

# **CLASS RULES OF THE CLUB 420 ASSOCIATION**

## **Effective February 1, 2010 as Amended 1 June 2017**

### **1.0 Fundamental Rules**

1.1 The Club 420 is a One-Design class. The rules, official plans and specifications (“Rules”) are intended to ensure that the yachts of this class conform to the design specifications and are as nearly as possible the same with regards to shape and weight of equipment, including the hull and deck, centerboard, rudder, spars and sails and that the equipment is simple, functional, dependable and affordable.

1.2 No addition or alteration may be made to the hull form, construction, equipment, type of equipment, placing of equipment, fittings, type of fittings, placing of fittings, spars, standing rigging, sails, battens and running rigging as supplied by the Builder except when such addition or alteration is specifically authorized by these Rules.

1.3 The Rules of the Class Association are “closed class rules.” If it does not specifically say that you “may”, then you “shall not”.

### **2.0 Measurement**

2.1 In the case of a measurement dispute with the hull, spars, sails, centerboard, rudder, rigging and equipment and the placing of same not explicitly covered by these Rules, the Measurement Diagram or the Construction Manual, the Class Measurer will adjudicate.

**2.2 All boats, spars, sails and equipment shall be subject to inspection or measurement at any time at the discretion of the Association or race committee.**

2.3 In the case of a dispute at an event alleging non-compliance with **class rules** and building specification and construction manual where specific measurements are not stated, the Event **Equipment Inspector** shall adopt the following procedure:

- a) A sample measurement of the disputed item shall be obtained by taking the identical measurement from a randomly selected group of boats or items of equipment (control group).
- b) The measurement of the disputed boat or items of its equipment, taken using the same technique as above, shall be compared to the sample.
- c) If any of the measurements obtained from the disputed boat or item of equipment lie outside the corresponding range of measurements found in the control group, the matter together with the details of the measurement methods and any other relevant information shall be referred to the Race Committee.

### **3.0 Crew**

3.1 No boat is permitted to race in any Class Association event unless all crew are current members of the Club 420 Class Association.

3.2 The Club 420 shall be raced with two or three persons on board.

3.3 In a series, the Club 420 shall be raced with the same number of crewmembers in every race. Crew changes may not be made during a series except with written permission of the race committee.

3.4 The trapeze wire shall be used to support the weight of only one crewmember who shall not be the helmsperson.

### **4.0 Safety Equipment**

4.1 For any race or series of races, competitors who are US citizens or US residents shall wear a US Coast Guard approved Personal Flotation Device (PFD) at all times while afloat. Competitors who are citizens or residents of another country shall wear either a US Coast Guard approved PFD or a PFD approved by the country of their citizenship or residence. The PFD may be removed temporarily so that clothing may be changed, added or removed.

4.2 A whistle shall be attached by a lanyard to the PFD. The lanyard shall be long enough to permit the sailor to use the whistle while wearing the PFD.

4.3 The buoyancy tanks shall be watertight.

4.4 Each boat shall carry one line designated as a towing line. This line shall be at least 26 feet long, 3/8 inch diameter, shall float, and shall have a loop in the end of the line that is not to be secured to the boat. The end of the line to be secured to the boat shall be tied either to the forward most hole of the jib tack fitting or tied with a bowline around the mast above the partners with the end with the loop taped to the deck of the bow next to the jib tack fitting.

4.5 The weight of the trapeze harness shall not exceed 4 kilograms and the harness shall float.

4.6 Each boat shall use a device that will keep the rudder connected to the boat in the event of capsize or turtle.

4.7 The length of the forestay, including any extensions, which must be metal, shall prevent one-half of the major dimension fore/aft of the mast from going aft of the mast partners when the jib halyard is released.

4.8 A competitor may use a line to secure the mast to the mast heel casting.

## **5.0 Sails**

5.1 No sail is permitted unless it originated from an official class Builder and manufactured by the official class Sailmaker in accordance with the Club 420 Construction Manual. A sail with a patch identical to the graphic depicted in [Exhibit A](#) shall be proof that the sail originated from the official class Sailmaker. A competitor using a sail without such a patch bears the burden of proving that the sail originated from the official class Sailmaker.

5.2 Except as provided in these Rules, no modifications to sails are allowed. Torn sails may be repaired, but not re-cut or re-shaped.

5.3 No sails other than one mainsail, one jib and one spinnaker shall be onboard while racing.

5.4 In a series of races, a sail shall not be changed for another sail unless written permission for the change is obtained from the protest committee prior to the change, or if the protest committee is not available, promptly after the change and the protest committee is available. Written permission shall be given only in the event of a sail damaged beyond repair or damaged to the extent that it cannot be repaired before the start of the next race in a series.

5.5 The webbing and or seizing as supplied on the jib at the tack may be substituted with a line that may be used to adjust the luff tension.

5.6 The entire foot of the mainsail shall be lead through the boom sail track at all times while racing.

## **6.0 Sail Numbers**

6.1 Sail numbers shall be attached on each side of the mainsail just below the second batten from the top. They shall be positioned on a line parallel to the seams and shall be solid, all the same color, clearly visible, easy to read and non-overlapping. The numbers on the starboard side shall be higher.

6.2 Numbers are not required on spinnakers.

6.3 Numbers and letters shall be of the following dimensions:

1. Height: Minimum 300mm
2. Width: Minimum 200mm (except number "1" and letter "l")
3. Thickness: Minimum 45mm
4. Space between numbers: Minimum 50 mm
5. Distance from leech to aft-most digit: Min 80 mm; max 160 mm
6. Distance between bottom of starboard-side numbers and top of port-side numbers: Minimum 50 mm; maximum 80 mm

## **7.0 Hull**

7.1 Waxing, polishing and fine wet or dry sanding of the hull is permitted provided the effect is to polish only and not to fair or reshape the hull

7.2 Sanding or refinishing of the hull with the effect to lighten the hull or improve the performance, finish or shape beyond the original condition is not permitted. Repairs may be made provided the original hull shape is maintained.

7.3 The use of slowly soluble applications, that alter the boundary layer characteristics of the hull, is prohibited.

7.4 A protective strip or bumper may be added to or removed from the bow of the boat.

7.5 Additional inspection ports may be installed in the flotation tanks provided they are threaded. Bayonet closure mechanisms are prohibited.

7.6 Drainage capacity may be fitted into the lower transom in the form of one or two openings in order to drain the boat. The total area of the openings shall not exceed 80 sq. cm (12.4 sq inches), the openings shall have flaps or other closing devices that can be operated from inside the boat and shall not obstruct the rudder. One additional cleat or hook may be installed on the keelson to provide a termination point for the control of the closing device.

7.7 One suction bailer and bailer accessories may be installed.

7.8 Hulls of boats built after March 1, 1973 shall carry the HIN (hull identification number) molded into the starboard transom.

7.9 Only polyester resins may be used in the manufacturing of hulls after February 14, 2010.

## **8.0 Spinnaker Pole, Centerboard, Rudder and Tiller**

8.1 The spinnaker pole, centerboard, rudder, rudder head and tiller shall be used as supplied by a Builder. The Builder shall label them with a c420 sticker to indicate they are legal. The spinnaker pole, rudder, rudder head and centerboard shall not be made of any composite material such as carbon fiber. Tillers of any length or material of wood or metal may be used. Adjustable tiller extensions are permitted.

8.2 The Club 420 shall be raced with the rudder at all times in the full-down position.

8.3 A rope handle that passes through the hole in the top of the centerboard may be added in addition to what may have been supplied by the Builder.

8.4 The rudder and centerboard may be polished or sanded provided this does not alter the shape of the blades or change their leading or trailing edges other than to fair the exposed fiberglass joint.

8.5 Shims of any material may be added between the rudder head cheeks and the rudder blade to improve the fit of the rudder blade in the rudder head.

8.6 Shims may be added inside the centerboard trunk to protect the board to improve the fit.

## **9.0 Spars and Standing Rigging**

9.1 The mast and boom shall be supplied by the Builder and not altered. All masts and Booms shall be labeled by the builder with a c420 sticker to indicate they are legal. No mast or boom which has a permanent bend shall be used. Spinnaker poles shall be 1750 millimeters (68 7/8 inches) from end to end and made of aluminum. Boats may carry a spare spinnaker pole. Rotating and permanently bent masts are prohibited. A drain hole no larger than 12 millimeters may be made within the bottom five inches of the mast, including the mast heel casting.

9.2 The shrouds and spreaders shall be supplied by a Builder. No changes are permitted to the length or angle of the spreaders.

9.3 The pin position of the shrouds shall not be adjusted while racing.

9.4 The use of mast blocks or any other system not specifically permitted in these Rules that may induce or limit mast bend is prohibited.

9.5 Halyard locks or hooks are not permitted.

9.6 A single piece of shock cord or line may be tied between the forestay and the bow chainplate for the purpose of removing slack from the forestay.

9.7 The jib stay shall be attached to the aft most hole in the tack fitting, the forestay to the middle hole and a painter shackle, or clevis pin for the bowline, to the foremost hole in the fitting.

## **10.0 Running Rigging and Control Lines**

10.1 Sheets and halyards of any length diameter and material may be substituted for those supplied by a Builder, with the following limitations:

1. Sheets and halyards in whole or in part of wire are prohibited except for the jib halyard.
2. No sheets or halyards may be tapered.

3. Each sheet and halyard shall be one single piece of line, except for the jib halyard which may include one part wire and one part line.
4. Shock cord may be attached to the end of a halyard, spinnaker pole uphaul/downhaul, or centerboard lines and the boat.
5. A “spinnaker clip” at deck level intended to allow for the quick release of the spinnaker halyard when being hoisted is permitted.

10.2 Plastic "stopper balls" may be used on any line or shock cord.

10.3 Cunningham. Cunningham lines for both the jib and the main may be used. Cunningham lines shall use only the fittings supplied by the manufacturer. Line loops or knots may be added to any part of the line to provide additional purchase.

10.4 Boom vang. The vang shall be rigged using a maximum of five sheaves and terminating at one cleat on the centerboard cap and shall not exceed a 16:1 purchase.

10.5 Outhaul. The outhaul shall be one piece of line rigged using a cheek block and deck strap (or becket on the cheek block) on the boom at the clew of the mainsail and a cleat located on the side of the boom 420 mm aft of the mast. An additional turning block may be fitted forward of the outhaul cleat.

10.6 Jib halyard. The jib halyard shall be rigged using only the hardware supplied with the original jib halyard system (or blocks of equivalent size and function). No additional blocks may be used. The jib halyard system may be rigged for no more than a 5:1 mechanical advantage maximum. The halyard tail shall be rope and shall terminate on a mast-mounted horn cleat.

10.7 Spinnaker pole uphaul/downhaul. A combination spinnaker pole uphaul/downhaul system using only rope and shockcord may be fitted using the existing mast hardware together with a hook for attaching to the pole and a cleat on the centerboard cap to provide adjustment to the height of the pole. The turning point on the keelson for the pole downhaul may be a fairlead or a block

10.8 Mainsheet bridle. The mainsheet may be trimmed to a bridle. If used, the bridle shall be made of no more than two pieces of line which shall be attached to the ends of the traveler bar or end bracket. The original traveler block supplied by a Builder (or a substitute of equivalent size and function) shall always be positioned as close to the boat's centerline as possible. The bridle may use no additional hardware other than a pin, shackle, eye strap or bolt through the holes on each end of the traveler or the deck strap attached to the end of the traveler and a metal thimble to reduce chafe at the block. The bridle may be adjusted while racing. The mainsheet system shall have a maximum purchase of 4:1.

10.9 Trapezes. The trapeze system shall consist of one steel trapeze wire, diameter not less than 2mm and a minimum length of 3000mm, no more than two lengths of line, one cleat, one sheave, one handle and one ring on each side. The ring may be fitted with an

additional sheave. An elastic cord return system with three fairleads may be used. Self tacking trapeze systems are not permitted.

## **11.0 Equipment and Hardware**

11.1 All existing blocks and cleats supplied by a Builder may be replaced by blocks and cleats of any make provided that the replacements: a) Are of essentially similar size and function. b) Are placed in the position as originally supplied. Except as specifically permitted in these Rules, no additional blocks, fairleads, or hardware may be added to the boat.

11.2 One cam cleat may be added on each side tank for the mainsheet.

11.3 A fairlead may be installed on the jib cam cleat.

11.4 An all metal extension to the pin used to attach the lower end of the fitting connecting the shroud to the boat may be added to serve as a spinnaker afterguy hook.

11.5 Hiking straps. Short pieces of line or webbing may be used to secure the hiking straps at both ends and to the traveler bar. Shock cord may be used to hold up the straps. The position of the hiking straps shall not be adjusted while racing. Adjustment cleats are not permitted.

11.6 Any hardware that may be added may correspondingly be removed provided that:

1. The hull still meets the minimum weight requirement.
2. The buoyancy tanks remain reasonably watertight.
3. The hardware is not moved to another position on the boat.

11.7 Tape may be used anywhere on the boat. Extra non-skid material, including non-skid paint, may be applied anywhere on the deck or hull.

11.8 Wind indicators made of yarn or other material may be attached as desired to spars, sails, topping lift, pole down haul or standing rigging. One wind pennant or indicator may be attached at the top of the mast.

11.9 One compass and bracket may be mounted to the mast no holes are cut or drilled in the buoyancy tanks or spars. A compass may not be installed in an inspection hatch cover. If electronic, only a compass with heading, heading memory, and timing functions is permitted. Other electronic devices except a digital timing device, electronic compass, and a camera are not permitted to be carried on board while racing.

11.10 Rubber or plastic tubing or other material may be used in places such as the jib halyard shackle and the lower end of the shrouds and their adjusters to ease the passage of lines, to prevent snagging and/or to reduce the chance of injury. Rubber or plastic

sleeves, or springs, may be used with mainsheet blocks to prevent the blocks from falling over.

11.11 Any existing clevis pin may be replaced by a "fast-pin" that must be attached to the boat with a line or wire lanyard.

11.12 Spinnaker bags that close through a combination of cloth and or shock cord are permitted. Shock cord may also be attached to the bottom of the spinnaker bag to assist in the stowage of the spinnaker pole.

11.13 Clips, ties, bags or similar methods for stowing gear (such as water bottles) may be used provided they do not require holes in the buoyancy tanks or spars.

11.14 Sailors may carry personal gear, food, drinks and a normal ditty bag.

## **12.0 Repairs and Maintenance**

12.1 Repairs and preventative maintenance to the sails, hull, deck, centerboard, rudder, mast, boom or any other fittings and riggings may be carried out provided such repairs are made in such a way that the designed shape, characteristics or function of the original are not affected.

12.2 In the event of the failure of any fittings, or the replacement of fittings as authorized by these Rules the fitting or the replacement shall be made in such a way that the essential shape, characteristics or function of the original are not affected and shall be placed in the same location as the original as supplied by a Builder.

12.3 Preventative maintenance shall include the replacement of fastenings with alternatives provided that the fittings are replaced with similar sized fastenings of the same material.

## **13.0 Weight**

13.1 The weight of the bare hull rigged with the centerboard in place and only those parts permanently affixed to the hull or deck shall be not less than 230 lbs. The hull shall be weighed in a dry state.

13.2 If the hull is found to weigh less than 230lbs., correctors with a total weight not exceeding 5 lbs., shall be clearly visible and fixed permanently, 50% to the transom and 50% to the keelson forward of the mast step (forward thwart).

## **14.0 Interpretations**

(This section is reserved for the recording of Interpretations to the Class Rules as determined by the Class Measurer and approved by the Board).

Exhibit A

