



Presenting the fifth instalment of F&B's resident DIY (Do-It-Yourself) Tony Ravenscroft's 7 Part Series rebuilding a Mako 20 from little more than scrap.

Rebuilding The GRP Mako 20 - Part 5

Of all the things you can do to a boat in the process of rebuilding it, cutting the bearers out is probably the most dangerous. This is because without the bearers there is nothing to support the shape of the hull.

If you aren't careful to support the hull during this process you can end up with a very miss-shaped running surface. If you are lucky, then all you will have done is left the boat with an ugly or strange-shaped hull. It is much more likely however, that apart from looking miss-shaped, the boat will now perform very badly. You

could now have a boat that always leans to one side, or runs with the bow always down. Before you start cutting anything out you must get the boat off the trailer and onto a very stable solid surface. Then support the hull from the outside before you start cutting, so that it's shape cannot be lost when it's internal strength is lost.

It has just occurred to me that since my project was already gutted then in this series we didn't cover the process of removing the old floor and bearers. I mention that because in general, this step that we are discussing now, would be one of the first things you would be

considering.

The basic situation is that the first thing you cut out will be the last thing you put back in. So although we are looking at bearers towards the end of the series, the reality is it will be on your mind almost from Day One. Because the floor and the bearers will be the first thing to be cut out. This also means that you may have the boat sitting on the workshop floor with beams under it to support the shape for several weeks.

Now before you start cutting, stand back, take a deep breath and have a good look at what is there already. This may be your last chance to save yourself a lot of trouble later. The question you should be asking right now is this: What are you going to put back in the boat once you have cut out the old timber? Do you plan to change things, or are you just going to put the boat back together the way it was?

The safest option is to put it back together the way it was. I have two very good reasons for advising this. First is that what was there clearly worked, meaning that it was strong enough to support the boat originally. If you start making changes to the structure that is in effect responsible for keeping the boat together, then you really should get some advice. It is at about this stage that it is a good idea to take at least a sketch of what you are doing to a pro boat builder or shipwright to confirm that what you intend to put in, will be strong enough to do the job.

The second reason I advise you to put the boat back together the way it was is because all the structure in there now, even if it is rotten, can be used to make templates. So that is why, before you start cutting, stand back and have a good look. Make as many templates as you can.

The technique I used to make templates for the bulkheads shown in the following photo sequence will work just as well here.

Start with the floor, I always find

Scribe Now to scribe that line. We measured along the bearer at regular spacing until we found the deepest point and marked that point on a stick. Then we moved along the bearer keeping the stick level, note the little spirit level taped to the side of the stick at the top, and transferred that point onto the bearer.



Bearers My two main bearers ready to be cut to the shape of the boat. They were made from 12mm ply wood double thickness and the joins were overlapped by 1.2 metres. That gave me a bearer 25mm thick. The two layers were joined with epoxy based glue to ensure that they could never separate. Epoxy glues wood better than anything and for such a critical structure is worth using. Regardless of what glue you use it must be a truly waterproof glue.



Scribe Setup The idea here is to get the shape of the hull where the bearer is to ultimately sit and transfer that shape to the new bearer. Then you can trim it to shape simply, with just one cut. The boat has been setup level so that the bearer can be setup level in relation to how it will actually be set into the boat.



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