

Assembly Instructions

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Vintage Shovelnose Hydroplane



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Introduction

Before Beginning

Read the manual thoroughly. Refer to the drawings and pictures to understand assembly before beginning.

Specifications

Length	24.0"
Width:	12"

Kit Contents

Plastic Parts

- Vacuum formed hull, deck and housing.
- Plastic material ABS (Acrylonitrile Butadiene Styrene)
- Ride Pads for Sponsons - ABS
- Tail Fin (2 pieces to make one fin - ABS)
- Parts to make an open engine housing - ABS

Laser-cut Wood Parts - Structural

- **2 Forward Formers** - Provide rigidity to the hull.
- **2 Aft Formers** - Provide rigidity to the hull. Provide mounting for mini servos.
- **1 Transom Doubler** - Provides transom rigidity and a mounting area for a rudder bracket.

- **1 Sponson Bulkhead** - Provides lateral rigidity and a mounting area for a skid fin.
- **1 Skid Fin Doubler** to add to the Sponson Bulkhead.
- **1 Bow Piece** - Provides impact resistance.
- **2 Bow Chine Pieces** - Provide impact resistance.
- **2 Aft Chine Pieces** - Provide impact resistance.

Laser-cut Wood Parts - Motor Mount

- **1 Motor Mount with reinforcements** - Designed for a 500 or 700 size motor of your choice. Designed to be glued between the 2 Aft Side Formers at a desired location or in slots provided in the aft formers.

Laser-cut Wood Parts - Boat Stand (optional)

- 2 Side Pieces
- 3 Cross Pieces

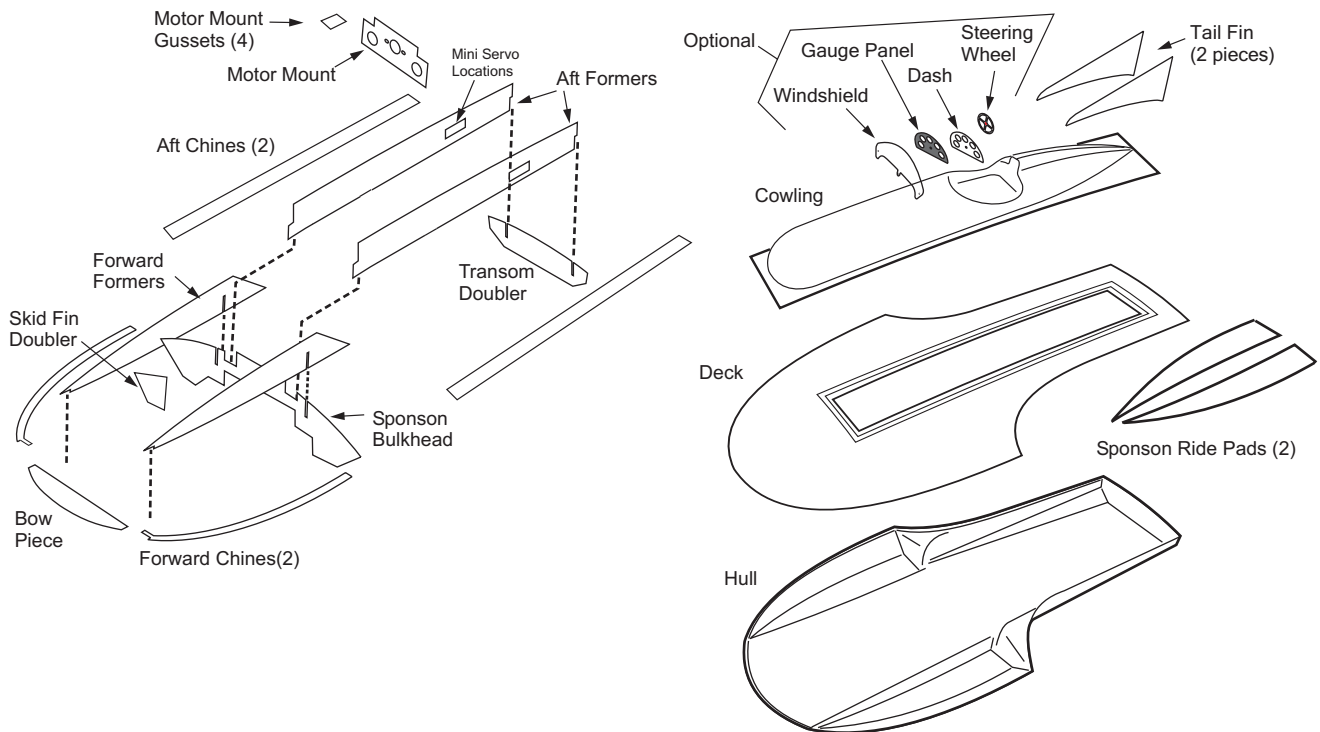
Laser-cut Wood Parts - Scale

- 1 Dashboard

Scale Parts

- 1 Laser-cut windshield
- 1 Laminated Gauge Panel
- 1 Steering Wheel

Figure 1. Parts of the Vintage Shovelnose Kit



Additional Materials for Assembly

Adhesives - any of these or all of these are acceptable for the plastic parts - Consider the working time with the gluing task along with other properties when choosing an adhesive. All are waterproof.

- Thick/Gap filling CA - slow set with a flex agent is preferred - sandable
- Goop™ Brand Marine Adhesive or “shoe glue” - good for bonding almost anything to anything - unsandable
- Plastic Epoxy™ Epoxy for plastics - sandable

Waterproofing liquid for laser-cut pieces - consider weight and penetration along with compatibility to adhesives. Epoxy thinned with alcohol is one choice.

Tools

- Electrical tape - white works the best
- Hobby knife
- Sanding block
- 150 grit sandpaper
- Small Clamps

Hull Construction

General Notes:

Test fit all parts to before gluing.

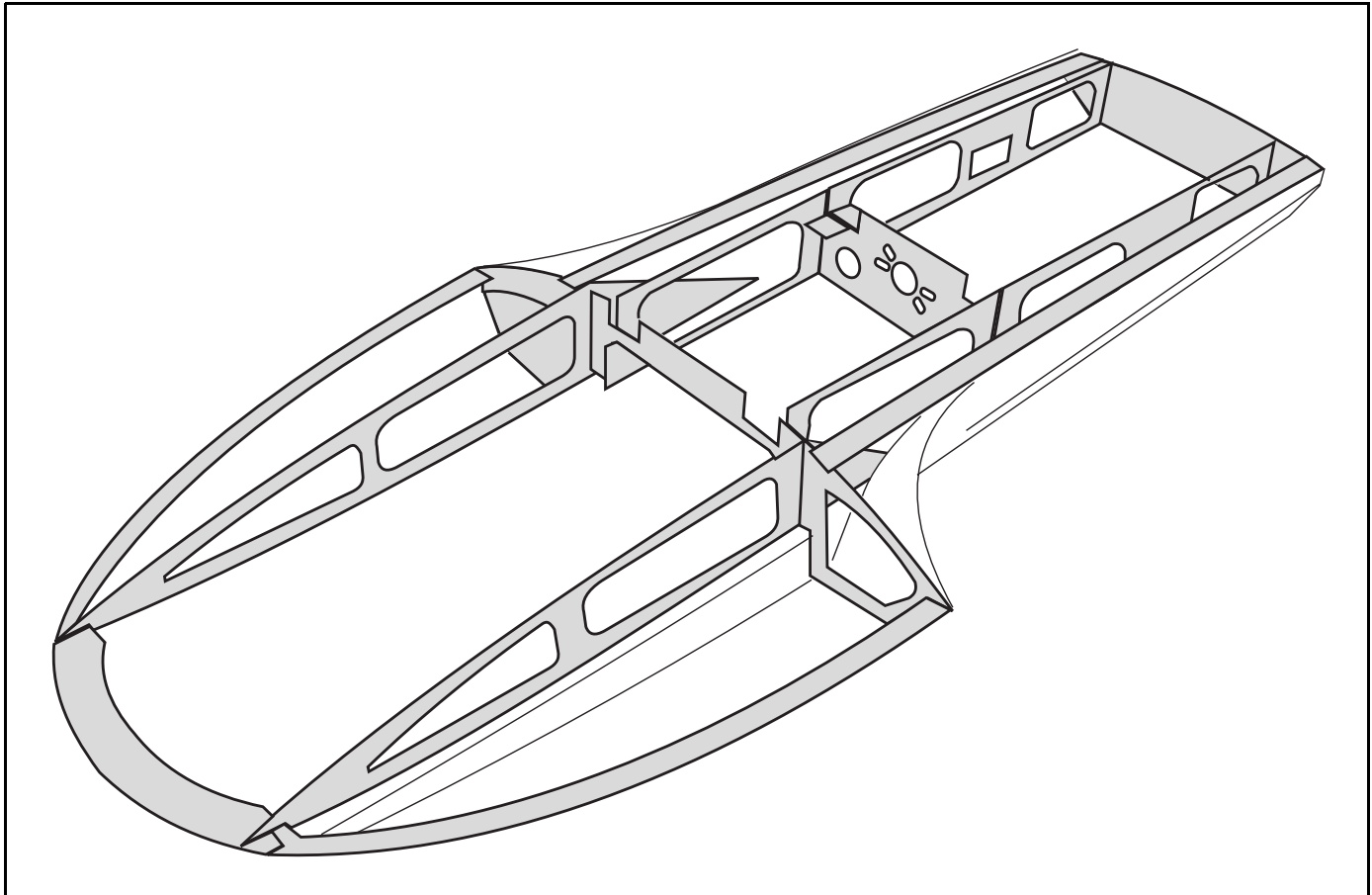
Flotation is strongly recommended! Use foam or other flotation that will not absorb water. The Sponsons and sides are recommended areas to add flotation.

Waterproof all structural wood parts before the deck is glued on.

Assembly of Structural Parts

NOTE: We recommend that the hull parts be washed to remove any release agents that may have been used during the molding process. These release agents make it difficult for glue or paint to adhere to plastic. Also, sand any areas on the hull the structure will be glued to.

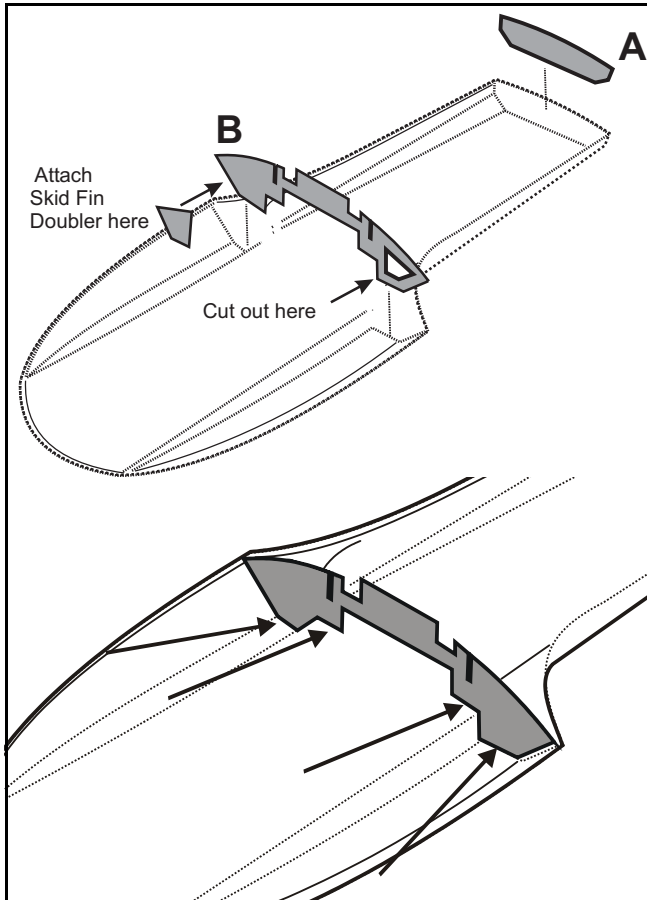
Figure 2. Laser Parts Assembled in Hull



1. Place the Hull on the Boat Stand or a flat surface and test fit the structural parts as shown in *Figure 2*.
2. Some trimming may be necessary on the rear of the port bow chine piece.
3. Before beginning, make sure the transom bottom and sponson bottoms of the hull evenly contact the flat surface. Use weights if necessary to ensure this.
4. Begin gluing structural pieces in hull in the following sequence. A slower setting glue is recommended to allow time for clamping. **Make sure the hull remains straight and does not twist as you are gluing:**

A. Transom Doubler - clamp to the transom for good contact

B. Sponson Bulkhead - Remove the **Skid Fin Doubler** from the bulkhead and glue it the starboard side of Sponson Bulkhead. Glue the Bulkhead to the hull. Clamp to back of sponsons for good contact. Make sure there is good contact on the bottom surfaces of the bulkhead to the hull as indicated by the arrows in the drawing. This helps establish an even sponson angle on both sides.

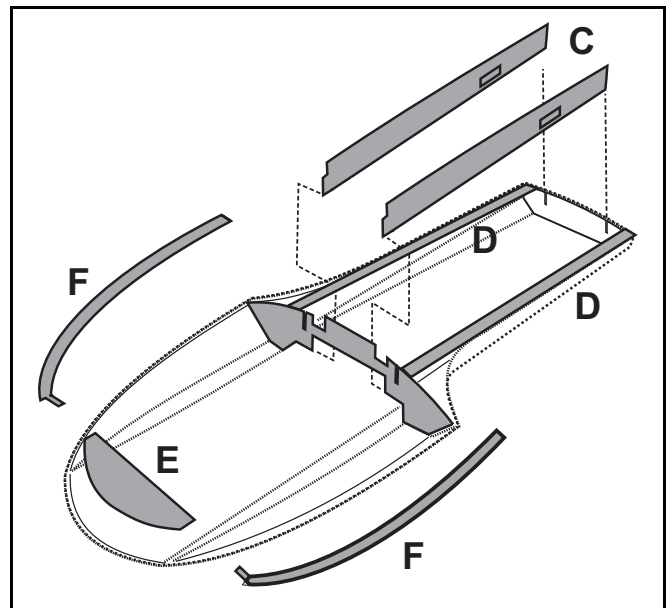


C. Aft Formers

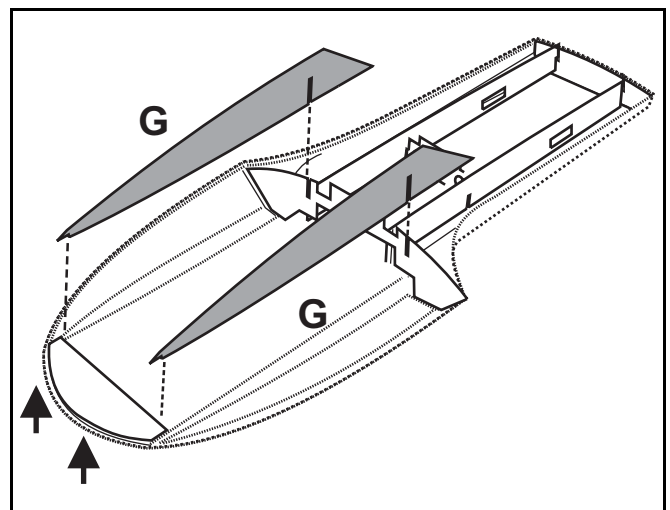
D. Aft Chine pieces - Bend each piece slightly to match the curve on the side of the hull and glue also to the side of the hull. Then glue into the slots in the sponson bulkhead and the transom doubler.

E. Bow Doubler

F. Bow Chine Doublers



G. Forward Formers - Add supports under the bow indicated by arrows in the drawing to make sure of even contact to hull bottom and glue in place. Do this step carefully as this sets in place the bottom curve of the hull.



5. Place hull on a flat surface or the optional boat stand and clamp where shown.

6. Use weights if necessary to make sure the hull remains straight and will not twist while the glue is setting. Allow glue to dry completely.

Trimming Hull Parts

After the structure is glued in place, begin to trim excess plastic from the hull, deck and housing.

1. Use a sanding block with 80 to 150 grit sandpaper to clean up the trimmed edges.
2. Block sand the aft sides and the transom to the edges of the structure parts.

Pre-Assemble Running Hardware, Motor and Radio Components of your choice

These instructions do not include directions on setting up your running hardware. The position of the motor mount in the slots is based on a flex drive setup with batteries in the front of the motor.

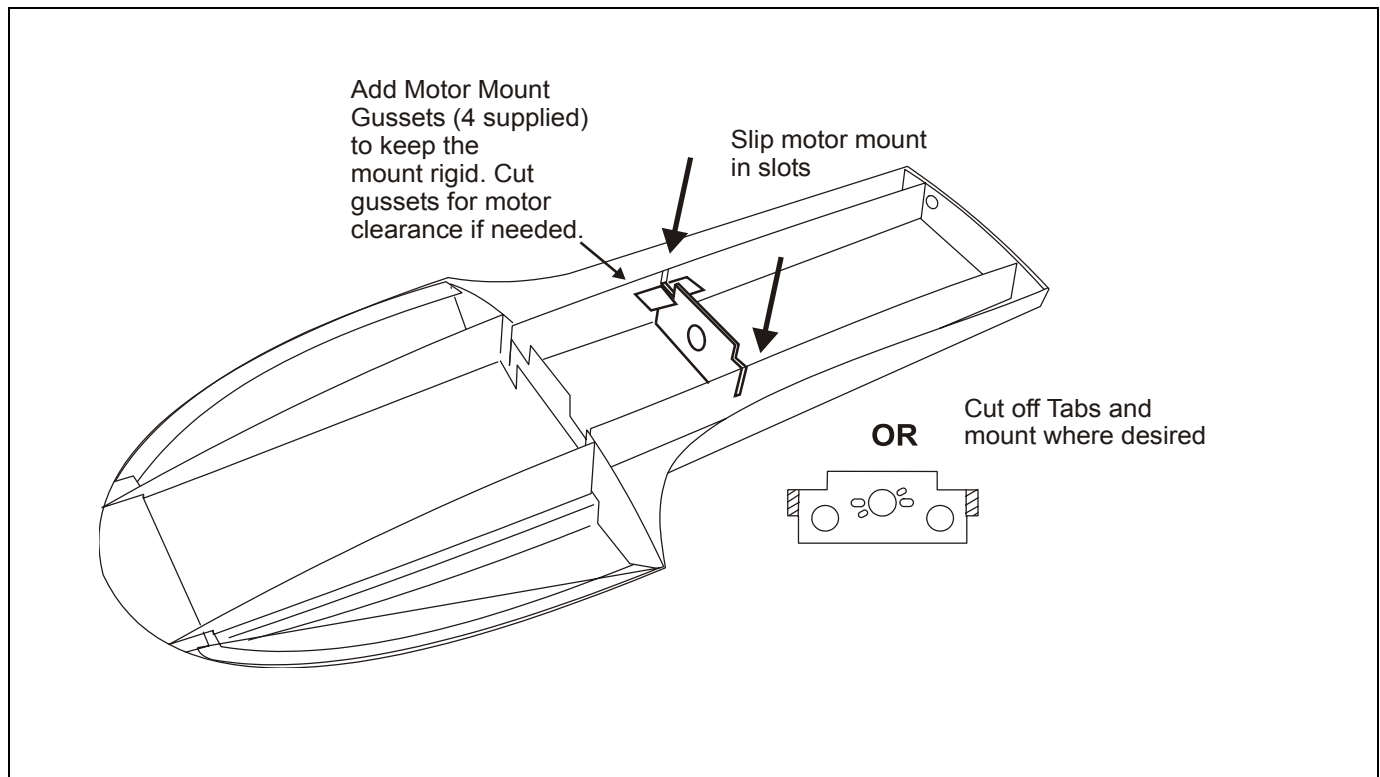
You may find that different locations work better. The center of gravity will vary with water conditions. It is highly recommended that you pre-assemble all your components including your motor, running hardware; driveshaft, rudder, turn fin, brackets etc. Also put your speed control, radio and drive batteries where desired.

The center of gravity is typically about 1 to 1-1/2" (25.4 to 38 mm) behind the rear of the sponsons. This will vary depending on water conditions. Balance the hull at

this distance with all your components installed or placed in location before gluing in the motor mount. There should be enough room to compensate for cg using your batteries drive packs during running.

Motor Mount Location

Slip the motor mount in the slots located in the middle of the rear formers. DO NOT GLUE in place until you are satisfied with your center of gravity. You may want to mount the motor in a different location. If so, simply cut off the motor mount tabs and glue where desired. It is recommended to reinforce the mount with the triangle pieces for better rigidity. These pieces will need trimming before installation to allow room for some motors.

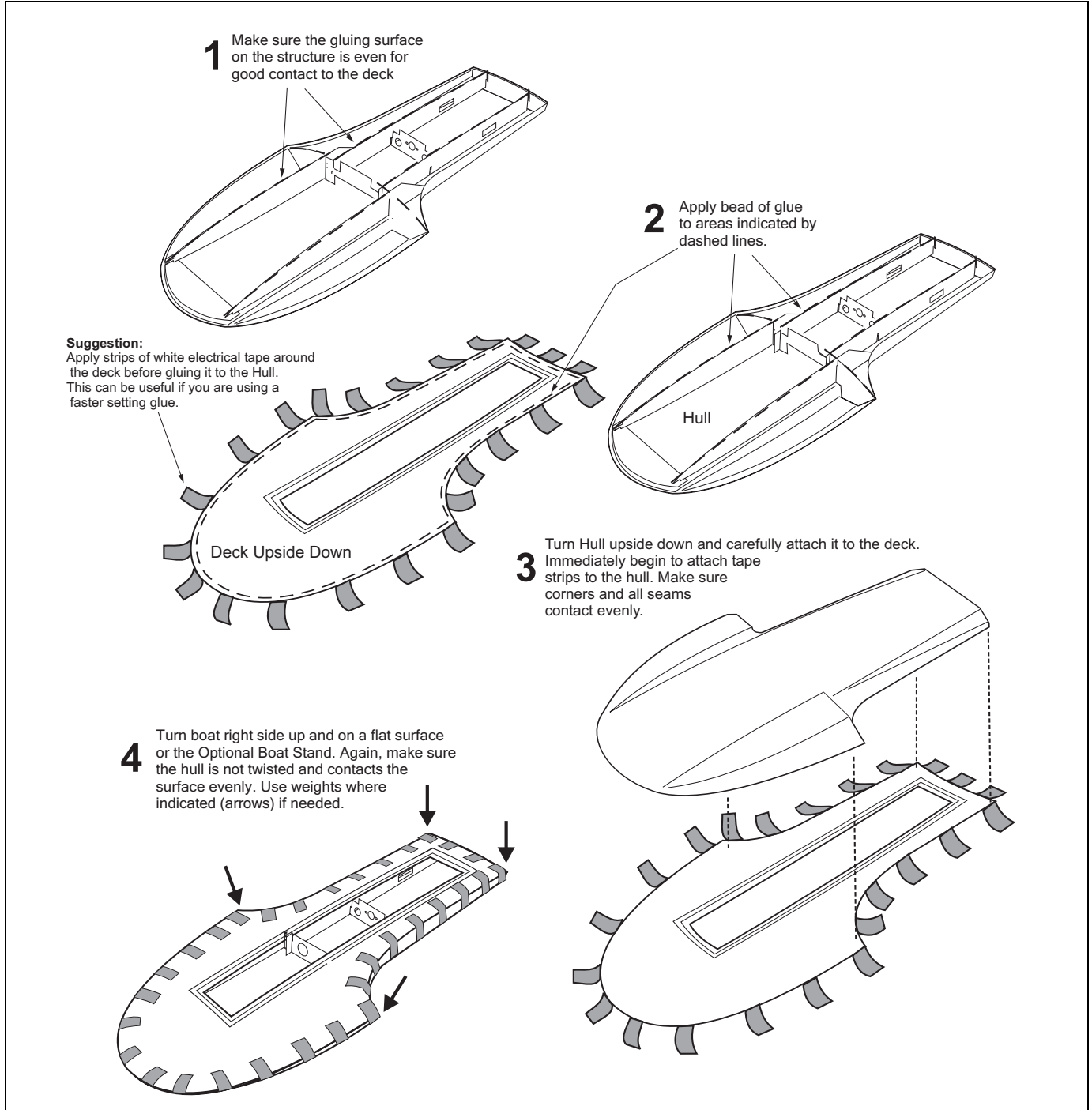


Glue Deck to the Hull

- Make sure the laser-cut structure has been water-proofed before gluing on the deck.
- Make sure you have put flotation in place before gluing on the deck.

1. Test fit the deck to the hull.
2. Sand the gluing surfaces of the laser-cut structure for a good fit to the deck. Make sure there is an even surface on the structure to contact the deck. Test fit until you are satisfied with the contact.
3. Apply glue to edges indicated by a dashed line as shown in Figure 6. You may want to use thick glue to fill any gaps.
4. Tape hull and deck together in the locations shown. White electrical tape leaves no residue.
5. Wipe any excess glue that may have oozed out around the seams.
6. Place hull right side up on a flat surface or the boat stand and use weights if necessary to make sure the hull will remain straight and not twist.
7. Allow the glue to dry thoroughly before removing tape. Sand and trim as desired.

Figure 3. Bonding the Hull and Deck Together



Fit Housing to the Deck

Glue a small piece of flotation in the housing. Make sure it will be clear of any components such as the motor. The flotation will keep the cowling floating if it is knocked off during running.

Sand the edges of the cowling to fit as desired in the recessed area of the deck.

Ride Pads

Plastic ride pads are provided to help with performance as they provide sharp edges to the sponson bottoms normal vacuum forming process cannot. Use an hobby knife or matt knife and score the inside edges of the Ride Pad forms. Snap off excess plastic. Sand so they are each flat. Glue in place under each sponson so you have a sharp edge on all sides.

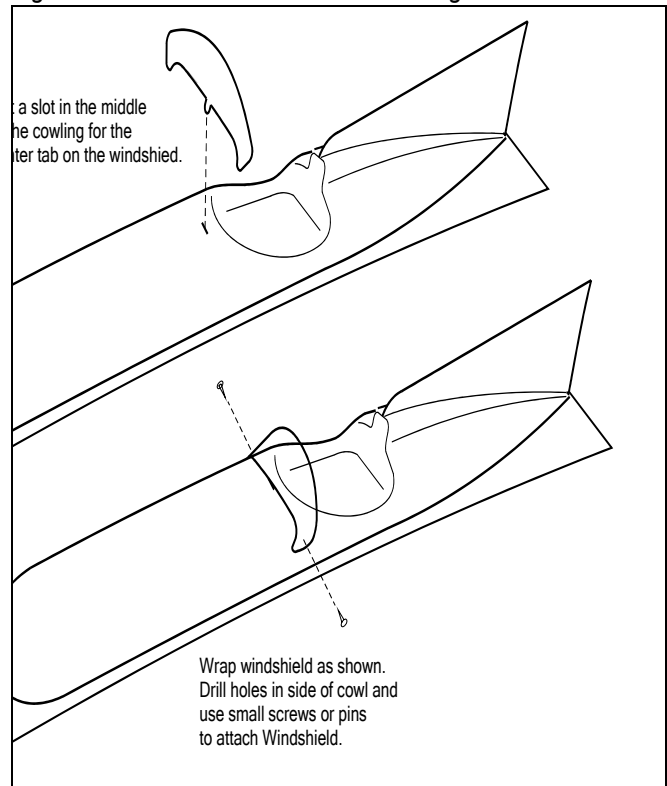
Attach Tail Fin to the Cowling

Use an hobby knife or matt knife and score the inside edges of the Tail Fin forms. Snap off excess plastic. Fit the 2 plastic Tail Fin pieces of tail fin together and glue. Then test fit on the rear of the cowling and shape until you have a good fit. Glue in place with thick CA glue.

Attach Windshield to the Housing

Attach the windshield as shown in *Figure 4*. Wrap around cowling and mark locations to attach small screws or pins. The tab in the center of the windshield can be attached on the outside or a slot can be cut into the cowling for the tab to be glued to the inside.

Figure 4. Attach Windshield to the Cowling



Attach Gauge Panel, Dashboard and Steering Wheel

1. Align the gauge pattern to the dash and trim if necessary. Attach the panel the dashboard. Glue the parts to the dash area on the cowl.
2. Paint Steering Wheel as desired and Attach to Dashboard. A short length of rod or tube can be used as a shaft between the dash and steering wheel.

Note: There is a plastic cast light-weight driver figure available as an option. Visit classichydros.com for further information.

Finishing and Painting

Make sure to lightly sand the plastic with 400 grit sandpaper and prime before painting. There are some newer paints on the market too that are formulated especially for plastics.

Your Vintage Shovelnose can be painted in any scheme desired. If you want to do a period paint job, here are some useful links on the web:

thunderboats.org

The Hydroplane and Raceboat museum in the Seattle area. They continually restore and run famous hydroplanes on a regular basis. Click on their resurrections link. Members can purchase many sources of photos and video tapes.

newtonmarine.com

Huge selection of 1-8th scale hydro plans and color schemes. You can order just the paint scheme plans. All blueprints but colors are labeled. You select different a plan numbers to see the photo of a hydro.

cwww.e-rcu.org

A 1-10th hydroplane club in Seattle. Also excellent photos of club members' boats.

craftworks.com/hydros/hydros.htm

Nice 3-view color drawings of vintage hydros. They also sell 1:48 scale hydros with the schemes and decals included.

lesliefield.com/

Period color and b& w photos of vintage hydros.

Running the Boat

The Vintage Shovelnose is designed to run using 6 to 12 cells with the motor and setup of your choice.

These instructions do not cover detailed assembly of running hardware. Your retailer will have suggestions regarding this for the type of class you wish to set up.

Suggestions for Running the Boat

After testing this hull, we suggest that:

Setup the rudder to the starboard side of the propeller

For certain setups, this typically hull does not require as much rudder and turn fin depth as in other hydroplanes.

Patterns

Figure 5. Additional Tail Fin Patterns. Modify the Tail Fin shapes if desired.

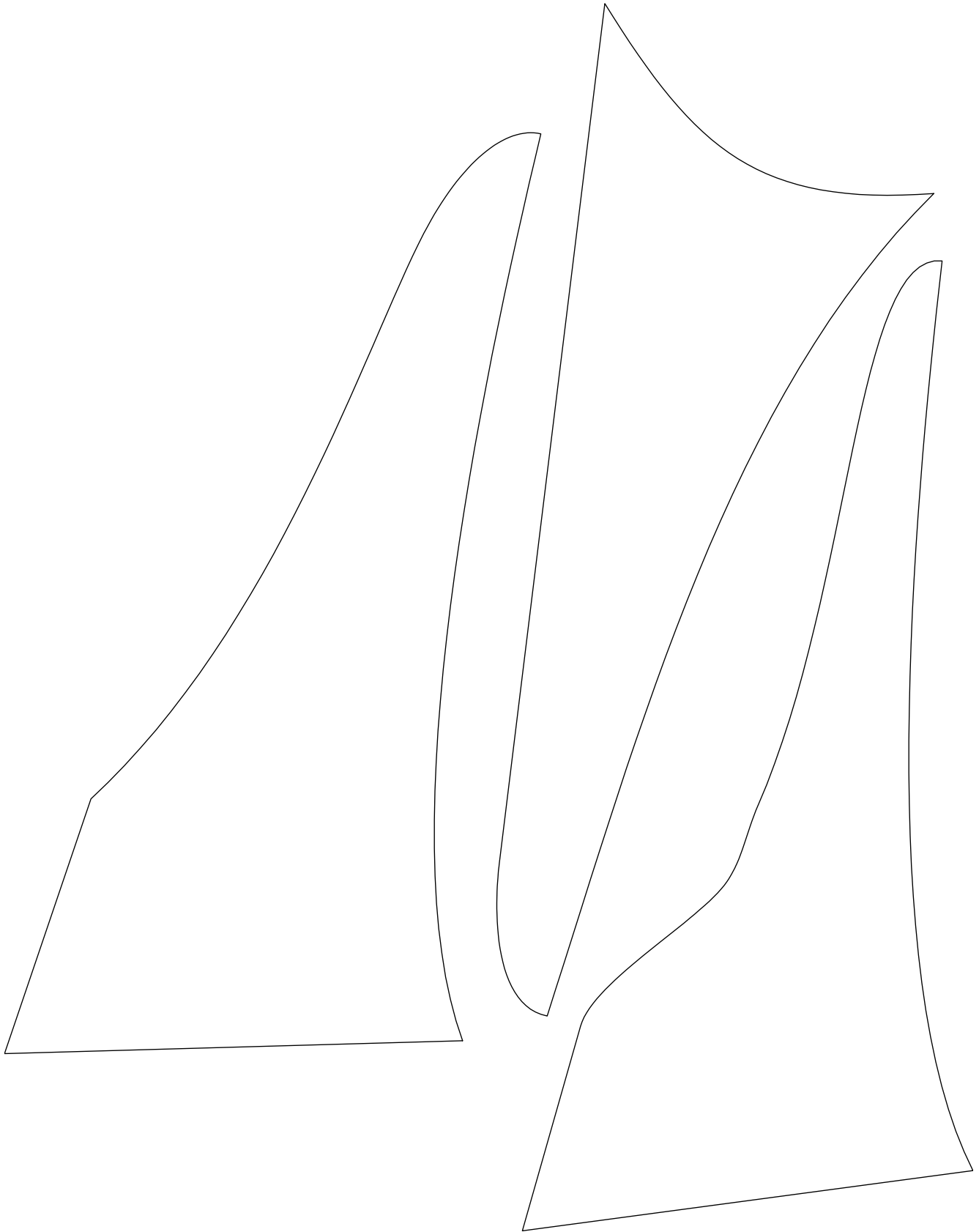
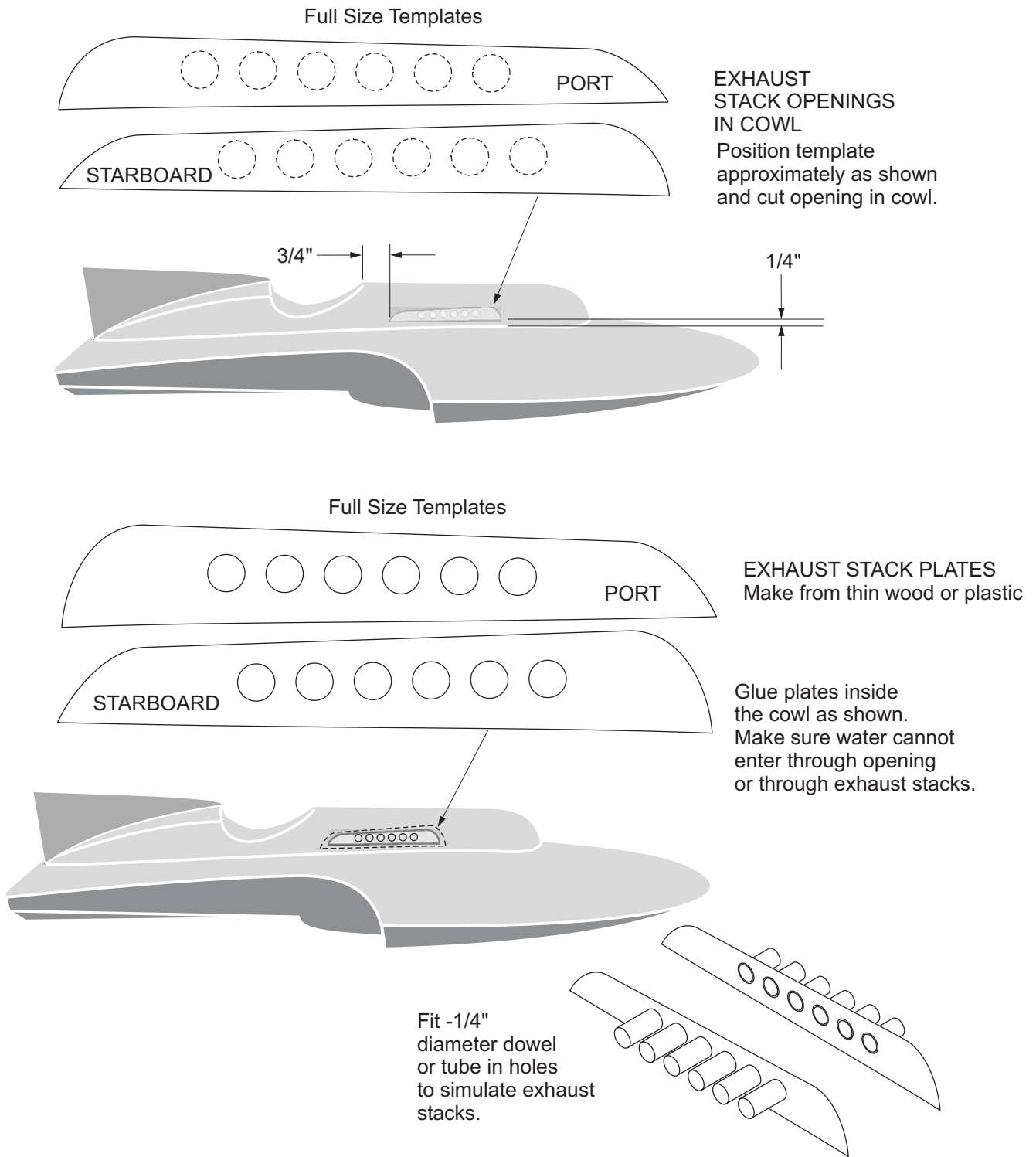


Figure 6. Exhaust Stack Patterns-Laser parts may be included with your kit. Check sizes before cutting the housing.



Notes: