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9/11/13

## Vac-Alert Electro-Mechanical SVRS

### **1.0 INSTALLATION:**

#### **STEP 1: Valve installation (see figure 1):**

- 1.1 Remove existing cap/insect screen assembly from existing VA-2000 SVRS and install in its place the Plunger item #1 and the Cap/Limit Switch assembly item # 2.

“Care shall be exercised not to tangle the limit switch wire bundle”

- 1.2 Perform normal VA-2000 calibration and testing.
- 1.3 Turn the pump “off” and disconnect electricity by switching off the main panel.

#### **STEP 2: Box Preparation:**

##### **CAUTION:**

**TURN POWER “OFF” AT MAIN PANEL BEFORE SERVICING THIS CONTROL BOX OR THE PUMP.**

- 1.4 Wall-mount the SVRS box (item # 3) within 7 to 12 feet from the pump.
  - a. Arrange for a convenient location for the SVRS box near existing controller and out of reach of children.
  - b. Mark mounting position on the wall, drill holes and drive screws into holes. Use anchors if necessary.

#### **STEP 3: Wiring:**

- 1.5 Remove the most convenient knockout of the SVRS box and attach incoming line from existing timer or controller cable “A” to box using proper conduits and cable connectors as shown in Figures 1 and 3.

Add Figure 1.

Label cable “A” on the Wiring Diagram.

- 1.6 If your pump is cord and plug connected, remove plug at end of pump cord. Split cord about 4 inches and strip wire ends 1/2 inch. Remove the most convenient knockout of the SVRS box and attach cord to box using proper strain relief grommet.
- 1.7 If your pump is hard wired, (if needed) prepare cable “B” by stripping the ends of wires about 1/2 inch, Using proper conduits and cable connectors attach cable “B” to the box.

Label cable “B” on the Wiring Diagram.

- 1.8 Connect the cable to the pump motor and then the wires to the motor terminals per motor instructions and nameplate diagram. Remove the most convenient knockout of the SVRS box and attach the other end of the cable to the box using proper cable connector.
- 1.9 Push the protective plate (see figure 3) upward to access the terminal block.
- 1.10 Attach the wires coming from the controller (Paragraph 1.7) and from the pump (Paragraphs 1.8 or 1.9) to the terminals of the SVRS box as shown in wiring diagram Figure 2. Insert only the

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stripped copper ends of wires under the pressure plates of terminal screws as shown in Figure 2. Tighten screws firmly (20 to 25 inch-lbs). Install front insulator cover using the provided screws.

- 1.11 Connect incoming line and load grounds to the box ground screw.

**Note:** All electrical equipment must be grounded according to ANSI/UL 1563-1995 “Standard for Electric Hot Tubs, Spas, and Associated Equipment”

- 1.12 Remove a convenient knockout of the SVRS box casing, route valve leads away from traffic area and connect it to box using proper strain relief grommet then connect leads to box terminals marked “SWITCH” as shown in Figure 3.

- 1.13 Push the protective plate (figure 4) down to completely cover the terminal block.

- 1.14 Secure the box cover onto the box using the four plastic screws.

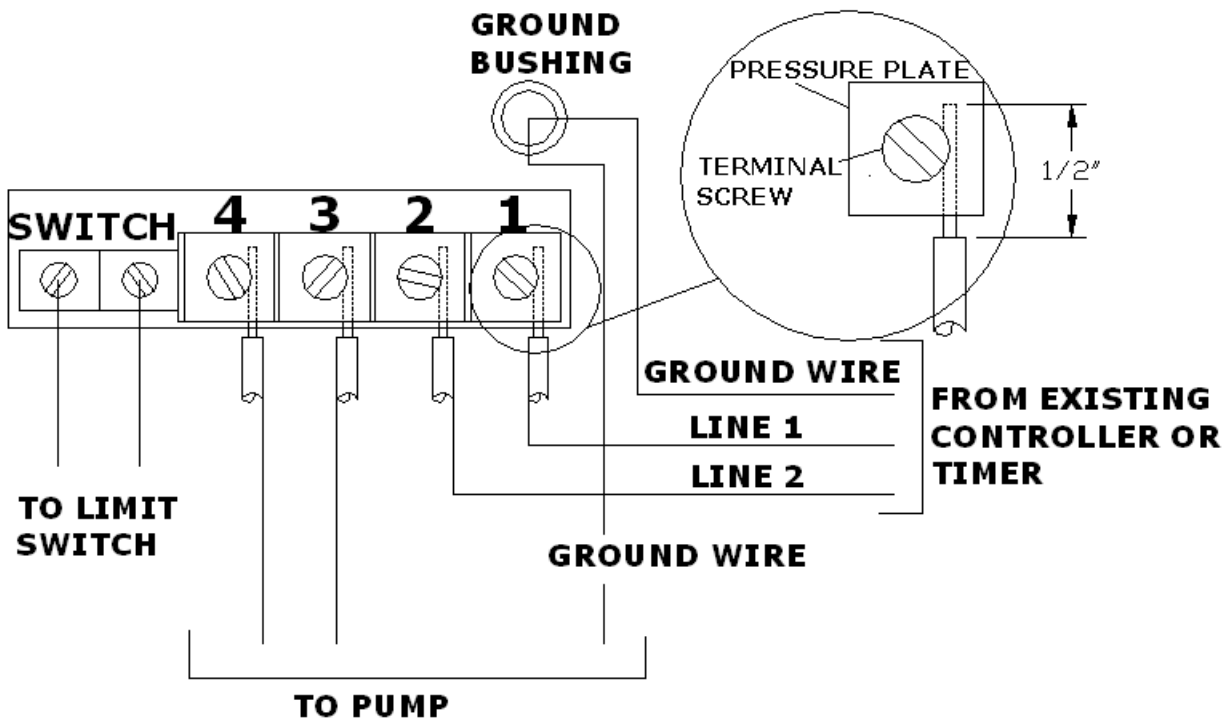


Figure 2. SVRS Box Terminal Layout

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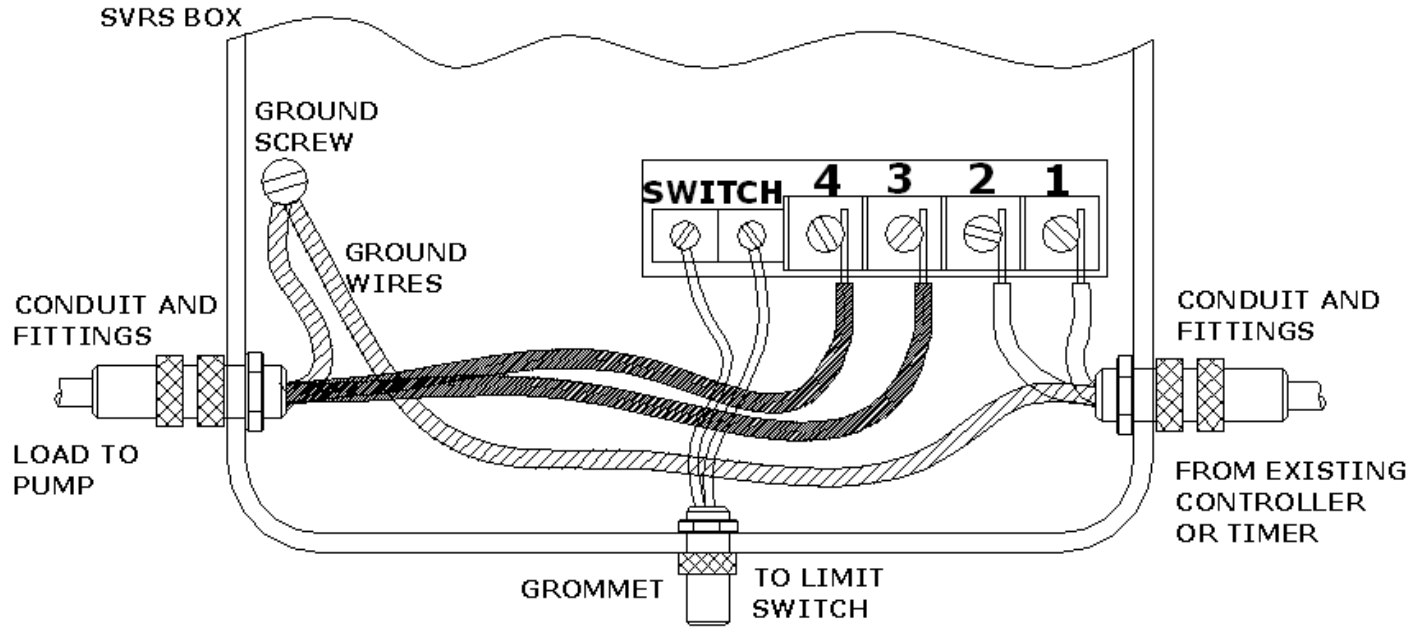
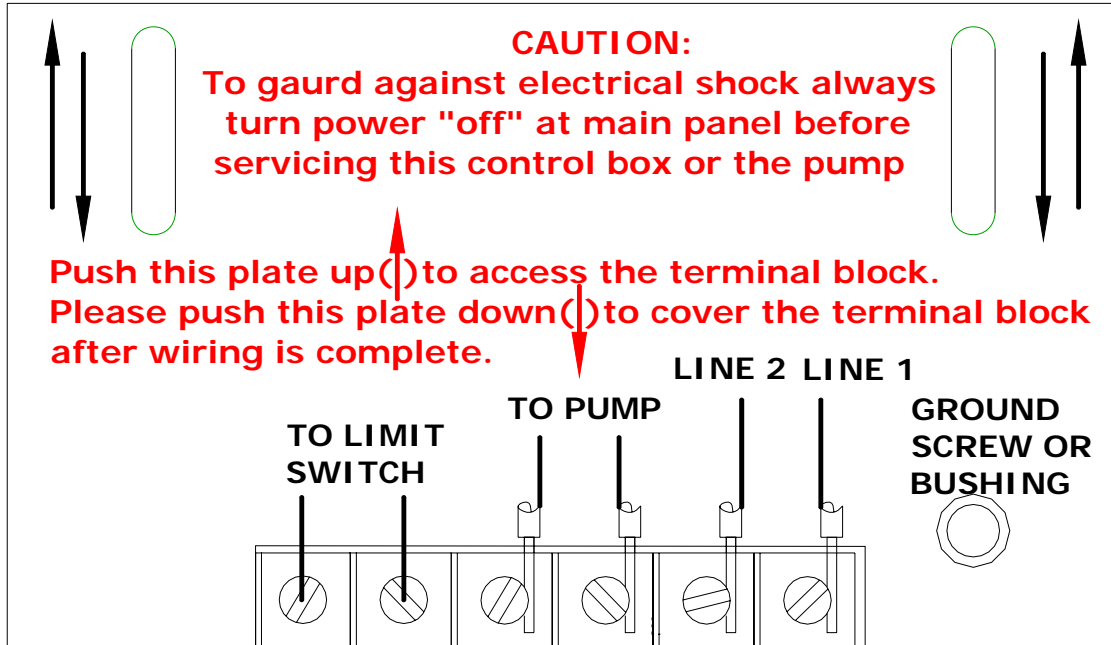


Figure 3. Wiring Diagram

Guard (spell check)



**Figure 4. Protective Plate**

**2.0 OPERATION:**

- 2.1 Turn "on" electricity to main controller or timer.
- 2.2 Reset main controller/timer to normal operating cycle.
- 2.3 The pump will continue to operate normally.

**3.0 SYSTEM VALIDATION & TEST:**

- 3.1 Leave the main suction inlet open and plug all other inlet ports to the pump including skimmers.
- 3.2 Simulate entrapment by completely plugging off the open suction inlet using a ball, butterfly or a sliding gate valve installed within 2 feet upstream from the pump. You can also simulate entrapment by completely plugging off the open suction outlet / inlet using a 10"X10" rubber mat attached to a long pole or equivalent.
- 3.3 The pump should immediately be turned "off" and the entrapment should be freed within one to three seconds.
- 3.4 Open the valve or remove the mat, reset the VA-2000 then reset the control box. Immediately the pump will resume normal operation.
- 3.5 Repeat above test three times to ensure that this product functions as designed.
- 3.6 It is recommended that this system be tested at least once every month to ensure vacuum safe operation of the pump.