BASKET MOLD: A HULL ASSEMBLY

The following notes describe our preferred assembly method for small to medium sized sailboats. Other methods such as traditional molds (jig) keel up on strongbacks will produce good results but our basket mold system is easy and fast. It is a proven method used by individual builders and professional boat builders alike.

Our plans give all the dimensions needed to build with either method. See real pictures on the plan’s pages for the Vagabond series.

While a true stitch and glue composite hull can be built without any jig or mold, we preconize the use of a small number of partial female molds. Our plans give all the dimensions necessary for these molds.

The building sequence is outlined below:

1. Cut all hull panels from the expanded plates dimensions given on the plans: no lofting is required. Plywood sheets should be assembled with butt blocks before cutting.

2. Set up a pair of strong backs, level and block them.

3. Build the mid frame and set it up on the strongbacks.

4. Build and set up the other partial frames.

5. Check for squareness, align and brace the molds (bracing is not shown on the drawings).

6. Install the bottom panel, fasten it to the mid frame only with temporary fasteners such as deck screws.
Install chine panels: align them and “stitch” them to the bottom panel. Build the first layer of fiberglass, seam between the chine and bottom panel.

Install the topside panel: fasten to the mid frame only as much as necessary to keep the panel in position. “Stitch” it to the chine panel and build the seam between topsides and chine, build the bow seam.

Install the transom and build the seam around it.

Install some spacers at deck level and finish all inside longitudinal seams. Fiberglass the inside of the hull as specified on the plans.

Install all bulkheads and longitudinal framing, build seams between hull, bulkheads and longitudinal structure. Install the floor frames.

Finish building the cockpit.

Install the deck clamp and deck framing.

Install the deck, glue it to deck framing but no inside seams yet.

Build all outside seams that are easy to reach: deck to hull seam, outside bow and transom seams, topside to chine panels.

Flip the hull over.

Build all other outside seams: chine panel to bottom. Fibreglass the outside.

Build inside hull to deck seams and inside cockpit seams.

Fair and sand, paint the hull with primer.

Drill holes for keel bolts or CB slot as required.

Turn the hull over.

Cut deck openings, install frames if required.

Finish the inside including the CB case as required.

Fit hull to keel with crane.

Final paint, rig and launch!