



Viper 640

Class Association

The Rules

PART A – Fundamental Rules

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 All Viper 640s shall be produced by Class Association appointed builders, shall comply with Class Association (Class) approved construction plans and specifications and shall be identical in every respect except where the class rules specifically allow for differences. No changes to the boat supplied by the builder are allowed unless they are specifically permitted by the class rules.

1.3 A Viper 640 shall be raced only with foils supplied by a Class appointed builder.

1.4 A Viper 640 shall be raced only with equipment and fittings identical to the fittings supplied with the boat by a Class appointed builder unless: (a) The Class Rules specifically allow equipment and fittings that differ from those supplied by the builder, (b) A boat replaces existing fitting or equipment with the current fittings and equipment used by a current builder, subject to rule 1.7., (c) A boat adds fittings or equipment used by a current builder, subject to rule 1.7.

1.5 The Viper 640 shall only be raced with sails supplied by a Class approved sail maker.

1.6. No addition or alteration may be made to the hull form, construction, equipment, type of equipment, fittings, type of fittings, standing rigging, running rigging, spars and foils as supplied by the builder except when such an alteration or change is specifically authorized by these rules.

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

PART B – Measurement Rules

2 Hull, Deck, Foils and Weight

2.1. Keel & Bulb

2.1.1 The keel shall be made only from Class approved molds and shall only be supplied by a Class approved builder.

2.1.2 The bulb shall be of lead cast in the Class approved mold (version 2) and encased in the Class approved bulb profile (version 2). All version 1 keel bulbs (Hulls up to and including Hull#70) shall install a retrofit keel bulb kit supplied by a Class approved builder.

2.1.3 The total weight of the keel shall be 119 kg +/- 4 kg.

2.2 Rudder- The rudder shall be made to the original design and shall only be supplied by a Class approved builder. **A rudder tower wedge, as supplied by a Class appointed part supplier, may be installed to make a swept rudder blade vertical. The rudder tower wedge may not be installed with older "forward kinked" rudders. A vertical rudder blade and vertical axis of rotation becomes mandatory after March 31, 2020. Once a rudder tower wedge is installed, a boat shall not switch between swept and vertical rudder configurations except with Technical Committee approval. When a swept rudder is converted to vertical, a tiller adapter from the Class appointed part supplier shall also be installed to make the tiller approximately horizontal if needed.** The rudder as supplied must weigh no less than 4.0 kg including tiller and extension. The tiller must be an aluminum tube of identical diameter to that supplied by a class builder but can be of any length. The tiller extension does not have to be identical to equipment supplied by a class approved builder

(Effective Date: March 31, 2017)

2.3 The Complete Yacht shall weigh no less than 340 kg. The Complete Yacht is defined as the yacht ready to sail including one set of sheets only, but excluding the following equipment: Sails and battens, paddle, life jackets, mooring lines, fenders, lifting slings, tool kit, and all other loose gear and personal effects.

2.4 Lightening of the Hull - No stripping or lightening of the hull by means of cutting holes in the, bulkheads, partial bulkhead or by the removal of material from the hull, deck, bulkheads or partial bulkhead shall be permitted.

2.5 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 by the builder or owner. Storage receptacles are permitted under the port covers.

2.6 Underweight Yachts - 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 combined weight of the complete yacht shall exceed 340 kg.

3 Hull and Foil Finish

3.1. The hull and foils including the rudder, keel foil and keel bulb, may not be faired or refinished with the intention or effect of lightening the hull, removing hull imperfections, improving the shape or otherwise improving the performance of the hull and foils, with the exception of keel foil fairing as allowed in 3.4. Waxing, polishing and sanding of the hull and foils is permitted, provided the intention and effect is to polish the hull and foils only.

3.2 Where a foil or the hull needs to be repaired, the repair may be faired into the area immediately surrounding the repair. Where a repair is extensive and where for example a

substantial portion of a foil has been faired as a result of repair, the hull or rudder foil shall be the same shape and finish as originally supplied by the builder. However, if a keel foil is extensively repaired, the fairing shall be performed per 3.4.

3.3 If a hull, keel bulb or rudder foil has a substantial imperfection that impedes the competitive performance of the boat relative to the average boat produced by the class builder/builders, the owner may apply to the Technical Committee to approve limited fairing to correct that imperfection. If the Technical Committee grants approval for fairing to correct an imperfection, the boat shall be inspected both prior to and after the fairing 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 The keel foil may be faired after September 30, 2012, subject to the following:

The keel foil may be faired only to match the Class provided Viper 640 keel template and 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, must: a) meet that shape within plus 2 mm or minus 1 mm as measured on each side of the keel foil; b) the distance from the 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; and c) the keel foil trailing edge minimum thickness is 3 mm. The faired keel foil may be subject to inspection at any time after fairing for compliance with these tolerances and dimensions. [KEEL MEASUREMENT PROCEDURE](#)

4 Spars

4.1 Construction - The material, method of construction and design of the spars, and the attachment of spreaders, standing rigging and halyard sheaves shall be in accordance with any class approved Spar Plan. Masts, spreaders and booms shall be fabricated only by spar manufacturers approved by the Class Association. The mast shall either be an aluminum mast manufactured by Proctor or a Carbon mast manufactured by Superspar.

4.2. The aluminum mast extrusion # 3525 shall be fabricated by Proctor Masts Ltd. (Selden) with an internal sleeve in accordance with the class approved spar plan.

4.3 The carbon mast is a Class specified "Viper" mast fabricated by Superspar.

4.4 Mast Measurement Bands - 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.

4.5 Spreaders - Spreaders, as supplied by a class approved builder, after assembly on the mast must be rigidly attached. 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. The length and sweep of the spreaders may not be adjusted in any way once a regatta has commenced.

4.6 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 in any way once a regatta has commenced.

4.7 Boom - The boom may be supplied by either Proctor (Selden) or Superspar. The Proctor (Selden) boom shall be extrusion #2632. The Superspar boom shall be The boom shall be of constant section throughout and shall not be tapered, cut away or drilled except for the attachment of fittings. Removal of the boom end plugs is prohibited. A Proctor (Selden) boom may be stiffened by inserting a boom sleeve and/or a 42" long prave may be inserted in the track on the underside of the boom for additional support

4.8 Permanently bent booms are prohibited. However, a permanent set, due to distortion not exceeding 25mm measured between the forward end of the boom and the measurement band is permitted.

4.9 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.

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

4.11 Mast chocks devices are permitted in front of the mast for the purpose of controlling mast bend at the deck: (partner blocks). The aft side of the mast may be secured in the partners with a line and cleat as supplied and positioned by the builder. Devices for controlling the position of the mast in the mast port below the deck are prohibited

5 Standing Rigging

5.1 Headstay - The length of the headstay shall be adjustable only by a turnbuckle attached to the headstay chainplate. The length of the headstay shall not exceed 7588 mm and shall not be less than 7512mm measured from the bearing point of the upper tang to the bearing point of the lower attachment point.

5.2 Headstay adjustments - The headstay length shall not be adjusted on a day of racing after the mainsail has been hoisted for the first time

5.3 Shroud adjustment - Adjustment of shroud length shall be made only by means of open body turnbuckles, Ronstan Sealoc turnbuckles or single or double column shroud adjusters. Adjustment of the shroud length while racing is prohibited.

6 Running Rigging

6.1 (a) The spinnaker sheets shall be line with a minimum diameter of 7 mm (approx 5/16") diameter. A pennant (of any diameter) that shall not exceed 45 cm may be attached to the spinnaker sheets for the purpose of attaching the spinnaker sheets to the clew of the spinnaker. (b) The jib sheets shall be a minimum diameter of 7 mm (approx 9/32"). (c) The main sheet shall be a minimum diameter of 8 mm (approximately 5/16") except that a split end mainsheet may taper to a smaller diameter between the split and the attachment points on the hull. (d) Halyards and the retrieval line shall be a minimum diameter of 4.0 mm (approx 3/16").

6.2 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. The retrieval line may be a continuous Spinnaker halyard/ Retrieval line system or a separate line from the spinnaker halyard.

6.3.1 The mainsheet system shall be one of the following four alternatives:

- (a) 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.
- (b) 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.
- (c) 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.
- (d) 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

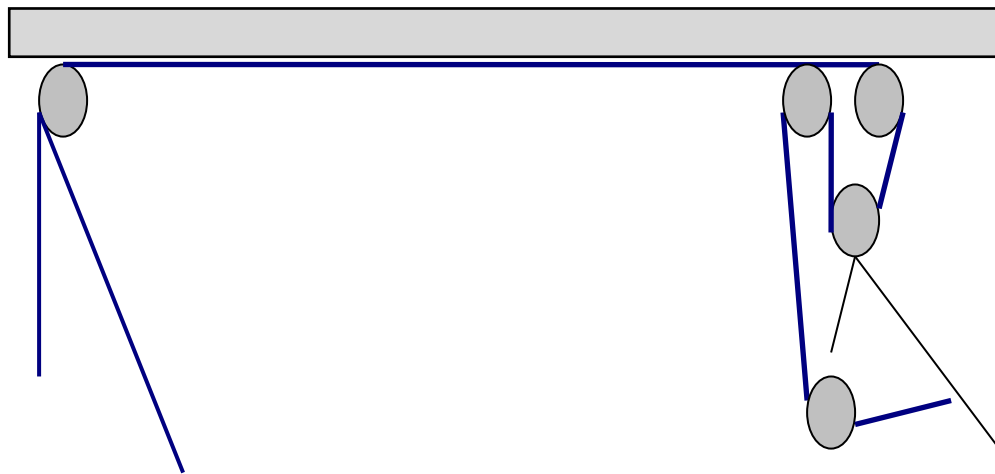


Diagram B. Split tail mainsheet and bridle attached to mid-boat pad eyes

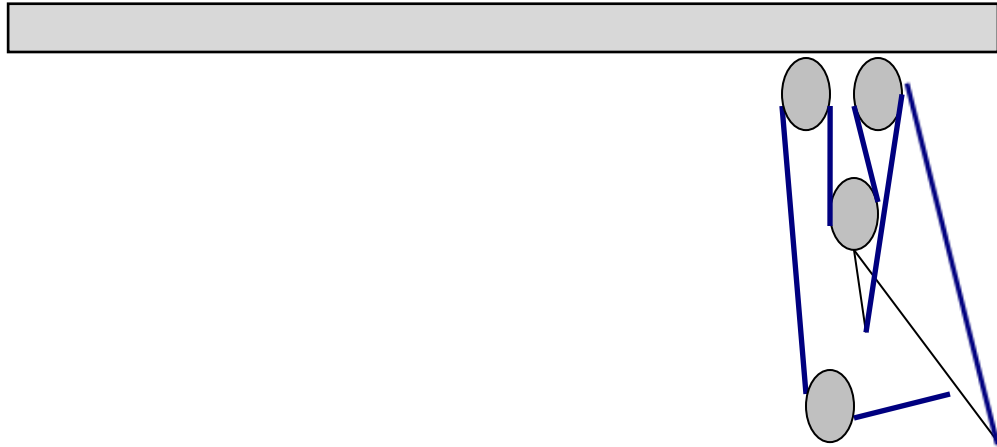


Diagram C. Mainsheet attached to block on mid-boat bridle

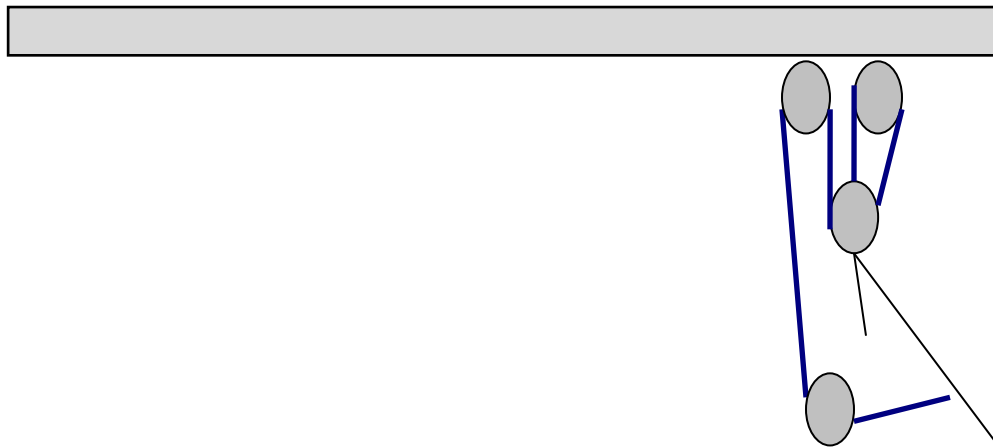
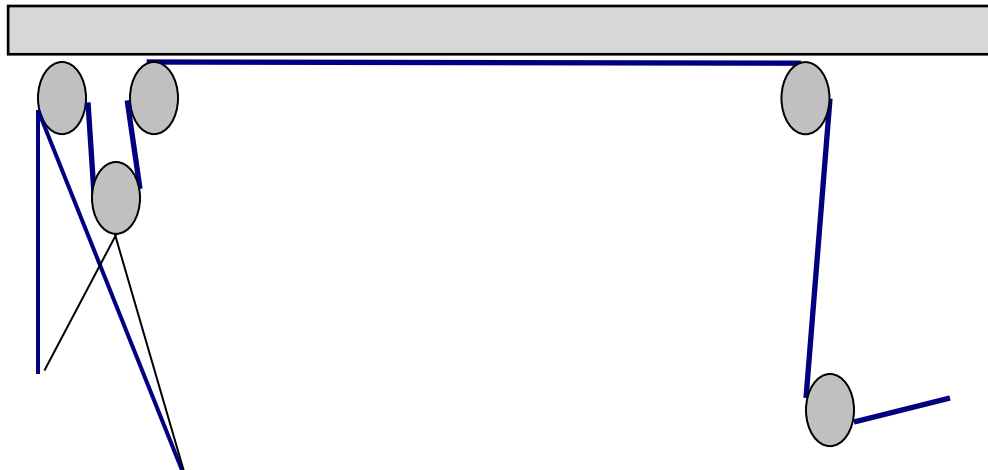


Diagram D. Split tail and bridle attached to aft pad eyes



6.3.2 In all four alternative systems, 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 the two mid bridle or aft bridle pad eyes installed by the builder. The mainsheet must also pass through at least one turning point located mid-boom, with mid-boom defined as the center of the attachment point and located within a range of between 1400 mm to 1750 mm as measured aft from the forward face of the boom.

6.3.3 No other mounting points may be added. The function of the mainsheet system is to allow the angle of the boom from the centerline of the boat to be adjusted solely by means of the mainsheet. No mechanism shall be added that creates a traveler. The addition of blocks, cam, cleats, or other lines and devices to facilitate adjustment of the angle of the boom while racing are specifically prohibited.

6.3.4 A cockpit swivel cam base with turning point and cleat as located by the builder must be part of the mainsheet system. If alternative 6.3.1(d) is rigged on a boat, the mainsheet must be trimmed through the swivel cam's turning point while sailing to windward. The swivel cam base may be raised up to 5 cm above the cockpit floor. 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 mid boom turning points, 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.

6.3.5 In a split tail mainsheet, the transition between the split made up of smaller tails of any diameter to the full diameter of the 8 mm mainsheet shall not exceed 24". Shock cord may be used to control slack split tails and bridles.

6.4 Boom vang and gnav

(a) All boats shall either have a boom vang or a boom gnav.

(b) The boom vang may be mounted with the cam cleat at either the top or the bottom of the vang. The vang shall not otherwise be changed from original configuration. Any addition of any blocks, line or other devices is prohibited.

(c) The boom gnav system does not have to be identical to that supplied by a class approved builder. The boom gnav must be attached to the mast at the Gnav goose neck installed by Superspar. The tube shall be of the same material and diameter as supplied by a class approved builder. The length of the tube (without end caps) shall be 122 cm +/- 6 cm. The base of the tube shall rest on a Gnav car or similar device installed on the top of the boom. The Gnav shall be adjusted by a maximum of 16:1 purchase and a minimum of 8:1 purchase. A maximum of 8:1 purchase and a minimum of 4:1 purchase shall be located on top of the boom (either attached to the front of the boom or to the mast) and a maximum of 6:1 purchase and a minimum of 2:1 purchase shall be located below the boom. No part of the purchase system shall be located inside the boom. All boats with carbon masts shall have a boom gnav system.

6.5 The aft spinnaker sheet blocks must be attached to the gunwale 200 cm forward from the corner of the gunwale and the transom.

6.6 The Cunningham system does not have to be identical to that supplied by a class approved builder. The purchase system shall not exceed 8:1 and shall only be able to adjust mainsail luff tension. The Cunningham control lines may not be run aft of the mast by more than 20 cm.

6.7 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.

7 Sails

7.1 Sails shall be constructed by Class Association approved sail makers.

7.2 Definitions – All definitions and terms shall be in accordance with ISAF Equipment Rules of Sailing 2009 -2012.

7.3 Material and Reinforcement - All sails shall be soft sails. All materials must be as specified in these rules or approved by the Class Technical Committee.

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

7.5 Mainsail

7.5.1 Measurements (a) The leech length shall not exceed 8200 mm. (b) The half width shall not exceed 2120 mm. (c) The three quarter width shall not exceed 1415 mm. (d) The upper width shall not exceed 785 mm. (e) The distance between the head point and the upper leech point shall be 900mm. (f) The top width shall not exceed 310mm. (e) 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.

7.5.2 Battens

(a) 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.

(b) Mainsail Battens - No more than five additional mainsail battens 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. For all sails constructed after June 30 2009, 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.

7.5.3 Material - The minimum fabric weight shall not be less than 200 g/sq m. The mainsail shall be constructed from one of the following materials: Woven Dacron or Mylar laminate with a polyester scrim. The Technical Committee may publish from time to time in section D of the class rules a list of specific sail cloths allowed for the mainsail.

7.5.4 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 Class Association

7.6 Headsail

7.6.1 General - 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. Head, clew and tack boards are prohibited. Foot roach and leech shall be fair curves. The forestay shall not be detached for the attachment of the headsail.

7.6.2 Battens - 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.

7.6.3 Measurement - (a) The luff shall not exceed 6875 mm. The LP shall not exceed 2200 mm. The width of the sail at the head shall not exceed 50 mm. (b) 1/2 Girth: Measurement points 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. (c) Material: The headsail shall be constructed from one of the following materials:-(d) The headsail may be constructed from woven Dacron with a minimum weight of 200 g/sq m.(e) The headsail may be constructed from Mylar laminate with a polyester scrim. The minimum weight of the finished fabric shall not be less than 200 g/sq m.

7.7 Spinnaker

7.7.1 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.

7.7.2 Measurement - (a) The length of the luff shall not exceed 9720 mm. (b) The length of the leech shall not exceed 7600 mm. (c) The length of the foot shall not exceed 5625 mm. (d) The half width shall not exceed 5500 mm. (e) The foot median shall not exceed 9800 mm.

7.7.3 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.

7.7.4 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.

7.7.5 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.

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

7.8.1 Sail Purchase

(a) A Viper 640 owner may acquire up to one complete set of new sails per calendar year (one main, one jib, and one spinnaker). A new sail is considered acquired for a boat when it is first used in a race 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) Used sails may be added to a boat's inventory at any time, provided the owner is in compliance with 7.8.1(c).

(e) A used sail is a previously registered sail. The year on its registration sticker is based on its registration by the original owner.

(f) Any previously used unregistered sail acquired by a boat owner is considered new for purposes of this rule 7.8.1, unless the owner can establish to the satisfaction of the Technical Committee that given the intent of this rule that the sail should be treated as used and registered as such.

7.8.2 Registration – All sails constructed prior to January 1st 2011 must be numbered and signed by a member of the Class Technical Committee or a designated Class measurer appointed by the Class Technical Committee. From January 1st 2011, any new sail acquired must have a Class Association numbered “registration sticker” permanently attached to the sail. Sail registration data will be available to any Class member for review upon reasonable request.

7.8.3 Exemptions - If the owners upon discovery that a sail is lost, stolen or destroyed can demonstrate that they are in a noncompetitive position, or if a sail is repaired such that the registration sticker must be replaced, or a sticker is lost, they may apply to the Technical Committee for an exemption and a replacement sticker. Such application shall be in a form and detail as requested by the Technical Committee.

7.8.4 Transfers - When a sail's ownership is transferred, the new owner is responsible for registering the sail as part of the new owner's inventory prior to the next sanctioned regatta the sail is used in.

7.8.5 Re-cuts - Any sail that is re-cut or substantially repaired requires re-measuring. A sail that is re-cut and re-measured shall not constitute acquisition of an additional new sail unless sail is re-cut, repaired or altered in a manner that 33% or more of the material used in the same is new or replaced.

7.8.6 Use

(a) No sails other than registered sails built by Class approved sail makers shall be used in any Viper one-design race.

(b) 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.

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

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

7.8.7 Charters /Borrowed Boats

(a) Charters or competitors who do not own a Viper 640 may acquire and register up to three 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 acquired and retained count towards the owner's inventory.

(b) 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.

7.8.8 Registration Sticker Purchase, Sail Registration and Administration—The sticker fee, method of payment and distribution shall be determined by the executive committee. There will be no fee for registration of sails constructed prior to 1/1/2011. The unique numbering sequence for a sail will be 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.

8 Equipment and Fittings

8.1 Hiking straps may be added for a fourth crew

8.2 A forward foot rest may be installed provided it is the same dimension and same location as current boats supplied by a Class approved builder.

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.

(Effective Date: March 1, 2017)

8.4 The main halyard cleats must be at or near the base of the mast and may be of any type. The primary jib halyard cleat must be of the same type and in the same place as installed by the

builder and 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.

8.5 The spinnaker halyard cleat on masts shall be a Ronstan Halyard swivel cams or equivalent in the same location as supplied by builder. Carbon masts may alternatively have a Harken 150 cam cleat or equivalent attached to the mast below the spinnaker exit or as supplied by the builder prior to 2009. The material of the attachment bracket is unlimited.

8.6 A pad-eye and single sheave block for the jib halyard may be installed on the port side tank athwartship of the mast.

8.7 An additional single purchase (block) may be added to the head of the jib with the tail of the halyard to terminate at the base of the jib halyard exit sheave.

9 Safety Equipment

9.1 The following equipment shall be carried on board when racing: (a) One life jacket or buoyancy vest (of pattern approved by the National Authority if required) for each member of the crew. (b) One paddle (c) A compass, which may be conventional or electronic but which may not store headings, unless such compass is specifically allowed in these rules. (d) 20 meters of 6mm diameter or larger towing line (e) Additional safety equipment required by local or national laws shall be carried

9.2 From May 30 2009, all boats are required to have crew safety lines installed under the gunwale in the same position as current boats supplied by a Class approved builder.

9.3 A safety line shall be installed in the aft part of the cockpit. The aft safety line shall be a minimum diameter of 4mm (approx. 3/16").

10 Prohibitions, Restrictions and Exemptions

10.1 The Viper Class Association promotes racing between Corinthian teams.

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 10.2 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 Deleted

10.4 Deleted

10.5 Private on the water coaching is not permitted at Class sanctioned events. At Class sanctioned events, no private coach boats shall enter the area where boats are racing from the time of the first warning signal of the day until racing has been concluded for the day. A Viper Class Coach boat, approved by the Class Executive Committee or by a Regatta Organizing Committee designated by the Executive Committee may provide coaching to a wide range of competitors to enhance all competitors' enjoyment of the event.

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

10.7 Helm and crew shall wear a PFD at all times from the start signal until their boat has finished or withdrawn.

10.8 Use of the shrouds and or mast to promote roll tacking or roll jibing is prohibited.

10.9.1 Self-contained electronic devices that display information which can be calculated based solely on an electronic compass, GPS sensors and internal software can used while racing.

10.9.2 Use of external sensors, transmitters (other than remote controls), wired or wireless data sources, and/or power supplies is prohibited.

10.9.3 Conventional compasses, electronic watches and timers are approved for use.

10.10. Special Exemptions and Waivers (Grandfathering provisions).

10.10.1 Fairing - A boat that has been faired prior to September 1st 2005 and can show that the fairing took place prior to September 1st 2005 may apply to the Class Association Technical Committee for the hull and foils to be allowed to race under the class rules. The Technical Committee shall use their discretion to determine whether such fairing conveys a reasonable competitive advantage to the boat in question. The Technical Committee may decide that no reasonable 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.

10.10.2 Spars, sails, rigging and other equipment – (a) Any boat that has spars, sails, rigging or other equipment (collectively referred to as equipment) dating from prior to September 1st 2005 that may 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. 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, the owner 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. Any boat that has to effect repairs to (or replace) spars, rigging and other equipment (excluding sails) prior to or during a class sanctioned regatta that 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. (b) The Technical Committee shall use their discretion to determine whether the equipment conveys any reasonable competitive advantage to the boat. The Technical Committee shall 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. (c) The Technical Committee may use its discretion to grant permission or a waiver for the equipment to be used under the class rules

for racing. The waiver or permission to use the equipment may be granted for a specific period or for an unlimited period. The permission or waiver to use the equipment may be revoked by the Technical Committee at any time, even if it was previously granted for an unlimited period.

10.10.3 Any permission or waiver to race with boats or equipment under the provisions of Rule 10.3 must be approved in writing by the Technical Committee.

10.10.4 Any decision by the Technical Committee to decline permission or decline a waiver under Rule 10.10 will not be reviewed by the Class Association Executive Committee or any other body. Any permission or waiver granted under Rule 10.9 may be reviewed by the Executive Committee. The Executive Committee can decide to revoke any waiver or permission issued under Rule 10.9 but it shall not affect race results prior to that decision.

10.11 Any alleged or suspected change to a boat supplied by the builder not covered by these rules, or any alleged non-compliance not covered by these rules may be compared by the Class Technical Committee or their appointed representative to a sample of 5 boats

10.12 In any case 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 in order to resolve any discrepancies. Once the interpretation has been posted via either of the two methods listed below, it shall be considered a part of the Viper 640 class rules.

Any official interpretations or clarifications that are made during the course of a Class Sanctioned Regatta will be posted in writing on the regatta notice board by 9:00 AM or two hours before the first warning signal (whichever is earlier) on the day that the interpretation is to take effect.

Any official interpretations or clarifications that are made at any time (including those made during the course of a Class Sanctioned Regatta) will be posted as soon as possible under Part D of the rules on the class website.

10.13 Upon written approval from both the Technical Committee and Executive Committee, new modifications and changes to the Viper 640, including but not limited to foils, equipment and sails 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 and Executive Committee. Such testing shall not occur at North American or National championships.

10.14 During any period where the Notice of Race or Sailing Instructions require that boats remain in the water, ~~only competitors may clean the bottoms of their boats, and then without careening or the use of any breathing apparatus or power equipment.~~ Keels must remain lowered during such period, but rudders may be removed after sailing.

(Effective Date: March 1, 2017)

11 Registration

11.1 Sail Number- The sail number shall be obtained from the Class Association or its appointed representative.

11.2 The Viper Class is a Category C (Advertising) Class under ISAF regulation 20.

11.3 A boat participating in a Class sanctioned regatta must either be owned by a Class Association member or the skipper on board throughout the regatta must be a Class Association member.

11.4 The Gulf Yachting Association (GYA) is appointed by the Class Association to provide sail numbers for Viper 640s competing in Gulf Yachting Association (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 7.8.2 which shall include the actual hull number.

(Effective Date: March 1, 2017)

PART C – Class Association Control of Builders, Distributors and Sailmakers, and Construction Specifications

12.1 All Viper 640s may only be produced from Class Association (Class) approved molds by Class approved builders and new boats may only be sold by Class approved distributors.

12.2 Hull, Deck, Keel and Rudder Molds: All molds for the hull, deck, foredeck, keel, and rudder shall be constructed solely by builders appointed for that purpose by the Class Association. Each mold may be measured prior to commencement of production and thereafter subject to further measurement at the discretion of the Class Association by a measurer appointed by the Class Association. Each mold shall be approved by the Class Association prior to commencement of production. The Hulls, Decks, Keels and Rudders produced by the molds may be inspected and measured by a measurer appointed by the Class Association. The approval for a mold may be revoked by the Class association at any time. All molds and patterns shall be numbered and issued only to builders appointed by the Class association.

12.3 Alterations to molds- No alterations shall be made to any molds, official patterns or templates without the written approval of the Class Association.

12.4 Application may be made to the Class Association to allow tolerances due to minor variations and distortions through age but intentional variations within these tolerances are prohibited. Such application must be approved in writing.

12.5 Building Licenses—Viper 640s shall only be molded and/or completed by builders appointed by the Class Association. All applications for licenses shall be made to the Class Association. Licenses shall be granted at the sole discretion of the Class Association. The license

may be revoked at any time by the Class Association and that builder shall no longer be a Class Appointed builder.

12.6 No alteration shall be made to the construction process, the materials, the layout or the equipment of the boat without the written permission of the Class Association. No other alteration shall be made to the “boat as supplied by the builder” without written permission from the Class Association.

12.7 Issue of Molds - Application for the issue of molds patterns and/or measurement templates shall be made to the Class Association which, in approved cases, shall coordinate to effect delivery from an approved source.

12.8 Construction of Hulls, Decks, Keels and Rudders shall be in accordance with any plans and specifications approved by the Class Association.

12.9 Material shall be in accordance with specifications approved by the Class Association.

12.10 Hull and Deck Assembly - (a) The builder shall follow procedures and standards which ensure strict control of the One-Design shape. The deck shall be assembled to the hull with the hull in a Class approved mold or in an assembly jig approved by the class association. In either case the necessary support shall be given so that the hull profile and sheer line are as shown on any plans approved by the Class Association. Such support shall be approved by the Class Association. (b) The hull may be measured by a measurer approved by the Class Association to ensure compliance with the class rules, which may include construction specifications, measurement diagrams and measurement forms. (c) The deck and foredeck may be measured by a measurer approved by the Class Association. The location and size of the mast port as molded shall be as specified on any Class approved Plans.

12.11 The manufacturer and type of hardware, equipment, spars, rigging and fittings supplied on the boat must be approved by the Class Association.

12.12 Relocation of hardware, fittings or rigging shall not be permitted without written permission from the Class Association.

12.13 The weight and distribution of weight of the Completed Yacht must comply with any specifications issued by the Class Association.

12.14 Sailmakers may apply to the Class Association to become Class Approved sailmakers. The Class Association shall use its discretion to approve sailmakers who will manufacture sails that comply with the class rules and will abide by the spirit and philosophy of The Viper Class. This approval shall be granted in writing and published on the Class website. The approval needs to be renewed annually and may be revoked at any time at the discretion of the Class Association.

13.1 Any boat which does not comply with Section 12 of the Class rules may be deemed by the Class Association as ineligible to race as a Viper 640 under the class rules.

PART D – Technical Committee Interpretations

14.1 Rules 6.1 is interpreted to mean that tapered sheets and halyards are prohibited.

14.2 Rule 5.3.1 is interpreted to mean that Brolga Turnbuckles and rig adjusters are prohibited. The Handle and lever kit for Ronstan Sealoc turnbuckles are allowed. Scar Pins may be used to secure open body turnbuckles in place of clevis pins.

14.3 Rule 1.5 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 built 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 31st 2006 are deemed to comply with Class rules.

14.4 Regarding rule 7.8.1 Sails awarded by EFG at the concluding regatta of the 2010 EFG Viper 640 Pan American Championships, the HPDO, shall not be deemed as “acquired” but they will be deemed as counting towards either an owner’s 2010 sail inventory (provided the owner has not already acquired a sail that counts towards his 2010 inventory) or the owner’s 2011 sail inventory for the purpose of sanctioned events. The EFG sail must be used at the HPDO . If the awarded sail is part of an owner’s 2011 inventory, this shall not preclude the owner acquiring an additional sail in 2011 provided that the additional sail is not used in sanctioned events

14.5 Where the term “Class Approved Builder” is used in the class rules, it shall refer to Performance Boats from 1996 to 1999 and to Rondar Race Boats from 2006 until further notice. The term “class appointed builder” or “appointed builder” or “approved builder” shall mean the same as “class approved builder”.

14.6 Rule 10.2 “Paid” is **a derivative of “Pay”** as defined in **World Sailing ISAF** Regulation 22. ~~and shall additionally include being paid for any goods or service in exchange for agreeing to helm or crew on a Viper. It shall exclude being paid to assist any disabled sailor who requires assistance to launch, rig or deliver the boat, provided the payee is not an ISAF Category 3 sailor.~~

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

(i) Rule 3.1 allows waxing, polishing and sanding “provided the intention and effect is to polish the hull and foils only”. 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 use of sanding to polish the hull and foils may only be localized for stubborn stains or scratches.

(iii) Any attempt to reduce print through on the hull is considered 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.

14.8 Rule 7.8: Co-owners of boats or Owners with Multiple Viper 640s: 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, unless transferred and approved by the Technical Committee per 7.8.6. 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.

14.9: Rules 7.5.3 and 7.6.3(e) are clarified to mean that the polyester fibers in a Mylar laminate may be oriented in different directions but all sets of fibers shall be uniformly spaced and patterned. New "string" sails are specifically prohibited at this time. String sails built before December 31, 2011 that can be shown to meet the 200 gr/sq meter minimum fabric weight are eligible to be grandfathered and registered on an individual basis by the Technical Committee working with the respective Viper 640 owners and sailmakers. Effective January 1, 2012

14.10 In reference to rule 12.11, it is permissible to install a composite gooseneck constructed in accordance with class specifications and manufactured and distributed by Ben Steinberg.

14.11 When an owner sells one Viper 640 (Viper 1) and within a year buys another new or used Viper 640 (Viper 2), Rule 7.8 is interpreted as follows: If the owner has retained registered sails from Viper 1, under 7.8.2(a) 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.

14.12 Rule 7.3 is clarified on reinforcement to prohibit the use of carbon fiber or carbon fiber composite battens in the mainsail or jib.