



FLECK NXT2 TIMER

SERVICE MANUAL

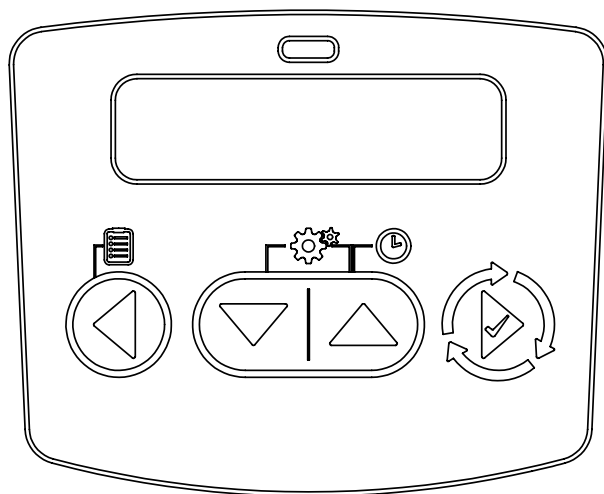


TABLE OF CONTENTS

IMPORTANT PLEASE READ:

- ^ The information, specifications and illustrations in this manual are based on the latest information available at the time of release. The manufacturer reserves the right to make changes at any time without notice.
- ^ This manual is intended as a guide for service of the valve 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.
- ^ It is established that when daytime water pressure exceeds 80 psi (5.5 bar), the maximum pressure rating of 125 psi (8.6 bar) can be exceeded. A pressure regulator must be installed on this system or warranty is voided.
- ^ Do not install the unit where temperatures may drop below 32°F (0°C) or above 120°F (52°C).
- ^ Do not place the unit in direct sunlight. Black units will absorb radiant heat, increasing internal temperatures.
- ^ Do not strike the valve 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, damage to product, or personal injury.
- ^ A prefilter should be used on installations in which free solids are present.
- ^ In some applications local municipalities treat water with Chloramines. High Chloramine levels may damage valve components.
- ^ Correct and constant voltage must be supplied to the controller to maintain proper function.
- ^ The system is intended to treat only potable quality water. It is not intended as the permanent primary treatment of water from a source that is contaminated, such as from radon, pesticides, insecticides, sewage or wastewater.
- ^ This system is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- ^ Children shall not play with the system.
- ^ Cleaning shall not be made by children without supervision.
- ^ Periodic cleaning and maintenance may be required to function properly.
- ^ All plumbing and electrical should be done in accordance with local codes.
- ^ An uninterrupted power supply is required. The control uses a transformer to supply 24 VDC. Please make sure your voltage supply is compatible with your unit before installation.

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.

FEATURES

1. The first feature is the presence of a specific symbol, which is a combination of a circle and a cross. This symbol is used to denote a particular type of data point or measurement.

2. The second feature is the use of a specific color, which is a shade of blue. This color is used to highlight certain elements or to represent a specific category.

3. The third feature is the inclusion of a specific text label, which is a short phrase or sentence. This label is used to provide context or to identify the data being presented.

4. The fourth feature is the use of a specific font style, which is a serif font. This font style is used to ensure readability and to maintain a consistent appearance.

5. The fifth feature is the inclusion of a specific image or graphic, which is a small illustration or diagram. This image is used to provide visual context or to represent a specific concept.

6. The sixth feature is the use of a specific layout or format, which is a structured arrangement of text and graphics. This layout is used to organize the information and to make it easy to navigate.

7. The seventh feature is the inclusion of a specific table or chart, which is a visual representation of data. This table or chart is used to present complex information in a clear and concise manner.

8. The eighth feature is the use of a specific color scheme, which is a set of colors used throughout the document. This color scheme is used to create a cohesive and professional appearance.

9. The ninth feature is the inclusion of a specific title or heading, which is a prominent label for a section of the document. This title or heading is used to guide the reader and to provide context.

10. The tenth feature is the use of a specific font size, which is a measure of the height of the text. This font size is used to ensure that the text is legible and to maintain a consistent appearance.

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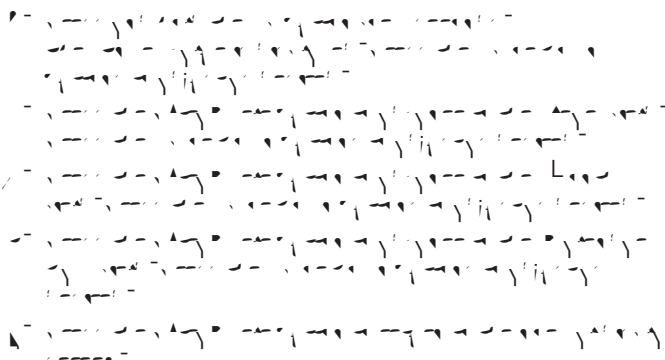
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TIMER OPERATION

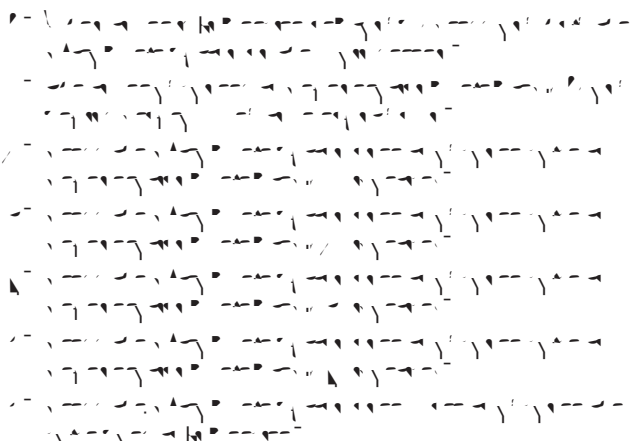
Setting the Time of Day

NOTE: Set Time of Day on any unit and the rest of the units in the system will update the Time of Day automatically.



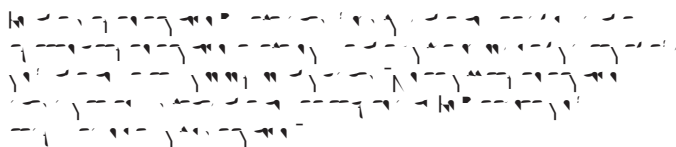
NOTE: Press and hold the Left button to exit without saving.

Manually Initiating a Regeneration



NOTE: A manually initiated or queued regeneration can be cleared by pressing and holding the Back button. 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 During Regeneration



CYCLE 1/5
BACKWASH 00:10:00

CYCLE 2/5
DRAW 00:60:00

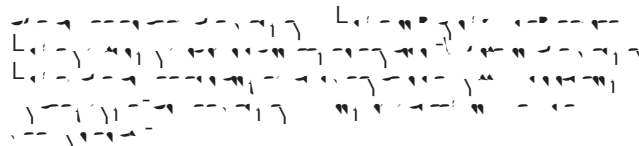
CYCLE 3/5
RAPID RINSE 00:10:00

CYCLE 4/5
TANK REFILL 00:12:00

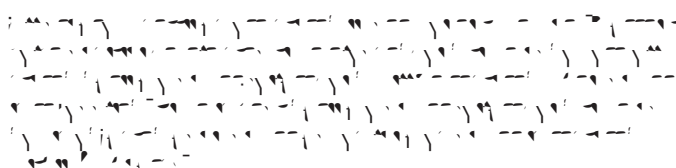


Press the Extra Cycle button during a system queued Regeneration Cycle to immediately advance the valve to the next cycle step position and resume normal step timing.

Timer Operation During Programming

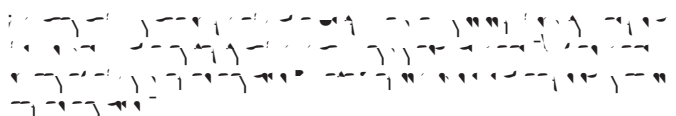


Timer Operation During A Power Failure



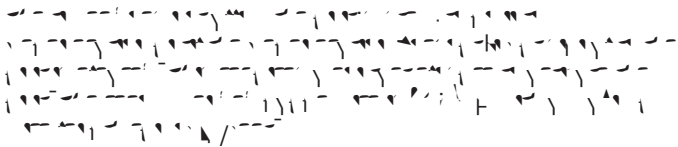
NOTE: The time of day on the main display screen will flash for 5 minutes when there has been a power outage. The flashing of the time of day can be stopped by pressing any button on the display.

Flow Meter Equipped Timer

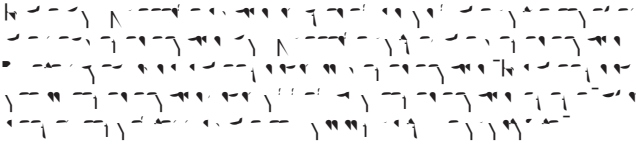


TIMER FEATURES

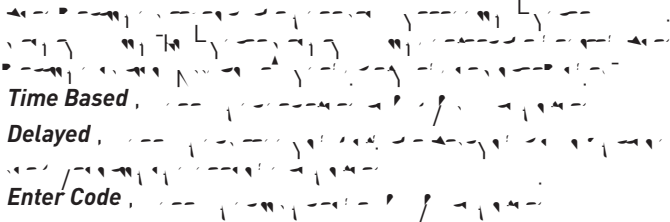
Remote Lock



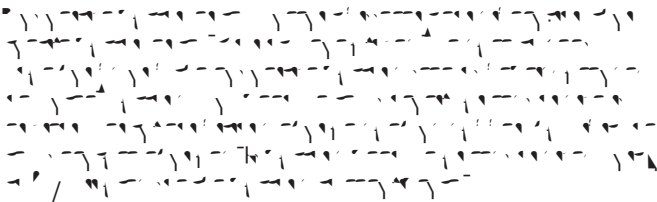
Regeneration Day Override Feature



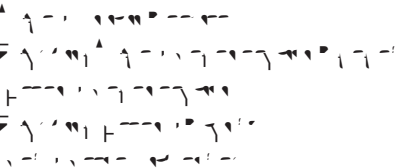
Lock Settings (access to Master Programming)



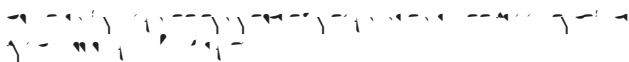
Capacitive Buttons



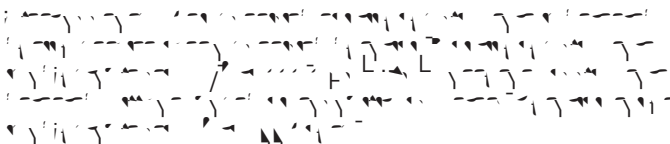
LED Status indicator



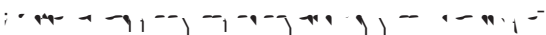
Power Loss Backup



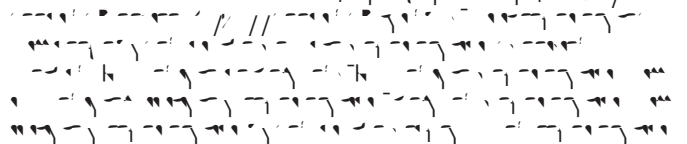
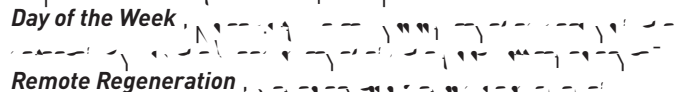
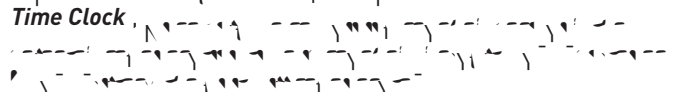
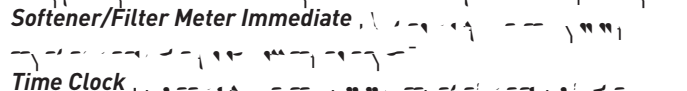
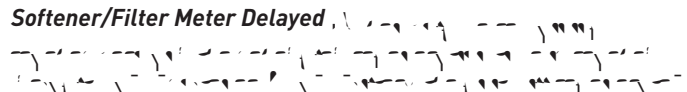
Continuous Flow Detect



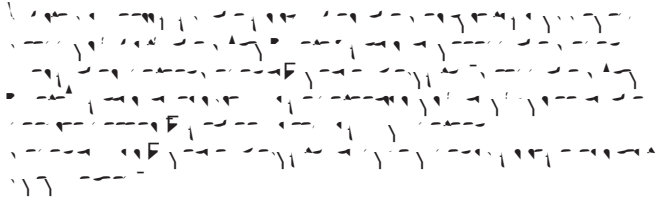
Remote Regeneration



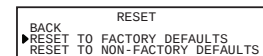
Regeneration Types



Reset to Factory Defaults



Power on the unit.
When Pentair logo appears,
press and hold the Extra Cycle button.
The Reset menu appears.



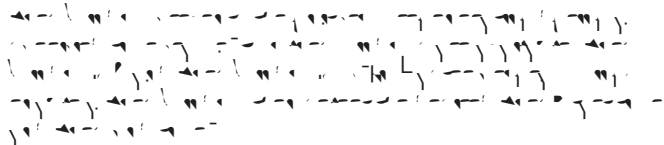
Use the up/down buttons to select.



Press the Extra Cycle button to set the
desired option and return to the
Service screen.

END

Lock Window



Settings Review



Auxiliary Relays



AUX.1: CYCLE BASED

▼

SP

X

BW

X

BD

✓

RR

X

RF

X

SB

X

Activates during selected cycle step

AUX.1:TIME BASED-START TIME #1

1 M

Activates upon selected start time
(Range: 0-91 minutes)

AUX.1:TIME BASED-END TIME #1

5 M

Deactivates upon selected end time
(Range: Start Time plus 1 minute)

AUX.1:VOLUME BASED - VOLUME-G

⏴

00100

⏵

Activates when selected volume (gallon)
is reached (Range: 0-99999)

AUX.1:VOLUME BASED - DURATION-S

0010

Selected Duration in Seconds
(Range: 0-9999 seconds)

SYSTEM DEFINITIONS

System 4 - Single Unit

System 4 is a single unit system. It is used for single unit systems.

System 5 (2-8 Units) Parallel Interlock)

System 5 is a parallel interlock system. It is used for 2-8 units. It is used for parallel interlock systems.

System 6 (2-8 Units) Parallel Series Regeneration

System 6 is a parallel series regeneration system. It is used for 2-8 units. It is used for parallel series regeneration systems.

System 7 (2 Units) Alternating Immediate

System 7 is an alternating immediate system. It is used for 2 units. It is used for alternating immediate systems.

System 8 (2 Units) Alternating Delayed

System 8 is an alternating delayed system. It is used for 2 units. It is used for alternating delayed systems.

System 9 (2-8 Units) Alternating with Standby Units

System 9 is an alternating with standby units system. It is used for 2-8 units. It is used for alternating with standby units systems.

System 14 (2-8 Units) Demand Recall

System 14 is a demand recall system. It is used for 2-8 units. It is used for demand recall systems.

	SETTINGS REVIEW ON OFF	Example: On: View settings without the ability to alter settings. Off: User has ability to alter settings.
	LANGUAGE PORTUGUES ENGLISH FRANCAIS	Example: English, Francais, Duetsch, Italiano, Espanol, Nederlandse, Portugues
	ASSISTANCE NAME 1	Example: 12 characters maximum.
	ASSISTANCE NAME 2	Example: 12 characters maximum.
	ASSISTANCE PHONE	Example: 14 characters maximum.
	SYSTEM SYSTEM 4 SYSTEM 5 SYSTEM 6	Example: 4, 5, 6, 7, 8, 9, 14
	VALVE 2815 2850 2900	Example: 2510, 2750, 2815, 2900, 3150, 3900
	REGEN. FLOW UPFLOW DOWNFLOW FILTER	Example: Upflow Downflow Filter
	REGEN. TYPE SOFTENER METER DEL SOFTENER METER IMM TIME CLOCK	Example: Softener Meter Delayed Softener Meter Immediate Time Clock Day of the Week.
	UNITS METRIC US	Example: Metric US
	CAPACITY - GRAINS 0023028	Example: Range: 0-9,999,999 grains
		Example: Range: 0-199 GPG
	RESERVE FIXED VOLUME WEEKLY RESERVE VARIABLE RESERVE	Example: Fixed Volume Weekly Reserve Variable Reserve Fixed %
	REMOTE REGENERATION DELAYED OFF IMMEDIATE	Example: Off, Immediate, Delayed
	REMOTE SIGNAL DURATION 1 S	Example: Range: 1-90 seconds (Service) 60-300 seconds (Standby)
	DAY OVERRIDE/TIME-DRIVEN 10 D	Example: Range: Off - 99 Days
	REGEN. TIME 02:00HR	Example: Range: 0 - 23 Hours 59 Minutes.

MASTER PROGRAMMING MODE

FLOW CHART



LOCK WINDOW #1
ON
OFF

Example:
Start Lock Window
End Lock Window

BACKWASH
10 M

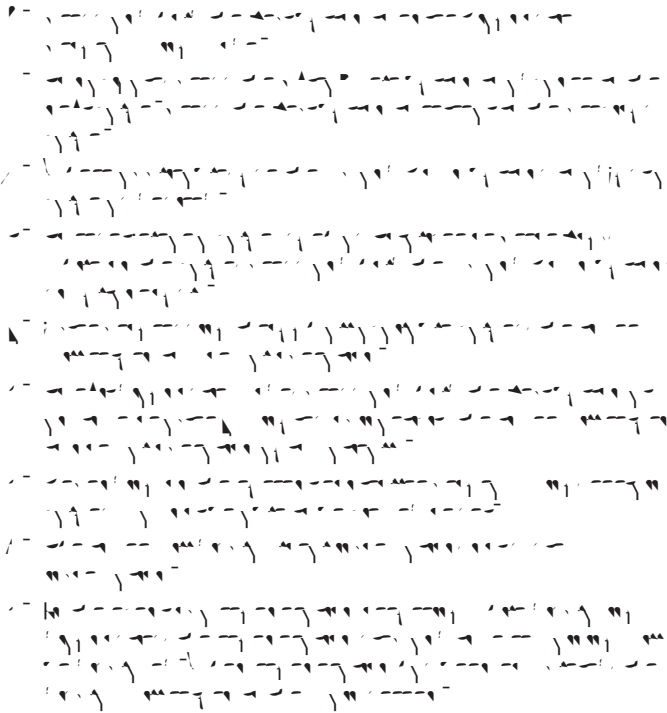
Example:
Range: 0 - 240 M

DRAW
60 M

Example:
Range: 0 - 240 M

DIAGNOSTIC PROGRAMMING MODE FLOW CHART

Diagnostic Programming Mode



ERROR LOG
ERROR LOG EMPTY

Example:
Record of error events chronologically.



SUN-AVERAGE USAGE
29.7 G

Example:
Average usage from past Sunday.



SUN-DAILY USAGE
2017-10-10 0 G
2017-01-02 0 G
2017-12-26 0 G

Example:
Average usage from past 3 Sundays.



MON-AVERAGE USAGE
29.7 G

Example:
Average usage from past Monday.



MON-DAILY USAGE
2016-10-10 0 G
2017-01-02 0 G
2016-12-26 0 G

Example:
Average usage from past 3 Mondays.



TUE-AVERAGE USAGE
29.7 G

Example:
Average usage from last Tuesday.



TUE-DAILY USAGE
2016-10-10 0 G
2017-01-02 0 G
2016-12-26 0 G

Example:
Average usage from past 3 Tuesdays.



WED-AVERAGE USAGE
29.7 G

Example:
Average usage from last Wednesday.



WED-DAILY USAGE
2016-10-10 0 G
2017-01-02 0 G
2016-12-26 0 G

Example:
Average usage from past 3 Wednesdays.



THU-AVERAGE USAGE
29.7 G

Example:
Average usage from last Thursday.



THU-DAILY USAGE
2016-10-10 0 G
2017-01-02 0 G
2016-12-26 0 G

Example:
Average usage from past 3 Thursdays.



FRI-AVERAGE USAGE
29.7 G

Example:
Average usage from last Friday.



FRI-DAILY USAGE
2016-10-10 0 G
2017-01-02 0 G
2016-12-26 0 G

Example:
Average usage from past 3 Fridays.



SAT-AVERAGE USAGE
29.7 G

Example:
Average usage from last Saturdays



SAT-DAILY USAGE
2016-10-10 0 G
2017-01-02 0 G
2016-12-26 0 G

Example:
Average usage from past 3 Saturdays.

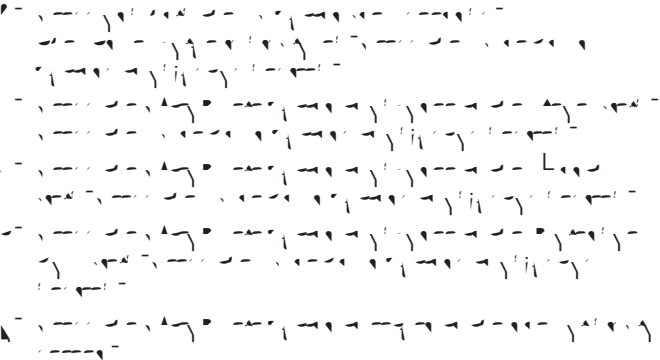
END

TIME OF DAY PROGRAMMING MODE

FLOW CHART

Setting the Time of Day

NOTE: Set Time of Day on any unit and the rest of the units in the system will update the Time of Day automatically.



NOTE: Press and hold the Left button to exit without saving.



TIME
11:00AM

YEAR
2018

MONTH
JAN

CALENDAR DAY
22

Example:
12 or 24 hour formats available

Example:
Set current year

Example:
Set current month

Example:
Set current day

[illegible]

NXT2 TIMER ASSEMBLY
(2510, 2750, 2850, 2900, 3150, 3900 VALVES)

Item No.	QTY	Part No.	Description

Service Assemblies

NXT2 TIMER ASSEMBLY
(2815 VALVE)

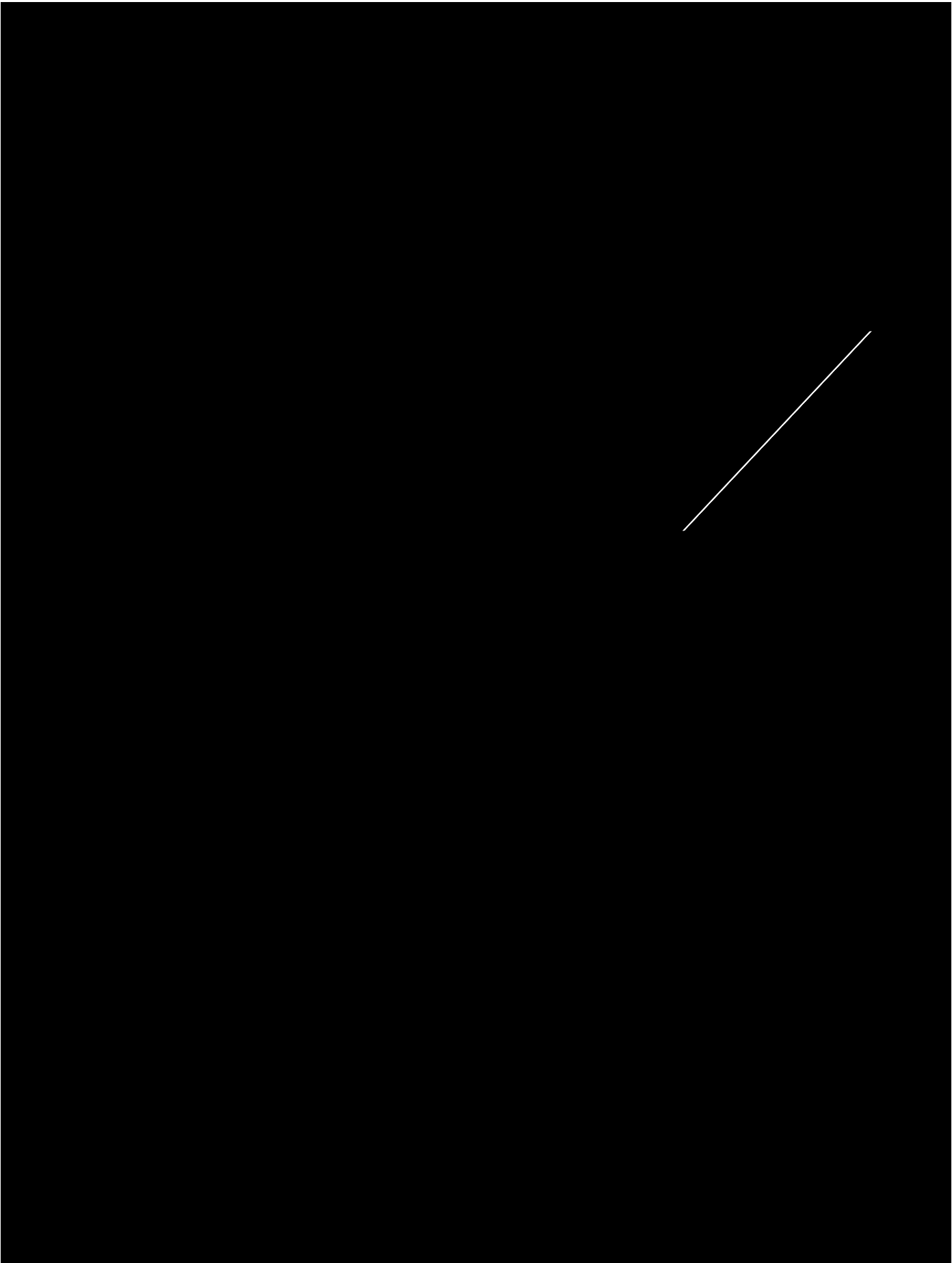
Item No.	QTY	Part No.	Description

Service Assemblies

NXT TO NXT2 CONVERSION KITS

Item No.	QTY	Part No.	Description
	1	8000100	Power Supply
	1	8000101	Wiring Harness
	1	8000102	Motor
	1	8000103	Sensor

NOTE: Conversion Kits do not include wiring harness; save and reuse existing NXT wiring harness.
Region-specific power supply is included.



POWER SUPPLY CONNECTIONS

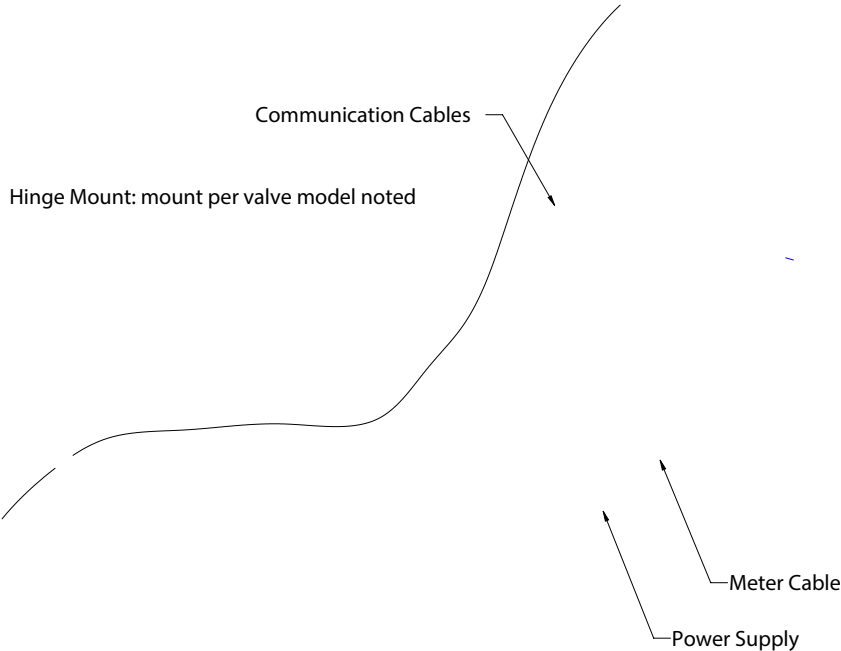
Installing the Power Supply:

NOTE: Power Supply includes a harness with 2 black wires that connect to circuit board, see page 15.



2510/2750/2815/2850/2900 Valves:

3150/3900 Valves:

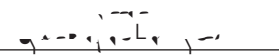
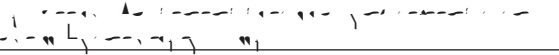
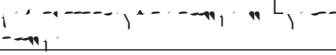
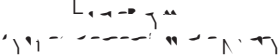
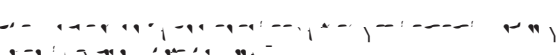
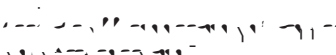
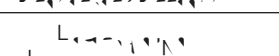
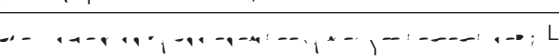
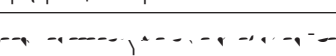
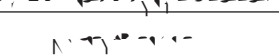
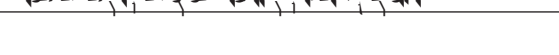
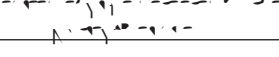
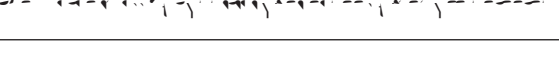
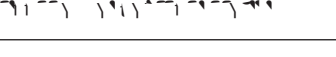
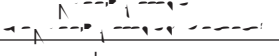
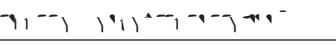
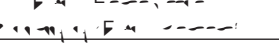
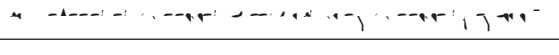
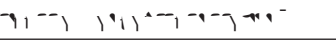
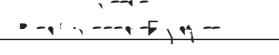
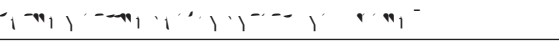
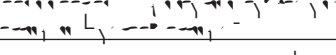
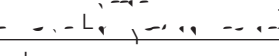
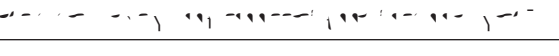
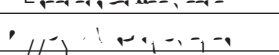
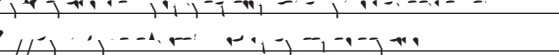
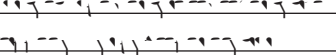
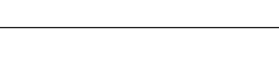
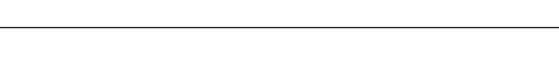
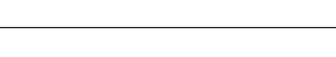


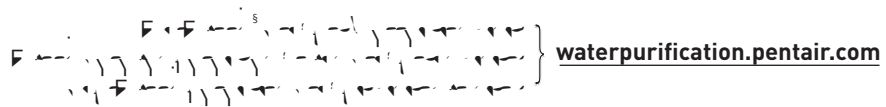
ERROR CODES AND TROUBLESHOOTING

Detected Errors

- [illegible]

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
		
		
		
		
		
		
		
		
		
		
		
		



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