

Carbon Fibre Seawind, a first look

David invited me to look over his newly purchased kit of a Carbon Fibre Seawind. The kit is identical to the standard kit except that the ABS hull and deck is replaced by a single piece composite component and there is an additional single page instruction sheet.

Hull

The hull is black carbon fibre with a clear gel coat over most of the area allowing the carbon fibre weave to be clearly visible. Where the deck join and keel box are reinforced the gel coat is sprayed black, this merges well with the overall appearance and is necessary to hide the edges.



The hull is surprisingly light, it is said to be 200gram less than the ABS moulding but I didn't have a bare hull available to compare with.

It is intended that the hull not be painted, keeping the material visible and the weight down.

Deck

The deck and transom is fibreglass with a blue gell coat. Again it seems that it does not require to be painted. It seems well bonded to the hull and the joining at the edge is well finished and clean.



All the required mounting holes in the deck are drilled but they have no sockets to take the screws. On an ABS hull the screw holes are backed by moulded protrusions that are 'blind', if the fittings are left off the mounting holes won't leak. On this deck all the holes are drilled and will need blanking if the winches aren't fitted, or are lost.

The shroud plates, forestay and backstay will also need under deck reinforcing to spread the loads and to take the screws or bolts.

There is an extra layer of glass under the mast support position and this requires part C3, the mast support bracket, to be modified to fit. More on this later.

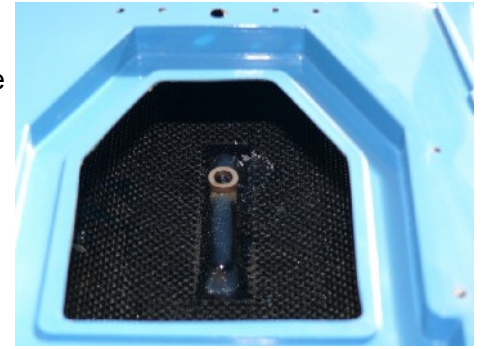
Overall the hull and deck are quite flexible. An ABS hull cannot be pushed in, the carbon fibre one can easily be flexed in along its sides by half an inch. Of course the carbon fibre is strong enough, far stronger per unit weight than ABS, and it won't be distorted by the water pressure evenly along its sides, but it doesn't give the solid feel that the ABS one has.

The deck is also more flexible, especially where the weight of the mast and the rig tension will sit.

Keel Box

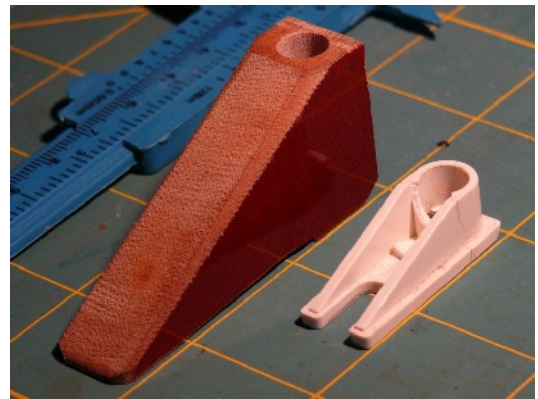
The keel box is fixed in place and reinforced inside.

The keel strut is tapped into the top of the box and this is an improvement over the ABS arrangement where it has to self tap. The distance between the underside of the deck and the keel box is slightly less and this requires the aluminium tube to be cut down by a millimetre or two.



Part C3 – Mast Bracket

On my boat the mast support bracket failed. The design is poor with two webs, one to each side, as this puts all the load on the front edge at the keel tube. The part is



also inadequate in length and depth, it only reaches the back of the mast step and is far too shallow for adequate support.

The picture shows the front around the tube broken away and the sides cracked giving no support at all. This also shows a prototype blank of a replacement part of adequate size.

This prototype is larger than the replacement that I made previously for my boat. On an ABS hull the front of the bracket needs to be forked to go either side of the screw posts. For a carbon fibre hull there needs to be a rebate to fit the reinforcing patch under the deck and it needs to be long enough to take the forward mast step screw.

Rudder Alignment

On some early hulls the rudder hole was apparently drilled slightly too far forward which made the rudder sit with less rake. It did not seem to affect David's hull.

Conclusion

As it is likely that for series racing a minimum weight will be imposed on all Seawinds then the advantages of having a carbon fibre boat may be reduced.

I would be nervous about racing one where it may be involved in collisions with ABS boats.