



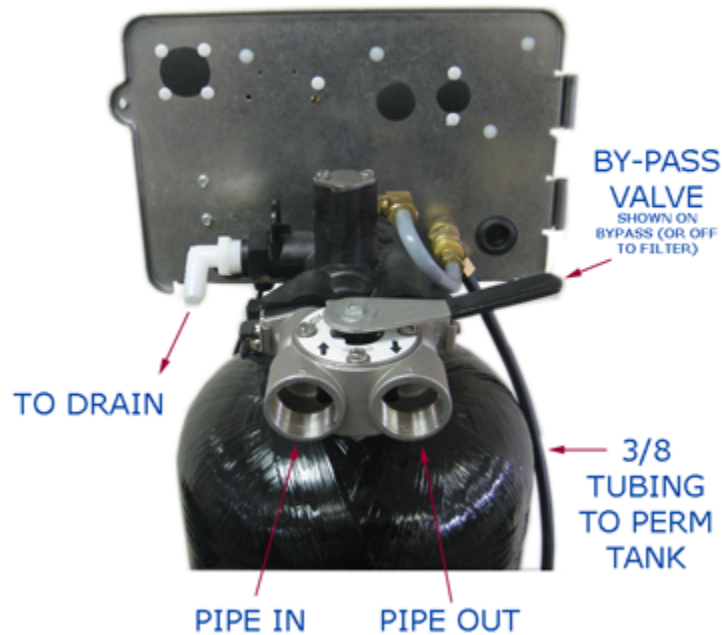
Clean Water Made Easy
www.cleanwaterstore.com

2806-C Soquel Ave Santa Cruz CA 95062
831.462-8500 FAX: 831.476.0832
info@cleanwaterstore.com

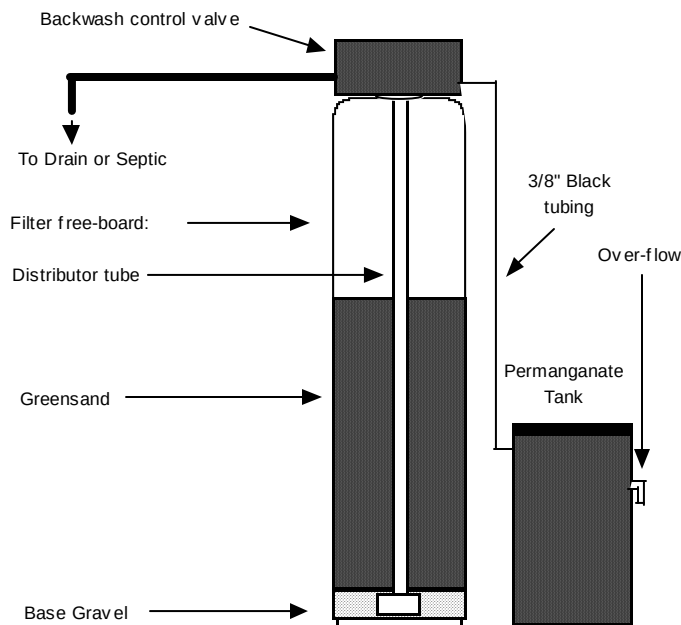
Adding Media & Starting Up Greensand + 2510 Filter with Potassium Permanganate Regeneration

1. Remove control valve and place distributor tube into tank if not already present in tank.
2. Make sure there is a plug or cap on top of distributor tube inside tank or wrap end of distributor tube with a electrical or duct tape to prevent greensand media from entering distributor when pouring in media.
3. Add base gravel using funnel provided, then add greensand media. Tank should be about 2/3rd full.
4. Remove cap or tape from distributor. Do not pull up distributor tube. Screw on control valve until tight, be careful not to cross thread tank. Do not over-tighten and do not use any teflon tape or pipe-joint compound on the threads. Plug in filter backwash control valve into electrical outlet.

GREENSAND CONTROL VALVE 2510



5. Install piping inlet and outlet, being careful to follow arrows on bypass valve showing the in and out piping. Attach a 1/2" flexible tubing line to the drain and connect to a suitable drain, sewer or septic tank. Plug control valve in to a 115v outlet.



6. Attach potassium permanganate solution tank tubing (3/8" black poly tubing) from the permanganate solution tank. You do not have to disassemble the white fitting in order to insert the tube. Loosen the white nut sufficiently in order to slide in the black 3/8" tube until it seats into the fitting, and then hand tighten the white compression nut until tight.

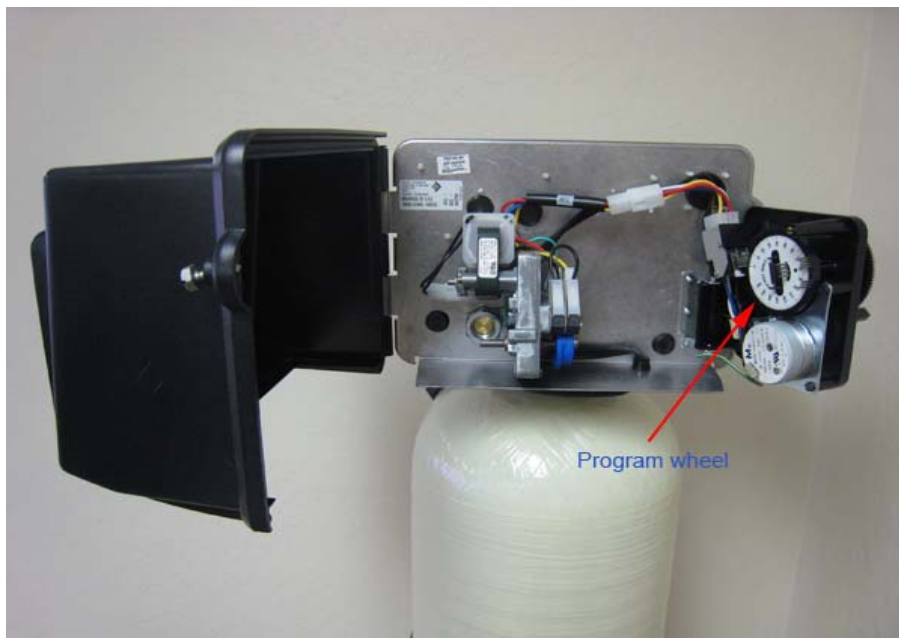


7. Add 1.5 gallons of water to permanganate solution tank. Water will cover the white felt pad. Add one 5-lb jug of potassium permanganate granules to the potassium perm tank by pouring it directly on top of the white felt pad. Do not pour permanganate down the white plastic brine well where the black line is attached.
8. The over-flow on the side of the potassium permanganate tank can be attached to a drain or a bucket if desired. The permanganate tank will not normally or may not ever over-flow, however, if the tank is located in an area where a stain or over-flowing permanganate solution would cause a problem, then a bucket or a tube can be run to a drain or floor pan.

Control valve without cover, showing timer assembly and program knob on front.



Control valve after timer assembly has been swung open to review program on back - no tools required to open.



9. Open timer cover. Swing open timer assembly to view the program wheel. 1 pin or space equates to 2 minutes. The program wheel has come preset and does not need to be changed.

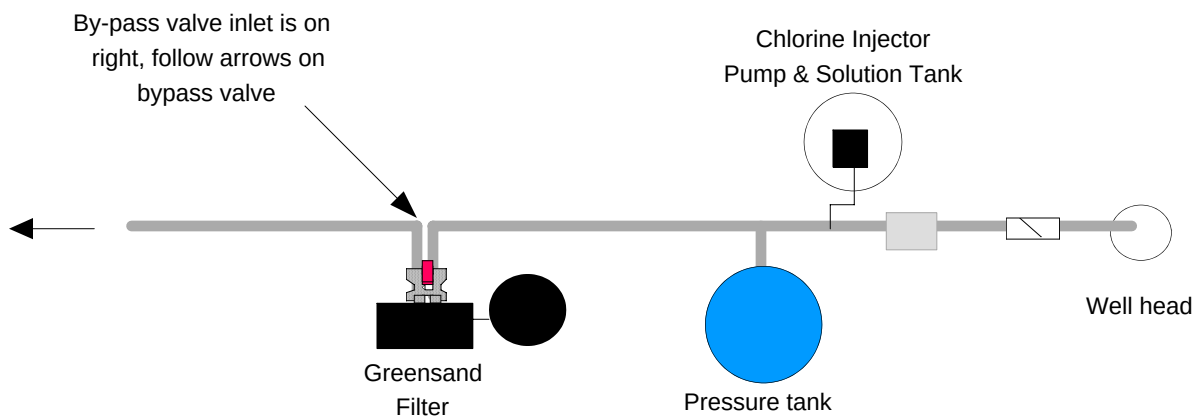
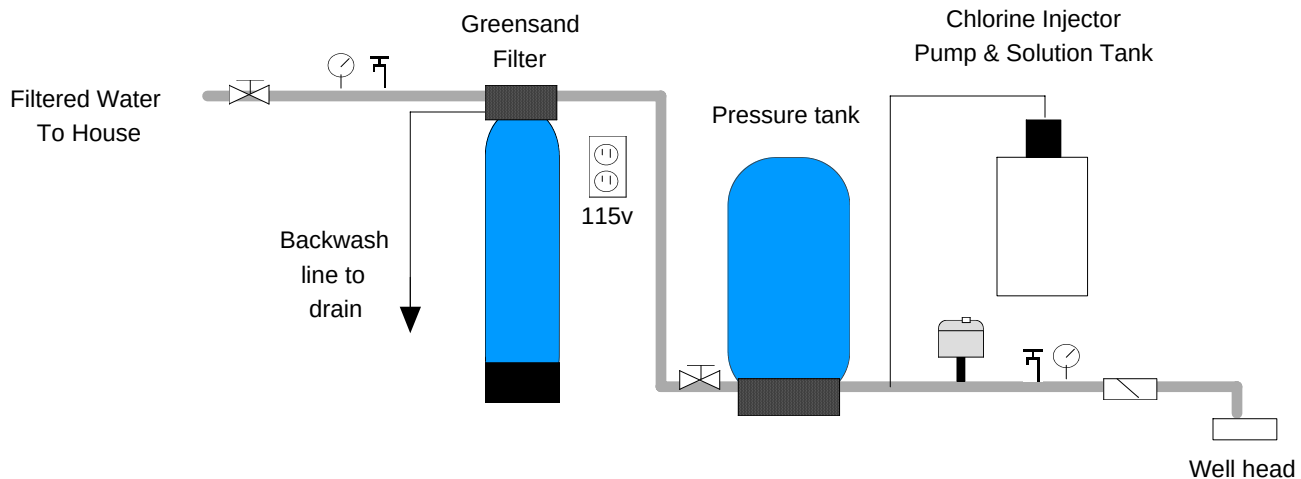
10. Before putting the filter into general use, the greensand-plus filter media needs to be backwashed and regenerated thoroughly with potassium permanganate.
11. Turn manual regeneration control knob on front of timer assembly in center of timer, clockwise a few degrees until you hear and see the control valve go into first position, or backwash position. By having the timer assembly open you can see when you turn the knob on the front, that it turns the program wheel on the back.
12. Turn the manual regeneration knob until it clicks on the first set of pins, which is the backwash cycle.
13. Slowly turn on the water to the filter tank, and allow filter tank to slowly fill with water, removing all air (bypass valve must be in the "Service" which means it is on-line and will fill with water). If you do not have a valve in the piping ahead of the greensand filter which would allow you to turn on the water slowly, you can use the by-pass valve instead and slowly turn the by-pass valve from the by-pass position to the service position. After the filter has backwashed and moved from the first set of pins on the program wheel to the next set of spaces, the control valve will suck in the potassium permanganate solution from the solution tank automatically.
14. Allow to complete one regeneration (which refers to the backwashing, permanganate rinse, and rapid rinse cycles which the Fleck 2510 control valve goes through) which takes 90 minutes.
15. After the regeneration cycle is complete, turn regeneration knob and allow filter to go through one additional regeneration. After the first regeneration, the permanganate tank will have sufficient water to cover the felt pad in the permanganate tank by one or two inches.
14. After the second regeneration is complete, open up a hose bib or a faucet in the house without an aerator, and run water for 5 to 10 minutes until you get clear water, and flush piping and fixtures.
15. Frequency of backwash is controlled by 12 day skipper wheel on front of timer assembly. Typical frequency is once every 4 days for high levels of iron. If the pin is sticking out, on the skipper wheel, then the filter will backwash on that night.
16. Set time of day to real time of day; if set to real-time-of-day, then filter will automatically backwash at 2am.
17. Add potassium permanganate powder as needed, typically every four to six months. When the mound of powder disappears into the purple solution in the tank, you can add another 5 lb container with a month.
18. See maintenance guide, the Fleck 2510 injector, throat and screen should be cleaned once or twice a year, the Clack permanganate tank safety float should be cleaned once per year, and the felt pad in the permanganate tank changed every 1 to 3 years.

Notes:

Often by working on older pipes and turning the water on and off, a significant amount of iron or manganese sludge can dislodge from the household pipes and plug up aerators in fixtures.

Avoid getting the permanganate powder or solution on your hands by using gloves. If your hands become stained, lemon juice will remove the brown manganese stain.

Piping diagram for Greensand-Plus 2510 Filter on a well system with pressure tank:



Key

	Water piping
	Check valve
	Pressure gauge
	Hose bib
	Pressure switch
	Gate or ball valve

Notes: Greensand-Plus iron filters require a chlorine or hydrogen peroxide solution to be injected into the water before the filter system. When the well pump turns on, the chlorine metering pump also turns on and injects 1 to 2 ppm or chlorine for every 1 ppm or iron. For filter installation, follow inlet and outlet arrows on filter for proper installation. Connect 1/2" flexible tubing from backwashing control valve to a drain with an air-gap similar to what a washing machine might require, such as 1 1/2" ABS with a p-trap and vent.

Follow all local plumbing and electrical codes.

IRON FILTER

Timer Setting and Initiating a Manual Backwash Procedure

How To Set Days On Which Carbon 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 the Filter At Any Time:

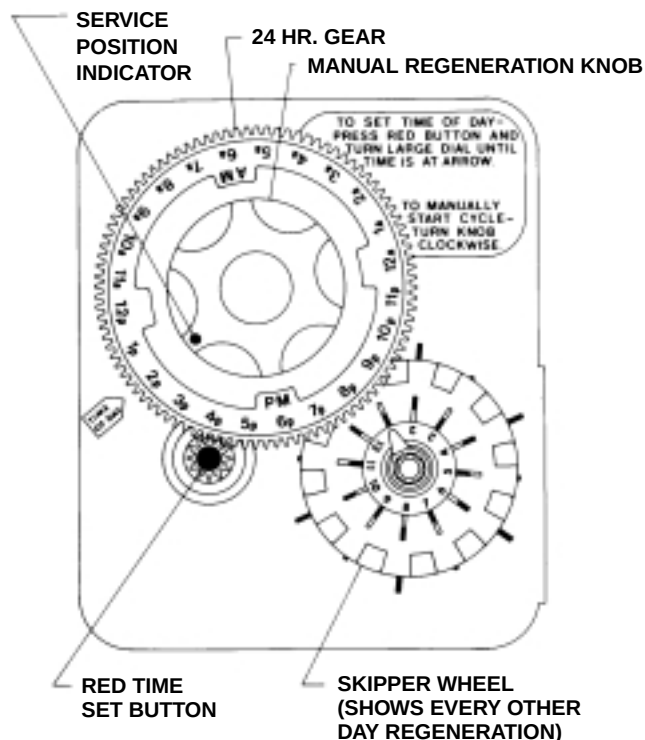
Turn the manual regeneration knob clockwise.

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 carbon drain line.





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Don't Over-Tighten 2510 Control When Installing on Tank

Please Note: When installing Fleck 2510 backwash control-timer valve on to the top of the filter tank, please do not over-tighten.

Tighten with hands, there is no need for a pipe wrench or other wrench.

The control valve is sealed with the o-ring on the base of the control valve. Once you hand-tighten it so the o-ring has sealed against the top of the tank, continue to tighten for perhaps another 1/4 turn until tight.

If the control valve is over-tightened and leaks, the black Slip Ring (see control valve manual, it is #26, part 19197 in the exploded view of the control valve) will need to be replaced.