

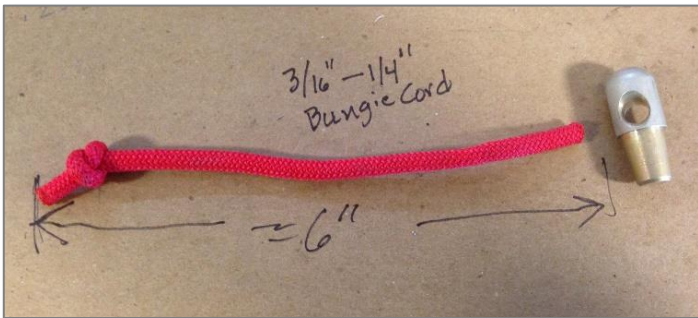


## KASPERWING Rib Retainer Upgrade

by Chelan

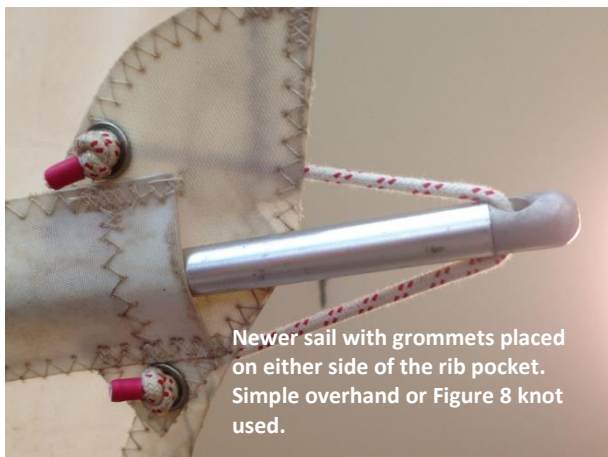
One of the easiest upgrades to the original leather tabs used to retain the ribs are the aluminum “plugs” that came with the KASPERWING 180-B Model. The installation is simple with just a bit of 3/16” bungee cord and some of the turned, aluminum rib plugs that can be ordered through this web site. It may be possible to re-use the bungee cord that currently secures your leather tabs, but if it is old and worn, just start anew. A quick search of the internet will lead you to many suppliers of appropriate bungee or shock cord suppliers.

**Prepping the Rib:** When the leather tabs were used, the ribs had a slight ‘notch’ filed into the trailing edge end (front end is flattened). To prepare the shoulder of the aluminum plug to sit flush in the end of the tube, file or cut about 1/8” off the rib to remove the notched portion. It doesn’t take much. **Note:** Although unnecessary, some of us have cut off the front ends as well (where the ribs slide over the LE Spar) and replaced the flattened section of tubing with 05-01932 POLY TIP RIB END FITTING 3675 (available at Aircraft Spruce).



**Prepping the Bungee Cord:** Start with a length of bungee cord about 7” long (make just one and check it first!). Cut and burn the ends (use a hot knife if you have one). Tie a knot about 1/2-1” from one end. Thread the unknotted end up through one grommet, through the hole in the plug and then through the other grommet. Tie a loose knot in the end you just pulled through the grommet, about an inch down. Slide a rib into a sail rib pocket, pop the plug in the end of the rib and check the tension of the bungee cord. Adjust the loose knot as needed to add or reduce the amount of tension pushing the rib forward. The correct tension helps the ribs do their part in maintaining the sail airfoil shape. Cut off any excess bungee cord (above the knot!) with a hot knife if desired. *Note: An alternative method of securing the bungee cord to the grommets is shown in the B-Model manual and in a photo below.*

Depending on when your sail was made and who manufactured it, the grommets will be placed on either side of the rib pocket, or above and below the pocket. Below are different ways of securing the bungee to the grommets:



Newer sail with grommets placed on either side of the rib pocket. Simple overhand or Figure 8 knot used.

