 50 or the notice of race may prescribe alternatives.
- (b) Inflatable buoyancy vests are not permitted.

C.4 ADVERTISING

C.4.1 Pursuant to ISAF Regulation 20.5.2. advertising is permitted as provided in ISAF Regulation 20.

C.4.2 For the purpose of ISAF Advertising Code, the gennaker shall be deemed a spinnaker.

C.5 PORTABLE EQUIPMENT

C.5.1 OPTIONAL

- (a) Timing devices, removable for weighing.
- (b) Maximum two compasses with brackets, removable for weighing.

- (c) Electronic compasses with functions beyond heading and timing are prohibited.
- (d) Spare parts and tools, removable for weighing.

C.6 BOAT

C.6.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The use of shock cord or adhesive tape is in general unrestricted, except that such material shall not be used in such a way as to create a fitting or extend a function.
- (b) Replacement of non-skid tape or paint to the deck moulding and the wings is permitted.
- (c) Any cleat may be replaced with a cleat of any material and of substantially the same size and design.
- (d) Any cleat including integrated fairlead may be replaced with a cleat of any material and of substantially the same size and design.
- (e) Any block may be replaced with a block of the same number of sheaves of similar or greater diameter. Ratchet blocks have no sheave diameter restrictions. Ratchet blocks may be used for the gennaker sheets and as the forward mainsheet block on the boom.
- (f) Any attachment of blocks may be replaced. Attachment for blocks shall be of substantially the same size and design.
- (g) Any other fitting than those mentioned in C.6.1 (e), (f) and (g), shall only be replaced by the same model or a replacement by a licensed builder.
- (h) Replacements shall be fitted in the same position as the standard fitting, or as close as is structurally possible.
- (i) To facilitate advertising, painting and vinyl or similar may be added to the **sails, hull** and **spars** for this purpose except that as per C.7.3(a) hull may not be painted.

C.7 HULL

C.7.1 MODIFICATIONS,

- (a) Maximum 4 foot straps on each wing for which holes may be drilled.
- (b) A block, in the gennaker halyard behind the two floor blocks, with a sheave of not more than 20 mm diameter and attached with a shockcord, which may pass through an additional block with a sheave diameter of not more than 20 mm.
- (c) One tie down loop, bolted through the gunwale flange on each side to be totally within 800 mm to 1000 mm behind the chainplates, to facilitate securing the **hull** to a trailer or dolly.
- (d) Wedges may be fitted under the jib sheet blocks, vang, and cunningham and gennaker halyard cleats.
- (e) Fittings made from flexible material may be added along the rail forward of the chainplates on each side for the hull for the sole purpose of retaining the spinnaker sheets on the boat.

- (f) The existing holes in the jib sheet track may be increased in diameter up to a maximum of 6.5mm. Additional holes are not permitted.
- (g) No holes may be made in the **hull** or deck mouldings except:
 - (i) for fittings specified in C.7.1 (a) and (c)
 - (ii) for the purpose of making repairs.
- (h) The **daggerboard** case packing may be replaced by any compressible material. This packing shall not extend for more than 60mm into the trunk from the top or bottom, or beyond the surface defined by straight edge held perpendicular to the centreline and dragged along the bottom of the **hull**.

C.7.2 MAINTENANCE

- (a) The watertight integrity of the **hull** shall be maintained.
- (b) The breather hole in the centre plinth shall remain open and unrestricted.
- (c) Fittings may be bedded in provided they can be removed without damage.

C.7.3 REPAIR

- (a) In the event of damage to any part of the **hull**, necessary repairs may be made provided repairs are made in such a way that the essential shape and function is not materially affected. Areas of damage repair may be filled, sanded and polished over.
- (b) Replacement of non-skid tape or paint to the deck moulding and the wings is permitted.

C.7.4 FITTINGS

USE

- (a) The wings shall be fully extended.

C.7.5 LIMITATIONS

- (a) Only one **hull** shall be used in an event, except when lost or damaged beyond repair. Any replacement shall only be made with the approval of the Race Committee.

C.7.6 HULL WEIGHT

- (a) The weight of the **hull** including wings, gennaker sock, bowsprit, **rudder** head (including tiller) **rudder** frame, permanently fixed fittings and control lines, foot straps and any **hull corrector weight**, but excluding **daggerboard**, **rudder** blade and non permanently fixed fittings and equipment listed in C.5 shall not be less than 94.0 kg with all items in a dry condition.

C.7.7 CORRECTOR WEIGHTS

- (a) **Corrector weights** of lead shall be permanently fastened to the top surface of the deck beside the mast step when the **hull** weight as in C.7.6(a) is less than the minimum requirement.
- (b) The total weight of such **corrector weights** shall not exceed 2.0kg.

C.8 HULL APPENDAGES

C.8.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) Repairs to chips in the leading and trailing edge may be filled and blended in. (Advisory note: nowhere is re-finishing, fairing of the **daggerboard** and **rudder** blade permitted except to facilitate localised repair in this rule. Painting is not mentioned therefore as these **closed class rule** it is prohibited.)
- (b) The tiller forward of the **rudder** head may be modified.
- (c) The **rudder** head packing may be replaced by any compressible material.
- (d) The tiller extensions may be replaced without any restrictions as to design and material.

C.8.2 LIMITATIONS

- (a) Only one **daggerboard** and one **rudder** blade shall be used during an event except when an item has been lost or damaged beyond repair. Any replacement shall only be made with the approval of the Race Committee.
- (b) In Olympic Games and ISAF Graded events (excluding Grade 2 and 3) the **daggerboard** and **rudder** blade identifiable by the embossed *49er* logo shall used.

C.9 RIG

C.9.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) Replacement of fittings may be made and if needed to facilitate repair the fitting may be modified to accommodate slightly larger fixings.
- (b) Standing **rigging** may be replaced and shall comply with the following:
 - (i) Construction shall be 1 x 7 stainless steel wire rope
 - (ii) The forestay, middle shrouds and lower shrouds shall be of diameter minimum 3.0mm, maximum 3.5mm.
 - (iii) The upper shrouds shall be of diameter 2.3 mm minimum, 2.6 mm maximum
- (c) The lower shroud may be fitted with a turnbuckle between the wire end and the hull fixing point.
- (d) The lower part of the forestay and shrouds, and their attachment fittings may be covered with protective covering; however, the function of the fittings shall not be changed.
- (e) Rig pins may be replaced by quick pins or any other type of pins.
- (f) Tufts or ribbons in the **rigging**.
- (g) The cap shroud and primary shroud may be fitted with a turnbuckle between the shroud plate and the hull fixing point.

C.9.2 LIMITATIONS

- (a) Only one set of **spars** and **standing** rigging shall be used except when an item has been lost or damaged beyond repair. Any replacement shall only be made with the approval of the Race Committee.

- (b) In Olympic Games and ISAF Graded events (excluding Grade 2 and 3) after 1 November 2010, only the 3 piece carbon mast shall be used.

C.9.3 DIMENSIONS

- (a) The forestay length is controlled by laying the forestay along the forward face of the **mast spar** and measuring the extension of the forestay beyond the mast heel. This distance shall be taken between the forward extension of the bottom of heel tenon and the bearing surface of the forestay pin and shall be minimum 425mm and maximum 435mm.

C.9.4 FITTINGS

- (a) Optional mechanical wind indicators.

C.9.5 STANDING RIGGING

USE

- (a) The forestay shall be fitted to the centre hole of the stem head fitting.

C.9.6 RUNNING RIGGING

(a) MODIFICATIONS, MAINTENANCE AND REPAIR

- (i) The trapeze wires may be replaced with stainless steel wire of not less than 2.0 mm diameter or by lines of any material of not less than 3.0 mm diameter.
- (ii) Sheets and lines may be replaced without any restrictions as to length, diameter and taper providing the part is not made of wire.
- (iii) A continuous main sheet and jib sheet is permitted.
- (iv) A fairlead/eye for the end of the mainsheet may be attached to the floor plinth.
- (v) **Mainsail** halyard and **jib** halyard may be replaced by lines of any material.
- (vi) **Mainsail**, **jib** and gennaker halyards may be lead externally
- (vii) A block may be added in the **gennaker** halyard between the **sail** and the **mast spar**, with a sheave of not more than 20 mm diameter. This block may be attached to a shock cord lead through a shackle, existing fitting or loop of rope on the mast and then attached to the **mast spar**.
- (viii) Shockcord tails may be added to ropes.
- (ix) A clip or shackle may be fitted at the end of the **jib** sheet attachment line where it attaches to the clewboard of the **jib**.
- (x) The trapeze arrangement may be modified to include a continuous system and/or adjustable hook height provided that the attachment methods to the mast spar and the wings are not changed.

C.9.7 USE

- (a) Running rigging shall be led through and attached to the fittings supplied for the function.
- (b) Standing rigging shall not be adjusted after the *start*.

C.10 SAILS

C.10.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) **Sails** shall not be recut, except as permitted in C.10.4(a), or otherwise change or affect any aspect of the **sail** or pierce the **sail** for any reason other than effecting necessary repairs or as permitted by these rules.
- (b) The length of the **battens** may be altered to adjust the tension in the batten pocket, provided the **batten** fits within the original pocket and the **sail** is not altered other than by cutting and renewing the **batten** pocket stitching at either end.
- (c) The **sail battens** identified by a unique identification graphic and as supplied by a licensed manufacturer and shall not be altered in stiffness.
- (d) Tell Tales on the sails.
- (e) Chaffing patches may be added to mainsail.

C.10.2 LIMITATIONS

- (a) Not more than 1 mainsail, 1 jib and 1 gennaker shall be used during an event except when a sail has been lost or damaged beyond repair. Any replacement shall only be made with the approval of the Race Committee.

C.10.3 MAINSAIL

(a) IDENTIFICATION

- (i) The national letters and the **sail** numbers shall be black and shall comply with the RRS except where specified otherwise.
- (ii) The national letters and the **sail** numbers shall be wholly between the 3rd and 4th **batten pockets** from the **head point**.
- (iii) The base of the national letters and the **sail** numbers shall be approximately parallel to the **batten pockets**.
- (iv) The **sail** number shall be either:
 - (1) If either of the crew has finished in the top 10 in the preceding 49er world championship their sail number shall be that place, 1st to 9th single digit, otherwise two digits.
 - (2) Otherwise, the sail number shall be that shown on the ISAF hull plaque.
 - (3) Should there be multiplicity in numbers due to C.10.3(a) (iv) (1), a race committee may make an arrangement suitable for the duration of the event involved.

C.10.4 GENNAKER

(a) MODIFICATIONS

The gennaker may be modified by having graphics cut in, which shall not extend within 1000 mm of the **head point** or **tack** and shall not extend into the two outer panels or the **luff**, **leach** or **foot**. Such actions may not alter the original shape of the **sail**.

(b) **LIMITATION**

IOC/ISAF Olympic national flag gennaker may be used for racing except in World Championship events.

Section D – Hull

D.1 MANUFACTURERS

(a) **Hull** and wing manufacturers shall be licensed in accordance with A.10.1

D.2 PARTS

- (a) **Hull**
- (b) **Wings**

D.3 IDENTIFICATION

The **hull** shall carry the manufacturer's serial number displayed on the aft trailing edge of the transom.

D.4 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the ISAF approved Builders Construction Manual

Section E – Hull Appendages

E.1 MANUFACTURERS

(a) **Hull appendage** manufacturers shall be licensed in accordance with A.10.1

E.2 PARTS

- (a) **Daggerboard**
- (b) **Rudder Blade**

E.3 IDENTIFICATION

The **daggerboard** and **rudder** blade shall carry the embossed *49er* logo at the head of each appendage.

E.4 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the ISAF approved Builders Construction

Section F – Rig

F.1 MANUFACTURER

Rig manufacturer shall be licensed in accordance with A.10.1

F.2 PARTS

- (a) **Mast**

- (b) Spreaders
- (c) **Boom**
- (d) Gennaker Pole

F.3 IDENTIFICATION

The **mast**, spreaders, **boom** and gennaker pole shall carry a 49er IHC sticker.

F.4 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the ISAF approved Builders Construction Manual.

Section G – Sails

G.1 MANUFACTURER

Sail manufacturer shall be licensed in accordance with A.10.1

G.2 PARTS

- (a) Mainsail
- (b) Jib
- (c) Gennaker

G.3 IDENTIFICATION

The mainsail, jib and gennaker shall carry the ICA sail label

G.4 MATERIALS, CONSTRUCTION, AND DIMENSIONS

Shall comply with the ISAF approved Builders Construction Manual.

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