MOUSTACHE
EST. 2018
MODEL WORKS

41” Floats

For 20cc DHC-2 Beaver

Instruction Manual

Version 1.0

Thank You

Thank you for purchasing the Moustache Model Works 41” / 20cc Float kit! These floats were drawn directly from DeHavilland Canada blueprints to maintain a scale appearance.

This float kit was designed specifically for the Moustache Model Works 20cc DHC-2 Beaver kit, although they are suitable for use on other models of similar size. Two versions of this kit are available: one with struts for mounting to the Beaver, and one without struts so the modeler can use these floats on other models. For the floats without struts, the modeler will need to determine his or her own method of mounting the floats to his aircraft. While the Beaver struts would be suitable for use on other aircraft, the struts are designed to match the near-scale mounting points on the Beaver kit, so adapting them for use on other aircraft would be challenging.

Twin water rudders are included and are driven by independent mini servos in each float.

Required to Complete

Glue - we suggest medium CA

Mini servos (2 required)

18” - 24” Servo extensions (450mm) (2 required)
- Length required may vary depending upon your radio installation

Finishing materials

- we recommend fiberglassing with 3/4 oz/ft^2 cloth, plus a layer of 2 oz/ft^2 on the bottom front section forward of the step for added durability

- primer, paint

Silicone sealer / RTV

Building Notes

The 20cc floats are built with tabs and slots to aid self-alignment, so building over the plans is not required. The floats are assembled inverted on a flat building surface and no pins are required to hold the parts to the table. While tab-and-slot construction is used, care was taken to reduce the number of tabs that extend to the surface of the floats, since every such tab is a potential location for water intrusion. Hence, most of the tabs are internal to the float structure.

When assembling the floats, REMEMBER TO BUILD BOTH LEFT AND RIGHT FLOATS! They do assemble quickly, so when building fast it would be easy to glue some components like bulkheads in the wrong orientation. Check, double-check, and triple check before applying glue to make sure you’re gluing each part in properly!

These floats are intended to be glassed and painted for the best barrier against water intrusion. It may be possible to cover with iron-on covering, but we have not tested this approach. Older float kits such as the ones formerly from Great Planes discuss covering with iron-on material, but we cannot confirm how successful this approach is.

Use medium CA for most of the assembly. When gluing the balsa plywood parts, note that the plywood is somewhat thirsty, meaning it will suck-up and absorb a large amount of glue, especially on the edges. To ensure the integrity of your glue joints, apply a coat of glue to the edge, wait about 30 seconds for it to soak in, then apply more glue. Keep doing this until the medium CA stops soaking into the wood, then press the parts together to complete the joint. Usually 2 coats are sufficient. For best strength, try to minimize your use of CA accelerator.

Parts Layout

Included Items

Wood—laser-cut balsa, plywood

Long Parts—pushrods, braces

Spacing Struts

Hardware Bag

Water Rudder Bearings/Float Strut Mounts

Water Rudders

Beaver Mounting Struts

Plans (not shown)

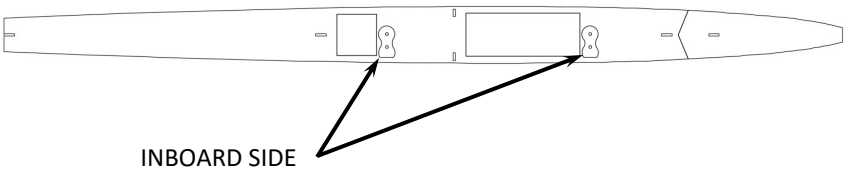
Instruction Manual (not shown)

Wood Parts Inventory

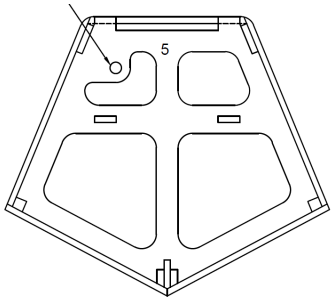
Wood Item	Size	Qty.	Notes
2.7mm Balsa Ply Sheet 1 of 2	2.7mm x 200mm x 894mm	2	Bottom front sheeting, some bulkheads, aft keel
2.7mm Balsa Ply Sheet 2 of 2	2.7mm x 200mm x 894mm	2	Bulkheads, fwd keel, spines, side rails
3mm Basswood Ply Sheet 1 of 1	3mm x 100mm x 860mm	2	Top doubler, hatches, mounting pads
3.0mm Balsa Sheet 1 of 2	3mm x 100mm x 860mm	4	Bottom aft sheeting, keel doublers, top front sheeting
3.0mm Balsa Sheet 2 of 2	3mm x 100mm x 860mm	2	Top aft sheeting
2.5mm Balsa Sheet 1 of 3	2.5mm x 100mm x 860mm	2	Outboard side sheeting
2.5mm Balsa Sheet 2 of 3	2.5mm x 100mm x 860mm	2	Inboard side sheeting
2.5mm Balsa Sheet 3 of 3	2.5mm x 100mm x 860mm	1	Aft side sheeting
6mm Balsa Sheet 1 of 1	6mm x 384mm x 189mm	1	Nose blocks

HARDWARE SUMMARY			
Item	**Qty**	**Notes**	**Location**
2.5mm x 10mm Socket head cap screw	8	For attaching struts to fuselage	
2.5mm x 20mm Socket head cap screw	4	For attaching struts to floats	
2.5mm x 25mm Socket head cap screw	8	For attaching strut mounts to floats	
2.5mm x 16mm Socket head cap screw	4	For attaching cross-braces	
3mm x 380mm steel pushrod	2	Diagonal braces for spacing struts	Long Bag
Metal straps for diagonal braces	4	For attaching diagonal braces to spacing struts	
Special 3mm clevis for ends of diagonal braces	4	For attaching diagonal braces	
Steel pushrod, 3mm x 305mm	2	Forward Diagonal Braces	Long Bag
Steel pushrod, 3mm x 292mm	2	Aft Diagonal Braces	Long Bag
3mm steel clevis	8	For Diagonal Braces	
2.5mm lock nuts	25	For all screws + one extra	
2.5mm flat washer	25	For all screws + one extra	
2.5mm fuel tubing x 6mm	8	Keepers for clevises on Diagonal Braces	
3mm ID x 9mm OD x 3mm thick nylon washer	6	For spacing where struts mount to floats	
Water rudder hardware	2 sets		
Water rudder pushrod, 1mm x 689 mm	2		Long Bag
3mm OD x 578mm plastic tube	2	Guide tube for water rudder pushrods	Long Bag
1.5mm thick aluminum diagonal brace mounts	4	For mounting diagonal braces to floats	
2mm x 10mm Sheet Metal Screws	16	For attaching hatches	
1mm steel pushrod with Z-bend	2	Water rudder pushrods	
EZ connector	2	For connecting pushrod to servo	
Struts 1-4 (if applicable)	2 ea.	For connecting floats to DHC-2 Beaver	
Spacing struts	2	Lateral connection between the floats	
Float strut mounts	4	For connecting struts to floats (probably 2 extras included)	
Rubber pushrod seals	2	(As of this writing, we’re not certain they’ll be included)	

The plans are provided at half scale. The floats are not built over the plans, but the plans are useful for reference. Also note the plans are not fully detailed, but rather are intended to convey the information required to complete the floats. For example, the clevises on the diagonal braces that mount to the spacing struts are not drawn in complete detail. They are shown in the photos in this instruction manual, however.

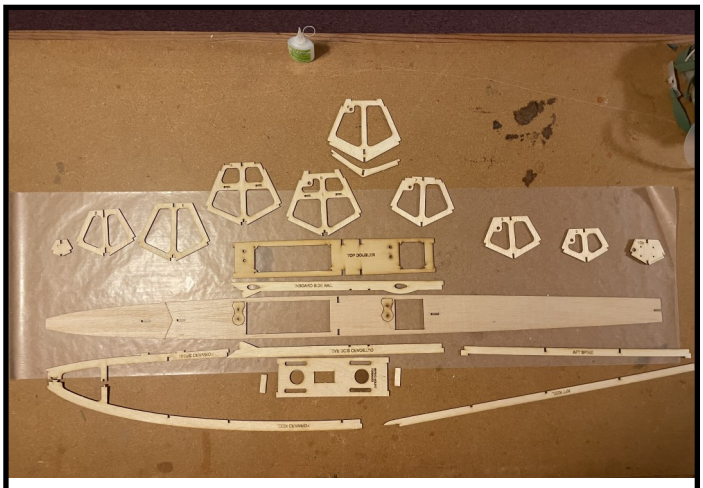


NOTE PUSHROD GUIDE HOLE ORIENTATION! The pushrod may be placed inboard or outboard, just MAKE SURE ALL THE HOLES IN THE BULKHEADS LINE UP!

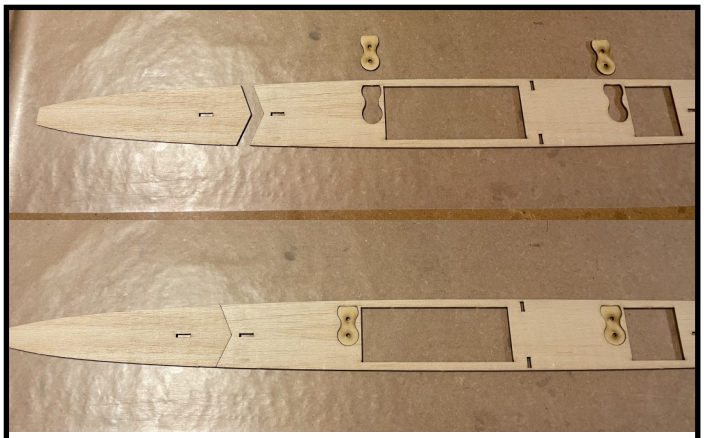


BULKHEAD 5

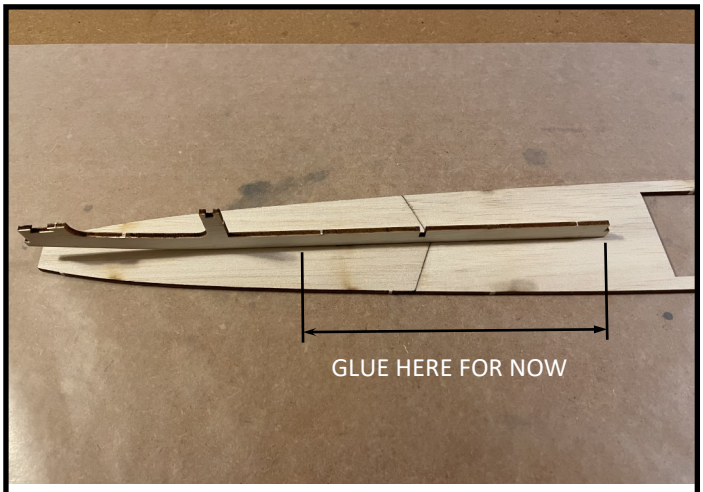
- ☐ Note that the spacing strut holes and MOUNTING PADS are biased toward the inboard side of the float
- ☐ The water rudder pushrods may be routed on either side of each float. As long as both servos rotate in the same direction the water rudders will turn the same direction as well. Whether you choose to route the water rudder pushrod on the inboard or outboard side, ALWAYS TAKE CARE TO ENSURE THAT THE BULKHEADS IN A SINGLE FLOAT ARE INSTALLED WITH THE PUSHROD GUIDE HOLES ON THE SAME SIDE!
- ☐ If you have fat fingers, consider positioning the water rudder pushrods outboard on each float. If they are routed inboard, if you have fat fingers, during final assembly you may have trouble installing the blind nuts on the inboard screw that holds the strut mounts in place.



- ☐ Remove all the parts for one float from the laser-cut sheets.

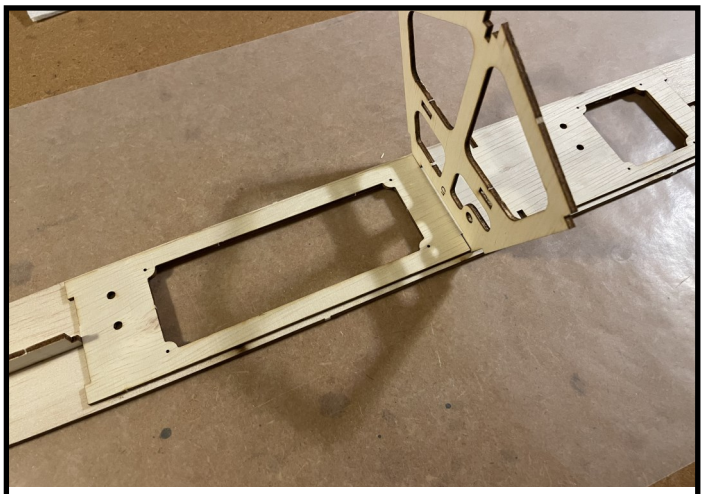


- ☐ Lay wax paper on a flat building surface.
- ☐ Locate the top sheeting in the 3mm balsa laser-cut sheets – two pieces, TOP and TOP FRONT
  - ☐ Two extra pieces of TOP FRONT are included and are not used
- ☐ Also locate the MOUNTING PADS in the 3mm bass plywood sheet
- ☐ Glue the TOP FRONT to the TOP at the V-shaped butt joint. The V-shape is to aid in alignment. Also glue in the MOUNTING PADS.



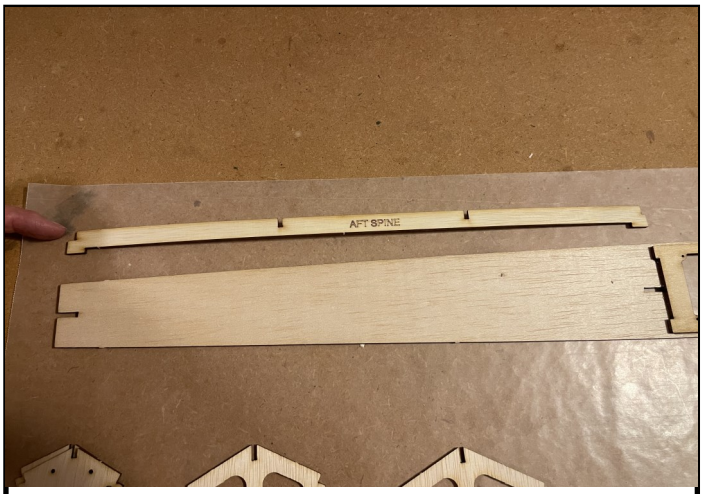
☐ Glue the FORWARD SPINE in place (3mm balsa plywood). Only apply glue from the aft end (at bulkhead 4) to about 10mm in front of the forward tab

☐ (This photo is from an earlier prototype that did not feature mounting pads)



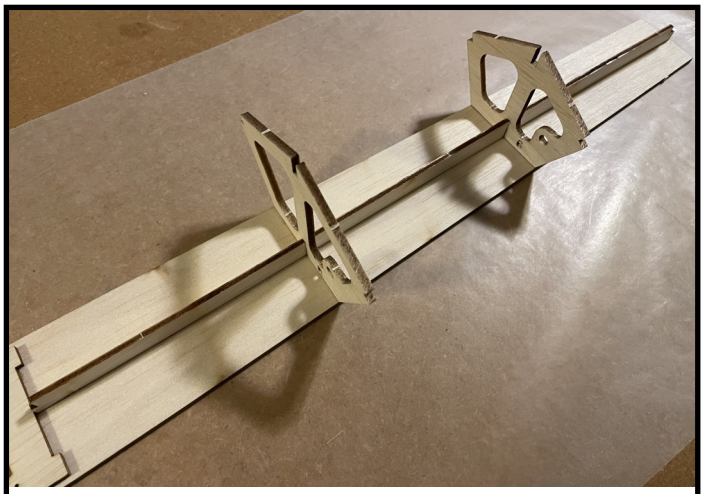
☐ Locate the TOP DOUBLER in the 3mm basswood plywood. Note the strut mounting holes are biased to the inboard side of the floats.

☐ Glue in place to the TOP as shown using BULKHEAD 5 as a guide and centering the TOP DOUBLER on the TOP at both ends of the TOP DOUBLER. DO NOT glue BULKHEAD 5 in place at this time.

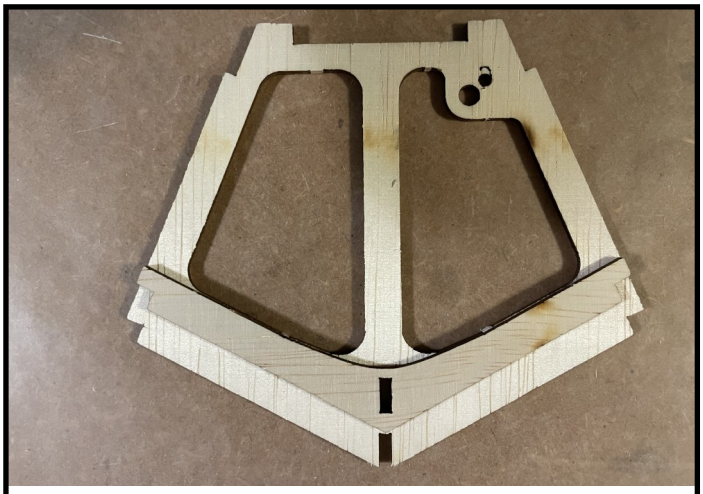


☐ Locate the AFT SPINE in the 3mm balsa plywood

☐ Identify which direction of the spine points forward. Each end has a notch that fits a bulkhead. The notch at the aft end is deeper than the notch at the front—this is to fit the double-thickness BULKHEAD 10.

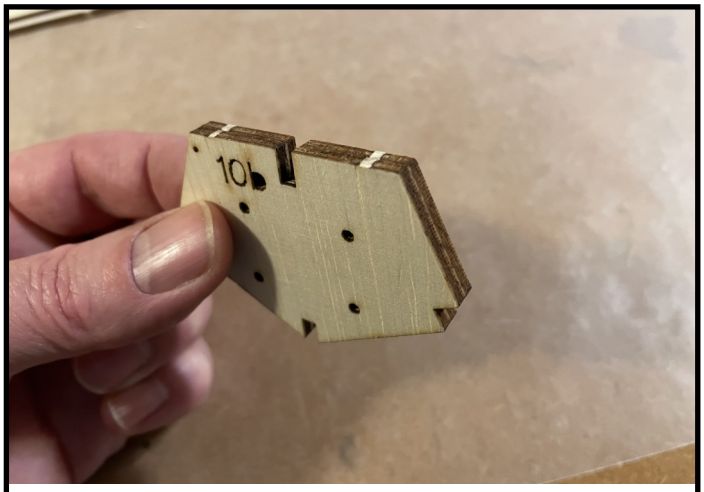


☐ Glue the AFT SPINE in place using the front and rear slots for alignment and utilizing BULKHEADS 8 and 9 as guides to center the spine on the top. Do not glue bulkheads 8 and 9 in at this time.

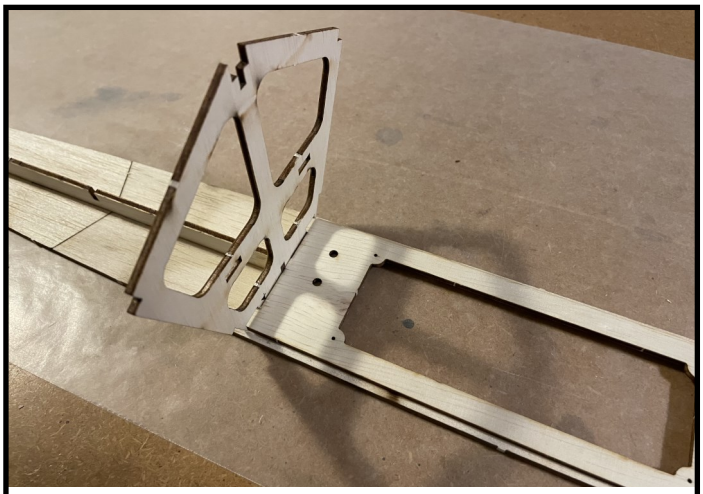


☐ Laminate the BULKHEAD 6 DOUBLER to the aft side of BULKHEAD 6. PAY ATTENTION TO THE LEFT/RIGHT ORIENTATION of the pushrod guide tube hole

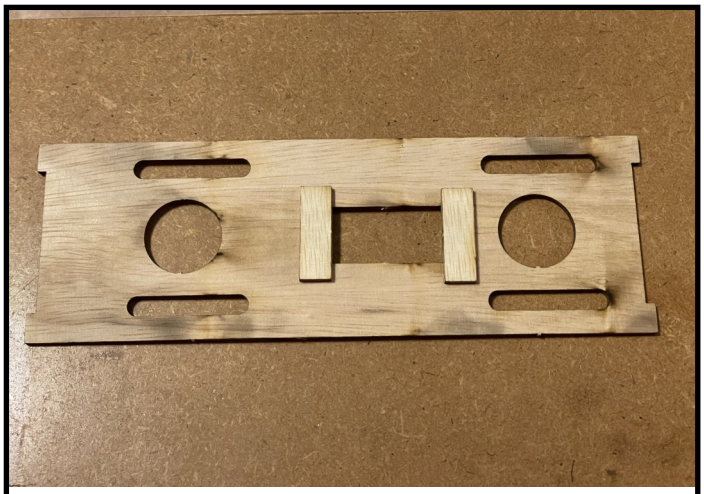
The doubler provides a shelf for attaching the bottom aft sheeting in a later step.



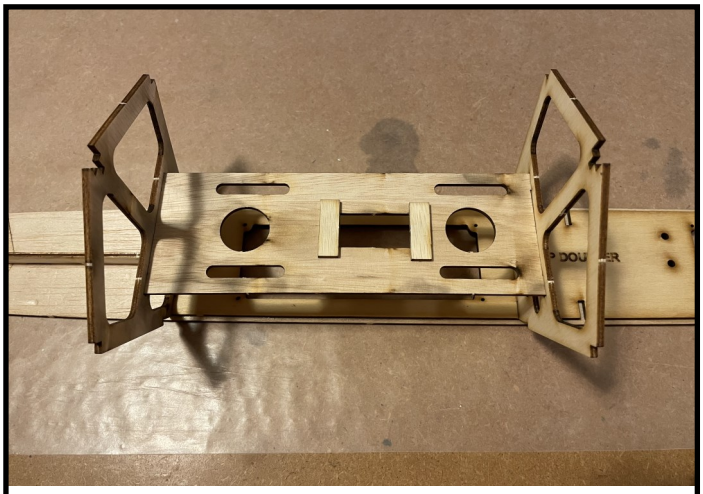
☐ Laminate two BULKHEAD 10s together



☐ Glue BULKHEAD 4 in place vertically



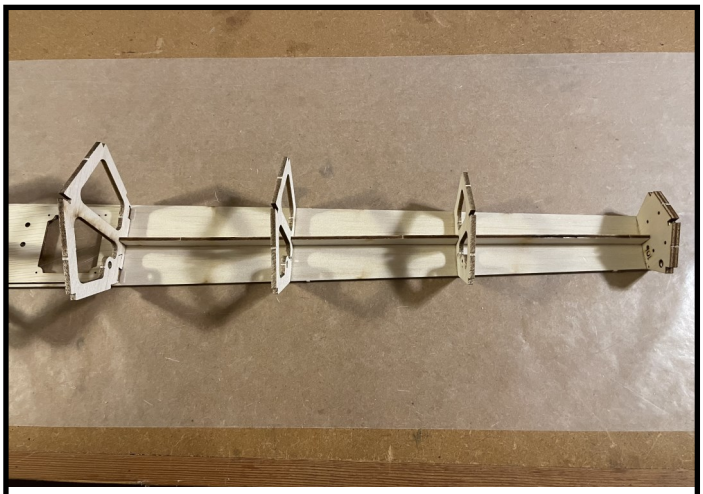
☐ Glue SERVO MOUNT DOUBLERS to the bottom side of the SERVO MOUNT



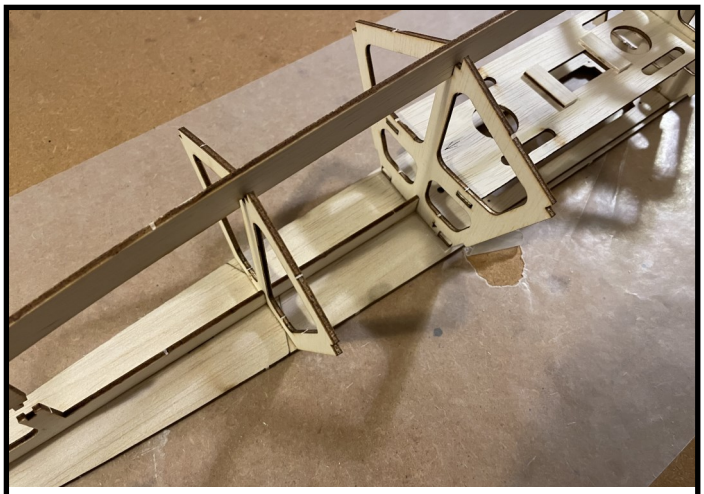
☐ Glue SERVO MOUNT in place to bulkhead 4 using BULKHEAD 5 as a jig

☐ Glue BULKHEAD 5 in place to TOP and SERVO MOUNT

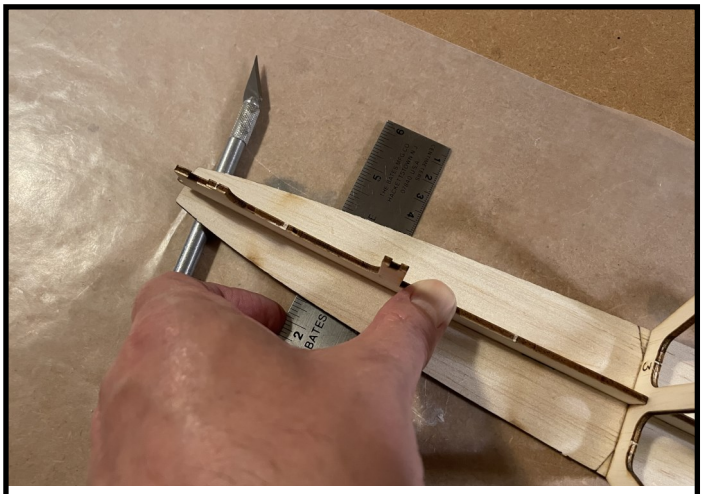
☐ Glue BULKHEAD 6 in place. Be careful to ensure the doubler is on the aft side of the bulkhead and the pushrod guide hole is on the same side as BULKHEAD 5’s. The forward keel may be used to help ensure proper alignment, without gluing the forward keel in place at this time.



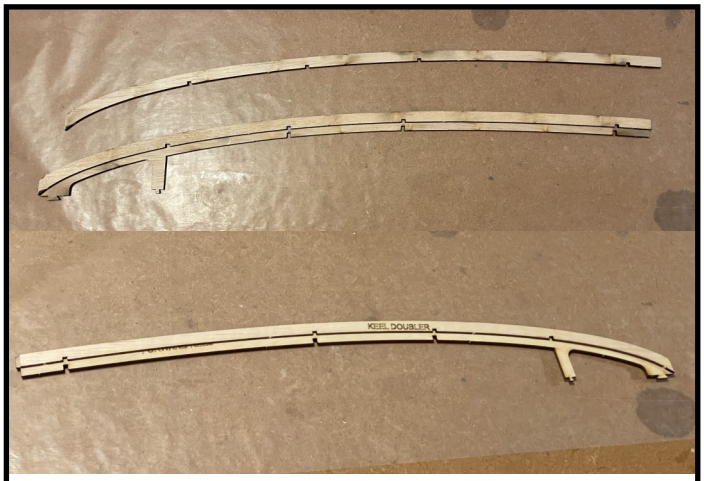
☐ Glue BULKHEADS 7-10 in place. Be careful to ensure the pushrod guide holes are all on the same side



☐ Glue BULKHEAD 3 in place. The FORWARD KEEL may be used as a guide



☐ Glue the TOP to the FORWARD SPINE up to the location of bulkhead 2. Help the top sheeting to make contact with the spine by sliding a ruler underneath the sheeting from the front and lifting the top sheeting into place. You may also want to use a pencil or a pen under the top sheeting at the front, again, to help the top sheeting make contact with the spine.

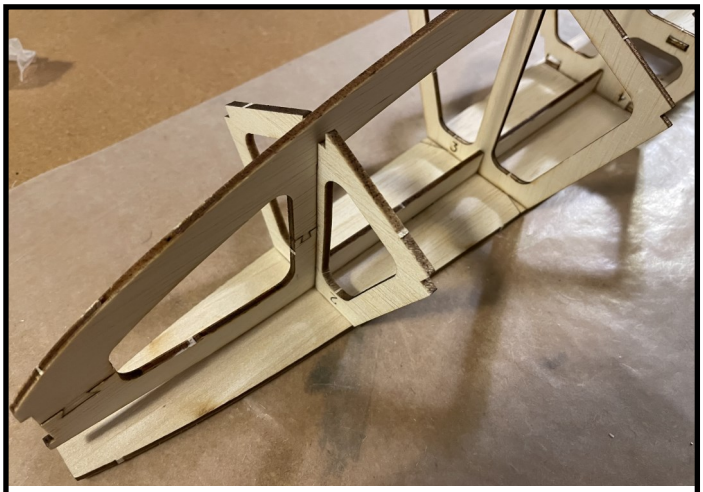


☐ Glue the KEEL DOUBLERS in place on each side of the FORWARD KEEL. Glue them flush with the upper edge of the FORWARD KEEL and use the slots that match the bulkhead locations to ensure proper fore/aft location

☐ KEEL DOUBLERS glued in place to the FORWARD KEEL

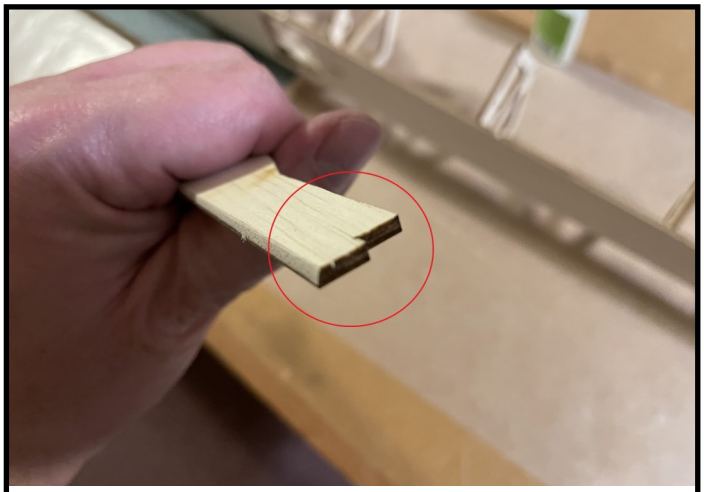
☐ Glue the FORWARD KEEL in place. Start by gluing to BULKHEADS 3-6, then glue to the connection points on the forward spine.

Although BULKHEADS 1 and 2 are shown in this photo, they are not installed until the next step or two.



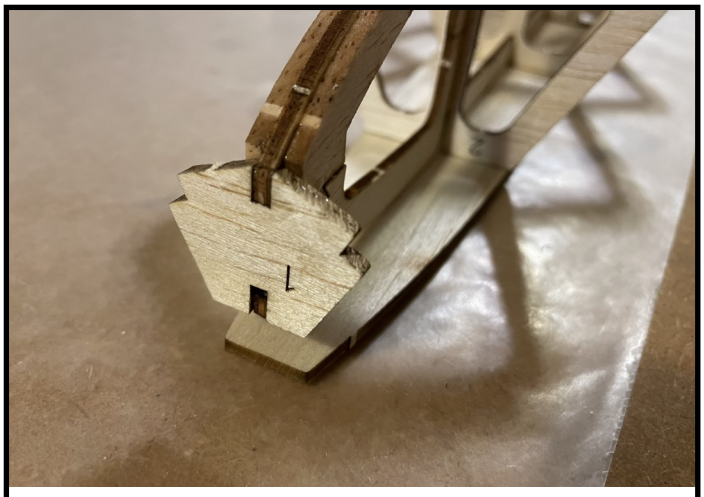
☐ Glue BULKHEAD 2 in place. Notice how it nestles up against the vertical web that bridges the FWD SPINE and the FWD KEEL.

(Keel doublers not shown in this photo)



☐ Fit the OUTBOARD SIDE RAIL and INBOARD SIDE RAIL into place. You may need to sand a slight chamfer or bevel on the top edge of each rail to help it fit. Make sure you install each one on the proper side – inboard or outboard. The INBOARD SIDE RAILS have airfoil-shaped holes for the spacing struts to pass through.

☐ Glue the OUTBOARD SIDE RAIL and INBOARD SIDE RAIL into place.

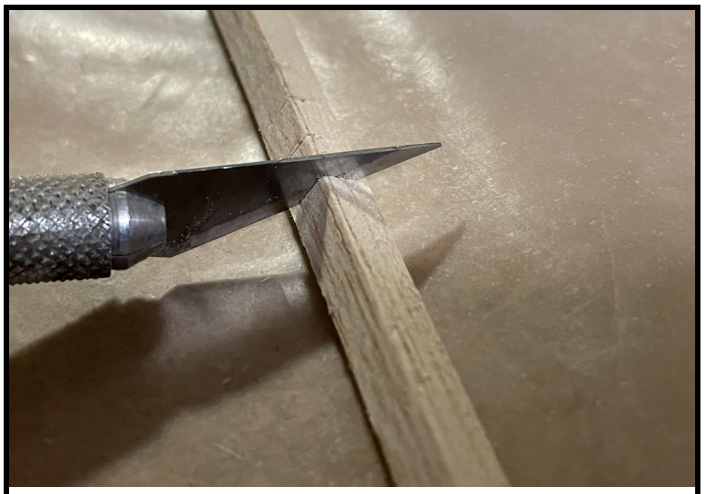


☐ Glue BULKHEAD 1 in place on the front of the keel/ spine

☐ Glue the TOP into place to the FORWARD SPINE, BULKHEAD 2 and BULKHEAD 1, bending into place. Use a pencil, a scrap balsa stick, or some other tool to help.

☐ Install the AFT KEEL.

☐ Cut to length then glue the aft, 5mm square balsa corner rails in place.



To install the forward corner rails:

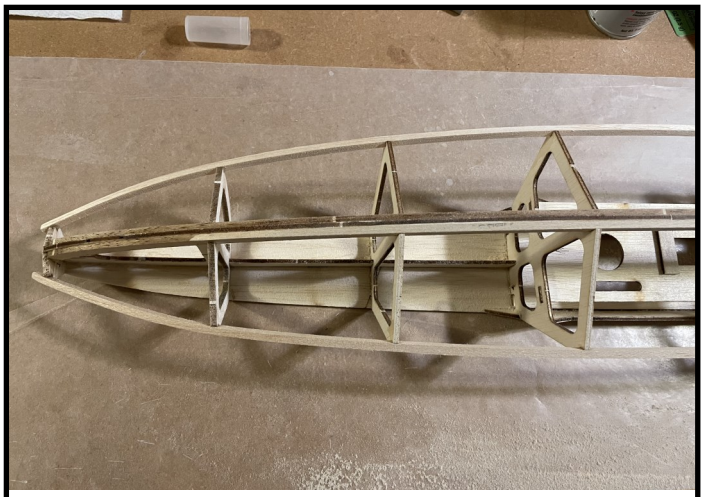
☐ Cut to length from 5mm square balsa

☐ These sticks will be difficult to bend into place between bulkheads 1 and 2. To make this job easier, make a series of cuts across the diagonal of the stick between these bulkheads, spaced about 6mm apart. Cut approximately halfway through the stick as shown in the following photos. These relief cuts then face the inside of the float.

☐ Glue each corner rail in place to BULKHEADS 6, 5, and 4 only, making sure that the relief cuts from the previous step are still facing the inside of the float.

☐ Sand or file a small bevel in the notch on bulkhead 1 to provide a better seat for the corner rails

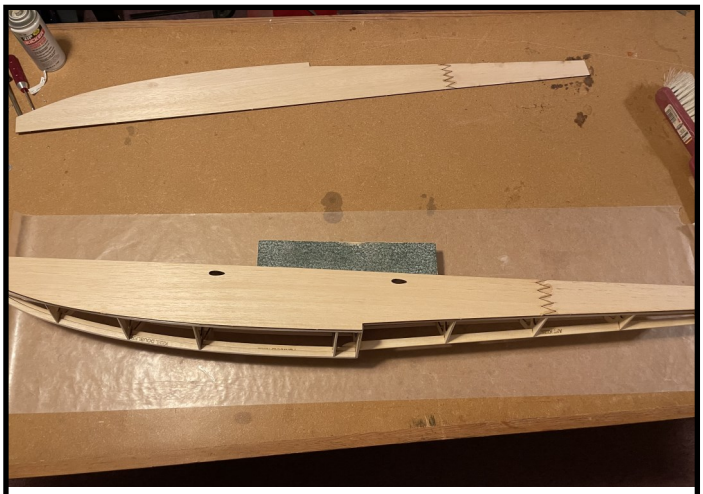
☐ To avoid building-in any warp or twist, glue both corner rails simultaneously to each remaining bulkhead one at a time, moving forward in sequence to BULKHEADS 3, 2, and 1.



☐ Corner rails glued fully in place

☐ Using a sanding block, sand the corner rails, edges of the top sheeting, and keel along both sides and all 4 bottom surfaces so the sides and bottom sheeting will seat properly

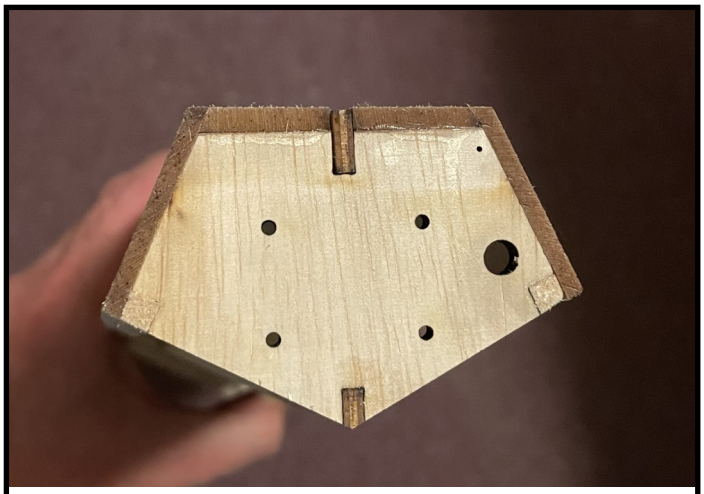
☐ Glue the aft portions of the SIDE SHEETING to the forward portions. The tail end of the side sheeting kicks upward about 1/16” and doesn’t make a perfectly straight line with the top edge of the front section.



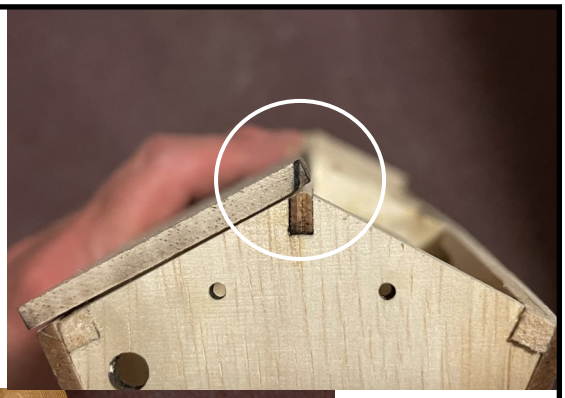
☐ Glue the SIDE SHEETING in place on both sides of the float. Pay attention to which side is inboard and which is outboard. Make sure the airfoil-shaped holes for the spacing struts line up approximately with the matching holes in the inboard side rails.

☐ Glue first between bulkheads 4 through 7, while carefully watching the alignment front and back.

☐ Then glue the sections fore and aft



☐ Sand the SIDE SHEETING flush with the top & bottom of the floats



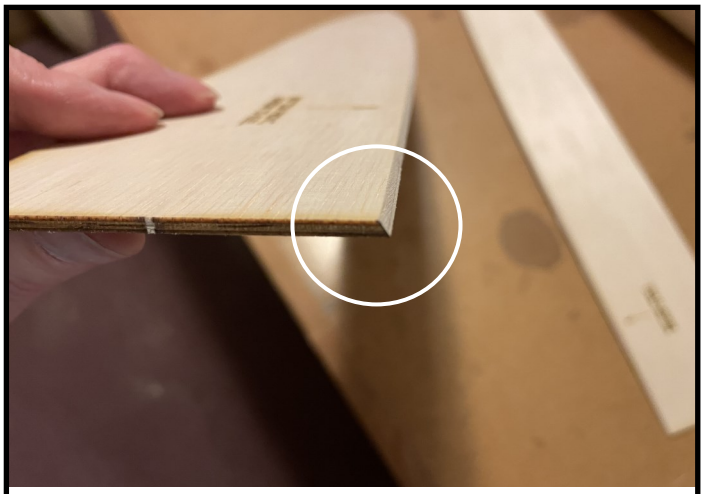
☐ Sand a bevel on the inboard edges of the BOTTOM AFT SHEETING (3mm balsa) so the two sheets meet nicely in the center. It may be helpful to mark the proper angle on the end of the sheet.

☐ Glue the BOTTOM AFT SHEETING in place

☐ Before gluing the Bottom Forward Sheeting in place, consider gluing some nose weight into the front of the float at this time.

☐ The prototype required 5 oz. to 6 oz. of nose weight to balance the weight of the water rudders, so we added 3 oz. in the nose of each float up against Bulkhead 1 after they were fully completed.

☐ The prototype used lead shot mixed with slow-cure epoxy, but lead stick-on weights could be used as well. Make sure it’s well-secured.



☐ Sand a bevel on the inboard edges of the BOTTOM FORWARD SHEETING (2.7mm balsa plywood) so the two sheets meet nicely in the center. Arrows point to the center.

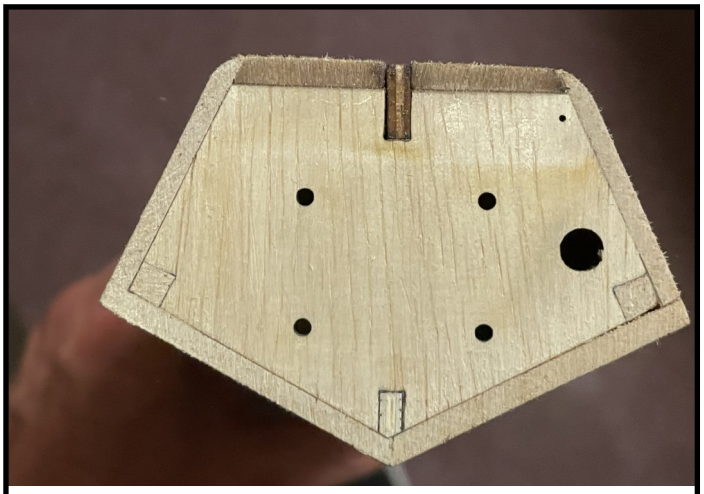
☐ Glue the FORWARD BOTTOM SHEETING in place. Be sure to test fit the sheeting in place so you get a feel for how they fit before committing to glue.

- ☐ Start by gluing from bulkhead 6 to bulkhead 4 or 3, one side then the other
- ☐ Then glue up to bulkhead 2, one side then the other

Here the sheeting has been glued up to bulkhead 2, only leaving the last section to be glued. At this point, do your last test fit to see how the bottom sheeting fits together up at the nose. You may need to sand the sheeting a little on one side to make them fit together properly.

☐ Glue each side in place up to bulkhead 1, one at a time. The sheeting can be bent into place by wrapping your fingers around the top of the float and using both thumbs to press the sheeting into place. It may be easier to hold in place by holding the float vertically with the aft end of the float on the ground.

Forward bottom sheeting fully in place. Any gaps can be filled with putty or filler prior to covering.

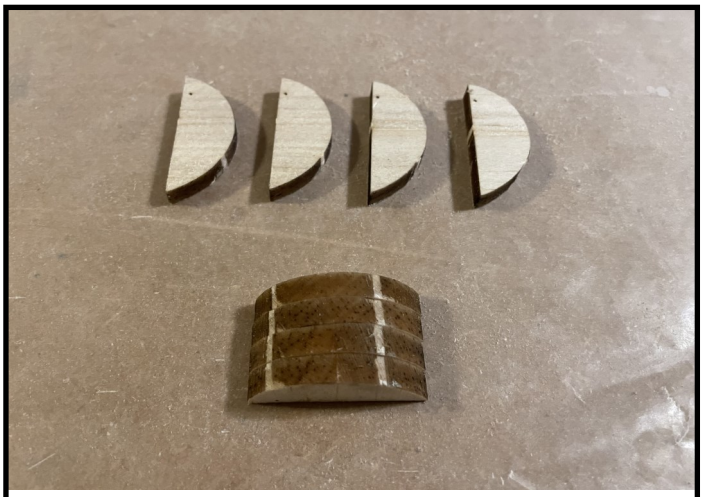


☐ Sand the edges of the BOTTOM SHEETING flush with the sides

☐ Sand a small radius in the top edges as shown

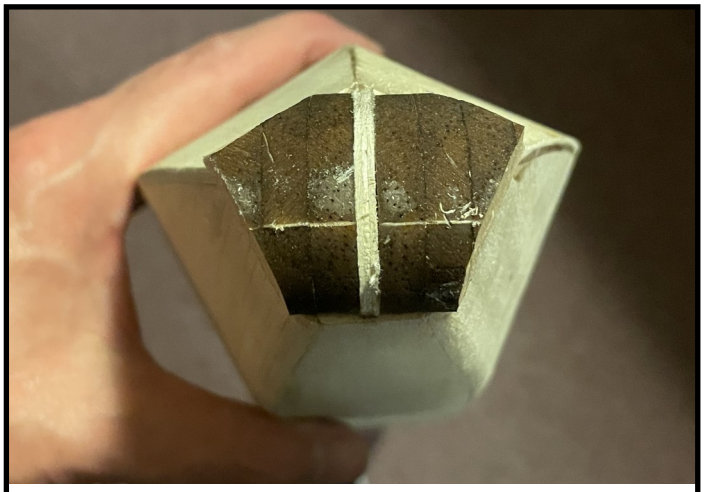
☐ Using a sanding block, sand any sheeting or corner rails flush with BULKHEAD 1

☐ Glue the 2.7mm balsa plywood NOSE CENTER GUIDE in place on BULKHEAD 1



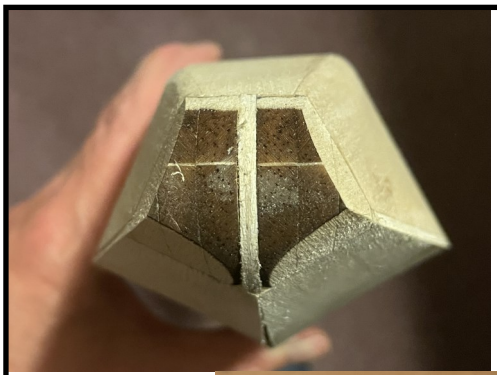
☐ Assemble the NOSE BLOCKS from 6mm balsa. Simply stack and laminate 4 pieces together for each side.

☐ Glue the assembled NOSE BLOCKS in place on each side of the NOSE CENTER GUIDE

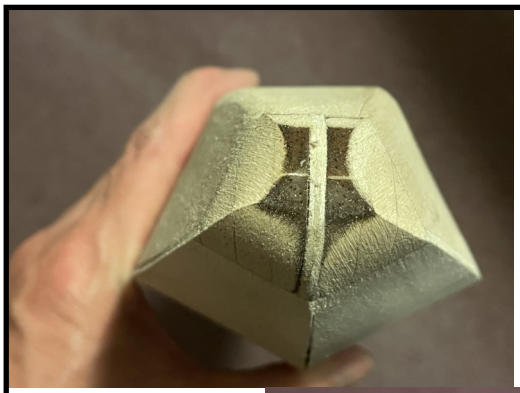


☐ Carefully carve and sand the NOSE BLOCKS to shape, sanding in steps to maintain control

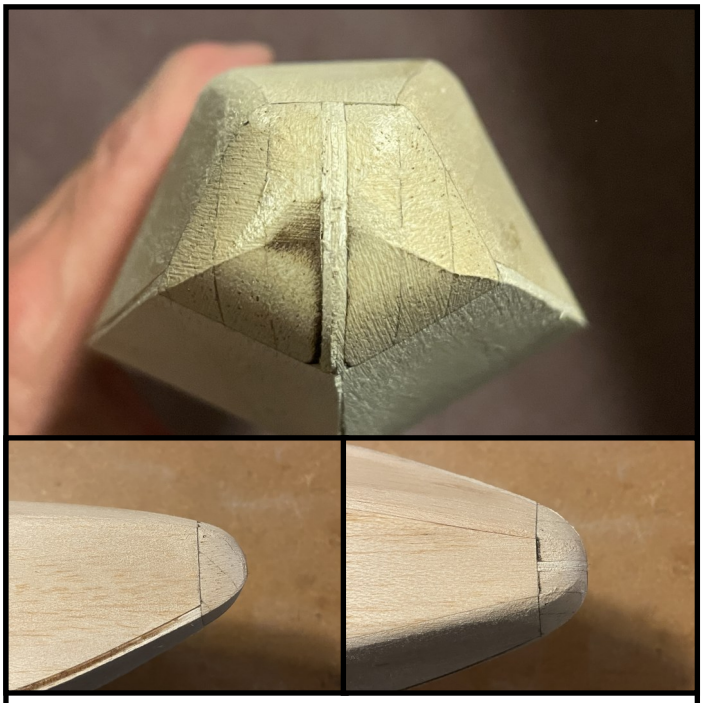
- ☐ First carve to rough shape—we used a hunting knife for this step



☐ Second, sand the nose block flush with all 5 sides, as if you’re extending the flat surfaces forward



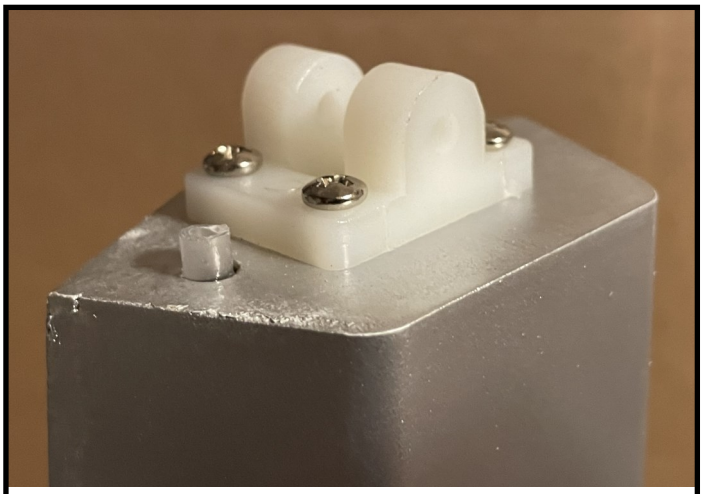
☐ Third, start rounding off the flat sides toward the CENTER GUIDE



☐ Finally, do the final rounding all the way to the CENTER GUIDE

Finish the floats in the manner you prefer. We strongly recommend glassing & painting for durability and waterproofing. We used 3/4-oz cloth on the prototypes shown here, plus an extra layer underneath of 2-oz cloth on only the forward bottom sheeting to provide additional durability.

The aluminum-colored paint is Krylon Chrome Aluminum, number 1404, which is then buffed with steel wool.



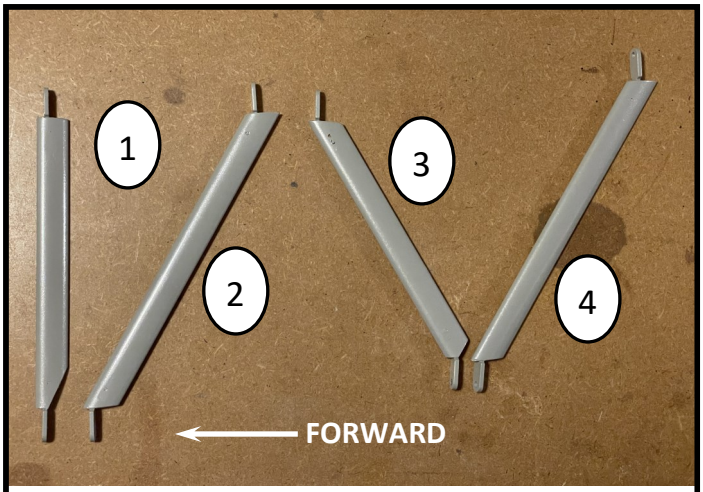
☐ Install the plastic pushrod guide tube so that it protrudes about 1/8” past bulkhead 10. CA in place to the bulkheads that are accessible.

☐ Install the water rudder bearing using four wood screws, supplied

☐ The floats can be assembled two primary ways:

- ☐ Attach the mounting struts to the aircraft first then assemble the floats beneath the aircraft as shown above
- ☐ Assemble all the struts to the floats before mounting to the aircraft (not shown)

☐ With either approach, use assorted cardboard boxes and scraps of plywood to support the fuselage when completing final assembly.



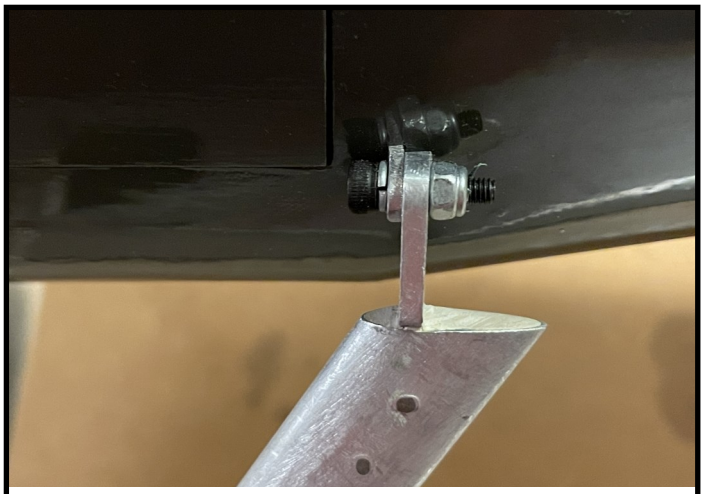
☐ The float mounting struts for the Moustache Model Works 20cc Beaver are shown above, labeled 1-4 from left to right, forward to aft.

☐ Struts 1 and 2 attach to the front face of the fuselage strut mounts using 2.5mm x 10mm socket head cap screws, 2.5mm lock nuts, and a flat washer. If your kit contains split washers instead of flat washers, use the split washers instead.

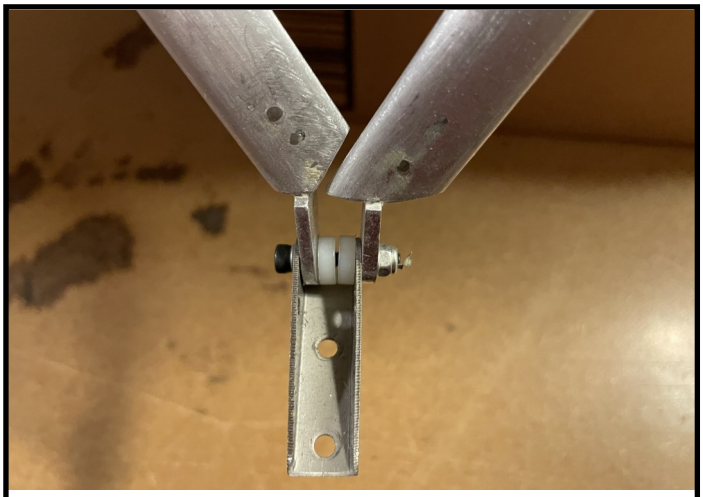
☐ Strut 2 attaches to the outside hole of its fuselage strut mount. (The inside hole is for the diagonal braces)

☐ Struts 1 and 2 attach to the float side strut mount using a 2.5mm x 20mm socket head cap screw, 2.5mm lock nut, a flat washer, and a single 3mm nylon spacer.

☐ Note that both mounting tabs on struts 1 and 2 fit INSIDE the float strut mount tabs.

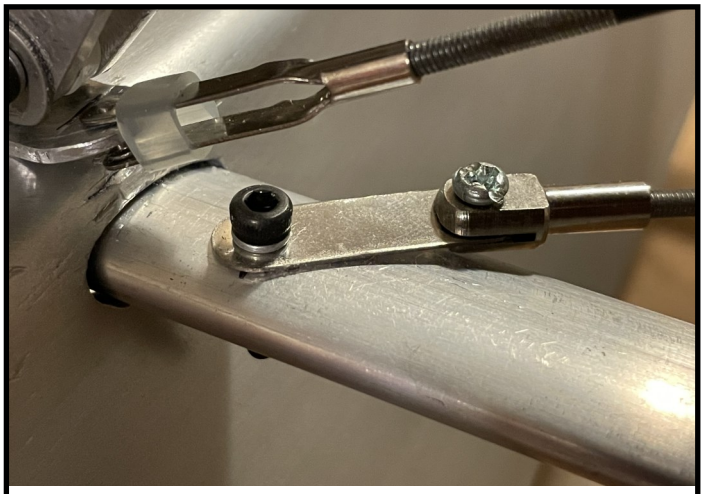


☐ Strut 3 also attaches to the front face of the fuselage strut mount, outside hole, but Strut 4 attaches to the BACK face of the fuselage strut mount just aft of the door. Both are attached using a 2.5mm x 10mm socket head cap screw, 2.5mm lock nut, and 2.5mm flat washer (or split washer).

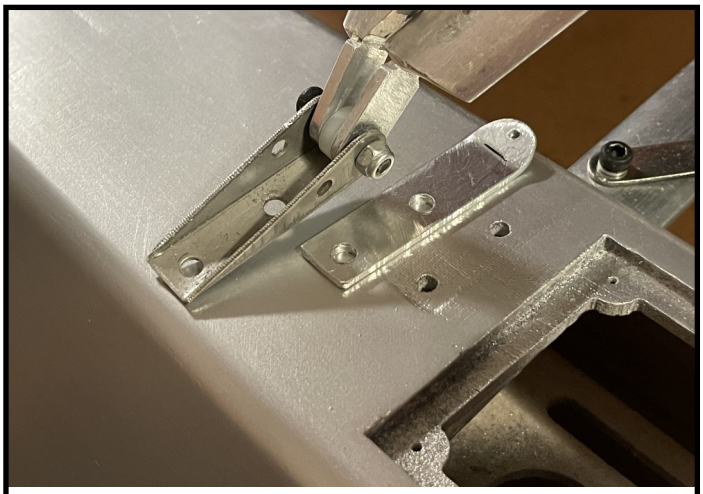


☐ Struts 3 and 4 also attach to the float side strut mount using a 2.5mm x 20mm socket head cap screw, 2.5mm lock nut, and a flat washer, but using TWO 3mm nylon spacers as shown.

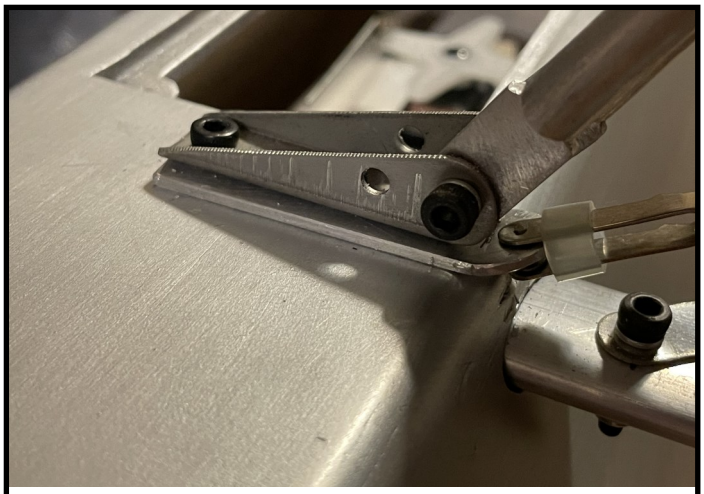
☐ Note that both mounting tabs on struts 1 and 2 fit just behind the float strut mount tabs.



☐ Fit the airfoil-shaped spacing struts into the matching holes in the float sides. The upper side of the cross-strut is supposed to rest flat against the TOP DOUBLER inside the float. If needed, use a round or oval-shaped file to sand away some of the upper edge of the hole in the side of the float to ensure the cross-strut fits flat against the top doubler.



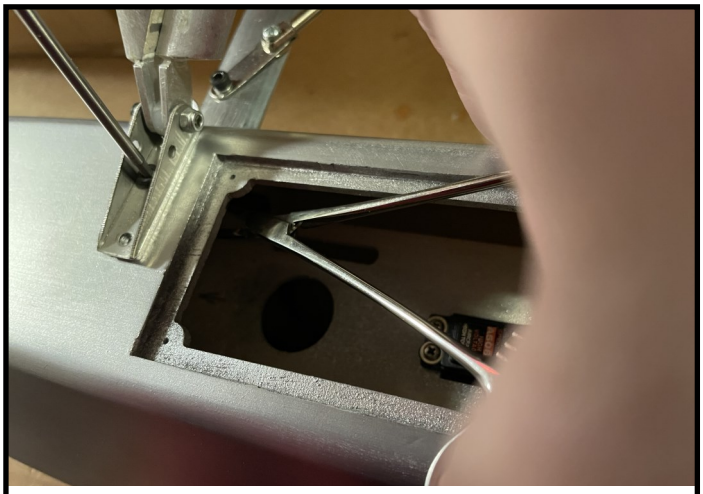
☐ The diagonal brace mounts are sandwiched between the top of the float and the float strut mounts.



Here’s where it all comes together!

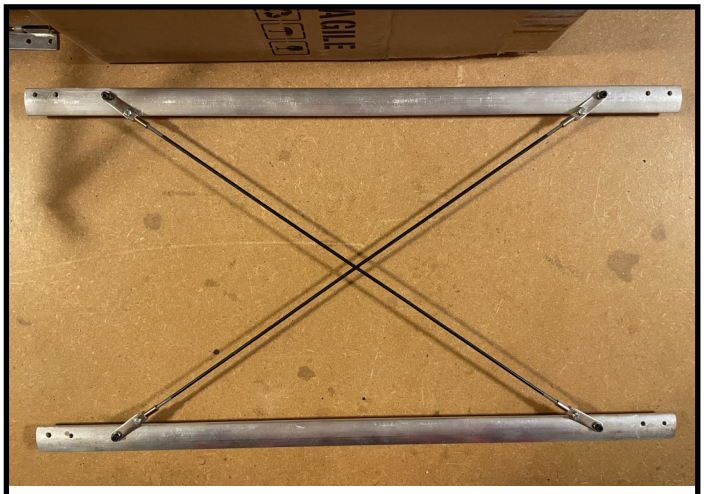
☐ Assemble the float strut mounts to the float and the spacing struts using two 2.5mm x 25mm socket head cap screws, 2.5mm lock nuts, and flat washers (or split washers).

☐ Remember to sandwich the diagonal brace mounts between the float strut mounts and the floats.



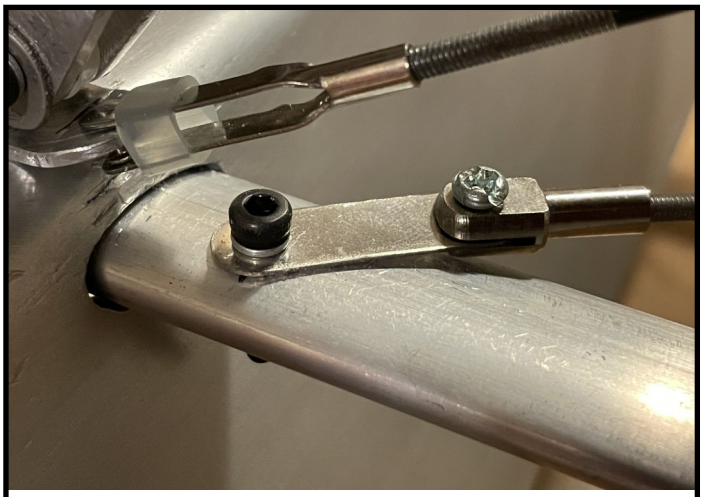
☐ Hemostats may help to hold the lock nuts in place while tightening the cap screws.

☐ Having a magnetized tool available will help when you drop the lock nuts into the bottom of the float. Trust me, you’re going to do this many times as you try to do this step! And, you will curse the designer (me).

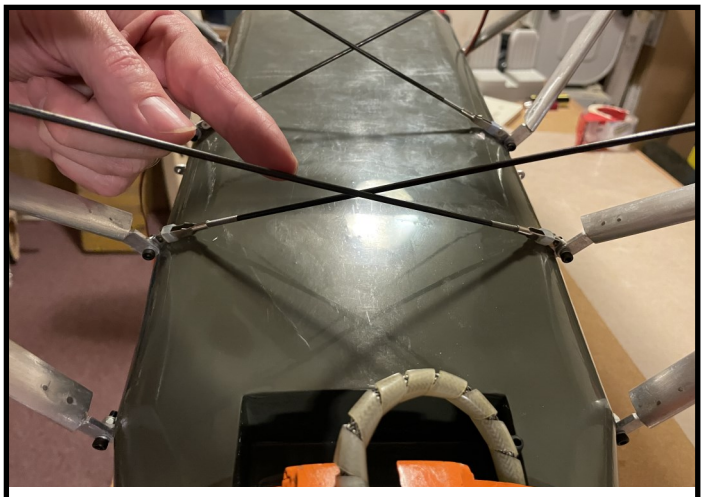


☐ Install the diagonal braces on the spacing struts. The diagonal braces are 3mm x 380mm

(the image shown here does not show the floats, but in order to get the diagonal braces the right length, they should be installed after the greater float assembly is completed to simplify getting the diagonal braces the correct length.)



☐ The diagonal braces use a special threaded clevis connected to a steel strap, which is then attached to the spacing struts using a 2.5mm x 16mm socket head cap screw, 2.5mm lock nut, and flat washer (or split washer), as shown.



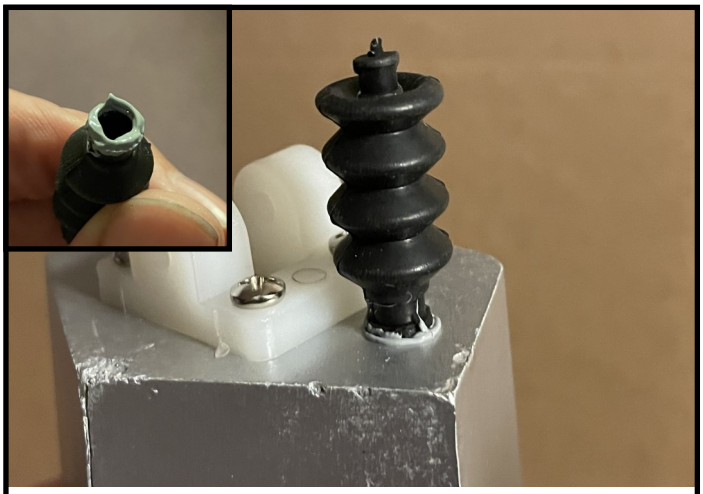
☐ Install the forward and aft diagonal braces between the diagonal brace mounts and the fuselage strut/ float mounts

- ☐ The forward diagonal braces are longer: 3mm x 305mm
- ☐ The aft diagonal braces are shorter: 3mm x 292mm

☐ The diagonal braces use 3mm steel clevises and a 3mm length of fuel tubing as a keeper

☐ Attach them to the inner holes on the fuselage float mounts

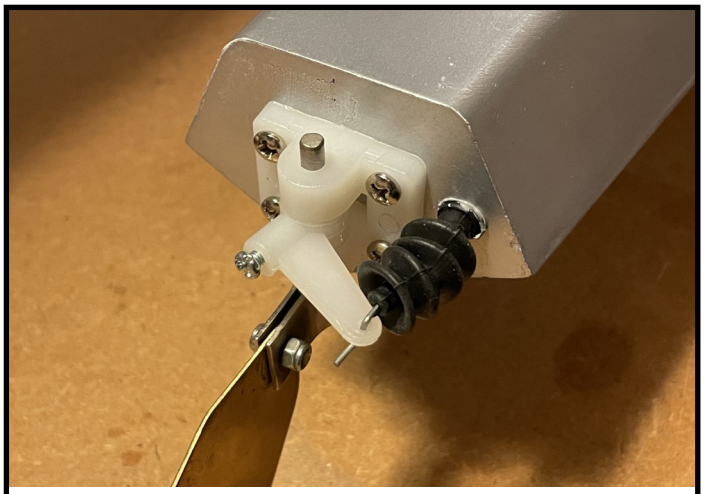
☐ Install the water rudder steering servos using the mounting hardware supplied with the servo. The servo output shaft is biased to the aft side of the float.



☐ Glue the rubber pushrod seal to bulkhead 10 using silicone adhesive / RTV.

☐ Allow to cure completely

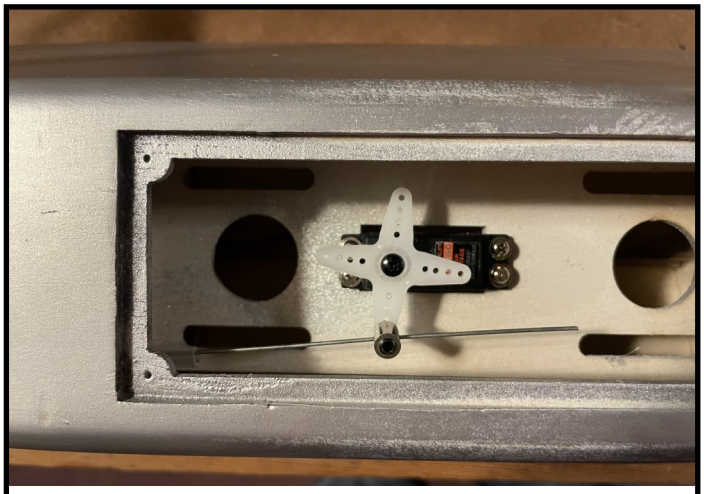
The rubber pushrod seals may or may not be included in the kit. If they are not, they are easy to find on Amazon. They should be 32mm long.



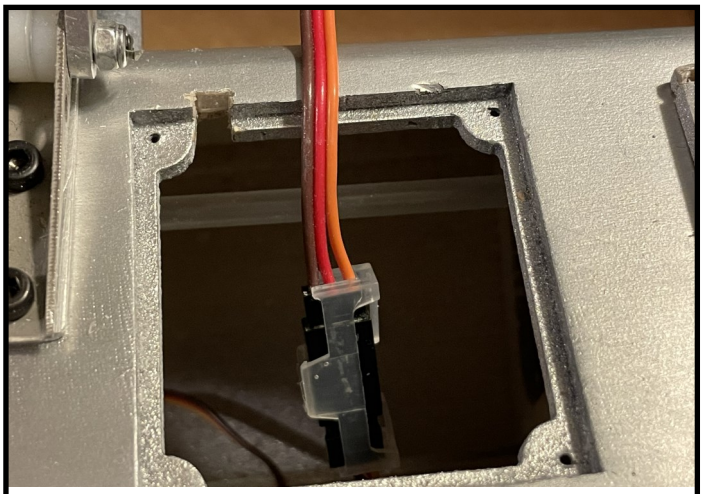
☐ Install the water rudder assembly

- ☐ Install the control arm onto the 1mm pushrod
- ☐ Insert the pushrod through the pushrod seal into the float
- ☐ Slide the control arm into place on the bearing
- ☐ Insert the water rudder shaft from the bottom—pay attention to the flat spot on the shaft
- ☐ Tighten the set screw on the control arm

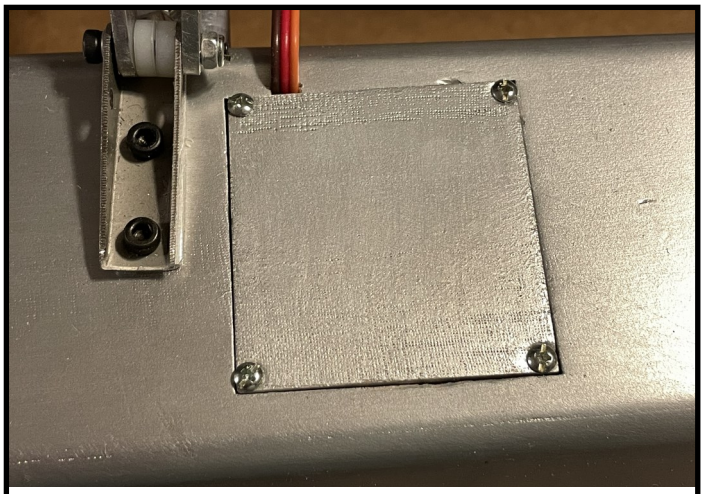
- ☐ Install an EZ connector (included) to the servo arm using the supplied nuts. You may need to drill out the hole in the arm for the threaded stud to fit.
- ☐ Remember to use thread lock on the nut—only on the side away from the servo arm.



- ☐ Slide the EZ connector onto the pushrod and install the servo arm onto the servo.
- ☐ Final tightening of the EZ connector to the pushrod will be done during radio setup.

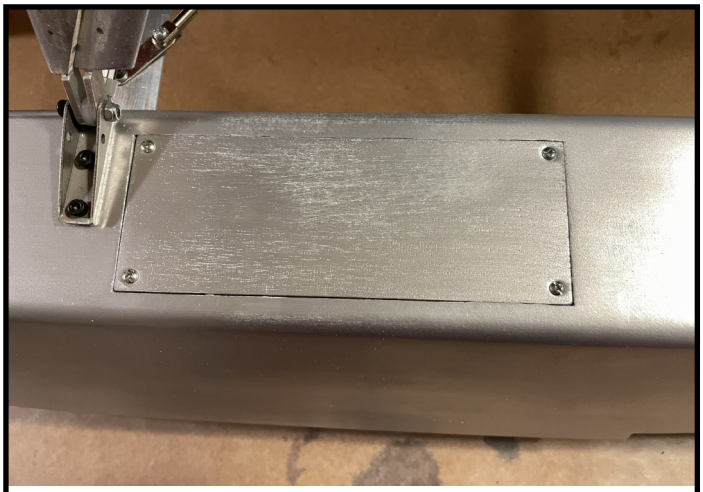


- ☐ Install the water rudder servo extensions. Connect to the receiver using a Y-harness and a single channel that is in turn mixed to the rudder for control.
  - ☐ 18” to 24” extensions required depending upon the length of the Y-harness used
  - ☐ Be sure to use a keeper where the servo connects to the extension inside the float.
- ☐ Cut a groove in the edge of the rear hatch for the servo extension to pass through

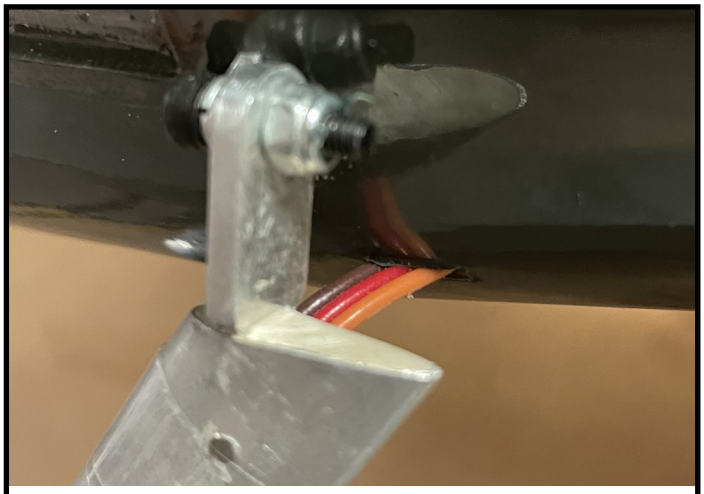


- ☐ Before installing the hatches, screw the 2mm x 10mm sheet metal screws into the holes in the TOP DOUBLER to thread the holes, back out the screws, and drop some thin CA into the threaded holes to harden them. Let dry thoroughly before reinstalling the screws.
- ☐ Enlarge the holes in the hatches using a 5/64” drill bit, then install the top hatches.

Note the hatch screws have been moved away from the corners since this prototype was built.

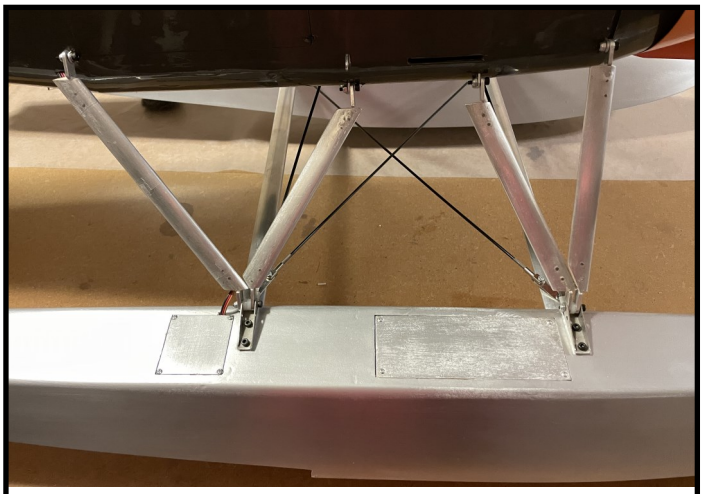


☐ If desired, form a seal around the perimeter of the hatches by applying silicone / RTV, then installing the hatches with a plastic wrap barrier to prevent permanently gluing the hatches in place. After the silicone cures, remove the hatches and the plastic wrap, then re-install the hatches.



☐ Route the servo extension up the inside of Strut 4 and secure in place with clear tape.

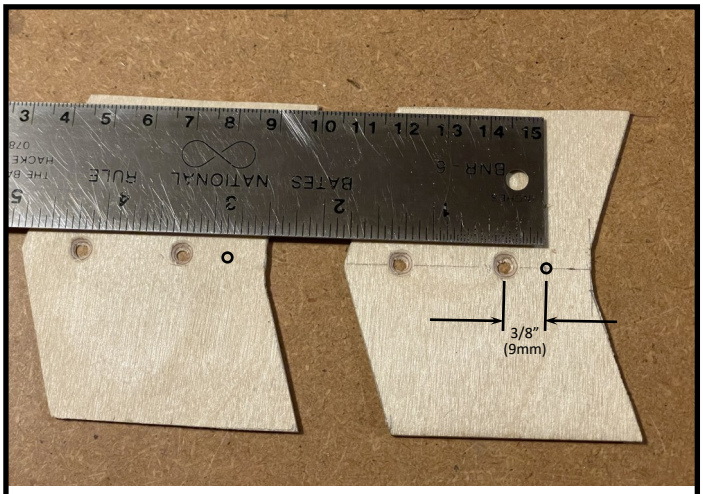
☐ Cut a small slot about 2mm x 8mm in the fuselage to pass the extension into the fuselage. This is easiest to do in the balsa corner sheeting just aft of the bulkhead.



☐ Completed view of the float installation

☐ Completed view of the float installation

☐ Cover the slot for the conventional landing gear with tape or with a strip of the covering material you used on the fuselage

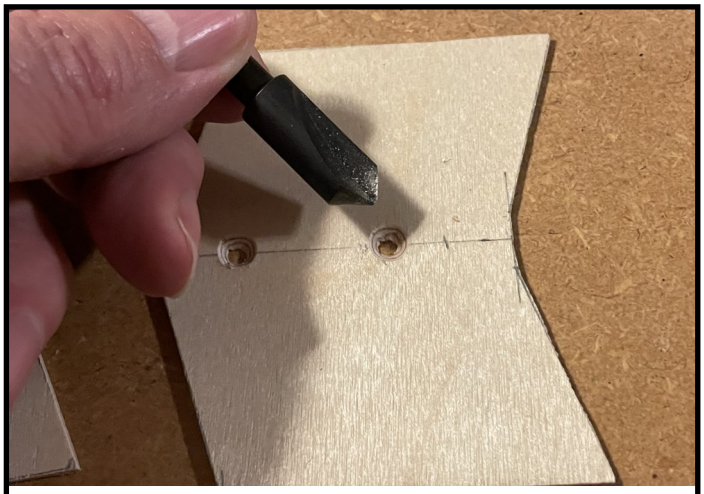


OPTIONAL SUB FINS

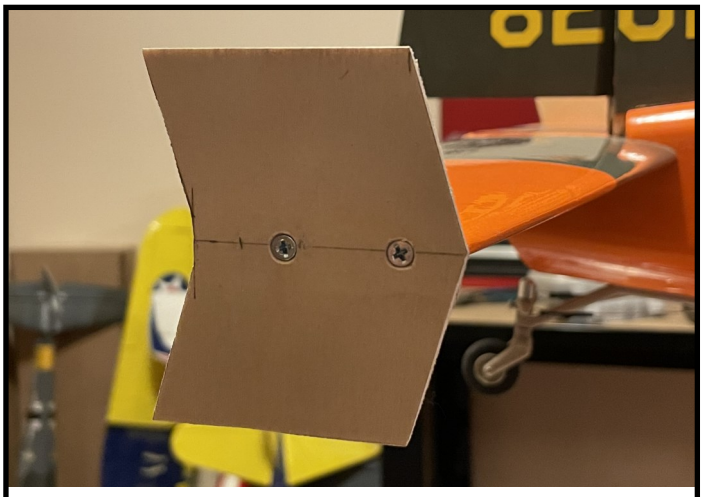
The sub fins are not required for use of floats on the Beaver, but they are commonly used on full scale Beavers. The sub fins are included in the Beaver kit, and they can be installed after having assembled the airplane.

☐ Start by removing them from the 1/32” sheeting

☐ The aft mounting hole is too far aft by about 3/8” or 9mm. Drill new holes 3/8” or 9mm forward of the laser-cut location.



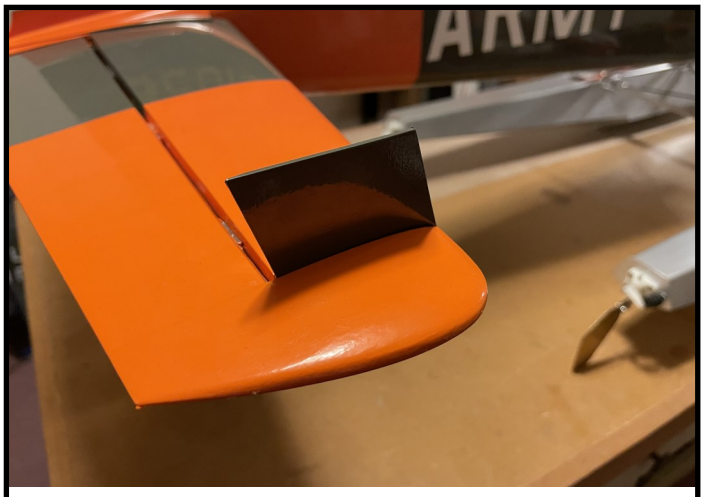
☐ Countersink the holes so a flathead screw will fit flush with the outside surface.



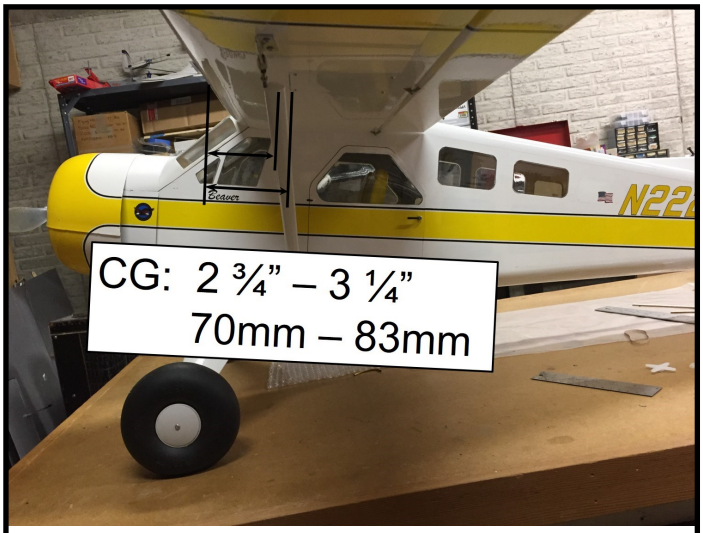
☐ Use the sub fin as a template to mark the location for the mounting screws on the tip of the stabilizer

☐ Drill pilot holes, approximately 1/16”, in the marked location

☐ Install the sub fins to the stabilizer tips (elevator not shown for clarity) using two #4 x 3/8” or #6 x 3/8” flat head wood or sheet metal screws (not included)



☐ Remove the sub fins, cover using your favorite method (MonoKote shown here), and re-install.

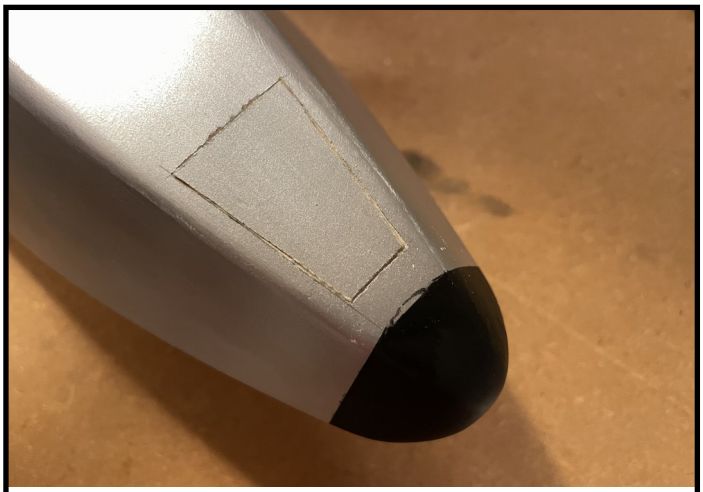


☐ Balance the aircraft using the same cg location without floats. For the 20cc Beaver, this location is 2 3/4 to 3 1/4 inches aft of the wing leading edge.

☐ As mentioned on page 13, we didn’t add any weight to the prototype during construction of the floats, so we had to add some after they were complete.

☐ If you take this approach, cut a small hatch in the top of the float for pouring a slurry of slow-cure epoxy and lead shot inside. While the epoxy is curing, tip the assembly on its nose so the slurry will flow to the forward bottom of the float.

☐ The prototype required about 3 oz in each float.



☐ After gluing in the epoxy/lead shot slurry, the temporary access hatch can be glued back in place. Use 5 -15 min. epoxy mixed with microballoons to ensure a good seal around the perimeter of the hatch.

MOUSTACHE
EST. 2018
MODEL WORKS

Moustache Model Works, LLC

PO Box 952

Greenwood, IN 46142