

# **F-27 Class Rules**

**Adopted 7-22-03**

**Revised 4-28-08**

## **1. Intent**

**1.1 Background** - The F-27 is a boat which has had two production versions and numerous other changes. The yacht started as a one-design Class, called the F-27, and has evolved to different sail configurations including a bowsprit, becoming a development Class. That version was called the Formula-27. They were the same boat except for the sails and other accessories. The yacht is out of production when these Rules were ratified.

**1.2 Purpose** - The purpose of these Rules is to establish limits on modifications that are allowed to the F-27 racing fleet.

**1.3 Commonalties** - Except where variations are specifically permitted by these Rules, yachts of this Class shall be alike in hull, deck, daggerboard, rudder and mast construction and equipment. The differences in float construction during the production run of the boat are allowed.

## **2. Administration**

**2.1 Authority** - The rules of the ISAF and US SAILING shall apply except as modified by these Class Rules and by the sailing instructions for a specific event.

**2.2 Builders** - F-27s eligible for this Class were built by Corsair Marine and shall comply with the building specifications of Corsair Marine, modified only as allowed herein.

## **3. Boat and Equipment Modification and Configuration**

**3.1 Limitations to Modifications** - If information regarding modification cannot be found in these Rules, no modification is allowed.

### **3.2 Configuration of the boats under these Rules:**

**3.2.1** The following sails are included in this Base Configuration: mainsail, headsail, screacher, spinnaker. This Base Configuration may race One Design, without rating adjustment for smaller sails or sails not carried on board.

**3.2.2** The following equipment is not included in this Base Configuration, but will be allowed. The boat may be given a rating adjustment for any (or a combination) of these:

- a) Transom hull extension meeting 5.4.2 a),
- b) No spinnaker and no screacher aboard (i.e., boat is sailed with headsail and mainsail only).

**3.2.3** Other equipment, as described in these Rules, is allowed at owner discretion.

**3.2.4** Boats alike in sails and equipment may race together without rating adjustments.

**4. Protests of Infringements of Class Rules** - Protests will be handled according to procedures outlined in Part 5 of The Racing Rules of Sailing published by the ISAF.

## **5. Equipment Rules**

### **5.1 Safety Equipment**

Participants shall comply with the safety requirements of the U.S. Coast Guard and/or other local authorities. It will be the participant's responsibility to have the appropriate safety gear for any given course or conditions.

### **5.2 Standard Equipment**

**5.2.1 Removal of items** supplied with the boat as standard is prohibited (i.e., cushions, galley molding, sink, settee moldings, fresh water tank, floorboards, battery, bow and stern pulpits, electrical system, lights.) except as allowed below. Removal of settee double-berth extensions, V-berth cushion and cabin floor carpets are allowed.

**5.2.2 Replacement of items** - Items supplied with the boat as standard and replaced with items having similar purpose and capability are acceptable, even if the weight and configuration of the replacements is different, except as limited elsewhere in these Rules.

**5.3 Modifications to Reduce Weight** - Under no circumstances shall modifications be allowed solely for the purpose of reducing weight.

**5.4 Hulls and Decks** - The hull and deck shall not be modified in shape, weight or construction, except as listed below.

**5.4.1 Prohibited** - The following are not permitted:

- a) Reshaping, filling, drilling out or replacement of materials, removal of gelcoat, grinding or relocating standard equipment to reduce weight, or to improve moments of inertia, or change standard shapes.

- b) Reshaping of the hull profiles or contours.

c) Use of carbon fiber in repairs, except that carbon fiber may be used when repairing parts originally constructed of carbon fiber.

**5.4.2 Allowed** - The following are permitted:

a) The main hull may be extended by an attachment to the transom of up to 13.5 inches (343 mm) in length as long as it does not inhibit the mobility of the rudder in its stock configuration and can be used to support the full weight of a 200 lb crew member.

b) General maintenance, (i.e. wet sanding, minor fairing, painting, and repairing) is allowed.

c) Balsa core may be replaced by PVC foam or epoxy core.

## **5.5 Daggerboard and Rudder**

**5.5.1 Source** - The daggerboard and rudder shall be supplied by Corsair Marine, Farrier Marine, or their sources or representatives.

**5.5.2 Shape and Configuration** - The external dimensions and configuration of the daggerboard and rudder may not be modified in planform, cross-section or material, except as listed below.

a) **Rudder Fences** - Rudder fences for the purpose of anti-ventilation are allowed.

b) **Shims, Bushings and Reinforcements** - Shims and bushings to reduce play in the rudder are allowed, as are local reinforcements at the holes.

c) **Rudder Kick-Up Pivot Hole** - The position of the rudder kick-up pivot hole is at the owner's option, subject to Rule 5.5.4 b).

**5.5.3 General maintenance** - General maintenance, (i.e. wet sanding, minor fairing, painting, repairing) is allowed. Edges and surfaces may be dressed and faired in order to repair damaged areas or to cure manufacturing blemishes, and the trailing edges may be sharpened to eliminate high speed hum within .75 inches (19 mm) of the trailing edge.

**5.5.4** The following are not permitted:

a) Reshaping, filling, drilling out or replacement of materials, grinding or relocating standard equipment to reduce weight, or improve moment of inertia, or change standard shapes.

b) Any modification of the daggerboard or rudder that in any way would prevent their ability to retract or kick-up.

c) Use of carbon fiber in repairs, except that carbon fiber may be used when repairing parts originally constructed of carbon fiber.

**5.5.5 Dagger Style Rudder** - A dagger style rudder designed by Farrier Marine and supplied by its source or representative is allowed. If used, it shall be in the maximum-down position while racing.

**5.6 Tiller and Extensions** - The metal tiller arm shall be as supplied by Corsair Marine and may be modified to the owners liking, while still allowing an easy way to retract the rudder. The type and use of tiller handle and tiller extension may be to the owners liking.

**5.7 Spars** - Spars shall be made of aluminum extrusion. The mast and boom shall conform to the spar specifications of Corsair Marine or Farrier Marine. No alterations or modifications to the spar extrusions are permitted except to facilitate the attachment of rigging and fittings as specified in these Rules.

**5.7.1 Mast Requirements -**

- a) Mast base hardware and configuration may be repaired but not modified. Mast rotation is not allowed.
- b) The distance from the forward surface of the mast at deck, to the most forward part of the deck sheerline, shall not be more than 128.5 inches (3.274 m), nor less than 127.5 inches (3.239 m).
- c) No alteration is permitted to prevent normal mast pivoting action required for mast stepping.
- d) The mast section shall not be tapered, cut-out except to add a second spinnaker halyard, or lightened.
- e) The type of spreader, spreader length, spreader angle, or method of attachment may not be modified. A second set of spreaders may be added for the purpose of additional stabilization of the upper portion of the mast.
- f) Length of the mast extrusion shall not exceed 444 inches (11.278 m).
- g) The maximum distance between the forestay pin attachment center and the front of the mast extrusion base shall not exceed 123 inches (3.124 m).
- h) The distance between the bearing point of the spinnaker halyard on the mast and the mast extrusion base shall not exceed 399 inches (10.135 m).
- i) The distance between the bearing point of the second spinnaker halyard on the mast and the mast extrusion base shall not exceed 410 inches (10.414 m).

j) If the mast is replaced, mast sections used in the production run of the boat, or a mast section meeting the spar specifications of Corsair Marine or Farrier Marine, must be used for replacement.

### **5.7.2 Bowsprits**

a) Bowsprits may be made of material of the owner's choice and shall not exceed 66 inches (1.676 m) in length measured from the forward edge of the molded deck to the furthest forward tip of the spar, including fittings.

b) Rigging is left to the owners discretion, but must provide for the spar to be carried either horizontal or angled up so as to avoid burying the bowsprit in heavy seas.

c) Articulation of the bowsprit is allowed.

d) Installation of an alternative bobstay location is allowed, as is strengthening of the bow in the region of the bowsprit or bobstay attachment points.

### **5.7.3 Spinnaker Pole**

a) The spinnaker pole is not considered standard or required equipment.

b) The overall length of the spinnaker pole, including fittings, shall not be more than 142 inches (3.607 m).

c) The spinnaker pole shall be attached to the mast when in use.

d) The material and shape, except for the length, is left to owner discretion.

e) No more than one spinnaker pole may be on board.

### **5.7.4 Main Boom**

a) The main boom may not be tapered, cut out to remove weight, or permanently bent.

b) No modifications may be made which prevent the ability to rotate boom for mainsail furling, with the exception of temporary, easily removed, boom vang devices.

c) Location of boom to mast connection shall not be altered.

**5.8 Standing Rigging Description** - The mast standing rigging shall consist of one forestay, two lower cap shrouds, two cap shrouds, two intermediate shrouds, one inner forestay, and two lower shrouds. If two sets of spreaders are used, a set of diamond wires and the elimination of the inner forestay is allowed.

**5.8.1 Steel Wire Rope Rigging** - The standing rigging of paragraph 5.8, if steel wire rope, shall be of stainless steel 1 X 19 strand. All shrouds shall not be less than .25 inch (6.35 mm) diameter.

**5.8.2 Synthetic Rope Rigging** - The standing rigging, if synthetic rope, may be at the owner's discretion except that the rope must have a minimum rated breaking strength of 8,200 pounds, and may replace part or all of the standing rigging except the diamond wires, the lower shrouds and the intermediate shrouds.

**5.8.3 Additional Rigging** - Additional rigging shall be allowed for the purpose of stiffening the mast or hulls. Dimensions and materials shall be at the owner's discretion.

**5.9 Running Rigging** - Running rigging, including the cap shroud adjusters, is left to the owner's discretion.

## **5.10 Sails**

**5.10.1 Class Insignia** - The F-27 Class insignia or the Corsair Trimaran Logo shall be contained in the top third of each side of the mainsail. The choice of these is the owner's. *(The optional choice of the Corsair Trimaran Logo is the 11-18-03 revision.)*

**5.10.2 Sail Numbers** - Sail numbers shall be placed on the mainsail. Sail numbers are not required on the headsail, screacher or spinnaker.

- a) Numbers must consist of a contrasting color such that they are clearly legible.
- b) Sail numbers must be positioned starboard on top of port with a minimum of 3 inch (76 mm) separation.
- c) Sail numbers shall not be less than 11.81 inches (300 mm) in height, 7.9 inches (200 mm) in width (except the figure 1), 1.75 inches (45 mm) in thickness, and spaced by at least 2.4 inches (60 mm).
- d) The three digit Hull Number may be used as a sail number. Include the preceding 0 or 00 for hull numbers below 100. Alternatively, a personal sail number issued by US SAILING may be used as a sail number.

**5.10.3 Sail Material** - Sails may be made from any material.

**5.10.4 Number of Sails** - There is no limit to the number of sails that may be carried onboard during an event. However, only one mainsail may be used in an event unless the original main incurs extensive unreparable damage. Change of mains during an event for the purpose of adapting to changing wind conditions is prohibited.

**5.10.5 Sail Rigging** - Leech lines, foot lines, battens and other sail rigging may be at the owner's discretion. Spreader and anti-chafing patches are allowed.

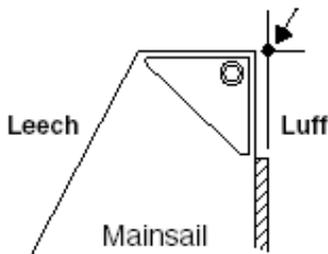
**5.10.6 Sail Corner Measurement Points** - All measurements include bolt rope, slugs or other mast attachment devices. Illustrations located in the sail descriptions are part of these definitions.

- a) The Head Point shall be defined as the point of intersection of the line of the Luff, including the boltrope or other attachment devices, and the highest point of the sail perpendicular to the Luff.
- b) The Aft Head Point is the intersection of the leech, extended as necessary, and the line through the Head Point at 90° to the Luff.
- c) The Tack Point is defined as the intersection of the Luff and the Foot, each extended as necessary.
- d) The Clew Point is defined as the point where the Leech and Foot, if extended, would intersect each other.

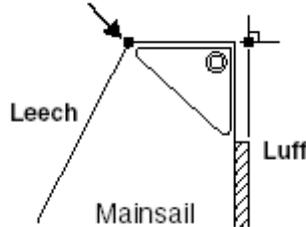
**5.10.7 Mainsail**

- a) The Top Width shall not exceed 31 inches (787 mm). The Top Width shall be measured from the Head Point to the Aft Head Point.

Head Point

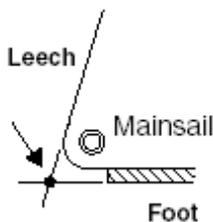


Aft Head Point

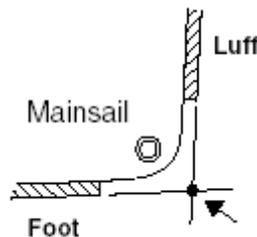


- b) Maximum Luff = 400 inches (10.16 m) Luff length is measured as the distance between two points: a) the Head Point, and b) the Tack Point
- c) Maximum Foot = 154 inches (3.912 m) measured as the distance between the Tack Point and the Clew Point.

Clew Point



Tack Point



d) The girth measurements shall be taken between the Half Leech Point and Three Quarter Leech Point and the Luff. The Half Leech Point is located on the Leech when the Head Point is folded to the Clew Point, and the Three Quarter Leech Point is located on the Leech when the Head Point is folded to the Half Leech Point. Girths are measured as the shortest distance to the Luff, including the bolt rope or other attachment devices, from the Half and Three-Quarter Leech Points.

Maximum Three Quarter girth = 88 inches (2.235 m).

Maximum Half girth = 123 inches (3.124 m).

e) A Cunningham hole may be fitted in the luff.

f) The mainsail shall be attached to the mast with a bolt rope, slugs or equivalent attachment devices.

g) The mainsail may be loose-footed but not boomless.

h) The mainsail shall be capable of roller reefing and furling, or equivalent reefing and furling capability shall exist.

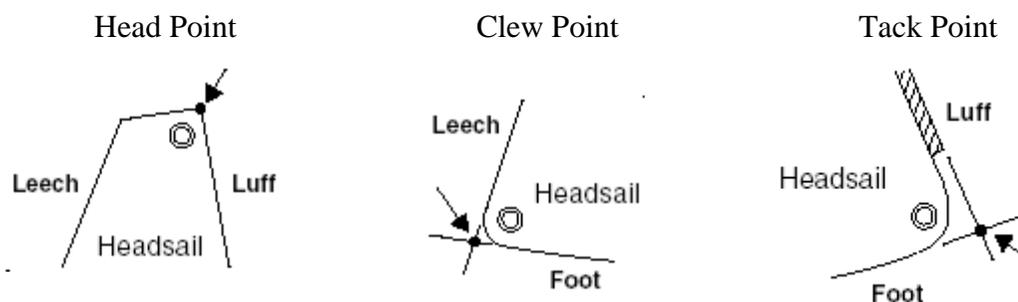
i) At least two reefs shall be built into the mainsail, or equivalent ability to secure and control the mainsail shall exist.

#### 5.10.8 Headsail (Jib & Genoa)

a) The maximum headsail size is limited by this rule as stated below. Number of headsails carried within these measurements is left to owner discretion.

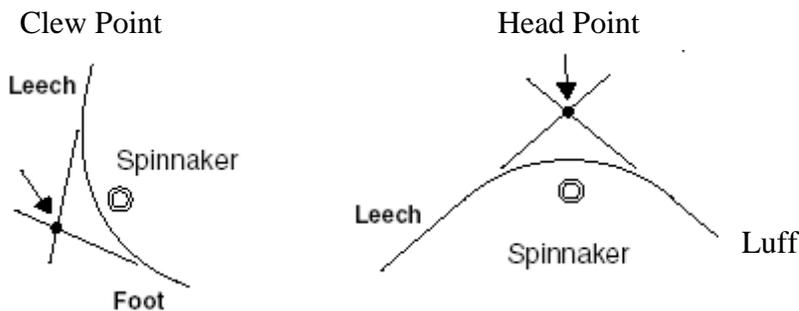
b) The Luff length shall not exceed 405 inches (10.287 m) measured as the distance between the Head Point and the Tack Point.

c) The Luff Perpendicular shall not be more than 186 inches (4.724 m). The Luff Perpendicular is defined as the shortest distance between the Clew Point and the Luff.



### 5.10.9 Spinnaker

a) This sail shall be three-cornered, with the total length of the Luff, Leech, Foot and mid-girth combined not to exceed 125 feet (38.1 m). The mid-girth shall be measured from the Half Point on the Luff to the Half Point on the Leech. These Half Points shall be found by folding the Head Point to the Tack Point for the Half Point on the Luff, and folding the Head Point to the Clew Point for the Half Point on the Leech.

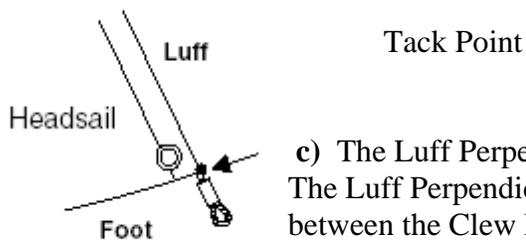


b) This sail may be tacked to any of the three bows, to the spinnaker pole, to any point along an allowable bowsprit or to any point inside and/or aft of these points. This sail may be sheeted to any point within the dimensions of the boat which cannot be extended by struts, bumpkins or other means.

### 5.10.10 Screacher

a) This sail shall be three-cornered:

b) The Luff length shall not exceed 35 feet (10.668 m) as measured between the Head Point and Tack Point.



c) The Luff Perpendicular shall not exceed 19 feet (5.791m). The Luff Perpendicular is defined as the shortest distance between the Clew Point and the Luff.

d) The mid-girth shall not exceed 130 inches (3.302 m) and be measured from the Half Point on the Luff to the Half Point on the Leech. These Half Points shall be found by folding the Head Point to the Tack Point obtaining the Half Point on the Luff, and folding the Head Point to the Clew Point obtaining the Half Point on the Leech.

**5.11 Deck Hardware** - Deck hardware may be added, changed, or modified to suit the owner's needs.

**5.12 Outboard Motor**

- a) An operable outboard motor of at least 8 HP (manufacturers rating) is required to be mounted in the engine well at all times.
- b) A fuel tank of at least 3 gallons (9 liters) capacity must be carried.