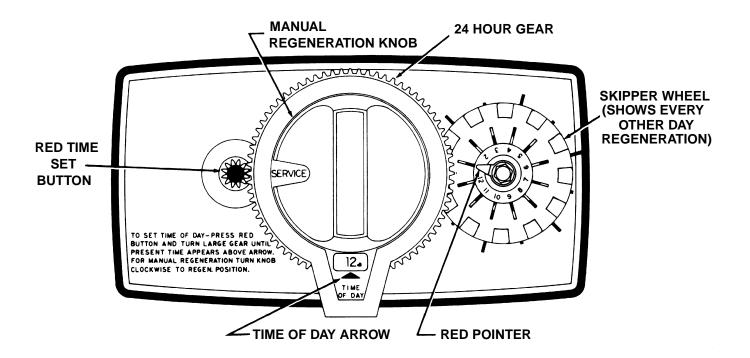
Installation and Start-Up Procedure

The water softener should be installed with the inlet, outlet and drain connections made in accordance with manufacturer's recommendations and to meet applicable plumbing codes.



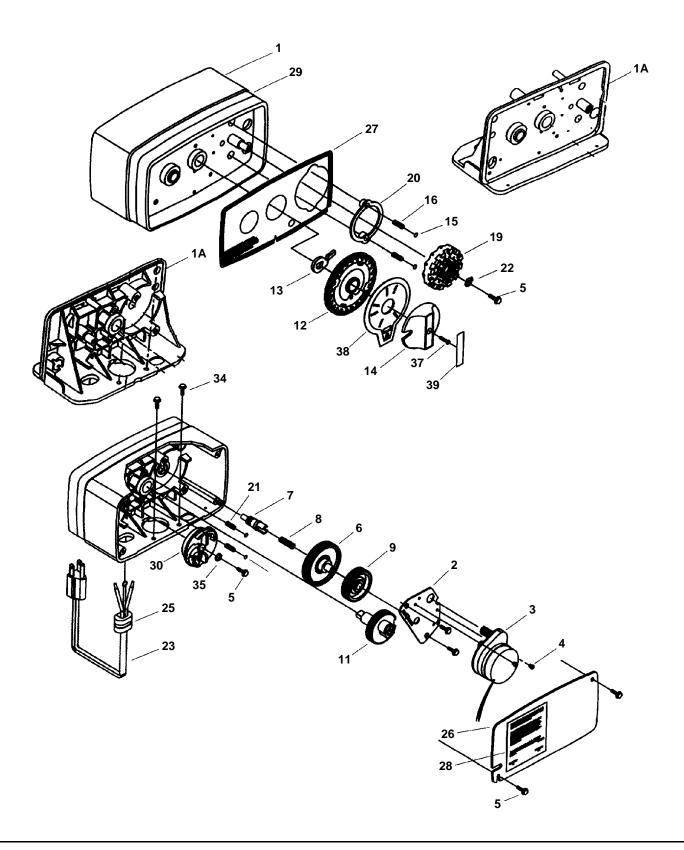
- Manually index the softener control into the service position and let water flow into the resin tank. When the water flow stops, open a softened water tap until all air is released from the lines, then close the tap.
 - Note: the various regeneration positions may be dialed manually by turning the knob on the front of the control until the indicator shows that the softener is in the desired position.
- 2. Manually index the control to the backwash position and allow water to flow at the drain for 3 or 4 minutes.
- 3. Remove back cover plate.
- 4. Make sure that the salt dosage is set as recommended by the manufacturer. If necessary, set salt in accordance with the setting instruction sheet. Manually index the control to the brine fill position and allow the brine tank to fill to the top of the air check.

- 5. Manually index the control to the brine draw position and allow the control to draw water from the brine tank until it stops.
- 6. Plug in the electrical cord and look in the sight hole in the back of the motor to see that it is running. Set the days that regeneration is to occur by sliding tabs on skipper wheel outward to expose trip fingers. Each tab is one day. Finger at red pointer is tonight. Moving clockwise from red pointer, extend or retract fingers to obtain the desired regeneration schedule.
- 7. Manually advance the control to the beginning of the brine fill position; and allow the control to return to the service position automatically.
- 8. Fill the brine tank with salt.
- 9. Replace back cover on the control.
- 10. Make sure that any by-pass valving is left in the normal service position.

MODEL 5600

Control Valve Drive Assembly

(See opposite page for parts list)



MODEL 5600

Control Valve Drive Assembly

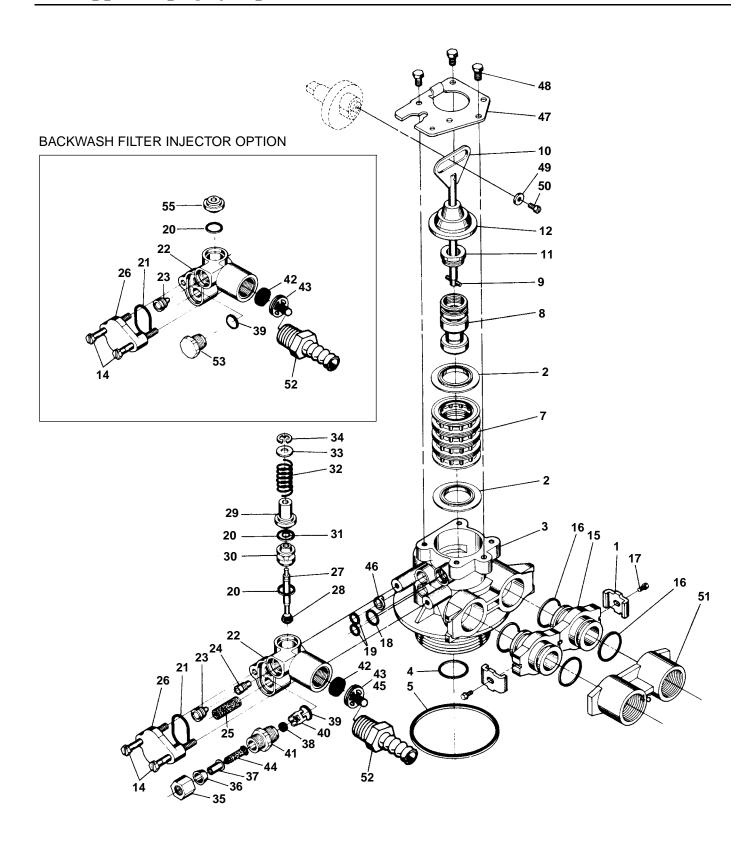
Parts List

Item No.	Quantity	Part No.	Description
1	1	14448-010	Housing - w/Pin
	1	14448-011	Housing - w/Pin Drilled for Screw
			Housing - w/Pin Drilled for Thumb Screw
1A	1	15494-01	"L" Housing - w/Pin
	1	15494-03	"L" Housing - w/Pin Drilled for Designer
2	1	13175	Motor Mounting Plate
3	1	18743	Motor - 120V., 60 Hz.
	1	19659	Motor - 24V., 60 Hz.
4	(2-3)	11384	Screw - Motor Mtg. & Ground Wire
5	(3-5)	13296	Screw - Component Mounting
6	1	13017	Idler Gear
7	1	13018	Idler Pinion
8	1	13312	Spring - Idler
		13164	. •
11	1	13170	Main Gear & Shaft
			24 Hour Gear Assembly, Silver
			24 Hour Gear Assy, Tan
13			Cycle Actuator Gear
			Knob - Manual Regeneration
			Ball - 1/4" Dia.
			Spring - Detent - Skipper Wheel
			Skipper Wheel Assembly - 12 Day
			Skipper Wheel Assembly - 7 Day
20			Skipper Wheel Ring
			Spring - Detent - Main Gear
			Regeneration Pointer
			Electrical Cord - Standard
			Wire Connector (Not Shown)
		13547	,
		13229	
			Front Label - Brown on Beige
21			Front Label - Blue/Silver on Black
28			Rear Label - Softener
20			Rear Label - Filter
20			Tape Stripe - Brown on Beige
23			Tape Stripe - Blue on Silver
▲ 30			Brine Cam Assy., 3-18
4 30			Brine Cam Assy., 6-36
			Brine Cam Assy Minutes
3/1			Screw-Drive Mounting
		12473	-
		12037	
			Valve Position Dial - Standard
30			
			Valve Position Dial - Low Water
			Valve Position Dial - Chemical Filter
20			Valve Position Dial - Filter
39			Knob Label - Beige
4.40			Knob Label - Silvers
▲40	1	40214	Screw, Brine Cam

▲Not used when a Filter Valve

Control Valve Drive Assembly For (Clock Or Meter)

(See opposite page for parts list)



Control Valve Drive Assembly For (Clock Or Meter)

Parts List

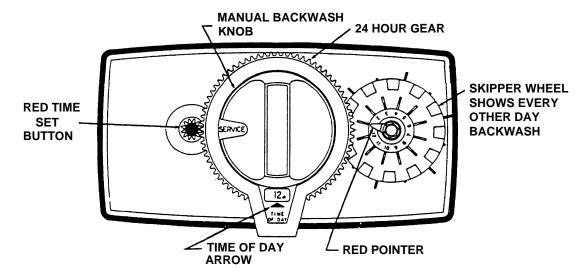
1	Item No.	Quantity	Part No.	Description
5 . 17772 Silicone Seal 3	1	2-4	13255	Adapter Clip (clock or meter)
3	2			
4 1 1 13304 O-Ring - Distributor Tube - 1" 1 10244 O-Ring - Distributor Tube - 1" 1 10244 O-Ring - Distributor Tube - 13/16" 5 1 1 12281 O-Ring - Top of Tank 6 Not Assigned 7 4 14241 Spacer 8 1 13247 Piston - Standard 1 13781 Piston - Standard 1 13781 Piston - Standard 9 1 10886 Piston - Filter 9 1 10886 Piston - Filter 1 1 13852 Piston - Filter 1 1 13001 Piston Rod Assembly 1 1 1 12346 Piston - Filter 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		5		Silicone Seal
4	3	1	61400-12	Valve Body Assembly - 1" Dist.
1 10244 O-Ring - Distributor Tube - 13/16" 6		1	61400-11	Valve Body Assembly - 3/4" Dist.
5	4			O-Ring - Distributor Tube - 1"
6 . Not Assigned 7	_	1		O-Ring - Distributor Tube - 13/16"
7				
8 1 13247 Piston - Standard 1 13781 Piston - Low Water 1 13852 Piston - Filter 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0		14041	Not Assigned
1 13781 Piston - Low Water 1 13852 Piston - Filter 9 1 1 00966 Piston Pin 10 1 13001 Piston Rod Assembly 11 1 12953 Piston Rod Assembly 11 1 12953 Piston Rod Assembly 12 1 13446-10 End Plug Assembly Stid - White 1 13446-10 End Plug Assembly Filter - Black 1 13446-20 End Plug Assembly Filter - Black 1 2 13315 Screw - Injector Mounting 14 2 13315 Screw - Adapter Coupling 15 2 19228 Adapter Coupling 16 4 13305 O-Ring - Adapter Coupling (clock or meter) 17 2 4 13314 Screw - Adapter Coupling (clock or meter) 18 1 2638 O-Ring - Drain 19 2 13301 O-Ring - Injector 19 2 13301 O-Ring - Injector Cover 19 1 13303 O-Ring - Injector Cover 10 1 13303 O-Ring - Injector Cover 10 1 13163 Injector Body 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
1 13852 Piston - Filter 9 1 10696 Piston Pi 10 1 133001 Piston Rod Assembly 11 1 12953 Piston Rod Assembly 11 1 12953 Piston Rod Assembly 12 1 33446 End Plug Assembly Std - White 1 13446-10 End Plug Assembly Std - White 1 13446-20 End Plug Assembly Filter - Black 1 13446-20 End Plug Assembly Low Water - Gray 14 2 13315 Screw - Injector Mounting 15 2 9228 Adapter Coupling 16 4 3305 O-Ring - Adapter Coupling 17 2-4 33314 Screw - Adapter Coupling (clock or meter) 18 1 12638 O-Ring - Drain 19 2 13301 O-Ring - Injector 20 2 13302 O-Ring - Brine Spacer 21 1 13303 O-Ring - Injector Cover 22 1 13163 Injector Body 23 1 10913U Injector Mozel - Undrilled 24 1 10914 Injector Body 25 1 10227 Injector Screen 26 1 13166 Injector Cover 27 1 13172 Brine Valve State 28 1 12626 Brine Valve State 29 1 13165 Brine Valve Spacer 29 1 13167 Brine Valve Spacer 30 1 13167 Brine Valve Spacer 31 1 12550 Quad Ring 32 1 11973 Spaing 33 1 6098 Washer - Brine Valve 34 1 11981-01 Retaining Ring 35 1 10332 BLFC. Friting Nut 43 1 12994 BLFC. Friting Nut 44 1 12997 O-Ring - BlFC. Friting Nut 45 1 12995 BLFC. Friting Nut 46 1 13244 BLFC. Friting Nut 47 1 13246 End Plug Retainer 48 1 12997 O-Ring - BLFC. 49 1 1363 DLFC. Friting Nut 40 1 13245 BLFC. Friting Nut 41 12997 DLFC. Button - 15 GPM 42 1 1363 DLFC. Friting Nut 43 1 1373 DLFC. Friting Nut 44 1 12997 O-Ring - BLFC. (not shown) 45 1 1398 DLFC. Friting Nut 46 1 13244 BLFC. Contrainer 47 1 13346 End Plug Retainer 48 1 12997 O-Ring - BLFC. (not shown) 49 1 1398 DLFC. Friting Silve 40 1 13245 BLFC. (not shown) 41 1398 DLFC. Friting Silve 42 1 DLFC. Button - 15 GPM 43 1 1398 DLFC. Friting Silve 44 1 19267 Over, Plags Retainer 45 1 13398 Over, Plags Retainer 46 1 13398 DLFC. Friting Silve 47 1 13546 End Plug Retainer 48 3 12112 Screw 49 1 13393 Washer 51A 1 13988 DLFC. Plug 51B 1 18706-02 Voke, Plastic Jiff NPT 52 1 13308 Drink Hobes Barb 51A 1 13985 DLFC. Plug 51B 1 18706-02 Voke, Plastic Jiff NPT	0			
9 1 1 06966 Piston Pin 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
10	9			
11				
12 1 13446-10 End Plug Assembly Std White 1 13446-10 End Plug Assembly Std White 1 13446-20 End Plug Assembly Low Water - Gray 14 2 13315. Screw - Injector Mounting 15 2 19228. Adapter Coupling 16 4 13305. O-Ring - Adapter Coupling 17 2-4 13314. Screw - Adapter Coupling (clock or meter) 18 1 1 12638. O-Ring - Drain 19 2 13301. O-Ring - Injector Adapter Coupling (clock or meter) 19 2 13301. O-Ring - Injector Adapter Coupling (clock or meter) 19 2 13301. O-Ring - Injector Adapter Coupling (clock or meter) 19 2 13301. O-Ring - Injector Cover 1 1 1 13303. O-Ring - Injector Cover 1 1 1 13463. Injector Body Injector Body Injector Rozzle - Undrilled Injector Rozzle - Undrilled Injector Throat - Specify Size 1 10914. Injector Rozzle - Undrilled Injector Throat - Specify Size 1 10227. Injector Screen 1 13172. Brine Valve Stem 1 12626. Brine Valve Stem 1 13165. Brine Valve Cap 1 13167. Brine Valve Spacer 1 1 12550. Quad Ring 1 1 12550. Spring Brine Valve 1 1 11981-01 Retaining Ring 1 1 10329. BLF.C. Fitting Nut 1 11981-01 Retaining Ring 1 1 12094. BLF.C. Fitting Nut 1 11981-01 Retaining Ring 1 1 12094. BLF.C. Fitting Nut 1 12097. BLF.C. Button - 25 GPM 1 12097. BLF.C. Button - 25 GPM 1 12097. BLF.C. Button - 35 GPM 1 12097. BLF.C. Button - 5 GPM 1 12097. BLF.C. Button - 15 GPM 1 12097. BLF.C. Button - 5 GPM 1 12097. BLF.C. Button Retainer 4 1 13348. BLF.C. Fitting 347 NPT 5 GPM 1 13308. Washer 5 GPM 5 GPM 5 GPM 5 GPM 5 GPM 5 GPM	11	1	12953	Piston Retainer
1 13446-10 End Plug Assembly Low Water - Gray 1 1 13446-20 End Plug Assembly Low Water - Gray 14 2 13315 Screw - Injector Mounting 14 1 2 13325 Adapter Coupling 16 4 13305 O-Ring - Adapter Coupling 17 2-4 13314 Screw - Adapter Coupling 18 1 12638 O-Ring - Drain 19 2 13301 O-Ring - Drain 19 2 13301 O-Ring - Brace 20 2 13302 O-Ring - Brace 21 1 13303 O-Ring - Brace 22 1 13303 O-Ring - Brace 22 1 13303 O-Ring - Brace 23 1 10913U Injector Rozzle - Undrilled 24 1 10914 Injector Throat - Specify Size 25 1 10227 Injector Screen 26 1 13166 Injector Cover 27 1 13172 Brine Valve Stem 28 1 12626 Birine Valve Stem 29 1 13165 Birine Valve Cap 30 1 13167 Brine Valve Cap 30 1 13167 Brine Valve Spacer 31 1 10939 Washer - Brine Valve Spacer 32 1 11973 Spring- Brine Valve 34 1 11981-01 Retaining Ring 35 1 10329 B.L.F.C. Fitting Nut 36 1 10330 B.L.F.C. Ferrule 37 1 10332 B.L.F.C. Fitting Nut 38 1 10994 B.L.F.C. Button - 25 GPM 439 1 12997 B.L.F.C. Button - 25 GPM 439 1 12997 B.L.F.C. Button - 25 GPM 430 1 131473 D.L.F.C. Button - 25 GPM 431 1 13244 B.L.F.C. Button - 25 GPM 432 1 13363 Washer - Brine Valve Retainer 41 1 13244 B.L.F.C. Button - 25 GPM 433 1 13173 D.L.F.C. Button - 25 GPM 44 1 13247 O-R.R.g. B.L.F.C. Button - 35 GPM 45 1 13368 O-R.B.L.F.C. Button - 35 GPM 46 1 13368 O-R.B.L.F.C. Button - 35 GPM 47 1 13368 O-R.B.L.F.C. Button - 35 GPM 48 3 12997 B.L.F.C. Button - 35 GPM 49 1 13363 Washer 40 1 13364 End Plug Retainer 41 1 13244 B.L.F.C. Button - 35 GPM 48 3 12192 Screw 49 1 13368 O-R.B.L.F.C. Button - 35 GPM 48 3 12197 O-R.R.g. B.L.F.C. Button - 35 GPM 49 1 13369 Screw - B.L.F.C. Button - 35 GPM 49 1 13363 Washer 50 1 13398 Yoke Brass, 3/4 PT 51B 1 13696 Screw 51A 1 13998 Yoke Brass, 3/4 PT 51B 1 13696 Screw 51A 13998 Yoke Brass, 3/4 PT 51B 1 13908 PLEC Plug B.L.F.C. Plug 51B 1 13918 B.L.F.C. Plug 51B 1 13918 B.L.F.C. Plug	12	1	13446	End Plug Assembly Std White
14 2 13315 Screw - Injector Mounting 115 2 19228 Adapter Coupling 116 4 13305 O-Ring - Adapter Coupling 117 2-4 13314 Screw - Adapter Coupling 118 1 12638 O-Ring - Drain - Adapter Coupling 119 2 13301 O-Ring - Injector 120 2 13302 O-Ring - Injector 130 O-Ring - Injector Cover 131 1 13303 O-Ring - Injector Cover 142 1 1 13303 O-Ring - Injector Cover 152 1 1 13303 Injector Body 152 1 1 13463 Injector Body 152 1 1 10913U Injector Nozzle - Undrilled 153 1 10927 Injector Cover 164 1 13166 Injector Cover 175 1 13172 Brine Valve Stem 188 1 12626 Brine Valve Stem 198 1 12626 Brine Valve Seat 199 1 13165 Brine Valve Spacer 11 13167 Brine Valve Spacer 11 13167 Brine Valve Spacer 11 13167 Brine Valve Spacer 11 11973 Spring - Brine Valve 11 11974 BL.FC. Fetrule 11 10329 BL.FC. Fetrule 11 10330 BL.FC. Fetrule 11 1095 BL.FC. Button - 10 GPM 11 1095 BL.FC. Button - 5 GPM 11 1095 BL.FC. Button - 5 GPM 11 1096 BL.FC. Button - 5 GPM 11 1097 BL.FC. Button - 5 GPM 11 1098 BL.FC. Fetrule 11 1098 BL.FC. Fetr		1	13446-10	End Plug Assembly Filter - Black
115 2 1928 Adapter Coupling 116 4 13305 O-Ring - Adapter Coupling 117 2-4 13314 Screw - Adapter Coupling (clock or meter) 18 1 12638 O-Ring - Drain 19 2 13301 O-Ring - Injector 20 2 13302 O-Ring - Injector Cover 21 1 13303 O-Ring - Brine Spacer 21 1 13303 O-Ring - Brine Spacer 21 1 13303 O-Ring - Brine Spacer 22 1 13163 Injector Cover 22 1 10914 Injector Screen 24 1 10914 Injector Cover 25 1 10227 Injector Cover 27 1 13172 Brine Valve Stem 28 1 12626 Brine Valve Stem 29 1 13165 Brine Valve Cap 30 1 13167 Brine Valve Cap 31		1	13446-20	End Plug Assembly Low Water - Gray
**16	14	2		Screw - Injector Mounting
**17	*15	2	19228	Adapter Coupling
18	*16	4	13305	O-Ring - Adapter Coupling
19	*17	2-4		Screw - Adapter Coupling (clock or meter)
▲20 2 13302 O-Ring - Brine Spacer 21 1 13303 O-Ring - Injector Cover 22 1 13163 Injector Body ▲23 1 10913U Injector Nozzle - Undrilled 24 1 10914 Injector Nozzle - Undrilled 24 1 10914 Injector Screen 25 1 10227 Injector Screen 26 1 13166 Injector Screen 27 1 13172 Brine Valve Stem 28 1 12626 Brine Valve Saet 29 1 13165 Brine Valve Cap 30 1 13167 Brine Valve Spacer 31 1 12550 Quad Ring 32 1 11973 Spring - Brine Valve 33 1 16098 Washer - Brine Valve 33 1 11981-01 Retaining Ring 34 1 11981-01 Retaining Ring 35 1	18	1		O-Ring - Drain
21	19			O-Ring - Injector
22 1 13163 Injector Body ▲23 1 10913U Injector Nozzle - Undrilled 24 1 10914 Injector Throat - Specify Size 25 1 10227 Injector Screen 26 1 13166 Injector Cover 27 1 13172 Brine Valve Stem 28 1 12626 Brine Valve Stem 28 1 1365 Brine Valve Cap 30 1 13167 Brine Valve Spacer 31 1 12550 Quad Ring 32 1 11973 Spring - Brine Valve 33 1 16098 Washer - Brine Valve 34 1 1973 Spring - Brine Valve 34 1 1973 Spring - Brine Valve 34 1 1993 BL.FC. Fitting Nut 35 1 10329 B.L.FC. Fitting Nut 36 1 10330 B.L.FC. Fitting Nut 37 1	▲ 20		12202	O Ring - Brine Spacer
▲23 1 10914U Injector Nozzle - Undrilled 24 1 10914 Injector Throat - Specify Size 25 1 10227 Injector Screen 26 1 13166 Injector Cover 27 1 13172 Brine Valve Stem 28 1 12626 Brine Valve Seat 29 1 3165 Brine Valve Spacer 30 1 3167 Brine Valve Spacer 31 1 12550 Quad Ring 32 1 11973 Spring - Brine Valve 33 1 6098 Washer - Brine Valve 34 1 11931-01 Retaining Ring 35 1 10329 B.L.FC. Fitting Nut 36 1 10330 B.L.FC. Fitting Nut 36 1 10330 B.L.FC. Button - 25 GPM 4 1 1034 B.L.FC. Button - 25 GPM 1 1 12094 B.L.FC. Button - 10 GPM 40	21	1	13163	Injector Body
24 1 10914 Injector Throat - Specify Size 25 1 10227 Injector Screen 26 1 13166 Injector Cover 27 1 1 13172 Brine Valve Stem 28 1 12626 Brine Valve Seat 29 1 13165 Brine Valve Cap 30 1 13167 Brine Valve Spacer 31 1 12550 Quad Ring 32 1 11973 Spring - Brine Valve 33 1 16098 Washer - Brine Valve 34 1 11981-01 Retaining Ring 35 1 10329 BL.FC. Fitting Nut 36 1 10330 BL.FC. Firting Nut 37 1 10332 BL.FC. Tube Insert 38 1 12094 BL.FC. Button - 25 GPM 1 12095 BL.FC. Button - 1.0 GPM ▲ 1 12097 B.L.FC. 40 1 13244 BL.FC. Button - 1.0 GPM 40 1 13245 BL.FC. Button - Specify Size 41 1 1373 DL.FC. Button - Specify Size 42 1 DL.FC. Button - Specify Size 43 1 13173 DL.FC. Button - Specify Size 44 1 12767 Screen - Brine Line 45 1 13487 Arb Typerser 47 1 13546 End Plug Retainer 48 3 12112 Screew 49 1 13363 Washer 50 1 13296 Screew 51A 1 13398 Voke, Brass, 1" NPT 51B 1 13708 Voke, Brass, 1" NPT 52 1 13308 Drain Hose Barb ♣53 1 13918 BL.FC. Plug ♣55 1 13818 BL.FC. Plug	<u>∠</u> 2	1	1091311	Injector Nozzle - Undrilled
25	24	1	10914	Injector Throat - Specify Size
26 1 13166	25		10227	Injector Screen
27 1 13172 Brine Valve Stem 28 1 12626 Brine Valve Seat 29 1 13165 Brine Valve Seat 30 1 13167 Brine Valve Spacer 31 1 12550 Quad Ring 32 1 11973 Spring - Brine Valve 33 1 1 16098 Washer - Brine Valve 34 1 11981-01 Retaining Ring 35 1 10329 B.L.F.C. Fitting Nut 36 1 10330 B.L.F.C. Fitting Nut 37 1 10332 B.L.F.C. Tube Insert 38 1 12094 B.L.F.C. Button - 25 GPM 1 12095 B.L.F.C. Button - 25 GPM 1 12097 B.L.F.C. Button - 1.6 GPM 40 1 13245 B.L.F.C. Button - 1.0 GPM 439 1 12977 O-Ring - B.L.F.C. 40 1 13245 B.L.F.C. Button - Specify Size 41 1 13244 B.L.F.C. Button - Specify Size 42 1 D.L.F.C. Button - Specify Size 43 1 13173 D.L.F.C. Button - Specify Size 44 1 12767 Screen - Brine Line 45 1 15348 O-Ring - D.L.F.C. (not shown) 46 1 13497 Air Disperser 47 1 13546 End Plug Retainer 48 3 12112 Screw 49 1 13363 Washer 50 1 13296 Screw 51A. 1 13398 Yoke, Brass, 3/4" NPT 51B. 1 18706 Yoke, Brass, 1" NPT 51B. 1 18706 Yoke, Plastic, 1" NPT 52 1 13308 Drain Valve - Plug 455 1 13318 B.L.F.C. Plug 455 1 13918 B.L.F.C. Plug				
29 1 13165. Brine Valve Cap 30 1 13167. Brine Valve Spacer 31 1 1 12550. Quad Ring 32 1 11973. Spring - Brine Valve 33 1 16098. Washer - Brine Valve 34 1 11981-01 Retaining Ring 35 1 10329. B.L.F.C. Fitting Nut 36 1 10330. B.L.F.C. Fitting Nut 36 1 10330. B.L.F.C. Tube Insert 38 1 12094 B.L.F.C. Button25 GPM 1 12095 B.L.F.C. Button25 GPM 1 12097. B.L.F.C. Button - 1.0 GPM ▲ 39 1 12977. O-Ring - B.L.F.C. 40 1 13245 B.L.F.C. Button Retainer 41 1 13244 B.L.F.C. Button Retainer 41 1 13244 B.L.F.C. Button - Specify Size 42 1 D.L.F.C. Button - Specify Size 43 1 13173 D.L.F.C. Button - Specify Size 44 1 12767 Screen - Brine Line 45 1 15348 O-Ring - D.L.F.C. (not shown) 46 1 13497 Air Disperser 47 1 13546 End Plug Retainer 48 3 12112 Screw 49 1 13363 Washer 50 1 13296 Screw 51A 1 13398 Yoke, Brass, 3/4" NPT 51B 1 18706 Yoke, Brass, 3/4" NPT 51B 1 18706 Yoke, Plastic, 1" NPT 51B 1 18706 Yoke, Plastic, 1" NPT 52 1 13308 Drain Hose Barb ♣53 1 13918 B.L.F.C Plug ♣55 1 13857 Brine Valve - Plug				
30 1 13167. Brine Valve Spacer 31 1 12550. Quad Ring 32 1 111973. Spring - Brine Valve 33 1 16098. Washer - Brine Valve 34 1 11981-01 Retaining Ring 35 1 10329 B.L.F.C. Fitting Nut 36 1 10330. B.L.F.C. Ferrule 37 1 10332. B.L.F.C. Tube Insert 38 1 12094 B.L.F.C. Button - 25 GPM 1 12095 B.L.F.C. Button - 1.5 GPM 1 12097 B.L.F.C. Button - 1.0 GPM ▲39 1 12977 O-Ring - B.L.F.C. 40 1 13245 B.L.F.C. Button Retainer 41 1 13244 B.L.F.C. Button - Specify Size 43 1 13173 D.L.F.C. Button - Specify Size 43 1 13173 D.L.F.C. Button - Specify Size 44 1 12767 Screen - Brine Line 45 1 15348 O-Ring - D.L.F.C. (not shown) 46 1 133497 Air Disperser 47 1 13546 End Plug Retainer 48 3 12112 Screw 49 1 13363 Washer 50 1 13296 Screw 51A 1 13398 'Voke, Brass, 3/4" NPT 51B 1 18706-02 'Yoke, Plastic, 1" NPT 51B 1 18706-02 'Yoke, Plastic, 1" NPT 52 1 13308 Drain Hose Barb 455 1 13918 B.L.F.C Plug 455 1 13918 B.L.F.C Plug 455 1 13857 Brine Valve - Plug	28	1	12626	Brine Valve Seat
31 1 12550 Quad Ring 32 1 11973 Spring - Brine Valve 33 1 16098 Washer - Brine Valve 34 1 11981-01 Retaining Ring 35 1 10329 B.L.F.C. Fitting Nut 36 1 10330 B.L.F.C. Forrule 37 1 10332 B.L.F.C. Button - 25 GPM 1 12094 B.L.F.C. Button5 GPM 1 12095 B.L.F.C. Button5 GPM 1 12097 B.L.F.C. Button - 1.0 GPM ■ 1 12977 O-Ring - B.L.F.C. 40 1 13245 B.L.F.C. Button - Retainer 41 1 13244 B.L.F.C. Button - Specify Size 42 1 D.L.F.C. Button - Specify Size 43 1 13173 D.L.F.C. Button - Specify Size 44 1 12767 Screen - Brine Line 45 1 15348 O-Ring - D.L.F.C. (not shown) 46 1 13497 Air Disperser 47 1 13546 End Plug Retainer 48 3 12112 Screw 49 1 13363 Washer 50 1 13398 Yoke, Brass, 3/4" NPT 51B 1 18706 Yoke, Plastic 3/4" NPT 51B 1 18706-02 Yoke, Plastic 3/4" NPT 51B 1 18706-02 Yoke, Plastic 3/4" NPT 52 1 13308 Drain Hose Barb ♣53 1 13918 B.L.F.C Plug ♣55 1 13857 Brine Valve - Plug	29	1	13165	Brine Valve Cap
32	30	1	13167	Brine Valve Spacer
33	31	1		Quad Ring
34 1 11981-01 Retaining Ring 35 1 10329 B.L.F.C. Fitting Nut 36 1 10330 B.L.F.C. Fitting Nut 37 1 10332 B.L.F.C. Tube Insert 38 1 12094 B.L.F.C. Button - 25 GPM 1 12095 B.L.F.C. Button - 1.5 GPM 1 12097 B.L.F.C. Button - 1.0 GPM Δ39 1 12977 O-Ring - B.L.F.C. 40 1 13245 B.L.F.C. Button Retainer 41 1 13244 B.L.F.C. Button - Specify Size 42 1 D.L.F.C. Button - Specify Size 43 1 13173 D.L.F.C. Button Retainer 44 1 12767 Screen - Brine Line 45 1 15348 O-Ring - D.L.F.C. (not shown) 46 1 13497 Air Disperser 47 1 13546 End Plug Retainer 48 3 12112 Screw 49 1 13363 Washer 50 1 13296 Screw 51A 1 13398 Yoke, Brass, 1" NPT 51B 1 18706 Yoke, Plastic, 1" NPT 51B 1 18706 Yoke, Plastic, 1" NPT 52 1 13308 Drain Hose Barb Δ53 1 13918 B.L.F.C Plug Δ55 1 13857 Brine Valve - Plug	32		11973	Spring - Brine Valve
35	33	4	14094 04	Wasner - Brine Valve
36 1 10330 B.L.F.C. Ferrule 37 1 10332 B.L.F.C. Tube Insert 38 1 12094 B.L.F.C. Button25 GPM 1 12095 B.L.F.C. Button5 GPM 1 12097 B.L.F.C. Button - 1.0 GPM	34	1	10320	B L FC Fitting Nut
37 1 10332 B.L.F.C. Tube Insert 38 1 12094 B.L.F.C. Button25 GPM 1 12095 B.L.F.C. Button5 GPM 1 12097 B.L.F.C. Button - 1.0 GPM ▲ 39 1 12977 O-Ring - B.L.F.C. 40 1 13245 B.L.F.C. Button Retainer 41 1 13244 B.L.F.C. Fitting, 3/8" 42 D.L.F.C. Button - Specify Size 43 1 13173 D.L.F.C. Button Retainer 44 1 12767 Screen - Brine Line 45 1 15348 O-Ring - D.L.F.C. (not shown) 46 1 13497 Air Disperser 47 1 13546 End Plug Retainer 48 3 12112 Screw 49 1 13363 Washer 50 1 13296 Screw 51A 1 13398 Yoke, Brass, 1" NPT 1 13708 Yoke, Brass, 3/4" NPT 51B 1 18706 Yoke, Plastic, 1" NPT 51B 1 18706 Yoke, Plastic, 1" NPT 52 1 13308 Drain Hose Barb ▲ 53 1 13918 B.L.F.C Plug ▲ 55 1 13857 Brine Valve - Plug				
38				
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51B. 1 18706. Yoke, Plastic, 1" NPT 1 18706-02 Yoke, Plastic 3/4" NPT 52 1 13308. Drain Hose Barb ▲53 1 13918. B.L.F.C Plug ▲55 1 13857. Brine Valve - Plug		1	13708	Yoke, Brass, 3/4" NPT
1	51B	1		Yoke, Plastic, 1" NPT
52 1 13308 Drain Hose Barb ▲53 1 13918 B.L.F.C Plug ▲55 1 13857 Brine Valve - Plug		1	18706-02	Yoke, Plastic 3/4" NPT
▲55	52	1	13308	Drain Hose Barb
	▲ 53	1	13918	B.L.F.C Plug
			1385/	Brine valve - Plug

^{*} Not used with meter controls

[▲] Note: Used in Backwash Filter

MODEL 5600 BACKWASH FILTER

Installation and Start-Up Procedure



 The filter should be installed with the inlet, outlet, and drain connections made in accordance with the manufacturer's recommendations and to meet applicable plumbing codes.

BEFORE PLUGGING THE UNIT IN

- 2. Open a treated water tap down stream of the filter.
- 3. Manually index the filter to the service position and allow the mineral tank to fill by slowly opening the main water supply valve. (any by pass should be in the service position) NOTE: The water flowing from the down stream tap will be cloudy and/or contain media fines as well as air. Allow water to run until it appears clean and free of air.
- 4. When a steady clean flow appears at the tap, close the tap and the main water supply valve and allow the filter media bed to settle 15 20 minutes.
- 5. Manually index the filter to the backwash position.
- 6. To prevent a sudden surge of water and air, partially open the main water supply valve so that the flow at the drain of the filter is approximately 1 gpm. The water at the drain will again be cloudy and/or contain media fines as well as air. Allow water to run until it appears clean and free of air.
- Continue to open the water supply valve until it is completely open. Allow water to flow at the drain until all media fines are washed out of the filter.
- 8. Manually index the filter to the service position, and again open the down stream tap. Check to be sure that the water flows clear. If necessary allow water to flow until all media fines are gone. If the tap is equipped with an aerator check that it is not plugged with media fines and pipe scale.
- Plug in the electrical cord and look in the sight hole on the back of the timer motor to ensure that it is running.

Set the days backwashing 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 red pointer, extend or retract fingers to obtain the desired backwash schedule.

- Set time of day by depressing red button and spin the 24 hr gear until the present time of day is visible above the time of day arrow.
- A. CYCLE TIMES & FLOW DIAGRAMS

<u>pages 16-19</u>

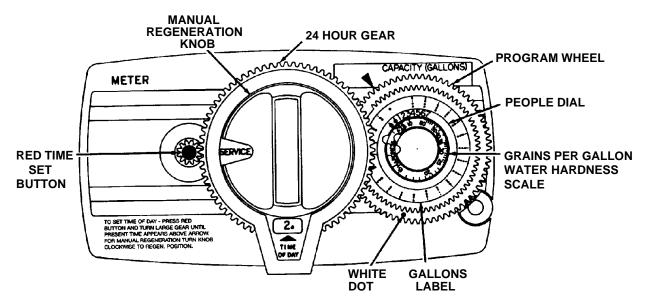
(with all following positions, disregard the brine tank, air check and all other items associated with brining)

- 1. Service Position same as pictured.
- 2. Preliminary Rinse Position
 - same as pictured with standard piston (white end plug) or filter piston (black end plug).
 - eliminated with low water piston (gray end plug).
- 3. Backwash Position
 - same as pictured with standard piston.
 - 15 minutes with filter piston.
 - 7 minutes with low water piston.
- 4 & 5. Brine & Slow Rinse Positions
 - eliminated, resulting in a 50 minute pause, no water flows during this time.
- 6. Rapid Rinse
 - same as pictured with standard piston.
 - 15 minutes with filter piston.
 - 7 minutes with low water piston.
- 7. Settling Rinse
 - same as pictured with standard or filter piston.
 - eliminate with low water piston.
- 8. Brine Tank Refill Position
 - eliminated, filter is back in service at this time.

MODEL 5600 ECONOMIDER®

Installation and Start-up Procedure (Cont'd.)

The water softener should be installed with the inlet, outlet and drain connections made in accordance with manufacturer's recommendations and to meet applicable plumbing codes.



- Manually index the softener control into the service position and let water flow into the resin tank. When the water flow stops, open a softened water tap until all air is released from the lines, then close the tap.
 - NOTE: The various regeneration positions may be dialed manually by turning the knob on the front of the control until the indicator shows that the softener is in the desired position.
- 2. Set water usage program wheel using any one of the following procedures:

Typical Residential Application

To program, just set the time, set the hardness and it automatically monitors system needs and regenerates only when necessary. To set time of day press red time set button and turn 24 hour gear until present time of day is at "time of day". Set program wheel by lifting the "people" dial and rotating it so that the number of people in the household is aligned with the household grains per gallon water hardness. Release the dial and check for firm engagement at setting. (This method will provide reserve capacity based on 75 gallons per person.)

Optional Programming Procedures

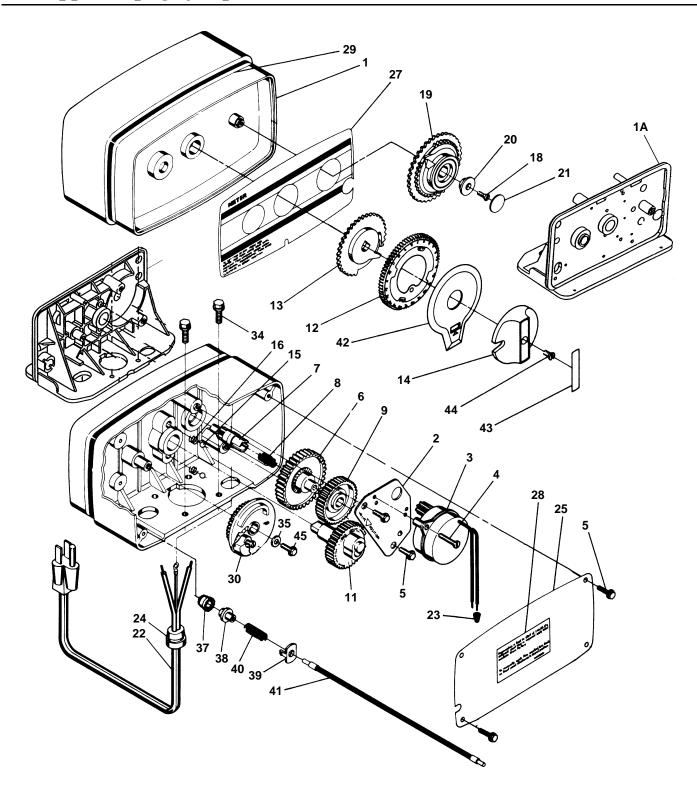
Calculate the gallon capacity of the system, subtract the necessary reserve requirement and set the gallons available at the small white dot on program wheel gear. Note, drawing shows 850 gallon setting. The capacity (gallons) arrow denotes remaining gallons exclusive of fixed reserve.

- 3. Rotate the program wheel counterclockwise until it stops at regeneration position.
- 4. Manually index the control to the back-wash position and allow water to flow at the drain for 3 or 4 minutes.
- 5. Remove back cover plate.
- Make sure than the salt dosage is set as recommended by the manufacturer. Manually index the control to the brine fill position and allow the brine tank to fill to the top of the air check.
- 7. Manualy index the control to the brine rinse position and allow the control to draw water from the brine tank until it stops.
- 8. Plug in the electrical cord and look in the sight hole in the back of the montor to see that it is running.
- Manually advance the control to the beginning of the brine fill position and allow the control to return to the service position automatically.
- 10. Fill the brine tank with salt.
- 11. Replace back cover on the control. Be sure cable is not pinched between cover and housing.
- 12. Make sure that any by-pass valving is left in the normal service position.

MODEL 5600 ECONOMINDER®

Control Valve Drive Assembly

(See opposite page for parts list)

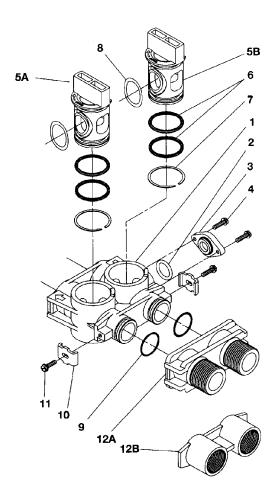


MODEL 5600 ECONOMINDER®

Parts List

Item No.	Quantity	Part No.	Description
		14448-000	Housing - with Roll Pin
			. Housing - w/Pin Drilled for Screw
			. Housing - w/Pin Drilled for Thumb Screw
1A		15494-01	
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			. "L" Housing - w/Pin Drilled for Designer
2		13175	
		18743	
0		13494	
4			. Screw - Motor Mtg. & Ground Wire
			. Screw - Component Mounting
		13017	
		13018	
		13312	
		13164	
		13170	
			. 24 Hour Gear Assembly, Silver
		19205-01	
13		13802	
			. Knob - Manual Regeneration
		13300	
		14457	
		13748	
			. Program Skipper Wheel Assy Specify Hardness Capacity
		13806	
			. Cover Label - Program Wheel
		11842	
23	2	12681	. Wire Connector
		13547	
25	1	13229	. Back Cover
26			. Not Assigned
27	1	13955	. Front Label - Beige
		13958	
28	1	13310	. Rear Label - Softener
		18520	
29		13957	
		13960	
30	1	60514	. Brine Cam Assembly, 3-18
		60514-01	
			. Brine Cam Assembly - Minutes
		12473	
		12037	
			. Drive Pinion - Program Wheel
		13831	
		14253	
		14276	
41		14043	
			. Cable Assembly, Ext, Rt Angle
42			. Valve Position Dial - Standard
			. Valve Position Dial - Low Water
	1	15478	. Valve position Dial - Filter
43		14175	
4.4		14207	
		15151	
45	1	40214	. Screw, Brine Cam

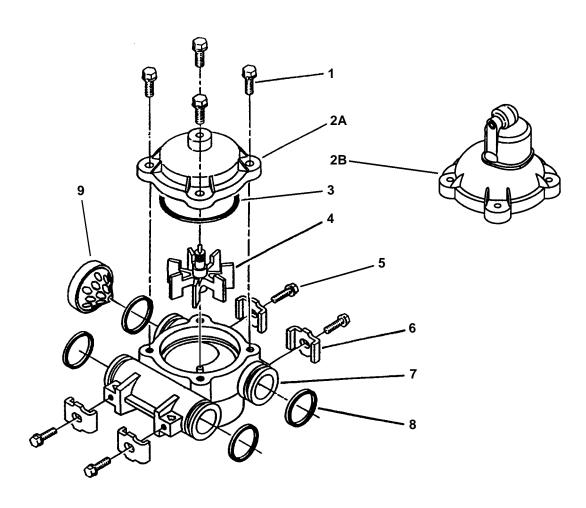
By-Pass Valve Assembly, Plastic



Item No.	Quantity	Part No.	Description
1	1	19723	By-Pass Valve Body, Plastic
2	1	11183	O-Ring, -015
3	1	19724	Cap, By-Pass
4	2	17512	Screw, Hex Washer Head, #6-24 x 3
5A	1	17820	Plug, By-Pass, Inlet
5B	1	17820-01	Plug, By-Pass, Outlet (White)
6	4	18661	O-Ring, -218
7	2	18662	Retaining Ring
8	2	18660	O-Ring
9	2	13305	O-Ring, -119
10	2	13255	Clip, Mounting
11	2	13314	Screw, Hex Washer Head, 8-18 x 5/8
12A	1	18706	Yoke, Plastic, 1" NPT
		18706-02	Yoke, Plastic 3/4"
12B	1	13708	
			Yoke, 3/4" Nickel Plated
		13398	
	1	13398NP	Yoke, 1" Nickel Plated

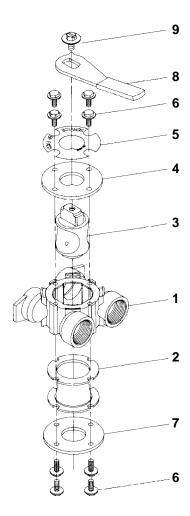
MODEL 5600 ECONOMINDER®

Meter Assembly



Item No.	Quantity	Part No.	Description
1	4	12473	Screw - Meter Cover Assembly
2A	1	14038	Meter Cover Assembly - Standard
2B	1	15659	Meter Cover Assembly - Extended Range, Rt. Angle
3	1	13847	O-Ring - Meter Cover Assembly
4	1	13509	Impeller
5	4	13314	Screw - Adapter Clip
6	4	13255	Adapter Clip
7	1	13821	Meter Body
8	4	13305	O-Ring - Meter Body
9	1	14613	Flow Straightener

By-Pass Valve Assembly



Item No.	Quantity	Part No.	Description	
1	1	17290	By-Pass Valve Body, 3/4"	
	1	17290NP	By-Pass Valve Body, 3/4" Nickel Plate	
	1	13399	By-Pass Valve Body, 1"	
	1	13399NP	By-Pass Valve Body, 1", Nickel Plate	
2	1	11726	Seal, By-Pass	
3	1	11972	Plug, By-Pass	
		11978		
		13604-01		
6	8	15727	Screw	
7	1	11986	Side Cover	
			Lever, By-Pass	
			Screw, Hex Head, 1/4-14	

Service Assembly

Parts List

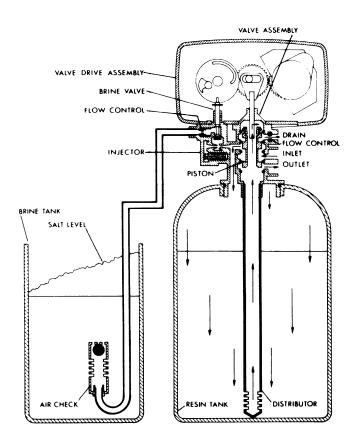
Part No.	Description
60102-00	Piston - Softener
60102-10	Piston - Filter
60102-20	Piston - Low Water
60125	Seal Kit
60084-XX	Injector
60032	Brine Valve
60514	Brine Cam, 3-18
60514-01	Brine Cam, 6-36
60514-02	Brine Cam, Minutes
	Coupling with Clip & Screws
60040	Bypass, Brass 3/4" NPT
	Bypass, Brass 1" NPT
	Bypass, Brass, Plastic
60086	Meter, Std.
60087	
60136-5600	
60135-5600	
	Skipper Wheel 7 Day
	Skipper Wheel 12 Day
	Meter Program Wheel, Std.
60405-20	Meter Program Wheel, Ext.

Water Conditioner Flow Diagrams

1 SERVICE POSITION

BRINE TANK SALT LEVEL AIR CHECK RESIN TANK DISTRIBUTOR

2 PRELIMINARY RINSE POSITION 5 Minutes



Hard water enters the unit at the valve inlet - flows around the lower piston groove - thru the passage to the top of tank - down thru the resin and enters the distributor as conditioned water. The conditioned water flows up thru the center tube to the valve outlet.

Hard water enters the unit at the valve inlet - flows around the lower piston groove - down thru the top of tank passage - downward thru the resin - up the distributor tube - thru the center hole in the piston - over the top edge of the piston and out the drain line.

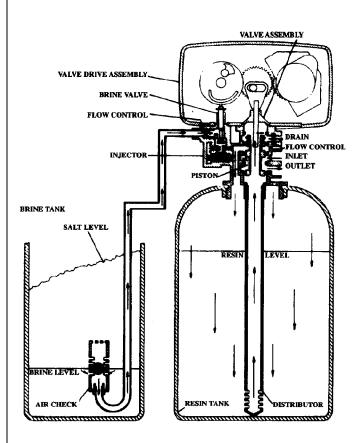
Water Conditioner Flow Diagrams (Cont'd.)

3 BACKWASH POSITION 10 Minutes

VALVE DRIVE ASSEMBLY BRINE VALVE FLOW CONTROL INJECTOR PISTON PISTON AIR CHECK RESIN TANK DISTRIBUTOR

4 BRINE POSITION

First Portion of 50 Minute Fixed Cycle



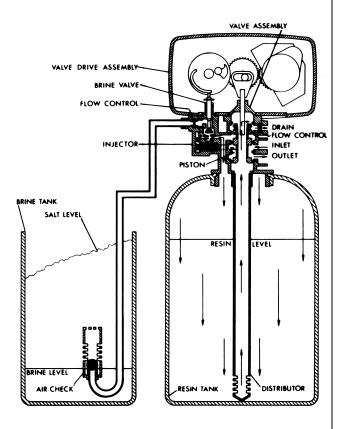
Hard water enters the unit at the valve inlet - flows around the lower piston groove and lower piston land - down thru the center tube and out the distributor - up thru the resin - thru the top of tank passage - around the upper piston groove and out the drain line.

Hard water enters the unit at the valve inlet - flows around the lower piston groove - thru the injector nozzle and orifice to draw brine from the brine tank. The brine flows down thru the resin - into the distributor - up thru the center tube - thru the center hole in the piston and out the drain line.

Water Conditioner Flow Diagrams (Cont'd.)

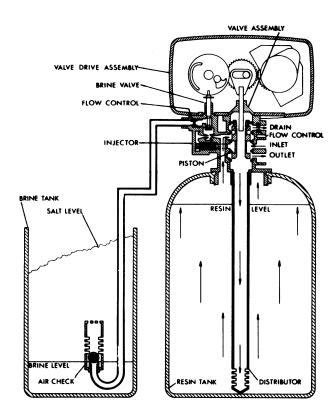
5 SLOW RINSE POSITION

Last Portion of 50 Minute Fixed Cycle



6 RAPID RINSE POSITION

10 Minutes



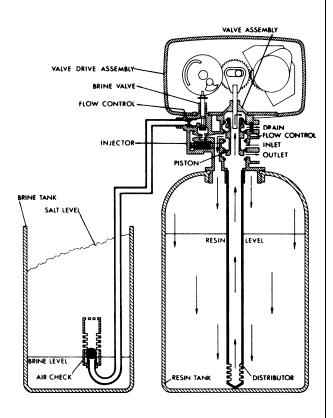
After all the brine has been drawn from the brine tank, hard water continues to enter thru the valve inlet - flows around the lower piston groove - thru the nozzle and orifice - down thru the resin and into the distributor - up thru the center tube - thru the center hole in the piston and out the drain line.

Hard water enters the unit at the valve inlet - flows around the lower piston groove and lower piston land - down thru the center tube and out the distributor - up thru the resin - thru the top of tank passage - around the upper piston groove and out the drain line.

Water Conditioner Flow Diagrams (Cont'd.)

7 SETTLING RINSE POSITION

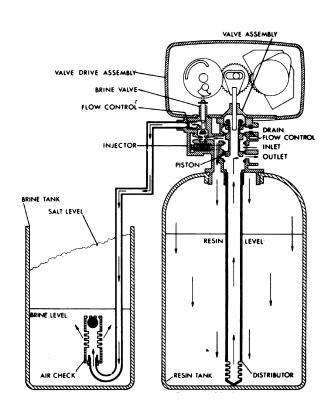
5 Minutes



Hard water enters the unit at the valve inlet - flows around the lower piston groove - down thru the top of tank passage - downward thru the resin - up the distributor tube - thru the center hole in the piston - over the top edge of the piston and out the drain line.

8 BRINE TANK FILL POSITION

4 to 24 Minutes Adjustable Cycle



Hard water enters the unit at the valve inlet - flows around the lower piston groove - thru the injector throat - thru the brine valve and flow control to fill the brine tank. Hard water also flows around the lower piston groove - thru the passage to the top of tank - down thru the resin and enters the distributor as conditioned water. The conditioned water flows up thru the center tube to the valve outlet.

Trouble-Shooting

PROBLEM			CAUSE		CORRECTION	
1.	Softener fails to regenerate.	Α.	Electrical service to unit has been interrupted.	A.	Assure permanent electrical service (check fuse, plug, pull chain or switch).	
		B.	Timer is defective.	B.	Replace timer.	
		C.	Power failure.	C.	Reset time of day.	
2.	Softener delivers hard water.	A.	By-pass valve is open.	A.	Close by-pass valve.	
		B.	No salt in brine tank.	B.	Add salt to brine tank and maintain salt level above water level.	
		C.	Injectors or screen plugged.	C.	Replace injectors and screen.	
		D.	Insufficient water flowing into brine tank.	D.	Check brine tank fill time and clean brine line flow control if plugged.	
		E.	Hot water tank hardness.	E.	Repeated flushings of the hot water tank is required.	
		F.	Leak at distributor tube.	F.	Make sure distributor tube is not cracked. Check O-ring and tube pilot.	
		G.	Internal valve leak.	G.	Replace seals and spacers and/or piston.	
3.	Unit uses too much salt.	A.	Improper salt setting.	A.	Check salt usage and salt setting.	
		B.	Excess water in brine tank.	B.	See problem No. 7.	
4.	Loss of water pressure.	A.	Iron buildup in line to water conditioner.	A.	Clean line to water conditioner.	
		B.	Iron buildup in water conditioner.	B.	Clean control and add resin cleaner to resin bed. Increase frequency of regeneration.	
		C.	Inlet of control plugged due to foreign material broken loose from pipes by recent work done on plumbing system.	C.	Remove piston & clean control.	
5.	Loss of resin through drain line.	Α.	Air in water system.	Α.	Assure that well system has proper air eliminator control. Check for dry well condition.	
6.	Iron In Conditioned Water.	Α.	Fouled resin bed.	A.	Check backwash, brine draw and brine tank fill, increase frequency of regeneration. Increase backwash time.	
	. Excessive water in brine tank.	A.	Plugged drain line flow control.	A.	Clean flow control.	

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