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## JOB SPECIFICATION SHEET

### Job Number:

### Model Number:

**Water Hardness:** __________ ppm or gpg  
**Capacity Per Unit:** __________

**Mineral Tank Size:** Diameter: __________ Height: __________  
**Salt Setting per Regeneration:** __________  

1. **Type of Timer:**
   - A. 7 Day or 12 Day  
   - B. Meter Initiated

2. **Downflow:**
   - Upflow
   - Upflow Variable

3. **Meter Size:**
   - A. 3/4" Std Range (125 - 2,100 gallon setting)
   - B. 3/4" Ext Range (625 - 10,625 gallon setting)
   - C. 1" Std Range (310 - 5,270 gallon setting)
   - D. 1" Ext Range (1,150 - 26,350 gallon setting)
   - E. 1-1/2" Std Range (625 - 10,625 gallon setting)
   - F. 1-1/2" Ext Range (3,125 - 53,125 gallon setting)
   - G. 2" Std Range (1,250 - 21,250 gallon setting)
   - H. 2" Ext Range (6,250 - 106,250 gallon setting)
   - I. 3" Std Range (3,750 - 63,750 gallon setting)
   - J. 3" Ext Range (18,750 - 318,750 gallon setting)
   - K. Electronic _________ Pulse Count ________ Meter Size _______

4. **System Type:**
   - A. System #4: 1 Tank, 1 Meter, Immediate, or Delayed Regeneration  
   - B. System #4: Time Clock  
   - C. System #4: Twin Tank  
   - D. System #5: 2-5 Tanks, Interlock Mechanical  
   - E. System #5: 2-4 Tanks, Interlock Electronic  
   - F. System #6: 2-5 Tanks, 1 Meter, Series Regeneration, Mechanical  
   - G. System #6: 2-4 Tanks, 1 Meter, Series Regeneration, Electronic  
   - H. System #7: 2-5 Tanks, 1 Meter, Alternating Regeneration, Mechanical  
   - I. System #7: 2-5 Tanks, 1 Meter, Alternating Regeneration, Electronic  
   - J. System #9: Electronic Only, 2-4 Tanks, Meter per Valve, Alternating  
   - K. System #14: Electronic Only, 2-4 Tanks, Meter per Valve. Brings units on and offline based on flow.

5. **Timer Program Settings:**
   - A. Backwash: __________ Minutes  
   - B. Brine and Slow Rinse: __________ Minutes  
   - C. Rapid Rinse: __________ Minutes  
   - D. Brine Tank Refill: __________ Minutes  
   - E. Pause Time: __________ Minutes  
   - F. Second Backwash: __________ Minutes

6. **Drain Line Flow Control:** __________ gpm

7. **Brine Line Flow Controller:** __________ gpm

8. **Injector Size:** __________

9. **Piston Type:**
   - A. Hard Water Bypass  
   - B. No Hard Water Bypass
INSTALLATION

Water Pressure
A minimum of 20 pounds (1.4 bar) of water pressure is required for regeneration valve to operate effectively.

Electrical Facilities
An uninterrupted alternating current (A/C) supply is required. Note: Other voltages are available. Please make sure your voltage supply is compatible with your unit before installation.

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 to prevent air breaks and back flow.

BY-PASS VALVES
Always provide for the installation of a by-pass valve if unit is not equipped with one.

CAUTION
Water pressure is not to exceed 125 psi (8.6 bar), water temperature is not to exceed 110°F (43°C), 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.
2. During cold weather, the installer should warm the valve to room temperature before operating.
3. All plumbing should be done in accordance with local plumbing codes. The pipe size for residential drain line should be a minimum of 1/2" (13 mm). Backwash flow rates in excess of 7 gpm (26.5 Lpm) or length in excess of 20' (6 m) require 3/4" (19 mm) drain line. Commercial drain lines should be the same size as the drain line flow control.
4. Refer to the dimensional drawing for cutting height of the distributor tube. If there is no dimensional drawing, cut the distributor tube flush with the top of the tank.
5. Lubricate the distributor O-ring seal and tank O-ring seal. Place the main control valve on tank. Note: Only use silicone lubricant.
6. Solder joints near the drain must be done prior to connecting the Drain Line Flow Control fitting (DLFC). Leave at least 6" (15 cm) between the DLFC and solder joints when soldering pipes that are connected on the DLFC. Failure to do this could cause interior damage to the DLFC.
7. Teflon tape is the only sealant to be used on the drain fitting. The drain from twin tank units may be run through a common line.
8. Make sure that the floor is clean beneath the salt storage tank and that it is level.
9. Place approximately 1" (25 mm) of water above the grid plate. If a grid is not utilized, fill to the top of the air check (Figure 1) in the salt tank. Do not add salt to the brine tank at this time.
10. 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. Once clean, close the water tap.
11. Slowly place the by-pass in service position and let water flow into the mineral tank. When water flow stops, slowly open a cold water tap nearby and let run until the air is purged from the unit.
12. Plug unit into an electrical outlet. Note: All electrical connections must be connected according to local codes. Be certain the outlet is uninterrupted.

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

1. Turn the manual regeneration knob slowly in a clockwise direction until the program micro switch lifts on top of the first set of pins. Allow the drive motor to move the piston to the first regeneration step and stop. Each time the program switch position changes, the valve will advance to the next regeneration step. Always allow the motor to stop before moving to the next set of pins or spaces.

NOTE: For electronic valves, please refer to the manual regeneration part of the timer operation section. If the valve came with a separate electronic timer service manual, refer to the timer operation section of the electronic timer service manual.

2. Position the valve to backwash. Ensure the drain line flow remains steady for 10 minutes or until the water runs clear (see above).
3. Position the valve to the brine / slow rinse position. Ensure the unit is drawing water from the brine tank (this step may need to be repeated).
4. Position the valve to the rapid rinse position. Check the drain line flow, and run for 5 minutes or until the water runs clear.
5. Position the valve to the start of the brine tank fill cycle. Ensure water goes into the brine tank at the desired rate. The brine valve drive cam will hold the valve in this position to fill the brine tank for the first regeneration.
6. Replace control box cover.
7. Put salt in the brine tank.

NOTE: Do not use granulated or rock salt.
How To Set Days On Which Water Conditioner Is To Regenerate (Figure 2)

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
1. Press and hold the red button in to disengage the drive gear.
2. Turn the large gear until the actual time of day is at the time of day pointer.
3. Release the red button to again engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time
1. Turn the manual regeneration knob clockwise.
2. This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.
3. The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.
4. 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.
5. 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.
3210 TIMER SETTING PROCEDURE

Typical Programming Procedure
Calculate the gallon capacity of the system, subtract the
necessary reserve requirement and set the gallons available
opposite the small white dot on the program wheel gear (Figure
3).

NOTE: Drawing shows 8,750 gallon setting. The capacity
(gallons) arrow (15) shows zero gallons remaining.
The unit will regenerate tonight at the set
regeneration time.

How To Set The Time Of Day
1. Press and hold the red button in to disengage the drive
gear.
2. Turn the large gear until the actual time of day is opposite
the time of day pointer.
3. Release the red button to again engage the drive gear.

How To Manually Regenerate Your Water Conditioner At
Any Time
1. Turn the manual regeneration knob clockwise.
2. This slight movement of the manual regeneration knob
engages the program wheel and starts the regeneration
program.
3. The black center knob will make one revolution in the
following approximately three hours and stop in the position
shown in the drawing.
4. 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.
5. 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. The timer will regenerate as
soon as the capacity gallons reaches zero.

NOTE: The program wheel to the left may be different than
the program wheel on the product.

NOTE: To set meter capacity rotate manual knob one - 360°
revolution to set gallonage.

*24 Hour Gear
Manual Regeneration Knob
Service
Position
Indicator
Red Time
Set Button
White Dot
(Gallon Capacity)
Gallons Label

Figure 3

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

61502-3200 Rev A

4 • AP10 Fleck 2510 & 2510 Econominder
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 Series Timers (Figure 4)
1. To expose cycle program wheel, grasp timer in upper left-hand corner and pull, releasing snap retainer and swinging timer to the right.
2. 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.
3. Return timer to closed position engaging snap retainer in back plate. Make certain all electrical wires locate above snap retainer post.

Timer Setting Procedure

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
1. 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 min. per hole).
2. 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
1. 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).
2. 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
1. The second group of holes in the program wheel determines the length of time that your water conditioner will refill the brine tank (2 min. per hole).
2. To change the length of refill time, move the two pins at the end of the second group of holes as required.
3. The regeneration cycle is complete when the outer microswitch is tripped by the two pin set at end of the brine tank refill section.
4. The program wheel, however, will continue to rotate until the inner micro switch drops into the notch on the program wheel.
3200 TIME CLOCK TIMER ASSEMBLY

Item No. QTY Part No. Description
1.0001 1 13870 Housing, Timer, 3200
2.0001 1 14265 Clip, Spring
3.0003 3 14087 Insulator
4.0001 1 10897 Switch, Micro
5.0001 1 15320 Switch, Micro, Timer
6.0002 2 11413 Screw, Pan Hd Mach, 4-40 x 1-1/8
7.0001 1 13886 Knob, 3200
8.0005 5 13296 Screw, Hex Wsh, 6-20 x 1/2
9.0001 1 11999 Label, Button
10.0001 1 13018 Pinion, Idler
11.0001 1 13312 Spring, Idler Shaft
12.0001 1 13017 Gear, Idler
13.0001 1 13164 Gear, Drive
14.0001 1 13887 Plate, Motor Mounting
15.0001 1 18743-1 Motor, 120V, 60Hz, 1/30 RPM
1.0001 1 18752-1 Motor, 100V, 50Hz, 1/30 RPM
1.0001 1 18824-1 Motor, 23V, 50Hz, 1/30 RPM
1.0001 1 18826-1 Motor, 24V, 50Hz, 1/30 RPM
1.0001 1 19659-1 Motor, 24V, 60Hz, 1/30 RPM
1.0001 1 19660-1 Motor, 230V, 60Hz, 1/30 RPM
16.0002 2 13278 Screw, Sltd Fillister Hd 6-32 x .156
17.0001 1 15424 Spring, Detent, Timer
18.0001 1 15066 Ball, 1/4", Delrin
19.0001 1 15465 Label, Caution
20.0001 1 19210 Program Wheel Assy
21.0001 1 13911 Gear, Main Drive, Timer
22.0001 1 41754 Pin, Spring, 1/16 x 5/8 SS, Timer
23.0001 1 13011 Arm, Cycle Actuator
24.0001 1 13864 Ring, Skipper Wheel
25.0002 2 13311 Spring, Detent, Timer
26.0002 2 13300 Ball, 1/4", SS
27.0001 1 14381 Skipper Wheel Assy, 12 Day
2.0001 1 14860 Skipper Wheel Assy, 7 Day
28.0001 1 13014 Pointer, Regeneration
29.0001 1 40096-24 Dial, 12 AM Regen Assy, Black
2.0001 1 40096-02 Dial, 2 AM Regen Assy, Black
30.0001 1 13881 Bracket, Hinger Timer
31.0002 2 11384 Screw, Phil, 6-32 x 1/4 Zinc
32.0001 1 13902 Harness, 3200
33.0002 2 40422 Nut, Wire, Tan
34.0001 1 15354-01 Wire, Ground, 4"
35.0001 1 14007 Label, Time of Day

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## MANUAL POWERHEAD ASSEMBLY

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<td>Screw, Slot Hex Wsh, 8-18 x 3/8 Type “B” RC44-47</td>
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**Not Shown:**

1. 10909. Pin, Link

60409 Rev A
**CONTROL VALVE ASSEMBLY**

![Diagram of the control valve assembly](image)

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**NOTE:** For optimal seal life, the use of lubricants is not recommended.
## SOFTENER FILTER CONVERSION KITS

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**NOTE:** For optimal seal life, the use of lubricants is not recommended.
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1600 BRINE SYSTEM ASSEMBLY

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12        | 1   | 12552-02 | Brine Valve Stem, 1600, with seat |
| 13       | 1   | 12626    | Seat, Brine Valve |
| 14       | 1   | 11982    | O-ring, -016 |
| 15       | 1   | 60020-25 | BLFC, .25 GPM, 1600 |
|          | 1   | 60020-50 | BLFC, .50 GPM, 1600 |
|          | 1   | 60020-100| BLFC, 1.0 GPM, 1600 |
| 16       | 2   | 10692    | Screw, Slot Hex Hd, 10 - 24X |
|          |     |          | 18-8 Stainless Steel |
| 17       | 1   | 11893    | Cap, Injector, SS |
| 18       | 1   | 10229    | Gasket, Injector Cap, 1600 |
| 19       | 1   | 10227    | Screen, Injector |
| 20       | 1   | 10913-xx | Nozzle, Injector, -xx is for injector size |
| 21       | 1   | 10914-xx | Throat, Injector, -xx is for injector size |
| 22       | 1   | 17776    | Body, Injector, 1600 |
|          | 1   | 17776-02 | Body, Injector, 1600 Upflow |
| 23       | 1   | 16221    | Disperser, Air |
| 24       | 1   | 14805    | Gasket, Injector Body, 1600/1700 |

*Upflow Only
### 1650 BRINE SYSTEM

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### 60010-25 BLFC Assy. (Parts)

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### 60010-50 BLFC Assy. (Parts)

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BYPASS VALVE ASSEMBLY (PLASTIC)

16 • AP10 Fleck 2510 & 2510 Econominder
## BYPASS VALVE ASSEMBLY (METAL)

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# 2300 Safety Brine Valve

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<td>10328</td>
<td>Fitting, Elbow, 90 Deg. 1/4 NPT x 3/8 Tube</td>
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<tr>
<td>5</td>
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<td>10332</td>
<td>Fitting, Insert, 3/8</td>
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<tr>
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<td>10330</td>
<td>Fitting, Sleeve, 3/8 Celcon</td>
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<td>7</td>
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<td>10329</td>
<td>Fitting, Tube, 3/8 Nut, Brass</td>
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<td>10186</td>
<td>Nut, Hex, 10-32</td>
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<td>9</td>
<td>1</td>
<td>60002-34</td>
<td>Air Check, #500, 34&quot; Long</td>
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<tr>
<td></td>
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<td>60003-34</td>
<td>Air Check, #500, HW, 34&quot; Tube</td>
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<tr>
<td>10</td>
<td>1</td>
<td>10149</td>
<td>Rod, Float</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>10700</td>
<td>Float Assy, White</td>
</tr>
<tr>
<td>12</td>
<td>3</td>
<td>10150</td>
<td>Grommet, .30 Dia</td>
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<td>Item No.</td>
<td>QTY</td>
<td>Part No.</td>
<td>Description</td>
</tr>
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<td>-------------</td>
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<tr>
<td>1</td>
<td>1</td>
<td>19645</td>
<td>Body, Safety Brine Valve, 2310</td>
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<tr>
<td>2</td>
<td>1</td>
<td>19803</td>
<td>Safety Brine Valve Assy</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>19804</td>
<td>Screw, Sckt Hd, Set, 10-24 x .75</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>19805</td>
<td>Nut, Hex, 10-24, Nylon Black</td>
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<td>5</td>
<td>1</td>
<td>19652-01</td>
<td>Poppet Assy, SBV w/O-ring</td>
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<td>6</td>
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<td>19649</td>
<td>Flow Dispenser</td>
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<td>11183</td>
<td>O-ring, -017</td>
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<td>8</td>
<td>1</td>
<td>19647</td>
<td>Elbow, Safety Brine Valve</td>
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<td>9</td>
<td>2</td>
<td>19625</td>
<td>Nut Assy, 3/8&quot; Plastic</td>
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<tr>
<td>10</td>
<td>1</td>
<td>18312</td>
<td>Retainer, Drain</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>60014</td>
<td>Safety Brine Valve Assy, 2310</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>10150</td>
<td>Grommet, .30 Dia</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>60068-30</td>
<td>Float Assy, 2310, w/30&quot; Rod</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>60002-34</td>
<td>Air Check, #500, 34&quot; Long</td>
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</tbody>
</table>
Tools Used in the Seal and Spacer Replacement

<table>
<thead>
<tr>
<th>Description</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nut Driver</td>
<td>12664</td>
</tr>
<tr>
<td>Socket Adapter</td>
<td>16906</td>
</tr>
<tr>
<td>Socket 7/16&quot;</td>
<td>12665</td>
</tr>
<tr>
<td>Seal Hook</td>
<td>12874</td>
</tr>
<tr>
<td>Puller</td>
<td>13061</td>
</tr>
<tr>
<td>Stuffer</td>
<td>11098</td>
</tr>
</tbody>
</table>

NOTE: Photos shown are for reference only for replacing the seal and spacer. Actual valve may be different.

1. Turn off water supply to valve. Next, cycle valve to backwash position, then to service. Now remove electrical plug from outlet.
2. Remove control box cover.
3. Disconnect the brine line from the injector housing to the brine valve (if your unit has timed brine tank fill).
4. Remove the two capscrews that hold the back plate to the valve.
5. Grasp the back plate on both sides and slowly pull end plug and piston assembly out of the valve body (see Figure 6) and lay aside.

6. Remove the seal first using the wire hook with the finger loop (see Figure 7).

7. The spacer tool (use only for removing the spacers) has three retractable pins, retained by a rubber ring, at one end. They are retracted or pushed out by pulling or pushing the center button the opposite end.
8. Insert the pin end of the spacer tool into the valve body with the pins retracted (button pulled back). Push the tool tight against the spacer and push the button in, (see ?). When the button is pushed in, the pins are pushed out to engage the 1/4 dia. holes in the spacer. Remove the tool from the valve body. The spacer will be on the end. Pull the center button back, the pins will be retracted and the spacer can be removed from the spacer tool.
9. Alternately remove the remaining seals and spacers in accordance with steps No. 6 and 8.

10. The last or end spacer does not have any holes for the pins of the spacer tool to engage, therefore if the end spacer does not come out on the first try, try again using the wire hook with the finger loop.

11. To replace seals, spacers and end ring, use special tool with the brass sleeve on one end. This is a double-purpose tool (see ?). The male end acts as a pilot to hold the spacers as they are pushed into the valve body and the brass female end is used to insert the seals into the valve body.

12. To restuff a valve body, first take the end ring (the plastic or brass ring without holes), then with your thumb press the button on the brass sleeve end. The large dia. inner portion is now exposed (see Figure 8). Place the end ring on this pilot with the lip on the end ring facing the tool. Push the tool into the valve body bore until it bottoms. While the tool is in the valve body, take a seal and press it into the inside diameter of the exposed brass female end.

13. Remove the tool, turn it end for end and insert it into the valve body bore. While holding the large dia. of the tool, slide it all the way into the valve body bore until it bottoms. Then push the center button to push the seal of the tool and leave it in place in the valve body.

14. Remove the tool from the valve body and push the center on the brass female end to expose the pilot on the opposite end. Place a spacer on this end and insert the spacer and tool into the valve.

**GENERAL SERVICE HINTS FOR METER CONTROL**

**Problem:** Softener delivers hard water  
**Reason:** Reserve capacity has been exceeded.  
**Correction:** Check salt dosage requirements and reset program wheel to provide additional reserve.

**Reason:** 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.

**Reason:** Meter is not measuring flow.  
**Correction:** Check meter with meter checker.
<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water conditioner fails to</td>
<td>Electrical service to unit has been</td>
<td>Assure permanent electrical service (check fuse, plug, pull chain, or switch)</td>
</tr>
<tr>
<td>regenerate.</td>
<td>interrupted</td>
<td></td>
</tr>
<tr>
<td>Timer is defective.</td>
<td></td>
<td>Replace timer.</td>
</tr>
<tr>
<td>Power failure.</td>
<td></td>
<td>Reset time of day.</td>
</tr>
<tr>
<td>Hard water.</td>
<td>By-pass valve is open.</td>
<td>Close by-pass valve.</td>
</tr>
<tr>
<td></td>
<td>No salt is in brine tank.</td>
<td>Add salt to brine tank and maintain salt level above water level.</td>
</tr>
<tr>
<td></td>
<td>Insufficient water flowing into brine tank.</td>
<td>Check injector screen.</td>
</tr>
<tr>
<td></td>
<td>Hot water tank hardness.</td>
<td>Repeated flushings of the hot water tank is required.</td>
</tr>
<tr>
<td></td>
<td>Leak at distributor tube.</td>
<td>Make sure distributor tube is not cracked. Check O-ring and tube pilot.</td>
</tr>
<tr>
<td></td>
<td>Internal valve leak.</td>
<td>Replace seals and spacers and/or piston.</td>
</tr>
<tr>
<td>Unit used too much salt.</td>
<td>Improper salt setting.</td>
<td>Check salt usage and salt setting.</td>
</tr>
<tr>
<td>Loss of water pressure.</td>
<td>Iron buildup in line to water conditioner.</td>
<td>Clean line to water conditioner.</td>
</tr>
<tr>
<td></td>
<td>Iron buildup in water conditioner.</td>
<td>Clean control and add mineral cleaner to mineral bed. Increase frequency of regeneration.</td>
</tr>
<tr>
<td></td>
<td>Inlet of control plugged due to foreign</td>
<td>Remove piston and clean control.</td>
</tr>
<tr>
<td></td>
<td>material broken loose from pipes by recent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>work done on plumbing system.</td>
<td></td>
</tr>
<tr>
<td>Loss of mineral through drain</td>
<td>Air in water system.</td>
<td>Assure that well system has proper air eliminator control. Check for dry well condition.</td>
</tr>
<tr>
<td>line.</td>
<td>Improperly sized drain line flow control.</td>
<td>Check for proper drain rate.</td>
</tr>
<tr>
<td>Iron in conditioned water.</td>
<td>Fouled mineral bed.</td>
<td>Check backwash, brine draw, and brine tank fill. Increase frequency of regeneration. Increase backwash time.</td>
</tr>
<tr>
<td>Excessive water in brine tank.</td>
<td>Plugged drain line flow control.</td>
<td>Clean flow control.</td>
</tr>
<tr>
<td></td>
<td>Plugged injector system.</td>
<td>Clean injector and screen.</td>
</tr>
<tr>
<td></td>
<td>Timer not cycling.</td>
<td>Replace timer.</td>
</tr>
<tr>
<td></td>
<td>Foreign material in brine valve.</td>
<td>Replace brine valve seat and clean valve.</td>
</tr>
<tr>
<td></td>
<td>Foreign material in brine line flow control.</td>
<td>Clean brine line flow control.</td>
</tr>
<tr>
<td>Softener fails to draw brine.</td>
<td>Drain line flow control is plugged.</td>
<td>Clean drain line flow control.</td>
</tr>
<tr>
<td></td>
<td>Injector is plugged.</td>
<td>Clean injector</td>
</tr>
<tr>
<td></td>
<td>Injector screen plugged.</td>
<td>Clean screen.</td>
</tr>
<tr>
<td></td>
<td>Line pressure is too low.</td>
<td>Increase line pressure to 20 psi</td>
</tr>
<tr>
<td></td>
<td>Internal control leak</td>
<td>Change seals, spacers, and piston assembly.</td>
</tr>
<tr>
<td></td>
<td>Service adapter did not cycle.</td>
<td>Check drive motor and switches.</td>
</tr>
<tr>
<td>Control cycles continuously.</td>
<td>Misadjusted, broken, or shorted switch.</td>
<td>Determine if switch or timer is faulty and replace it, or replace complete power head.</td>
</tr>
<tr>
<td>Drain flows continuously.</td>
<td>Valve is not programming correctly.</td>
<td>Check timer program and positioning of control. Replace power head assembly if not positioning properly.</td>
</tr>
<tr>
<td></td>
<td>Foreign material in control.</td>
<td>Remove power head assembly and inspect bore. Remove foreign material and check control in various regeneration positions.</td>
</tr>
<tr>
<td></td>
<td>Internal control leak.</td>
<td>Replace seals and piston assembly.</td>
</tr>
</tbody>
</table>
NOTE:
1. Single Tank Timeclock, Meter Delayed, or Meter Immediate Regeneration
2. Valve Shown in Service Position.
### SERVICE ASSEMBLIES

#### 24 Hour Gear Assemblies
- **40096-02** ................. Dial 2AM Regen Assy, Black
- **40096-24** ................. Dial 12AM Regen Assy, Black
- **60519-02** ................. Gear Assy, 3200 24 Hour 2 Times/Day
- **60519-03** ................. Gear Assy, 3200, 24 Hour 3 Times/Day
- **60519-04** ................. Gear Assy, 3200, 24 Hour 4 Times/Day
- **60519-06** ................. Gear Assy, 3200, 24 Hour (12:00) 6 Times/Day

#### Brine Line Flow Control (BLFC)
- **60010-25** ................. BLFC, 1650, .25 GPM, Plastic
- **60010-50** ................. BLFC, 1650, .50 GPM, Plastic
- **60010-100** .................. BLFC, 1650, 1.0 GPM, Plastic

#### Brine Valves
- **60011-010** .................. Brine Valve, 1650, Short Stem, .25 GPM, Less Tube
- **60011-030** .................. Brine Valve, 1650, Short Stem, 1.0 GPM, Less Tube

#### Bypasses
- **60049** ....................... Bypass Plastic Assy
- **60040SS** .................... Bypass Valve, 5600, 3/4" NPT
- **60041SS** .................... Bypass Valve, 5600, 1" NPT

#### Cam
- **60160-15** .................... Drive Cam Assy, STF, Blue

#### Clamp
- **60503** ....................... Clamp Ring Assembly, 2510

#### Coupling
- **60510** ....................... Adapter Coupling Assy, 5600

#### Drain Line Flow Controls
- **60705-00** ................. DLFC, Plastic, Blank
- **60705-06** ................. DLFC, Plastic, 60 GPM
- **60705-08** ................. DLFC, Plastic, 80 GPM
- **60705-10** ................. DLFC, Plastic, 1.0 GPM
- **60705-12** ................. DLFC, Plastic, 1.2 GPM
- **60705-13** ................. DLFC, Plastic, 1.3 GPM
- **60705-15** ................. DLFC, Plastic, 1.5 GPM
- **60705-17** ................. DLFC, Plastic, 1.7 GPM
- **60705-20** ................. DLFC, Plastic, 2.0 GPM
- **60705-24** ................. DLFC, Plastic, 2.4 GPM
- **60705-30** ................. DLFC, Plastic, 3.0 GPM
- **60705-35** ................. DLFC, Plastic, 3.5 GPM
- **60705-40** ................. DLFC, Plastic, 4.0 GPM
- **60705-45** ................. DLFC, Plastic, 4.5 GPM
- **60705-50** ................. DLFC, Plastic, 5.0 GPM
- **60705-60** ................. DLFC, Plastic, 6.0 GPM
- **60705-70** ................. DLFC, Plastic, 7.0 GPM
- **60705-8.0** ................. DLFC, QC x 3/4" F, 8.0 GPM
- **60705-9.0** ................. DLFC, QC x 3/4" F, 9.0 GPM
- **60705-12** ................. DLFC, QC x 3/4" F, 12.0 GPM
- **60705-15** ................. DLFC, QC x 3/4" F, 15.0 GPM

#### Drives
- **60050-21** .................. Drive Assy, 2750, STF, 120V Softener

#### Injectors
- **60480-xx** .................. 1600 Injector Assy
  (Specify size of Injector)

#### Meters
- **60088-180** ................. Meter Assy, 3/4" Dual Port, Slip Std, Rt Ang/180 Plastic Paddle w/clps
- **60089-180** ................. Meter Assy, 3/4" Dual Port, Slip Ext, Rt Ang/180 Plastic Paddle w/clps

#### Pistons
- **61670-00** .................. Piston Assy w/ Seal & Spacer Kit 2510
- **61670-01** .................. Piston Assy w/Seal & Spacer Kit 2510 Piston NHWB
- **61671-00** .................. Piston Conversion w/Seal & Spacer 2510 NHWBP Filter
- **61671-01** .................. Piston Conversion w/Seal & SPacer 2510 NHWBP 1600

#### Program Wheels
- **60405-10** .................. Program Wheel, w/3/4" Std Label Set @ 21
- **60405-15** .................. Program Wheel, w/3/4" Std Label w/ People Label Set @ 21

#### Safety Brine (2300)
- **60028-30** .................. Float Assy, 2350, 30", White
- **60027-FFA** .................. Safety Brine Valve Body, 2300 Fitting Facing Arm
- **60027-FFS** .................. Safety Brine Valve Body, Fitting Facing Stud

#### Sales and Service Aids
- **40097** ....................... Literature, 2510, S/Manual
- **16510** ....................... Literature, 2510, Spec Sheet

#### Seal & Spacer Kits
- **60129** ....................... Seal & Spacer Kit, 2850
- **60129-20** .................. Seal & Spacer Kit, 2850, Natural
- **60129-30** .................. Seal & Spacer Kit, 2850

#### Skipper Wheels
- **14860** ....................... Skipper Wheel Assy, 7 Day
- **14381** ....................... Skipper Wheel Assy, 12 Day

#### Yokess
- **13708-40** .................. Yoke, 1", Sweat
- **13708-45** .................. Yoke, 3/4", Sweat
- **18706** ....................... Yoke, 1", NPT, Plastic
- **18706-20** .................. Yoke, 3/4", NPT, Plastic
- **19275** ....................... Yoke, Angle 90 Deg. 3/4", NPT
- **19275-45** .................. Yoke, Angle 90 Deg. 3/4" Sweat
- **19620-01** .................. Yoke Assy, 3/4", R/Angle, 90 Deg w/O-rings, Clips and Screws
- **40636** ....................... Yoke, 1-1/4", NPT
- **40636-49** .................. Yoke, 1-1/4", Sweat
- **41026-01** .................. Yoke, 1", NPT, SS
- **41027-01** .................. Yoke, 3/4", NPT, Cast, Machd

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