



FLECK® 3200 NXT
SERVICE MANUAL



TABLE OF CONTENTS

JOB SPECIFICATION SHEET	2
INSTALLATION	3
TIMER OPERATION	3
SYSTEM DEFINITIONS	5
SYSTEM OPERATION IN SERVICE (SYSTEM 14-DEMAND RECALL)	6
FLOW IN A FOUR-UNIT SYTEM (SYSTEM 14-DEMAND RECALL)	7
TIMER DISPLAY FEATURES	7
TIMER DISPLAY - SCREEN EXAMPLES (SYSTEM 4 THROUGH 6)	7
TRANSFORMER AND GROUND CONNECTIONS	8
NETWORK/COMMUNICATION CABLES AND CONNECTIONS	8
MASTER PROGRAMMING MODE FLOW CHART	9
USER PROGRAMMING MODE FLOW CHART	11
DIAGNOSTIC PROGRAMMING MODE FLOW CHART	12
2750/2850/2900S UPPER & 2900S LOWER POWERHEAD ASSEMBLY	14
3150/3900 UPPER & LOWER POWERHEAD ASSEMBLY ...	16
METER ASSEMBLY PLASTIC	18
1-INCH METER ASSEMBLY BRASS	20
1-1/2 INCH METER ASSEMBLY BRASS	21
2-INCH METER ASSEMBLY BRASS	22
3-INCH METER ASSEMBLY BRASS	23
SINGLE PISTON WIRING DIAGRAM	24
DUAL PISTON WIRING DIAGRAM	25
REMOTE TIMER WIRING DIAGRAM	26
2750/2850 REMOTE TIMER WIRING DIAGRAM	27
2900 REMOTE TIMER WIRING DIAGRAM	28
3900 REMOTE TIMER WIRING DIAGRAM	29
3150 REMOTE METER WIRING DIAGRAM	30
TROUBLESHOOTING	31
CALIFORNIA PROPOSITION 65 WARNING	31

JOB SPECIFICATION SHEET

Please Circle and/or Fill in the Appropriate Data for Future Reference:

Programming Mode:

Feed Water Hardness: _____ Grains per Gallon or Liters
 Regeneration Time: Delayed _____ AM/PM or Immediate
 Regeneration Day Override: Off or Every _____ Days
 Time of Day: _____

Master Programming:

System Type:

- 4 - Single Unit
- 5 - Parallel Unit
- 6 - Parallel Series Regen
- 7 - Twin Alternating
- 9 - Alternating
- 14 - Demand Recall

Valve Type: 2750 2850 2900s 3150 3900

System Size: 2 Valves 3 Valves 4 Valves

Valve Address: #1 #2 #3 #4

Regenerant Flow: Downflow or Upflow
 Brine Draw First or Brine Fill First

Display Format: US Gallons or Liters

Unit Capacity: _____ Grains or grams CaCO₃

Capacity Safety Factor: Zero or _____ %

Feed Water Hardness: _____ Grains or milligrams CaCO₃/L

Trip Points (Gallons or M³): _____ Point 1 _____ Point 2 _____
 Point 3

Trip Delays: Delay 1 _____ Delay 2 _____ Delay 3 _____

Regeneration Cycle Step #1: ____ : ____ : ____

Regeneration Cycle Step #2: ____ : ____ : ____

Regeneration Cycle Step #3: ____ : ____ : ____

Regeneration Cycle Step #4: ____ : ____ : ____

Regeneration Cycle Step #5: ____ : ____ : ____

Timed Auxiliary Relay Output Window:

Off or Start Time ____ : ____ : ____

End Time ____ : ____ : ____

Chemical Pump Output Auxiliary Relay:

Off or Volume (Gallons or Liters)

Time ____ : ____ : ____

Fleck Flow Meter Size:

Paddle: 1-inch 1.5-inch 2-inch 3-inch

Turbine: 1-inch 1.5-inch

Generic Flow Meter:

Maximum Flow Rate: Add __ Gallons every __ Pulses



IMPORTANT PLEASE READ:

- The information, specifications and illustrations in this manual are based on the latest information available at the time of printing. The manufacturer reserves the right to make changes at any time without notice.
- This manual is intended as a guide for service of the controller only. System installation requires information from a number of suppliers not known at the time of manufacture. This product should be installed by a plumbing professional.
- This unit is designed to be installed on potable water systems only.
- This product must be installed in compliance with all state and municipal plumbing and electrical codes. Permits may be required at the time of installation.
- If daytime operating pressure exceeds 80 psi, nighttime pressures may exceed pressure limits. A pressure reducing valve must be installed.
- Do not install the unit where temperatures may drop below 32°F (0°C) or above 110°F (43°C).
- Do not place the unit in direct sunlight. Black units will absorb radiant heat increasing internal temperatures.
- Do not strike the controller or any of the components.
- Warranty of this product extends to manufacturing defects. Misapplication of this product may result in failure to properly condition water, or damage to product.
- A prefilter should be used on installations in which free solids are present.
- Correct and constant voltage must be supplied to the controller to maintain proper function.

INSTALLATION

Water Pressure

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

Electrical Facilities

An uninterrupted alternating current (A/C) supply is required.

NOTE: Other voltages are available. Please make sure your voltage supply is compatible with your unit before installation.

TIMER OPERATION

Setting the Time of Day

NOTE: Set Time of Day on the Lead Unit (#1) and the rest of the units in the system will update the Time of Day within 10 seconds.

1. Press and hold the Up or Down button for 2 seconds.
2. Press the Shift button to select the digit you want to modify.
3. Press the Up or Down buttons to adjust the valve.
4. Press the Extra Cycle button to return to the normal display screen, or wait for a 5 second timeout.

NOTE: The "D" button (Diagnostic) can be pressed to exit without saving.

Manually Initiating a Regeneration

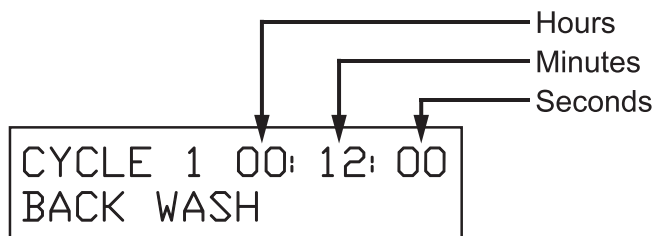
1. When timer is In Service or Stand By, press the Extra Cycle button for 5 seconds on the main screen.
2. The timer advances to Regeneration Cycle Step #1, and begins programmed time count down.
3. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #2 (if active).
4. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #3 (if active).
5. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #4 (if active).
6. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #5 (if active).
7. Press the Extra Cycle button once more to advance the valve back to In Service.

NOTE: A manually initiated or queued regeneration can be cleared by pressing the Extra Cycle button for less than 5 seconds. A system queued regeneration can only be cleared by stepping through a manual regeneration. If regeneration occurs for any reason prior to the delayed regeneration time, the manual regeneration request shall be cleared. Pressing the Extra Cycle button while in regeneration will cause the upper drive to advance to the next step immediately.

TIMER OPERATION *CONTINUED*

Timer Operation During Regeneration

In the Regeneration Cycle step display, the timer shows the current regeneration cycle number the valve is in, or has reached, and the time remaining in that step. Once all regeneration steps are complete the timer returns to In Service and resumes normal operation.



Example: 12 minutes remaining in Cycle 1 (Backwash)



Press the Extra Cycle button during a system queued Regeneration Cycle to immediately advance the valve to the next cycle step position and resume normal step timing.

Flow Meter Equipped Timer

As treated water is used, the Volume Remaining display counts down from the calculated system capacity to zero. When zero is reached a Regeneration Cycle begins if no other units are in regeneration.

Timer Operation During Programming

The timer enters the Program Mode in Standby or Service Mode as long as it is not in regeneration. While in the Program Mode the timer continues to operate normally monitoring water usage. Timer programming is stored in memory permanently.

Timer Operation During A Power Failure

All program settings are stored in permanent memory. Current valve position, cycle step time elapsed, and time of day are all stored during a power failure, and will be restored when power is re-applied. Time is kept during a power failure, and time of day is adjusted upon power up (as long as power is restored within 12 hours).

NOTE: The time of day on the main display screen will flash for 5 minutes when there has been a power outage. The flashing of the time of day can be stopped by pressing any button on the display.

Remote Lockout

The timer does not allow the unit/system to go into Regeneration until the Regeneration Lockout Input signal to the unit is cleared. This requires a contact closure to activate the unit. The recommended gauge wire is 20 with a maximum length of 500 feet. See P4 remote inputs in the wiring diagrams in the service manual.

Regeneration Day Override Feature

If the Day Override option is turned on and the valve reaches the set Regeneration Day Override value, the Regeneration Cycle starts if no other unit is in Regeneration. If other units are in regeneration, it is added to a regeneration queue. This occurs regardless of the remaining volume available.

⚠ WARNING: Transformer must be grounded and ground wire must be terminated to the back plate where grounding label is located before installation.

SYSTEM DEFINITIONS

System Number	System Description	# of Tanks/ Controls	Type	Operation Discussion
4	Single Unit	1	Time Clock: No Meter Immediate: One Meter Delayed: One Meter Remote Signal Start: No Meter	Single tank configuration.
5	Interlocked	2, 3, or 4	Immediate: All Meters Remote Signal Start: No Meter	All tanks in parallel supplying treated water. Each unit in the system will have its own flow meter/sensor input. The control will delay the start of Regeneration if another unit is already in Regeneration. Once that unit has completed a Regeneration cycle, and has returned to Service, the unit with longest regeneration queue time will begin Regeneration. No more than one unit will be in Regeneration at a time.
6	Series Regeneration	2, 3, or 4	Immediate: One Meter Delayed: One Meter Remote Signal Start: No Meter	All tanks in parallel supplying treated water. Only #1 control will monitor flow meter/sensor input. When a regeneration is required for the system, it will regenerate valve address #1 first, immediately followed by #2, then #3, then #4 if installed. No more than one unit will be in Regeneration at a time.
7	Twin Alternating	2	Immediate: One Meter Remote Signal Start: No Meter	One tank online supplying treated water, one tank in Standby. Only #1 control will monitor its flow meter/sensor input. Regeneration of a unit will begin after the other control has left Standby and returned to Service. When the Regeneration cycle is complete, the regenerated unit will enter Standby. Standby on each tank is controlled by the lower drive output terminals on the NXT circuit board.
9	Multiple Tank Alternating	2, 3, or 4	Immediate: All Meters Remote Signal Start: No Meter	One, two, or three tanks online supplying treated water, one tank in Standby. Meter/sensor input is required on each tank. Regeneration of a unit will begin after the other control has left Standby and returned to Service. When the Regeneration cycle is complete, the regenerated unit will enter Standby. Standby on each tank is controlled by the lower drive output terminals on the NXT circuit board.
14	Demand Recall	2, 3, or 4	Immediate: All Meters	Meter input is required on each tank. Unit #1 will begin In Service with #2, #3, and #4 (if installed) will begin in Standby. At least one unit is In Service at all times. When flow rate to the Primary Service Unit increases to a user specified rate, the next unit in sequence will move from Standby to Service. As the flow rate falls below the user specified rate subsequent tanks will return to Standby. When the Primary Service Unit regenerates, the next unit in sequence will become the new Primary Service Unit. As each units capacity is reached the controller will initiate a Regeneration of that unit. Depending on the number of units in the system, and flow rate demand the regenerated unit will then be placed either into Standby or Service. Only one unit will be in Regeneration at a time.

SYSTEM OPERATION IN SERVICE (SYSTEM 14-DEMAND RECALL)

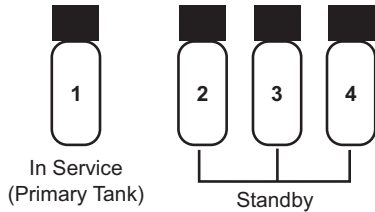
The system operates as part of a multi-valve regeneration system.

Each valve in the system will have an active flow meter input, even in Standby.

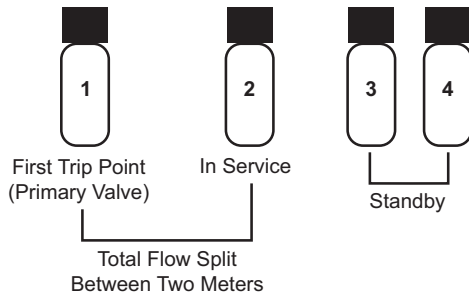
The number of valves in service depends on the flow rate.

Examples of a Four-Unit System:

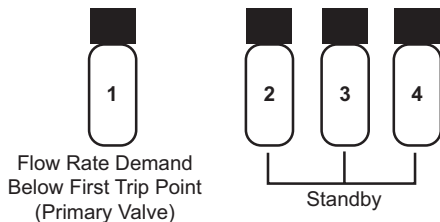
1. One Valve is in service at all times (the "primary valve").



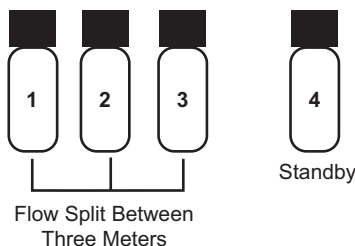
2. The total flow rate to the primary valve increased past the first trip point programmed rate. The flow stayed past the trip point delayed time. The next valve (least volume remaining) changes from Standby to In Service. This valve then splits the total flow between two meters.



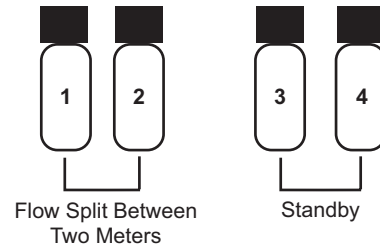
3. The flow rate demand decreased below the first trip point. The valve returns to Standby.



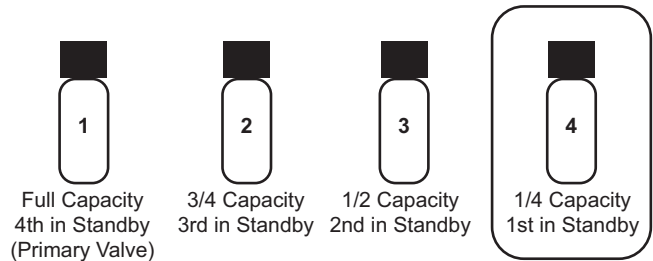
4. Total flow rate demand increased past a second trip point programmed rate. The second and third valve (least volume remaining) changes from Standby to In Service. The total flow is split between the three meters.



5. The third valve returns to stand by as demand decreases past the second trip point.

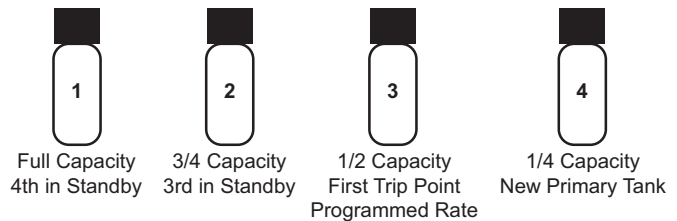


6. Valves return to stand by due to decreased total flow rate and trip points programmed. The valve with the most remaining volume will be the first to go into Standby.



7. The primary valve regenerates. The next valve with the least remaining volume becomes the new primary valve. The valve with the next least volume remaining will be the first trip point programmed rate. Valves continue operating in this order.

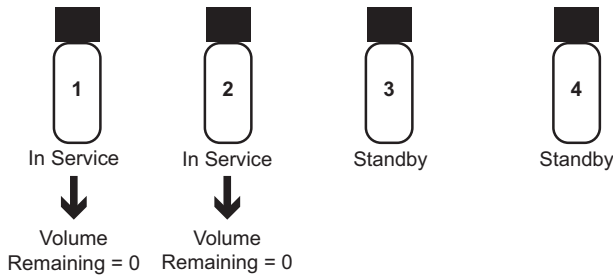
System Operation in Regeneration:



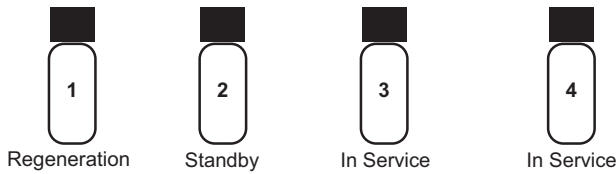
If two valves are In Service and both reach Volume Remaining = 0, the other two valves will shift from Standby to In Service. The lead valve with Volume Remaining = 0 will start regeneration. The second valve with Volume Remaining = 0 will enter Standby. If flow increases past the trip point a third valve needs to enter In Service. The valve in Standby with Volume Remaining = 0 will shift into In Service to maintain a steady flow. Operating for extended periods in this mode may degrade the water quality.

FLOW IN A FOUR-UNIT SYTEM (SYSTEM 14-DEMAND RECALL)

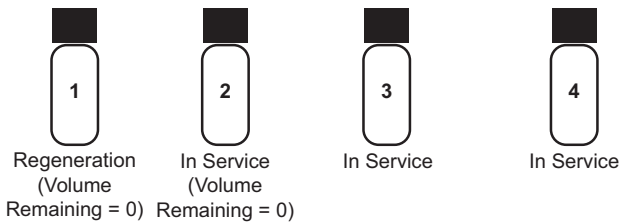
Steady Flow:



Flow Stays Steady:



Flow Increases Past the Trip Point:



TIMER DISPLAY FEATURES

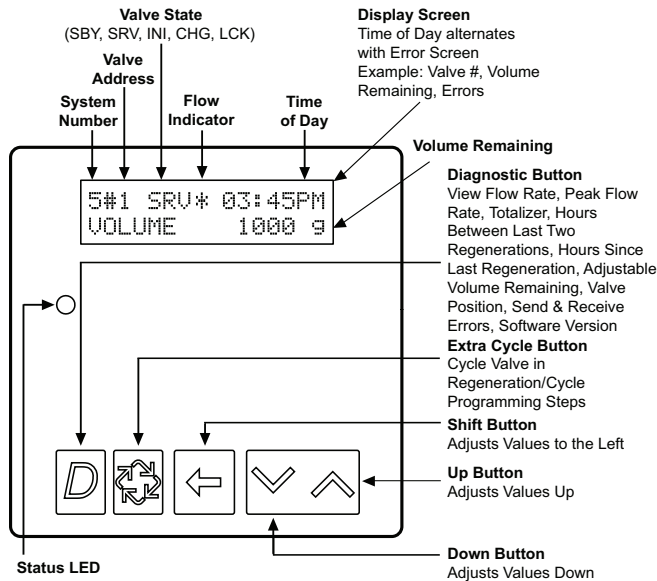


Figure 1

Valve State

CHG (Change of State) - CHG will be displayed when the lower drive changes from one state to another in dual piston valves.

INI (Initializing) - INI will display on the screen for 30 to 45 seconds when initializing after a power failure reset or programming.

RGQ (Regeneration Queued) -RGQ indicates that the reserve has been entered in a delayed system and regeneration has been queued. When in the main screen, press the Extra Cycle button to toggle service (SRV) with RGQ.

Service (SRV) - SRV will display when the unit is in service.

LCK (Lock) - Lock will be displayed when the terminal/remote input block P4 on the circuit board is switched to "lock". See the "Network/Communication Cables & Connections" section of this manual.

LED Status Lights

Blue LED - Illuminates while the unit is in service and no errors exist. A blinking blue light indicates the timer is in service, and queued for regeneration.

Green LED - Illuminates when the unit is in Regeneration mode, unless an error condition exists. A blinking green light indicates the timer is in Standby, and not in Regeneration.

Red LED- Illuminates when there is an error.

Flow Indicator

A rotating line (appearing as a rotating star shape) will display on the screen when flow is going through the meter.

TIMER DISPLAY - SCREEN EXAMPLES (SYSTEM 4 THROUGH 6)

1. In Service: System 4 Time Clock

```
4#  SRV  03:45PM
REGEN IN 07 DAYS
```

2. In Service: System 4 Flow Meter Initiated or System 4 Flow Meter Delayed

```
4#  SRV* 03:45PM
VOLUME 1000 g
```

3. In Service: System 5 Flow Meter Initiated (Lead Unit)

```
5#1 SRV* 03:45PM
VOLUME 1000 g
```

4. In Service: System 5 Flow Meter Initiated (Lag Unit #3)

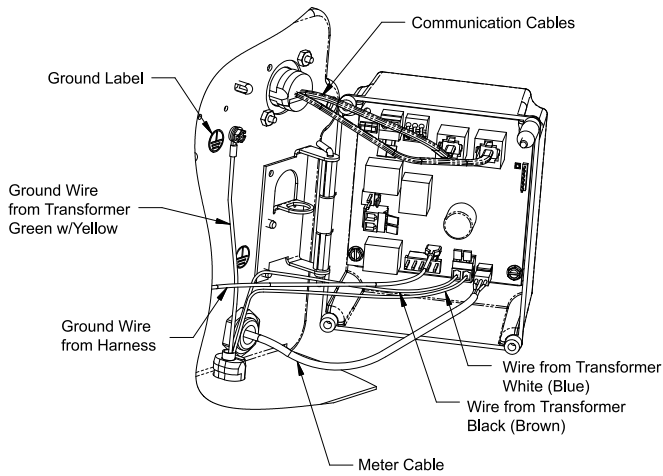
```
5#3 SRV  03:45PM
VOLUME 1000 g
```

5. In Service: System 6 Flow Meter Initiated (Lead Unit)

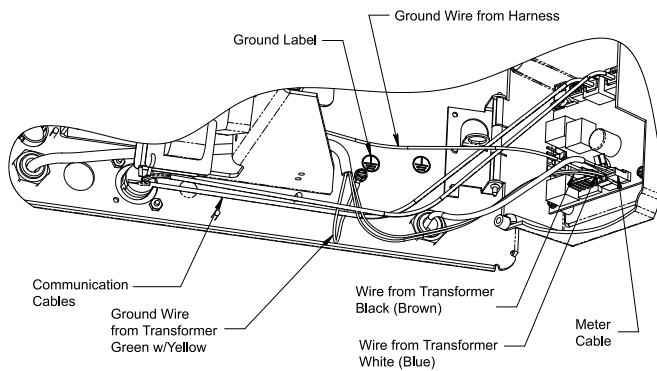
```
6#1 SRV* 03:45PM
SYSVOL 4000 g
```


TRANSFORMER AND GROUND CONNECTIONS

2750/2850/2900 Valves:



3150/3900 Valves:



IMPORTANT: Earth ground wire must be installed.

Installing the Transformer:

1. Locate the ground label to find the screw to attach the ground wire on the transformer.
2. Remove the screw and attach the ground wire, and re-attach the screw.

NETWORK/COMMUNICATION CABLES AND CONNECTIONS

Use either a CAT3 or CAT5 Network/Communication cable.

Connect the network/communication cable first before programming.

The maximum cable length between timers is 100 feet.

Connect each unit together from one communication port to the next communication port. It does not matter which one goes to the next one.



Figure 2 Current NXT Circuit Board

MASTER PROGRAMMING MODE FLOW CHART

CAUTION Before entering Master Programming, please contact your local professional water dealer.

NOTE: Depending on current option settings, some displays cannot be viewed or set.

Entering Master Programming Mode

- Press and hold the Shift and Up buttons for 5 seconds. Press the Extra Cycle button once per display until all displays are viewed and Normal Display is resumed. Option setting displays may be changed as required by pressing either Up or Down button. Use the Shift button to move one space to the left.
- Depending on current valve programming, certain displays may not be viewed or set.

NOTE: If the "D" button is pressed while in master programming, no changes will be saved.

Exiting Master Programming Mode

- Press the Extra Cycle button once per display until all are viewed. Master Programming Mode is exited and the normal display screen appears.
- To exit the Master Programming Mode without saving changes, press the Diagnostic button.

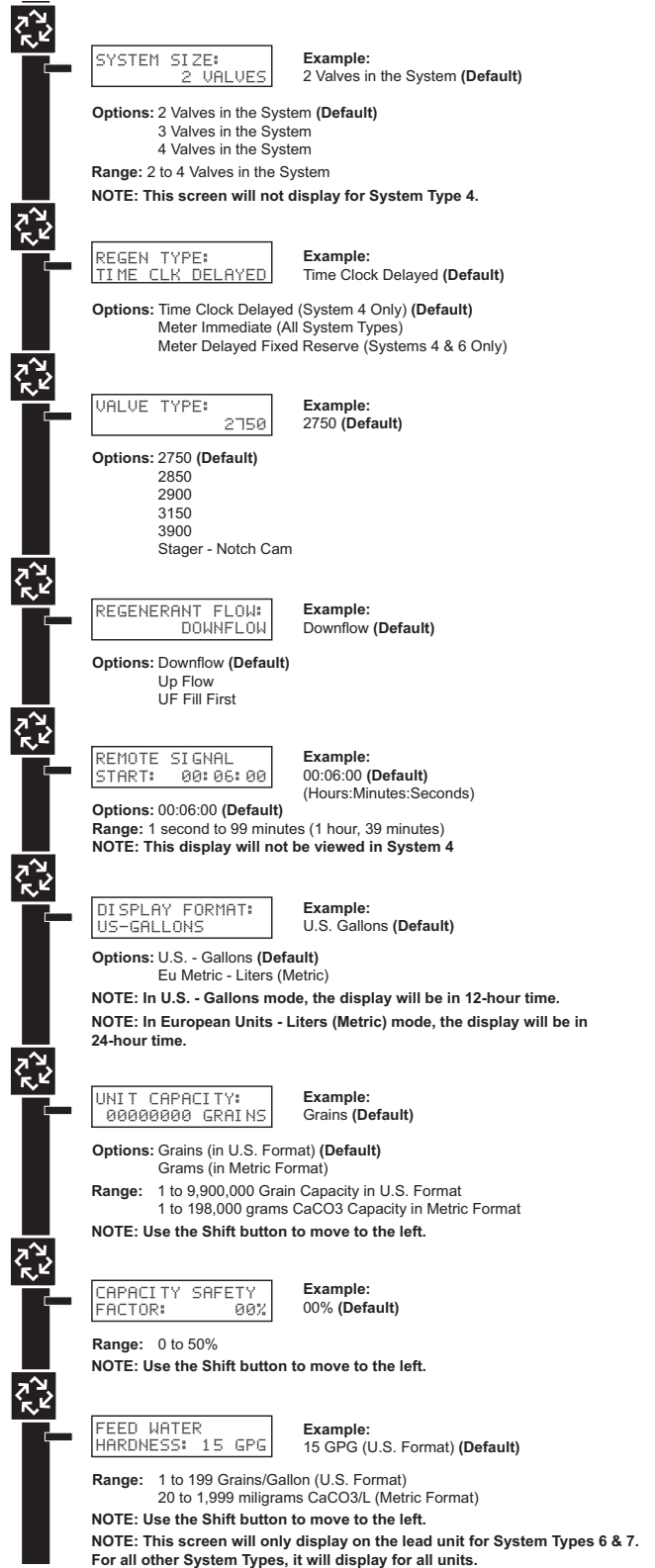
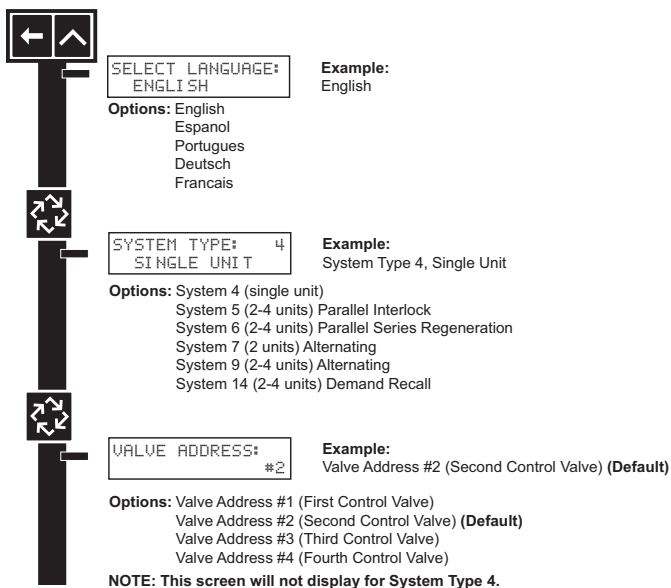
NOTE: If no keypad activity is made for 5 minutes while in the Master Programming Mode, or if there is a power failure, no changes will be saved, and the unit will go back to the main display screen.

Resets

Soft Reset: Press and hold the Up and Down buttons for 25 seconds until 12:00PM (or 12:00HR) appears. This resets all parameters except for the flow meter totalizer volume.

Master Reset: Hold the Extra Cycle button while powering up the unit. This resets all of the parameters in the unit. Check and verify the choices selected in Master Programming Mode.

NOTE: If the "D" button is pressed while in master programming, no changes will be saved.



MASTER PROGRAMMING MODE FLOW

CHART CONTINUED

Trip Points 1, 2, and 3 (System 14 only)

This program step selects up to three Trip Points programmed on the master timer only (Valve Address #1).

The actual required number of Trip Points in a system is one less than the number of valves in the system.

Trip Point 1 represents the system flow rate at which a second valve will be brought In Service or Standby.

Trip Point 2 represents the system flow rate at which a third valve will be brought In Service or Standby.

Trip Point 3 represents the system flow rate at which a fourth valve will be brought In Service or Standby.

Trip Point 1	Trip Point 2	Trip Point 3
Range: 1 - 997 GPM	U.S.: Value of Trip Point 1 plus 1 to 998	U.S.: Trip Point 2 plus 1 to 999
Range: 0.01 - 9.97 M ³ /M	Metric: Value of Trip Point 1 plus .01 to 9.98	Metric: Trip Point 2 plus 0.01 to 9.99

Trip Delays 1, 2, and 3 (System 14 only)

This program step selects each Trip Delay time that is addressed with each Trip Point and will be programmed on the Master timer only (Valve Address #1). The Trip Delay time represents a minimum amount of time the system flow rate is required to be equal or greater than the Trip Points to bring a unit In Service. It also is the minimum amount of time the system flow rate is required to be less than the Trip Points to remove a unit from In Service to Standby.

Trip Delay 1	Trip Delay 2	Trip Delay 3
Default: 30 Seconds		
Range: 30 - 99 Seconds	Range: 30 - 99 Seconds	Range: 30 - 99 Seconds



TRIP POINT 1:
000 3PM

Examples: Default will need to be changed before next step [000] = Default
Brings 2nd valve In Service after 125 gpm [125]
Brings 2nd valve In Service after .47 m³/m [0.47]

Range: 1 to 997 gpm
0.01 to 9.97 m³/m

NOTE: Display will not appear unless timer is programmed as valve position #1. Use the Shift button to change each decimal position.



TRIP DELAY 1:
30 SECONDS

Example: Trip point time delay until valve goes into service [30] = Default
Range: 30 to 99 seconds

NOTE: Display will not appear unless timer is programmed as valve position #1. Use the Shift button to move one space to the left.



TRIP POINT 2:
250 3PM

Examples: Brings 3rd valve In Service after 250 gpm [250]
Brings 3rd valve In Service after .95 m³/m [0.95]

Range: 2 to 998 gpm
2 to 9.98 m³/m

NOTE: Display will not appear unless timer is programmed as valve position #1. System size must be 3 or 4 to appear. Use the Shift button to move one space to the left.



TRIP DELAY 2:
30 SECONDS

Example: Trip point time delay until valve goes into Service [30] = Default

Range: 30 to 99 seconds

NOTE: Display will not appear unless timer is programmed as valve position #1. System size must be 3 or 4 to appear. Use the Shift button to move one space to the left.



TRIP POINT 3:
350 3PM

Examples: Brings 4th Valve In Service after 350 gpm [350]
Brings 4th Valve In Service after 1.32 m³/m [1.32]

Range: 3 to 999 gpm
3 to 9.99 m³/m

NOTE: Display will not appear unless timer is programmed as valve position #1. System size must be 4 to appear. Use the Shift button to move one space to the left.



TRIP DELAY 3:
30 SECONDS

Example: Trip point time delay until valve goes to Service [30] = Default

Range: 30 to 99 seconds

NOTE: Display will not appear unless timer is programmed as valve position #1. System size must be 4 to appear. Use the Shift button to move one space to the left.



REGENERATION DAY
OVERRIDE: OFF

Example:
Off (Default)
On (Default for time clock)

REGENERATION DAY
OVERRIDE: 01 DAYS

Example:
1 Day

Options: Off (Default for meter) or On

Range: 1 to 99 Days



REGENERATION
TIME: 02:00AM

Example:
2:00 A.M. (Default)

Options: A.M. (U.S. Format)
HR (Metric Format)

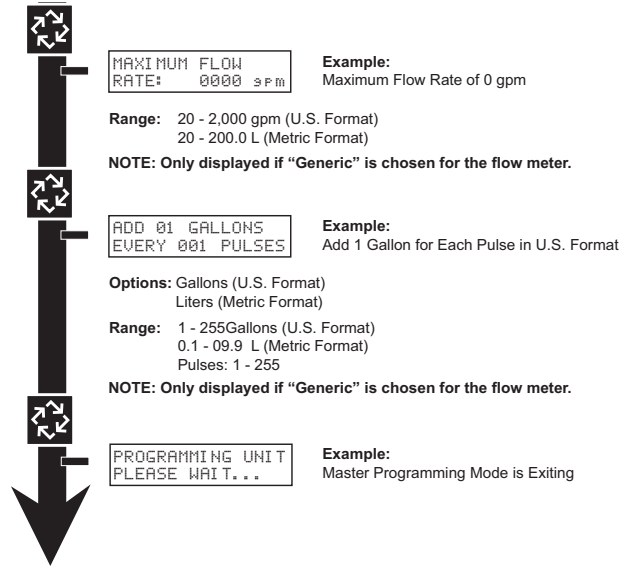
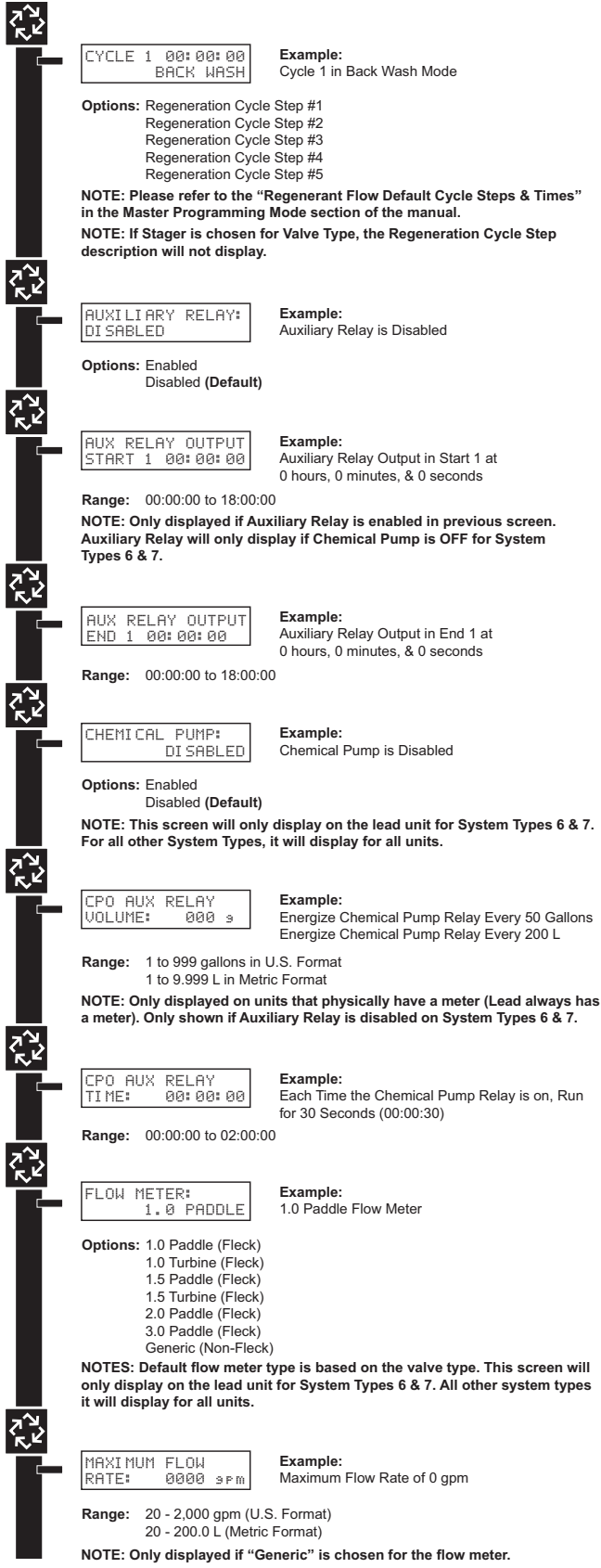
NOTE: Regeneration time will not appear unless Regeneration Day Override is on.

Regeneration Cycle Steps

This step programs the Regeneration Cycle step times 1 through 5. Please Refer to the chart below for regenerant flow default cycle steps and times.

Regenerant Flow	Cycle 1	Time	Cycle 2	Time
Downflow	Backwash	10 Minutes	Brine & Slow Rinse	1 Hour
UF Brine Draw	Brine & Slow Rinse	1 Hour	Backwash	10 Minutes
UF Fill First	Brine Tank Fill	12 Minutes	Brine Making	1 Hour
Regenerant Flow	Cycle 3	Time	Cycle 4	Time
Downflow	Rapid Rinse	10 Minutes	Brine Tank Fill	12 Minutes
UF Brine Draw	Rapid Rinse	10 Minutes	Brine Tank Fill	12 Minutes
UF Fill First	Brine & Slow Rinse	1 Hour	Backwash	10 Minutes
Regenerant Flow	Cycle 5	Time		
Downflow	Pause	N/A		
UF Brine Draw	Pause	N/A		
UF Fill First	Rapid Rinse	10 Minutes		

MASTER PROGRAMMING MODE FLOW CHART CONTINUED



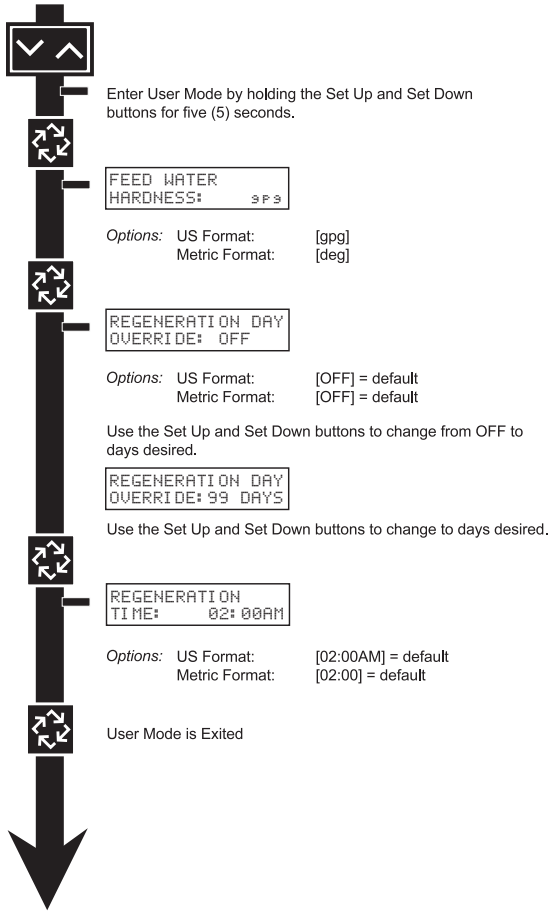
USER PROGRAMMING MODE FLOW CHART

Entering User Programming Mode

Hold the Set Up and Set Down buttons for 5 seconds.

NOTE: User Mode is only displayed when a metered option is chosen under System Type. Depending on current option settings, some displays cannot be viewed or set.

NOTE: User Mode cannot be entered on the Lag unit for System 6.



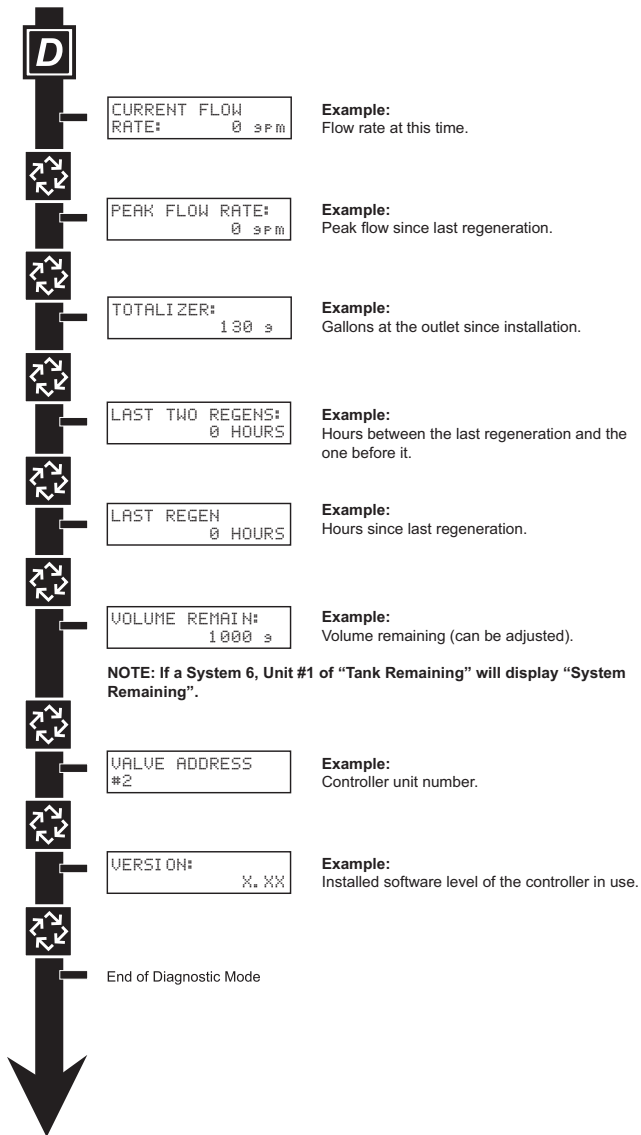
DIAGNOSTIC PROGRAMMING MODE FLOW CHART

Entering Diagnostic Programming Mode

1. Push and release the "D" button.
2. Press the Extra Cycle button once per display until all displays are viewed and Normal Display is resumed.
3. Push and release the "D" button at anytime during diagnostic mode and the timer will exit the mode.
4. Depending on the current controller programming, certain displays may not be able to be viewed or set.

Overview Diagnostic Mode

The current diagnostic will be displayed until Extra Cycle key is pressed. There is no time limit on each display. The timer will display local information, not system information. In the event of a regeneration occurring while displaying diagnostics, the regeneration step and time remaining will be displayed. When regeneration has been completed, the display will return to the main screen.



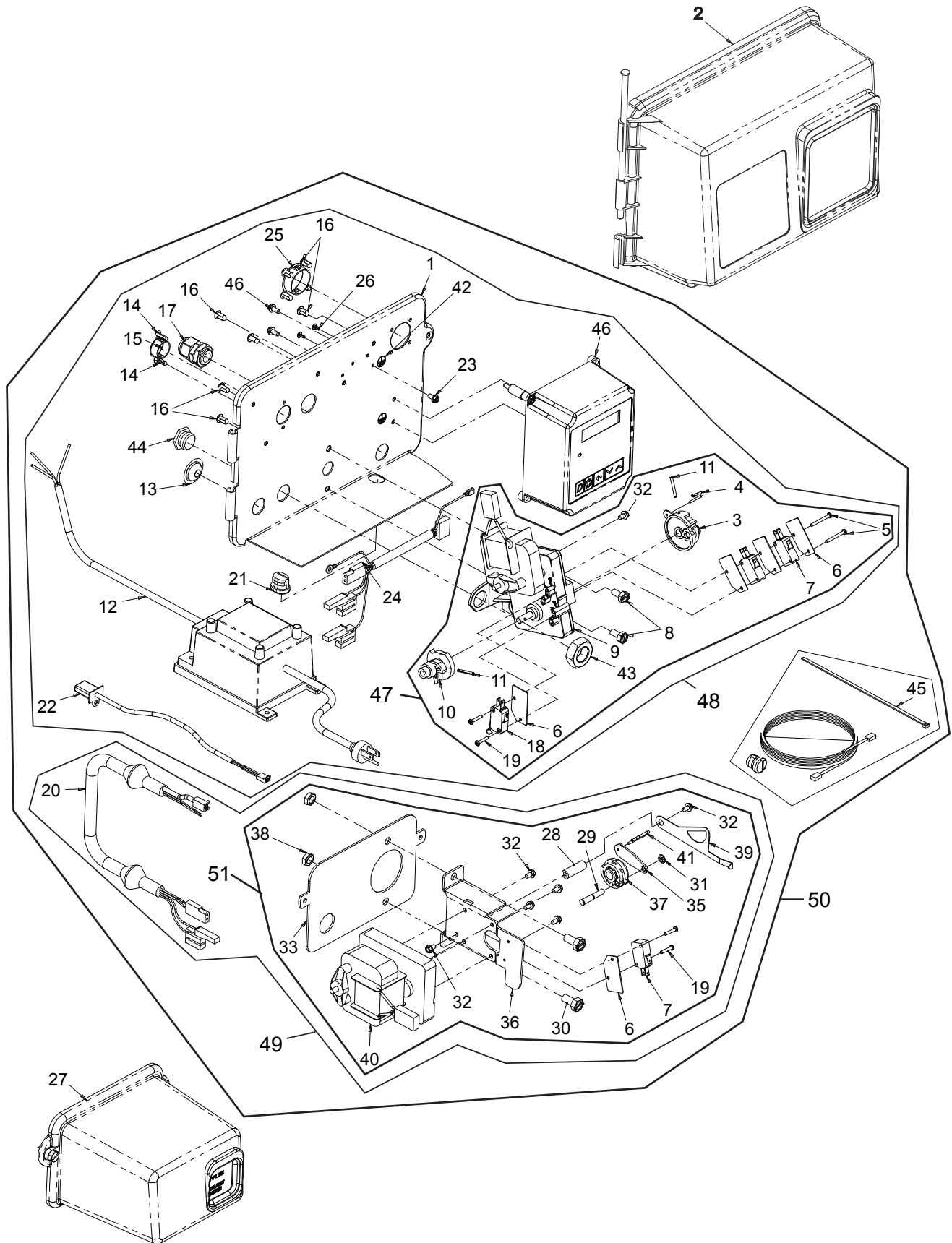
NXT Multi Language Programming Parameters and Ranges

System Type	4 Time Clock				4 Metered Immediate				4 Metered Delayed				5 Interlock				6 Series				7 Alternating				9 Alternating				14 Demand Recall				Programming Parameter Ranges			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Gallons	Liters		
Valve Address																																		1 thru 4		
Select Language	x				x				x				x				x				x				x								English, Espanol, Portugues, Deutsch, Francais			
System Size																																	1 thru 4			
Regen Type	x				x				x				x				x				x				x								Time Clock, Metered Delayed, Metered Immediate			
Valve Type	x				x				x				x				x				x				x								2750, 2850, 2900, 3150, 3900, Stager			
Regenerant Flow	x				x				x				x				x				x				x								Downflow, Upflow, Upflow Fill First			
Remote Signal Start	x				x				x				x				x				x				x								Off, 00:00:01 - 01:39:00			
Display Format	x				x				x				x				x				x				x								US - Gallons	EU - Metric-Liters		
Unit Capacity					x				x				x				x				x				x				1 - 9900000 Grains	1 - 198000 gCaCO3						
Capacity Safety Factor					x				x				x				x				x				x				0 - 50%							
Feed Water Hardness					x				x				x				x				x				x				1 - 199 Grains/Gallons	1 - 1999 mg/L						
Trip Point 1																													0 - 997gpm	0 - 3997 Lpm						
Trip Delay 1																													30 - 99 Seconds	30 - 99 Seconds						
Trip Point 2																													Trip Point 1 + 1 - 998 gpm	Trip Point 1 + 1 - 3998 Lpm						
Trip Delay 2																													30 - 99 Seconds	30 - 99 Seconds						
Trip Point 3																													Trip Point 2 + 1 - 999 gpm	Trip Point 2 + 1 - 3999 Lpm						
Trip Delay 3																													30 - 99 Seconds	30 - 99 Seconds						
Regeneration Day Override	x				x				x				x				x				x				x				Off, 1 - 99							
Regeneration Time	x				o				o				o				o				o				o				12:00 a.m. - 11:59 p.m.	00:00 - 23:59 Hour						
Cycle 1	x				x				x				x				x				x				x				00:00:00 - 04:00:00							
Cycle 2					x				x				x				x				x				x				Off, 00:00:00 - 04:00:00							
Cycle 3	x				x				x				x				x				x				x				Off, 00:00:00 - 04:00:00							
Cycle 4	x				x				x				x				x				x				x				Off, 00:00:00 - 04:00:00							
Cycle 5	x				x				x				x				x				x				x				Off, 00:00:00 - 04:00:00							
Auxiliary Relay	x				x				x				x				x				x				x				Enabled, Disabled							
Aux Relay Output Start	c				c				c				c				c				c				c				00:00:01 to Total Regeneration Time - 1							
Aux Relay Output End	c				c				c				c				c				c				c				Start Time + 1 to Total Regeneration Time							
Chemical Pump					x				x				x				x				x				x				Enabled, Disabled							
CPO Aux Relay Volume					c				c				c				c				c				c				1 - 999 gallons	0001 - 9999 Liters						
CPO Aux Relay Time					c				c				c				c				c				c				00:00:01 - 02:00:00	00:00:01 - 02:00:00						
Flow Meter					x				x				x				x				x				x				1" 1.5" Paddle or Turbine, 2" Paddle, 3" Paddle, Generic							
Generic					x				x				x				x				x				x											
Maximum Flow Rate					a				a				a				a				a				a				20 - 2000 GPM	20 - 2000 LPM						
Add ___ Gallons or Liters					a				a				a				a				a				a				1 - 255 Gallons	001 - 255 Liters						
Every ___ Pulses					a				a				a				a				a				a				1 - 255	1 - 255						

Notes

- o** - Regeneration Time will only be viewed if Regeneration Day Override is used.
- u** - If Auxiliary Relay is Enabled then Chemical Pump Relay will not be viewed or if Chemical Pump Relay is Enabled then Auxiliary Relay will not be viewed.
- c** - All Relay Output parameters programming will be viewed if Enabled.
- a** - If Generic Flow Meter is chosen, then programming parameters will be viewed.

2750/2850/2900S UPPER & 2900S LOWER POWERHEAD ASSEMBLY



61501-3200NXT-2_Page2_REVA

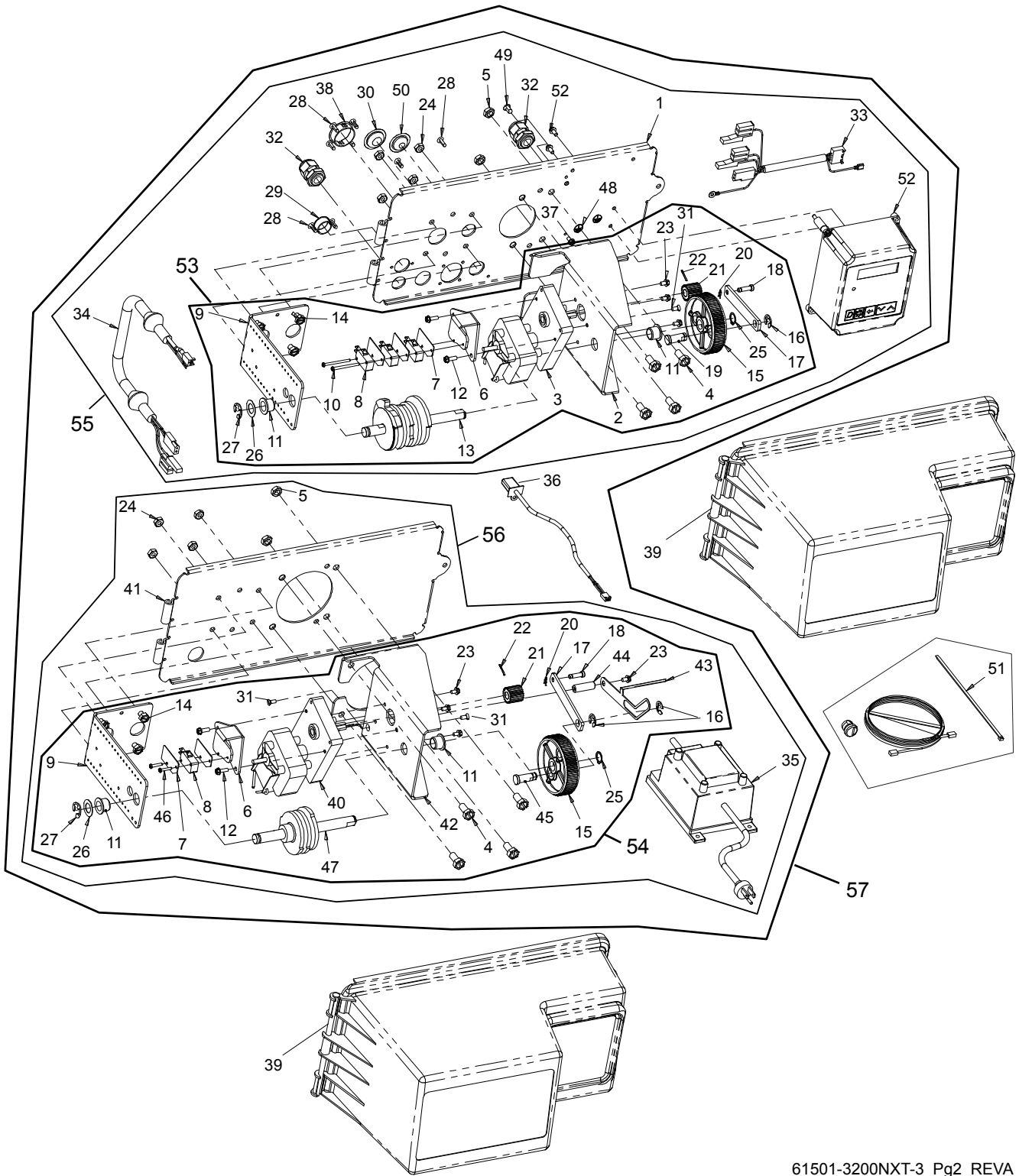
2750/2850/2900S UPPER & 2900S LOWER POWERHEAD ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description	Item No.	QTY	Part No.	Description
1	1	18697-15	Backplate, Hinged	30	2	11224	Screw, Hex Hd 5/16 - 18 X 5/8, SS
2	1	60219-02	Cover Assy, Environmental, Black	31	1	10250	Ring, Retaining
3	1	60160-15	Drive Cam Assy, Stf, Blue	32	7	10872	Screw, Hex Wsh, 8-32 X 17/64
4	1	10909	Pin, Link	33	1	18709	Backplate, Lower
5	2	14923	Screw, Pan Hd Mach, 4-40 X 1	34	1	11381	Pin, Roll, 2900/3900
6	5	10302	Insulator, Limit Switch	35	1	14759	Link, Piston Rod
7	3	10218	Switch, Micro	36	1	14769	Bracket, Motor, 2900
8	2	10231	Screw, Slot Hex, 1/4 - 20 X 1/2	37	1	14775	Cam, Drive, 2900
9	1	42579	Motor, Drive, 24V, 50/60 Hz	38	2	16346	Nut, Hex, Jam, 5/16-18, 18-8-SS
10	1	12777	Cam, Shut-Off Valve	39	1	18725	Indicator, Service/Standby
11	2	10338	Pin, Roll, 3/32 X 7/8	40	1	42580	Motor, Drive, 24V, 50/60 Hz, SP
12	1	42469	Transformer, Us, 120V, 24V, 40VA	41	1	14813	Pin, Spring, Connecting Rod
		41049	Transformer, Euro, 230V/24V 108VA	42	1	41102	Label, 3200NT, Ground
		41050	Transformer, Aust, 230V/24V, 108VA	43	1	10269	Nut, Jam, 3/4 - 16
13	1	19691	Plug, .750 Dia, Recessed, Black	44	1	10712	Fitting, Brine Valve
14	2	19800	Plug, .140 Dia, White	45	1	61763	Kit, Can Communication Cable
15	1	15806	Plug, Hole, Heyco #2693	46	1	42466-11	Timer Assy, Nxt, Right Hand
16	9	19801	Plug, .190 Dia, White, Heyco #0307	47		60050-23	Drive Assy, 2750, 2850, 2900S Upper, STF, 24V 50/60 Hz
17	1	17967	Fitting Assy, Liquid Tight, Blk			60050-26	Drive Assy, 2850S, STF, 24V 50/60 Hz
18	1	10896	Switch, Micro	48	*		Powerhead Assy, 2750, 2850, 2900S Upper
19	4	11805	Screw, Rd Hd, 4-40 X 5/8 Type 1		*		Powerhead Assy, 2850S
20	1	40943	Wire Harness, Lower Drive, W/Molded Strain Relief	49	*		Powerhead Assy, Lower 2900S
21	1	13547	Strain Relief, Flat Cord, Heyco #30-1	50	*		Powerhead Assy, Upper and Lower 2900S
22	1	19121	Meter Cable Assy, 3200NT	51		60055-53	Lower Drive Assy, 2900, 24/60
		19121-08	Meter Cable Assy, NT, 35- inch W/Connector				
		19121-09	Meter Cable Assy, NT, 99.5- inch W/Connector				
		19121-10	Meter Cable Assy, NT, 303.5- inch W/Connector				
23	1	14202-01	Screw, Hex Wsh Mach, 8-32 X 5/16				
24	1	40941	Wire Harness, Upper Drive				
25	1	17421	Plug, 1.20 Hole, Heyco #2733				
26	2	41581	Plug, Hole, .125 Dia, White				
27	1	60217-02	Cover Assy, 2900, Lower, Black, Environmental				
28	1	18626	Spacer, Indicator				
29	1	18746	Bearing, Connecting Rod				

*Call you distributor for a Part Number

NOTE: For all other service part numbers, see the Service Manual that accompanies the control valve.

3150/3900 UPPER & LOWER POWERHEAD ASSEMBLY



61501-3200NXT-3_Pg2_REVA

3150/3900 UPPER & LOWER POWERHEAD

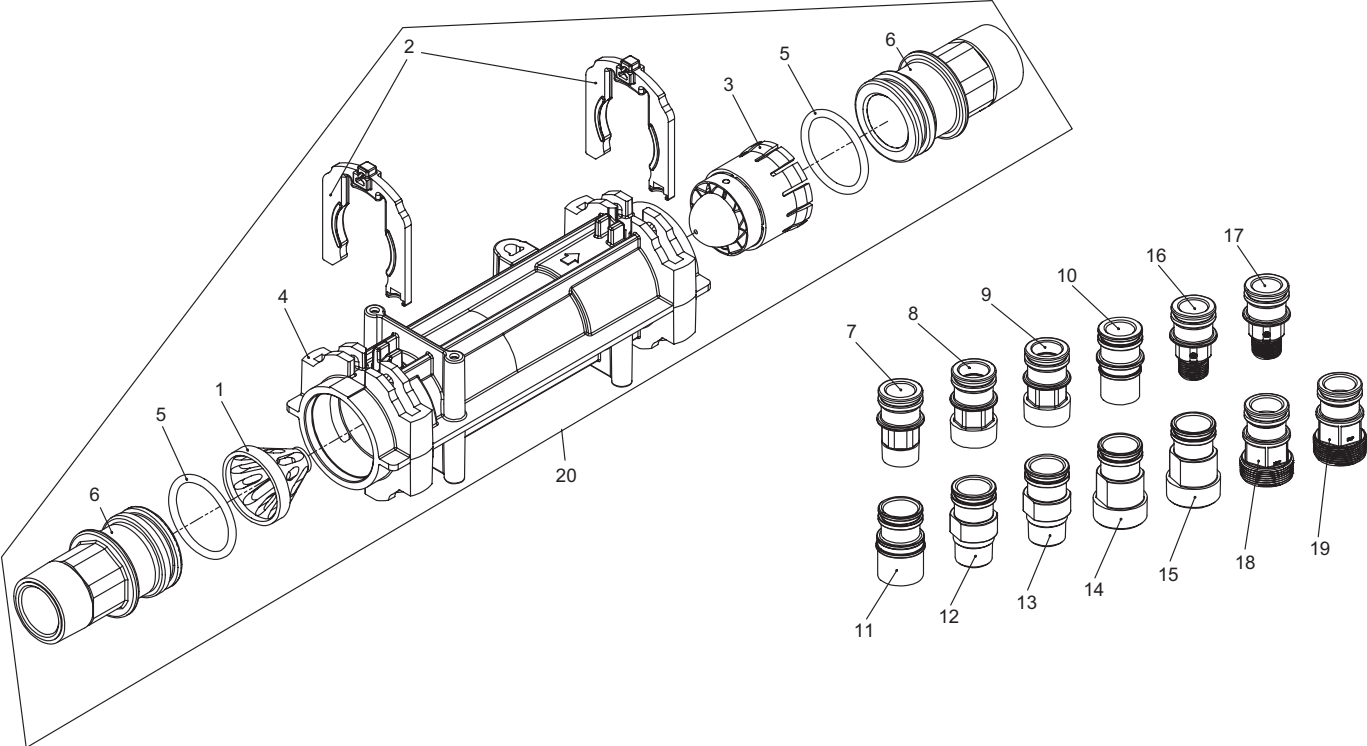
ASSEMBLY CONTINUED

Item No.	QTY	Part No.	Description	Item No.	QTY	Part No.	Description
1	1	19304-04	Backplate, 3150/3900	35	1	42469	Transformer, US, 120V, 24V, 40VA
2	1	15120	Bracket, Motor MTG, 3150/3900			41049	Transformer, Euro, 230V/24V 108VA
3	1	42581	Motor, Drive, 24V, 50/60 Hz, SP			41050	Transformer, Aust, 230V/24V, 108VA
4	8	11224	Screw, Hex HD, 5/16 - 18 X 5/8, SS	36	1	19121	Meter Cable Assy, 3200NT
5	4	16346	Nut, Hex, Jam, 5/16 - 18, 18-8-SS			19121-08	Meter Cable Assy, NT, 35-inch W/Connector
6	2	17797	Bracket, Switch, Mounting, 3150/3900			19121-09	Meter Cable Assy, NT, 99.5-inch W/Connector
7	5	10302	Insulator, Limit Switch			19121-10	Meter Cable Assy, NT, 303.5-inch W/Connector
8	4	10218	Switch, Micro	37	1	14202-01	Screw, Hex Wsh, 8-32 X 5/16
9	2	16053	Bracket, Brine Side	38	1	17421	Plug, 1.20 Hole
10	2	12624	Screw, Phil Pan, 40 X 1 1/2	39	2	60240-02	Cover Assy, 3150/3900, Env, Black
11	4	16052	Bushin, 3150/3900	40	1	42581	Motor, Drive, 115V, 50/60Hz, SP
12	4	17567	Screw, Hex, Wsh HD, 8 X 1/2	41	1	19305	Backplate, 3900, Lower, Env
13	1	16494	Cam Assy, 3150/3900	42	1	16086	Bracket, Motor Mounting
14	8	10231	Screw, Slot Hex, 1/4 - 20 X 1/2 18-8 SS	43	1	19315	Indicator, Service/Standby, 3900
15	2	16046	Gear, Drive	44	1	18726	Spacer, Indicator
16	3	11774	Ring, Retaining	45	1	16048	Bearing, Drive Link
17	2	16047	Link, Drive	46	2	11805	Screw, RD HD, 4-40 X 5/8, Type 1
18	2	11709	Pin, Drive Link	47	1	16495	Cam Assy, 3900, Lower
19	1	16048	Bearing, Drive Link	48	1	41102	Label, 3200NT, Ground
20	2	11898	Clip, 3150/3900	49	1	19801	Plug, .190 Dia, White
21	2	16045	Pinion, Drive	50	1	19691	Plug, .750 Dia, Recessed, Black
22	2	11381	Pin, Roll, 2900/3900	51	1	61763	Kit, Can Communication Cable
23	7	10872	Screw, Hex Wsh, 8-32 X 17/64	52	1	42466-11	Timer Assy, Nxt, Right Hand
24	8	11235	Nut, Hex, 1/4 - 20	53		60057-03	Drive Assy, 3150, 3900 Upper, 24V 50/60 Hz
25	2	16050	Ring, Retaining	54		60058-03	Lower Drive Assy, 3900, 24V 50/60 Hz
26	2	16059	Washer, SS, .88, 3150/3900	55	*		Powerhead Assy, 3150, 3900 Upper
27	2	16051	Ring, Retaining, Bowed	56	*		Powerhead Assy, 3900 Lower
28	8	19800	Plug, .140, White	57	*		Powerhead Assy, 3900 Upper & Lower
29	1	15806	Plug, Hole, Heyco, #2693				
30	1	19591	Plug, .8750 Hole, Recessed, Black				
31	3	11080	Screw, FLT HD Mach, 8-32 X 3/8				
32	2	17967	Fitting Assy, Liquid Tight, Blk				
33	1	40941	Wire Harness, Upper Drive				
34	1	40943	Wire Harness, Lower Drive W/Molded Strain Relief				

* Call your distributor for Part Number

NOTE: For all other service part numbers, see the Service Manual that accompanies the control valve.

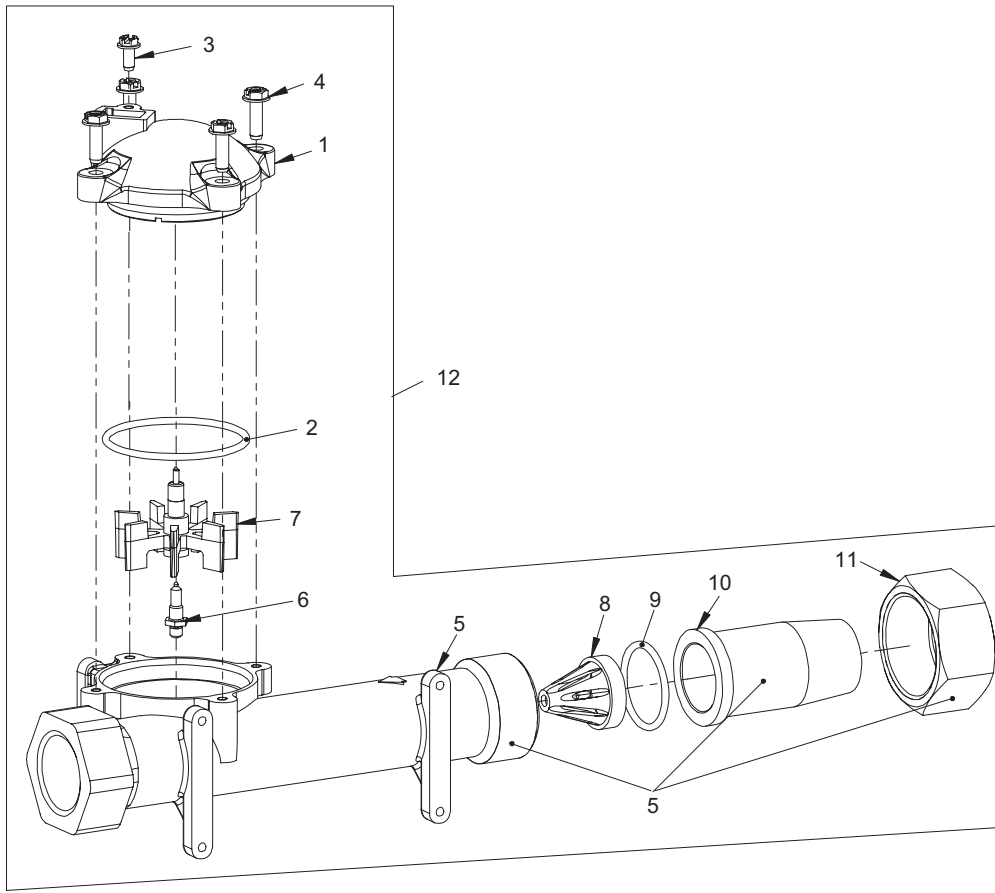
METER ASSEMBLY PLASTIC



METER ASSEMBLY PLASTIC *CONTINUED*

Item No.	QTY	Part No.	Description	Item No.	QTY	Part No.	Description
1	1	17542	Flow Straightener, 1-1/2 inch	20		61560	Meter Assy, 1-1/2 inch INLN, ELEC, PLAS, w/o Nipples, TURB
2	2	40576	Clip, H, Plastic, 7000			61560-01	Meter Assy, 1-inch, INLN, NPT, ELEC, PLAS, PLAS Nipples, TURB
3	1	40577	Turbine Meter Assy, 7000			61560-02	Meter Assy, 1-inch, INLN, BSP, ELEC, PLAS, PLAS Nipples, TURB
4	1	41555	Body, Inline Meter			61560-03	Meter Assy, 1-1/4 inch INLN, NPT, ELEC, PLAS, PLAS Nipples, TURB
5	2	40951	O-ring, -220			61560-04	Meter Assy, 1-1/4 inch INLN, BSP, ELEC, PLAS, PLAS Nipples, TURB
6	2	40563-01	Connector Assy, 1-inch NPT, Plastic, w/O-ring			61560-05	Meter Assy, 1-inch & 1-1/4 inch, INLN, SWT, ELEC, PLAS, SWT Nipples, TURB
7	2	40563-11	Connector Assy, 1-inch BSP, Plastic, w/O-ring			61560-06	Meter Assy, 1-1/4 inch & 1-1/2 inch, INLN, SWT, ELEC, PLAS, SWT Nipples, TURB
8	2	40565-01	Connector Assy, 1-1/4 inch NPT, Plastic, w/O-ring			61560-07	Meter Assy, 1-inch INLN, NPT, ELEC, PLAS, BRS Nipples, TURB
9	2	40565-11	Connector Assy, 1-1/4 inch BSP, Plastic, w/O-ring			61560-08	Meter Assy, 1-inch INLN, BSP, ELEC, PLAS, BRS Nipples, TURB
10	2	41242-01	Connector Assy, 1-inch & 1-1/4 inch, Sweat, w/O-ring			61560-09	Meter Assy, 1-1/2 inch INLN, NPT, ELEC, PLAS, BRS Nipples, TURB
11	2	41243	Connector, 1-1/4 inch & 1-1/2 inch Sweat, 7000			61560-10	Meter Assy, 1-1/2 inch INLN, BSP, ELEC, PLAS, BRS Nipples, TURB
		41243-01	Connector Assy, 1-1/4 inch & 1-1/2 inch, Sweat, w/O-ring			61560-11	Meter Assy, 3/4-inch INLN, NPT, ELEC, PLAS, PLAS Nipples, TURB
12	2	61561	Connector Assy, 1-inch NPT, Brass, w/O-ring			61560-12	Meter Assy, 3/4-inch INLN, BSP, ELEC, PLAS, PLAS Nipples, TURB
13	2	61561-10	Connector Assy, 1-inch BSP, Brass, w/O-ring			61560-13	Meter Assy, 1-1/2 inch, INLN, NPT, ELEC, PLAS, PLAS Nipples, TURB
14	2	61562	Connector Assy, 1-1/2 inch NPT, Brass, w/O-ring			61560-14	Meter Assy, 1-1/2 inch INLN, BSP, ELEC, PLAS, PLAS Nipples, TURB
15	2	61562-10	Connector Assy, 1-1/2 inch BSP, Brass, w/O-ring				
16	2	42414-01	Connector 3/4-inch NPT, Plastic, w/O-ring				
17	2	42414-11	Connector, Assy, 3/4-inch BSP, Plastic, w/O-ring				
18	3	42241-01	Connector Assy, 1-1/2 inch NPT, Plastic, w/O-ring				
19	3	42241-11	Connector Assy, 1-1/2 inch BSP, Plastic, w/O-Ring				
				Not Shown			
						19791-02	Meter Cable Assy, Turbine 35-inch
						19791-04	Meter Cable Assy, Turbine 100-inch
						19791-05	Meter Cable Assy, Turbine 304-inch

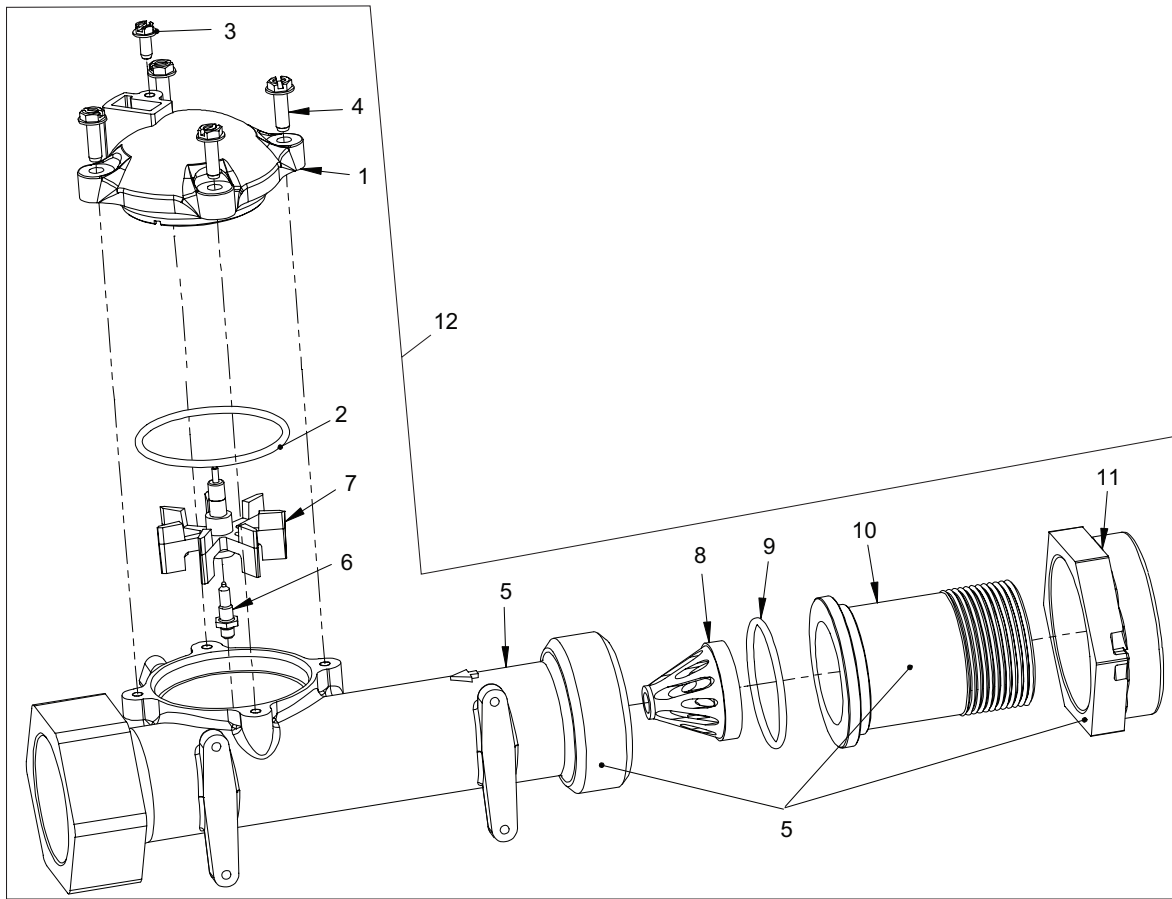
1-INCH METER ASSEMBLY BRASS



Item No.	QTY	Part No.	Description
1	1	14716	Meter Cap Assy, Elec, Plastic Paddlewheel
2	1	13847	O-ring, -137
3	1	17798	Screw, Slot Hex WSH HD
4	4	12473	Screw, Hex WSH, 10-24 x 5/8
5	1	14959-20	Body, Meter, 1-inch, BSP, Metric, Brass
6	1	13882	Post, Meter Impeller
7	1	13509	Impeller, Meter
8	1	14960	Flow Straightener, 1-inch
9	1	13287	O-ring, 123
10	1	14961-10	Fitting, 1-inch Quick Connector, BSP
11	1	14962	Nut, Quick Connect NPT
12	1	60613	Meter Assy, 1-inch Inline, NPT, Electronic, Brass, PDL
		60613NP	Meter Assy, 1-inch Inline, NPT, Electronic, Nickel, PDL
		60613-20	Meter Assy, 1-inch Inline, BSP, Electronic, Brass, PDL

Item No.	QTY	Part No.	Description
Not Shown			
		19121-08	Meter Cable Assy, NT, 35-inch, w/Connector
		19121-09	Meter Cable Assy, NT, 99.5-inch, w/Connector
		19121-10	Meter Cable Assy, NT, 303.5-inch w/Connector

1-1/2 INCH METER ASSEMBLY BRASS

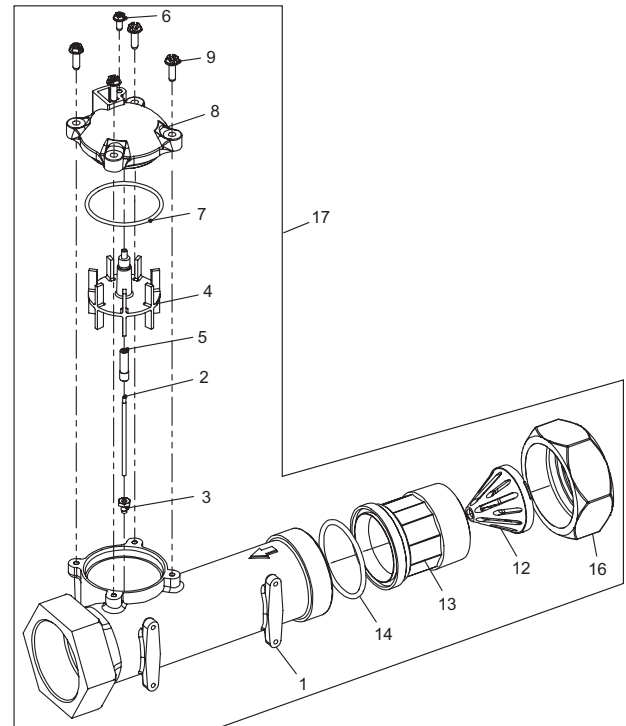
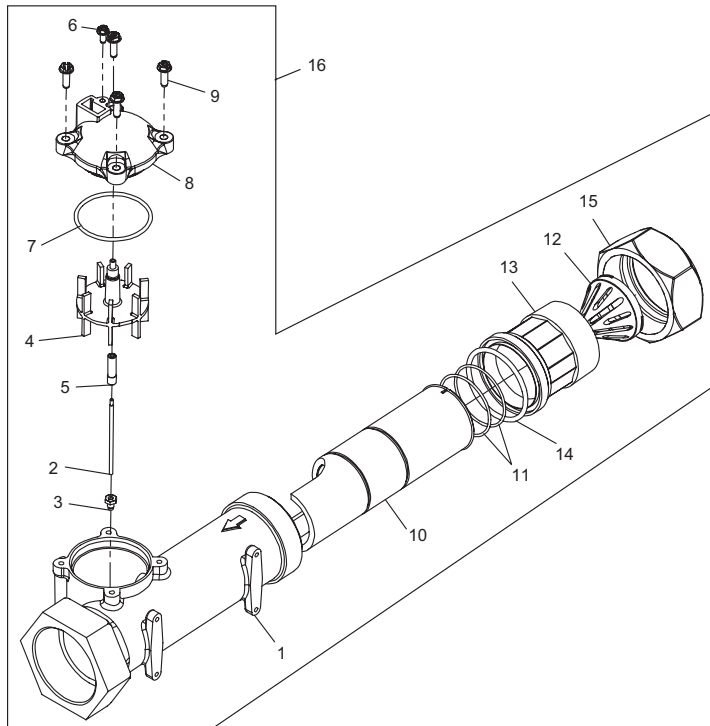


Item No.	QTY	Part No.	Description	Item No.	QTY	Part No.	Description
1	1	14716	Meter Cap Assy, Elec, Plastic Paddlewheel	12	1	60614	Meter Assy, 1-1/2 inch Inline, NPT, Electronic, Brass Body, PDL
2	1	13847	O-ring, -137			60614NP	Meter Assy, 1-1/2 inch INLN, NPT, ELEC, BRS BDY, NP, PDL
3	1	17798	Screw, Slot Hex WSH HD			60614-01	Meter Assy, 1-1/2 inch INLN, NPT, ELEC, BRS BDY, PDL, 1-inch SLV
4	4	12473	Screw, Hex WSH, 10-24 x 5/8			60614-01NP	Meter Assy, 1-1/2 inch INLN, NPT, ELEC, BRS BDY, NP, PDL, 1-inch SLV
5	1	17569-20	Body, Meter, BSP, 1-1/2 inch Quick Connector Brass			60614-20	Meter Assy, 1-1/2 inch INLN, BSP, ELEC, BRS BDY, PDL, 1-inch SLV
6	1	13882	Post, Meter Impeller			60614-20NP	Meter Assy, 1-1/2 inch INLN, BSP, ELEC, BRS BDY, NP, PDL, 1-inch SLV
7	1	13509	Impeller, Meter				
8	1	17542	Flow Straightener, 1-1/2 inch				
9	1	12733	O-ring, -132				
10	1	17544-10	Fitting, 1-1/2 inch Quick Connector, BSP				
11	1	17543	Nut, Quick Connect 1-1/2 inch				

Not Shown

		17790	Sleeve, Meter, 1-1/2 inch x 1
		19121-08	Meter Cable Assy, NT, 35-inch, w/Connector
		19121-09	Meter Cable Assy, NT, 99.5-inch, w/Connector
		19121-10	Meter Cable Assy, NT, 303.5-inch w/Connector

2-INCH METER ASSEMBLY BRASS



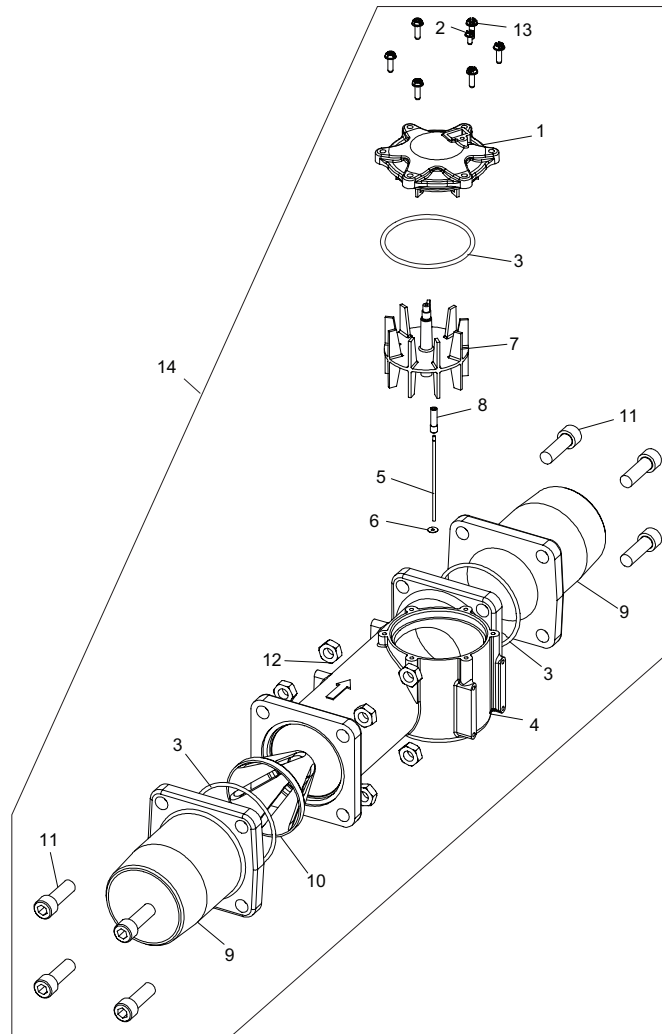
Item No.	QTY	Part No.	Description
1	1	14456	Body, Meter 2-inch
	1	14456-20	Body, Meter, 2-inch, BSP, Metric
	1	14456-20NP	Body, Meter, 2-inch, BSP, Metric, NP
2	1	15432	Shaft, Impeller, SS
3	1	15532	Seat, Impeller Shaft, Hex
4	1	15374-01	Impeller, 2-inch Meter
5	1	15381	Plug, Impeller 2-inch Meter
6	1	17798	Screw, Slot Hex WSH HD
7	1	13847	O-ring, -137
8		14716	Meter Cap Assy, ELEC, Plastic, Paddlewheel
9	4	12473	Screw, Hex WSH, 10-24 x 5/8
	4	21716	Screw, Hex Head, M5 x 16
10		61439	Meter Sleeve w/O-ring, MACHD
11	2	16080	O-ring, -032
12	1	14680	Flow Straightener
13	1	14568	Fitting, Nipple, 2-inch
	1	14568-10	Fitting, Nipple, 2-inch, BSP, Brass
	1	14568-10NP	Fitting, Nipple, 2-inch, BSP, Brass, NP
14	1	14679	O-ring, -227

Item No.	QTY	Part No.	Description
15	1	14569	Nut, Quick Connect
16		60615	Meter Assy, 2-inch INLN, NPT, ELEC, BRS, PDL, 1.5-inch SLV
		60615NP	Meter Assy, 2-inch INLN, NPT, ELEC, NP, PDL, 1.5-inch SLV
		60615-20	Meter Assy, 2-inch INLN, BSP/MET, ELEC, BRS, PDL, 1.5-inch SLV
		60615-20NP	Meter Assy, 2-inch INLN, BSP/MET, ELEC, NP, PDL, 1.5-inch SLV
17		60616	Meter Assy, 2-inch INLN, NPT, ELEC, BRS, PDL
		60616NP	Meter Assy, 2-inch INLN, NPT, ELEC, NP, PDL
		60616-20	Meter Assy, 2-inch INLN, BSP/MET, ELEC, BRS, PDL
		60616-20NP	Meter Assy, 2-inch INLN, BSP/MET, ELEC, NP, PDL

Not Shown

		19121-08	Meter Cable Assy, NT, 35-inch, w/Connector
		19121-09	Meter Cable Assy, NT, 99.5-inch, w/Connector
		19121-10	Meter Cable Assy, NT, 303.5-inch w/Connector

3-INCH METER ASSEMBLY BRASS



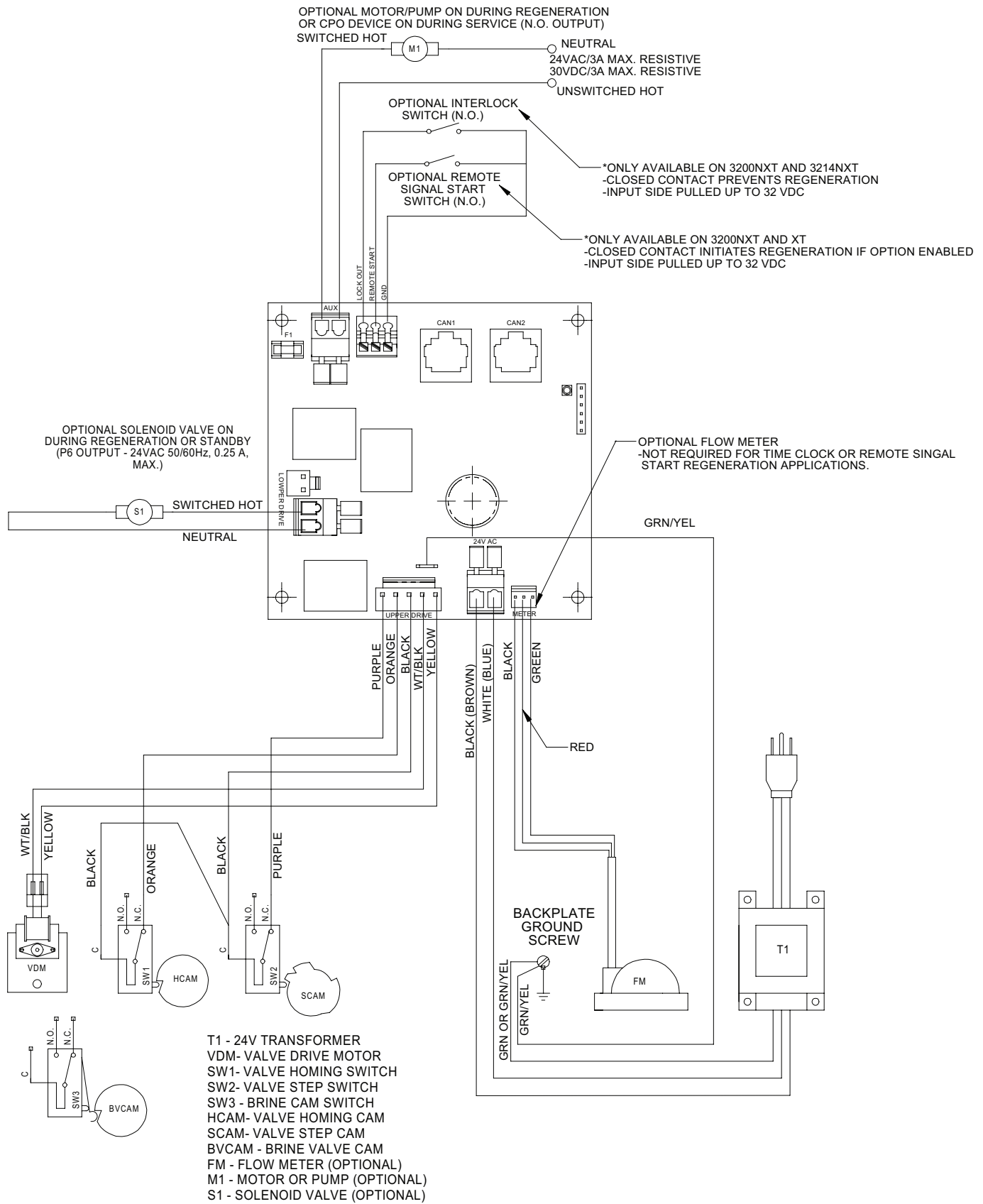
Item No.	QTY	Part No.	Description
1	1	14716-01	Meter Cap Assy, 3-inch ELEC, Plastic, Paddlewheel
2	1	17798	Screw, Hex Washer Head, #8-16 x 0.38
3	3	15707	O-ring, -236
4	1	16254-20	Body Meter, 3900, BSP
5	1	16279	Shaft, Impeller, SS
6	1	16574	Washer, Plain, SS
7	1	16252	Impeller, 3900
8	1	15381	Plug, Impeller, 2-inch Meter
9	2	16328-10	Adapter, Flange, 3-inch BSP
10	1	16280	Flow Straightener
11	8	40118	Screw, SCKT HD, 1/2-13 UN
12	8	16386	Nut, Hex, Jam, 1/2-13, 18-8 S.S.
13	6	12473	Screw, Hex Washer Head, #10-24 x 0.625

Item No.	QTY	Part No.	Description
14		60617	Meter Assy, 3-inch INLN, NPT, Electronic, BRS BDY, Paddlewheel
		60617-10	Meter Assy, 3-inch INLN, BSP, Electronic, BRS BDY, Paddlewheel

Not Shown

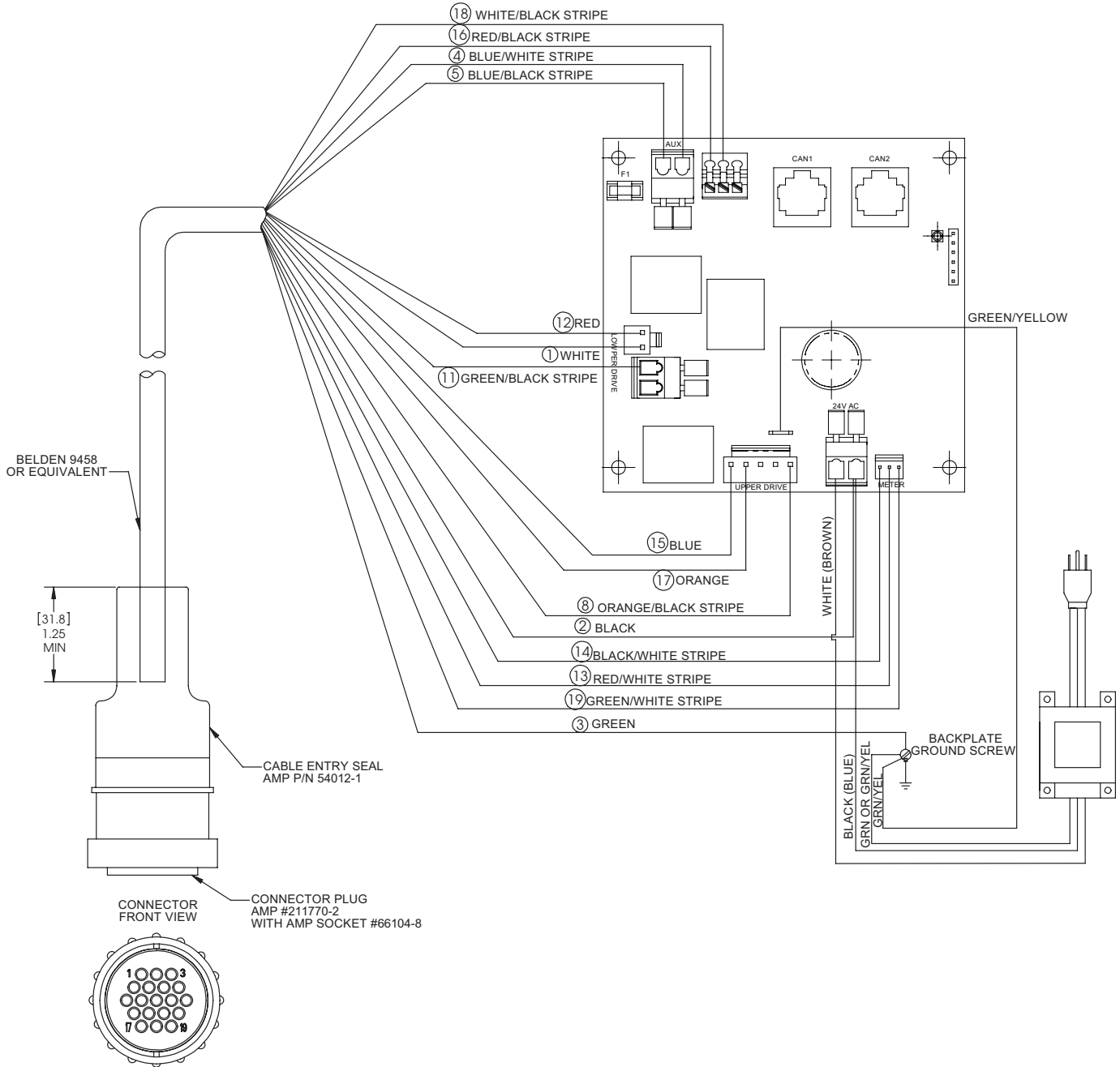
.....	19121-08	Meter Cable Assy, NT, 35-inch, w/Connector
.....	19121-09	Meter Cable Assy, NT, 99.5-inch, w/Connector
.....	19121-10	Meter Cable Assy, NT, 303.5-inch w/Connector

SINGLE PISTON WIRING DIAGRAM

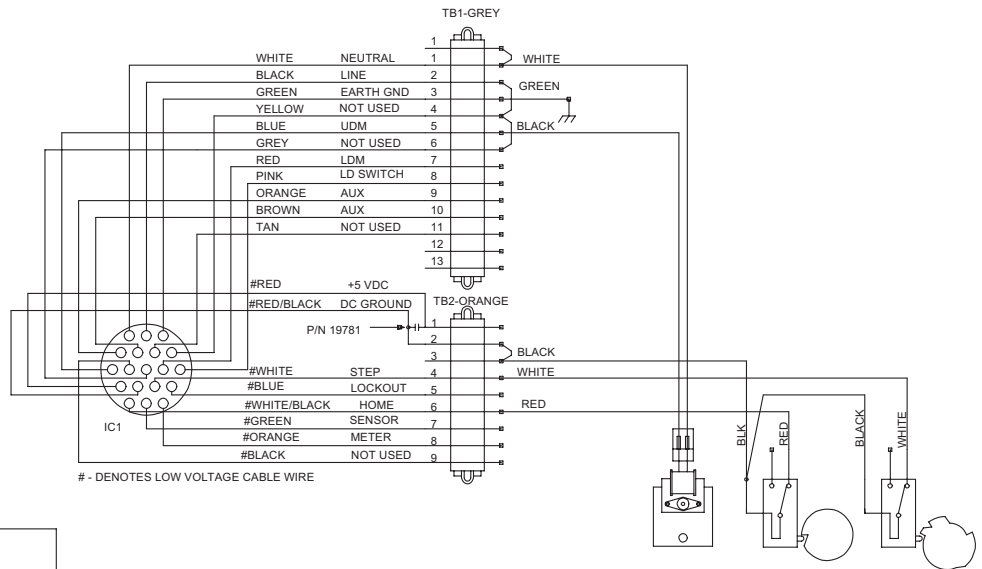
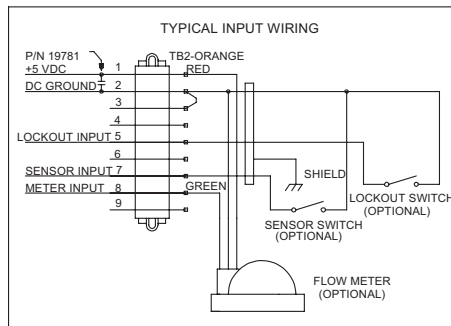
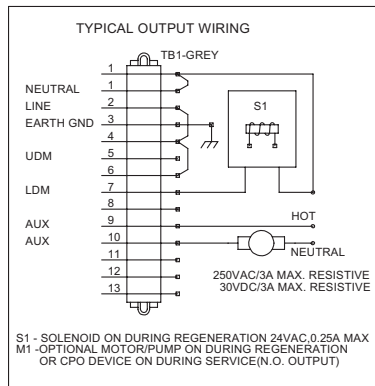


- NOTE:
1. TRANSFORMER FUSE - 5A 250V SLOW-BLOW P/N 41143
 2. VALVE SHOWN IN SERVICE

REMOTE TIMER WIRING DIAGRAM



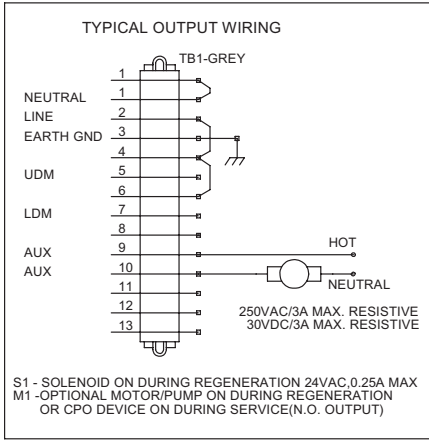
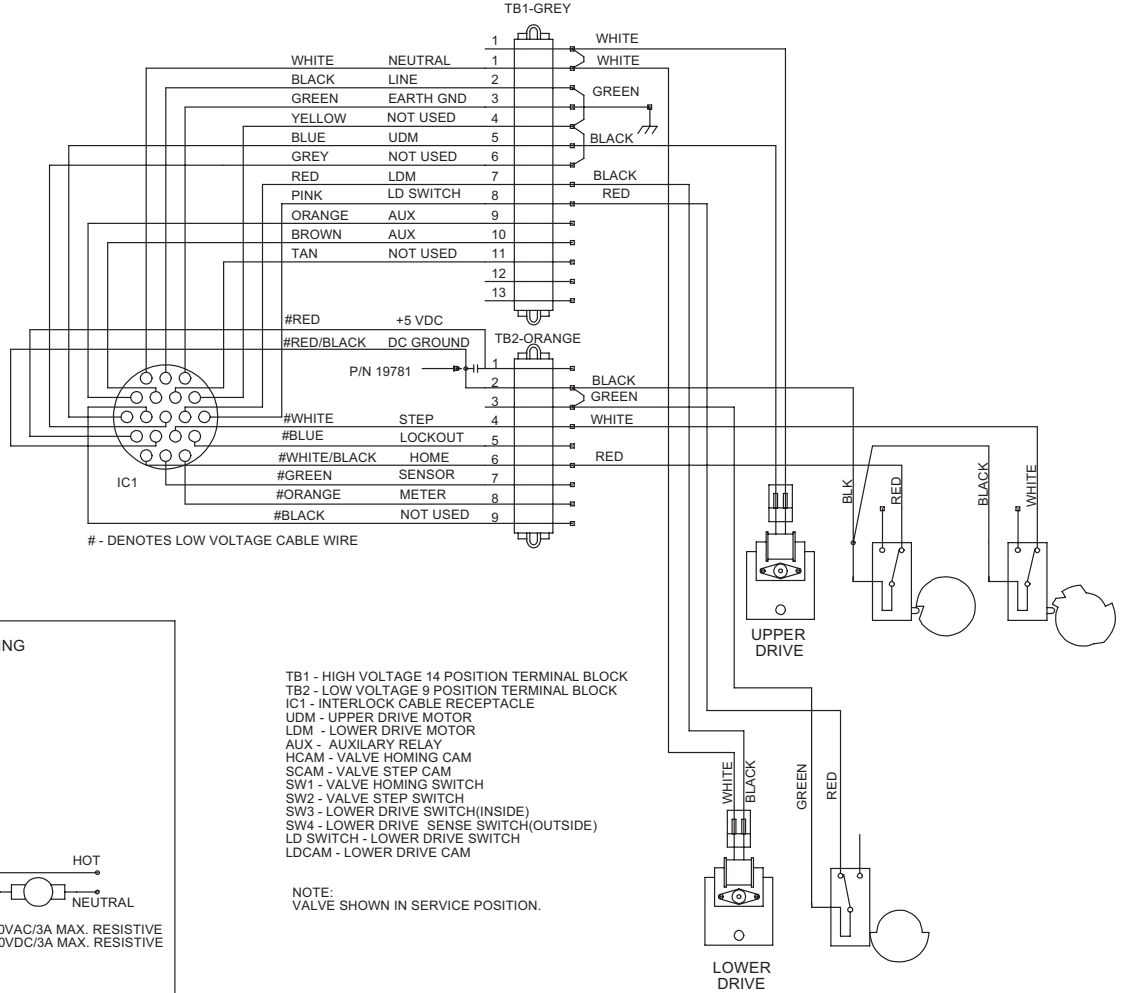
2750/2850 REMOTE TIMER WIRING DIAGRAM



TB1 - HIGH VOLTAGE 14 POSITION TERMINAL BLOCK
TB2 - LOW VOLTAGE 9 POSITION TERMINAL BLOCK
IC1 - INTERLOCK CABLE RECEPTACLE
UDM - UPPER DRIVE MOTOR
LDM - LOWER DRIVE MOTOR
AUX - AUXILIARY RELAY
HCAM - VALVE HOMING CAM
SCAM - VALVE STEP CAM
SW1 - VALVE HOMING SWITCH
SW2 - VALVE STEP SWITCH
LD SWITCH - LOWER DRIVE SWITCH

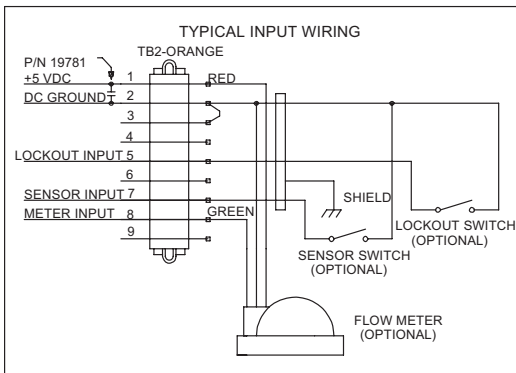
NOTE:
VALVE SHOWN IN SERVICE POSITION.

2900 REMOTE TIMER WIRING DIAGRAM

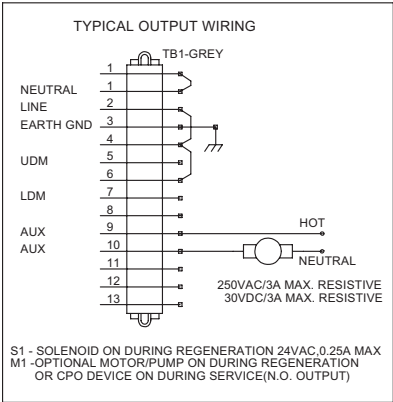
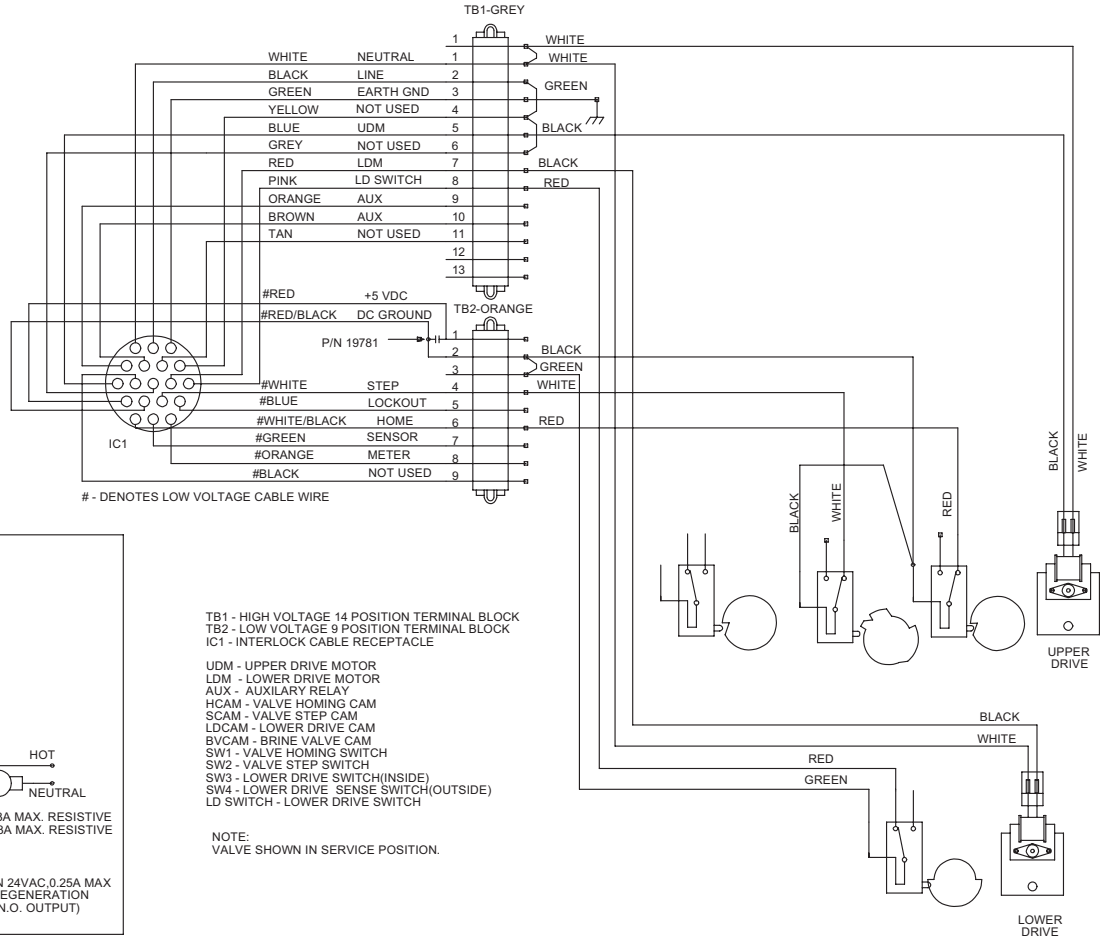


TB1 - HIGH VOLTAGE 14 POSITION TERMINAL BLOCK
TB2 - LOW VOLTAGE 9 POSITION TERMINAL BLOCK
IC1 - INTERLOCK CABLE RECEPTACLE
UDM - UPPER DRIVE MOTOR
LDM - LOWER DRIVE MOTOR
AUX - AUXILIARY RELAY
HCAM - VALVE HOMING CAM
SCAM - VALVE STEP CAM
SW1 - VALVE HOMING SWITCH
SW2 - VALVE STEP SWITCH
SW3 - LOWER DRIVE SWITCH(INSIDE)
SW4 - LOWER DRIVE SENSE SWITCH(OUTSIDE)
LD SWITCH - LOWER DRIVE SWITCH
LDCAM - LOWER DRIVE CAM

NOTE:
VALVE SHOWN IN SERVICE POSITION.



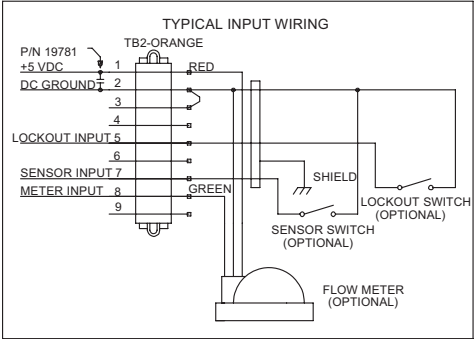
3900 REMOTE TIMER WIRING DIAGRAM



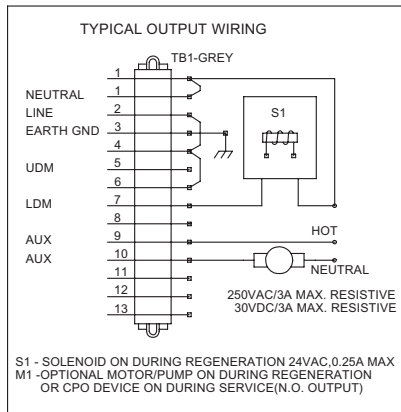
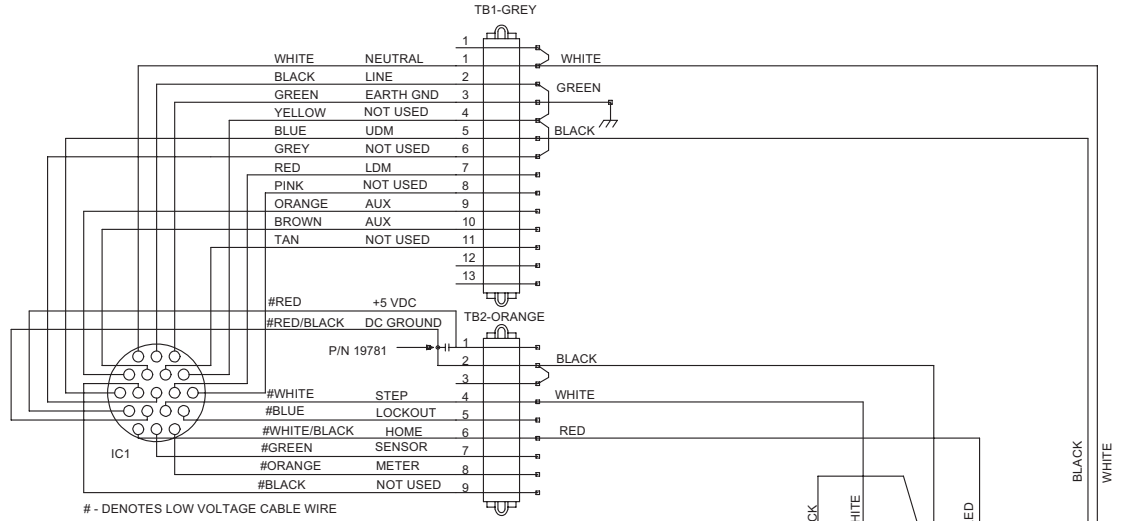
TB1 - HIGH VOLTAGE 14 POSITION TERMINAL BLOCK
 TB2 - LOW VOLTAGE 9 POSITION TERMINAL BLOCK
 IC1 - INTERLOCK CABLE RECEPTACLE

UDM - UPPER DRIVE MOTOR
 LDM - LOWER DRIVE MOTOR
 AUX - AUXILIARY RELAY
 HCAM - VALVE HOMING CAM
 SCAM - VALVE STEP CAM
 LDCAM - LOWER DRIVE CAM
 BVCAM - BRINE VALVE CAM
 SW1 - VALVE HOMING SWITCH
 SW2 - VALVE STEP SWITCH
 SW3 - LOWER DRIVE SWITCH(INSIDE)
 SW4 - LOWER DRIVE SENSE SWITCH(OUTSIDE)
 LD SWITCH - LOWER DRIVE SWITCH

NOTE:
 VALVE SHOWN IN SERVICE POSITION.

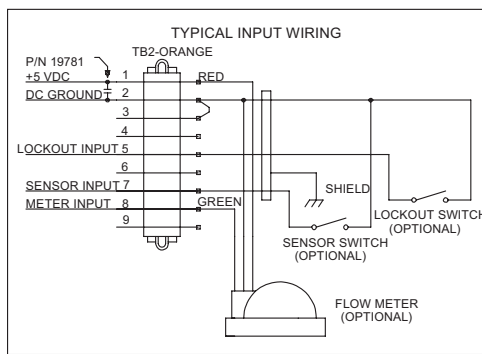


3150 REMOTE METER WIRING DIAGRAM



TB1 - HIGH VOLTAGE 14 POSITION TERMINAL BLOCK
TB2 - LOW VOLTAGE 9 POSITION TERMINAL BLOCK
IC1 - INTERLOCK CABLE RECEPTACLE
UDM - UPPER DRIVE MOTOR
LDM - LOWER DRIVE MOTOR
AUX - AUXILIARY RELAY
HCAM - VALVE HOMING CAM
SCAM - VALVE STEP CAM
BVCAM - BRINE VALVE CAM
SW1 - VALVE HOMING SWITCH
SW2 - VALVE STEP SWITCH

NOTE:
VALVE SHOWN IN SERVICE POSITION.



TROUBLESHOOTING

Detected Errors

If a communication error is detected, an Error Screen will alternate with the main (time of day) screen every few seconds.

- All units In Service remain in the In Service position.
- All units in Standby go to In Service.
- Any unit in Regeneration when the error occurs completes Regeneration and goes to In Service.
- No units are allowed to start a Regeneration Cycle while the error condition exists, unless they are manually forced into Regeneration.
- When an error is corrected and the error no longer displays (it may take several seconds for all of the units in a system to stop displaying the error message), the system returns to normal operation.

NOTE: During the error condition the control continues to monitor the flow meter and update the volume remaining. Once the error condition is corrected all units return to the operating status they were in prior to the error. Regeneration queue is rebuilt according to the normal system operation. Or, if more than one unit has been queued for regeneration, then the queue is rebuilt according to which one communicates first.

Message Displayed	Cause For Error	Correction
Flashing time	Power outage.	Program time by holding UP on Unit #1.
Detected Error = Matching Address	Two or more units programmed with the same valve address number.	Program each unit with unique valve address number in Master Programming.
Detected Error = Program Mismatch	Master program parameters do not match between two or more controls.	Confirm Master Programming for each unit.
Detected Error = No Message #1	No power to Control #1.	Power Control #1.
	Communication Cable to Valve Address #1 bad or missing.	Connect or replace Communication Cable.
Detected Error = No Message #2	No power to Control #2.	Power Control #2.
	Communication Cable to Valve Address #2 bad or missing.	Connect or replace Communication Cable.
Detected Error = No Message #3	No power to Control #3.	Power Control #3.
	Communication Cable to Valve Address #3 bad or missing.	Connect or replace Communication Cable.
Detected Error = No Message #4	No power to Control #4.	Power Control #4.
	Communication Cable to Valve Address #4 bad or missing.	Connect or replace Communication Cable.
Detected Error = E2 Reset Unit	This message appears after a software reset.	Reprogram control using Master Programming section.
Test Mode	Circuit Board was not programmed at factory.	Replace Circuit Board.
Black Squares on screen	Bad Circuit Board.	Replace Circuit Board.
INI on screen for more than 2 minutes	Circuit board not getting feedback from cycle switch.	Inspect Motor - should be rotating.
		Connect wire harness to cycle switch.
		Check Cycle Micro Switch.
CHG on screen for more than 2 minutes	Control programmed incorrectly as 2900 or 3900 valve type.	Reprogram unit as Stager Valve type.

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.



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