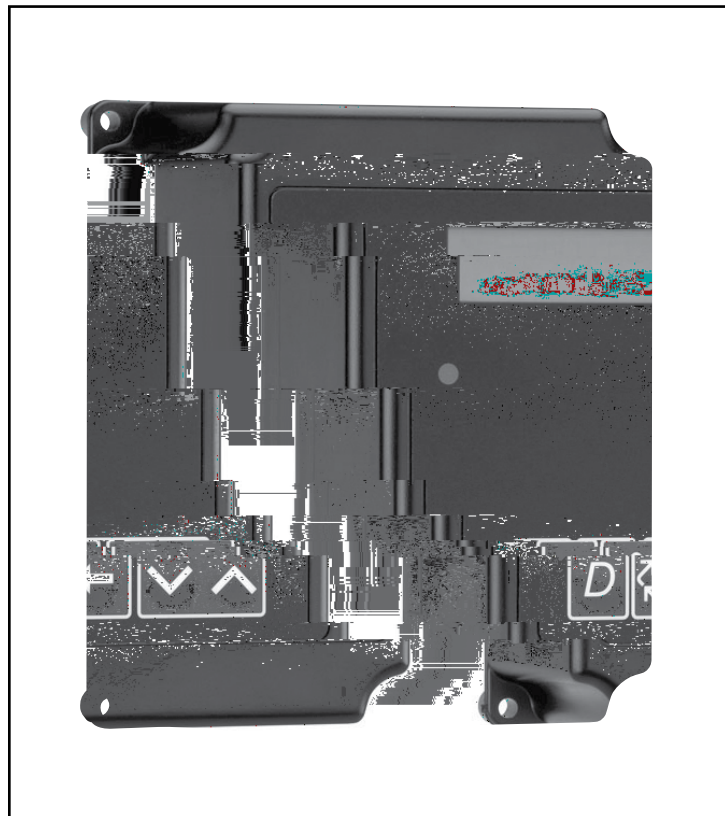


# 3200NXT

## *Service Manual*



**IMPORTANT:** Fill in Pertinent Information on Page 3 for Future Reference

## Table of Contents

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**IMPORTANT PLEASE READ:**

- [illegible]

---

## ***Job Specification Sheet***

---

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

**Programming Mode:**

**Master Programming Mode:**

**Valve Type:**                      **2750 / 2850 / 2900s / 3150 / 3900 / Stager**

3

3

---

## 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 populate with the Time of Day within 10 seconds.

- 1.
- 2.
- 3.
- 4.

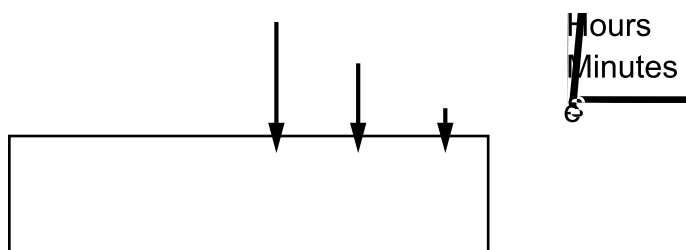
**NOTE:** The “D” button (Diagnostic) can be pressed to exit without saving.

### Manually Initiating a Regeneration

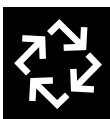
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

**NOTE:**

### Timer Operation During Regeneration



**Example:**



### Flow Meter Equipped Timer

---

---

### **Timer Operation During Programming**

### **Timer Operation During A Power Failure**

**NOTE:**

#### **Remote Lockout**

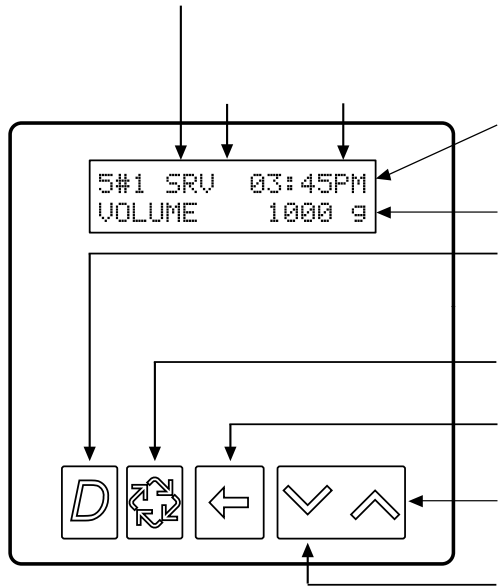
### **Regeneration Day Override Feature**

	<b>WARNING</b> Transformer must be grounded and ground wir
--	---

---

## Timer Display Features

---



---

## Timer Display - Screen Examples

---

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

**Example:**

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

**Example:**

- 1.
- or
- 2.

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

**Example:**

- 1.

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

**Example:**

- 1.

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

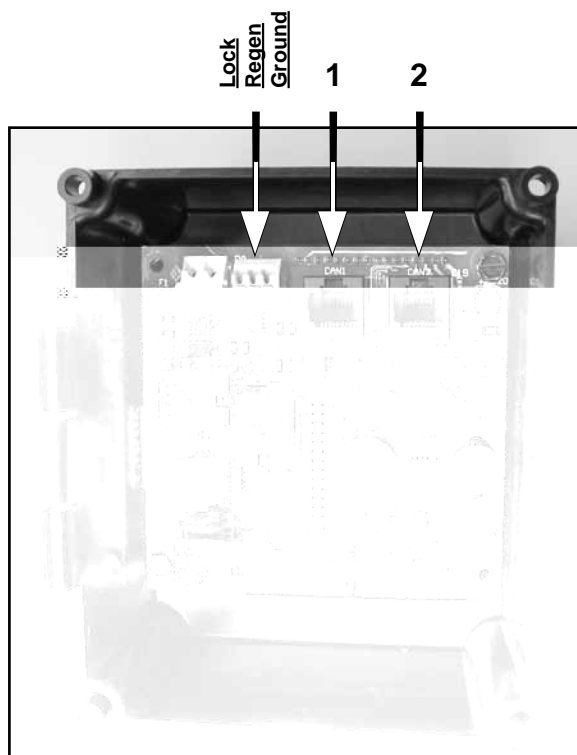
**Example:**

- 1.
- 
-

---

## ***Network/Communication Cables & Connections***

---



**3200NXT Circuit Board**

**Two-Unit System:**  
**Three-Unit System:**  
**Four-Unit Systems:**

---

---



---

# Master Programming Mode Flow Chart

---

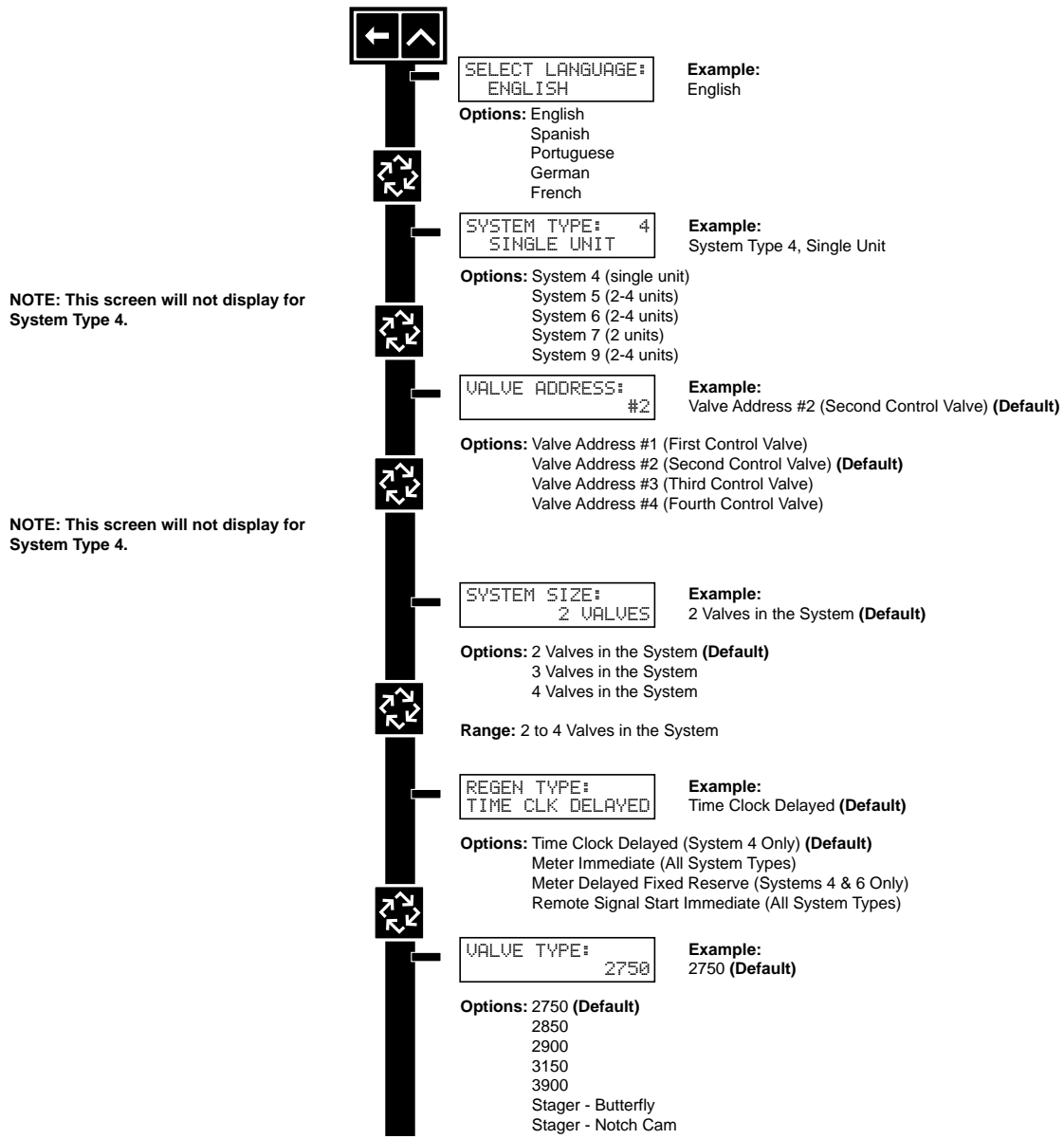
**NOTE:** Depending on current option settings, some displays cannot be viewed or set.

## Entering Master Programming Mode:

1.

2.

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



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

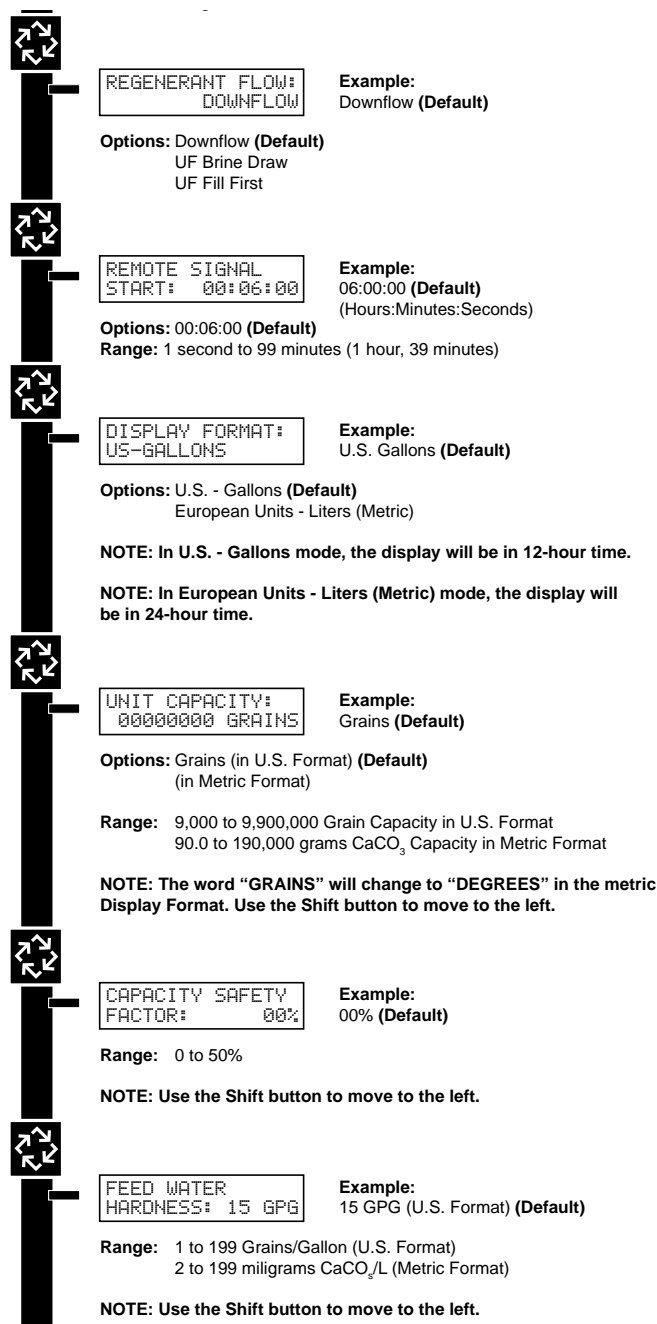
---

---

# Master Programming Mode Flow Chart

---

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



**NOTE:** This screen will only display on the lead unit for System Types 6 & 7. For all other System Types, it will display for all units.

---

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

---

---

## ***Master Programming Mode Flow Chart***

---

---

---

# Master Programming Mode Flow Chart

NOTE: Only displayed on units that physically have a meter (Lead always has a meter). Only shown if Auxiliary Relay is disabled on System Types 6 & 7.



CPO AUX RELAY  
VOLUME: 000 g

**Example:**  
Chemical Pump Auxiliary Relay  
Volume at 0 Gallons

**Range:** 000 to 999 gallons in U.S. Format  
0.000 to 9.999 L in Metric Format



CPO AUX RELAY  
TIME: 00:00:00

**Example:**  
Chemical Pump Auxiliary Relay at 0 Hours,  
0 Minutes, & 0 Seconds

**Range:** 00:00:00 to 02:00:00



NOTES: Default flow meter type is based on the valve type. This screen will only display on the lead unit for System Types 6 & 7. All other system types it will display for all units.

FLOW METER:  
1.0 PADDLE

**Example:**  
1.0 Paddle Flow Meter

**Options:** 1.0 Paddle  
1.0 Turbine  
1.5 Paddle  
1.5 Turbine  
2.0 Paddle  
3.0 Paddle  
Generic



NOTE: Only displayed if "Generic" is chosen for the flow meter.

MAXIMUM FLOW  
RATE: 0000 gpm

**Example:**  
Maximum Flow Rate of 0 gpm

**Range:** 20 - 2,000 gpm (U.S. Format)  
2.0 - 200.0 L (Metric Format)



NOTE: Only displayed if "Generic" is chosen for the flow meter.

ADD 01 GALLONS  
EVERY 001 PULSES

**Example:**  
Add 1 Gallon for Each Pulse in U.S. Format

**Options:** Gallons (U.S. Format)  
Liters (Metric Format)

**Range:** 1 - 99 Gallons (U.S. Format)  
0.1 - 09.9 L (Metric Format)  
Pulses: 1 - 99



PROGRAMMING UNIT  
PLEASE WAIT...

**Example:**  
Master Programming Mode is Exiting



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

---

# Master Programming Guide

---

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

**Entering Master Programming Mode:**

OR

12:01 PM or 12:01HR

**Exiting Master Programming Mode:**

**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 made, and the unit will go back to the main display screen.

**Resets:**

**Soft Reset:**

**Master Reset:**

## 1. Choice of Language

- 1.
- 2.

SELECT LANGUAGE  
ENGLISH

## 2. System Type

- 1.
- 2.

SYSTEM TYPE: 4  
SINGLE UNIT

## 3. Valve Address

- 1.
- 2.

VALVE ADDRESS:  
# 2

---

---



## 8. Remote Signal Start

- 1.
- 2.

```
REMOTE SIGNAL  
START: 00:00:00
```

```
5#1 SRV* 05:38PM  
SIGNAL 00:06:00
```

## 9. Display Format

- 1.
- 2.

```
DISPLAY FORMAT:  
US-GALLONS
```

## 10. Unit Capacity

3

3

3

- 1.
- 2.
- 3.

```
UNIT CAPACITY:  
300000 GRAINS
```

---

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

---

---

# Master Programming Guide

---

## 11. Capacity Safety Factor

Range:

- 1.
- 2.
- 3.

CAPACITY SAFETY  
FACTOR: 00%

## 12. Feed Water (Hardness)

U.S. Range:

Metric Range:

3

- 1.
- 2.
- 3.

FEED WATER  
HARDNESS: 015 GPG

## 13. Regeneration Day Override

Default:

Range:

NOTE:

- 1.
- 2.
- 3.

REGENERATION DAY  
OVERRIDE: OFF

REGENERATION DAY  
OVERRIDE: 01 DAYS

---

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

---



# Master Programming Guide

## 14 Generation Time

Default: .S.:

Default: etric:

1.

2.

3.

GENER 1

## 15 Generation Cycle Steps

## 16 Auxiliary Relay Output

AUXILIARY RELAY:  
ENABLED

**ON:** Before entering Master Programming, please contact your local professional water dealer.

---

## Master Programming Guide

---

### 17. Timed Auxiliary Relay Output Window (Start & End Time Setting, If Auxiliary Relay is Enabled)

Start Time:

End Time:

AUX RELAY OUTPUT START 00:00:00
------------------------------------

AUX RELAY OUTPUT END 00:00:00
----------------------------------

### 18. Chemical Pump Auxiliary Relay Output Window

U.S. Range:

Metric Range:

CHEMICAL PUMP: ENABLED
---------------------------

CPO AUX RELAY VOLUME: 000 g
--------------------------------

CPO AUX RELAY TIME: 00:00:00
---------------------------------

---

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

---

---

## Master Programming Guide

---

### 19. Fleck Flow Meter Size (Default to Valve Type)

- 1.
- 2.

FLOW METER:  
.75 PADDLE

### 20. Maximum Flow Rate

- 1.
- 2.
- 3.

MAXIMUM FLOW  
RATE: 0000 GPM

### 21. Pulses per Gallon/Liter

- 1.
- 2.
- 3.

ADD 01 GALLONS  
EVERY 001 PULSES

### 22. End of Master Programming Mode

PROGRAMMING UNIT  
PLEASE WAIT...

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

---

---

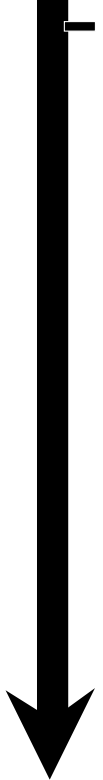
---

# User Mode Programming Flow Chart

---

**NOTES:** 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.

Entering User Mode:



Use the Up and Down buttons to change from OFF to days desired.

Use the Up and Down button

---

## Diagnostic Mode Flow Chart

---

### Entering Diagnostic Mode:

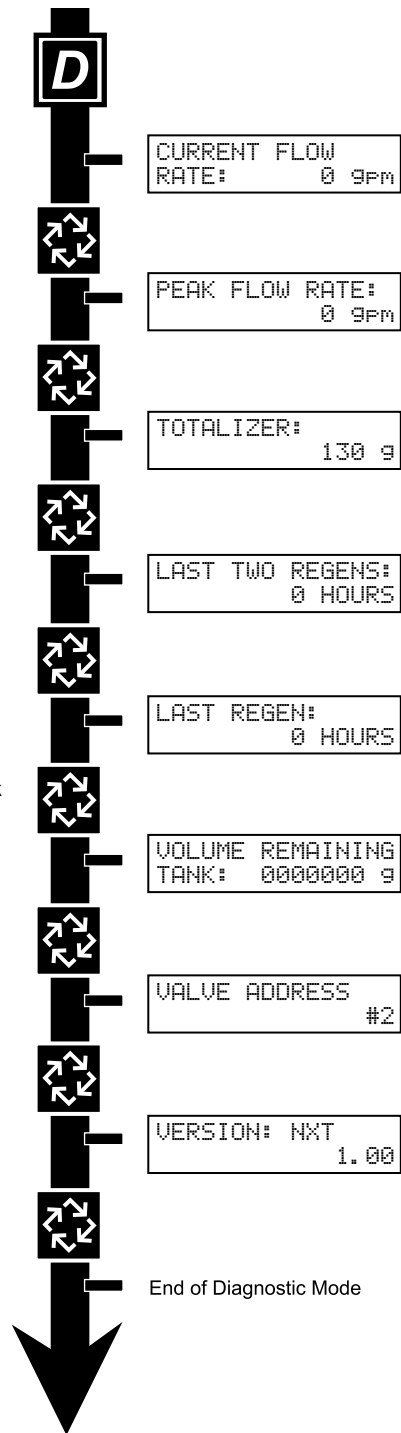
1.

2.

3.

4.

NOTE: If a System 6, Unit#1 of "Tank Remaining" will display "System Remaining").



---

# Diagnostic Programming Guide

---

## Overview Diagnostic Mode

## Entering and Exiting Diagnostic Mode

### Current Flow Rate

- 1" Paddle Meter Maximum Flow Rate:
- 1.5" Paddle Meter Maximum Flow Rate:
- 2" Paddle Meter Maximum Flow Rate:
- 3" Paddle Meter Maximum Flow Rate:
- 1" and 1.5" Turbine Meter:

1.

CURRENT FLOW  
RATE: 0 GPM

### Peak Flow Rate

Range:

1.

PEAK FLOW RATE:  
0 GPM

### Totalizer

**NOTE:** The user cannot edit below the current volume remaining.

1.

2.

TOTALIZER:  
00000000 G

---

## ***Diagnostic Programming Guide***

---

### **Hours Between Last Two Regenerations**

1.

LAS "

### **Hours Since Last Regeneration**

1.

### **Volume Remaining (This Tank Only)**

**NOTE:** Volume Remaining will not display for System Type 6.

1.

2.

3.

### **Volume Remaining (System)**

1.

---

---

---

## ***Diagnostic Programming Guide***

---

### **Valve Address**

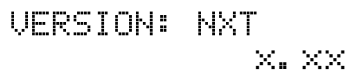
1.



A rectangular LCD screen with a black border. The text "VALVE ADDRESS:" is displayed in the upper left, and "# 2" is displayed in the lower right.

### **Software Version**

1.



A rectangular LCD screen with a black border. The text "VERSION: NXT" is displayed in the upper left, and "X.XX" is displayed in the lower right.

**NOTE:** Diagnostic Mode programming will stop if the system goes into regeneration.

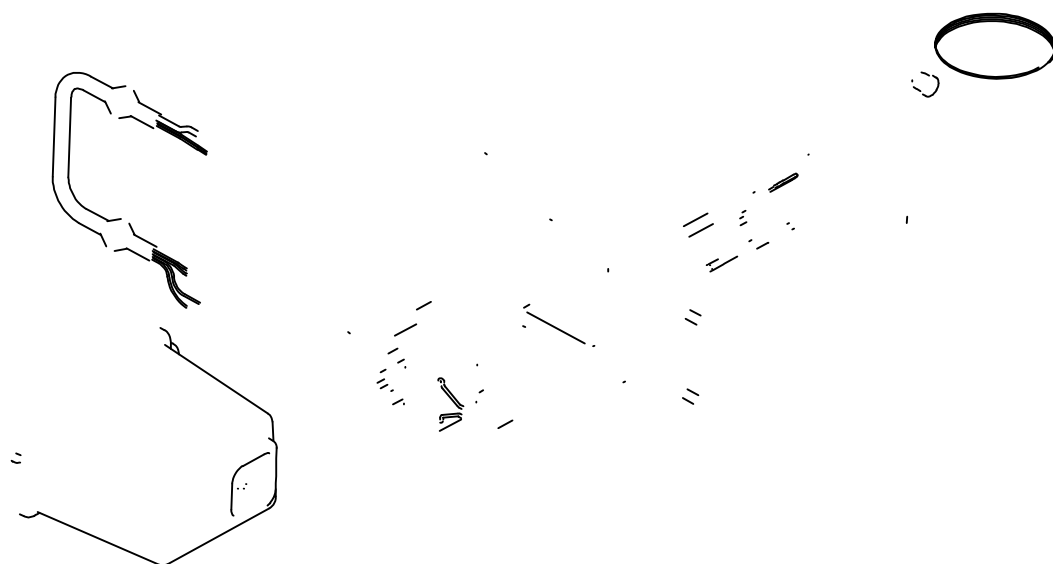




---

## ***2750/2850/2900 Upper & 2900 Lower Powerhead Assy***

---



---

## 2750/2850/2900 Upper & 2900 Lower Powerhead Assy

---

Item No.	Quantity	Part No.	Description
1.....	1.....		
2.....	1.....		
3.....	1.....		
4.....	1.....	10909.....	
5.....	2.....	14923.....	
6.....	5.....	10302.....	
7.....	3.....	10218.....	
8.....	2.....	10231.....	
9.....	1.....	41544.....	
10.....	1.....	12777.....	
11.....	2.....	10338.....	
12.....	1.....	41034.....	
		41049.....	
		41050.....	
13.....	1.....	19691.....	
14.....	2.....	19800.....	
15.....	1.....	15806.....	
16.....	9.....	19801.....	
17.....	1.....	17967.....	
18.....	1.....	10896.....	
19.....	4.....	11805.....	
20.....	1.....	40943.....	
21.....	1.....	13547.....	
22.....	1.....	19121.....	
23.....	1.....		
24.....	1.....	40941.....	
25.....	1.....	17421.....	
26.....	2.....	41581.....	
27.....	1.....		
28.....	1.....	18626.....	
29.....	1.....	18746.....	
30.....	2.....	11224.....	
31.....	1.....	10250.....	
32.....	7.....	10872.....	
33.....	1.....	18709.....	
34.....	1.....	11381.....	
35.....	1.....	14759.....	
36.....	1.....	14769.....	
37.....	1.....	14775.....	
38.....	2.....	16346.....	
39.....	1.....	18725.....	
40.....	1.....	40388.....	
41.....	1.....	14813.....	
42.....	1.....	41102.....	
43.....	1.....	10269.....	
44.....	1.....	10712.....	
45.....	1.....	41692.....	
46.....	1.....		

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

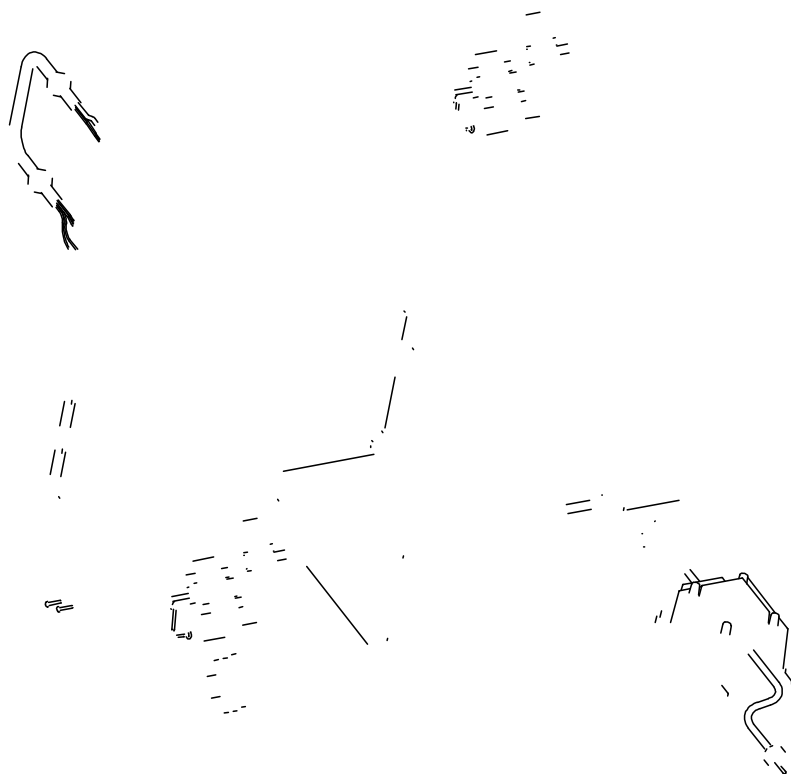
---

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---

***3150/3900 Upper & 3900 Lower Drive Powerhead Assy***

---



## **3150/3900 Upper & 3900 Lower Drive Powerhead Assy**

Item No.	Quantity	Part No.	Description
1	1		
2	1	15120	
3	1	40391	
4	8	11224	
5	4	16346	
6	2	17797	
7	5	10302	
8	4	10218	
9	2	16053	
10	2	12624	
11	4	16052	
12	4	17567	
13	1	16494	
14	8	10231	
15	2	16046	
16	3	11774	
17	2	16047	
18	2	11709	
19	1	16048	
20	2	11898	
21	2	16045	
22	2	11381	
23	7	10872	
24	8	11235	
25	2	16050	
26	2	16059	
27	2	16051	
28	8	19800	
29	1	15806	
30	1	19591	
31	3	11080	
32	2	17967	
33	1	40941	
34	1	40943	
35	1	41034	
		41049	
		41050	
36	1	19121	
37	1		
38	1	17421	
39	2		
40	1	40392	
41	1	19305	
42	1	16086	
43	1	19315	
44	1	18726	
45	1	16048	
46	2	11805	
47	1	16495	
48	1	41102	
49	1	19801	
50	1	19691	
51	1	41692	
52	1		

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

## IONS.



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

## 2900/3900 Input & Output Wiring



---

# Troubleshooting

---

## Detected Errors

NOTE: It can take up to 30 seconds for an error to be detected and displayed. All errors on each timer in the system must be displayed before the errors can be corrected.

NOTE:

Cause	Correction

## Programming Errors

Programming Errors Detected:

Solution:

NOTE:

---

---



---

## Troubleshooting

---

Cause	Correction

### Example Error Screens

```
DETECTED ERROR=
E2      RESET UNIT
```

#### Detected Error

- 1.

```
DETECTED ERROR=
NO MESSAGE #1
```

#### No Message #1

- 1.
- 2.
- 3.

```
DETECTED ERROR=
NO MESSAGE #3
```

#### No Message #3

- 1.
- 2.
- 3.

```
DETECTED ERROR=
PROGRAM MISMATCH
```

#### Program Mismatch

- 1.

```
DETECTED ERROR=
EXCEED UNIT SIZE
```

#### Exceed Unit Size

- 1.

```
DETECTED ERROR=
MATCHING ADDRESS
```

#### Matching Address

- 1.

**NOTE:** The rest of the system will still function without this unit.

---

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---

## ***Notes***

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