POWER UNIT DOES NOT ACTIVATE

This section is to be used for the customer with a unit that will not turn on at all, or "bogs" down once the unit starts to build pressure. It would also apply to those customers whose unit is starting intermittently.

This guide is a process of elimination, you cannot move on to the next potential problem until you have addressed the prior item.

1. Check to make sure power unit is attached to the battery. We recommend a "0", change it and retest the unit.

2. Make sure battery is charged and offering 12 volts at the unit. Need a volt meter to check this. **Must** use a size "0" Cable as specified.

   Check the battery cable size chart at the right. We recommend size "0" cable. Low voltage can cause the unit to either not run or not run properly due to valve coils energizing and, in turn, not shifting the valve.

   Using a volt meter, put the red lead on the "hot" start solenoid post. Now touch the black lead to the motor case or a ground, read the volts.

3. Check to make sure the unit has a secure ground.

   Check to see if cable is attached to the threaded grounding hole on the side of the unit's base. If not, one should be attached from this hole directly back to the negative post on the battery.

   Poor ground is the number one cause of trouble.

   If the unit gets really hot when the customer turns it on, the unit does not have a secure ground.

   Place the red lead from the volt meter on the unit's aluminum base and then touch the black to a known ground. With the unit running, read the meter's millivolts, the lower the reading, the better the ground for the unit. Any reading above 2 volts would suggest the unit is not getting a good ground. For rated performance, the voltage at the power unit must be a minimum of 12 VDC. This should be measured between the large terminal of the start solenoid (where the battery cable is connected) and the power unit base.

   NOTE: Grounding of the power unit is just as important as the installation of the positive battery cable. It is easier to get a good ground by using a second battery cable. Connect the large terminal on the motor start solenoid to the positive terminal on the battery with a #10 gauge battery cable. Grounding of the power unit can be completed by connecting a second battery cable to the

tapped threaded hole in the power unit base marked "GND". A size #0 cable should be attached to the battery's negative terminal. Check the voltage between the large terminal on the start solenoid and the power unit base.

4. Check to make sure cord halves are securely plugged together. Something to look for here pertains to the "pins" on the end of the wire in the plug. If the wire can be pulled back, toward the cord, it is not locked all the way in to the sealed part of the plug. If the pin is not all the way in, it might not be making contact as needed.

5. Eliminate the unit's start solenoid mounted to the motor by using a jumper wire across the two large posts. This will supply power directly to the motor. If the motor runs, replace the solenoid. If the start solenoid is not energizing, it might be that the start solenoid is defective. It might also mean that the unit is not getting the proper voltage at the unit. Make sure item #2 above has been addressed.

6. Make sure all terminals are clean and tight. Any corrosion should be removed from terminals. It is important here, if a ground cable was fitted at initial install, to REMOVE and clean both the ground cables, terminal and the aluminum base of the power unit. If a ground cable was not put in place at initial install, one should be added now.

7. If this does not work, and the unit is within the specified warranty, the unit may need a new pump or motor. Contact vendor as the power unit may need to be Replaced.