

# Class Rules

## International Nacra 15 Class Association



The Nacra 15 was designed in 2014 by Nacra and Morrelli & Melvin and was adopted as a World Sailing class in 2018. Appointed International Youth Multihull by World Sailing in 2015.

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## INTRODUCTION

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*This introduction only provides an informal background and the International Nacra 15 Class Rules proper begin on the next page.*

*Nacra 15 hulls, hull appendages, cross beams, trampoline, rigging and sails are manufacturer controlled.*

*Nacra 15 hulls, hull appendages, cross beams, trampoline, rigging and sails shall only be manufactured by Nacra Sailing B.V or a Nacra Sailing Licensed Manufacturer referred to in these rules as a Licensed Manufacturer. Equipment is required to comply with the International Nacra 15 Building Specification and is subject to World Sailing approved manufacturing control system.*

*Nacra 15 hulls, hull appendages, cross beams, trampoline, rigging 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 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.

**“You haven’t won the race, if in winning the race you have  
lost the respect of your competitors.” Paul Elvstrom**

## PART I – ADMINISTRATION

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### Section A – General

#### A.1 LANGUAGE AND DEFINITIONS

A.1.1 The official language of the class is English and in case of dispute over translation the English text shall prevail.

A.1.2 The word “shall” is mandatory and the word “may” is permissive.

A.1.3 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 “*italics*” the definition in the RRS applies and when a term is “underlined” the definition in Class Rule A.1.4 applies.

A.1.4 The following definitions apply:

**Bonding**

To fix in place with glues, resins, sealants or other similar chemical agents.

**Coating**

Application of an additional permanent layer or layers of a substance to a surface. This may require prior preparation of the surface which may involve **sanding**, etching, blasting, but not **fairing**.

**Sanding**

Removal of the outermost surface through use of an abrasive material with or without a **lubricating** agent, which does not alter the shape but may remove localised irregularities or textures in the surface. It may include polishing through the use of a cutting compound.

**Cleaning**

The application and subsequent removal of detergents or similar agents, the purpose of which is to remove residue on the surface.

**Fairing**

The addition and/or removal of material to alter the shape.

**Lubricating**

The application of non-permanent friction reducing compound.

**Polishing**

The application of a non-permanent surface sealing or cutting compound.

**Modification**

Work resulting in a change to the original condition.

**Maintenance**

Work required to retain the original condition, compensating for normal wear and tear in order to achieve its maximum useful life. This includes preventive **maintenance** and may include polishing, **coating**, **sanding**, **lubricating** and **cleaning**, but shall exclude **fairing** and **bonding**.

**Repair**

Corrective action, following unintended damage, required to restore the original condition. This may include **coating**, **fairing** and **bonding**.

## **A.2 ABBREVIATIONS**

- A.2.1 WS World Sailing  
MNA WS Member National Authority  
NS Nacra Sailing B.V. also referred in the rules as Nacra the Copyright Holder  
NSLM Nacra Sailing Licenced Manufacturer  
IN15CA International Nacra 15 Class Association  
NN15CA National Nacra 15 Class Association  
ERS Equipment Rules of Sailing  
RRS Racing Rules of Sailing  
IM International Measurer

## **A.3 AUTHORITIES**

- A.3.1 The international authority of the class is World Sailing, which shall co-operate with the IN15CA in all matters concerning these **class rules**.

## **A.4 ADMINISTRATION OF THE CLASS**

- A.4.1 World Sailing has delegated its administrative functions of the class to the IN15CA.

## **A.5 CLASS RULES CHANGES**

- A.5.1 Changes to the **class rules** shall be in accordance with the IN15CA constitution and approval of World Sailing.

## **A.6 CLASS RULES AMENDMENTS**

- A.6.1 Ammendments to the **class rules** shall be in accordance with the IN15CA constitution and approval of World Sailing.

## **A.7 CLASS RULES INTERPRETATIONS**

- A.7.1 Interpretation of **class rules** shall be made in accordance with World Sailing Regulations in consultation with the IN15CA and NS.  
A.7.2 Interpretation of **class rules** at an event shall be carried out in accordance with the RRS. The event organising authority shall inform World Sailing and IN15CA of any such interpretations.

## **A.8 INTERNATIONAL CLASS FEE AND WORLD SAILING BUILDING PLAQUE**

- A.8.1 Nacra the Copyright Holder shall pay the World Sailing International Class Fee.  
A.8.2 World Sailing shall, after having received the International Class Fee for the **hull**, send the World Sailing Building Plaque to Nacra the Copyright Holder.

## **A.9 CERTIFICATION**

- A.9.1 Written **certification** will not be issued.

## Section B – Boat 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:

- (a) have a World Sailing Building Plaque
- (b) have been manufactured by a Nacra Sailing Licensed Manufacturer.
- (c) be in compliance with the **class rules**.

### B.2 EVENT INSPECTION

B.2.1 A role of **equipment inspectors** at an event is to verify that equipment has been produced by a NSLM and has not been subsequently altered (other than as is permitted within these **class 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 the **equipment inspector** considers being within manufacturing tolerances, the matter shall be reported to the Race Committee or Event Technical Committee. Such occurrences shall be reported to World Sailing and the IN15CA Technical Committee for investigation and a ruling on the eligibility of the equipment for *racing*.

### B.3 EVENT LIMITATION MARKS

B.3.1 If an event uses **event limitation marks** these marks shall not be removed during the event. If an **event limitation mark** becomes damaged or lost this shall be reported to the Race Committee or Event Technical Committee as soon as possible.

## PART II – REQUIREMENTS AND LIMITATIONS

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

The Class Rules in Part II are **closed class rules**, where anything that is not specifically allowed in the **class rules** is prohibited.

**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 49.1 is amended such that both members of the **crew** may use a **trapeze**.  
Add to RRS 49.1; Both **crew** must maintain contact between the **boat** and their body when using their trapezes.

##### C.1.2 LIMITATIONS

- (a) Where the replacement of equipment other than from NS is permitted by these rules, it may be obtained from any supplier provided that the replacement is of a similar weight, size, type, and performs the same function within the tolerances set by Appendix Section H and I. Replacement fittings shall be fitted in the same position as the original fitting
- (b) After **equipment inspection** at an event, **Modifications** permitted in these rules require the approval of the Event Technical Committee.

#### C.2 CREW

##### C.2.1 LIMITATIONS

- (a) The **crew** shall consist of two persons.

##### C.2.2 MEMBERSHIP

- (a) During all International events each **crew** member shall be a current member of the IN15CA.

#### C.3 PERSONAL EQUIPMENT

##### C.3.1 MANDATORY

- (a) For use:
- (i) Whilst afloat, both **crew** shall wear a **personal flotation device** to the minimum standard ISO 12402-5 (Level 50), or USCG Type III, or AUS PFD 2, or EN 393, or equivalent. The use of inflatable personal flotation devices is not permitted
  - (ii) Each **crew** member shall wear a helmet that shall be to the minimum standard EN1385, EN1077, EN 966, ASTM 2020, Snell S98 or equivalent. When Flag T is flown by the Race Committee Rule C 3.1 (ii) is suspended.
  - (iii) Each **crew** member shall carry a safety knife with a blade length of no more than 150 mm that shall be covered.
  - (iv) Each **crew** member shall carry a SOLAS approved whistle.



- (v) The maximum weight permitted of the trapeze harnesses shall be 2.4kg. This changes RRS 43.1 (b).

#### C.3.2 OPTIONAL

##### (a) For use:

- (i) Each **crew** member may wear body protection. If the body protection also acts as a **personal flotation device**, it shall comply with Class Rule C.3.1 (a)(i).

#### C.4 ADVERTISING

C.4.1 Advertising shall only be displayed in accordance with World Sailing Regulation 20 Advertising Code

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

C.4.3 The area between batten number 2 and batten number 4 of the **mainsail** shall be kept free of competitor advertising, and shall be reserved for the Class Insignia and national flag, as specified in Appendix Section K.

#### C.5 PORTABLE EQUIPMENT

##### C.5.1 MANDATORY

##### (a) For use:

- (i) A righting line shall be attached at the dolphin striker rod and shall be a minimum of 10 mm diameter and 5 m in length.
- (ii) A tow line shall be carried of a minimum of 6 mm diameter and 15 m in length.

##### C.5.2 OPTIONAL

##### (a) For use:

- (i) Timing function carried or worn separately in one device, or with timing function combined with other approved functions and services in one device.
- (ii) Boat heading function in one device using magnetic input. If digital/electronic, the device with magnetic input may combine and store boat heading direction together with wind shift detection and timing functions.
- (iii) The device display letters and numerals shall be not more than 30 mm high and show only;
  - boat heading (damping may be adjusted manually),
  - Calculated wind direction determined from manual input and adjustment of tacking angles manually for windshift detection),
  - time,
  - race timing information,
  - identification,
  - battery condition, system error, adjustment and calibration.
- (iv) Race timing information may be transmitted by sound. The electronic/digital devices shall not deliver, store or correlate information in any way except as described in this section
- (v) Magnetic compasses having no electronics
- (vi) Camera recording equipment and attachments and/or race tracking equipment (GPS) where permitted by the Notice of Race and/or Sailing Instructions.
- (vii) Spare parts, tools, shockcord, rope, blocks, rings, and plastic balls.



## C.6 BOAT

### C.6.1 MODIFICATIONS

- (a) Shockcord with a maximum diameter of 5 mm, rings, ropes of any length and diameter, plastic balls, and blocks with a maximum sheave diameter of 20 mm may be added for the following functions.
  - (i) lift the cunningham block system and/or trapezes and/or pull out the jib sheet.
  - (ii) lead the jib sheets, trapezes, trapeze take up, tack line, righting line, rotation of the mast spanner, gennaker sheets, jib halyard, gennaker halyard, mainsheet, cunningham line.
  - (iii) take up within the beams.
  - (iv) dampen the tiller bar.
  - (v) create mast rotation marks.
  - (vi) Shockcord and ropes may also be used to secure items, to prevent catching of any part and in the place of washers.
- (b) Adhesive tape may be applied above the line of **flotation trim** for **maintenance** purposes.
- (c) Fasteners may be replaced or added and, where required to facilitate a **repair** and the fitting may be modified to accommodate slightly larger fixings with the following exception:
  - (i) Beam bolts, shall only be replaced by bolts from a NSLM.
- (d) To facilitate advertising, the application of vinyl, mylar or other plastic film over the surfaces of the **hull, sails and spars** is permitted, provided that the film shall not be specially textured or otherwise manufactured in a way that could improve the character of the flow of water or air inside the boundary layer.
- (e) The righting line may be changed to a minimum diameter of 8 mm and a minimum length of 4100 mm, led under the trampoline with both ends fixed to the front beam.
- (f) Any cleat including integrated fairlead may be replaced with a cleat of similar size and design of any material.
- (g) Blocks, block systems and associated fittings may be replaced with blocks or block systems that must comply with the number of sheaves, dimensions, tolerances and remarks as stated in PART III- Appendices, with the following exceptions:
  - (i) The mainsheet system number of sheaves may be altered to achieve a maximum purchase of 10:1 and a minimum purchase of 8:1, only one ratchet block is allowed in the mainsheet system.
  - (ii) The four supplied blocks for the gennaker sheets, may be changed to any type of block with a minimum sheave diameter of 40 mm and a maximum of 60 mm.
- (h) The attachment fittings of the mainsheet blocks and mainsheet block system, from the strap on the **mainsail** and to the traveller car eye, may be replaced by attachment fittings of any length of ropes, shackles or other items and their combinations. Both ends of blocks and block systems including all attachment fittings, must remain in the straight line from the traveller car eye to the strap on the **sail**.
  - (i) Any other attachment of blocks may be replaced by attachments of substantially the same size and design.

### C.6.2 MAINTENANCE

- (a) **Maintenance** of the **boat** is permitted with the following exception:  
For **hull appendages Maintenance** is only permitted as defined in rule C.8.2.

#### C.6.3 REPAIR

- (a) **Repairs** shall not be used to reinforce an existing part and shall not alter the essential shape, characteristics and function of the original equipment.
- (b) **Repairs** may be carried out without the approval of actions and materials.

#### C.6.4 WEIGHT

The weight of the **boat** in dry condition shall be a minimum of 141 kg. The weight of the boat shall be taken including: **hulls**, the fully **assembled platform**, **hull appendages**, **rig**, fittings and the righting line. But excluding **rig** fittings not permanently fixed, the tiller extension, **sails** and all optional **portable equipment** listed in C.5. The compass bracket shall be included if permanently fixed.

#### C.6.5 CORRECTOR WEIGHTS

- (a) When the **boat** weight is less than the minimum requirement, **corrector weight** of a solid, non-absorbant material shall be used fastened to the inside of the dolphin striker (V Bar) at locations avoiding the intersection of the front cross beam and the dolphin striker rod. The location must allow the application of **event limitation marks** to the corrector weight and allow visual inspections.
- (b) The total weight of such **corrector weight** shall not exceed **4 kg**. The weight of materials used to fasten the **corrector weights** shall not be included in the **corrector weights** calculation.

#### C.6.6 LIMITATIONS

- (a)

### C.7 HULL

#### C.7.1 MODIFICATIONS

- (a) Non-skid tape of a thickness no greater than 3mm may be applied to any part of the **hull** and Cross Beams above the line of **flotation trim**.
- (b) Wedges may be fitted under the mast rotation line cleats.
- (c) Stand-up springs or boots may be fitted between the gennaker blocks and the eye-straps on the **deck**.
- (d) Two foot-straps may be fitted to each **hull**, aft of the Rear Cross Beam.
- (e) Holes shall be made in the **hull** or **deck** mouldings only in the following case;
  - (i) For the purpose making **Repairs**.
  - (ii) To fit foot-straps.
- (f) Shockcord may be led through the breather hole in the centre of the top hatches.

#### C.7.2 MAINTENANCE

- (a) **Maintenance** of the **hull** is permitted. The watertight integrity of the **hull** shall be maintained.

#### C.7.3 REPAIR

**Repairs** to the **hull** may be carried out without approval of actions or materials.

#### C.7.4 LIMITATIONS

- (a) Only one starboard **hull** and one port **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 or Event Technical Committee.
- (b) The Manufacturers Mark (Nacra 15 Logo) shall be present on the outside of the stern of each **hull**.
- (c) Serial numbers shall remain legible.

## C.8 HULL APPENDAGES

### C.8.1 MODIFICATIONS

- (a) The rudder winglet screw heads may be **Faired**.
- (b) The tiller extension may be replaced by any tiller extension provided that it is compatible with the NS supplied tiller connector bar universal joint.
- (c) The rope handle of the **daggerboard**, may be replaced by a different rope, with a maximum length of 600 mm and minimum of 6 mm thickness

### C.8.2 MAINTENANCE

- (a) **Maintenance** of **hull appendages** is permitted with the following exceptions:  
 For **daggerboards** and **rudders**:
  - (i) **Coating** is not permitted as part of **Maintenance**.
  - (ii) **Sanding** is permitted on the gelcoat layer on the outermost sides of the **daggerboards** and **rudders**.
  - (iii) **Lubricating** is only permitted for the purpose of reducing bearing friction while raising and lowering the **hull appendages** and may be applied to the surfaces only prior to *racing*.

### C.8.3 REPAIR

- (a) **Repairs** to **hull appendages** may be carried out without the approval of actions and materials.
- (g) **Repair** of a **hull appendage** surface shall only be permitted in the localised area of damage.

### C.8.4 LIMITATIONS

- (a) Only one starboard **daggerboard**, one starboard **rudder**, one port **daggerboard** and one port **rudder** shall be used in 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 or Event Technical Committee.

## C.9 ASSEMBLED PLATFORM

### C.9.1 MODIFICATIONS

- (a) The **jib** sheet and **mainsail** downhaul trim line retraction system may be modified to make them a continuous system to the opposite side of the platform. Additional blocks may be used as specified in Appendix Section I.
- (b) The beam's bolt bedding inside the beam extrusion and casting shall not be adjusted and no filler shall be applied.
- (c) No additional holes shall be made in the Cross Beams.
- (d) Fittings may be replaced with fittings of similar size and design

### C.9.2 MAINTENANCE

- (a) **Maintenance** to the Cross Beams is permitted

### C.9.3 REPAIRS

- (a) **Repairs** to the Cross Beams may be carried out without approval.

### C.9.4 DIMENSIONS

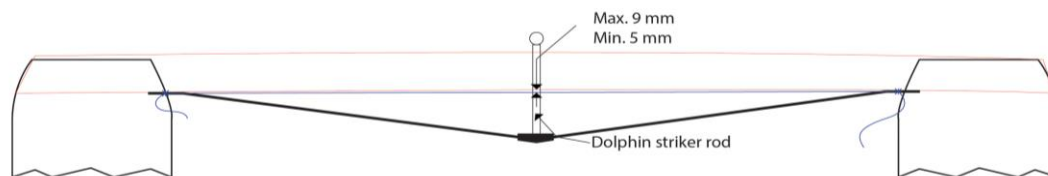
- (a) Front Cross Beam curvature

	Minimum	Maximum
Front Cross Beam deflection	5mm	9mm

Front Cross Beam deflection is the greatest distance between:

- the highest point of the underside of the Front Cross Beam
- and;
- a straight line from the port and starboard bottom points of the Cross Beam

at the intersection with the **hull** taken at 90 degrees to the straight line with the dolphin-striker tensioned and platform assembled, with the mast removed or with the mast standing and the rig tension at 0, and the Front and Rear Cross Beams bedded and tightened into their respective hulls.



## C.10 RIG

### C.10.1 MODIFICATION

- (a) To protect the **mast** from the **rigging**, the use of any tape is permitted.
- (b) The terminals of the **forestay** and **shrouds** and their attachment fittings may be covered with tubular protective covering however the function of the fittings shall not be changed.
- (c) Calibration marks are permitted.
- (d) The trapeze lines may also be fitted through the upper terminal of the **shrouds**.
- (e) Tell-tales or ribbons in the **rigging** may be used.
- (f) Mechanical wind indicators may be used.
- (g) A protective cover made only by tape or sail cloth and attached by adhesive tape with a max size of 300 mm by 350 mm may be fitted over the hounds.
- (h) A fitting may be replaced with a fitting of a similar size and design.
- (i) Additional cleats may be fitted to the mast as per section H.

### C.10.2 MAINTENANCE

- (a) **Maintenance** is permitted

### C.10.3 REPAIR

- (a) In the event of damage to a **rig**:
  - (i) **Repairs to spars, spreaders and standing rigging** may be carried out without approval.
  - (ii) **Repairs to running rigging** may be carried out without approval.

### C.10.4 FITTINGS

#### (a) USE

- (i) The lower hole of the hounds shall be used to fit the **forestay** and **shrouds**.
- (ii) The middle and top hole of the hounds may be used to fit the **trapeze** lines.
- (iii) The **trapeze** lines may also be fitted through the upper terminal of the **shrouds**.

### C.10.5 LIMITATIONS

- (a) Only one set of **spars** and **standing rigging** 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 or Event Technical Committee.
- (b) No additional holes shall be drilled in the **mast** section other than to NS specifications.

#### C.10.6 STANDING RIGGING

##### (a) MODIFICATION, MAINTENANCE AND REPAIR.

- (i) **Standing rigging** may be replaced and shall comply with Appendix Section I.
- (ii) The stay adjusters of **forestay** and **shrouds** may be replaced by a turnbuckle of the following manufactures:
  - Ronstan Calibrated Turnbuckles RF1575 or RSF1481-04
  - NavTec Quickfit lifeline Turnbuckle 316
  - C.S. Johnson 12-100 Stay Adjuster – Calibrated.
  - Stay Master 1/8"
  - Blue Wave Mono Race 4mm

Turnbuckles from other manufacturers may be used if pre-approved by the IN15CA Technical Committee in writing

- (iii) The **shrouds** and **forestay** terminal wire connectors may be replaced by fittings of substantially the same size, weight and structural design.
- (iv) The ring of the Jib Halyard Locking system shall be in the same position as on the standard forestay, of the same size and structural design, with the exception; the ring of the locking system may be fitted to the **forestay** by rope.
- (v) Carbon tubes or other similar cylindrical covers of up to 20 cm in length may be used to cover shroud turnbuckles and chainplates.

##### (b) DIMENSIONS

- (i) Forestay control:

The **forestay** shall be placed along the foreside of the **mast** with the turnbuckle fully extended or the chainplate attached at maximum extension. The distance from the lower end of the section of the **mast** to the centre of the lower **forestay** pin shall be a minimum of 220 mm

##### (c) USE

- (i) **Standing rigging** shall not be adjusted while *racing*.

#### C.10.7 RUNNING RIGGING

##### (a) MODIFICATION, MAINTENANCE AND REPAIR.

- (i) **Running rigging** may be replaced and shall comply as specified in Appendix section I.
- (ii) The **mainsail** downhaul system shall have a maximum purchase of 16:1.
- (iii) The **trapeze** system arrangement is open and may be modified provided that the adjustment rope is a minimum of 5 mm. Attachment methods by shockcord shall use the **hull** trapeze fairlead and via the end caps in the Front Cross Beam.
- (iv) The **mainsail** downhaul trim line may be led through a ring or block with a maximum sheave diameter of 30 mm attached to the **trapeze** system by rope.
- (v) A shackle or snap-shackle may be fitted at the end of the main sheet where it attaches the **mainsail**.
- (vi) A shackle or snap-shackle may be fitted at the end of the jib sheet where it attaches to the clew of the **jib**.

- (vii) The gennaker tack-line inboard end turning blocks may be attached by rope to the **shrouds**, gennaker strap-eye or Front Cross Beam or beam casting with a maximum sheave diameter of 30 mm.
  - (viii) The mast rotation line may be modified to a continuous system.
  - (ix) A rope with a ring may be fitted to the gennaker **clew** for the purpose of leading the gennaker retrieval line through this ring.
- (b) USE
- (i) **Running rigging** shall be led through and attached to the fittings supplied for their function.

## C.11 SAILS

### C.11.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) **Repair** of sails may be carried out without approval with the following exception:
- (i) During an event, **Repair** of **sails** require the approval of the Event Technical Committee.
- (b) The following is permitted without approval:
- (i) Addition of tell tales.
  - (ii) Addition of camber stripes.
  - (iii) **Lubrication** may be used.

### C.11.2 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 or Event Technical Committee.

### C.11.3 MAINSAIL

- (a) MODIFICATION, MAINTENANCE AND REPAIR.

The application of paint, ink, vinyl, mylar or other plastic film over the surfaces of the **mainsail** is permitted to facilitate advertising, provided that it shall not cover the window panels (blue coloured panels in Appendix Section K).

- (b) IDENTIFICATION.

**Sail** numbers shall be any of the following:

- (i) The number shown on the World Sailing International Class Building Plaque on the **boat**, or on any **boat** still owned by the **crew** members.
- (ii) Where the helm has finished in the top 3 in the preceding Nacra 15 World Championship the **sail** number shall be that place, single digit.
- (iii) The national letters and the sail numbers shall be black in colour and applied according to the dimensions as defined in Appendix Section K immediately under batten number 4. The national letters and numbers shall comply with the RRS Appendix G except where specified otherwise in Class Rules Appendix K.

- (c) BATTENS

The **mainsail** battens shall be of the standard set supplied by Nacra Licensed manufacturer only and shall not be altered. A standard batten set shall consist of six battens.

Battens shall be inserted in their matching **batten pocket** and no more than one batten shall be placed in each **batten pocket**.

(d) NATIONAL FLAGS

- (i) All teams when *racing* shall display their national flag. The national flag shall be single sided on starboard if the Mk1, sectional flag. Or placed back to back on the starboard and port side of the **mainsail** if the Mk2 printed flag.
- (ii) National flag placement shall be between batten number 3 and batten number 4 from the head point of the **sail**. National flag fitting dimensions can be found in Section K.
- (iii) The national flag shall be corresponding to the country code displayed in the **sail** number.

(e) USE

- (i) The **mainsail** shall be hoisted on the **halyard**. The Nacra licensed supplied arrangement shall permit hoisting and lowering of the **mainsail** whilst afloat.

C.11.4 JIB

(a) MODIFICATIONS, MAINTENANCE AND REPAIR

- (i) The application of paint, ink, vinyl, mylar or other plastic film over the surfaces of the **jib** is permitted to facilitate advertising, provided that it shall not cover the window panels (blue coloured panels in Appendix Section K).

(b) BATTENS

- (i) The **jib** battens shall be of the standard set supplied by NSLM only and shall not be altered.
- (ii) A standard batten set shall consist of a lower, middle and top batten.
- (iii) Battens shall be inserted in their matching batten pocket and no more than one batten shall be placed in each **batten pocket**.

(c) USE

- (i) The **jib** shall be hoisted on the **halyard**. The NSLM supplied arrangement shall permit hoisting and lowering of the **jib** whilst afloat.

C.11.5 GENNAKER

(a) MODIFICATION

The **gennaker** may be painted or printed for graphics.

(b) USE

A **boat** shall not set the gennaker when sailing on a leg to a windward mark from a leeward mark.

## Section D – Platform

### D.1 PARTS

#### D.1.1 MANDATORY

- (a) Starboard **hull**
- (b) Port **hull**
- (c) Front Cross Beam
- (d) Rear Cross Beam
- (e) Trampoline

### D.2 MODIFICATIONS, MAINTENANCE AND REPAIR

The alterations contained in D.2.1. to D.2.3 may be made by Nacra Sailing, or by anybody adhering to NS technical instructions.



**D.2.1. MODIFICATIONS**

- (a) Fittings as per NS instructions to allow Nacra 15 FCS conversion kit

**D.2.2. MAINTENANCE**

- (a)

**D.2.3. REPAIR**

- (a)

**D.3. MANUFACTURERS**

The parts of section D.1.1 shall only be manufactured by a Nacra Sailing Licenced Manufacturer.

**D.4. IDENTIFICATION**

- (a) The Nacra Sailing Licensed Manufacturer's serial number shall be displayed on the transom of the starboard **hull**.
- (b) Items (c), (d) of section D.1.1 shall carry NSLM identification stickers.

**D.5. MATERIALS, CONSTRUCTION AND DIMENSIONS**

- D.5.1 Shall comply with the World Sailing approved Builders Construction Manual.

## **Section E – Hull Appendages**

**E.1. PARTS**

**E.1.1. MANDATORY**

- (a) Starboard **Daggerboard**
- (b) Port **Daggerboard**
- (c) Starboard **Rudderblade**
- (d) Port **Rudderblade**
- (e) **Rudder** upper-casting including tiller-arm
- (f) **Rudder** lower-casting
- (g) **Tiller-bar**

**E.2. MODIFICATIONS, MAINTENANCE AND REPAIR**

The alterations contained in E.2.1. to E.2.3 may be made by Nacra Sailing, or by anybody adhering to NS technical instructions.

**E.2.1. MODIFICATIONS**

- (a) Starboard and Port NSLM supplied **daggerboards** may be Mk1, Mk2 or a combination.

**E.2.2. MAINTENANCE**

- (a)

**E.2.3. REPAIR**

- (a)

**E.3. MANUFACTURERS**

The parts of section E.1 shall only be manufactured by Nacra Sailing Licenced Manufacturers.

**E.4. IDENTIFICATION**

- (a) The NSLM serial number shall be displayed on the **daggerboards** and **rudder** blades

- (b) **Rudder** castings items (e) and (f) and shall carry imbedded Nacra logos.
- (c) **Tiller-bar** item (g) shall carry a NSLM identification sticker.

#### **E.5 MATERIALS, CONSTRUCTION AND DIMENSIONS**

Shall comply with the World Sailing approved Builders Construction Manual.

## **Section F – Rig**

### **F.1 PARTS**

#### **F.1.1 MANDATORY**

- (a) **Mast**
- (b) **Spreaders**
- (c) **Boom**
- (d) **Bowsprit** including snuffer ring and bridles
- (e) Compression post
- (f) **Gennaker** snuffer bag

### **F.2 MODIFICATIONS, MAINTENANCE AND REPAIR**

The alterations contained in D.2.1. to D.2.3 may be made by Nacra Sailing, or by anybody adhering to NS technical instructions.

#### **F.2.1. MODIFICATIONS**

- (a) Mastfoot update as per NS instructions.

#### **F.2.2. MAINTENANCE**

- (a)

#### **F.2.3. REPAIR**

- (a)

### **F.3 MANUFACTURERS**

The parts of section F.1 shall only be manufactured by a Nacra Sailing Licensed Manufacturer.

### **F.4 IDENTIFICATION**

Items (a), (b), (c), (d) and (e) shall carry a NSLM identification sticker.

### **F.5 MATERIALS, CONSTRUCTION AND DIMENSIONS**

Shall comply with the World Sailing approved Builders Construction Manual.

## **Section G – Sails**

### **G.1 PARTS**

#### **G.1.1 MANDATORY**

- (a) **Mainsail**
  - (i) Standard batten set
- (b) **Jib**
  - (i) Standard batten set
- (c) **Gennaker**

**G.2 MODIFICATIONS, MAINTENANCE AND REPAIR**

The alterations contained in G.2.1. to G.2.3 may be made by Nacra Sailing, or by anybody adhering to NS technical instructions.

G.2.1. MODIFICATIONS

(a)

G.2.2. MAINTENANCE

(a)

G.2.3. REPAIR

(a)

**G.3 MANUFACTURERS**

Sails of section G.1.1 shall only be manufactured by NSLM.

**G.4 IDENTIFICATION**

The NSLM serial number shall be displayed on the **mainsail, jib** and **gennaker**

**G.5 MATERIALS, CONSTRUCTION AND DIMENSIONS**

Shall comply with the World Sailing approved Builders Construction Manual.

## PART III – APPENDICES

The rules in Part III are **closed class rules**. Measurement shall be carried out in accordance with the ERS except where varied in this Part.

### Section H: MANUFACTURED PART LIST

The following components shall comply with the building specification in force at the time of manufacture. As required, components shall have identification stickers attached by the builder at the time of manufacture or by the measurer:					
Qty	Component	Associated Hardware	Iden. sticker	Ident. Nr.	Options or tolerances
<i>(Where no comment as per class rules)</i>					
2	<b>Hull</b>		Required	Yes	Nacra Licensed suppliers only
2		Mast rotation Clamcleat CL268			CL823 Wedge
2		Gennaker Sheet Block			40-60mm
		Pro Grip			Nacra Licensed suppliers only
2		Rear Inspection Hatch			5" / 125mm cut out, Open Manufacturer
1	<b>Front Cross beam</b>		Required	No	Nacra Licensed suppliers only
2		Gennaker Sheet Block			40-60mm
1		Tack-line cheek HK233			Harken Licensed suppliers only
1		Gennaker Tack-line cleat HK468			Harken licensed suppliers only
2		Jib sheet swivel base HK241			Harken licensed suppliers only
1		Jib track Car HK2700 + HK 406			Harken licensed suppliers only
1		Jib strop block HK406			16-29mm ±2mm
1		Jib track			Nacra Licensed suppliers only
1	<b>Rear Cross Beam</b>		Required	No	Nacra Licensed suppliers only
1		Traveller track car HK2738			Harken licensed suppliers only
1	<b>Mast</b>		Required	No	Nacra Licensed suppliers only
1		Gennaker Halyard Cleat HK2156			Harken Licensed suppliers only
2		Downhaul sheave micro HK160			Harken Licensed suppliers only
1		Downhaul single HK348			29mm ±2mm
2		Downhaul Pivoting HK395 Or Spinlock PXR0206/VP			Harken / Spinlock Licensed suppliers only
2		16:1 Tail Cleat			Clamcleat CL211
1	<b>Spreaders (6 components)</b>		Required	No	Nacra Licensed suppliers only
1	<b>Boom</b>		Required	No	Nacra Licensed suppliers only
1		Clamcleat Outhaul CL277			
1		Boom Gooseneck U-fitting			Nacra Licensed suppliers only
1	<b>Compression Post</b>		Required	No	Nacra Licensed suppliers only
1	<b>Trampoline</b>		Required	No	Nacra Licensed suppliers only
2		Gennaker Haylard Guiders			16 – 29mm ±2mm
2					Kickbars, Nacra Licensed suppliers only
1	<b>Gennaker Pole</b>		Required	No	Nacra Licensed suppliers only
1		Snuffer ring			Nacra Licensed suppliers only
1		Tack-line stand-up HK349			29mm ±2mm
1		Jib Car Cleat			Clamcleat CL211
1		Jib sheet cheek block HK416			16mm ±2mm
		Jib Tack Downhaul Cleat			Clamcleat CL236
1	<b>Gennaker Snuffer Bag</b>		Required	No	Nacra Licensed suppliers only
2	<b>Daggerboard</b>		Required	Yes	Nacra Licensed suppliers only
2	<b>Rudder Blade inc winglet</b>		Required	Yes	Nacra Licensed suppliers only
2	<b>Rudder system - upper - incl. rudder arm</b>				Nacra Licensed suppliers only
2	<b>Rudder system - lower</b>				Nacra Licensed suppliers only
1	<b>Tiller-Bar inc Mechanical Universal Joint</b>		Required	No	Nacra Licensed suppliers only
1	<b>Tiller Extension</b>		None		Open excluding Tiller Ext UJ

Section H Continued.

1	Mainsail		Required	Yes	Nacra Licensed suppliers only
		Batten set	Required	No	Nacra Licensed suppliers only
1		Country Flag	Required		Nacra Licensed suppliers only
1	Jib		Required	Yes	Nacra Licensed suppliers only
		Batten set	Required	No	Nacra Licensed suppliers only
1	Gennaker		Required	Yes	Nacra Licensed suppliers only

## Section I: RIGGING LIST

Running Rigging	Size			Material/Associated Hardware		Options or tolerances
	Qty	length	Min diam	core	cover	
Mainsheet with split-tail 1:10	1		8			8mm - 6mm Tapering allowed within blocks and a split tail $\pm 0.2$ mm diam.
	1			HC8454		Harken Licenced Suppliers Only
	1			HK2762		Harken Licenced Suppliers Only
Gennaker Halyard	1		5			5mm - 3mm taper upwards of Gennaker mast cleat with sail hoisted
Main Halyard	1	17000	5			$\pm 0.5$ mm diam. and $\pm 2000$ mm rope length
	1			Ring w/shackle		Nacra Licensed suppliers only
Jib Halyard	1		3			$\pm 0.2$ mm diam. 500mm max x 1.5mm hook attachment line
	1			S-hook jib		Nacra Licensed suppliers only
Mainsail Downhaul	1		4			Max 16:1 Purchase
Mainsail Downhaul tail	2		6			$\pm 0.2$ mm diam.
	2			HK406		16mm $\pm 2$ mm
				Optional Continuous System		16 – 29mm $\pm 2$ mm
Mainsail Outhaul	1		4			$\pm 0.5$ mm diam.
Gennaker Sheet	1		8			Min 4mm taper max 500mm from sheet ends or mid point tail min 4mm x max 500mm $\pm 0.2$ mm diam.
	4			Genneker Sheet blocks		40-60mm
Gennaker Tack-line	1		5	Dyneema®	Poly/Nylon	5mm - 3 mm $\pm 0.2$ mm diam taper forward of tack-line cleat.
				Optional Tack Line turning blocks		16 – 29mm $\pm 2$ mm
Jib sheet	1		6			5mm $\pm 0.2$ mm diam.
	1			HK 404		16 – 29mm $\pm 2$ mm
Jib Sheet Thin			3			$\pm 0.2$ mm diam.
	1			HK 348		29mm $\pm 2$ mm
	1			Shackle		Screw or snap shackle
Jib Tack Line	1		3			Max 3:1 purchase
Jib Tack tie	1					Soft material only
Gennaker head, block line	1		3	Dyneema®		$\pm 0.2$ mm diam.
	1			HK 348 29mm		$\pm 2$ mm diam. sheave
Gennaker Bale	1		3	Dyneema®		$\pm 0.2$ mm diam.
Mast Rotation line	1		3			
	1			Ring max. diameter 30mm		$\pm 5$ mm inside diam.
				Optional continuous system		16 – 29mm $\pm 2$ mm
Gennaker Tack-line release	1		3			
	1			Ring max. diameter 30mm		$\pm 5$ mm inside diam.
Hiking strap tie	3		3			$\pm 0.2$ mm diam.
Righting line	1	5000	10			4100mm x 8mm $\pm 0.2$ mm diam. As per C.6.1 (c)
Helm Trapeze shockcord	2		4	Shockcord		$\pm 0.5$ mm diam. shockcord.
Gennaker halyard shockcord	1		3	Shockcord		$\pm 1$ mm

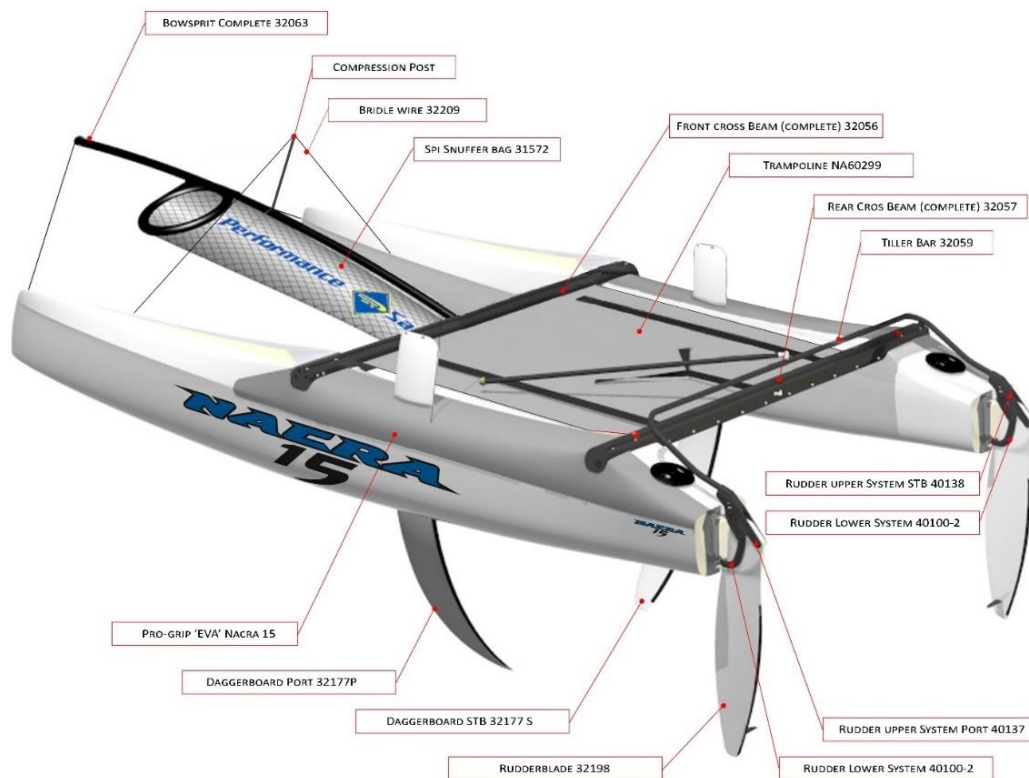
Gennaker Tack-line shockcord	1		3	Shockcord		± 1mm
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Running Rigging	Size (mm)			Material/Associated Hardware		Options or tolerances
	Qty	Length	Diam	Core	Cover	
<i>Front cross beam rigging</i>		mm	mm			<i>(Where no comment as per class rules)</i>
<i>(optional) Jib Sheet and Mainsail Downhaul retraction system</i>	2			HK 406		16mm ± 2mm
<i>(optional for continuous system)</i>	2			HK404 / HK406		C.9.1 (a) 16-29mm ±2mm
<b>Shockcord block line</b>	2		1.5			
<b>Retraction shockcord</b>	2		3	Shockcord		± 1mm
<b>Crew Trapeze shockcord</b>	1		4	Shockcord		± 1mm
<b>Trapeze adjuster ropes</b>	4		5			± 0.5mm
<i>Rear cross beam rigging</i>						
<i>(optional) Chicken line</i>	2		5			
	2			HK 404		16mm ± 2mm
<i>(optional) Retraction shockcord</i>	1					
<i>(optional) Shockcord block tie rope</i>	2					

Standing rigging	Qty	Diam.	Material	Associated Hardware	options or restrictions
		mm			<i>(Where no comment as per class rules)</i>
<b>Forestay</b>	1	4	Standard 1 x 19 stainless steel wire		±0.05 mm in diam. Length minimum 5570mm & maximum 5590mm
	1			Stay Adjuster	C.10.3 (a) (ii)
<b>Bridle</b>	2	3	Standard 1 x 19 stainless steel wire		Nacra Licensed suppliers only
	1			Bridle fitting NA31698	Nacra Licensed suppliers only
<b>Shrouds</b>	2	4	Standard 1 x 19 stainless steel wire		diam. ±0.05 mm.
	2			Stay Adjuster	C.10.3 (a) (ii)
<b>Diamonds</b>	2	3	Standard 1 x 19 stainless steel wire		diam. ±0.05 mm.
<b>Bowsprit bridle</b>	2	2.5	Standard 1 x 19 stainless steel wire		Nacra Licensed suppliers only
<b>Bowsprit mid-bridle</b>	2	3	Dyneema or Polyester		±0.2 mm diam.
<b>Snuffer bag line</b>	1	3	Dyneema or Polyester		±0.2 mm diam.
<b>Tramp laces rear</b>	1	3	Dyneema or Polyester		±0.2 mm diam.
<b>Tramp laces side</b>	2	3	Dyneema or Polyester		±0.2 mm diam.
<b>Trapeze lines</b>	4	2.5	1 x 19 stainless steel wire	Open, see C.10.4 (a)(v)	±0.05 mm diam. Minimum length 5000mm

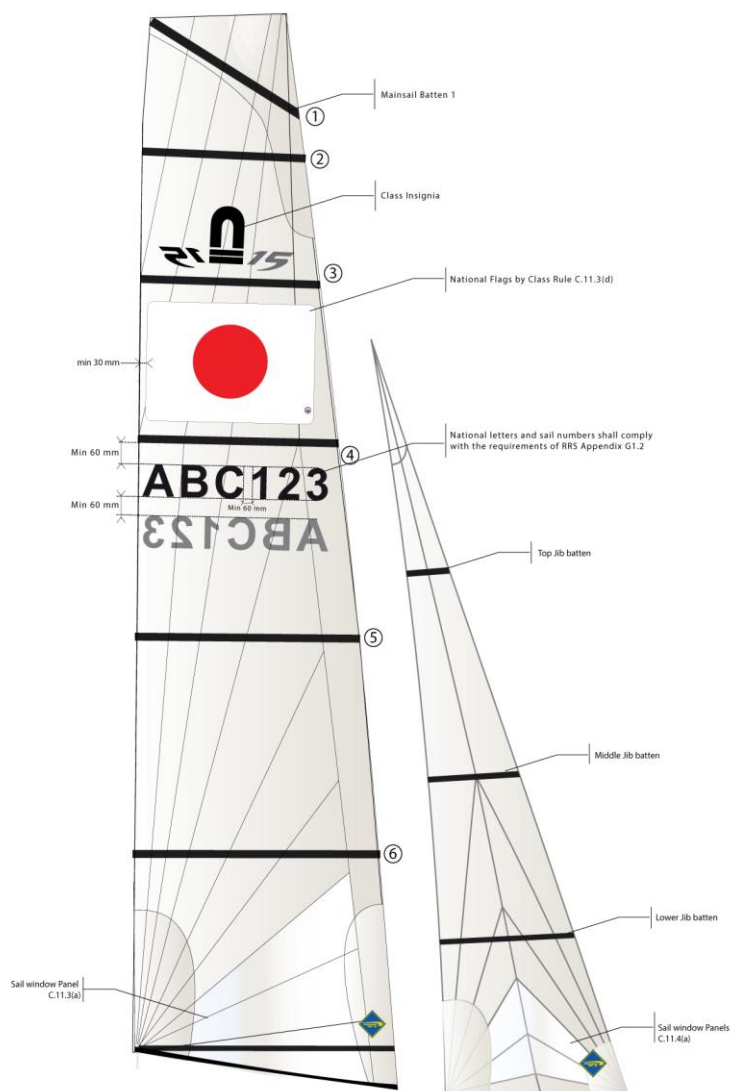
(1) Length is the distance taken between the bearing surfaces of the rigging.

## SECTION J: NACRA 15 HULL ARRANGEMENT





## Section K: NACRA 15 SAIL ARRANGEMENT



Effective Date: 14 June 2021

Previous issues: 22-09-2019, 08-04-2019, 01-08-2018, 02-10-2017

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