

ProF1oSE Downflow water softener (5000SE)

Service Instructions

TO REPLACE BRINE VALVE, INJECTORS, AND SCREEN

Turn off water supply to conditioner:

If the conditioner installation has a “three valve” by-pass system, first open the valve in the by-pass line, then close the valves at the conditioner inlet and outlet.

If the conditioner has an integral by-pass valve, put it in the by-pass position.

If there is only a shut-off valve near the conditioner inlet, close it.

Relieve water pressure in the conditioner by stepping the control into the backwash position momentarily. Return the control to the service position.

Unplug electrical cord from outlet.

Disconnect brine tube and drain line connections at the injector body.

Remove the two injector body mounting screws. The injector and brine module can now be removed from the control valve. Remove and discard brine body O-rings.

6A. To replace brine valve.

Pull brine valve from injector body, also remove and discard O-ring at bottom of brine valve hole.

Apply silicone lubricant to new O-ring and reinstall at bottom of brine valve hole.

Apply silicone lubricant to O-ring on new valve assembly and press into brine valve hole, shoulder on bushing should be flush with injector body.

6B. To replace injectors and screen.

Remove injector cap and screen, discard O-ring. Unscrew injector nozzle and throat from injector body.

Screw in new injector throat and nozzle, be sure they are sealed tightly. Install a new screen.

Apply silicone lubricant to new O-ring and install around oval extension on injector cap.

Apply silicone lubricant to three new O-rings and install over three bosses on injector body.

Insert screws thru injector cap and injector. Place this assembly thru hole in timer housing and into mating holes in the valve body. Tighten screws.

Reconnect brine tube and drain line.

Return by-pass or inlet valving to normal service position. Water pressure should now be applied to the conditioner, and any by-pass line shut off.

Check for leaks at all seal areas. Check drain seal with the control in the backwash position.

Plug electrical cord into outlet.

Set time of day and cycle the control valve manually to assure proper function. Make sure control valve is returned to the service position.

Make sure there is enough salt in the brine tank.

Start regeneration cycle manually if water is hard.

TO REPLACE TIMER

Follow Steps A.1 through A.3.

Remove the control valve back cover. Remove the control valve front cover. Disconnect the meter dome signal wire from the front cover and feed it back through the control.

Remove screw and washer at drive yoke. Remove timer mounting screws. The entire timer assembly will now lift off easily.

Put new timer on top of valve. Be sure drive pin on main gear engages slot in drive yoke.

Replace timer mounting screws. Replace screw and washer at drive yoke. Replace meter signal wire.

Return by-pass or inlet valving to normal service position. Water pressure should now be applied to the conditioner, and any by-pass line shut off.

Replace the control valve back cover.

Follow Steps A.12 through A.15.

TO REPLACE PISTON ASSEMBLY

Follow Steps A.1 through A.3.

Remove the control valve back cover. Remove the control valve front cover. Disconnect the meter dome signal wire from the front cover and feed it back through the control.

Remove screw and washer at drive yoke. Remove timer mounting screws. The entire timer assembly will now lift off easily. Remove end plug retainer plate.

Pull upward on end of piston yoke until assembly is out of valve.

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Service Instructions (Contd.)

TO REPLACE PISTON ASSEMBLY (Cont'd.)

Inspect the inside of the valve to make sure that all spacers and seals are in place, and that there is no foreign matter that would interfere with the valve operation.

Take new piston assembly as furnished and push piston into valve by means of the end plug. Twist yoke carefully in a clockwise direction to properly align it with drive gear. Replace end plug retainer plate.

Place timer on top of valve. Be sure drive pin on main gear engages slot in drive yoke.

Replace timer mounting screws. Replace screw and washer at drive yoke.

Return by-pass or inlet valving to normal service position. Water pressure should now be applied to the conditioner, and any by-pass line shut off.

Replace the control valve back cover.

Follow Steps A.12 through A.15.

TO REPLACE SEALS AND SPACERS

Follow Steps A.1 through A.3.

Remove the control valve back cover. Remove the control valve front cover. Disconnect the meter dome signal wire from the front cover and feed it back through the control.

Remove screw and washer at drive yoke. Remove timer mounting screws. The entire timer assembly will now lift off easily. Remove end plug retainer plate.

Pull upward on end of piston rod yoke until assembly is out of valve. Remove and replace seals and spacers.

Take piston assembly and push piston into valve by means of the end plug. Twist yoke carefully in a clockwise direction to properly align it with drive gear. Replace end plug retainer plate.

Place timer on top of valve. Be sure drive pin on main gear engages slot in drive yoke.

Replace timer mounting screws. Replace screw and washer at drive yoke.

Return by-pass or inlet valving to normal service position. Water pressure should now be applied to the conditioner, and any by-pass line shut off.

Replace the control valve back cover.

Follow Steps A.12 through A.15.

TO REPLACE METER

Follow Steps A.1 through A.3.

Remove two screws and clips at by-pass valve or yoke. Pull resin tank away from plumbing connections.

Pull meter module out of control valve.

Remove signal wire from meter module, (snap tab on end opposite wire cable).

Apply silicone lubricant to four new O-rings and assemble to four ports on new meter module.

Install signal wire into new meter module.

Assemble meter to control valve. Note, meter portion of module must be assembled at valve outlet.

Push resin tank back to the plumbing connections and engage meter ports with by-pass valve or yoke.

Attach two clips and screws at by-pass valve or yoke. Be sure clip legs are firmly engaged with lugs.

Return by-pass or inlet valving to normal service position. Water pressure should now be applied to the conditioner, and any by-pass line shut off.

Check for leaks at all seal areas.

Follow Steps A.12 through A.15.

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Troubleshooting Guide

SYMPTONS	PROBABLE CAUSE	CORRECTION
1Softener fails to regenerate automatically.	A. Cord plugged into intermittent or dead power source.	A. Connect to constant power source.
Disconnected meter cable.	B. Reconnect cable.	
Defective power cord.	C. Replace cord.	
Defective timer, meter or sensor.	D. Replace or repair	
Regeneration at wrong time.	A. Timer improperly set, due to Power failure.	A. Reset timer.
Loss of capacity.	A. Increased raw water hardness.	A. Reset unit to the new capacity.
Brine concentration and/or quantity.	B. Keep brine tank full of salt at all times. Clean it yearly. Salt may be bridged. If using a salt grid plate ensure refill water is over it.	
Resin fouling.	C. Call dealer, find out how to confirm it, clean the resin and prevent future fouling.	
Poor distribution, Channeling (uneven bed surface).	D. Call dealer. Check distributors and backwash flow.	
Internal valve leak.	E. Call dealer. Replace spacers, seals and/or piston.	
Resin age.	F. Call dealer. Check for resin oxidation caused by Chlorine. Mushy resin.	
Resin Loss.	G Call dealer. Check for correct bed depth. Broken distributors. Air or gas in bed:	
Well gas eliminator	Loose brine line.	
Poor water quality	A. Check items listed in #3.	
Bypass valve open.	H. Close by-pass valve.	

Channeling. I. Check for too slow or high service flow.

Check for media fouling.

High salt usage. A. High salt setting. A. Adjust salt setting.

Excessive water in brine tank. CORRECTION B. See symptom No. 7.

Troubleshooting Guide (Cont'd.)

SYMPTOMS	PROBABLE CAUSE	CORRECTION
Loss of water pressure.	A. Scaling/Fouling of inlet pipe.	
Fouled resin.	E. Clean the resin. Pretreat to prevent.	
Improper backwash.	F. Too many resin fines and/or sediment.	
Call dealer, reset backwash flow rate, and/or adjust time		
Excessive water in brine tank and/or salty water to service.	Plugged Drain Line.	A. Check flow to drain. Clean flow control.
Dirty or damaged brine valve.	B. Clean or replace brine valve.	
Plugged injector.	C. Clean injector and replace screen.	
Low inlet pressure.	D. Increase pressure to allow injector to perform properly (20 psig minimum.)	
Timer not cycling.	E. Replace timer.	
Softener fails to use salt.		
Plugged/restricted drain line.	A. Clean drain line and / or flow control.	
Injector is plugged.	B. Clean or replace injector and screen.	
No water in brine tank.	C. Check for restriction in BLFC. Ensure safety float is not stuck.	
Water pressure is too low.	D. Line pressure must be at least 20 psi.	
Brine line injects air during brine draw.	E. Check brine line for air leaks.	

Internal control leak. F. Call dealer. Check piston, seals and spacers for scratches and dents.

Control cycles continuously. A. Faulty timer. A. Replace timer.

Continuous flow to drain. A. Foreign material in control. A. Call dealer. Clean valve, rebuild unit.

Internal control leak. B. Same as above C. Valvejammed in brine or backwash position.

Timer motor stopped or jammed. Clean or replace pipeline. Pretreat to prevent.

Replace timer motor.

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