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MasterCraft Additional Ballast

OVERWHELMED?

Don't let this project scare you. The basic principle is to splice or "T" into the existing pump hoses leading to the factory ballast tanks and using them to fill and drain the additional fat sacs. The same principle applies to venting the fat sacs. So lets get started!

NOTE: You do not have to drill any holes in the hull of your boat.

NOTE: Variations from this general set of instructions may be used to add additional fat sacs to various boats from all manufacturers.

Please refer to Fig. 1 for the corresponding sac location

Required tools & materials:

- Hose Cutter (knife/scissors will work)
- Adjustable Pliers
- Slotted Screw Driver
- Heat Gun or Blow Dryer
- Measuring Tape
- Power Drill
- 1/4" Hole Saw Bit
- 3/4" Hole Saw Bit

Included Tools & Materials:

- 5/32 Allen Key
- 3 Directional Valves with all fittings & sockets (See Fig.2)
- 3 Stop Flow T-Assemblies (See Fig.3)
- 50 ft. of 1" reinforced hose
- 5 Worm Drive Hose Clamps (may have extra)
- 4 Custom Fat Sacs with all fittings & sockets
- 3 Drill Templates
- Plastic hose clamps (may have extra)

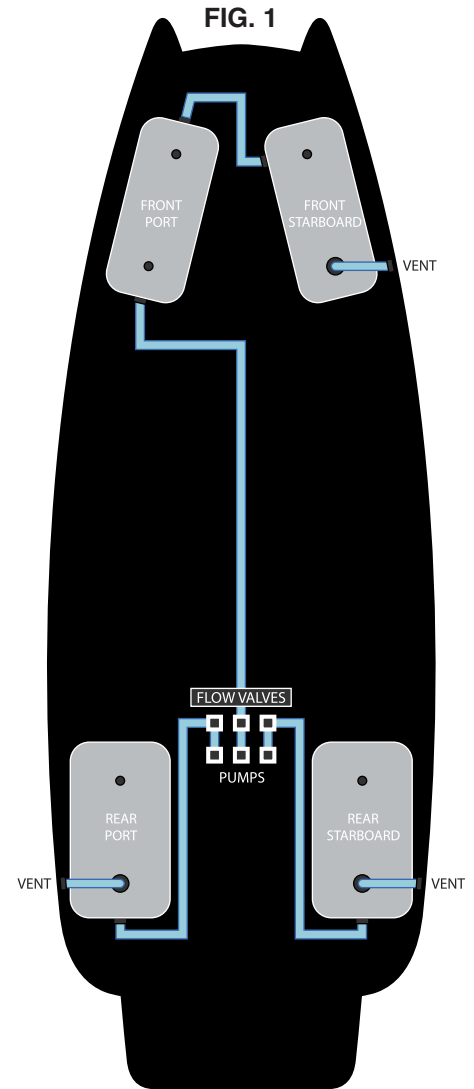


FIG. 2



FIG. 3



A. Planning:

1. The two main components of this system are the plumbing (Directional Valve, hose, Stop Flow T-Assembly), and the ballast bags themselves. Please take a moment to familiarize yourself with the boat you will be installing the system in, keeping in mind the above components and where they will be located. Please be sure to read all instructions to assist you; use your own decision making skills when installing the system, and do not hesitate to contact us if you have any questions at all during the installation process.

B. Install Directional Valves:

2. Each ballast bag is labeled with its location (i.e. Rear Starboard, Rear Port). Place each bag in their proper location. (See Fig.1)

3. Remove the rear bulkhead and determine where you would like to install the directional valves. The directional valves will be mounted on the rear bulkhead. The location can be on either side of the rear bulkhead. To ensure there are no obstructions with the engine keep the location towards the top and off to either side. (See Fig. 4)

4. Once you figure out your location cut out the drill templates. Tape each template in their proper location. Make sure there are no obstructions with the engine. Drill a 3/4" hole through the larger hole on the template and (2) 1/4" holes through the smaller holes on the template. Unscrew the set screw from the bottom of the handle. Then unscrew the handle bolt to remove the handle and face plate from the directional valve (See Fig. 5). Make sure you mark the direction the handle is facing to ensure proper valve function. (See Fig. 5) Repeat these steps for more than 1 directional valve.

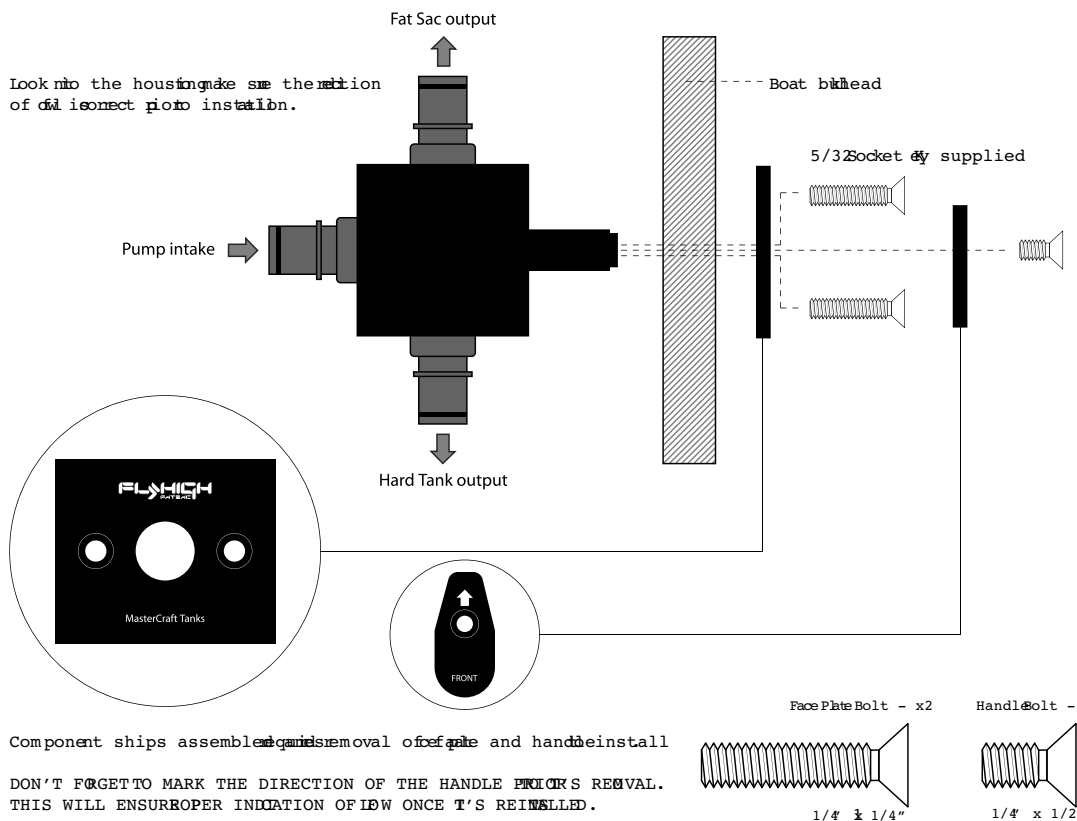
5. Now that the holes are drilled, install your directional valves to the bulkhead (See Fig. 5)

IMPORTANT: THE SELECTION HANDLE ON THE FLOW VALVES ONLY NEEDS TO BE TURNED UNTIL IT STOPS. IT WILL BE FULLY POSITIONED AT THIS POINT AND THERE IS NO NEED TO TURN IT MORE.

FIG. 4



FIG. 5



C. Plumb The System:

6. Locate your pumps at the rear of the boat. You will see three pumps for filling/draining your hard tanks. Make sure you are aware of which hard tank and fat sac(s) each pump is connected to for filling and draining; the left pump fills/ drains your rear starboard hard tank, the center pump fills/drains your center hard tank, and the right pump fills/drains your rear port hard tank. You will be plumbing into this hard tank system. Each pump will have an intake and output (See Fig. 6). Locate the output hose on the rear starboard pump. Remove the output hose from the pump by loosening the hose clamp (See Fig. 7). Attach this hose to your rear starboard directional valve hard tank output (See Fig. 5). You will need to remove the 1" elbow socket from the rear starboard directional valve and insert it into the output hose. Use a heat gun or blow dryer to soften the hose for easier insertion (See Fig. 8).

7. Secure hose with a plastic hose clamp (See Fig. 9).

8. Measure the distance from your rear starboard directional valve to the pump. (See Fig. 5) Cut a piece of hose to this distance, (Note: we suggest allowing yourself at least 8 inches of extra hose). Attach one end of the hose to your pump intake starboard directional valve (See Fig. 5). You will need to remove the 1" elbow socket from the directional valve and insert it into the hose. Use a heat gun or blow dryer to soften the hose for easier insertion (See Fig. 8). Secure with plastic hose clamp (See Fig. 9). Attach the other end of the hose to pump output, secure with a worm drive hose clamp (See Fig. 7). Measure the distance from your rear starboard directional valve to the fill/drain valve on your rear starboard ballast bag (See Fig. 1). Cut hose to this distance and attach to the fat sac output on the rear starboard directional valve (See Fig. 5). You will need to remove the 1" elbow socket from the directional valve and insert it into the hose. Use a heat gun or blow dryer to soften the hose for easier insertion (See Fig. 8). Secure it with a plastic hose clamp (See Fig. 9). Attach the other end to the fill/drain valve on the ballast bag using the same techniques as above.

9. The last step in this process is to install the Stop Flow T-Assembly for proper venting. Find the rear starboard hard tank vent and measure 12" down the hose from the thru-hull. Make a cut at this distance and connect your Stop Flow T-Assembly in between the hose (See Fig. 10, Fig. 11, & Fig. 12).

10. Measure the hose from the barbed end of the Stop Flow T-Assembly to the vent on your rear starboard ballast bag, cut a piece of hose to this distance. Attach the hose to the barbed end of the Stop Flow T-Assembly and secure it with a plastic hose clamp (See Fig. 12). Attach the other end to your vent on the rear starboard ballast bag. You will need to remove the 1" elbow socket from the bag and insert it into the hose. Use a heat gun or blow dryer to soften the hose for easier insertion (See Fig. 8). Secure it with a plastic hose clamp (See Fig. 9).

11. Repeat these steps for the rear port and front installation.

12. The front installation is primarily the same; however, you only vent on the front starboard side. (Note: the front port ballast bag over-flows into the front starboard ballast bag - See Fig. 1 and 13).

FIG. 6

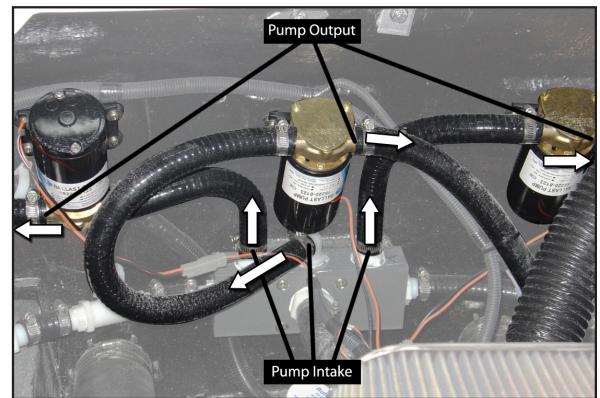


FIG. 7

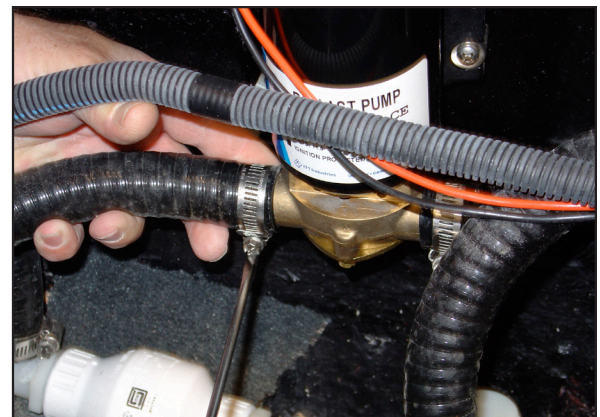


FIG. 8



FIG. 9

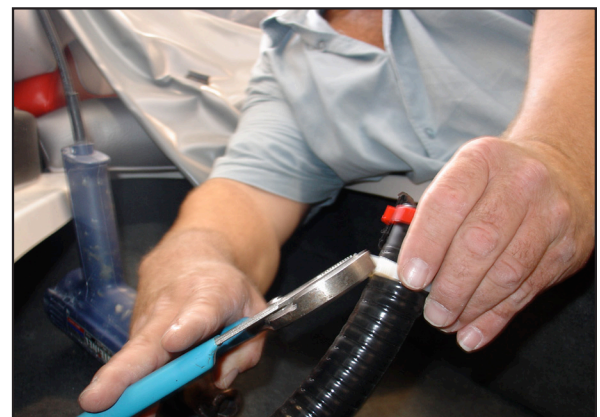


FIG. 10

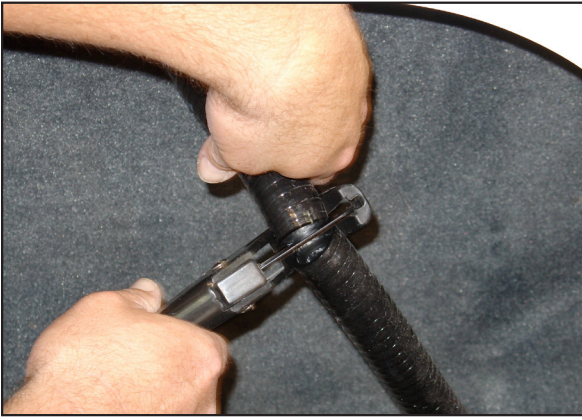


FIG. 11



FIG. 12



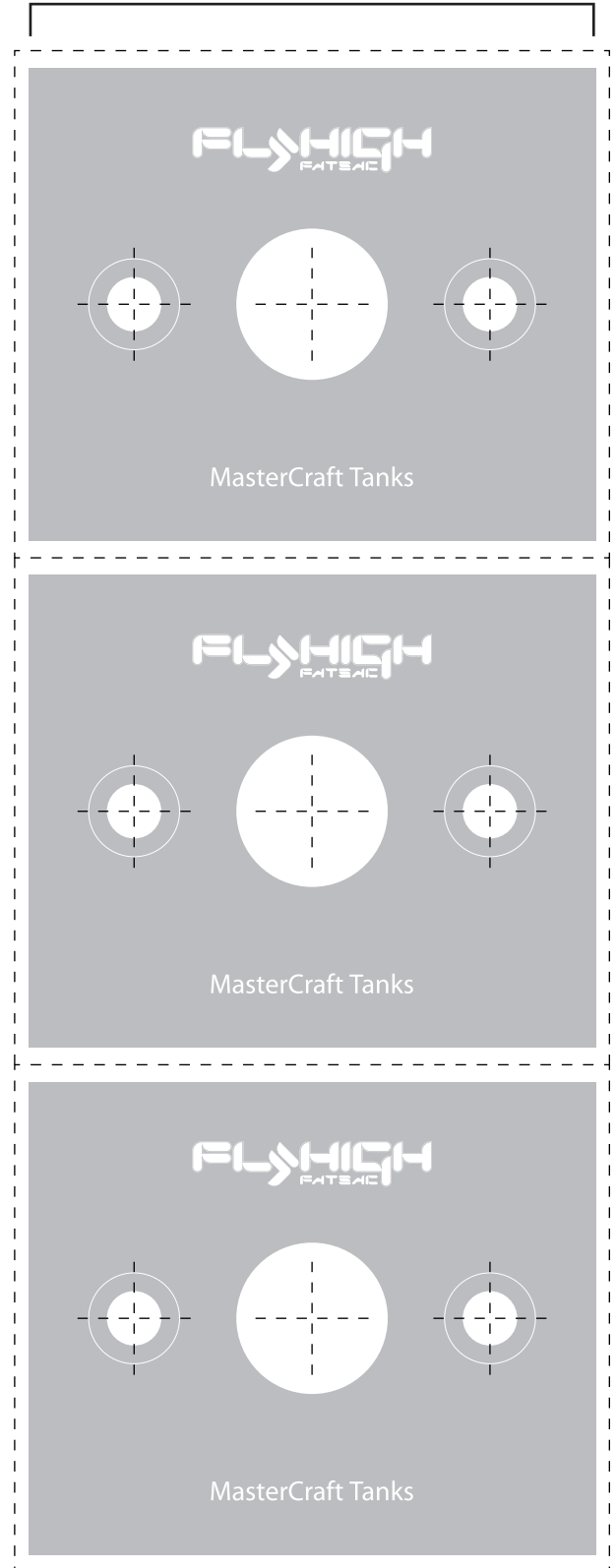
FIG. 13



IMPORTANT

SOME PRINTERS MAY CHANGE THE SIZE OF THE TEMPLATE WITHOUT YOU KNOWING. YOU MUST MEASURE THE TEMPLATE PRIOR TO USE. THE VALVE FACE PLATE SHOULD MEASURE 3" WIDE.

3"



Cut out each template and place on boat bulkhead where directional valves will be installed. Use center point to drill installation holes. It's recommended that you drill smaller pilot holes before drilling the main holes.

UPDATE

UPDATE

Mastercraft said this update is needed so it will not take longer for the water to come out of one of the front sacs than the other.

