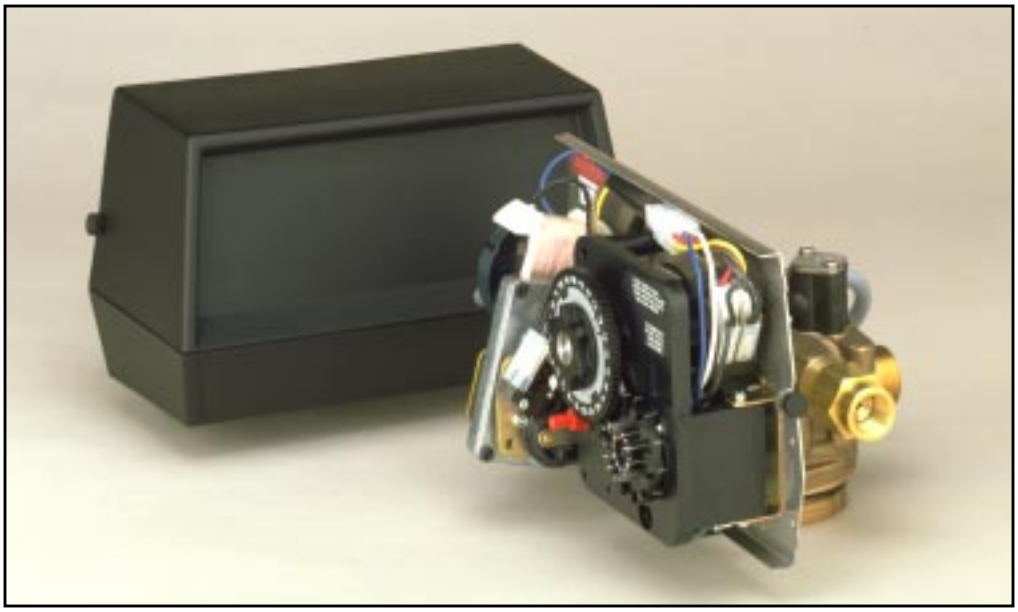
MODEL 2750 UPFLOW CONTROL VALVE

Service Manual



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

MODEL 2750

Job Specification Sheet

- JOB NO. _____
- *MODEL NO. _____
- WATER TEST _____
- CAPACITY PER UNIT _____MAX. _____PER REGENERATION
- MINERAL TANK SIZE DIA._____HEIGHT_____
- BRINE TANK SIZE & SALT SETTING PER REGENERATION:
- _____

* 2750 CONTROL VALVE SPECIFICATIONS

1. Type of Timer (see pages 16, 17, & 18)
   A. 7 day or 12 day
   B. * 310 to 5,2700 gallon meter or
      * 1,550 to 26,350 gallon meter
      * Other _____
   C. Meter Wiring Package
      1) System #4 - 1 tank; 1 meter; immediate or delayed regeneration
      2) System #5 - 2 tanks; 2 meters; interlock
      3) System #6 - 2 tanks; 1 meter; series regeneration
      4) System #7 - 2 tanks; 1 meter; alternator
2. Timer Program Settings (see pages 18 and 19)
   A. Backwash _____ min.
   B. Brine & Slow Rinse _____ min.
   C. Rapid Rinse _____ min.
   D. Brine Tank Refill_____ min.
3. Drain Line Flow Controller _____ gpm
4. Brine Line Flow Controller _____ gpm
5. Injector Size #_____
6. Service Valve Operation Units (SVO)
   Size of Service Valve _____

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MODEL 2750

General Commercial Pre-Installation Check List

WATER PRESSURE: A minimum of 25 pounds of water pressure is required for regeneration valve to operate effectively.

ELECTRICAL FACILITIES: A continuous 110 volt, 60 Hertz current supply is required. Make certain the current supply is always hot and cannot be turned off with another switch. (Other voltages available.)

EXISTING PLUMBING: Condition of existing plumbing should be free from lime and iron buildup. Piping that is built up heavily with lime and/or iron should be replaced. If piping is clogged with iron, a separate iron filter unit should be installed ahead of the water softener.

LOCATION OF SOFTENER AND DRAIN: The softener should be located close to a drain.

BY-PASS VALVES: Always provide for the installation of a by-pass valve.

CAUTION: Water pressure is not to exceed 120 p.s.i., water temperature is not to exceed 100°F, and the unit cannot be subjected to freezing conditions.

INSTALLATION INSTRUCTIONS

1. Place the softener tank where you want to install the unit making sure the unit is level and on a firm base. (Maximum 4 feet apart for twin units.)
2. All plumbing should be done in accordance with local plumbing codes. The pipe size for the drain line should be the same size as the drain line flow control female connection. Water meters are to be installed on soft water outlets. Twin units with (1) one meter shall be installed on common soft water outlet of units.
3. Solder joints near the drain must be done prior to connecting the Drain Line Flow Control filling. Leave at least 6″ between the DLFC and solder joints when soldering when the pipes are connected on the DLFC. Failure to do this could cause interior damage to the DLFC.
4. Teflon tape is the only sealant to be used on the drain fitting. The drain from twin units may be run through a common line.
5. Make sure that the floor is clean beneath the salt storage tank and that it is level.
6. Place approximately 1″ of water above the grid plate (if used) in your salt tank. Salt may be placed in the unit at this time.
7. On units with a by-pass, place in by-pass position. Turn on the main water supply. Open a cold soft water tap nearby and let run a few minutes or until the system is free from foreign material (usually solder) that may have resulted from the installation.
8. Place the by-pass in service position.
9. Manually index the softener control into “service” position and let water flow into the mineral tank. When water flow stops, open a cold water tap nearby and let run until air pressure is relieved.
10. Electrical: All electrical connections must be connected according to codes. Use electrical conduit if applicable. Remote meter systems and Twin meter system wiring diagrams are on page 22. Plug into power supply.

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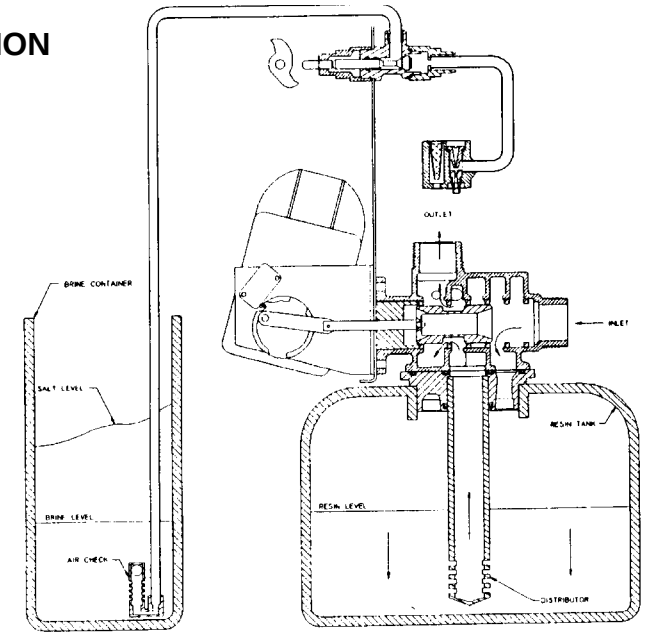
MODEL 2750 UPFLOW

Water Conditioners Flow Diagrams

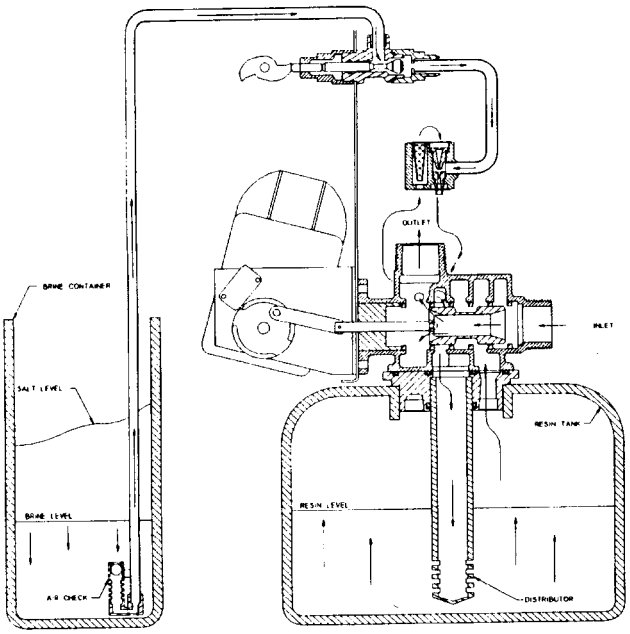
Standard Upflow Cams 19887/19888

1 SERVICE POSITION



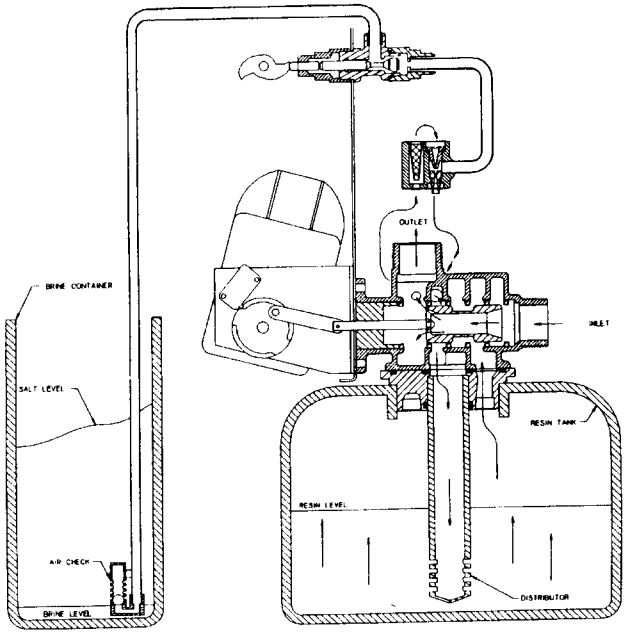
Hard water enters unit at valve inlet and flows down thru the mineral in the mineral tank. Conditioned water enters center tube thru the bottom distributor then flows up thru the center tube around the piston and out the top outlet of the valve.

2 BRINE POSITION



Hard water enters unit at valve inlet - flows up into injector housing and down thru nozzle and orifice to draw brine from the brine tank - brine flows down the center tube thru bottom of tank, up thru mineral to top of tank, around piston and out thru the drain line.

3 SLOW RINSE POSITION



Hard water enters unit at valve inlet - flows up into injector housing and down thru nozzle and orifice - around the piston - down thru center tube thru bottom distributor - flows up thru mineral - around piston and out thru drain line.

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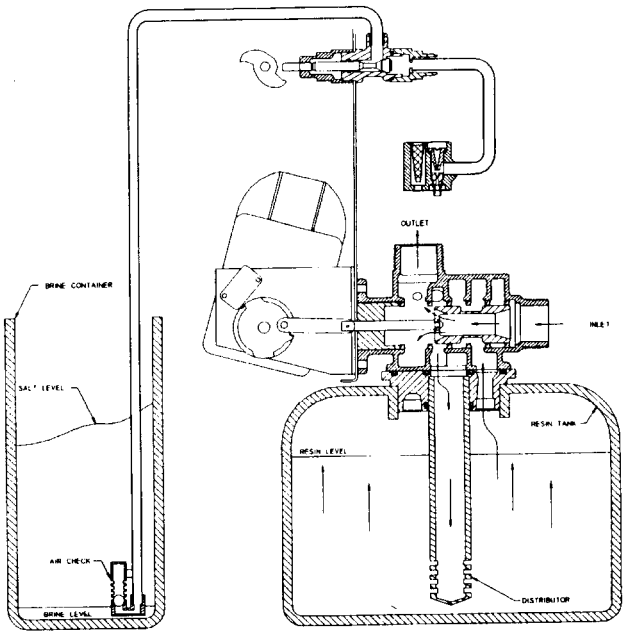
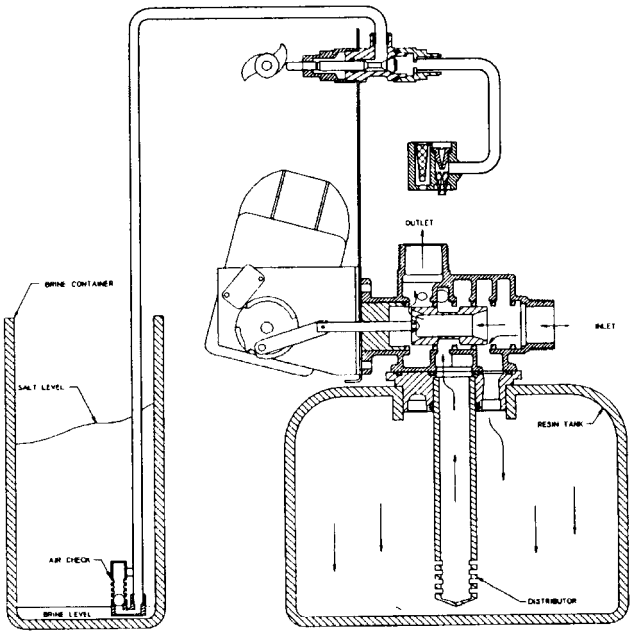
4 BACK WASH POSITION



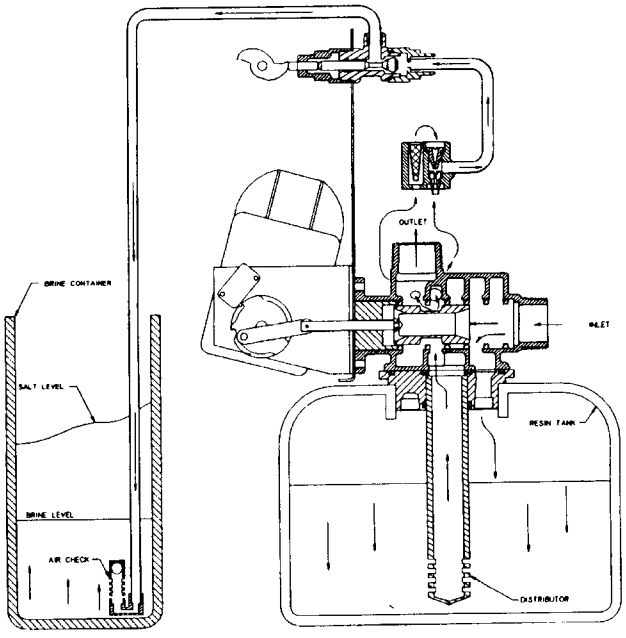
Hard water enters unit at valve inlet - flows thru piston - down center tube - thru bottom distributor and up thru the mineral - around the piston and out the drain line.

5 RAPID RINSE



Hard water flows directly from inlet down thru mineral into center tube bottom distributor and up thru center tube - around piston and out thru the drain line.

6 BRINE TANK FILL POSITION



Hard water enters unit at valve inlet - flows up thru the injector housing- thru the brine valve to fill the brine tank.

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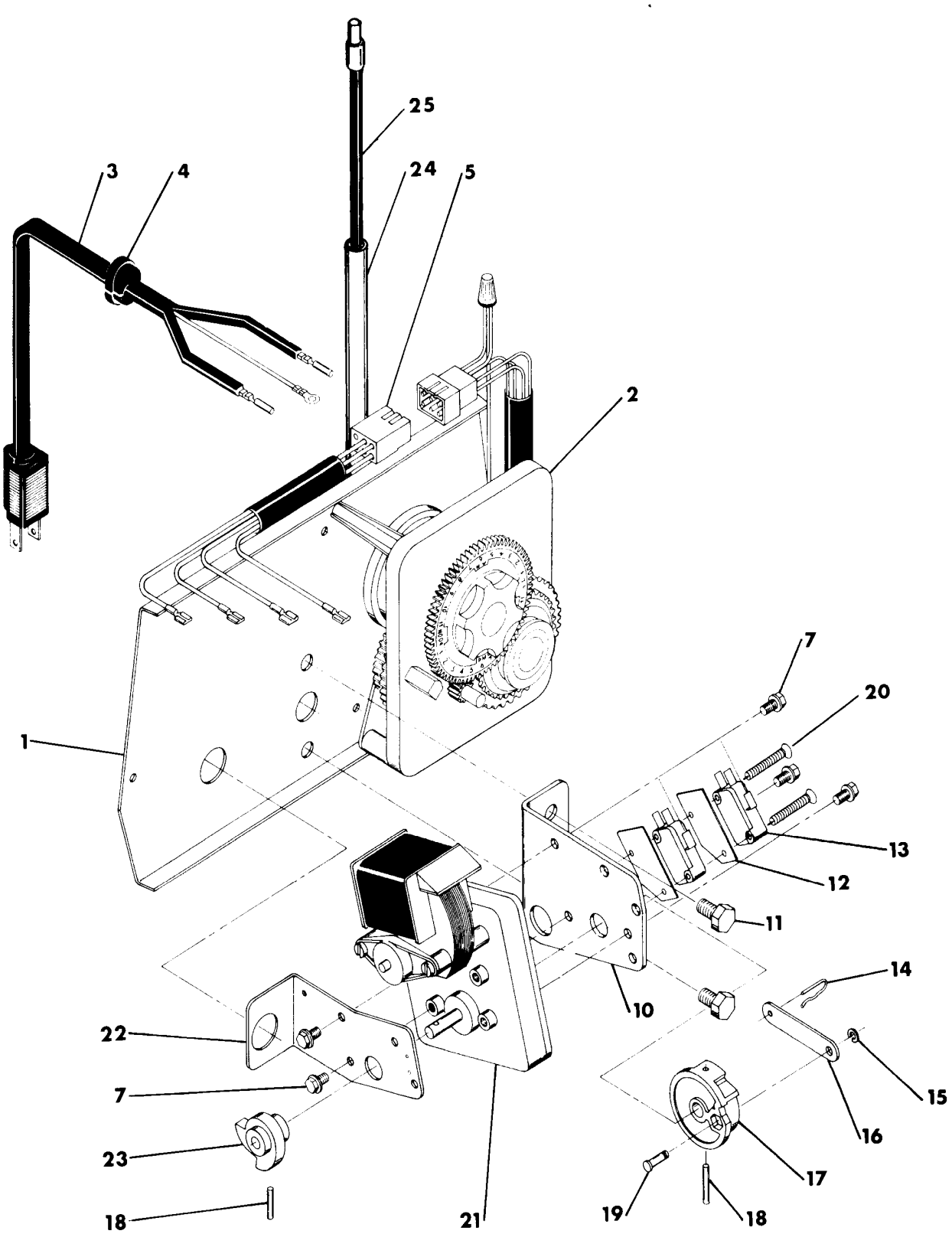
MODEL 2750 UPFLOW

Control Drive Assembly

(See opposite page for parts list)



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MODEL 2750 UPFLOW

Control Drive Assembly

Parts List

Item No.	Quantity	Part No.	Description
1	1	14884	Back Plate
	1	15156	Back Plate - SVO (not shown)
2	1		Timer -3200 7 Day -3200 12 Day -3210 Meter
3	1	11838	Power Cord
4	1	13547	Strain Relief
5	1	11667	Wire Harness
7	5	10872	Screw - Motor Mounting
8			Not Assigned
9			Not Assigned
10	1	10774	Bracket - Motor Mounting
11	2	10231	Screw - Drive Mounting
12	2	10302	Insulator
13	2	10218	Switch
14	1	10909	Connecting Link Pin
15	3	10250	Retaining Ring
16	1	10621	Connecting Link
17	1	19750	Drive Cam - Variable Brining (not shown)
	1	19888	Drive Cam - Std. Upflow
18	2	10338	Roll Pin
19	1	13366	Drive Bearing
20	2	14923	Screw - Switch Mounting
21	1	10769	Motor
22	1	11826	Bracket - Brine Valve Side
23	1	19749	Brine Valve Cam - Variable Brining (not shown)
	1	19887	Brine Valve Cam - Std. Upflow
24	1	15441	Meter Cable Guide Assembly
25	1	15513	Meter Cable Assembly
26	2	10300	Screw - Timer Mounting (not shown)
27	2	15742	Screw (not shown)
28	2	15833	Spacer, Cover (not shown)
29	1	19291-020	Cover, 1 Piece, Black (not shown)
30	2	19367	Screw, Cover (not shown)

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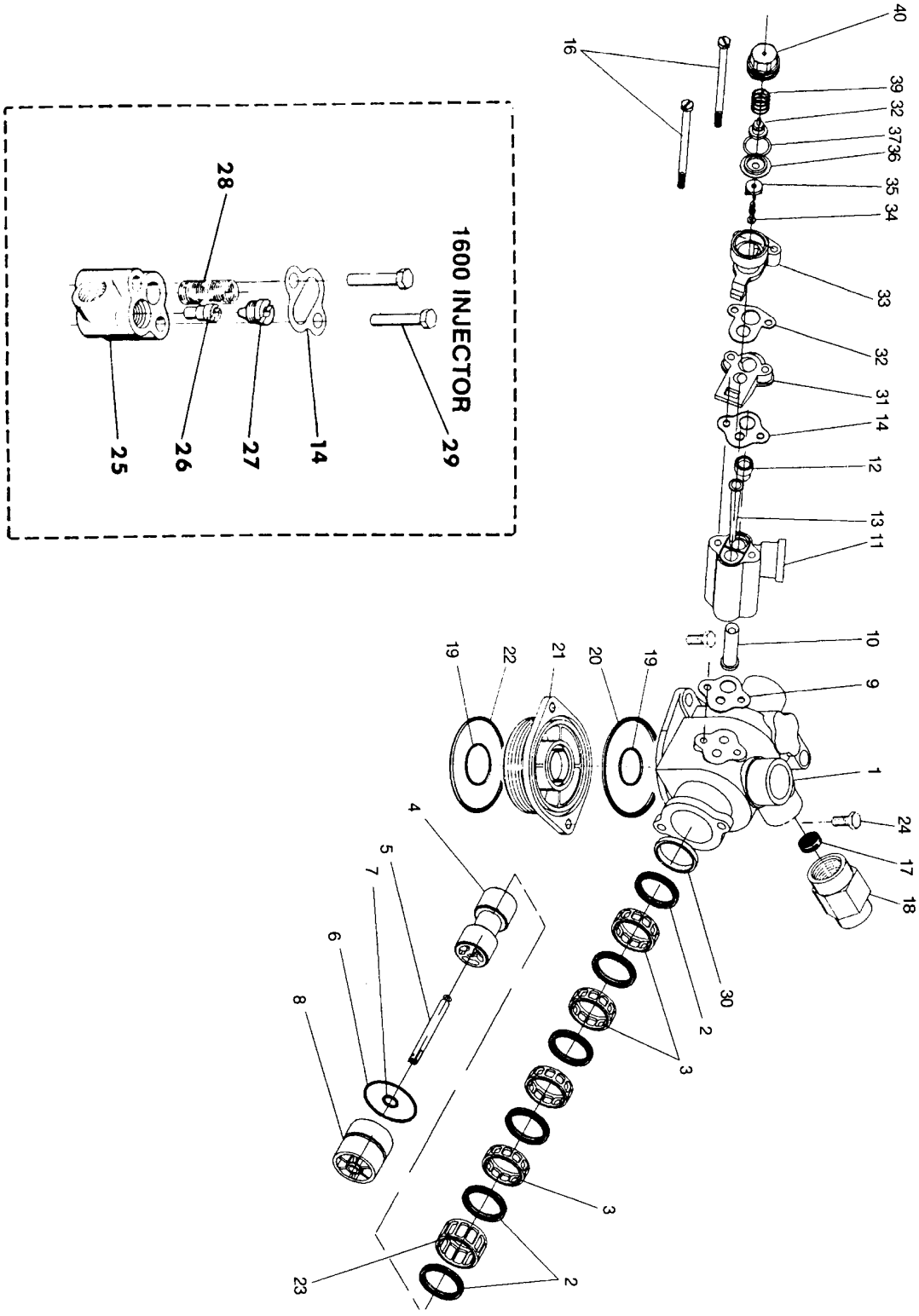
MODEL 2750 UPFLOW

Control Valve with 1700 Injector

(See opposite page for parts list)



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MODEL 2750 UPFLOW

Control Valve with 1700 Injector

Parts List

Item No.	No. Req'd.	Part No.	Description
1	1	19401-01	Valve Body
2	6	10545	Seal
3	5	11451	Spacer
4	1	19454	Piston
5	1	14452	Piston Rod
6	1	40078	"O" Ring - End Plug
7	1	10209	Quad Ring - Piston Rod
8	1	10598-03	End Plug Assembly
9	1	14805	Injector Body Gasket
10	1	14802	Injector Throat1
11	1	17777-02	Injector Body
12	1	14801	Injector Nozzle
13	1	19478	Injector Screen
14	1	19925	Injector Cover Gasket
15	1	16221	Air Disperser - 1600 Injector (not shown)
16	2	19718	Screw- Injector Body
17	1		Washer - Flow Control (specify size)
18	1	15177	Flow Control Housing
19	2	11710	"O" Ring Base
20	1	11208	"O" Ring Base
21	1	12461-01	Adapter Base 2-1/2-8 Thd
22	1	10381	"O" Ring-Top of Tank
23	1	19457	Spacer, Long, Red
24	2	11224	Screw - Valve Mounting
25	1	17776-02	Injector Body
26	1	10914	Injector Throat
27	1	10913	Injector Nozzle
28	1	19479	Injector Screen
29	2	19740	Screw - Injector Body
30	1	10757	End Spacer
31	1	19482	Adapter Regulator - 1600
		19482-01	Adapter Regulator - 1700
32	1	19452	Gasket, Adapter - 1600
	1	19925	Gasket, Adapter - 1700
33	1	19464	Body, Regulator - 1600
	1	19464-01	Body, Regulator - 1700
34	1	19462	Stem, Regulator-1600
	1	19924	Stem, Regulator- 1700
35	1	19463	Seat, Regulator
36	1	18568	Diaphragm, Regulator
37	1	14848	Washer, Regulator
38	1	18571	Retainer, Regulator
39	1	18837	Spring, Regulator - 1600
	1	19917	Spring, Regulator- 1700
40	1	18570	Cap, Regulator

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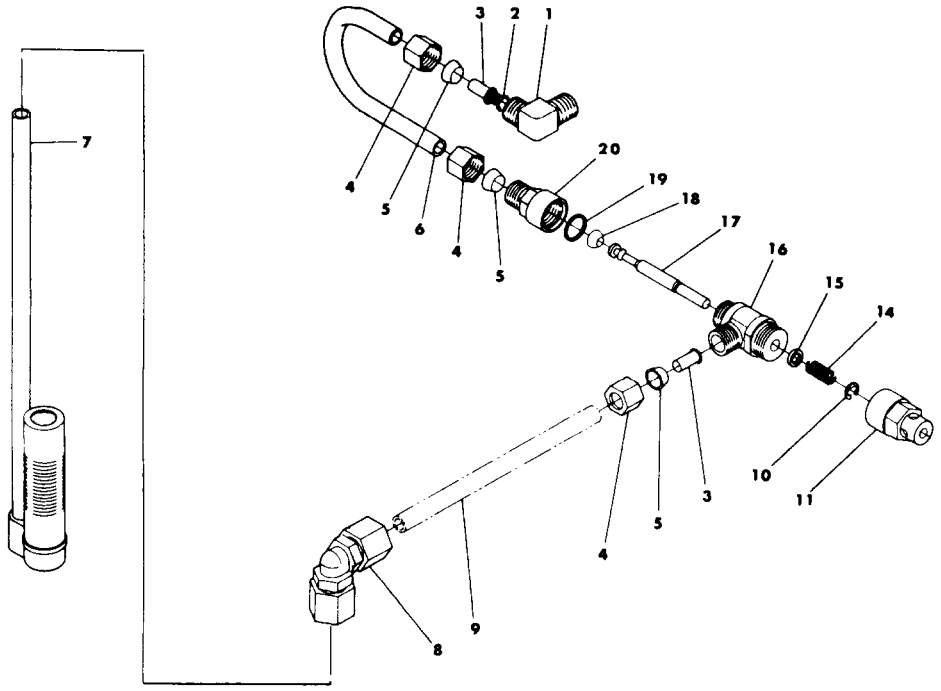
MODEL 2750 UPFLOW

1600 Series Brine System Assembly



PARTS LIST

Item No.	Quantity	Part No.	Description
1	1	10328-01	900 Elbow-1/4 Pipe Thd. to 3/8 Tube
2	1	12767	Brine Line Screen
3	2	10332	Insert Sleeve 3/8 Tube)
4	3	10329	Fitting Nut (3/8 Tube)
5	3	10330	Derlin Sleeve (3/8 Tube)
6	1	14703-02	Brine Valve Tube
7	1	60002	#500 Air Check Assembly
		60003	#500 Air Check Assembly, Hot Water
8	1	12794	90˚ Elbow-3/8 Tube to 3/8 Tube
9	1	Not Supplied	Brine Line Tube (3/8 Flexible Tube)
10	1	10250	Retaining Ring
11	1	11749	Stem Guide
12			Not Assigned
13			Not Assigned
14	1	10249	Brine Valve Spring
15	1	12550	Quad Ring
16	1	12748	Brine Valve Body
17	1	12552	Brine Valve Stem
18	1	12626	Brine Valve Seat
19	1	11982	“O” Ring
20	1	60020-25	BLFC .25 GPM
		60020-50	BLFC .50 GPM
		60020-100	BLFC 1.0 GPM

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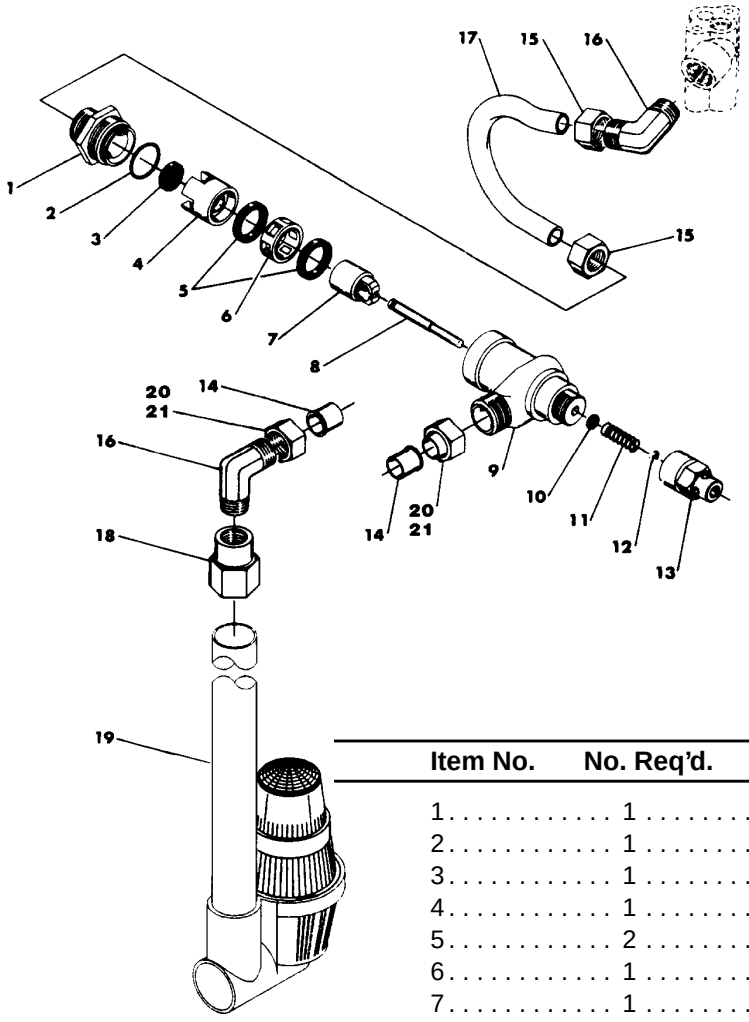
MODEL 2750 UPFLOW

1700 Series Brine System



PARTS LIST

Item No.	No. Req'd.	Part No.	Description
1	1	14792	End Plug
2	1	13201	"O" Ring - End Plug
3	1		Washer Flow Control (specify size)
4	1	14785	Flow Control Retainer
5	2	14811	Piston Seals
6	1	14798	Spacer
7	1	14795	Brine Valve Piston
8	1	14797	Brine Valve Stem
9	1	14790	Brine Valve Body
10	1	12550	Quad Ring - Brine Stem
11	1	15310	Spring-Brine Valve
12	1	10250	Retaining Ring
13	1	15517	Stem Guide
14	2	15415	Insert
15	2	15414	Nut & Sleeve
16	2	15413	Elbow
17	1	19682	Brine Tube
18	1	16977	Reducer Coupling, 1/2 NPT to 3/8 NPT
19	1	60009	#900 Air Check Assembly
		60009-01	#900 Air Check Assembly, Hot Water
20	2	16123	Nut
21	2	16124	Sleeve

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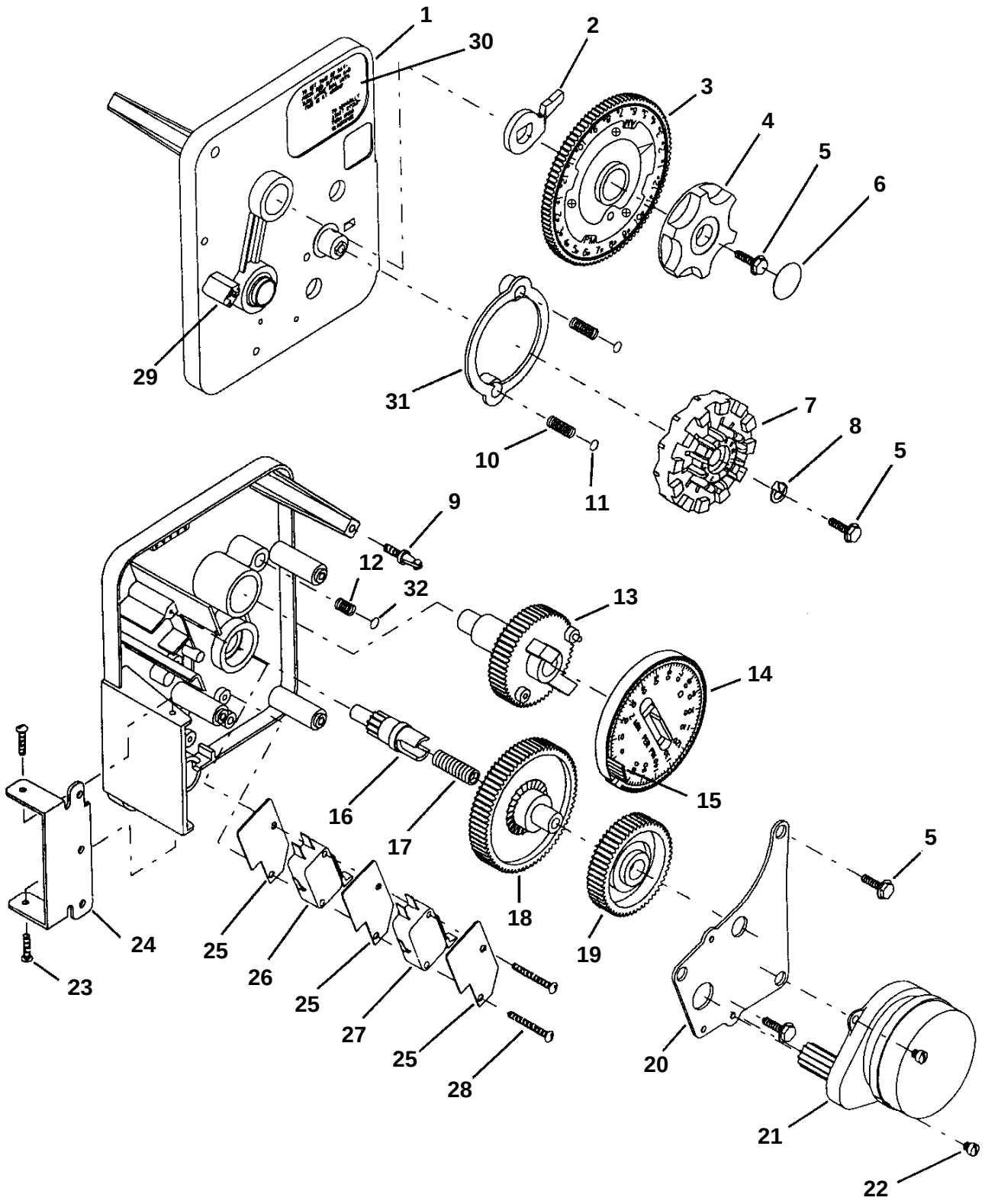
MODEL 2750 ECONOMINDER

Timer Assembly

(See opposite page for parts list)



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MODEL 2750 ECONOMINDER

Timer Assembly

Parts List

Item No.	No. Req'd.	Part No.	Description
1	1	113870	Timer Housing
2	1	13011	Cycle Actuator Arm
3	1	40096-24	24 Hour Gear Assembly, 12 Midnight
		40096-02	24 Hour Gear Assembly, 2 a.m.
4	1	13886-01	Knob
5	5	13296	Screw - Timer Knob and Motor Mtg. Plate
6	1	11999	Button Decal
7	1	14381	Skipper Wheel Assembly - 12 Day
		14860	Skipper Wheel Assembly - 7 Day
8	1	13014	Regeneration Pointer
9	1	14265	Spring Clip
10	2	13311	Spring - Skipper Wheel Detent
11	2	13300	Ball - 1/4 in. Dia. Skipper Wheel
12	1	15424	Spring - Main Gear Detent
13	1	13911	Main Drive Gear
14	1	19210	Program Wheel
15	21	15493	Roll Pin
16	1	13018	Idler Shaft
17	1	13312	Spring - Idler
18	1	13017	Idler Gear
19	1	13164	Drive Gear
20	1	13887	Motor Mounting Plate
21	1	18743	Motor - 120V., 60 Hz.
		19659	Motor - 24V., 60 Hz.
22	2	13278	Screw - Motor Mounting
23	3	11384	Screw - Timer Hinge & Ground Wire
24	1	13881	Hinge Bracket
25	3	14087	Insulator
26	1	10896	Switch
27	1	15320	Switch
28	2	11413	Screw - Switch Mounting
29	1	14007	Decal - Time of Day
30	1	14045	Decal - Instructions
31	1	13864	Skipper Wheel Ring
32	1	15066	Ball 1/4 in. Dia. Main Gear
Not Shown	1	13902	Harness
Not Shown	2	12681	Wire Connector
Not Shown	1	15354-01	Ground Wire

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MODEL 2750 ECONOMINDER

1″ Commercial Demand Regeneration Control

Timer Settings

Typical Programming Procedure

Calculate the gallon capacity of the system, subtract the necessary reserve requirement and set the appropriate gallons available opposite the small white dot on the program wheel gear. Note, drawing shows 10,000 gallon setting. The capacity (gallons) arrow denotes remaining gallons exclusive of calculated reserve.

How To Set The Time Of Day:

Press and hold the red button in to disengage the drive gear.

Turn the large gear until the actual time of day is opposite the time of day pointer

Release the red button to again engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time:

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

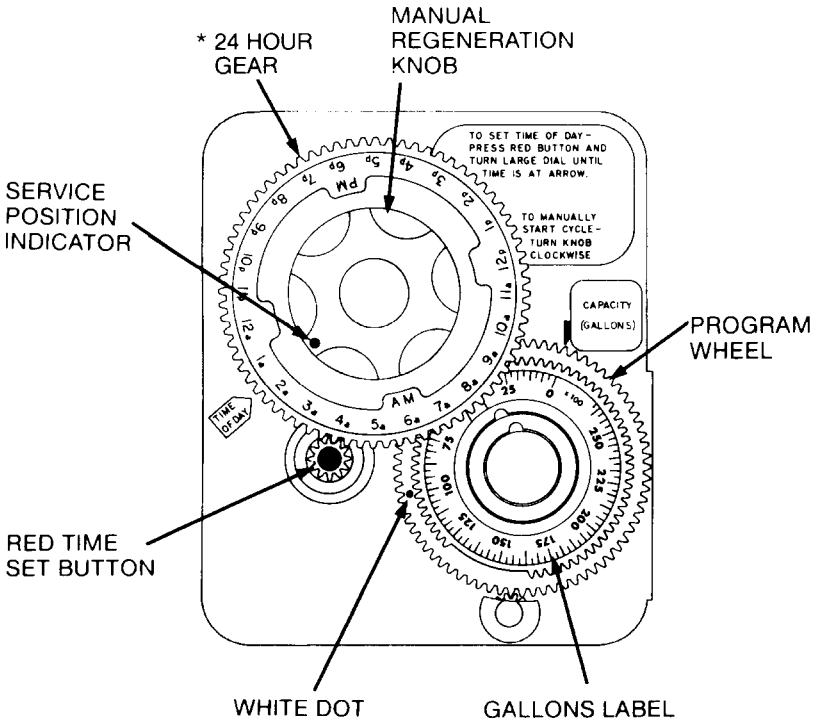
The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

Immediate Regeneration Timers:

These timers do not have a 24 hour gear. Setting the gallons on the program wheel and manual regeneration procedure are the same as previous instructions.



* Immediate regeneration timers do not have 24 hour gear. No time of day can be set.

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MODEL 3200 TIMER

Timer Setting Procedure

How To Set Days On Which Water Conditioner Is To Regenerate:

Rotate the skipper wheel until the number “1” is at the red pointer. Set the days that regeneration 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 the red pointer, extend or retract fingers to obtain the desired regeneration schedule.

How To Set The Time Of Day:

Press and hold the red button in to disengage the drive gear.

Turn the large gear until the actual time of day is at the time of day pointer.

Release the red button to again engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time:

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

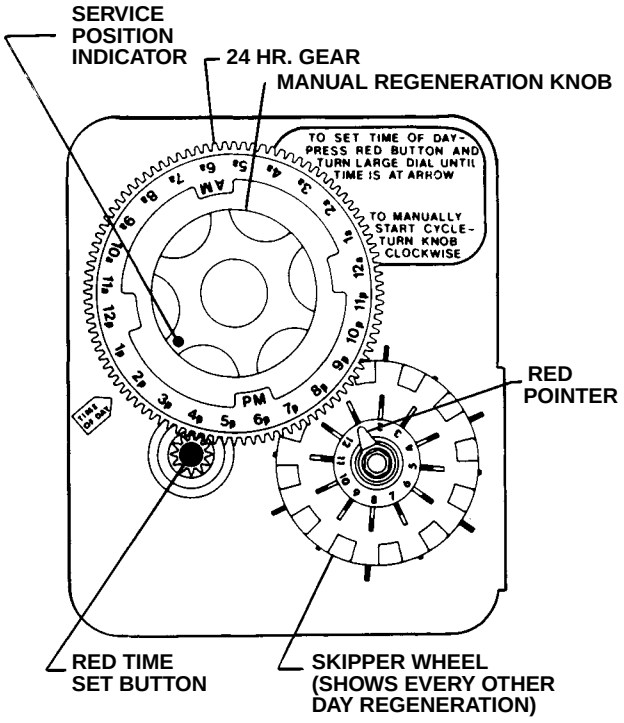
The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.

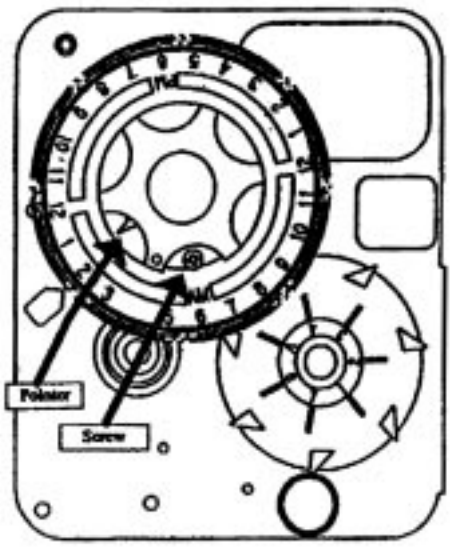
Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

How to Adjust Regeneration Time:

1. Disconnect the power source.
2. Locate the three screws behind the manual regeneration knob by pushing the red button in and rotating the 24 hour dial until each screw appears in the cut out portion of the manual regeneration knob.
3. Loosen each screw slightly to release the pressure on the time plate from the 24 hour gear.
4. Locate the regeneration time pointer on the inside of the 24 hour dial in the cut out.
5. Turn the time plate so the desired regeneration time aligns next to the raised arrow.
6. Push the red button in and rotate the 24 hour dial. Tighten each of the three screws.
7. Push the red button and locate the pointer one more time to ensure the desired regeneration time is correct.
8. Reset the time of day and restore power to the unit.





3200 ADJUSTABLE REGENERATION TIMER

IMPORTANT!
SALT LEVEL MUST ALWAYS BE ABOVE WATER LEVEL IN BRINE TANK.

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MODEL 3000, 3200 & 3210 TIMER SERIES

Regenerating Cycle Program Setting Procedure

(Brine Tank Refill Separate From Rapid Rinse)

How To Set The Regeneration Cycle Program:

The regeneration cycle program on your water conditioner has been factory preset, however, portions of the cycle or program may be lengthened or shortened in time to suit local conditions.

3200 & 3210 Series Timers (Figure to Right)

To expose cycle program wheel, grasp timer in upper left-hand corner and pull, releasing snap retainer and swinging timer to the right.

To change the regeneration cycle program, the program wheel must be removed. Grasp program wheel and squeeze protruding lugs toward center, lift program wheel off timer. (Switch arms may require movement to facilitate removal.)

Return timer to closed position engaging snap retainer in back plate. Make certain all electrical wires locate above snap retainer post.

3000 Series Timers (Not Pictured)

To expose the program wheel on hinge type mounted timers, remove the screw in the upper left hand corner and swing the timer outward.

To change the regeneration cycle program, the program wheel must be removed by holding the black center knob on the front of the timer, while you remove the wing nut and the program wheel from the rear of the timer.

Timer Setting Procedure for 3000, 3200 & 3210 Timer

How To Change The Length Of The Backwash Time:

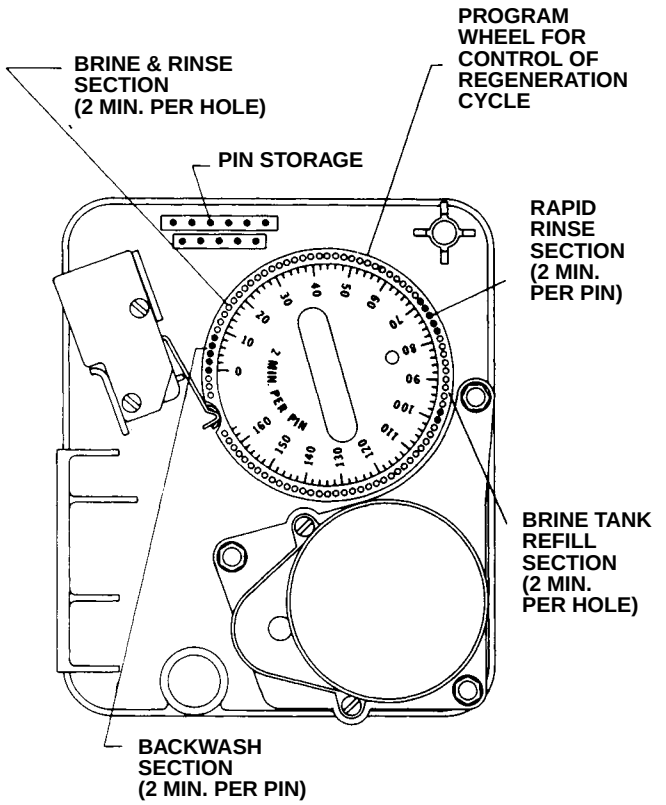
The program wheel as shown in the drawing is in the service position. As you look at the numbered side of the program wheel, the group of pins starting at zero determines the length of time your unit will backwash.

FOR EXAMPLE: If there are six pins in this section, the time of backwash will be 12 min. (2 min. per pin). To change the length of backwash time, add or remove pins as required. The number of pins times two equals the backwash time in minutes.

How To Change The Length Of Brine And Rinse Time:

The group of holes between the last pin in the backwash section and the second group of pins determines the length of time that your unit will brine and rinse (2 mm. per hole.)

To change the length of brine and rinse time, move the rapid rinse group of pins to give more or fewer holes in the brine and rinse section. Number of holes times two equals brine and rinse time in minutes.



How To Change The Length Of Rapid Rinse:

The second group of pins on the program wheel determines the length of time that your water conditioner will rapid rinse. (2 min. per pin.)

To change the length of rapid rinse time, add or remove pins at the higher numbered end of this section as required. The number of pins times two equals the rapid rinse time in minutes.

How To Change The Length Of Brine Tank Refill Time:

The second group of holes in the program wheel determines the length of time that your water conditioner will refill the brine tank. (2 mm. per hole.)

To change the length of refill time, move the two pins at the end of the second group of holes as required.

The regeneration cycle is complete when the outer microswitch is tripped by the two pin set at end of the brine tank refill section.

The program wheel, however, will continue to rotate until the inner micro-switch drops into the notch on the program wheel.

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Notes

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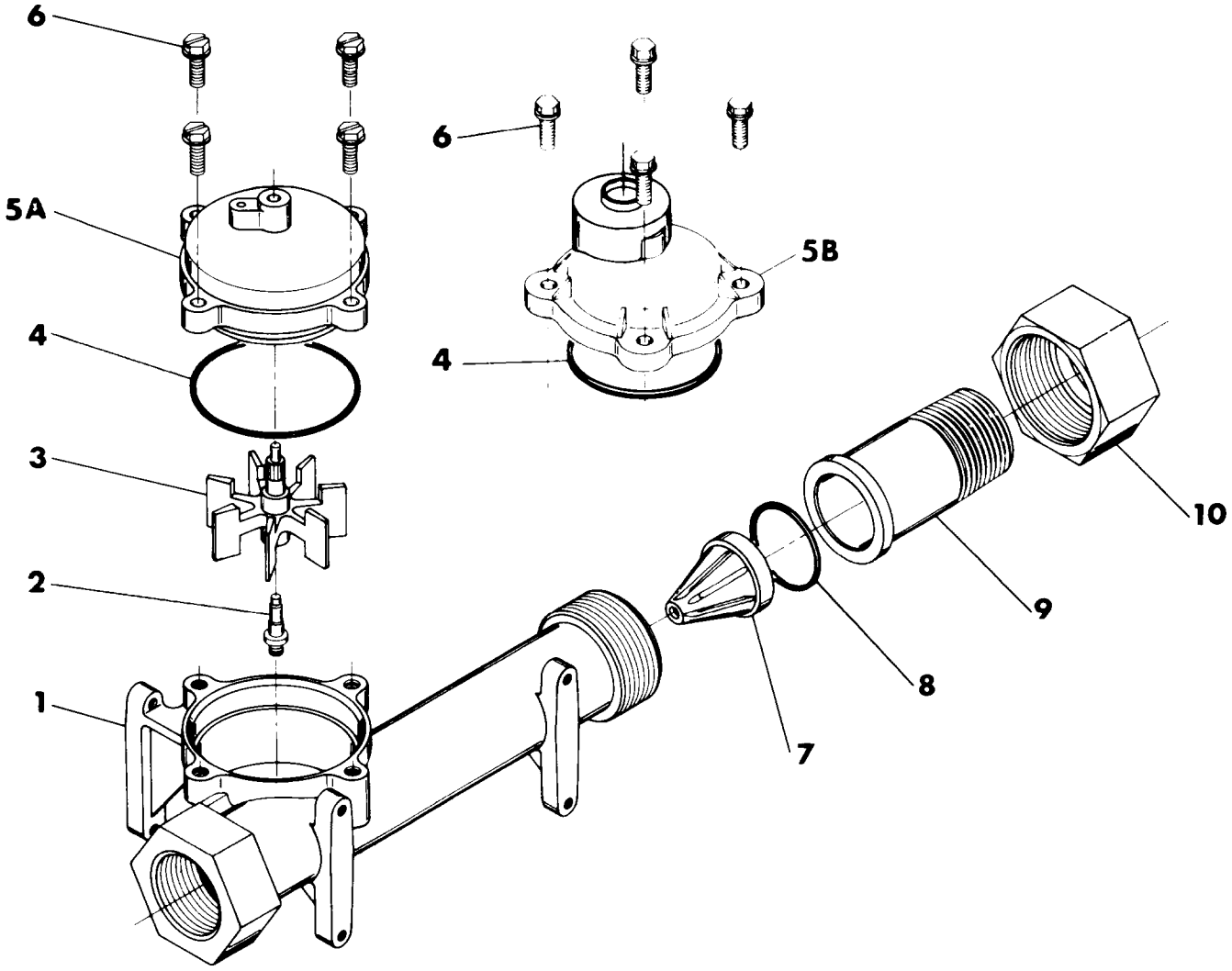
MODEL 2750 ECONOMINDER

1″ Meter Assembly

(See opposite page for parts list)



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MODEL 2750 ECONOMINDER

1″ Meter Assembly

Parts List

Item No.	No. Req'd.	Part No.	Description
1	1	14959	Meter Body
2	1	13882	Post, Meter Impeller
3	1	13509	Impeller
4	1	13847	"O" Ring Meter Cover
5A	1	15218	Meter Cover Assembly (Std.)
5B	1	15237	Meter Cover Assembly (Extended Range)
6	4	12112	Screw Meter Cover
7	1	14960	Flow Straightener
8	1	13287	"O" Ring Quick Connect
9	1	14961	Nipple Quick Connect
10	1	14962	Nut Quick Connect
11	1	15308	Brass 1″ Coupling (not shown)

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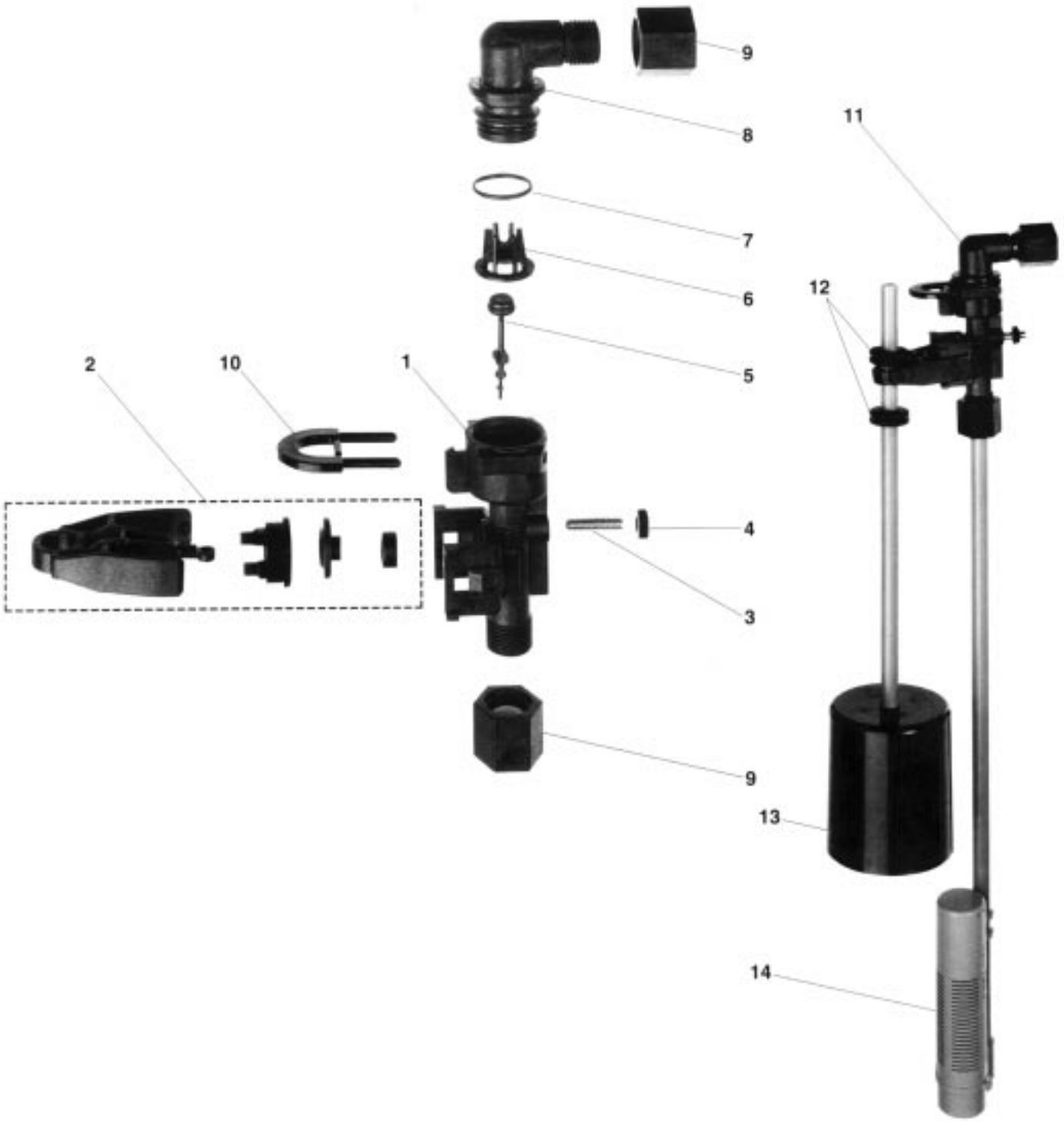
MODEL 2750

2310 Safety Brine Valve

(See opposite page for parts list)



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MODEL 2750

2310 Safety Brine Valve

Parts List

Item No.	No. Req'd.	Part No.	Description
1	1	19645	Safety Brine Valve Body
2	1	19803	Safety Brine Valve Arm Assembly
3	1	19804	Stud, 10-24
4	1	19805	Nut, 10-24
5	1	19652-01	Poppet & Seal
6	1	19649	Flow Dispenser
7	1	11183	O-Ring, -017
8	1	19647	Elbow, Safety Brine Valve
9	2	19625	Nut Assembly, 3/8
10	1	18312	Retaining Clip
11	1	60014	Safety Brine Valve, 2310 (includes items 1-10)
12	2	10150	Grommet (included with item 13)
13	1	60068	Float Assembly, 2310
14	1	60002	500 Air Check Assembly

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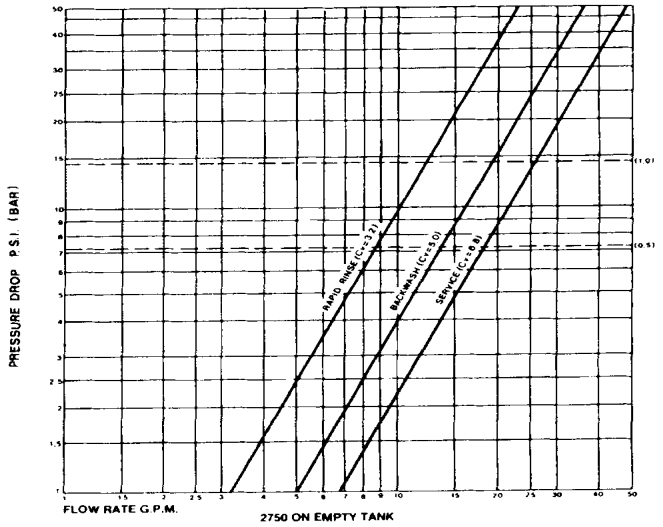
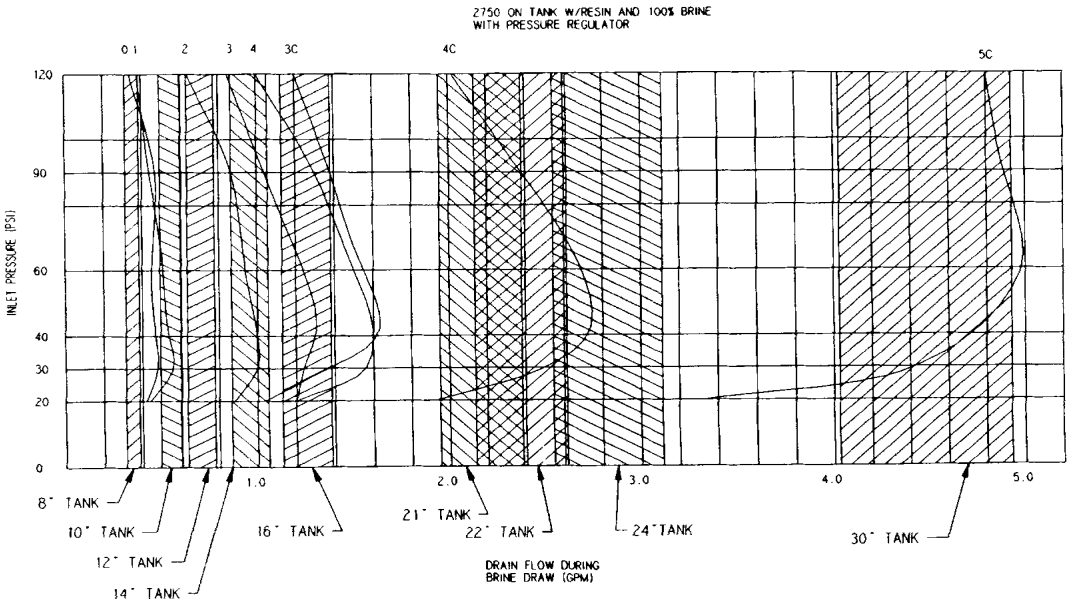
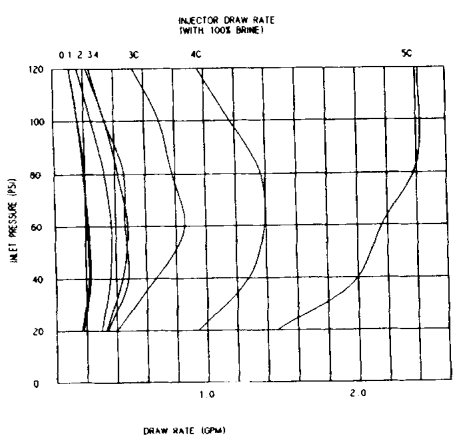
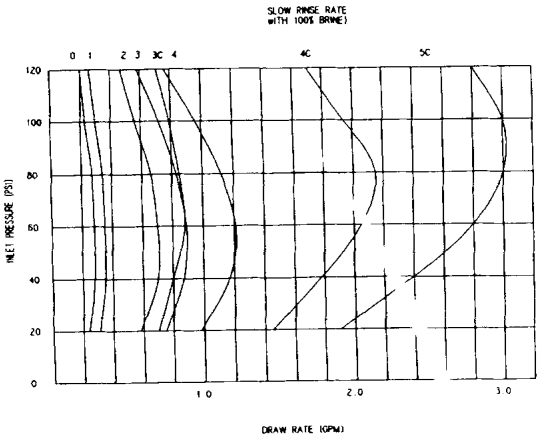
MODEL 2750 UPFLOW

1700 Series Brine System









INJECTORS 0, 1, 2, 3, 4 - TESTED W/ 1/2 CUBE RESIN
INJECTORS 3C, 4C, 5C -TESTED W/ 1 CUBE RESIN

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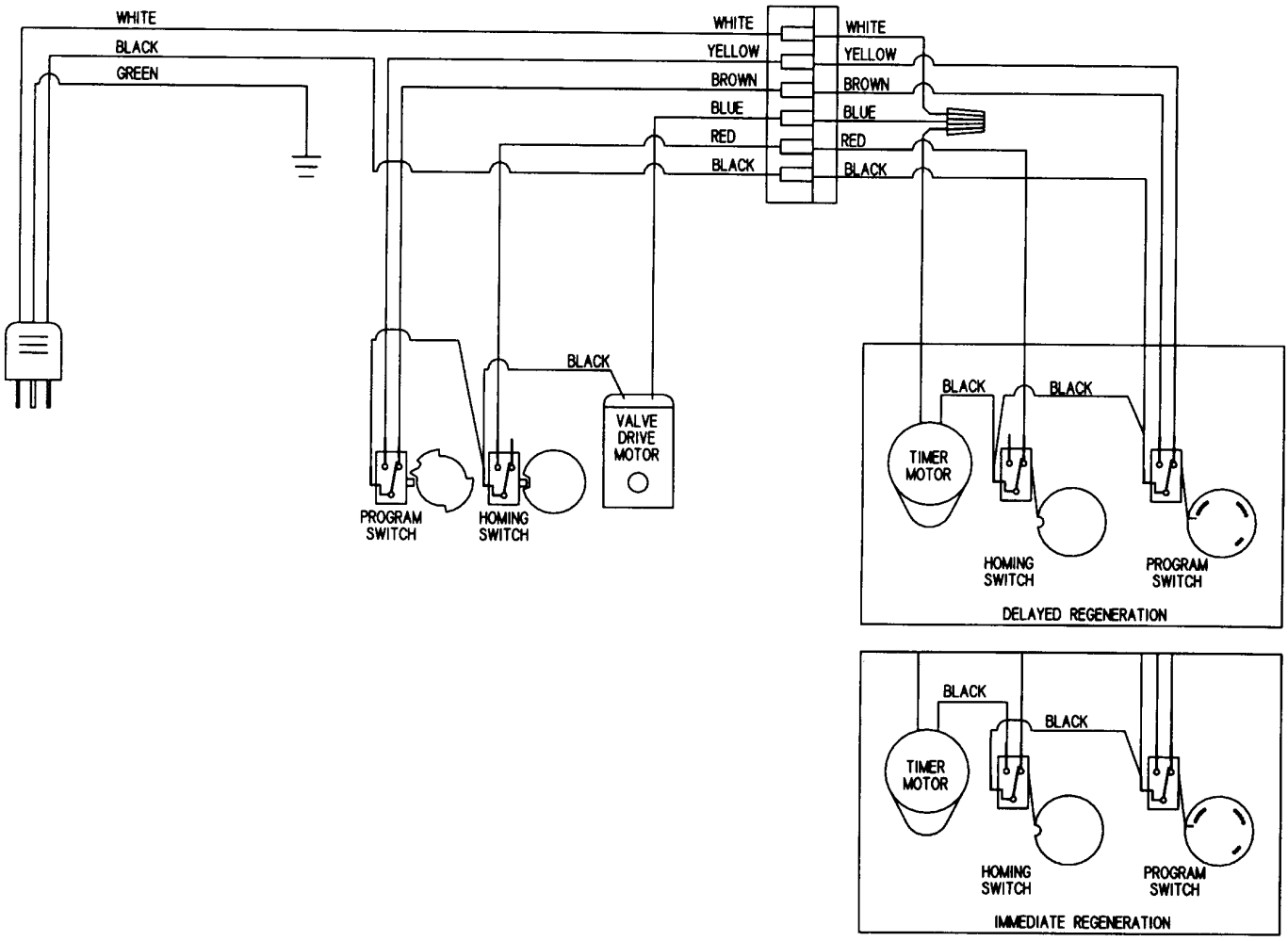
SYSTEM #4

Single System Wiring Diagram

Immediate or Delayed Regeneration



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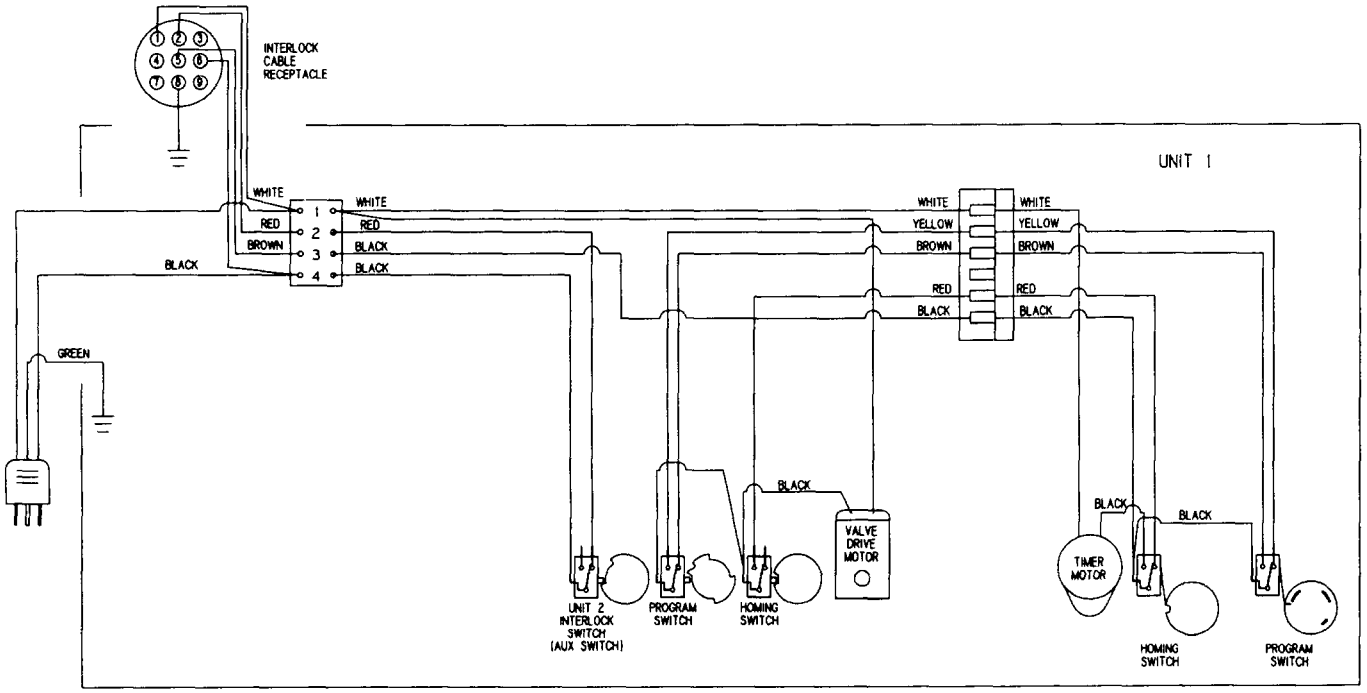
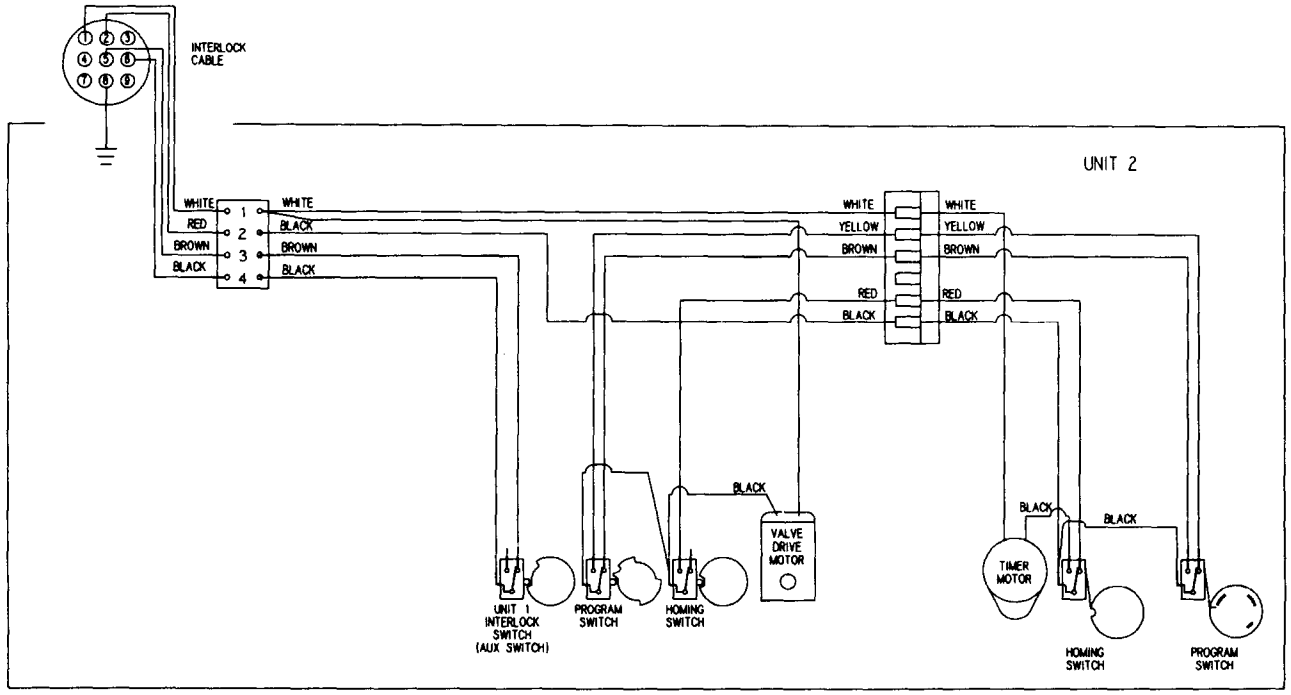
SYSTEM #5

2 Meter Interlock Wiring Diagram





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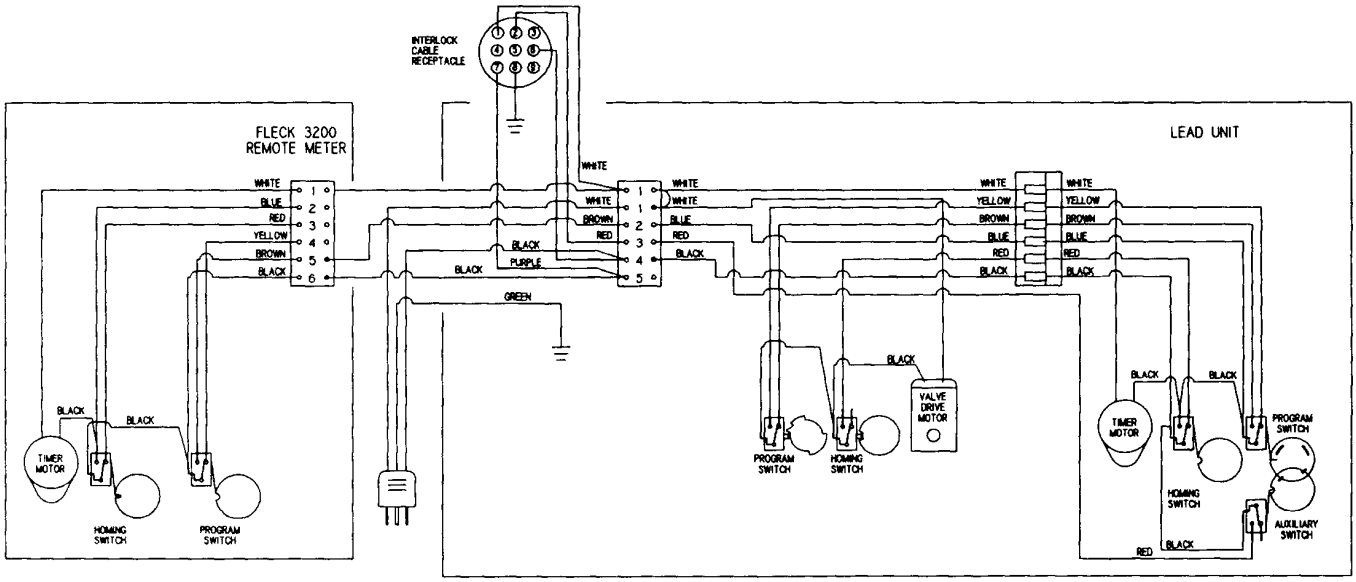
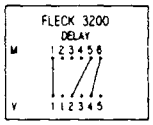
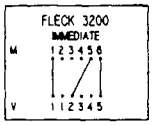
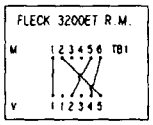
SYSTEM #6

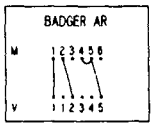
Series Regeneration Wiring Diagram

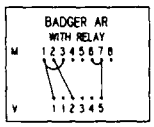


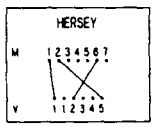


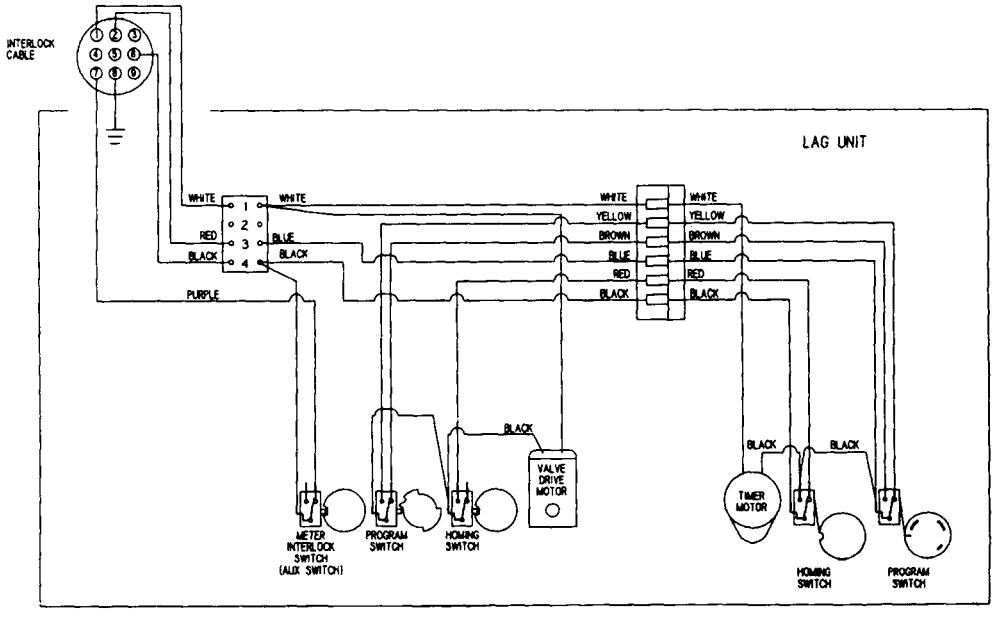












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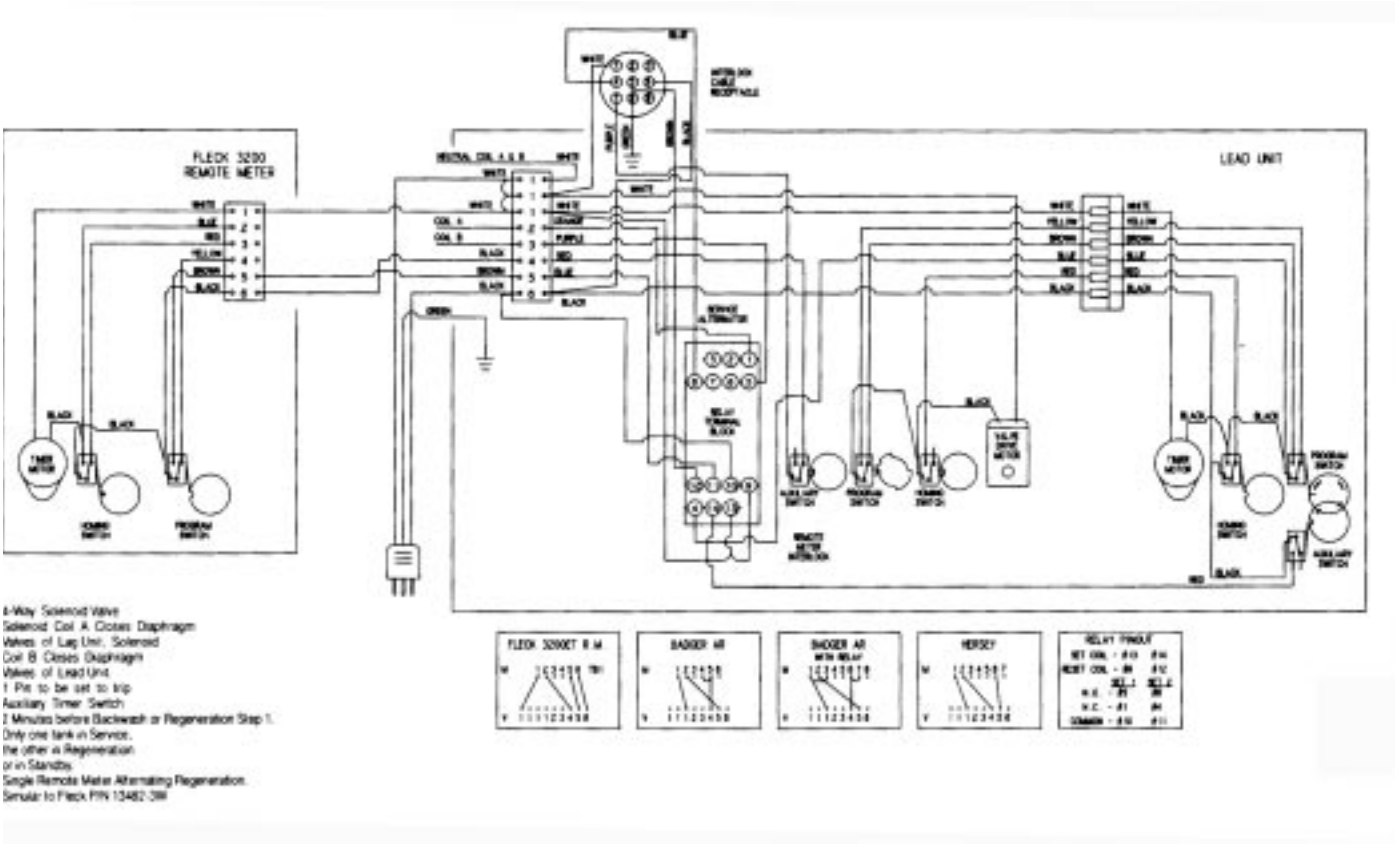
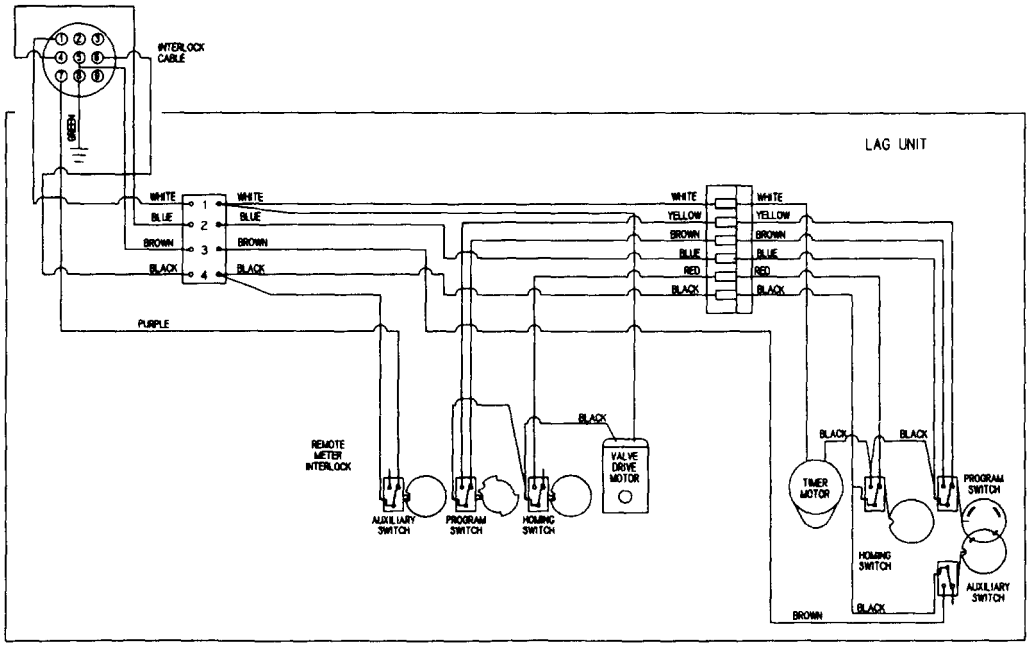
SYSTEM #7

Alternator Wiring Diagram - 3-Way Solenoid Output





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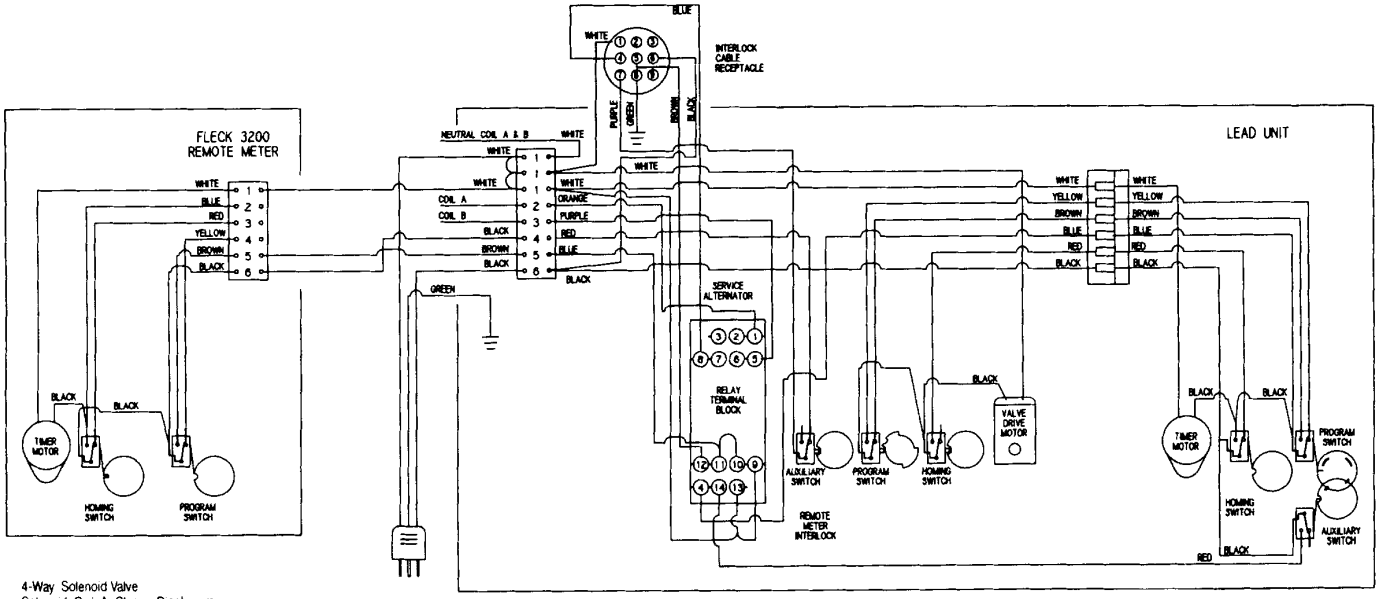
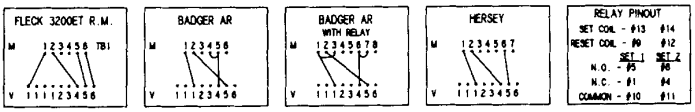
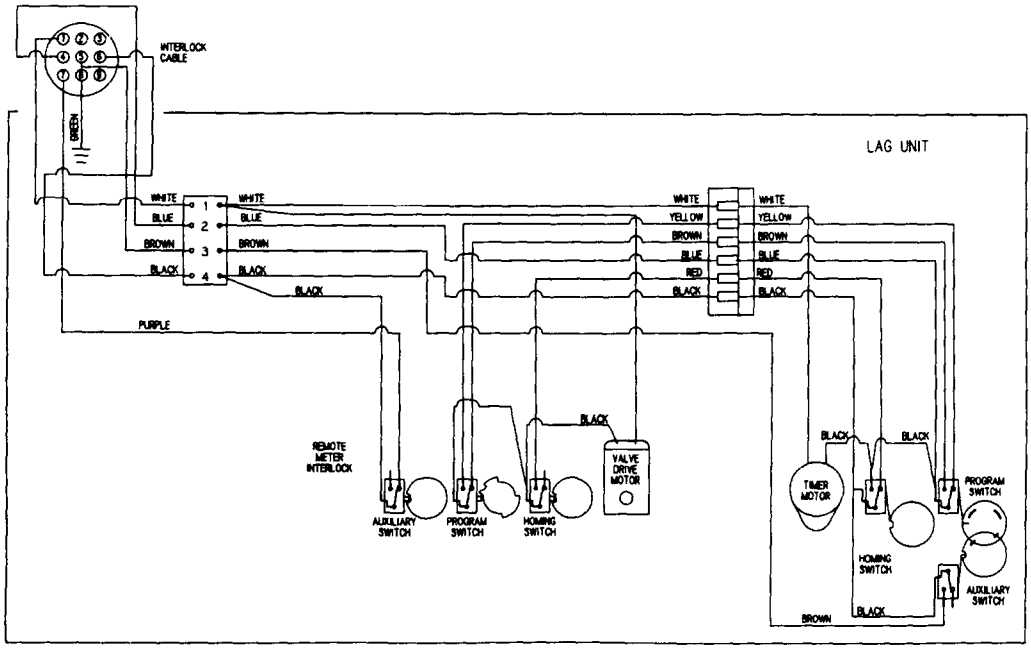
SYSTEM #7

Alternator Wiring Diagram - 4-Way Solenoid Output



4-Way Solenoid Valve
Solenoid Coil A Closes Diaphragm Valves of Lead Unit, Solenoid Coil B Closes Diaphragm Valves of Lag Unit.
1 Pin to be set to trip Auxiliary Timer Switch After Brine Tank Fill.
Only one tank in Service, the other in Regeneration or in Standby.
Single Remote Meter Alternating Regeneration.





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PROBLEM	CAUSE	CORRECTION
1. Softener Fails To Regenerate.	A. 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. 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. Injector Screen Plugged.	C. Clean Injector 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 Used Too Much Salt.	A. Improper Salt Setting.	A. Check Salt Usage and Salt Setting.
	B. Excessive 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 Mineral Cleaner to Mineral 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 and Clean Control.
5. Loss of Mineral Through Drain Line.	A. Air In Water System.	A. Assure That Well System Has Proper Air Eliminator Control. Check For Dry Well Condition.
	B. Improperly Sized Drain Line Flow Control.	B. Check For Proper Drain Rate.
6. Iron In Conditioned Water.	A. Fouled Mineral Bed.	A. Check Backwash, Brine Draw And Brine Tank Fill. Increase Frequency of Regeneration. Increase Backwash Time.
7. Excessive Water In Brine Tank.	A. Plugged Drain Line Flow Control.	A. Clean Flow Control

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PROBLEM	CAUSE	CORRECTION
	B. Plugged Injector System.	B. Clean Injector and Screen.
	C. Timer Not Cycling.	C. Replace Timer.
	D. Foreign Material In Brine Valve.	D. Replace Brine Valve Seat And Clean Valve.
	E. Foreign Material In Brine Line Flow Control.	E. Clean Brine Line Flow Control.
8. Softener Fails To Draw Brine.	A. Drain Line Flow Control Is Plugged.	A. Clean Drain Line Flow Control.
	B. Injector Is Plugged.	B. Clean Injector.
	C. Injector Screen Plugged.	C. Clean Screen.
	D. Line Pressure Is Too Low.	D. Increase Line Pressure To 20 PSI.
	E. Internal Control Leak.	E. Change Seals, Spacers and Piston Assembly.
	F. Service Adapter Did Not Cycle.	F. Check Drive Motor And Switches.
9. Control Cycles Continuously.	A. Missadjusted, Broken or Shorted Switch.	A. Determine If Switch or Timer Is Faulty and Replace It, or Replace Complete Power Head
10. Drain Flows Continuously.	A. Valve Is Not Programming Correctly.	A. Check Timer Program and Positioning of Control. Replace Power Head Assembly If Not Positioning Properly.
	B. Foreign Material In Control.	B. Remove Power Head Assembly And inspect Bore, Remove Foreign Material and Check Control In Various Regeneration Positions.
	C. Internal Control Leak.	C. Replace Seals and Piston Assembly.

General Service Hints For Meter Control

Problem: Softener Delivers Hard Water.

Cause could be that... Reserve Capacity Has Been Exceeded.

Correction: Check salt dosage requirements and reset program wheel to provide additional reserve.

Cause could be that... Program Wheel Is Not Rotating With Meter Output.

Correction: Pull cable out of meter cover and rotate manually. Program wheel must move without binding and clutch must give positive “clicks” when program wheel strikes regeneration stop. If it does not, replace timer.

Cause could be that. .. Meter Is Not Measuring Flow.

Correction: Check meter with meter checker.

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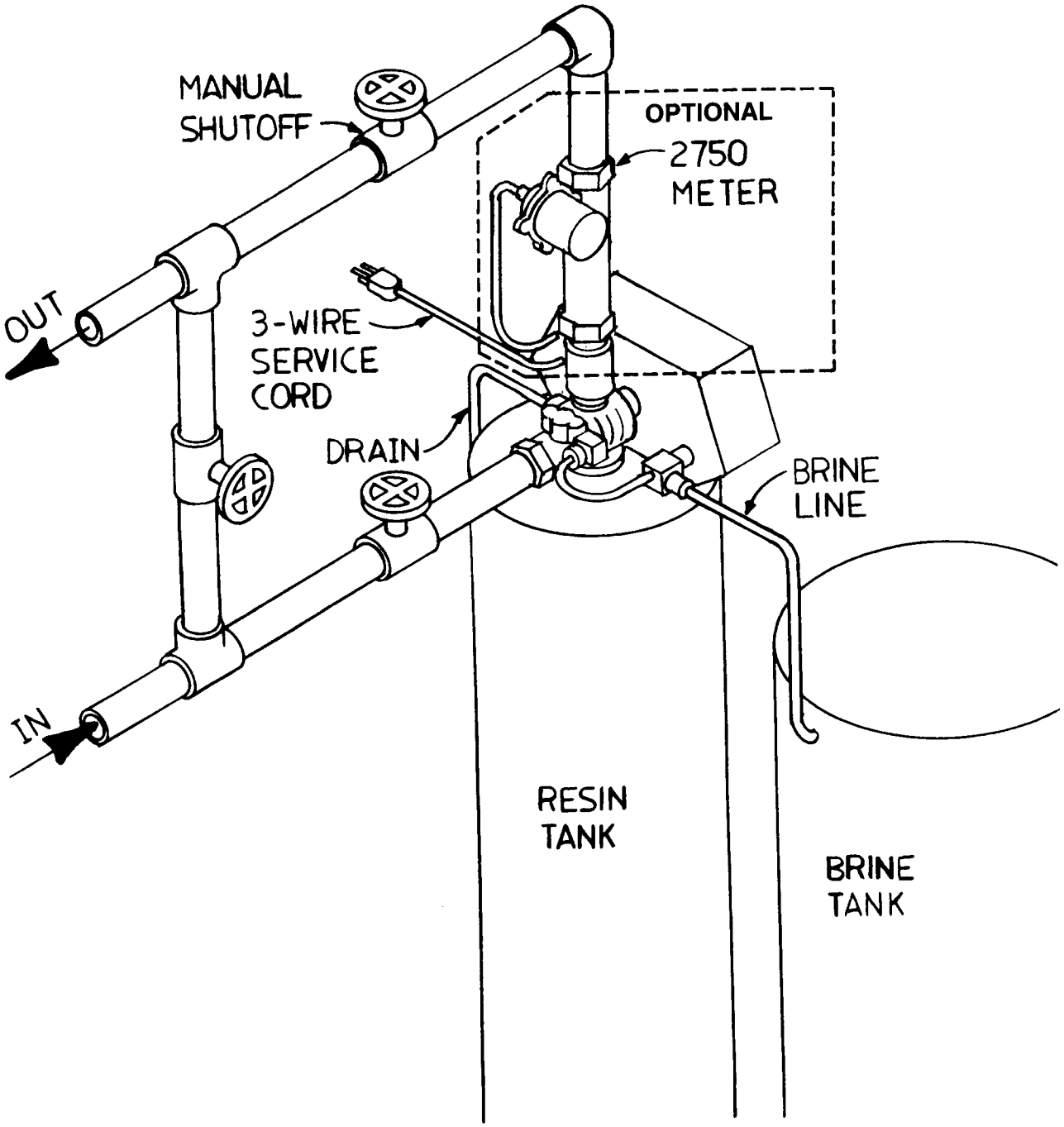
System #4 - Typical Single Tank Installation With Optional Meter



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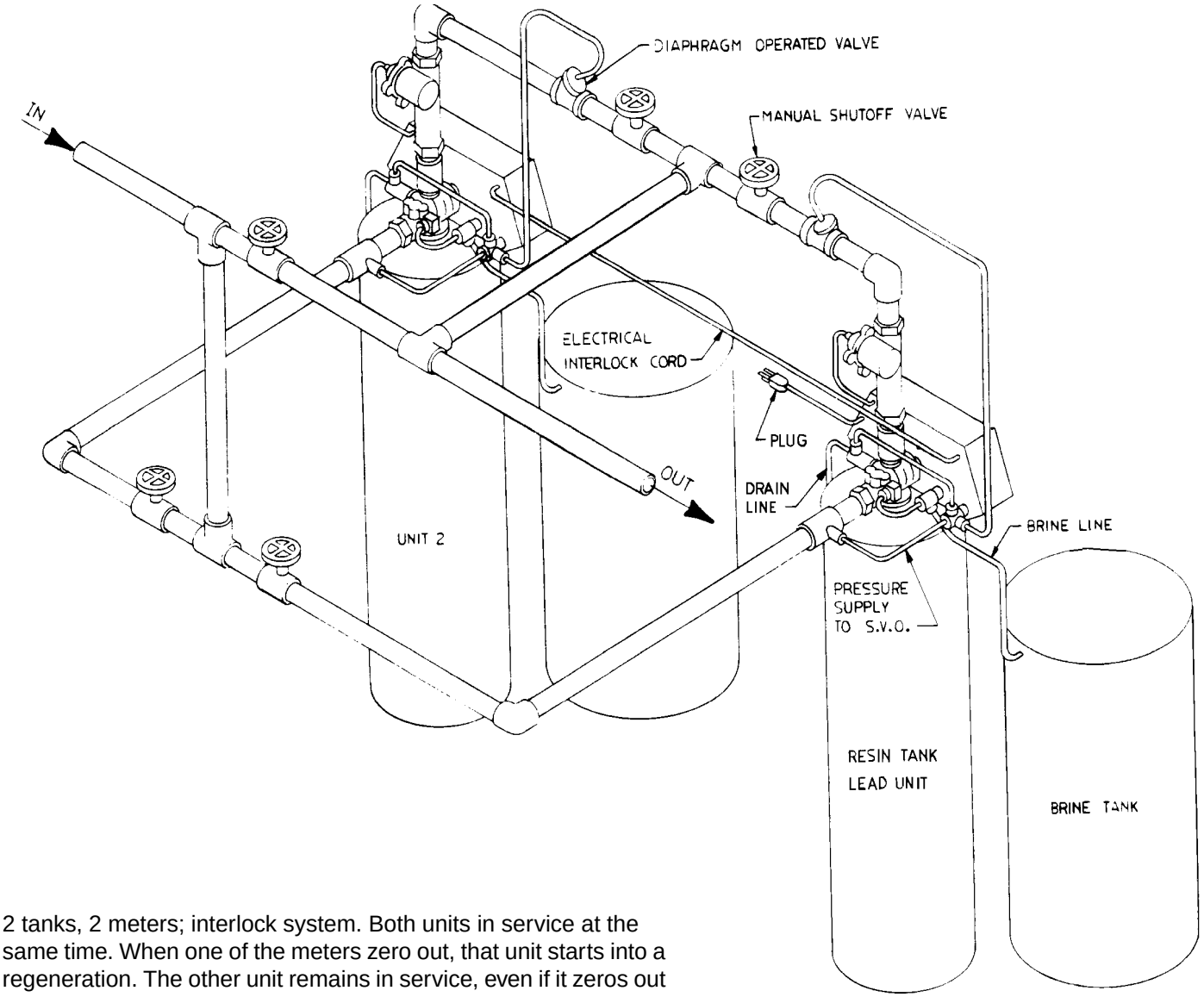
MODEL 2750

System #5 Interlock - Typical Twin Tank Installation With Optional 2 Meter Interlock And No Hard Water Bypass



2 tanks, 2 meters; interlock system. Both units in service at the same time. When one of the meters zero out, that unit starts into a regeneration. The other unit remains in service, even if it zeros out during this time.

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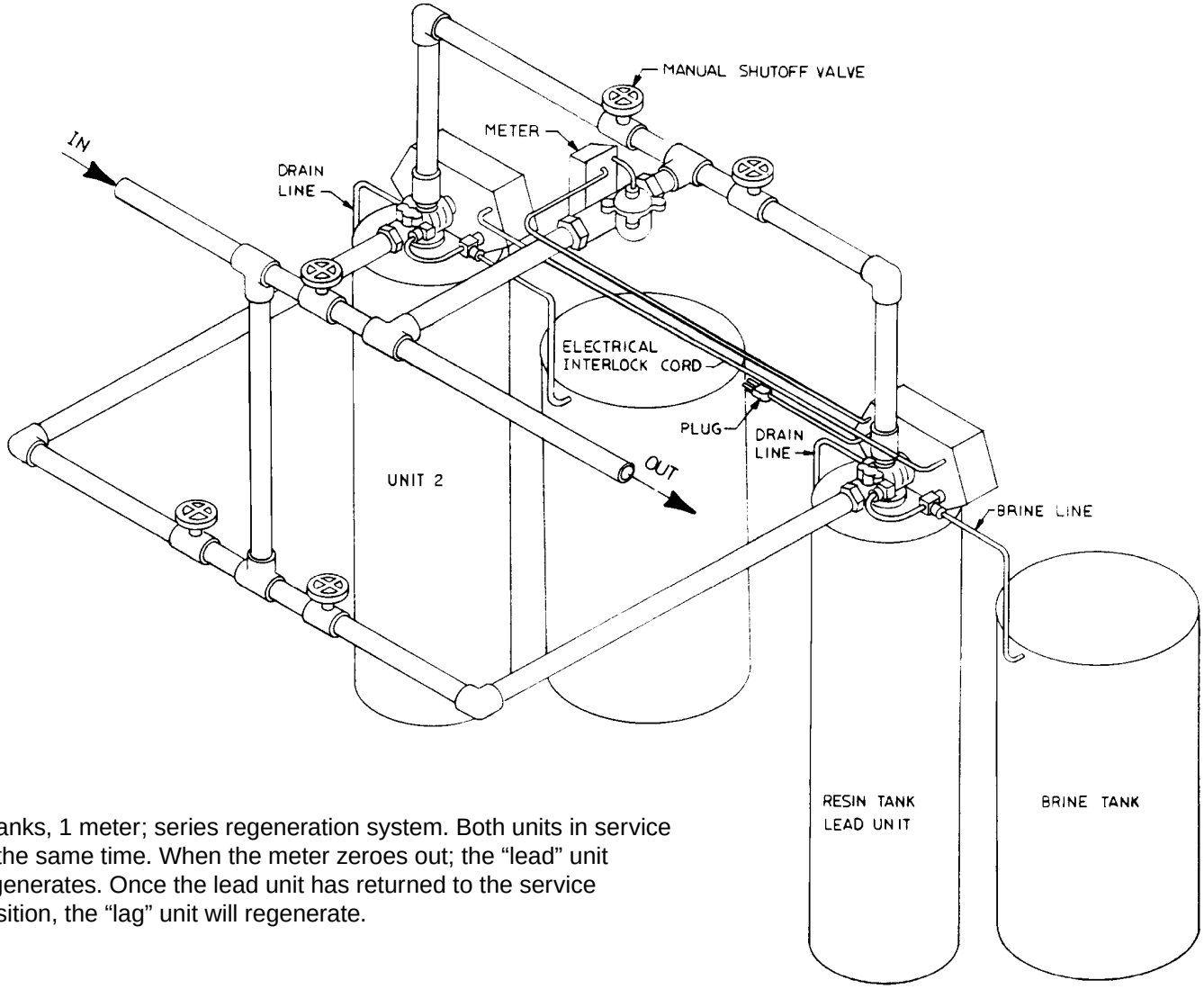
MODEL 2750

System #6 - Twin Series Regeneration

Installation With A Remote Meter



2 tanks, 1 meter; series regeneration system. Both units in service at the same time. When the meter zeroes out; the “lead” unit regenerates. Once the lead unit has returned to the service position, the “lag” unit will regenerate.

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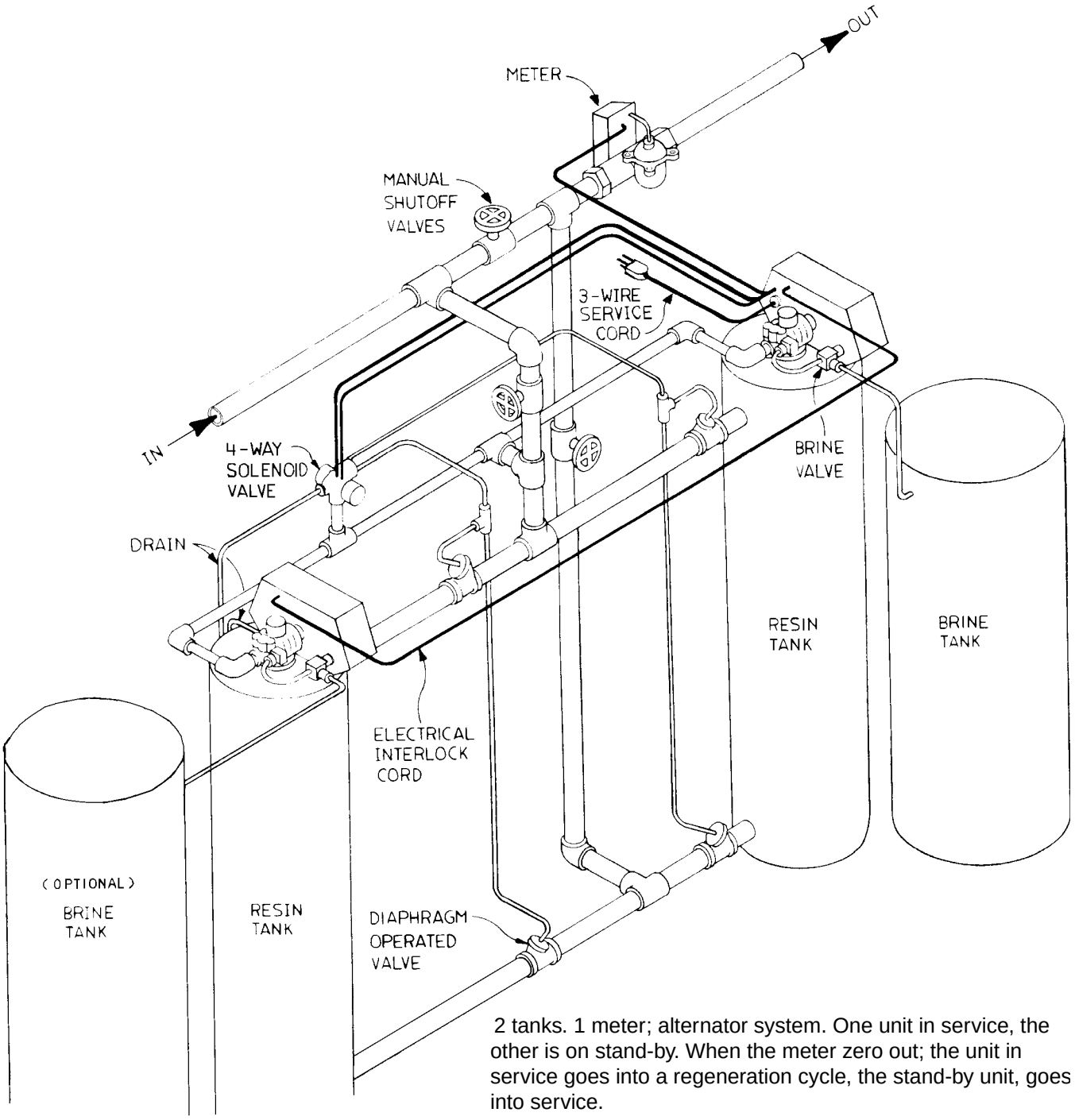
System #7 - Twin Alternator Installation With A Remote Meter



2 tanks. 1 meter; alternator system. One unit in service, the other is on stand-by. When the meter zero out; the unit in service goes into a regeneration cycle, the stand-by unit, goes into service.

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MODEL 2750 UPFLOW

Service Assemblies

60029 **1600 Brine Valve**
For Illustration, See Page 12

1	10249	Brine Valve Spring
1	10250	Retaining Ring
2	10329	3/8″ Brass Nut
2	10330	3/8″ Ferrule
2	10332	3/8″ Sleeve
1	11749	B/VStem Guide
1	11982	O-Ring Brine Valve
1	12552	1600 Brine Valve Stem
1	12626	Shut Off Valve Seat
1	12748	Brine Valve Body
1	12550	Quad Ring

60034-XX **1700 Brine Valve, Specify Refill Rate**
For Illustration, See Page 11

1	10250	Brine Valve Spring
1	12550	Quad Ring
1	13201	Quad Ring
1	14785	Flow Control Retainer
1	14790	Brine Valve Body
1	14792	Brine Valve End Plug
1	14795	Brine Valve Piston
1	14797	Brine Valve Stem
1	14798	Spacer
2	14811	Piston Seal
1	15310	Brine Valve Spring
1	15517	Stem Guide
1	15414	Nut Ferrule 1/2″
1	16123	Nut 1/2″
1	16124	Ferrule 1/2″

60485-XX **1600 Injector Assembly, Specify Injector Size**
For Illustration, See Page 8

1	19479	Injector Screen
1	10328-0	90° Elbow 1/4″ NPT x 3/8 Tube
2	19740	Screw
1	10913	Injector Nozzle
1	10914	Injector Throat
2	14805	Injector Body Gasket
1	17776-02	Injector Body

60486-XX **1700 Injector Assembly, Specify Injector Size**
For Illustration, See Page 8

1	17777-02	Injector Body
1	14801	Injector Nozzle
1	14802	Injector Throat
1	19478	Injector Screen
2	19718	Screw
2	19925	Injector Body Gasket

601 90-UF **2750 Piston Assembly**

	10598-03	End Plug Assy.
1	10909	Pin, Link
1	19954	Piston, 2750, Upflow
1	14452	Piston Rod

60121-20 **Seal & Spacer Kit, 2750**

6	10545	Seal, Piston
1	10757	End Spacer
4	11451	Spacer, 12 Hole
1	19457	Spacer, Upflow, Red

60050-21 **2750 Drive Assy., 120V**

2	10218	Micro Switch
1	10250	Retaining Ring
2	10302	Insulator
2	10338	Pin, Roll 3/32 x 7/8
1	10621	Link
1	10769	Motor, Drive 120V
1	10774	Bracket, Motor Drive Side
5	10872	Screw, Hex Washer 8-32 x 5/16
1	11667	Wire Harness, Drive Motor
1	11826	Bracket, Sensor Motor
1	12576	Cam, Drive STF
1	12777	Cam, Shut-Off Valve
1	13366	Bearing, Drive
2	14923	Screw, Pan HD Mach 4-40x1
1	17904	Bushing, Heyco

60365-XX **Brass DLFC 3/4″ NPT Specify Flow Rate Range 1.2 - 7.0 GPM**

60710-XX **BLFC, 1″ Specify Flow Rate Range 8.0 - 25.0 GPM**

60391 **2750 Meter Assy., STD**

60392 **2750 Meter Assy., EXT**

60301 **3000 12 Day Timer, Specify Voltage**

60303 **3200 Clock Timer, Specify Voltage**

60306 **3210 Delay Timer, Specify Voltage**

60307 **3220 Immed Timer, Specify Voltage**

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Notes