

Damage to Seawind Prada 01

Previously I had replaced part C3, the mast support bracket, as it had broken and was no longer supporting the mast or deck.



The standard part is poorly designed because the two side webs take the force to the sides of the support tube and this puts all the strain across the front of the round socket. It is also inadequate in size, both because it fails to reach under the mast step and because it is too short on the tube leading to excessive loads.



Now I had noticed that the replacement part that I had made had also broken. This was indicated by the dishing inwards of the deck and the gap between the keel nut and the deck.

Fortunately, I can still pull the keel in spite of the boat being several years old, so it all can come apart for replacement and repair.



The replacement C3 part had also collapsed and there was some breaking of the deck around the keel bolt.

A more substantial part was required and I had some linen phenolic block which should make a sufficiently strong part.

Additional problems also showed up and needed repairing.



Some time ago the keel bolt tube had sheared away at the threads where it screws into the keel box. The bolt itself could support the tube but this break could leak badly as the tube is supposed to be watertight

around the bolt. I have had to pack the keel socket with vaseline to keep the leak under control.

Now the tube shows significant corrosion. It cannot be replaced by a new one as the broken off threaded end is lodged in the keel box.



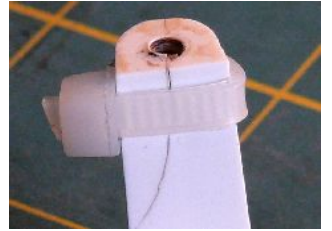
The radio support bracket that hangs off the keel tube is also breaking up, probably due to sideways movement of the keel bolt and tube.

There was also cracking found on other parts

including the deck around the keel bolt.

The repairs

The rudder support bracket showed some cracks around the deck screws so a couple of cable ties were tensioned around the ends to hold these together.



The radio support bracket was also repaired using cable ties. This time epoxy was also used as the cracks had opened up wide enough to allow the glue to be run into them.



Holes had been drilled through the webs to take the ties and one of these also coincided with a crack so it provided stress relief.

The new mast support (C3) is made from 16mm Tufnol linen reinforced phenolic.



It is 65mm long so that it reaches under the mast step and is 30mm deep to obtain adequate support from the keel bolt tube.

The hole is 8mm drilled from the underside to within 2mm of the top surface, then 6mm for the rest. This is so that it fits on top of the aluminium outer keel bolt tube and the shoulder will hold the bracket up under the deck.

The hole centres are 6mm from the rear edge leaving a 2mm wall which is all that is available between the tube and the hatch recess. The upper rear corner also needs to be chamfered to fit into the corner.

The front needs to be forked to fit around the mast step screw sockets on an ABS boat. This part had originally been made as a prototype to test on a CFE Seawind and this required the front to be recessed to fit under the reinforcing in that area, but no slot as there are no screw sockets on a CFE, the screws would go into the bracket.

The deck around the keel bolt hole had cracked and broken away from the hatch area.



A plastic patch was epoxied over the area with a hole that was carefully aligned with the original.



Replacing the keel proved to be difficult due to having to align the tube manually because it didn't reach into the top of the keel socket.

The repairs have made the deck feel completely solid and should avoid any further problems.