

## ARTICLE XII

### Specifications:

1. Explanations - Specifications, however complete, cannot anticipate every possible situation that may arise. If a point is not herein covered, a ruling must be obtained from the Board of Directors or a committee designated by it. In interpreting any point not covered, or wording of obscure meaning, the intended meaning shall be considered rather than any technical misconstruction that might be derived from the wording, and the basic principle of the specifications, which is to maintain the Rebel as a standard one design class, shall be borne in mind at all times.
2. Requirements - A yacht, its spars, rigging, and sails must conform strictly throughout with respect to design, dimensions, construction and material to the official plans and specifications of the National Rebel Class Association to be considered a Rebel and be eligible to the Rebel Class. Nothing is optional in these specifications unless the word "optional" appears in the Article and then only within the limitations described.
3. Hull Dimensions:
  - (a) Length overall - 16' 1-1/4" not including mouldings.
  - (b) Greatest beam - 6' 7-1/2" not including mouldings
  - (c) All hulls must be made of fiberglass from a mould made in exact accordance with a set of scale loft lines owned by Ray Greene & Company and approved by the Association. No deviation will be allowed from these loft lines. The completed fiberglass hull must conform to the standard weight limitation of 700 pounds minimum with all standing rigging, flotation, mast, boom, rudder, tiller, floorboards (if used), and centerboard. If this weight is less than the minimum, the difference shall be made up by the addition of any material and permanently attached to the hull.
  - (d) Flotation - 9 cubic feet of styrofoam or its equivalent having a density of 2 pounds per cubic foot maximum must be built into the hull.
  - (e) The thickness of the hull must be uniform except where reinforced locally such as the keel, the stem, and where the stay anchorages and rudder gudgeons are attached. Deck supports and reinforcing may be made of materials other than fiberglass such as wood or aluminum.



## ARTICLE XII (Continued)

4. Deck: The deck may be made of fiberglass or wood with canvas covering provided the weight limitations are met.
5. Fastenings: Fastenings may be of any material and may be galvanized or plated.
6. Spars:
  - (a) Mast - shall be an aluminum extrusion with minimum wall thickness of .085 inches, minimum width of cross section 1.75 inches and minimum length of cross section 2.650 inches. The length of the extrusion shall be 24 feet plus or minus 1/4 inch. The maximum height of the mast above the sheer molding shall be 25 feet. The mast may be moved fore or aft 3 inches from location shown on plan.
  - (b) Boom - shall be an aluminum extrusion with minimum wall thickness of .085 inches, minimum width of cross section 1.75 inches and minimum length of cross section 2.650 inches. The length of the extrusion shall be 11 feet 3 inches plus or minus 1/4 inch.
  - (c) There shall be no restriction as to the use, length or material of the whisker pole, except that it may only be used for the jib.
7. Rigging:
  - (a) Standing rigging shall be as shown on the plans as to position and number and length of stays, to be of wire rope of diameter and strength not less than shown on the plans. Spreaders and struts to be shown as to position, length, diameter, and wall thickness.
  - (b) Any change in the set of standing rigging during a race except as occasioned by accident shall be prohibited.
  - (c) Changes in running rigging, not expressly barred in the plans or specifications may be made at the owner's option. Additional fittings to aid in ease and convenience of handling the boat may be used at the owner's option. However, a trapeze or other rigging (except hiking stamps) used by the crew to utilize his weight to trim the boat is prohibited.
8. Centerboard: to be a maximum of 5/16" thick and not vary more than 1/2" in any dimensions from official pattern, provided, however, that the edges may be tapered to within 1" of the edge and that the radius along the edge shall not be less than 1/16". Centerboards shall be made of any metal and may be galvanized or plated. The weight of the centerboard shall be 110 pounds maximum.
9. Rudder & Tiller:
  - (a) The rudder shall be 5/8" thick fiberglass and may be tapered to not less than 1/16" radius at the edges. It may be arranged to tip up when striking an underwater object, but must be kept in the full down position during races. The outline must be as shown in the official plans.
  - (b) The tiller may be of any length at the option of the owner, either with or without hiking stick. Material is optional.
10. Floorboards: May be made of any material and of any design at the option of the owner, or may be omitted entirely.
11. Sails:
  - (a) No sails other than the standard size jib and mainsail are allowed. Storm sails, or those especially cut to smaller dimensions than shown on the official plans for use in racing under heavy weather are prohibited. This refers to the three linear dimensions of the sail, vis. luff, leech and foot, and does not refer to the belly or draft the sailmaker may put into the sails. Loose-footed mainsails, jib booms, double luff mainsails, and perforated sails, other than reef

ARTICLE XII (Continued)

- points or accidental, are barred. Zippers on sails may not be changed during sanctioned races. It is permissible to have a plastic window, not to exceed 4 square feet, in the mainsail or the jib as an aid to avoiding collisions.
- (b) Mainsail and jib shall be of cotton or synthetic woven fabric. The sail cloth shall not be lighter than 3.7 ounce material, this weight being based on a lineal yard 28 1/2" in width.
  - (c) Racing number and class emblem not less than 10 inches high must be attached on each side of the mainsail and be of size and design shown on the official plans.
  - (d) Sails may be reefed at the foot only. The jib, when used, must be used without reefing.
  - (e) Battens may be of any material. There shall be four battens in the mainsail and they shall divide the leach into approximately five equal parts. The lengths of the battens shall not exceed 40 inches. Battens in the jib are prohibited.
  - (f) Size of mainsail - The luff and foot dimensions shall be governed by the banding requirements of Section 12. The leach, measured in a straight line from top of headboard to edge of the sail at the clew, not including the boltrope shall be 23 feet 10 inches when stretched sufficiently to straighten out the material. Roach and draft are governed by a measurement across the sail from a point on the luff halfway from top of headboard to tack, not including the boltrope, to a point on the leach halfway from top of headboard to clew, not including the boltrope. This measurement shall not exceed 7 feet 3 inches. A tolerance of 5 inches minus and 0 inches plus is allowed on the dimensions of the mainsail. The size of the headboard shall not exceed 5 inches across measured perpendicular to the mast.
  - (g) Size of jib - The luff, measured from the apex of the sail at the head and the apex at the tack shall be 15 feet 0 inches. The foot, measured from the apex of the sail at the clew to the apex of the sail at the tack shall be 7 feet 0 inches. The leach, measured from the apex of the sail at the clew to the apex at the head shall be 13 feet 6 inches. These measurements shall be made with approximately 5 pounds pull on the sail. A tolerance of 4 inches minus, 0 inches plus is allowed on the dimensions of the jib.
12. Banding: Bands at least 1/2 inch wide shall be affixed to the mast and boom to mark the maximum allowable positions of the three corners of the main sail. The measurement from outside edge to outside edge of the top and bottom bands on the mast shall not exceed 22 feet 3 1/2 inches. The measurement along the boom from the normal position of the edge of the sail at the tack, not including the boltrope, when it is attached to the gooseneck, to the outside of the band on the boom shall not exceed 11 feet. Alternate sets of bands on the mast may be used providing they are of contrasting color and meet the above dimensional requirements.



# 16' REBEL

LOA 16'-1 $\frac{1}{4}$ " BEAM 6'-7 $\frac{1}{2}$ "

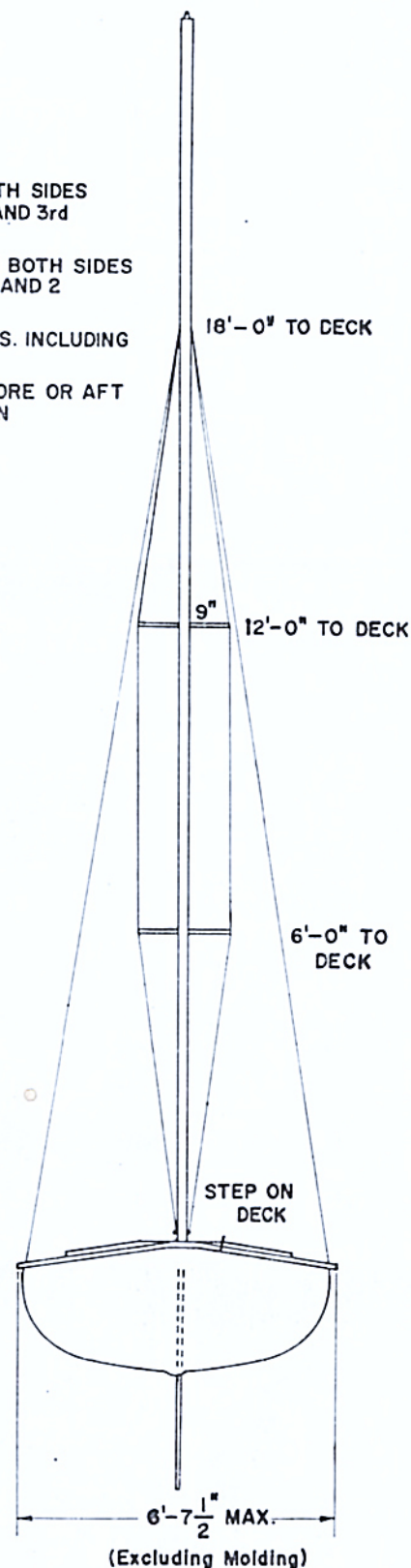
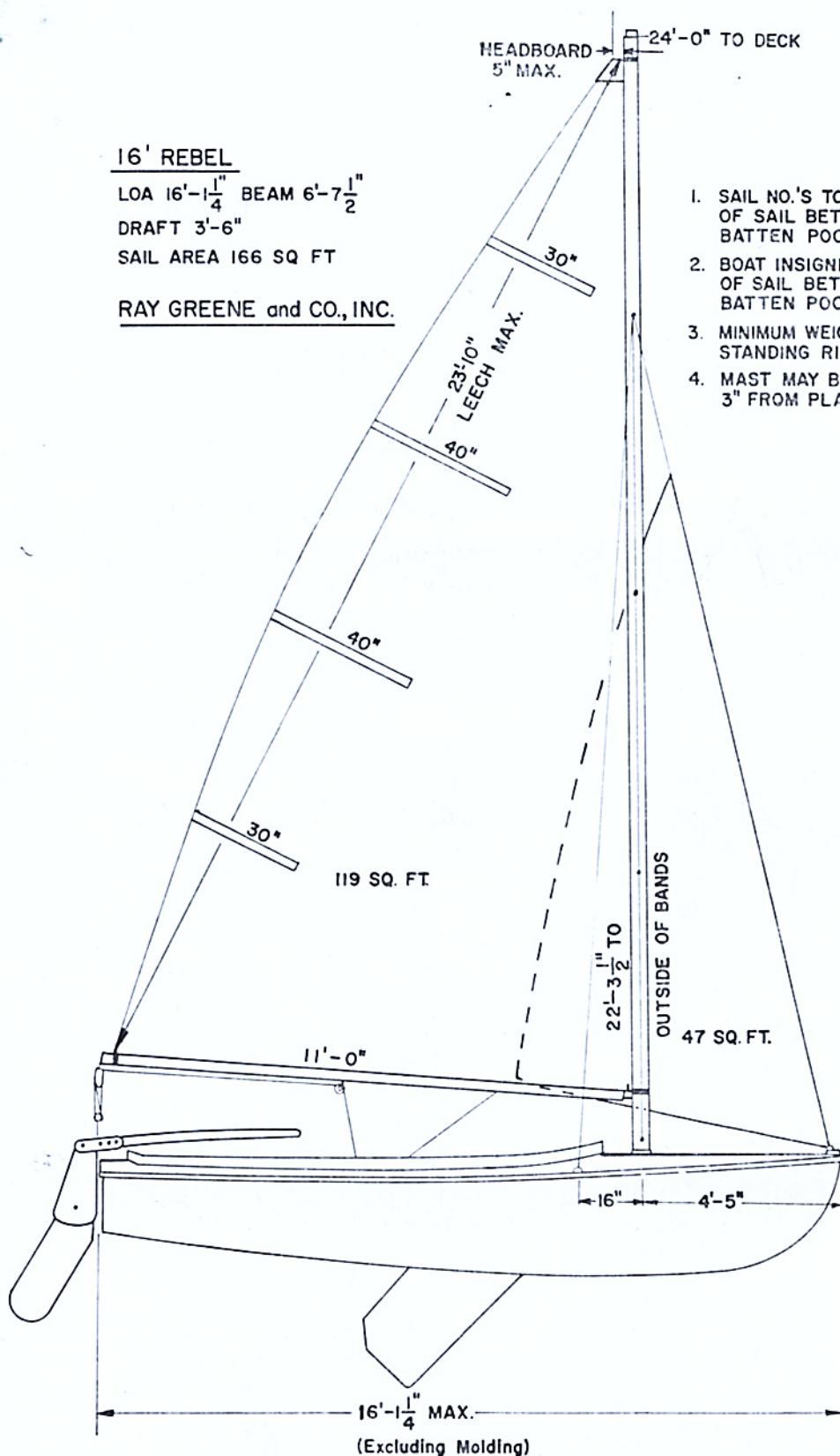
DRAFT 3'-6"

SAIL AREA 166 SQ FT

RAY GREENE and CO., INC.

HEADBOARD 5" MAX.  
24'-0" TO DECK

1. SAIL NO.'S TO BE ON BOTH SIDES OF SAIL BETWEEN 2nd AND 3rd BATTEN POCKETS.
2. BOAT INSIGNIA TO BE ON BOTH SIDES OF SAIL BETWEEN NO. 1 AND 2 BATTEN POCKETS.
3. MINIMUM WEIGHT 700 LBS. INCLUDING STANDING RIGGING
4. MAST MAY BE MOVED FORE OR AFT 3" FROM PLAN LOCATION



OFFICIAL REBEL PLAN

# JIB MEASUREMENT METHOD

FROM POINT 1,  
STRIKE AN ARC  
WITH 4" RADIUS.

HEAD

4" R.

LUFF AND LEECH MUST TOUCH ARC  
WHEN TAKING MEASUREMENTS

## MEASUREMENTS

1-2	14'-8"	1-7	13'-6"
1-3	15'-0"	2-5	7'-0"
1-4	13'-2"	2-6	7'-0"
1-5	13'-2"	3-4	6'-8"
1-6	13'-6"	3-7	6'-8"

LUFF

LEECH

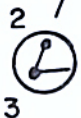
JIB

LAY THE LUFF ALONG A LINE CONNECTING  
POINTS 1 AND 3. PLACE LUFF AND LEECH  
NEAR HEAD SO THEY JUST TOUCH THE  
INTERSECTION OF THE FOUR INCH ARC WITH  
LINES 1-3 AND 1-5.

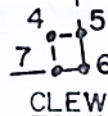
LUFF AND FOOT INTERSECTION MUST FALL  
BETWEEN POINTS 2 AND 3.

THE CLEW MUST FALL WITHIN THE  
BOXED AREA 4-5-6-7.

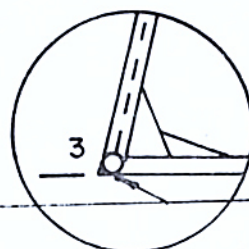
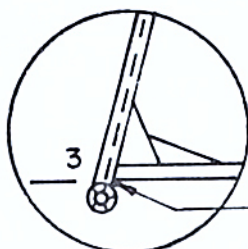
TACK



FOOT

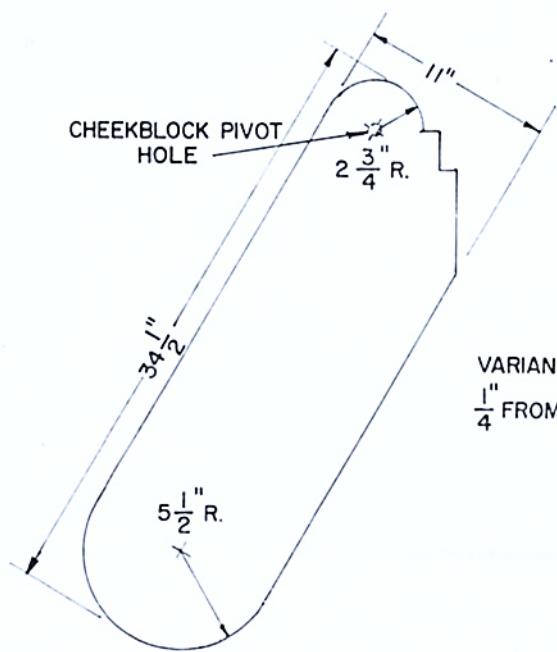


CLEW



POINT OF MEASUREMENT AT  
TACK IN RELATION TO GROMMET.

## 1066



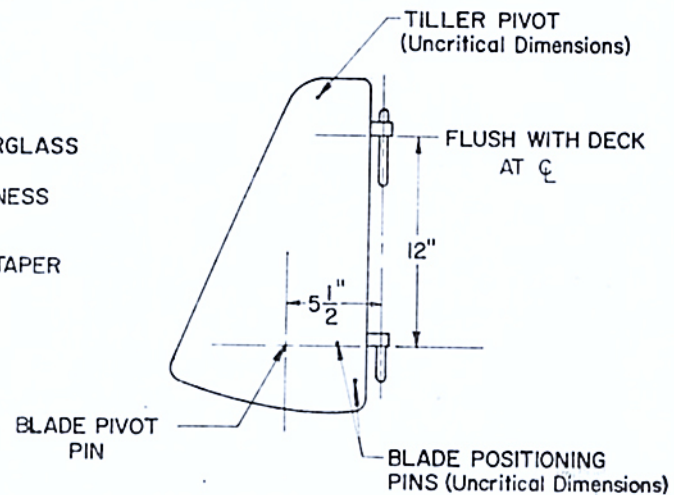
## MATERIAL FIBERGLASS

$\frac{5}{8}$ " MAX. THICKNESS

$\frac{1}{16}$  R. MIN EDGE TAPER THICKNESS

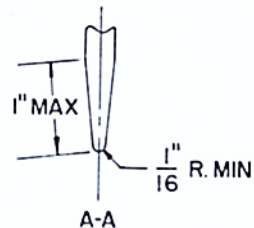
VARIANCE NOT MORE THAN  
 $\frac{1}{4}$ " FROM OFFICIAL PATTERN

TILLER LENGTH, MATERIAL,  
AND HIKING STICK OPTIONAL

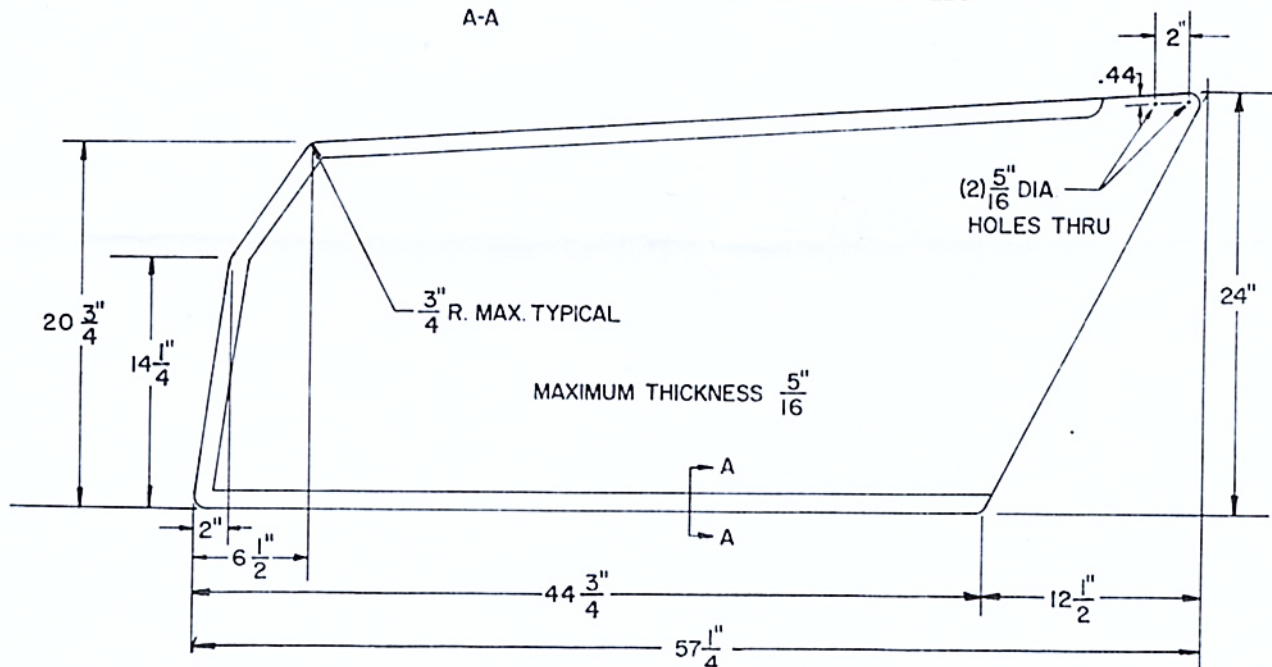


BLADE

## CHEEKBLOCK



VARIANCE NOT MORE THAN  
 $\frac{1}{2}$ " FROM OFFICIAL PATTERN  
MAX. WEIGHT 110 LBS.



CENTERBOARD