

- Notes:
- 20 foot ISO shipping container.
 - Partition wall.
 - 12-2 TW wiring throught out to be placed in 3/4" conduit.
 - Outlet supplies water tank pumps.
 - Outlet supplies drum pump, GFCI.
 - Outlet supplies main vac/primary pump.
 - 12-2 TW wire supply to primary pump.
 - Primary pump.
 - Electrical panel.
 - System timer panel (timers/controls).
 - Control panel (in wash bay).
 - Extra outlets.
 - Electrical service power supply line .
 - Outlet supplies main vacuum.
 - Outlet supplies low pressure solenoid.
 - Ground

Note: all electrical installation and equipment shall meet or exceed all applicable codes.

Materials List				
Item	Quantity	Description	Part #	Supplier
1	1	20' ISO Shipping container see sheets 2,3 and 4		Martin Container-container.com
2		Partition wall- 2 x 4 stud wall @ 16" o.c. see sheets 2 ,3 and 4.		Local hardware store
3		12-2 TW wiring		kristechwire.com
"		3/4" conduit		Local hardware store
4-6, 12, 14, 15	9	Outdoor water-proof electrical outlets		Local hardware store
8	1	Primary Pump		
9	1	125 AMP Electrical Panel		Local hardware store
10	1	System Timer Panel		
11	1	Control Panel Panel		
	1	Repeat timers-20 amp		airotronics.com
	1	Relay timer-20 amp n.o.		airotronics.com
	1	1 shot timer-10-30 minutes		airotronics.com
	1	1 shot timer--30-120 seconds		airotronics.com

ATV Wash System Operation Cycles

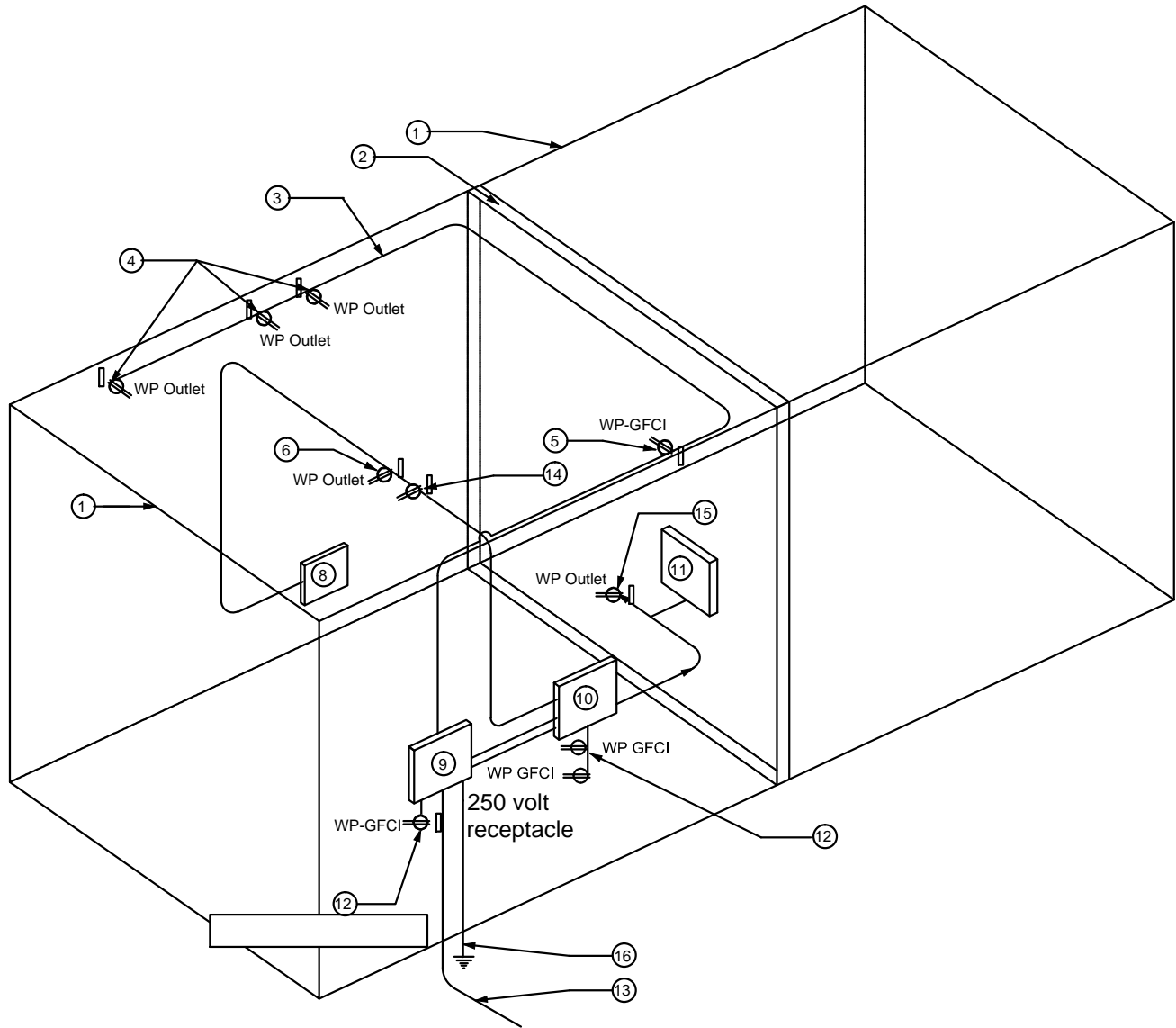
The system wash cycle is initiated by pressin Monmentary Switch MS1; the START button on the Control Panel (Figure 1). That connects the "hot" lead of a 120v single phase circuit from the main breaker panel Drum Pump circuit to the relay coil of CT1; the cycle timer that sets the wash cycle in operation. CT1 is a Single Shot timer with a relay and it is set to hold the circuit closed for approximately 15 minutes, but it is adjustable from 10 - 30 minutes. It will also open the relay if power is disconnected from the hot lead input (terminal 2) by opening the Normally Closed STOP button (MS2).

The relay in CT1 sends power to RT1, a Single Shot Relay timer that is set to close as long as it receives power from CT1 and open when power is interrupted. CT1 also sends power to RT3; a Repeat Cycle Timer that is used to run the Flush pump at about 45 second intervals for about 10-15 seconds. It also sends power to SS1; a Selector Switch that either opens a solenoid valve on the low pressure side of the system, or sends power to activate RT2; another Single Shot Timer like RT1 that runs the High pressure pump.

The above is all dependent on activation of CT1 and remains in operation for the duration of the time cycle set on CT1.

Another side of the washer electrical system has power on full time to several float-switch activated pumps (Figure 2). It also has a shop vacuum that is run independent of the wash cycle. The shop vacuum is powered through CT2, another Single Shot timer like CT1, that is set to run the vacuum for 0.5 - 5.0 minutes. MS3 is a Normally Open momentary switch, starts the shop vac cycle by sending power to CT2.

Figure 3 shows the wiring of the timers in the panel. It is a very literal mechanical representation, not an actual schematic. Power comes from several circuits of the Main breaker panel. The leads coming into and out of the panel are labeled according to thier connections.



Electrical Layout

NOT TO SCALE

Scale 1/2"=1'

