

Fibreglass rudder guidelines

The current mould is made to match the existing pelican class rules. It also is made to match a Viadana rudder box, Item 51.05 which comes with 2 pintles, tiller and stock.

A different rudder box can be used but the pivot point and attachments will need to be modified so that the same distance below the keel is maintained. Otherwise a rudder box can be made to match the Viadana measurements.

The rudder can be made from normal fibreglass or carbon fibre. If carbon fibre, a vacuum pump will need to be used to make sure the carbon fibre takes the shape of the mould. Clear finish on top of this will finish this off well. But, not easy unless you know what you're doing.

The other option is to use normal fibreglass and then you have a choice of whether to paint or gel coat as a final finish. The methodology of the mould is to make two halves and then resin/glue them together once trimmed to shape. If gel coating, some fill and fairing will be required once resining the two pieces together so be mindful of the joint.

If painting, can fill and fair and then paint over the top and no joint line to be seen.

1. Wax mould, 8 times. Use only mould release wax. If this is not done properly, the fibreglass will stick to the mould and can damage it. If in doubt, more wax
2. If gel coating
 - a. Put gel coat on mould, 3-4mm thick
 - b. Let it go tacky and then add two layers of tissue cloth
 - c. Lay up 3-4 layers of chop strand.
3. If painting
 - a. Lay up 3-4 layers of chop strand
4. Wait for both sides to cure
5. De-mould and trim sides of each half to the flange level
6. Trial fit the two halves together to make sure they come together evenly
7. Make sure the overall width of the rudder at the stock end only is smaller than 20mm. If it is bigger than 20mm, then it will not fit into the stock and allow it to rotate easily.
8. Fill each side with chosen filler. Qcell, microlite or equivalent
9. Sand filler flat. Bond sides together with filler/resin and clamp in mould
10. De-mould, fill and fair
11. Drill holes as per the mould for rotation point and the two pin locations to keep rudder down when in the water and up when in storage
12. Paint if needed

Materials

4m chop strand, 200g

4 kg of vinylester resin inclusive of hardener

0.5kg fill, Qcell, microlite or equivalent

If gel coating, to also include;

2m of tissue paper

1 litre of brushable gel coat

All items can be sourced from fibreglass resin and sales in Welshpool, <http://www.fibreglass-resin-sales.com.au/>

If painting, enamel or two pack as preferred.