Basic Paragon Trouble Shooting Guide

Before trouble shooting verify the following:

1. Supply tank has potable water
2. DC Power is provided to the pump
3. The Pressure Storage Tank, (PST), has the correct air pressure charge.
4. All faucets are closed.

Pump System Overview:

The Paragon Water Pressure System supplies pressurized water to the connected water lines on the vessel.

When power is applied, the processor looks for stored pressure in the lines and Pressure Storage Tank (PST). If the pressure is below the 'cut-on' value of the pressure switch, the pump will run and supply pressurized water to the system, increasing pressure until the system pressure reaches the 'cut-off' value of the pressure switch.

In the first 30 seconds of operation, the NOFLO sensor looks for the presence of water in the supply line.

* If water is present, the pump will continue to run. If no water is present, the pump will stop.
* When the pressure reaches the 'cut-off' pressure, the pump will stop.
* Upon opening a faucet, water will flow from the line, until the system pressure drops below the pressure switch 'cut-on' value, and the pump will re-start, providing water flow to supply the demand, as well as to re-pressurize the PST.

The following conditions will cause the pump to stop:

1. If there is no water in the supply line NOFLO will stop the pump preventing internal pump impellor damage from running dry. This requires interrupting and restoring DC power for the system to re-set.
2. The system has reached the 'Cut-off' value of the pressure switch. This is the normal condition.
3. During high demand usage, if the pump runs continuously for a period of 10 minutes, the pump will stop. This requires interrupting and restoring DC Power for the system to re-set.

To test the system, perform the following steps:

1. Ensure the tank has water.
2. Disconnect DC Power.
3. Open a faucet to relieve all water pressure.
4. Measure the Air Pressure setting in the PST. Air pressure should be set to 2-3 PSI below the pressure switch 'cut-on' pressure. Adjust as necessary. See Service Sheet for model specific pressure settings.
5. Close the open faucet.
6. Apply DC Power, the pump should run.

7. If not, check the pressure switch. Shorting the two wires on the switch will simulate the switch being closed, the pump should run. Separating the two wires simulates the switch opening, the pump should stop.
8. If this test is successful, the pressure switch is suspect. Replace as needed.
9. If this test is not successful, the electronic circuitry is suspect. There is no 'field repair' to the pcb. Replace or send to Groco for repair.
10. If the pump is running, the processor now looks for the presence of water in the inlet line and NOFLO sensor.
11. If water is present in the first 30 seconds of operation, the pump will continue to run.
12. If water is not present, the pump will stop. Verify water is available in the tank.
13. If water is present, the runs and builds pressure until the system has reached the 'cut-off' value of the switch. The pump will stop.
14. Open a faucet and monitor the Water System Pressure gage, (If so equipped). The pump should re-start when the water system pressure reaches the 'cut-on' pressure of the switch.
15. Reduce demand at the faucet, and allow the pump to run for 10 minutes. The pump will stop.
16. Close the faucet, interrupt and restore power, the pump should run and build-up pressure, then stop as normal.

If the pump runs, but never reaches the cut-off pressure, then the impellors are suspect on the pump and should be examined and replaced as needed.

If the pump runs, but is very noisy, (Knocking sounds), then the impellors are damaged and should be replaced.

If the pump runs, but has difficulty priming, then the impellors are suspect and should be examined and replaced as needed.

If the pump does not run…
Verify incoming DC Power is present…

1. Using a Volt meter, measure the incoming DC Power at the connection to the pump.
2. If power is valid, using a set of jumper wires, apply DC Power directly to the motor terminals.
3. If the motor runs, then the electronic pcb is suspect.
4. If the motor does not run, then the Motor is suspect.

For further information please call GROCO to discuss with a technician.