

The Tiny Pontoon Boats modular fence system is made so that many different configurations are able to be assembled with the fence panels that we offer. This means that different fence panels can be selected and bolted together to fit the individual customer's needs. Creating a full set of assembly instructions for every fence configuration that we can provide simply isn't reasonable (instructions like this take a tremendous amount of time to build), so on this page, we will walk through the process of installing a full-surround modular fence system for our largest recreational pontoon boat, our 8'x15' model. When installing a different configuration on the same or different model boat, use this set of instructions as a guide for the techniques we recommend for installing our modular fence system. When ordering a full kit from Tiny Pontoon Boats, you will receive the panels and installation hardware required for your unique system and we will provide you with diagrams showing where to place your panels and required mounting holes for your kit. This will be provided in a timely manner after your purchase.

Remember, in this set of instructions, we are working through installation of a full-surround fence system for a 8'x15' boat kit. This fence has two 34" wide side-entry doors.

8'X15' FULL-SURROUND FENCE SYSTEM INSTALLATION:

The fence system we are installing in this set of instructions includes the following (includes extra hardware):

Fence panels:

- Qty. 4 of fence corner panels
- Qty. 2 of 72" wide straight fence panels
- Qty. 2 of 28" wide straight fence panels
- Qty. 2 of 34" wide straight fence panels (used for doors)

Small fence assembly parts:

- Qty. 2 of aluminum door hinges
- Qty. 2 of stainless door latch assemblies
- Qty. 50 (2 packs) of plastic fence risers (spacers)
- Qty. 2 of 2.125" wide aluminum backer plates (install under deck)
- Qty. 8 of 2.5" wide aluminum backer plates (install under deck)

Fence assembly hardware:

- Qty. 30 of 5/16" x 3 1/2" hex bolts (fence to deck)
- Qty. 14 of 5/16" x 3 1/4" hex bolts (fence panel to fence panel)
- Qty. 85 of 5/16" flat washers
- Qty. 48 of 5/16" lock nuts
- Qty. 50 of stainless 3/16" pop-rivets

The fence system is the last thing to install on the boat, and is installed after the frame & floats are assembled, and the decking, transom, motor, and steering console are installed. If installing carpeting, get through the entire process listed here OTHER than installing the nuts on the bolts that hold the fence in place. It's next to impossible to mark hole locations that you have to drill in the deck with carpet installed. When you get to the portion of our instructions where the nuts are installed on the through-deck bolts, remove the entire fence, glue down your carpet, and then go back to reinstalling the

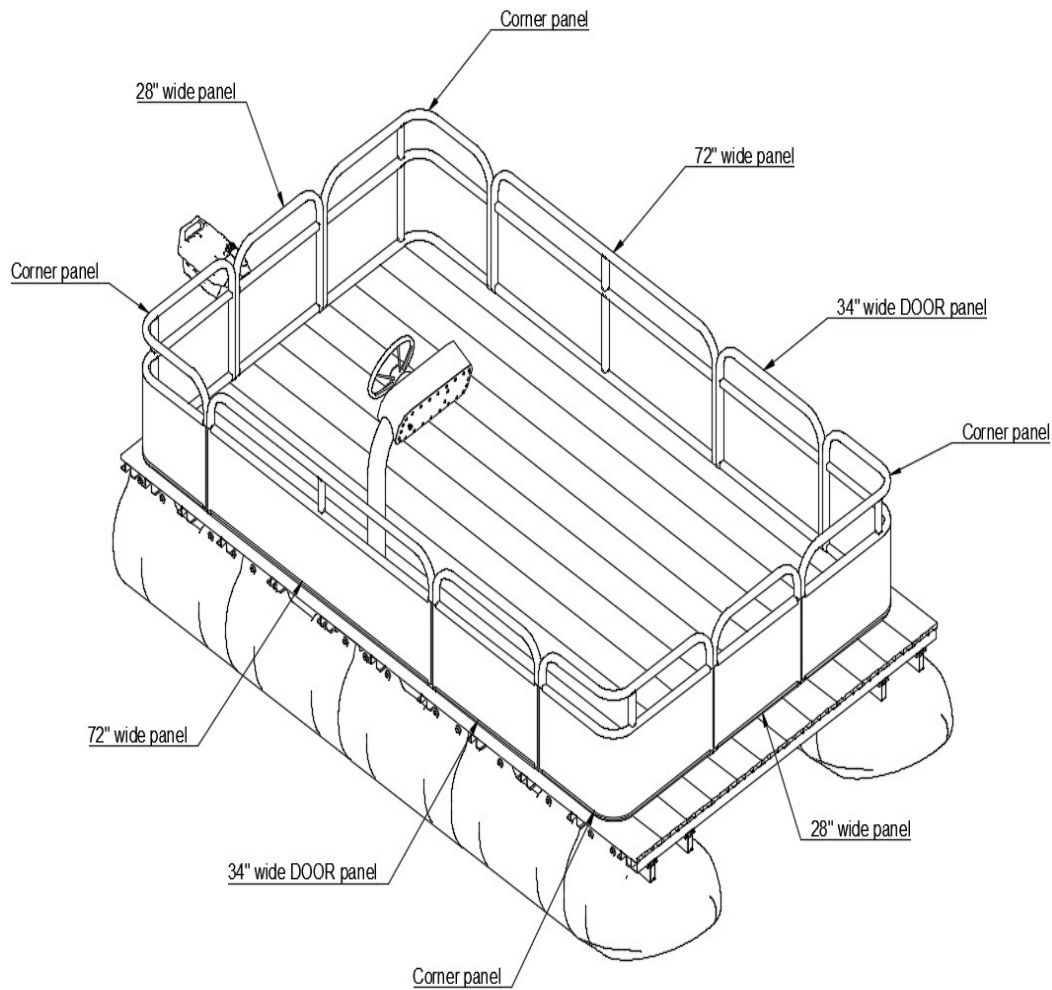
fence and completing the fence installation. In this set of instructions, we are working as if no carpeting is being installed. Also, **installation of your fence system is much easier when working as a 2-person team.**

To start off, a picture of the included hardware is shown below.



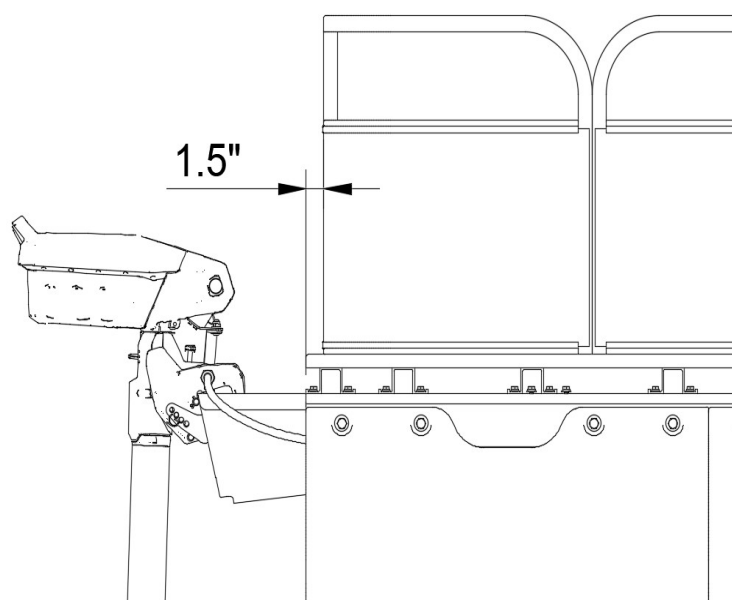
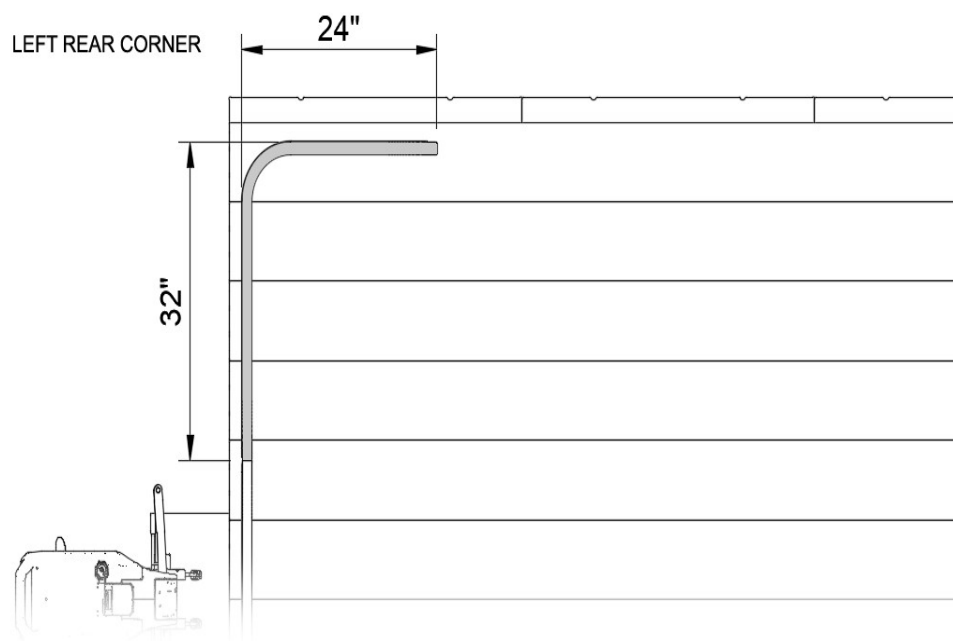
For your fence system installation, the 5/16" x 3 1/4" hex bolts are for bolting the fence panels to each other and the 5/16" x 3 1/2" hex bolts are for bolting the fence to the deck of the boat. When bolting your fence to the deck of the boat, the goal is to bolt through the frame crossmembers. This ensures that your fence system is as sturdy as possible. This is most important when using our aluminum decking. When using typical 3/4" marine grade plywood decking, this is not as important. As the modular fence system consists of universal fit fence panels, you will have to drill a few holes in the bottom tube of a few of the panels.

Below we have provided a diagram showing the configuration of the fence panels in the kit we are working with:



For the project we are working through in these instructions, the 34" door panels will be hinged and the hinges will be positioned on the bow end (front end) of each panel. We'll cover installation of the door panels later on.

Using the 5/16"x3 1/4" hex bolts, washers (2 per bolt), and the standard 5/16" steel lock nuts from your kit (standard steel nuts are used for temporary fastening), loosely bolt the rearmost panels together. This will require a total of 4 bolt assemblies. As shown in the first diagram, one of the 28" wide straight fence panels bolts between a pair of the corner panels. You'll note that the ends of the corner fence panels are different lengths. For 8' boat, the longer end of the fence will point inward on the boat. You'll also note that the corner fence panels are mirror images of each other. Place the assembly at the rear of the boat so that it sits 1.5 away from the stern (rear) end of the frame/decking as shown below.

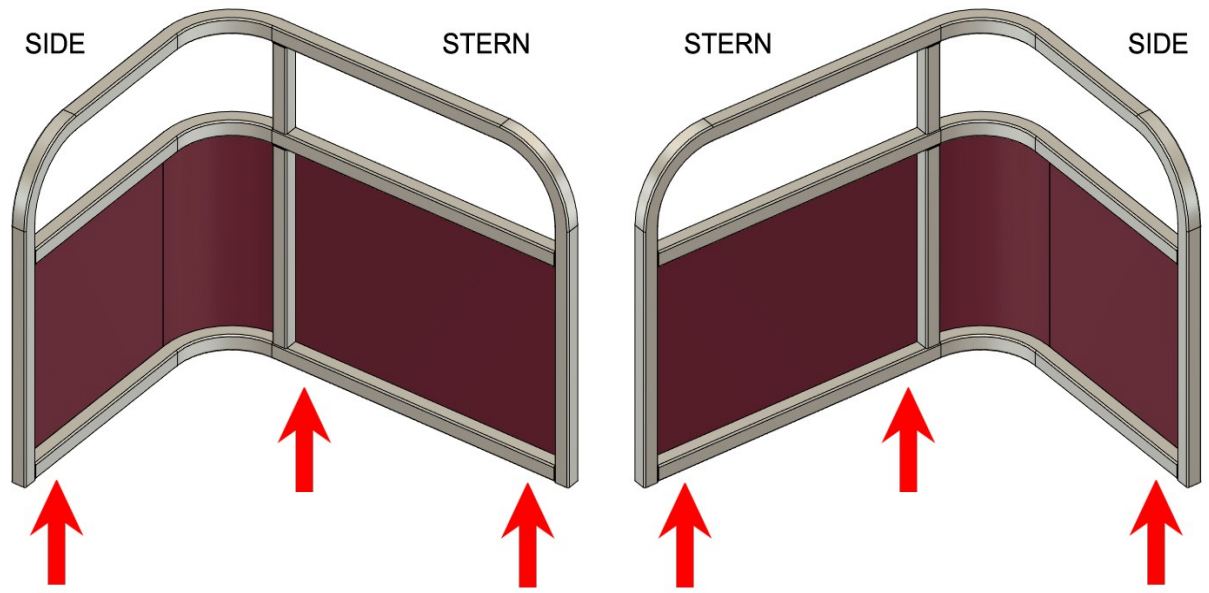




Center the fence assembly from left to right on your boat's deck.

Each fence panel (other than the door panels) needs to be bolted to the boat deck with 2-4 bolts. Each corner panel requires 3 or 4 bolts, each short panel requires 2 bolts (20" - 34" panels), and each long panel requires 3 or 4 bolts (3 bolts for 48", 4 bolts for 72" and 92" panels"). This ensures that each panel is stable and sturdy when installation is complete.

For the 8'x15' boat fence system we are working through here, the 28" wide straight fence panel will come with have two bolt holes in the base, and the corner pieces will have two as well. You will have to drill an additional bolt holes in each panel to fasten through a hat channel crossmember on your frame. For the corner panels, be sure that you have holes in the positions pointed out below. As there is minimal room for an electric drill to drill from the top of the base tube, due to the sheet metal on each panel, you may have to mark the location (from the outside of the boat) above crossmembers and drill from the bottom of the fence panel. Some low-profile drills will fit and allow you to drill from the top of the bottom tube of the fence (typically small pneumatic right-angle drills). We recommend drilling any required bolt holes with a 3/8" drill bit to allow for placement adjustment.

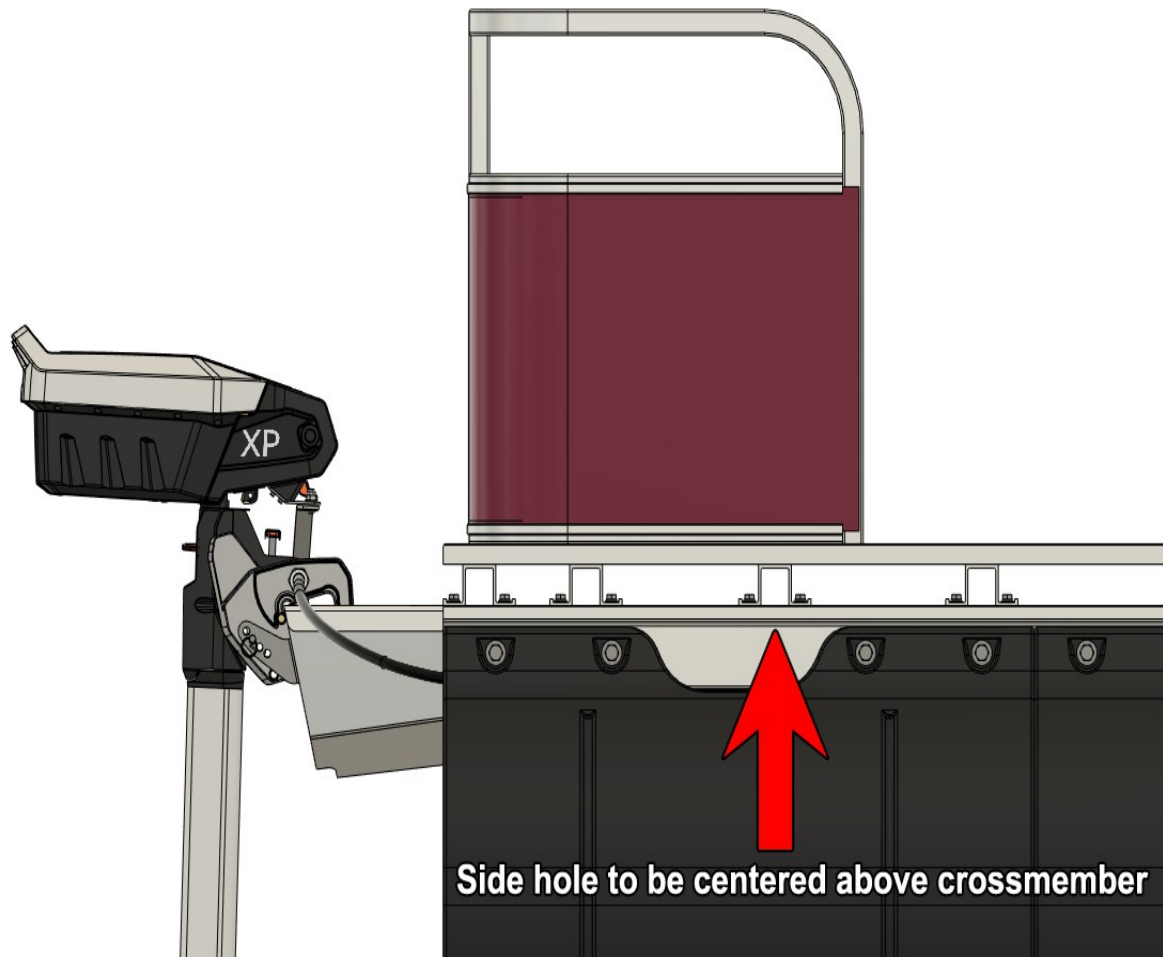


Centered above crossmember.

Locations of required bolt holes

Centered above crossmember.

-We recommend any new bolt holes be centered at least 1.5" away from posts.
-Existing holes not shown



With the required bolt holes drilled in the rear fence panels, reposition your fence assembly on the deck as you did before. Be sure to double-check your placement measurements. Now drill straight down through the deck and top of the crossmember below with your 3/8" drill bit. If your drill is too large to fit with the fence in place, use a transfer punch to place the hole locations on your deck. With this, you insert the transfer punch through the bolt hole on the fence and give it a tap with a hammer. This creates a divot in the deck surface and marks where to drill. If you are doing this, mark all the hole locations (all three panels on your boat), slide the fence assembly aside, and drill straight down through the boat deck.

NOTE:

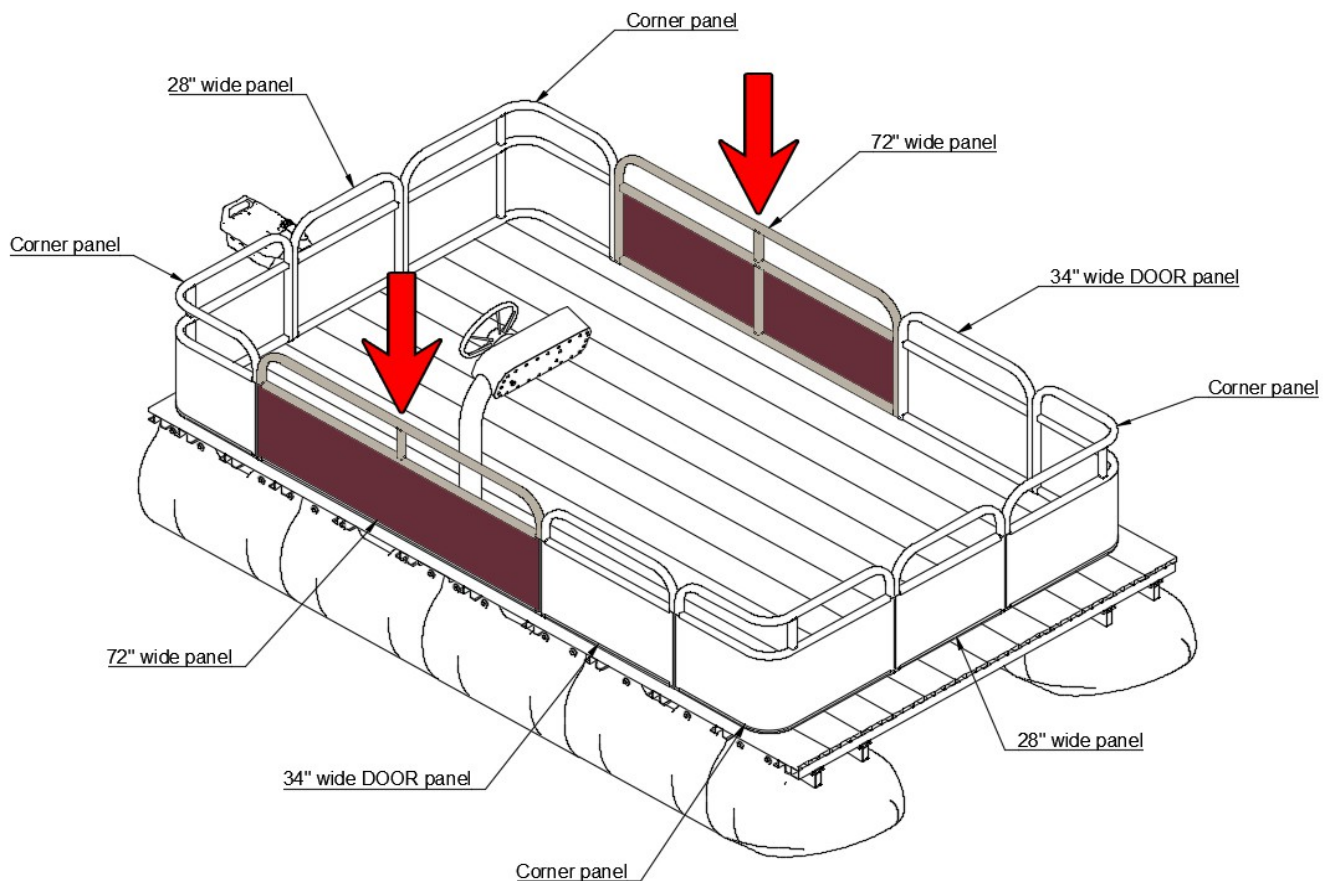
We prefer to use a plastic hammer when using a transfer punch for this operation to avoid scratching the sheet metal on the fence panels. If you do not have a plastic hammer, we recommend putting some electrical tape over your steel hammer to protect the paint on the sheet metal from scratches.



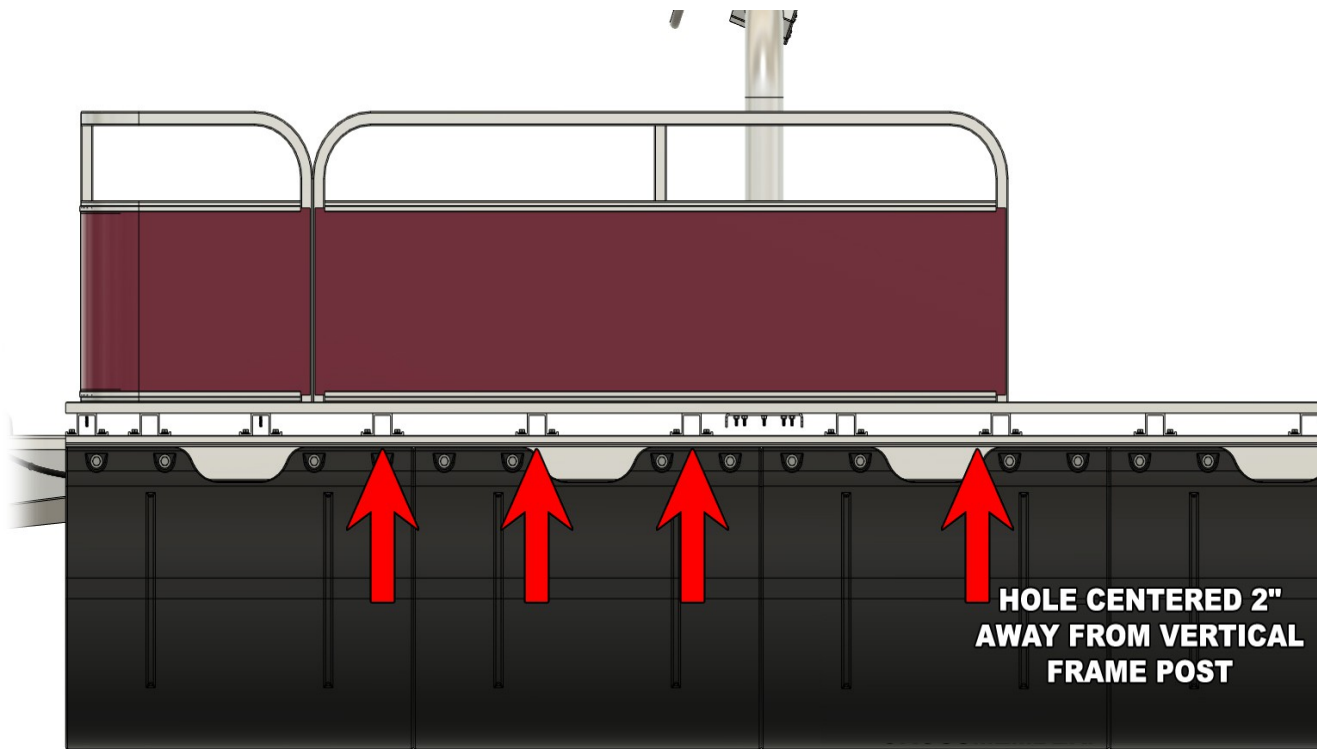
With the bolt holes drilled in the deck, reposition your rear fence assembly as necessary, and use your hammer and tap a 5/16"x 3 1/2" hex bolt with flat washer into each of the holes in the rear fence assembly. Do not yet install nuts under the deck (spacers are installed between the fence panels and the deck later on). Your rear fence assembly is now "pinned" in position with the bolts. **DO NOT INSTALL THE NUTS ON THE 3 1/2" BOLTS YET.**



Select the fence panels that are ahead of your rear fence panels. For the fence system that we're installing on our 8'x15' boat, we are selecting the 72" long straight fence panels.



Use the 5/16" x 3 1/4" bolts, 2 washers, and the standard steel nuts (not the lock nuts) from your hardware kit to bolt the 72" panels to the rear corners as shown above. With the fence panels in place, mark and drill 4 holes in the base tube of each fence panel so that the holes line up with the frame's crossmembers when possible. In the scenario of our 8'x15' boat, the frontmost bolt holes will not line up with a crossmember, so it is to be drilled so that it is centered 2" away from the front vertical tube of either fence panel as shown below.

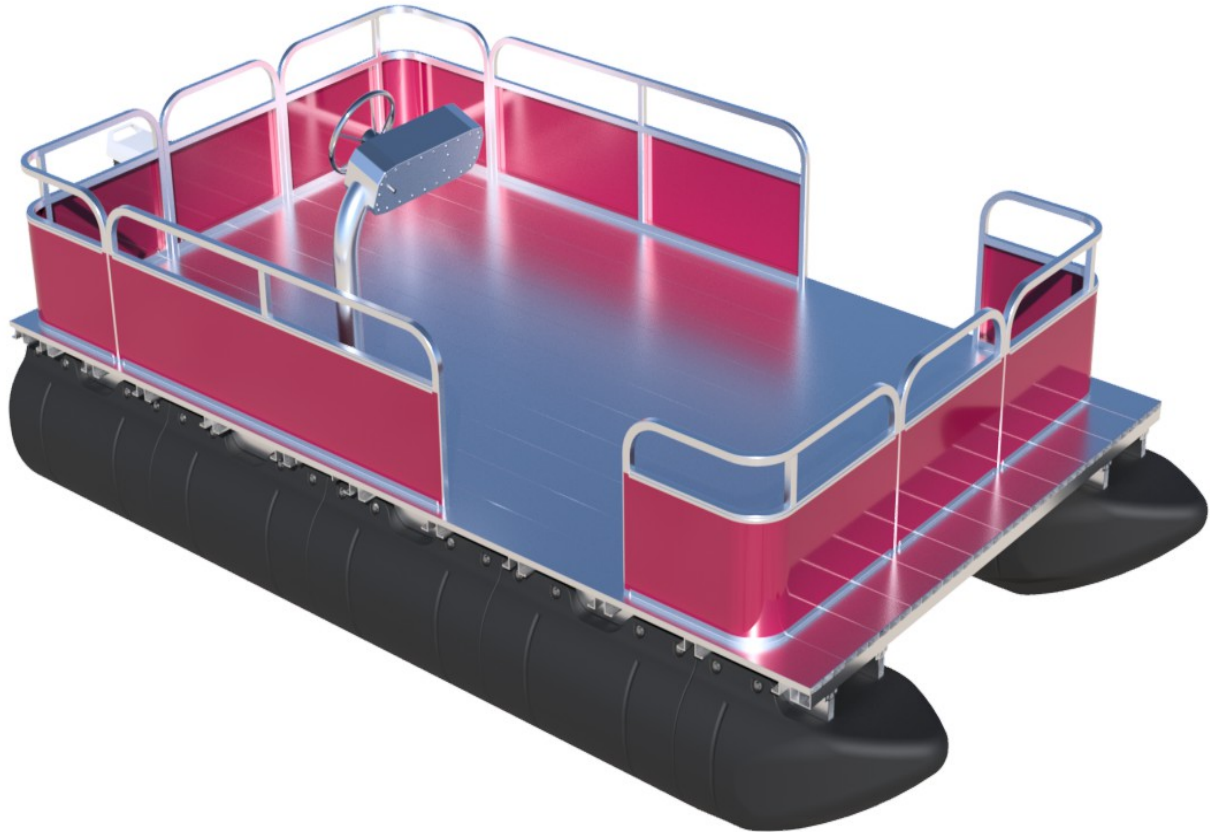


As before, with the fence panels in place (reinstall with the bolts, washers, and standard nuts if removed), drill through the holes you just drilled in the fence panel and through the deck of the boat. Be sure to go through the top of the crossmembers where the holes line up. Use your transfer punch if needed, just as before.

With the 72" wide fence panels in place, "pin" the panels in position with your 5/16" x 3 1/2" bolts with washers, just as with the rear fence. **DO NOT INSTALL THE NUTS ON THE 3 1/2" BOLTS YET.**

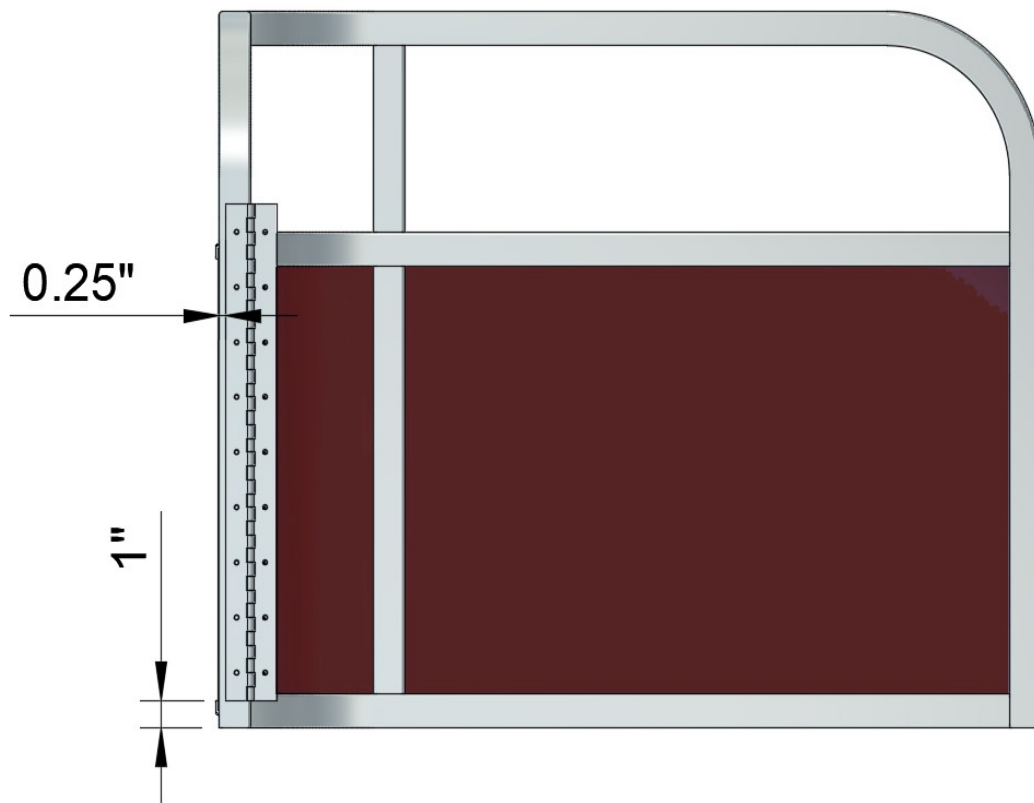
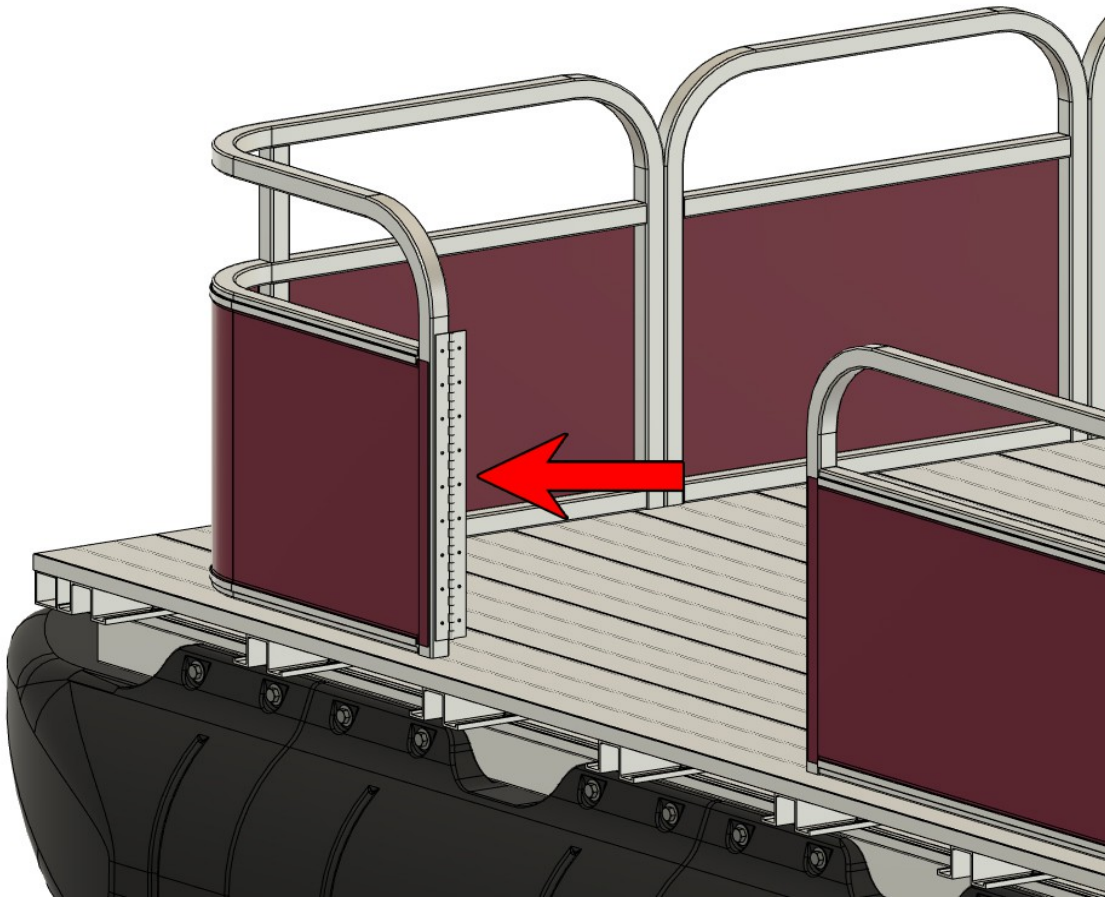


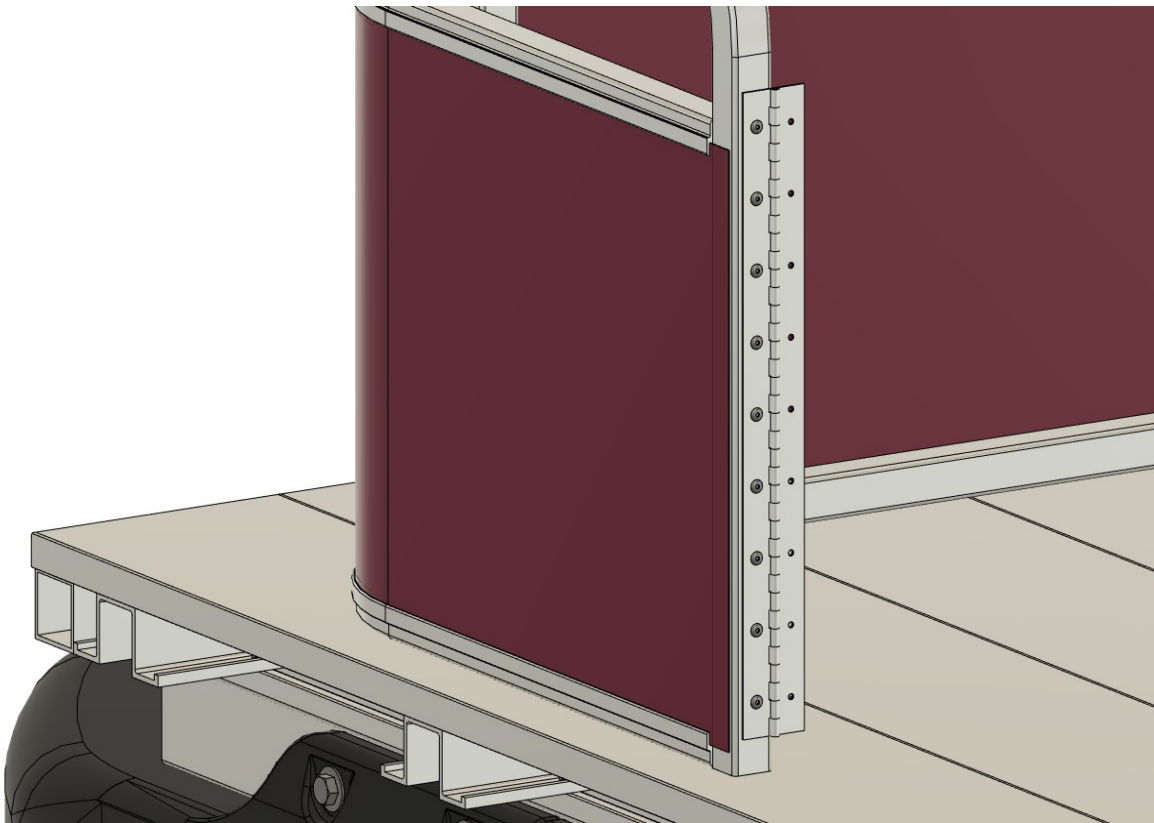
It's now time to assemble the front portion of the fence. Start off by bolting the front two corners to the front central straight fence panel together. For the 8'x15' boat we're working on, the front fence panel is another 28" panel, just like in the rear. Use the 5/16" x 3 1/4" bolts, washers, and standard steel nuts to temporarily bolt the panels together. Slide the assembly to the approximate location of its final location.



The next step is to install the door panel hinges. The hinges that are include with your fence kit are 18” long and 2” wide when laid flat. The hinges are to be installed so that the door panels open inward. **Pontoon boat doors must always open inward in case someone leans on the door and a latch is left disengaged. This prevents someone from falling off the boat if they lean on a door that is unlatched.**

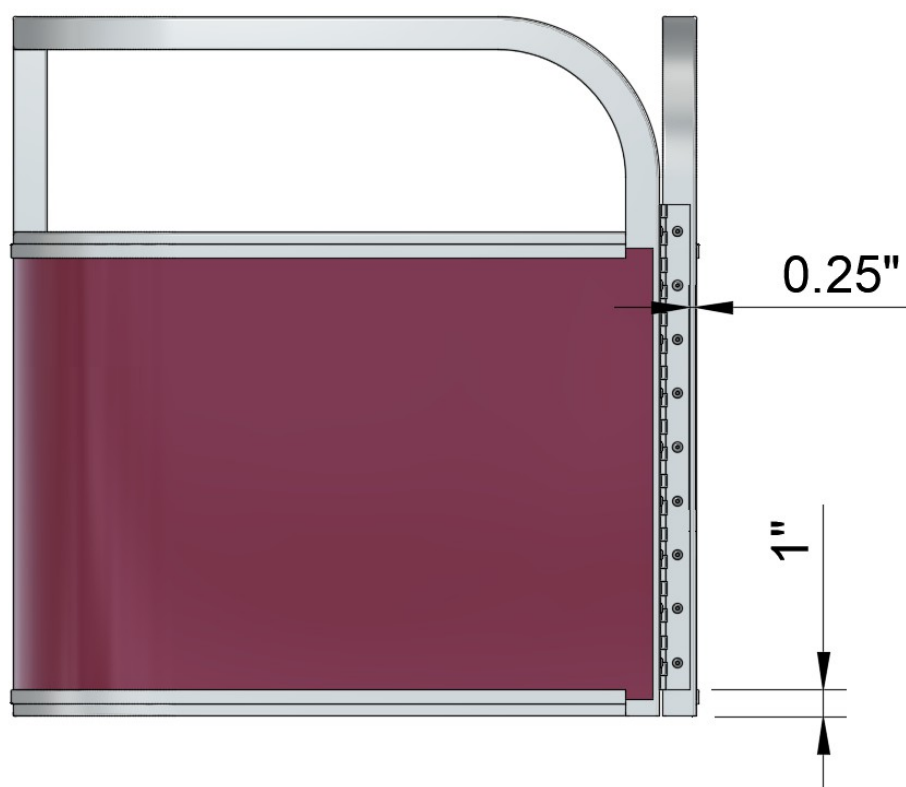
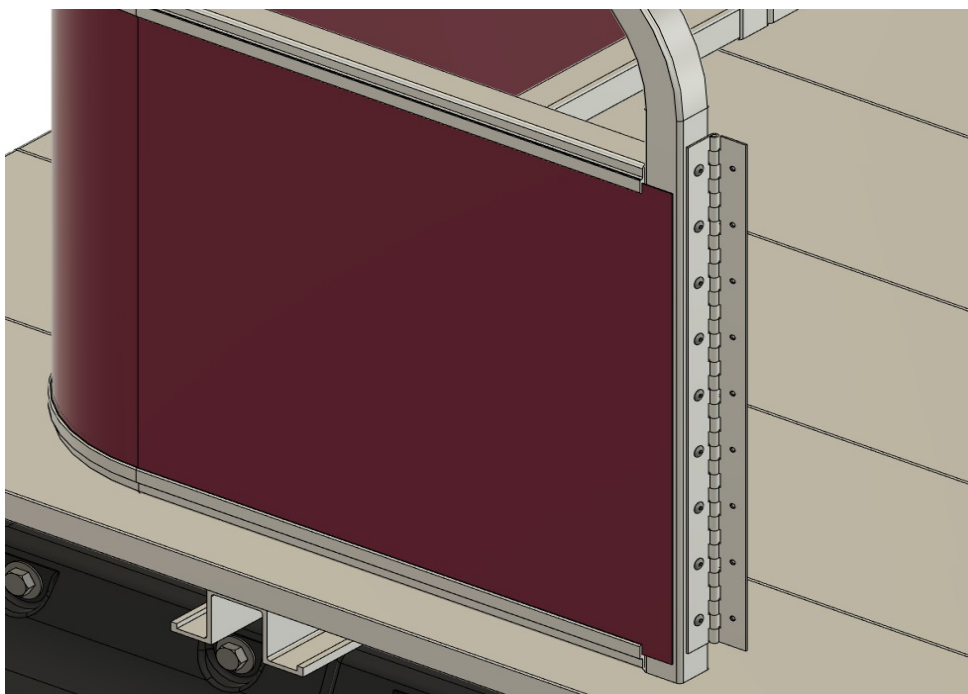
When mounting each hinge, place it 1” from the bottom of the fence panel and 1/4” from from the outer side of the vertical fence panel post. When we do this at Tiny Pontoon Boats, we use a sliding combination square to line up the hinge. Hold the hinge in place with a couple C-clamps or F-clamps (we like the plastic pistol-grip units), carefully make any required placement adjustments, and then drill one upper hole (through an existing hinge rivet hole – requires 11 gauge drill bit) and install one of the included 3/16” diameter stainless rivets from your hardware kit. This fixes the position of the top of the hinge, and you can then easily adjust the placement of the bottom of the hinge. Drill and install rivets in every hinge mounting hole on the portion of the hinge you're attaching to the soon-to-be stationary fence panel.





The next step is to rivet on the door panel. This can be a little tricky as the door panel has to be held in place against the other side of the door hinge and it's tough to clamp it in place for drilling.

Fold the hinge so that it's at a 90 degree angle and hold the door panel against it as shown below. For our scenario, we are using the remaining 34" straight fence panels as our door panels. Clamp the top part of the hinge in place, and drill through the hole in the hinge leaf that is highest and install a rivet. Adjust the hinge/door placement as necessary and drill and install the rest of the rivets. We recommend the lowest rivet be installed right after the top rivet.

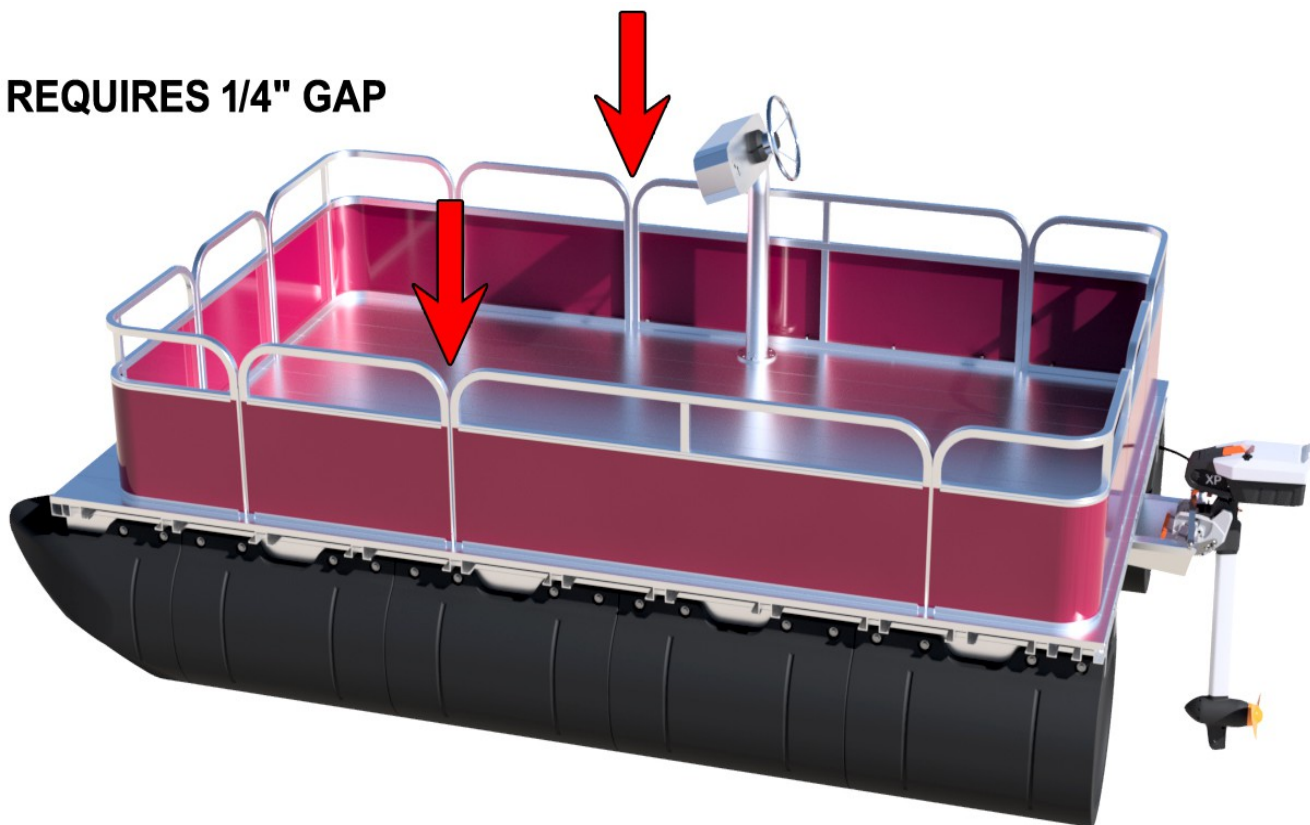


As the 8'x15' boat we're working on in this set of instructions has two door panels, follow the same procedure as with the last door, and install the remaining hinge and door panel on the other side of the boat.

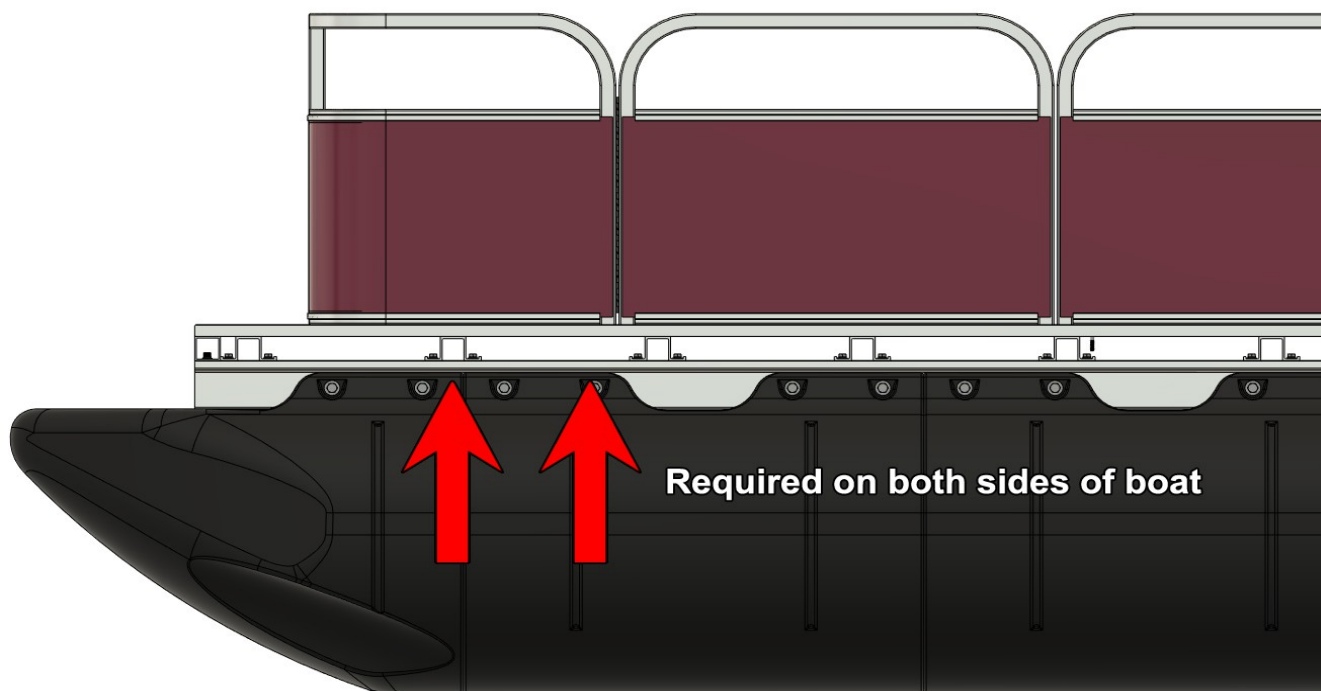


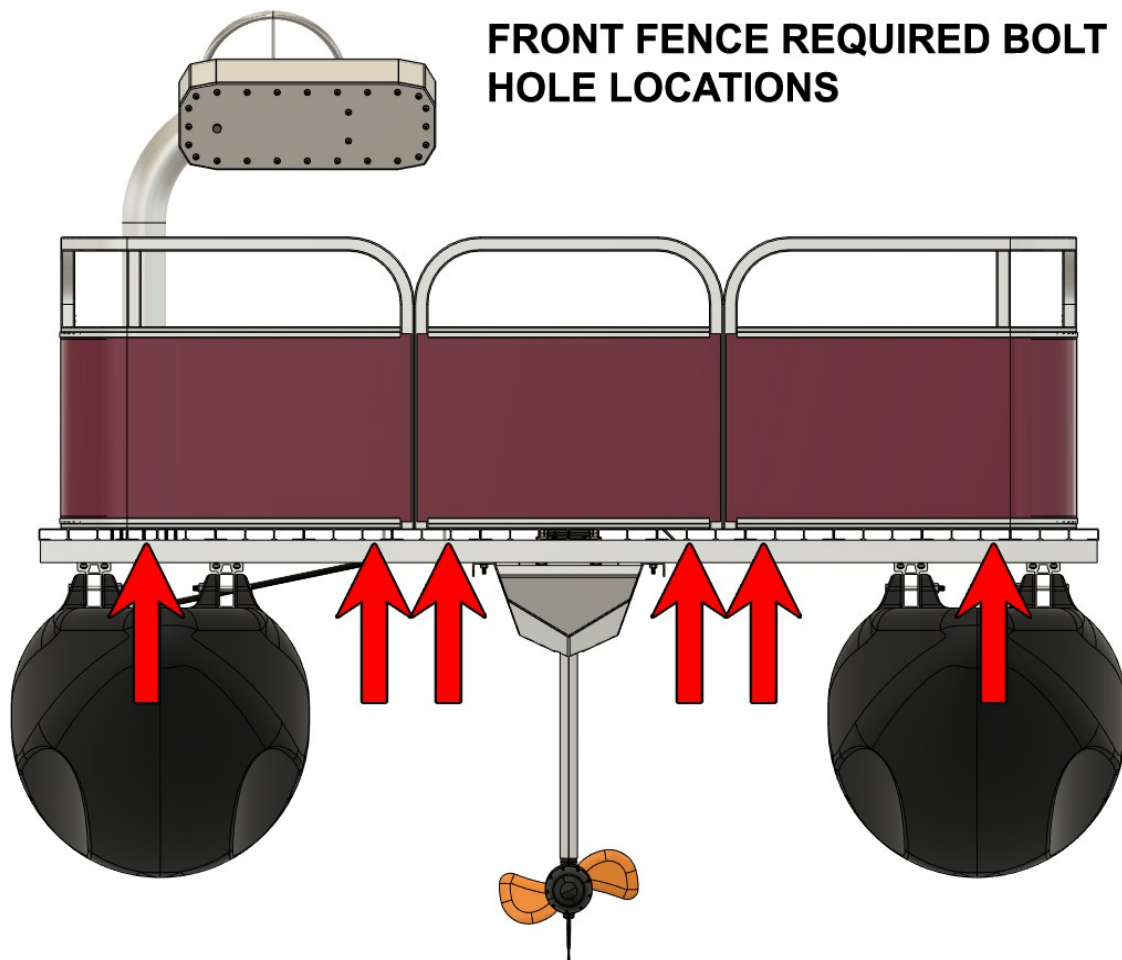
With both doors attached to the front fence assembly, it's time to tackle the final placement. Swing the doors to their closed position and place the whole front fence assembly so that the doors have a 1/4" gap between them and the rear fence assembly. When doing this at Tiny Pontoon Boats, we use scrap pieces of 1/4" plastic as a spacers, and use a "quick-clamps" to hold the two fence assemblies together for the next step. This ensures that the door gaps are just right.

REQUIRES 1/4" GAP



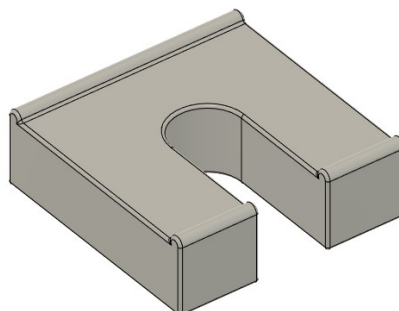
The next step is to locate and drill deck mounting holes for the front fence assembly. This portion of the fence requires a total of 10 bolts to fasten it to the deck. The front corner panels require a total of 4 bolts and the central 28" long straight panel requires 2 bolts. Below we have pointed out the required bolt hole locations, and many of the holes already exist in the fence panels. In this scenario, you only have to drill four new mounting holes in the front fence assembly.



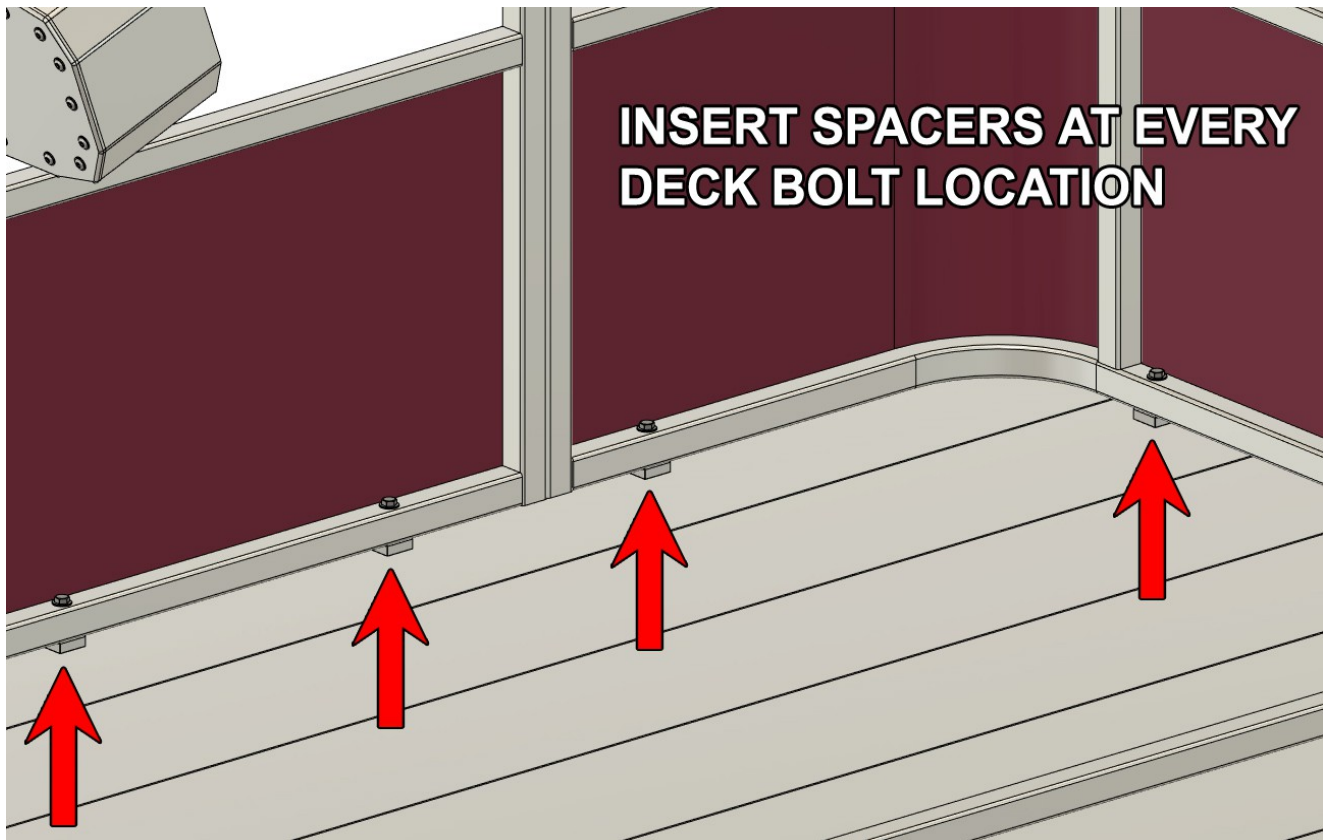


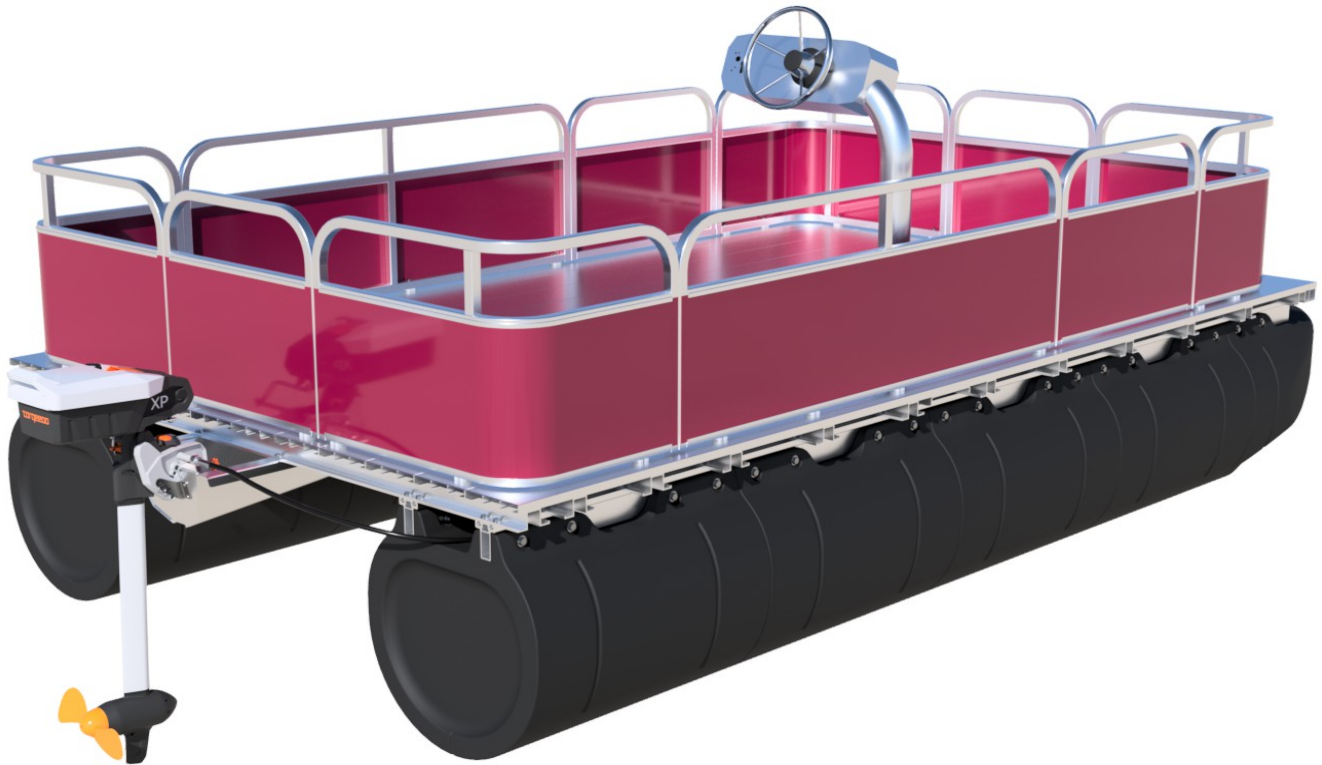
As with the prior fence panels, drill the required fence panel holes and then transfer them to the deck of the boat. With our 8'x15' boat fence assembly, you will only be drilling through one crossmember for these bolt holes (drilled through twice – once for each side of the boat). With all your front fence assembly panels in place, “pin” the fence panels in position with your 5/16” x 3 1/2” bolts with washers, just as you did with the prior fence panels. **DO NOT INSTALL THE NUTS ON THE 3/12” BOLTS YET.**

With all your fence panels “pinned” to the deck of your boat, we're getting close to completion of the project. The next step is to install the plastic spacers that go between the fence and the deck of the boat. The spacers included with your kit are 3/8” thick and allow water to drain off your boat easily. The spacers are “U” shaped, so installation will be easy.

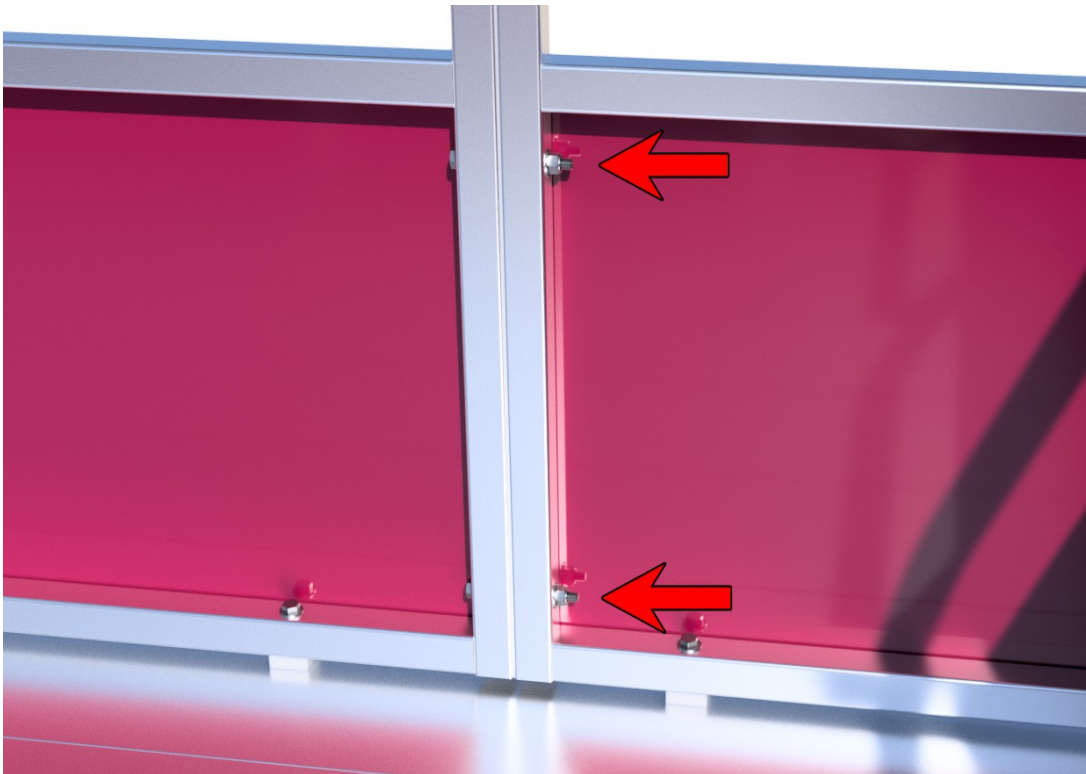


At every location that the fence bolts to the deck, lift the fence assembly a little bit and slide a fence spacer around the bolt and between the fence panel and the deck of the boat. Do this from inside the boat fence so that the two legs of each spacer face outward.



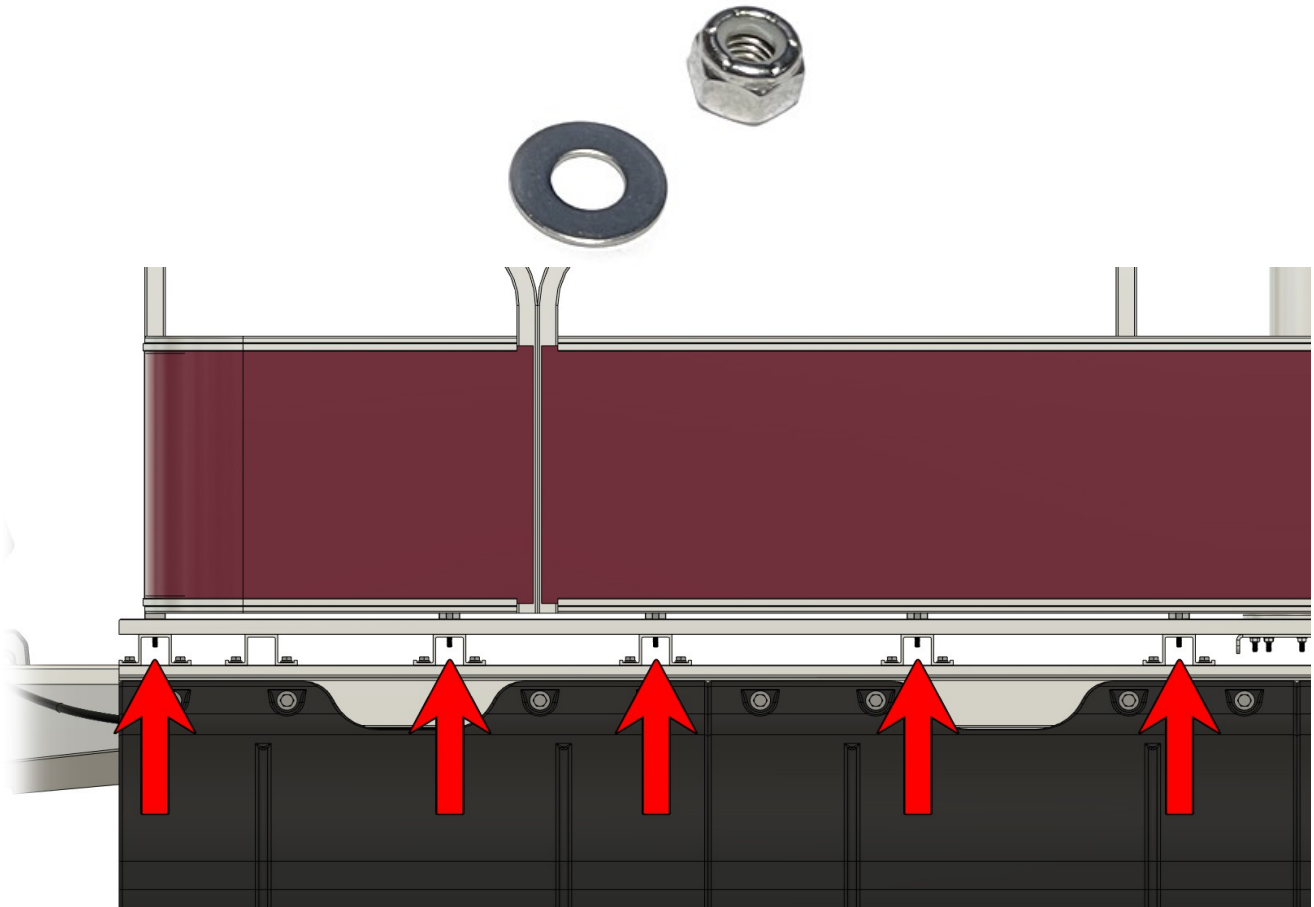


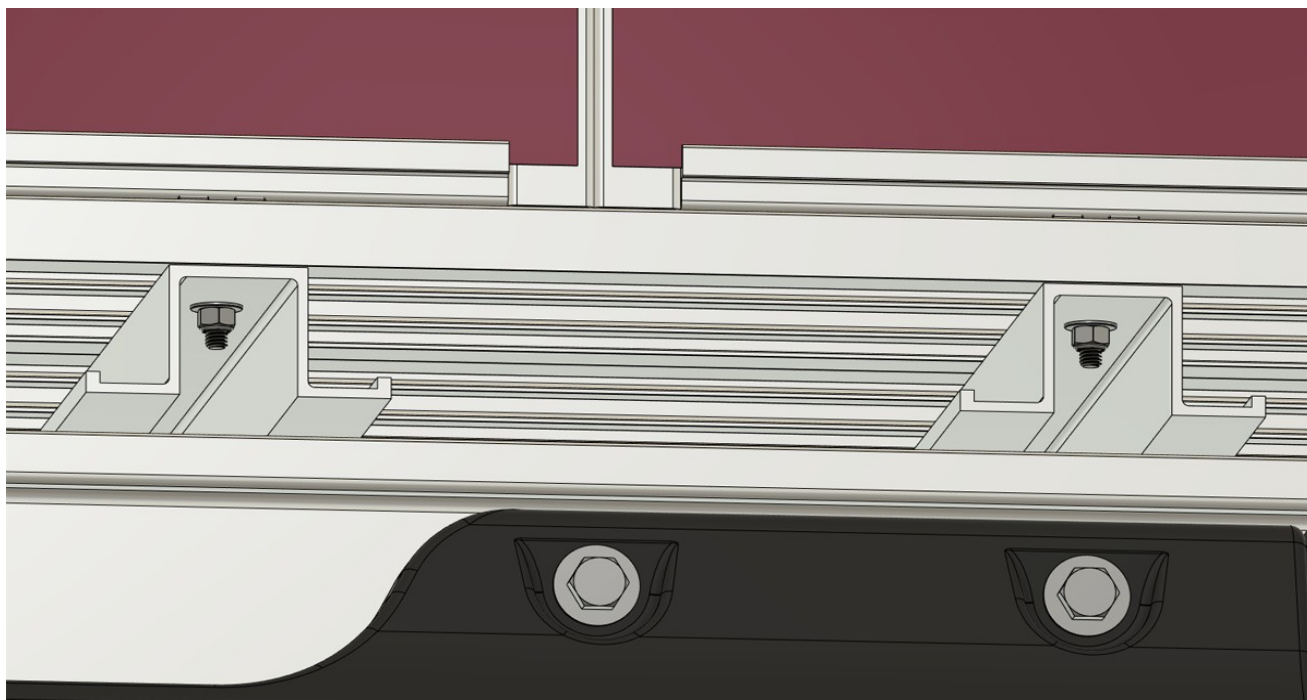
You are now onto the last few steps. First off, remove any of the standard 5/16" steel nuts used to temporarily hold fence panels together and install the stainless 5/16" lock nuts from your hardware kit. Fully tighten all the nuts and bolts holding fence panels together.



Now to complete the task of fastening the fence system to the deck of the boat. Install a 5/16" lock nut with washer onto each bolt that goes through the deck **AND** goes through a hat channel crossmember.

DO NOT YET INSTALL NUTS ON BOLTS THAT DO NOT GO THROUGH A FRAME CROSSMEMBER.

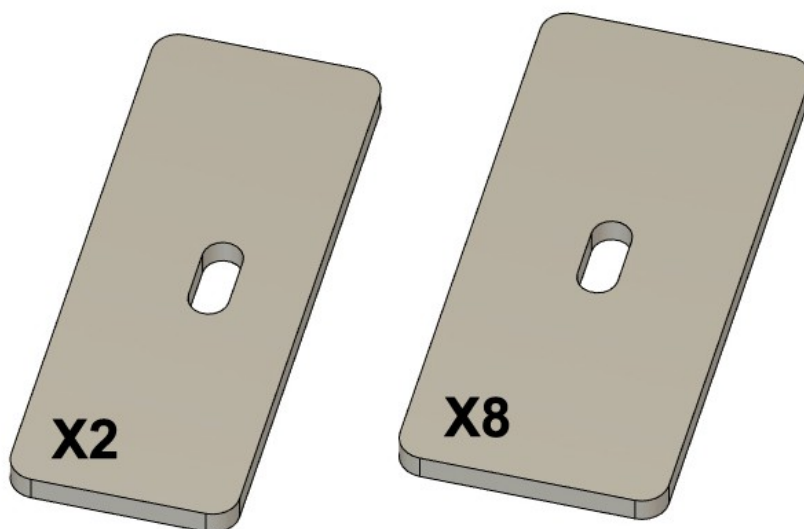




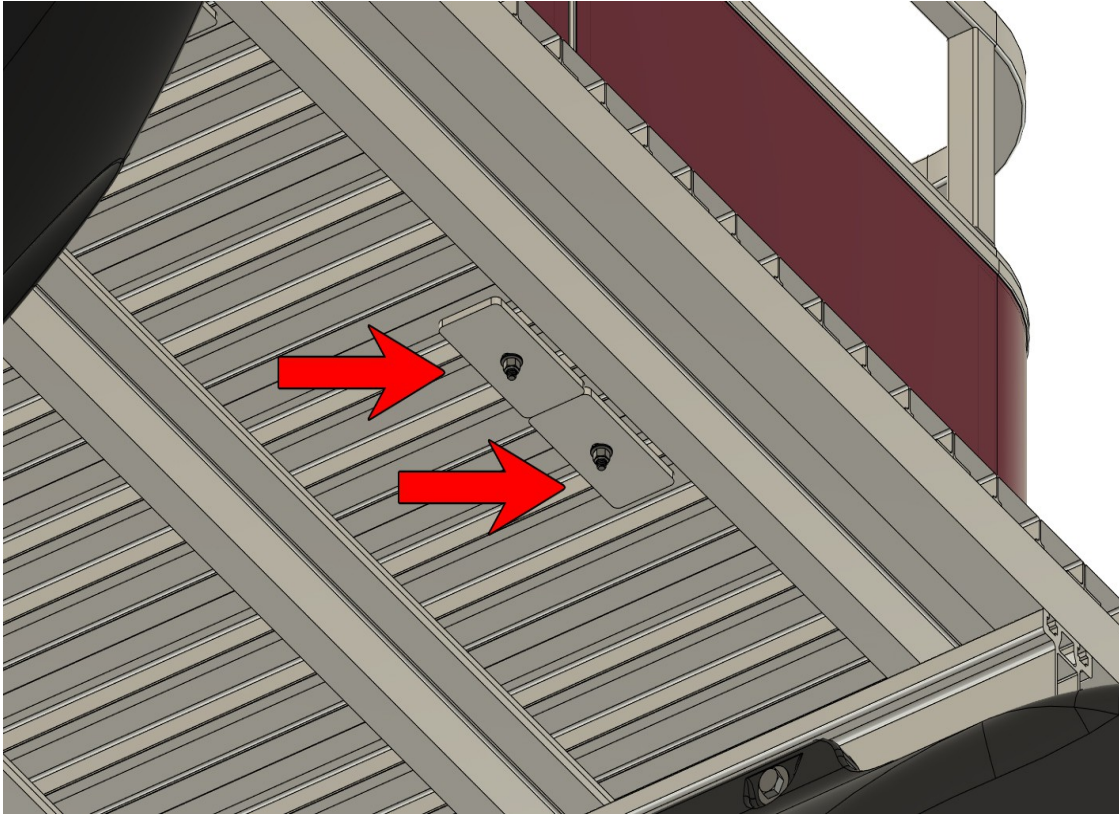
Next, locate the under-deck backing plates from your hardware kit. These are 1/4" thick aluminum plates that are tailor-fit to each individual modular fence package and are made to go over the remaining deck bolts that DO NOT go through hat channel crossmembers. In the case of the 8'x15' boat we are working on here, there are a total of 10 aluminum plates and 2 different designs (qty. 8 of a 2.5" wide plate with centered hole and qty. 2 of a 2.125" wide plate with offset hole). These plates act as large washers to spread the load of the bolt under the deck of your boat.

1/4" THICK UNDER-DECK BACKING PLATES INCLUDED WITH 8'X15' BOAT MODULAR FENCE SYTEM IN THESE INSTRUCTIONS

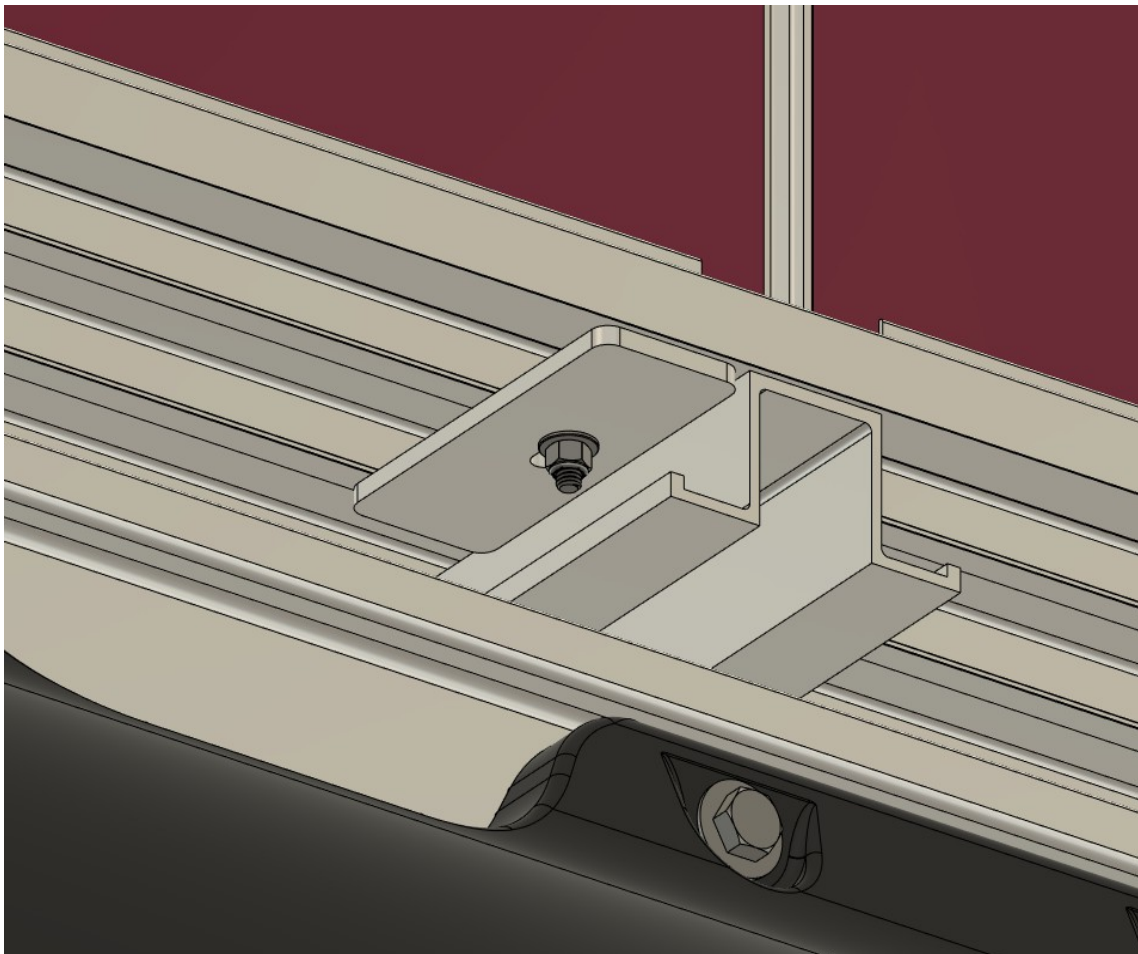
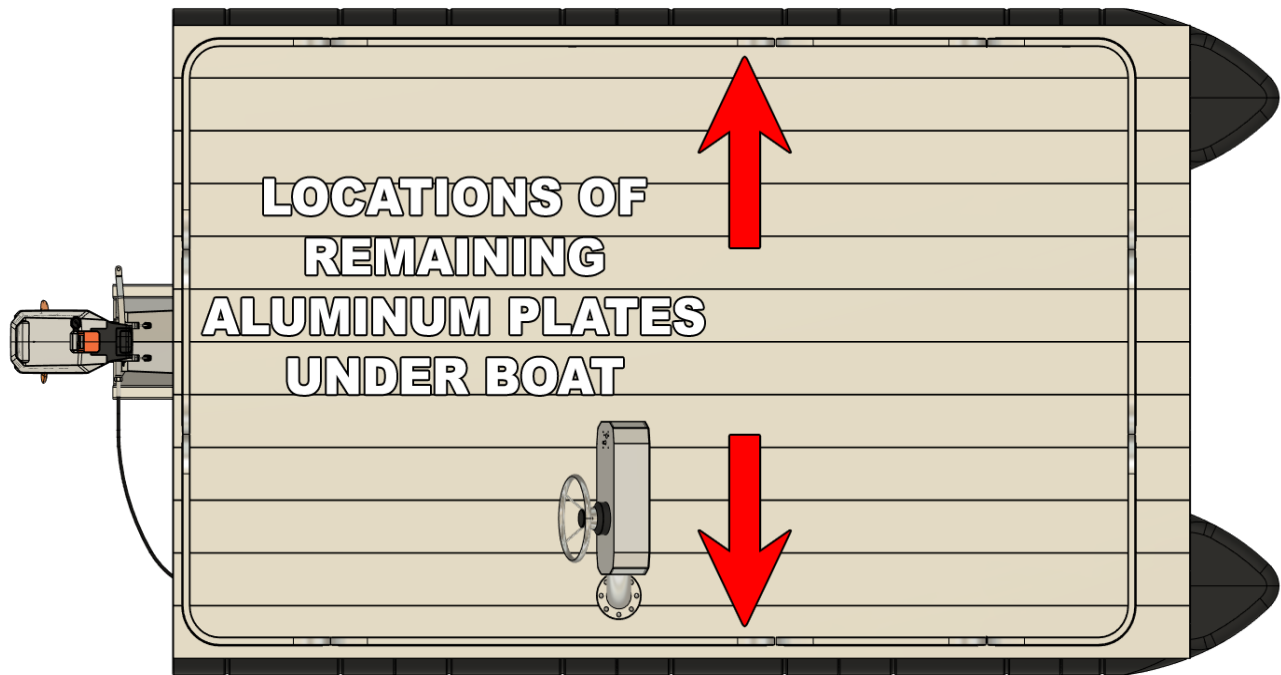
-PARTS WILL VARY FOR EACH MODULAR FENCE SYSTEM-



Install the 2.5" wide aluminum backer plates with 5/16" washers and lock nuts on the remaining bolts that protrude through the deck as shown below *at the locations shown below*. There are a total of 8 bolts you'll be utilizing with the 2.5" wide plates on the 8'x15' boat kit in these instructions.



Install the two 2.125" wide plates with 5/16" flat washers and lock nuts on the remaining through-deck bolts. The plates have offset holes and install at the locations pointed out below.



Double-check that every bolt fastening the fence to the deck has a nut installed. Your fence system is now fully bolted to your boat! Installation of the door latches is all that remains.

The fence system we've been installing in this set of instructions has two door panels, and therefore includes two door latches. Here's what the latches look like:



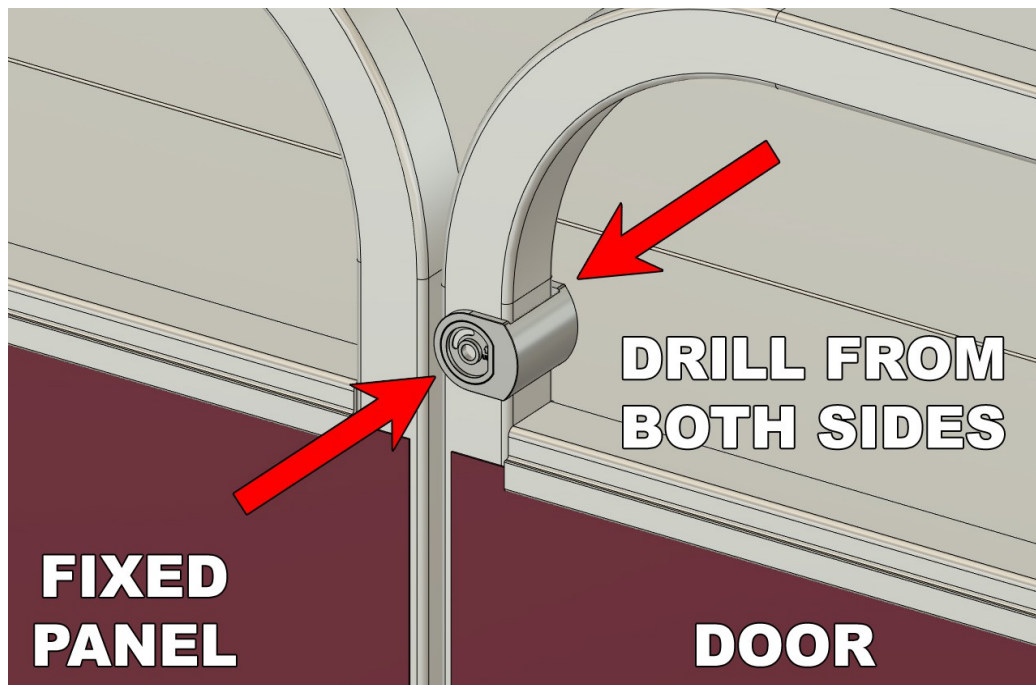
**LEVER GOES ON
OUTSIDE OF FENCE**

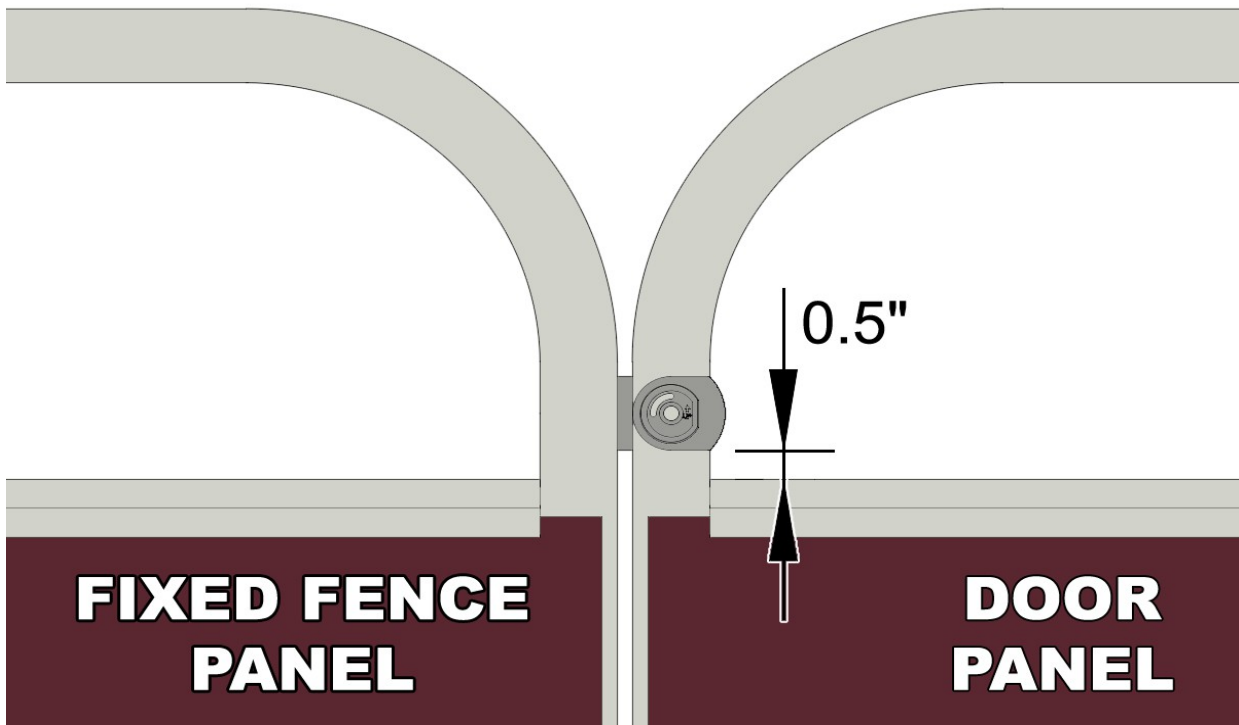
The included latches are made to be installed with the thumb lever on the outside of the fence. This places the built-in door stop on the inside of the fence. The latches come with a small disk that dictates which way the lever can rotate. The lever is intended to pivot from horizontal to straight-up. The lever should never be able to point straight down. This disk has a flat edge that allows it to be installed in two ways. The disk has an arrow and the word “UP” on it. When installing the latch assembly, make sure that the disk is placed with the arrow pointing up as shown below.



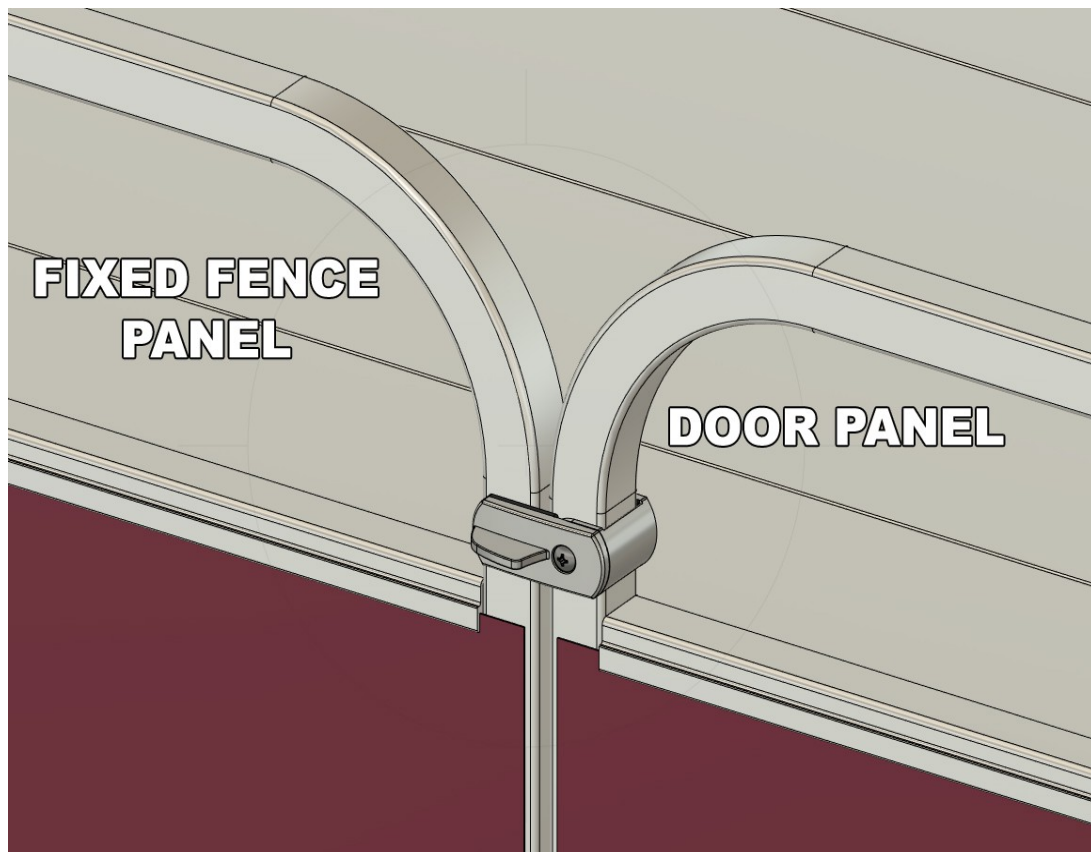
The latch assembly bolts to the door panel on your boat (never to a fixed fence panel) and the lever goes on the outside of the boat. Hold or clamp the central U-shaped portion of the latch onto the door so that it sits against the vertical tube of the door panel (opposite the hinged side of the door) and is 1/2" above the top of the mid horizontal tube, as shown below. The disk will need to be inserted into the D-shaped hole for the next step.

Using your power drill and a 1/4" drill bit, use the latch mechanism as a guide and drill a 1/4" hole through either side of the fence post. **Drill through one side of the vertical tube and then drill from the other side of the tube. Do not attempt to drill all the way through (both sides of the tube) at once. You will NOT get a straight hole if you do this.**





With your bolt holes in place, bolt on the lever with the included screw and nut. Fully tighten the bolt.



Install the latch mechanism on the other side of the boat. Follow the same steps as before. With both latches installed, your fence system is now fully installed!



