



# Water Saver Booklet

Installation

Operation

Parts

# INDEX

<u>Sword II installation</u>	<u>2 – 6</u>
<u>Quartz installation</u>	<u>7 – 11</u>
<u>N.E.S. installation</u>	<u>12 - 15</u>
<u>Electrical schematic</u>	<u>16</u>
<u>Touchscreen instructions</u>	<u>17 – 22</u>
<u>Parts</u>	<u>23 -30</u>

## Water Saver Sword II Install

### Disconnect power before starting procedure



Mount water saver control next to control box  
Use connector ( Item #'s 66 and 67 ) and run wires through door

Item #'s 66 and 67



Run wires with loom. Run power cord 14/3 item( # 52 ) and brown 18/2 cord (item #54) into electrical box. Run 16/3 cord ( item # 53 ) marked solenoid to water solenoid. This cord will now control water solenoid.



Remove bottom spray bar and replace with Item # 24. Attach ½" nylobraid tubing with ½" valve inline and connect to water solenoid

**There are many different configurations for the water supply, from the solenoid. Item's # 7,15,19,20and 32-40 are supplied to cope with any configuration**



Attach wire marked solenoid to solenoid. Use the plug provided ( Item #'s 56 and 57 ) or butt splices ( Item # 65 ). The water saver will now control the solenoid.



On Sword II move drain pipe to emergency overflow

Using the fittings supplied ( Item # 8 and 9 ) run a 1" hose to the water recirc pump 3C

Attach 1 1/2" x 1" fitting to main drain ( Item # 8 )

Item # 10

Use item # 20 to feed water spray bars if necessary

Use the power from the water solenoid to power the the new water recirc pump. Use plug provided ( Item # 58 and 59 ) or use butt splices ( Item # 65 )



Mount 3C pump with bracket inside machine ( Item #'s 11,12,13 and 14 )

Item # 15

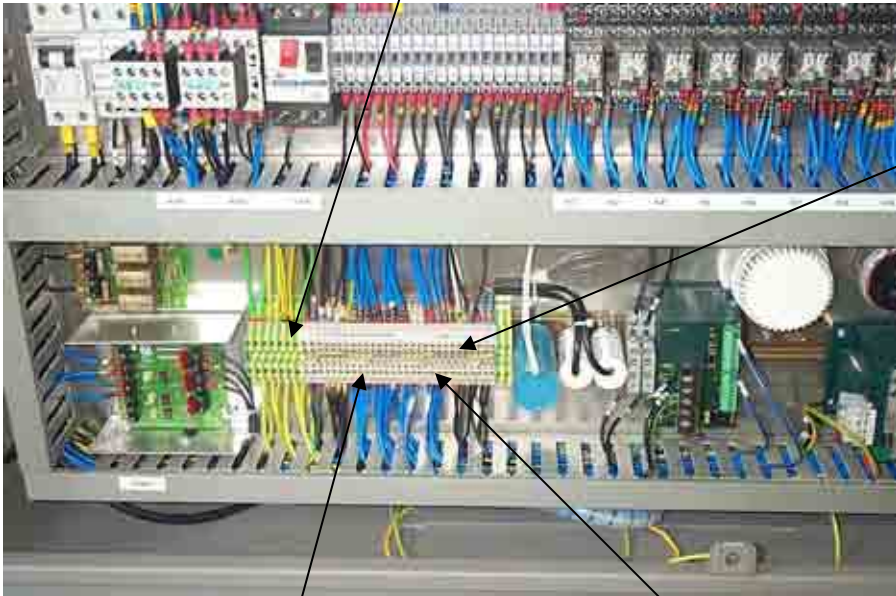
Attach the 3/4" T inline with the pump for the tank drain. Item # 16.

Item # 9 or 15

Item # 17



Run the 14/3 power cord to the terminal strip and connect to KQ 1. Connect the black wire to 9 and the white wire to 89. Attach the green wire to the machine ground



Run the brown 18/2 cord marked sensor input to the main terminal strip

Attach the "com" wire to terminal 111

Attach the "sig" wire to terminal 121

# Check all connections before applying power



Use Water Saver manual to set different parameters on the touch screen

## Water Saver Quartz Install

### Disconnect power before starting procedure

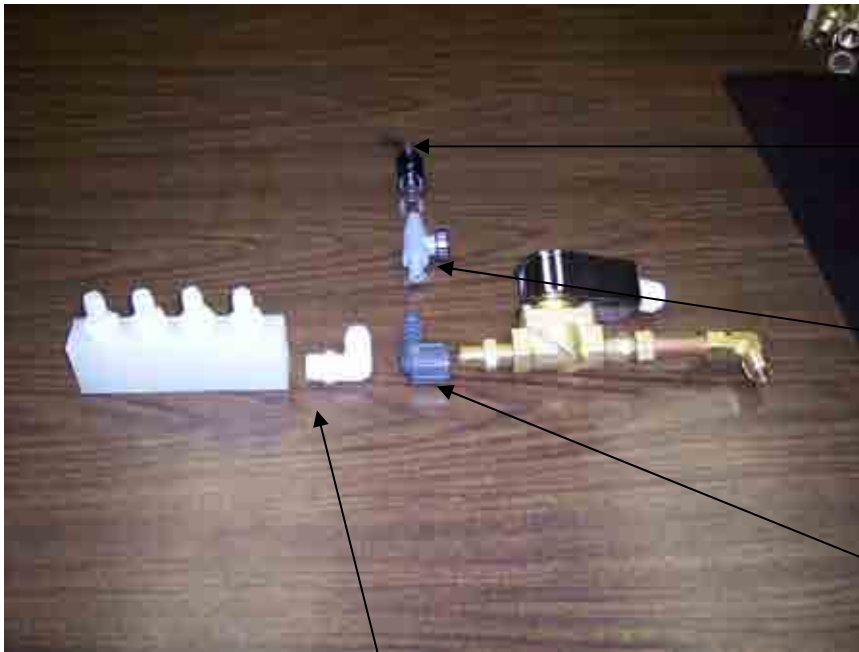


Mount water saver control next to control box  
Use connector ( Item #'s 66 and 67 ) and run wires through door

Item #'s 66 and 67



Run wires with loom. Run power cord 14/3 item( # 52 ) and brown 18/2 cord (item #54) into electrical box. Run 16/3 cord ( item # 53 ) marked solenoid to water solenoid. This cord will now control water solenoid.



Item #24

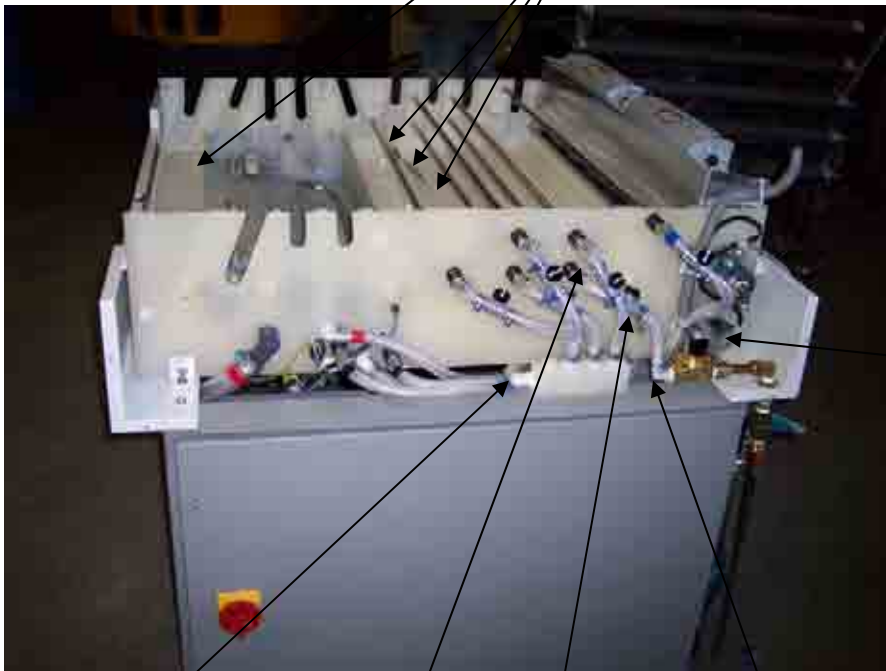
Item #25

Add item # 32 to solenoid, along with item # 25 and 24. This will now supply water to the rinse tank, when the Water Saver calls for water.

Remove manifold from solenoid and use item # 36. This will connect with the output of the new recirc pump.

Plug holes in dev exit tank use items #'s 38/39/40. Dev overflow will now exit from the front of the dev tank.

**There are many different configurations for the water supply, from the solenoid Item #'s 7,15,19,20 and 32 - 40 are supplied to cope with any configuration.**



Remove power from water solenoid. The wires removed from the solenoid will be used to power the new water recirc pump. Attach the 16/3 cord marked solenoid to the solenoid. The water saver will now control the solenoid. Use the plug provided Item #'s 56,57,58 and 59 or butt splices Item # 65 .

Item # 36

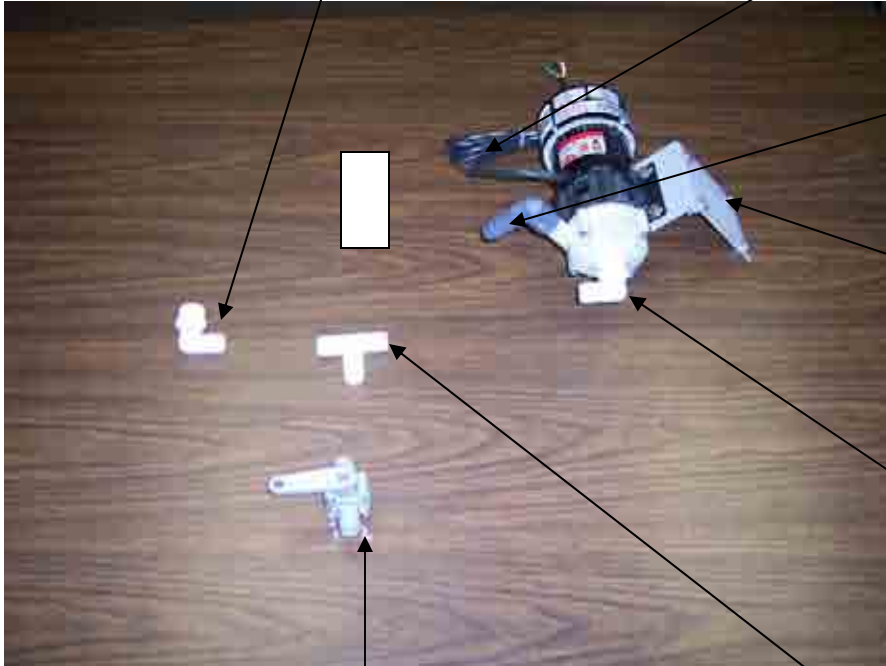
Item # 24

Item # 25

Item # 33

Attach 3/4" fitting ( Item # 15 ) to emergency overflow on under side of tank. This will supply water to new pump

Use the power from the water solenoid to power the the new water recirc pump. Use plug provided ( Item # 58 and 59 ) or use butt splices ( Item # 65 )



Item # 10. This will now supply the rinse spray bars.

Mount 3C pump with bracket inside machine ( Item #'s 11,12,13 and 14 )

Item # 15

Item # 17. Rinse tank drain

Attach the 3/4" T inline with the pump for the tank drain. Item # 16.



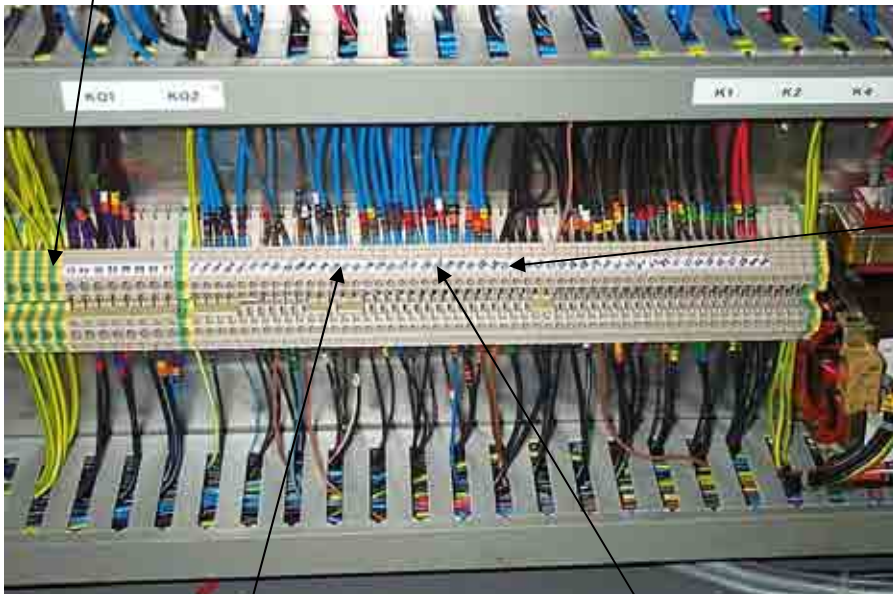
Move shield to overflow adaptor Item # 22

Remove emergency overflow fitting. This will now be the input for the new recirc pump

Insert overflow adaptor Item # 22 into main drain. Use silicone provided to seal .



Run the 14/3 power cord to KQ 1 and connect the black wire to 7 and the white wire to 77. Connect the green wire to the machine ground . **On 3 phase machines connect black wire to 7 and white wire to 9.**



Run the brown cord marked sensor input to the main terminal strip.

Attach the "com" wire to terminal 129

Attach the "sig" wire to terminal 111

# Check all connections before applying power



Use Water Saver manual to set different parameters on the touch screen

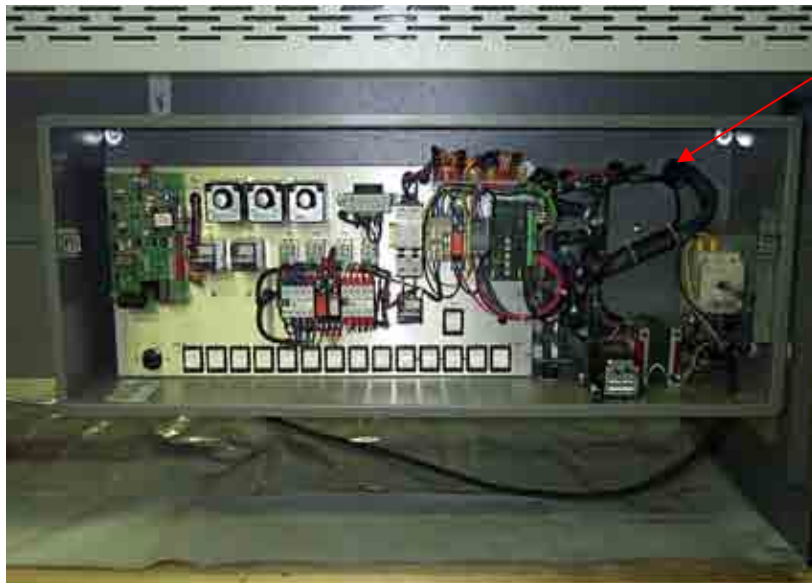
## Water Saver N.E.S. Install

### Disconnect power before starting procedure



Remove panels  
and set aside

Mount water saver  
control using bolts  
supplied.  
# 10 self tap screw  
# 10 sheet metal screw  
Item # 73 and 74



Run wires with loom.  
Run power cord 14/3  
item # 52 and brown  
18/2 cord item # 54  
into electrical box.



Drill and tap 1/2" npt below 1<sup>st</sup> rinse spray bar. Add item #'s 23,24 and 25. Use 1/2" nylobraid hose and connect to water solenoid

Run 16/3 cord item # 53 marked solenoid to water solenoid. Remove wires from solenoid ( **these will be used to power the new recirc pump** ). Connect the new 16/3 cord to the water solenoid. The water saver will now control the solenoid.

Item # 10. This will supply the rinse spray bars.

Remove plumbing stack and replace with item # 8. This will now be the supply for the recirc pump.  
  
Item #9

Mount 3 C pump with bracket under machine. Item #'s 11,12,13 and 14.



Attach the 3/4" T inline with the pump for the tank drain. Item 16

Item # 17 rinse tank drain valve

Use a 2" hole saw Item # 75 for water overflow. Make sure to drill perpendicular to tank bottom. Center hole under rinse brush. Insert bulkhead # 2



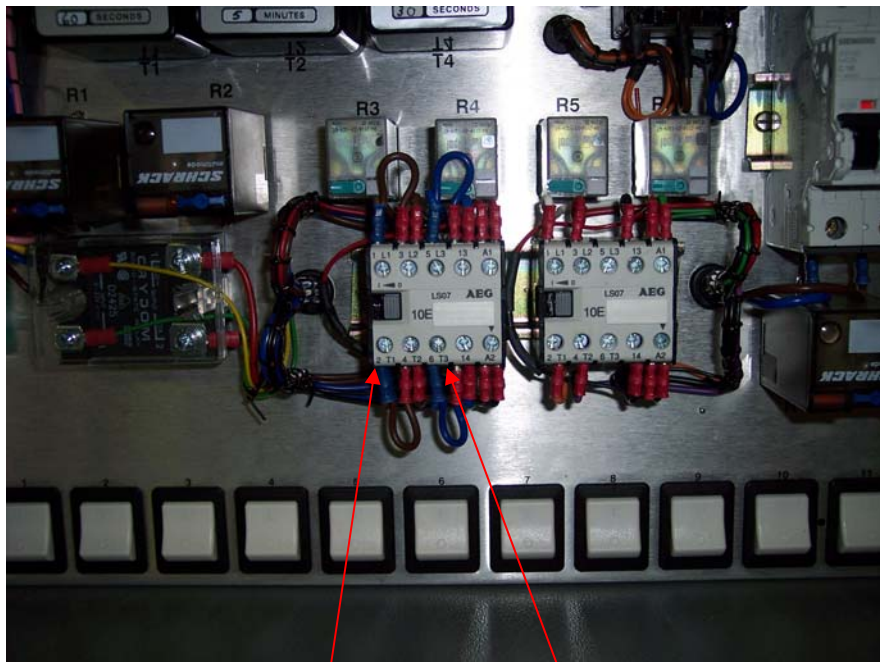
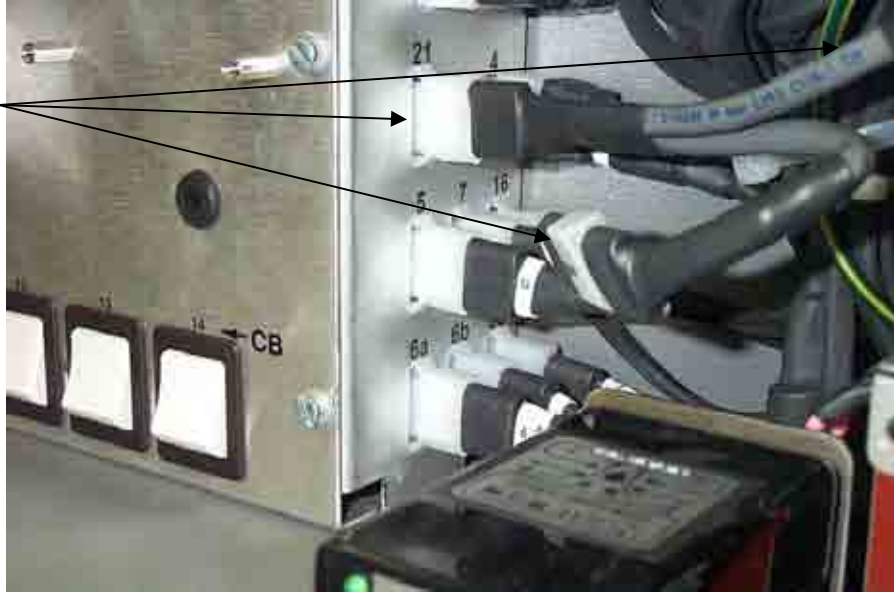
Rinse overflow bulkhead. Item # 2

Connect dev overflow .

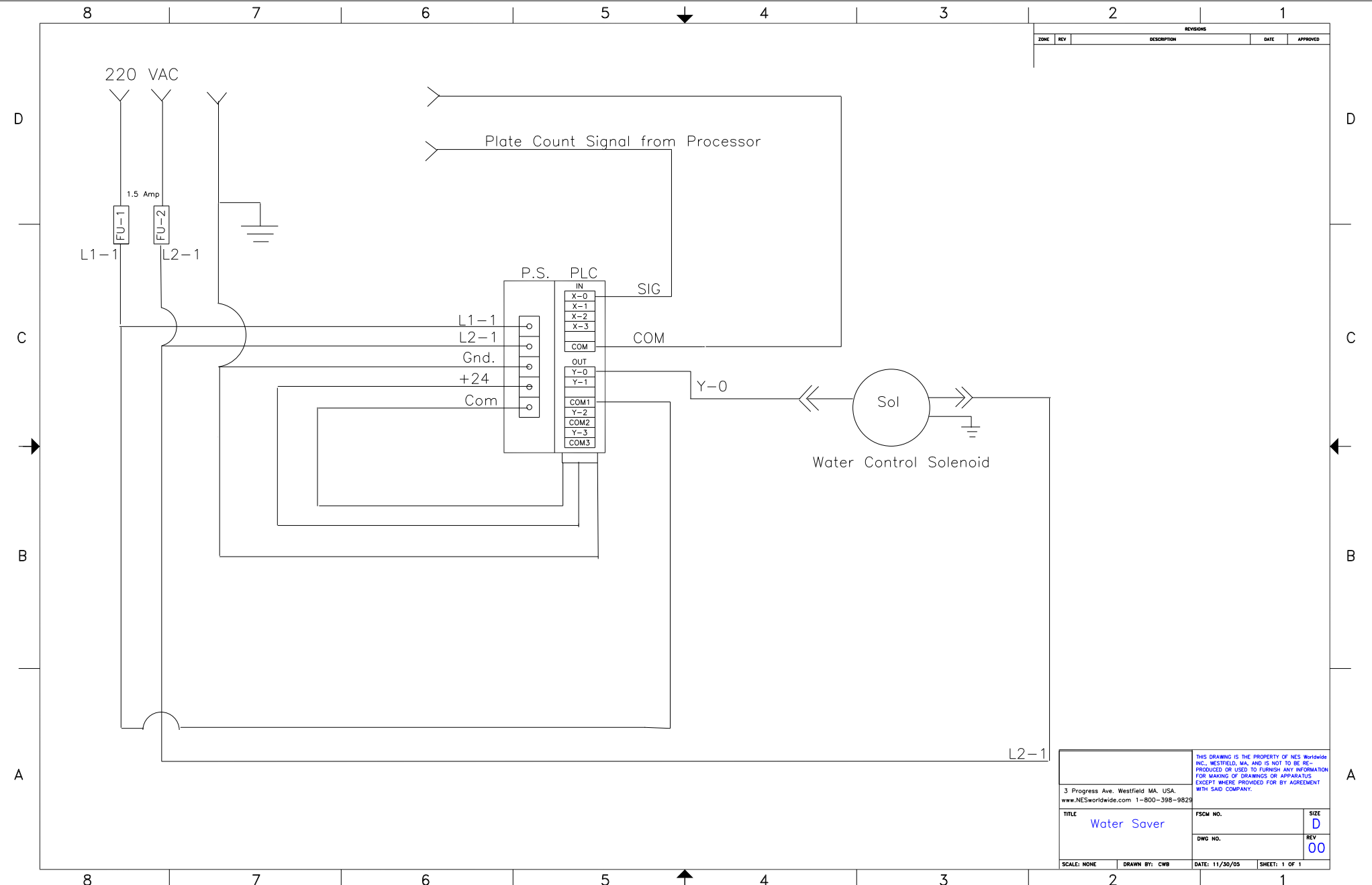
Run to waste



Unplug 21 and insert Y connector (Item #57). Plug brown wire from water saver and plug 21 back into Y connector



Connect the 14/2 cord Item #52 from water saver to C2. Connect the black wire to terminal 2 and connect the white wire to terminal 6. Connect the green wire to machine ground.



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

<small>THIS DRAWING IS THE PROPERTY OF NES Worldwide INC., WESTFIELD, MA. AND IS NOT TO BE REPRODUCED OR USED TO FURNISH ANY INFORMATION FOR MAKING OF DRAWINGS OR APPARATUS EXCEPT WHERE PROVIDED FOR BY AGREEMENT WITH SAID COMPANY.</small>	
<small>3 Progress Ave. Westfield MA, USA. www.NESworldwide.com 1-800-398-9829</small>	
TITLE	SIZE
Water Saver	D
DWG NO.	REV
	00
SCALE: NONE	SHEET: 1 OF 1
DRAWN BY: CWB	DATE: 11/30/05



**Water Saver**

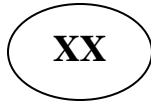
**Instruction**

**Booklet**

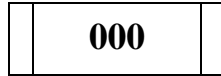
# Water Saver Touchscreen



Squares = Push Buttons



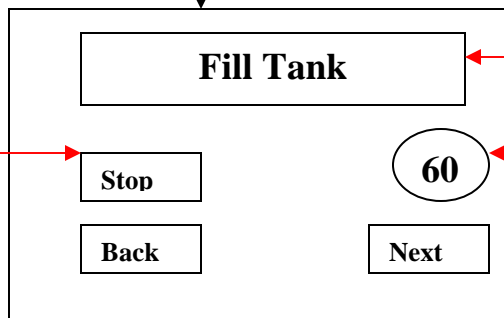
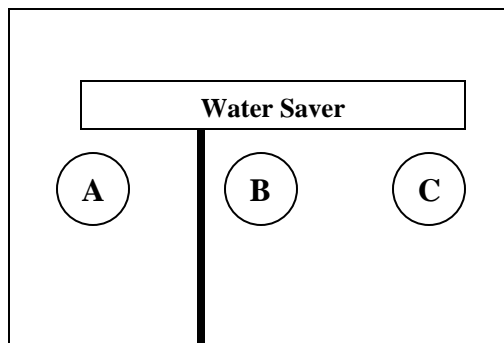
Rounds = Value Display



Depress for Password Entry

- = Plate Count Set Point
- = Plate Count Down
- = Cycle Timer

## Main Menu

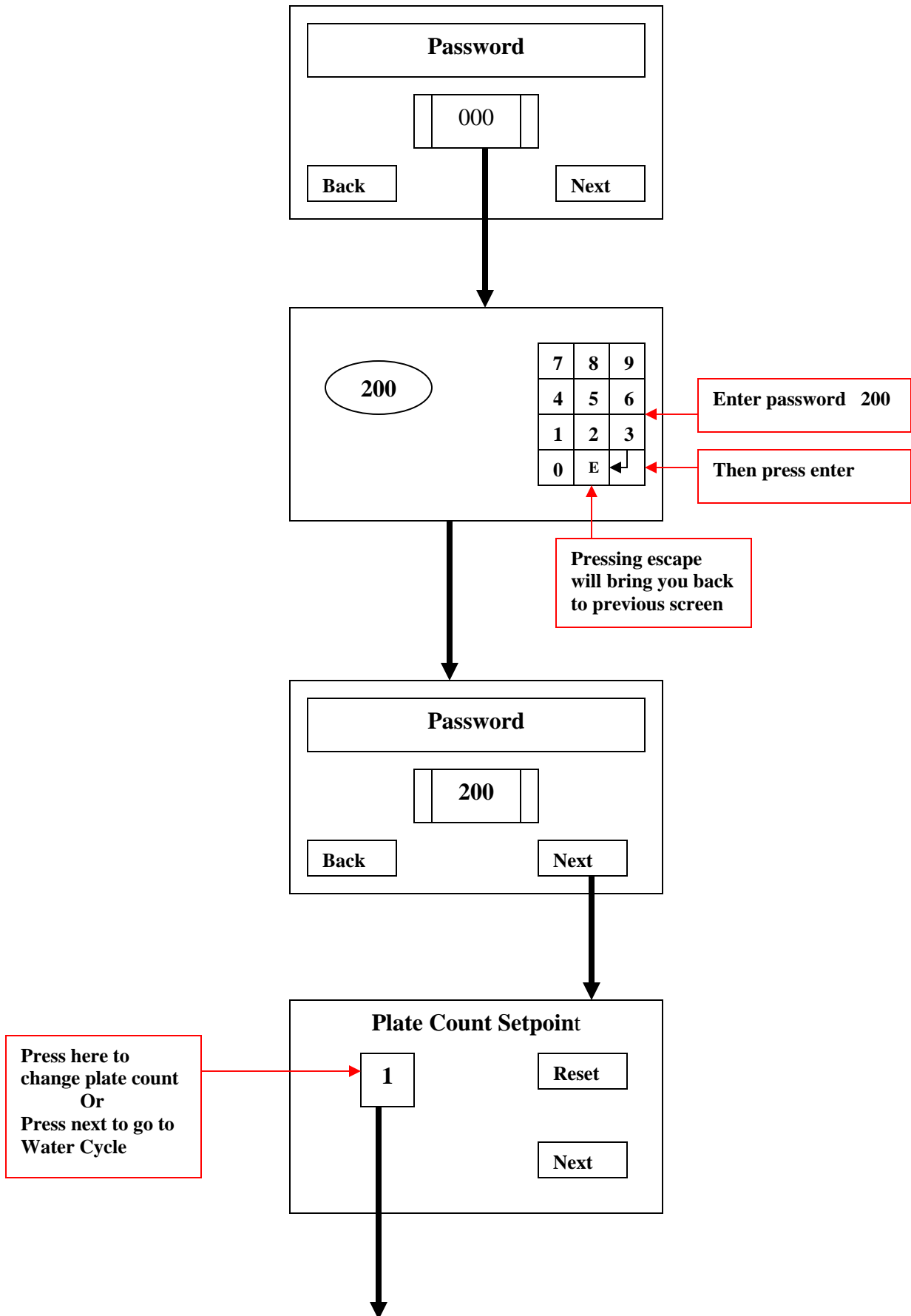


Will stop water solenoid when pressed

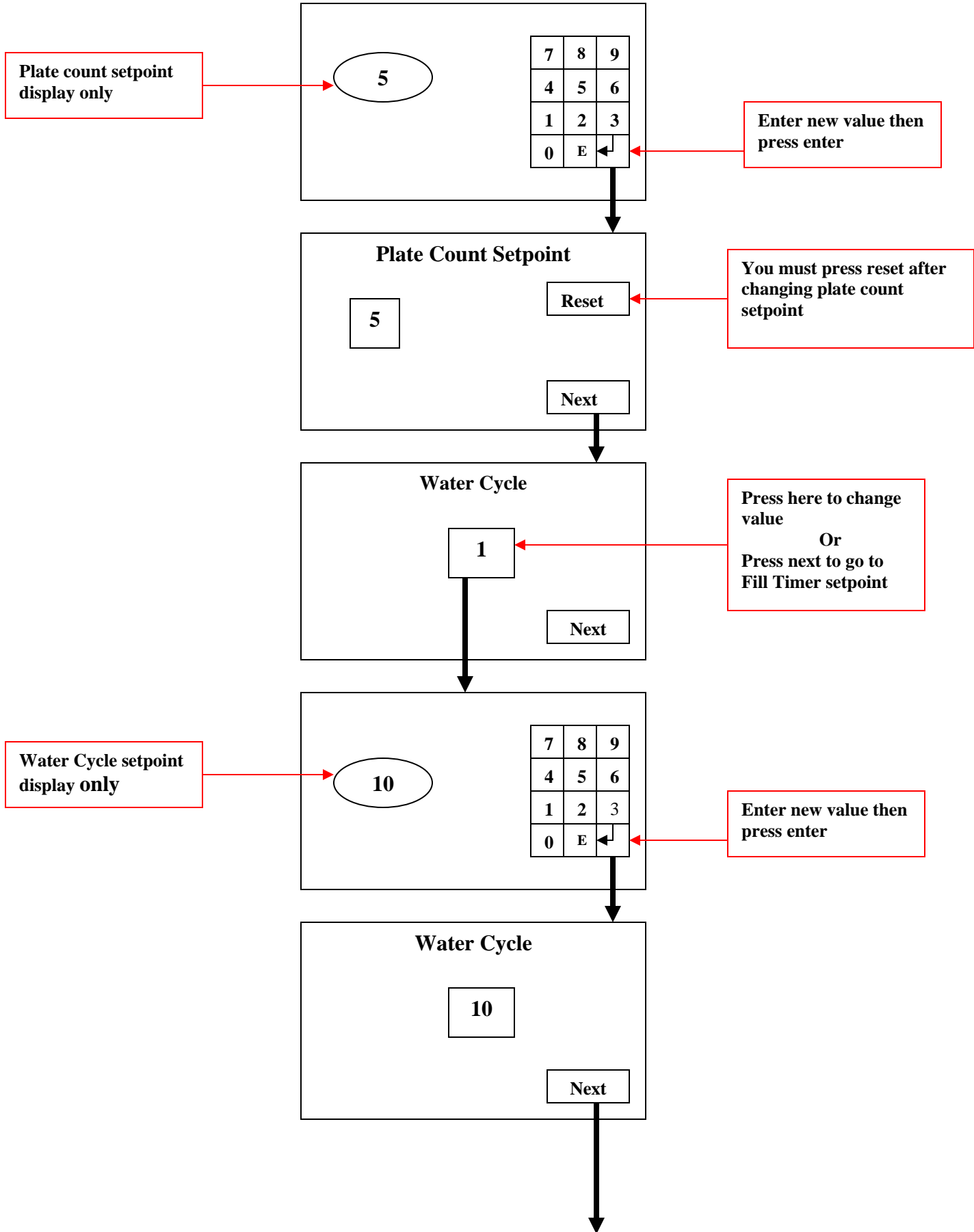
When pressed will open water solenoid for the amount of time entered in the Fill Timer Setpoint screen

Counts down the time the water solenoid is on. Display only

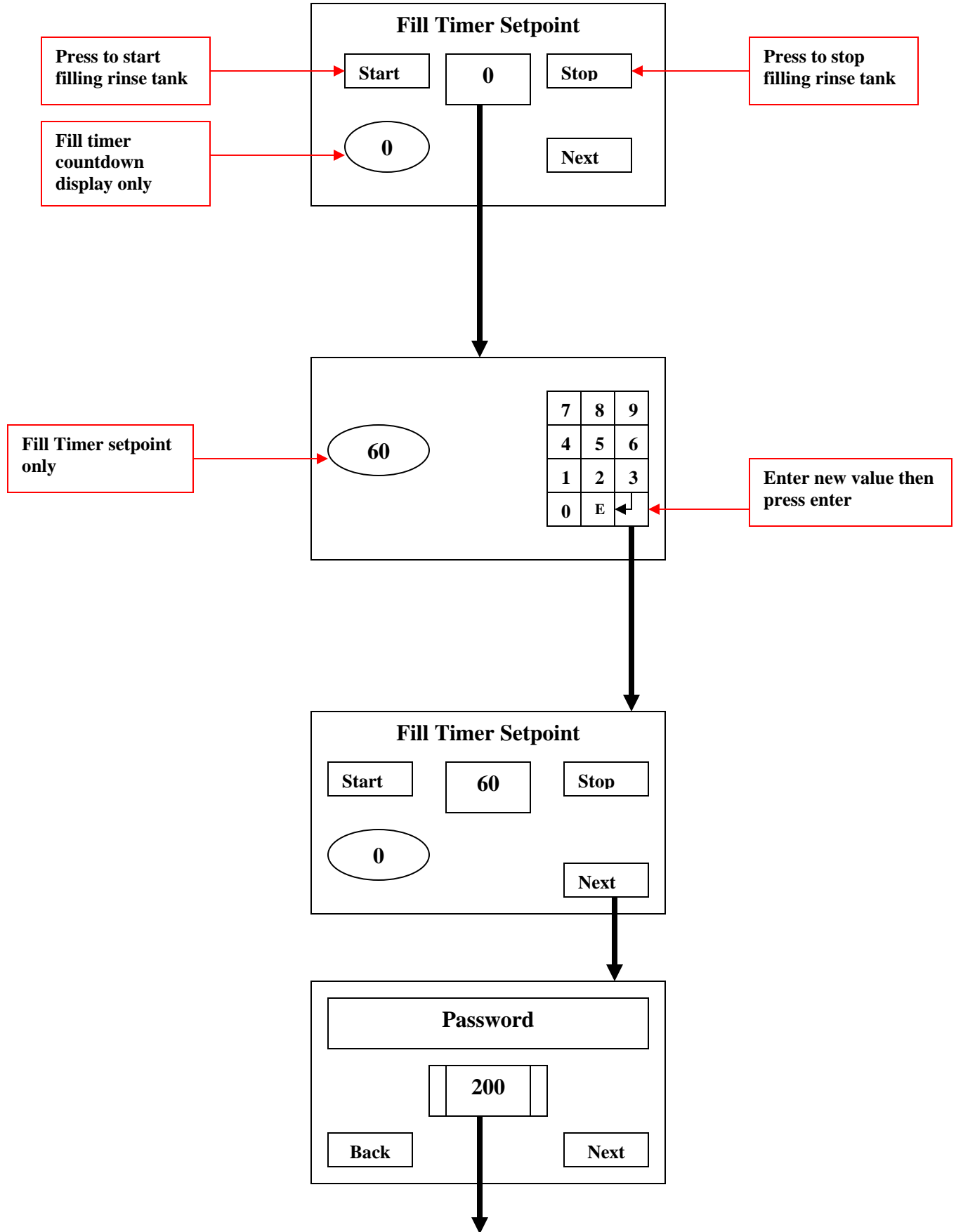
# Water Saver Touchscreen



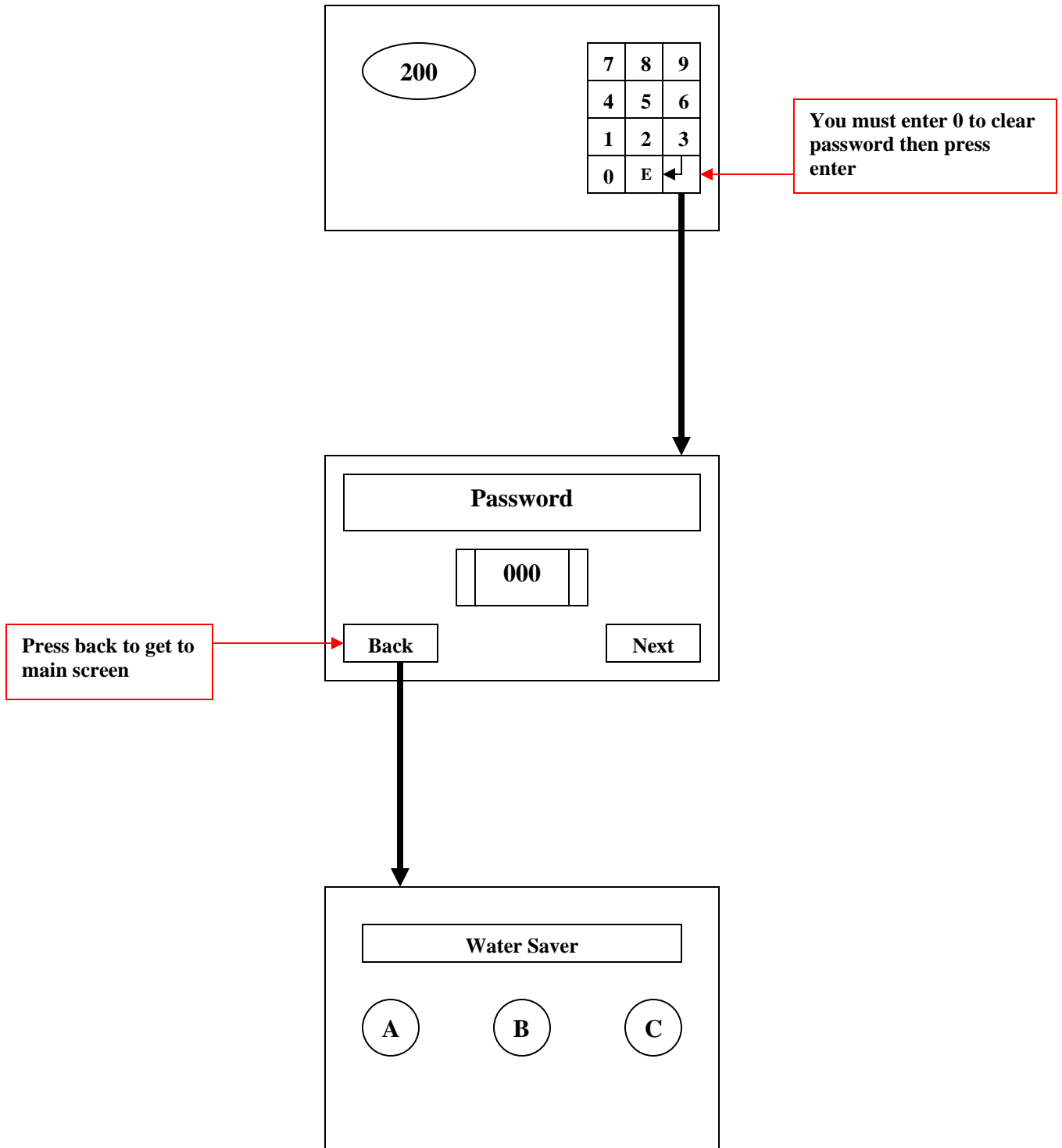
# Water Saver Touchscreen



# Water Saver Touchscreen

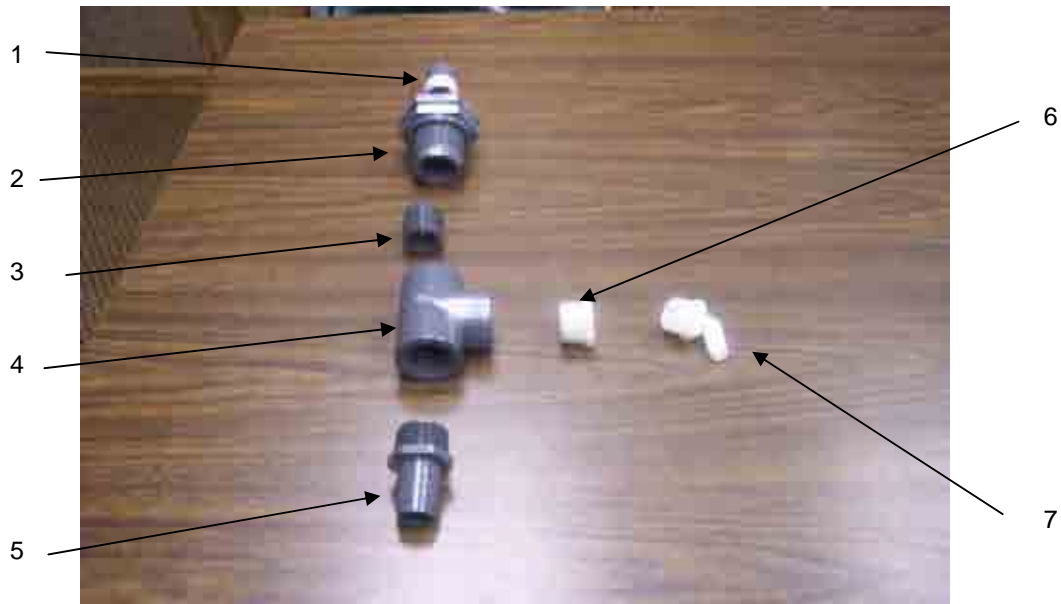


# Water Saver Touchscreen



### Part Breakdown

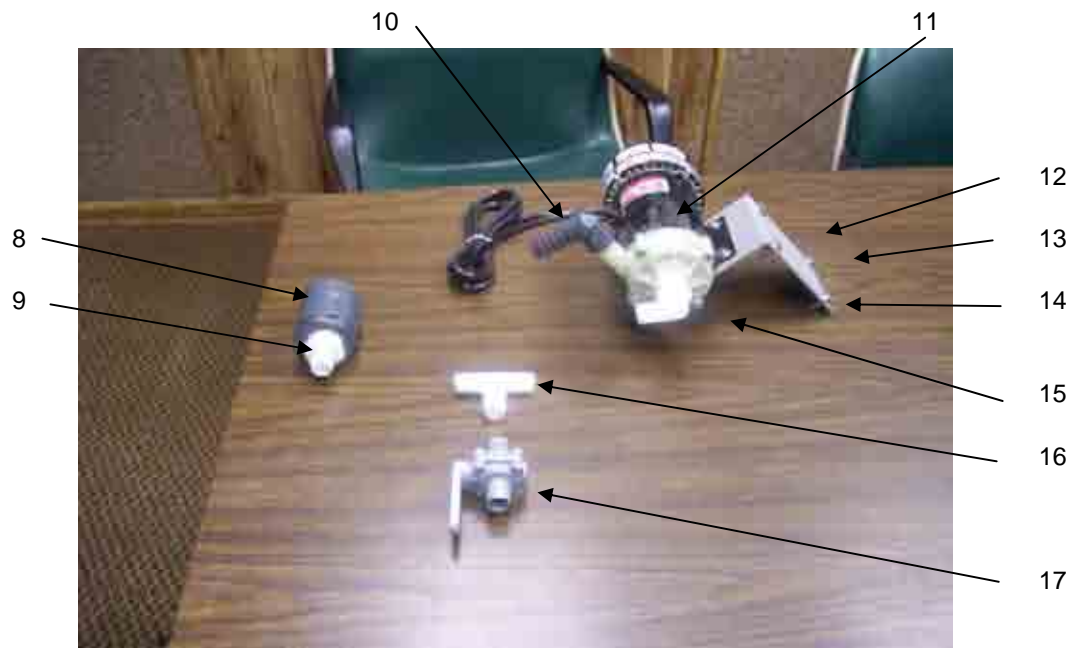
Item	Description	Part Number	Bin#	Quantity
1	1" x 3" nip			1
2	1" bulkhead			1
3	1" close nip		71	1
4	1" T thr		72	1
5	1" mpt x 1" hose		15	1
6	1" x 3/4" reducing bushing		40	1
7	3/4" mpt x 1/2" hose 90		22	2



1 through 7 are used with the NES Sword processor

## Part Breakdown

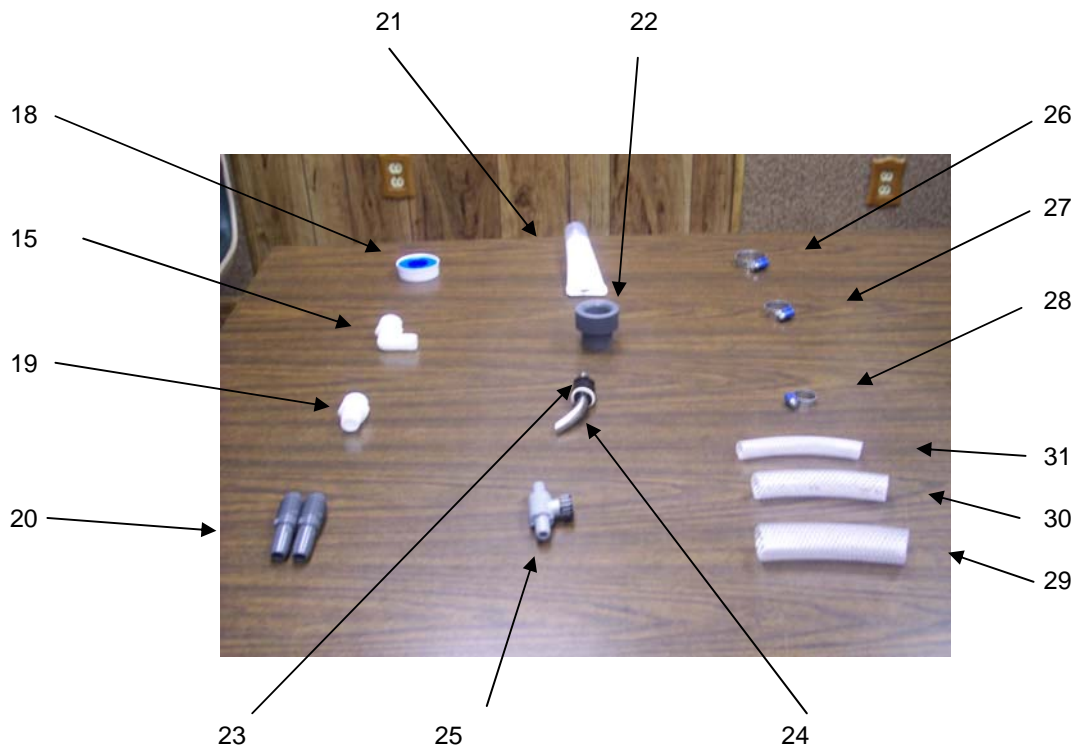
8	1 1/2" x 1" reducing coupling	78	1
9	1" mpt x 3/4" hose	14	1
10	1/2" fpt 3/4" hose 90	29	1
11	3 C pump		1
12	pump bracket		1
13	6mm x 16 mm bolt		8
14	6mm nut		8
15	3/4" mpt x 3/4" hose 90	23	3
16	3/4" T barb	2	1
17	3/4" ball valve	122	1



Item 8 and 9 used on Sword II and Nes

## Part Breakdown

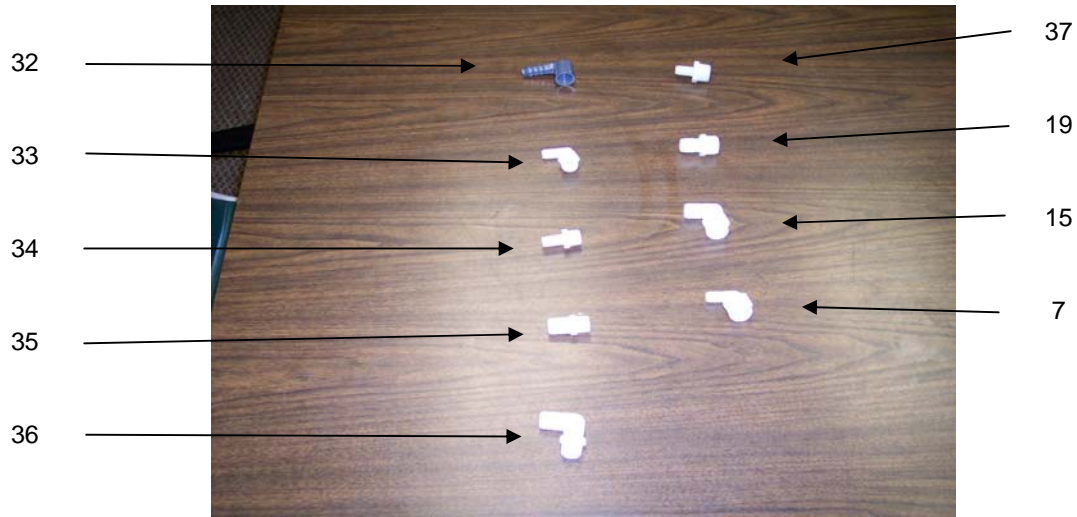
18	teflon tape		1
19	3/4" mpt x 3/4" hose	11	2
20	3/4" x 1/2" reducing barb	70	2
21	silicone		1
22	overflow adaptor Quartz		1
23	1/2" compression fitting		1
24	1/2" s.s. inlet tube		1
25	1/2" ball valve	120	1
26	1" hose clamp		2
27	3/4" hose clamp		9
28	1/2" hose clamp		6
29	1" nylobraid hose		6'
30	3/4" nylobraid hose		10'
31	1/2" nylobraid hose		6'



Item 15,19 and 22 used on Quartz

## Part Breakdown

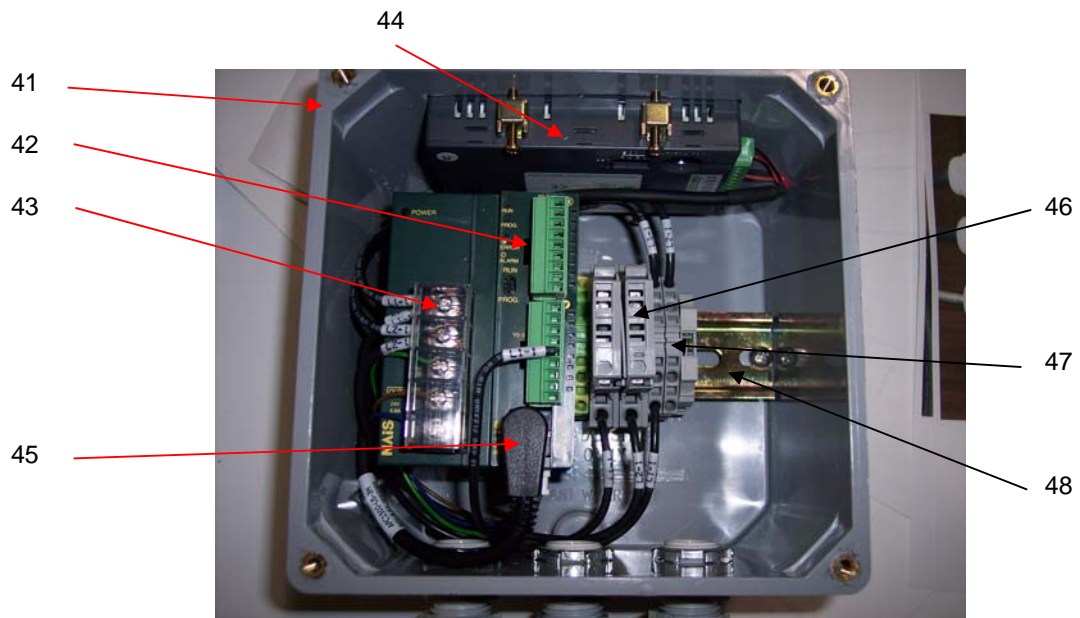
32	3/4" fpt x 3/4" hose 90	50	1
33	1/2" mpt x 1/2" hose 90	20	1
34	1/2" mpt x 1/2" hose	9	1
35	1/2" mpt x 3/4" hose	10	1
36	1/2" mpt x 3/4" hose 90	21	1
37	3/4" mpt x 1/2" hose	22	1
38	3/8" mpt plug <u>not shown</u>		4
39	1/2" mpt plug <u>not shown</u>		4
40	3/4" mpt plug <u>not shown</u>		4



**Items on this page are for different configurations for the water supply from the solenoid. All items will not be used.**

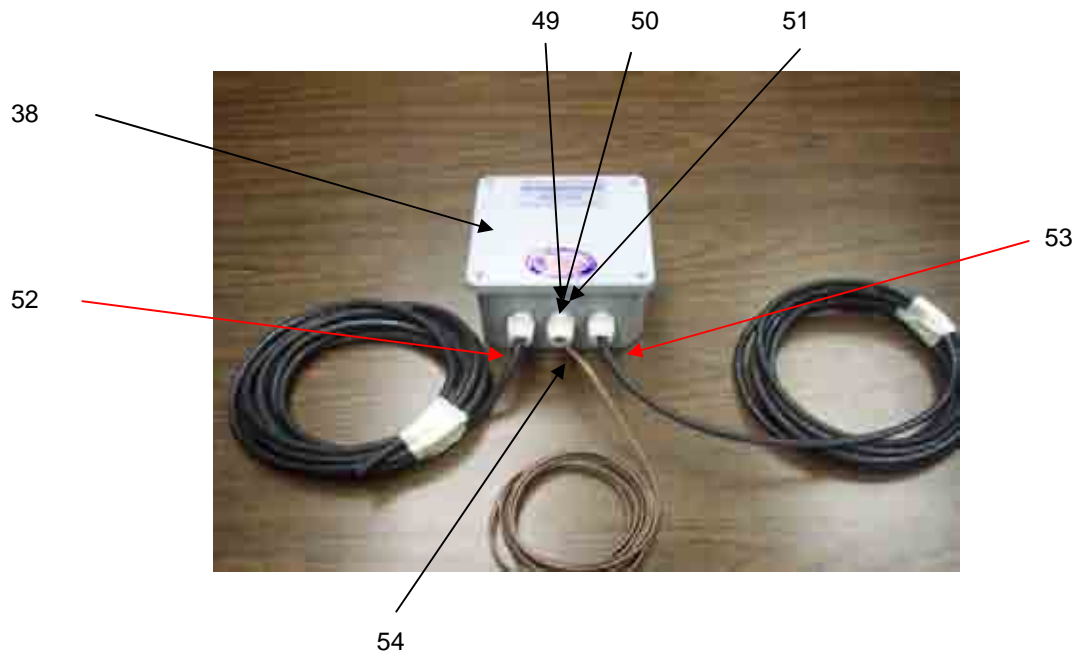
## Part Breakdown

41	Plastic enclosure	1
42	PLC	1
43	Power Supply PLC -24VDC	1
44	GT-01 Touch screen      EL0195-1	1
45	Interface cable	1
46	Fuse holder	2
47	T-Block	2
48	End anchor	1



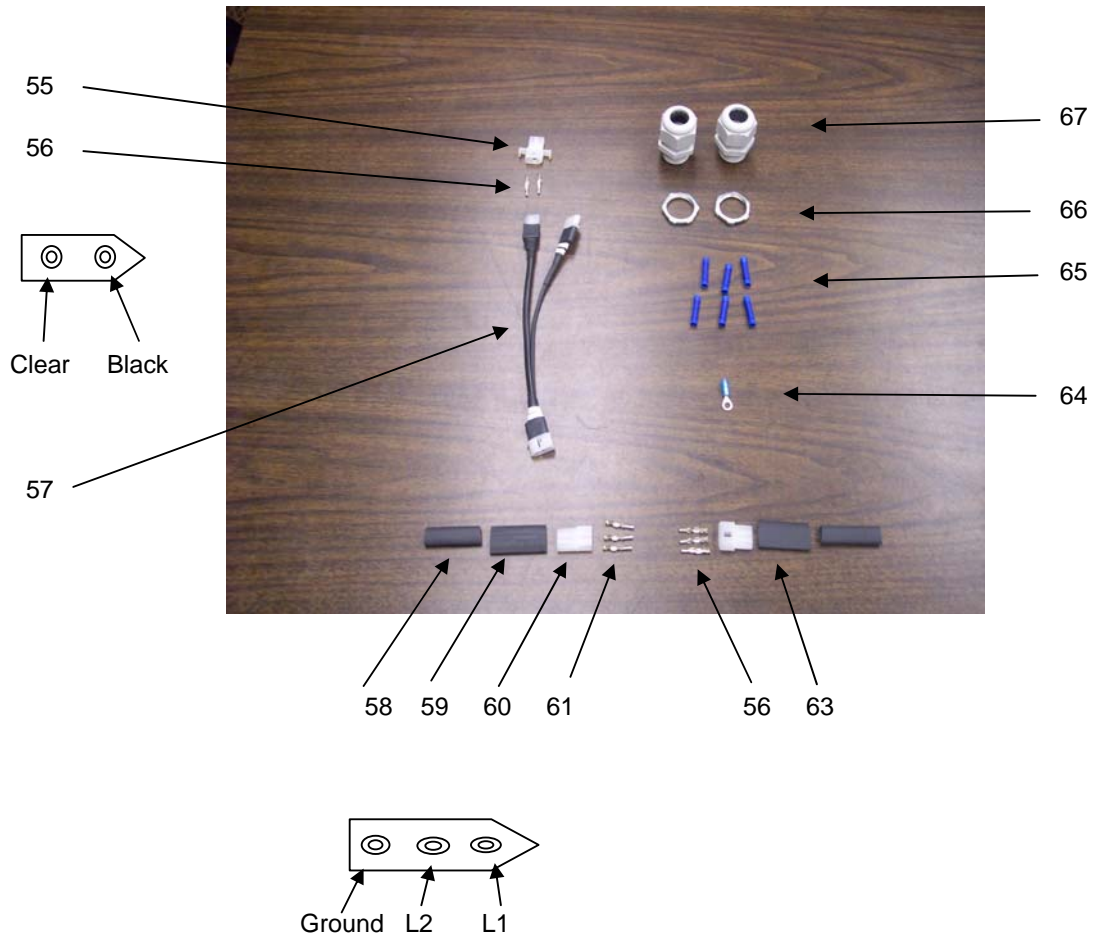
# Part Breakdown

49	Liquid tite connector	3
50	Seal 1/2"	3
51	1/2" locknut	3
52	14/2 cord	20'
53	16/2 cord	20'
54	18/2 cord	20'



## Part Breakdown

55	Molex 2 pin plug	1
56	male pins	5
57	Y connector for sensor	1
58	Shrink tube 1/2" x 2"	2
59	Shrink tube 3/4" x 2"	2
60	Molex 3 pin plug male	2
61	Female pins	6
63	Molex 3 pin plug female	1
64	Crimp for ground	1
65	Butt splice	6
66	3/4" locknut	2
67	3/4" liquid tite connector	2
68	wire tie 1/4" x 12 <b>NOT SHOWN</b>	12
69	spade connector <b>NOT SHOWN</b>	2



Part Breakdown

70	Water Saver Manual	1
71	Water Saver Installation Book	1
72	Water Saver schematic	1

