

Beautiful Keel
by
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Kept at Campbell's Town Creek dock, Suzie-Q is a skiff with a top that thinks it's a yacht. This 25-ft inboard is made of glass-covered wood with a large keel to hold the propeller shaft. During its first season the keel warped and developed cracks, and during its second season the boat started leaking badly (5½ gal/hr!). The boat had also been plagued with drive-train vibrations, which had been reduced by adjustment but not eliminated.



Based on several inspections, Campbell's staff concluded that water was getting in through keel cracks and flowing up around the outside of the stern tube through gaps left during construction. The boat's Western Shore builder disagreed and proposed limited repairs. I decided to have the keel totally replaced in Campbell's shop at Town Creek, and Campbell's assessment of the defect was soon seen to be accurate.

The fix required cutting off most of the keel and removing the fiberglass stern tube – a tricky and difficult operation. The original chunks-of-wood keel was replaced by a dimensionally stable sandwich of marine plywood, tightly fitted around a new stern tube. Cutlass-bearing and shaft-

seal supports were simplified, eliminating lag screws that had opened another entry path for water in the old keel. The new keel was then covered with strong biaxial fiberglass cloth and epoxy.

The vibrations had been discussed many times, and Barney Kastel at Kastel Brothers propeller shop in St. Michaels made the comment that resonated with the experts. Barney thought that all our vibration problems were caused by turbulence behind the keel at the location where the propeller takes its bite. He went on to say that this was a frequent cause of propeller damage in work boats that have rather thick keels with square trailing edges like Suzie-Q. The solution is to heavily contour the keel's trailing edge to promote smooth water flow in front of the propeller.

Tom Campbell designed contour lines for the plywood layers in the sandwich, and Jason Satchell crafted the beautiful sculptured keel shown in the photograph. The boat has been in the water now for more than two months and there are no leaks whatsoever. Drive train vibrations are totally gone, and the only remaining vibrations are those of a normal 4-cylinder diesel. My little skiff is now a delight to cruise and I can't find enough good words to describe the experience, skill, craftsmanship, and care that went into this work – all done at a price that was very reasonable. To some TCBY may mean the country's best yogurt, but to me Tom Campbell's Boat Yards means the best place in the country to get your boat fixed.

