



Fleck 2900s

Service Manual

TABLE OF CONTENTS



JOB SPECIFICATION SHEET

1. Type of Timer:

2. Down flow: Up flow Up flow Variable
3. Meter Size:

4. System Type:

units on and offline based on flow.

5. Timer Program Settings:

Brine Tank Refill:

6. Drain Line Flow Control: _____ gpm
7. Brine Line Flow Controller: _____ gpm
8. Injector Size#: _____
9. Piston Type:

INSTALLATION

Water Pressure

Electrical Facilities

Existing Plumbing

iron filter unit should be installed ahead of the water softener.

Location Of Softener And Drain

breaks and back flow.

BY-PASS VALVES

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

making sure the unit is level and on a firm base.

should be a minimum of 1/2" (13 mm). Backwash flow rates

lines should be the same size as the drain line flow control.

distributor tube flush with the top of the tank.

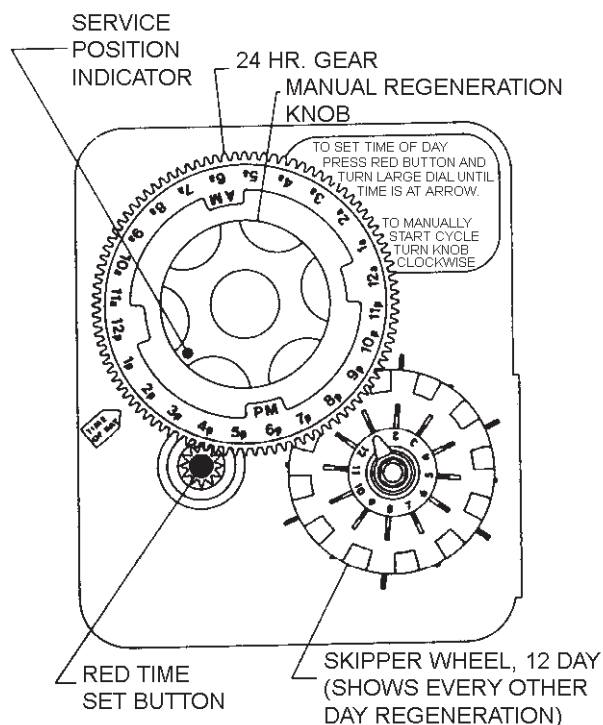
3200 TIMER SETTING PROCEDURE

How To Set Days On Which Water Conditioner Is To Regenerate (Figure 2)

tabs on the skipper wheel outward to expose trip fingers.
clockwise from the red pointer, extend or retract fingers to

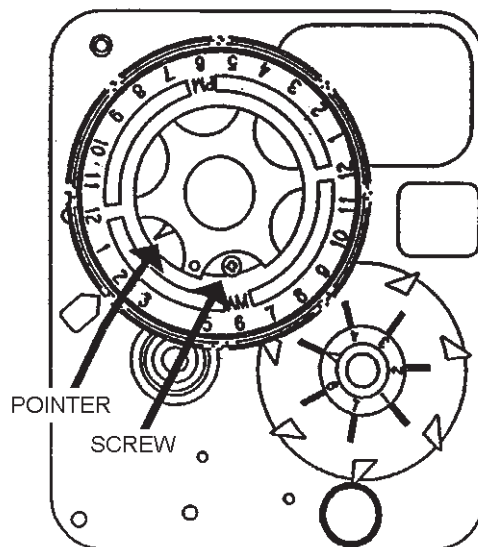
How To Set The Time Of Day

How To Manually Regenerate Your Water Conditioner At Any Time



water stops flowing from the water conditioner drain line.

How to Adjust Regeneration Time



3200 ADJUSTABLE REGENERATION TIMER

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

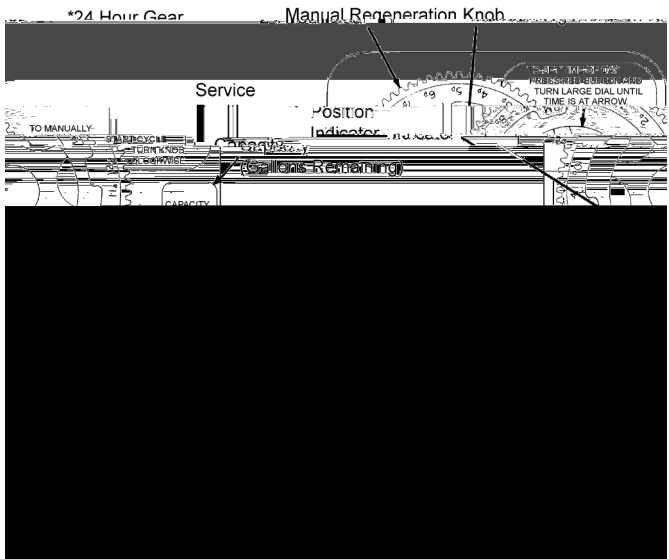
3210 & 3220 TIMER SETTING PROCEDURE

Typical Programming Procedure

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

How To Set The Time Of Day

How To Manually Regenerate Your Water Conditioner At Any Time



water stops flowing from the water conditioner drain line.

Immediate Regeneration Timers

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

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

32

33

34

2

17

18

1

31

30

:

31

3

4

3

5

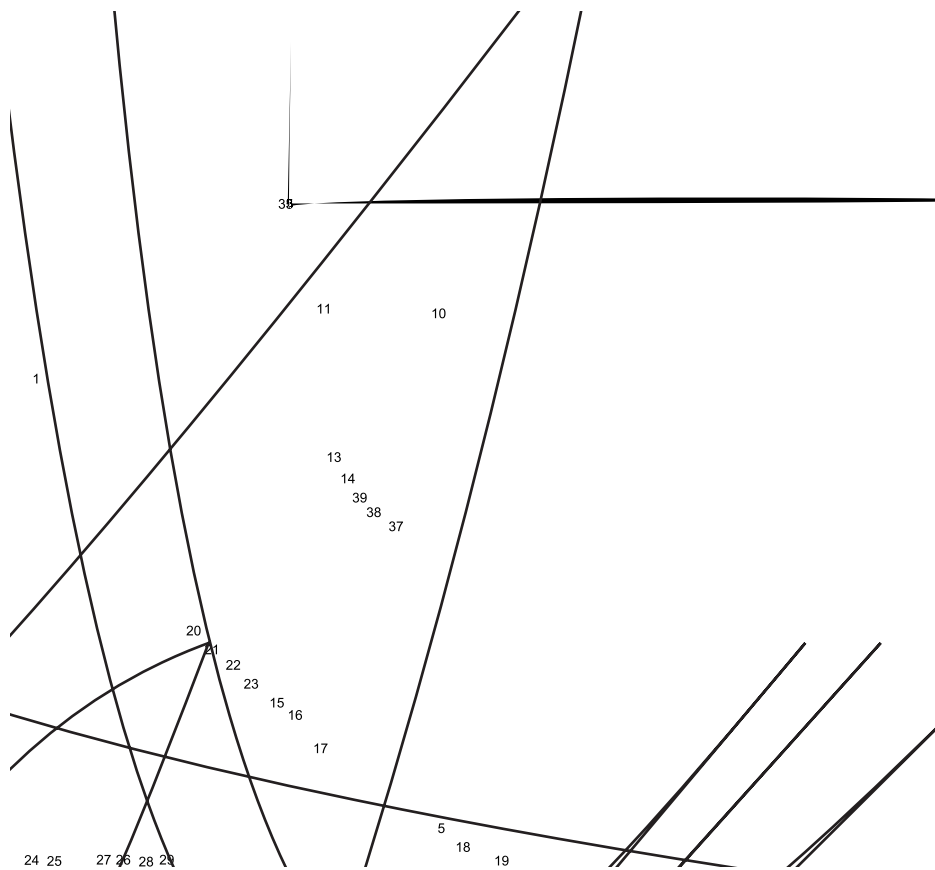
3

6

8

15

3210 METER DELAYED TIMER ASSEMBLY



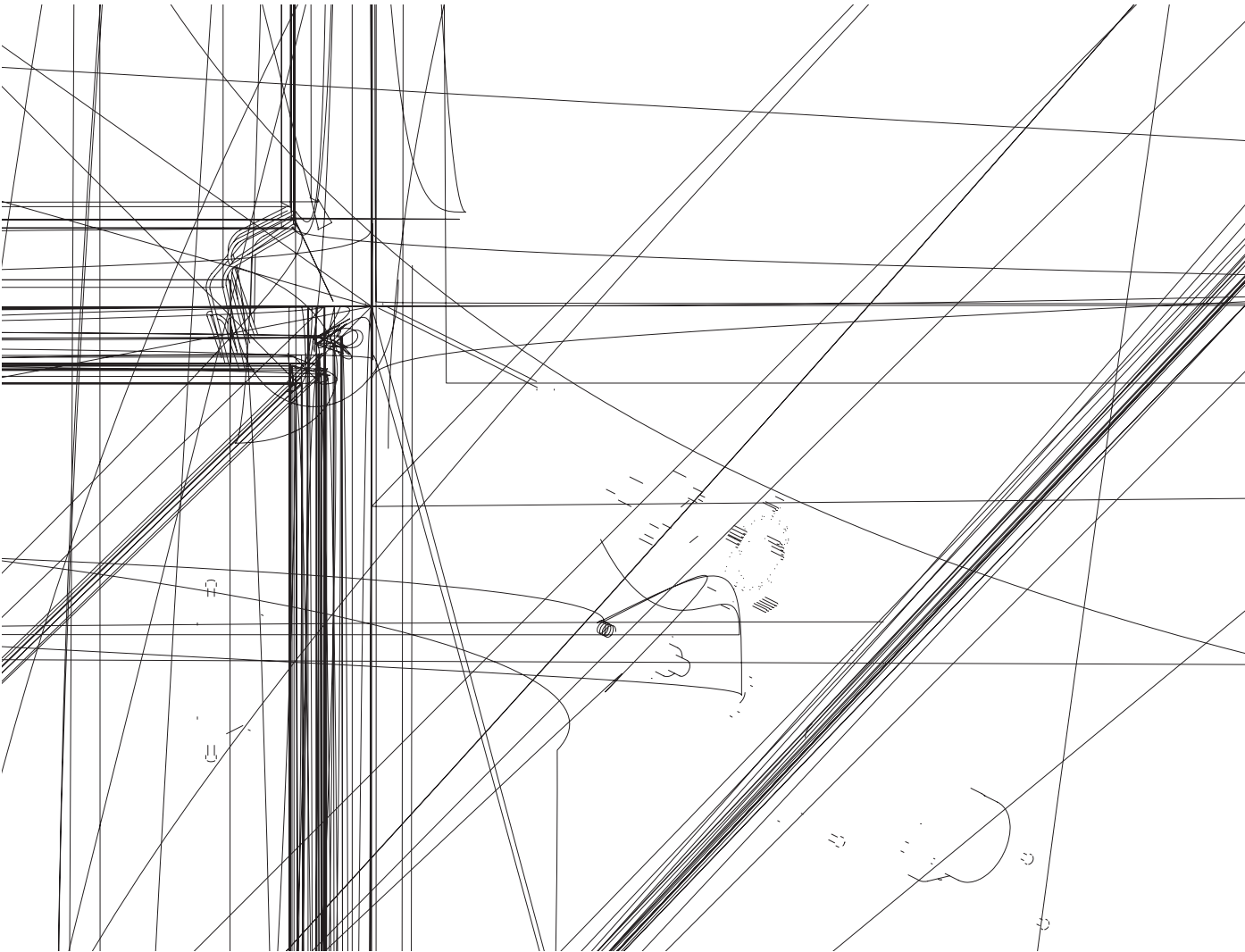
3220 METER IMMEDIATE TIMER
ASSEMBLY

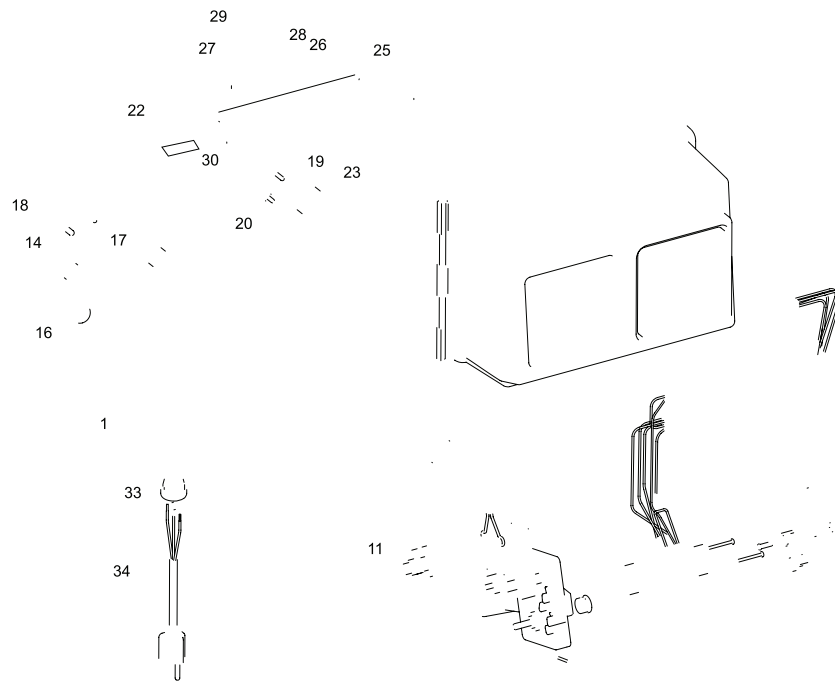


Item No.	QTY	Part No.	Description
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Item No.	QTY	Part No.	Description
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3230 REMOTE START TIMER
ASSEMBLY

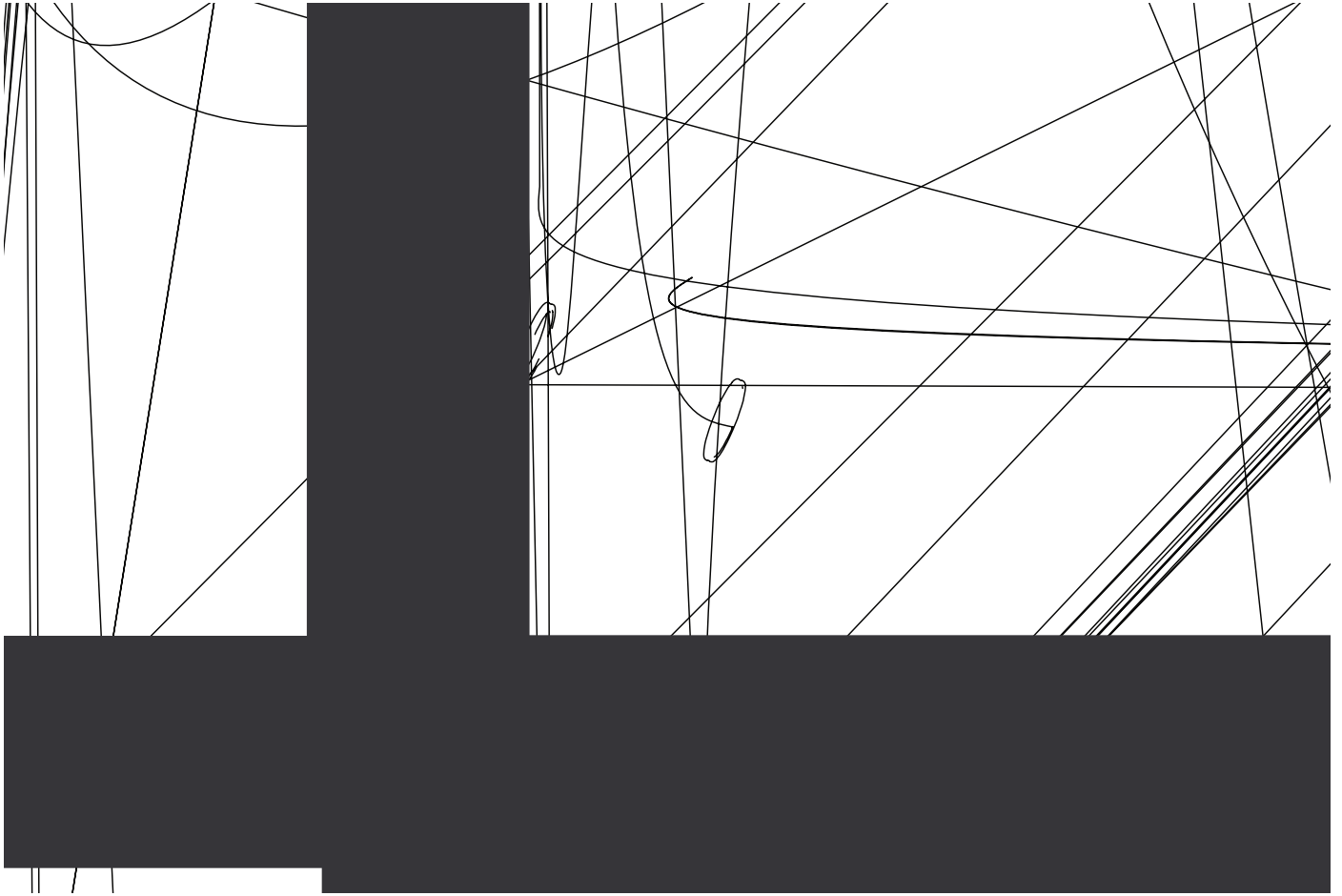




LOWER ENVIRONMENTAL
POWERHEAD ASSEMBLY

Item No.	QTY	Part No.	Description
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1.375	an		<</MCID 2277 >>BDC BT /TT8 1 Tf /Span<</ActualText<FEFF0009>>> BDC 8 0 0 8FFFDFFFDFFFD>>> B
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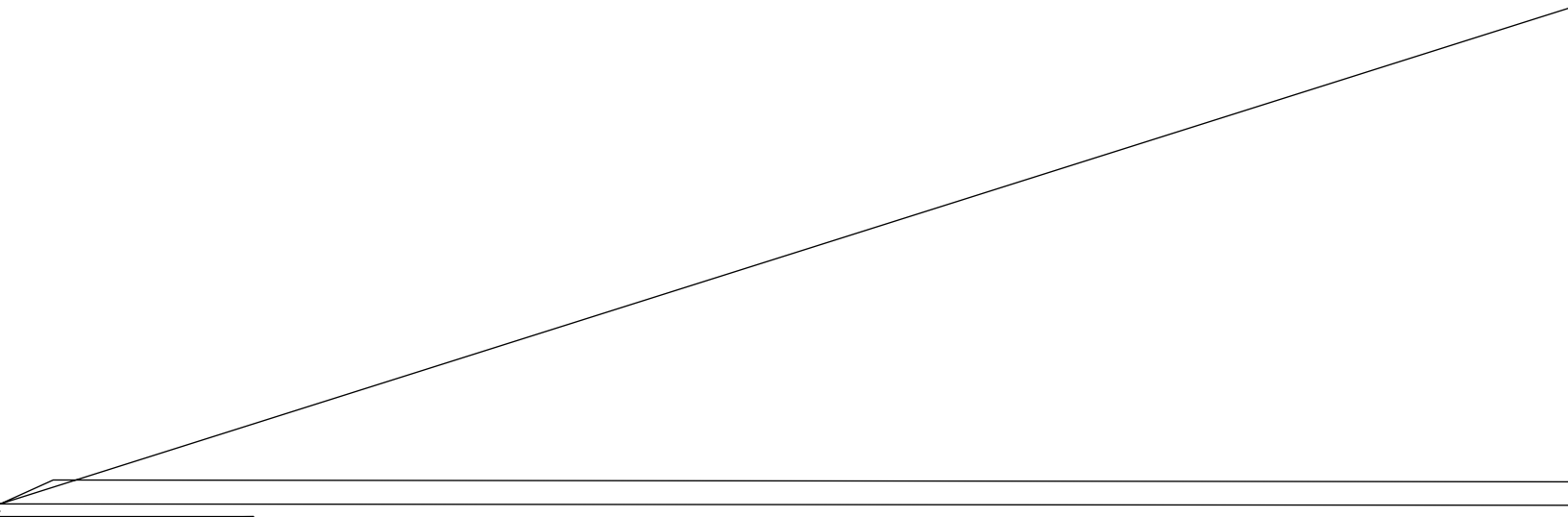
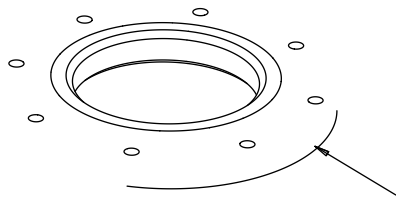
CONTROL VALVE ASSEMBLY *continued*

Item No.	QTY	Part No.	Description	Item No.	QTY	Part No.	Description
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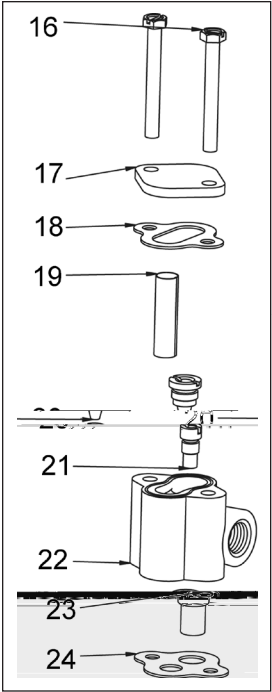
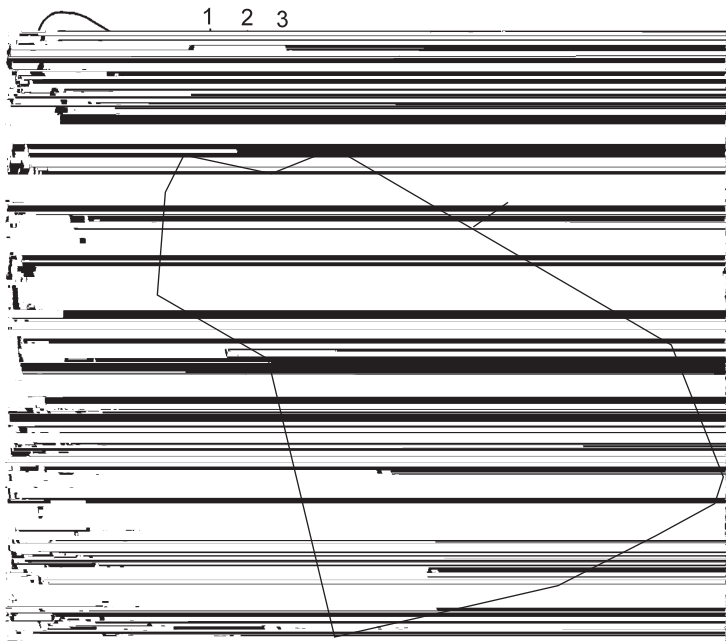
Piston Assy, 2900s, Downfow,
Piston Assy, 2900s, Downfow,
Piston Assy, 2900s, Upfow,
Piston Assy, 2900s, Upfow,

Not Shown:

*Upfow Only



1600 SERIES BRINE SYSTEM



Item No.	QTY	Part No.	Description	Item No.	QTY	Part No.	Description
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1600 SERIES BRINE SYSTEM *continued*

Item No.	QTY	Part No.	Description
			Body, Injector, 1600 Upfow
			Injector Assy, 2900/1600, Upfow,
			Injector Assy, 2900/1600, Upfow,
			Injector Assy, 2900/1600, Upfow,
			Injector Assy, 2900/1600, Upfow,
			Injector Assy, 2900/1600, Upfow,

*Upfow Only

1650 BRINE SYSTEM ASSEMBLY

Injector Assy, 2900/1600, Upfow,

Injector Assy, 2900/1600, Upfow,

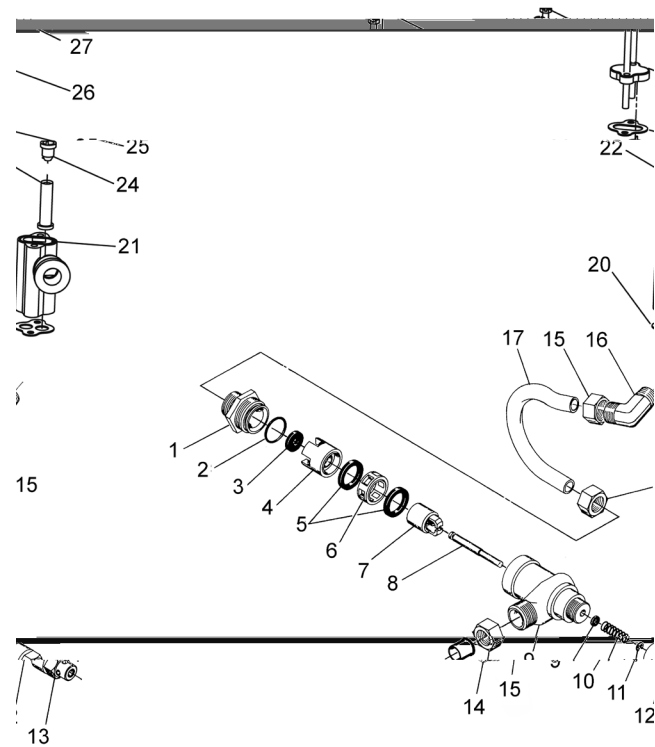
Injector Assy, 2900/1600, Upfow,

Injector Assy, 2900/1600, Upfow,

Injector Assy, 2900/1600, Upfow,

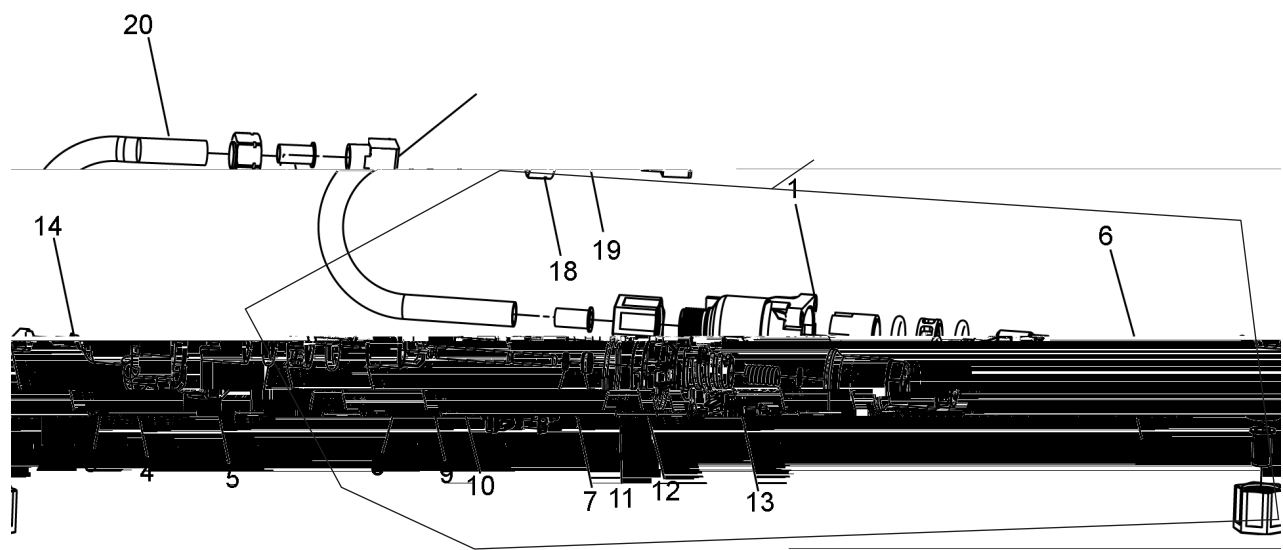
Body, Injector, 1600 Upfow

1700 BRINE SYSTEM ASSEMBLY



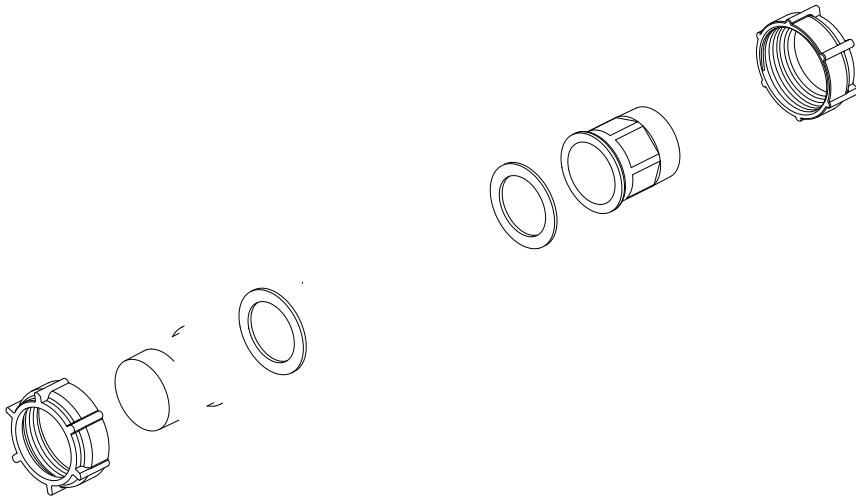
Item No.	QTY	Part No.	Description
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1710 BRINE SYSTEM ASSEMBLY

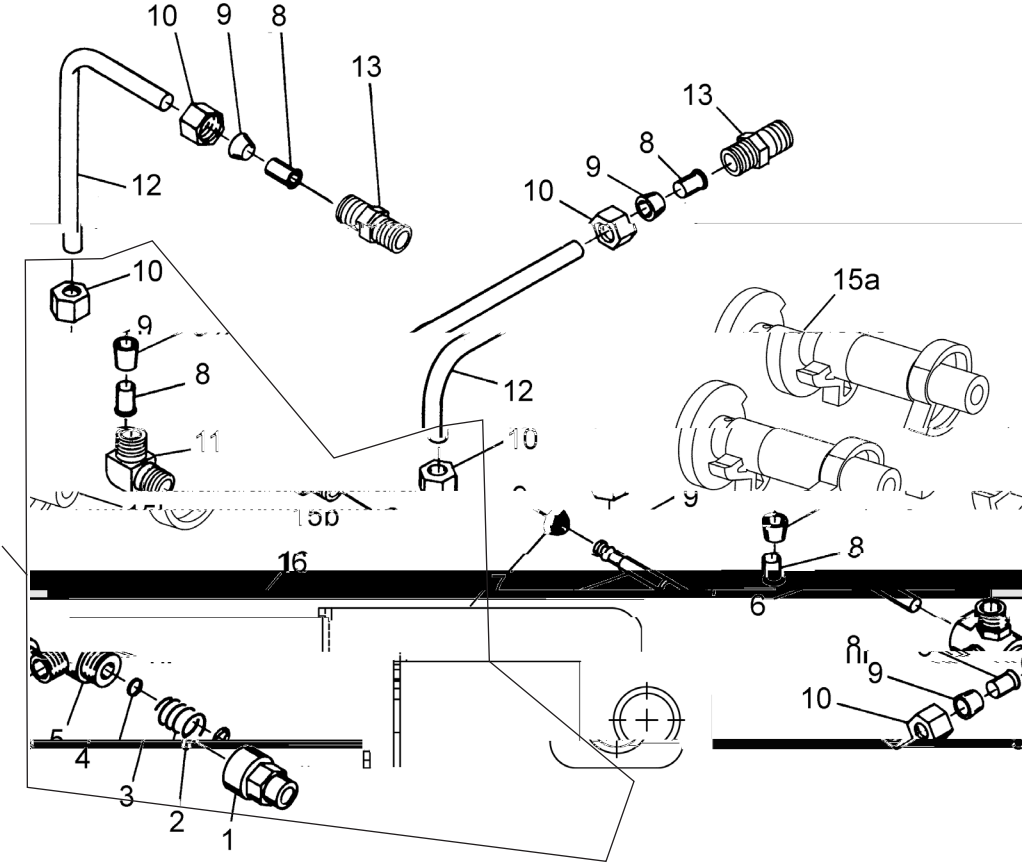


Item No.	QTY	Part No.	Description	Item No.	QTY	Part No.	Description
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Not Shown

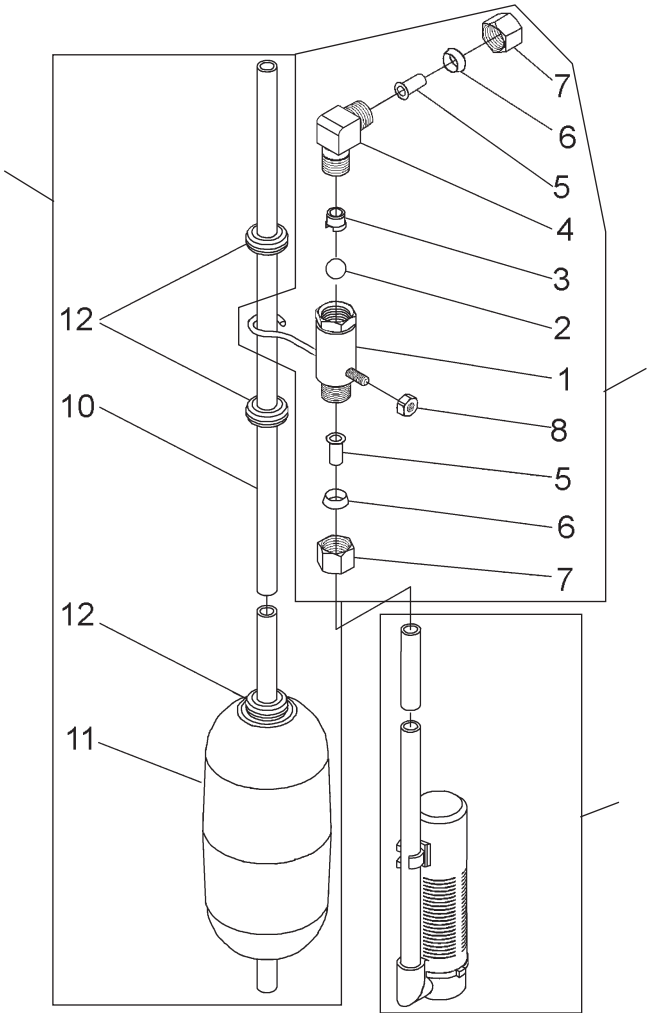


1600 SERVICE VALVE OPERATOR (NEW
STYLE)



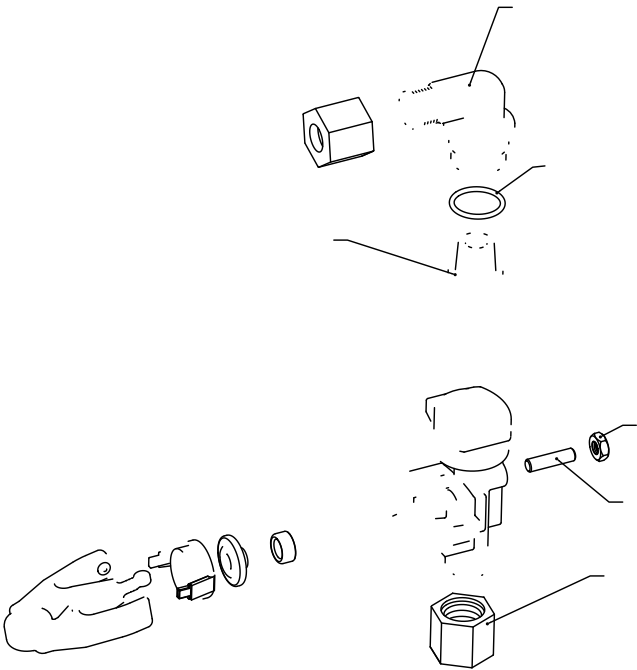
Item No.	QTY	Part No.	Description
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2300 SAFETY BRINE VALVE



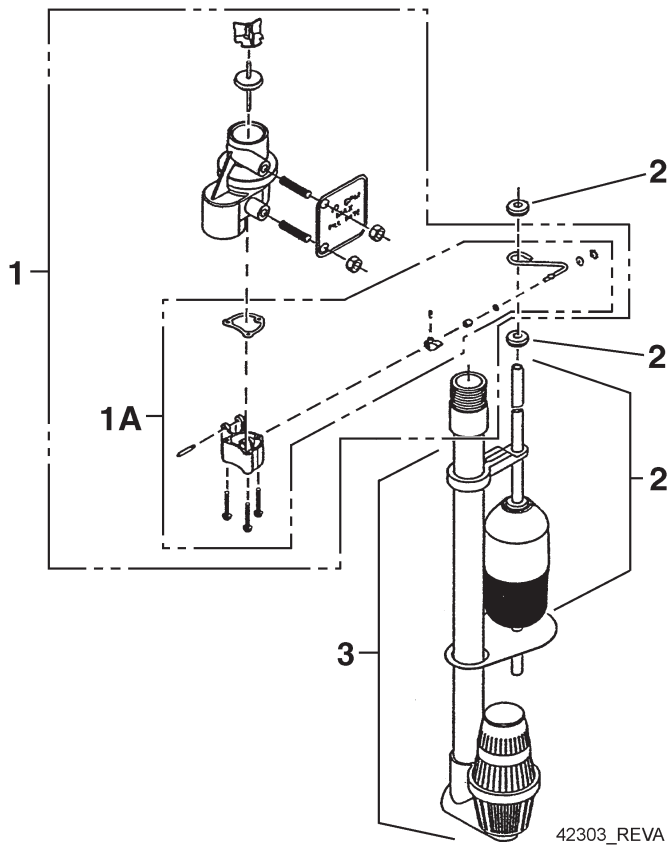
Item No.	QTY	Part No.	Description	Item No.	QTY	Part No.	Description
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2310 SAFETY BRINE VALVE



Item No.	QTY	Part No.	Description
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2350 SAFETY BRINE VALVE



Item No.	QTY	Part No.	Description
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Not Shown

GENERAL SERVICE HINTS FOR METER CONTROL

Problem: Softener delivers hard water

Reason:

Correction:

Reason:

Correction:

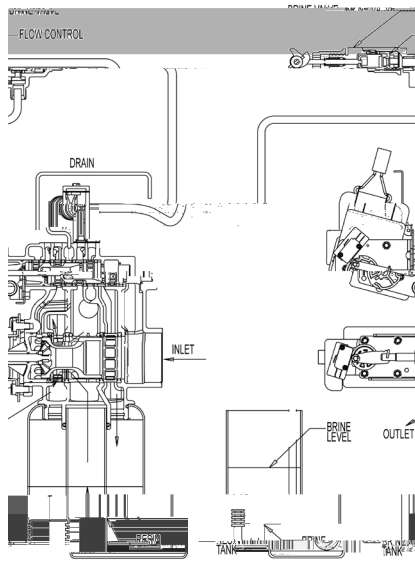
Reason: Meter is not measuring flow.

Correction:

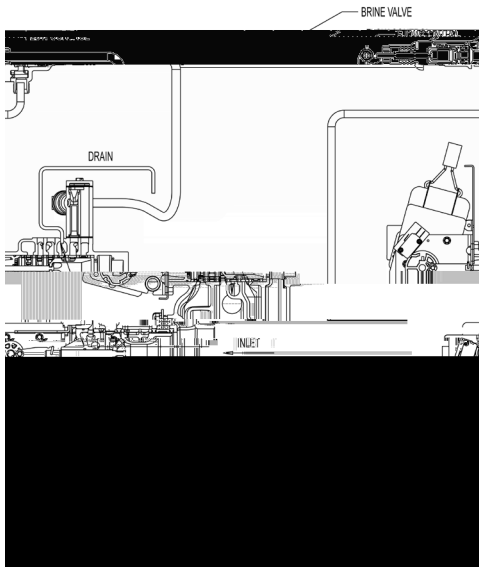
Problem	Cause	Correction
	Insufficient water flowing into brine tank.	Check brine tank fill time and clean brine line flow
		Repeated flushings of the hot water tank is

WATER CONDITIONER FLOW DIAGRAMS - DOWNFLOW

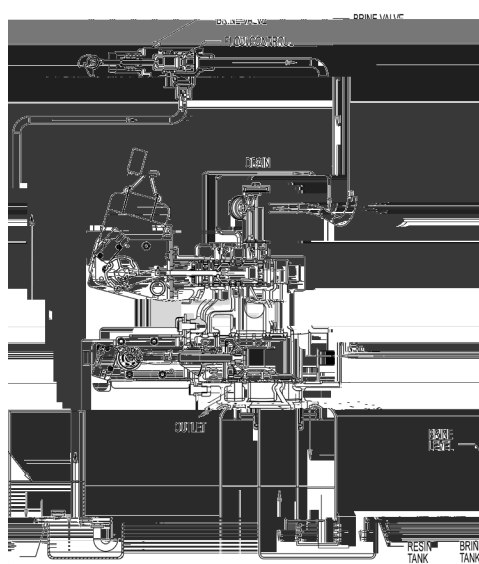
1 Service Position



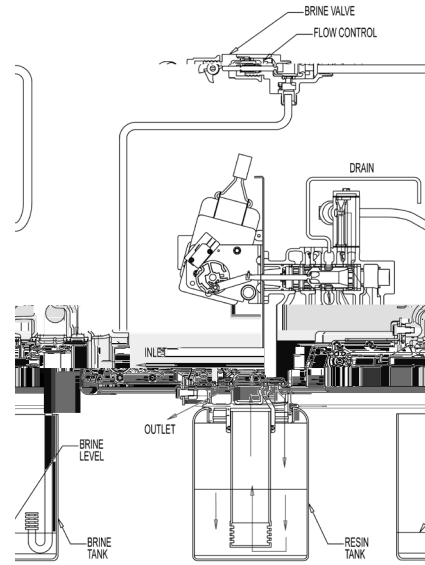
2 Backwash Position



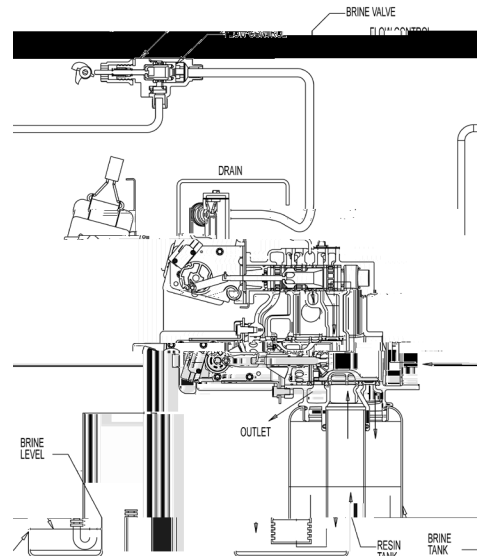
3 Brine Position



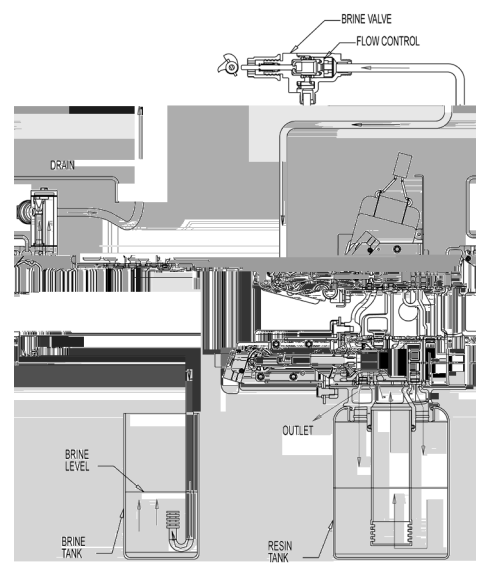
4 Slow Rinse Position



5 Rapid Rinse

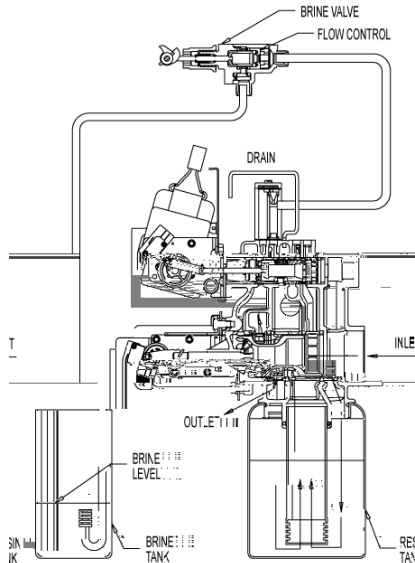


6 Brine Tank Refill Position

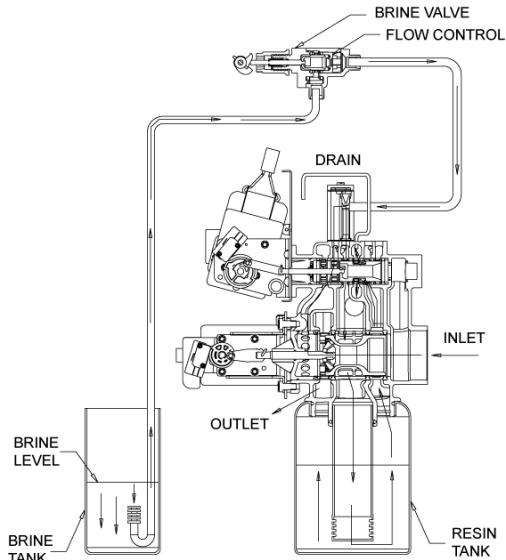


WATER CONDITIONER FLOW DIAGRAMS - UPFLOW

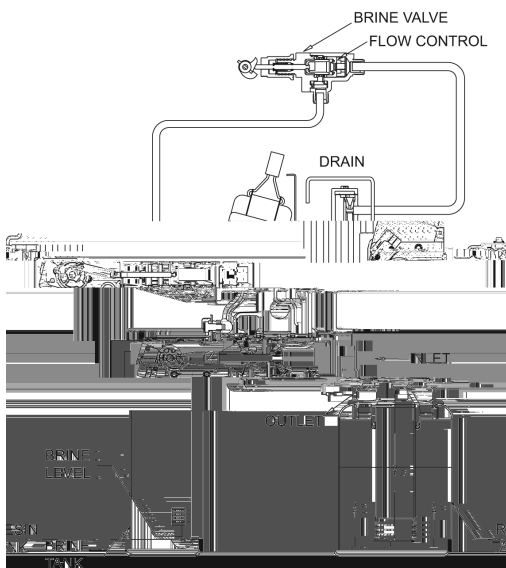
1 Service Position



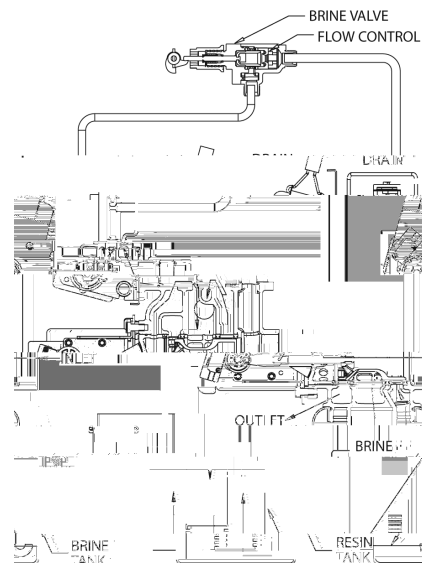
2 Brine Position



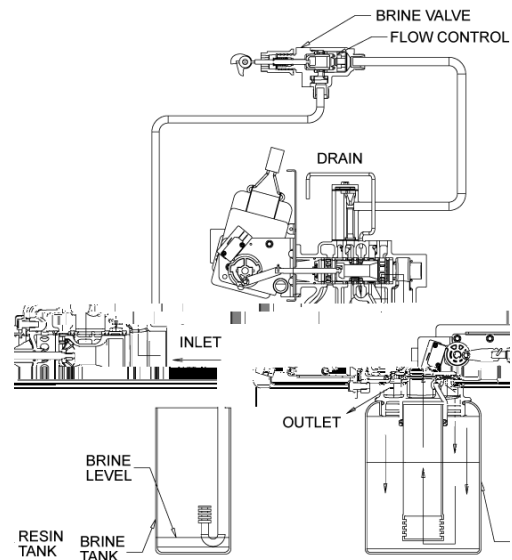
3 Slow Rinse Position



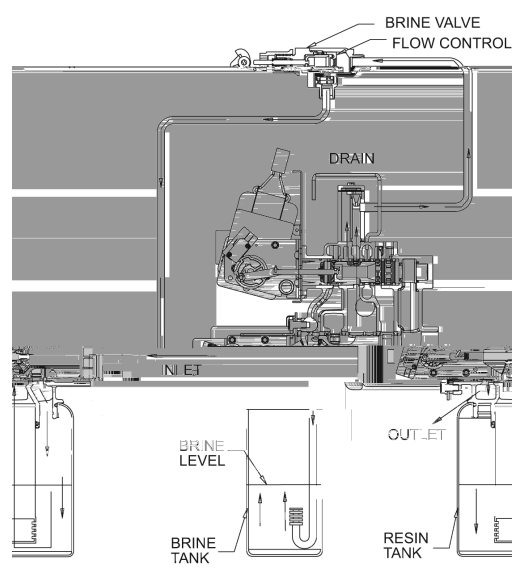
4 Back Wash Position



5 Rapid Rinse



6 Brine Tank Fill Position



TR22089-2900s Valve 1600 Series Injector Draw Rates

44.7
1.76

4.44

4.5
.18

321.2
12.65

INLET

174.8
6.88

55.9
2.20

2"-11 1/2 N.P.T.

31.8
1.25

75.4
2.97

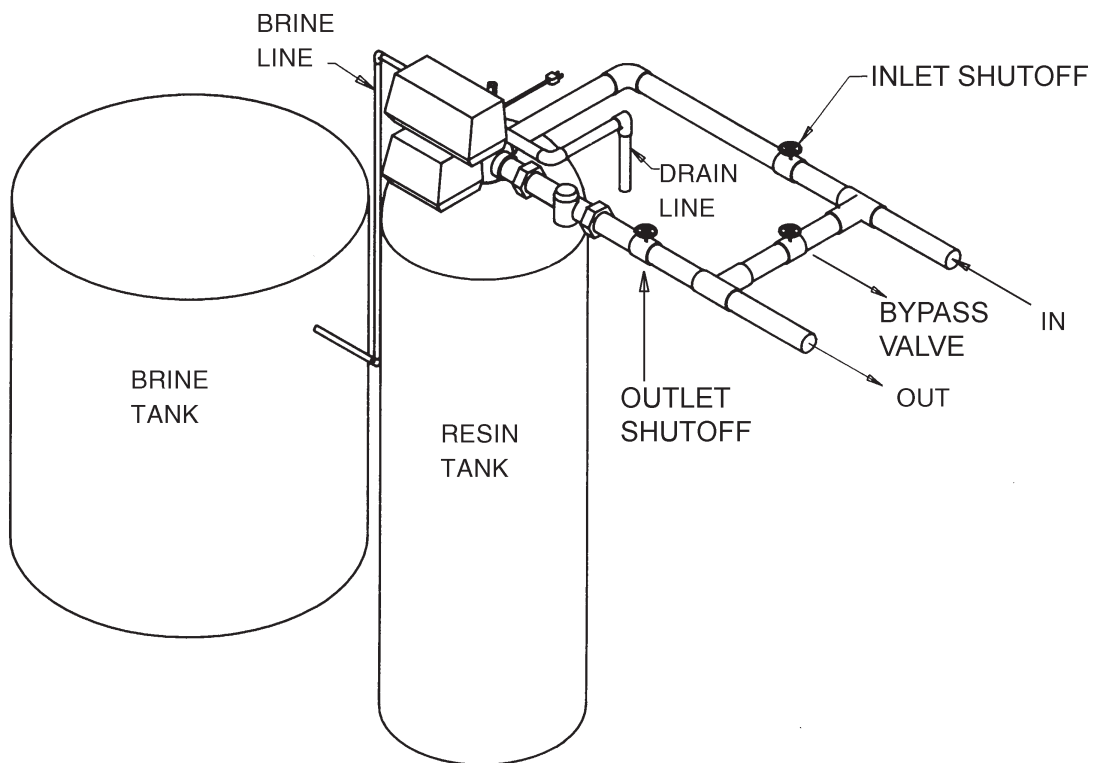
90.9
3.58

OUTLET

226.9
8.93

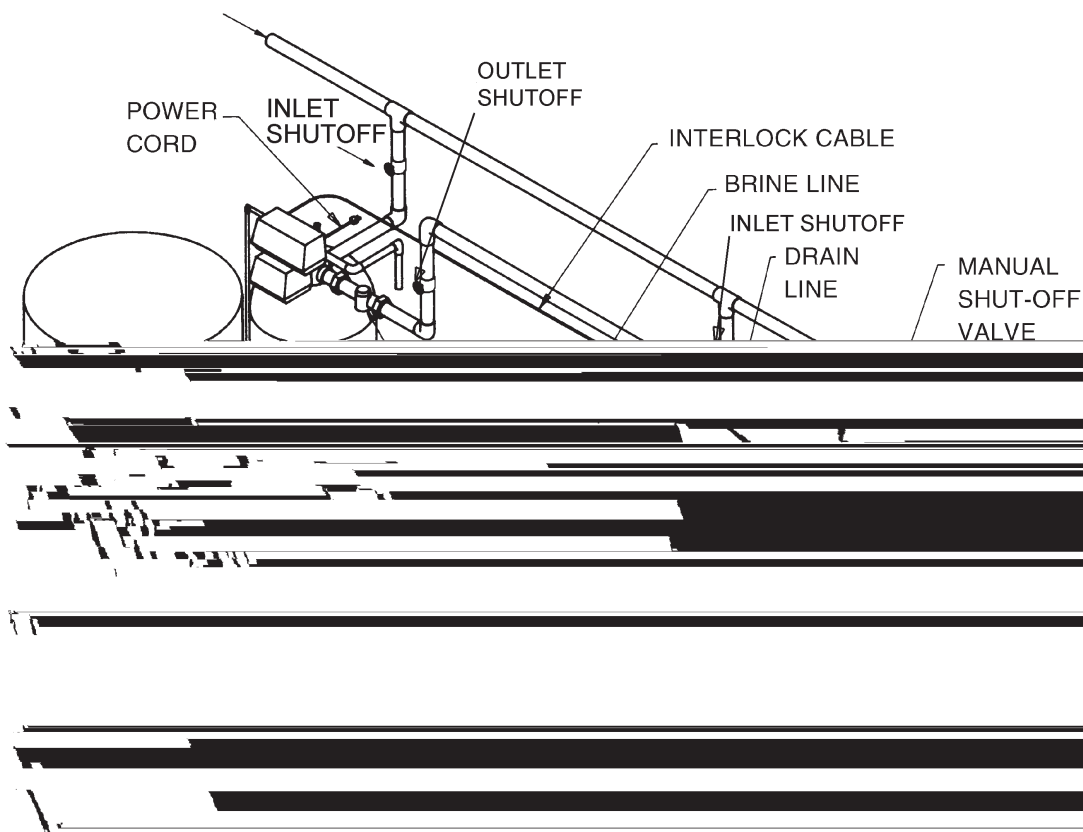
SYSTEM #4

Typical Single Tank Installation with Optional Meter



SYSTEM #5 INTERLOCK

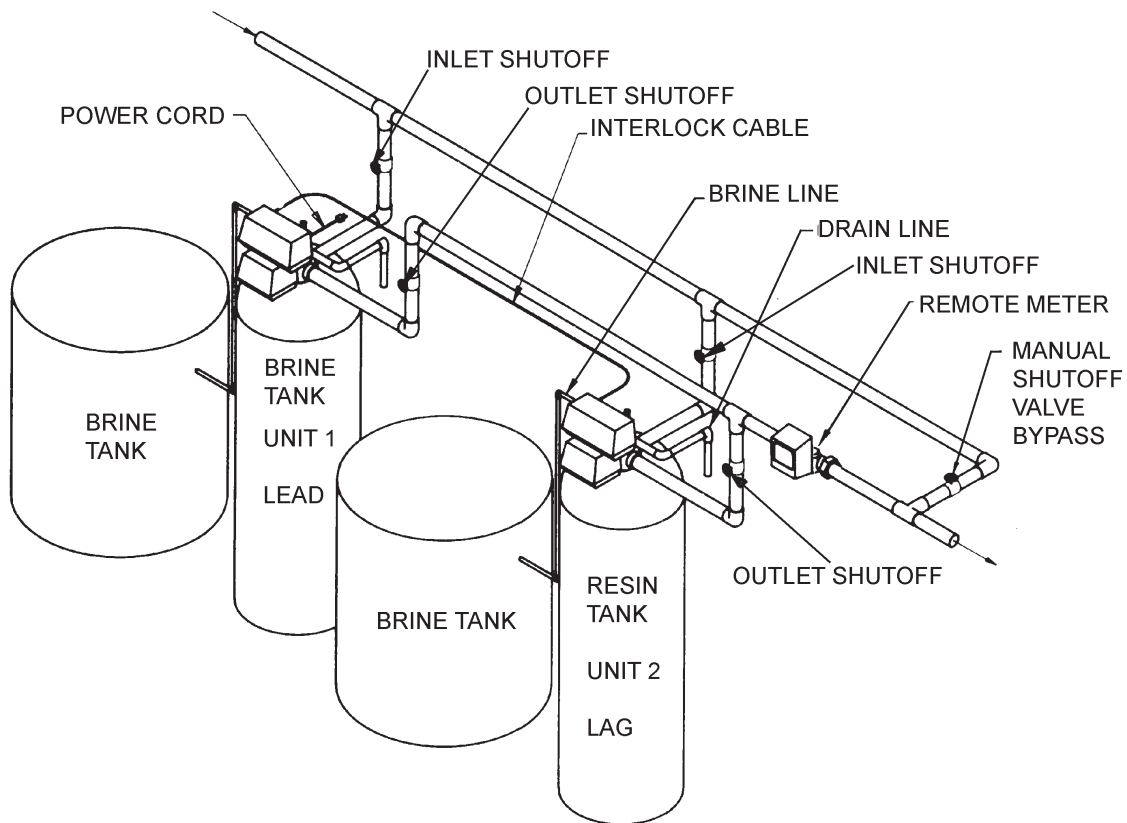
Typical Twin Tank Installation with Optional Meter Interlock and No Hard Water Bypass



SYSTEM #6 & #7

Twin Series Regeneration Installation with a Remote Meter

Twin Alternator Installation

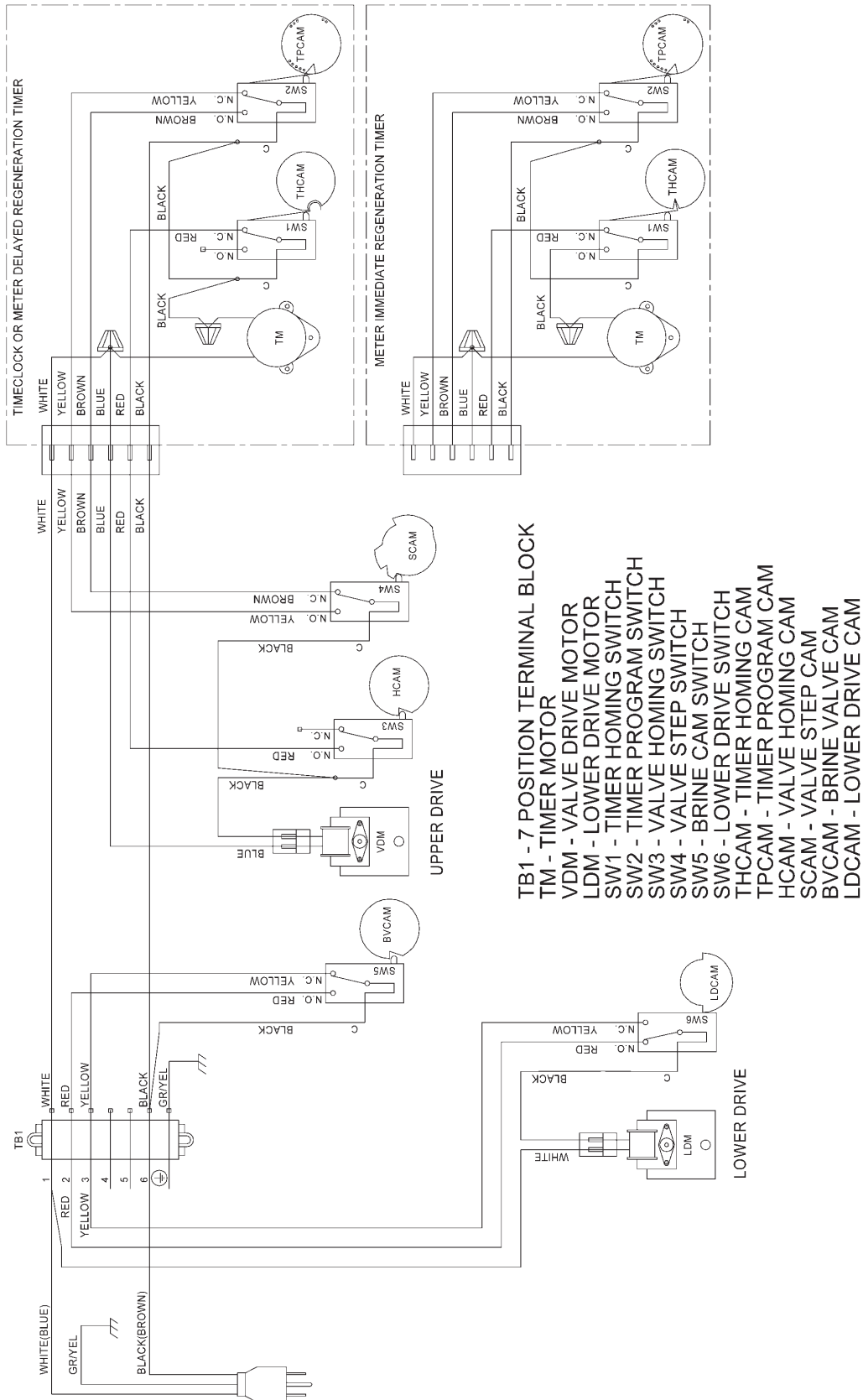


NOTE: On System 7, the power cord is on Unit 2.

NOTE: System 7 can run with either one or two brine tanks. Two brine tanks should be used if regeneration is less than 4 hours.

SYSTEM #4 WIRING

Single Valve Regeneration Immediate and Delayed Valve Wiring



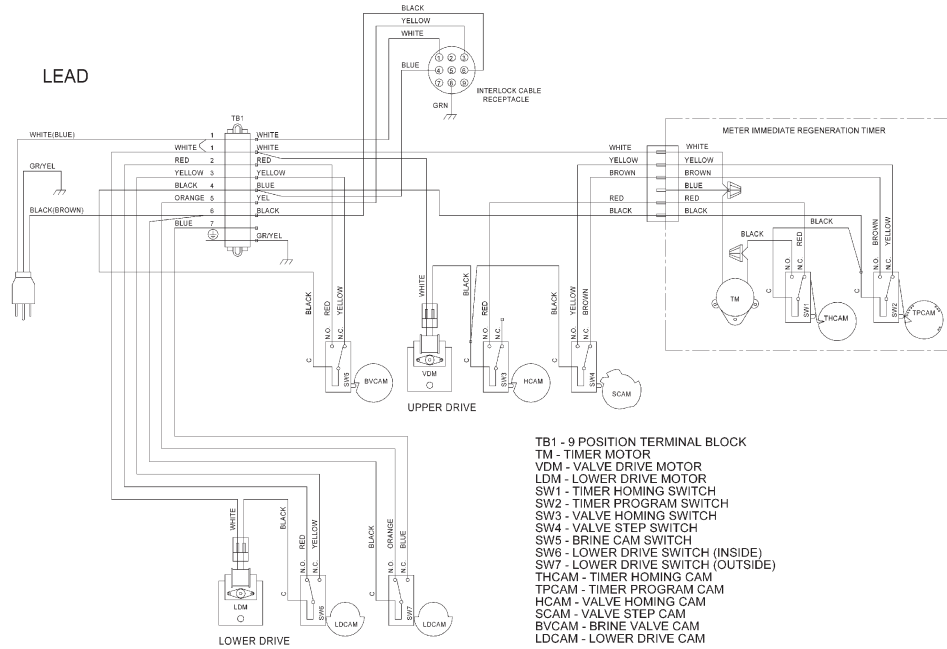
NOTE:
 1. SINGLE TANK TIMECLOCK, METER DELAYED, OR METER IMMEDIATE REGENERATION.
 2. VALVE SHOWN IN SERVICE.

With Remote Starter Valve Wiring



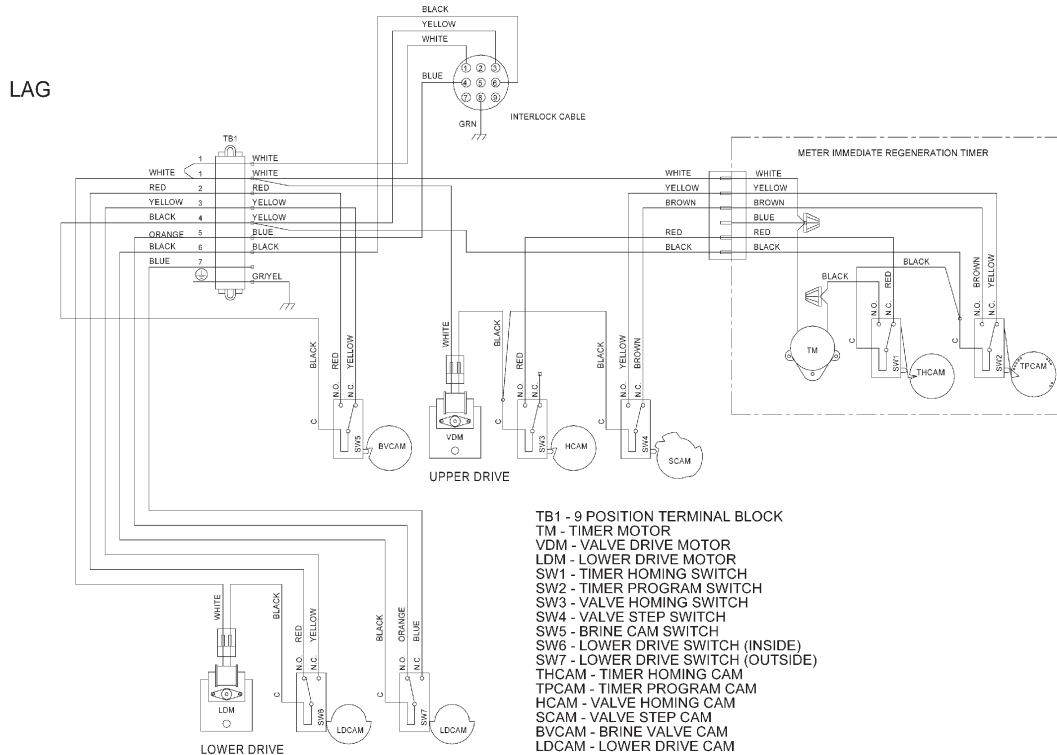
SYSTEM #5 WIRING

Interlocked Regeneration Valve Wiring



NOTE:

1. TWO TANK INTERLOCKED, INDIVIDUAL METER, IMMEDIATE REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
3. VALVE SHOWN IN SERVICE.

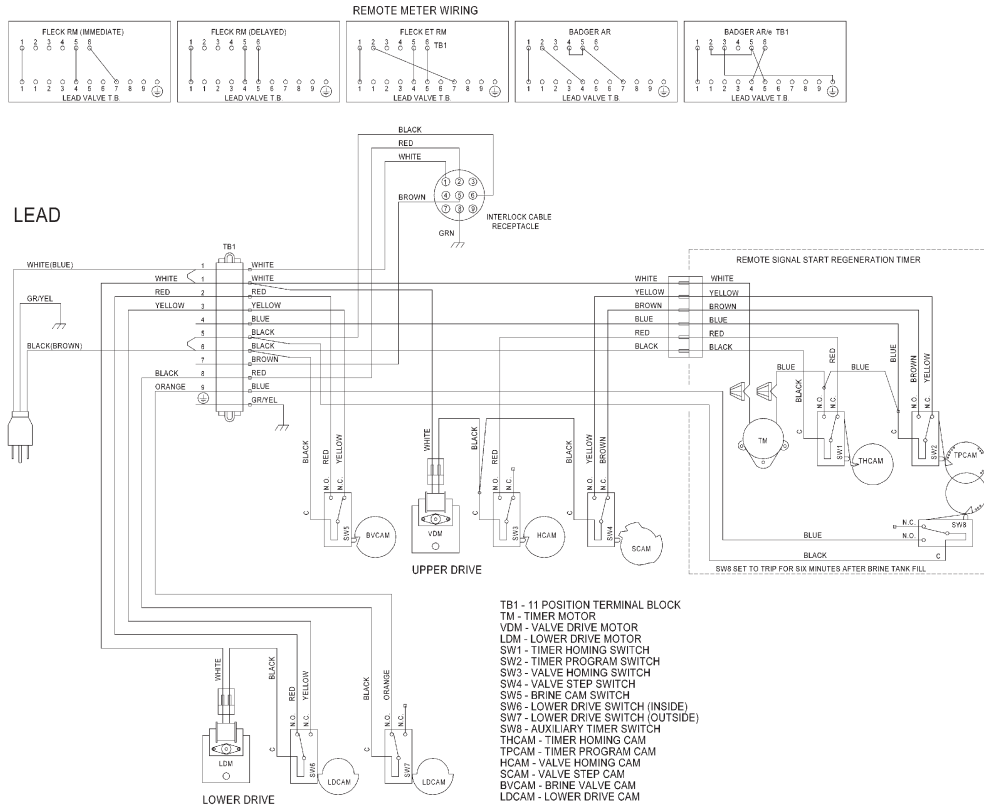


NOTE:

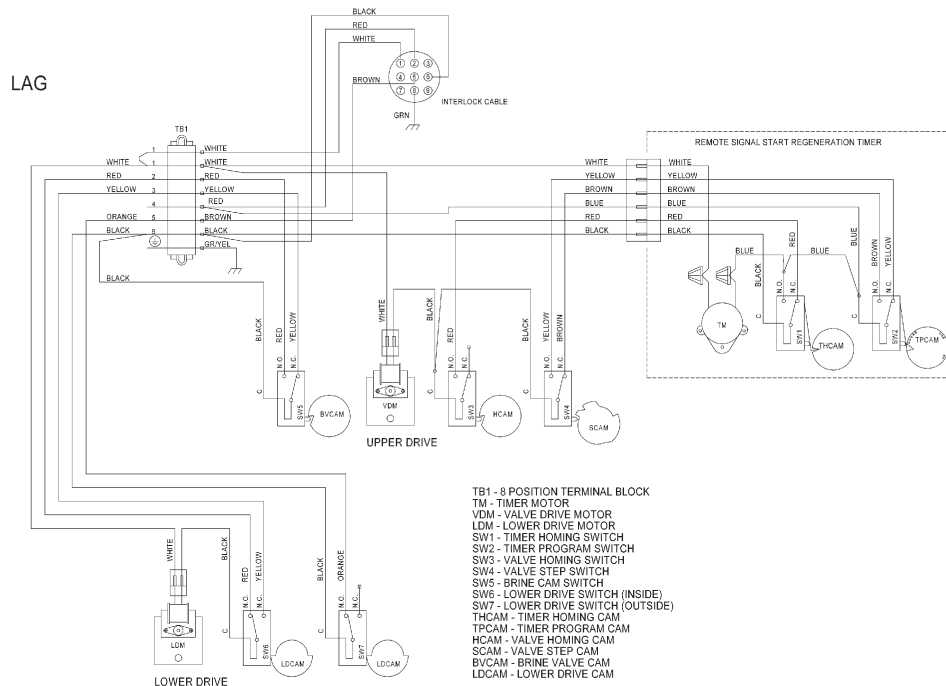
1. TWO TANK INTERLOCKED, INDIVIDUAL METER, IMMEDIATE REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
3. VALVE SHOWN IN SERVICE.

SYSTEM #6 WIRING

Series Regeneration Valve Wiring



NOTE:
1. TWO TANK INTERLOCKED, SINGLE REMOTE METER, SERIES REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE.
3. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
4. LEAD VALVE REGENERATES FIRST, FOLLOWED IMMEDIATELY BY LAG VALVE.
5. VALVE SHOWN IN SERVICE POSITION.

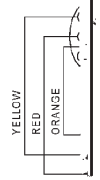


NOTE:
1. TWO TANK INTERLOCKED, SINGLE REMOTE METER, SERIES REGENERATION.

Alternating Regeneration Valve Wiring

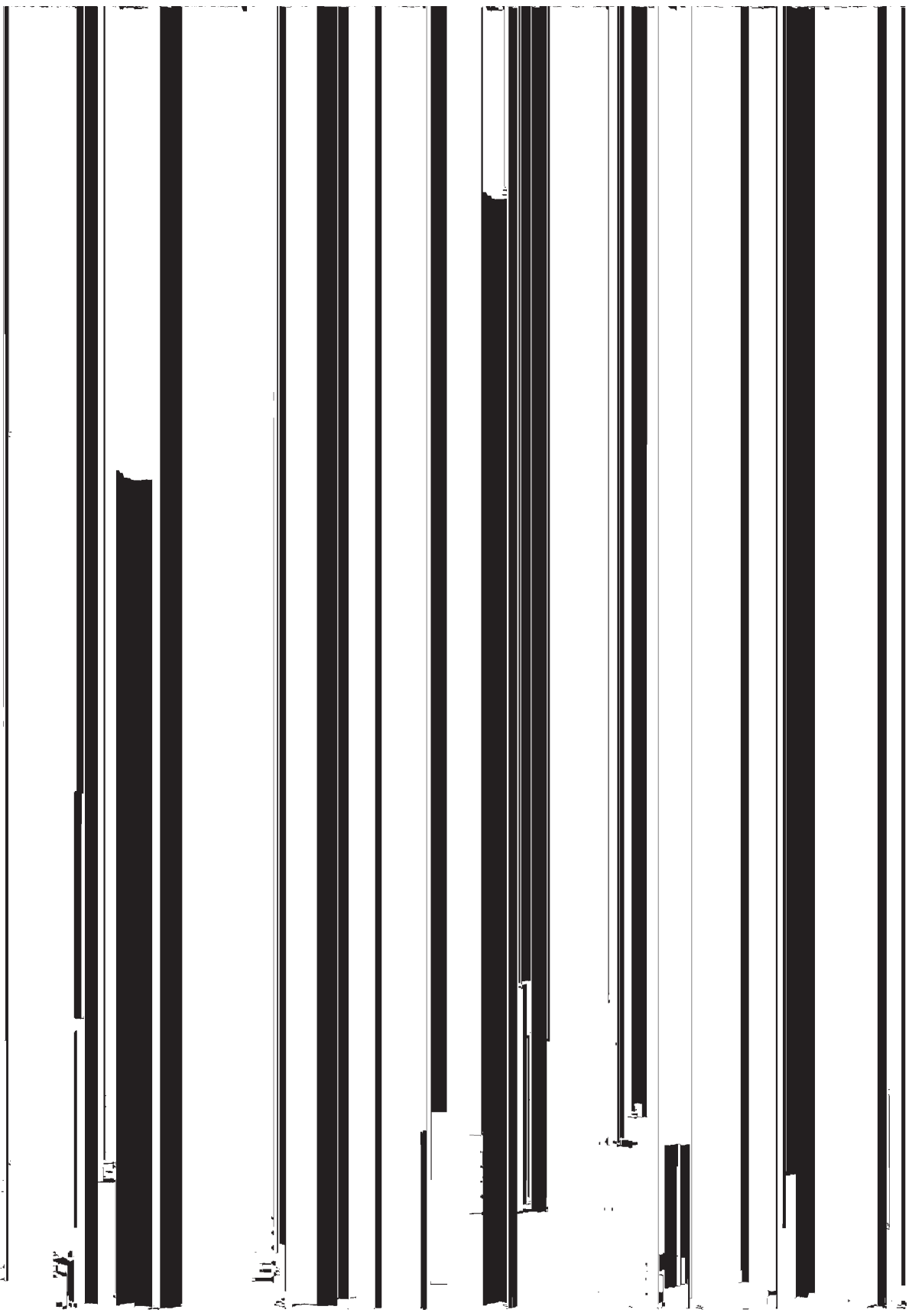


JUMPER PLUG WIRING
JUMPER PLUG PLACED ON LAST VALVE IN SYSTEM



INTERLOCK CABLE
(CONNECT TO UPSTREAM VALVE OR EMPTY METER)

INTERLOCK CABLE RECEPTACLE
(CONNECT TO DOWNSTREAM VALVE OR JUMPER BULB)



1600/1700 SYSTEM NOZZLE & THROAT
CHART

1600 Brine System

Standard

Size	Color	Nozzle	Throat
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PVC

Size	Color	Nozzle	Throat
------	-------	--------	--------

Stainless Steel

Size	Color	Nozzle	Throat
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1700 Brine System

Standard

Size	Color	Nozzle	Throat
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SERVICE ASSEMBLIES

Adapters:

Cam Assemblies:

Drive Cam Assy, Upfow
Drive Cam Assy, Upfow, Variable

24-Hour Gear Assemblies:

Air Checks:

Auxiliary Micro Switch:

Injector Assemblies (Complete):

Brine Line Flow Controls (BLFC):

Brine Valves:

Piston Assemblies:

fow control 1.0 - 5.0)

fow control 1.0 - 5.0)

Piston Assy, 2900s, Downfow Upper
Piston Assy, 2900s Downfow Upper,

Covers:

Piston Assy, 2900s, Upfow Upper
Piston Assy, 2900s, Upfow Upper, HW

Drain Line Flow Controls (DLFC):

- 1" FNPT x ¾" FNPT (specify fow control
- 1" FNPT x 1" FNPT (specify fow control
- 1" FNPT x 1" MNPT (specify fow control
- 1" FNPT x ¾" FNPT (specify fow control
- 1" FNPT x 1" FNPT (specify fow control

Program Wheel Assemblies:

SERVICE ASSEMBLIES *continued*

Safety Brine Valves:

