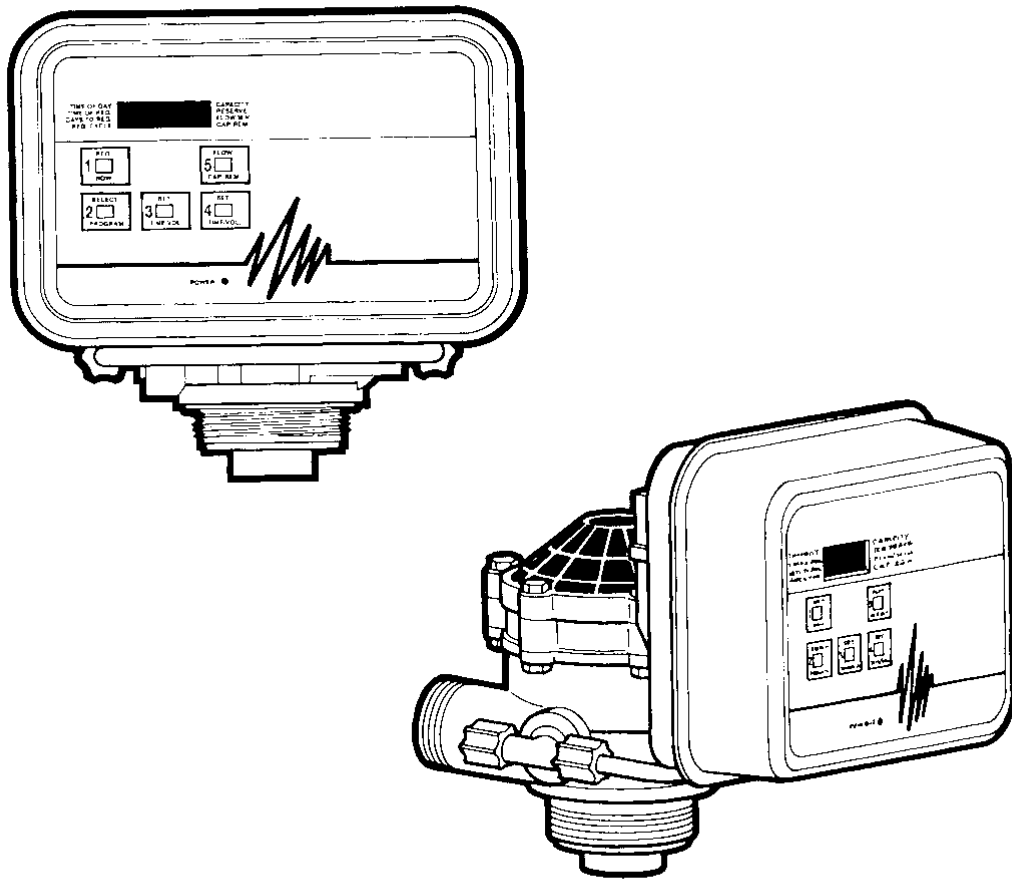


# OPERATING AND SERVICE MANUAL



FOR SYSTEMS USING THE 2001S9 VALVE

## **Assembly:**

1. Cut the top of the riser tube 1/2 inch below the top of the tank threads.
2. Chamfer the tube to prepare it for insertion into the control valve.
3. Verify that the control is equipped with the proper voltage, injector, Back Wash Flow Control, and Brine Line Flow Control.
4. Lower the control straight down onto the riser tube.
5. Grip the valve body and turn the control into the resin tank threads.

## **Installation:**

### **General Information**

1. When facing the front of the control the inlet is to the left and the outlet is to the right.
2. The system pressure must be between 20 psi and 120 psi.
3. If the system pressure is greater than 120 psi a pressure reducing valve must be installed.
4. The unit must be installed in accordance with local codes.
5. Do not over tighten connections.

**Note: Systems installed outside require a weather cover (p/n 568-330-11) for the control power head, not doing so will void the factory warranty.**

### **Drain Line Connection**

1. The drain line I.D. must be at least 1/2".
2. Teflon Tape should be used on the drain fitting.
3. Drain line must be free of kinks.
4. The drain line may be run a maximum of 48" above the top of the control valve.

### **Brine Line Connection**

1. An air check is required for proper operation during regeneration.
2. If a safety float is used it must be set high enough to prevent premature shutoff during the brine fill cycle.

### **Bypass Connection**

1. Insure that the bypass is in the service position prior to operating the unit.

2. DO NOT use Teflon tape when connecting the fitting kit to the integral bypass connections.
3. If the fitting kit provides a sweat connection, care must be taken to prevent the bypass manifold and the fitting kit union nut from melting.  
**Note: Do not connect the fitting kit to the bypass prior to sweat fitting the copper adapter.**
4. Place a wet rag over the copper tube and the Noryl nut prior to heating the tube.

### **Fitting Kit Connection**

1. DO NOT use Teflon tape when connecting the fitting kit to the control valve.
2. If the fitting kit provides a sweat connection, care must be taken to prevent the Noryl nut from melting.
3. Place a wet rag over the copper tube and the Noryl nut prior to heating the tube.

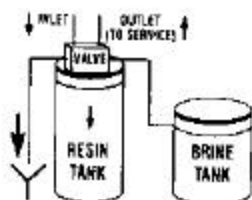
### **Start Up:**

1. Insure that the bypass valve is secured in the "bypass" position.
2. Verify that the control valve is in the service position.
3. Open all plumbing connections to allow the free flow of water to the unit.
4. Slowly shift the bypass valve to the service position and secure it.
5. Allow water to completely fill the resin tank.
6. Open a tap and allow softened water to run until all of the air is removed from the system.
7. Once all of the air is removed, close the tap.
8. Follow the Initial Start Up instructions found in the **Programming** section of this manual.
9. Manually advance the control valve to the backwash position and allow water to run to drain for a period of 3 - 4 minutes.
10. Using a pail, fill the brine tank with water to the top of the air check.
11. Manually advance the control valve to the brine/slow rinse position.
12. Allow the control valve to draw water from the brine tank until the air check checks.
13. Manually advance the control valve to the Fast Rinse / Brine Fill position.
14. Allow the control valve to fill the brine tank and return to service automatically.
15. Add the appropriate amount of salt to the brine tank.

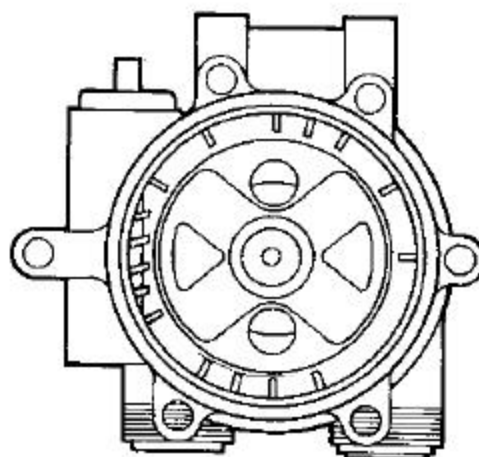
# Cycle Flow Diagrams

## 1. Service (Downflow)

The service cycle position directs untreated water to flow down through the mineral tank and up through the riser tube. The water is conditioned/filtered when passing through the mineral tank.

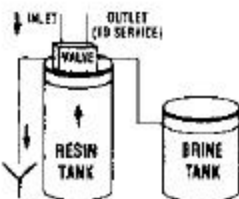


In service, the Cam/Rotor ports are located directly over the valve body ports.

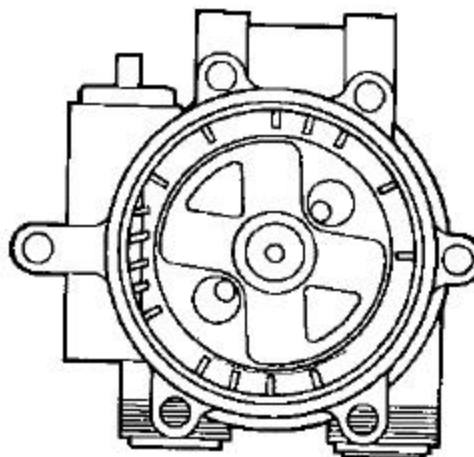


## 2. Backwash (Upflow)

The backwash cycle directs water down the riser tube and up through the media in the mineral tank. Any debris and/or filtered material are flushed from the media during this cycle.



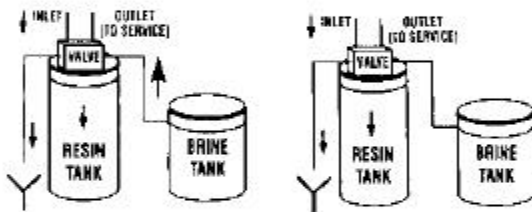
In backwash, the Cam/Rotor has rotated 45 degrees placing the port over both backwash ports in the valve body.



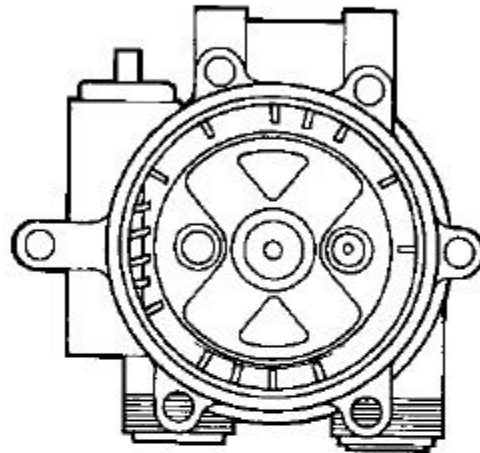
### 3. Brine/Slow Rinse (Downflow)

In softener systems, brine is drawn from the brine tank and flows down through the media in the mineral tank and up through the riser tube. This process regenerates the media. Brine is drawn until the air check in the brine tank closes.

Once the air check closes the system is in slow rinse. This does not involve any movement within the control. The slow rinse cycle consists of a slow flow of water down through the media and up through the riser tube.

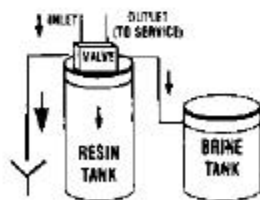


In brine/slow rinse, the Cam/Rotor has now rotated 90 degrees from the service position, placing the cam/rotor ports over the injector and hard water bypass ports.

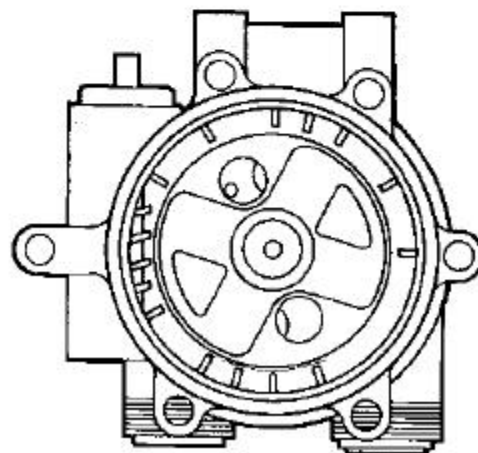


### 4. Fast Rinse/Brine Refill (Downflow)

Timed brine refill and fast rinse occur simultaneously. The fast rinse cycle directs water down through the media and up through the riser tube to remove any remaining brine. Brine refill occurs as water is allowed to flow to the brine tank.



In fast rinse, the Cam/Rotor ports are now located partly over the service ports and refill ports.



# **Programming:**

## **Models S8, S9, F8, F9**

### **DEMAND REGENERATION WITH DAY OVERRIDE**

#### **General Information**

The control valve is designed to initiate regeneration according to the pre-set factory parameters. Following the instructions contained in this section will allow the installer to customize the program for the users exact needs.

The control valve utilizes a standard 9 volt alkaline battery to maintain the correct time in the event of a power failure. The battery will maintain any customized settings. If the battery is dead, the control program will revert to the factory default settings in the event of a power interruption.

When the battery is weak, the liquid crystal display will flash on and off.

#### **Initial Start Up**

1. Remove the battery case retaining screw from the upper portion of the battery case. Lift the upper portion of the battery case away from the back plate.
2. Place a standard 9 volt alkaline battery in the upper portion of the battery case.
3. Press the upper portion of the battery case and the battery down on to the lower portion of the battery case to connect the battery to the terminals.
4. Re-install the retaining screw.
5. Plug the control into the power supply
6. The display will show 1000 GAL (4000 LIT).
7. Press button #1 .

**Note: This must be done within 30 seconds after connecting the control to power or the control will initiate a regeneration.**

If the control begins a regeneration sequence before button #1 is pressed, press button #3 and button #5

simultaneously, followed by button #1. The control will cycle directly back to the service position.

8. The control is now ready for customized programming.

#### **Factory Default Settings**

The following factory default settings are pre-programmed into the control valve.

Time Of Day:	8:00 a.m.
Time Of Regeneration:	2:00 a.m.
Total Capacity:	1000 Gal. 4000 Liters
Reserve Capacity:	200 Gal. / 800 Liters
Days Override:	4 Days
Cycle 1:	10 minutes (S8, S9) 20 minutes (F8, F9)
Cycle 2:	60 minutes (S8, S9) 1 minute (F8, F9)
Cycle 3:	5 minutes

#### **Programming**

The programmable functions are accessed by pressing button #2. The various functions are then increased or decreased by using button #3 and button #4.

The following functions are presented in the order they will appear when pressing button #2.

#### **Time Of Day**

1. Press button #2. The display will show 8:00 AM.
2. Press button #3 to set the hours.
3. Press button #4 to set the minutes.

#### **Time Of Regeneration**

1. Press button #2. The display will show 2:00 AM.
2. Press button #3 to adjust the hours.
3. Press button #4 to adjust the minutes.

#### **Total Capacity**

1. Press button #2. The display will show 1000 GAL (4000 LIT).
2. Press button #3 to increase the capacity setting in 100 Gal. (400 Liter) increments.
3. Press button #4 to decrease the capacity setting in 100 Gal. (400 Liter) increments.

**Note:** The capacity setting must match the total exchange capacity of the unit.

## Reserve Capacity

1. Press button #2. The display will show 200 GAL (800 LIT).
2. Press button #3 to increase the reserve setting in 10 Gal. (40 Liter) increments.
3. Press button #4 to decrease the reserve capacity in 10 Gal. (40 Liter) increments.

**Note:** The reserve capacity should be set to match the water usage for a 24 hour period. The average person uses 75 Gal. (300 Liters) of water daily.

## Days Override

1. Press button #2. The display will show 4.
2. Press button #3 to increase the cycle time in 1 day increments.
3. Press button #4 to decrease the cycle time in 1 day increments.

## Cycle 1 - Backwash

1. Press button #2. The display will show 1:10 for Models S8 and S9. The display will show 1:20 for Models F8 and F9.
2. Press button #3 to increase the cycle time in 1 minute increments.
3. Press button #4 to decrease the cycle time in 1 minute increments.

## Cycle 2 - Brine / Slow Rinse

1. Press button #2. The display will show 2:60 for Models S8 and S9. The display will show 2:01 for Models F8 and F9.
2. Press button #3 to increase the cycle time in 1 minute increments.
3. Press button #4 to decrease the cycle time in 1 minute increments.

## Cycle 3 - Fast Rinse / Brine Fill

1. Press button #2. The display will show 3:05.
2. Press button #3 to increase the cycle time in 1 minute increments.
3. Press button #4 to decrease the cycle time in 1 minute increments.

**PROGRAMMING IS NOW COMPLETE.**

**Note:** In the event that you are called away during programming the control valve will return to the Service Display mode after 90 seconds of no activity. All programmed settings will be retained. To return to the programming mode press button #2 until the appropriate function setting is displayed.

## Service Display

The control valve has three (3) available display settings. They are:

- Time Of Day
- Capacity Remaining
- Flow Rate (gpm / lpm)

The Service Display can be changed by pressing button #5 when the unit is in the service mode. The selected display will be shown at all times except during regeneration.

## Delayed Regeneration

When the water usage indicates that a regeneration is required the control valve will initiate a delayed regeneration.

A **flashing** cursor will appear in the lower left hand corner of the display. This will indicate that the control will begin regeneration at the pre set Time Of Regeneration.

## Immediate Regeneration

A regeneration may be initiated at any time by pressing button #1 when the unit is in the service mode.

A **solid** cursor will appear in the lower left hand corner of the display indicating that a regeneration has been initiated. The control will begin regeneration in approximately 30 seconds.

## Power Interruption During Regeneration

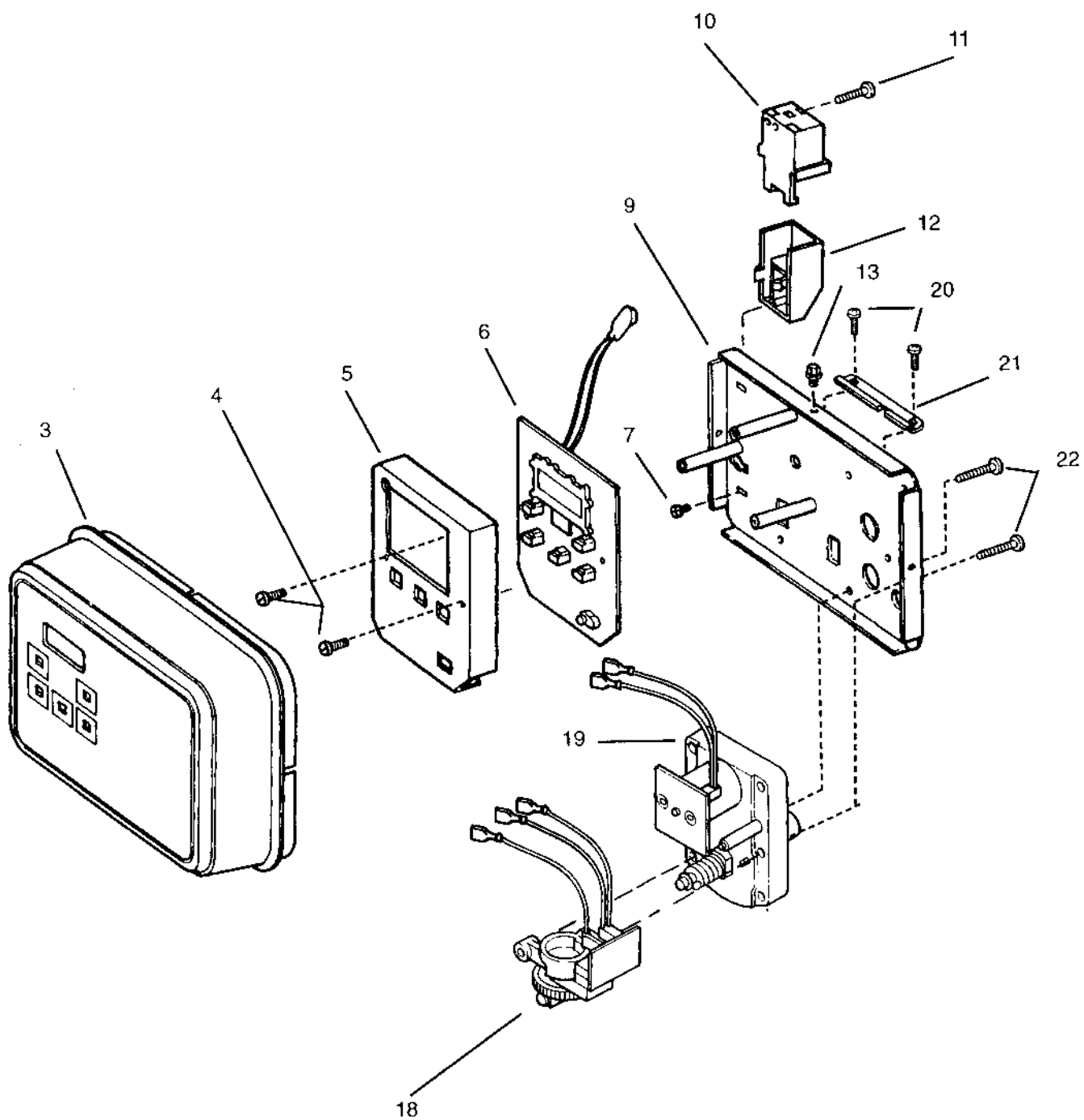
The battery backup feature is designed to retain all custom settings during power interruptions. The display will not appear during power outages. When power is resumed, a cursor will appear in the lower left hand corner of the display window. The display will continue to remain blank, (except for the cursor) until the control cycles directly back to the service position. After one minute the control will then cycle to the backwash position. The display will show the Cycle 1 display and the control will initiate a complete regeneration per the custom settings.

## ELECTRONIC POWER HEAD PARTS LIST

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
3.	568-360-*	Timer Cover	1
4.	15-179-2	Screw, Circuit Board	2
5.	570-247	Insulator Board	1
6.	2001-227-**_E	Circuit Board	1
7.	15-102	Screw, Battery Box, Small	1
9.	568-376-3	Back Plate/Support Post Assembly	1
10.	570-224-1	Battery Box, Upper	1
11.	15-180-20	Screw Battery Box, Large	1
12.	570-221	Battery Box, Lower	1
13.	15-41-1	Screw, Timer Cover	3
18.	568-396	Cam/Switch & Bracket Assembly	1
19.	568-394	Drive Motor	1
20.	15-131	Screw, Back Plate Mount	2
21.	568-399	Support Bracket	1
22.	15-222	Screw, Motor/Switch Mount	2

\*-- Specify Standard or Custom

\*\*-- Specify Model



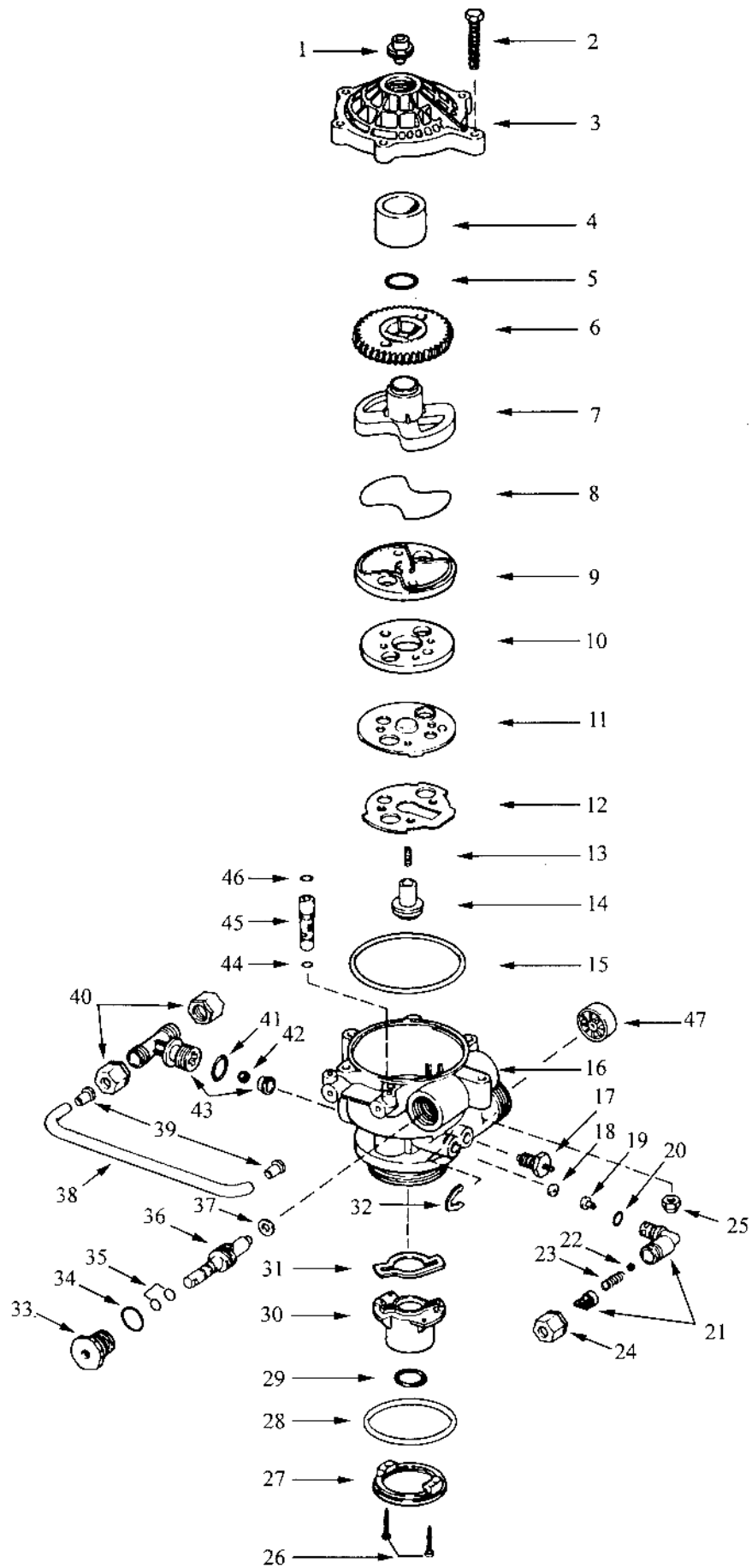


## VALVE BODY PARTS LIST

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1.	568-271-*	Backwash Flow Control	1
2.	568-223	Bolt, Valve Cover	6
3.	568-254-3	Valve Cover	1
4.	568-332	Sleeve	1
5.	186-112	O-ring, White	1
6.	568-260	Worm Gear	1
7.	568-259	Cam	1
8.	185-041-1	O-ring, Cam/Rotor	1
9.	568-345-2	Rotor Plate	1
10.	568-256	Seal Plate	1
11.	568-383	Insert Plate	1
12.	568-384	Gasket, Insert Plate	1
13.	51-5-105	Spring	1
14.	568-270-6	Float Valve / O-Ring Assembly	1
15.	185-154-1	O-ring, Valve Cover	1
16.	568-253	Valve Body	1
17.	568-408	Mixing Valve Assembly (optional)	1
18a.	432-30	Flow Controller, 0.25 GPM	1
18b.	432-31	Flow Controller, 0.5 GPM	1
18c.	432-32	Flow Controller, 1.0 GPM	1
19.	568-385-2	Flow Controller Retainer	1
20.	186-118	O-ring, Refill Elbow	1
21.	568-336	Refill Elbow / Retainer	1
22.	568-275	Check Ball, Refill Elbow	1
23.	413-62	Spring, Refill Elbow	1
24.	21-88	Compression Nut, 3/8"	1
25.	568-224	Nut, Valve Cover	6
26.	15-207-12	Screw, Adapter	2
27.	541-232	Adapter, Upper Distributor	1
28.	185-337-1	O-ring, Tank	1
29.	185-214-1	O-ring, Riser	1
30.	568-334	Riser	1
31.	570-251	Gasket, Riser	1
32.	541-254	Retainer Clip	1
33.	568-216-3	Packing Gland Nut	1
34.	185-211-1	O-ring, Packing Gland	1
35.	186-115	O-ring, Worm Drive Shaft	2
36.	568-208-2	Worm Drive Shaft	1
37.	14-43	Washer, Worm Drive Shaft	1
38.	0041-014	Brine Refill Tube	1
39.	21-108	Insert, Refill Tube	2
40.	21-88	Compression Nut	2
41.	185-208-1	O-ring, Check Tee	1
42.	26-47-12N	Check Ball, Check Tee	1
43.	568-340	Check Tee/Retainer	1
44.	185-011-1	O-ring, Injector, Lower	1
45.	568-215-**	Injector	1
46.	186-107	O-ring, Injector, Upper	1
47.	3001-219	Meter Assembly	1

\* -- Specify Flow Rate Size

\*\* -- Specify Size



# **Troubleshooting Guide:**

<b>Symptom / Cause</b>	<b>Solution</b>
<b>1. Unit Fails To Regenerate</b>	
A. Faulty electrical supply.	A. Verify electrical service (fuse, circuit breaker, light switch, pull chain, power cord).
B. Meter not functioning properly.	B. Clean and/or replace meter assembly.
C. Defective circuit board.	C. Replace circuit board.
D. Defective drive motor.	D. Replace drive motor.
E. Low inlet pressure.	E. Verify that service inlet pressure is a minimum of 20 psi.
F. Drain line is restricted.	F. Insure that drain line is free of kinks. Index control to backwash and verify flow rate.
G. Plugged backwash flow control (BWFC).	G. Inspect BWFC to insure it is free of debris.
H. The injector is plugged.	H. Clean the injector.
<b>2. Hard Water To Service</b>	
A. The bypass valve is open or defective.	A. Insure that the bypass valve is in the service position. Check for leaks and replace if necessary.
B. No salt in the storage tank.	B. Add salt.
C. Not enough water in the brine tank.	C. Verify that refill time corresponds to the proper salt level and amount of media.
D. Unit fails to draw brine.	D. See Symptom/Cause #7.
E. Excessive water usage.	E. Verify capacity and reserve settings.
F. Loss of resin.	F. See Symptom/Cause #4.
G. Meter not functioning properly.	G. Clean and/or replace meter assembly.
H. Change in raw water hardness.	H. Test the raw water hardness and adjust programming accordingly.
I. Leak at the distributor tube.	I. Verify that the distributor tube is seated correctly and is not cracked.
<b>3. Unit Uses Too Much Salt</b>	
A. Improper brine refill setting.	A. Verify that refill time corresponds to the proper salt level and amount of media.
B. Excessive water in the brine tank.	B. See Symptom/Cause #6.
C. Unit regenerating too frequently.	C. Check capacity and reserve settings.
<b>4. Loss Of Resin</b>	
A. Backwash flow controller (BWFC) is missing or incorrectly sized.	A. Verify that the BWFC is installed and is correctly sized for the unit.
B. Air in the system.	B. Verify that the system has an air eliminator. Check a well for dry well condition.
<b>5. Salt Water To Service</b>	
A. Brine/Slow Rinse cycle time set too short.	A. Verify cycle time.
B. Excessive water in the brine tank.	B. See Symptom/Cause #6.
C. Injector plugged or undersized.	C. Clean the injector and verify proper selection.

Symptom / Cause	Solution
<b>6. Excessive Water In The Brine Tank</b> A. Injector is plugged. B. Defective or damaged sealplate.  C. Cam / Rotor assembly is out of synchronization. D. The check ball in the brine tee is dirty. E. Refill cycle set incorrectly. F. Drain line is restricted. G. Plugged backwash flow control (BWFC).	A. Clean and/or replace the injector. B. Replace the sealplate. Follow the procedure detailed in the Parts Replacement section of this manual. C. Synchronize the Cam / Rotor assembly. D. Remove the brine tee and clean the check ball. Inspect tee for debris. E. Verify that the refill time corresponds with the proper salt level and amount of media. F. Insure that drain line is free of kinks. Index the control to backwash and verify flow rate. G. Inspect BWFC to insure it is free of debris.
<b>7. Unit Fails To Draw Brine</b> A. Injector is plugged. B. Loose brine line connection.  C. Drain line is restricted.  D. Low inlet pressure. E. Improper installation of distributor pipe.	A. Clean and/or replace the injector. B. Verify that all brine line connections are tight. C. Insure that drain line is free of kinks. Index the control to backwash and verify flow rate. D. Verify that service inlet pressure is a minimum of 20 psi. E. Verify that the distributor pipe is cut 1/2 inch below the top of the tank threads.
<b>8. Continuous Flow To Drain</b> A. Defective or damaged sealplate.  B. Cam / Rotor assembly is out of synchronization. C. White, Teflon O-ring is missing or damaged. D. Drive motor failure.	A. Replace the sealplate. Follow the procedure detailed in the Parts Replacement section of this manual. B. Synchronize the Cam / Rotor assembly. C. Reinstall or replace. D. Replace the drive motor.
<b>9. Loss Of Water Pressure</b> A. Iron build-up in mineral tank. B. Iron build-up in the line leading to the control valve inlet. C. Lower distributor basket crushed.	A. Clean the resin bed and the control valve. Increase the frequency of regeneration. B. Clean the water line. C. Replace the lower distributor basket. Insure that the top of the distributor pipe is cut 1/2 inch below the top of the tank threads.
<b>10. Control Cycles Continuously</b> A. Defective gear motor microswitch assembly. B. Loose timing cam set screw. C. Defective circuit board.	A. Replace gear motor microswitch assembly. B. Synchronize the power head and the Cam / Rotor assembly. Tighten the set screw. C. Replace the circuit board.

# Parts Replacement:

## General Information

Familiarize yourself with the parts replacement procedures and component parts thoroughly before attempting any repair.

Insure that the unit is in the bypass position and relieve the system pressure before attempting any repair procedure.

**WARNING! Disconnect all electrical power to the unit before attempting any repair procedure.**

## Required Tools

The following tools are required to perform routine maintenance on this control valve:

- 1/2" Socket Drive
- 5/16" Socket Drive
- 1/2" Combination Wrench
- 3/8" Allen Wrench
- Needle Nose Pliers
- Phillips Screwdriver
- Standard Screwdriver
- Adjustable Wrench

## Circuit Board Replacement

1. Disconnect all electrical power to the control.
2. Place the bypass valve in the "bypass" position.
3. Relieve the system pressure.
4. Loosen the three (3) cover screws and remove the cover.
5. Remove the two (2) screws which hold the circuit board in place.
6. Remove the insulator board.
7. Disconnect the impeller cable from the circuit board.
8. Disconnect the wire leads from the circuit board.
8. Remove the battery cable from the battery box.
9. Remove the circuit board.
10. Follow these steps in reverse to reconnect the circuit board.

## Drive Motor Replacement

1. Disconnect all electrical power to the control.
2. Place the bypass valve in the "bypass" position.

3. Relieve the system pressure.
4. Disconnect the meter cable from the valve body.
5. Remove the two (2) screws which secure the back plate to the valve body.
6. Separate the powerhead assembly from the valve body.
7. Loosen the three (3) cover screws and remove the cover.
8. Disconnect the motor leads from the motor circuit board.
9. Remove the two (2) motor mounting screws from the back side of the back plate and remove the drive motor.
10. Follow these steps in reverse to reassemble the drive motor.

## Cam / Rotor & Sealplate Replacement

1. Insure that the control valve is in the service position.
2. Disconnect all electrical power to the control.
3. Place the bypass valve in the "bypass" position.
4. Relieve the system pressure.
5. Remove the six (6) bolts which secure the valve cover.
6. Lift the valve cover away from the valve body.
7. Remove the cam / rotor assembly from the valve cover.
8. The white Teflon o-ring will remain in the valve cover. Inspect the o-ring for wear and replace it if necessary.
9. Separate the worm gear from the cam / rotor assembly.
10. Inspect the cam / rotor surface. The surface should be smooth and free of any circular grooves or scratches.
11. Remove the sealplate from the valve body.
12. Inspect the sealplate. Insure that the raised ribs are intact. The green Teflon coating may be worn off of the ribs. This is normal and will not effect valve performance.
13. Use Dow 111 Silicone Based Lubricant to lightly lubricate the green side of the sealplate.
14. Reinstall the sealplate in the valve body.
15. Insure that the cam / rotor assembly is pressed together securely.
16. Reinstall the worm gear on the cam / rotor assembly.
17. Place the cam / rotor and worm gear assembly into the valve body. Insure that the arrow on the worm gear is pointing directly towards the worm drive.

18. Insure that the two holes in the worm gear are exactly aligned with the corresponding holes in the sealplate.
19. Center the PVC sleeve on the worm gear.
20. Insure that the valve cover o-ring is securely installed in the valve cover.
21. Place the six (6) valve cover bolts into the valve cover.
22. Lower the valve cover straight down onto the valve body. Press down firmly and evenly to seat the valve cover.
23. Install the cover nuts and tighten in a cross pattern.

## Injector Replacement

1. Insure that the control valve is in the service position.
2. Disconnect all electrical power to the control.
3. Place the bypass valve in the "bypass" position.
4. Relieve the system pressure.
5. Remove the six (6) bolts which secure the valve cover.
6. Lift the valve cover away from the valve body.
7. Remove the cam / rotor assembly from the valve cover.
8. The white Teflon o-ring will remain in the valve cover. Inspect the o-ring for wear and replace it if necessary.
9. Separate the worm gear from the cam / rotor assembly.
10. Remove the sealplate from the valve body.
11. Using a needle nose pliers grasp one side of the injector and pull straight up from the valve body. The injector, insertplate and insertplate gasket will remain together.
12. Remove the injector from the insert plate and gasket.
13. If installing a new injector, lightly lubricate both o-rings with a silicone based lubricant.
14. When reinstalling the injector insure that one of the rectangular openings on the injector is facing **directly** towards the center of the valve body assembly.
15. Install the gasket into the valve body. Insure that the holes of the gasket match the holes in the valve body.
16. Install the insertplate on to the gasket. If properly seated, the insertplate will not rock back and forth.
17. Install the sealplate in the valve body.
18. Insure that the cam/rotor assembly is pressed together securely.

19. Reinstall the worm gear on the cam/rotor assembly.
20. Place the cam/rotor and worm gear assembly into the valve body. Insure that the arrow on the work gear is pointing directly towards the work drive.
21. Insure that the two holes in the worm gear are exactly aligned with the corresponding holes in the sealplate.
22. Center the PVC sleeve on the work gear.
23. Insure that the valve cover o-ring is securely installed in the valve cover.
24. Place the six (6) valve cover bolts into the valve cover.
25. Lower the valve cover straight down onto the valve body. Press down firmly and evenly to seat the valve cover.
26. Install the cover nuts and tighten in a cross pattern.

## Backwash Flow Control Replacement

1. Insure that the control valve is in the service position.
2. Disconnect all electrical power to the control.
3. Place the bypass valve in the "bypass" position.
4. Relieve the system pressure.
5. Remove the drain fitting from the valve body.
6. Using a 3/8" allen wrench unscrew the flow control from the valve cover.
7. Follow these procedures in reverse to reinstall the flow control.

## Brine Line Flow Control Replacement

1. Insure that the control valve is in the service position.
2. Disconnect all electrical power to the control.
3. Place the bypass valve in the "bypass" position.
4. Relieve the system pressure.
5. Using a needle nose pliers, remove the retaining clip which secures the brine elbow to the valve body.

**Note: If the retaining clip is bent it must be replaced.**

6. Remove the brine elbow assembly from the valve body.
7. If installing a new brine elbow lightly lubricate the o-ring with a silicone based lubricant.

8. Follow these procedures in reverse to reinstall the brine line flow control assembly.

## **Brine Tee Replacement**

1. Insure that the control valve is in the service position.
2. Disconnect all electrical power to the control.
3. Place the bypass valve in the "bypass" position.
4. Relieve the system pressure.
5. Disconnect the brine tank line from the check tee.
6. Disconnect the brine refill tube from the check tee.
7. Disconnect the Tee by turning counter clockwise.
8. Remove the retainer and check ball.
9. Follow the procedures in reverse to reinstall the brine tee.

## **Meter Replacement**

1. Insure that the control valve is in the service position.
2. Disconnect all electrical power to the control.
3. Place the bypass valve in the "bypass" position.
4. Relieve the system pressure.
5. Disconnect the fitting kit or bypass valve from the control valve inlet / outlet.
6. Using a 5/16" nut driver, remove the meter assembly from the control valve outlet opening.
7. Place the shoulder screw into the meter.
8. Reinsert the meter assembly into the control valve outlet opening.
9. Tighten the shoulder screw until snug. Do not over tighten.