



INTERNATIONAL *49er* CLASS RULES

2012



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 manufacture 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 shall, after having left the manufacturer, only be altered to the extent permitted in Section C of the class rules.

Owners and crews shall be aware that compliance with rules in Section C is the responsibility of the competitor. 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 International 49er Class is the ISAF, which shall cooperate with the ICA in all matters concerning these **class rules**.
- A.3.2 Neither the ISAF or the ICA is under any legal responsibility in respect of these **class rules**.

A.4 ADMINISTRATION OF THE CLASS

- A.4.1 ISAF has 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 10.11 applies

A.7 CLASS RULE AMENDMENTS

- A.7.1 In accordance with ISAF Regulations, amendments to the **class rules** require the approval of ISAF after their adoption by a simple majority vote of the members in a general meeting of the ICA held 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. The event organising authority shall, as soon as practical after the event, inform the ISAF and ICA of any such interpretations.

A.9 INTERNATIONAL CLASS FEE AND ISAF BUILDING PLAQUE

- A.9.1 Licensed manufacturers of hulls shall pay an International Class Fee for each hull manufactured.
- A.9.2 The ICA shall, after having received the International Class Fee for the hull, send the ISAF Building Plaque to the Licensed Manufacturer.

A10 LICENSED MANUFACTURERS

- A10.1 49er equipment shall only be manufactured by those appointed and licensed by the CRH, in consultation with ISAF. Such licensees shall be referred to as Licensed Manufacturers within these **class rules**.

A.11 SAIL NUMBERS

- A.11.1 Sail numbers shall be:
 - (a) the number shown on the ISAF International Class building plaque; or
 - (b) where the helm 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; or
 - (c) an ICA issued personal sail number between 20 – 500 which shall be renewed on an annual basis
 - (d) the sail number of another boat owned by the crew and with a hull number greater than 100 which is not competing in that event
- A.11.2 After the sale of the boat, the new owner shall use the sail number as in accordance with the ISAF hull plaque or his own personal number on his sails. In the event of a conflict, Hulls number 1 – 100 shall have the prefix “0” before the sail number.

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 comply with the **class rules**.

B.2 CLASS ASSOCIATION MARKINGS

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

B.2.2 Wings, **mast** sections, **mast** spreaders, **bowsprit**, **daggerboard** and **rudder** blade shall carry an ICA 9er certified equipment 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 reference sample of the type of equipment presented for inspection. Should this comparison reveal deviation greater than what the Equipment Inspector considers being within manufacturing tolerances, the matter shall be reported to the race committee.

Such occurrences shall be reported to ISAF and the ICA technical committee as soon as practical for investigation and a ruling on the eligibility of the equipment for racing.

B.4 EVENT LIMITATION MARKS

B.4.1 Where 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 event race committee as soon as practical.

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 42.3 shall apply as amended below:
Add to RRS 42.3
 - (i) *A boat's crew may pump the mainsail repeatedly to release one or more battens.*
 - (j) *A boat maybe sculled before the start if the sculling does not propel the boat.*
- (c) RRS 49.1 is changed to: 'The **crew** shall use no device designed to position their body outboard other than a **trapeze**, hiking straps and stiffeners worn under the thighs.'

C.2 CREW

C.2.1 LIMITATIONS

- (a) The **crew** shall consist of two persons.
- (b) A **crew** member using a **trapeze** shall be in contact with the **hull** at all times except in the situation of accidental movement and or a manoeuvre.

C.2.2 MEMBERSHIP

In all 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 EN 393 or ISO 12402-5, level 50 or the notice of race may prescribe alternatives.
- (b) The use of inflatable personal flotation devices is not permitted when racing.

C.4 ADVERTISING

C.4.1 Advertising as chosen by the Person in Charge is unrestricted as in accordance with 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.
- (e) Camera recording equipment and attachments, where permitted by the Notice of Race and/or Sailing Instructions and 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 of a permitted fitting.
- (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 substantially of 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. Attachments for blocks shall be of substantially the same size and design.
- (g) Any other fitting than those mentioned in C.6.1 (e), and (f), shall only be replaced by the same model or a replacement model.
- (h) Replacement fittings shall be fitted in the same position as the original 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) the hull shall not be painted.
- (j) Fasteners may be replaced or added, if the function of the fitting or part is not altered and where required to facilitate a repair the fitting maybe modified to accommodate slightly larger fixings.

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 shock cord, which may pass through an additional block with a sheave diameter of not more than 20 mm.

- (c) One tie down loop is permitted on each gunwale flange to facilitate securing the hull to a trailer or beach dolly. The loop shall be permanently fastened to the gunwale flange using screws or bolts. Each loop shall be within 800 mm to 1000 mm behind the chain plates.
- (d) Wedges or risers may be fitted under the jib sheet blocks, **boom** vang, cunningham and gennaker halyard cleats and wing mounted control lines.
- (e) Fittings made from flexible material may be added along the rail forward of the chain plates 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 with any 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 to either the **hull** or fitting.

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.

C.7.4 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.
- (b) The wings shall be fully extended when racing

C.7.5 HULL WEIGHT

- (a) The weight of the **hull** including wings with gennaker blocks attached, gennaker sock, **bowsprit**, **rudder** stock including tiller and **rudder** pintle, **rudder** gantry, permanently fixed fittings and control lines including shock cord, foot straps and any **hull corrector weight**, but excluding **daggerboard**, **rudder** blade, tiller extensions, 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.7.6 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.7.5 (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 are **closed class rule** it is prohibited.)
- (b) The tiller forward of the **rudder** stock may be modified.
- (c) The **rudder** stock packing may be replaced with any 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 the Olympic Sailing Competition, World Championships, Continental Championships, ISAF Sailing World Cup and other ISAF grade 1 events the **daggerboard** and **rudder** blade identifiable by the embossed *49er* logo shall used.

C.9 RIG

C.9.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) 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
- (b) The lower shroud may be fitted with a turnbuckle between the wire end and the hull fixing point.
- (c) 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.
- (d) Rig pins may be replaced by quick pins or any other type of pins.
- (e) Tufts or ribbons in the **rigging**.
- (f) 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 the Olympic Sailing Competition, World Championships, Continental Championships, ISAF Sailing World Cup and other ISAF grade 1 events, only the 3 piece carbon **mast** and the **bowsprit** with the white safety banding at each end and forward end cap fitting 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

- (a) USE
 - (1) The forestay shall be fitted to the centre hole of the stem head fitting.
 - (2) **Standing rigging** shall not be adjusted after the *start*.

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) Shock cord 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 clew board 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.
- (xi) The boom vang take-off block shall be attached to a mast stop.
- (b) USE
 - (1) **Running rigging** shall be led through and attached to the fittings supplied for the function.

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

The national letters and the sail numbers shall be black in colour and applied back to back on a white background to the sail immediately below batten 4 from the head point. The white background shall be ordered and purchased from the ICA and shall not be trimmed or cut. The national letters and numbers shall be placed on the same plane and shall comply with the RRS Appendix G except where specified otherwise.

(b) NATIONAL FLAGS

- (i) All teams when racing in the International 49er Class World Championship, Continental Championship and ISAF Sailing World Cup events shall display the national flag of the helmsperson. The flag shall be placed on the port side of the mainsail between the 3rd and 4th battens from the head point of the sail.
- (ii) Flags shall only be ordered and purchased through the ICA.

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 wings shall only be manufactured by Licensed Manufacturers.

D.2 PARTS

- (a) **Hull**
- (b) Wings
- (c) Gennaker sock

D.3 IDENTIFICATION

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

The wings shall carry an ICA 9er certified equipment label

D.4 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the ISAF approved Builders Construction Manual

Section E – Hull Appendages

E.1 MANUFACTURERS

(a) **Hull appendages**, **Rudder** stock and **Rudder** gantry shall only be manufactured by Licensed Manufacturers.

E.2 PARTS

- (a) **Daggerboard**
- (b) **Rudder** Blade
- (c) **Rudder** stock
- (d) **Rudder** gantry

E.3 IDENTIFICATION

The **daggerboard** and **rudder** blade shall carry the embossed *49er* logo and ICA 9er certified label 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 shall only be manufactured by a Licensed Manufacturer.

F.2 PARTS

- (a) **Mast**
- (b) **Spreaders**
- (c) **Boom**
- (d) **Bowsprit**
- (e) **Boom vang lever**
- (f) **Boom vang arms**
- (g) **Standing rigging**
- (h) **Running rigging**

F.3 IDENTIFICATION

The **mast** sections, **spreaders** and **bowsprit** shall carry an ICA 9er certified equipment label.

F.4 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the ISAF approved Builders Construction Manual.

Section G – Sails

G.1 MANUFACTURER

Sails shall only be manufactured by a Licensed Manufacturer

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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