

# Auto Bilge Pump Installation Instructions

## **CAUTION:**

**Read all instructions carefully before installing and using this product.**

**This pump is sealed and, therefore, submersible. However, the electric wire connections must not be submerged. For extra protection, coat the butt joints and adjacent wire ends liberally with liquid electrical tape.**

## **SECURITY:**

- **Auto bilge pump can only be used for pumping water. It can not be used for other liquids.**
- **Red color positive electrode(semi-automatic)(+)Blue color positive electrode(full-automatic)(+)Black color negative electrode(-)**
- **Use the suitable fuse.**
- **The wire connections must be sealed by marine sealant.**
- **All wires and connections must be above the bilge water level. Unless necessary, please do not arbitrarily remove the insulator. Marine sealant oxidant should be used for all wires.**
- **Not dry running**

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## **WARNING:**

- To prevent injury, always disconnect the power source when installing or servicing any electrical product.
- DO NOT use pump to remove gasoline oil or other flammable liquids.
- Always use the fuse amperage rating specified for your pump model.
- Failure to do so could result in serious personal injury or fire hazards.

## **OPTIONAL MATERIALS**

- 1/2"-thick marine plywood block (slightly larger than pump base)
- Waterproof adhesive (epoxy, silicone adhesive, or fiberglass resin) to mount block.
- 18-gauge wire (brown brown white and black).

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## **PUMP MOUNTING INSTRUCTIONS**

**WARNING:** Remove the pump mounting base (See Figure 3)

Remove the foam block that supports the float during shipping.

Failure to do this prevents the pump from starting when water is present.

**Step 1:** Press the hasps on both sides of the auto bilge pump, and remove the filter away from the bottom of the pump.

**NOTE:** Before connecting or operating the pump, install the filter correctly. It is strictly prohibited to disconnect the filter when the pump is running.

The pump must be installed above the water level.

**Step 2:** Ensure the best place when installing the pump. If you only use one pump, it is usually installed in the deepest place of the water level when the boat stops. You must install complete tubes for draining water. Drain all seepers by horizontal installation of water pipes, or placing the pump in a higher position.

**Step 3:** Install the strainer

**A:** When fixing the strainer on wood block, use  $\varnothing$  4.0mm stainless steel self-tapping screws.

**B:** If you fix the strainer to a metal or glass fiber, firstly install a piece of wood on it, then fix the strainer to the piece of wood, then install the pump in the filter, and ensure that the two hasps fastened.

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**Step 4:** Connect a 3/4 "ID pipe to the outlet nozzle, and clamp them by a stainless steel clamp. Recommend using the standard tubes, because they will not tie off by suddenly bending. If using a pipe with smaller diameter; it will not damage the pump, but will reduce the pump's flow.

## **Step 5: Wire**

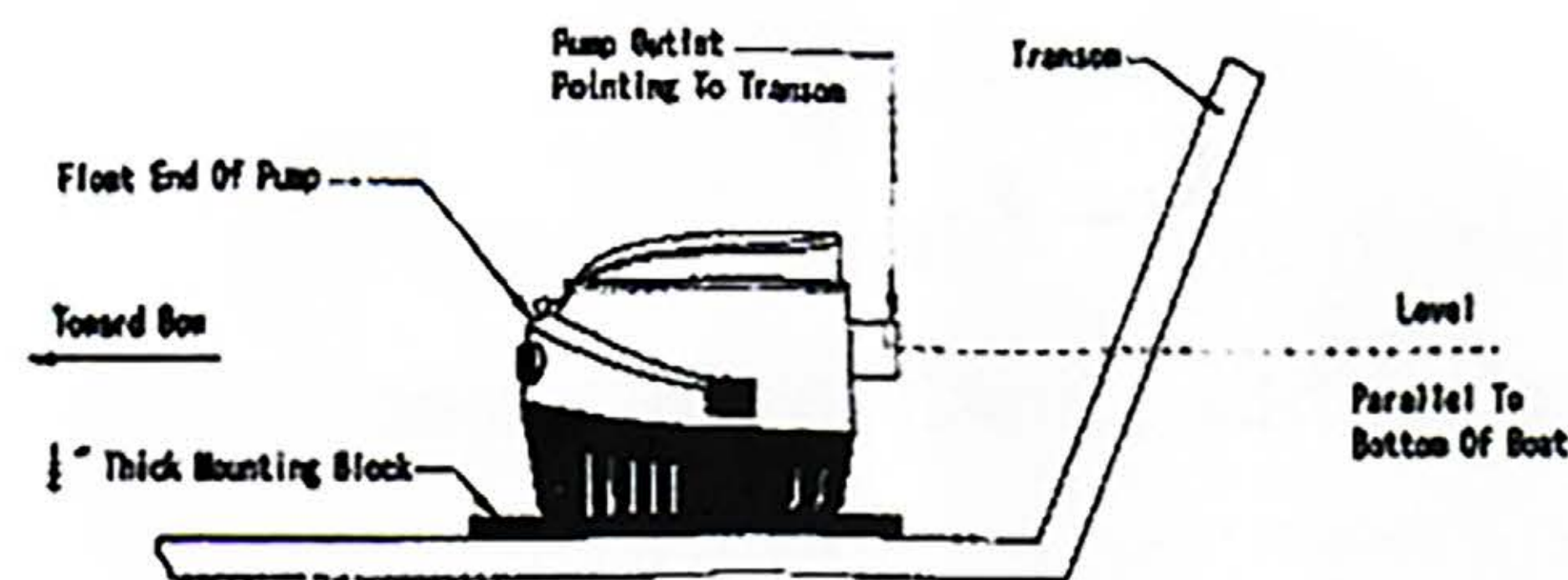
In order to prevent ruin or corrosion of the wire, it is important to fasten the ends of the wire and the terminals by insulators or plastic belts at the highest horizontal position as possible.

When installing the pump, # 18 wire is suggested, If too small wire is used, it will cause overheating inside, reducing the pressure and affecting the performances of the pump.

## **NOTE:**

1. Make sure the hull thickness is at least 1/2" thick. If not, place a block of 1/2" marine plywood (slightly larger than the pump base) in the lowest part of the bilge. Be sure that the pump cover can be removed for cleaning in this position. Glue the plywood to the hull with a waterproof adhesive (epoxy, silicone adhesive, or fiberglass resin). See figure 1.

**Figure 1**



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2. Position the pump in the lowest part of the bilge on a flat, level surface (on the plywood block if it has been installed) with the outlet pointing toward the transom.

Be sure outlet nozzle is level. If pointed upward or downward, an airlock may form in the pump. (See Figure 1)

3. The float end of the pump must be level with or above the pump end (See Figure 1). This prevents the pump from running out of water while the float is still high enough to activate the pump.

4. Mark location of the three (3) mounting holes with a pencil or scribe.

**WARNING:** When drilling holes do not drill through the hull!

5. Carefully drill two 1/8" diameter pilot holes in marked area and drive a screw in each hole.

6. Slide hose clamps (one to clamp hose to the pump, the other to the thru-hull connector) over end of the hose. Force hose over the discharge nozzle of the pump. Install clamp.

7. Route hose on an upward incline to the thru-hull connector. Avoid dips in hose that can trap water and airlock the pump. Avoid putting excess tension on hose, which can damage the pump outlet.

8. Force the hose over the thru-hull boards and clamp into place.

## **OPERATION:**

When the brown white wire of the auto bilge pump is connected to the battery's positive (+) terminal, the black wire is connected to the battery's negative (-) terminal, the pump has automatic function.

# Auto Bilge Pump Installation Instructions

When the brown white wire of the auto bilge pump is connected to the battery's positive (+) terminal, the black wire is connected to the battery's negative (-) terminal, the pump has automatic function.

1. When the water level rise above the bottom flat surface of the strainer 40 - 50 mm, the float switch's contact point is connected then the pump works.

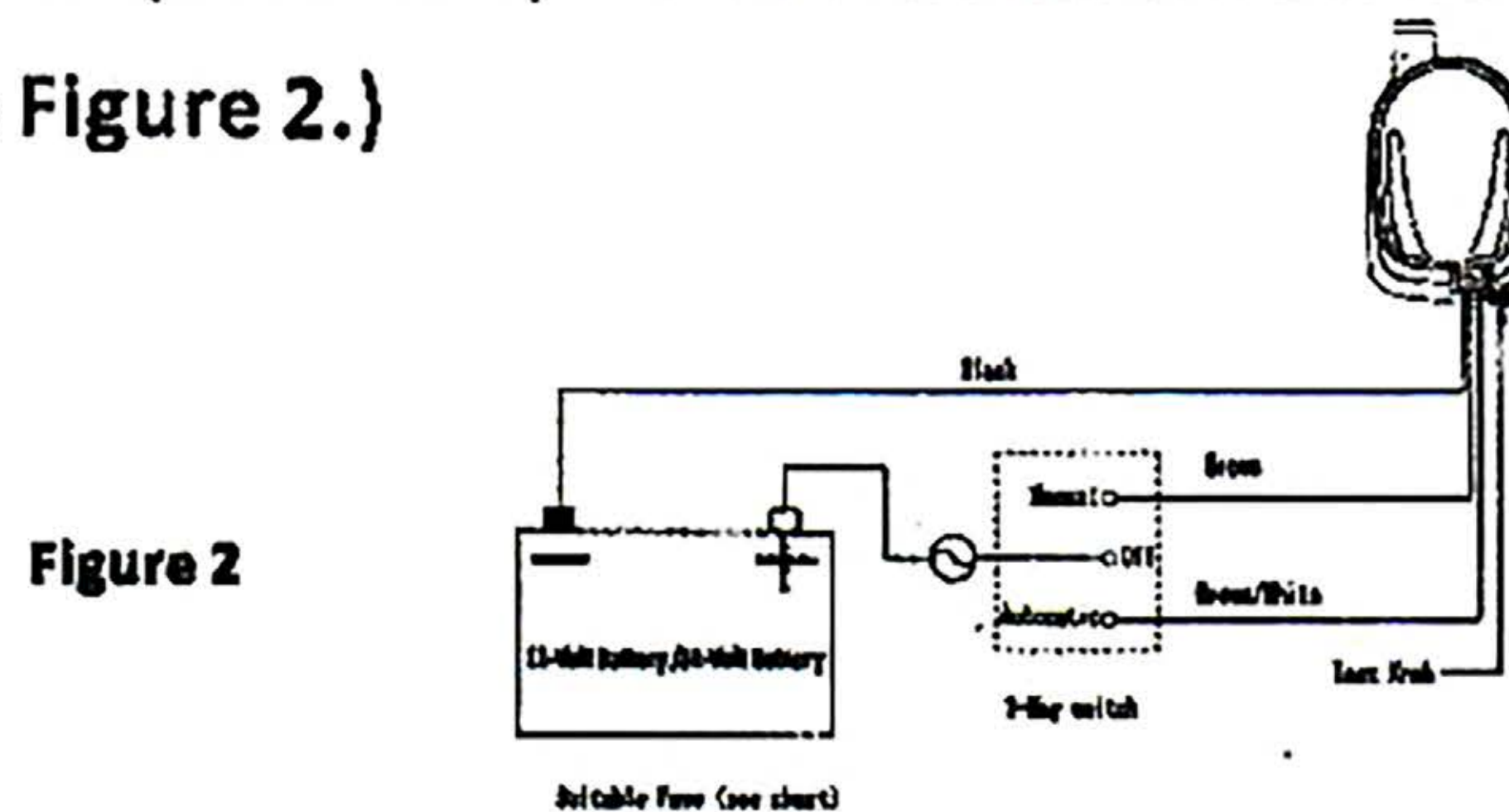
2. When the water level dropped to 20 -30 mm above the bottom flat surface of the strainer, the float switch's contact point is disconnected, the float switch stops working, and then the pump ceases to work meanwhile.

When the brown wire of the auto bilge pump is connected to the battery's positive (+) terminal, the black wire is connected to the battery's negative (-) terminal, this pump is same as the ordinary bilge pump and has no automatic function.

## WARNING INSTRUCTIONS

**WARNING:** Be certain that power source is 12-volt D.C. /24-volt D.C. Higher voltage will damage the pump.

1. Using the full length of wire provided (and additional wire if necessary), connect wires to the pump as shown in the diagram.(See Figure 2.)



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2. Route wires out of the way and secure them to the bulkhead to avoid pulling.

3. Using butt connectors sized for 18-gauge wire, splice fuse holder into positive lead (brown) between the battery and switch.

Position fuse holder in a location that is easily accessible for changing fuses.

**IMPORTANT:** Use fuses of the proper amperage (See Specification Chart at top of sheet.)

**Warning:** FAILURE TO PROPERLY FUSE AND MAKE THE APPROPRIATE WATERPROOF CONNECTIONS WILL VOID THE PRODUCT WARRANTY.

4. Install a Three-way switch that allows for automatic or manual switching models.

5. Turn the pump on and twist the Test Knob clockwise to check operation. Feed water into the pump. If output appears to be too low, check the wire connections. Reversed connections result in opposite impeller rotation that drastically reduces capacity and can cause premature pump failure.

## CARE AND MAINTENANCE

- Occasionally check your pump to be certain debris is not jamming the impeller and/or float within the housing. Use the test knob by rotating in a clockwise direction. Careful attention will guarantee outstanding pump performance.

# Auto Bilge Pump Installation Instructions

- To clean the water chamber remove pump housing from the mounting base by pressing in tabs on sides. Lift the pump housing away. (See Figure 3)
- To clean the impeller, remove the impeller guard screw and lift the impeller guard.
- Remove all debris that has accumulated in pump chamber and around the impeller. Ensure that all debris is removed from strainer slots around the pump base.
- Inspect the impeller to ensure that it is firmly attached to shaft and is not cracked or broken.
- Replace impeller guard, screw, and pump housing on base. Be certain that all tabs are fully engaged.
- Periodically check the electrical connections to ensure they are water-resistant and mounted high and dry.
- Do not use household cleaners on the pump because many of them may damage the pump materials.

**Figure 3**

