



**Viper 640**  
International Class Association

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## **CLASS RULES**

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

**V4.0 October 5, 2025**

## **INTRODUCTION**

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*This introduction only provides an informal background. The Viper 640 International Class Rules properly begin on page 4.*

### **Strict One Design**

The Viper 640 is a strict one-design keelboat where the true test, when raced, is between helmspersons and crews, and not boats and equipment.

### **Mission**

The Viper mission is to provide a fast, exciting, fun, easy, contemporary, high performance, one-design sport boat that is accessible to a wide range of sailors with a wide range of sailing skills.

### **Guide to Navigating the Rules.**

**Part A - “Fundamental Rules”.** The fundamental rules state simply that you cannot change anything on the boat as it was originally supplied by the builder unless it is specifically allowed in Part B

**Part B – The “Measurement Rules”** specify changes that are allowed to builder supplied boats and provides measurements and specifications that apply to sails and equipment. It also contains certain requirements that apply while racing in Viper regattas including Rule 10.2 that crew cannot be “paid” to sail on a Viper.

**Part C** contains definitions and any interpretations issued by the Technical Committee.

*Have fun out there!! Justin Scott, Tim Carter & Tyler Moore 12-31-2021*

### **Introduction to Class Rules 2004**

*“One of the attractions of the Viper for most owners is that the class rules are very simple and that the boat is strictly one design. The Viper philosophy incorporated in these rules is that “We want to go sailing, not use our time custom rigging our boats. We want an emphasis on sailing skills not differences between boats. We want to win or lose races on the water with the same exact boat as our fellow sailors.*

*The Class Rules are written to prevent any changes from the standard boat that might be perceived to affect performance or boat handling, so that on the water each boat is the same. The few options to the standard boat that are allowed are minor. We want the boats to look and feel the same. A Viper owner should be able to step from one boat to another and feel right at home.”*

*Have fun out there! Kay Van Valkenburg, Justin Scott & Paul Zimmerman. 5-1-2004*

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## ABBREVIATIONS AND LINKS

[VICA – Viper 640 International Class Association](#)

[RRS - Racing Rules of Sailing](#)

[ERS – Equipment Rules of Sailing](#)

[WS – World Sailing](#)

## **PART A – FUNDAMENTAL RULES**

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**1.1** The Viper 640 is a strict one-design keelboat where the true test, when raced, is between helmspersons and crews, and not boats and equipment

**1.2** The Viper 640 shall only be raced with a boat produced by a Builder\* or Builders appointed by the Viper 640 International Class Association (VICA) in compliance with construction plans and/or specifications Issued or approved by the VICA.

**1.3** A Viper 640 shall only be raced with a keel and rudder manufactured from VICA approved molds to VICA specification from by a foil manufacturer approved by the VICA.

**1.4** A Viper 640 shall only be raced with sails supplied by a VICA approved sail maker.

**1.5** A Viper 640 shall only be raced with a mast, boom and sprit fabricated by spar manufacturers approved by the VICA to specifications approved by the VICA

### **1.6**

(a) No changes to the boat supplied by the Builder\* are allowed unless they are specifically permitted by these Class rules.

(b) No alteration or addition may be made to the hull, bulkheads, keel, keel bulb, rudder, standing rigging, running rigging and spars as supplied by the Builder except when such an alteration or addition is specifically authorized by these Class rules.

(c) A Viper 640 shall be raced only with equipment and fittings identical to the fittings supplied with the boat by the Builder unless:

(i) These Rules specifically allow equipment and fittings that differ from those supplied by the Builder.

(ii) These Class Rules specifically allow equipment or fittings that are “equivalent” \* to equipment and fittings supplied by the Builder.

(iii) In accordance with 1.6 (d)

(d) (i) A boat may replace existing fittings or equipment with updated fittings and equipment currently installed on a new boat supplied by the Builder, subject to rule 1.7

(ii) A boat may add moldings, fittings or equipment currently installed on a new boat by the Builder, subject to rule 1.7.

**1.7** No alteration may be made to the location of; equipment, fittings, standing rigging, running rigging, moldings, lockers, spars, or foils as supplied by the Builder except when such an alteration is specifically authorized by these rules.

## **PART B – MEASUREMENT RULES**

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### **2 Weight, Foils, and Inspection Ports**

#### **2.1 Weight**

(a) The Complete Yacht shall weigh no less than 340 kg. The Complete Yacht is defined as the yacht ready to sail including foils, tiller, spars, safety lines, standing and running rigging (one set of sheets only) but excluding sails, portable equipment\*, personal gear and consumables.

(b) If the Complete Yacht weight in dry condition is found to be less than 340 kg, weight shall be added by permanently fixing lead weight by mechanical fasteners and strapped or encased in fiberglass to either side of the structural girder in the forward bilge sump, such that the weight of the complete yacht shall comply with 2.1 (a)

(c) No stripping or lightening of the hull by any means is allowed, including the removal of material from the hull, deck, or bulkheads

## **2.2 Keel & Bulb**

(a) The bulb shall be of lead cast in a VICA approved mold and encased in the VICA approved bulb profile. The total weight of the keel shall be 119 kg +/- 4 kg. The circumference of the keel bulb at its widest point shall not be less than TBD cm.

(b). Keel foil and keel bulb shall not be faired except in accordance with Rule 3.2,3.3 and 3.4

(c) Keel Depth

(i) The depth of the keel as measured by the distance between points K and B shall be 106 cm plus or minus 5 cm. Data Point K is the point where the hull plane intercepts with the aft edge of the keel. Data Point B is the flush surface of the top of the bulb where the trailing edge of the keel is fair with the top of the bulb.

(ii) No permanent material may be added or removed from the top of the keel to alter the depth of the keel. Spacers may be placed between the top plate and the top of a wedge keel to enable a snug fit between keel wedge and wedge receptacle, provided they are easily discernable and easy for a measurer to remove, measure and reinstall.

(iii) The position of the keel wedges may not be altered without permission in writing from the Technical Committee

(c) The lowered and fixed keel shall not extend beyond 44" [111 cm] as measured from the trailing edge exit from the hull to the top of the keel bulb.

(d) The lowered and fixed keel may be shimmed, fixed, and/or stabilized by adding materials between the keel plate and the keel exit from the hull

## **2.3 Rudder and Tiller**

(a) The rudder shall weigh no less than 4.0 kg including tiller and extension.

(b) A rudder tower bracket as supplied by an VICA approved part supplier shall be installed to make the rudder blade vertical on all boats with swept rudder towers (prior to boats built with vertical rudder towers).

(c) The tiller must be an aluminum tube of identical diameter to that supplied by the Builder but can be of any length. The tiller shall be approximately horizontal to the deck for the helm and may include a bend to accommodate the rudder.

(d) The tiller extension does not have to be identical to equipment supplied by the Builder

## **2.4 Inspection Ports**

The Viper 640 has a storage locker in the each of the port and starboard tanks installed by the Builder. Additional watertight inspection ports may be installed on the deck or in the cockpit to provide access to the hull cavity. Storage receptacles are permitted under the port covers.

## **3 Hull and Foil Finish**

### **3.1 Prohibitions on Fairing**

- (a) The hull shall not be faired or refinished except as described in Rule 3.2
- (b) The keel bulb shall not be faired or refinished except as described in Rule 3.2.
- (c) The rudder shall not be faired or refinished except as described in Rule 3.2
- (d) The keel foil shall not be faired or refinished except as described in Rule 3.2 and 3.3
- (e) \* Waxing, polishing and light sanding of the hull, bulb and foils is permitted, provided the intent and effect is only to polish the hull, bulb and foils and does not fair the surfaces, remove imperfections, improve the shape, reduce weight or otherwise improve the performance of the boat. Any use of sanding to polish the hull and foils may only be localized for stubborn stains or scratches.

### **3.2 Repair to Hull and Foils**

- (a) Where a keel, rudder or the hull needs to be repaired, the repair may be faired into the area immediately surrounding the repair. Any repairs to the hull, bulb or rudder foil shall be the same shape and finish as originally supplied by the Builder. If a keel foil is extensively repaired, the fairing shall conform with rule 3.3.
- (b) If a hull, keel, or rudder as supplied by the builder has a substantial imperfection that impedes the competitive performance of the boat relative to the average boat produced by the Builder, the owner may apply to the Technical Committee to approve limited fairing to correct that imperfection. The Technical Committee reserves the right to inspect the boat prior to and after the fairing to ensure that the fairing is limited to that necessary to correct the imperfection. The owner shall be responsible for conveying the boat to a suitable location for inspection.

### **3.3 Fairing the Keel Foil**

- (a) Keels manufactured after December 31, 2021, shall not be faired except as allowed by Rule 3.2 and 3.3.
- (b) The foil of keels manufactured prior December 31, 2021, may be faired, subject to the following:
  - (i) The keel foil may only be faired over the section from 50 mm above the top of the keel bulb to 25 mm below where the keel exits the hull when in the lowered position
  - (ii) Chord Length: At any vertical point on the keel, the chord Length shall not exceed the VICA template and shall not be less than 5 mm shorter than the template. (+0/-5mm)
  - (iii) Chord Width: At any vertical point of the faired keel, the chord width shall not exceed the VICA template and shall not be less than 3 mm thinner than the template on each surface. (+0/-3mm).
  - (iv) The faired keel foil trailing edge shall have a minimum thickness of 3 mm.
  - (v) The faired keel foil may be subject to inspection at any time after fairing by the Technical Committee, or a measurer appointed by the Technical Committee, for compliance with these tolerances and dimensions.

(vi) The shape of keel bulb may not be altered, and the bulb may not be faired except as allowed by rule 3.2 and 3.4

### **3.3 Substantial Imperfection**

(a) If a hull, keel, or rudder has a substantial imperfection that impedes the competitive performance of the boat relative to the average boat produced by the Builder, the owner may apply to the Technical Committee to approve limited fairing to correct that imperfection.

(b) If the Technical Committee grants approval for fairing to correct an imperfection, the boat shall be inspected both prior to and after the fairing by the Technical Committee or their designee to ensure that the fairing is limited to that necessary to correct the imperfection and that the fairing results in the same shape and finish as an average boat supplied by the Builder. The owner shall be responsible for conveying the boat to a suitable location for inspection.

### **3.4 Fairing the Keel**

(a) Keels manufactured after the Class Specified Keel Date may not be faired except as allowed by rules 3.2 and 3.3

(b) The foil of keels manufactured prior to the Class Specified Keel Date may be faired, subject to the following:

(i) The keel foil may only be faired over the section from 50 mm above the top of the keel bulb to 25 mm below where the keel exits the hull when in the lowered position

(ii) The faired keel must match a Class provided Viper 640 keel template within plus 2 mm or minus 1 mm as measured on each side of the keel foil

(iii) The distance from the faired keel's leading edge to its trailing edge measured perpendicular to the leading edge and parallel to its centerline shall be between 350 mm and 359 mm

(iv) The faired keel foil trailing edge shall have a minimum thickness of 3 mm.

(v) The faired keel foil may be subject to inspection at any time after fairing by the Technical Committee, or a measurer appointed by the Technical Committee, for compliance with these tolerances and dimensions.

(vi) The shape of keel bulb may not be altered, and the bulb may not be faired except as allowed by rule 3.2 and 3.4

(c) The Class Specified Keel Date shall be the date of manufacture of the first keel from new molds approved by the Class Association, provided that the International Board and the Technical Committee of the Class Association deems that molds are of sufficient quality that the keel foils will not require fairing. When the molds have been approved and the Class Specified Keel Date is established, paragraph (a) and (b) will be amended to insert the date and paragraph (c) will be deleted without a class vote.

The Keel measurement procedure is described [HERE](#) but is not part of the Class rules.

## **4 Spars and Spar Fittings**

### **4.1 Mast**

(a) \* The mast shall either be a Carbon mast manufactured by Superspar in accordance with VICA specifications or an aluminum mast manufactured by Proctor/Selden prior to 2005 (See Grandfathering Provisions 11.1)

(b) Two measurement bands 24mm minimum width and of color contrasting with the mast shall be located as follows: The upper edge of the lower band shall be 1190mm +/- 10mm above the cockpit floor. The upper surface of the boom groove projected to the mast shall not extend below this point. The lower edge of the upper band shall not be more than 7810mm above the upper edge of the lower band. No part of the mainsail shall extend beyond the lower edge of the upper band.

(c) A Gooseneck supplied by a Class approved manufacturer to a Class approved design may be used to replace the gooseneck supplied with the mast.

#### **4.2 Mast Heel**

Movement of the mast is permitted only in a fore and aft direction. The position of the mast heel shall not be adjusted once a regatta has commenced.

#### **4.3 Spreaders**

(a) Spreaders, supplied by an VICA approved spar manufacturer (or equivalent\*), must be rigidly attached to the mast when rigged.

(b) The length and sweep of the spreaders on carbon masts shall be measured by attaching a line between the upper shrouds at the bearing point with the spreaders. The distance between this line and the aft most point of the track on the mast, measured perpendicular to the mast shall be no less than 280mm.

(c) The length and sweep of the spreaders may not be adjusted in once a regatta has commenced.

#### **4.4 Mast Partners**

(a) Mast chocks are permitted in front of the mast

(b) The aft side of the mast may be secured in the partners with a line and cleat as supplied and positioned by the Builder

#### **4.5 Boom**

(a) The boom shall be a Superspar boom manufactured in accordance with VICA specifications, or a Proctor /Selden boom manufactured prior to 2005 (see Grandfathering provision 11.2).

(b) The boom shall be of constant section throughout and shall not be tapered, cut away or drilled except for the attachment of fittings or lines. Removal of the boom end plugs is prohibited

(c) Boom Measurement Band: A single contrasting measurement band of 12.5 mm shall be placed on the boom 3050 mm when perpendicular from the aft face of the mast.

**4.6** The Sprit shall be made of carbon, complying with VICA approved specifications and supplied by a VICA approved spar manufacturer. The extended length from the center of the headstay pin to the bearing point of the tack line shall not exceed 190cm

## **5 Standing Rigging**

### **5.1 Headstay**

(a) The Headstay shall be made from 4mm 1x19 stainless steel wire.

(b) The maximum length of the headstay shall not exceed 7588 mm measured from the upper bearing point of the T terminal to the bearing point of the lower attachment point.

(c) The length of the headstay shall be adjustable by a closed turnbuckle equivalent\* to as supplied by Builder attached to the headstay chain plate. The headstay length shall not be adjusted on a day of racing after the mainsail has been hoisted for the first time.

## **5.2 Upper Shrouds**

- (a) The Upper shrouds shall be made from 4mm 1x19 stainless steel wire, or 4 mm 1x7 compact strand wire.
- (b) The upper shroud length shall be adjustable by means of open body turnbuckles.
- (c) The spreader end plate shall be vertically restrained on the shroud by crimped ferrules to fix the spreader dihedral angle under high shroud loads.

## **5.3 Lower Shrouds**

- (a) The lower shrouds shall be made from 3mm 1x19 stainless steel wire.
- (b) The lower shroud length shall be adjustable by means of open body turnbuckles; or alternatively a specific shroud adjuster or turnbuckle that is approved by the VICA as a component supplied by the Builder.

**5.4** A hand grip may be installed on the shrouds above an open bodied turnbuckle to assist adjustment. The open body turnbuckles may be secured by attaching the upper and lower turnbuckles together by any means. Turnbuckles may also be locked using scar pins, rings or clevis pins or similar means.

**5.5** Adjustment of shroud lengths when a boat is racing is prohibited.

# **6 Running Rigging**

## **6.1 Line Dimensions**

- (a) Tapered sheets or halyards are prohibited except where pennants and tails are specified in these Rules
- (b) Minimum Diameters are specified in metric measurements.
  - Spinnaker Sheet: 7 mm (9/32")
  - Jib Sheet: 7 mm (9/32")
  - Main Sheet: 8 mm (5/16")
  - Halyards and Spinnaker Retrieval line: 4 mm (3/16")
- (c) The Spinnaker sheet may be tapered on either side for a length of 2 meters from the point where it is attached to the clew.
- (d) In a split tail mainsheet, the two tails may be of any diameter. Any taper between the point where the mainsheet splits and the sheet reaches its full 8mm diameter shall not exceed 24 cm.
- (e) The retrieval line may be tapered for a length of 2 meters from the end
- (f) Where a length is not specified in these rules, running rigging may be of any length.

## **Running Rigging - Mainsail**

### **6.2 Mainsail Halyard and Cunningham**

- (a) The main halyard cleats must be at or near the base of the mast and may be of any type.
- (b) The Cunningham system does not have to be identical to that supplied by the Builder. The purchase system shall not exceed 8:1 and shall only be able to adjust mainsail luff tension. Hardware to direct and cleat the Cunningham control lines shall not be mounted aft of the aftmost surface of the main vertical bulkheads on either side of the mast.

### **6.3 Mainsheet Purchase System**

(a) The mainsheet system shall be one of the following four alternatives:

(i) A split tail mainsheet where the split ends are attached to the aft pad eyes and shall include 5 sheaves (or turning points) as per Diagram A.

(ii) A split tail mainsheet where the split ends are attached to the mid bridle pad eyes and shall include 4 turning points as per Diagram B.

(iii) A constant diameter mainsheet where the end is attached to the block on the mid bridle and shall include 4 turning points as per Diagram C.

(iv) A split tail mainsheet where the split ends and a bridle with a turning point are attached to the aft pad eyes and shall include 5 turning points as per Diagram D.

Diagram A. Split tail mainsheet attached to aft pad eyes



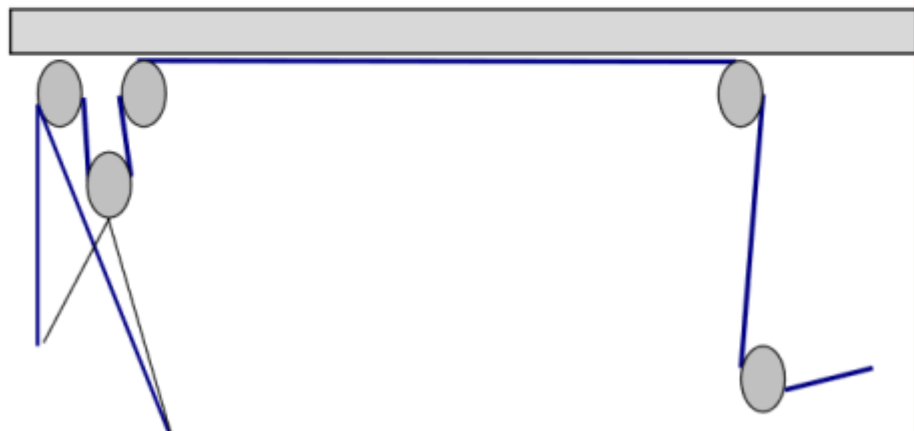
Diagram B. Split tail mainsheet and bridle attached to mid-boat pad eyes



Diagram C. Mainsheet attached to block on mid-boat bridle



Diagram D. Split tail and bridle attached to aft pad eyes



(b) Bridle: The mainsheet must run through a turning point attached to a bridle. The bridle may be of any length but may not be adjustable while racing. The bridle must be attached to either:

- (i) The two mid bridle pad eyes installed by the Builder.
- (ii) The two aft bridle pad eyes installed by the Builder.
- (iii) The gunwales in line with the aft bridle pad eyes (within +/- 5mm fore-aft). Holes may only be drilled in the outer angled gunwale face, and no additional hardware or fittings may be added to the boat.

(c) The mainsheet must pass through at least one turning point located mid-boom, with mid-boom defined as between 1400 mm to 1750 mm as measured aft from the forward face of the boom.

(d) The location of the mainsheet cockpit swivel cam base with turning point and cleat may not be changed as supplied by the Builder but the swivel cam base may be raised up to 5 cm above the cockpit floor. The mainsheet must run through the turning block but may be trimmed from the boom.

(e) Any manufacturer's blocks, ferrules or rings may be used as turning points as long as they are no smaller than 40 mm or larger than 60 mm in outside diameter, except that the small sheave in a fiddle block, if used instead of 2 blocks may be smaller than 40 mm. Only one turning point in the system may be a ratchet block and that ratchet block may be placed anywhere in the system. The mainsheet may only be cleated at the swivel cam base.

(f) Shock cord may be used to control slack in split tails and aft bridles.

#### **6.4 Gnav**

(a) All boats with a carbon mast shall have a gnav. Boats with an aluminum mast shall comply with grandfathering provision, rule 11.1 (b).

(b) The gnav fittings, including car, boom track, tube, mast strap and gooseneck shall be as supplied by the Builder (or equivalent\*). The maximum track length shall be 67 cm. The length of the gnav tube (without end caps) shall be 122 cm +/- 2 cm.

(c) The gnav purchase system may be altered provided that: The gnav shall be adjusted by a maximum of 16:1 purchase and a minimum of 8:1 purchase. A maximum of 8:1 and a minimum of 4:1 purchase shall be located on top of the boom with the dead ends attached to the mast strap. A maximum of 4:1 and a minimum of 2:1 purchase may be located below the boom using additional blocks as required. No part of the purchase system shall be located inside the boom.

(d) The cleats and cheek blocks for the gnav line may be relocated on the side tanks provided they are aft of the cockpit lockers and forward of the mainsheet pedestal.

(e) The gnav control line may be led through a thimble, lead ring, or similar fitting with no moving parts, attached by line to the gunwale or the rope eye strap of the aft spinnaker sheet turning block, for the sole purpose of adjusting the gnav. The gnav control line ends may be joined to create a continuous line.

### **Running Rigging – Jib**

#### **6.5 Jib Halyard System**

(a) The jib halyard cleat must be equivalent\* and in the same location as installed by the Builder. An additional jib halyard cleat may be installed on the deck or aft lip of the foredeck to help prevent the jib halyard from slipping under load.

(b) An additional single purchase (block) may be added to the head of the jib with the upper tail of the halyard terminating at the base of the jib halyard exit sheave, creating a 2:1 purchase on the jib halyard.

(iv) A single sheave block may be installed on the port side tank athwartship of the mast to provide a better angle for the jib halyard to run through the deck sheave. The block may be attached to the existing pad eye or an additional installed pad eye.

### **Running Rigging – Spinnaker**

#### **6.6 Spinnaker Halyard/Retrieval System**

(a) The spinnaker halyard may be a single continuous halyard/retrieval system or separate lines for halyard and retrieval line.

(b) The retrieval line shall be attached to a retrieval cringle on the spinnaker and shall run through the spinnaker throat in the foredeck and through the spinnaker sock to the cockpit.

(c) The spinnaker halyard cleat on carbon masts shall be a Ronstan Halyard swivel cams or equivalent\* in the same location as supplied by Builder or a Harken 150 cam cleat or equivalent\* attached to the mast on a bracket below the spinnaker halyard exit as supplied by the Builder prior to 2009. The material of the attachment bracket is unlimited.

(d) The spinnaker sock may be from any manufacturer provided it is equivalent\* to the spinnaker sock supplied by the Builder.

(e) The spinnaker sock may be attached on either the port or starboard side of the mast and deck.

**6.7** The aft spinnaker sheet blocks shall be attached to the gunwale 200cm forward from the corner of the gunwale and the transom. Spinnaker sheet blocks may be equivalent\* to those used by the Builder.

## **7 Sails**

### **7.1 Royalty Tags**

Sails purchased new after January 1st, 2018, shall have an VICA Royalty tag attached to the starboard tack of the sail.

### **7.2 General**

All sails shall be soft sails using materials specified in these rules.

### **7.3 Windows**

Up to two unwoven transparent windows are permitted in each of the mainsail and headsail

### **7.4 Mainsail**

#### **(a) Measurements**

- (1) The leech length shall not exceed 8200mm.
- (2) The half width shall not exceed 2120mm.
- (3) The three-quarter width shall not exceed 1415mm.
- (4) The upper width shall not exceed 785 mm.
- (5) The distance between the head point and the upper leech point shall be 900mm.
- (6) The top width shall not exceed 310mm.
- (7) No part of the mainsail shall extend above the lower edge of the upper mast measurement band or aft of the forward edge of the boom measurement band.

#### **(b) Battens**

- (i) The use of carbon fiber or carbon fiber composite battens is prohibited.
- (ii) Head Batten – A head batten may support the head of the sail provided that the batten does not extend the sail aft of a straight line between a point measured perpendicular to the luff 310mm aft of the head point, and the upper leech point.
- (iii) Mainsail Battens - No more than five mainsail battens in addition to the head batten shall be permitted in the main body of the sail. The 2 lower mainsail battens shall not exceed 1400mm. All other battens may be of unlimited length. The distance from the head point to the intersection of the mainsail leech and the middle of the top mainsail batten shall be no less than 900 mm.

(iv) Each Mainsail shall come with one only one set of battens. If battens are replaced, they shall be equivalent\* to battens supplied with the sail or currently supplied with new sails. Mainsail battens may not be changed during a regatta unless they are damaged or broken.

(c) Material

(i) The minimum fabric weight shall not be less than 200g/sq. m.

(ii) \* The mainsail shall be constructed from one of the following materials: Woven Dacron or Mylar laminate with a polyester scrim and/or Aramid fibers. The Technical Committee may publish from time to time in section C of the Class rules a list of specific sail cloths allowed or disallowed for the mainsail.

(d) Insignia and Numbers: The mainsail shall have the Viper insignia shown in a prominent position and may have the words "Viper 640" on the sails. The mainsail shall display the sail registration number allotted by the VICA

## 7.5 Headsail

(a) Measurements

(i) The headsail shall be measured to the outside edge of the cloth including tabling, foot roach, etc. Cringles not included within these edges are to be excluded from measurement.

(ii) The luff shall not exceed 6875 mm.

(iii) The Luff Perpendicular shall not exceed 2200mm.

(iv) The width of the sail at the head shall not exceed 50 mm.

(v) 1/2 Girth: The measurement points shall be found by folding forward corner of head to the tack apex and the forward corner of the headboard to the clew apex. 1/2 girth shall not exceed 1265 mm.

(vi) The half width shall not exceed...

(vii) The foot roach and the leech shall be fair curves.

(b) Material:

(i) \* The headsail shall be constructed from Dacron, or a Mylar laminate with a polyester and/or Aramid fibers.

(ii) The minimum weight of the finished fabric shall not be less than 200g/sq m.

(iii) The Technical Committee may publish from time to time in Section C of the Class rules a list of specific sail cloths allowed or disallowed for the headsail.

(c) Battens

(i) The use of carbon fiber or carbon fiber composite battens is prohibited.

(ii) No more than three battens shall be permitted in the headsail. The battens shall divide the leech into equal segments +/- 150 mm. The top batten may be of unlimited length. The lower 2 battens shall not exceed 900 mm.

(iii) A boat may use a selection of up to 3 top battens for the headsail during a regatta. The top batten may be changed or removed during a regatta. The lower two battens may not be changed during a regatta unless they are damaged or broken. If lower battens are replaced, they shall be equivalent\* to battens supplied with the sail.

(d) Head, clew and tack boards are prohibited.

(e) The forestay shall not be detached to attach the headsail.

## **7.6 Spinnaker**

(a) General - The spinnaker shall be asymmetrical in shape. Fittings shall be limited to corner cringles or rings, and retrieval cringles or tabs. Up to 3 Retrieval cringles are permitted.

(b) Measurement

- (i) The length of the luff shall not exceed 9720 mm.
- (ii) The length of the leech shall not exceed 7600 mm.
- (iii) The length of the foot shall not exceed 5625 mm.
- (iv) The half width shall not exceed 5500mm.
- (v) The foot median shall not exceed 9800 mm.

(c) Materials - The spinnaker shall be constructed of woven nylon material. The weight of the finished fabric shall not be less than 40 g/sq m.

(d) The spinnaker shall be launched and retrieved through the spinnaker throat in the foredeck and shall be doused within the spinnaker sock under the foredeck.

(e) The spinnaker sock shall be a tube made of cloth, canvas, canvas mesh or other flexible material attached at one end to the spinnaker retrieval throat in the foredeck and at the other end to a pad eye on the cockpit floor.

(f) In accordance with RRS 77 Appendix G2, the national letters and sail numbers are not required on spinnakers.

## **7.7 Sail Acquisition and Sail Inventory**

(a) \* A Viper 640 owner may acquire up to one complete set of new sails per boat per calendar year (one main, one jib, and one spinnaker) for a boat. A new sail is considered "acquired" for a boat when it is first used in a race on that boat by the owner. The year shown on the registration sticker must be consistent with that date of first use.

(b) An owner in their first year of Viper 640 ownership may in addition, choose to purchase and race with one or more of next year's new sails in advance. In this case only, the year on the registration sticker will be next year. The first year of Viper 640 ownership is the calendar year the boat is first raced by the owner after purchase.

(c) A boat's overall sail inventory of both new and used sails shall include no more than one sail of each type (main, jib, and/or spinnaker) per year as shown on the registration sticker.

(d) Co-owners of boat or owners with multiple boats: Sails are specific to a boat. If a sail is used on a boat, then the sail counts towards the sail inventory of that boat. If an owner uses the same sail on two boats, it counts towards the inventories of both boats. Co-owners may not each have their own sail inventory. This rule does not apply to sails that comply with rule 7.7 (g).

(e) Used Sails

- (i) Used sails may be removed from one boat's inventory and added to another boat's inventory at any time, provided they comply with rule 7.7(c) and 7.8.(b) and (c)
- (ii) A used sail is a previously registered sail. The year on its registration sticker is based on its original registration by the original owner.
- (iii) Any previously used unregistered sail acquired by a boat owner is considered new for purposes of rule 7.7 (a) unless the owner can establish to the satisfaction of the Technical Committee that the sail complies with the spirit and intent of this rule and that the sail should be treated as used and registered as such.

(f) If a like new condition sail is lost, stolen or destroyed and the owner can demonstrate that this places the boat in an uncompetitive position they may apply to the Technical Committee for

permission to acquire an additional new sail. Such application shall be in a form as requested by the Technical Committee who may withhold or grant this permission at their discretion to ensure that no competitive advantage is gained.

(g) Charters / Borrowed Boats

(i) If a Viper 640 owner borrows or charters another owner's Viper 640 and brings their own sails, those sails do not need to count towards the borrowed or chartered boat's inventory except under paragraph (iii) of this rule.

(ii) Competitors who do not own a Viper 640 may acquire and register up to one set\* of new or used sails per calendar year to use on different charter boats or borrowed boats. If they subsequently purchase a boat, any such sails that are retained count towards the owner's inventory.

(iii) If a competitor regularly sails on a borrowed boat or chartered boat with their own sails, then the Technical Committee may at their sole discretion deem that the sails count towards the boat's sail inventory

## 7.8 Sail Registration

(a) Any new sail acquired after December 31, 2010, must have a Class Association "registration sticker" permanently attached to the starboard tack of the sail. All sails acquired prior to January 1st, 2011, may be numbered and signed on the starboard tack by a member of the Class Technical Committee, or a designated Class measurer appointed by the Class Technical Committee.

(b) Transfers - When a used sail's ownership is transferred, the new owner is responsible for registering the sail with the Technical Committee by email as part of the new owner's inventory prior to the next sanctioned regatta the sail is used in.

(c) The unique numbering sequence for a sail registration sticker is Hull No./Sail acquisition year/type. For example, 055/10/J, would indicate hull 55 first race in 2010 a jib. If the sail is later sold, the hull sold to gets added to the front (120/055/10/J). This would track the sail as being sold to hull 120.

(d) Replacement Registration stickers - If a registration sticker is lost or damaged, the owner may apply to the Technical Committee for a replacement sticker. Such application shall be in a form as requested by the Technical Committee.

**7.9 Re-cuts.** A sail that is re-cut, repaired or altered, in a manner such that 33% or more of the material used in the sail is replaced, shall be considered the acquisition of a new sail.

## 7.10 Use

(a) At a Class sanctioned regatta, no more than two suits of registered sails may be used, and no more than one mainsail, jib and spinnaker may be used on any given day, except if there is irreparable damage that renders a sail unusable.

(b) Regatta organizers may require owners to provide sail registration information before the regatta commences.

(c) Only one of each, mainsail, jib and spinnaker shall be hoisted at the same time

## 8 Additional Equipment and Fittings

**8.1** The Following equipment and fittings shall be equivalent to the equipment and fittings supplied by the Builder and may be manufactured by any supplier:

- (a) Turning blocks provided they are the same size provided by the builder, unless otherwise specified in these Class rules
- (b) Cam Cleats, which shall only be replaced by cam cleats unless otherwise specified in these rules.
- (c) Clam Cleats which shall only be replaced by clam cleats unless otherwise specified in these rules.
- (d) Sheet storage bags which may be located on the port and starboard sides of the cockpit or attached to the lip of the cap deck.
- (e) Hiking straps

**8.2** Forward hiking straps may be added for a fourth crew

**8.3** Lines to assist hiking may be attached to the hiking straps, hiking strap pad eyes, lifting eye on top of the keel and/or to the lifting padeyes on port and starboard deck floor. A hiking line may assist a crew member hiking only by being held in the hands. The hiking line may not be attached to the crew by any means.

**8.4 (a)** A line or shock cord may be attached between the top of the headstay turnbuckle or swage and the bow of the boat or molding that supports the sprit pole for the sole purpose of keeping sheets and the spinnaker retrieval line from catching on the bow or headstay.

(b) Tubes and/or a ring may be installed near the spinnaker throat and on the forestay solely for the purpose of easing the hoisting and dowsing of the spinnaker provided that (i) there are no active bearings (ball or roller) and (ii) the device is easily removed.

### **8.5 Compass, Timing Devices GPS and other Electronic Equipment**

(a) All boats shall have a compass on board when racing in accordance with rule 9.1. The compass may be electronic or traditional magnetic. The compass must be a self-contained device and may not make calculations other than whether the boat is headed or lifted.

(b) Boats may carry GPS sensors that provide information about speed over the ground, heading, and distance to the start line provided they are self-contained and do not provide any other tactical or performance calculations to the crew while racing.

(c) Boats may carry timing devices that are either stand alone or incorporated in another device

(d) Self-contained electronic devices shall not use external sensors, transmitters, wired or wireless data sources, and/or power supplies.

(e) An electronic device must not be capable of displaying information about wind speed, wind direction, or lay lines

**8.6** A wind indicator vane may be attached to the mast. A wind indicator shall not be electronic. Ribbons, tape, wool, or similar wind indicators may be attached to the sails and shrouds.

**8.7 (i)** The use of flexible adhesive tape or similar is permitted to prevent the chafe of sails and lines, and to secure shackle pins, cotter pins, rings, clips, knots and similar, provided that tape shall not be used to construct new fittings or modify the function of existing fittings.

(ii) The use of shock cord is permitted to take up slack in halyards and control lines, to secure safety or other equipment in the cockpit, or around the mast, secure dowsed sails or secure turnbuckles, provided that shock cord shall not be used to construct new lines or modify the function of existing lines.

(iii) Clips, ties, bags or short lengths of line may be used to stow or secure safety equipment and personal gear in the cockpit.

**8.8** A kelp stick may be carried on the boat and may be used to clean weed off the keel and rudder while racing. The device shall not be used for any other function on the boat.

## **9 Safety Equipment**

**9.1** The following equipment shall be carried on board when racing:

- (a) One paddle
- (b) A compass
- (c) 20 meters of 6mm diameter or larger towing line
- (d) Any additional safety equipment required by local or national laws
- (e) A functioning VHF handheld radio

**9.2** If any of the safety equipment listed in rule 9.1 is inadvertently lost overboard or broken while racing, the boat may continue to race for the remainder of that day but shall replace the safety equipment prior to the start of the next day's racing.

**9.3** Each crew member shall wear a personal flotation device (PFD), while racing. The PFD shall comply with a minimum standard of ISO 12402-5 (Level 50) or equivalent, or be approved to standard of AS 4758 Level 50, USCG Type III, or US/Canada Harmonized Level 70. Inflatable PFDs are not permitted.

**9.4** All boats are required to have crew safety lines installed under the gunwale in the same position as current boats supplied by the Builder.

**9.5** All boats are required to have a safety line installed in the aft part of the cockpit in the same position as a current boat supplied by the Builder. The aft safety line shall be a minimum diameter of 4mm (approx. 3/16").

## **10 Requirements and Restrictions at Events**

**10.1** (i) A boat participating in a Class sanctioned regatta shall either be owned by a Class Association Member or a person on board designated as skipper shall be a Class Association Member.

(ii) A helmsperson of a boat participating in a Class sanctioned regatta shall be a Class Association Associate Member or a Class Association Member.

(iii) A helmsperson of a boat participating in a Designated Major International Championship shall be a Class Association Member.

**10.2** No helmsperson or crew member may be "paid"\* to sail in any race aboard a Viper. A signed declaration of compliance with this rule by all participants on Viper 640s at a Sanctioned regatta may be required at the discretion of the Executive Committee and in a form it specifies.

### **10.3 Private Coaching**

(a) On the water coaching is not permitted at Class sanctioned events at any time (from the moment the boat has left the dock or mooring) on race days unless it complies with rule 10.3 (b)

(b) A Viper Class Coach boat specifically approved in writing by the Class Regional Executive Committee, or by a Regatta Organizing Authority designated by the relevant Class Regional Executive Committee, may provide coaching to a wide range of competitors, without bias, to enhance all competitors' enjoyment of the event.

**10.4** During any period where the Notice of Race or Sailing Instructions require that boats remain in the water, keels must remain lowered during such period, but rudders may be removed after sailing.

### **10.5 Crew and Crew Substitution**

(a) There shall be a minimum of two persons on board when racing.

(b) The same number of persons shall sail throughout an event. No changes to the constituent team of helm and crew shall be made at sanctioned regattas without written approval prior to sailing from the Regatta Organizing Authority (designated by the Executive Committee) posted on the official notice board. This shall not prevent helm and crew within the same constituent team from rotating roles on the boat.

**10.6** Use of the shrouds and/or mast to promote roll tacking or roll jibing is prohibited.

## **11 Waivers and Grandfathering Provisions**

11.1 Any boat that has spars, sails, rigging or other equipment that complied with Class rules at the time they were installed or supplied to the boat but subsequently do not comply with Class rules due to a change in the Class rules, may apply to the Technical Committee for a waiver to allow the equipment to be used on that boat to race under the Class rules.

11.2 Any boat that needs to repair or replace spars, rigging or other equipment (excluding sails) prior to or during a Class sanctioned regatta such that the boat may not comply with the Class rules may apply to the Technical Committee for permission to use the equipment (excluding sails) to race under the Class rules.

11.3 Boats built prior to September 1st , 2005, may use grandfathering provisions in Appendix B

11.4 A sailor with a physical disability, or reduced mobility due to age, may apply in writing to the Technical Committee for a waiver to allow a device or devices to be installed to assist that sailor sail the boat. The Technical Committee may at their sole discretion allow or disallow the device or propose an alternative device. The Technical Committee shall not approve a device that provides the sailor with a competitive advantage over able bodied sailors. The waiver can be withdrawn at the discretion of the Technical Committee.

### **11.5 Waiver Process**

(a) Any permission or waiver to race with boats or equipment under the provisions of Rule 11.1, 11.2, 11.4 or Appendix B (the Waiver) must be approved in writing by the Technical Committee.

(b) The Waiver may be granted for a specific period, a specific regatta or for an unlimited period. The Waiver may be revoked by the Technical Committee at any time, even if it was previously granted for an unlimited period.

(c) In determining whether to grant the Waiver, the Technical Committee shall consider whether the equipment conveys a more than insignificant competitive advantage to the boat. The Technical Committee may also take into consideration:

- (i) Has a reasonable attempt been made to comply with Class rules?
- (ii) The cost of complying with Class rules
- (iii) The availability of replacement equipment and components
- (iv) The impact on the strict One-Design nature of the Class.
- (v) Any other factors that they consider relevant.

(d) A decision by the Technical Committee to grant the Waiver may be reviewed by the relevant Executive Committee before a boat competes in a National Championship, or the International Board if the boat is attending a World Championship. The Executive Committee (or Board) can decide to revoke the Waiver, but it shall not affect race results prior to the decision to revoke the waiver. A decision to revoke or decline a waiver by the Technical Committee cannot be reviewed by the Board or Executive Committee.

## **Appendix B Grandfathering Provisions for Mark 1 Boats and Pre-2005 equipment**

B.1 (a) A Boat built prior to 2005 (a Mark 1 Boat) may race with the boat's original aluminum mast fabricated by Proctor Masts Ltd. (Selden) which shall be extrusion #3525 with an internal sleeve built in accordance with the Class approved specifications.

(b) Mark 1 Boats with an aluminum mast may use either a Gnav or a Vang. The Gnav shall comply with rule 6.4. The vang shall not be changed from the 8:1 original configuration.

(c) Mark 1 Boats with spars, sails, rigging or other equipment (collectively referred to as equipment) dating from prior to September 1st, 2005, that does not comply with the Class rules may apply to the Technical Committee for a Waiver so that the equipment may be used on that boat to race under the Class rules.

B.2 (a) Boats may sail with a boom manufactured by Proctor/Selden that comprises extrusion #2632, provided it was manufactured prior to 2005.

(b) The boom may be stiffened by inserting a boom sleeve inside the boom or inserting a 42" prave in the track on the underside of the boom.

B.3 (a) A boat that has been faired prior to September 1st, 2005 may apply to the VICA Technical Committee for a Waiver under Rule 11.5 to be allowed to race under the Class rules.

(b) The Technical Committee may decide that no competitive advantage exists and grant the boat a waiver to race under Class rules. The Technical Committee may specify specific work that needs to be done to rectify some competitive advantage conveyed by the fairing to enable the boat to comply with these Class rules. The Technical Committee may determine that the boat does not comply with the Class rules.

## **12 Hull, Sail and Bow Numbers**

**12.1** The sail number and hull number shall be obtained from the VICA or its appointed representative. The sail number shall accord with the hull number unless a different sail number is allocated by the International Board.

**12.2** The Gulf Yachting Association (GYA) is appointed by the VICA to provide sail numbers for Viper 640s competing in specific GYA events in compliance with Appendix A of these rules.

**12.3** A Viper 640 shall carry permanent bow numbers, with 3 numerals, provided by a Class approved vendor in the font, style and colors specified by the Class. The bow number shall be the boat's hull and sail number, unless another number is allocated by the International Board of Governors. The numbers are to be positioned 75mm from the lower edge of the gunwale and 150 mm aft of the bow on both sides.

## **PART C – DEFINITIONS, ADMINISTRATION AND TECHNICAL COMMITTEE INTERPRETATIONS**

### **13 Definitions**

**13.1** The terms “Class Association” or “Class” in these rules shall mean the Viper 640 International Class Association (VICA)

**13.2** The term “Builder” used in these rules shall be a builder or builders appointed by the VICA per rule 1.2. The Builder was Performance Boats from 1996 to 1999 and is Rondar Race Boats from 2006 until further notice.

**13.3** The term “Paid” in rule 10.2 is a derivative of “Pay” as defined in World Sailing Regulation 22

**13.4** Equipment or fittings may be deemed “Equivalent” if the equipment or fitting is similar in cost, close in form and identical in function to the equipment or fitting it replaces and conveys no performance or boat handling advantage to the boat.

The Technical Committee shall be the arbiter for deciding if a piece of equipment or a fitting is “equivalent” to equipment or fittings supplied by the Builder or a Sailmaker.

**13.5** Portable Equipment (see also C6.6 ERS) in rule 2.1 includes but is not limited to: the safety equipment listed in rule 9.1, life jackets, mooring lines, fenders, lifting slings, lifting block and tackle, tool kit, radio, and all other loose gear.

**13.6** Where a word used in these rules is defined in the World Sailing Equipment Rules of Sailing (ERS), the ERS definition shall apply except where these rules state otherwise.

**13.7** The term “Technical Committee” refers to the VICA Technical Committee appointed per the VICA constitution.

**13.8** The term “set of sails” refers to one jib, one mainsail and one spinnaker.

### **14 Administration of the Rules**

#### **14.1 Language**

(a) The official language of the class is English and in case of dispute over translation the English text shall prevail.

(b) The word “shall” is mandatory and the word “may” is permissive.

#### **14.2 Administration Responsibilities**

(a) The administrative functions of these class rules shall be carried out by the VICA.

(b) Neither WS, the VICA, the VICA Board and Executive Committees (and their designees), the VICA Technical Committee, a VICA measurer, Viper 640 Class Association Inc. or its directors or members is under any legal responsibility in respect of these class rules.

#### **14.3 Amendments to Class Rules**

(a) Amendments to these class rules shall be made per the VICA Constitution.

(b) An amendment to these class rules shall come into effect when passed in accordance with the VICA constitution but the amendment remains subject to review by WS. If WS subsequently rejects a rule amendment, the rule shall cease to apply at that time.

## **Technical Committee Functions**

### **14.4 Issuing Technical Committee Interpretations**

(a) Where the wording or intent of the Viper 640 Class rules is found to be unclear or in need of clarification, The Technical Committee shall have the power to make official interpretations or clarifications of existing Class rules to resolve any discrepancies.

(b) An official interpretation shall only clarify an existing class rule and shall not change the class rules.

(c) An official interpretation made during the course of a Class Sanctioned Regatta shall be posted in writing on the regatta notice board by 8.00 p.m. on the day prior to the interpretation taking effect and shall be binding for the remainder of the regatta. Until the interpretation is posted on the Class website per 14.1 (d), it shall only be valid at that regatta.

(d) An official interpretation or clarification shall be posted as soon as possible in Part C of the rules on the Class website. Once an interpretation is posted on the Class website it shall be valid at all racing venues on the following day based on local time, subject to rule 14.4 (c)

(e) An official interpretation is binding on competitors. An interpretation may become a Class rule if approved by VICA membership as set out in the VICA constitution and approved by WS. Any owner Class member can propose and require that an interpretation is subject to a member vote as a Class rule at an VICA AGM. If the interpretation is rejected by either World Sailing or the VICA membership then the Technical Committee shall publish a notification on the VICA website, and the interpretation will cease to be binding.

### **14.5 Providing Definitions.**

Definitions may be added or amended to Section 13 of the Class rule with the approval of both the Technical Committee and the International Board.

### **14.6 Testing Experimental Rules and Modifications**

Upon written approval from both the Technical Committee and the International Board or a Regional Executive Committee, new modifications to the boat (including but not limited to foils, equipment and sails) or prospective rule changes may be tested at Class sanctioned regattas. The number of boats and the period of testing shall be set by agreement with the Technical Committee, the International Board and the relevant Regional Executive Committee. Such testing shall not occur at World, North American or National championships.

## **15 Technical Committee Interpretations**

**15.1** Rule 11.4 is interpreted to mean that sails that complied with the sail dimension and material requirements of the Class rules at the time that they were made and were made by sailmakers that were Class Approved sailmakers at the time the sails were made, comply with Class rules. All sails that complied with the sail dimension and material requirements of the Class rules at the time they were made that were built by any sailmaker prior to December 31 2006 are deemed to comply with Class rules.

**15.2** Under rule 1.6 (e) (iii) A forward footrest may be installed to older boats provided it is the same dimension and same location as the footrest in current boats supplied by a Class Builder

**15.3** Rule 3.1 is clarified as follows:

- (i) Rule 3.1 allows waxing, polishing, and light sanding “provided the intent and effect is only to polish the hull and foils”. Any sanding with a coarser grit than CAMI (US standard) grit designation 1000 (European ISO/FEPA standard P2000) will not qualify as sanding with an intent to polish.

(ii) Any attempt to reduce print through on the hull is deemed to be “refinishing with the intention of removing hull imperfections or otherwise improving the performance of the hull” and is disallowed under rule 3.1.

**15.4** Rules 7.4.(c) and 7.5.(b) are clarified to mean that the polyester fibers in a Mylar laminate in jibs and mains may be oriented in different directions but all sets of fibers shall be uniformly spaced and patterned. “String” sails are specifically prohibited.

**15.5** In reference to rule 11.6 (e) (ii) and rule 4.1 it is permissible to install a composite gooseneck constructed in accordance with Class specifications and manufactured and distributed by Ben Steinberg.

**15.6** When an owner sells one Viper 640 (Viper 1) and within a year buys another new or used Viper 640 (Viper 2), Rule 7.7 is interpreted as follows: If the owner has retained registered sails from Viper 1, these previously registered sails may be acquired as used sails for Viper 2 as long as it results in Viper 2 having no more than one suit of sails from each calendar year complying with rule 7.7 (c)

## **Appendix A – Gulf Yachting Association Sail Numbers**

The Gulf Yachting Association (GYA) is appointed by the VICA to provide sail numbers for Viper 640 sails used in competition at GYA Capdevielle and other GYA specified events only open to GYA member clubs.

Viper 640 mainsails with GYA sail numbers shall also have the letters GYA, such letters being contrasting in color to the numbers and 10” high, vertically aligned near the leech on each side of the sail and aft of the numbers. The vertical alignment of the letters shall be perpendicular to the alignment of the numbers. On the starboard side the numbers and letters shall be higher than any on the port side and the bottom of the “A” shall be aligned with the bottom of the numbers. On the port side, the top of the “G” shall be aligned with the top of the numbers. Minimum spacing between characters and the edge of the mainsail shall be 60mm.

No national letters shall be applied to Viper mainsails with GYA numbers.

GYA sails must carry sail registration stickers per rule 7.8 which shall include the actual hull number.