

**Loss of incoming water supply:**

- Systems are programmed to stop when suction pressure drops. To restart pump, press the RESET button. If this does not work, turn off the system using appropriate circuit breaker, wait until the VF Drive display goes blank. Turn the system ON by turning on circuit breaker for. Then Press AUTO button.
- You may need to “burp” air from system if there is a complete loss of water and air is introduced in to the system. Do this by running water and opening/closing discharge ball valve. This may need to be repeated multiple times.



*Reset*

**Loss of power supply:**

- If system does not turn on automatically, turn off the system power using appropriate circuit breaker and wait until the display goes blank. Turn the system ON by turning on circuit breaker. May need to press AUTO triangle button.

**Short cycling:**

***Issue:***

- Pump turns ON / OFF every few minutes / seconds

***Solution:***

- Check for leaks (faucet, toilet fill valve, etc).
- As mentioned in the assembly section, it is essential to install a ball valve on the suction [City/ Well side] and discharge [Building side] of the pump.
- Close the ball valve on the discharge side of the pump and check to see if the pump turns OFF. If it does, there may be a leak in the water line, a faucet, a toilet, hose bib, etc.
- If the pump continues to run after the discharge shut off valve is closed, the water may be leaking back through the check valve [if installed on suction side of pump.]



*Leaking toilet flapper*

***To test this:***

1. Let pump run and increase pressure.
2. Close discharge ball valve when pressure reaches its highest point.
3. Close the suction ball valve.
4. Turn off circuit breaker. Wait for screen to go blank.
5. Open suction ball valve. Watch pressure gauge closely. If pressure starts to drop, then check valve is fouled and the water is leaking back through it.
6. Check valve debris must be flushed out by running a lot of water through system or removed and cleaned.



*Fouled Check Valve*



*Clean Check Valve*

**Pump continually runs:**

***Issue:***

- Pump operates constantly without any demand for water

***Solution:***

- If a bypass is installed, ensure the bypass valve is **CLOSED!**
- When all fixtures are closed and no water is being drawn, air may get trapped within the lines causing the pump to not reach the pressure set point and hence cause it to operate continuously. You may need to “burp” air from the pump impellers and water lines. Do this by first opening multiple fixtures. With the pump running, Close the discharge ball valve, let the pressure build then open it quickly. This will force the air the air from the pump and water lines. This may need to be repeated **multiple times**.
- Maneuver to the pressure monitor menu (U5-91) on your Yaskawa drive. Press UP arrow until you see “P7ON” and press enter. You should see **U1-01** with the U1 blinking (if U1 is not blinking, press RESET/> button). With the U1 blinking on the screen, press the UP arrow until you get to **U5** and press ENTER. Now the 01 should be blinking. Press the up arrow until you get to **U5-91**, then press ENTER. Record this reading, as this is what your transducer is reading for pressure. If this is significantly different that what your pressure gauge is reading, the transducer may be clogged or defective. A difference of +/- 5 psi is expected. To get back to main screen, press **ESC**.
- The transducer is located below the expansion tank / pressure gauge.
- To check the transducer for debris, first turn the system power off and drain the water from the booster pump [the transducer is exposed directly to the water supply]. Remove your transducer [this can be done with an adjustable wrench as the transducer is only threaded in]. Inspect the back orifice for debris / mineral build up. If the orifice is clogged, try cleaning it with a toothpick, bobby pin, or vinegar. After cleaning, plug the transducer back in (make sure to plug the wire back in too) and test the system. If V2.2 still significantly differs from the pressure gauge reading, it most likely needs to be replaced. Please give us a call to order a replacement



*Clogged orifice*



*Clean orifice*

**Noise:**

***Pump Issue:***

- There is a squeaking noise at the end of a pump duty cycle.

***Solution:***

- Lubricate the shaft through the gap between the pump casing and the motor.
- Often when the system shuts down the drive will command a “zero-speed” to the motor for a period of time before it goes to sleep. That whine you hear is the noise a motor makes when a drive commands zero speed in a running condition. VFD/pump packages exhibit this behavior to some extent – it’s not indicative of a problem.

***VFD Issue:***

- There is a noise coming from the Yaskawa VFD.

***Solution:***

- The VFD has a built in fan which is used to cool down the internals. The fan is programmed to turn on & off when it reaches certain temperatures, the pump does not necessarily need to be running.