SOSYSTEMS

Troubleshooting Manual

LooLoop Wastewater Treatment System

An SOSystems Technologies Product

181 Harry S Truman Pkwy
Suite 275
Annapolis, MD 21401

Trouble Shooting and Repair: LooLoop Treatment System

This trouble shooting and repair manual is written to help you identify the cause of system problems that may occur at times. Whenever a problem is identified, it is important to take steps to eliminate the cause. Note that all areas of installation, including those typically the responsibility of the contractor, excavator, electrician, plumber, and owner are covered. It is possible that many problems have root causes other than the system or its components.

The trouble shooting guide provides efficient solutions to most wastewater treatment problems when used with the recommended inspection procedures performed by a LooLoop representative.

Operational Trouble Shooting

Mud or Silt in the System

Possible Cause	Solution
Influent sewer line separated at a joint or fitting	Have contractor excavate and repair
Sewer line crushed	Have contractor excavate and replace

Septic Odor

Possible Cause	Solution
Incomplete treatment due to hydraulic overloading	See “Hydralulic Overloading”
Insufficient flow from pump to BioFilter	Clean spray nozzle Open all valves Clear pump intake Restore pump operation

Hydraulic Overloading

Possible Cause	Solution
Ground water entering system	Install curtain drain to lower water table Install new water tight septic tank Repair defective valves in building Disconnect sump pump from sewer line Raise or regrade around tank risers to shed water Disconnect roof leaders, footing drains, garage drain, basement floor drain, yard drains from septic system

Controller Pump Alarm Activated

Possible Cause	Solution
Pump fails to start	Check pump wire connections Replace pump
Pump motor failure	Replace pump
High water level in LooLoop tank	Blockage in leaching system

No Electrical Power from Electrical Disconnect to Controller

Possible Cause	Solution
Circuit breaker tripped	Turn breaker to “off” position, then turn “on”
Defective circuit breaker	Replace circuit breaker
Power connection from disconnect to controller	Locate break and repair

No Electrical Power from Controller to Pump

Loose wiring connection	Check all connections Pump plug not inserted in Controller receptacle properly

LooLoop System Repair Guide

The LooLoop wastewater treatment system has been designed to be the most robust, effective, easy to operate and maintain, yet technically simple onsite wastewater treatment system on the market today. If you find a component of this system does not meet expectations and needs to repaired or replaced. please contact the LooLoop representative. The LooLoop representative will provide any replacement components and installation services.

The following section provides instructions on replacing each of the key LooLoop system components:

Spray Nozzle - see Figure 1.

Preparation: PPE required is limited to rubber gloves.

Step 1. Turn the pump off by opening the circuit breaker box (located behind the door of the BioFilter Cabinet) and turning power to the pump and controller off.

Step 2. The spray nozzle is accessed by lifting the lid of the BioFilter Cabinet, and securing the lid in the open position with the stainless steel bar located inside the top of the cabinet. The location of the nozzle (see Figure 1) is at the end of the pipe that enters through the wall at the front of the cabinet.

Step 3. Removal of the nozzle itself requires an adjustable open end wrench to loosen the nozzle followed by manually unscrewing. Remove the spray nozzle by unscrewing the nozzle from the piping.

Step 4. Replacement requires the application of teflon tape to the threads on the nozzle and manually screwing the nozzle into the pipe fitting. Extreme tightening with a wrench is not required, hand tight is recommended.

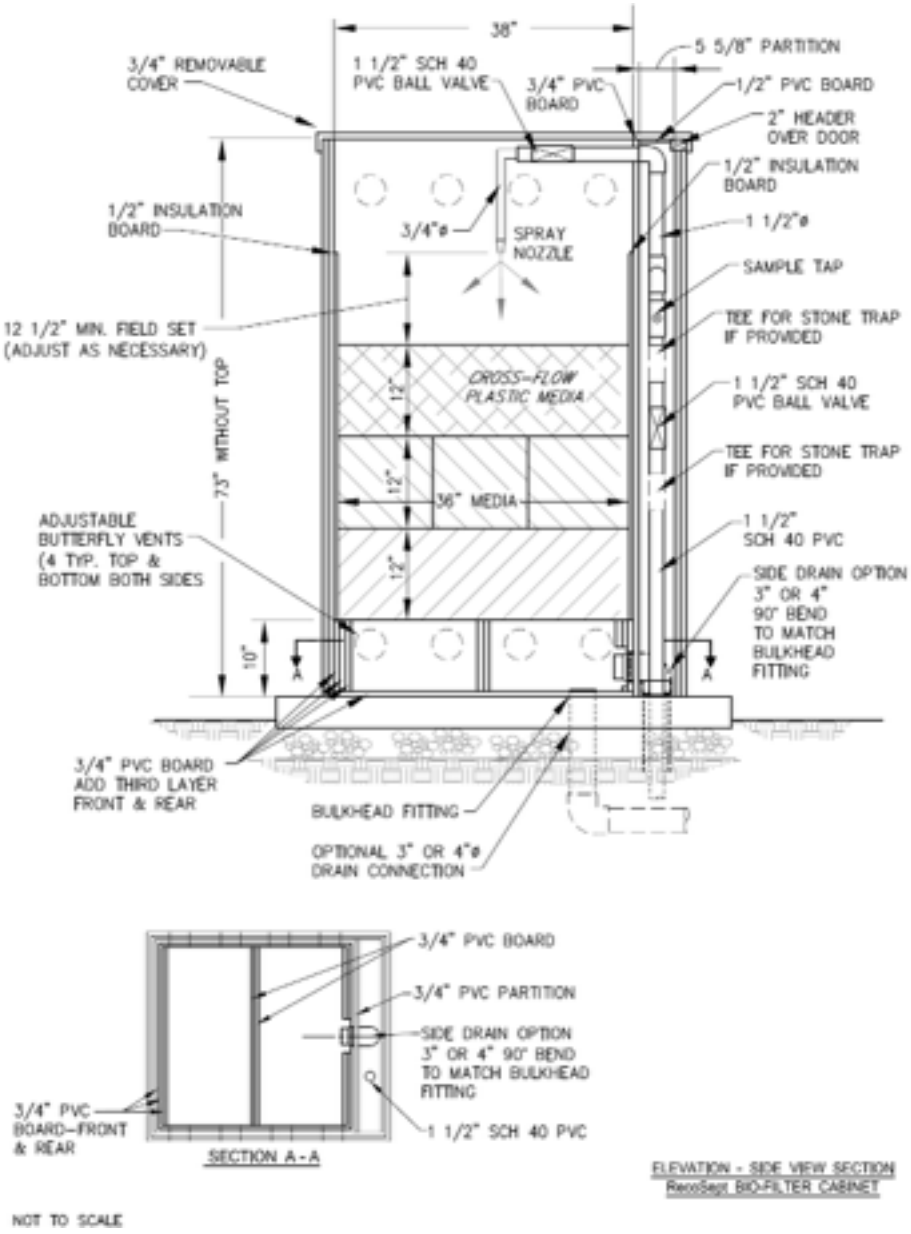


Figure 1. LooLoop BioFilter Side View Section

Filter Media - see Figure 1.

Preparation: PPE required includes Tyvek or other protective outer garment and rubber gloves

Filter media should not require removal, however, if removal is required, remove the spray nozzle feed pipe from the nozzle to a point just inside of the wall where it enters the BioFilter Cabinet.

Step 1. Turn the pump off by opening the circuit breaker box (behind the door of the BioFilter Cabinet) and turning power to the pump and controller off.

Step 2. The spray nozzle and filter media are accessed by lifting the lid of the BioFilter Cabinet, and securing the lid in the open position with the stainless steel bar located inside the top of the cabinet.

Step 3. Remove the spray nozzle feed pipe from the nozzle to a point just inside of the wall where it enters the BioFilter Cabinet.

Step 4. The filter media is installed loose and can be lifted out bale by bale. The top layer is removable by reaching down into the BioFilter Cabinet and lifting the bales out. The next two layers may require entry of the BioFilter Cabinet to lift the bales out one by one. A second person equipped with similar PPE is required to re- ceive the filter media bales as they are lifted out. Care should be taken to prevent damage to the filter media bales when entering the BioFilter Cabinet. If any of the filter media bales are damaged, replace with new.

Step 5. Unpack the cross flow filter media. Install the first layer of three bales - oriented front to back. The 2 subsequent layers should be installed at 90 degrees to the one below. The cross flow media requires no special handling, fastening or restraint.

Step 6. Reinstall the spray nozzle piping section by gluing pipe fitting to connect the piping section to the inlet piping.

Step 7. Turn the breaker for the pump back on, turn the pump on and observe the spray pattern. The spray should appear cone shaped and uniform throughout the pattern. A poorly formed spray may be due to low pres- sure. Adjust the pressure using the valve on the supply pipe.

Pump - see Figure 2.

Preparation: PPE required includes Tyvek or other protective outer garment and rubber gloves.

Step 1. Turn the pump off by opening the circuit breaker box (usually behind the door of the BioFilter Cabinet) and turning power to the pump and controller off.

Step 2. To remove the pump, begin by removing the manway cover on the LooLoop tank (Tank 2).

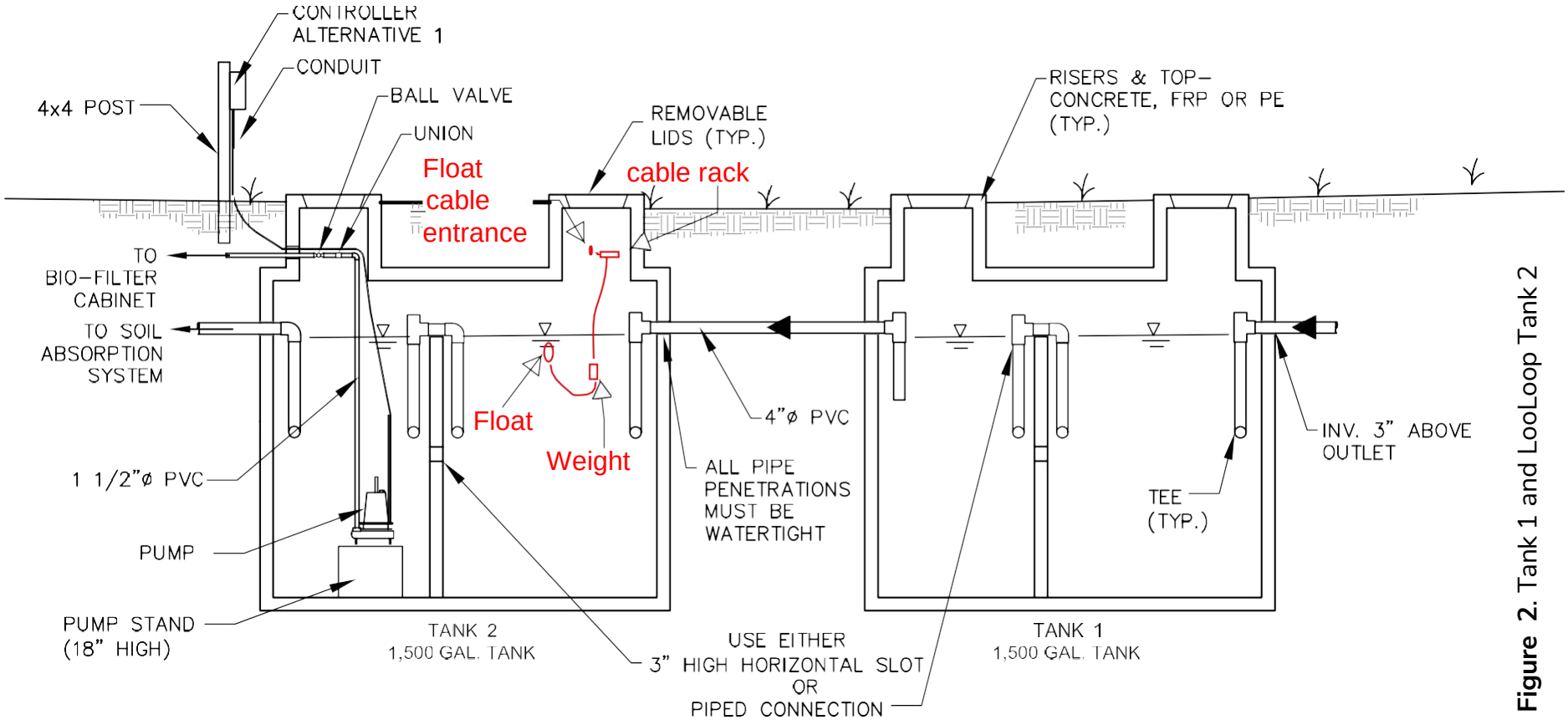
Step 3. Disconnect the pipe union on the pump discharge pipe. The union may be found on the vertical or horizontal pipe.

Step 4. Locate the lifting rope for the pump and using the rope and the discharge pipe lift the pump from the tank.

Step 5. Install the discharge pipe on the pump. Step 6. Install the pump in the tank.

Step 7. Reconnect the pump to the outlet piping.

Step 8. Turn the breaker for the pump back on, turn the pump on.



SEPTIC TANK INSTALLATION

NOT TO SCALE

Figure 2. Tank 1 and LooLoop Tank 2

Level switch -

Preparation: PPE required includes Tyvek or other protective outer garment and rubber gloves.

Step 1. Turn the pump and controller off by opening the circuit breaker box (behind the door of the BioFilter Cabinet) and turning power to the pump and controller off.

Step 2. To remove the level switch, begin by removing the manway cover on the LooLoop tank (Tank

2). Step 3. Remove the float level switch and counterweight.

Step 4. Unpack the float level switch and counterweight. To ensure the proper function of the float switch, it is necessary to secure the electric cable inside the tank as illustrated in Figure 3. The length of the cable measured between the fixture point and the body of the float switch assembly determines the total extension of the float. It is essential to ensure the there are no obstructions in the float switch operational area before operation. During operation, adjustments to the float switch cable must not be made under any circumstances, due to the fact that any unwanted cable connections made while the float switch is immersed in liquid can lead to electric shock.

Step 5. Before feeding the cable through the conduit to the BioFilter Cabinet, slip the counterweight onto the float cable, turning it. This will result in the detachment of the plastic ring inserted in the mouth (if necessary insert a screwdriver to aid in the detachment of the ring.) Place the ring at the point on the cable where the counterweight is to be attached. Leave enough slack in the cable to allow adjustment of the float and counter- weight depth. Set the float/counterweight length. Set the length of the incoming cable to the counterweight by gathering the slack in a loop. Attach the cable loop to the cable hanger mounted to the inside of the riser. Con- nect with a nylon wire tie. Note: the length of cable between the float and fixed point can be freely adjusted.

Step 6. Attach the counterweight on the ring by turning it and using moderate pressure.

Step 7. Attach the float switch to a cord and raise and lower the float switch. Adjust the ON level by changing the position of the weight provided with the switch.

LooLoop Treatment System

SOSystems requires that maintenance and repair activities on the LooLoop treatment system be performed by a qualified and trained representative. The Field Maintenance Report must be completed following any maintenance and repair activities and forwarded to SOSystems, 181 Harry S Truman Pkwy, Suite 275, Annapolis, MD 21401.

Owner Name: _____ Location Address: _____ Date: _____

Representative: _____

Maintenance Performed (Repair and/or Replace):

Notes: