VMAR 60 - 90 SIZE FLOATS

Graphic Detailing & Logos may differ slightly from that shown

SUMMARY OF ASSEMBLY STEPS

- Read Instructions
- Check Off Parts
- Attach Float Struts to Fuselage
- Attach Float Set
- Attach Water Rudder

Liability Disclaimer

It is important that the following liability disclaimer be

READ BEFORE ASSEMBLING OR USING THIS PRODUCT

Model airplanes, model floats, model engines, model engine fuel, propellers and related accessories, tools and equipment can be hazardous if improperly used. Be cautious and follow all safety recommendations when using your VMAR product. Keep hands, tools, clothing and all foreign objects well clear of engines when they are operating. Take particular care to safeguard and protect your eyes and fingers and the eyes and fingers of other persons who may be nearby. Use only a good quality propeller that has no cracks or flaws. Stay clear of the propeller and stay clear of the plane of rotation defined by the propeller.

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PLEASE READ THIS FIRST!

PLEASE REVIEW THIS DOCUMENT CAREFULLY INCLUDING THIS LIST OF "STAY OUT OF TROUBLE... MUST DO'S!"

1. **READ ALL THE DOCUMENTATION** before doing anything else.

2. **DO NOT REMOVE ANY LABELS OR STICKERS** until advised and note the correct procedure for doing so.

3. **UNPACK CAREFULLY and RETAIN ALL PACKAGING** until you are completely finished the assembly process.

4. **ALLOW ENOUGH TIME** to do a good job. The process is simple and can be completed in approximately 90 minutes.

5. **DO NOT OVERTIGHTEN SCREWS, BOLTS AND FITTINGS! USE HAND TOOLS ONLY.** Do NOT use power tools. Remember, making sure that things are snug and secure does not mean that you use an impact wrench and a hammer! **GENTLE DOES IT!**

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PLEASE NOTE. We have used the VMAR Beaver 60-90 ARF to illustrate this procedure. These floats can be adapted by modelers to fit on almost any 60-90 size model.

With regards to directional references, the terms Left, Right, Front, Back, Forward, Aft, Front, Rear, etc are all with respect to a pilot sitting in the cockpit of an airplane and looking ahead to the propeller.

❑**Step 1:** BEFORE doing anything, please review these instructions from beginning to end and then follow the procedure carefully.

❑**Step 2:** Unpack the floats. Carefully remove the packing material and components from the shipping box. Do NOT discard anything until you have completed the assembly process.

❑**PLEASE NOTE:** Do NOT remove any factory applied labels or stickers from your floats until advised to do so.

❑**Step 3:** Check off the Parts per the list below: Exact quantities of hardware may vary slightly from model to model.

❑ 1 Instruction Set
❑ 1 Float Set consisting of two factory bult floats.
❑ 2 Aluminum Tubes (Spreader Bars)
❑ 12 Black Hex Head Bolts
❑ 12 Self Tapping Screws approx 1.25 in. (30mm) long
❑ 12 Bevelled Plastic Washers
❑ 4 Self Tapping Screws approx 3/4 in. (18mm) long
❑ 4 Self Tapping Screws approx 3/8 in. (9mm) long
❑ 1 Water Rudder with Steering Arm.
❑ 2 Plastic Straps (saddle shaped)
❑ 4 Sets of Float Struts as shown below (used to attach the float set to the fuselage)

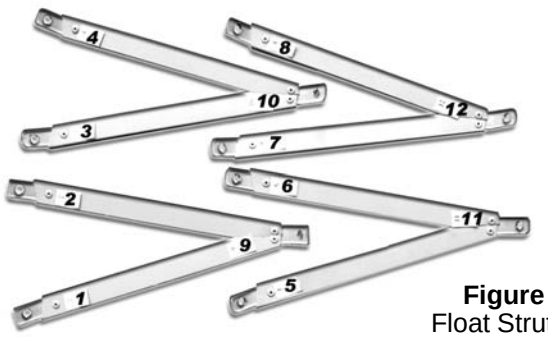


Figure 1
Float Struts

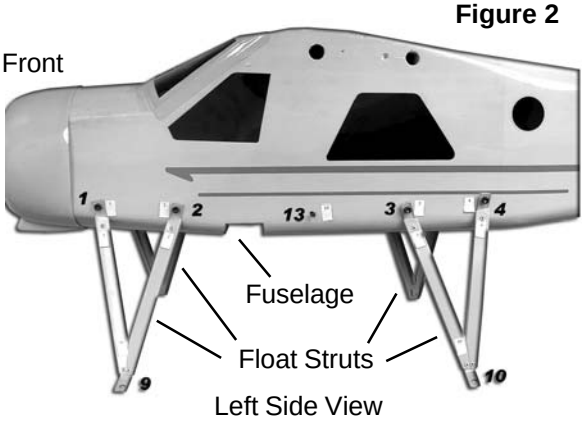
❑**Step 4:** Apply small labels made of low tack masking tape to the Float Struts and number them 1 to 12 as shown in Figure 1.

❑**Step 5:** See Figure 2 and apply low tack labels to the side of your fuselage to match the numbers you applied to the float struts in Step 4.

❑**Step 6:** Attach the four float struts shown in Figure 1 to the fuselage using 8 of the black hex head screws. Two struts go on each side of the fuselage. The ends of the struts are numbered to match with corresponding numbers on the fuselage. Install screws at locations 1,2, 3, 4,5,6,7 and 8. Leave the screws loosely inserted at this time. Do NOT tighten the screws. The struts should be able to move slightly at this stage.

If your model is not a VMAR Beaver 60-90 ARF or does not have the factory installed hard point T-nuts installed in the fuselage you will need to epoxy hard points (wood blocks) inside the fuselage and use 8 self tapping screws rather than the hex bolts.

Figure 2



Left Side View

❑**Step 7**: Locate and position the floats on a soft surface. Apply low tack numbered labels (9,10,11,12) to the floats as shown in Figure 3.

❑**Step 8**: Carefully insert the aluminum tubes into one float and then the other. Ensure that the tubes are fully inserted but do NOT force them or they will puncture through the surface of the outboard float skin.

Line the floats up so that they are parallel or very very slightly "toed-In" to be no more than 1/16" (1-2 mm) closer together at the front than at the back. See FIgure 3. Mark the tubes for reference.

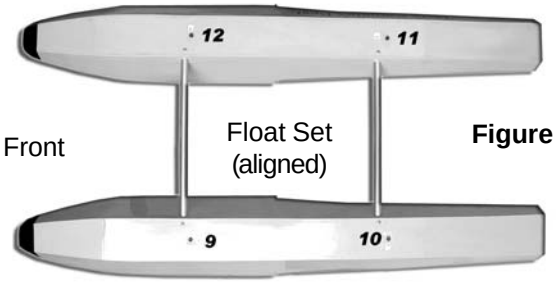


Figure 3

Left

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❑**Step 9**: You are going to drill four holes vertically down through the top of the floats and through the spreader bar ends that are inside the floats and then insert a self tapping screw to secure the spreader bars to the floats.

To do this... mark the top of the floats about 3/8 in. (9 mm) inboard from the inside edge of the float and directly above where the spreader bars enter into the float. Make four marks, one for each speader bar end.

Check the alignment carefully to ensure the marks are directly over the spreader bars inside the floats.

Leave the spreader bars in place.

❑**Step 10**: Use a 1/16 in. (1-2 mm) diameter drill bit and drill at the marked locations on one float. Drill down through the top of the float and through the spreader bars to a depth of about 1-1/4 in. (30 mm).

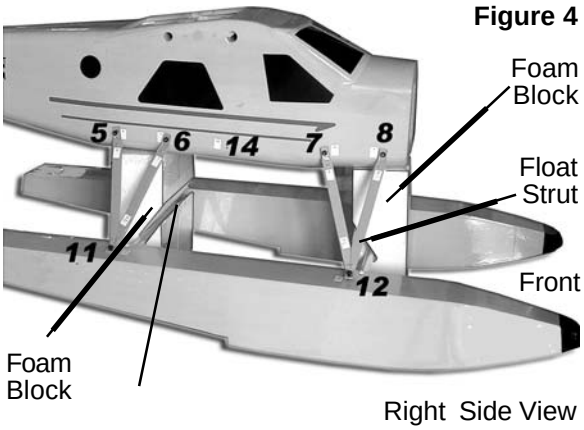
❑**Step11**: Use 2 self tapping screws 1-1/4 in. (30 mm) long and two of the plastic washers (bevel towards the screw head) to secure the spreader bars to the float.

❑**Step 12**: Carefully check the float alignment and the marks on your tubes that you made in Step 8. Adjust the position of the second (still loose) float to ensure the correct alignment

❑**Step 13:** Repeat steps 10 and 11 to securely attach the second float to the spreader bars using two more screws and plastic bevelled washers.

❑**Step 14:** Carefully review Figure 4 below and FIgure 6 on Page 4. Cut two foam or cardboard blocks to serve as a cradle for your fuselage. Adjust the angles of the fuselage to align the strut ends with the floats and the pre-installed fuselage hard points in your Beaver 60-90 ARF or to the hard points you may have installed in Step 6.

Figure 4



Right Side View

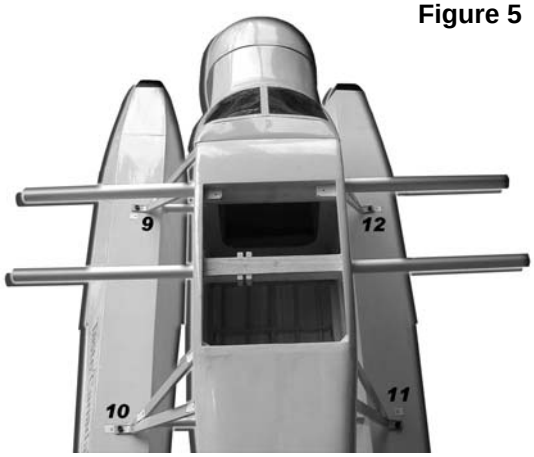
❑**Step 15:** Use a (4mm) allen key to tighten the Hex Head Bolts (or a screw driver if using the self tapping screws and plastic washers screws) to tighten the fasteners in two passes. The TWO pass approach ensures the parts align well.

❑**Step 15.1:** First Pass: LIGHTLY (leave just a touch of wiggle room) tighten the screws in this order...
1, 3, 5, 7, 2,4,6,8 on the fuselage and 9,10,11,12 on the floats.

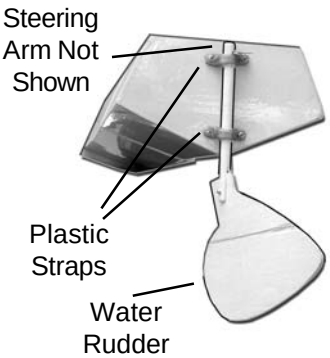
❑**Step 15.2:** Second Pass: Being careful to NOT overtighten any screws, secure the components so they do not move by snugly tightening the screws in the same order...
1, 3, 5, 7, 2,4,6,8 on the fuselage and 9,11,10,12 on the floats.

❑**Step 16:** Insert the wing spars into your Beaver 60-90 ARF (or position a yard stick across the top of and perpendicular to the fuselage if a different model) as shown in FIgure 5. Check the alignment of the floats from above and vertically. Everything should be aligned & equidistant relative to the the wing spare tubes.

Figure 5



❑**Step 17:** Locate and install the water rudder on the aft end of one float. Secure the rudder into place with the plastic saddle straps and four small screws supplied. Connect the steering arm to your steering servo.



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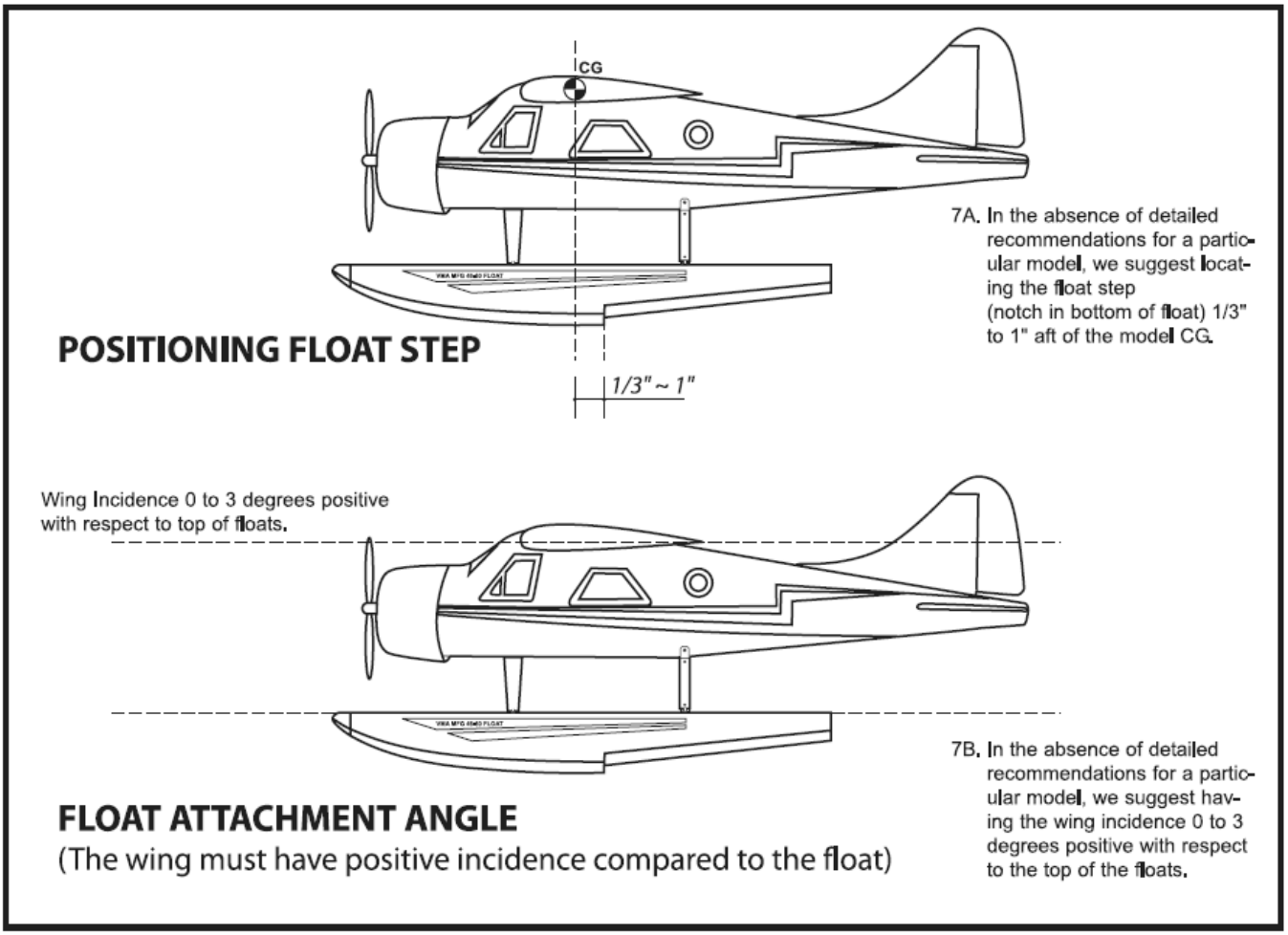
❑**Step 18**: Carefully and slowly remove all of the labels from the surface of the model and floats Do NOT remove by pulling the labels directly away from the surface to which they are applied. Pull the labels back on themselves parallel to the surface to which they are applied.



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