

RETRO INBOARD KIT INSTALLATION INSTRUCTIONS

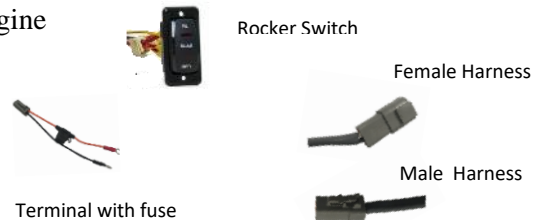
READ THROUGH ALL DIRECTIONS COMPLETELY BEFORE INSTALLING THIS PRODUCT

**BE SURE TO CHECK ALL HARDWARE FOR WEAR AND PROPER INSTALLATION PRIOR TO EACH USE
ALL MODIFICATIONS ARE DONE AT YOUR OWN RISK**

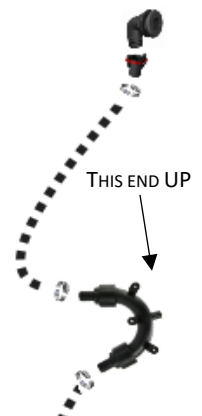
Parts included in Kit

- (2) Gray 400 lbs V-Drive sacs
- (35 ft) 1" ID Clear Flexible Kink-Proof Hose
- (1) 1 1/8" Flow-Rite elbow thru hull fitting
- (3) 1 1/8" Flow-Rite straight fittings
- (4) 1 1/8" Flow-Rite 90 ° elbow fittings
- (4) W743-SS fittings 1 1/8" Quick Connect – Suction Stop
- (2) W749 Air release fittings
- (2) W731 FatSac plugs
- (1) 1" Vented Loop
- (1) BFI bronze hull kit
- (10) Hose clamps
- (10) Cable ties
- (1) Tube of 25 ML epoxy cement
- (1) Tube of 3M marine adhesive sealant
- (1) Reversible ballast pump
- (1) Switch with housing rocker
- (1) 21' male PNP wire harness
- (1) Wire harness battery terminal w/fuse
- (1) 21' female PNP wire harness

- Unpack the Kit and separate the items for visibility.
- Take the BFI bronze hull kit and follow the included instructions for installation. (see page 5 & 6)
- Installing the reversible ballast pump
 - Mount the pump – pumps are often mounted on the engine compartment wall
 - Mount the rocker-style pump switch on the dash.
 - Run the supplied wire harness from:
 - battery → terminal with fuse
 - terminal → 21' female harness → switch
 - switch → 21' male harness → pump
 - Support the wiring throughout with the included zip ties to prevent sagging and chafing.
 - Refer to Instructions Diagram for reference on page 4.



- Installing the Overflow/Vent
 - Select a location on the boat's side for the Flow-Rite thru hull fitting. Thru hull vent fittings are commonly placed on the starboard side in front of the driver's seat just under the gunnel
 - **The fitting should be located higher than the water level when all ballasts are filled.**
 - Install the Flow-Rite thru-hull fitting (this will be similar to installing the bronze thru-hull however it will be on the SIDE of the boat instead of the floor)
 - Connect a straight flow-rite to the end of the thru-hull
 - Attach your vented loop to the side wall of the boat and higher than the ballast bags. The ends of the loop should face the floor and with the arch facing upwards
 - From the Vented Loop Measure hose to connect to the Overflow/Vent fitting. (see attached diagram on page 3)
 - Cut accordingly attach the hose with a hose clamp.



- Plumb the System
 - Take the hose and measure from the brass through hull to the reversible pump.
 - Cut accordingly and install with hose clamps
- Installing the Sacs
 - Place both V-Drive Sacs into the rear compartments.
 - One bag per compartment.
 - Take the hose and measure from the pump to the BOW end of the W701 located on the OPPOSITE side of your Overflow/vent fitting. (referred to as SAC A in diagram on page 3)
 - Cut hose and connect to the pump with a hose clamp
 - Attach the fittings

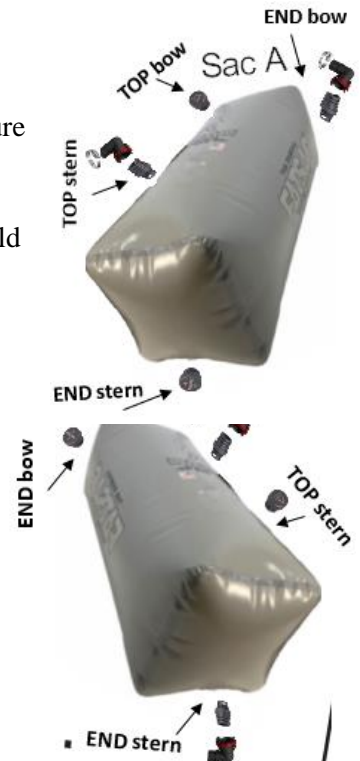


- Connect 1 of the W743-SS fittings into the END valve facing the BOW. Cap with a Flo-rite elbow fitting and secure the hose with a hose clamp (straight flo-rite can be used instead)
- Insert the W731 plug fitting into the opposite END, it should be facing the stern
- Insert another W743-SS fitting into the Stern TOP valve
- Insert the W749 air release fitting into the last remaining TOP valve.



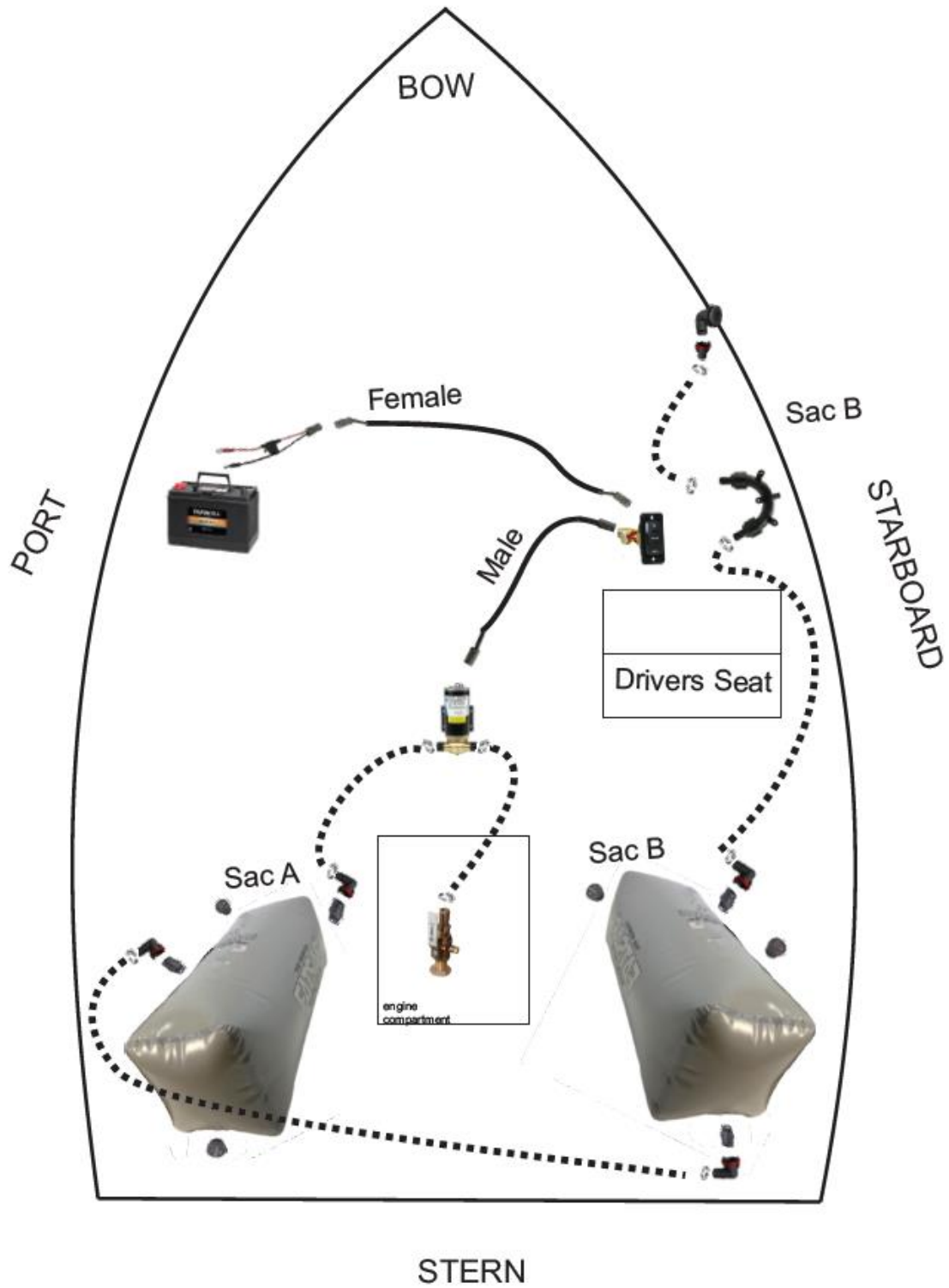
- Take the second V-Drive Sac and assemble exactly the same, then ROTATE THE SAC 180 DEGREES. The fittings should be located as so:
 - END Bow valve – W731 plug
 - END Stern valve W743-SS to elbow flo-rite (straight flo-rite can be used instead)
 - TOP Bow – W743-SS to elbow flow right
 - TOP Stern – W749 air release

- Measure the amount of hose needed to connect the two 400 lb. V-Drive Sacs. The hose will run from the elbow flow-rite in the TOP STERN of SAC A to the END STERN flo-rite in SAC B
 - Cut accordingly and attach the hose with hose clamps
- From the bow TOP of the SAC B measure hose to connect the bag to the Vented Loop. (see attached diagram)
 - Cut accordingly and install with hose clamps

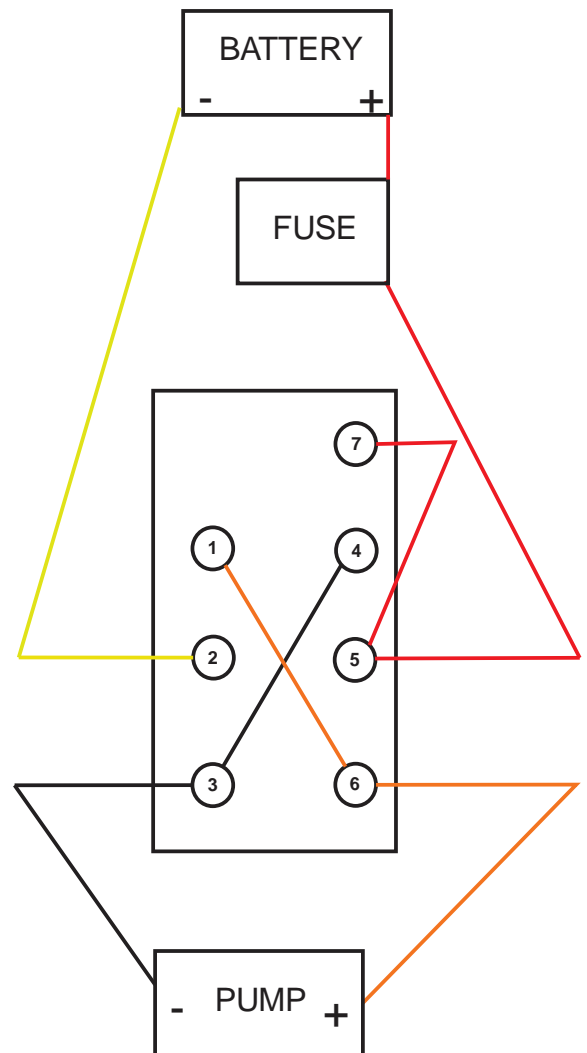
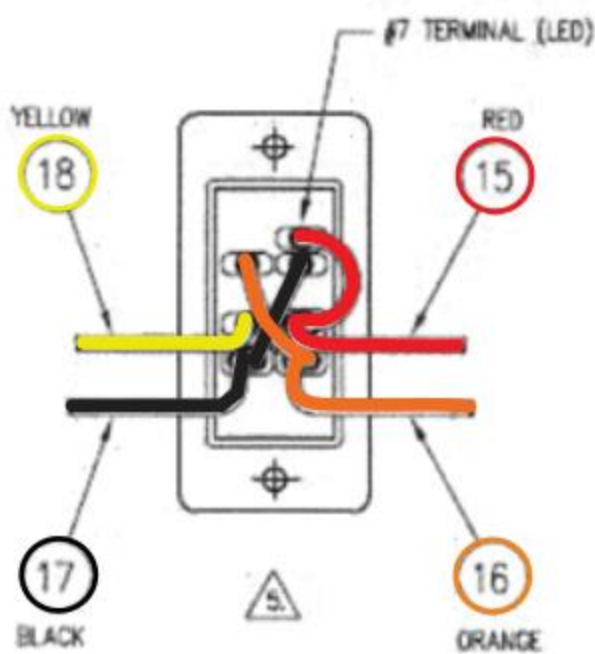


- If everything fits and works properly go back and glue the 4 x W743-SS fittings into the sacs with the epoxy cement. Once the fitting is glued it is NOT removeable. Make sure everything is in the appropriate position BEFORE gluing.
- CONGRATULATIONS on installing your FATSAC Retro Inboard Rear Wake Kit!





Rocker Switch Wiring Instructions



*** TEST SWITCH AFTER INSTALLING If pump fills when switch is set to empty swap the orange and black wires

INSTALLING THE BRONZE THRU-HULL

YOU WILL NEED

- Drill
- drill bit – small (for drilling the first pilot hole)
- 1 5/16" - 1 3/8" Bi-metal hole saw w/fine tooth blades & pilot drill bit
- 2 small magnets (not necessary but will simplify install)
- Masking tape
- Pen
- Safety glasses
- Gloves
- Mask
- Long sleeves (to protect arms from fiberglass shavings)

DETERMINING LOCATION

Find the bilge compartment where the thru-hull fitting will be installed.

Look for a spot where there is enough space for the fitting and components. Keep in mind that you will need to thread the in-line valve onto the thru-hull as well as operate the shut off handle once it is installed

Check for existing systems both inside and outside of the boat. Make sure that the thru hull will not rest on the trailer bunks. Also look out for raw water intakes for engine, depth finder transducers or perfect pass paddle wheel

DO NOT install any fittings in front of the paddle wheel as it will disrupt the water over the paddle wheel and the speed control will not work

Once you have determined your location place a magnet on the floor of the boat where the thru hull will go and place the thru hull on top of the magnet (to hold the magnet in place and keep it from shifting)

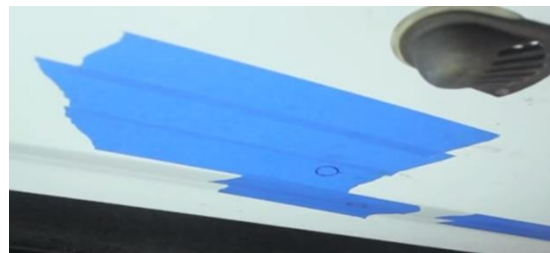
Move to the underside of the boat. Use references to determine about where the thru-hull is inside of the boat and make sure there are no interference issues.

If there are no interferences mask off the general area with masking tape

Run your other magnet along the bottom of the boat until you find the magnet that was left under the thru-hull inside of the boat

When you find the inside magnet mark the spot with a pen

Make sure the masking tape extends at least 6 inches in each direction beyond the marked location. This will help protect the gel coat.



DRILLING THE HOLE

ALWAYS WEAR THE PROPER SAFETY EQUIPMENT

IT IS RECOMMENDED TO WEAR SAFETY GLASSES, GLOVES, A MASK, AND LONG SLEEVES WHEN DRILLING AS FIBERGLASS SHAVINGS CAN BE SHARP

To prevent the drill from skipping punch a small dimple in the hull's surface with an awl or other sharp tool. This will provide a small groove for the pilot bit to sit in and prevent skipping.

Before drilling with your hole saw, drill a pilot hole using a single small bit. When drilling make sure to keep the drill straight and refrain from drilling on an angle

After you have drilled the pilot hole check the location of the hole from the inside of the boat.

Make sure to use a bi-metal hole saw with sharp fine-tooth blades. Coarse blades can grab and chip the gel coat.

Place the pilot bit of the hole saw into your pilot hole and slowly work up to the surface of the boat.

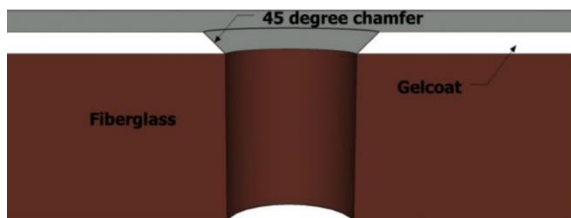
When the hole saw is just below the surface of the boat, run the drill in **REVERSE** and apply slow even pressure to wear through the gel coat.

The gel coat is the shiny outermost surface of the boat. Gel coat is very brittle, so it is important to keep steady control of the drill and continuously check to make sure the drill is square to the surface.

When you are through the gel coat (about 2mm deep) switch the drill back to the **FORWARD** position and drill through the fiber glass. Do not push hard. Let the hole saw do the cutting.

Once you are completely through the hull the next step is to chamfer the gel coat. The gel coat is brittle, sanding it back from the hole at about a 45-degree angle will help to protect it.

Take a piece of sandpaper / file / or grinding bit and sand around the circumference of the hole until the gelcoat is at about a 45-degree angle to the fiberglass.



Grab the bronze thru-hull. You may need to unscrew it from the inline-valve.

Dry fit the thru-hull through the hole to make sure everything lines up



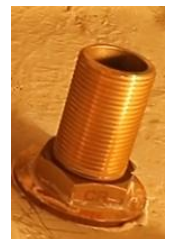
On the thru-hull fitting there will be a groove engraved into the underside of the mushroom flange. This is where the epoxy will go.

Lay a generous bead of epoxy along the groove of the fitting. The bead needs to be large enough to fill the area but not too full as it will squish out when pushed against the hull.



Go underneath the boat and push the thru-hull fitting through the drilled hole. Wipe up any extra epoxy that squeezes out from the mushroom flange. On the inside of the boat, lay a small bead of epoxy around the thru-hull to help seat the nut

Thread the lock nut on, careful not to disrupt the thru-hull when tightening the nut



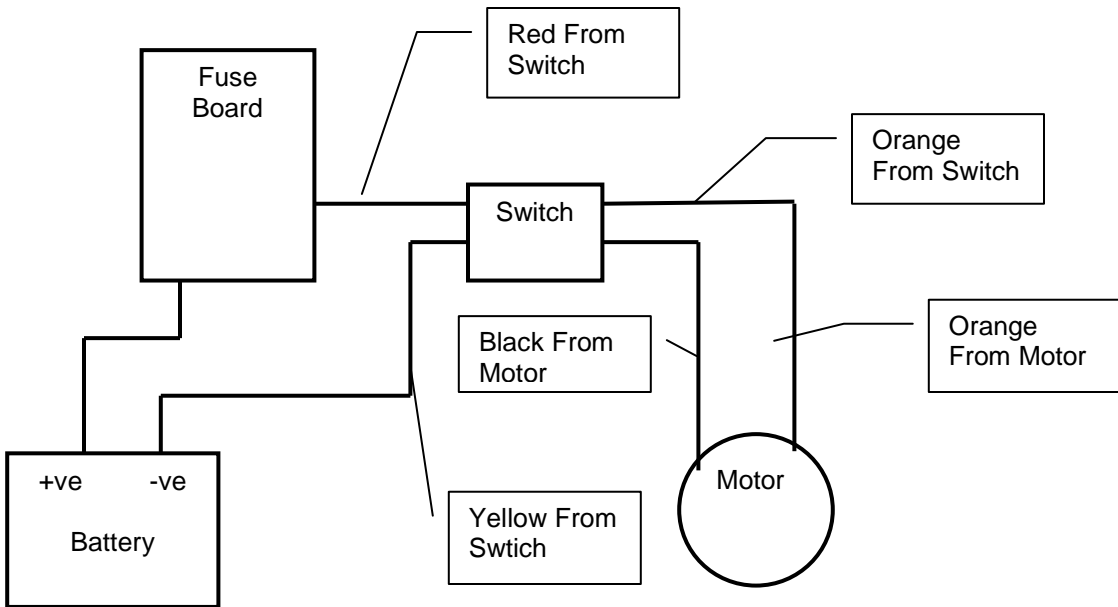
Reconnect the in-line valve by screwing it onto the thru-hull. This is a combination thread thru-hull. This means that the ball valve will only screw on so far. **DO NOT FORCE IT**

Once everything is re-connected you are finished. The epoxy cement will take 24 hours to cure **do not** take your boat into the water until the epoxy has fully cured.

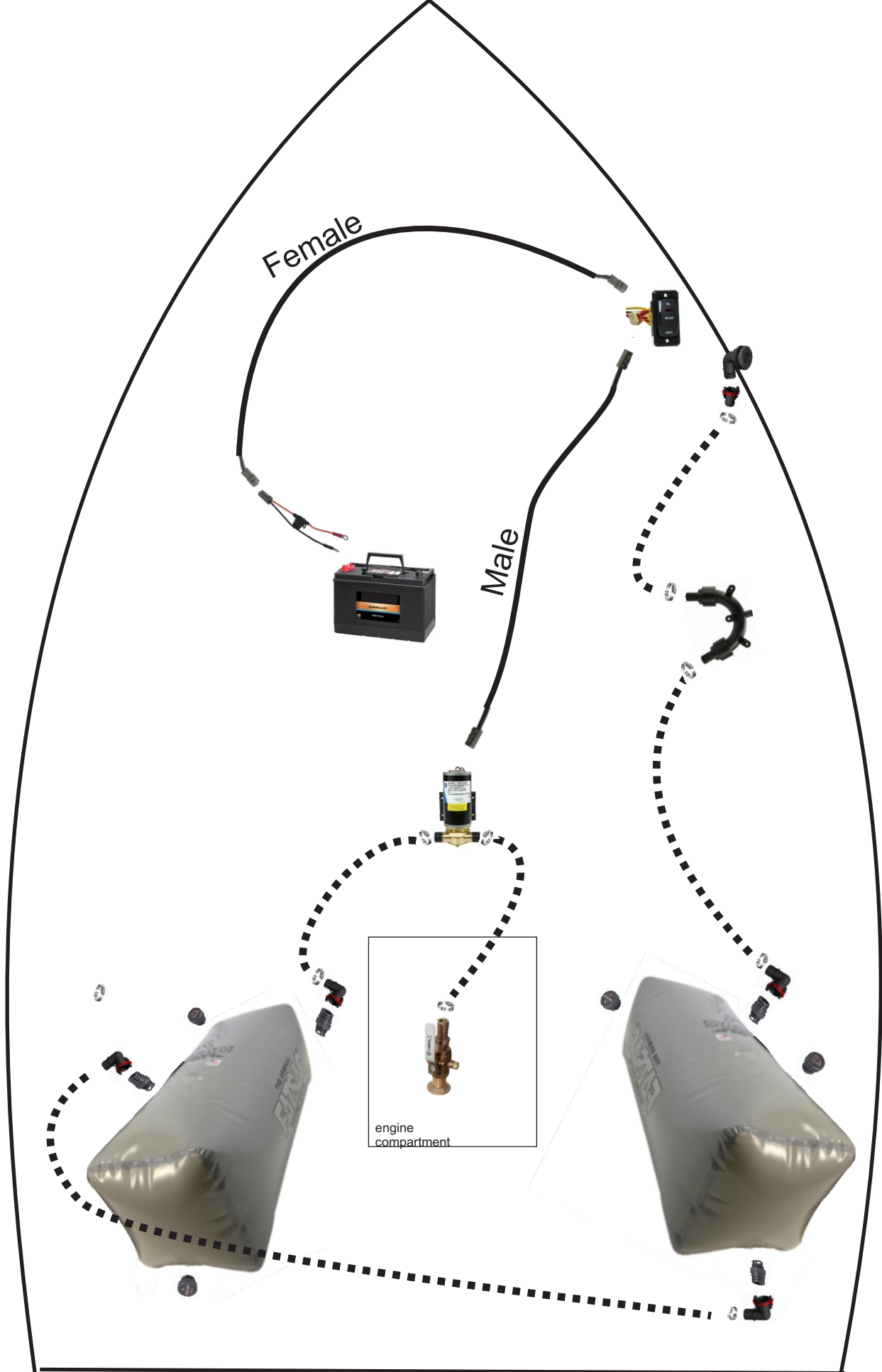


Wiring Instructions

Pump Model 18220 / 22610

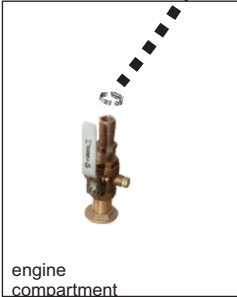


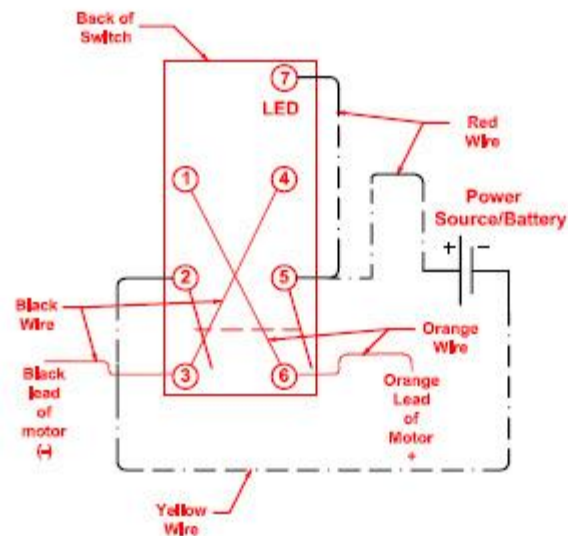
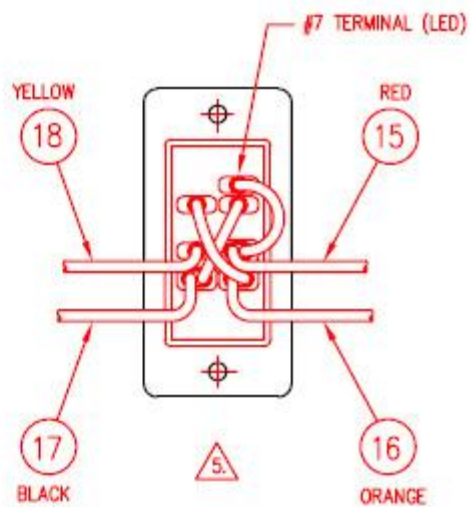
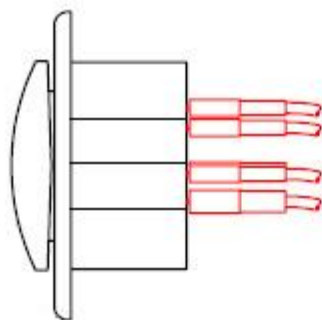
1. Please note wiring recommendations in the data sheet.
2. Please note the fuse requirements in the data sheet.
3. To reverse pump/switch for filling and emptying, swap the orange and black from motor to orange and black from switch.



Female

Male





**Wiring for Ballast Pump
Rocker Switch**