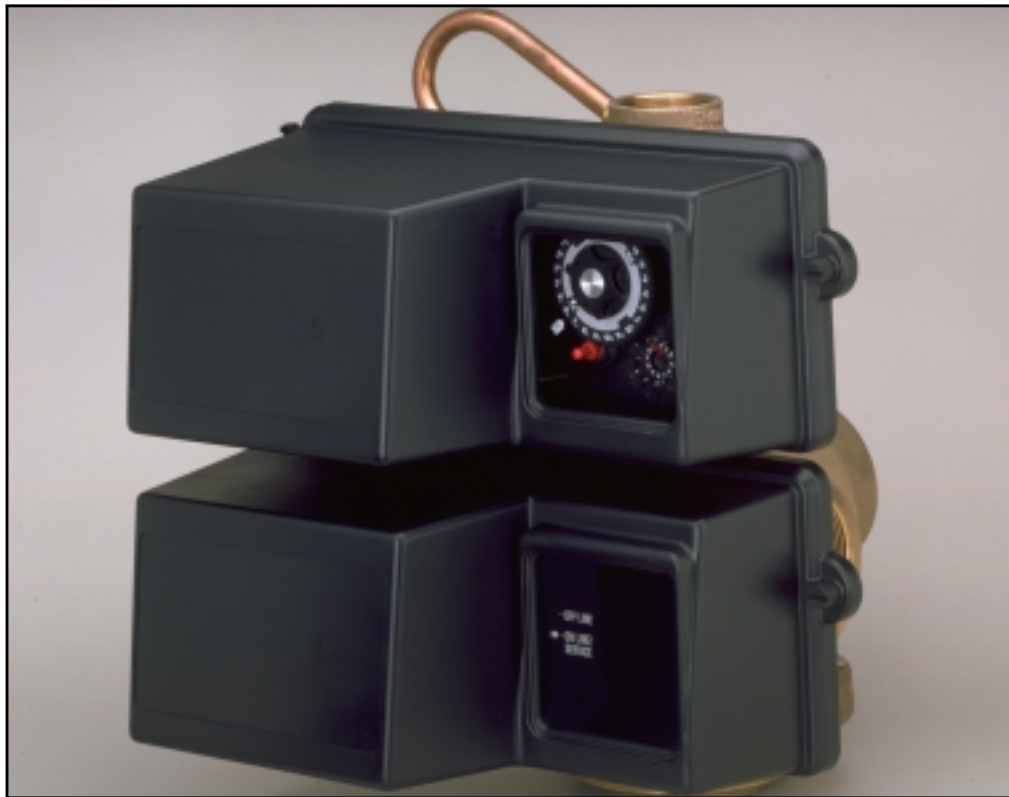


MODEL 3900

Service Manual



IMPORTANT: Fill in pertinent information on page 2 for future reference.

MODEL 3900

Control Valve

Parts List

Item No.	Quantity	Part No.	Description
1.	1	15114	Valve Body
2.	8	11720	Seal
	8	11720-02	Seal, Silicone
3.	5	10369	Spacer - Port
4.	2	10368	Spacer
		10368-01	Spacer, Hot Water
5.	1	16130	Piston
6.	2	14818	Clip - Piston Rod
7.	1	15125	Piston Rod
8.	1	14922	O-Ring -035
9.	1	16398-01	End Plug Assembly
10.	2	40118	Screw - Hex Hd.
11.	1	16078	O-Ring - 149
12.	1	16074	Coupling
13.	1	16077	O-Ring - 140
14.	1	15112	Seal
15.	1	16067-02	3" Adapter Body
16.	4	16068	Seal
	4	16068-02	Seal, Silicone
17.	2	16069	Spacer - Narrow
	2	16069-01	Spacer - Narrow, Hot Water
18.	1	16070	Spacer - Wide
	1	16070-01	Spacer - Wide, Hot Water
19.	1	16071	Piston
	1	16082	Piston - No Hard Water By-Pass
20.	1	16072	Piston Rod
21.	1	16076	O-Ring - 042
22.	1	16399-01	End Plug Assy - White
	1	16399-11	End Plug Assy - Black, NHWB-P
	1	19901	End Plug Assy - Brass, Hot Water
23.	1	16800	O-Ring - 238
24.	2	16345	O-Ring - 362
25.	1	16255	Tank Adapter - 6" -8
	1	16256	Welded Flange
26.	2	16257	Flange Segment
27.	12	11238	Screw - Hex Hd.
28.	1	16088	Pipe Plug - 2" NPT
35.	1	16258	Flow Disperser

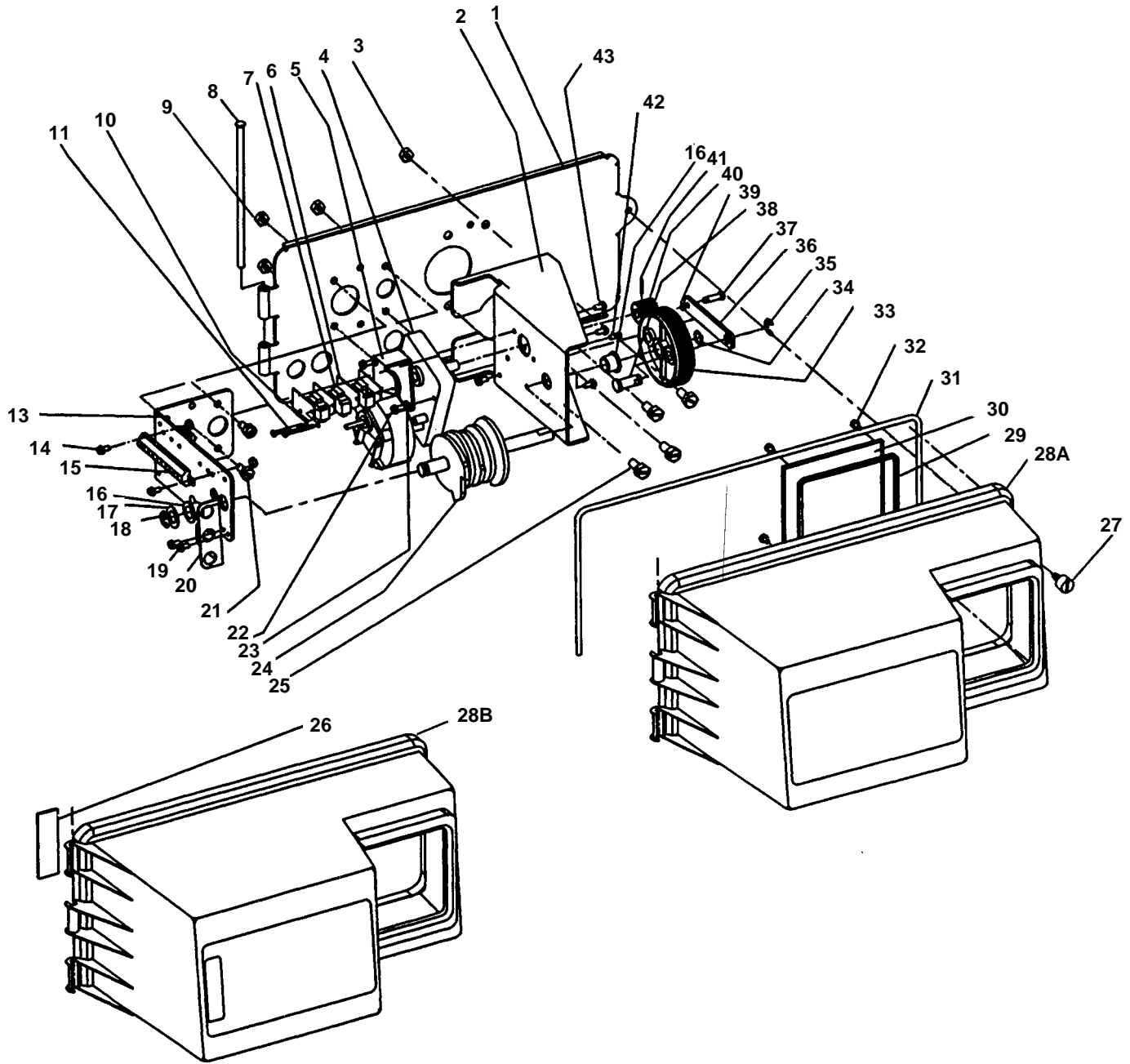
Options

29	2	16482	Flange Segment
30	1	16483	Flange Ring
31	1	16484	O-Ring -442
32	12	16517	Screw, Park Tank
	12	19592	Screw, Structural Tank
33	12	18619	Washer
34	12	16346	Nut
35	1	19608-20	Disperser (Upper)
36B	1	18584	Adapter, Side Mount

MODEL 3900

Control Drive Assembly

(see opposite page for parts list)



MODEL 3900

Control Drive Assembly

Parts List

Item No.	Quantity	Part No.	Description
1.	1	19304-00	.Back Plate -01, -02
2.	1	15120-01	.Bracket - Motor Mounting
3.	2	16346	.Nut - 5/16 - 18
4.	1	16044	.Drive Motor - 115 V. 60 Hz.
		16500	.Drive Motor - 220 V. 50 Hz.
		16501	.Drive Motor - 24 V. 60 Hz.
5.	1	17797	.Bracket - Switch Mounting
6.	4	10302	.Insulator - Switch
7.	3	10218	.Switch
8.	1	17845-03	.Pin, Hinge
9.	4	11235	.Nut, 1/4 - 20
10.	2	13365	.Lockwasher
11.	2	12624	.Screw - Pan Hd.
13.	1	16053	.Bracket - Brine Side
14.	2	40133	.Screw - Round Hd.
15.	1	15226-*	.Terminal Block
16.	2	16052	.Bushing
17.	1	16059	.Washer
18.	1	16051	.Retaining Ring - Bowed "E"
•19	2	10300	.Screw - Hex - Hex Hd Thread Cutting
•20	1	19317	.Light Bracket
21.	4	10231	.Screw - Hex Hd.
22.	2	17567	.Screw - Hex Hd.
23.	2	12288	.Washer, Lock, #8 Internal
24.	1	16494-05	.Cam Assembly - Service After RR
	1	16494-03	.Cam Assembly - Service After Brine Refill
25.	4	11224	.Screw - Hex Hd.
•26	1	19319	.Lamp Window
27.	1	18744	.Screw
28A	1	19277-020	.Cover, Black
•28B	1	19277-021	.Cover, Lamp Window
29.	1	18615-02	.Seal, Window
30.	1	18745	.Window
31.	1	18716-03	.Seal, Cover
32.	4	19203	.Screw
33.	1	16046	.Drive Gear
34.	1	16050	.Retaining Ring
35.	1	11774	.Retaining Ring "E"
36.	1	16047	.Drive Link
37.	1	11709	.Pin - Drive Link
38.	1	16048	.Bearing - Drive Link
39.	1	11898	.Clip
40.	1	16045	.Drive Pinion
41.	1	11381	.Roll Pin
42.	1	11080	.Screw - Flat Hd.
43.	3	10872	.Screw - Hex Hd.
44.	1		.Timer - (not shown) [3000, 3200, 3210, 3200E, 3200ET]
45.	1	40084-07	.Power Cord, 120V, 7 Ft. (not shown)
	1	40084-12	.Power Cord, 120V, 12 Ft. (not shown)
	1	40085-07	.Power Cord, 240V, 7 Ft. (not shown)
46.	1	17967	.Strain Relief (not shown)
47.	1	16430	.Harness (not shown)
48.	1	19691	.Hole Plug - 3/4 Dia. (not shown)
49.	1	19591	.Hole Plug - 7/8 Dia. (not shown)
50.	1	16427-04	.Motor Lead Wire (not shown)
51.	1	16384	.Wire Harness (not shown)
52.	1	14924	.Strain Relief (not shown)
53.	1	15513	.Meter Cable (not shown)
54.	2	15250	.Label - Terminal Strip (not shown)
55.	1	16821	.Cable Guide Assembly (not shown)

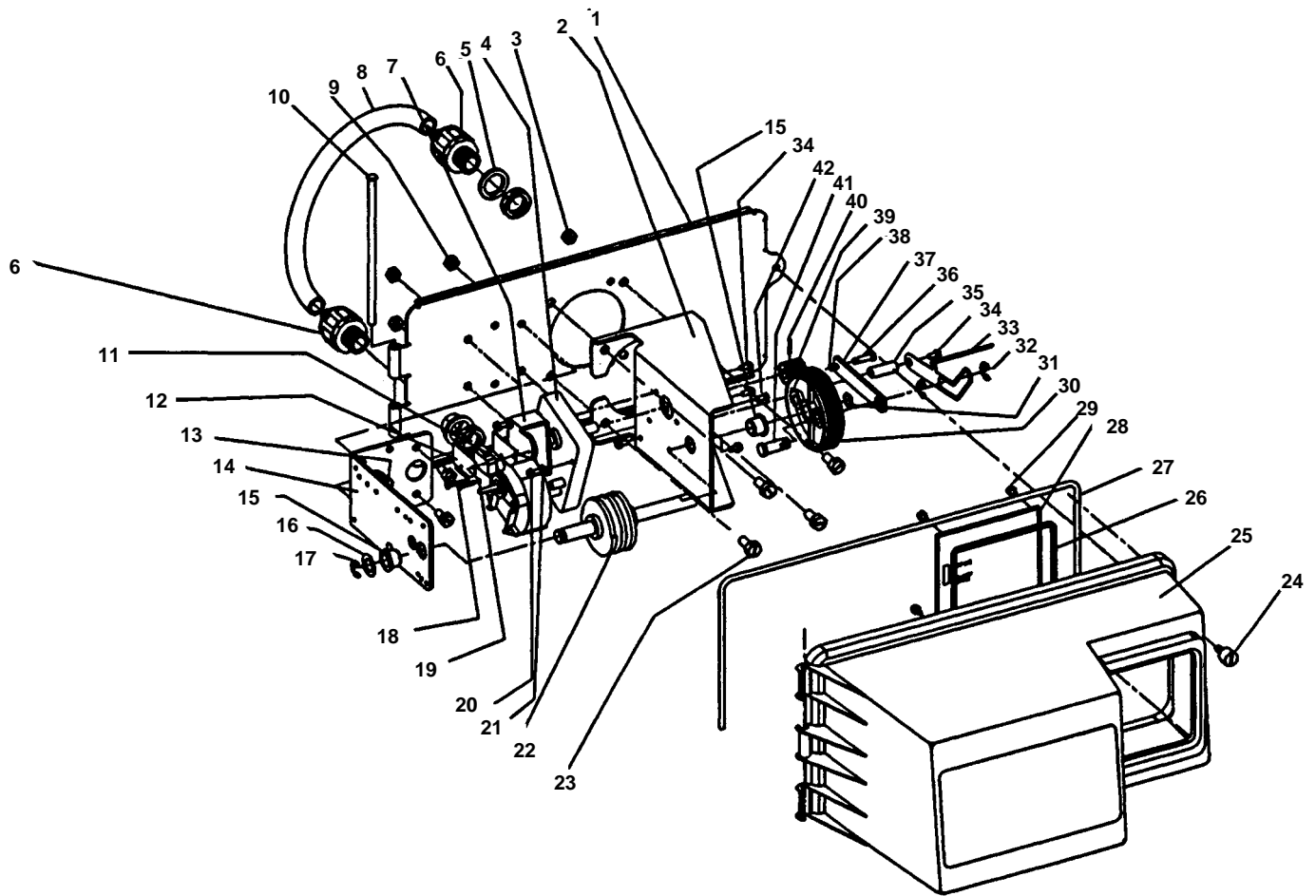
*Specify number of terminals

• Optional Parts for Lamp Package

MODEL 3900

Adapter Control Drive

(see opposite page for parts list)



MODEL 3900

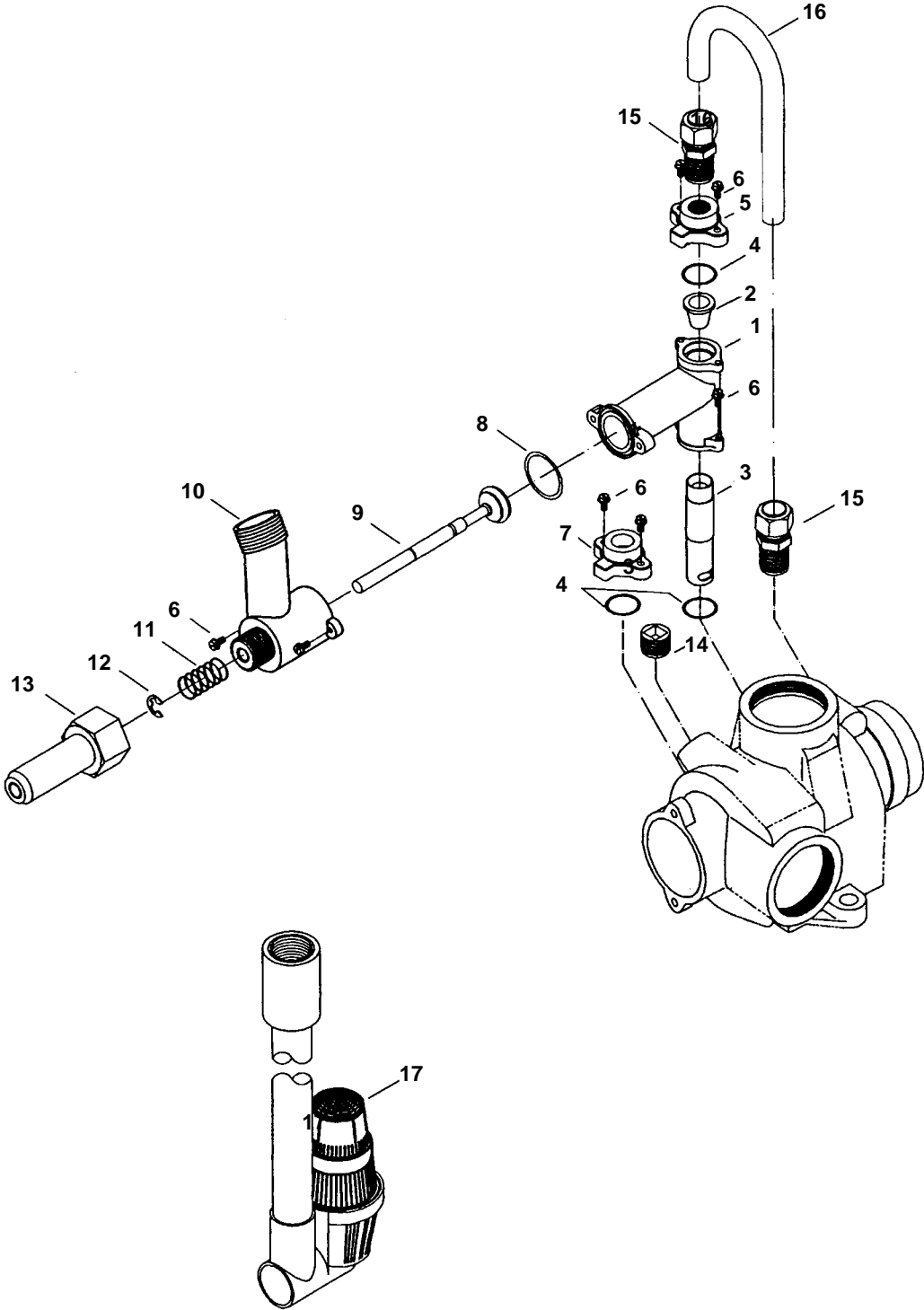
Adapter Control Drive

Parts List

Item No.	Quantity	Part No.	Description
1.....	1	19305	Back Plate
2.....	1	16086	Bracket - Motor Mounting
3.....	2	16346	Nut
4.....	1	16044	Drive Motor - 115 V. 60 Hz.
		16500	Drive Motor - 220 V. 50 Hz.
		16501	Drive Motor - 24 V. 60 Hz.
5.....	2	18692	Washer, Sealing
6.....	2	18691	Connector, Conduit
7.....	1	17797	Bracket - Switch Mounting
8.....	1	18693	Conduit, Interdrive
9.....	4	11235	Nut, 1/4-20
10.....	1	17845-03.....	Pin, Hinge
11.....	1	10218	Switch
12.....	2	10302	Insulator - Switch
13.....	4	10231	Screw - Hex Hd.
14.....	1	16053	Bracket - Brine Side
15.....	2	16052	Bushing
16.....	1	16059	Washer
17.....	1	16051	Retaining Ring - Bowed "E"
18.....	2	11805	Screw - Pan Hd.
19.....	2	13365	Lockwasher
20.....	2	17567	Screw - Hex Hd.
21.....	2	12288	Washer, Lock, Internal #8
22.....	1	16495	Cam Assembly
23.....	4	11224	Screw - Hex Hd.
24.....	1	18744	Screw, Cover
25.....	1	19277-020.....	Cover, Black
26.....	1	18615-02.....	Seal, Window
27.....	1	18716-03.....	Seal, Cover
28.....	1	19316	Window, Indicator
29.....	4	19203	Screw, Window
30.....	1	16046	Drive Gear
31.....	1	16050	Retaining Ring
32.....	2	11774	Retaining Ring - "E"
33.....	1	19315	Indicator
34.....	4	10872	Screw - Hex Hd.
35.....	1	18726	Space, Indicator
36.....	1	11709	Pin - Drive Link
37.....	1	16047	Drive Link
38.....	1	11898	Clip
39.....	1	16045	Drive Pinion
40.....	1	11381	Roll Pin
41.....	1	16048-01.....	Bearing - Drive Link
42.....	2	11080	Screw - Flat Hd.
43.....	1	19015	Wire Harness (not shown)

MODEL 3900

1800 Brine System



MODEL 3900

Brine System

Parts List

Item No.	Quantity	Part No.	Description
1	1	16340	Injector Body
2	1	15128*	Injector Nozzle
3	1	15127*	Injector Throat
4	3	15246	O-Ring - 116
5	1	16341-01	Injector Cover
6	8	12473	Screw - Hex Hd.
	8	19677	Screw - Hex Hd. (Metric)
7	1	16341-02	Cover
8	1	18879	O-Ring - 021
9	1	16497-01	Brine Stem Assembly
10	1	18713	Brine Valve Body
11	1	11772	Spring
12	1	11774	Retaining Ring
13	1	16498-01	Stem Guide Assembly
14	1	16387	Pipe Plug - 1/2 NPT
15	2	18702	Tube Fitting - Straight
16	1	18703	Brine Tube
17	1	60009	#900 Commercial Air Check
	1	60009-01	#900 Commercial Air Check Hot Water
18	1		Flow Control - Specify Flow Rate - Not Shown

* Specific Size

Option Without Brine Valve

1	16605	Retainer Plate
1	16620	Fitting - Brine Tank
1	18879	O-Ring, 021

Delete: Items 9 thru 16

Injector Throat

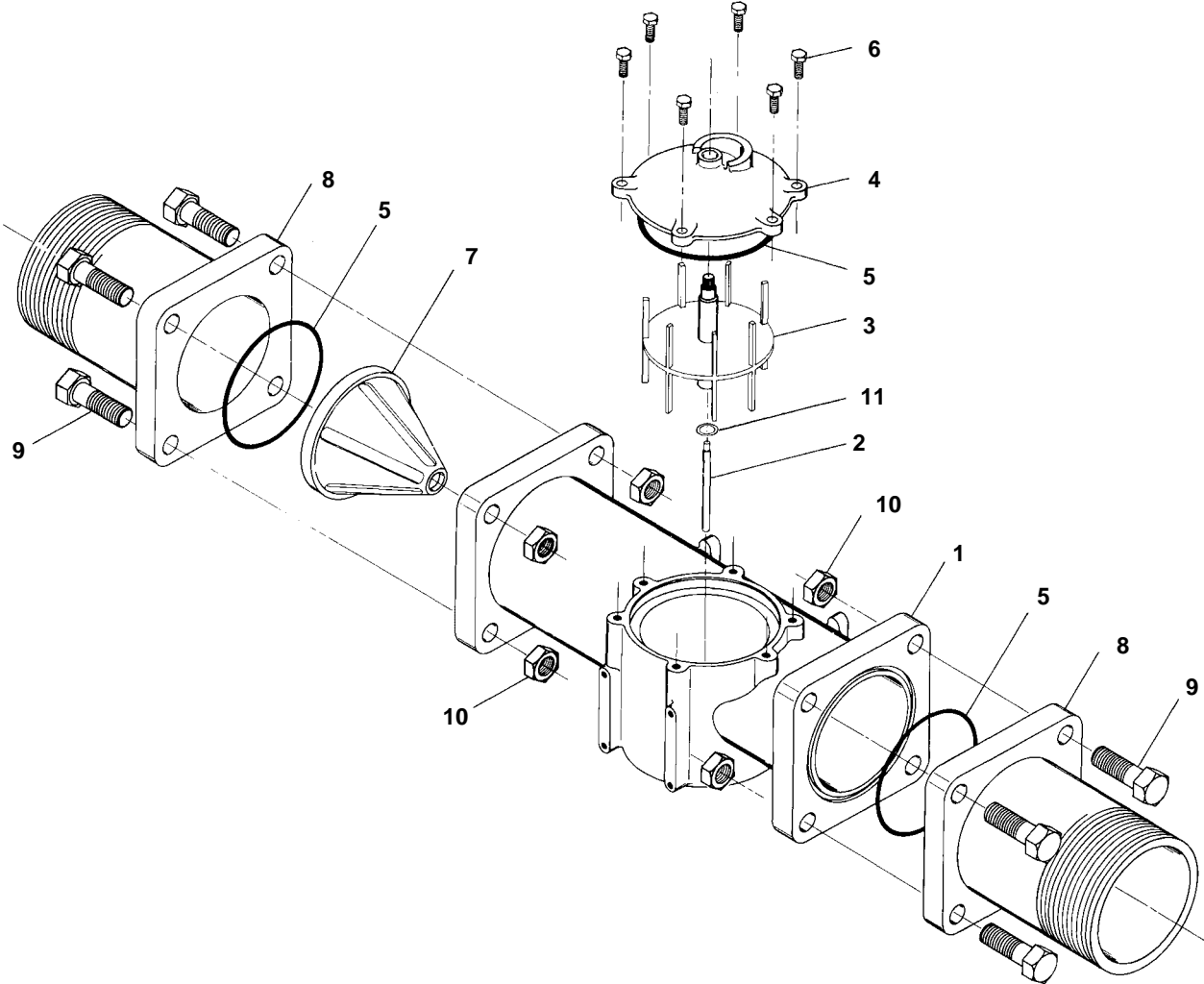
15127-04	#4	Green
15127-05	#5	Red
15127-06	#6	White
15127-07	#7	Blue
15127-08	#8	Yellow
15127-09	#9	Violet
15127-10	#10	Black

Injector Nozzle

	Size	Color
15128-04	#4	Green
15128-05	#5	Red
15128-06	#6	White
15128-07	#7	Blue
15128-08	#8	Yellow
15128-09	#9	Violet
15128-10	#10	Black

MODEL 3900

3" Meter Assembly



MODEL 3900

3" Meter Assembly

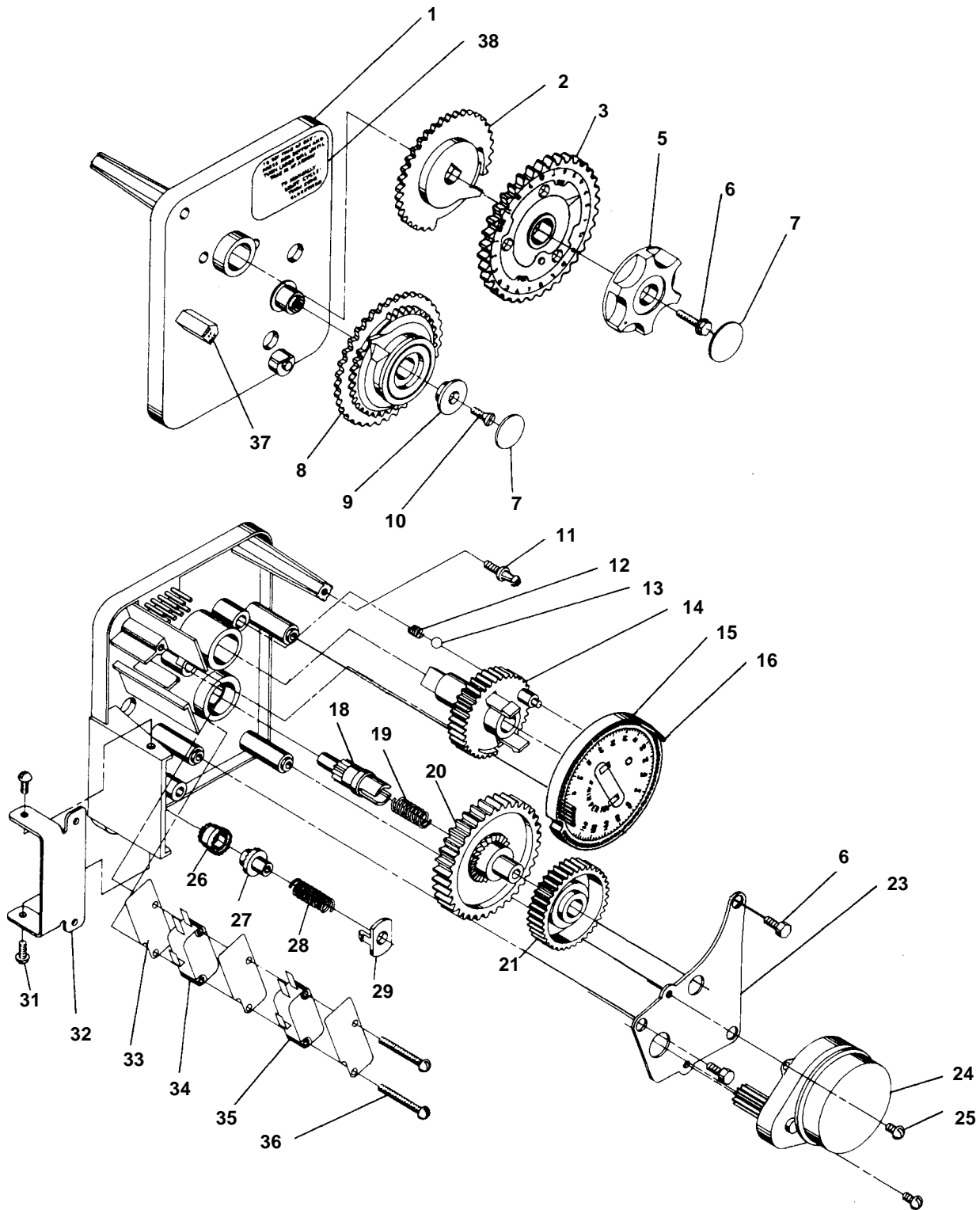
Parts List

Item No.	Quantity	Part No.	Description
1.....	1	16254	Meter Body
2.....	1	16279	Impeller Shaft
3.....	1	16575	Impeller Assembly
4.....	1	16400	Meter Cover Assembly - Std.
	1	16401	Meter Cover Assembly - Ext. Range
5.....	3	15707	O-Ring - 236
6.....	6	12112	Screw - Hex Hd.
	6	15886	Screw - Hex Hd. (Metric)
7.....	1	16280	Flow Straightener
8.....	2	16328	Connecting Flange
9.....	8	40118	Screw - Hex Hd.
	8	17122	Screw - Hex Hd. (Metric)
10	8	16386	Nut - 1/2-13
11	1	16574	Stainless Steel Washer

MODEL 3210 ECONOMINDER™

Timer Assembly

(see opposite page for parts list)



MODEL 3900

Service Assemblies

60036-02 1800 Brine Valve See Illustration Page 12	60131 3900 Upper Seal Kit See Illustration Page 6
1 11772 Spring	2 10368 Spacer
1 11774 Retaining Ring	5 10369 Spacer - Port
1 18713 Brine Valve Body	8 11720 Seal
1 16497-01 Brine Stem Assembly	
1 16498-01 Stem Guide Assembly	60132 3900 Lower Seal Kit See Illustration Page 6
	4 16068 Seal
60277 1800 Injector Assembly See Illustration Page 12	2 16069 Spacer - Narrow
4 12473 Screw - Hex Hd.	1 16070 Spacer - Wide
1 15127 Injector Throat	
1 15128 Injector Nozzle	60132-01 3900 Lower Seal Kit, Hot Water
2 15246 O-Ring -116	4 16068 Seal
1 16340 Injector Body	2 16069-01 Spacer, Narrow, Hot Water
1 16341-01 Injector Cover	1 16070-01 Spacer, Wide, Hot Water
60106-00 3900 Upper Piston Assembly See Illustration Page 6	60057-01 3900 Upper Drive Motor Assembly - 115 V. See Illustration Page 8
1 14818 Clip Piston Rod	4 10302 Insulator - Switch
1 14922 O-Ring - 035	3 10872 Screw - Hex Hd.
1 15125 Piston Rod	1 11080 Screw - Flat Hd.
1 16130 Piston	3 10218 Switch
1 16398-0 End Plug Assembly	2 10300 Screw - Hex Hd.
	1 15120 Bracket - Motor Mounting
60107-00 3900 Lower Piston - Hard Water By-Pass See Illustration Page 6	1 16044 Drive Motor - 115 V.
1 14818 Clip Piston Rod	1 16052 Bushing
1 16071 Piston	1 17797 Bracket - Switch Mounting
1 16072 Piston Rod	2 12624 Screw - Pan Hd.
1 16076 O-Ring - 042	
1 16399-01 End Plug Assembly - White	60058-01 3900 Lower Drive Motor Assembly - 115 V. System #4 See Illustration Page 10
	2 10302 Insulator - Switch
60107-10 3900 Lower Piston - No Hard Water By-Pass See Illustration Page 6	3 10872 Screw - Hex Hd.
1 14818 Clip Piston Rod	1 11080 Screw - Flat Hd.
1 16082 Piston - No Hard Water By-Pass	1 10218 Switch
1 16072 Piston Rod	2 10300 Screw - Hex Hd.
1 16076 O-Ring - 042	2 11805 Screw - Pan Hd.
1 16399-11 End Plug Assembly - Black	1 16044 Drive Motor - 115 V.
	1 17797 Bracket - Switch Mounting
	1 16086 Bracket - Motor Mounting