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**Operation Manual**

**a** **a**

## TABLE OF CONTENTS

# LOGIX™ SERIES INSTALLER QUICK-START SHEET

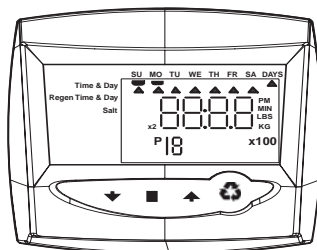
## Logix Series Controllers

Logix Series controllers are designed to operate on both the 255 and Performa valve body series.

**742 Controller -** The 742 controller is designed to operate on both the 255 and Performa valve body series. It is a 3-1/2" wide, 4-1/2" high unit with a digital display and buttons for Time & Day, Regen Time & Day, and Salt.

**762 Controller -** The 762 controller is designed to operate on both the 255 and Performa valve body series. It is a 3-1/2" wide, 4-1/2" high unit with a digital display and buttons for Time & Day, Regen Time & Day, and Salt.

The Logix Series will operate on both the 255 and Performa valve body series.



Logix Series controllers are designed to operate on both the 255 and Performa valve body series.

## Initial Power-up

**Initial Power Up - (CAMSHAFT proceeds to HOME position)**

When the controller is first powered up, the CAMSHAFT will proceed to the HOME position. The digital display will show the day of the week, time, date, and salt level. The unit will then proceed to the next step in the process.

## Initial Start-up Step-by-step Instructions

### Step 1: Select Valve Type

[illegible]

NOTE: 10 a a a a

## Step 2: Program System Size

a a 3.

Z -

a -

a a Z

a 3- a - a " "

a

a Z'

- a " "

/

### Step 3: Program Time of Day

[illegible]

### Step 4: Set Day of Week

a a a / a a  
 a a a a /  
 a /  
 a a a a a a

### Step 5: Set Regen Time

00 ( ) a - a a  
a - a - a - 00 a  
a a a a a a a

--

--

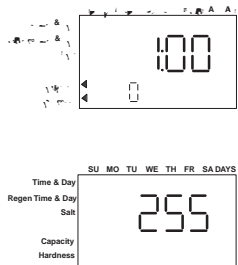
"0" a a a a  
 a a a 1/ ( . ) a  
 a- a "0" a  
 a- a  
 a a a a

3 (110 / )".

## 3



Resetting The Control



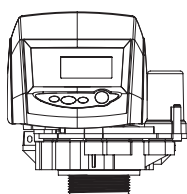
- 1. Press and hold the **0** button for 5 seconds. The display will show **0**.
- 2. Press the **0** button again. The display will show **0**.
- 3. Press the **0** button again. The display will show **0**.



**WARNING:** Do not touch the control panel when the system is running. The control panel is hot and may cause burns. Do not touch the control panel when the system is running.

Further programming or set-up instructions can be found in this manual.

## How To Use This Manual



a a a a  
a - a a - a 00  
a a a a / a a  
a a a a  
a 00 a / a  
a a  
/ a / a /  
a  
a " a - " a

## Icons That Appear In This Manual



**WARNING:** a. Do not use this form for a new record. a. Do not use this form for a new record. a. Do not use this form for a new record. a. Do not use this form for a new record.



**NOTE:** <sup>a</sup>  $\chi^2 = 1.0$ ,  $df = 1$ ,  $p = .32$ . <sup>a</sup>  $\chi^2 = 1.0$ ,  $df = 1$ ,  $p = .32$ .



## EQUIPMENT INSTALLATION

gs

a

a a

equipment

a, use

equipment

M

a, use

a, use pliers or

a, use

equipment

\* a, use

a, use

a, a, a, a

## General

[illegible]

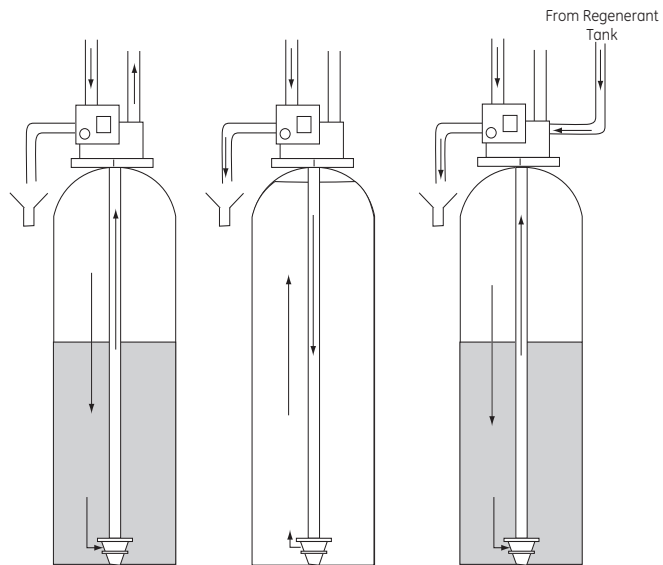
## 5. Fast Rinse (Downflow) — Cycles C5, C7:

During the fast rinse cycle, water flows down through the filter media, flushing out any remaining fines or debris. This cycle is typically used after a backwash to restore the filter's normal operation.

## 6. Brine Refill — Cycle C8:

During the brine refill cycle, the system draws brine from the regenerant tank and fills the filter tank. This prepares the system for the next regeneration cycle, where the brine will be used to clean the filter media.

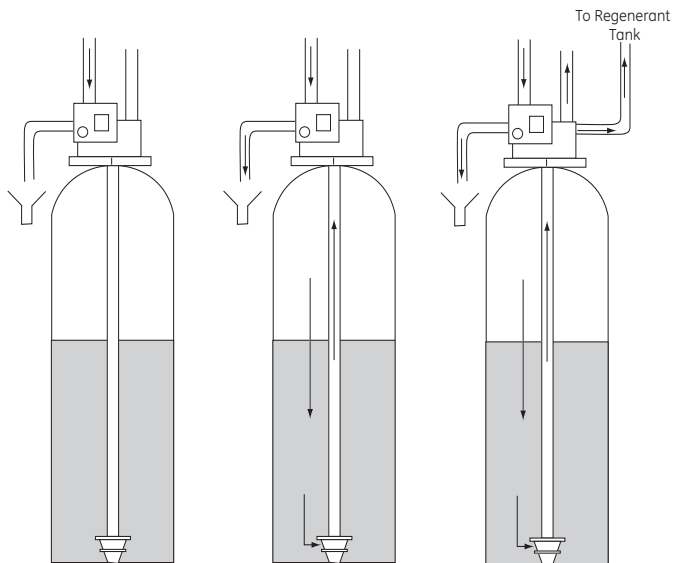
1



SERVICE  
C0

BACKWASH  
C1 and C6

BRINE/SLOW RINSE  
C2 and C3



REPRESSURIZE  
C4

FAST RINSE  
C5 and C7

BRINE REFILL  
C8



3  
a a a



a a



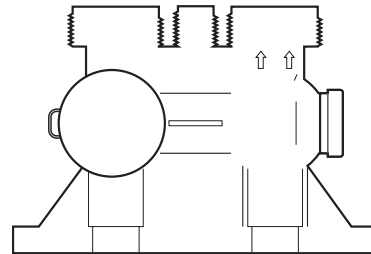


Top  
View

**a**  $\frac{1}{2}$  in. / 12.7 mm **a** 1 in. / 25.4 mm

Normal Operation

In Bypass



Top  
View 1

**a**  $\frac{1}{2}$  in. / 12.7 mm **a** **a** 1 in. / 25.4 mm

Top  
View

**a**  $\frac{1}{2}$  in. / 12.7 mm **a** **a** 1 in. / 25.4 mm





**WARNING:**

Do not use the unit in the following conditions:

- When the unit is used in a location where the ambient temperature is higher than 40°C (104°F).
- When the unit is used in a location where the relative humidity is higher than 95%.
- When the unit is used in a location where the air is contaminated with dust, oil, or other particles.



**WARNING:**

Do not use the unit in a location where the unit is exposed to direct sunlight or where the unit is exposed to rain or other weather conditions.



**WARNING:**

Do not use the unit in a location where the unit is exposed to high voltage or where the unit is exposed to high frequency electromagnetic interference (HFI).

## Drain Line Connection



**NOTE:**

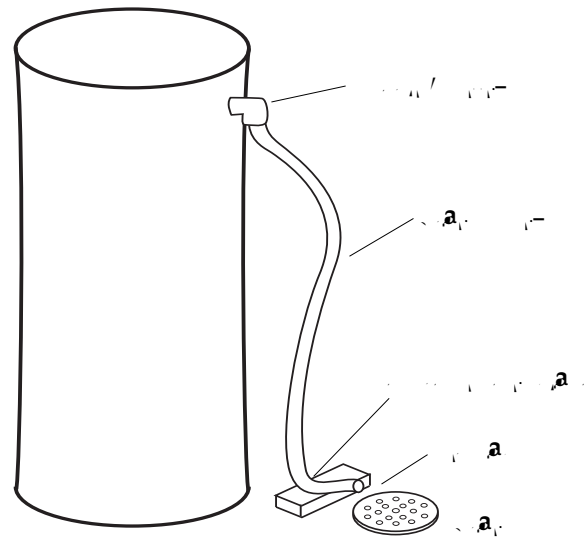
The drain line must be connected to the drain port of the unit. The drain line must be connected to the drain port of the unit.

1. The drain line must be connected to the drain port of the unit. The drain line must be connected to the drain port of the unit.
2. The drain line must be connected to the drain port of the unit. The drain line must be connected to the drain port of the unit.
3. The drain line must be connected to the drain port of the unit. The drain line must be connected to the drain port of the unit.

The drain line must be connected to the drain port of the unit. The drain line must be connected to the drain port of the unit.



Figure 10-10  
Regenerant Line Connection



## Regenerant Line Connection (not used with 3-cycle filter system)

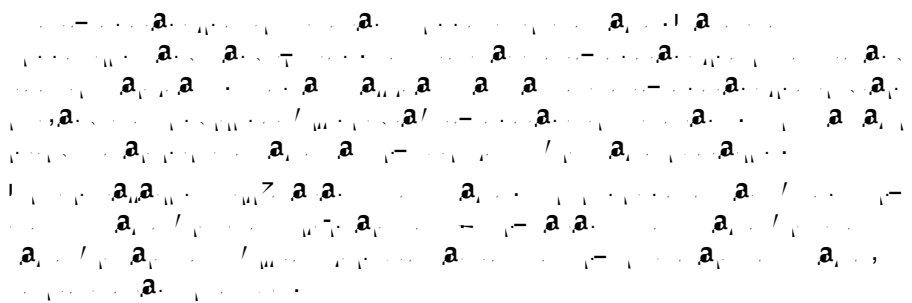
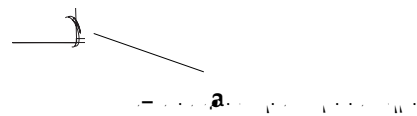


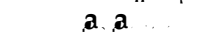

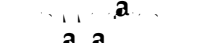
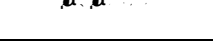

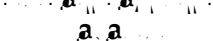
Figure 10-10  
Regenerant Line Connection





$$\frac{a_1}{a_2} = \frac{a_3}{a_4} = \frac{a_5}{a_6} = \dots = \frac{a_{n-1}}{a_n} = \frac{a_{n+1}}{a_{n+2}} = \dots = \frac{a_{m-1}}{a_m} = \frac{a_{m+1}}{a_{m+2}} = \dots = \frac{a_{n+m-1}}{a_{n+m}} = \frac{a_{n+m+1}}{a_{n+m+2}} = \dots$$

## Electrical Connection

00                      a                      1 -                      a                      a -                      /                      a  
                              a                      a                      a                      a                      a                      a  
a                      a                      a                      a                      a                      a                      a

AC Adapter	Input Voltage	Application	Part Number
	100-120V		100-11
	100-120V		100-12
	100-120V		100-13

100 VAC, 120 VAC and 230 VAC AC Adapters:



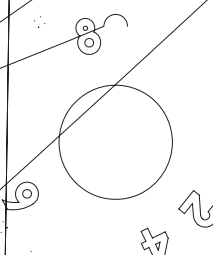
NOTE:

When using the 100 VAC, 120 VAC and 230 VAC AC Adapters, the power supply must be connected to the power supply terminal block. The power supply must be connected to the power supply terminal block. The power supply must be connected to the power supply terminal block.

Controller Location

Valve Camshaft

13  
a a 3, a a





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# SYSTEM DISINFECTION

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## Disinfection Of Water Conditioners

1. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.

2. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.

### Sodium or Calcium Hypochlorite

#### Application

1. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.

### 5.25% Sodium Hypochlorite

1. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.

1. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
2. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
3. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
4. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
5. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
6. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
7. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
8. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
9. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.
10. Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner. Mix thoroughly. Allow to stand for 15 minutes. Drain and flush thoroughly with water.

\*Add 1.0 gallon of 5.25% sodium hypochlorite to 100 gallons of water conditioner.



## Calcium Hypochlorite

$\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution,  $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution  
 $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution,  $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution  
 $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution,  $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution

- $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution,  $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution  
 $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution,  $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution  
 $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution,  $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution  
 $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution,  $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution  
 $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution,  $\frac{1}{2}$  cup (125 mL) 0%  $\text{Ca}(\text{OCl})_2$  solution

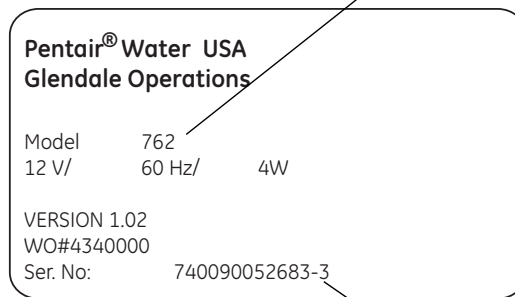
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## DETERMINING IF YOU HAVE A 742 OR 762 CONTROL

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1. Look for the label on the control. The label will have the following information:

Figure 1



2. The label will have the following information:








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# GENERAL 700 SERIES INSTRUCTIONS

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## Display Icons 700 Controller

Page 1

1.          

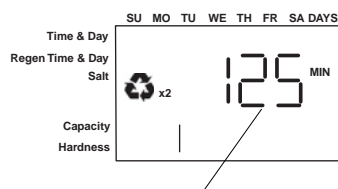




## Regeneration Modes

00  
a. a. - a - a. a. a. a.  
a. a. - a - a. a. a. - a.  
a. a. /  
a.

### To Initiate a Manual Regeneration:

[illegible]

### During a Regeneration:

"#" a / a - a a -

### To Advance Regeneration Cycles:

a  
a.  
a / " a a a - a /  
a a a " / " a  
a a - a a - a  
a a a - a  
- a / a a  
a a / a a a a 1

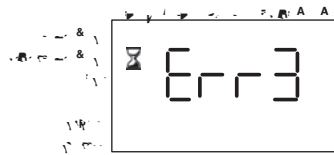
1

### Regeneration Cycles:

- [illegible]

## 742/762 Series Initial Power-Up

### Initial Power Up – (Camshaft proceeds to HOME position)



When the engine is started, the camshaft will proceed to the HOME position. The display will show 'Err3'.

NOTE:

## Initial Start-up Step-By-Step Instructions

When the engine is started, the camshaft will proceed to the HOME position. The display will show 'Err3'.

### Step 1: Select Valve Type

When the engine is started, the camshaft will proceed to the HOME position. The display will show 'Err3'.

When the engine is started, the camshaft will proceed to the HOME position. The display will show 'Err3'.

3

3

3

3

3

3

3, 3-

3, 3-

3, 3-

3, 3-

3, 3-

3, 3-

[illegible]

NOTE: The following information is for informational purposes only and is not intended to be used as a basis for any legal action. The information is provided as a service to the public and is not a guarantee of accuracy. The information is provided as a service to the public and is not a guarantee of accuracy.



$\frac{1}{2} \cdot 100 = 50$



a a / a  
 a a a /  
 a /  
 a a a a a a

**After steps 1-4, the controller will operate most systems. Proceed to step 5 if further adjustments to your system's programming is needed.**



00 ( 1 )      a      -      a      a

a -      a      -      a      -      00      a

a      a      a      a

a      a      a      a      a a



**Step 6: Set Days to Regenerate (742 Time-Clock Control Only)**

1. Press **ENTER** to go to the **Days to Regenerate** screen.

2. Press **ENTER** to go to the **Days to Regenerate** screen.

3. Press **ENTER** to go to the **Days to Regenerate** screen.

4. Press **ENTER** to go to the **Days to Regenerate** screen.

5. Press **ENTER** to go to the **Days to Regenerate** screen.

6. Press **ENTER** to go to the **Days to Regenerate** screen.

7. Press **ENTER** to go to the **Days to Regenerate** screen.

8. Press **ENTER** to go to the **Days to Regenerate** screen.

9. Press **ENTER** to go to the **Days to Regenerate** screen.

10. Press **ENTER** to go to the **Days to Regenerate** screen.

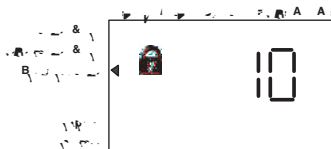
11. Press **ENTER** to go to the **Days to Regenerate** screen.

**Table 1- High Efficiency Exchange Capacity**

Salt lbs/cu ft	Exchange Capacity grains/cu ft	Salt grams/ liter	Exchange Capacity grams/liter
3	1 100	0	33.
	30	0	0.0
	11 0	0	.
	3 0	0	.
	0	0	13.
1	1	100	.
	3	110	.
10	3001	1 0	0.
11	31 3	130	.
1	3 3 0	1 0	.
13	333 3	1 0	.
1	3 3 0	1 0	0.
1	3 0	00	.
1	3 0	30	.3
1	30	0	.
1	3 33	0	.1

**Table 2**

To Convert Capacity in	Into Capacity in	Multiply by
in ( )	in ( )	1 . 3
in ( )	in ( )	0.0 3
in <sup>3</sup>	in ( )	0.10
in <sup>3</sup>	in ( )	0.0



Filter backwash time (filter mode only)

Filter backwash time (filter mode only)

Filter backwash time (filter mode only)



# PLACING CONDITIONER INTO OPERATION (turning on the water)

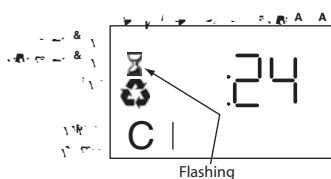
## Conditioner and FA Filter Start-Up

1. Turn on the water supply to the conditioner. The water flow rate should be adjusted to the recommended flow rate. The water flow rate should be adjusted to the recommended flow rate.



**WARNING:** The water flow rate should be adjusted to the recommended flow rate. The water flow rate should be adjusted to the recommended flow rate.

1. Turn on the water supply to the conditioner. The water flow rate should be adjusted to the recommended flow rate. The water flow rate should be adjusted to the recommended flow rate.
2. The water flow rate should be adjusted to the recommended flow rate. The water flow rate should be adjusted to the recommended flow rate.
3. The water flow rate should be adjusted to the recommended flow rate. The water flow rate should be adjusted to the recommended flow rate.



**WARNING:** The water flow rate should be adjusted to the recommended flow rate. The water flow rate should be adjusted to the recommended flow rate.

The water flow rate should be adjusted to the recommended flow rate. The water flow rate should be adjusted to the recommended flow rate.



$$a' / a - a a$$

$$a' / a (0), a a$$

$$a' - a$$

$$1(a' / a) a - a a$$

$$a a - a' / a$$

$$a' / a - a' / a a a$$

$$a a - a a' / a (0)$$

$$a a a / a$$

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# PROGRAMMING THE 700 FOR 5-CYCLE FILTER APPLICATIONS

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## Manganese Greensand Systems

### Sizing FA Filters

1. Press **FA** key. The display shows **FA**.

#### Backwash Controller

2. Press **0.33** key. The display shows **0.33**.

#### Injector

3. Press **0.33** key. The display shows **0.33**.

#### Refill Controller

4. Press **0.33** key. The display shows **0.33**.

### Initial Resin Volume Setting

1. Press **FA** key. The display shows **FA**.

### "Salt" Setting for $\text{KMNO}_3$ Regenerant

1. Press **FA** key. The display shows **FA**.

### Days Between Regeneration Setting (742 FA)

1. Press **FA** key. The display shows **FA**.

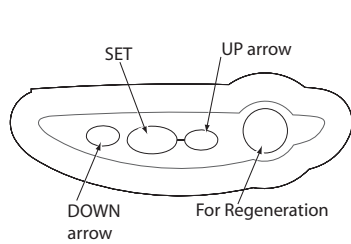




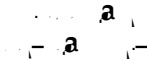


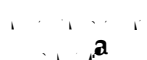


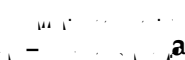
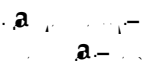

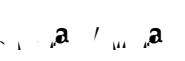
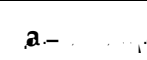


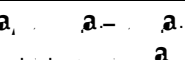



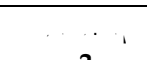

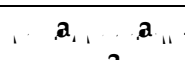
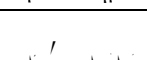


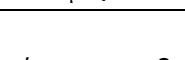
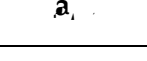

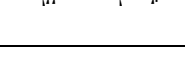
## Things You Might Need to Know

[illegible]

## 742/762 SERIES ADVANCED PROGRAMMING



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a a a / a a  
a a

Action	Key	Duration	Display
			
			
			
			
			
			
			
			

## 742/762 Level II Professional Programming

[illegible]

Accessing History Values

Accessing history values is done by using the `getHistoryValue` function. The function takes the history value number as an argument and returns the value. The history values are stored in the `history` array.

History Values

	Description	Range	Notes
0	$a_{i-1} - a_i$	$0 - 1,310.0 \times 10^3$	
1	$a_{i-1} - a_{i-2}$	0	
	$a_{i-1} / a_i$	$0 - 1,310.0 \times 10^3$	
3	$a_{i-1} - a_{i-3} / 3$	$0 - 1,310.0 \times 10^3$	
	$a_{i-1} - a_{i-2} - a_{i-3} / 3$	$0 - 1,310.0 \times 10^3$	
	$a_i / a_{i-1} \times 100$	$0 - 1,310.0 \times 10^3$	
	$a_i / a_{i-1} \times 1,000,000$	$10 - a_{i-1} \times 10^3$	
	$a_{i-1} - a_{i-3} \times 3$	$0 - 1,310.0 \times 10^3$	
8	$a_{i-1} - a_{i-2} \times 3$	$0 - 1,310.0 \times 10^3$	
	$a_{i-1} - a_{i-3} \times 3$	$0 - 1,310.0 \times 10^3$	
10	$a_{i-1} - a_{i-2} \times 3$	$0 - 1,310.0 \times 10^3$	
11	$a_{i-1} - a_{i-3} \times 3$	$0 - 1,310.0 \times 10^3$	
1	$a_{i-1} - a_{i-2} \times 3$	$0 - 1,310.0 \times 10^3$	
13	$a_{i-1} - a_{i-3} \times 3$	$0 - 1,310.0 \times 10^3$	
1	$a_{i-1}$	0 - $a_i$	
1	$a_{i-1} / a_i$	0 - $1,000 \times 10^3$	
1	$a_{i-1} - a_{i-2} / a_i$	$a_{i-1} - a_{i-2} / a_i$	
1	$a_{i-1}$	0 - $a_i$	
	$a_{i-1} - a_{i-2} \times 3$	0 - 3	

Resetting the Control

1.  $a_{i-1} - a_{i-2} \times 3$
2.  $a_{i-1} - a_{i-3} \times 3$
3.  $a_{i-1} - a_{i-2} \times 3$
4.  $a_{i-1} - a_{i-3} \times 3$
5.  $a_{i-1} - a_{i-2} \times 3$
6.  $a_{i-1} - a_{i-3} \times 3$



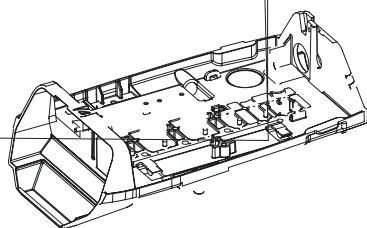
**WARNING:**

Do not use the vehicle's electrical system to power any other equipment. The vehicle's electrical system is designed to power the vehicle's accessories only. Using the vehicle's electrical system to power other equipment may cause damage to the vehicle's electrical system and void the warranty.

**All further advance programming or set-up instructions can be found in the Dealer Installation and Service Manual, P/N 1255652.**

<b>PARTS AND ACCESSORIES</b>	
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## 255 Valve Exploded View



## 255 Valve Parts List

Part				Part			
Code	No.	Description	Qty.	Code	No.	Description	Qty.
1	1 0	a	1	1	1000	a	1
	1033	a	1	1		a	1
3	1010	-	1		1000 0	(1.3)	
	1010	-			1000 10	(1. - )	
	1 3 3 0	a, a, 00 0	1		1000 11	(. - 3)	
					1000 1	.10 ( - 10. )	
	1 3 3 1	a	1		100 130	.1 (3. - 1. )	
	1 3 *	a, / a, 00 0	1		1000 1	.13 ( - 1. )	
					1000 1	.1 ( .3 - 0. )	
	1001 0	a	1		1000	a, 0.33 a	1
	10 0	-	1		1 3 10	a	
10	1001	13/1	1	1			1
*	1000 0	a	1		103 1	a	
*	1 3 0	a 00/ 00	1		103 1	1/ a	
11		a	1	0	1 3 3 3		1
	1031 0	a- a- a		1	1030 0	a, /	1
	1031 03	a- a- a		*	10330	a	1
	1031 0	a- a- a- a			1 3	a	1
	1031 0	a, a- a- a- / a		*	1 33		
	1031 0	a a- a- a- a		*	1 33	a, 0.33	
	1031 0	a- a- a- a		*	1 11	a	
	100 0 3	a- a- / - 1		*	1 3 11	, 0.1a	
1		a	1	*	1 3	a	
	1 3 3 3	a / 00 0 a		*	1 3 3	a, 0.1a	
		a		*	1 3	a	
	1 3 1	a / 00 0 a					
		a ( )					
13	1 3 3 1	/ a, a	1				
1	1000	/ a /	1				
1		( )	1				
	103 30	( - ) -					
		( - a. )					
	103 31	( - ) - a					
		( - a. )					
	103 3	( - ) - a					
		( - a. )					
	103 33	( - ) -					
		( - a. )					
	103 3	( - ) -					
		(10- a. )					
	103 3	( - ) -					
		(1 - a. )					
	103 3	( - ) - a-					
		(13-1 - a. )					

★

 $\mathbf{a}_1 \quad \mathbf{a}_2 \quad \mathbf{a}_3 \quad \mathbf{a}_4 \quad \mathbf{a}_5 \quad \mathbf{a}_6 \quad \mathbf{a}_7 \quad \mathbf{a}_8 \quad \mathbf{a}_9 \quad \mathbf{a}_{10}$

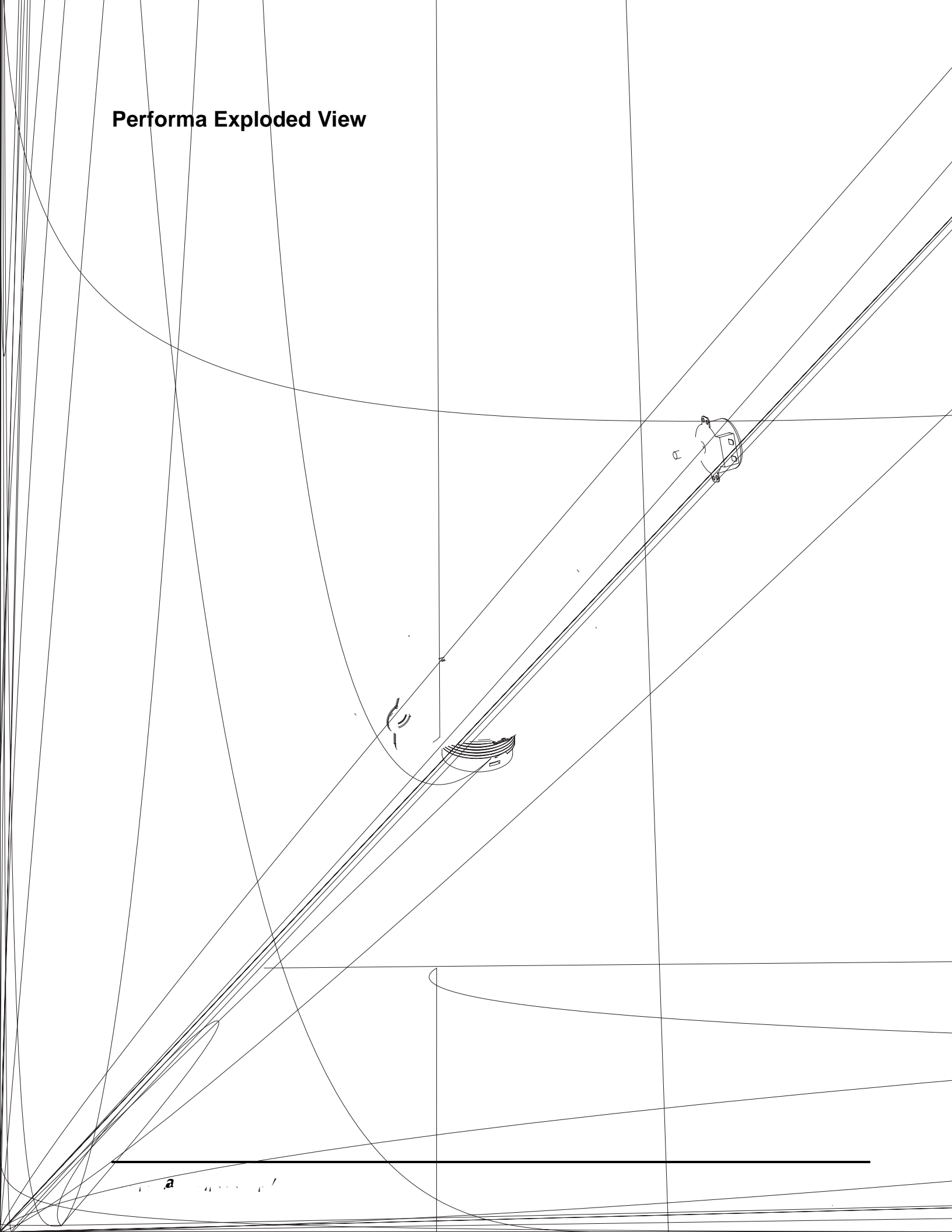
## 255 Valve Parts List (Continued)

Part				Part			
Code	No.	Description	Qty.	Code	No.	Description	Qty.
*							
	10 0	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 0	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 13	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 1	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 1	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 03	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 0	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 11	3/4" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")					
*	10 033	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1	*	1001 10	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
*		1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")		*	1001 1	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1
	103 3 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1				
	103 3 1	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1				
*		1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")					
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1				
	10 0	1/2" x 1/2" x 1/2" (1/2" x 1/2" x 1/2")	1				

\* 1/2" x 1/2"



Performa Exploded View



## Performa Parts List

[illegible]

\*  $\frac{d}{dt} \left( \frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$

Logix 700 Series Controllers Parts List

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# TROUBLESHOOTING

## 700 Series Controller Troubleshooting

Problem	Possible Cause	Solution
1. The controller will not start.	The controller is not properly connected to the power source.	Check the power source and the controller connection.
2. The controller will not start.	The controller is not properly connected to the power source.	Check the power source and the controller connection.
3. The controller will not start.	The controller is not properly connected to the power source.	Check the power source and the controller connection.
	The controller is not properly connected to the power source.	Check the power source and the controller connection.
	The controller is not properly connected to the power source.	Check the power source and the controller connection.
	The controller is not properly connected to the power source.	Check the power source and the controller connection.
	The controller is not properly connected to the power source.	Check the power source and the controller connection.

## System Troubleshooting

Problem	Possible Cause	Solution
1. $\frac{a}{a} = a$ $\frac{a}{a} = a$	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)
$\frac{a}{a} = a$ $\frac{a}{a} = a$ $\frac{a}{a} = a$	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)
3. $\frac{a}{a} = a$ $\frac{a}{a} = a$ $\frac{a}{a} = a$	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)
$\frac{a}{a} = a$ $\frac{a}{a} = a$ $\frac{a}{a} = a$	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)
$\frac{a}{a} = a$ $\frac{a}{a} = a$ $\frac{a}{a} = a$	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)
$\frac{a}{a} = a$ $\frac{a}{a} = a$ $\frac{a}{a} = a$	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)
$\frac{a}{a} = a$ $\frac{a}{a} = a$ $\frac{a}{a} = a$	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)	$a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero) $a = \frac{a}{a}$ (division by zero)

<p>9. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>9. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>9. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>
<p>10. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>10. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>10. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>
<p>11. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>11. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>11. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>
<p>12. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>12. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>12. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>
<p>13. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>13. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>13. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>
<p>14. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>14. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>	<p>14. <math>\frac{a_1 - a_2}{a_1 - a_2} = \frac{a_1 - a_2}{a_1 - a_2}</math></p>



