

## Pivot Bolts On Rudders & Centreplates

By Mike Broad, Shrimper 500 (*Damzelfly*), (Spring 2003)

These suggestions apply to many small craft as well as to Cornish Shrimpers.

Although a check on and replacement of, the lifting wire/line for both centreplate and rudder is routine, many owners are unaware of the importance of regular inspection and replacement of the pivot bolts.

This is especially true for the rudder plate pivot bolts on Shrimpers before No. 500 as these were of galvanised steel, as were the gudgeons and pintles. Over the years, severe wear, accelerated by corrosion, takes place and two local (Dart) boats had their (early type) rudder plates drop out due to corroded pivot bolts. One colleague was persuaded to remove his bolt for checking and found that it was wasp-waisted and less than half the original diameter! Replacement galvanised bolts are cheap, but a better long-term solution is to replace the rudder plates and associated fittings with the stainless steel type, as fitted to boats from No. 500 onwards.

The centreplate pivot bolt must also be checked as these are of galvanised steel on all boats. Although the centre plate hole is bushed, the builder's Factory Manager advised me that the pivot bolts should be checked and replaced every 5 to 8 years. We found one elderly boat with a very badly worn and corroded pivot bolt in imminent risk of failure with the alignment holes in the box also worn oval by the loose, rusty bolt.

The M12x65 zinc plated bolts used are inexpensive (I paid £1.43 for two locally) and used a film of "Keenol" grease for the replacements. The replacement procedure is easily undertaken ashore, either on a trailer using wedges to take the centreplate load off the bolt, or, if propped up in a boatyard, by using blocks and a small hydraulic car jack for the same purpose. It is also vital to check that the washer type seals at the pivot bolt and nut are intact where they abut the centreplate box. Salt water must not leak in here as it can cause serious corrosion of the internal resin-cast ballast in the adjacent floor.

Although on checking the centreplate bolts on both my own Shrimper and on a friend's older vessel, they were found to be in good condition, it is far better to replace them regularly and be sure. The loss of a 150 lbs./68Kg centreplate is not funny.

## Centreplate Bolts

By Paul Rich, Shrimper 171 (*Sula Sula*) (Winter 2003)

The article in the Spring Issue by Mike Broad under the above title was enough to put the fear of Neptune up all of us owners of elderly Shrimpers. My Shrimper, *Sula Sula* (171) is 18 years old, so with the thought that the centreplate pivot bolt is overdue for replacement 2 or 3 times over (divide 5 or 8, the recommended service life, into 18!), I tackled the job forthwith. To my huge relief, I was able to hammer the new bolt through with little difficulty to displace the old one. Imagine my surprise to find that the old bolt was hardly corroded and I would have guessed that it was reasonably good for another 10 years. Maybe the waters of Milford Haven are sweeter than those of the Dart!

Articles like Mike Broad's are very welcome for us owners of the "more mature" Shrimpers. Could we have more please?

## More on bolts!

By Mike Broad, Shrimper 500 (*Damzefly*) (Winter 2004)

I was surprised that reader Paul Rich (Winter 2003 magazine) was disappointed to find that his boat's centreplate pivot bolt was still in good condition. Fortunately this is the "norm". Of the boats we checked locally, all but one was also in pristine condition. The rare exception is shown in the attached photo, marked (A). Nuff said.

Photo (B) shows an M10 stainless steel rudder pivot bolt. Interestingly, there is evidence of pitting on the diameter, due to the well-documented phenomenon of anaerobic corrosion of some stainless steels. Nothing to worry Shrimper owners, even in our "ultra saline" waters...!

Photo (C) shows a badly worn M10 galvanised steel rudder pivot bolt from an older Shrimper (before stainless steel fittings became standard). The deep wear groove is very clear - fortunately the owner discovered the problem whilst ashore. Replacement of the old galvanised steel rudder plates, bolts, hangings etc., with the later stainless variety seems to cure the problem. Although our Shrimpers are very sturdily constructed, moving items will not last forever, so regular maintenance should be a key part of boat ownership.

