

5700-e Control Valve

Service Manual



2806-A Soquel Ave Santa Cruz CA 95062

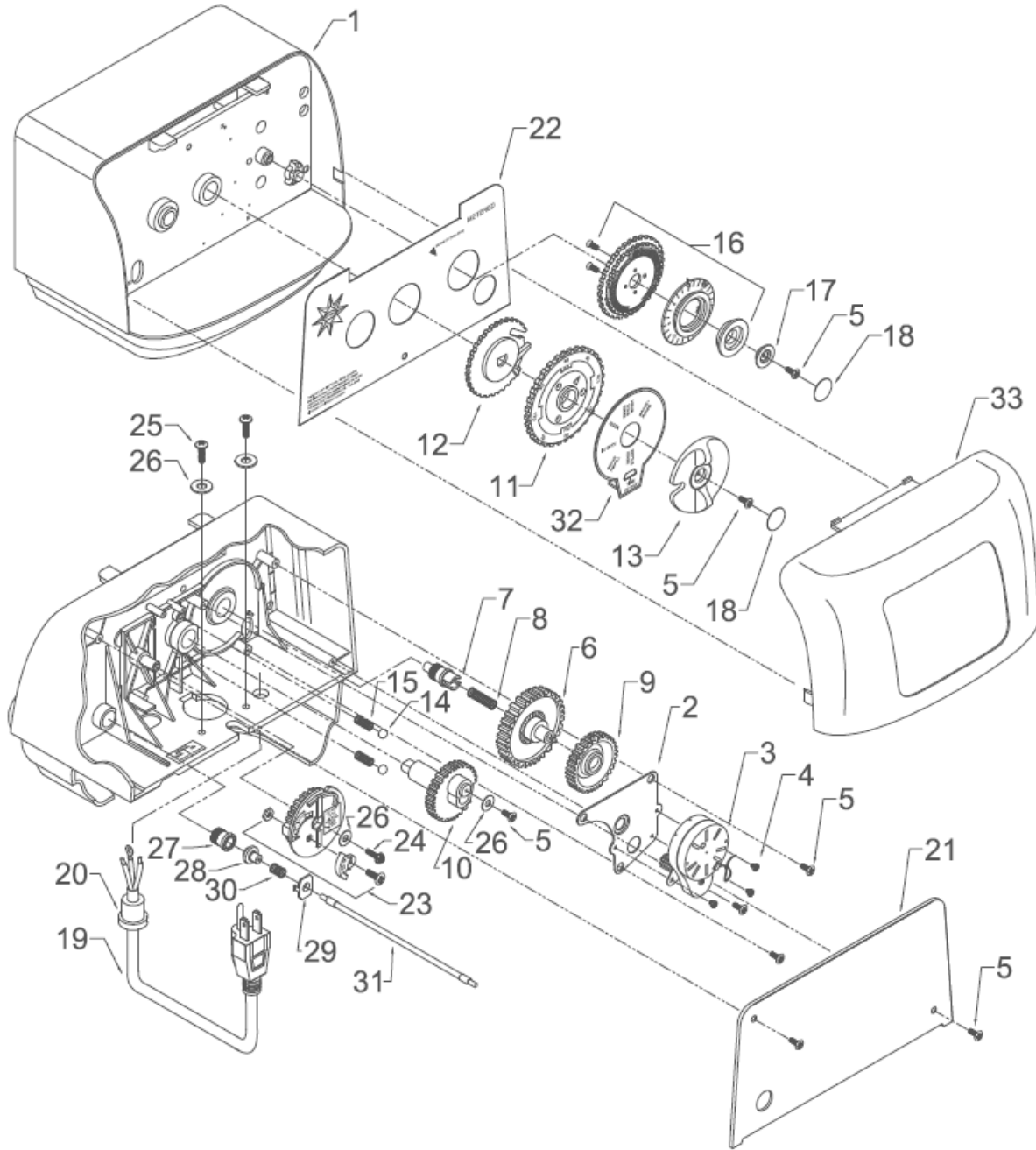
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Control Valve Drive Assembly (*Metered Version*)

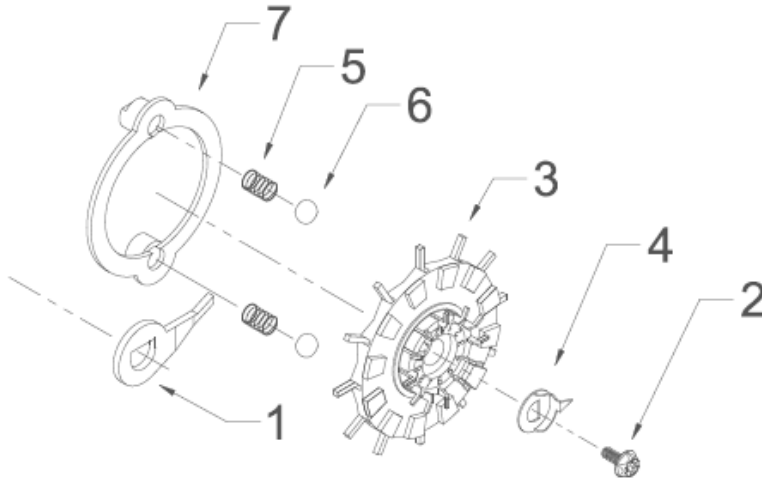


Valve Drive Assembly Parts List *(Metered Version)*

Ref #	Description	Part #	Qty
0	Competitor 12 Day Softener Powerhead Assy. Complete	20563H100	1
1	Drive Housing	20563X101	1
2	Motor Mounting Plate	20251X102	1
3	Motor, 110 V / 60 Hz	20251X425	1
4	Motor Mount and Ground Screw	20251X427	3
5	Component Mounting Screw	20251X406	8
6	Idler Gear	20251X421	1
7	Idler Pinion	20251X419	1
8	Idler Spring	20251X420	1
9	Drive Gear	20251X422	1
10	Main Gear and Shaft	20561X111	1
11	24 Hour Gear	20251X403	1
12	Cycle Actuator Arm	20253X110	1
13	Manual Regeneration Knob	20561X114	1
14	Ball, 1/4" Diameter SST	20251X413	2
15	Spring Detent	20251X414	2
16	Program Wheel Assy. - Specific "K"	20563X119	1
17	Program Wheel Retainer	20253X111	1
18	Program Wheel Cover Label	20563X121	2
19	Power Cord	20561X123	1
20	Strain Relief	20251X102	1
21	Back Cover	20561X126	1
22	Silver Front Label	20563X127	1
23	Brine CAM Assembly 6-36 - Inc. CAM, CAM Screw, CAM Nut, & "LBS OF SALT" Label	20561X130	1
24	Brine CAM Mounting Screw	20561X131	1
25	Drive Mounting Screw	20561X134	2
26	Washer	20561X135	1
27	Program Wheel Drive Pinion	20563X137	1
28	Drive Pinion Clutch	20563X138	1
29	Spring Retainer	20563X139	1
30	Spring	20563X140	1
31	Cable Assy. Standard 8.25"	20563X141	1
	Cable Assy. Ext. 6.75"	20563X142	1
32	Valve Position Dial Standard	20561X138	1
33	Designer Cover	N/A	1

Shaded Ref # Indicates Assembly or Kit

Control Valve Drive Assembly (*Timeclock Version*)



Control Drive Assembly Parts List (*Timeclock Version*)

Ref #	Description	Part #	Qty
0	Competitor 12 Day Softener Powerhead Assy. Complete	20561H100	1
Not Shown	Drive Housing	20561X101	1
Not Shown	Front Label - Blue/Silver	20561X127	1
1	Cycle Actuator Arm	20251X402	1
2	Component Mounting Screw	20251X406	1
3	Skipper Wheel Assy. - 12 Day	20251X408	1
4	Regen Pointer	20251X410	1
5	Skipper Wheel Detent Spring	20251X412	2
6	Ball, 1/4" DIA SST	20251X413	2
7	Skipper Wheel Ring	20251X435	1

All Items Same as Metered Version Except:

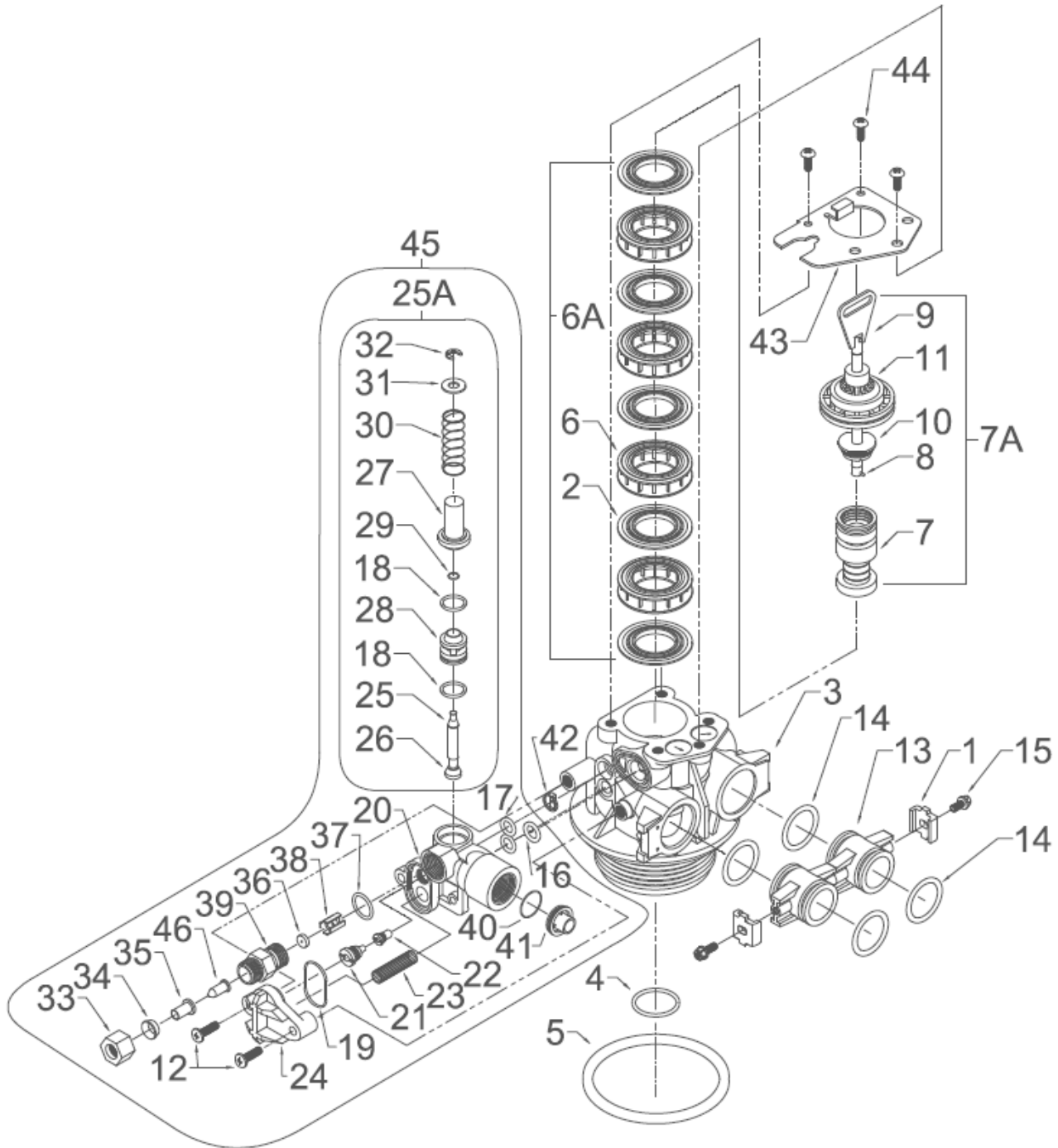
#1 Replaces Metered Item #12

#2 Through #7 Replace Metered Items #16 Through #18

Metered Items #27 Through #31 Are Not Included

Shaded Ref # Indicates Assembly or Kit

Control Valve Drive Assembly (Meter or Clock Version)



Control Valve Drive Assembly Parts List

(Metered or Clock Version)

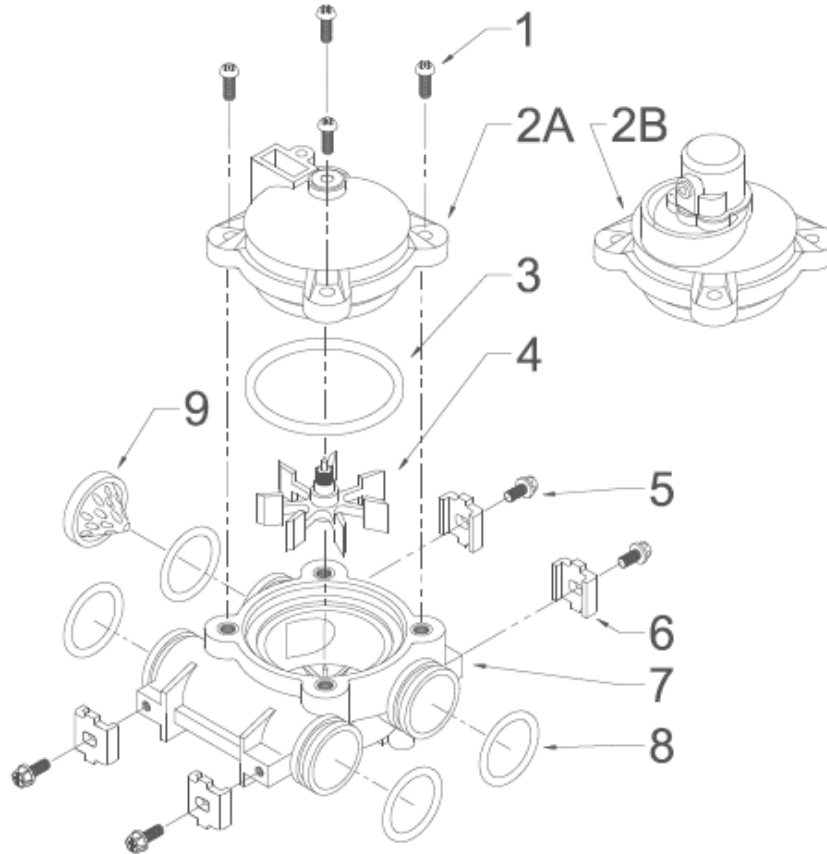
Ref #	Description	Part #	Qty
0	Valve Body Complete	20561X200	1
1	Adapter Clip	20561X201	2
2	Seal	20561X202	5
3	Valve Body Only 1.05" Dist.	20561X203	1
4	Dist Tube O-Ring 1.05" O.D.	20561X204	1
5	Valve to Tank O-Ring	20561X205	1
6	Spacer	20561X207	4
6A	Seal & Spacer Kit - Incl. 5-#2 & 4-#6	20561X253	1
7	Piston Only	20561X208	1
7A	Piston & End Plug Assy. - Incl. #7 to #11	20561X254	1
8	Piston Pin	20561X209	1
9	Piston Rod Assembly	20561X210	1
10	Piston Retainer	20561X211	1
11	End Plug Assembly	20561X212	1
12	Injector Mounting Screw	20561X214	2
13	Bypass Adapter (Automatics Only)	20251X215	2
14	Bypass Adapter O-Ring	20561X216	4
15	Adapter Clip Screw 8-18 X 5/8"	20561X217	2
16	Drain O-Ring	20561X218	1
17	Injector O-Ring	20561X219	2
18	Brine Spacer O-Ring	20561X220	2
19	Injector Cover O-Ring	20561X221	1
20	Injector Body	20561X222	1
21	Injector Nozzle, #1 White	20251X205	1
	Injector Nozzle, #2 Blue	20251X241	1
	Injector Nozzle, #2 PVC	20251X235	1
22	Injector Throat, #1 White	20251X206	1
	Injector Throat, #2 Blue	20251X242	1
	Injector Throat, #2 PVC	20251X236	1
23	Injector Screen	20251X204	1
24	Injector Cover	20561X226	1
25	Brine Stem Only	N/S	1
25A	Brine Valve Assy. - Incl. #18, #25 to #32	20561X225	1
26	Brine Valve Seat	20251X315	1
27	Brine Valve Cap	N/S	1
28	Brine Valve Spacer	N/S	1
29	Quad Ring	20251X312	1
30	Brine Valve Spring	N/S	1
31	Brine Valve Washer	N/S	1
32	Retaining Ring	N/S	1

Ref #	Description	Part #	Qty
33	Brine Line Compression Nut	20251X304	1
34	Brine Line Ferrule	20251X305	1
35	Brine Line Brass Insert	20251X303	1
36	BLFC Button .5 GPM	20251X318	1
37	Brine Line O-Ring	20561X239	1
38	BLFC Button Retainer	20561X240	1
39	BLFC Brass Fitting	20561X241	1
40	Flow Control Button 1.5 GPM	20251X266	1
	Flow Control Button 2.0 GPM	20251X267	1
	Flow Control Button 2.4 GPM	20251X268	1
	Flow Control Button 3.0 GPM	20251X269	1
	Flow Control Button 3.5 GPM	20251X270	1
	Flow Control Button 4.0 GPM	20251X271	1
	Flow Control Button 5.0 GPM	20251X272	1
	Flow Control Button 7.0 GPM	20251X274	1
41	DLFC Button Retainer	20561X246	1
42	Air Dispenser	20561X248	1
43	End Plug Retainer	20561X249	1
44	10-24 X 1/2" Screw	20561X250	3
45	Injector Model Assy. #1 Inj. .5 BLFC, Specify DLFC, Incl (2) #12, (1) #16, (2) #17 & #18, (1) EA. #19 Thru #25, (1) EA. #26 Thru #38	20561X260	1

Filter Components Not Shown			
	Description	Part #	Qty
	Filter Module Assy. Specify DLFC	20562X263	1
	Drain Line Fitting Straight 1/2" NPT X 1/2" Tubing	20561X256	1
	Drain Line Fitting 90° Elbow 1/2" NPT X 1/2" Tubing	20251X255	1
	Brine Valve Plug - Filter Only	20562X102	1
	Brine Valve Plug O-Ring	20561X220	1
	BLFC Plug - Filter Only	20562X103	1
	BLFC Plug O-Ring	20561X239	1
	Piston Assy. - Filter Only	20562X254	1
	Injector Nozzle Undrilled		1

N/S Indicates Non-Stocked Item
Shaded Ref # Indicates Assembly or Kit

Meter Assembly



Meter Assembly Parts List

Ref #	Description	Part #	Qty
0	Meter Module Complete - Std. Range	20563X200	1
1	Meter Cover Assy. Screw	20561X134	4
2A	Meter Cover Assy. - Std. Range	20563X202	1
	Meter Cover Assy. - Ext. Range	20563X211	1
2B	Meter Cover -Right Angle - Std. Range	20253X202	1
	Meter Cover -Right Angle - Ext. Range	20253X203	1
3	Meter Cover Assy. O-Ring	20563X203	1
4	Impeller	20563X204	1
5	Adapter Clip Screw	20561X217	4
6	Adapter Clip	20561X201	4
7	Meter Body	20563X207	1
8	Meter Body O-Ring	20561X216	4
9	Flow Straightener	20563X209	1

Troubleshooting Guide

SYMPTOM	PROBABLY CAUSE	CORRECTION
1. Softener fails to regenerate automatically	Power supply plugged into intermittent or dead power source.	Connect to constant power source
	Disconnected meter cable	Reconnect cable
	Improper control valve programming	Reset program settings
	Defective power supply	Replace power supply
	Defective meter	Replace or repair
	Defective drive motor	Check motor operation
2. Regeneration at wrong time	Time of day improperly set, due to power failure	Reset time of day programming
3. Loss of capacity	Increase raw water hardness	Reset unit to the new hardness
	Brine concentration and/or quantity	Keep brine tank full of salt at all times. Clean it yearly. Salt may be bridged. If using a salt grid pate, ensure refill water is over it.
	Resin fouling	Call dealer, find out how to confirm it. Clean the resin and prevent future fouling.
	Poor distribution, Channeling (uneven bed surface)	Call dealer. Check distributors and backwash flow.
	Internal valve leak	Call dealer. Replace spacers, seals and/or piston.
	Resin age	Call dealer. Check for resin oxidation caused by chlorine. Mushy resin.
	Resin loss	Call dealer. Check for correct bed depth. Broken distributors. Air or gas in bed: Well gas eliminator. Loose brine line.
4. Poor water quality	Not regenerating enough	Check regeneration cycle
	Bypass valve open	Close by-pass valve
	Channeling	Check for too slow or high service flow. Check for media fouling.
5. High salt usage	High salt setting	Adjust brine tank refill time
	Excessive water in brine tank	See symptom #7
	Constant flow through the unit	Indicates plumbing leak (i.e. toilet tank)
	Improperly set hardness, regeneration frequency or regeneration day	Reset programming

SYMPTOM	PROBABLY CAUSE	CORRECTION
6. Loss of water pressure	Scaling/fouling of inlet pipe	Clean or replace pipeline. Pretreat to prevent
	Fouled resin	Clean resin. Pretreat to prevent
	Improper backwash	Too many resin fines and/or sediment. Call dealer, reset backwash flow rate, and/or adjust
7. Excessive water in brine tank and/or salty water to service	Plugged drain line	Check flow to drain. Clean flow control
	Dirty or damaged brine valve	Clean or replace brine valve
	Plugged injectors	Clean injectors and replace screen
	Low inlet pressure	Increase pressure to allow injector to perform properly. (20 psig minimum)
	Excessive brine refill cycle time	Check salt setting
8. Softener fails to use salt	Check items listed in #1	
	Improper control valve programming	Check and reset settings
	Plugged/restricted drain line	Clean drain line and/or flow control
	Injectors are plugged	Clean or replace injectors and screen
	No water in brine tank	Check for restriction in BLFC . Ensure safety float is not stuck. Check brine tank for leaks.
	Water pressure is too low	Line pressure must be at least 20 psi.
	Brine line injects air during brine draw	Check brine line for air leaks
	Internal control leak	Check piston, seals and spacers for scratches and dents
9. Control cycles continuously	Debris in seals & spacers	Clean or replace seals & spacers / piston assembly
10. Continuous flow to drain	Foreign material in control	Clean valve, or rebuild unit
	Internal control leak	Same as above
	Valve jammed in backwash, brine, or Rapid rinse position	Same as above
	Motor stopped or jammed	Replace motor