

LAKE NORMAN KEELBOAT COUNCIL
STANDARD SAIL AND EQUIPMENT SPECIFICATIONS
March 2010

1. Headsails

- A. A headsail is defined as a sail set in the fore triangle that is tacked between the fore side of mast line and the intersection of the forestay with the deck or fixed bow sprit.
- B. The mid girth of a headsail, measured between the midpoints of the luff and leech, shall not exceed 50% of the foot length nor shall the length of any intermediate girth exceed a value similarly proportional to its distance from the head of the sail (rule 50.4).
- C. A sailboat may use a luff groove device provided that such luff groove device is of constant section throughout its length and is either essentially circular in section or is free to rotate without restraint.
- D. Headsails may be sheeted from only one point on the sail except in the process of reefing. Thus quadrilateral or similar sails in which the sailcloth does not extend to the cringle at each corner are excluded.

2. Measurement of headsails

- A. Longest perpendicular of jibs (LP) shall be measured on the perpendicular from the luff (outside edge of the sail or rope) to clew (intersection of edges of sail).
- B. LP shall be the largest such dimension found on the headsails carried on board.

3. Limitations on headsails

- A. No clew boards or headboards may be used on jibs.
- B. Battens may be used only in jibs smaller than 110% LP. The number of battens is limited to four, which must be arranged with approximately equal spacing between head and clew.
- C. The maximum Length Perpendicular (LP), measured from the clew perpendicular to the mid point of the luff, that may be used without penalty shall be 155% of J.
- D. The distance, measured on the surface, between the midpoint of the foot and the midpoint of the luff shall not exceed 55% of the length of the leech.
- E. Headsail sheeting to the boom shall be allowed provided the sheeting point is not further aft on the boom than E plus six inches. This shall be marked if such sheeting is to be used by a red band one (1) inch wide. The forward edge of the band will define the limits of the sheeting approved.
- F. In no case shall the sum of the LP of the headsail and the distance measured from the forward end of J to the tack of the sail be greater than the sailboats rated LP.

4. Measurement of spinnakers

- A. For measurement as a symmetric spinnaker, the luff and leech must be of equal length and the sail must be symmetric in shape and construction about a line joining the head to the center of the foot.
- B. Spinnakers shall be measured with such tension as will remove wrinkles across the line of measurement.
- C. Symmetric spinnaker maximum Girth (G) shall be at the foot or across the body of the sail, measured between points on the luffs equidistant from the head.
- D. Spinnaker Luff and Leech (SL for symmetric or ALU and ALE for asymmetric) shall be the greatest length of spinnaker luff and leech measured around the edges of the sail. Where stiffening is used to extend the angles at the tack or clew of spinnakers beyond an included angle of 110 degrees, the greatest length of any such stiffening in the foot of the sail, measured from the clew, shall be added to the length to determine SL, or ALU and ALE.
- E. Asymmetric spinnaker Mid Girth (AMG) shall be across the body of the sail measured from mid-point on the luff to mid point on the leech.
- F. Asymmetric spinnaker Foot (AF) shall be the distance measured along the foot tape from tack to clew.

5. Limitations on spinnakers

- A. Choice of asymmetric, symmetric, or both types of spinnakers shall be made at time of rating application and may be changed once during the calendar year.
- B. Spinnakers shall be sheeted from only one point on the sail.
- C. Battens shall not be used in spinnakers.
- D. Adjustable leech lines are not permitted on spinnakers.
- E. Spinnaker Pole Length (SPL) shall not exceed 100% of J.
- F. Symmetric spinnaker Hoist (SH) shall not exceed 100% of I.
- G. Symmetric spinnaker Luff (SL) shall not exceed .95 times the square root of ($I^2 + J^2$).
- H. Symmetric spinnaker maximum Girth (G) shall not exceed 1.8 times J.
- I. Symmetric spinnaker maximum Girth (G) shall not be less than .75 times AF.
- J. Asymmetric spinnaker maximum Luff (ALU) shall not exceed 1.1 times the square root of ($AH^2 + BS^2$).
- K. Asymmetric spinnaker Foot (AF) shall not exceed 1.8 times BS. BS is equal to SPL if the sail is tacked at a spinnaker pole.
- L. Asymmetric spinnaker Mid Girth to Foot ratio (AMG/AF) shall not be less than 0.75

6. Sails with mid girth between .5 and .75 times foot length

Asymmetric sails with a mid girth to foot ratio between .5 and .75 tacked forward of the fore side of the mast line shall be considered to be in the spinnaker configuration.

7. Bloopers

A. A blooper that is flown with a spinnaker must be no longer on the luff than the head stay. A tack pennant not to exceed 2.5 feet can be added. A blooper must be tacked to the stem fitting on the bow.

B. The mid girth measured between the midpoints of the luff and leech, shall not exceed 50% of the foot length nor shall the length of any intermediate girth exceed a value similarly proportionate to its distance from the head of the sail.

C. The distance, measured on the surface of the sail, between the midpoint of the foot and the midpoint of the luff shall not exceed 55% of the length of the leech.

D. The LP can be no longer than the largest declared headsail.

8. Measurement of mainsails

A. Foot of mainsail (E) shall be the length measured along the boom of the foot of the sail taken from the aft face of the mast to the aftermost position to which the sail is permitted to extend. Where this latter point is inside of the boom end, it shall be located by the inner edge of a one inch band around the boom.

B. Mainsail hoist (P) shall be the measured length of the hoist of the sail. It is the distance along the after side of the mainmast from the highest level to which the head of the sail may be set to the lowest position of the tack. The highest point shall be taken at the top of the highest sheave used for the main halyard, or to the lower edge of a one inch band around the mast. If a sliding goose neck is used, measurement is to be made with the boom at the extreme bottom of the slide unless the lowest sailing position of the foot is marked by the upper edge of a one inch band around the mast.

C. Mainsail Headboard (MH) shall be the maximum fore and aft dimension from the luff of the main, projected if necessary, to the extreme aft edge of the leech measured across the widest part of the headboard.

9. Limitations on mainsails

A. The number of battens in any mainsail or mizzen shall be limited to seven (7) for all sailboats. Batten spacing shall be approximately equal between headboard and clew.

B. The maximum mainsail headboard (MH) dimension shall not exceed 4% of E or .5 feet (6 inches).

C. Rated without adjustment are One Design mainsail girths, or IMS maximum default girths as per the table below:

MGT (7/8 leech) = 0.22*E

MGU (3/4 leech) = 0.38*E

MGM (1/2 leech) = 0.65*E

MGL (1/4 leech) = 0.90*E

10. General equipment limitations

Sailboats shall race as rated with at least all the equipment and furnishings supplied as standard equipment by the manufacturer. A sailboat which has altered or removed bulkheads, permanently attached furniture, or structural interior components shall be considered a custom sailboat. Drawers, headliners, cabinet and locker doors, steps, ladders and engine enclosures shall remain in place as supplied as standard equipment for a sailboat not to be considered a custom sailboat. Passageway doors, cushions, dining tables and carpet are specifically exempted and are alterable or removable.

11. Crew limitations

There shall be no limitations on the number of crew other than those specified in the class restrictions for ODR ratings. See rule 49.

12. Non-spinnaker limitations

A. The maximum length of a spinnaker pole (whisker pole) that may be used shall be equal to J. If the spinnaker pole (whisker pole) is adjustable, there shall be no gap visible between ½" stripes, placed one on each section of the pole where the sections intersect, when the pole is extended to its rated length. See rule 50.2.

B. The non-spinnaker headsail shall meet all headsail regulations. No part of the luff of a jib shall be more than 4% of the length of the luff from a straight line drawn from its halyard exit to the point on the sailboat to which it is tacked. The use of sails other than a mainsail and headsails is prohibited in the non-spinnaker classes.

C. All other sail and equipment rules applicable to spinnaker classes apply to non-spinnaker classes. Only one (1) headsail may be used at a time while racing, except for cutter rigs flying headsails in the normal configuration. Two (2) headsails may be flown during a sail change, which must be completed in a seaman-like manner

13. Requirements for Roller Furler (RF) credit

A. The RF headsail must be tacked above the RF drum and have the head (or pennant) secured to the bottom of the upper swivel at all times while racing except while changing the headsail.

B. RF headsails may be constructed of any material, but laminated sails must be protected by continuous woven taffeta skins on both sides, and all RF sails must have 4.0 oz minimum woven UV cover present on both the leech and foot.

C. The roller furling headsail, once hoisted, shall not be changed during a day, race, series, or regatta, unless conditions warrant use of a heavy weather sail. If conditions during a race have warranted the use of a heavy weather sail and during the course of the race these conditions have abated, it is permissible to hoist the declared RF headsail for that sailboat.

14. Stock boat Roller Furler (RF)

A. If a standard class boat is supplied from the factory with a RF system for the jib, the board of handicappers will provide the rating for the class assuming no modifications to the RF system or sail attachment thereto. This means that the jib shall be tacked above the RF drum and the swivel shall be at maximum luff hoist when a jib is flown.

B. Any modifications departing from these standards must be reported to the Board of Handicappers.

15. Lifting and swing keels

Lifting and swing keels shall be locked in the down position at all times while racing.

16. Mizzen

A. The measurement procedures for mizzen shall be the same as for mainsails.

B. The limitations for mizzen shall be the same as for mainsails.

17. Mizzen stay sails

A. Sheet leads may be to hull or rail and to mizzen boom, but they may not be sheeted to any other spar or outrigger.

B. Mizzen Stay sails must be 3-cornered (head, tack, and clew). The tack or tack pennant must be secured abaft the point of intersection of the face of the mainmast with the deck and also must be secured no higher than a rail cap, deck, or cabin top.

C. No mizzen stay sail may be carried set on a sloop rig flying from the backstay.