

## **NESTING TOTO**

When I was looking for a design for a new Kayak, I was specifically looking for a kayak that 'nests' (splits in 3 with each section fitting within the others). I am now 80 and I'm unable to lift a full-length kayak on to car roof racks. Also I have a small cottage (in Adelaide, South Australia) with limited storage . I couldn't find what I wanted, but then came across the TOTO design by Jim Michalak.

With apologies to Jim I decided on some alterations.

Firstly the boat needed to be in 3 pieces, secondly I did not want to exceed 12'. (In Australia we use metrics, but I worked in Ft & Ins.50 years ago) I noticed that in all photos of a Toto, the paddler was sitting about 1 foot forward of the rear bulkhead. Thus, I wanted to bring the rear bulkhead forward 1 foot and additionally bring the transom forward 1 foot.

A sheet of ply being 8' was ideal to create the front section. The rear 4' was half a sheet of ply. With consideration that I wanted the kayak sections to nest, I wanted the sides to slope outward at the top, so where the plans called for vertical sides, I sloped them out by half an inch at the top (gunwale) edge.



As per the plans I drew up the first 8', cut it out and joined (with cable ties). Then, likewise drew up the last 4' (Note: in the photo a temporary bulkhead has been installed. (This is actually the rear bulkhead as per the plans))

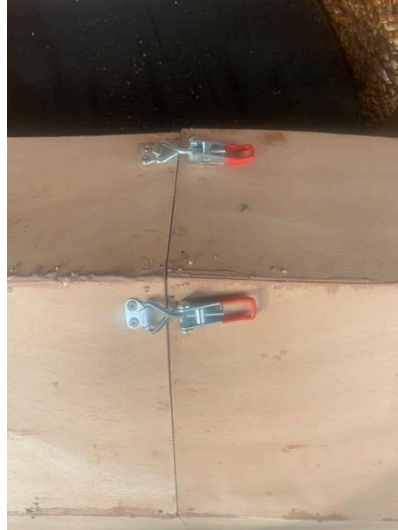


The 'centre' section of the kayak I wanted to be no longer than 4'3" (to fit in the boot (trunk) of my car). That length would allow the 'rear' section (4') to fit inside it. That would leave the 'front' section at 3'9" able to fit into the rear section.

I made a new 'rear' bulkhead at the 8' mark and then a new bulkhead at the 3'9" mark. Additionally a transom for the 12' mark. However, both front and rear bulkheads needed to be duplicated, because each would form a watertight seal for each section. These were glued in place.



Next job was to cut between the two front bulkheads and separate the 'front' section. The 'rear' section was already separate at the 8' mark. Guess what? All 3 sections nest.



The three hull sections would be held together with external clips as shown. (I have another kayak and a SUP that split in three and are held together in this manner with never any problem



Remainder of the build was pretty much standard.

The Gunwale was glued on while all three sections were latched together to ensure a smooth curve of the sides



The rear section was decked with opening enough to fit the front section

Top of all bulkheads was given a slight curve to give the deck a curve.





Covers were made for rear and centre sections, the centre acting as a spray skirt. First impressions were it's easy to paddle. It tracks straight and feels good. I have my seat a little high which creates a little instability, but I'll lower that. Total weight is 15kg (33lb). All ply is Okume 3mm with 6mm bulkheads, all other

timbers western red cedar

