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## **Fleck 2510 Manual Sediment Filter Installation & Start-Up Guide**

Thank you for purchasing a Clean Water System! With proper installation and a little routine maintenance your system will be providing neutral pH water for many years.

Your new system comes with a printed Fleck Service manual, which along with this start-up guide will help guide you in the installation and start-up of your new system. The Fleck service manual covers other types of systems as well such as water softeners and filters, so there may be information in your Fleck service manual that does not pertain to your system. Please review this start-up guide entirely before beginning to install your system and follow the steps outlined for best results.

**SEDIMENT MEDIA CONTAINS DUST. USE PAPER MASK AND VENTILATE TO AVOID BREATHING DUST.**

### **Questions?**

Call us toll-free: 1-888-600-5426 or 1-831-462-8500

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## Table of Contents

Packing List .....	3
Pre-Installation .....	4
Best Practices for Piping & Drain Installation .....	4
How Your Sediment Filter Works .....	5
Fig 1 .....	5
Fig 2: .....	6
Fig 3 .....	7
Fig 4: .....	7
Assembly and Installation Instructions .....	8
Timer Setting and Initiating a Manual Backwash Procedure .....	10
How To Set Days On Which Sediment Filter Is To Regenerate: .....	10
How To Set The Time Of Day .....	10
How To Manually Backwash Your Sediment Filter At Any Time .....	10
Troubleshooting the Fleck 2510 Sediment Filter .....	11
Low Water Pressure: .....	11
Does NOT remove sediment: .....	11
What to Do If Your Filter Tank Does Not Sit Level on the Floor: .....	11

### **Packing List**

#### **Sediment Filter 1.0 cubic foot size**

Quantity 1 Fleck 2510 Backwash Control Valve with Bypass Assembly and Pipe connector kit (1" or  $\frac{3}{4}$ ")

Quantity 1 10" x 44" filter tank with distributor tube

Blue media funnel for adding the Chemsorb media

1 cubic foot of Chemsorb media

#### **Sediment Filter 1.5 cubic foot size**

Quantity 1 Fleck 2510 Backwash Control Valve with Bypass Assembly and Pipe connector kit (1" or  $\frac{3}{4}$ ")

Quantity 1 10" x 54" filter tank with distributor tube

Blue media funnel for adding the Chemsorb media

1.5 cubic foot of Chemsorb media

#### **Sediment Filter 2.0 cubic foot size**

Quantity 1 Fleck 2510 Backwash control Valve with Bypass Assembly and Pipe connector kit (1" or  $\frac{3}{4}$ ")

Quantity 1 12" x 52" filter tank with distributor tube

Blue media funnel for adding the Chemsorb media

2.0 cubic foot of Chemsorb media

#### **Sediment Filter 2.5 cubic foot size**

Quantity 1 Fleck 2510 Backwash Control Valve with Bypass Assembly and Pipe connector kit (1" or  $\frac{3}{4}$ ")

Quantity 1 13" x 54" filter tank with distributor tube

Blue media funnel for adding the Chemsorb media

2.5 cubic foot of Chemsorb media

### **Pre-Installation**

1. Review your packing list and make sure you have received all the parts before beginning installation.
2. If you are going to be turning off the water to the house and you have an electric water heater, shut off the power to the water heater before beginning installation in case water heater is accidentally drained.
3. Pick a suitable location for your filter system on a dry level spot where it won't be exposed to freezing temperatures. A minimum of 20 PSI is required. Maximum pressure is 90 PSI.
4. Get all of your plumbing parts together before beginning installation. Installation typically takes 3 to 5 hours. However after installation the Sediment Backwash Filter must be allowed to run through a complete backwash and rinse cycle.
5. After the system is installed and running, your water may be discolored, or full of sediment or rust, particularly if this is older or corroded piping. Typically this clears up over a day or two.

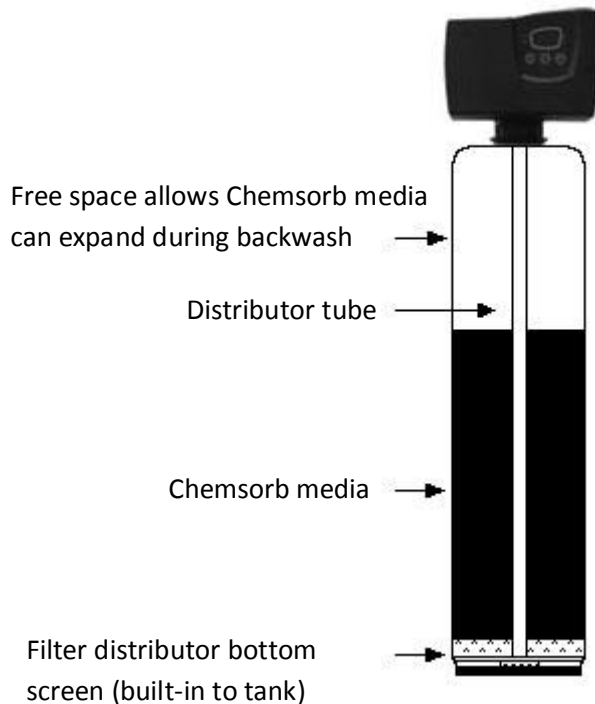
### **Best Practices for Piping & Drain Installation**

1. See typical installation (see Fig 2). The Sediment Filter is installed after the pressure tank.
2. Make sure to follow to connect the in pipe to the Fleck 2510 inlet and the outlet to the outlet (see Fig 2). As you face the Fleck 2510 control from the front, the water enters on the right and exits on the left. From the back (see Fig 2) the water enters on the left. The inlet and outlet are attached to the bypass valve which is marked with arrows as well.
3. Make sure there is a working gate or ball valve before the Fleck 2510 Sediment Filter and also one after as shown in the diagram Fig 2. The pressure gauges are optional and perhaps not necessary but a hose bib (which is a faucet that you can attach a garden hose to) is strongly recommended after the Sediment Filter before the second ball valve. This makes it easy to rinse your new Sediment Filter on start-up and gives you a place to test the water before it enters your household plumbing.
4. If you will be using copper piping, do not sweat the copper pipe directly on to the Fleck 2510 control valve. Avoid heating up the Fleck 2510 control valve plastic with the torch.
5. You do not need unions to install your Fleck 2510 control. If you need to remove it, the Fleck 2510 has quick-release couplings that make it easy to put the Sediment Sediment Filter on by-pass and remove the filter system from the piping.
6. The drain line tubing (not supplied) is connected to a drain from the drain outlet using flexible ½" ID tubing. Note that the drain can run up above the Fleck 2510 control and into a drain, it does not have to drain down, as the filter backwashes under line pressure from your well pump. Most plumbing codes require an air-gap connection, so that if your sewer or septic tank backs up, it cannot cross connect with the drain tubing.

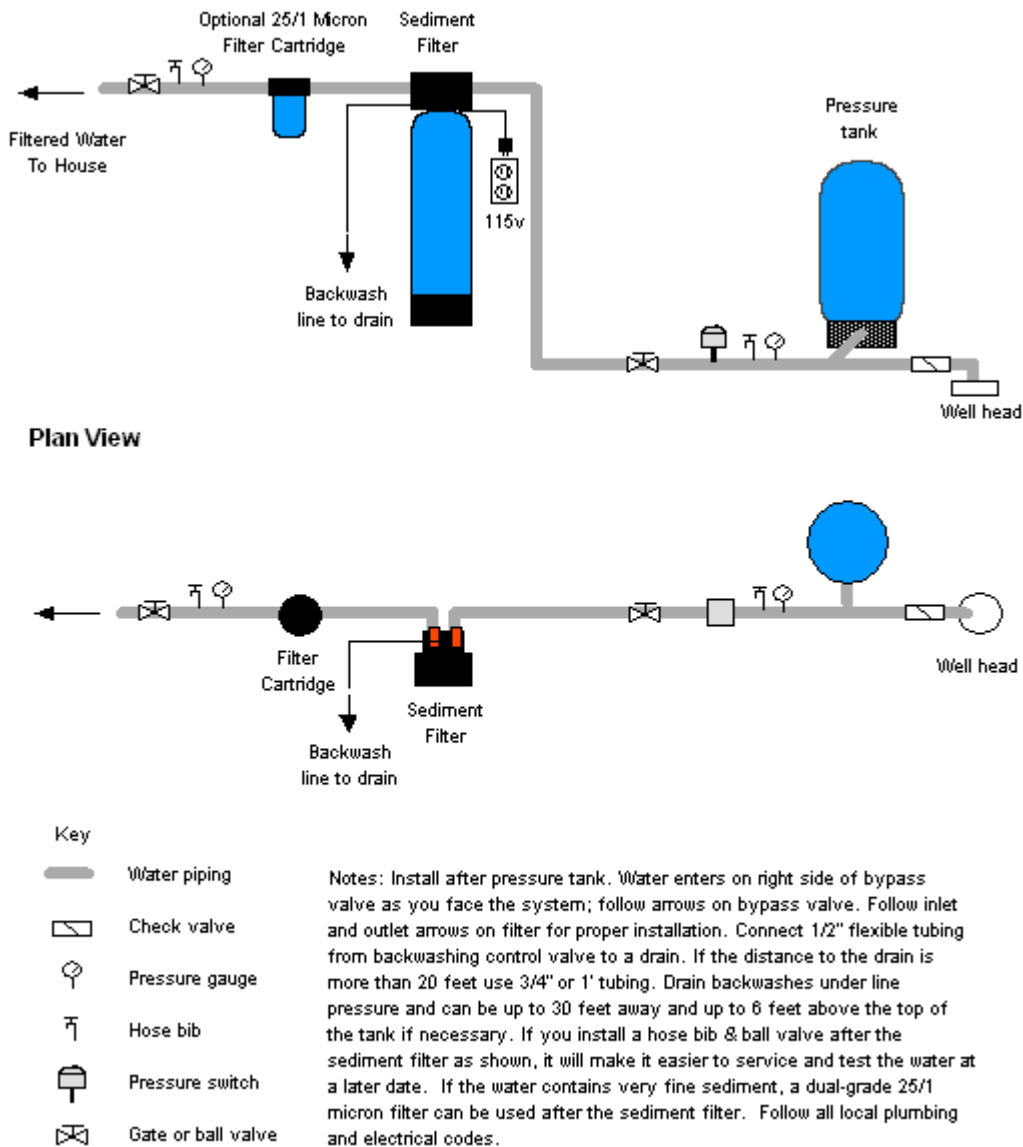
### How Your Sediment Filter Works

See Fig 1. In your Sediment Filter the water enters the top of the tank and flows down through the media and up the distributor tube. The downflow type Sediment Filter removes sediment and can be backwashed, which cleans and re-classifies the Sediment, preventing channeling. During backwash, the water flow is reversed and water flows down the distributor tube and up through the media, lifting and expanding the Sediment media. During the backwash the Sediment is cleaned by the action of the water flowing through it.

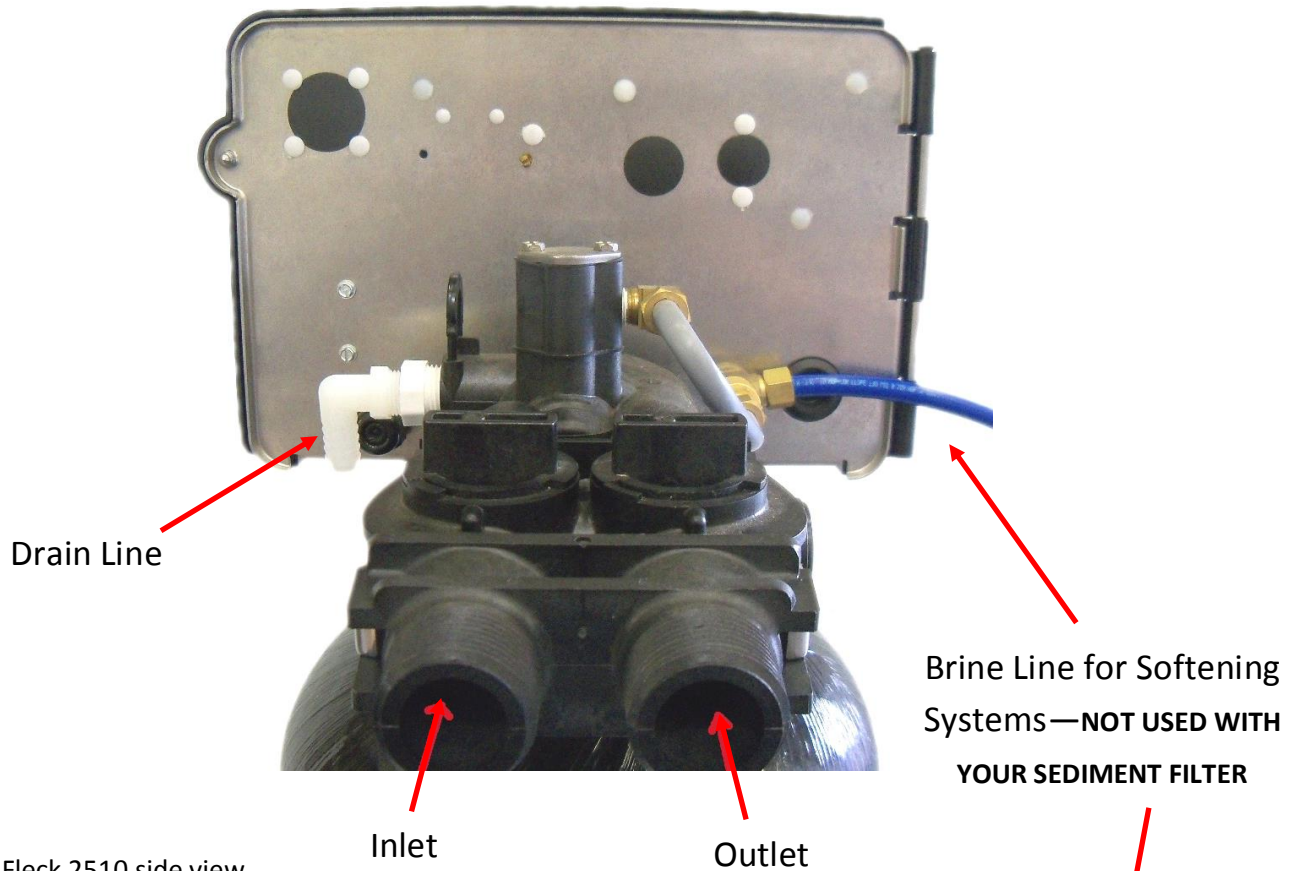
**Fig 1:** Sediment Filter Tank



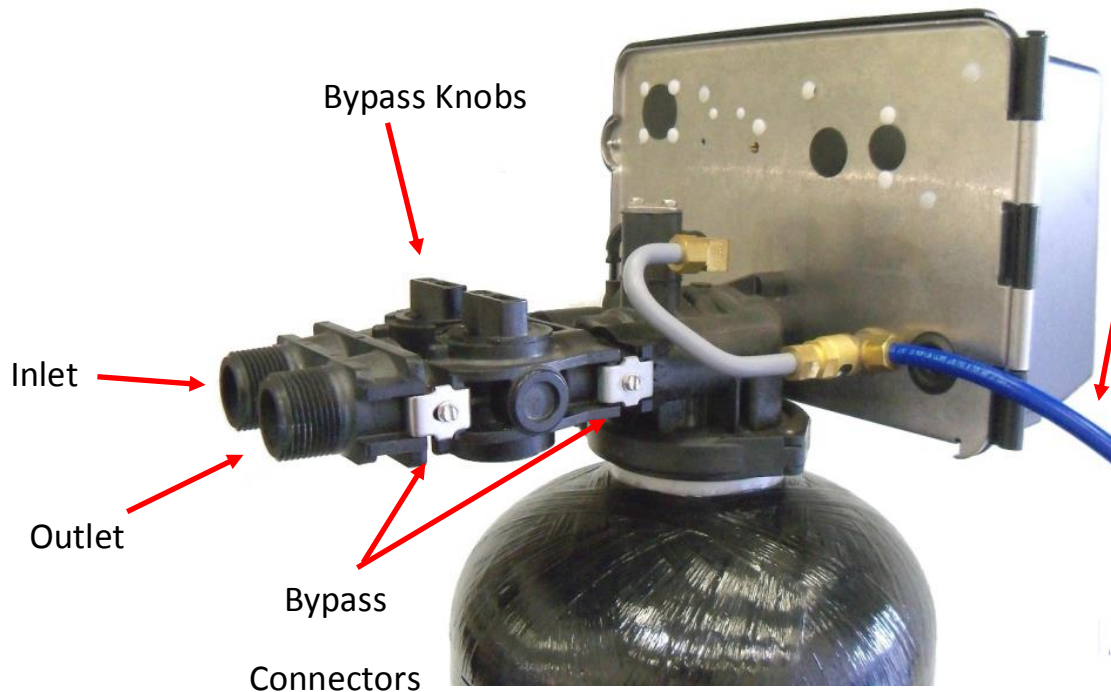
**Fig 2:** Typical Sediment Filter Fleck 2510 piping installation with ball valve and hose bib after the filter



**Fig 3:** Fleck 2510 from the rear showing the inlet and outlet end-connector fittings 1" or 1-1/4" NPT in Noryl plastic. Brass end-connectors are also available for connecting to copper tubing.



**Fig 4:** Fleck 2510 side view

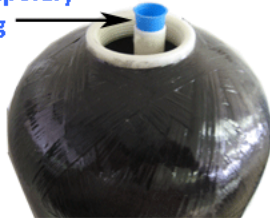


## Assembly and Installation Instructions

1. Unscrew by hand the entire Fleck 2510 control valve from top of tank if it was shipped screwed on. Place distributor tube in tank if not already inside tank. If not already done, make sure blue cap is on top of distributor tube, or wrap the top of distributor tube with electrical or duct tape. You do not want Sediment to go down the distributor tube.

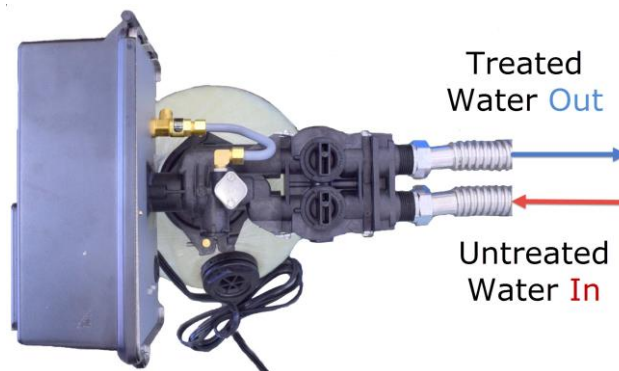
Plug or tape top of distributor tube to prevent media from entering distributor tube when adding media. Remove when finished.

Temporary plug

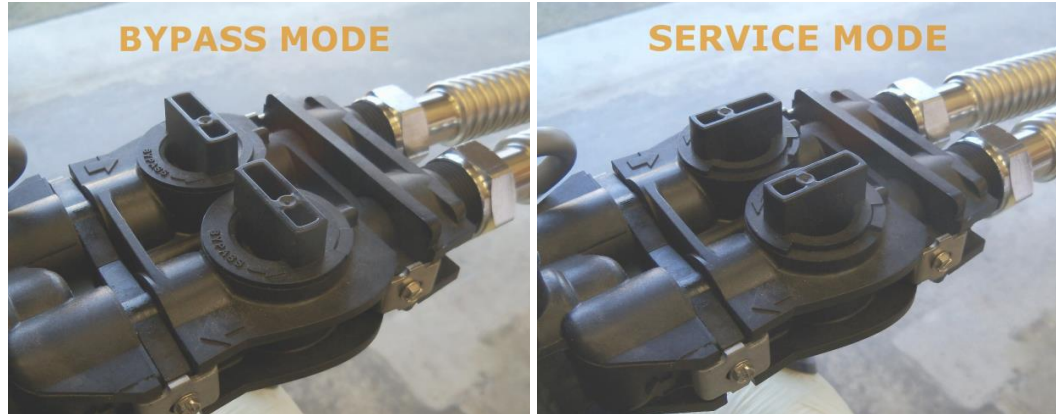


2. Next add Sediment filter media (Chemsorb). The tank will be about 2/3rds full of media.
3. Remove cap or tape from top of distributor tube. Be careful not to pull up distributor tube when removing cap or tape.
4. If possible at this point, fill tank completely with water. This will allow the Sediment Filter media to settle and eliminate the need of "purging" the air out of the tank later.
5. Screw on Fleck 2510 control valve carefully. Do not use pipe-joint compound, Teflon tape, or Vaseline or other petroleum greases to lubricate tank threads.
6. Lubricate the by-pass valve o-rings with some vegetable oil or silicone grease and connect the bypass assembly to the Fleck 2510 control by sliding the bypass valve firmly into the body of the Fleck 2510. Secure each side with metal adapter coupling and screw.
7. Now install your water pipes to the Fleck 2510 bypass end connectors. Make sure inlet is installed to the 'In' pipe connector on the bypass valve and outlet is on the "Out" connector. **Note:** Arrows on

bypass valve should be visible from the top of the bypass valve.







8. Note that the Fleck 2510 is usually shipped in the bypass position. You can easily tell if it is in bypass when the knobs are perpendicular to flow. When in service position, knobs are parallel to water flow (note above).
9. Connect some flexible tubing from the drain connection on the Fleck 2510 control valve to a suitable drain such as a septic tank or drain to a sewer. It is OK to run the drain line up and over the Fleck 2510 Sediment Filter up to 4 feet above the top of the tank. If the drain line will be more than 20 feet, use larger diameter tubing such as  $\frac{3}{4}$ " or 1". Note that it is desirable to be able to run the drain line into a bucket in order to test the backwash flow rate in the future. This is why hard piping the drain line is discouraged, however, if you do use hard PVC piping for the drain line, and you are able to remove the hard PVC drain piping and attach flexible tubing should you ever desire for testing purposes, it is OK to use rigid PVC pipe for the drain. Make sure the drain tubing is firmly clamped to the barbed fitting with a hose clamp to prevent leaks.
10. **For the 2.0 and 2.5 cubic foot systems only: these larger tank systems have an external stainless steel flow control that comes with the system.** This must be installed. If you have a 1.0 or 1.5 cubic foot system, the flow control is internal and there is no external drain flow control.

### **Stainless Steel Flow Control (2.0 and 2.5 Cubic Foot Systems Only)**



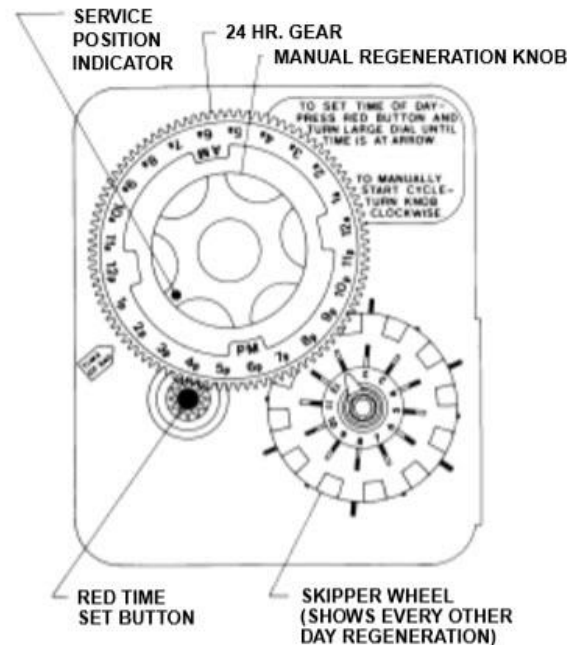
## Timer Setting and Initiating a Manual Backwash Procedure

### How To Set Days On Which Sediment Filter Is To Regenerate:

Rotate the skipper wheel until the number "1" is at the red pointer. Set the days that regeneration is to occur by sliding tabs on the skipper wheel outward to expose trip fingers. Each tab is one day. Finger at red pointer is tonight. Moving clockwise from the red pointer, extend or retract fingers to obtain the desired regeneration schedule.

### How To Set The Time Of Day

- Press and hold the red button in to disengage the drive gear.
- Turn the large gear until the actual time of day is at the time of day pointer.
- Release the red button to again engage the drive gear.



### How To Manually Backwash Your Sediment Filter At Any Time

- Turn the manual regeneration knob clockwise.
- This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.
- The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.
- Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set only one half of this time.
- In any event, filtered water may be drawn after rinse water stops flowing from the sediment drain line

## **Troubleshooting the Fleck 2510 Sediment Filter**

### **Low Water Pressure:**

Make sure it is backwashing frequently enough, in some cases every 1 to 2 days is necessary.

Check backwash flow rate: One problem that may occur is if you do not have enough backwash flow rate to properly clean the Sediment Filter. You can verify the backwash flow rate by running the drain line into a bucket and timing it when the Fleck 2510 is in Cycle 1 or backwash. A 1.0 or 1.5 cubic foot system should have 7 gallons per minute and a 2.5 cubic foot system should have 10 gallons per minute of backwash at a minimum.

Check programming: In some cases, the Fleck 2510 may not be programmed correctly. See the Fleck 2510 service manual for instructions on how to access the master programming.

### **Does NOT remove sediment:**

Make sure it is not on bypass, see bypass valve positions (page 6)

Fleck 1.03" adapter when using a Vortech tank is missing. Remove control valve and make sure o-ring on Fleck 2510 valve that seals around distributor tube is present, and is sealing tightly around distributor tube.

In some cases the sediment may be too small to be removed by the filter. One way to determine that the filter system is working is to run it for one or two weeks until the pressure drops after the filter. Then manually backwash and observe the backwash water. If the filter has been removing sediment, the backwash water will be quite dirty and full of sediment. If the backwash is clean, then the particles are less than 5 to 10 microns, and an alum injection system is required to clump the particles together into a larger 5 to 10 micron form.

### **What to Do If Your Filter Tank Does Not Sit Level on the Floor:**

Your black filter tank base is not glued to the bottom of your tank. Occasionally tank bases will become crooked during shipment. If you find that that your tank does not sit level on the floor, you can easily adjust it by holding the empty tank and rapping it on a concrete or solid floor once or twice in order to level it.

### **How To Remove Media From the Control Head**

Sometimes, when doing the Initial Backwash, the media gets lifted up into the control head. You can tell this happened because you will have little or no flow, either going out to drain while in the backwash position, or when in the service position.

To remove media from a control head, do the following:

- 1) Put the Inlet Bypass in the Closed position.
- 2) From the Service Mode, initiate a manual regeneration, by pressing and holding the regen button (button on far left).

- 3) The valve will advance to the BW (backwash) position, and start counting down. Press the Regen button again, and wait for the valve to advance and stop at the Rapid Rinse (RR) position.
- 4) With the valve in the RR position, open and close the Inlet Bypass valve several times. After the third or fourth time, leave it in the open position and check the drain line- do you have a good solid flow? 90% of the time, the answer is yes, but sometimes, even after opening and closing the valve many times, you still don't have good flow... But, in either case (good or no flow), continue...
- 5) With the Inlet Valve OFF, Advance the valve back to Service position again, and again press and hold the Regen button, we are putting the valve back to the Backwash position.
- 6) Open the Inlet valve just enough so you can hear the water passing thru the valve- you should notice a corresponding slow flow out of the drain line. After a minute, if there are no air bubbles present, open the valve about another quarter inch- again, you should see a corresponding increase in the flow... And you will continue until the valve is full open.

**IMPORTANT:**

Any time that you are in the Backwash or Rapid Rinse position, you may need to unplug the power - this will hold the valve in its current position, so it doesn't 'time out' and go to the next position. When you plug the valve back in, after a minute it will return to where it was when you unplugged it (i.e. 2:32 remaining in BW). Understand, it is not possible to jam media into the head while in Rapid Rinse, or Service, just in the Backwash, when the flow direction is reversed.

What you are trying to accomplish, after you have pushed the media back in to the tank in the Rapid Rinse position, is to get the Inlet valve all the way open in the Backwash position, without it jamming media back in the head, and this is the part where you have to go slow, open up the Inlet valve a little bit at a time and let it run for a few minutes- this is why you may have to unplug it- and then, once you have done that, finally, do one more backwash, starting with the Inlet valve open, just as it will be when it does it automatically at night. Once it does that successfully, you are done.