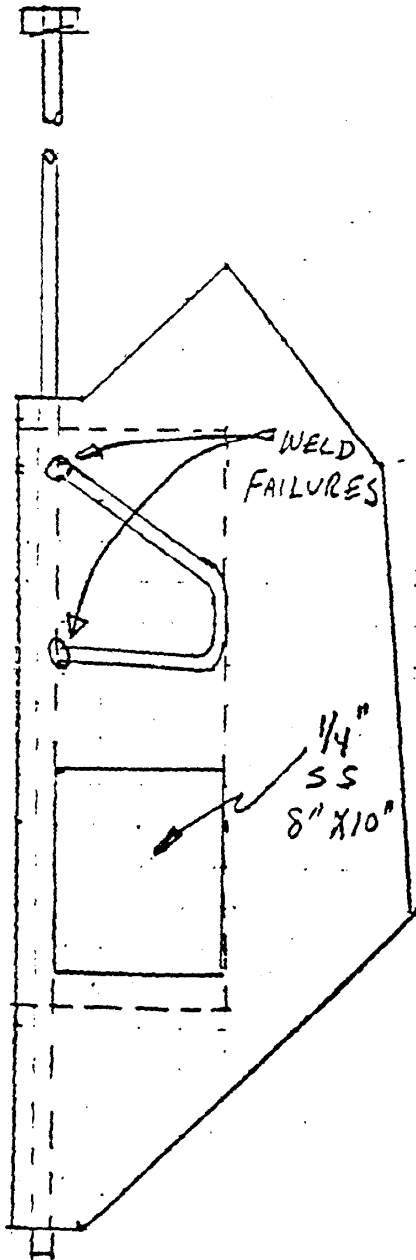


RUDDER REPAIR



Our rudder problem was indicated by a progressing offset of the tiller with the rudder in a neutral position. We had to cut the fiberglass away (dotted line) to reveal the failed weld connections, as the drawing (to scale) shows. We had the rod re-welded to the rudder post. For good measure, we had a $\frac{1}{4}$ " stainless steel 8"x10" plate also welded to the rudder post. We then filled the void with a sand and resin mix, and fiberglassed and painted the rudder to complete the repair. The rudder is now much stronger than the original. The total cost was about \$70 for welding, fiberglass material, and the stainless steel plate.

← - Ellie and Bill Burns

* * *

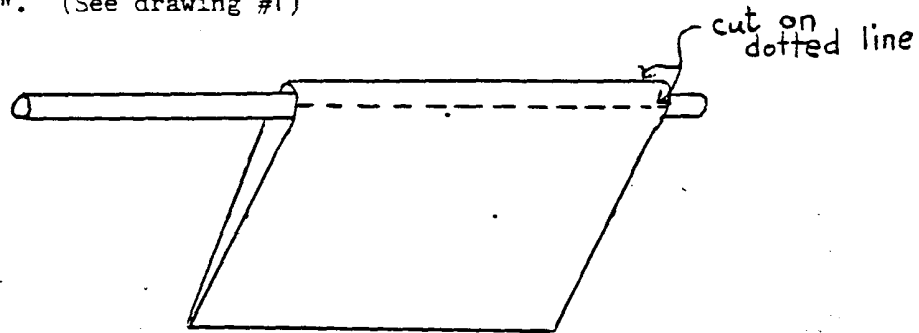
When we put "Lyra" back in the water, we noticed about 6 inches of play in the tiller before the rudder moved. From talking with several Vega owners, it seems that Albin used a variety of methods in constructing the rudder over the years. Since we could not get a clear idea of how ours was constructed, we decided to play it safe and drop the rudder and do whatever was necessary to repair it. We did this with the boat in the water. To drop the rudder, we:

1. Removed the tiller.
2. Ran a line under the rudder, tying it off on the winch on each side. We did this at the suggestion of another Vega owner who had found his rudder rather heavy when he removed it.
3. Undid the shoe on the keel. For this we needed a thin-walled 14mm socket.
4. Pulled the rudder shaft down thru the shaft tube. This can be facilitated by a light sanding of the upper end of the shaft so it slides thru more easily.

(continued)

With the rudder ashore we carefully made a cut on both sides parallel to the rudder shaft the full length of the rudder. This piece now came off as a "cap". (See drawing #1)

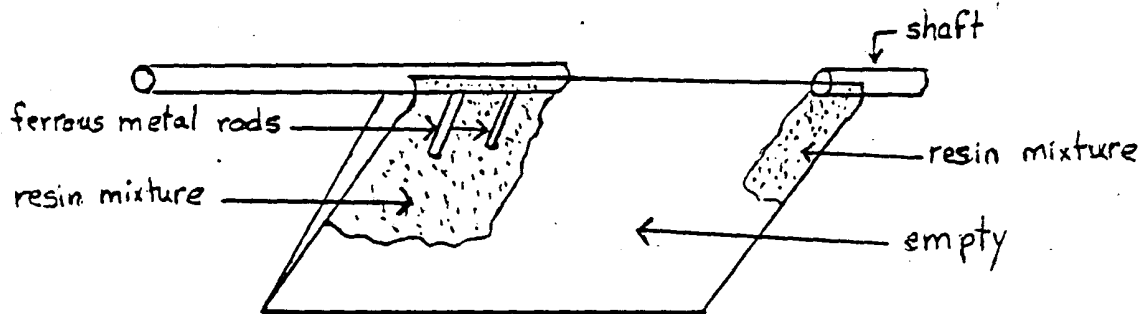
#1



With this "cap" removed we were surprised to see the construction. The shaft did not extend all the way through the rudder but was in two parts. The upper end extended approximately 18 inches into the rudder and was attached to two ferrous metal rods welded to it which were in turn embedded in a resin/fiberglass/sand mixture poured into the upper portion of the rudder. The middle of the rudder was empty. The lower end of the rudder held a 10 inch piece of shaft embedded in a resin mixture poured into the lower portion of the rudder. (See drawing #2)

#2

"X-ray" view with cap removed



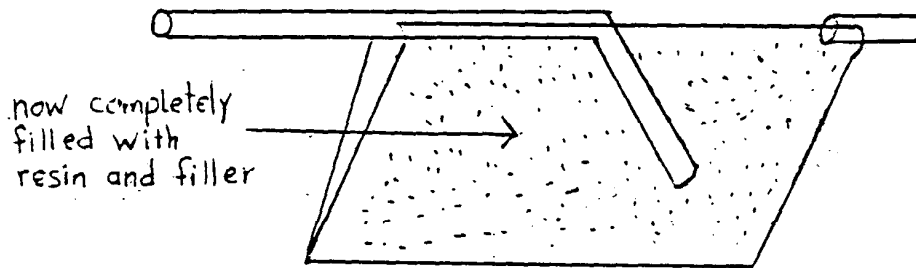
Our problem had been with the ferrous metal rods, of course. The first one had broken loose from the shaft and the lower one had begun to work in the resin mixture.

(continued)

We considered replacing the shaft with a single piece which extended all the way through the rudder but a 25 mm shaft was not available locally.

Instead, we had a 12 inch rod welded on the end of the shaft at a 45 degree angle. We put the shaft back in place and poured 2 gallons of resin and filler in to completely fill the rudder cavity. (See drawing #3)

#3



We replaced the cap and used resin to fill the gap created when it was sawed off. A little sanding and a coat of bottom paint and it was ready to put back on. Although the rudder held well for 16 years and may have continued to hold for some time we feel that in its rebuilt state it will still be around long after the rest of the boat has disintegrated into dust.

- Bill and Karen Sides