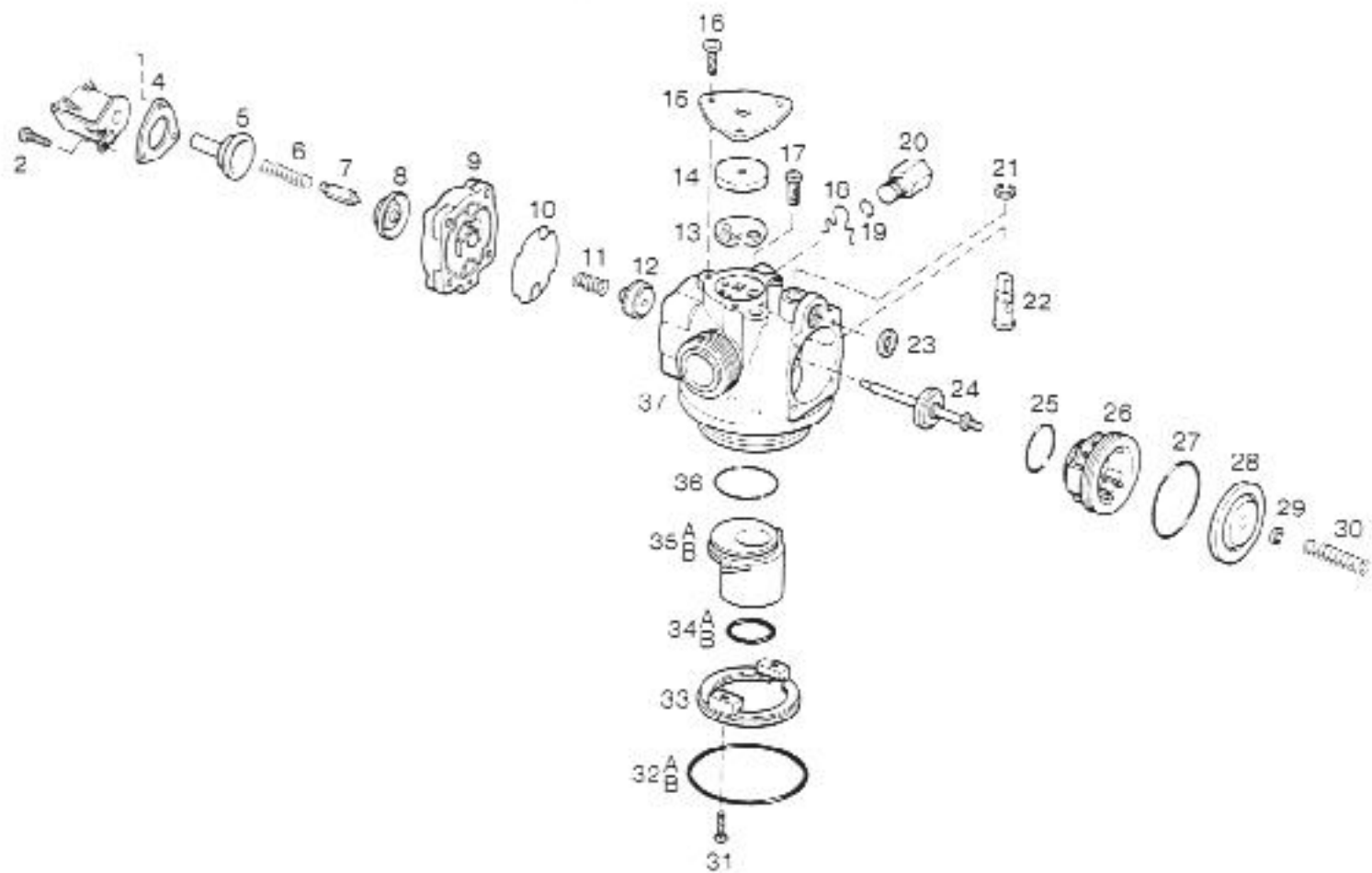


# ELECTROMECHANICAL POWER HEAD PARTS LIST

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1.	15-76	Screw	1
2.	529-309	Time Dial	1
3.	525-303	Spring Washer, (Small)	1
4.	52-308	Locating Dial	1
5A.	529-232-1	Gear, Time of Day (12 Day)	1
5B.	529-232-2	Gear, Time of Day (7 Day)	1
6.	19-3	C-clip	1
7.	529-218	Actuator	1
8.	529-212	Spindle, Actuator	1
9.	529-333-1	Housing, Power Head	1
10.	15-185-10	Screw, Day Selector Wheel	1
11A.	525-274-1	Washer, Day Indicator (12 Day)	1
11B.	525-274-2	Washer, Day Indicator (7 Day)	1
12A.	525-241-2	Day Selector Wheel (12 Day)	1
12B.	525-241-4	Day Selector Wheel (7 Day)	1
13.	525-205	Spring Washer, (Large)	1
14.	15-87	Screw, Head Mount	4
15.	529-239-1	Cycle Cam & Knob Assembly	1
16.	529-219-3	Drain Plunger Assembly	1
17.	401-7	Return Spring, Drain Plunger	1
18.	185-0221-1	O-ring, Plunger Cap	1
19.	529-286	Plunger Cap	1
20.	529-280	Retainer, Drain Plunger	1
21.	15-92-2	Screw, Retainer	1
22.	525-279-4	Switch & Terminal Assembly	1
23.	15-185-10	Screw, Switch	2
24.	15-76	Screw, Timer Motor	2
25.	30-77-_*	Timer Motor	1
26.	516-221	Return Spring, Main Diaphragm	1
27.	15-185-10	Screw, Ratchet	1
28.	14-11	Washer, Ratchet	1
29.	525-260	Ratchet	1
30A.	525-254-2	Gear, Ratchet (12 Day)	1
30B.	525-254-5	Gear, Ratchet (7 Day)	1
31.	529-234-_*	Front Cover	1
32A.	529-220-1	Rear Cover (Gray)	1
32B.	529-220-2	Rear Cover (White)	1
33.	529-290-14BK	Solenoid Cord	1
34.	28-8-28	Strain Relief	1
35.	28-142-2	Power Cord (120 Volt)	1

\* Indicate Voltage

\*\* Indicate Opaque or Clear



# VALVE BODY PARTS LIST

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1.	15-88	Screw, Backcap	4
2.	15-90	Screw, Solenoid Mount	3
3.	413-134-___*	Solenoid Coil (Specify Voltage)	1
4.	413-60	Spacer	1
5.	413-58	Guide	1
6.	413-62	Spring, Plunger	1
7.	413-61	Plunger, Solenoid	1
8.	413-59	Diaphragm, Solenoid	1
9.	541-208-2	Backcap, 5 Cycle Fast Rinse	1
10.	541-206	Seal, Backcap	1
11.	541-239	Return Spring, Check Disc	1
12.	541-246	Check Disc	1
13.	541-325	Gasket, Injector	1
14.	428-__	Injector (Specify Size)	1
15.	541-221	Cover Plate, Injector	1
16.	15-89	Screw, Injector Mount	3
17.	413-13	Filter Screen, Injector	1
18.	541-254	Spring Clip	1
19.	186-111-N	O-Ring, Brine Fitting	1
20.	541-250-1	Brine Fitting	1
21.	19-19	C-Clip, Backwash Flow Adjuster	1
22.	541-243	Backwash Flow Adjuster w/o-rings	1
23.	529-244	Gasket, Cross Over Port	1
24.	541-244	Body Stem Assembly	1
25.	185-024-1	O-Ring (Small), Seat Insert	1
26.	541-204	Seat Insert	1
27.	185-028-12	O-Ring (Large), Seat Insert	1
28.	541-256	Main Diaphragm	1
29.	19-3	C-Clip, Main Diaphragm	1
30.	516-221	Return Spring, Main Diaphragm	1
31.	19-90	Screw, Adapter Ring	2
32A.	185-231-1	O-Ring, Structural Tank	1
32B.	186-106	O-Ring, Park Tank	1
33.	541-232	Adapter Ring	1
34A.	185-211-1	O-Ring, 13/16" Riser Adapter	1
34B.	185-214-1	O-Ring, 1.050" Riser Adapter	1
35A.	541-205	13/16" Riser Adapter	1
35B.	541-218	1.050" Riser Adapter	1
36.	185-029-1	O-Ring(Outside), Riser Adapter	1
37.	541-257-1	Valve Body & Seal	1

\* - Indicate Voltage

# Troubleshooting Guide:

## Symptom / Cause

## Solution

### 1. Unit Fails To Regenerate

- A. Faulty electrical circuit.
- B. Defective clock motor.
- C. Low inlet pressure.
- D. Drain line is restricted.
- E. All skipper tabs in the "out" position.
- F. The brine injector is plugged.
- G. Main diaphragm is torn.
- H. Timer Knob out of alignment with Time Gear.
- I. Defective solenoid coil.

- A. Verify electrical service (fuse, circuit breaker, light switch, pull chain, power cord).
- B. Replace the clock motor. Follow the procedure outlined in the Parts Replacement section of this manual.
- C. Verify that the service inlet pressure is a minimum of 20 psi.
- D. Insure that the drain line is free of kinks. Cycle the control to backwash and verify flow rate.
- E. Push desired number of skipper tabs to the "in" position.
- F. Clean or replace the injector.
- G. Replace the diaphragm.
- H. Realign the Knob and Gear. Follow the procedure outlined in the Parts Replacement section of this manual.
- I. Test or replace the solenoid coil.

### 2. Hard Water To Service

- A. The bypass valve is open or faulty.
- B. No salt in the storage tank.
- C. Not enough water in the storage tank.
- D. Unit fails to draw brine.
- E. Excessive water usage.
- F. Unit not regenerating.
- G. Loss of resin.
- H. Change in raw water hardness.
- I. Leak at the distributor tube.

- A. Close the bypass valve.
- B. Add salt.
- C. Verify that the safety float is properly set.
- D. See Symptom/Cause #6
- E. Check regeneration frequency.
- F. See Symptom/Cause #1.
- G. See Symptom/Cause #4.
- H. Test the water hardness.
- I. Verify that the distributor tube is seated correctly and is not cracked.

### 3. Excessive Salt Usage

- A. Excessive water in storage tank.
- B. Unit regenerating too frequently.
- C. Faulty safety float.

- A. Verify that the safety float is properly set.
- B. Check regeneration frequency.
- C. Replace the safety float.

### 4. Loss Of Resin

- A. Faulty air check in storage tank.
- B. Leak at the distributor tube.
- C. Backwash flow improperly adjusted.

- A. Clean or replace the air check.
- B. Verify that the distributor tube is seated correctly and is not cracked.
- C. Verify the backwash flow.

### 5. Salt Water To Service

- A. Brine/Slow Rinse cycle time set too short.
- B. Excessive water in the storage tank.
- C. Brine injector undersized.

- A. Verty the cycle time.
- B. Verify that the safety float is adjusted correctly and operating properly.
- C. Verify proper injector selection.

### 6. Control Fails To Draw Brine

- A. Brine injector is plugged.
- B. Filter screen plugged.
- C. Loose brine line connection.
- D. Drain line is restricted.
- E. Low inlet pressure.
- F. Main diaphragm is torn.
- G. Solenoid plunger stuck open.

- A. Clean or replace the injector. Follow the procedure detailed in the Parts Replacement section of this manual.
- B. Clean or replace screen.
- C. Verify that all the brine line connections are tight.
- D. Insure that the drain line is not kinked or plugged.
- E. Verify that the service inlet pressure is a minimum of 20 psi.
- F. Replace diaphragm.
- G. Clean or replace the solenoid plunger assembly. Follow the procedure detailed in the Parts Replacement section of this manual.

### 7. Continuous Flow To Drain

- A. Drain plunger stuck open.
- B. Clock motor stalled.

- A. Clean or replace the drain plunger assembly. Follow the procedure detailed in the Parts Replacement section of this manual.
- B. Replace the clock motor. Follow the procedure detailed in the Parts Replacement section of this manual.

### 8. Loss Of Water Pressure

- A. Iron build up in mineral tank
- B. Lower distributor basket crushed.

- A. Increase the salt dosage or regenerate more frequently.
- B. Replace the basket and verify that the distributor is cut 1/2 inch below the top of the tank threads.