Shrimper 21 Floor Removal

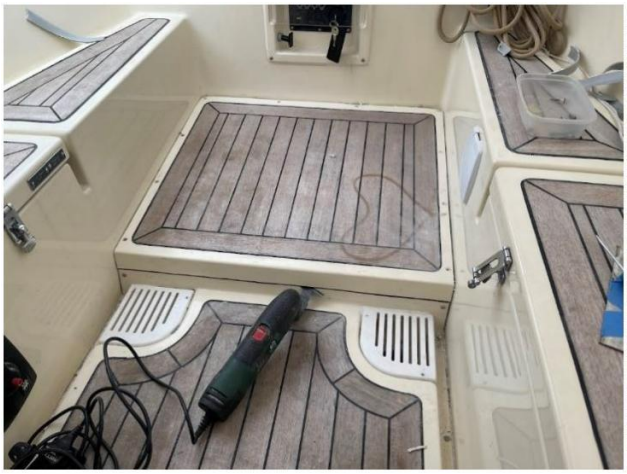
By Jon Davies – S21-36 *Merriwinds*

The Shrimper 21 has two important components hidden under the cockpit floor. First there is the fuel tank which, unlike a S19, uses a built-in electrical fuel gauge and has no dip stick. If there is a problem with the gauge there is no way of knowing how much fuel you have. The tank might also need cleaning. The other important component is the Tides Marine water-lubricated propeller shaft seal. This, it appears, in a Shrimper has a life of about six or seven years before it can start dripping and eventually need replacement. So, two items which require access for maintenance. Surprisingly however, on a Shrimper 21 there is no designed built-in access to either of these components. To get at them the sealed-in floor must be removed, which is a major job. In desperation, to replace a leaking propeller shaft seal some owners have cut an access hole for a hatch in the floor, but this solution will obviously ruin any teak deck fitted.

Up to about number 40 the cockpit floor is one large moulding, although the builders must have eventually recognised that this was a problem because later boats have the raised rear section as a separate piece. On an earlier boat the floor is said to be extremely difficult to remove in one piece without damage (especially with a teak deck) so it really must be cut into two manageable pieces, as once the rear part is out, access to the front is much better allowing it to be freed from both ends.

Information and advice about floor removal is thin on the ground. The following describes how it worked for me.

On my one-piece floor I decided to separate the rear raised piece by cutting a straight line across with a multi tool. The cut can later be sealed with mastic and hidden with a piece of 40mm polished stainless steel strip. There is plenty of room in the void behind so, with care, the blade will not accidently cut anything else. At the sides there is a small gap between the two mouldings and you can feel when the saw has gone through. (Not shown in the photo is the two pieces of thin aluminium I taped to the cockpit sides to stop the saw blade scratching the gel coat in the corners). You should be left with a neat straight line that will not be too difficult to hide with a strip of stainless steel later. The fibreglass is about 5 mm thick but cuts quite well (however leaving lots of dust).



The next step is to remove all the screws holding down the floor, and then carefully go around the edge with a sharp knife to try to separate the white silicone mastic seal.

Now we start to loosen the rear section. The floor is seated on some soft butyl marine sealant tape which is not double-sided but can in places hold the two fibreglass edges together. The bead of silicone will also not have been cut everywhere and will need some prising apart. Starting at the vertical corners I used a small right-angled pointed scraper tool like a bent screwdriver to initially prise away the corner edges without using so much force that there was a danger of any of the fibreglass snapping off. Slowly the silicone and any adhesion on the tape inside will yield, giving more and more room to get a purchase. Be patient and, using screwdrivers as wedges, slowly the front end will lift until the floor eventually peels way from its seating. The rear section can now be removed.

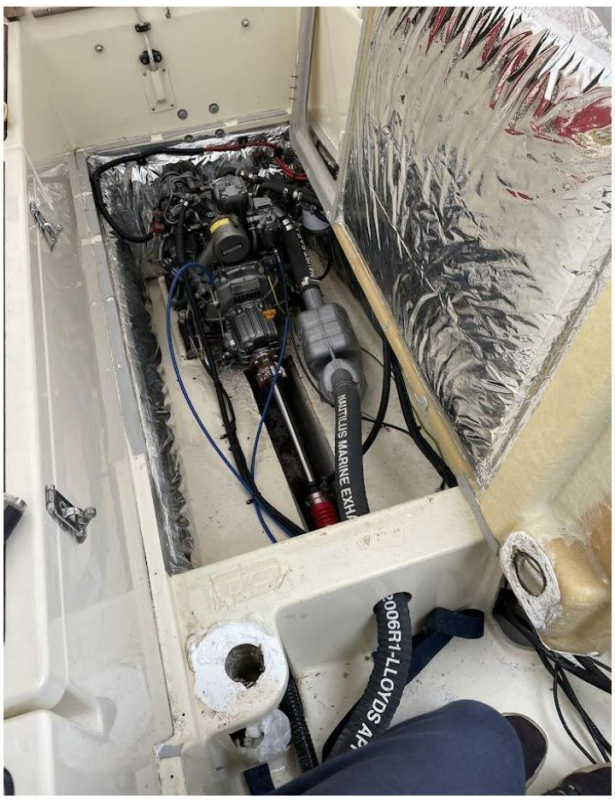
It is possible to do the job without removing the fuel tank, but access is limited. If you do need more room unscrew the large main filler pipe and then take off the other three hoses. The two fuel gauge wires will need to be cut and rejoined later, (take a reference photo). Undo the straps and, using the filler hole, lift the tank out of its location. (You might want to syphon some of the fuel out first, it is much easier if it is almost empty!). The next step is to unscrew and remove the tank locating mouldings underneath. Make a note of which strap goes where.

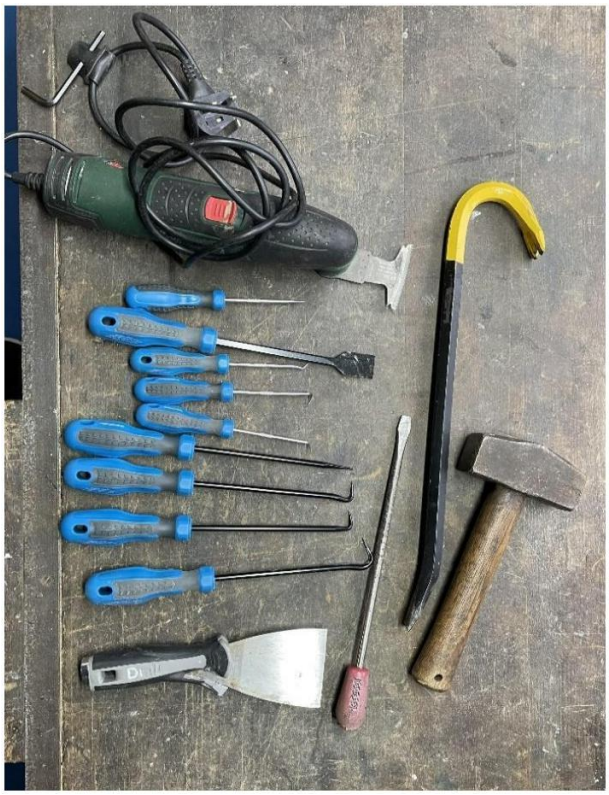
For the front floor, once the white drain hole covers had been removed, I started at the engine compartment. Remove the cover by sliding it off its hinges and then, around the inside of the opening using a big flat screwdriver, force it into the joint between the upper and lower mouldings and slowly separate the two going as far back as you can reach. The front needs to be completely free before lifting any more at the back as it is here that the moulding is weakest.

You can now begin the main floor removal. (Note that it is not necessary to remove the gear lever or the cover for the keel raising line at the front). The hardest problem to solve is separating the cockpit drain holes which are bonded to the lower moulding with two doughnuts of heavy-duty mastic. These are accessible from the fuel tank space. The mastic is quite tough (I did this job when it was 7c outside, perhaps on a warmer day it might be easier). The way I did it, (and there might be better ways), was to use a heavy-duty sharpened scraper and hit it hard with a lump hammer forcing it into the mastic between the two mouldings. It eventually cut through but it was quite hard work. Once you have separated the drain holes you can use a small jemmy to lever up the rear floor, again bit by bit, allowing the silicone to slowly

separate. On my boat, once the front and rear were free the rest reluctantly peeled away and the floor could be manoeuvred out. It is not too heavy.

The view from the back showing one of the flattened doughnuts that need to be cut, and the view once the floor was out showing the scraper I used as a very fine chisel (now very battered) Something a bit narrower than the one I used might be easier.





The front floor finally up. It was not as heavy as expected and can be carefully lifted out of the boat. Note the butyl tape which stuck partly to both mouldings and came away in different pieces. You can see the separated doughnuts. There is now good access to the propeller shaft and its shaft seal assembly. On the right is a selection of tools used.