

## **MERIT 25 CLASS RULES**

### **ARIZONA YACHT CLUB (“AYC”) ONE-DESIGN FLEET**

**Effective January 1, 2006**

#### **I. PURPOSE**

The purpose of these Rules is to maintain the one-design character of the Merit 25 while allowing for a variety of uses other than one-design racing. Safety of boat and crew, considering the sailing conditions of Lake Pleasant, is of extreme importance in the rules as contained herein. Any boat which has been altered or modified with respect to weight, design, structure or rigging, except as authorized by these Rules, shall be ineligible to compete in the AYC Merit 25 one-design fleet.

Temporary exceptions providing for less restrictive specifications for a given race day, made to these written rules, shall be allowed with the approval of 100% of the Merit 25 skippers competing for that race day, the intention being to allow visiting boats the ability to compete.

#### **II. HULL, KEEL AND RUDDER**

- A. Only hulls, keels, and rudders built by Merit Marine for the Merit 25 shall be used, except that damaged rudders may be replaced.
- B. Replacements for damaged rudders shall be similar in dimensions, section thickness and weight to the rudders provided by Merit Marine. No carbon fiber material may be used.
- C. The design and construction of the main and forward hatch covers may be modified provided there is no reduction in weight due to these modifications.
- D. Hull penetrations may be made for the sink drain, knotmeter, fathometer, pump discharge, and other through-hull fittings. These openings may be plugged or taped over for racing.
- E. The shape and structure of the hull, keel, and rudder shall not be altered, except as follows:
  - 1. The hull, keel, and rudder may be smoothed and faired. Faired keels shall conform approximately to NACA section 0014. No other keel templates may be used for keel fairing or reshaping.
  - 2. The rudder stock may be reinforced.
  - 3. The garboard area of the keel and floors in way of the keel stub may be reinforced.

4. A yacht shall not have a specially textured hull surface, the intention of which is to reduce drag in the water. A conventional smooth hull surface is permitted. Drag reduction films and/or hull etching are not permitted.

### III. SPARS AND STANDING RIGGING

A. The mast, boom, and spreaders shall be as originally supplied by Merit Marine, except as follows:

1. The spreaders may be shortened to a minimum length of 2.375 ft. Spreader length is measured with the spreader installed, from the mast surface to the outer tip of the spreader, along the spreader axis. On replacement masts, the spreaders and lower shroud tangs may be moved downward by up to 0.5 ft.
2. Internal or external doubler plates or other reinforcing material may be added to the lower panel of the mast.
3. Additional halyards or topping lifts may be added. Any additional halyard used for one-design racing must exit from the mast so that, when the halyard is pulled horizontally away from the mast, the height of the halyard is no higher than if the halyard exited from the standard sheave box.
4. Halyards may be run internal or external of the mast.
5. Mast must maintain a neutral or positive rake (aft) while racing.

B. Masts may be replaced to bring older boats into conformity with newer boats, or to replace old or damaged masts. Replacement masts must meet the following conditions:

1. The upper halyard exit points, halyard sheave positions, backstay crane dimensions, gooseneck and spreader locations shall correspond exactly to those on masts originally supplied by Merit Marine, except as specifically allowed by these rules.
2. Replacement masts shall be untapered aluminum, with the following section properties:
  - a) Minimum dimensions: 3.1" x 5.0"
  - b) Minimum weight/ft: 1.65 lb/ft.
  - c) Maximum stiffness:  $5.0 \times 1.96 \text{ in.}^4$
  - d) Stiffness does not include doubler plates, if fitted
  - e) The intent of this rule is to allow both the Kenyon 3550 and the Ballenger 5031 mast sections.

C. Booms may be replaced with new booms.

1. Replacement booms shall be untapered aluminum of approximately equal weight and length to the original boom supplied by Merit Marine.
  2. Running rigging, hardware details, and exit port locations in the boom may be modified.
  3. A small geared winch or block and tackle is permitted inside the boom for adjustment of the outhaul.
- D. Boom kickers, topping lifts, solid boom vang including traditional, spring and pneumatic types, are permitted.
- E. The standing rigging, including tangs, turnbuckles, and chain plates, shall not be modified from the original design, with the following exceptions:
1. Toggles may be added at the upper and lower forestay terminations.
  2. The backstay may be shortened.
  3. The headstay and shrouds may be replaced with a larger diameter wire.
  4. On replacement masts, the spreaders and lower shroud tangs may be positioned up to 0.5 ft. lower than on the standard position.
- F. Rod rigging is prohibited.
- G. Turnbuckles shall not be adjusted while racing, except that the aft, lower turnbuckles may be adjusted and/or mounted on adjustable tracks allowing for adjustment during a race.
- H. The location and length of the spinnaker pole track shall be optional.
- I. The overall length of the spinnaker pole shall not exceed 9.66 ft.

#### **IV. RUNNING RIGGING**

- A. Barber haulers, floating leads, twings, snatch blocks on the toe rail, and similar devices are permitted.
- B. Boom vang, Cunningham, foreguy, reef lines, outhauls, and other control lines may be added and / or modified.
- C. Running backstays and baby stays are prohibited.
- D. Hydraulic tensioning or adjusting devices are prohibited.
- E. No fitting shall be used which projects the spinnaker pole further outboard or further forward than when used with the standard fitting and track as originally supplied by Merit Marine.

## **V. DECK HARDWARE AND EQUIPMENT**

- A. Location and number of headsail sheet lead tracks is not restricted.
- B. Shroud and headstay adjustment devices other than the standard turnbuckles are prohibited.
- C. Backstay tension may be controlled with either a split backstay or a block and tackle arrangement, or a combination of the two. Winches, mechanical gear apparatus, and hydraulics are not permitted for backstay adjustment.
- D. Additional winches may be added in any location.
- E. A bow pulpit at least 18" in height (nominal) must be fitted.
- F. Lifelines and stern rail are optional.
- G. Hiking straps, trapezes, racks, planks, handles, and similar hiking assist devices are prohibited. Heel chocks may be fitted on the cockpit seats and padding may be attached to the toe rail. Footstraps which have no function relating to increasing stability or righting moment are permitted. The helmsperson may use the traveler control lines, in their normal position, as a hiking assist.
- H. Self-tacking jibs are prohibited for one-design racing.

## **VI. INTERIOR**

- A. Bulkheads, berths, locker hatches and covers, liners, backrests, shelves, trim, and similar fixtures shall not be modified or removed, except as follows:
  - 1. An opening may be cut in the transverse bulkhead under the cockpit for the purpose of facilitating engine stowage under the cockpit.
  - 2. Limber holes may be drilled in bulkheads only as necessary to allow water to drain into the bilge sump.
  - 3. Appropriately sized holes may be drilled in bulkheads and decks only as necessary for passage of pipes and wires.
  - 4. Additional fixtures or joiner work may be added, provided that each modification results in no net reduction of weight or increase in strength or stiffness.
- B. Grinding, drilling, or other modifications to reduce weight or change structure are prohibited.
- C. No inside ballast shall be carried.

D. Flotation foam may be installed.

## **VII. EQUIPMENT ON BOARD**

A. An outboard motor, capable of propelling the boat at a speed of at least 4 knots, shall be carried. The motor and bracket may be stored while racing.

B. A suitable anchor, chain, and rode shall be carried.

C. Total weight of motor, fuel, bracket, anchors, chain, and rode shall be at least 60 lb.

D. A battery, weighing at least 20 lb., shall be installed. The battery shall be wired to an electrical system including a switch panel, running lights, and at least one installed interior light. If a solar panel is fitted, the weight of the panel and connecting wire may be included in the minimum battery weight.

E. All four berth cushions shall be in place while racing.

F. Hatch and companionway covers shall be carried while racing.

G. An ice box, head and other equipment may be carried while racing.

## **VIII. SAILS**

A. There are three class sails:

1. Main
2. Headsail(s) up to 155% LP
3. Spinnaker

B. There is no quantity restriction of approved sails carried or used during racing.

C. There are no restrictions on sail material.

D. There are no sail weight restrictions.

E. All sail measurements, except spinnaker luff, shall be taken with the sail under sufficient tension to remove all wrinkles transverse to the direction of the measurement.

F. Sail dimensions shall be as follows:

1. Mainsail:
  - a) Maximum luff length = 28.00 ft. Luff length is measured from the intersection of extensions of the luff (forward edge of the bolt rope or sail lugs) and foot, to the highest point on the headboard.

b) Maximum foot length = 9.75 ft. Foot length is measured from the intersection of extensions of the luff (forward edge of the bolt rope or sail lugs) and foot, to the intersection of extensions of the leach and foot.

c) If the spars are banded for maximum P (luff length) not to exceed 28.00 feet, and maximum B (foot length) not to exceed 9.75 feet (in accordance with MORC or IMS practice), then the sail need not measure within these limits provided that the bands are observed while racing.

d) Maximum headboard width = 0.50 ft. The headboard width is measured from the forward edge of the boltrope or sail lugs (or vertical extension of the forward edge of the boltrope or sail lugs) to the aft edge of the headboard.

e) Maximum mainsail girths are as follows:

(1) Upper quarter-girth = 4.03 ft.

(2) Mid-girth = 6.69 ft.

(3) These girth limits are intended to be identical to the default girth limits used by the Southern California PHRF handicapping committee.

(4) Mainsail mid-girth is measured from a point on the leech mid-way between the top forward corner of the headboard and the intersection of extensions of the leech and foot.

(5) Mainsail quarter-girth is measured from a point on the leech midway between the mid-girth measurement point and the forward corner of the headboard.

(6) Mainsail girth measurements are perpendicular to the luff, determined by measuring the minimum distance from the girth measurement point to the luff.

f) The leech curve, as defined by the aft edge of the sail at each batten, shall be fair and continuous with no hollows or points of inflection.

## 2. Headsail – maximum 155%

a) Maximum LP (luff perpendicular) = 14.50 ft. The LP is measured from the intersection of extensions of the leach and foot to the forward edge of the luff tape. If jib hanks are used, jib hanks are not included in this measurement.

b) Girth at the head of the sail shall not exceed 0.30 ft, measured from the extension of the leech to the extension of the forward edge of the luff tape.

3. Spinnaker

- a) Maximum luff length = 28.82 ft. Luff length is measured between the intersections of the extensions of the edges of the sail, with the sail under 7 lb. of tension.
- b) Maximum girth at any location = 17.39 ft.
- c) Battens and headboards are prohibited in the spinnaker.

**IX. CONTESTANT, SKIPPER AND SCORING**

- A. Contestant - During any regular AYC fall and spring series race, the Contestant shall be defined as the registered boat as designated on the race entry form.
- B. Skipper - The Skipper shall be the person who is the "master of the boat." The Skipper shall include the regular helmsman or any member of the boats crew so designated for each race. The Skipper may assume any position while in command of the boat.
- C. Scoring – When five or more races have been completed, a boat's series score will be the total of her race scores excluding 20% (rounded down to the nearest whole number) of her worst scores.

**X. CLASS RULE INTERPRETATIONS AND PROTESTS**

- A. When a Protest Committee acting under USSA Rule 64.3 refers a question of measurement rule to an "authority responsible for interpreting the rule," the Fleet Measurer, or Fleet Captain if the Fleet Measurer is unavailable or a party to the protest, shall convene a committee of at least three people to rule on the issue. The committee members may or may not be members of the AYC Merit 25 Fleet, but in no case shall they be interested parties to the protest as defined by the USSA definition.
- B. This committee shall conduct a hearing or perform measurements at its discretion.
- C. Decisions and rulings made by this committee shall become amendments to these rules and are binding on the entire fleet, unless and until they are modified or revoked by majority vote at a regular Fleet meeting.
- D. Administrative protests or requests for interpretation of these Rules not arising from any specific race may be submitted to the Fleet Measurer in writing by any fleet member, who shall then proceed as in Class Rule X. A. above.