

## Grout Pump Electrical Troubleshooting

1. All Geo-Loop grout pumps require a minimum of 12 volts to operate correctly. In a case of a dead battery and the engine had to be jump started, or on 13 HP Honda pull started, the grout pump will not stroke until charging system has been repaired.
2. On start up, if the grout pump strokes to one side and stops with the grout pump hydraulic control valve on, and grout pump auto switch on, then turn grout pump automatic switch off and back on. If pump starts working normally, continue to grout. If it does not work then move to step 6.
3. If the pump strokes and stops on the same side repeatedly, the micro switch that is being contacted may be faulty, replace switch and test pump.
4. In a case that the grout pump is stroking properly and then randomly stops on either side, it is a good indicator that the ratchet relay in the gray electric box is bad. Replace relay and test pump.
5. Another test is to stop the grout pistons in the middle of the stroke so neither micro switch spring on the grout cylinder is being touched. Next turn engine off (not running). Then remove cover off the gray Geo-Loop electric box. Inspect the ratchet relay to be sure the solenoid plunger with the spring is down in the extended position. This indicates the coil is not on and plunger is not stuck.  
Then turn the key on, do not start or run engine. Turn grout pump auto switch on, then, using a suitable tool such as a screw driver, move micro switch spring and watch ratchet relay to see if it changes white triangle causing the circuit to switch from one side to the other.  
If this does not happen then the ratchet relay may need to be replaced.
6. If grout pump sticks on one end and will not move back and forth with grout pump manual switch, visually check the ¼" spade connections on the black coils located on the hydraulic solenoid valve. Clean and tighten connections and retest grout pump manual mode.

Each coil should magnetize separately with the grout pump manual switch. Check with a metal object, such as a screw driver on the coil nut to feel the magnetism. If a coil does not magnetize, replace the coil.

7. Then move on to the last step that very seldom ever fails. The pilot valve in the hydraulic solenoid valve may be bad if the pump sticks to one side and will not move. **Shut off engine and relieve all pressure on hydraulic system, grout pump and grout line.** Take a  $\frac{3}{4}$ " end wrench and remove the coil nut. Then using a 1" box end wrench remove the pilot valves on both ends of the solenoid valve and swap end to end. Replace the coils, cleaning the shaft properly and apply never seize or grease. Do not over tighten the nut that holds the coil in place, 60 in lbs. or 5 ft. lbs. torque.

These are just some quick issues that may get you up and going quickly. If this does not help, as always, feel free to contact us at Geo-Loop for technical support. We will be glad to assist you.