

Installing Std. 16" Black Aluminum Mast Can and Pin Rack

By Bob Reilly

- 1. Remove the existing mast can and all associated fasteners, such as through-bolts. Putty (Bondo) or otherwise seal any leftover holes to keep water out of mast step.**
- 2. It is important to locate the pin rack so that the center hole is positioned to yield a mast rake of approximately 13 feet 6 inches measured from mast tip to rear edge of aft transom. This provides maximum flexibility fore and aft for the rake system. Assemble the can and rack with the pin and holding or clamping it temporarily to the mast step. Then insert the mast with a tape attached and make the measurement as mentioned above. Mark the location of the pin rack on the mast step.**
- 3. The butt of the mast must rest between 8 inches and 8-1/2 inches below the sheer line of the boat to be in accordance with Class rules. This measurement is frequently checked at the annual Championship Regattas. The sheer line is the top edge of the boat at the topside fiberglass surface. Some interpolation is usually required here to account for mast partner configuration. A straight edge laid across the boat at the mast hole with a tape measure downward will yield the gross measurement, which must be corrected by the interpolation mentioned above.**
- 4. A mast "depth" measurement of 8 " is the ideal, but keep in mind that the slug at the bottom of the can is 1/2" thick (on later model mast cans), so some careful measuring is in order at this point. It may be necessary to notch the mast step piece for the pin rack to sit down low enough in the boat to achieve the required dimension. This is a somewhat awkward job as the space to wield an effective cutting tool is very limited. A sharp chisel will work. A Dremel type tool with a small saw attachment could also be used. Other suggestions will be welcome. Any raw wood surfaces uncovered during this process must be varnished, painted or otherwise waterproofed.**

When the correct location of the pin rack has thus been determined both vertically and horizontally it is time to bolt that piece to the mast step. The opening in the bottom of the pin rack is about 3/4" and most mast steps are roughly the same, so that no shimming or shaving is required, but not all Sabots are made so uniformly. Suffice to say that the pin rack should fit snugly on to the mast step. If the depth of the mast can is slightly in excess of ideal, it can be readily corrected by inserting (and gluing in) an appropriate thickness plastic disk in the bottom of the mast can.

5. I recommend through bolting the pin rack with at least two 1/4" stainless steel bolts. This requires drilling out the holes provided in the lower half of the pin rack. A 17/64" drill hole makes later assembly a bit easier. It is at this point that a right angle drill or drill attachment comes in very handy. There is little room to maneuver a standard power drill to make the required holes. Perhaps a Dremel style tool would also do the job, however slowly. With holes completed insert the bolts (trimmed to length) using nylon washers on both ends and nylon-inserted nuts. The latter recommendation is an attempt to keep salt water from entering the drilled holes in the mast step.

An alternative by some Sabot skippers has been to screw the pin rack in place using the drilled holes as provided and four #10 stainless steel, pan head, sheet metal screws of appropriate length. Again, other methods used would be useful information.

6. At this point the job is finished. It only remains to slide the mast tube through the mast partner hole and pin it in place through the hole provided in the mast can blade and the "Avdel" type pin provided. Keep in mind that the maximum play of the mast can in the mast partner hole can only be 1/8" total. I recommend a more snug fit using heat shrink tube or Dacron sail tape to close the gap.

Similarly, I consider it best to reduce mast can "rattle", that is free play of the mast inside the mast can, to a minimum. Two-inch diameter heat shrink tubing seems to work well in this situation. Depending on the amount of free play to be eliminated, I usually apply one or more turns of duct tape to the mast prior to overwrapping it with the shrink tube. A little wax will keep the mast rotating easily.

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