



**FLECK®** 9000/9100/9500

SERVICE MANUAL



## TABLE OF CONTENTS

|  |    |
|--|----|
| JOB SPECIFICATION SHEET .....  | 2  |
| EQUIPMENT CONFIGURATION.....   | 2  |
| INSTALLATION & START-UP .....  | 3  |
| 9000/9100/9500 (3200 SERIES) ELECTRO MECHANICAL<br>TIMER ASSEMBLY..... | 6  |
| POWER HEAD ASSEMBLY.....   | 8  |
| 9000 CONTROL VALVE ASSEMBLY .....                                      | 10 |
| 9100 CONTROL VALVE ASSEMBLY .....                                      | 13 |
| 9500 CONTROL VALVE ASSEMBLY .....                                      | 16 |
| 1600 BRINE VALVE SYSTEM (FOR 9500).....                                | 19 |
| 1700 BRINE VALVE SYSTEM (FOR 9500).....                                | 20 |
| 1710 BRINE VALVE SYSTEM (FOR 9500).....                                | 21 |
| 3/4-INCH METER ASSEMBLY.....   | 22 |
| 1-INCH METER ASSEMBLY.....   | 23 |
| 1-INCH METER ASSEMBLY.....   | 24 |
| 1-1/2 INCH METER ASSEMBLY .....  | 25 |
| 9000 SECOND TANK ASSEMBLY.....   | 26 |
| 9100 SECOND TANK ASSEMBLY.....   | 27 |
| 9500 SECOND TANK ASSEMBLY.....   | 28 |
| 2300 SAFETY BRINE VALVE .....  | 29 |
| 2310 SAFETY BRINE VALVE .....  | 30 |
| 2310 SAFETY BRINE VALVE .....  | 31 |
| 2350 SAFETY BRINE VALVE .....  | 32 |
| BYPASS VALVE ASSEMBLY (METAL) .....                                    | 33 |
| BYPASS VALVE ASSEMBLY (PLASTIC).....                                   | 34 |
| GENERAL SERVICE HINTS FOR METER CONTROL.....                           | 35 |
| TROUBLESHOOTING.....   | 36 |
| 9000/9100/9500 METER FLOW DATA.....                                    | 37 |
| 9000/9100/9500 INJECTOR FLOW DATA (1600 SERIES<br>INJECTORS).....      | 38 |
| 9500 INJECTOR FLOW DATA (1600 & 1700 SERIES<br>INJECTORS).....         | 39 |
| 9000 CONTROL DIMENSIONS .....  | 40 |
| 9100 CONTROL DIMENSIONS .....  | 41 |
| 9500 CONTROL DIMENSIONS .....  | 42 |
| WATER CONDITIONER FLOW DIAGRAMS.....                                   | 43 |
| 9000/9500 WIRING DIGRAM .....  | 45 |
| SERVICE ASSEMBLIES .....   | 46 |

## CALIFORNIA PROPOSITION 65 WARNING

**⚠ WARNING:** This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

## JOB SPECIFICATION SHEET

- Job Number: \_\_\_\_\_
- Model Number: \_\_\_\_\_
- Water Test: \_\_\_\_\_
- Capacity Per Unit: \_\_\_\_\_
- Mineral Tank Size: \_\_\_\_\_ Diameter: \_\_\_\_\_ Height: \_\_\_\_\_
- Brine Tank Size and Salt Setting per Regeneration: \_\_\_\_\_
- 9000/9100/9500 Control Valve Specifications:
- Type of Timer:
    - 82 minute available regeneration time, 1/15 RPM
    - 164 minute available regeneration time, 1/30 RPM
  - Meter Size:
    - 3/4- inch Std Range (125 - 2,100 gallon setting)
    - 3/4-inch Ext Range (625 - 10,625 gallon setting)
    - 1-inch Std Range (310 - 5,270 gallon setting)
    - 1-inch Ext Range (1,150 - 26,350 gallon setting)
    - 1-1/2 inches Std Range (625 - 10,625 gallon setting)
    - 1-1/2 inches Ext Range (3,125 - 53,125 gallon setting)
  - Timer Gallon Setting: \_\_\_\_\_ Gallons
  - Regeneration Program Setting:
    - Backwash: \_\_\_\_\_ Minutes
    - Brine and Slow Rinse: \_\_\_\_\_ Minutes
    - Rapid Rinse: \_\_\_\_\_ Minutes
    - Brine Tank Refill: \_\_\_\_\_ Minutes
  - Drain Line Flow Control: \_\_\_\_\_ gpm
  - Brine Refill Rate: \_\_\_\_\_ gpm
  - Injector Size: \_\_\_\_\_

## EQUIPMENT CONFIGURATION

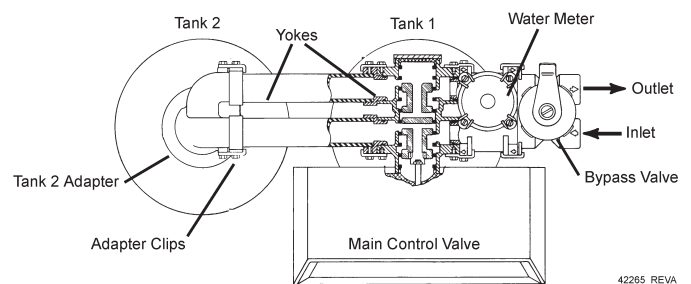


Figure 1 9000/9100 Equipment Configuration

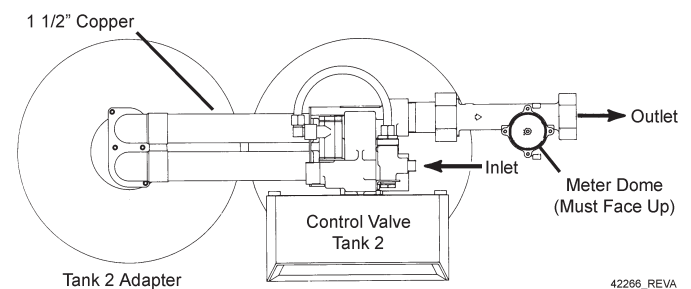


Figure 2 9500 Equipment Configuration

## INSTALLATION & START-UP

### Water Pressure

A minimum of 25 pounds (1.7 bar) of water pressure is required for regeneration valve to operate effectively.

### Electrical Facilities

A continuous 115 volt, 60 Hertz current supply is required. Make certain the current supply is always hot and cannot be turned off with another switch.

### 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.

### Bypass Valves

Always provide for the installation of a bypass valve.

**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.

**NOTE: Be sure the tank is level and on a firm base.**

2. During cold weather, the installer should warm the valve to room temperature before operating.
3. Perform all plumbing according to local plumbing codes.
  - Use a 1/2-inch minimum pipe size for the drain.
  - Use a 3/4-inch drain line for backwash flow rates that exceed 7 gpm or length that exceeds 20 feet (6 m).
4. Both tanks must be the same height and diameter and filled with equal amounts of media.
5. The distributor tube must be flush with the top of each tank. Cut if necessary. Use only non-aerosol silicone lubricant.
6. Lubricate the distributor o-ring seal and tank o-ring seal. Place the main control valve on one tank and the tank adapter on the second tank.

**NOTE: If required, solder copper tubing for tank interconnection before assembling on the main control valve and tank adapter. Maintain a minimum of 1 inch distance between tanks on final assembly.**

7. Solder joints near the drain must be done before connecting the Drain Line Flow Control fitting (DLFC). Leave at least 6 inches (152 mm) between the DLFC and solder joints when soldering pipes that are connected on the DLFC. Failure to do this could cause interior damage to DLFC.
8. Use only plumber tape on the drain fitting.
9. Be sure the floor under the salt storage tank is clean and level.

10. Place approximately 1 inch (25 mm) of water above the grid plate. If a grid is not utilized, fill to the top of the air check in the salt tank. Do not add salt to the brine tank at this time.
11. On units with a bypass, place in Bypass position.
12. Turn on the main water supply.
13. Open a cold soft water tap nearby and let water run a few minutes or until the system is free of foreign material (usually solder) resulting from the installation. Close the water tap when water runs clean.
14. Place the bypass In Service position and let water flow into the mineral tank. When water flow stops, slowly open a cold water tap nearby and let water run until air is purged from the unit. Then close tap.
15. Make all electrical connections according to codes. Plug the valve into an approved power source. Do not insert meter cable into the meter yet.
16. Tank one has control valve and tank two has adapter.
17. Look on the right side of the control valve, it has indicators showing which position the control valve is in during Regeneration and which tank is In Service.

**NOTE: Make sure the meter cable is not inserted in the meter dome. Swing the timer out to expose the program wheel. To swing timer out, grab onto the lower right corner of timer face and pull outward.**

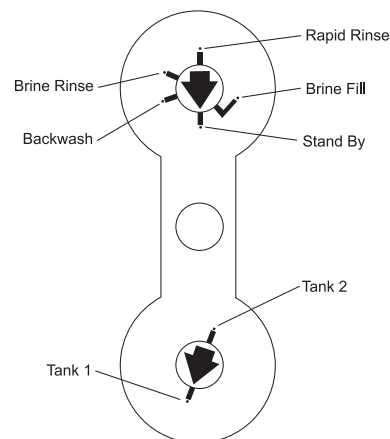
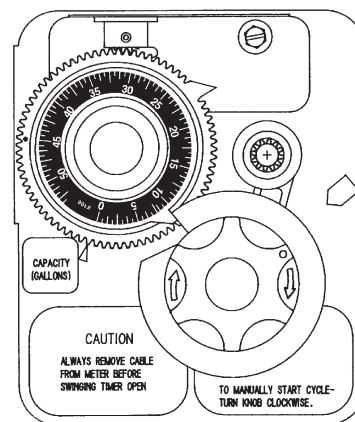


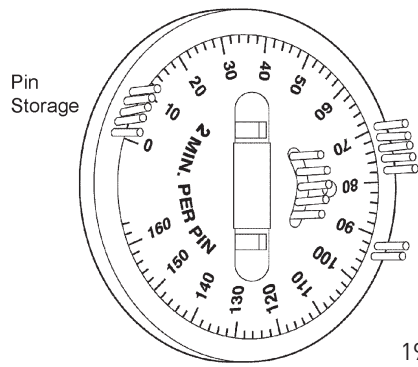
Figure 3 Control Valve Position Indicators



61591 Rev A

Figure 4 Timer

## INSTALLATION & STARTUP *CONTINUED*



19210 Rev D

Figure 5 Program Wheel

- Cycle timer into backwash position. Turn manual knob so that the micro switch rides on the first set of pins. In this position the tanks switch (lower piston) and the control valve moves to the backwash position (upper piston). Wait until the positioning of upper and lower pistons stops before advancing the timer further. If advanced too fast the control will not home into the In Service position (it will not advance to any other position). To correct this, rotate the manual knob back to In Service and start again into backwash.

**NOTE: Once valve positions itself into the backwash cycle, the homing circuit locks in.**

- With all the air backwashed, slowly cycle the timer to the brine position; rapid rinse; and brine tank refill. Wait for the control drive motor to position itself in each cycle and stop, before advancing on to the next position.
- Once back in the In Service position, cycle the control valve again into the backwash position. The tanks switch again, and air head backwashes out of the other tank. Cycle the control back to the In Service position. Leave the timer in the open position. DO NOT insert meter cable yet.

**NOTE: Two motors are available.  
1/15 RPM has 82 minute regeneration time.  
1/30 RPM has 164 minute regeneration time.**

### Valve To Tank Installation

- Spin the valve onto the tank, ensuring the threads are not cross-threaded.

**NOTE: All Fleck® valves are right-hand threads, or clockwise, to install**

- Rotate the valve freely without using force until it comes to a stop (this position is considered zero).
- Rotate the valve clockwise from zero, between 1/4-turn and 1/2-turn (see "Figure 6").

**NOTE: If lubricant is required, a silicone compound is strongly recommended. Dow Corning® Silicone Compound (available from Pentair), is recommended for best possible results. Dow Corning® 7 Release Compound is used in the manufacture of Pentair control valves. The use of other types of lubricants may attack the control's plastic or rubber components. Petroleum-based lubricants can cause swelling in rubber parts, including o-rings and seals.**

| Part No. | Description              |
|----------|--------------------------|
| 16174    | Silicone, 2 oz Tube      |
| 16586-8  | Silicone, Dow #7<br>8 lb |

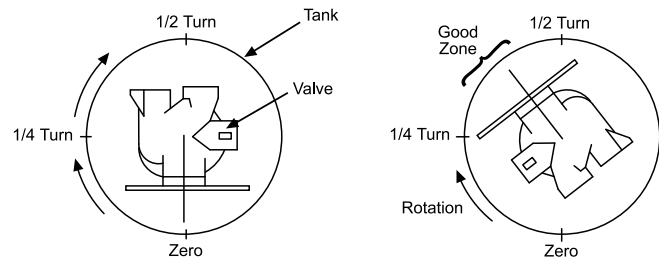


Figure 6

### Setting the Regeneration Cycle Program

The Regeneration cycle program on the water conditioner is preset at the factory. However, portions of the cycle or program time may be lengthened or shortened for local conditions or system design.

- Expose cycle program wheel by grasping timer in lower right hand corner and pulling. This releases snap retainer and swings timer to the left

**NOTE: Meter cable must be removed from meter dome before opening timer.**

- Remove the program wheel by grasping program wheel and squeezing protruding lugs towards center. Lift program wheel off timer. Switch arms may require movement to facilitate removal.
- Return timer to closed position by engaging snap retainer in back plate. Make certain all electrical wires locate above snap retainer post.

### Changing Length of the Backwash Time

Looking at the numbered side of the program wheel, the group of pins starting at zero determines the length of time the unit backwashes.

**Example:** If there are six pins in this section, the time of backwash is 12 minutes (2 minutes per pin). To change the length of backwash time, add or remove pins as required.

The number of pins multiplied by two equals minutes of backwash.

### Changing 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 a unit will brine and rinse (2 minutes per hole).

To change the length of brine and rinse time, add or remove pins in the rapid rinse group of pins to increase or decrease the number of holes in the brine and rinse section.

The number of holes multiplied by two equals minutes of brine and rinse.

### Changing Length Of Rapid Rinse

The second group of pins on the program wheel determines the length of time the water conditioner rapid rinses (2 minutes 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 multiplied by two equals minutes of rapid rinse.

**NOTE: Program wheels with 0-82 minute cycle times, use one minute per pin or hole to set Regeneration times. The layout of pins and holes on the program wheel follow the same procedure as on this page.**

## INSTALLATION & STARTUP CONTINUED

### Changing Length of Brine Tank Refill Time

The second group of holes on the program wheel determines the length of time the water conditioner refills the brine tank (2 minutes 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 two pin set at end of the brine tank refill section trips the outer micro-switch. The program wheel, however, continues to rotate until the inner micro-switch drops into the notch on the program wheel.

### Programming

1. The control valve is set at the factory for backwash; brine and slow rinse; rapid rinse and brine tank fill times. Change any of these times by repositioning the pins and holes or adding more pins.

**NOTE: Two timer motors are available.**

**1/15 RPM has 82 minute Regeneration Time and each pin or hole equals one minute.**

**1/30 RPM has 164 minute Regeneration Time and each pin or hole equals two minutes.**

2. The control valve has a separate brine tank fill cycle. Calculate the desired salt setting using the brine line flow control rate of refill (in gpm) multiplied by the timer setting. Then, using one gallon of fresh water dissolving approximately 3 lbs salt, calculate the refill time.

**Example:** A desired 30 lbs salt setting:

The unit has a 1.0 gpm refill rate so a 10 gallon fill is required.

10 gallons x 3 lbs/gals = 30 lbs salt

Set the timer refill section at 10 minutes.

10 minutes x 1.0 gpm = 10 gallon fill

**NOTE: There must always be two pins at the end of a refill time to stop the fill cycle. With the Regeneration times set, place timer back to its original position, making sure the lower right hand corner snaps back into the backplate and the meter cable slides through the backplate and does not bind.**

3. Setting the gallon wheel. Knowing the amount of resin in each tank and the salt setting per Regeneration, calculate the gallons available, using the following capacities as a guide:

$$\frac{[\text{capacity per ft}^3 \times \text{ft}^3 \text{ of resin per tank}]}{\text{compensated hardness of H}_2\text{O}} = \text{gallons available}$$

**NOTE: Based on tank size: More resin increases capacity, less resin decreases capacity. More salt increases capacity, less salt decreases capacity.**

**Example:**

|  |   |   |
|--|---|---|
| Tank Diameter  | = | 16 inches                                   |
| Compensated Hardness   | = | 35 grains per gallon (tested sample)        |
| ft <sup>3</sup> Resin (based on flow rate)   | = | 4   |
| lbs of Salt per ft <sup>3</sup>  | = | 8   |
| Capacity per ft <sup>3</sup>   | = | 24,000                                      |
| $\frac{[24,000 \times 4 \text{ ft}^3 \text{ of resin per tank}]}{35 \text{ grains}}$ | = | 2,740 gallons available before regeneration |

Complete step 4 before setting gallons on the meter wheel.

4. Because the control valve regenerates with soft water from the other tank, subtract the water used for regeneration. Take each regeneration cycle and calculate the water used.

**Example:** Unit is set for a 16-inch diameter tank with 4 ft<sup>3</sup> of resin and salted at 8 lbs. per ft<sup>3</sup>, 7 gpm backwash, #3 injector, 1.0 gpm brine refill, and 60 psi and timer set for 10 min. backwash, 60 min. brine and rinse, 10 min. rapid rinse, 10 min. brine tank fill.

|                          |                  |   |           |
|--------------------------|------------------|---|-----------|
| Backwash                 | 10 min x 7.0 gpm | = | 70.0 gal  |
| Brine and Rinse          | 60 min x 1.0 gpm | = | 60.0 gal  |
| Rapid Rinse              | 10 min x 7.0 gpm | = | 70.0 gal  |
| Brine Tank Fill          | 10 min x 1.0 gpm | = | 10.0 gal  |
| Total Regeneration Water |                  | = | 210.0 gal |

With the 2740 gallons available calculated in Step 3, subtract the Regeneration water used from the total water available.

2740 gallons available - 210 gallons used = 2530 gallons (in Regeneration, Step 4)

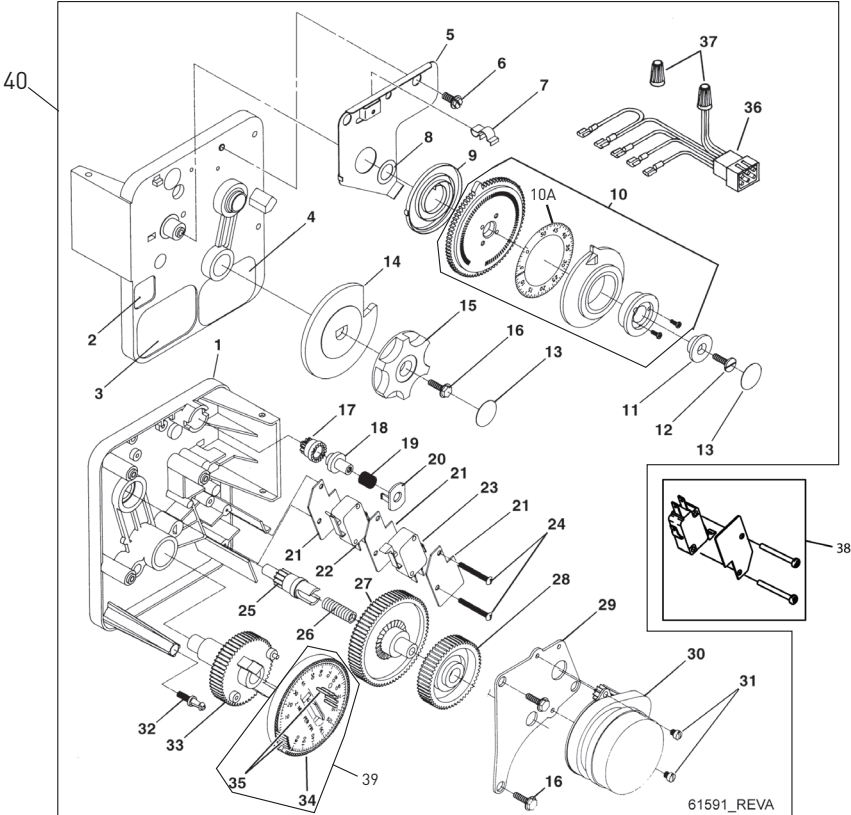
5. Set meter wheel at approximately 2530 gallons. Lift the inner dial of the meter program wheel so that you can rotate it freely. Position the white dot opposite the 2530 gallon setting.

**NOTE: There is a slight delay between the time the meter zeros out and the cycle starts. Units using the: 1/15 RPM motor, 82 minute Regeneration Time has a 9 minute delay 1/30 RPM motor, 180 minute Regeneration Time has an 18 minute delay.**

**NOTE: This delay period is not critical on residential equipment. However, take this factor into consideration for commercial applications by subtracting continuous flows for 9 minutes or 18 minutes from water available.**

6. Insert meter cable into meter.
7. Check bypass.
8. Plug in unit.

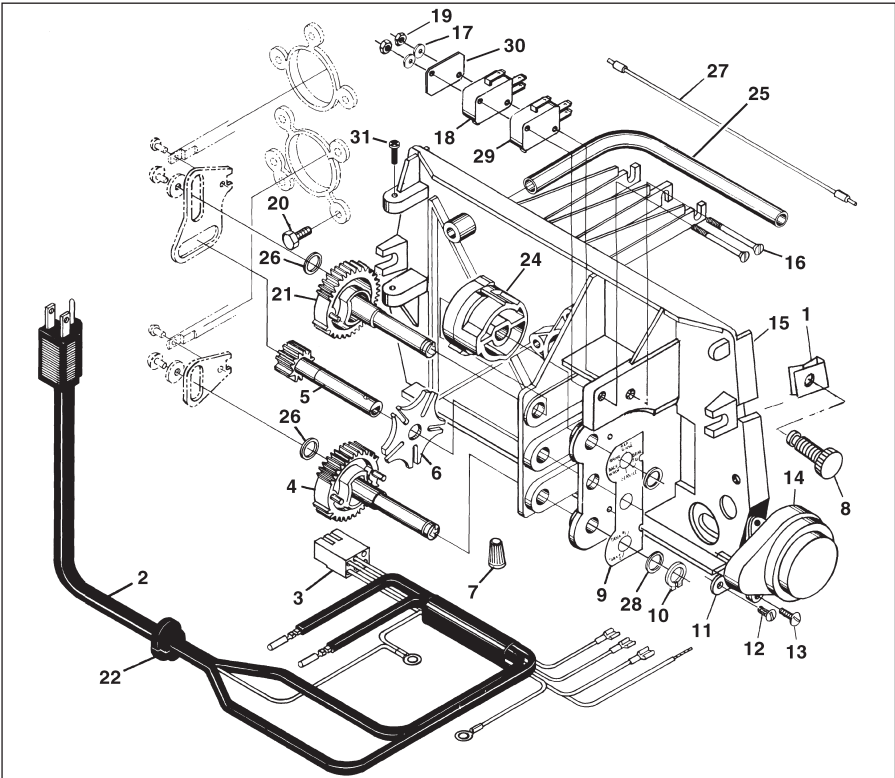
**9000/9100/9500 (3200 SERIES) ELECTRO  
MECHANICAL TIMER ASSEMBLY**



# 9000/9100/9500 (3200 SERIES) ELECTRO MECHANICAL TIMER ASSEMBLY *CONTINUED*

| Item No. | QTY | Part No. | Description   | Item No.                               | QTY | Part No. | Description   |
|----------|-----|----------|---|--|-----|----------|---|
| 1        | 1   | 13870-03 | Housing, Timer, 9000  | 21                                     | 3   | 14087    | Insulator   |
| 2        | 1   | 17870    | Label, Indicator, 9000<br>Timer   | 22                                     | 1   | 15314    | Switch, Micro, Modified                                     |
| 3        | 1   | 15465    | Label, Caution  | 23                                     | 1   | 15320    | Switch, Micro, Timer  |
| 4        | 1   | 16930    | Label, Instruction  | 24                                     | 2   | 11413    | Screw, Pan Hd Mach,<br>4-40 x 1 1/8                         |
| 5        | 1   | 15227    | Plate, Clutch, Actuator   | 25                                     | 1   | 13018    | Pinion, Idler   |
| 6        | 1   | 10300    | Screw, Slot Hex Washer,<br>18-8 x 3/8   | 26                                     | 1   | 18563    | Spring, Idler Shaft   |
| 7        | 1   | 17513    | Clip, Spring  | 27                                     | 1   | 13017    | Gear, Idler   |
| 8        | 1   | 15407    | Washer, Plain, #4   | 28                                     | 1   | 13164    | Gear, Drive   |
| 9        | 1   | 15228    | Spring, Return  | 29                                     | 1   | 13887    | Plate, Motor Mounting                                       |
| 10       | 1   | 16270-10 | Program Wheel Assy,<br>9000/9100, 3/4-inch STD,<br>0-2, 100                               | 30                                     | 1   | 18743-1  | Motor, 120V, 60 Hz 1/30 RPM,<br>5600                        |
|          |     | 16270-30 | Program Wheel Assy,<br>9000/9100, 1-inch STD,<br>0-5, 100                                 |  |     | 18824-1  | Motor, 230V, 50 Hz 1/30 RPM                                 |
|          |     | 16270-40 | Program Wheel Assy,<br>9000/9100, 1-inch EXT,<br>0-25, 500                                |  |     | 19170    | Motor, 120V 60 Hz 1/15 RPM                                  |
|          |     | 16270-50 | Program Wheel Assy,<br>9000/9100/9500, 3/4-inch<br>EXT, 1.5-inch STD,<br>0-10, 500        |  |     | 18825    | Motor, 230V, 50 Hz 1/15 RPM<br>Mallory                      |
|          |     | 16270-60 | Program Wheel Assy, 9500,<br>1.5-inch EXT, 0-50, 000                                      | 31                                     | 2   | 13278    | Screw, Phil Hd Mach, 6-32 x<br>1/8 Steel Zinc               |
| 10A      |     | 24673    | Volume Label, Metric,<br>9000/9100, 3/4-inch STD,<br>0-8m <sup>3</sup>                    | 32                                     | 1   | 14265    | Clip, Spring  |
|          |     | 24672    | Volume Label, Metric,<br>9000/9100, 1-inch STD,<br>0-20m <sup>3</sup>                     | 33                                     | 1   | 15055    | Timer, Main Drive Gear                                      |
|          |     | 24676    | Volume Label, Metric,<br>9000/9100, 1-inch EXT,<br>0-100m <sup>3</sup>                    | 34                                     | 1   | 19210-02 | Program Wheel Assy, 9000<br>1/15                            |
|          |     | 24675    | Volume Label, Metric,<br>9000/9100/9500, 3/4-inch<br>EXT, 1.5-inch STD 0-40m <sup>3</sup> |  |     | 19210-05 | Program Wheel Assy,<br>9000/3230                            |
|          |     | 25027    | Volume Label, Metric, 9500,<br>1.5-inch EXT, 1.5-inch EXT<br>0-200m <sup>3</sup>          | 35                                     | 23  | 15493    | Pin, Spring, 1/16 x 5/8 SS                                  |
| 11       | 1   | 13806    | Retainer, Program Wheel   | 36                                     | 1   | 15203    | Harness, 9000/9500, Timer                                   |
| 12       | 1   | 13748    | Screw, Flt Hd St, 6-20 x 1/2  | 37                                     | 2   | 40422    | Nut, Wire, Tan  |
| 13       | 2   | 11999    | Label, Button   | 38                                     | 1   | 60320-02 | Switch Kit, 3200/9000 Timer<br>Auxiliary                    |
| 14       | 1   | 15223    | Actuator, Cycle   | 39                                     |     | 61420-69 | Program Wheel & Gear Assy,<br>5-30-5-10-2, 2 Min<br>Per Pin |
| 15       | 1   | 13886    | Know, 3200  |  |     | 61420-80 | Program Wheel & Gear Assy,<br>5-40-5-7-2, 2 Min Per Pin     |
| 16       | 4   | 13296    | Screw, Hex Washer,<br>6-20 x 1/2  | 40                                     | 1   | *        | Complete 9000 Meter<br>Immediate Timer Assembly             |
| 17       | 1   | 17724    | Program Wheel, Pinion<br>Drive  | *Call your distributor for Part Number |     |          |   |
| 18       | 1   | 17723    | Clutch, Drive Pinion  |  |     |          |   |
| 19       | 1   | 14276    | Spring, Meter Clutch  |  |     |          |   |
| 20       | 1   | 14253    | Retainer, Clutch Spring   |  |     |          |   |

**POWER HEAD ASSEMBLY**

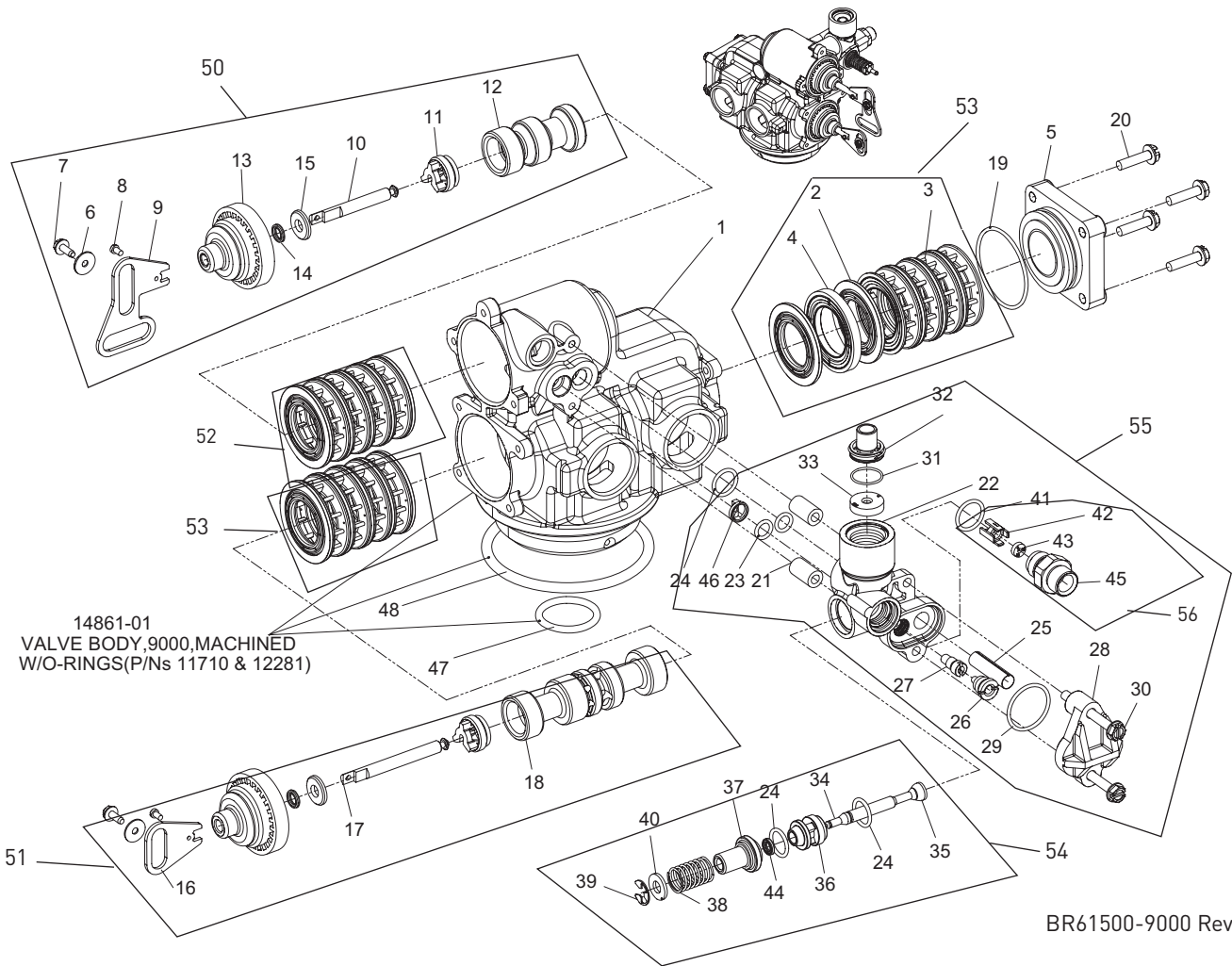




## POWER HEAD ASSEMBLY *CONTINUED*

| Item No. | QTY | Part No. | Description   | Item No.                               | QTY | Part No.  | Description   |
|----------|-----|----------|---|--|-----|-----------|---|
| 1        | 2   | 18728    | Nut, Tinnerman, U Type, 8-32                                      | 17                                     | 2   | 10340     | Washer, Lock #4, Zinc                                       |
| 2        | 1   | 11838    | Power Cord, 6' Fleck  | 18                                     | 2   | 16433     | Switch, Miniature   |
|          |     | 11839    | Power Cord, 12' Fleck   | 19                                     | 1   | 10339     | Nut, Hex, 4-40 Zinc Plated                                  |
|          |     | 40084-12 | Power Cord, 12' U.S., Round, 120V Sys 5, 6, 7 & 2900/3150/3900 #4 | 20                                     | 1   | 15331     | Screw, Hex Washer Mach, 10-24 x 3/4 410 S.S.                |
|          |     | 19885-01 | Power Cord Assy, Japanese   | 21                                     | 1   | 15133     | Gear Assy, Drive, 3/4-inch Stroke                           |
|          |     | 11545-01 | Power Cord Assy, 4' Black, Euro w/Terminals                       | 22                                     | 1   | 13547     | Strain Relief, Flat Cord Heyco #30-1                        |
|          |     | 14678    | Power Cord, U.S., 220/60  |  | 1   | 13547-01  | Strain Relief, Round Cord                                   |
|          |     | 19303-01 | Power Cord Assy, Australian w/Terminals                           | 23                                     | 1   | 15810     | Ring, Retaining   |
|          |     | 40085-12 | Power Cord, 12' US, Round, 240V                                   | 24                                     | 1   | 17331     | Cam, 9000, 9100, 9500                                       |
|          |     | 19674    | Transformer, 24V, 9.6VA Residential Valves                        |  |     | 17765     | Cam Assy, Aux Switch, 9000, 9100, 9500                      |
|          |     | 41475    | Transformer, 24V, 9.6VA, European                                 | 25                                     | 1   | 15368     | Tube, Cable Guide, 2-Tank, 9000/9100                        |
| 3        | 1   | 15202    | Harness, 9000/9500, Drive   |  |     | 17337     | Tube, Cable Guide, 9500                                     |
|          |     | 14822    | Harness, 2900   | 26                                     | 2   | 15372     | Washer, Thrust, 3/8   |
| 4        | 1   | 15134    | Gear Assy, Drive, 1/2-inch Stroke 9000/9500                       | 27                                     | 1   | 15425     | Meter Cable Assy, 13.25 inches 9000/9100 3/4-inch STD & EXT |
| 5        | 1   | 15135    | Gear, Drive, 9000   |  |     | 15216     | Meter Cable Assy, 15.25 inches 9000/9100 1-inch STD & EXT   |
| 6        | 1   | 14896    | Wheel, Geneva   |  |     | 17744     | Meter Cable Assy, 20.75 inches 9500 1.5-inch STD & EXT      |
| 7        | 2   | 40422    | Nut, Wire, Tan  | 28                                     | 2   | 15692     | Washer, Plain, 3/8-inch                                     |
| 8        | 2   | 19367    | Screw, Designer Cover, Thumb 8-32 Blank UV Stable Material        | 30                                     | 1   | 10302     | Insulator, Limit Switch                                     |
| 9        | 1   | 15175    | Label, Shaft Position   | 31                                     | 2   | 15173     | Screw, Slot Rd Hd Mach, 5-20 x 3/8                          |
| 10       | 2   | 14917    | Ring, Retaining   | 32                                     |     | *         | Complete 9000/9100/9500 Powerhead Assy                      |
| 11       | 1   | 42296    | Plate, Ground, 9000/9500  | <b>Not Shown</b>                       |     |           |   |
| 12       | 1   | 14430    | Screw, Hex Washer St, 6 x 1/4 Type "B"                            | 1                                      |     | 60232-110 | Cover, Designer, 1 Pc Black                                 |
| 13       | 2   | 19160    | Screw, Phil Pan, Thread 6-32 x 3/8 Type 23 Zinc                   | 1                                      |     | 60232-112 | Cover, Designer, 1 Pc Black w/Left Window, Electric         |
| 14       | 1   | 18737    | Motor, 24V, 50/60 Hz, 1 RPM                                       | 1                                      |     | 60320-10  | Switch Assy, Drive Cam, 9000, 9100, 9500                    |
|          |     | 18738    | Motor, 120V, 50/60 Hz 1 RPM                                       | *Call your distributor for Part Number |     |           |   |
|          |     | 18739    | Motor, 220V, 50/60 Hz 1 RPM                                       |  |     |           |   |
| 15       | 1   | 15131    | Backplate, 9000, Mechanical, SXT                                  |  |     |           |   |
|          |     | 17784-05 | Panel, Control, 9000/9500 XT                                      |  |     |           |   |
|          |     | 17784-02 | Panel, Control, 9000, 9500 w/Terminal Block                       |  |     |           |   |
| 16       | 2   | 15172    | Screw, Flt Hd Mach, 4-40 x 1 3/8 Steel Zinc Plate                 |  |     |           |   |

# 9000 CONTROL VALVE ASSEMBLY



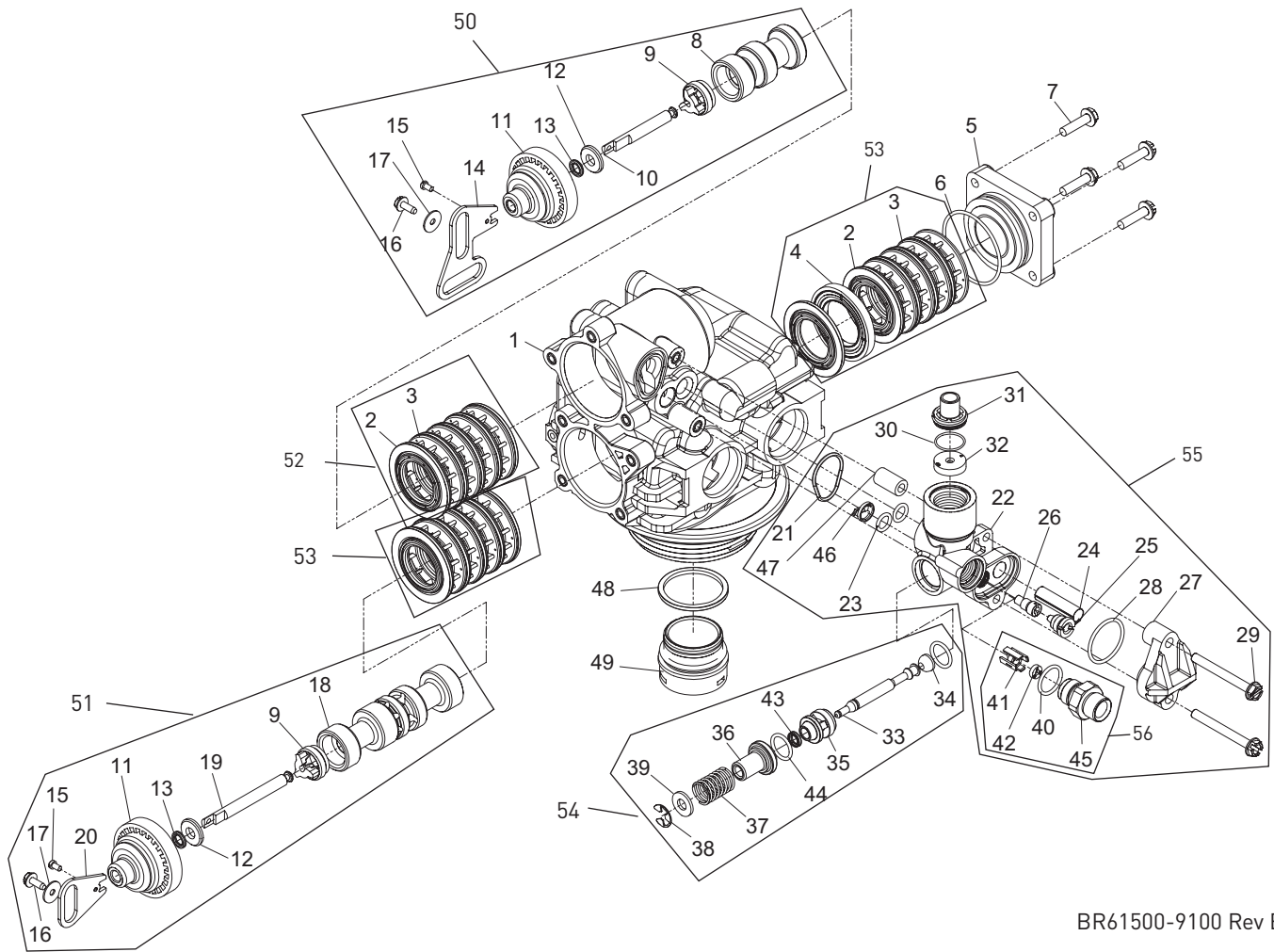
## 9000 CONTROL VALVE ASSEMBLY *CONTINUED*

| Item No. | QTY | Part No.  | Description                           | Item No. | QTY | Part No.  | Description                                     |
|----------|-----|-----------|---------------------------------------|----------|-----|-----------|---|
| 1        | 1   | 14861     | Valve Body, 9000                      | 33       | 1   | 19153     | Washer, Flow, 0.6 GPM                           |
| 2        | 16  | 13242-02  | Seal, 5600,9000, 9100                 |          |     | 19152     | Washer, Flow, 0.8 GPM                           |
| 3        | 12  | 14241     | Spacer, 5600,9000, 9100               |          |     | 12097     | Washer, Flow, 1.0 GPM                           |
| 4        | 1   | 16595     | Spacer, 9000, 9100                    |          |     | 12085     | Washer, Flow, 1.2 GPM                           |
| 5        | 1   | 43458     | End Cap, Plastic, 9000/9100           |          |     | 19150     | Washer, Flow, 1.3 GPM                           |
| 6        | 2   | 13363     | Washer, Plain                         |          |     | 12086     | Washer, Flow, 1.5 GPM                           |
| 7        | 2   | 17020     | Screw, STL. Hex Washer,<br>6-20 x 3/8 |          |     | 19149     | Washer, Flow, 1.7 GPM                           |
| 8        | 2   | 11335     | Screw, #4-40                          |          |     | 12087     | Washer, Flow, 2.0 GPM                           |
| 9        | 1   | 14921     | Link, Piston Rod                      |          |     | 12088     | Washer, Flow, 2.4 GPM                           |
| 10       | 1   | 14919     | Piston, Rod, Upper                    |          |     | 12089     | Washer, Flow, 3.0 GPM                           |
| 11       | 2   | 14309     | Retainer, Piston Rod                  |          |     | 12090     | Washer, Flow, 3.5 GPM                           |
| 12       | 1   | 14914     | Piston, 9000, 9100 Upper              |          |     | 12091     | Washer, Flow, 4.0 GPM                           |
| 13       | 2   | 13243     | Plug, End, 5600, 9000, 9100           |          |     | 19147     | Washer, Flow, 4.5 GPM                           |
| 14       | 2   | 10209     | Quad Ring, -010                       |          |     | 12092     | Washer, Flow, 5.0 GPM                           |
| 15       | 2   | 13008     | Retainer, End Plug Seal               |          |     | 17814     | Washer, Flow, 6.0 GPM                           |
| 16       | 1   | 15019     | Link, Piston Rod, 9000/9500,<br>9100  | 34       | 1   | 14925     | Brine Valve Stem, 9000, 9100                    |
| 17       | 1   | 14920     | Rod, Piston, Lower, 9000,<br>9100     | 35       | 1   | 12626     | Seat, Brine Valve                               |
| 18       | 1   | 14905     | Piston, 9000, 9100 Lower              | 36       | 1   | 13167     | Spacer, Brine Valve                             |
| 19       | 1   | 40952     | O-ring, -030                          | 37       | 1   | 13165     | Cap, Brine Valve                                |
| 20       | 4   | 15331     | Screw, Hex Washer Head                | 38       | 1   | 11973     | Spring, Brine Valve                             |
| 21       | 2   | 13361     | Spacer, 4600, 9000, 9100              | 39       | 1   | 11981-01  | Ring, Retaining, SS                             |
| 22       | 1   | 15215     | Body, Injector, 9000, 9100            | 40       | 1   | 16098     | Washer, Nylon Brine                             |
| 23       | 2   | 13301     | O-ring, -011                          | 41       | 1   | 12977     | O-ring, -015                                    |
| 24       | 3   | 13302     | O-ring, -014                          | 42       | 1   | 13245     | Retainer, BLFC                                  |
| 25       | 1   | 10227     | Screen, Injector                      | 43       | 1   | 17307     | Washer, Flow, 0.125 GPM                         |
| 26       | 1   | 10913-000 | Nozzle, Injector, #000, Brown         |          |     | 12094     | Washer, Flow, 0.25 GPM                          |
|          |     | 10913-00  | Nozzle, Injector, #00, Violet         |          |     | 12095     | Washer, Flow, 0.50 GPM                          |
|          |     | 10913-0   | Nozzle, Injector, #0, Red             |          |     | 12097     | Washer, Flow, 1.0 GPM                           |
|          |     | 10913-1   | Nozzle, Injector, #1, White           | 44       | 1   | 12550     | Quad Ring, -009                                 |
|          |     | 10913-2   | Nozzle, Injector, #2, Blue            | 45       | 1   | 13244     | Adapter, BLFC                                   |
|          |     | 10913-3   | Nozzle, Injector, #3, Yellow          | 46       | 1   | 13497     | Air Disperser, Injector                         |
|          |     | 10913-4   | Nozzle, Injector, #4, Green           | 47       | 1   | 11710     | O-ring, -215                                    |
| 27       | 1   | 10914-000 | Throat, Injector, #000, Brown         | 48       | 1   | 12281     | O-ring, -338                                    |
|          |     | 10914-00  | Throat, Injector, #00, Violet         | 50       |     | 60400     | Piston Assy, 9000, 9100<br>Upper                |
|          |     | 10914-0   | Throat, Injector, #0, Red             |          |     | 60400-01  | Piston Assy, 9000 Upper, HW                     |
|          |     | 10914-1   | Throat, Injector, #1, White           |          |     | 60400-001 | Piston Assy, 9000, 9100<br>Upper, 560CD         |
|          |     | 10914-2   | Throat, Injector, #2, Blue            | 51       |     | 60401     | Piston Assy, 9000, 9100<br>Lower                |
|          |     | 10914-3   | Throat, Injector, #3, Yellow          |          |     | 60401-01  | Piston Assy, 9000 Lower, HW                     |
|          |     | 10914-4   | Throat, Injector, #4, Green           |          |     | 60401-001 | Piston Assy, 9000, 9100<br>Lower, 560CD         |
| 28       | 1   | 13166     | Cap, Injector, 5600, 9000,<br>9100    | 52       |     | 60125     | Seal & Spacer Kit,<br>5600/9000/9100 Upper      |
| 29       | 1   | 13303     | O-ring, -021                          |          |     | 60125-15  | Seal & Spacer Kit,<br>5600/9000/9100 Upper Blue |
| 30       | 2   | 13387     | Screw, Hex Washer Head                |          |     | 60125HW   | Seal & Spacer Kit, 9000<br>Upper                |
| 31       | 1   | 15348     | O-ring, -563                          |          |     |           |   |
| 32       | 1   | 13173     | Retainer, DLFC Button                 |          |     |           |   |

## 9000 CONTROL VALVE ASSEMBLY *CONTINUED*

| Item No. | QTY | Part No.   | Description  | Item No.         | QTY | Part No.   | Description  |
|----------|-----|------------|--|------------------|-----|------------|--|
| 53       |     | 60421      | Seal & Spacer Kit, 9000/9100 Lower                       |                  |     | 60385-0382 | Injector Drain, 9000, 9100, 0.50 BLFC #3 INJ, 5.0 DLFC |
|          |     | 60421HW    | Seal & Spacer Kit, 9000 Lower                            |                  |     | 60385-0482 | Injector Drain, 9000, 9100, 0.50 BLFC #4 INJ, 5.0 DLFC |
|          |     | 60421-50   | Seal & Spacer Kit, 9000/9100 Lower, 559PE                |                  |     | 60385-0133 | Injector Drain, 9000, 9100, 1.0 BLFC #1 INJ, 2.0 DLFC  |
| 54       |     | 60350      | Brine Valve Assy, 9000, 9100                             |                  |     | 60385-0143 | Injector Drain, 9000, 9100, 1.0 BLFC #1 INJ, 2.4 DLFC  |
|          |     | 60350-01   | Brine Valve Assy, 9000, 560CD, Hot Water                 |                  |     | 60385-0163 | Injector Drain, 9000, 9100, 1.0 BLFC #1 INJ, 3.5 DLFC  |
| 55       |     | 60385-0011 | Injector Drain, 9000, 9100, 0.25 BLFC #0 INJ, 1.2 DLFC   |                  |     | 60385-0233 | Injector Drain, 9000, 9100, 1.0 BLFC #2 INJ, 2.0 DLFC  |
|          |     | 60385-0111 | Injector Drain, 9000, 9100, 0.25 BLFC #1 INJ, 1.2 DLFC   |                  |     | 60385-0243 | Injector Drain, 9000, 9100, 1.0 BLFC #2 INJ, 2.4 DLFC  |
|          |     | 60385-0121 | Injector Drain, 9000, 9100, 0.25 BLFC #1 INJ, 1.5 DLFC   |                  |     | 60385-0253 | Injector Drain, 9000, 9100, 1.0 BLFC #2 INJ, 3.0 DLFC  |
|          |     | 60385-0131 | Injector Drain, 9000, 9100, 0.25 BLFC #1 INJ, 2.0 DLFC   |                  |     | 60385-0263 | Injector Drain, 9000, 9100, 1.0 BLFC #2 INJ, 3.5 DLFC  |
|          |     | 60385-0141 | Injector Drain, 9000, 9100, 0.25 BLFC #1 INJ, 2.4 DLFC   |                  |     | 60385-0273 | Injector Drain, 9000, 9100, 1.0 BLFC #2 INJ, 4.0 DLFC  |
|          |     | 60385-0012 | Injector Drain, 9000, 9100, 0.50 BLFC #0 INJ, 1.2 DLFC   |                  |     | 60385-0353 | Injector Drain, 9000, 9100, 1.0 BLFC #3 INJ, 3.0 DLFC  |
|          |     | 60385-0112 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 1.2 DLFC   |                  |     | 60385-0373 | Injector Drain, 9000, 9100, 1.0 BLFC #3 INJ, 4.0 DLFC  |
|          |     | 60385-0122 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 1.5 DLFC   |                  |     | 60385-0383 | Injector Drain, 9000, 9100, 1.0 BLFC #3 INJ, 5.0 DLFC  |
|          |     | 60385-0132 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 2.0 DLFC   |                  |     | 60385-0393 | Injector Drain, 9000, 9100, 1.0 BLFC #3 INJ, 7.0 DLFC  |
|          |     | 60385-0142 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 2.4 DLFC   | 56               |     | 60022-12   | BLFC, 0.125 GPM, 5000/5600/9000/9100                   |
|          |     | 60385-0182 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 5.0 DLFC   |                  |     | 60022-25   | BLFC, 0.25 GPM, 5000/5600/9000/9100                    |
|          |     | 60385-0222 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 1.5 DLFC   |                  |     | 60022-50   | BLFC, 0.50 GPM, 5000/5600/9000/9100                    |
|          |     | 60385-0242 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 2.4 DLFC   |                  |     | 60022-100  | BLFC, 1.0 GPM, 5000/5600/9000/9100                     |
|          |     | 60385-0252 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 3.0 DLFC   | <b>Not Shown</b> |     |            |  |
|          |     | 60385-0262 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 3.5 DLFC   | 1                |     | 12128      | Label, 0.25 GPM BLFC                                   |
|          |     | 60385-0272 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 4.0 DLFC   | 1                |     | 13333      | Label, Injector  |
|          |     | 60385-0282 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 5.0 DLFC   | 1                |     | 10760      | Label, 1 GPM, 3 lbs salt/min                           |
|          |     | 60385-02A2 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 6.0 DLFC   |                  |     | 10759      | Label, 0.5 GPM, 1.5 lbs Salt                           |
|          |     | 60385-0202 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, Blank DLFC |                  |     | 19654      | Label, 0.125 GPM Brine Refill Flow                     |
|          |     | 60385-0372 | Injector Drain, 9000, 9100, 0.50 BLFC #3 INJ, 4.0 DLFC   |                  |     |            |  |

# 9100 CONTROL VALVE ASSEMBLY



BR61500-9100 Rev E

| Item No. | QTY | Part No. | Description                        |
|----------|-----|----------|------------------------------------|
| 1        | 1   | 40688    | Valve Body Assy, 9100              |
| 2        | 16  | 13242-02 | Seal, 5600,9000, 9100              |
| 3        | 12  | 14241    | Spacer, 5600,9000, 9100            |
| 4        | 1   | 16595    | Spacer, 9000, 9100                 |
| 5        | 1   | 43458    | End Cap, Plastic, 9000/9100        |
| 6        | 1   | 40952    | O-ring, -030                       |
| 7        | 4   | 15331    | Screw, Hex Washer Head             |
| 8        | 1   | 14914    | Piston, 9000, 9100 Upper           |
| 9        | 2   | 14309    | Retainer, Piston Rod               |
| 10       | 1   | 14919    | Piston, Rod, Upper                 |
| 11       | 2   | 13243    | Plug, End, 5600, 9000, 9100        |
| 12       | 2   | 13008    | Retainer, End Plug Seal            |
| 13       | 2   | 10209    | Quad Ring, -010                    |
| 14       | 1   | 14921    | Link, Piston Rod                   |
| 15       | 2   | 11335    | Screw, #4-40                       |
| 16       | 2   | 17020    | Screw, STL. Hex Washer, 6-20 x 3/8 |

| Item No. | QTY | Part No.  | Description                    |
|----------|-----|-----------|--------------------------------|
| 17       | 2   | 13363     | Washer, Hague Drive            |
| 18       | 1   | 14905     | Piston, 9000, 9100 Lower       |
| 19       | 1   | 14920     | Rod, Piston, Lower, 9000, 9100 |
| 20       | 1   | 15019     | Link, Piston, Rod, 9000/9500   |
| 21       | 1   | 41500     | O-ring, 9100 Drain             |
| 22       | 1   | 15215     | Body, Injector, 9000, 9100     |
| 23       | 2   | 13301     | O-ring, -011                   |
| 24       | 1   | 10227     | Screen, Injector               |
| 25       | 1   | 10913-000 | Nozzle, Injector, #000, Brown  |
|          |     | 10913-00  | Nozzle, Injector, #00, Violet  |
|          |     | 10913-0   | Nozzle, Injector, #0, Red      |
|          |     | 10913-1   | Nozzle, Injector, #1, White    |
|          |     | 10913-2   | Nozzle, Injector, #2, Blue     |
|          |     | 10913-3   | Nozzle, Injector, #3, Yellow   |
|          |     | 10913-4   | Nozzle, Injector, #4, Green    |

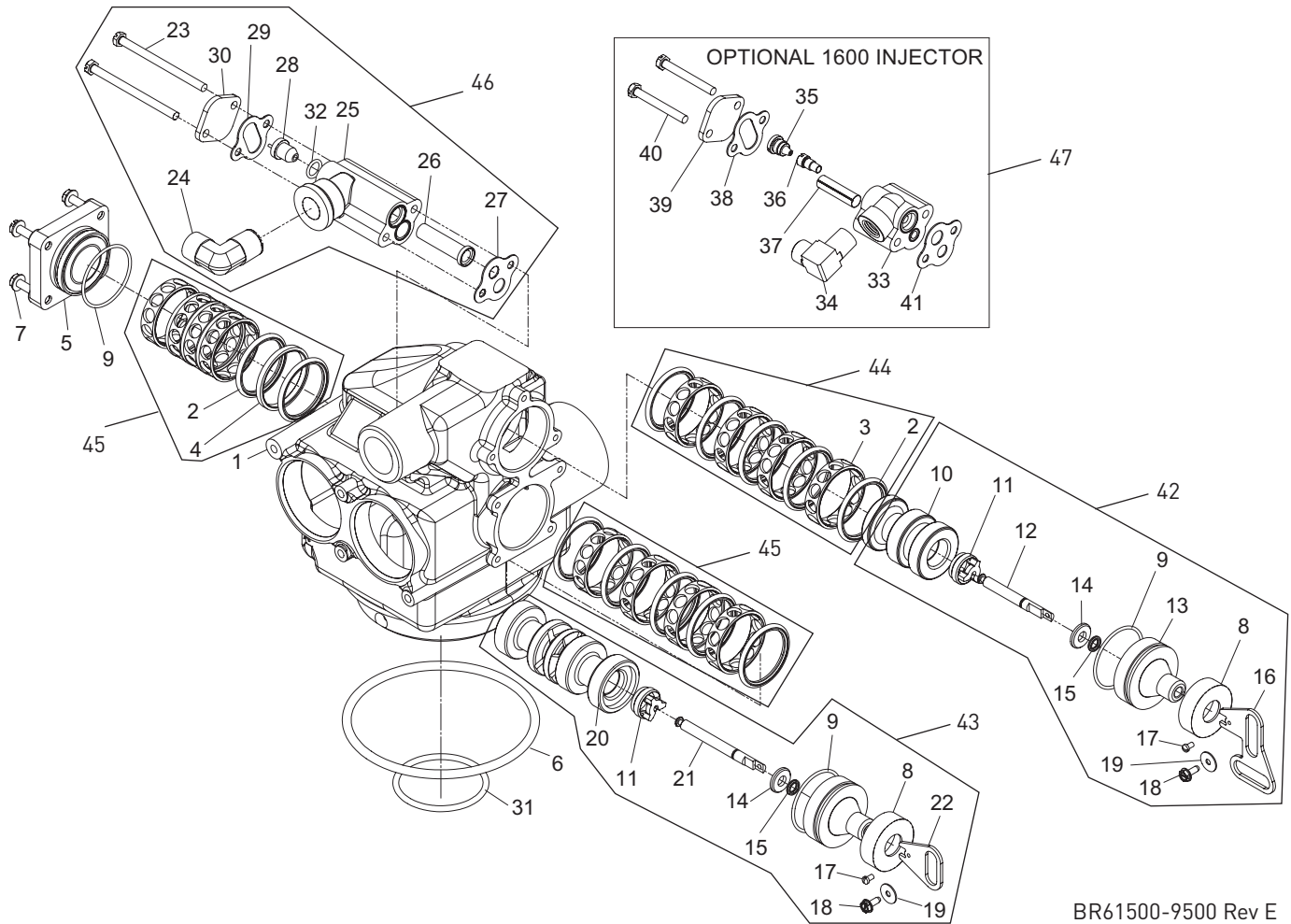
## 9100 CONTROL VALVE ASSEMBLY *CONTINUED*

| Item No. | QTY | Part No.  | Description                     | Item No. | QTY | Part No.   | Description  |
|----------|-----|-----------|---------------------------------|----------|-----|------------|--|
| 26       | 1   | 10914-000 | Throat, Injector, #000, Brown   | 47       | 1   | 13361      | Spacer, 4600, 9100                                     |
|          |     | 10914-00  | Throat, Injector, #00, Violet   | 48       | 1   | 40538      | Retainer, 32 mm, O-ring DIST, 7000                     |
|          |     | 10914-0   | Throat, Injector, #0, Red       | 49       | 1   | 61419      | Kit, 1.05-inch Distributor Adapter                     |
|          |     | 10914-1   | Throat, Injector, #1, White     | 50       |     | 60400      | Piston Assy, 9000, 9100 Upper                          |
|          |     | 10914-2   | Throat, Injector, #2, Blue      |          |     | 60400-001  | Piston Assy, 9000, 9100 Upper, 560CD                   |
|          |     | 10914-3   | Throat, Injector, #3, Yellow    | 51       |     | 60401      | Piston Assy, 9000, 9100 Lower                          |
|          |     | 10914-4   | Throat, Injector, #4, Green     |          |     | 60401-01   | Piston Assy, 9000 Lower, HW                            |
| 27       | 1   | 13166     | Cap, Injector, 5600, 9000, 9100 |          |     | 60401-001  | Piston Assy, 9000, 9100 Lower, 560CD                   |
| 28       | 1   | 13303     | O-ring, -021                    | 52       |     | 60125      | Seal & Spacer Kit, 5600/9000/9100 Upper                |
| 29       | 2   | 13387     | Screw, Hex Washer Head          |          |     | 60125-15   | Seal & Spacer Kit, 5600/9000/9100 Upper Blue Silicone  |
| 30       | 1   | 15348     | O-ring, -563                    | 53       |     | 60421      | Seal & Spacer Kit, 9000/9100 Lower                     |
| 31       | 1   | 13173     | Retainer, DLFC Button           |          |     | 60421-50   | Seal & Spacer Kit, 9000/9100 Lower, 559PE              |
| 32       | 1   | 19153     | Washer, Flow, 0.6 GPM           | 54       |     | 60350      | Brine Valve Assy, 9000, 9100                           |
|          |     | 19152     | Washer, Flow, 0.8 GPM           | 55       |     | 60385-0011 | Injector Drain, 9000, 9100, 0.25 BLFC #0 INJ, 1.2 DLFC |
|          |     | 12097     | Washer, Flow, 1.0 GPM           |          |     | 60385-0111 | Injector Drain, 9000, 9100, 0.25 BLFC #1 INJ, 1.2 DLFC |
|          |     | 12085     | Washer, Flow, 1.2 GPM           |          |     | 60385-0121 | Injector Drain, 9000, 9100, 0.25 BLFC #1 INJ, 1.5 DLFC |
|          |     | 19150     | Washer, Flow, 1.3 GPM           |          |     | 60385-0131 | Injector Drain, 9000, 9100, 0.25 BLFC #1 INJ, 2.0 DLFC |
|          |     | 12086     | Washer, Flow, 1.5 GPM           |          |     | 60385-0141 | Injector Drain, 9000, 9100, 0.25 BLFC #1 INJ, 2.4 DLFC |
|          |     | 19149     | Washer, Flow, 1.7 GPM           |          |     | 60385-0012 | Injector Drain, 9000, 9100, 0.50 BLFC #0 INJ, 1.2 DLFC |
|          |     | 12087     | Washer, Flow, 2.0 GPM           |          |     | 60385-0112 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 1.2 DLFC |
|          |     | 12088     | Washer, Flow, 2.4 GPM           |          |     | 60385-0122 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 1.5 DLFC |
|          |     | 12089     | Washer, Flow, 3.0 GPM           |          |     | 60385-0132 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 2.0 DLFC |
|          |     | 12090     | Washer, Flow, 3.5 GPM           |          |     | 60385-0142 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 2.4 DLFC |
|          |     | 12091     | Washer, Flow, 4.0 GPM           |          |     | 60385-0182 | Injector Drain, 9000, 9100, 0.50 BLFC #1 INJ, 5.0 DLFC |
|          |     | 19147     | Washer, Flow, 4.5 GPM           |          |     | 60385-0222 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 1.5 DLFC |
|          |     | 12092     | Washer, Flow, 5.0 GPM           |          |     | 60385-0242 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 2.4 DLFC |
|          |     | 17814     | Washer, Flow, 6.0 GPM           |          |     | 60385-0252 | Injector Drain, 9000, 9100, 0.50 BLFC #2 INJ, 3.0 DLFC |
|          |     | 12408     | Washer, Flow, 7.0 GPM           |          |     |            |  |
| 33       | 1   | 14925     | Brine Valve Stem, 9000, 9100    |          |     |            |  |
| 34       | 1   | 12626     | Seat, Brine Valve               |          |     |            |  |
| 35       | 1   | 13167     | Spacer, Brine Valve             |          |     |            |  |
| 36       | 1   | 13165     | Cap, Brine Valve                |          |     |            |  |
| 37       | 1   | 11973     | Spring, Brine Valve             |          |     |            |  |
| 38       | 1   | 11981-01  | Ring, Retaining, SS             |          |     |            |  |
| 39       | 1   | 16098     | Washer, Nylon Brine             |          |     |            |  |
| 40       | 1   | 12977     | O-ring, -015                    |          |     |            |  |
| 41       | 1   | 13245     | Retainer, BLFC                  |          |     |            |  |
| 42       | 1   | 17307     | Washer, Flow, 0.125 GPM         |          |     |            |  |
|          |     | 12094     | Washer, Flow, 0.25 GPM          |          |     |            |  |
|          |     | 12095     | Washer, Flow, 0.50 GPM          |          |     |            |  |
|          |     | 12097     | Washer, Flow, 1.0 GPM           |          |     |            |  |
| 43       | 1   | 12550     | Quad Ring, -009                 |          |     |            |  |
| 44       | 2   | 13302     | O-ring, -014                    |          |     |            |  |
| 45       | 1   | 13244     | Adapter, BLFC                   |          |     |            |  |
| 46       | 1   | 13497     | Air Dispenser, Injector         |          |     |            |  |

## 9100 CONTROL VALVE ASSEMBLY *CONTINUED*

| Item No. | QTY | Part No.         | Description   | Item No.         | QTY | Part No.         | Description  |
|----------|-----|------------------|---|------------------|-----|------------------|--|
|          |     | ..... 60385-0262 | .....Injector Drain, 9000, 9100,<br>0.50 BLFC #2 INJ, 3.5<br>DLFC   |                  |     | ..... 60385-0120 | .....Injector Drain, 9000, 9100,<br>Blank BLFC #1 INJ, 1.5<br>DLFC |
|          |     | ..... 60385-0272 | .....Injector Drain, 9000, 9100,<br>0.50 BLFC #2 INJ, 4.0<br>DLFC   | 56               |     | ..... 60022-12   | .....BLFC, 0.125 GPM,<br>5000/5600/9000/9100                       |
|          |     | ..... 60385-0282 | .....Injector Drain, 9000, 9100,<br>0.50 BLFC #2 INJ, 5.0<br>DLFC   |                  |     | ..... 60022-25   | .....BLFC, 0.25 GPM,<br>5000/5600/9000/9100                        |
|          |     | ..... 60385-02A2 | .....Injector Drain, 9000, 9100,<br>0.50 BLFC #2 INJ, 6.0<br>DLFC   |                  |     | ..... 60022-50   | .....BLFC, 0.50 GPM,<br>5000/5600/9000/9100                        |
|          |     | ..... 60385-0202 | .....Injector Drain, 9000, 9100,<br>0.50 BLFC #2 INJ, Blank<br>DLFC |                  |     | ..... 60022-100  | .....BLFC, 1.0 GPM,<br>5000/5600/9000/9100                         |
|          |     | ..... 60385-0372 | .....Injector Drain, 9000, 9100,<br>0.50 BLFC #3 INJ, 4.0<br>DLFC   | <b>Not Shown</b> |     |                  |  |
|          |     | ..... 60385-0382 | .....Injector Drain, 9000, 9100,<br>0.50 BLFC #3 INJ, 5.0<br>DLFC   | 1                |     | ..... 13333      | .....Label, Injector   |
|          |     | ..... 60385-0482 | .....Injector Drain, 9000, 9100,<br>0.50 BLFC #4 INJ, 5.0<br>DLFC   | 1                |     | ..... 10759      | .....Label, 0.5 GPM, 1.5 lbs salt/<br>min                          |
|          |     | ..... 60385-0133 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #1 INJ, 2.0 DLFC       |                  |     | ..... 18569      | .....Retainer, Tank Seal   |
|          |     | ..... 60385-0143 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #1 INJ, 2.4 DLFC       |                  |     | ..... 18303      | .....O-ring, -336, Top of Tank                                     |
|          |     | ..... 60385-0163 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #1 INJ, 3.5 DLFC       |                  |     | ..... 12128      | .....Label, 0.25 GPM BLFC  |
|          |     | ..... 60385-0233 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #2 INJ, 2.0 DLFC       |                  |     | ..... 10760      | .....Label 1 GPM, 3 lbs Salt                                       |
|          |     | ..... 60385-0243 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #2 INJ, 2.4 DLFC       |                  |     | ..... 19654      | .....Label, 0.125 GPM Brine Refill<br>Flow                         |
|          |     | ..... 60385-0253 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #2 INJ, 3.0 DLFC       |                  |     |                  |  |
|          |     | ..... 60385-0263 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #2 INJ, 3.5 DLFC       |                  |     |                  |  |
|          |     | ..... 60385-0273 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #2 INJ, 4.0 DLFC       |                  |     |                  |  |
|          |     | ..... 60385-0353 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #3 INJ, 3.0 DLFC       |                  |     |                  |  |
|          |     | ..... 60385-0373 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #3 INJ, 4.0 DLFC       |                  |     |                  |  |
|          |     | ..... 60385-0383 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #3 INJ, 5.0 DLFC       |                  |     |                  |  |
|          |     | ..... 60385-0393 | .....Injector Drain, 9000, 9100,<br>1.0 BLFC #3 INJ, 7.0 DLFC       |                  |     |                  |  |

# 9500 CONTROL VALVE ASSEMBLY



BR61500-9500 Rev E

| Item No. | QTY | Part No. | Description                         | Item No. | QTY | Part No.  | Description                          |
|----------|-----|----------|-------------------------------------|----------|-----|-----------|--------------------------------------|
| 1        | 1   | 16919-01 | Valve Body, 9500, Machining         | 16       | 1   | 14921     | Link, Piston Rod                     |
| 2        | 16  | 16101    | Seal, 2850, 4500                    | 17       | 2   | 11335     | Screw, #4-40                         |
|          |     | 41113    | Seal, 2850, 559PE                   | 18       | 2   | 17020     | Screw, STL. Hex Washer, 6-20 x 3/8   |
| 3        | 12  | 16638    | Spacer, 9500/2850, Cold & Hot Water | 19       | 2   | 13363     | Washer, Plain, .145 ID S.S.          |
|          |     | 16638-02 | Spacer, 9500/2850, MS1050, Plastic  | 20       | 1   | 17111     | Piston, 9500, Lower                  |
| 4        | 1   | 17092    | Spacer, Disc, 9500                  | 21       | 1   | 16956     | Rod, Piston, Lower, 9500             |
| 5        | 1   | 43458-01 | End Cap, Plastic, 9500              | 22       | 1   | 15019     | Link, Piston Rod, 9000/9500, 9100    |
| 6        | 1   | 16455    | O-ring, -347                        | 23       | 2   | 14804     | Screw, Slotted Hex Head              |
| 7        | 4   | 15331    | Screw, Hex Washer Head              | 24       | 1   | 15413     | Fitting, Elbow, Male, 1/2 TX 3/8 NPT |
| 8        | 2   | 17558    | Disc, Spacer, End Plug              | 25       | 1   | 17777-03  | Body, Injector, 1700                 |
| 9        | 3   | 16394    | O-ring, -029                        | 26       | 1   | 14802-03C | Throat, Injector, #3C, Yellow        |
| 10       | 1   | 17110    | Piston, 9500, Upper                 |          |     | 14802-04C | Throat, Injector, #4C, Green         |
| 11       | 2   | 14309    | Retainer, Piston Rod                |          |     | 14802-05C | Throat Injector, #5C, White          |
| 12       | 1   | 16957    | Rod, Piston, 9500                   |          |     | 14802-06C | Throat Injector, #6C, Red            |
| 13       | 2   | 16954    | Plug, End, 9500                     | 27       | 1   | 14805     | Gasket, Injector Body                |
| 14       | 2   | 13008    | Retainer, End Plug Seal             | 28       | 1   | 14801-03C | Nozzle, Injector, 3C, Yellow         |
| 15       | 2   | 10209    | Quad Ring, -010                     |          |     |           |                                      |



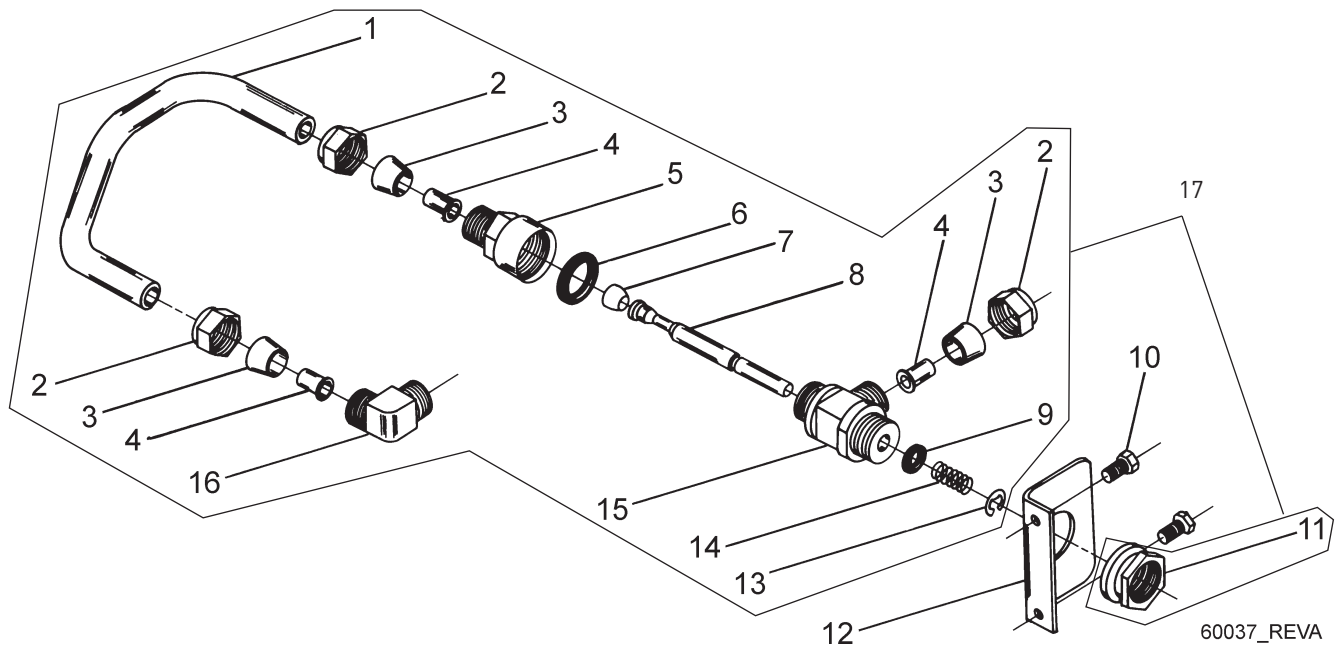
## 9500 CONTROL VALVE ASSEMBLY *CONTINUED*

| Item No.                                    | QTY | Part No.  | Description   | Item No.  | QTY | Part No. | Description                                 |
|---|-----|-----------|---|-----------|-----|----------|---|
|   |     | 14801-04C | Nozzle, Injector, 4C, Green   |           |     |          | Plastic                                     |
|   |     | 14801-05C | Nozzle, Injector, 5C, White   | 60480-03  |     |          | Injector Assy, 1600, #3, Plastic            |
|   |     | 14801-06C | Nozzle, Injector, 6C, Red   | 60480-04  |     |          | Injector Assy, 1600, #4, Plastic            |
| 29  | 1   | 10229     | Gasket, Injector Body   | 60481-21  |     |          | Injector Assy, 1600, #1, S.S. Brass, HW     |
| 30  | 1   | 11893     | Cap, Injector   | 60481-22  |     |          | Injector Assy, 1600, #2, S.S. Brass, HW     |
| 31  | 1   | 13577     | O-ring, -226  | 60481-23  |     |          | Injector Assy, 1600, #3, S.S. Brass, HW     |
| 32  | 1   | 13771     | O-ring, -012  | 60080-11  |     |          | Injector Assy, 1600, #1, PVC                |
| <b>Optional (1600) Injector Part Number</b> |     |           |   | 60080-12  |     |          | Injector Assy, 1600, #2, PVC                |
| 33  |     | 17776     | Body, Injector, 1600  | 60080-14  |     |          | Injector Assy, 1600, #4, PVC                |
| 34  |     | 10328     | Fitting, Elbow, 90 Deg.   | Not Shown |     |          |   |
| 35  |     | 10913-1   | Nozzle, Injector, #1, Natural   | 60366-00  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, No Button |
| 36  |     | 10914     | Throat, Injector  | 60366-06  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 0.6 GPM   |
| 37  |     | 10227     | Screen, Injector  | 60366-08  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 0.8 GPM   |
| 38  |     | 10229     | Gasket, Injector Body   | 60366-10  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 1.0 GPM   |
| 39  |     | 11893     | Cap, Injector   | 60366-12  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 1.2 GPM   |
| 40  |     | 10692     | Screw, Slot, Indented Hex Head  | 60366-13  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 1.3 GPM   |
| 41  |     | 14805     | Gasket, Injector Body   | 60366-15  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 1.5 GPM   |
| 42  |     | 60108     | Piston Assy, 9500, Upper  | 60366-17  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 1.7 GPM   |
|   |     | 60108-01  | Piston Assy, 9500, Upper, HW  | 60366-20  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 2.0 GPM   |
|   |     | 60108-02  | Piston Assy, 9500, Upper, 560CD   | 60366-24  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 2.4 GPM   |
| 43  |     | 60109     | Piston Assy, 9500, Lower  | 60366-30  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 3.0 GPM   |
|   |     | 60109-01  | Piston Assy, 9500, HW, Lower  | 60366-35  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 3.5 GPM   |
|   |     | 60109-02  | Piston Assy, 9500, Lower, 560CD   | 60366-40  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 4.0 GPM   |
| 44  |     | 60134     | Seal & Spacer Kit, 9500, Upper, Hot & Cold                                | 60366-45  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 4.5 GPM   |
|   |     | 60134-20  | Seal & Spacer Kit, 9500, Upper, Plastic Spacers                           | 60366-50  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 5.0 GPM   |
|   |     | 60134-30  | Seal & Spacer Kit, 9500, Upper, Plastic Spacers, Chemical Resistent Seals | 60366-60  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 6.0 GPM   |
| 45  |     | 60133-01  | Seal & Spacer Kit, 9500, Lower, Hot & Cold                                | 60366-70  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, 7.0 GPM   |
|   |     | 60133-20  | Seal & Spacer Kit, 9500, Lower, Plastic Spacers                           | 60708-00  |     |          | DLFC, 1 inch F x 3/4 inch F, NPT, No Button |
|   |     | 60133-30  | Seal & Spacer Kit, 9500, Upper, Plastic Spacers, Chemical Resistent Seals | 60708-8.0 |     |          | DLFC, 1 inch F x 3/4 inch F,                |
| 46  |     | 60381-03  | Injector Assy, 1700, #3C  |           |     |          |   |
|   |     | 60381-04  | Injector Assy, 1700, #4C  |           |     |          |   |
|   |     | 60381-05  | Injector Assy, 1700, #5C  |           |     |          |   |
|   |     | 60381-06  | Injector Assy, 1700, #6C  |           |     |          |   |
| 47  |     | 60480-00  | Injector Assy, 1600, #0, Plastic  |           |     |          |   |
|   |     | 60480-01  | Injector Assy, 1600, #1, Plastic  |           |     |          |   |
|   |     | 60480-02  | Injector Assy, 1600, #2,  |           |     |          |   |

## 9500 CONTROL VALVE ASSEMBLY *CONTINUED*

| Item No. | QTY | Part No.  | Description                                   | Item No. | QTY | Part No.  | Description   |
|----------|-----|-----------|---|----------|-----|-----------|---|
|          |     |           | NPT, 8.0 GPM                                  |          |     |           | NPTF, 4.5 GPM                                       |
| .....    |     | 60708-9.0 | DLFC, 1 inch F x 3/4 inch F,<br>NPT, 9.0 GPM  | .....    |     | 60721-50  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 5.0 GPM         |
| .....    |     | 60708-10  | DLFC, 1 inch F x 3/4 inch F,<br>NPT, 10.0 GPM | .....    |     | 60721-60  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 6.0 GPM         |
| .....    |     | 60708-12  | DLFC, 1 inch F x 3/4 inch F,<br>NPT, 12.0 GPM | .....    |     | 60721-70  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 7.0 GPM         |
| .....    |     | 60708-15  | DLFC, 1 inch F x 3/4 inch F,<br>NPT, 15.0 GPM | .....    |     | 60702-00  | DLFC, 1 inch M x 1 inch F,<br>NPT, Brass, No Button |
| .....    |     | 60721-00  | DLFC, 1 inch F x 1 inch F,<br>NPT, No Button  | .....    |     | 60702-8.0 | DLFC, 1 inch M x 1 inch F,<br>NPT, 8.0 GPM          |
| .....    |     | 60721-06  | DLFC, 1 inch F x 1 inch F,<br>NPT, 0.06 GPM   | .....    |     | 60702-9.0 | DLFC, 1 inch M x 1 inch F,<br>NPT, 9.0 GPM          |
| .....    |     | 60721-08  | DLFC, 1 inch F x 1 inch F,<br>NPT, 0.08 GPM   | .....    |     | 60702-10  | DLFC, 1 inch M x 1 inch F,<br>NPT, 10 GPM           |
| .....    |     | 60721-10  | DLFC, 1 inch F x 1 inch F,<br>NPT, 1.0 GPM    | .....    |     | 60702-12  | DLFC, 1 inch M x 1 inch F,<br>NPT, 12 GPM           |
| .....    |     | 60721-12  | DLFC, 1 inch F x 1 inch F,<br>NPT, 1.2 GPM    | .....    |     | 60702-15  | DLFC, 1 inch M x 1 inch F,<br>NPT, 15 GPM           |
| .....    |     | 60721-13  | DLFC, 1 inch F x 1 inch F,<br>NPT, 1.3 GPM    |          |     |           |   |
| .....    |     | 60721-15  | DLFC, 1 inch F x 1 inch F,<br>NPT, 1.5 GPM    |          |     |           |   |
| .....    |     | 60721-00  | DLFC, 1 inch F x 1 inch F,<br>NPTF, No Button |          |     |           |   |
| .....    |     | 60721-17  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 1.7 GPM   |          |     |           |   |
| .....    |     | 60721-20  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 2.0 GPM   |          |     |           |   |
| .....    |     | 60721-24  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 2.4 GPM   |          |     |           |   |
| .....    |     | 60721-30  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 3.0 GPM   |          |     |           |   |
| .....    |     | 60721-35  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 3.5 GPM   |          |     |           |   |
| .....    |     | 60721-40  | DLFC, 1 inch F x 1 inch F,<br>NPTF, 4.0 GPM   |          |     |           |   |
| .....    |     | 60721-45  | DLFC, 1 inch F x 1 inch F,                    |          |     |           |   |

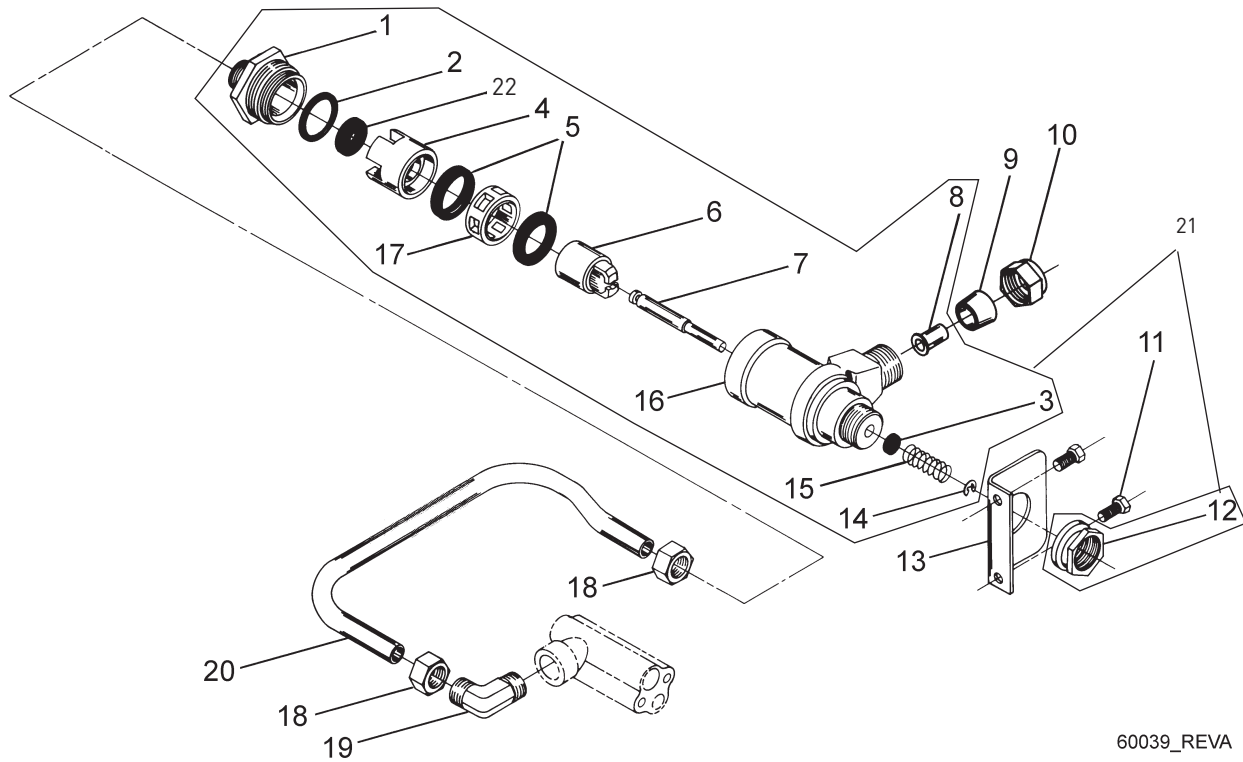
## 1600 BRINE VALVE SYSTEM (FOR 9500)



60037\_REVA

| Item No. | QTY | Part No.  | Description                              |
|----------|-----|-----------|--|
| 1        | 1   | 16960     | Tube, Brine Valve                        |
|          | 1   | 16960     | Tube, Brine Valve, HW                    |
| 2        | 1   | 10329     | Fitting, Tube, 3/8 Nut, Brass            |
|          |     | 18698     | Nut, 3/8-inch Tube, W/<br>Sleeve, HW     |
| 3        | 1   | 10330     | Fitting, Sleeve, 3/8 Celcon              |
| 4        | 1   | 10332     | Fitting, Insert, 3/8                     |
| 5        | 1   | 12747     | Fitting, Flow Control                    |
|          |     | 60020-25  | BLFC, 0.25 GPM, 1600                     |
|          |     | 60020-50  | BLFC, 0.50 GPM, 1600                     |
|          |     | 60020-100 | BLFC, 1.0 GPM, 1600                      |
| 6        | 1   | 12550-01  | Quad Ring, -009, 560CD                   |
| 7        | 1   | 12626-01  | Seat, Brine Valve, 560CD                 |
| 8        | 1   | 16958     | Brine Valve Stem, 1600<br>Coated         |
| 9        | 1   | 11982-01  | O-ring, -016, 560CD                      |
| 10       | 3   | 15137     | Screw, Hex Washer Mach,<br>10-24 x 3/8   |
| 11       | 3   | 10269     | Nut, Jam, 3/84 - 16                      |
| 12       | 3   | 16922     | Bracket, Brine Valve<br>Mounting         |
| 13       | 1   | 10250     | Ring, Retaining                          |
| 14       | 1   | 10249     | Spring, Brine Valve                      |
| 15       | 1   | 12748-01  | Brine Valve Body, 1600                   |
| 16       | 2   | 10328     | Fitting, Elbow, 90 Deg.                  |
| 17       |     | 60037-610 | Brine Valve Assy. 9500/1600<br>0.25 GPM  |
|          |     | 60037-620 | Brine Valve Assy. 9500/1600<br>0.50 GPM  |
|          |     | 60037-630 | Brine Valve Assy. 9500/1600<br>1.0 GPM   |
|          |     | 60037HW   | Brine Valve Assy. 9500/1600<br>Hot Water |

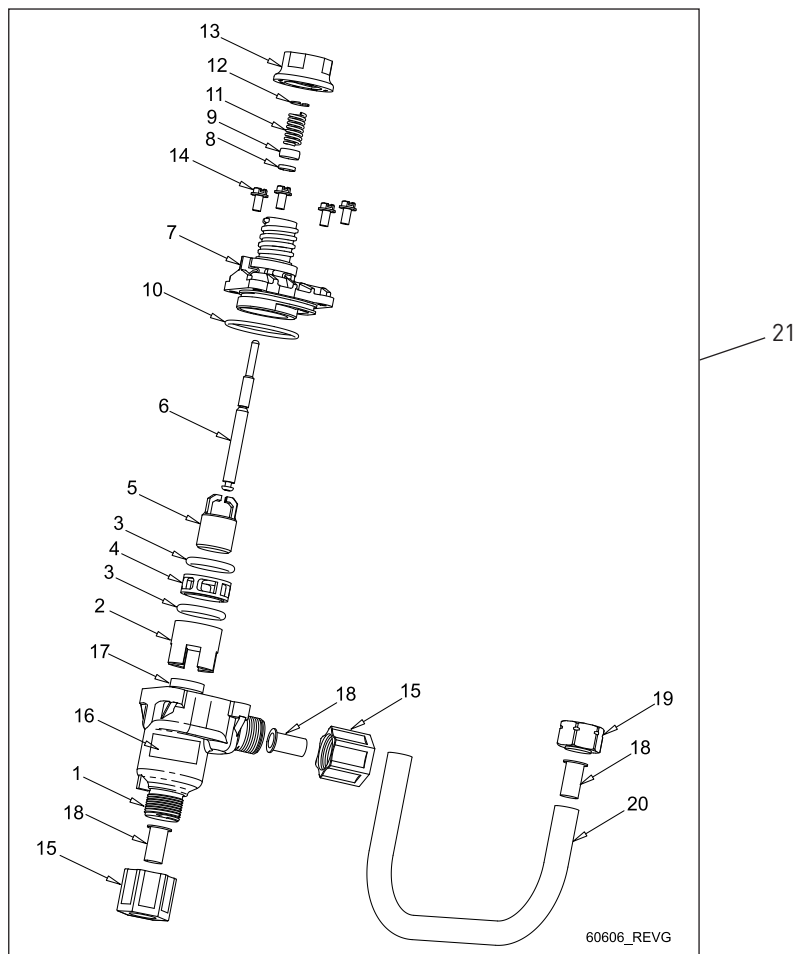
# 1700 BRINE VALVE SYSTEM (FOR 9500)



60039\_REVA

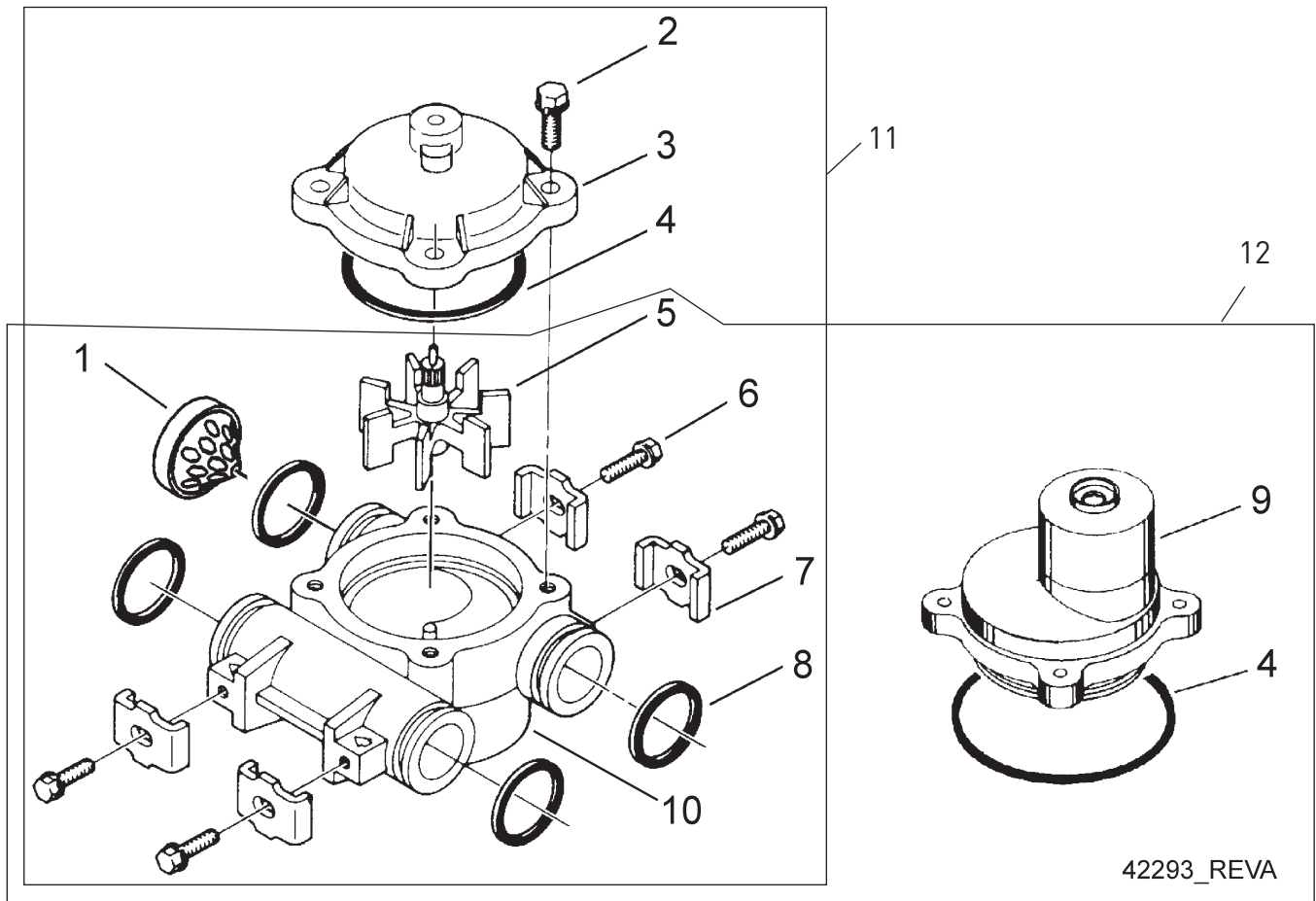
| Item No. | QTY | Part No. | Description                                     | Item No. | QTY | Part No. | Description                            |
|----------|-----|----------|---|----------|-----|----------|--|
| 1        | 1   | 14792    | Plug, End, Brine Valve                          | 21       | 1   | 60039-10 | Brine Valve Assy. 9500/1700<br>1.0 GPM |
| 2        | 1   | 13201    | Quad Ring, -020                                 |          |     | 60039-12 | Brine Valve Assy. 9500/1700<br>1.2 GPM |
|          |     | 13201-01 | Quad Ring, -20, 560CD                           |          |     | 60039-15 | Brine Valve Assy. 9500/1700<br>1.5 GPM |
| 3        | 1   | 12550    | Quad Ring, -009                                 |          |     | 60039-20 | Brine Valve Assy. 9500/1700<br>2.0 GPM |
|          |     | 12550-01 | Quad Ring, -009, 560CD                          |          |     | 60039-24 | Brine Valve Assy. 9500/1700<br>2.4 GPM |
| 4        | 1   | 14785-01 | Retainer, Flow Control                          |          |     | 60039-30 | Brine Valve Assy. 9500/1700<br>3.0 GPM |
| 5        | 2   | 14811    | O-ring, -210, 560CD, Brine                      |          |     | 60039-50 | Brine Valve Assy. 9500/1700<br>5.0 GPM |
| 6        | 1   | 14795    | Piston, Brine Valve                             |          |     | 60039-00 | Brine Valve Assy. 9500/1700<br>Blank   |
| 7        | 1   | 16929    | Brine Valve Stem, Coated                        | 22       | 1   | 12097    | Washer, Flow, 1.0 GPM                  |
| 8        | 1   | 15415    | Fitting, Insert, 1/2-inch Tube                  |          |     | 12085    | Washer, Flow, 1.2 GPM                  |
| 9        | 1   | 16124    | Fitting, Sleeve, Delrin                         |          |     | 19150    | Washer, Flow, 1.3 GPM                  |
| 10       | 1   | 16123    | Nut, Brass                                      |          |     | 12086    | Washer, Flow, 1.5 GPM                  |
| 11       | 1   | 15137    | Screw, Hex Washer Mach,<br>10-24 x 3/8          |          |     | 19149    | Washer, Flow, 1.7 GPM                  |
| 12       | 1   | 10269    | Nut, Jam, 3/4 - 16                              |          |     | 12087    | Washer, Flow, 2.0 GPM                  |
| 13       | 1   | 16922    | Bracket, Brine Valve<br>Mounting                |          |     | 12088    | Washer, Flow, 2.4 GPM                  |
| 14       | 2   | 10250    | Ring, Retaining                                 |          |     | 12089    | Washer, Flow, 3.0 GPM                  |
| 15       | 1   | 15310    | Spring, Brine Valve                             |          |     | 12090    | Washer, Flow, 3.5 GPM                  |
| 16       | 2   | 14790    | Brine Valve Body                                |          |     | 12091    | Washer, Flow, 4.0 GPM                  |
| 17       | 1   | 14798    | Spacer, 1700, Brine                             |          |     | 19147    | Washer, Flow, 4.5 GPM                  |
| 18       | 1   | 15414    | Nut, 2900, w/Sleeve                             |          |     | 12092    | Washer, Flow, 5.0 GPM                  |
| 19       | 1   | 15413    | Fitting, Elbow, Male, 1/2T x<br>3/8 NPT         |          |     | 17814    | Washer, Flow, 6.0 GPM                  |
| 20       | 1   | 16959    | Tube, Brine 9500/1710, 10.6<br>inches           |          |     | 12408    | Washer, Flow, 7.0 GPM                  |
|          |     | 16959-01 | Tube, Brine Valve 9500/1710,<br>CPVC, Hot Water |          |     |          |  |

# 1710 BRINE VALVE SYSTEM (FOR 9500)



| Item No. | QTY | Part No. | Description                          | Item No. | QTY | Part No. | Description                         |
|----------|-----|----------|--------------------------------------|----------|-----|----------|-------------------------------------|
| 1        | 1   | 41202    | Brine Valve, 1700, Plastic, Top      | 17       | 1   |          | Washer, Flow (Specify GPM)          |
| 2        | 1   | 14785-01 | Retainer, Flow Control               | 18       | 3   | 15415    | Fitting, Insert, 1/2-inch, Tube     |
| 3        | 2   | 14811    | O-ring, -210, 560CD, Brine           | 19       | 1   | 15414    | Nut, 2900, w/Sleeve                 |
| 4        | 1   | 14798    | Spacer, 1700, Brine                  | 20       | 1   | 16959    | Tube, Brine 9500/1700, 10.6 inches  |
| 5        | 1   | 14795    | Piston, Brine Valve                  | 21       |     | 60606-10 | Brine Valve Assy. 9500/1710 1.0 GPM |
| 6        | 1   | 41429    | Stem, Brine, 1710, Plastic, 9500     |          |     | 60606-12 | Brine Valve Assy. 9500/1710 1.2 GPM |
| 7        | 1   | 41201    | Brine Valve, 1700, Plastic, Bottom   |          |     | 60606-15 | Brine Valve Assy. 9500/1710 1.5 GPM |
| 8        | 1   | 12550    | Ring, Quad, -009                     |          |     | 60606-20 | Brine Valve Assy. 9500/1710 2.0 GPM |
| 9        | 1   | 17908    | Sleeve, Brine Valve Stem             |          |     | 60606-24 | Brine Valve Assy. 9500/1710 2.4 GPM |
| 10       | 1   | 41547    | O-ring, 2mm x 35mm                   |          |     | 60606-30 | Brine Valve Assy. 9500/1710 3.0 GPM |
| 11       | 1   | 15310    | Spring, Brine Valve                  |          |     | 60606-40 | Brine Valve Assy. 9500/1710 4.0 GPM |
| 12       | 1   | 10250    | Ring, Retaining                      |          |     | 60606-50 | Brine Valve Assy. 9500/1710 5.0 GPM |
| 13       | 1   | 17906-01 | Guide, Brine Valve Stem              |          |     | 60606-00 | Brine Valve Assy. 9500/1710 Blank   |
| 14       | 4   | 14202-01 | Screw, Hex Washer, Mach, 8-32 x 5/16 |          |     |          |                                     |
| 15       | 2   | 41056    | Nut Assy, 1/2-inch Plastic           |          |     |          |                                     |
| 16       | 1   | 41493-XX | Label, BLFC, 1710 (Specify GPM)      |          |     |          |                                     |

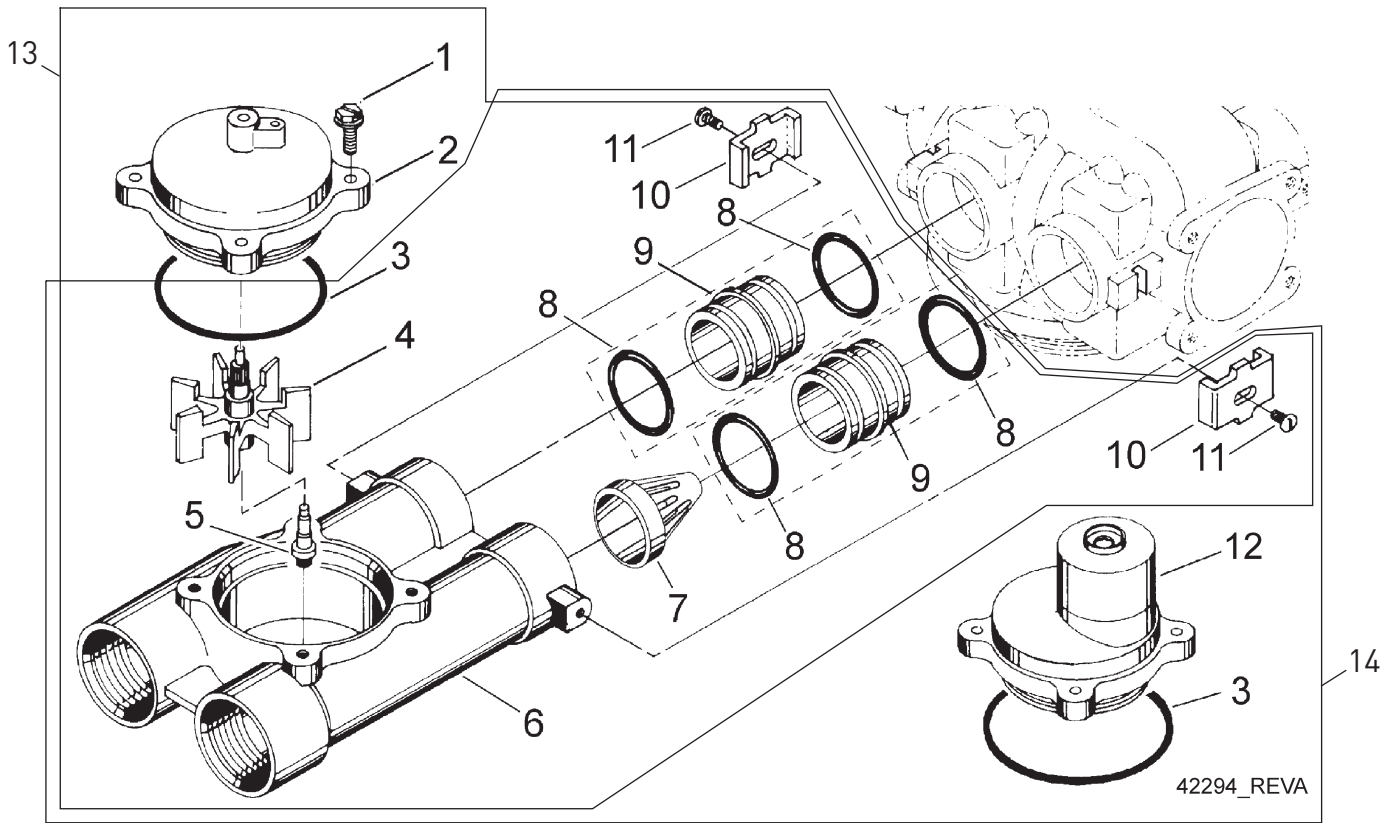
## 3/4-INCH METER ASSEMBLY



42293\_REVA

| Item No. | QTY | Part No. | Description  |
|----------|-----|----------|--|
| 1        | 1   | 14613    | Flow Straightener  |
| 2        | 4   | 12473    | Screw, Hex Washer,<br>10-24 x 5/8  |
| 3        | 1   | 14038    | Meter Cap Assy, STD, Plastic   |
| 4        | 1   | 13847    | O-ring, -137, Std/560CD,<br>Meter  |
| 5        | 1   | 13509    | Impeller, Meter  |
| 6        | 4   | 13314    | Screw, Slot Ind Hex,<br>8-18 x .60   |
| 7        | 4   | 13255    | Clip, Mounting   |
| 8        | 4   | 13305    | O-ring, -119   |
| 9        | 1   | 15150    | Meter Cap Assy, EXT, Plastic<br>Paddle   |
| 10       | 1   | 13821    | Body, Meter, 5600  |
| 11       | 1   | 60086    | Meter Assy, 3/4-inch Dual<br>Port, Slip, STD, Plastic,<br>Paddlewheel, w/Clips |
| 12       | 1   | 60087    | Meter Assy, 3/4-inch Dual<br>Port, Slip, EXT, Plastic,<br>Paddlewheel, w/Clips |

# 1-INCH METER ASSEMBLY

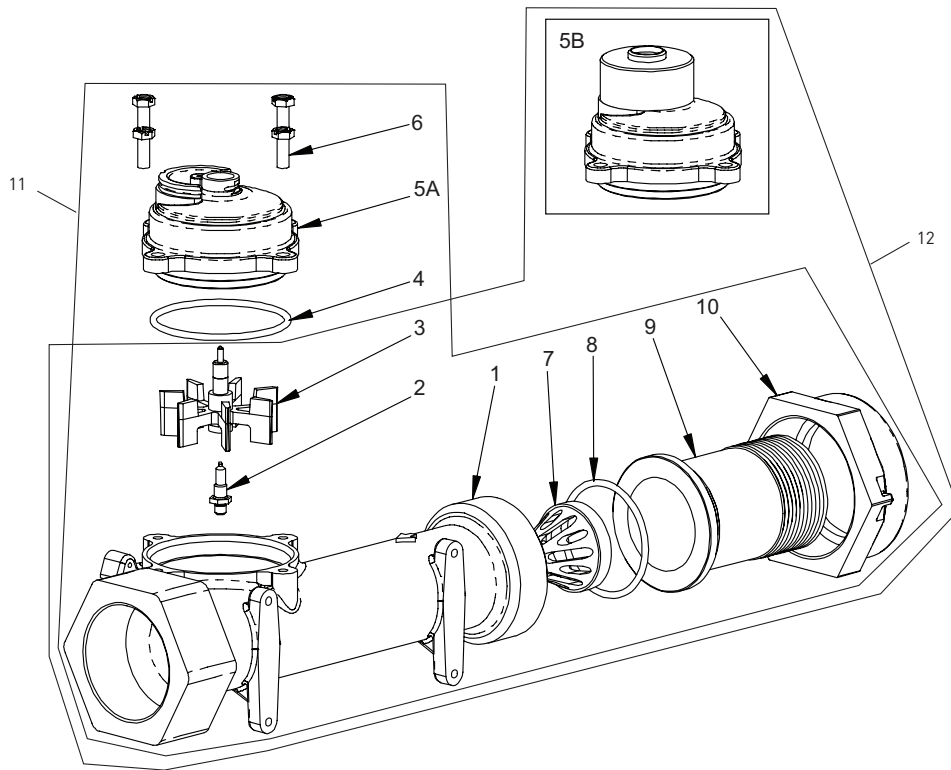


## 1-INCH METER ASSEMBLY

| Item No. | QTY | Part No.  | Description   | Item No. | QTY         | Part No. | Description   |
|----------|-----|-----------|---|----------|-------------|----------|---|
| 1        | 4   | 12112     | Screw, Hex Hd Mach 10-24 x 1/2                                      | .....    | 60389-001NP | .....    | Meter Assy, 1-inch Dual Port, NPT, STD, BRS BDY, 560CD, PDL, W/CLPS |
| 2        | 1   | 15218     | Meter Cap Assy, Brass, Standard                                     | .....    | 60389NP     | .....    | Meter Assy, 1-inch Dual Port, NPT, STD, BRS BDY, NP, PDL, W/CLPS    |
|          |     | 14038     | Meter Cap Assy, Standard  | .....    | 60612       | .....    | Meter Assy, 1-inch Dual Port, NPT, STD, BRS, HW, PDL                |
| 3        | 1   | 13847     | O-ring, -137, STD/560CD, Meter                                      | .....    | 60612NP     | .....    | Meter Assy, 1-inch Dual Port, NPT, STD, BRS, HW, NP, PDL            |
| 4        | 1   | 13509     | Impeller, Meter   | .....    | 61575       | .....    | Meter Assy, 1-inch Dual Port, NPT, STD, BRS BDY, PDL, W/O CLP & SCW |
|          |     | 13509-01  | Impeller, Celcon  | .....    | 60389-20    | .....    | Meter Assy, 1-inch Dual Port, BSP/Metric, STD, BRS BDY, PDL, W/CLPS |
| 5        | 1   | 13882     | Post, Meter Impeller  | .....    | 60390-20    | .....    | Meter Assy, 1-inch Dual Port, BSP/Metric, EXT, BRS BDY, PDL, W/CLPS |
| 6        | 1   | 15043     | Body, Meter, 9000 1-inch  | .....    | 60632-20    | .....    | Meter Assy, 1-inch Dual Port, BSP/Metric, EXT, BRS, HW, PDL         |
| 7        | 1   | 14960     | Flow Straightener, 1-inch   | .....    | 60612-20    | .....    | Meter Assy, 1-inch Dual Port, BSP/Metric, STD, BRS, HW, PDL         |
| 8        | 4   | 13305     | O-ring, -119  |          |             |          |   |
| 9        | 2   | 15078     | Adapter, 1-inch Coupling  |          |             |          |   |
| 10       | 2   | 13255     | Clip, Mounting  |          |             |          |   |
| 11       | 2   | 14202-01  | Screw, Hex Washer Mach, 8-32 x 5/16                                 |          |             |          |   |
| 12       | 1   | 15150     | Meter Cap Assy, Ext, Plastic Paddle                                 |          |             |          |   |
|          |     | 15237     | Meter Cap Assy, Ext, Brass Paddle                                   |          |             |          |   |
| 13       |     | 60390     | Meter Assy, 1-inch Dual Port, NPT, EXT, BRS BDY, PDL, W/CLPS        |          |             |          |   |
|          |     | 60390-001 | Meter Assy, 1-inch Dual Port, NPT, EXT, BRS BDY, 560CD, PDL, W/CLPS |          |             |          |   |
|          |     | 60390NP   | Meter Assy, 1-inch Dual Port, NPT, EXT, BRS BDY, NP, PDL, W/CLPS    |          |             |          |   |
|          |     | 60632     | Meter Assy, 1-inch Dual Port, NPT, EXT, BRS, HW, PDL                |          |             |          |   |
|          |     | 60632NP   | Meter Assy, 1-inch Dual Port, NPT, EXT, BRS, HW, NP, PDL            |          |             |          |   |
|          |     | 60389     | Meter Assy, 1-inch Dual Port, NPT, STD, BRS BDY, PDL, W/CLPS        |          |             |          |   |
|          |     | 60389-001 | Meter Assy, 1-inch Dual Port, NPT, STD, BRS BDY, 560CD, PDL, W/CLPS |          |             |          |   |



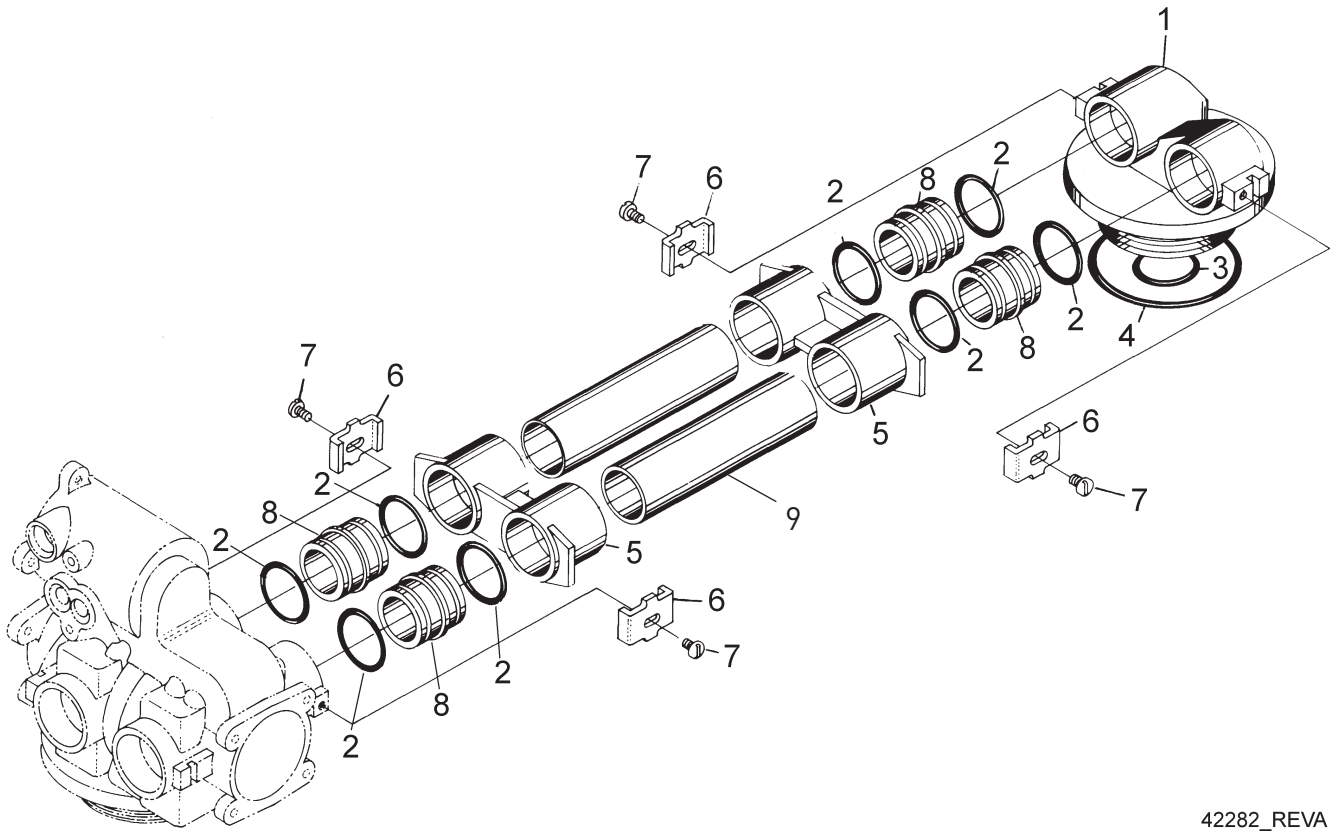
# 1-1/2 INCH METER ASSEMBLY



60610 Rev C

| Item No. | QTY | Part No. | Description  | Item No.         | QTY   | Part No. | Description                                 |
|----------|-----|----------|--|------------------|-------|----------|---|
| 1        | 1   | 17569    | Body, Meter, 2850/9500                               |                  |       |          | EXT, Brass, Paddlewheel                     |
| 2        | 1   | 13882    | Post, Meter Impeller                                 | <b>Not Shown</b> |       |          |   |
| 3        | 1   | 13509    | Impeller, Meter                                      | 1                | 17790 |          | Sleeve, Meter, 1-1/2 inch x 1 inch          |
|          | 1   | 13509-01 | Impeller, Celcon, Hot Water                          | 1                | 15218 |          | Meter Cap Assy, STD Range, Brass, Hot Water |
| 4        | 1   | 13847    | O-Ring, -137, Std/560CD, Meter                       | 1                | 15237 |          | Meter Cap Assy, EXT Range, Brass, Hot Water |
| 5A       | 1   | 14038    | Meter Cap Assy, STD Range, Plastic                   |                  |       |          | Sleeve, Meter, 1.5 inch x 1 inch            |
| 5B       | 1   | 15150    | Meter Cap Assy, Ext Range, Plastic                   |                  |       |          |   |
| 6        | 4   | 12112    | Screw, Hex Hd Mach, 10-24 x 1/2 18-8 Stainless Steel |                  |       |          |   |
| 7        | 1   | 17542    | Flow Straightener, 1-1/2 inches                      |                  |       |          |   |
| 8        | 1   | 12733    | O-Ring, -132   |                  |       |          |   |
| 9        | 1   | 17544    | Fitting, 1-1/2 inch Quick Connector                  |                  |       |          |   |
| 10       | 1   | 17543    | Nut, 1-1/2-inch, Q/C                                 |                  |       |          |   |
| 11       |     | 60610-01 | Meter Assy, 1-1/2 inch, NPT, STD, Brass, Paddlewheel |                  |       |          |   |
|          |     | 60610-21 | Meter Assy, 1-1/2 inch, BSP, STD, Brass, Paddlewheel |                  |       |          |   |
| 12       |     | 60610-02 | Meter Assy, 1-1/2 inch, NPT, STD, Brass Paddlewheel  |                  |       |          |   |
|          |     | 60610-22 | Meter Assy, 1-1/2 inch, BSP,                         |                  |       |          |   |

# 9000 SECOND TANK ASSEMBLY

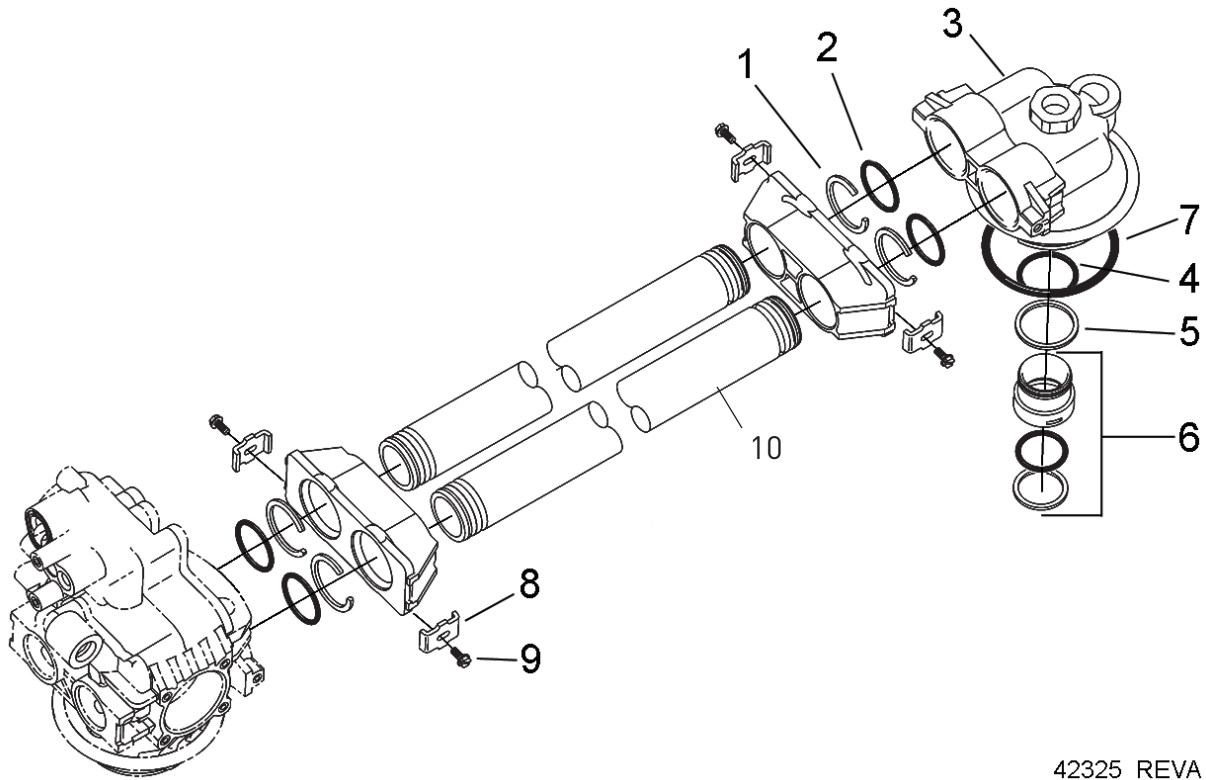


42282\_REVA

| Item No. | QTY | Part No.   | Description   |
|----------|-----|------------|---|
| 1        | 1   | 14864-01   | Adapter, 9000, 2nd Tank, Machd w/O-rings                          |
| 2        | 8   | 13305      | O-ring, -119  |
| 3        | 1   | 11710      | O-ring, -215  |
| 4        | 1   | 12281      | O-ring, -338  |
| 5        | 2   | 13708-40   | Yoke, 1-inch Sweat  |
|          | 1   | 15823-XX   | Yoke Assy. Specify Tank Size                                      |
| 6        | 4   | 13255      | Clip, Mounting  |
| 7        | 4   | 14202-01   | Screw, Hex Washer Mach, 8-32 x 5/16                               |
| 8        | 4   | 15078      | Adapter, 1-inch Coupling  |
| 9        |     | 15823-06   | 9000 Tube Assy, 6-inch Dia. Tank Only (Overall Length 7.25)       |
|          |     | 15823-06NP | 9000 Tube Assy, 6-inch Dia. Tank Only (Overall Length 7.25)       |
|          |     | 15823-12   | 9000 Tube Assy, 6-inch to 12-inch Dia. Tank (Overall Length 9.75) |

| Item No. | QTY | Part No.   | Description   |
|----------|-----|------------|---|
|          |     | 15823-12NP | 9000 Tube Assy, 6-inch to 12-inch Dia. Tank (Overall Length 9.75) |
|          |     | 15823-14   | 9000 Tube Assy, 14-inch Dia. Tank (Overall Length 11.75)          |
|          |     | 15823-14NP | 9000 Tube Assy, 14-inch Dia. Tank (Overall Length 11.75)          |
|          |     | 15823-16   | 9000 Tube Assy, 16-inch Dia. Tank (Overall Length 13.75)          |
|          |     | 15823-16NP | 9000 Tube Assy, 16-inch Dia. Tank (Overall Length 13.75)          |

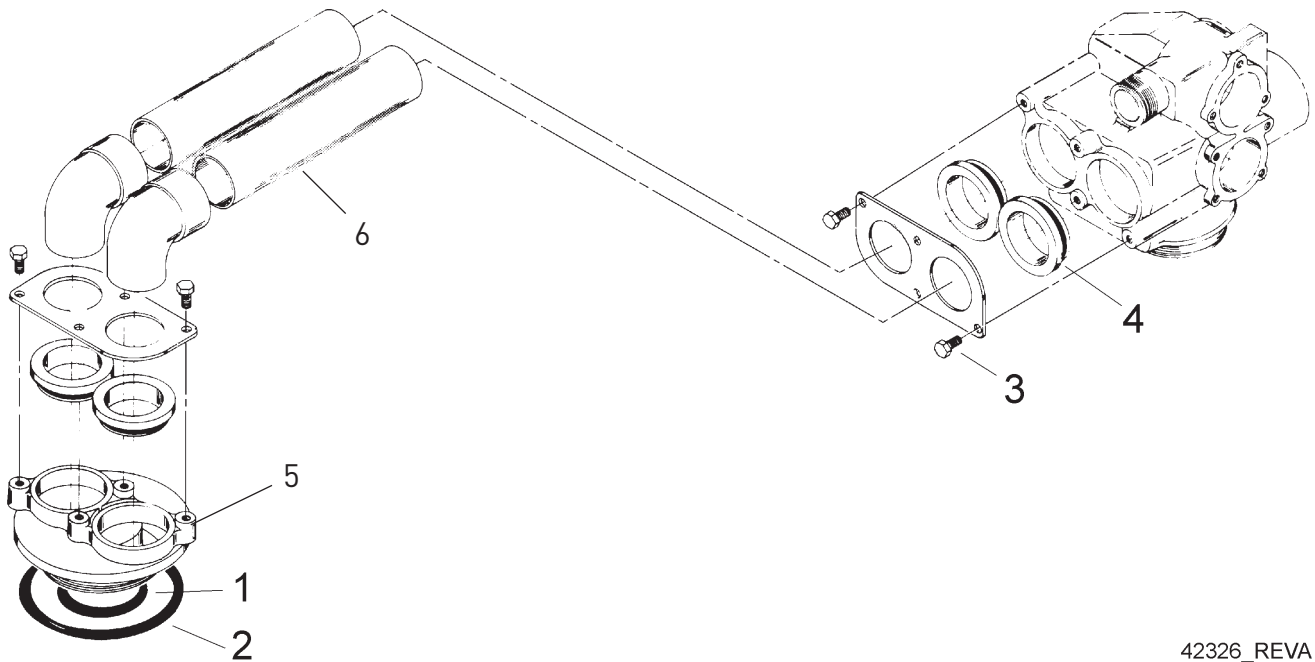
# 9100 SECOND TANK ASSEMBLY



42325\_REVA

| Item No. | QTY | Part No. | Description                         |
|----------|-----|----------|-------------------------------------|
| 1        | 4   | 40678    | Ring, 9100, Yoke Retainer           |
| 2        | 4   | 13287    | O-ring, -123                        |
| 3        | 1   | 14865    | Adapter Assy, 2nd Tank, 9100        |
| 4        | 1   | 19054    | O-ring, -124                        |
| 5        | 1   | 40538    | Retainer, 32mm, O-ring Dist, 7000   |
| 6        | 1   | 61419    | Kit, 1.05-inch Distributor, Adapter |
| 7        | 1   | 18303    | O-ring, -336                        |
| 8        | 4   | 13255    | Clip, Mounting                      |
| 9        | 4   | 14202-01 | Screw, Hex Washer Mach, 8-32 x 5/16 |
| 10       |     | 60425-9  | Tube Assy, 9100 8-9-inch Tank       |
|          |     | 60425-12 | Tube Assy, 9100 6-12-inch Tank      |
|          |     | 60425-16 | Tube Assy, 9100 13-16-inch Tank     |

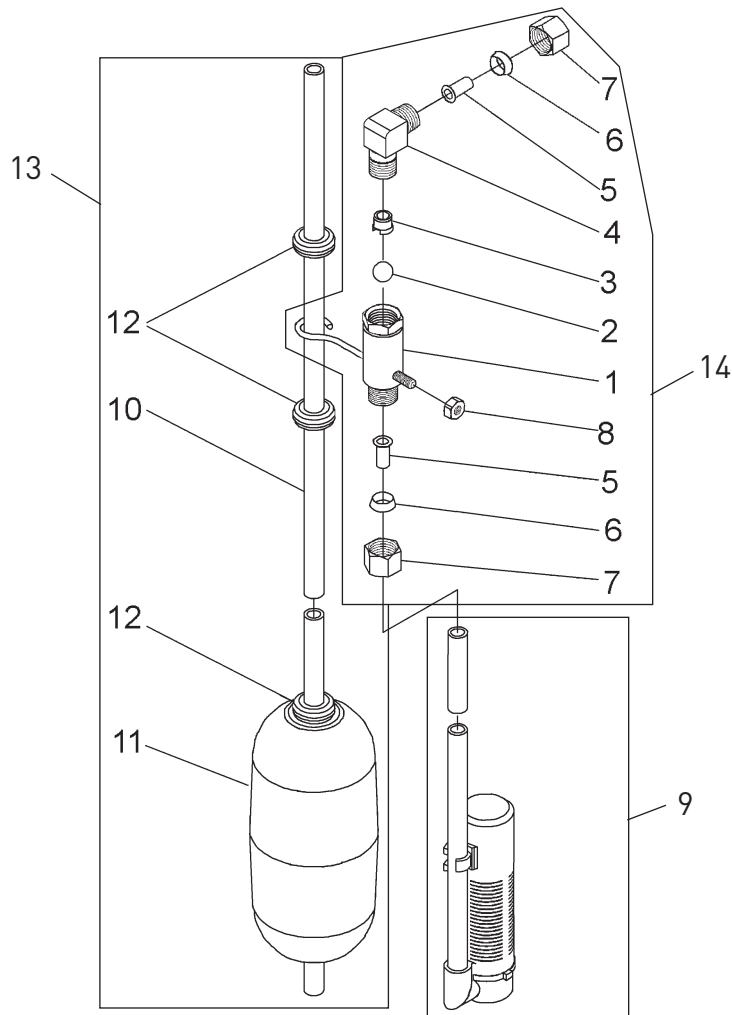
# 9500 SECOND TANK ASSEMBLY



42326\_REVA

| Item No. | QTY | Part No.   | Description  |
|----------|-----|------------|--|
| 1        | 1   | 13577      | O-ring, -226                                       |
| 2        | 1   | 16455      | O-ring, -347                                       |
| 3        | 8   | 10231      | Screw, Slot Hex,<br>1/4 - 20 x 1/2                 |
| 4        | 4   | 17224      | O-ring, -224                                       |
| 5        | 1   | 16916-01   | Adapter, 9500, 2nd Tank,<br>NPT                    |
|          |     | 16916-21   | Adapter, 9500, 2nd Tank,<br>Metric                 |
|          |     | 16916-01NP | Adapter, 9500, 2nd Tank,<br>NPT, Nickel Plated     |
| 6        |     | 17465-16   | Tube Assy, 2nd Tank, 16-inch<br>9500               |
|          |     | 17465-16NP | Tube Assy, 2nd Tank, 16-inch<br>9500 Nickel Plated |
|          |     | 17465-20   | Tube Assy, 2nd Tank, 20-inch<br>9500               |
|          |     | 17465-24   | Tube Assy, 2nd Tank, 24-inch<br>9500               |
|          |     | 17465-24NP | Tube Assy, 2nd Tank, 24-inch<br>9500 Nickel Plated |

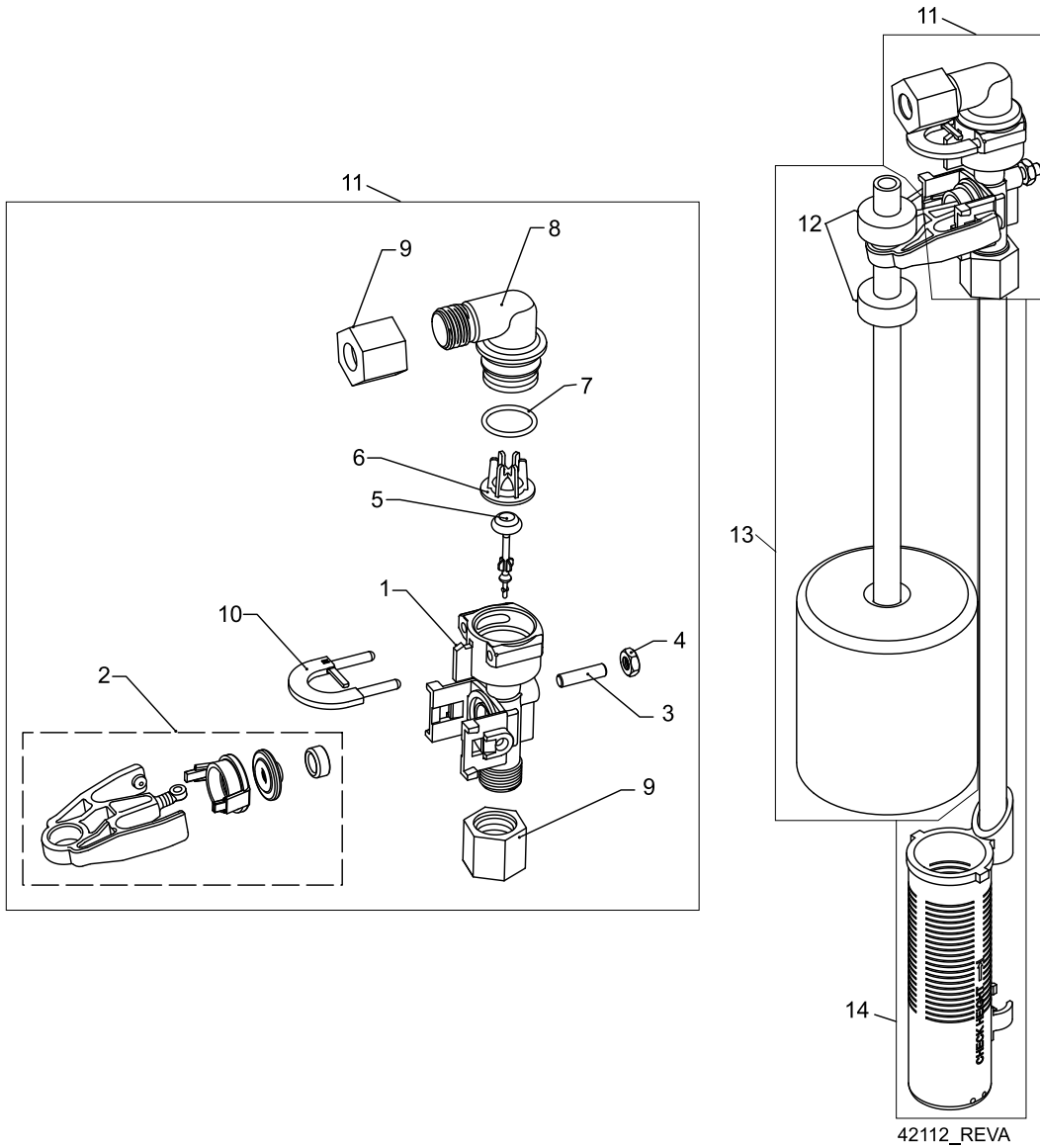
# 2300 SAFETY BRINE VALVE



60027 Rev D

| Item No. | QTY | Part No.    | Description                                | Item No. | QTY | Part No.    | Description                                  |
|----------|-----|-------------|--|----------|-----|-------------|--|
| 1        | 1   | 60027-00    | Safety Brine Valve, 2300, Less Elbow       | .....    | 1   | 60002-34    | Air Check, #500, 34 inches Long              |
| 2        | 1   | 10138       | Ball, 3/8-inch, Brass                      | .....    | 1   | 60002-36    | Air Check, #500, 36 inches Long              |
| 3        | 1   | 11566       | Ball Stop, Slow Fill                       | .....    | 1   | 60002-48    | Air Check, #500, 48 inches Long              |
| 4        | 1   | 10328       | Fitting, Elbow, 90 Deg. 1/4 NPT x 3/8 Tube | .....    | 1   | 60002-26.25 | Air Check, #500, 26.25 inches Long           |
| 5        | 1   | 10332       | Fitting, Insert, 3/8                       | .....    | 1   | 60002-33.25 | Air Check, #500, 33.25 inches Long           |
| 6        | 1   | 10330       | Fitting, Sleeve, 3/8 Celcon                | 10       | 1   | 10149       | Rod, Float, 30 inches                        |
| 7        | 1   | 10329       | Fitting, Tube, 3/8 Nut, Brass              | 11       | 1   | 10700       | Float Assy, White                            |
| 8        | 1   | 10186       | Nut, Hex, 10-32                            | 12       | 3   | 10150       | Grommet, .30 Dia                             |
| 9        | 1   | 60002-10    | Air Check, #500, American Hydro            | 13       | 1   | 60028-30    | Float Assy, 2300, 30 inches White            |
|          |     | 60002-11.38 | Air Check, #500, 11.38 inches Long         | 14       | 1   | 60027-FFA   | Safety Brine Valve, 2300, Fitting Facing Arm |
|          |     | 60002-24    | Air Check, #500, 24 inches Long            | 1        | 1   | 60027-FFS   | Safety Brine Valve, 2300 Fitting Facing Stud |
|          |     | 60002-27    | Air Check, #500, 27 inches Long            |          |     |             |  |
|          |     | 60002-32    | Air Check, #500, 32 inches Long            |          |     |             |  |

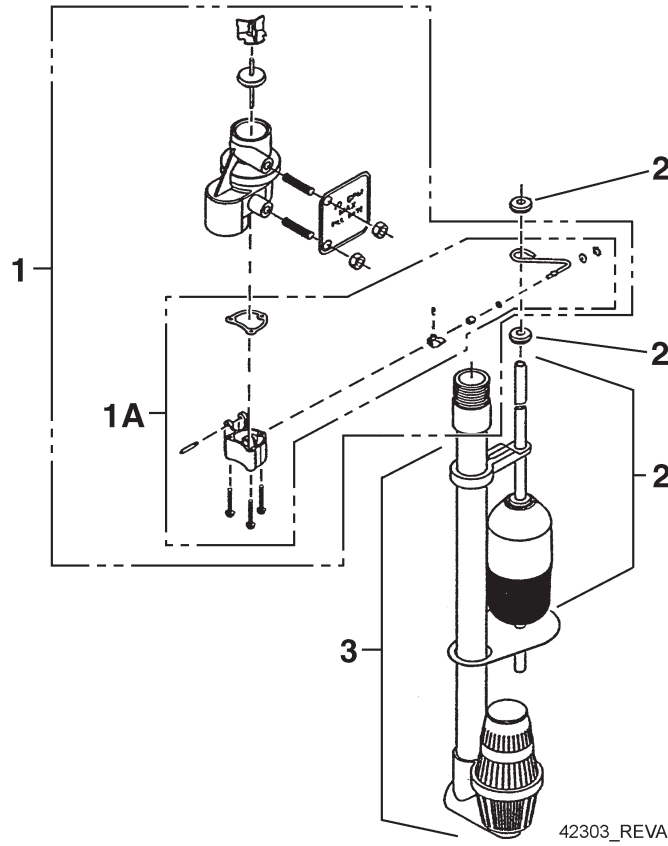
**2310 SAFETY BRINE VALVE**



## 2310 SAFETY BRINE VALVE

| Item No. | QTY | Part No.   | Description                       | Item No. | QTY | Part No.    | Description                        |
|----------|-----|------------|-----------------------------------|----------|-----|-------------|------------------------------------|
| 1        | 1   | 19645      | Body, Safety Brine Valve, 2310    | 14       | 1   | 60002-10    | Air Check, #500, American Hydro    |
| 2        | 1   | 19803      | Safety Brine Valve Assy           |          |     | 60002-11.38 | Air Check, #500, 11.38 inches Long |
| 3        | 1   | 19804      | Screw, Sckt Hd, Set, 10-24 x .75  |          |     | 60002-24    | Air Check, #500, 24 inches Long    |
| 4        | 1   | 19805      | Nut, Hex, 10-24, Nylon Black      |          |     | 60002-27    | Air Check, #500, 27 inches Long    |
| 5        | 1   | 19652-01   | Poppet Assy, SBV w/O-ring         |          |     | 60002-32    | Air Check, #500, 32 inches Long    |
| 6        | 1   | 19649      | Flow Dispenser                    |          |     | 60002-34    | Air Check, #500, 34 inches Long    |
| 7        | 1   | 11183      | O-ring, -017                      |          |     | 60002-36    | Air Check, #500, 36 inches Long    |
| 8        | 1   | 19647      | Elbow, Safety Brine Valve         |          |     | 60002-48    | Air Check, #500, 48 inches Long    |
| 9        | 2   | 19625      | Nut Assy, 3/8-inch Plastic        |          |     | 60002-26.25 | Air Check, #500, 26.25 inches Long |
| 10       | 1   | 18312      | Retainer, Drain                   |          |     | 60002-33.25 | Air Check, #500, 33.25 inches Long |
| 11       | 1   | 60014      | Safety Brine Valve Assy, 2310     |          |     |             |                                    |
| 12       | 2   | 10150      | Grommet, .30 Dia                  |          |     |             |                                    |
| 13       | 1   | 60068-8.06 | Float Assy, 2310, w/8.06-inch Rod |          |     |             |                                    |
|          |     | 60068-10.5 | Float Assy, 2310, w/10.5-inch Rod |          |     |             |                                    |
|          |     | 60068-11.5 | Float Assy, 2310, w/11.5-inch Rod |          |     |             |                                    |
|          |     | 60068-20   | Float Assy, 2310, w/20-inch Rod   |          |     |             |                                    |
|          |     | 60068-30   | Float Assy, 2310, w/30-inch Rod   |          |     |             |                                    |

# 2350 SAFETY BRINE VALVE



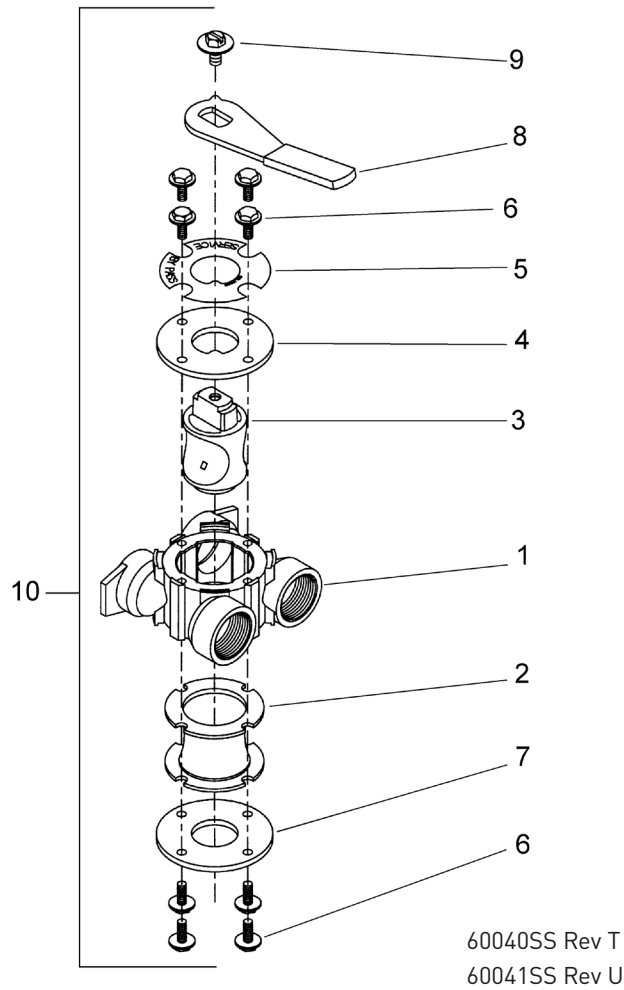
| Item No. | QTY | Part No.    | Description  |
|----------|-----|-------------|--|
| 1        | 1   | 60038       | Safety Brine Valve, 2350                             |
| 1A       | 1   | 61024       | Actuator Assy, 2350 Brine                            |
| 2        | 1   | 60028-30    | Float Assy, 2350, 30-inch Wht                        |
|          | 1   | 60026-30SAN | Float Assy, 2350, 30-inch Hot Water                  |
| 3        | 1   | 60009-00    | Air Check, #900, Commercial Less Fittings            |
|          | 1   | 60009-01    | Air Check, #900, Commercial, Hot Water Less Fittings |

**Not Shown**

|       |   |       |                                  |
|-------|---|-------|----------------------------------|
| ..... | 1 | 18603 | Fitting Assy, 900 Air Check 2350 |
| ..... | 1 | 18602 | Fitting Assy, 900 Air Check      |



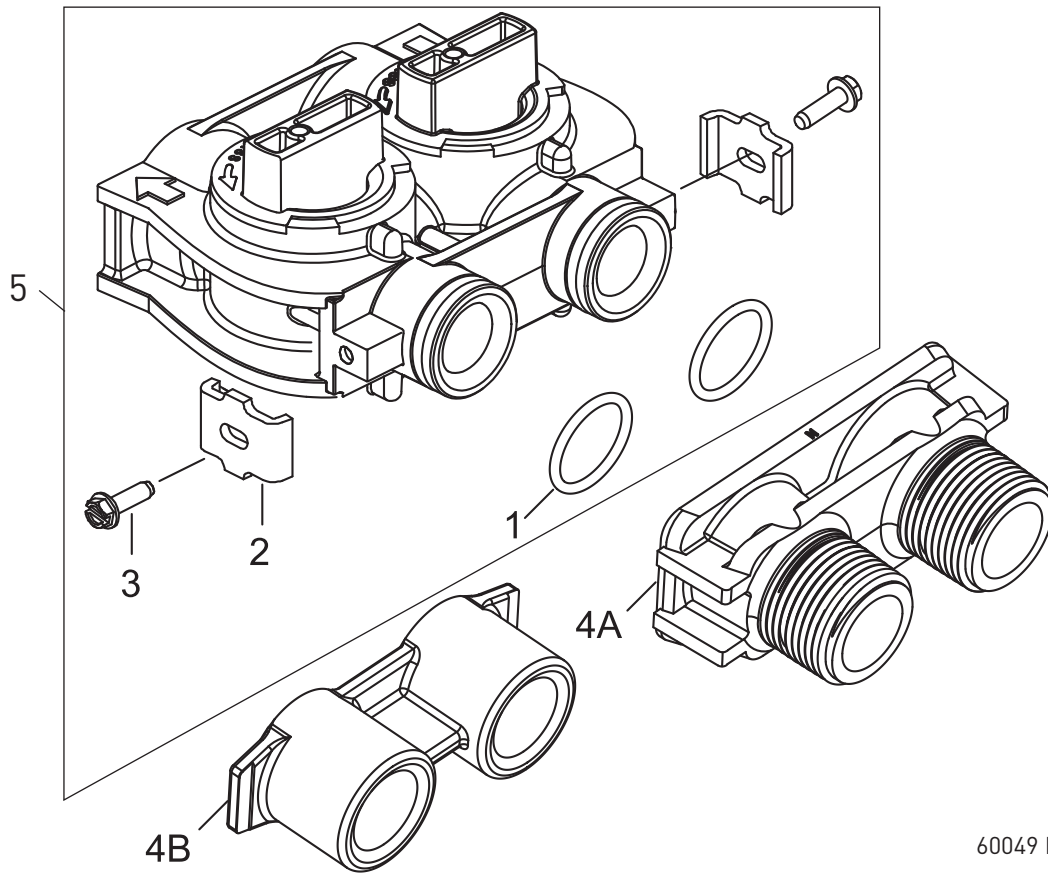
# BYPASS VALVE ASSEMBLY (METAL)



| Item No. | QTY | Part No. | Description   |
|----------|-----|----------|---|
| 1        | 1   | 40614    | Bypass Body, 3/4-inch                               |
|          |     | 40634    | Bypass Body, 1-inch, SS                             |
| 2        | 1   | 14105    | Seal, Bypass, 560CD                                 |
| 3        | 1   | 11972    | Plug, Bypass  |
| 4        | 1   | 11978    | Side Cover  |
| 5        | 1   | 13604-01 | Label   |
| 6        | 8   | 15727    | Screw, 10-24 x 0.5                                  |
| 7        | 1   | 11986    | Side Cover  |
| 8        | 1   | 11979    | Lever, Bypass                                       |
| 9        | 1   | 11989    | Screw, Hex Head, 1/4-14 x 1.5-inch                  |
| 10       | 1   | 60040SS  | Bypass Valve, 5600, 3/4-inch NPT Blk Grip Lever, SS |
|          |     | 60041SS  | Bypass Valve, 5600, 1-inch NPT Blk Grip Lever, SS   |
| *        | 2   | 19228-01 | Adapter Assy, Coupling, w/O-rings                   |

\*Not Shown

# BYPASS VALVE ASSEMBLY (PLASTIC)



60049 Rev G

| Item No. | QTY | Part No. | Description   |
|----------|-----|----------|---|
| 1        | 2   | 13305    | O-ring, -119  |
| 2        | 2   | 13255    | Clip, Mounting  |
| 3        | 2   | 13314    | Screw, Slot Ind Hex, 8-18 x .60                                 |
| 4A       | 1   | 18706    | Yoke, 1-inch, NPT, Plastic                                      |
|          |     | 18706-02 | Yoke, 3/4-inch, NPT, Plastic                                    |
| 4B       | 1   | 13708-40 | Yoke, 1-inch, Sweat   |
|          |     | 13708-45 | Yoke, 3/4-inch, Sweat   |
|          |     | 19275    | Yoke, Angle 90 Deg, 3/4-inch, NPT                               |
|          |     | 19275-45 | Yoke, Angle 90 Deg, 3/4-inch Sweat                              |
|          |     | 19620-01 | Yoke Assy, 3/4-inch, R/ Angle, 90 Deg w/O-rings, Clips & Screws |
|          |     | 40636    | Yoke, 1-1/4 inch, NPT   |
|          |     | 40636-49 | Yoke, 1-1/4 inch, Sweat   |
|          |     | 41027-01 | Yoke, 3/4-inch, NPT, Cast, Machined                             |
|          |     | 41026-01 | Yoke, 1-inch, NPT, Cast, Machined, SS                           |

| Item No. | QTY | Part No. | Description                          |
|----------|-----|----------|--------------------------------------|
|          |     | 41026-02 | Yoke, 1-inch, BSP, Cast, MACHD, SS   |
|          |     | 18706-10 | Yoke, 1-inch, BSP, Plastic           |
|          |     | 41027-02 | Yoke, 3/4-inch, BSP, Cast, MACHD     |
|          |     | 18706-12 | Yoke, 3/4-inch, BSP, Plastic         |
|          |     | 19620-01 | Yoke Assy, 3/4-inch, R/Angle, 90 Deg |
| 5        | 1   | 60049    | Bypass Plastic                       |
| *        | 2   | 19228-01 | Adapter Assy, Coupling, w/O-rings    |

\*Not Shown

## 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.

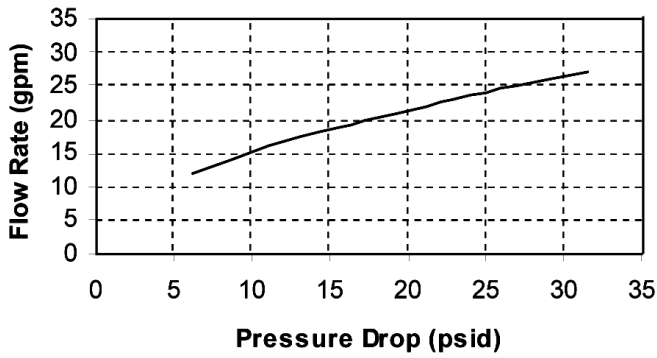
## TROUBLESHOOTING

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

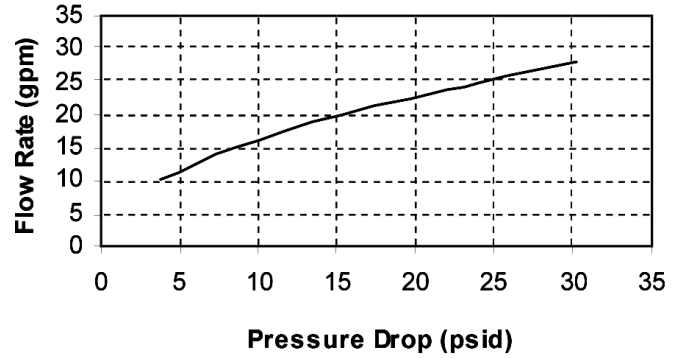
# 9000/9100/9500 METER FLOW DATA

## 9000 Meter Flow Data

### 3/4" Mechanical Meter



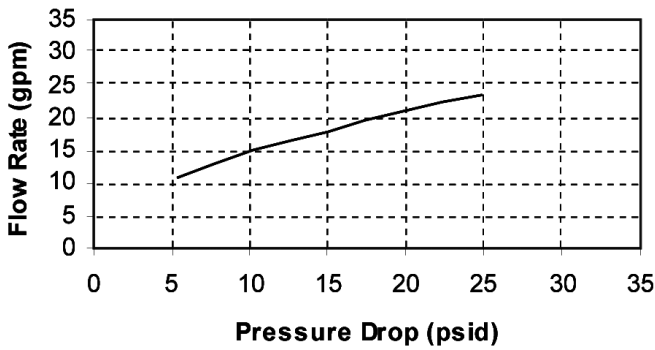
### 1" Brass Meter



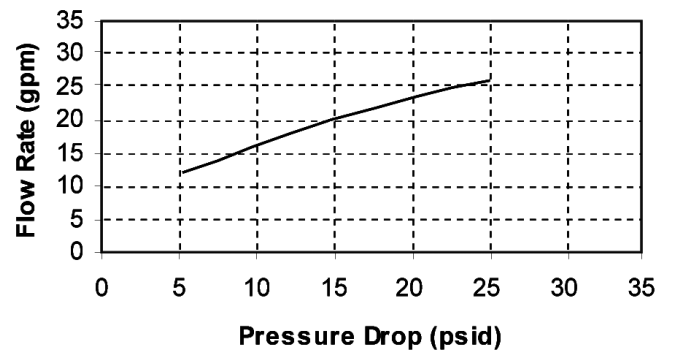
TR: 18467  
41092

## 9100 Meter Flow Data

### 3/4" Mechanical Meter



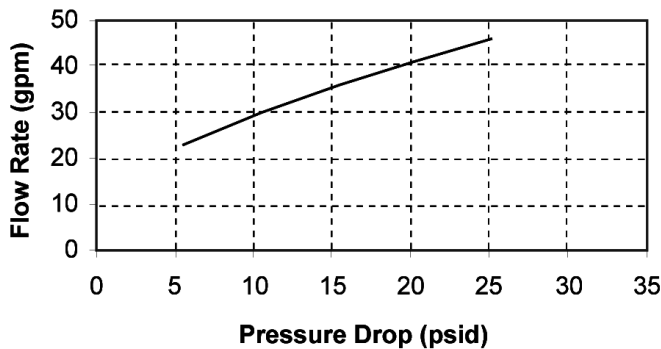
### 1" Brass Meter



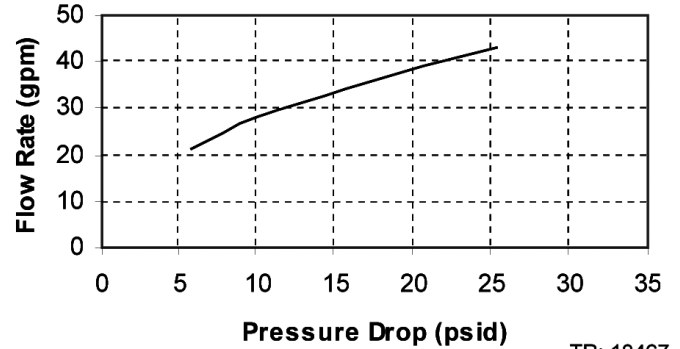
TR: 18467  
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## 9500 Meter Flow Data

### 1 1/2" Meter

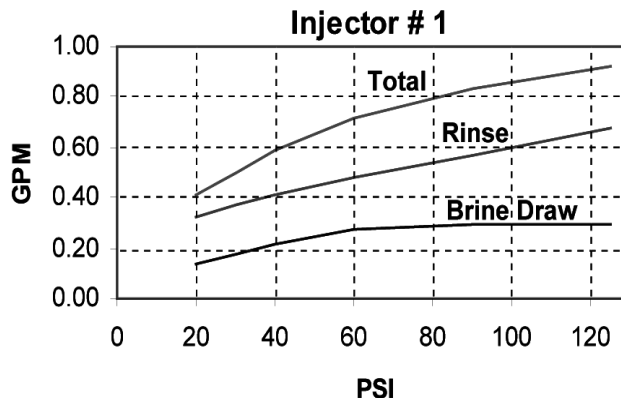
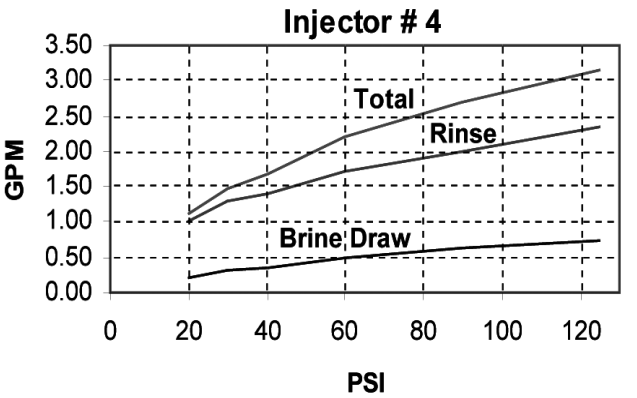
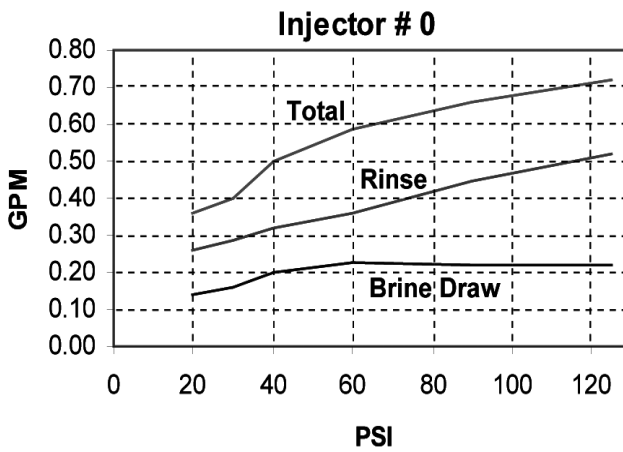
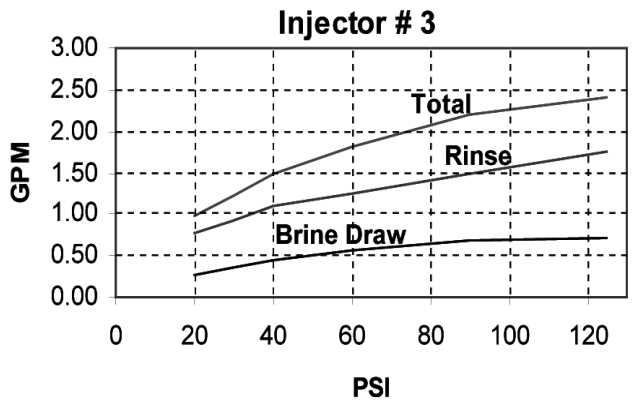
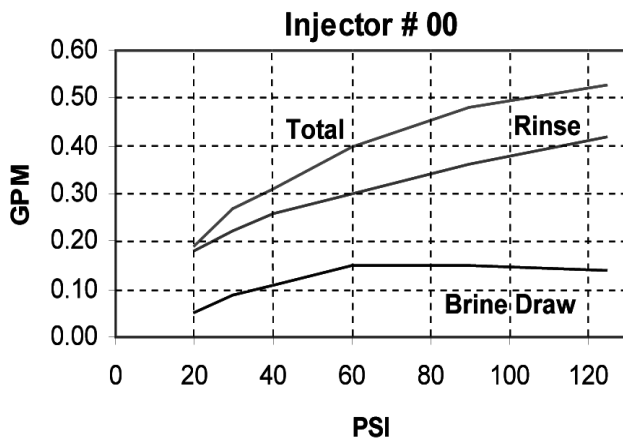
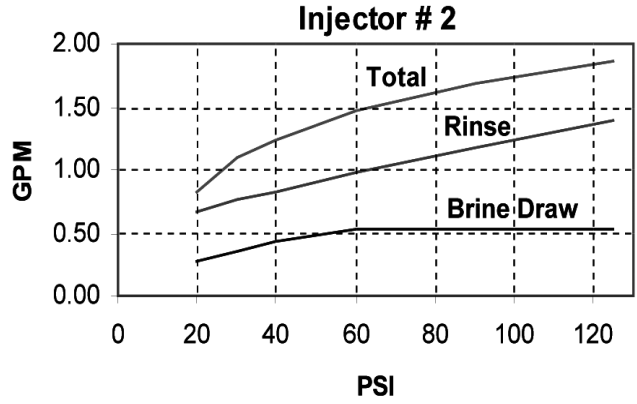
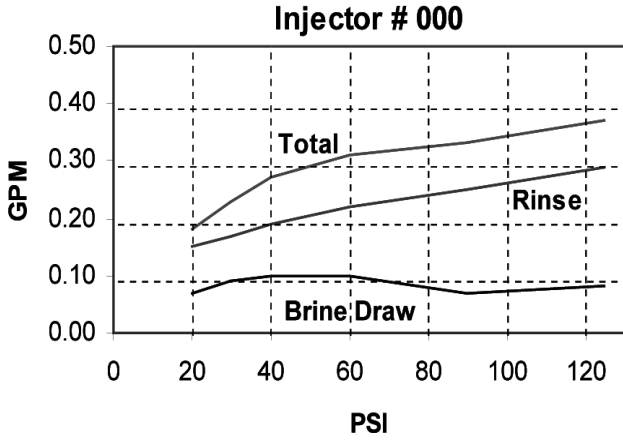


### 1 1/2" Meter Sleeved



TR: 18467  
41092

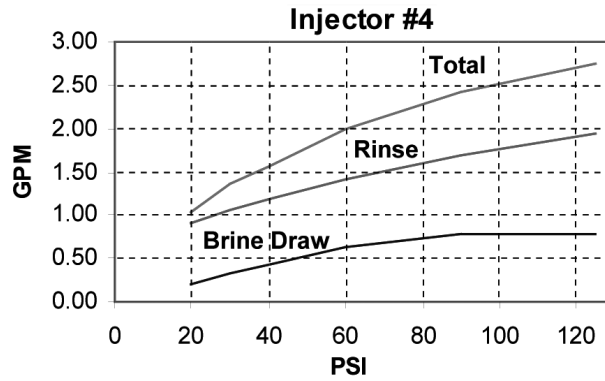
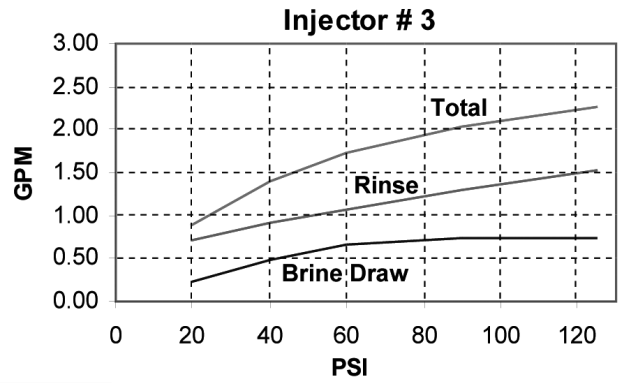
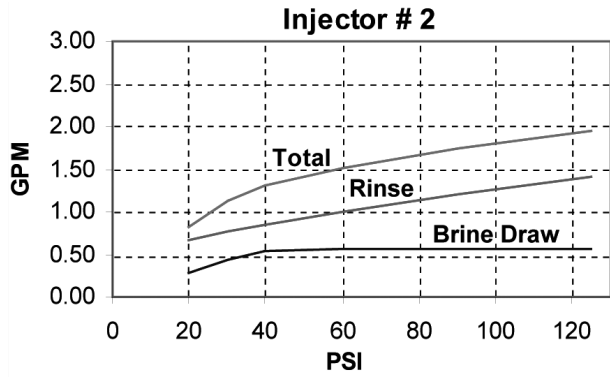
**9000/9100/9500 INJECTOR FLOW DATA  
(1600 SERIES INJECTORS)**



TR: 18467  
41092

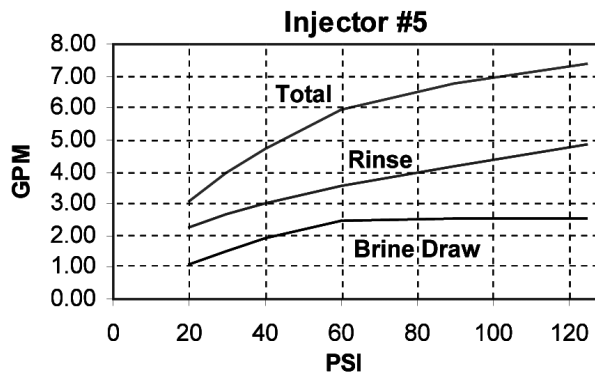
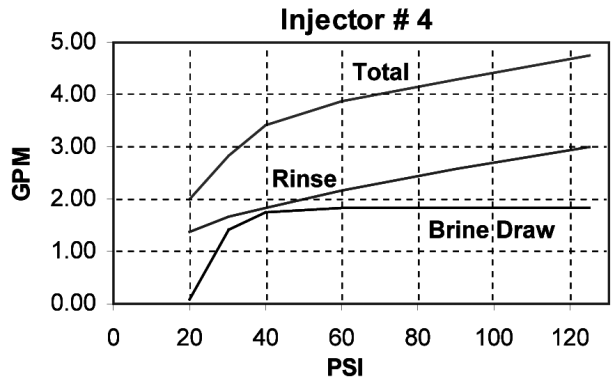
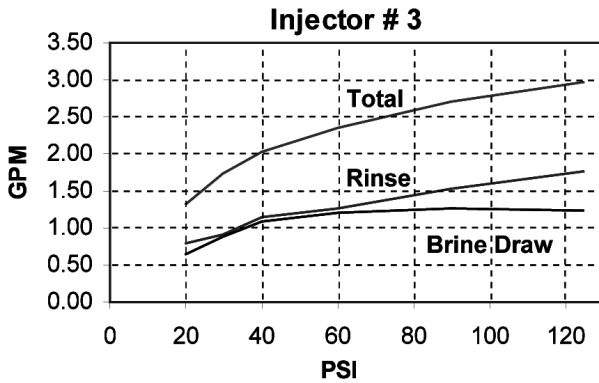
# 9500 INJECTOR FLOW DATA (1600 & 1700 SERIES INJECTORS)

## 1600 Series Injectors



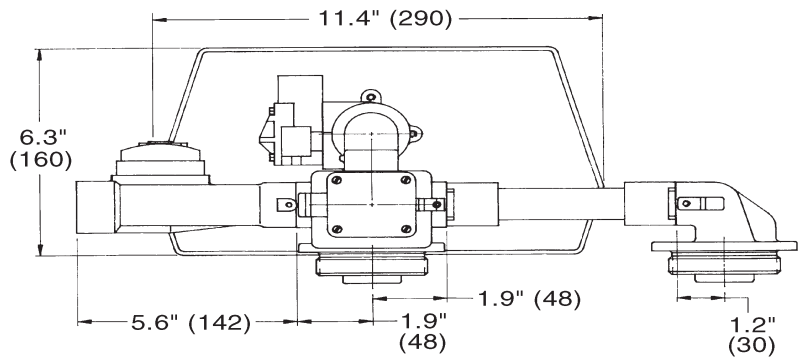
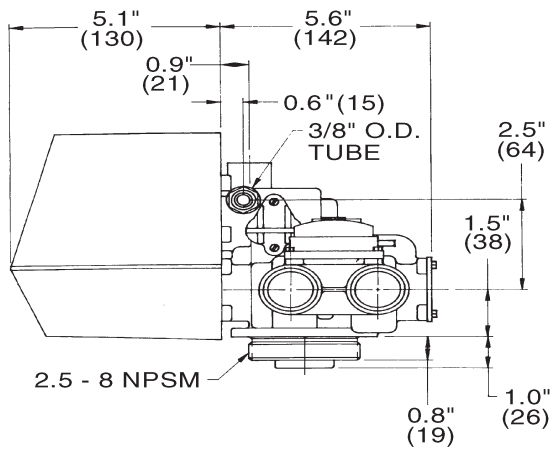
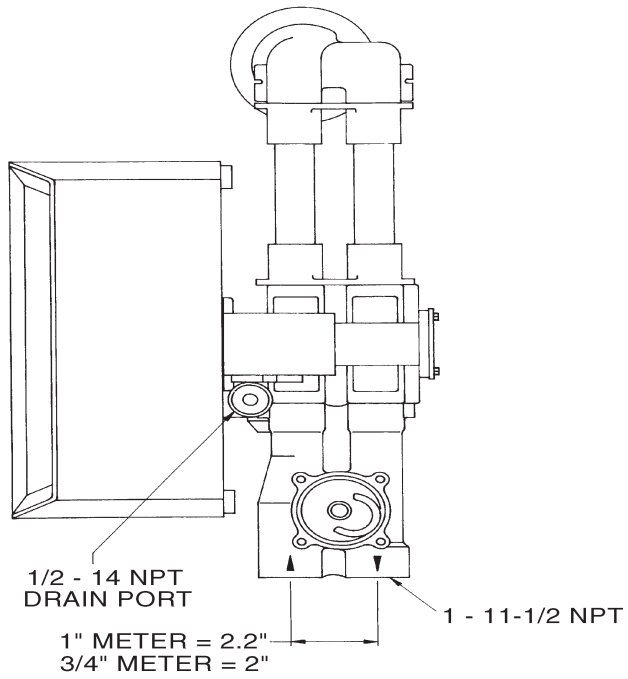
TR: 18467  
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## 1700 Series Injectors



TR: 18467  
41092

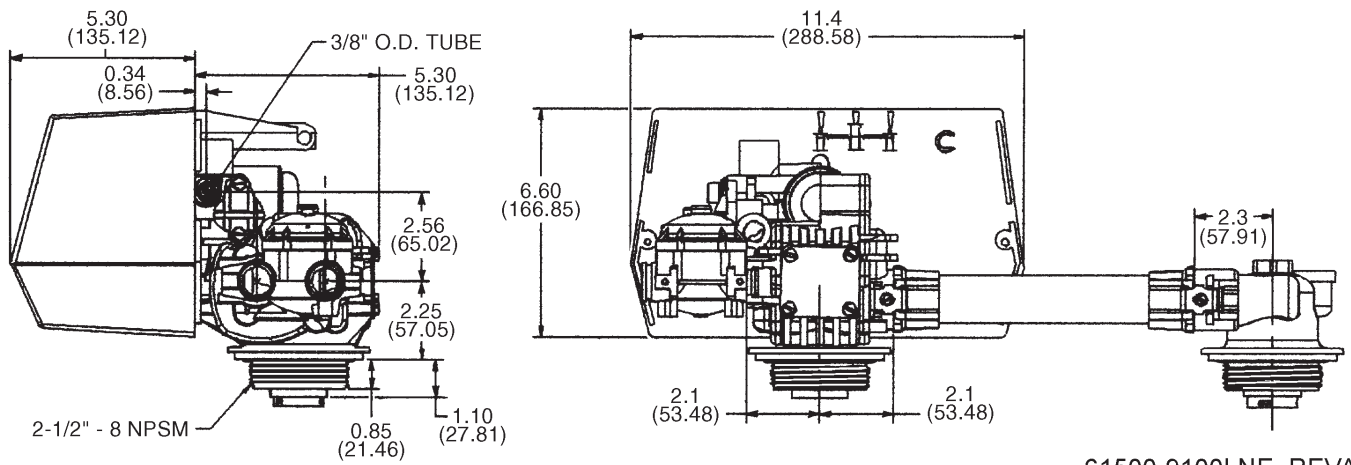
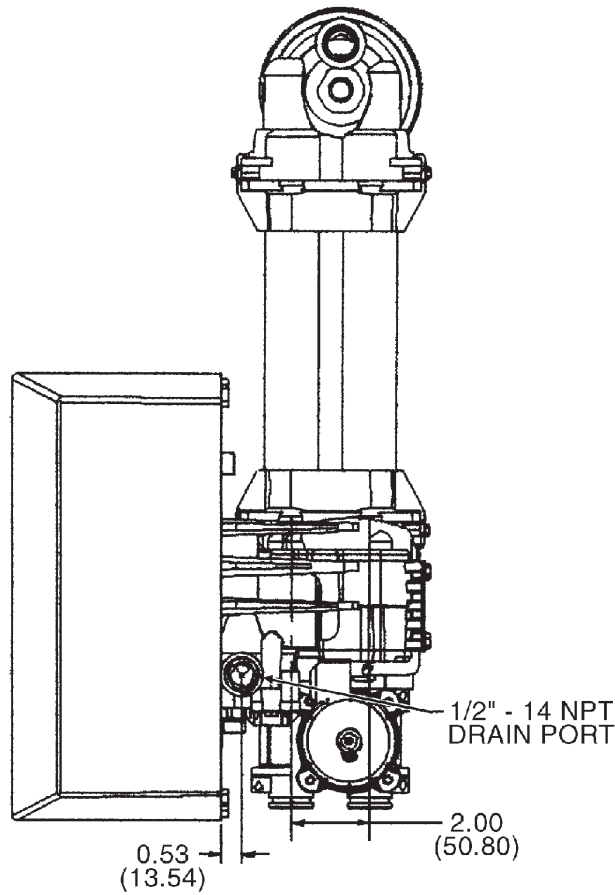
# 9000 CONTROL DIMENSIONS



61500-9000LNE\_REVA

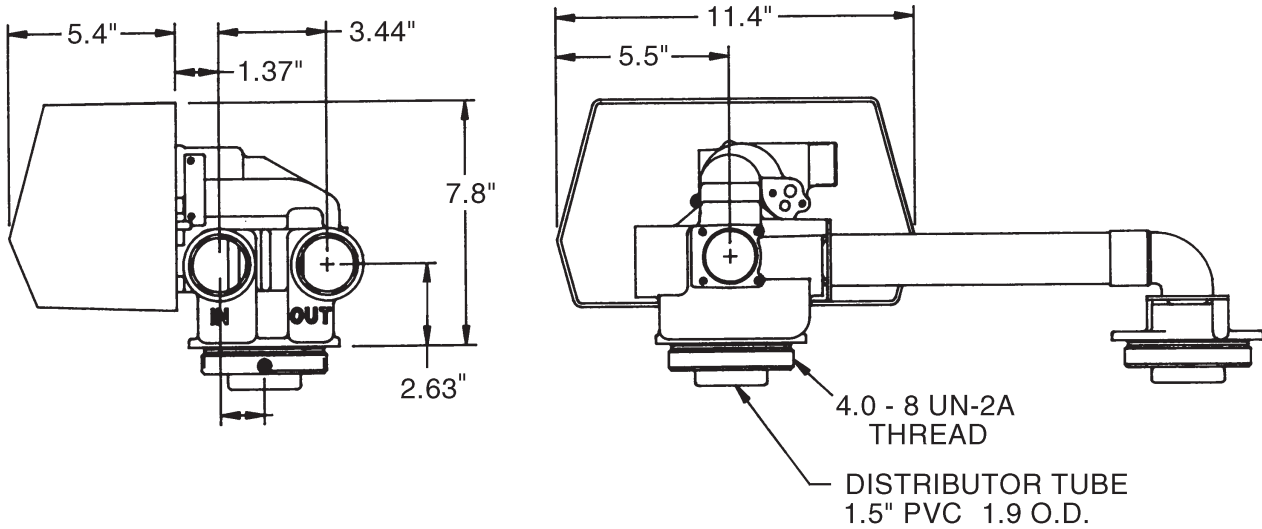
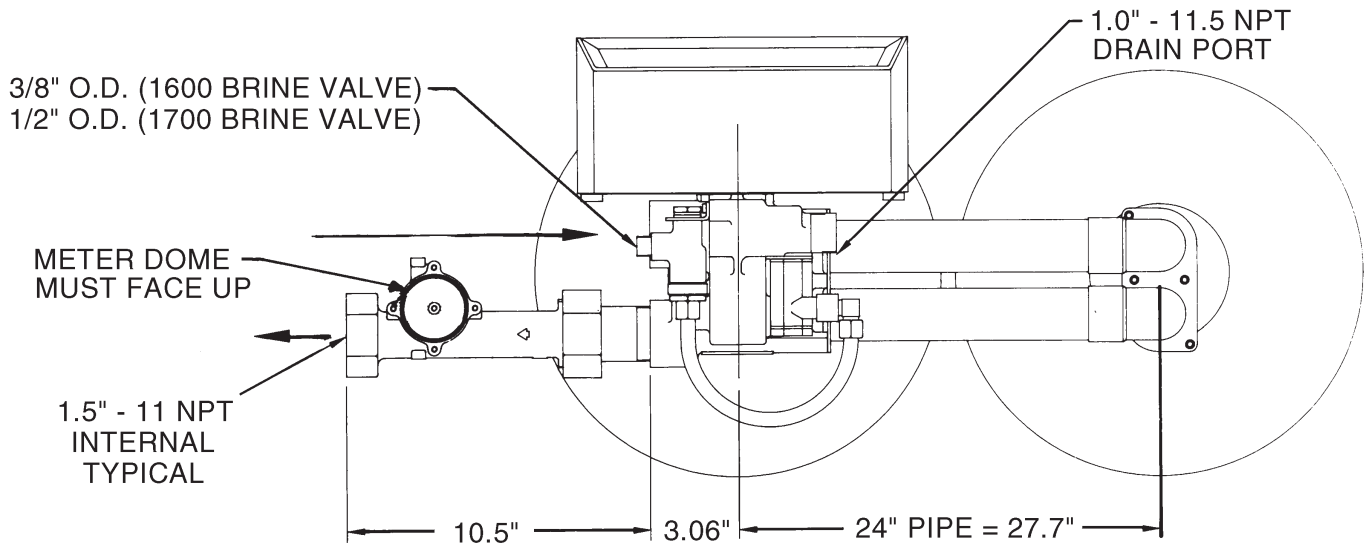


# 9100 CONTROL DIMENSIONS



61500-9100LNE\_REVA

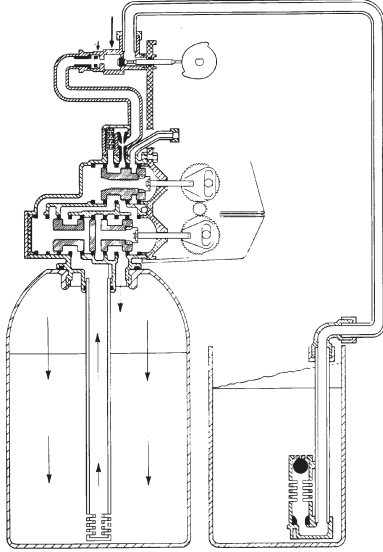
# 9500 CONTROL DIMENSIONS



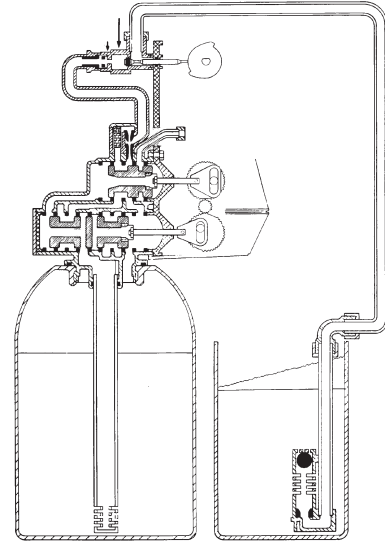
61500-9500LNE\_REVA

# WATER CONDITIONER FLOW DIAGRAMS

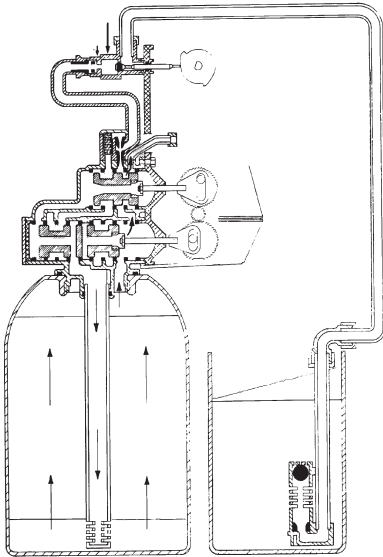
1 In Service Position



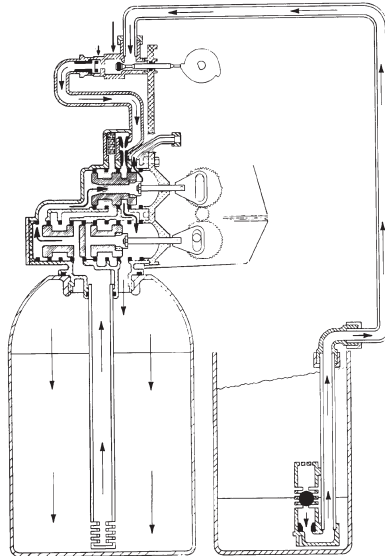
3 Tanks Switching Position  
(Meter Initiated Regeneration)



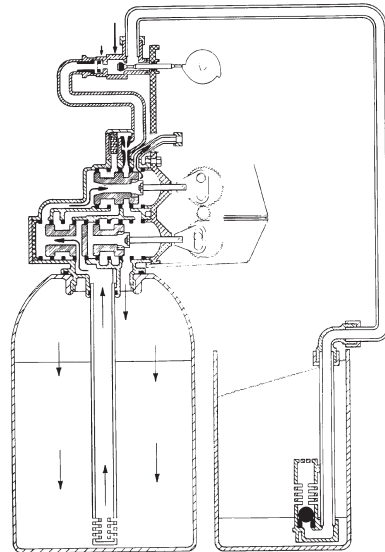
2 Backwash Position



4 Brine Draw Position



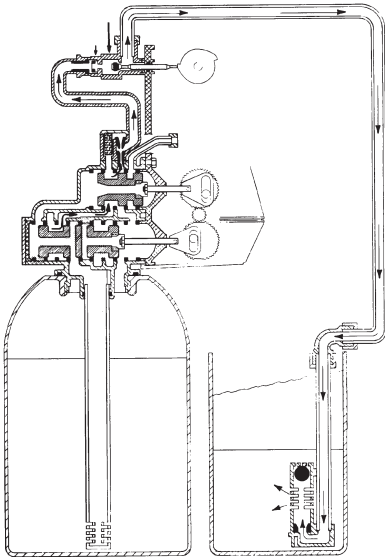
5 Slow Rinse



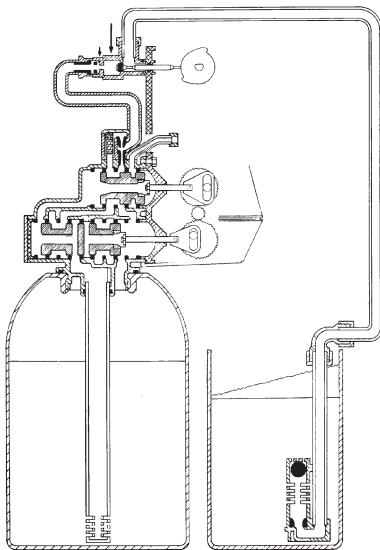
# WATER CONDITIONER FLOW DIAGRAMS

*CONTINUED*

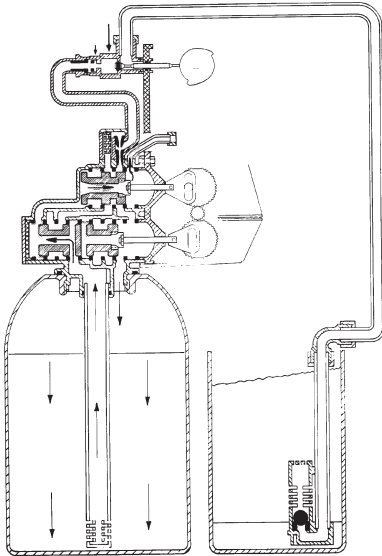
**6 Brine Tank Fill Position**



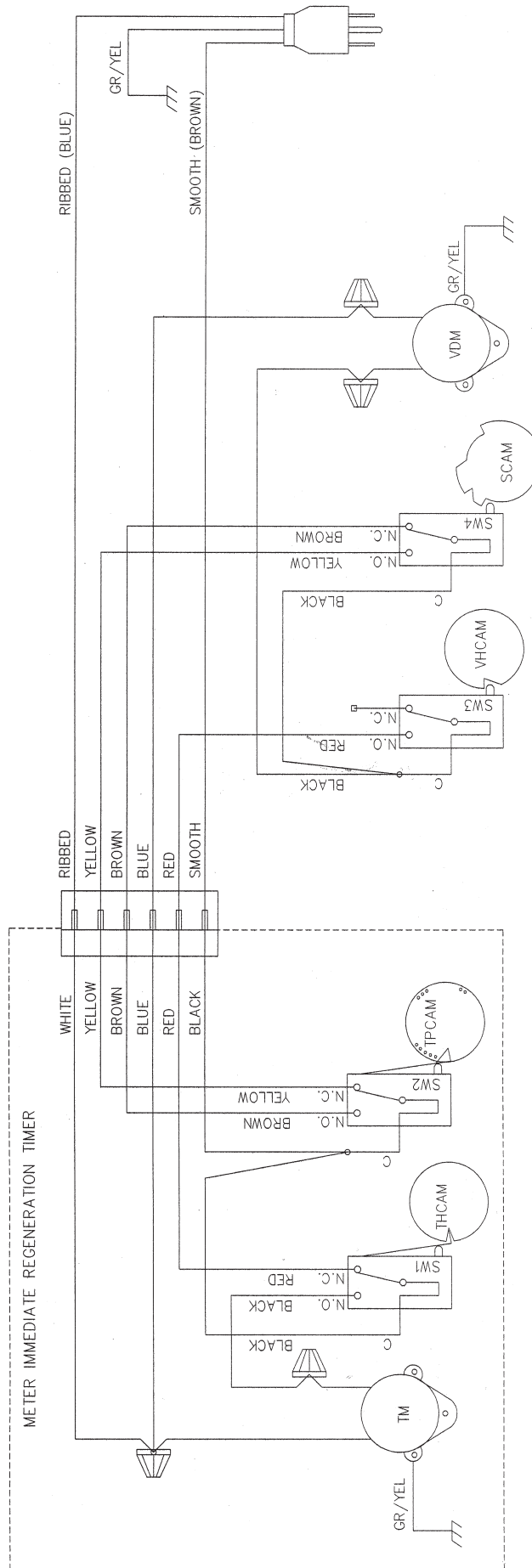
**8 In Service Position, Tanks Switched**



**7 Rapid Rinse Position**



# 9000/9500 WIRING DIAGRAM



- TM - TIMER MOTOR
- VDM - VALVE DRIVE MOTOR
- SW1 - TIMER HOMING SWITCH
- SW2 - TIMER PROGRAM SWITCH
- SW3 - VALVE HOMING SWITCH
- SW4 - VALVE PROGRAM SWITCH
- THCAM - TIMER HOMING CAM
- TPCAM - TIMER PROGRAM CAM
- HCCAM - VALVE HOMING CAM
- SCAM - VALVE STEP CAM

NOTE:  
 1. TWIN TANK METER IMMEDIATE ALTERN REGENERATION.  
 2. VALVE SHOWN IN SERVICE POSITION.

19752 Rev B

## SERVICE ASSEMBLIES

### Brine Line Flow Controls (9000/9100):

|           |       |                                     |
|-----------|-------|-------------------------------------|
| 60022-12  | ..... | BLFC, .125 GPM, 5000/5600/9000/9100 |
| 60022-25  | ..... | BLFC, .25 GPM, 5000/5600/9000/9100  |
| 60022-50  | ..... | BLFC, .50 GPM, 5000/5600/9000/9100  |
| 60022-100 | ..... | BLFC, 1.0 GPM, 5000/5600/9000/9100  |
| 60350     | ..... | Brine Valve Assy, 9000/9100         |

### Brine Line Flow Controls (9500):

|           |       |                     |
|-----------|-------|---------------------|
| 60020-25  | ..... | BLFC, .25 GPM, 1600 |
| 60020-50  | ..... | BLFC, .50 GPM, 1600 |
| 60020-100 | ..... | BLFC, 1.0 GPM, 1600 |

### Brine Valve Assemblies:

|           |       |   |
|-----------|-------|---|
| 60037-610 | ..... | Brine Valve, 9500/1600, .25 GPM, Cold & HW 180°       |
| 60037-620 | ..... | Brine Valve, 9500/1600, .50 GPM, Cold & HW 180°       |
| 60037-630 | ..... | Brine Valve, 9500/1600, 1.0 GPM, Cold & HW 180°       |
| 60350     | ..... | Brine Valve Assy 9000/9100, Cold & HW 180°            |
| 60350-01  | ..... | Brine Valve Assy, 9000/9100/Twinfl100, Cold & HW 180° |

### 1700 Brine Valve Assemblies (9500):

|          |       |  |
|----------|-------|--|
| 60039-XX | ..... | Brine Valve, 1700/9500, Cold & HW 180° |
|----------|-------|--|

### Bypass Assemblies:

|         |       |                                  |
|---------|-------|----------------------------------|
| 60040SS | ..... | Bypass Valve, 5600, 3/4-inch NPT |
| 60041SS | ..... | Bypass Valve, 5600, 1-inch NPT   |
| 60049   | ..... | Bypass Plastic Assy              |

### Injector Assemblies (9000/9100):

|         |       |  |
|---------|-------|--|
| 60385-X | ..... | Injector Assembly (specify size of injector) |
|---------|-------|--|

### Injector Number DLFC Number BLFC Number

|           |         |       |        |       |        |
|-----------|---------|-------|--------|-------|--------|
| Red #0    | .....00 | Blank | .....0 | Blank | .....0 |
| White #1  | .....01 | 1.2   | .....1 | 0.25  | .....1 |
| Blue #2   | .....02 | 1.5   | .....2 | 0.50  | .....2 |
| Yellow #3 | .....03 | 2.0   | .....3 | 1.00  | .....3 |
| Green #4  | .....04 | 2.4   | .....4 |       |        |
|           |         | 3.0   | .....5 |       |        |
|           |         | 3.5   | .....6 |       |        |
|           |         | 4.0   | .....7 |       |        |
|           |         | 5.0   | .....8 |       |        |
|           |         | 7.0   | .....9 |       |        |

### Injector Assemblies (9500):

|          |       |   |
|----------|-------|---|
| 60381-03 | ..... | Injector Assy, 1700, #3, Cold & HW 150° |
| 60381-04 | ..... | Injector Assy, 1700, #4, Cold & HW 150° |
| 60381-05 | ..... | Injector Assy, 1700, #5, Cold & HW 150° |

|          |       |  |
|----------|-------|--|
| 60381-06 | ..... | Injector Assy, 1700, #6, Cold & HW 150°      |
| 60480-01 | ..... | Injector Assy, 1600, #1, Plastic, Cold Water |
| 60480-02 | ..... | Injector Assy, 1600, #2, Plastic, Cold Water |
| 60480-03 | ..... | Injector Assy, 1600, #3, Plastic, Cold Water |
| 60480-04 | ..... | Injector Assy, 1600, #4, Plastic, Cold Water |
| 60481-21 | ..... | Injector Assy, 1600, #1, SS, HW 180°         |
| 60481-21 | ..... | Injector Assy, 1600, #2, SS, HW 180°         |
| 60481-21 | ..... | Injector Assy, 1600, #3, SS, HW 180°         |
| 60481-21 | ..... | Injector Assy, 1600, #4, SS, HW 180°         |

### Meter Assemblies (9000/9100):

|          |       |   |
|----------|-------|---|
| 15078-01 | ..... | Adapter, 1-inch Coupling                              |
| 60086    | ..... | Meter Assy, 5600/9000/9100, 3/4-inch Std/Range        |
| 60087    | ..... | Meter Assy, 5600/9000/9100, 3/4-inch, Ext             |
| 60389    | ..... | Meter Assy, 9000/9100, 1-inch                         |
| 60389NP  | ..... | Meter Assy, 9000/9100, 1-inch, N/P                    |
| 60389-20 | ..... | Meter Assy, 9000/9100, 1-inch, BSP/Metric             |
| 60390    | ..... | Meter Assy, 9000/9100, 1-inch, Ext                    |
| 60390NP  | ..... | Meter Assy, 9000/9100, 1-inch, Ext, N/P               |
| 60390-20 | ..... | Meter Assy, 9000/9100, 1-inch, Ext/BSP/Metric         |
| 60612    | ..... | Meter Assy, 9000/9100, 1-inch, Std Range, HW 150°     |
| 60612NP  | ..... | Meter Assy, 9000/9100, 1-inch, Std Range, HW 150°, NP |
| 14038    | ..... | Meter Cap Assy  |
| 15150    | ..... | Meter Cap Assy, Ext                                   |
| 15218    | ..... | Meter Cap Assy  |
| 15218NP  | ..... | Meter Cap Assy, Std, NP                               |
| 15237    | ..... | Meter Cap Assy, Ext                                   |
| 15237NP  | ..... | Meter Cap Assy, Ext, NP                               |
| 13509    | ..... | Impeller, Meter                                       |
| 13509-01 | ..... | Impeller, Celcon, HW 150°                             |

### Meter Assemblies (9500):

|            |       |  |
|------------|-------|--|
| 60610-01   | ..... | Meter, 2850/9500, 1-1/2 inch Std                           |
| 60610-01HW | ..... | Meter, 2850/9500, 1-1/2 inch Std, HW 150°                  |
| 60610-01NP | ..... | Meter, 2850/9500, 1-1/2 inch Std, N/P                      |
| 60610-02   | ..... | Meter, 2850/9500, 1-1/2 inch Ext                           |
| 60610-02HW | ..... | Meter, 2850/9500, 1-1/2 inch Ext, HW 150°                  |
| 60610-02NP | ..... | Meter, 2850/9500, 1-1/2 inch Ext, N/P                      |
| 60610-21   | ..... | Meter, 2850/9500, 1-1/2 inch Std/BSP Metric                |
| 60610-21NP | ..... | Meter, 2850/9500, 1-1/2 inch Std/BSP Metric, Nickel Plated |

## SERVICE ASSEMBLIES *CONTINUED*

|                  |  |
|------------------|--|
| 60610-22 .....   | Meter, 2850/9500, 1-1/2 inch Ext/BSP Metric  |
| 60610-22NP ..... | Meter, 2850/9500, 1-1/2 inch Ext/BSP Metric/Nickel Plated  |
| 60611-01HW ..... | Meter, 2850/9500, 1-inch Sleeve, 1-1/2 inch Std, HW 150°   |
| 60611-01 .....   | Meter, 2850/9500, 1-inch Sleeve, 1-1/2 inch Std Meter  |
| 60611-01NP ..... | Meter, 2850/9500, 1-inch Sleeve, NP 1-1/2 inch Std Meter   |
| 60611-02 .....   | Meter, 2850/9500, 1-inch Sleeve, 1-1/2 inch Ext Meter  |
| 60611-02NP ..... | Meter, 2850/9500, 1-inch Sleeve, NP 1-1/2 inch Ext Meter   |
| 17790.....       | Sleeve, Meter, 1-1/2 inch x 1-inch (NOTE: when reducing a 1-1/2 inch meter to a 1-inch meter, the program wheel and timer settings must be changed to a 1-inch meter size) |

### Meter Checker Kits:

|            |                        |
|------------|------------------------|
| 60460..... | Meter Checker Kit, Std |
| 60461..... | Meter Checket Kit, Ext |

### Piston Assemblies:

|                |  |
|----------------|--|
| 60108.....     | Piston Assy, 9500, Upper               |
| 60108-01 ..... | Piston Assy, 9500, Upper, HW 180°      |
| 60109.....     | Piston Assy, 9500, Lower               |
| 60109-01 ..... | Piston Assy, 9500, Lower HW, 180°      |
| 60400.....     | Piston Assy, 9000/9100, Top            |
| 60400-01 ..... | Piston Assy, 9000/9100, HW Upper, 180° |
| 60401.....     | Piston Assy, 9000/9100, Lower          |
| 60401-01 ..... | Piston Assy, 9000/9100 Lower, HW 180°  |

### Seal & Spacer Kits:

|                |  |
|----------------|--|
| 60125.....     | Seal & Spacer Kit, 5600/9000 Top                   |
| 60125-20 ..... | Seal & Spacer Kit, Top, 559 PE Cold and Chloramine |
| 60125HW .....  | Seal & Spacer Kit, 9000/9100, Upper HW 180°        |
| 60133-01 ..... | Seal & Spacer Kit, 9500, Lower, Cold & HW 180°     |
| 60133-20 ..... | Seal & Spacer Kit, 9500, Lower                     |
| 60133-30 ..... | Seal & Spacer Kit, 9500, Lower                     |
| 60134.....     | Seal & Spacer Kit, 9500, Upper, Cold & HW 180°     |
| 60134-20 ..... | Seal & Spacer Kit, 9500, Upper                     |
| 60134-30 ..... | Seal & Spacer Kit, 9500, Upper                     |
| 60421.....     | Seal & Spacer Kit, 9000/9100, Bottom               |
| 60421-20 ..... | Seal & Spacer Kit, 9000/9100, Bottom 559PE         |
| 60421HW .....  | Seal & Spacer Kit, 9000/9100, Bottom, HW 180°      |

### Second Tank Assemblies (9000):

|                  |   |
|------------------|---|
| 14202-01 .....   | Screw, Hex Washer Mach, 8-32 x 5/16 18-8 S.S. |
| 13255.....       | Clip, Mounting                                |
| 15078-01 .....   | Adapter Assy, 1-inch Coupling                 |
| 14864-01 .....   | Adapter, 9000/9100, 2nd Tank, Machd w/O-rings |
| 14864-01NP ..... | Adapter, 9000/9100, 2nd Tank, Machd,          |

|                  |   |
|------------------|---|
| 15823-06 .....   | NP  |
| 15823-06NP ..... | Yoke Assy, 6-inch Tank & 6-inch Tube              |
| 15823-12 .....   | Yoke Assy, 6-inch - 12-inch Tank, 8-1/2 inch Tube |
| 15823-12NP ..... | Yoke Assy, 6-inch - 12" Tank, NP 8-1/2 inch Tubes |
| 15823-14 .....   | Yoke Assy, 14-inch Tank, 10-1/2 inch Tube         |
| 15823-14NP ..... | Yoke Assy, 14-inch Tank, NP 10-1/2 inch Tube      |
| 15823-16 .....   | Yoke Assy, 16-inch Tank, 12-1/2 inch Tube         |
| 15823-16NP ..... | Yoke Assy, 16-inch Tank, NP 12-1/2 inch Tube      |

### Second Tank Assemblies (9100):

|                |  |
|----------------|--|
| 60425-12 ..... | Tube Assy, 9100, 6-inch - 12-inch Tanks  |
| 60425-16 ..... | Tube Assy, 9100, 13-inch - 16-inch Tanks |
| 14865.....     | Adapter Assy, 2nd Tank, 9100             |
| 61419.....     | Kit, 1.05-inch Distributor Adapter       |

### Second Tank Assemblies (9500):

|                  |  |
|------------------|--|
| 16919-01 .....   | Valve Body, 9500 Machd                                       |
| 16919-01NP ..... | Valve Body, 9500 Machd, NP                                   |
| 16919-21 .....   | Valve Body, 9500 BSP, Mtrc, Machd                            |
| 16919-21NP ..... | Valve Body, 9500 BSP, Mtrc, Machd Nickel Plated              |
| 60715-16 .....   | Tube Assy, 9500, 2nd Tank for 14-inch to 16-inch Tanks       |
| 60715-16NP ..... | Tube Assy, 9500, 2nd Tank, NP for 14-inch to 16-inch Tanks   |
| 60715-20 .....   | Tube Assy, 9500, 2nd Tank for 20-inch Tanks                  |
| 60715-24 .....   | Tube Assy, 9500, 2nd Tank for 20-inch and 24-inch Tanks      |
| 60715-24NP ..... | Tube Assy, 9500, 2nd Tank, Nickel for 20-inch -24-inch Tanks |

### Single Piece Plastic End Cap Assemblies

|                |                              |
|----------------|------------------------------|
| 61701-01 ..... | Plug Assy, End Cap 9000/9100 |
| 61701-02 ..... | Plug Assy, End Cap 9500      |

### Tools:

|            |                              |
|------------|------------------------------|
| 12763..... | Stuffer Tool Assy, 5600/9000 |
| 13061..... | Puller Assy, Port Ring       |
| 13759..... | Tool, DLFC Retainer          |

### Valve Body Assembly (9100):

|            |                       |
|------------|-----------------------|
| 40688..... | Valve Body Assy, 9100 |
| 18303..... | O-ring, -336          |
| 18569..... | Retainer, Tank Seal   |

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