INSTALLATIONS PUICE 2000 3700 COMPUTERIZED PUMPS IGNITION PROTECTED

® Rule Registered Trademark

CONGRATULATIONS!

You have just purchased one of the finest quality pumps available in the industry. It was developed after years of experience, research and testing by our research staff. It motor and shaft seals were specially designe and manufactured by Rule Industries to give years of reliable trouble-free performance.

Most early pump failures are due to imprope installation and wiring. Please read and follow the instructions carefully and your pump will wide you with the maximum output and the lifter which it was designed.

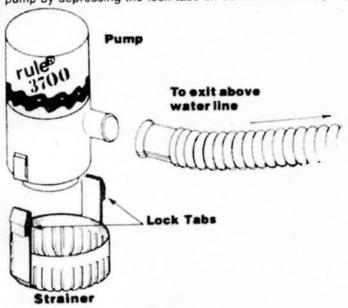
These pumps are "Ignition Protected."





INSTRUCTIONS

STEP 1 Remove the strainer from the bottom of the pump by depressing the lock tabs on both sides of the pump.



STEP 2 Determine the desired location for the pump. If only one pump is used it is usually located where the water is deepest in the bilge while the boat is at rest. The installation must allow for complete drainage of the hose. All water pockets must be eliminated by having the hose running level or continuously upward. See illustration Step 7.

STEP 3 Position the strainer so that the pump nozzle is in the proper position to connect to the discharge hose.

STEP 4 Mounting the Strainer

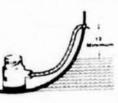
A. If attaching the strainer to wood, fasten with stainless steel screws.

B. If attaching the strainer to metal or fiberglass, first mount a wooden block, then fasten the strainer to the wooden block.

STEP 5 Mount the pump on the strainer so that both lock-tabs "snap" into place. (The pump may be reversed on these tabs as so desired.)

STEP 6 On the 3700, attach 1½ " I.D. hose to the discharge nozzle and fasten with a stainless steel clamp. Rule flexible hose (Model #88) is recommended because it will not kink when making sharp bends. Use 1½ " hose (Model #80) on the 2000.

STEP 7 Thru-hull Fittings



A. For most installations install a 1½° I.D. thru-hull fitting (Rule Model #59) to achieve the rated flow of the Rule 3700 pump. Locate the thru-hull fitting at least 12° above the water line to prevent water from flowing back into the hull when the pump is off. Use Model #60 thru-hull with the 2000

B. For stern installations, place the thru-hull fitting high enough in the stern so that submergence of the fitting will not occur under any conditions.

pump.

STEP 8 Wiring

In order to prevent electrolysis and corroded wire connections, it is essential that all wire ends and terminals be sealed with Rule* Heavy Duty Marine Sealant and located above the highest possible water level by fastening with insulated staples or plastic straps.

When installing your pump, 14 gauge wire should be used. However, if your installation is over 20' from the battery source, the wire size should be increased to 12 gauge. Using a wire which is too small causes undesirable heat in the wires and results in a voltage drop and lower performance of the pump.

STEP 9 Fusing

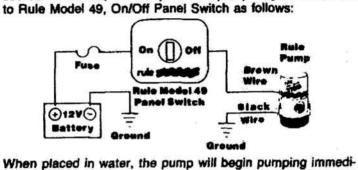
To protect your electrical wiring from possible overload install a fuse in the positive (+) lead from the battery. The fuse should be sized according to the following chart.

| PUMP | 3700-12 volt | 2000 12 volt |
|----------|--------------|--------------|
| AMP DRAW | 15.5 amp | 8.4 amp |
| FUSE | 25 amp | 15 amp |

If wiring directly to a circuit panel with a fuse holder, check to see that the proper fuse is being used.

ELECTICAL INSTALLATION STEP 10

The computerized, automatic system assures that the vessel is always pumped out and that the pump does not run needlessly. The proper wiring polarity must be observed with the brown wire connected to the positive lead of the power source. If desired, the computerized pump may be connected



ately upon being turned on. After pumping the vessel dry, the pump will automatically stop, and begin pumping again, when water is again present. The pump will start and run when turned on manually even if there is no water present, but of course, no water will emerge and the pump will turn itself off in a very short time. (The pump may be restarted and/or tested at any time by turning off the power, waiting 5 seconds, and then turning the power back on. If no water is present the pump will only run momentarily. If water is present the pump will continue to run until the water is pumped out.) Once the pump has power, starting and stopping is completely computerized. No further adjustment is

STEP 11 Polarity is important. On the Rule® 3700 and 2000 pump the correct polarity will be obtained when the BROWN wire of the pump is connected to the POS or + side of the battery.

necessary or possible.

Caution: Pump must always be properly attached to the strainer before running the unit.

Storage The pump may be left in the bilge all winter without damage,

but must be disconnected from the battery. Even if the pump is subjected to freezing temperatures, no damage will occur. DO NOT try to turn the pump ON if pump is embedded in ice.

TROUBLE-SHOOTING SECTION

| Symptom | Possible Cause | Cure |
|--------------------|-----------------------------|--|
| Reduced Flow | Plugged strainer | Clean outside of strainer and clean debris from around impeller. |
| | Low battery voltage | Check battery condition and charge if necessary. |
| | Kinked discharge hese | If hose is kinked because of sharp bend, convert to Rule #90 hose which will not kink at bends. |
| Ne water pumped | Wire connections | Make sure wire connections are not corroded. Visual check is not enough a slight pull on each wire will tell if the wires are still joined. Check to be sure no wire joints are hanging down into the water. |
| | Blown fuse | Check ruse to see that it is the correct size according to the chart in step 9. If fuse size is correct and fuse still blows, check im- peller through inlet opening to be sure it is not jammed |

| Wires over-heated. Melted insulation | Fuse size or Jammed impeller | Be sure impeller is clean of debris and is free to rotate. Reduce fuse to proper size shown in chart in step 9. Replace damaged wiring and/or switch. |
|---|------------------------------------|--|
| | | |

Repeated Fuse size or blown fuse Jammed impeller

Be sure fuse has amp rating shown in chart in step 9. Check impeller to see that it is not bound up by fish line, etc.

or stuck with debris.

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