

STAR CONSTRUCTION — KEEL FABRICATION

THE OFFICIAL KEEL SPECIFICATION READS AS FOLLOWS:

- 1) May be solid or hollow.**
- 2) Material may be reinforced plastic, plastic laminate, fiberglass, wood or metal.**
- 3) Strength and integrity must be maintained whether solid or hollow.**
- 4) Shape is not specified but must follow the general shape shown on the ref. Drawing.**
- 5) The dim. at the hull junction must be between 6" and 8".**
- 6) The dim. at the top junction with the bulb must be between 4" and 6".**
- 7) May be removable.**
- 8) May not be mechanically moved during sailing.**
- 9) Total drop length of the keel/bulb combination must not exceed 11 ½" when measured from the keel/hull junction.**

THE KEEL (PREFERED BY THE WRITER) DESCRIBED BELOW IS NOT REMOVABLE BUT PROVIDES THE FOLLOWING BENEFITS.

- 1) Lowest possible installation in the hull cavity. This permits the combined weight of the radio board, servos and battery to be as low in the boat as possible.**
- 2) The 4 bent tabs spread the cantilever forces entirely across the bottom of the hull from the center line to the chines.**

THE CONSTRUCTION IS AS FOLLOWS:

- 1) Material is 1/8" thick alum. plate.(Approx. 6 ½" x 16")**
- 2) The keel shape (including 4 pointed mounting tabs) is scribed on the alum. plate and sawn out.(See sketch following.)**
- 3) The tabs are bent over to 90 degrees in an alternating manner. (This can readily be done in a bench vice.)**
- 4) The keel is then slipped thru the slot in the hull and each tab is adjusted (curved upward) to match the shape of the hull as closely as possible.**

NOTE: THIS ENTIRE PROCESS REQUIRES THE USE OF A HOLDING FIXTURE THAT ALLOWS THE HULL TO BE SET ON 3 BUTTONS AND THE KEEL TO BE SLID INTO A SLOT THAT PLACES IT PERPENDICULAR TO THE 3 BUTTONS.(SEE PHOTO FOLLOWING)

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(CONT'D.)

- 5) With the keel and the hull properly fitted and located in the fixture, the 4 tabs are fiberglassed to the hull and allowed to cure for 48 hours.

NOTE: THE NEXT STEP IS TO ASSEMBLE THE BALLAST BULB.(SEE PAGE HEADED "BALLAST BULB")

THE KEEL MUST HAVE A "CHORD" SHAPE ON EACH SIDE. THIS IS DONE BY APPLYING "BONDO" MATERIAL (A chord is similar to an airplane wing.)

- 1) Grind or file both the leading and trailing edges of the keel to a point. Taper the sides back about $\frac{3}{4}$ " on each side.
- 2) To assure adherence of the bondo rough up both sides of the keel using 50 grit sand paper.
- 3) Make a 'Wiping Blade' out of any stiff material. Cut the chord shape into the edge of the blade.(See sketch which follows.)
- 4) With boat laying on its side, place a quantity of Bondo at the top of the keel next to the hull. Using the blade, wipe the Bondo from the top to the bottom. Doing this will produce the desired chord. Allow Bondo to completely cure.
- 5) Sand Bondo to a smooth surface and paint.

PAINTING

Painting may be only the keel or may include the bulb as well.

- 1) Use an enamel spray can, such RUST-OLEUM.
- 2) After adequate masking, spray on 10 to 15 light coats of paint. Following directions on the can, these coats can be applied 10 to 15 minutes apart. (NOTE: Adequate thickness must be available to avoid sanding thru to the metal.)
- 3) If spraying is impractical, (such as indoors) brush on 8 to 10 light coats of ACRYLIC LATEX paint. (Valspar)
- 4) WET SAND using 400 grit wet paper until all irregularities are blended into a smooth surface
- 5) WET SAND using 800 and then 1200 wet paper until smooth.
- 6) Finish polish using a FINISH RUB POLISHING COMPOUND.
(Such as PPG-DRX 25.)

ALL SURFACES MUST BE SMOOTH TO AVOID FRICTION IN THE WATER.