

USE THE BLUE TABS LOCATED ON THE RIGHT AND LEFT SIDES OF THE FOLLOWING DOCUMENT TO ADVANCE TO EACH SECTION.



DEXTER
LAUNDRY


## C-Series Vended Washers WC0_00XA-1_EC4X

## WC0300XA-10EC4X WC0300XA-12EC4X WC0400XA-12EC4X WC0600XA-12EC4X

After Serial \# W1.19213.001
After Serial \# W1.19211.025
After Serial \# W1.19219.027
After Serial \# W1.19220.051
Non-Express (100G)

Caution! To reduce the risk of damage to the Water Inlet Valve, do not supply inlet water with a temperature that exceeds $70^{\circ} \mathrm{C}$.

Caution! To reduce the risk of fire or explosion, do not operate this equipment in any hazardous classified (ATEX) environment.

Indicates an imminently hazardous situation, which if not avoided, will result in death or serious injury.

Indicates a potentially hazardous situation, which if not avoided could result in death or serious injury.

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. Minor burns, pinch points that result in bruises and minor chemical irritation.

Indicates information or a company policy that relates directly or indirectly to the safety of personnel or protec tion of property.

This is the user caution symbol. It indicates a condition where damage to the equipment resulting in injury to the operator could occur if operational procedures are not followed. TO REDUCE THE RISK OF DAMAGE OR INJURY, refer to accompanying documents; follow all steps or procedures as instructed.

This is the electrical hazard symbol. It indicates that there are DANGEROUS HIGH VOLTAGES PRESENT inside the enclosure of this product. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, do not attempt to open the enclosure or gain access to areas where you are not instructed to do so. REFER SERVICING TO QUALIFIED SERVICE PERSONEL ONLY

Caution! There are sharp edges on various sheet metal parts internal to the enclosure. Use safety consciousness when placing or moving your hands while working in the interior of this equipment

## Equipment Safety Warnings

 Symbols and Terminology Used in this Equipment

Warning! Do not operate equipment if door glass is damaged in any way.

Warning! Keep clear of rotating parts.

Prohibited! Do not enter this equipment or space.

Prohibited! Do not step or stand on this equipment.

Prohibited! Do not operate without all guards and covers in place.

Prohibited! Do not operate without all guards and covers in place.


Prohibited! Do not wash clothing impregnated with flammable liquids (petrochemical).

Prohibited! Do not allow children to play in or around equipment.


## ! ${ }_{\text {WARNING }}$

|  | - All washers must be installed in accordance to all applicable electrical, plumbing and all other local codes. <br> - These installation and operation instructions are for use by qualified personnel only. To avoid injury and electrical shock, do not perform any servicing other than that contained in the installation and operation instructions, unless qualified. |
| :---: | :---: |
|  | Do not install washers in an explosive atmosphere. |
|  | - Care must be stressed with all foundation work to ensure a stable unit installation, eliminating possibilities of excessive vibration. <br> - Foundation must be level within $13 \mathbf{~ m m}$ to ensure proper washer operation. |



Do not operate washer if door glass is damaged in any way.


Do not wash clothing impregnated with flammable liquids (petrochemical).

Children should be supervised to ensure they do not operate or play in or around equipment.
this appliance 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.

A washer should not be allowed to operate if any of the following occur:

- Excessive high water level.
- Machine is not connected to a properly earthed circuit.
- Door does not remain securely locked during the entire cycle.
- Vibration or shaking from an inadequate mounting or foundation

| Prorning! Do not operate equipment if door glass is |
| :--- | :--- |
| damaged in any way. |



## Dexter Safety Guidelines

## 1 WARNING

These washers are equipped with devices and features relating to their safe operation. To avoid injury or electrical shock, do not perform and service, unless qualified to do so

## FOR SAFETY

1. Always shut off power and water supply and also discharge capacitors before servicing
2. Do not overload the washer
3. Do not attempt to open door if cylinder is in motion or contains water.
4. Do not mechanically force or override door lock in any way.
5. Do not bypass any safety devices of this washer.
6. Do not use volatile or flammable substances in or near this washer.
7. Keep all panels in place. They protect against shock and injury and add rigidity to the washer.

A machine should not be allowed to operated if any of the following occur:

- Excessively high water level.
- Machine is not connected to a properly grounded circuit.
- Loading door does not remain securely locked during the entire cycle.
- Vibration or shaking from an inadequate mounting or foundation.

To activate your warranty, be sure to return your red warranty form to the factory. Please have serial number and model ready when calling for assistance.

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Specifications for below models are outlined in this book:

| WC0300XA-10EC4X | 120 volts | 60 hz | Single Phase |
| :--- | :--- | :--- | :--- |
| WC0300XA-12EC4X | $208-240$ volts | 60 hz. | Single Phase or Three Phase |
| WC0400XA-12EC4X | $208-240$ volts | 60 hz | Single Phase or Three Phase |
| WC0600XA-12EC4X | $208-240$ volts | 60 hz | Single Phase or Three Phase |

T-300 Mounting Dimensions

## Section 1:

Machine
Mounting


## T-400 Mounting Dimensions



T-600 Mounting Dimensions




T-600 Mounting Pad Dimensions


## Foundation Requirements

The washer must be securely bolted to a substantial concrete floor, or mounted upon a suitable base which is in turn securely bolted to a substantial concrete floor. Care must be stressed with all foundation work to insure a stable unit, eliminating vibration. All installations must be made on sound concrete floor See mounting dimensions for each model being installed.

## Mounting

A concrete pad or steel base which elevates the machine 4 to 6 inches above the floor level. To provide easy access to the loading door, it is recommended to allow a minimum of $24^{\prime \prime}$ of clearance behind the rear of the machine for service as is shown. Dexter highly recommends the use of a dry expansion grout mix.

## Proper Machine Grout Installation

Grout should be installed between base (if used) and concrete floor on all side rails and crossmembers. If using a base you should grout between base top and machine frame and all side rails and crossmembers.

Mounting Holes
See mounting dimensions for the machine model you are installing in previous section. They also show a typical concrete pad arrangement. It is highly recommended that you use all mounting holes supplied with each model. Note: Mounting bolts should be checked frequently to insure that they remain tight. The machine should be checked with a spinning load to be sure there is no unusual vibration or movement between the machine and the base or floor. Please note: Machine grouting is highly recommended as grouting insures stability and longevity.

## Plumbing

Water supply hoses are furnished with each machine. The threaded connections on the hoses are standard garden hose type thread. Separate hot and cold water lines with shut off valves or faucets for inlet hose connections must be provided, maintaining 30 to 120 p.s.i. water flow pressure. Maximum wate temperature is 180 degrees.

## Drain

The drain outlet tube at the rear of the machine is $3^{\prime \prime}$ in outside diameter on models T-400 \& T-600. The drain outlet tube at the rear of the machine is $21 / 4^{\prime \prime}$ outside diameter on a T-300. All Drains are gravity drain outlet tube at the rear of the machine is $21 / 4$ outside

## Section 2:

## Protective Film

The machine may have protective adhesive film on the front escutcheon area and the front and side stainless steel panels. The film may be peeled off before putting the machine into service.

## Electrical

Dexter single/three-phase 208-240VAC 60 Hz washing machines are intended to be permanently installed appliances. No power cord is provided. The machine should be connected to an individual branch circuit not shared by lighting or other equipment. The connection should be sheathed in liquid tight flexible conduit, or equivalent, with conductors of the proper size and insulation. A qualified technician should make such connections in accordance with the wiring diagram.

Each unit should be connected to an individual branch circuit not shared by lighting or other equipment. Conductors of the proper size and insulation (suggested size on the next page) should be used.

Machine
Installation
\& Operating
Instructions
Machine
Installation
\& Operating
Instructions
Machine
Installation
\& Operating
Instructions
Machine
Installation
\& Operating
Instructions



## To Make Electrical Connections

Disconnect all power to the washer. Remove screw and lift out the cover located in the upper left corner $f$ the machine (as viewed from the back).

- If power is $208-240-3 \mathrm{PH}-60 \mathrm{~Hz}$, connect $\mathrm{L} 1, \mathrm{~L} 2, \mathrm{~L} 3$ and ground. If there is a high leg it mus be connected to L3. It is highly recommended to use a TVSS.
- If power is $208-240-1 \mathrm{PH}-60 \mathrm{~Hz}$, connect L1, L2 and Ground. If power is $120-1 \mathrm{PH}-60 \mathrm{~Hz}$. Use a UL approved receptacle with proper external ground.

NOTE: It is important that the grounding screw next to the power terminal block TB-1 be connected to a good external ground.

## Controls Transformer

The controls transformer is located inside the control trough and steps a range of 208 to 240 volts down to 115 volts. There are two terminals on the controls transformer for the primary (incoming) power se the terminal marked " 208 V " for power supplies between 200 and 219 volts. Use the terminal marked " 240 V " for power supplies between 220 and 240 volts.

NOTE: transformer must be set at proper tap for proper operation.

## Electrical Connections

Electrical power connections are made to the small terminal block located in the rear of the contro trough. The terminal block is accessed by opening the top panel of the machine

- 1 Phase or 3 Phase connection
$208-240 \mathrm{Vac}, 60 \mathrm{~Hz}$
- Suggested Minimum Wire Size - 12 Ga.


## Fusing Requirements

Dual element time delay fuse or equivalent breaker of amperage specified below.

- 1 Phase or 3 Phase, $15 \mathrm{amp}, 208-240 \mathrm{Vac}$
- WC0300XA-12, WC0400XA-12, \& WC0600XA-12
- 1 Phase, 20 amp, 120Vac
- WC0300XA-10

Rotation in extract as viewed through glass door at front of washer, all models will be counter- clockwise.

## Emergency Stop / Safety Door Lock

This machine is equipped with a Safety Door Lock that locks the door closed from when the cycle is started until the cycle is complete. The door lock prevents opening the door for up to 3 minutes if the power is interrupted during the cycle.

The Emergency Stop button pauses the washer and allows the door to be opened during the cycle after the Safety Door Lock releases. When the Emergency Stop button is pressed an alarm will sound and the display will begin counting down from " 3 ". If the button is released before 3 seconds elapse, the alarm will stop and the cycle will continue normally. If the Emergency Stop is held down for 3 seconds, the display will count down to " 0 " and the washer will begin stopping from inside the washer. Though the maching may

號 minutes for the door to unlock. During that time the alarm will continue to sound. When the alarm stops, the door may be opened. The washer may be restarted by closing and latching the door, and pressing the Start button. If the washer was stopped during final extract, the cycle will be ended. If the washer is stopped for more than 1 hour, the cycle will be terminated. If the emergency stop is triggered a second time during the cycle, the cycle will be terminated.

## Operating Instructions

Microprocessor
Prior to operation, the micro computer should be set to display the amount of vend price being offered and the cycle to be given to the user.

## Starting the Washer

A. Load the clothes loosely in the cylinder and latch the door securely. Be sure clothing does not get caught between the door gasket and tub front when closing the door
B. Pour low-sudsing powdered detergent in the amount shown below into the detergent dispenser top of the machine. Rinse conditioners may also be added to the dispenser. The correct location is shown on the dispenser lid

NOTE: To close the door the handle must be in the horizontal position and then moved to the vertical position. After moving the door to the closed position, the handle must be turned down to the vertical position to latch the door for machine operation

C Once the door is closed and latched, the display will scroll "SELECT TEMP" and the temperature lights will flash. Using the TEMPERATURE SELECT buttons on the front, select the desired temperature. If temperature pricing is being used you will display price changes as you push the desired temperature selection. This selection must be made before inserting coins to satisfy temperature price selected. If coins or value are added after extended plus cycle vend price is met and machine started the customer may change temperature selections of equal to or low

Always disconnect electrical power to the machine before performing any adjustments or service.
priced temperature selections already inserted into machine.
D. Insert coins, tokens or activate card reader to meet displayed vending price. The washer display will read "PUSH START" and the green "on" led will glow. The green start pushbutton must be pushed to run.
E. At the correct time in the wash bath cycle the display will scroll "ADD BLEACH" indicating the time for adding bleach if desired. The timing is $21 / 2$ minutes after start of wash bath the light will come on and stay on for $21 / 2$ minutes or end of wash bath.

## End of Cycle

When the cycle is completed, the end of cycle enunciator will sound for 3 seconds, the "on" light will go off and "CYCLE DONE THANK YOU" will scroll on the screen until the door is opened. The loading door can now be opened by turning the door handle to the indicated position and pulling. turning the door handle to the indicated position and pulling. Leave the clothes door open when the machine is not in use
Also, at the end of cycle the display will reset to the original amount required to start.


## TRANSIENT VOLTAGE SURGE SUPPRESSORS

Like most electrical equipment your new machine can be damaged or have its life shortened by voltage surges due to lightning strikes which are not covered by factory warranty. Local power distribution problens also can be detrimental to the life of electrical components. We recommend the installation of transien

These surge protectors help to protect equipment from large spikes and also from small ongoing spikes
Th the porger thetors help to pill in the power that occur on a day to day basis. These smaller surges can shorten overall life of electrical components of all types and cause their failure at a later date. Atthough they cant protect against all electronic components.

Electronic Components are helped to have a longer useful life when they are supplied with the clean stable electrical power they like.

We are including the following names and links to a few suppliers of these devices for those who don currenty have a source.

MANUFACTURER
MCG Surge Protection
Eaton Corporation
Schneider Electric
Asco Power Technolgies
Emerson Electric Co

## LINK

mcgsurge.com
eaton.com/us/en-us
se.com/us/en
ascopower.com/us/en
emerson.com/en-us

## Profitable

Create exciting promotions to attract new customers. Offer extra prewash, plus cycles, extra rinse and temperature pricing to drive more revenue in your store.

## DexterLive

The new DexterLive controls were created for you to be able to interface easier with your equipment and create variable pricing cycles to increase your profitibility in the same floor space.

First, log into DexterLive, create your location and equipment list and then create your cycle and pricing information by the particular type of washer and dryer at the location. Once the information is saved, download the "AllUser.xml" file to a USB device which will be used to program the machines from the USB port.

Keep it simple or use the marketing features such as temperture pricing, plus cycle or an additional final rinse that the customer can select for a value added wash. Utilize time of

View and customize equipment settings to fit your business model. Download your unique user file and quickly transfer it to your equipment via USB.
.

## Section 3:

## Machine <br> Programming <br> Instructions

day pricing to help move people from heavy use periods to special value times of day or days of the week.

Through the easy to use USB programing so you can download all special pricing and cycles from DexterLive to set up your store quickly and easily.


## Accessible

Available anytime, anywhere, on any internet capable device. Once you have set up your free account all of your custom settings and store information are saved making it quick and easy to make future changes.

## Simple

1) Log into DexterLive.

At the bottom, select "Create your DexterLive account."
B. Fill in the required fields and click on "Create My Account".


C. After selecting to "Create My Account", you will see the log in screen advising you to go to your e-mail and activate your account.

After creating
After creating
your account your account to use the email link to gain first gain first account will not be active until you confirm your account.

When creating a new user account make sure to fill in all fields marked with asterisks
and check the
"Terms of
Service" box.


3) Open the e-mail sent from Dexterlive and select "CONFIRM MY ACCOUNT".


## Programming

5) To configure your settings with DexterLive.com A. Add or select a location to program.


DexterLive
gives an owner
the ability to
manage
multiple locations and locations machines.
B. On the left side of the screen, select the "Programming" tab.

C. Edit the "General Settings" (Equipment Tab)

D. Next select the "+Add Equipment" (Equipment Tab), located in the upper right hand corner.


F. Cycle changes can be made by selecting the "Cycles" tab.


## Adjust cycle

 programming set the length of time and extracts speed as needed.as treveu


## Program the <br> price of the

machin
and the
adders.
G. If desired, you may create and edit optional store promotions from the "Promotions" tab.


Select "Save
Promotion"
once your
changes have
been made.
6) Create and download Programming File.
A. Once all preferred prices, cycles and promotions have been modified and saved, select "DOWNLOAD PROGRAMMING FILE".

B. Based on your internet browser the file needs to be saved as "AllUser.xml". Depending on your Internet browser you may need to retrieve the file from your "Downloads" folder, which is locater under "Computer".

Note: The newly created programing file may have changed from the proper "AllUsers.xml". Machine programming will not occur using a different file name than "AllUser.xml". An extra extension names will require the file to be renamed back to "AllUser.xml" for the machine to recognize the file.
7) To save the Programming File to a USB Drive:
A. Move or Copy the "AllUser.xml" file from your computer onto a USB drive.
B. Based on your computer and internet browser, this file may be found in your "Down loads" folder, which is located under the "Computer" area.

Note: The "AllUser.xml" file size is small, nearly any capacity USB drive will do.


## Quartans ©inly

8) Program Your Machines Using the USB Drive.

CAUTION!!! Be sure that any loose keys or other items that are connected to the USB device are removed from the USB stick to prevent any possible metal contact with the control board.
A. Insert the USB drive containing the "AllUser.xml" file into the Dexter machines you wish to program. The control will scroll "
while identifying the program on wish to program. The contro will scroil "........... "INile identifying the program on
the USB. Once identified, the display will scroll "INSTALL USER FILE FROM USB". At this prompt press the green start button on the front panel.


B. The machine will scroll "TO INSTALL - PRESS START". At this prompt, press the green "Start" again.

C. Once the program is uploaded successfully the control will scroll "DONE REMOVE USB". The USB drive can be safely removed at this point.
Note: All Dexter equipment (washers and dryers) featuring DexterLive controls can be programmed using this file once the equipment has been configured.

## PROGRAMMING INSTRUCTIONS:

The washer control can be programmed to prompt the user for alternate vend prices, change washer cycle times, temperatures and many other options. This can be accomplished in two ways:

1. Manual program

For instructions on using the USB download feature, please contact your local Dexter distributor.

## MANUAL PROGRAMMING:

The washer must be in idle mode for the manual programming menus to be accessed. Idle mode is when the washer is not actively running a wash cycle and the vend price is displayed on the screen.
To enter the manual programming mode, the top of the washer must be unlocked and lifted slightly (it should not be necessary to remove the screws for the soap box). The programming button is then presse for 1 second. The control should display "PROGRAMMING".

See Figure 1 for the location of the programming button in relation to the USB port (The USB port is exposed when the washer top is lifted).

## Figure 1



When manual programming mode is entered, the "Start", "Hot", "Warm" and "Cold" buttons perform alternate functions.

| Button Name | Alternate Function in Programming Mode |
| :--- | :--- |
| Start | Becomes the action to accept the displayed option or the "Enter" key |
| Hot | Becomes the action to move UP through displayed options (Press \& hold <br> for accelerated scrolling) |
| Warm |  <br> hold for accelerated scrolling) |
| Cold | Becomes the action to move back a step (1 press) or EXIT from <br> programming mode (press for 3 seconds) |

## Programing Selection:

These alternate functions allow the user to move through a menu of options to choose various programmable settings. Figure 2, shown below, shows the top level menu. Choosing an option from the top level menu will then display the next level of options (the sub menu).


[^0]
## Optional Cycles Option:

This option allows the user to select the different test and short-cycle options.

## Quick Test Option:

 eration.
## Rapid Advance Option:

 is advancing. The water level needs to be empty before this advance occurs. During the time waiting for flashing. The Rapid Advance shall allow the tub to empty of water and the tub to stop before beginning either spin or the next bath.The Rapid Advance mode can be exited by pressing the programming button. This will end the cycle
When the Rapid Advance mode is used, the cycle time will no longer be correct. By skipping steps with Rapid Advance, the door may not open immediately at the end of the cycle.

When the Quick Test Option is chosen, the washer will begin a shortened wash cycle without the displaye vend price being met. The purpose of this shortened cycle is to test all major components for proper op-

Error Codes should all function normally during this test. The display will show customer prompts in a similar way to a normal wash cycle. Exceptions to this are that the "ADD BLEACH" prompt will not occur because of reduced cycle time. Final Extract speed is specific to the customer's programming.

| Bath | Bath Cycle <br> Time (min.) | Water Temp | Delay Fill |  |
| :--- | :---: | :---: | :---: | :---: |
| Spin Time (min.) |  |  |  |  |
| Prewash | $\mathbf{0}$ | n/a | n/a | $\mathbf{0}$ |
| Wash | $\mathbf{1}$ | Hot | On | $\mathbf{2}$ |
| Extended Wash | $\mathbf{0}$ | n/a | n/a | n/a |
| Rinse | $\mathbf{1}$ | Cold | On | $\mathbf{0}$ |
| Final Rinse | $\mathbf{0}$ | Cold | On | n/a |
|  | n/a | n/a | n/a | $\mathbf{0}$ |
| Extra Rinse Bath | $\mathbf{0}$ | n/a | n/a | n/a |
| Final Extract Spin | n/a | n/a | n/a | $\mathbf{4}$ |

Similar to the Quick Test, when the Rapid Advance Option is chosen, the washer will begin a wash cycle without the displayed vend price being met. However, in this case, it will be a normal default cycle with an additional feature available. The "Start" button LED will flash, prompting the user that, when pressed, the additional feature available. The "Start" button LED will flash, prompting the user that, when pressed, the
washer shall rapid advance to the next step in the cycle. The display will show "ADVANCE" when the cycle washer shall rapid advance to the next step in the cycle. The display will show "ADVANCE" when the cycle
is advancing. The water level needs to be empty before this advance occurs. During the time waiting for


## 류우우N

## Final Rinse and Spin Option:

"Final Rinse and Spin" will begin only the Final Rinse Bath and Final Spin portions of the cycle without the displayed vend price being met. The configured temperature, cycle times, and spin speed for the Fina Rinse Bath and Final Spin settings will be used when this option is selected.

## Note:Error Codes should all function normally during this test.

## Clean Drum Option:

"Clean Drum" will begin a shortened cycle without the displayed vend price being met. The cycle will be a 3-minute cycle (no spin). Hot water fill will be used and the detergent and softener compartments will both be flushed. Error Codes should all function normally during this cycle.

## Error Code Historical Log:

The last five occurring error codes will be stored in the control with a time and date stamp. The purpose of this option is only to observe the history of these code occurrences (no changes can be made).

The time is based off the Real Time Clock, but potentially shifted by the user's manual programming changes (Shift Hours option) and/or network time override. As additional error codes occur, the oldest of the five logged codes is cleared from memory.


## Prices Option

This option allows the user to set values for coin acceptor inputs and to set the vend price. It also allows the user to return the values to factory defaults. "RIGHT COIN" and "LEFT COIN" are the two possible inputs from coin acceptors.
"SET VEND" is the actual Base Vend Price (or Vend Price A) that is shown on the control display. After changing prices using the "Up" or "Down" buttons, the "Enter" button must be pressed again for the control to store the changes that have been made.

To reset either the coin acceptor inputs or the vend price to factory default, press "Enter" when the "DEFAULT prompt is shown. Press "Enter" again when the "RESET" prompt is shown to confirm the action.

Figure 3, shown below, shows the sub menu options for Prices:


## Temp Pricing Option:

The Temperature Pricing option allows for the user to prompt the customer for varying vend prices based on the water temperature the customer selects. If a value other then 0 is programmed for either the "WARM ADDER" or "HOT ADDER", the feature becomes active. The programmed value is added to the base vend price when that particular water temperature is chosen.

When the customer adds coins to meet the adjusted vend price and starts the washer, the temperature selections available to the customer are limited to those with vend prices equal to or less than the amount entered.

Figure 4, shown below, shows the sub menu options for Temp Pricing:


## Cycles Option:

This option allows the user to set the bath time and spin time for the "Wash" bath. It also allows the user to set bath time, water temperature and spin time for "Rinse" and "Final rinse" baths. (Water temperature for the "Wash" bath is chosen by the customer using the "Hot", "Warm" and "Cold" buttons on the front of the machine). For the "Final Spin" it also allows the user to set the spin speed (see additional description below)
It also allows the user to return the values to factory defaults. To reset all values in the Cycles option to factory default, press "Enter" when the "DEFAULT" prompt is shown. Press "Enter" again when the "RE-


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## Final Spin:

The washer "Final Spin" is the spin that occurs after all selected baths \& intermediate spins have been completed. It is a higher spin speed then previously occurring intermediate spins. The benefit of this completed. It is a higher spin speed then previously occurring intermediate spins. The benefit of this
higher spin speed is that more water is extracted from the wash load, which minimizes the drying time higher spin speed is that more water is extracted from the wash load, which minimizes the drying time
needed. However, in some cases, if the Dexter installation guidelines are not followed properly, it may be needed. However, in some cases, if the Dexter installation guidelines are not followed properly, it may be
necessary to reduce the spin speed of the "Final Spin". The control allows for this to occur, based on the menu shown above.

The Final Spin can be adjusted in increments of 10 G for washers with a 100 G maximum spin speed and increments of 20 G for washers with a 200G maximum spin speed. The factory default final spin speeds are the maximum values.

| Model | Adjustable Final Spin Range |
| :--- | :--- |
| T300 | 60G to 100G |
| T350 | 60G to 200G |
| T400 | 60G to 100G |
| T450 or T450 SWD | 60G to 200G |
| T600 | 60G to 100G |
| T750 | 60G to 200G |
| T900 | 60G to 100G |
| T950 | 60G to 200G |
| T1200 | 60G to 100G |
| T1450 | 60G to 200G |

## Delay Fill:

In some applications, the amount of available water pressure is limited. In these cases, the washer may not be able to fill the tub in sufficient time to allow for effective washing performance. For this situation, the control has a "Delay Fill" option that can be chosen based on the menus above.

When the Delay Fill option is "On", the water valves shall be turned on, the washer shall agitate, but the cycle time shall be paused. The washer shall continue in this state until the proper water level is reached Once the proper water level is reached, the cycle shall continue. A single selection of "On" or "Off" shall apply to all baths in the cycle. The factory default setting is "Off".

## Delay Spin:

In some applications, the amount of drain capacity is limited. In these cases the washer cannot empty the tub in sufficient time to allow for a spin cycle to occur. For this situation, the control has a "Delay Spin" option that can be chosen based on the menus above.

When a time value (other than 0 ) is programmed for the Delay Spin option, the end of each bath will be extended by the selected time. Therefore, extra time will be allowed for the drain valve to be open and compensate for slow drain capacity. The factory default setting is 0 seconds.

## Default Temp:

The "Default Temp" option allows the user to choose which water temperature ("Hot", "Warm", or "Cold") will be active during Idle mode. The customer can, of course, choose other temperatures for the wash bath based on other options described in this manual.

## Plus Cycle Options:

The Plus Cycle options allow for the user to prompt the customer for varying vend prices based on additional wash baths chosen. In general, the user can program the additional wash baths in a similar manner to what was described in the "Cycles" Options section.

It also allows the user to return the programmable values to the factory default setting. No plus cycle options are active using the factory default. To reset all values in the Plus Cycles option to factory default, press "Enter" when the "DEFAULT" prompt is shown. Press "Enter" again when the "RESET" prompt is shown to confirm the action.

Figure 6, shown below, shows the next level options for Plus Cycle Options:


## Pre-Wash:

If the user programs a "CYCLE TIME" for Pre-Wash other then 0 ("NO CYCLE"), the feature becomes active. However, the customer will not be prompted to pay an additional vend price for Pre-Wash unless the user programs the Price to a value other then 0 ("FREE").

With the Pre-Wash feature active, an additional bath and, optionally, an additional spin, will occur before the standard Wash bath described in the Cycles Options section.
With the Pre-Wash feature active and a Price value programmed, the customer will be prompted to add With the Pre-Wash feature active and a Price value programmed, the customer will be prompted to add
additional coins if they wish to purchase the Pre-Wash feature. This will occur after they have entered coins to meet the Base Vend price. If the customer does not meet the vend price of the Pre-Wash feature the prompt will time out and the Pre-Wash bath will not occur.

## Extend Wash:

If the user programs an "EXTEND TIME" for Extend Wash other then 0 , the feature becomes active. However, the customer will not be prompted to pay an additional vend price for Extend Wash unless the user programs the Price to a value other then 0 ("FREE").

With the Extend Wash feature active, the standard Wash bath described in the Cycles section will be extended for the additional time selected.

With the Extend Wash feature active and a Price value programmed, the customer will be prompted to add additional coins if they wish to purchase the Extend Wash feature. This will occur after they have pressed
 Extend Wash feature, the prompt will time out and the additional time will not be added to the Wash bath.

## Extra Rinse:

If the user programs a "CYCLE TIME" for Extra Rinse other then 0 ("NO CYCLE"), the feature becomes active. However, the customer will not be prompted to pay an additional vend price for Extra Rinse unless the user programs the Price to a value other then 0 ("FREE").

With the Extra Rinse feature active, an additional bath and, optionally, an additional spin, will occur after the standard Final Rinse bath described in the Cycles Options section.

With the Extra Rinse feature active and a Price value programmed, the customer will be prompted to add additional coins if they wish to purchase the Extra Rinse feature. This prompt will occur during the standard Final Rinse bath. If the customer does not meet the vend price of the Extra Rinse feature, the prompt will time out and the Extra Rinse bath will not occur.

## SuperWash:

If the user programs SuperWash to "On", the feature becomes active. However, the customer will not be prompted to pay an additional vend price for "SuperWash" unless the user programs the Price to a value other than 0 ("Free"). With the "SuperWash" feature active, any combination of the "Pre-Wash", "Extend Wash, or "Extra Rinse"features, of which that are also active, win be automatically implemented durexample, if "Pre-Wash" "Extra Rinse" and "SuperWash" options are active and "SuperWash" price is met the "Pre-Wash" and "Extra Rinse" features will automatically occur during the cycle. The control will not prompt for "Extra Rinse" vend at the normal prompting time of the cycle.

With the "SuperWash" feature active and "Price" value programmed, the customer will be prompted to add additional coins if they wish to purchase the "SuperWash" feature. This will occur after they have enadditional coins if they wish to purchase the "SuperWash" feature. This will occur after they have en-
tered coins to meet the Base Vend price. If the customer does not meet the "SuperWash" vend price, the tered coins to meet the Base Vend price. If the customer does not meet the "SuperWash" vend price, the
prompt will time out and the configured combination of "Pre-Wash", "Extend Wash", or "Extra Rinse" features that make up SuperWash will not occur. The "SuperWash" price will take priority over the individual pricing of the "Pre-Wash", "Extend Wash", and "Extra Rinse" features that are active.
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## Settings Options:

The Settings options allow for the user to make various programming changes to change how the control operation affects the customer. See below for detailed information on each next level option.

It also allows the user to return the programmable values to the factory default setting. To reset all value in the Settings options to factory default, press "Enter" when the "DEFAULT" prompt is shown. Press "Enter" again when the "RESET" prompt is shown to confirm the action.

Figure 7, shown below, shows the next level options for Settings Options:


## Decimal Point:

If the user programs the Decimal Point to "OFF", control display will not show a decimal point on any vend price values. The factory default is "ON".

## Sounds:

If the user programs the Sounds to "OFF", the control will not sound the enunciator at the end of a wash cycle. The factory default is "ON".

## Password:

If the user programs the Password to any value other then 0000, the control will prompt the user to enter a password (the programmed value) before manual programming can be accessed. The factory default is " 0000 " (no password).

Note that if the user forgets the Password, it can be reset to factory default (no password), by performing a soft reset on the control. Please refer to the appropriate section of this manual to understand how to perform a hard reset.

The individual digits of the Password can be set by using the "Up" or "Down" buttons to change the number that is flashing. Once the desired number is chosen for a single digit, press the "Enter" button to move to the next one. Once all four desired digits are chosen, the "Enter" button must be held down for 3 seconds to confirm that the complete password should be set.

## Language:

The control uses English for the default language of the customer prompts. Alternatively, the user can choose Spanish, French, Malay, or Italian for the customer display prompts. However, all other prompts, such as Manual Programming, USB Programming and any Error Codes will still display in English.

## Shift Hours:

The control uses a Real Time Clock (RTC) to internally track the time and date. The RTC continues operation even if the control loses external power. The RTC is set for Central Standard Time and no daylight savings.

Because the machine may be located in another time zone, the user can choose to create an alternate time \& date that tracks in parallel to the RTC. When this alternate time is chosen, or shifted from the RTC the alternate time will be used to, for example, track error code occurrences and set time-of-day pricing changes.

The hours in "SHIFT HOURS" can be set by using the "Up" or "Down" buttons to change the number that is flashing. Once the desired hour shift is chosen, press the "Enter" button to move to the minutes. Once the hours and minute shift are both chosen, the "Enter" button must be held down for 3 seconds to confirm that the complete shifted time is set.

## Time:

The control uses a Real Time Clock (RTC) to internally track the time and date. The RTC continues operation even if the control loses external power. The RTC is set for Central Standard Time and no daylight savings. However, if a problem occurs and the RTC time is not accurate, it can be reset to the current time using this option.
The hours in "TIME" can be set by using the "Up" or "Down" buttons to change the number that is flashing. Once the desired hour is chosen, press the "Enter" button to move to the minutes. Once the hours and minute are both chosen, the "Enter" button must be held down for 3 seconds to confirm that RTC is meant to be reset to the complete entry.

## Date:

The control uses a Real Time Clock (RTC) to internally track the time and date. The RTC continues operation even if the control loses external power. The RTC is set for the current date. However, if a problem occurs and the RTC date is not accurate, it can be reset to the current date using this option.

The day of the month in "DATE" can be set by using the "Up" or "Down" buttons to change the number that is flashing. Once the desired day of the month is chosen, press the "Enter" button to move to the month of the year. Once the desired month of the year is chosen, press the "Enter" button to move to the year. Once the day, month and year are all chosen, the "Enter" button must be held down for 3 seconds to confirm that RTC is meant to be reset to the complete entry.

## Out of Service:

The control can be put into an Out-of-Service mode via manual programming. When the mode is "ON", the control will scroll "OUT OF SERVICE" on the display. The machine will not react to any vend input and will not operate when in this mode. The factory default is "OFF".

## Drive Table:

The control knows what model of washer it is installed in based on various inputs including information it receives from the Variable Frequency Drive (VFD). However, because multiple VFD's can be used on the same model, depending on when it was manufactured, the "DRIVE TABLE" option is available. "DRIVE ER ROR 1 " will display on the control when the Drive Table setting does not match the appropriate VFD in the washer.
a. Choose "Drive 3" for C4 models (ex. WC0600XA-12EC4X-)
b.
b. Choose "Drive 2" for C1, C2, or C3 models (ex. WC0600XA-12EC2X-)
c. Choose "Drive 1" for WCAD models (ex. WCAD40KCS)

## Usage Menu:

The Usage menu allows for the user to track data about machine usage. See below for detailed information on each sub menu option.

Figure 8, shown below, shows the sub menu options for Usage:


## Coin Audit：

The coin audit field shows the accumulation of coin pulses that were sent to the control over each of the left and right coin inputs．Note that this is a count of coin pulses，not an accumulated report of vend value． The user can also return the coin audit amounts to the factory default setting（zero）．To reset all coin audit values，press＂Enter＂when the＂DEFAUIT＂prompt is shown．Press＂Enter＂again when the＂RESET＂ prompt is shown to confirm the action．

## Cycle Count：

The cycle count field shows the accumulation of wash cycles that have occurred．Note that this is a count of cycles，not of hours accumulated．

The user can also set the count value to a designated number．For example，if it is necessary to replace the control on a machine，the new control could be programmed to show the cycle count value that was recorded by the previously installed control．The individual digits of the count can be set by using the＂Up＂ or＂Down＂buttons to change the number that is flashing．Once the desired digit of the count is chosen， press the＂Enter＂button to move to the next digit．Once the complete count is chosen，the＂Enter＂button must be held down for 3 seconds to confirm the action．

The user can also return the cycle count to the factory default setting（zero）．To reset the cycle count， press＂Enter＂when the＂DEFAULT＂prompt is shown．Press＂Enter＂again when the＂RESET＂prompt is shown to confirm the action．

## Motor Hours：

The motor hours field shows the accumulated hours of operation for the motor．In many cases，it will match the cycle hours of the machine．However，separate fields are provided in the event that a motor is replaced on a machine．

The user can set the motor hours to a designated number．For example，if it is necessary to replace the control on a machine，the new control could be programmed to show the motor hours that were recorded by the previously installed control．The individual digits of the hours count can be set by using the＂Up＂or ＂Down＂buttons to change the number that is flashing．Once the desired digit of the hours is chosen，press the＂Enter＂button to move to the next digit．Once the complete hours are chosen，the＂Enter＂button must be held down for 3 seconds to confirm the action．

The user can also return the motor hours to the factory default setting（zero）．To reset the motor hours， press＂Enter＂when the＂DEFAULT＂prompt is shown．Press＂Enter＂again when the＂RESET＂prompt is shown to confirm the action．

## Cycle Hours：

The cycle hours field shows the accumulated hours of operation for the washer．In many cases，it will match the motor hours of the machine．However，separate fields are provided in the event that a motor is replaced on a machine．See the Motor Hours description for more information．

## Control Menu：

The Control menu allows for the user to observe important technical information for the control and Vari－ able Frequency Drive system．No changes can be made at this menu．See below for detailed information each sub menu．

Figure 9，shown below，shows the sub menu options for Control：


## Serial Number：

The serial number is the control serial number．

## MAC Address：

The MAC Address is a unique identifier designated to the control by the manufacturer．It allows the contro to be recognized by network routers．

## IP Address：

The IP Address is the identifier given to the control by a network system．

## M Firmware：

The M Firmware is the Main Firmware currently loaded onto the control．

## S Firmware：

The S Firmware is the Secondary Firmware currently loaded onto the control．

## C Firmware：

The C Firmware is the Communications Firmware currently loaded onto the control

## Drive ID：

The Drive ID is the code that represents the size of the Variable Frequency Drive and parameters loaded into it，corresponding with the washer model．

## USB Menu:

The USB menu allows for the user to move programming files back and forth from a common USB memory stick.


### 2.11.5 MAXIMUM SPIN SPEED ADJUSTMENT (A// washers except T-950)

If desired, the washer can be adjusted to limit the maximum extract spin speed for all wash cycles.
To make this adjustment, a jumper wire must either be installed or removed on the Variable Frequency Drive (VFD), depending on the washer model and
desired speed. This Dexter jumper part number 8220-057-036 (qty 1) is factory supplied on terminal points " 10 V " and " RC ". Remove this jumper to make new jumper connections if necessary. Refer to figure below for the approximate location of the control terminations on the Variable Frequency Drive (VFD) and for appropriate jumper connection points indicated with an " $X$ " for the desired maximum spin speed setting. If no adjustment to the default spin speed is desired, do not remove or add any wires on VFD.


Control Terminations on Variable Frequency Drive


Spin Speed Adjustment Jumper Locations

MAXIMUM SPIN SPEED ADNUSTMENT (T-950 Only)
The variable frequency drive allows for varying acceleration during Final Spin on T-950 models. It is important to utilize a decreased acceleration rate when the application power is low. This acceleration rate is determined by a white wire jumper installed on the drive terminal block from +10 V to AVI.
Remove the wire jumper when input power is between 208 and 219 volts. Keep the jumper installed when input power is between 220 and 240 voits. Reference the drawing below for the jumper location.


T-950 Spin Speed Adjustment Jumper Locations


| Common | Troubleshooting Solutions |  |
| :--- | :--- | :--- | :--- |
| Symptom | Probable Cause | Suggested Remedy |

## Common Troubleshooting Solutions

| Symptom | Probable Cause | Suggested Remedy |
| :---: | :---: | :---: |
| Door will not open | Door Rod | Check to see that door rod from gear motor to lock ass'y is long enough to allow lock ass'y to disengage. If not, adjust rod. |
|  | Gear Motor | Check the door lock motor. Make sure the motor is not stuck or in a bind. If motor does not move freely, replace locking motor. |
| No hot water in detergent dispenser | Water Valve Coil | Check coil continuity at terminals and replace if no continuity. 120 V power only on for 20 second in wash bath. |
|  | Water Inlet | Check water inlet screens for blockage and clean screens if necessary. |
|  | Water | Check to insure that water is turned on and operating. |
|  | P-20 Wire Harness | Check black \& white harness. |
| Hot water does not enter tub in wash | Water Valve Coil | Check coil continuity at terminals and replace if no continuity. Check for 120 V power from main relay PCB |
|  | Water Inlet | Check water inlet screens for blockage and clean if necessary screens |
|  | Water | Check to insure that water is turned on and operating. |
|  | Blk or Wht wire at main controller | Check black or white wires at Molex plug on PCB at main controller and at relay PCB. |
|  | Pressure Switch | Check pressure switch continuity between terminals . If no continuity, check pressure switch hose for obstruction. If hose okay, change pressure switch. |
| No cold water to tub in wash | Water Valve Coil | Check coil continuity at terminals and replace if no continuity. |
|  | Water Inlet Screens | Check water inlet screens for blockage and clean if necessary. |
|  | Water | Check to insure that water is turned on and operating. |
|  | Blk or whit wire at controller and main relay PCB | Check black or white wires at Molex plug on PCB at main controller and at relay PCB. |
|  | Pressure Switch | Check pressure switch continuity between terminal contacts. If no continuity, check pressure switch hose for obstruction. If hose okay, change pressure switch. |
| Water comes in but level does not rise | Drain Valve (open) | Check these areas • Drain valve blockage • Drain valve motor and gear train. If power but drain valve does not close, replace valve. • Power to the drain valve. If no power to drain valve, check (brn/yel) circuit for power. |
|  | Blk or whit wire at controller | Check black and white wires at molex plug on main PCB controller and at main relay PCB |
| Water does not flush softener compartment. | Water Valve Coil | Check coil continuity at terminals and replace if no continuity. |
|  | Water Inlet Screens | Check water inlet screens for blockage and clean if necessary. |
|  | Water | Check to insure that water is turned on and operating. |

## Troubleshooting Machine Fault Errors

Displayed on front of washer
The following pages are a description of fault codes that will appear on the front of the washer. There is a chart format that shows what fault code that will be displayed at washer front. These codes displayed may stop machine operation or may not stop machine Please check chart before removing power to reset. PLEASE NOTE: CHECK DRIVE FAULT CODE BEFORE POWERING MACHINE DOWN!

| Fault |  |  |  |
| :--- | :--- | :--- | :--- |
| Description <br> DOOR <br> LOCK <br> ERROR | The door failed to <br> close and lock or <br> The door failed to <br> remain locked during <br> the cycle. | Condition | Customer Action <br> This error is when the Door Locked <br> signal is not received within one <br> second after the start of the cycle. <br> After three attempts to start the <br> washer. |
|  |  | Delay | Immediate |
|  |  | Action | When the error occurs, the Door Lock <br> gear motor will be turned off; all other <br> outputs will be turned off. |
|  |  | Solution | Check VFD fault light. Check to hear <br> if door motor engaged. Turn off the <br> power to the washer. Check wire <br> connections to door /lock switches. <br> Check wire connections from switches <br> to controller. Check P-4 Door/Lock <br> wire connections at PCB controller. <br> Adjust the door lock mechanism. (See <br> on line service manual or video) |
| SLOW <br> FILL <br> ERROR | Slow Fill Error | Condition | This error is when a low water level is <br> not reach within 7 minutes. |


| Fault | Description |  | Customer Action |
| :---: | :---: | :---: | :---: |
| COMM ERROR 1 | I2C Bus Error | Condition | Washer controller communication error on the I2C bus. Both the main slave micro and the master micro can be in this error state. The slave micro error is recoverable at any time, if I2C communication resumes. The master micro error is permanent. |
|  |  | Delay | The main slave starts displaying this error after 6 seconds of no (valid) I2C activity. The master micro goes into this permanent error state after 8 seconds of no (valid) I2C activity |
|  |  | Action | Stop the washer and turn off all outputs. |
|  |  | Solution | Check VFD fault light before turning off power. Try the data cable first. Move around cable and remove any side loading tension from data cable connector ends. Check connection P23 to P15. Turn power back on to the washer. If the problem returns, replace the PCB washer controller. |
| COMM ERROR 2 | Wrong <br> Washer <br> Size Jumper Configuration | Condition | Invalid washer size jumper (harness) configuration. |
|  |  | Delay | Immediate (after the wrong size jumper configuration is read). Washer size/type inputs are read only at power up, before starting a cycle, once every 24 hours, and in factory test mode. |
|  |  | Action | Stop the washer. |
|  |  | Solution | Check VFD fault light before turning off power. If the controller was installed in a different size machine before being installed in this machine, a problem can occur. If someone has been doing repairs on the washer, check for the correct size drive. It can also be caused by pressure switch harness. Check to ensure the correct harness in installed. The control can be reset by holding program button on controller during startup (soft reset). Check orange wire at Molex connector on controller coming from pressure switch or replace pressure switch harness. |
| COMM ERROR 3 | Washer Size or Type Changed | Condition | The washer size or washer type configuration has changed. |
|  |  | Delay | Immediate (after the size jumper configuration is read). Washer size/type inputs are read only at power up, before starting a cycle, once every 24 hours, and in factory test mode. |
|  |  | Action | Stop the washer. |
|  |  | Solution | Check VFD fault light before turning off power. Check to ensure all the harnesses are properly connected to the controller. Check to ensure the VFD drive horsepower is proper for this size of washer. The control can be reset by holding program button on controller during startup (soft reset). Check orange wires at Molex connector on controller coming from pressure switch. |

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| Fault | Description |  | Customer Action |
| :---: | :---: | :---: | :---: |
| COMM ERROR 4 | VFD Non Existent or communication fault | Condition | This error is when the washer controller cannot communicate with the drive. |
|  |  | Delay | Delay time is 2 seconds |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | Check the data communication cable between the washer computer and the variable frequency drive (VFD). Step 1: Make sure the cable did not become unplugged during operation. Step 2: Make sure that the cable is not being pulled sideways at either the washer controller, or the VFD, plug end. If both ends of the communications cable are plugged in the washer computer and VFD and there is no tension on the communications cable pulling it from side to side, then replace the cable. Step 3: Inspect both female connection points at PCB controller and at VFD. These may need replacement if they cannot be reset. |
| COMM ERROR 5 | VFD <br> Communication Fault | Condition | This error is a data error on communications between the controller and the VF drive |
|  |  | Delay | Delay time is 12 seconds. |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | The CE errors are communications errors. Data Cable noise can cause the majority of these errors. Check VFD fault light before turning off power. Check the data cable between the controller and the drive. Replace data cable if it appears damaged and fault appears again. Please note that this fault will occur if you turned main power off and on to quickly. (See Note below) |
| COMM ERROR 6 | VFD <br> Communication Fault | Condition | This error indicates that a VFD exception error is set |
|  |  | Delay | Occurs following the "DELAY" error (see corresponding detail) |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | The washer will not restart until the power is removed and re-applied. |



| Fault | Description |  | Customer Action |
| :---: | :---: | :---: | :---: |
| SLOW DRAIN ERROR | Drain Error | Condition | This error is when an empty water level is not reach within 7 minutes. |
|  |  | Delay | Immediate |
|  |  | Action | The washer cycle will continue. Do not spin the tumbler with out reaching an empty water level. If empty water level is not reached, agitate during the normal spin time. |
|  |  | Solution | Check VFD fault light before turning off power. Check to ensure the drain valve is operating properly (slow drain has potential to cause this code). Check to ensure the pressure switch tube is clear of any blockage, and the pressure switch is operating properly. Check the pressure switch harness. |
| $\begin{array}{\|l\|} \hline \text { SPIN } \\ \text { STOP } \\ \text { ERROR } \end{array}$ | Stop Error | Condition | This error is when the washer does not stop spinning within 150 seconds after receiving the command. |
|  |  | Delay | Immediate |
|  |  | Action | Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | Check VFD fault light before turning off power. Inspect the braking resistors and measure the resistance. Check connecting wiring from braking resistor to the drive mounted in the top of the washer. Reset the drive and try again. Possibly incorrectly programmed drive. |
| $\begin{array}{\|l\|} \hline \text { DRIVE } \\ \text { ERROR } \\ 1 \end{array}$ | Washer size/ VFD size mismatch | Condition | This error is when the drive size does not match the washer size. |
|  |  | Delay | Immediate. (after the size jumper configuration is read). Washer size/type inputs are read only at power up, before starting a cycle, once every 24 hours and in factory test mode |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door |
|  |  | Solution | Check VFD fault light before turning off power. If the controller was installed in a different size machine before being installed in this machine, a problem can occur. If someone has been doing repairs on the washer, check for the correct size drive. It can also be caused by pressure switch harness. Check to ensure the correct harness in installed. The control can be reset by holding program button on controller during startup (soft reset). Check orange wire at Molex connector on controller coming from pressure switch or replace pressure switch harness. |



| Fault | Description |  | Customer Action |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { DRIVE } \\ & \mathrm{OH} \end{aligned}$ | VFD <br> Overheat Fault | Condition | This error is over-heating on the VF drive |
|  |  | Delay | Occurs following the "DELAY" error (see corresponding detail) |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | The washer will not restart until the power is removed and re-applied. |
| DRIVE OL | VFD <br> Overload Fault | Condition | This error is overload on the VF drive |
|  |  | Delay | Occurs following the "DELAY" error (see corresponding detail) |
|  |  | Action | "DRIVE OL" |
|  |  | Solution | The washer will not restart until the power is removed and re-applied. |
| $\begin{array}{\|l\|} \hline \text { DRIVE } \end{array}$GFI | VFD Ground Fault | Condition | This error is a ground fault interruption on the VF drive |
|  |  | Delay | Occurs following the "DELAY" error (see corresponding detail) |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | The washer will not restart until the power is removed and re-applied. |
| DRIVE LV | VFD Low Voltage | Condition | This error is low voltage on the VF drive |
|  |  | Delay | Occurs following the "DELAY" error (see corresponding detail) |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | The washer will not restart until the power is removed and re-applied. |
| DRIVE IF | VFD Internal Fault | Condition | This error is an internal VF drive error |
|  |  | Delay | Occurs following the "DELAY" error (see corresponding detail) |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | The washer will not restart until the power is removed and re-applied. |


| Fault | Description |  | Customer Action |
| :---: | :---: | :---: | :---: |
| INVALID DRIVE | Drive is not the correct Dexter version of the Delta E-drive | Condition | The error indicates the VF drive is not a Dexter version of the Delta E-drive. |
|  |  | Delay | Immediate (after the Dexter indication value is read from drive). Drive indication value is read only at power up, before starting a cycle, once every 24 hours, and in factory test mode. |
|  |  | Action | Stop the machine and clear the cycle. Keep the door locked until the machine has stopped moving and then unlock the door. |
|  |  | Solution | The washer will not restart until the power is removed and re-applied. |
| SECONDARY FUSE ERROR | Factory program error | Condition | This error occurs when the fuse settings for the Slave/Secondary microprocessor have not been set correctly during factory programming |
|  |  | Delay | None |
|  |  | Action | When detected, the washer control shall not be operational. |
|  |  | Solution | The control must be re-programmed with the factory programming tool. |
| MAIN FUSE ERROR | Factory program error | Condition | This error occurs when the fuse settings for the Master/Main microprocessor have not been set correctly during factory programming |
|  |  | Delay | None |
|  |  | Action | When detected, the washer control shall not be operational. |
|  |  | Solution | The control must be re-programmed with the factory programming tool. |
| $\begin{array}{\|l\|} \hline \text { DELAY } \\ \text { F13 } \end{array}$ | Communication loss | Condition | This is an intermediate error code that displays as the control is attempting to re-establish communications with the variable frequency drive. It is a condition of other specified Error Codes (for example Comm Error6). |
|  |  | Delay | 4 cycles of 10 seconds if during tumble portion of cycle |
|  |  |  | 4 cycles of 2 minutes if during spin portion of cycle |
|  |  | Action | Prompt is displayed during each of the specified 10 second or 2 minute periods. Error condition (such as Comm Error4) occurs, but Delay is shown instead of specific Error Code. Action during this time is dependent on the specific error code that caused it. |
|  |  | Solution | No exit strategy. Either communication is re-established or the specific Error Code eventually occurs. |


| Fault | Description |  | Customer Action |  |
| :--- | :--- | :--- | :--- | :---: |
| CRC ERROR | Firmware <br> corrupted | Condition | This error occurs the washer control firmware <br> fails a CRC check. |  |
|  |  | Delay | None |  |
|  |  | Action | When detected, the dryer control shall not be <br> operational. |  |
|  | Solution | The error is fatal. The control must be <br> replaced. |  |  |

Drive Motor Inverter Type
Motor-Winding Resistance Chart
201b C-Series Washer (both voltages 115/208-240)

|  |  | Resistance |  |
| :---: | :---: | :---: | :---: |
| Motor Winding | Wire \# | Minimum | Maximum |
| 201 l 1ph or 3ph 60hzMain (wash \& spin) | T1 \& T2 | 3.91 | 4.60 |
| Dexter \#9376-307-001 | T2 \& T3 | 3.91 | 4.60 |
| Marathon | T1 \& T3 | 3.91 | 4.60 |
| 301b C-Series Washer |  |  |  |
| Motor Winding | Wire \# | Res Minimum | Maximum |
| 301b 1ph or 3ph 60hzMain (wash \& spin) | T1 \& T2 | 2.45 | 2.71 |
| Dexter \#9376-305-001 | T2 \& T3 | 2.45 | 2.71 |
| A.O. Smith \#19343600 | T1 \& T3 | 2.45 | 2.71 |
| 401b C-Series Washer |  |  |  |
| Motor Winding | Wire \# | Minimum | Maximum |
| 401 l 1ph or 3ph 60hzMain (wash \& spin) | T1 \& T2 | 2.45 | 2.71 |
| Dexter \#9376-305-001 | T2 \& T3 | 2.45 | 2.71 |
| A.O. Smith \#19343600 | T1 \& T3 | 2.45 | 2.71 |

NOTE: Resistance values are measured at the stator. Values at the end of the motor wiring harness may be slightly higher.

## Top Panel Removal

Step 1: Remove 4 screws that hold detergent dispenser to top panel
Step 3: Raise top panel, slide to the rear to release from back clips and lift off.

## Front Panel Removal

Step 1: Remove the loading door by first removing the two lower screws of the lower hinge clamp and lifting the door off of the hinge assembly
2: doorf 2 the hins beter Remove 2 screws between front panel top and fron (located behind control panel).
Step 3: Remove the two screws in the middle of the fron
pan
Pull pand out at the bottom to about a 45 dere angle to detach the top lip and remove.

## Back Panel Removal



Step 1: Remove all screws holding back panel in position except the bottom row. Step 2: The bottom row of screws are slotted and only need to be loosened and to lift off panel.

NOTE: The back panel is not only a safety requirement but also contributes to the rigidity of the cabinet.

## Drain Valve Access

For access to drain valve, remove lower service panel. The drain valve is a ball type and is powered closed by the drain valve motor. It is mounted under the washer tub on the left side. It is spring loaded open. If power is interrupted to the washer, the motor releases the sealing ball, allowing the drive spring to open the valve. With the valve open, all water in the washer will drain out

## Section 5:

Machine Service
Procedures

## Drain Valve Cleaning

Step 1: Loosen the clamp on the tub hose at th drain valve end and remove the hose from the drain valve.
Step 2: Loosen the drain hose clamp on the back of the drain valve. Remove two
drain valve mounting racket screws from the frame of the washer.
Step 3: Disconnect red \& black wire connection at clear connector
Step 4: Remove the drain valve and bracket assembly. Unplug the wiring after the drain valve is removed from the washer.


## Detergent Dispenser

Remove top panel to access dispenser. (see Removing Top Panel) Detergent is flushed from the front of the compartment and fabric softener is flushed from the back. There will be a small amount of water left in the fabric softener compartment after each use.


## Vacuum Breaker (also called an air gap)

In the left rear of the cabinet is the vacuum breaker. It guides the water to the tub and dispenser and prevents a back flow of water.

## Water Valves

Remove top panel to access water valves. (see Removing Top Panel) The two dual outlet water valves are mounted to the water valve mounting plate that is fastened to the rear the water valve mounting plate that is fastened to the rear channel. To remove the valves, loosen the 2 locking nuts
on both sides of the mounting plate from the interior of the on both sides of the mounting plate from the interior of the channel and pull the assembly into the machine. The valves can then be removed from the mounting plate by removing the $5 / 16$ mounting screws.

Always check inlet screens to be sure that they are clean. Disassembly requires the removal of two solenoid screws and three valve body screws. Below the solenoid coil is a solenoid guide, armature, armature spring and diaphragm. All valve parts are available individually or as a complete unit.


## Door Lock Assembly Operation

After loading the clothing, the door should be closed and latched. The locking cam on the door contacts the latching switch actuator which closes the latching switch. The specified number of coins should now be added to start the washer. The gear motor pulls up on the locking pawl by use of a linkage rod. The locking pawl has two jobs. The first is to lock the door. This is accomplished by blocking the locking cam on the door so that it can't rotate to unlock. The second job is to close the two piggyback lock sensing switches. These switches control power to all of the controls. If the door unlocks for any reason, these two switches will stop the machine. When the door handle is $1 / 4$ to $1 / 2$ of an inch from its fully closed position, the latching switch should close. The two piggyback lock sensing switches should be open when the door is unlocked and should be closed when the door is locked.

## Accessing the Door Lock Assembly

After removing the front panel and masking ring, the door lock assembly can now be accessed.

## Adjustment for Door Lock Assembly

The latching switch and the piggyback lock sensing switches all have slotted mounting for easy adjustment.

Adjustment to this bracket usually is not necessary as next step is used more in field.


Step 1: Set door cam over pin. Here you can see the door cam away from the door lock assembly.

Step 2: Tighten spring screw on switch actuator bracket arm until it just clears cam OD. at bracket arm until it just clears cam OD. at
base of door lock assembly.


Switch actuator




Step 3：With switch actuator bracket adjusted you will now need to adjust single switch by loosening 2 flat brade screws and allowing swivel of switch．Move switch towards above bracket until it actuates．Now tighten flat blade screws．Use a .040 thickness guage to insert between bracket and switch and the witch should close and open removal of thickness quage．


Step 5：Check that lock pawl arm swings to cam lobe to lock position．

Door cam check position


Step 4：Check for switch actuation at partial turn of cam as in operation above．Door handle goes from horizontal to six o＇clock vertical．

Adjustment screw for
（piggyback switches）


Step 6：The lock stacked switches（piggyback） must be adjusted as door lock solonoid pulls up on door rod and locking pawl is now blocking door cam from turning and is in full up position．The stacked swtiches （piggyback）have a single actuator arm and it must actuate when single actuator roller wheel rolls to flat side of locking pawl．You will also notice a .040 gap between actuator arm and switch bodies

Note：Both stacked switches must operate together！

## Adjusting the Loading Door

The door can be adjusted by changing the number of shims behind the door hinge and the door lock assembly．The vertical fit of the door to the tub can be altered by loosening the door hinge bolts and raising or lowering the door before retightening．It is important for the door to be centered on the tub front．By chalking the front of the tub and closing the door to transfer that line to the gasket，the centering can be evaluated．It is also important for door pressure to be similar around the door perimeter．Door pressure can be evaluated by inserting a dollar bill in several positions and tugging on it．See Parts Section for kit to increase door sealing pressure．

## Loading Door Removal

Step 1：First remove loading door and front panel．


Step 2：Remove 3 screws holding door hinge． Shims may be present between hinge and tub front．The number may be increased or decreased to adjust right side door pressure．

NOTE
Door hinge mounting bolts penetrate tub front and require silicone sealer applied to holes when reinstalling．


Step 1：Support door to prevent dropping．

 $-$

## Loading Door Disassembly

Step 1: Remove the loading door as outlined above.
Lay the door on a flat surface with the glass down.

## Loading Door Reassembly

Step 1: Lay the door ring face down on a flat surface. Start the glass into one side of the door gasket.

Step 2: While holding down on the door glass, lift up the door glass, lift up back the lip of the gasket with your fingers.

Step 3: Work all the way around the gasket and the glass is out.

Outer Cabinet Removal
T-300, T-400, \& T-600

## Removal of Cabinet T-300, T-400, \& T-600

Step 1: The power supply, water hoses, and drain connection must all be disconnected before proceeding with the disassembly
Step 2: Now remove the lower service panel and the top panel assembly.
Step 3: Remove the left and right lower front panel screws that retain the panel to the chassis.
Step 3: Remove the bottom row of back panel screws.
Step 4: Remove the loading door.
Step 5: Remove the screws along the bottom of each side panel When reinstalling these screws do not overtighten
Step 6: Remove clamp and soap dispenser hose where it attaches to the tub inlet. Disconnect the door lock wires from all switches and the door lock gear motor.
Step 7: Disconnect pull rod between gear motor and door lock assembly. Disconnect the wires to the dump valve at the bottom of the machine.
Step 8: Disconnect the wires to the drive motor from the VFD T1, T2, T3.
Step 9: Remove the clamp and the hose from the vacuum breaker where it connects to the inlet on the back of the tub.
Step 10: Remove the pressure switch hose from the bottom of the switch.
 set it aside.


## Door Locking Gear Motor Assembly

The door locking gear motor is rotated shut with control voltage to lock the door and releases when voltage is removed. It is located in the left front corner of the washer. (Original locking solenoid models can be converted to the new assembly)

## Thermoactuators

The thermoactuators are a safety device that keeps the door from immediately unlocking if power is lost while the machine is operating. They are mounted under the door locking gear

## Lock Thermoactuator

Control voltage is applied to the lock
thermoactuator at the beginning of the cycle making it extend and block the door locking gear motor. This keeps the door locked for approximately two minutes after a power failure occurs. The lock thermoactuator does not delay the door opening at the end of a normal cycle.

## Unlock Thermoactuator

To insure that the lock thermoactuator has retracted by the end of the cycle, one minute prior to the end of the cycle the unlo, one minute prior is powered with control voltage making it extend and unblock the door locking gear motor.

## Drive Belt Removal

Turn the drive pulley while applying pressure to the drive belt until it rolls off of the basket pulley the drive belt until it rolls off of the basket pulley first and then remove from the motor pulley. Be the tension assembly.

Reverse this procedure for installation.


Drive Belt

Tub Back, Bearing and Cylinder Assembly Basket assembly T-300, T-400, \& T-600

## Removal

Step 1: Remove the top and back panel as described.

Step 2: Move the rear channel, that the water valves mount to forward by removing the five mounting screws.

Step 3: Remove the drive belt

Step 4: Remove the overflow hose, tub fill hose and pressure switch hose from the back of the tub.

Step 5: Mark the tub back and bearing assembly for ease in assembly later. (see picture)

Step 6: Remove the 12 bolts and nuts from the perimeter of the tub back clamp ring. (Two of the twelve bolts are longer and go through the thicker part of the brace where it connects to the frame.)

Step 7: Remove the 2 bolts that fasten the clamp ring to the frame.

Step 8: The entire tub back and cylinder assembly may be lifted out of the tub (it may be necessary to break the adhesion of the silicone that seals the tub back to the tub). Blocks should be placed under the edges of the cylinder before setting it down to prevent damage to the cylinder flange.


## Reassembly

Reverse the procedures to the left paying attention to the following areas

Step 1: Lay the washer on its front Note: Put a thick pad acros the front of the washer, above the door, to protect the handle and coin acceptor

Step 2: Make sure the bearing housing weep holes are housing weep holes are
located at 12 o'clock and 6 o'clock.

Step 3: Clean the silicone rubber from the back of the outer tub and the perimeter of the tub back where the two meet. There is no gasket in this area.

Step 4: Apply a new bead of silicone rubber around the back of the outer tub. (see picture)

Step 5: Lower the tub back, bearing and cylinder assembly into the washer outer tub.
Step 6: Torque all bolts according to the following charts.

Step 7: Use a puller to remove the pulley from the shaft.


## Basket Pulley, Bearing Housing, Water Seals and Tub Back <br> The cast iron basket pulley is retained by a bolt, locking washer and a flat washer.



## Removal

Step 1: Insert a large screw driver or punch through a spoke in the pulley into the bearing housing support. This keeps the pulley from turning.
Step 2: Remove the retaining bolt, lockwasher and flat washer and reinstall just the bolt.

Step 3: Use a puller to remove the pulley from the shaft. Watch for tolerance ring.

## Reassembly

Step 1: Make sure that the tolerance ring is in place inside the pulley.
Step 2: The shoulder inside the pulley that holds the tolerance ring should face the back of the washer when installed correctly.
Step 3: Use a stack of flat washers and a longer bolt to press the pulley onto the basket shaft.
Step 4: Reinstall the retaining bolt, lock washer and flat washer. The shaft end bolt with washer should be installed with a torque value listed in charts in this manual.

Removal of Bearing Housing From Basket Shaft, Bearings and Water Seals


Step 1: To remove the tub back assembly, the 6 bolts attaching it to the bearing housing must be removed.
Step 2: Remove water seals from the seal mounting plate on the cylinder shaft. These are removed with your fingers.

Step 3: The retaining ring next to the front bearing must also be removed.

Step 4: The bearings are pressed into the housing and must be pressed back out.

## Reinstallation onto Basket Shaft

Step 1: Carefully set the assembly over the shaft engaging the bearings and bearing spacer
Step 2: The tolerance ring that fits inside the pulley should be placed in position (see Basket Pulley Reassembly for correct positioning).
Step 3: The pulley should then be started onto the shaft. A stack of flat washers and a longer pulley bolt will be required to pull the basket shaft through the bearings and pulley.

Step 4: Install the shaft end bolt with washers and torque to specifications in Bolt Torque Chart. Step 5: See Tub Back, Bearing and Cylinder Assembly for installation of complete assembly back into washer.

## Reassembly

Step 1: When installing new bearings into a bearing housing, first press the front (large) bearing into the housing until it bottoms. With the snug between the two bearings. Be sure and reinstall the retaining ing front of the front bearing (see picture).

The tub back assembly should be reattached to the bearing housing with the 6 mounting bolts and torqued according to the torque chart Note: The bead of silicone that seals each bolt to the tub back. This must be cleaned and replaced upon reassembly (see picture).
If the 6 support assemblies have been removed from the bearing housing, the 6 rear bearing housing bolts should be torqued according to the chart also.

Step 3: The primary and secondary seals that mount on the sealing ring may be slid over the shaft and seated on the metal sealing ring. In the unlikely event that the metal ring that mounts these sealing rings were to be damaged or moved, a new one would need to be pressed on.The ring must be pushed against the stop on the shaft. Before installing the new sealing ring, a bead of silicone should be put on the basket shaft (see picture). After installing the seals, lubricate the faces of the seals with silicone grease (see picture)


## Drive Motor Removal

Step 1: Remove the drive belt as explained in previous instructions.
Step 2: Remove the tension spring and bracket.
Step 3: Disconnect the motor wires at the variable frequency drive unit. The motor wire retaining clamp should be removed and reused. It is good to notate the location of the $\mathrm{T} 1, \mathrm{~T} 2$, and T 3 . (It is nornmal in most cases that the T1 and T2 wires are swapped at the variable frequency drive.

Step 4: Loosen the set screws on the motor support shaft.
Step 5: Remove the retaining bolt from the front of the support shaft.
Step 6: Remove the motor support shaft.
Step 7: Lift motor out of machine. Note: On larger washers it is advisable to put a board under the motor and slide it out rather than lifting it.

| T-300 Bolt Torque Chart |  |  |  |
| :--- | :--- | :--- | :---: |
|  | Where Used | Torque |  |
|  | Frt Ring Ends - Belly Band | $20-30$ |  |
| $9545-0017-012$ | Front/Rear Mtg Ring to Base | $70-110$ |  |
| $9545-017-009$ | Rear Mtg Ring to Tub Back | $45-80$ |  |
| $9545-029-003$ | Brg Hsg to Tub Back | $70-110$ |  |
| $9545-017-009$ | Brg Hsg - Pulley End | $45-80$ |  |
| $9545-029-003$ | Hub of Driven Pulley | $45-80$ |  |
| $9545-017-009$ | Drive Pulley Set Screws (Loctite) | $190-200$ |  |
| $9545-028-015$ |  |  |  |


| T-400 Bolt Torque Chart |  |  |
| :--- | :--- | :--- |
|  | Where Used | Torque |
| Bolt Size | Frt Ring Ends - Belly Band | $30-40$ |
| $1 / 2-13 \times 21 / 2^{\prime \prime}$ | Front/Rear Mtg Ring to Base | $120-150$ |
| $5 / 8-11 \times 11 / 2^{\prime \prime}$ | Rear Mtg Ring to Tub Back | $100-125$ |
| $7 / 16-14 \times 22^{\prime \prime}$ | Brg Hsg to Tub Back | $70-110$ |
| $1 / 2-13 \times 11 / 4^{\prime \prime}$ | Brg Hsg - Pulley End | $45-80$ |
| $3 / 8-16 \times 11 / 2^{\prime \prime}$ | Hub of Driven Pulley | $45-80$ |
| $1 / 2-13 \times 11 / 4^{\prime \prime}$ | Drive Pulley Set Screws (Loctite) | $190-200$ |
| $5 / 16-18 \times 7 / 8^{\prime \prime}$ |  |  |


| T-600 Bolt Torque Chart |  |  |
| :--- | :--- | :--- |
| Bolt Size | Where Used | Torque |
| $1 / 2-13 \times 21 / 2^{\prime \prime}$ | Frt Ring Ends - Belly Band | $30-40$ |
| $5 / 8-11 \times 11 / 2^{\prime \prime}$ | Front/Rear Mtg Ring to Base | $120-150$ |
| $7 / 16-14 \times 2$ " | Rear Mtg Ring to Tub Back | $100-125$ |
| $5 / 8-11 \times 11 / 2^{\prime \prime}$ | Brg Hsg to Tub Back | $120-150$ |
| $7 / 16-14 \times 11 / 2^{\prime \prime}$ | Brg Hsg - Pulley End | $100-125$ |
| $5 / 8-11 \times 11 / 2^{\prime \prime}$ | Hub of Driven Pulley | $100-125$ |
| $5 / 16-18 \times 7 / 8^{\prime \prime}$ | Drive Pulley Set Screws (Loctite) | $190-200$ |



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## Control Mounting Trough

Remove top panel to access control trough．（see Removing Top Panel）It sets on the right side of the machine and holds the control PCB＇s，transformers，and pressure switch．

## Section 6：

Service Electrical
Components

## Controls Transformer

This transformer is mounted at the back of the control trough and steps a range of 208 to 240 volts down to 120 volts for the controls．There are two terminals on the controls transformer for incoming power On terminal tap is marked for $L 1208$ volts use this tap for measured voltage of 200 volts -219 volts．and the terminal tap is marked for L1 208 volts use this tap for measured voltage of 200 volts -219 volts．and the Always check the incoming voltage and use the appropriate transformer terminal when installing All washers．

## Circuit Breaker／Fuse

The fuse（optional circuit breaker）mounts to the rear channel．It carries all of the controls in the machine but does not include the motor．To reset the circuit breaker just push in the button．If you have a fuse then remove fuseholder and fuse and replace with a $11 / 2 \mathrm{amp}$ fast blow type fuse．


## Power Connection Terminal Block

This terminal block sets at the very back of the control trough on the T－300 models and is behind the removable electrical panel on the back of all other machines．Incoming power to the washer should connect here．（see Electrical under Installation and Operation Section for exact connections）
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## PCB Transformer Step-down

Small transformer mounted at front of control trough that is powered with 120 VAC primary and 24 VAC on the secondary side.

## Main Relay Printed Circuit Board

Please be sure to be grounded to machine before removal of this board. PCB mounting horizontal in control trough towards front of machine. Remove 4 mounting nuts.

## Main Control Printed Circuit Board

Please be sure to be grounded to machine before removal of this board from machine. PC board mounted vertically behind front control panel. Remove hold down nuts in 4 corners and 1 at bottom center.


## Main LED Printed Circuit Board Temperature \& Start Display/Push-Button

The selector switch is mounted in the center of the control panel and is held in place with five nuts. It allows the selection of hot, warm or cold water temperatures. Note: Do not over tighten on reinstallation as the switch can be damaged, stay pushed in and will cause erratic displays.

## Emergency Stop Button Switch Assembly

The stop button is mounted on right side of machine. Remove the top and access the rear of button. Remove the plastic retainer by unthreading CCW. The switch assembly will have to be removed by pressing down on the plastic clip while pulling the switch body away from the stop button.


Temperature and Start Display
 Switch Assembly

## Electronic Pressure Sensor

The Electronic Pressure Sensor comes standard on all models starting September, 1st 2015. Machines manufactured before this date can be upgraded with Kit 9732-213-001. The Pressure Sensor is adjustable The Factory settings chart will let you know the starting values for each machine and by following the switch position chart you can adjust the water levels in $1 / 4$ inch increments from that starting value


| Switch Positions: |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Depth (in): | Pos 1 | Pos 2 | Pos 3 | Pos 4 | Pos 5 | Pos 6 |
| 5.00 |  |  |  |  |  |  |
| 5.25 | on |  |  |  |  |  |
| 5.50 |  | on |  |  |  |  |
| 5.75 | on | on |  |  |  |  |
| 6.00 |  |  | on |  |  |  |
| 6.25 | on |  | on |  |  |  |
| 6.50 |  | on | on |  |  |  |
| 6.75 | on | on | on |  |  |  |
| 7.00 |  |  |  | on |  |  |
| 7.25 | on |  |  | on |  |  |
| 7.50 |  | on |  | on |  |  |
| 7.75 | on | on |  | on |  |  |
| 8.00 |  |  | on | on |  |  |
| 8.25 | on |  | on | on |  |  |
| 8.50 |  | on | on | on |  |  |
| 8.75 | on | on | on | on |  |  |
| 9.00 |  |  |  |  | on |  |
| 9.25 | on |  |  |  | on |  |
| 9.50 |  | on |  |  | on |  |
| 9.75 | on | on |  |  | on |  |
| 10.00 |  |  | on |  | on |  |
| 10.25 | on |  | on |  | on |  |
| 10.50 |  | on | on |  | on |  |
| 10.75 | on | on | on |  | on |  |
| 11.00 |  |  |  | on | on |  |
| 11.25 | on |  |  | on | on |  |
| 11.50 |  | on |  | on | on |  |
| 11.75 | on | on |  | on | on |  |
| 12.00 |  |  | on | on | on |  |
| 12.25 | on |  | on | on | on |  |
| 12.50 |  | on | on | on | on |  |
| 12.75 | on | on | on | on | on |  |
| 13.00 |  |  |  |  |  | on |
| 13.25 | on |  |  |  |  | on |
| 13.50 |  | on |  |  |  | on |
| 13.75 | on | on |  |  |  | on |
| 14.00 |  |  | on |  |  | on |
| 14.25 | on |  | on |  |  | on |
| 14.50 |  | on | on |  |  | on |
| 14.75 | on | on | on |  |  | on |
| 15.00 |  |  |  | on |  | on |

## Data Communication Cable

Goes between front PCB board and Variable Frequency Drive unit mounted center rear of machine. It has telephone type connectors at each end and is inserted at Controller PCB and the Variable Frequency Drive

## Delta Variable Frequency Drive

Main power is connected to terminals $\mathrm{L} 1, \mathrm{~L} 2$, and L 3 on the Delta drive. If the washer is connected to a three phase source, there should be voltage present on all three terminals. If the washer is connected to single phase power, there should be voltage present on terminals.

The voltage should measure 208 Volts to 240 Volts A.C. between phases and connected to if connected to three phase). There is a tolerance of $+10 \%$ on the mains voltage ( 187 Volts to 264 Volts).

## Delta VFD Motor Leads:

The wires from the motor are connected to terminals $\mathrm{T} 1, \mathrm{~T} 2$, and T 3 Since this drive uses pulse width modulation, an accurate current or voltage reading is not possible. Although an accurate current reading is not possible, a balanced current reading should be present while the motor is running.


Two, 160 Ohm or 200 Ohm braking resistors (Please check your washer model parts requirements and quantities), are connected in parallel and attached to the drive at terminals B1 and B2. These resistors allow voltage, which is generated by the motor when decelerating, to be dissipated. They will become hot while the motor is slowing down, so care should be taken so as not to come in contact with them. This will prevent an electrical shock and/or a physical burn.

## Delta VFD Cooling Fan

There is a cooling fan attached to the bottom of the Delta drive. This fan will operate when the internal temperature of the drive reaches a predetermined level, the same way the radiator fan in a newer car operates. THE FAN CAN OPERATE ANYTIME POWER IS APPLIED TO fan.


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## Electrical Path Circuit Schematics

## Start Circuit

Power travels into the machine on L1 \& L2 \& (L3, if 3 phase used). L1 and L2 provide 208-240VAC to the controls transformer which steps the voltage down to 120VAC for the controls. (The 11 connection at the controls transformer must be checked at start-up to coincide with machine operating voltage) The 120VAC travels out from the transformer on either [ $\mathrm{X}-1$ red wire directly to the 1.5 amp fuse] or $[\mathrm{X}-1$ black/red wire to TB-4 and then through the red wire to the 1.5 amp fuse]. The controls transformer also creates a neutral on the $\mathrm{X}-2$ black/blue wire that connects to TB-1. From the fuse holder, 120VAC travels on the red wire to the \#6 terminal on the terminal strip and then through the black wire to another step-down trans ators and all valves. The white wire provides the neutral from the terminal to the step down transformer.

120VAC is stepped down to 24 VAC (blue wires), 24VAC (red wires), and a yellow center tap wire to the $\mathrm{P}-7$ power connection on the main controller PCB . With the main control PCB now powered, 5 VDC will be present between the (2) yellow wires and also the (2) brown wires for the coin switches. Both pairs will now be ready to count coins through the P-2 connection at the control PCB. 26.8 VAC goes out on the black wire of the P-4 connection from the main control PCB to the S5 door closed switch which mounted on the hinge side of the front panel. Closing the door will engage the door closed switches, sending the voltage to the red wire on the S1 door latched switch. Turning the door handle to the vertical latched position closes the S1 door latched switch, returning the voltage to the main control PCB on the white/red wir at the $\mathrm{P}-4$ connection. 26.8VAC is now present at the S 2 and S 3 door locked switches.
26.8 VDC is also at the black and white wires between $\mathrm{P}-21$ at the main control PCB and the $\mathrm{P}-20$ of the re lay PCB. This voltage signals the relay PCB that the door is closed and latched making 120VAC available to the relays controlling the door lock gear motor assembly, drain valve and water valves. A continuous 5VDC is sent on the red wire from the P-1 connector on the main control PCB, through the (normally closed) emergency stop button switch and returns on the second red wire back to the P-1 connector. After select ing the temperature, payment is added and the display counts down on the main control PCB display until the vend price is satisfied. The display will change to scroll PUSH START and the green light over the start lock the door and 120VAC will go to the door lock gear motor on the white/red wire from the P17 connector of the relay PCB. The door lock gear motor engages and pulls up on the door locking rod, locking the door and closing the S2 and S3 door locking switches.

## Section 7:

Electrical
Wiring Diagrams \& Schematics

The S 2 locking switch is a backup to the S 1 latching switch so that once the cycle starts the S 1 isn't critical. The S 3 locking switch provides 26.8 VDC on the orange wire back to P 4 connector at the main contro PCB and the P15 connector at the relay PCB. This signals that the loading door is closed,locked and safe to continue wash operations. This activates the P-13 and P-14 yellow enable wires to the inverter drive to allow motion. If there is no signal on $\mathrm{P}-15$ (orange wire) their will be no motion of the tub. $\mathrm{S} 1, \mathrm{~S} 2, \mathrm{~S} 3$ and S5 door switches are now closed. The green "On" LED and the door lock gear motor (discussed in start circuit) will remain on throughout the cycle.

## Fill Circuit-Warm

The relay PCB supplies 120VAC to the brown/yellow wire from P-17 to the drain valve which closes the valve. The lock thermoactuator also receives 120VAC on orange/blue from P17 of the relay PCB. This device prevents the door lock gear motor from dropping out and unlocking during the cycle in the event a power loss. The 120VAC will cycle on and off keeping the lock thermoactuator engaged until 70 second before the end of the cycle. The main control PCB sends data commands to the VFD through the data cable connected at P-6. These commands control the wash basket which will tumble one direction for 12 seconds, pause, and then reverse direction for 12 seconds.

The prewash or wash LED will illuminate at this time, powered through the white wires from the P-3 con nection of the main control PCB to the LED printed circuit board. Using the factory preset cycle as an example: The washer fills the tub through the back of the machine with either one or both the C1 cold and H1 hot water valves. From the P19 connection of main relay PCB, 120 VAC is sent out on the white/brown emperature selected, After a 90 second delay from the beginning of the wash cycle bath only, the detergent dispenser flushes the detergent into the tub for 20 seconds. This is accomplished when 120VAC travas through the red/orange wire to the H 2 hot water valve solenoid. During the machine fill a 5 VDC signal is sent on the red wire from the P5 connection of the main control PCB to the pressure switch contact and sturns on the yellow and orange wires to the P5 connection of the main control PCB When the water evel in the basket reaches the preset level pressure the switch moves the switch contacts to the full or open position. This causes the main control PCB to signal the relay PCB to shut off the water valve coils.

## Wash Circuit

Once the machine has achieved it's water level, the wash basket will continue to tumble one direction for 12 seconds, pause, and then reverse direction for 12 seconds. The time on the front display will count down as the bath progresses. The time of the bath is programmable up 15 minutes per bath. Note: When programming cycles, the wash bath must be programmed for 3 minutes or more.

## Drain

When the program bath time ends the main control PCB signals the relay PCB to remove 120 VAC power from brown/yellow wire at P17 going to the drain valve. The normally-open, spring-loaded drain valve opens allowing water to exit the machine. This resets the pressure switch back to an empty level and restores the 5VDC connection through the pressure switch from the red wires to the orange and yellow wires.

Rinse 1 \& 2
For Rinse $1 \& 2$, the rinse LED will illuminate, the drain valve will receive 120VAC and close. The basket will fill and tumble the same as the wash bath for the programmed time. The rinse water temperatures are programmable and factory default is cold.

## Final Rinse Circuit

The final rinse LED will illuminate, the drain valve will receive 120VAC and close. The basket will fill and tumble the same as the previous baths for the programmed time. The final rinse water temperatures are programmable. Note: When programming cycles, the final rinse bath must be programmed and cannot be set for less than 3 minutes. Also at the beginning of the final rinse bath, the main control PCB will signal the relay PCB to send 120 V to the $\mathrm{P}-19$ connector on the white/blue wire to the C 2 cold water valve for 20 seconds to flush the fabric softener dispenser.

## Spin Circuit

The spin LED will illuminate and the main control PCB sends a signal to the variable frequency drive via the data cable at P6 to VFD RJ-11. The rotation as viewed from front during spin will be counter-clockwise The 18 lb washers will extract in a clockwise direction) The time of the spin cycle can be programmed. lote: The final spin must be programmed into the final rinse bath and must be programmed for 1 minute or more.

Unlock Thermoactuator and Shake Out Circuit
70 seconds before the end of the cycle the main control PCB signals the relay PCB to remove 120VAC fro the orange/blue wire at the P-17 connector on the lock thermoactuator. This allows the lock thermoactuator time to cool and retract by the end of the cycle. To insure that the lock thermoactuator has retracted by the end of the cycle, 1 minute prior the end of the cycle, the unlock thermoactuator is powered with 120VAC through the orange/red wire from the P-17 connector of relay PCB. The unlock thermoactuato moves the complete bracket assembly away from the white door lock actuator allowing it to drop at the end of the cycle, unlocking the door. The basket will come to a stop from spin speed with the assistance of dynamic braking resistors wired to the variable frequency drive. (See wiring diagrams for quantities and resistor ohm values). The washer will then tumble for 45 seconds to let the clothes shake loose from the basket and then stop

## End of Cycle and Door Open Circuit

Once the machine stopped, 3 things occur:

1. The enunciator will signal for 3 seconds letting the user know that it is the end of the cycle 2. The Display of the Washer will scroll "CYCLE DONE THANK YOU".
2. The main control PCB signals the relay PCB to remove power from the white/red wire at P-17 which allows the door lock gear motor to unlock. When the loading door is opened, the $\mathrm{S} 1, \mathrm{~S} 2, \mathrm{~S} 3, \mathrm{~S} 5$ switches are opened. The machine is now ready to accept coins again.


T-300: Vended 120 Volt Wiring Diagram


T-300: 208-240V Schematic



T-400: 208-240V Schematic


Part \# 8533-114-001 2/24

T-400: 208-240V Wiring



T-600: 208-240V Wiring



## C-Series Accessories

WC0300XA-10EC4X
WC0300XA-12EC4X
WC0400XA-12EC4X
wC0600XA-12EC4X
120 volts
60hz. Single Phase
After Serial \#W1.19213.001
208-240 volts 60hz. Single Phase or Three Phase After Serial \# W1.19211.025
208-240 volts 60 hz Single Phase or Three Phase After Serial \#W1.19219.027
208-240 volts 60 hz Single Phase or Three Phase After Serial \#W1.19220.051

| Key | Description | T300 | T400 | T600 | QTV |
| :---: | :---: | :---: | :---: | :---: | :---: |
| * | Kit, Door Gasket Expander (large) | 9732-139-002 | 9732-1 | -139 |  |
| * | Kit, Door Gasket Expander (small) | 973 | -139-001 | 32-139-001 |  |
| * | Hose, Water Supply $3 / 8^{\prime \prime}$ I.D. $\times 48^{\prime \prime}$ | 9990-027-011 | 9990-027-011 | 9990-027-011 | 2 |
| * | Washer, Inlet Hose (furnished) | 8641-242-000 | 8641-242-000 | 8641-242-00 | 2 |
| * | Strainer, Inlet Hose (furrished) | 9565-003-001 | 9565-003-001 | 565-00 | 2 |
| * | Bevel Washer for $5 / 8^{\prime \prime}$ bolt used in installations using angle iron bases | 8641-586-002 | 8641-586-002 | 8641-586-002 |  |
| * | Bevel Washer for $3 / 4^{\prime \prime}$ bolt used in installations using angle iron bases | 8641-586-003 | 8641-586-003 | 8641-586-003 |  |
|  | Seaing compound | 8538-151-001 | 8538-151-001 | 8538-151-001 |  |
| * | TORX $\mathrm{\#}$ 20 | 8545-051-002 | 8545-051-002 | 8545-051-002 |  |
| * | Fow Restrictors (in dispenser ) | 9475-002-002 | 9475-002-002 | 9475-002-002 | 2 |
| * | Battery (used on Control PCB) | 8612-001-001 | 8612-001-001 | 8612-001-001 |  |
| * | Coin Bearing \& Seal Kit | 9732-219-001 | 9732-219-002 | 9732-219-004 |  |
| * | Coin Op CD with OS2 Platform for A Series Washers Only | 9504-015-001 | 9504-015-001 | 9504-015-001 |  |
| * | Coin Box Assy, Blue Large | 9807-099-002 | 9807-099-002 | 9807-099-002 | 1 |
|  | Coin Box Assy, Black Large | 9807-099-004 | 9807-099-004 | 9807-099-004 | 1 |
|  | USB, Thumb Drive (Blank) | 9150-045-001 | 9150-045-001 | 9150-045-001 | 1 |
|  | USB, Thumb Drive, W/File | 9150-045-002 | 9150-045-002 | 9150-045-002 | 1 |
| * | Mode Light Backing Window | 9635-022-001 | 9635-022-001 | 9635-022-001 | 1 |

Kits, Assemblies, \& Common Parts

| Coin Acceptor Components | Part Number |
| :---: | :---: |
| Optical Coin Acceptor | 9021-092-002 |
| Optical Coin Switch Replacement | 9801-099-001 |
| Coin Drop Screws | 9545-053-002 |
| Retainer, Coin Acceptor | 9486-149-001 |
| Loading Door \& Door Lock Components | Part Number |
| Door Glas Gasket (Standard Door) | 9206-419-001 |
| Door Glass Gasket (Small Door) | 9206-411-002 |
| Door Handle Only (Large) | 9244-091-001 |
| Door Close Switch | 9539-492-001 |
| Door Lock Gear Motor Assembly | 9892-015-001 |
| Kit - Door Latching Assy. \& Cam (replaces original Door Latching Assembly) | 9732-347-001 |
| Kit - Door Cam Replacement | 9732-346-002 |
| Kit- Locking Pawl Replacement | 9732-346-001 |
| Kit - Door Gasket Expander K Kit (Small) | 9732-139-001 |
| Kit - Door Gasket Expander K Kit (Large) | 9732-139-002 |
| Electrical Components | Part Number |
| Transformer, Main | 8711-004-001 |
| Transformer, Control | 8711-009-004 |
| Main Control Board | 9473-010-001 |
| Kit-Replacement, Pressure Sensor (Only) | 9732-315-001 |
| VFD \& Breaking Resistors Components | Part Number |
| Breaking Resistor 200 Ohms | 9483-004-002 |
| Breaking Resistor 160 Ohms | 9483-004-003 |
| Delta E Drive Display | 9150-044-001 |
| MS 300 VFD Display | 9150-058-001 |
| Data Cable (56") | 9806-015-003 |
| Drain \& Water Valve Components | Part Number |
| Kit - 3" ${ }^{\prime \prime}$ Drain Valve Seal Replacement | 9732-327-001 |
| Drain Valve $3^{\prime \prime}$ | 9379-202-001 |
| Drain Valve $2^{\prime \prime}$ | 9379-199-001 |
| Water Valve (Dual) | 9379-183-012 |
| Water Valve (Single Mueller) | 9379-194-001 |
| Diaphragm (Dual) | 9118-049-003 |
| Diaphragm (Single Mueller) | 9118-055-001 |
| Cabinet Components | Part Number |
| Front Panel Screw | 9545-008-014 |
| Front Panel Finisher Washer | 8641-585-001 |
| Front Panel Spring Nut | 8640-399-008 |
| Top Soap Box Screw (Regular Chassis Only) | 9545-008-012 |
| Top Soap Box Spring Nut (Regular Chassis Only) | 8640-399-007 |
| $5 / 16$ Hex Screw, Common | 9545-008-026 |
| Top Lock Key \#6324 | 9306-025-001 |
| Cyvinder Plug (1.5" Plastic) | 9456-041-007 |



Wiring Harness Part \# by Model

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Control Panel Wiring Harnesses |  |  |  |  |  |
| * | Wiring Harness, Door Lock | 9627-991-003 | 9627-991-003 | 9627-991-004 | 1 |
| * | Wiring Harness, CoinDrop Mech |  |  |  | 1 |
| * | Wiring Harness, Drain/Thermo/DoorSol | 9627-796-001 | 9627-796-001 | 9627-796-002 | 1 |
| * | Wiring Harness, LED PCB to Control Board | 9627-797-001 | 9627-797-001 | 9627-797-001 | 1 |
| * | Wiring Harness, Relay Board to Control Board (P20/P21) | 9627-793-001 | 9627-793-001 | 9627-793-001 | 1 |
| Control Trough Wiring Harnesses |  |  |  |  |  |
| * | Wiring Harness, Control Board to Relay Board (P8/P16) | 9627-794-001 | 9627-794-001 | 9627-794-001 | 1 |
| * | Wiring Harness, Water Valve to Relay Board (P19) | 9627-795-003 | 9627-795-003 | 9627-795-004 | 1 |
| * | Harness, Control Board (P5) to Pressure Switch (-10 120VAC) | 9627-908-001 |  |  |  |
| * | Harness, Control Board (P5) to Pressure Switch | 9627-908-002 | 9627-908-004 | 9627-908-007 | 1 |
| * | Wiring Assembly, Fuse (Red 7 ") | 9631-381-018 | 9631-381-018 | 9631-381-018 | 3 |
| * | Wiring Assembly, Terminal Block to Step-Down Transformer (BIk/Red) | 8220-001-232 | 8220-001-232 | 8220-001-232 | 1 |
| * | Wiring Assembly, Terminal Block to Control Transformer (BIk/Blu) | 8220-001-231 | 8220-001-231 | 8220-001-231 | 1 |
| * | Harness, Power Terminal Block | 9627-747-003 | 9627-747-003 | 9627-747-003 | 1 |
| Rear Channel Wiring Harnesses |  |  |  |  |  |
| * | Wiring Assembly, Yel. Jumper (Water Valve) | 8220-123-001 | 8220-123-001 | 8220-123-001 | 1 |
| * | Data Communication Cable | 9806-025-001 | 9806-025-001 | 9806-025-001 | 1 |
| * | Wiring Assembly, Relay Board to VFD (Yel. 32") | 8220-064-023 | 8220-064-023 | 8220-064-023 | 2 |
| * | Wire Assy, VFD to Braking Resistors (Violet, 24") | 8220-118-001 |  |  | 2 |
| * | Cord Assembly, Power (-10 120VAC ONLY) | 9802-037-009 |  |  | 1 |


| $\frac{y}{0}$ | Cabinet and Front Panel Group Part \# by Model |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Key | Description | T300 | T400 | T600 | QTY |
|  | 1 | Panel, Side (Left or Right) - stainless |  | 9732-359-006 | 9732-359-008 | 2 |
|  | 1 | Panel, Right Side-stainless | 9989-639-001 |  |  | 1 |
|  | 1 | Panel, Left Side - stainless | 9989-639-002 |  |  | 1 |
|  | 2 | Screw, (Side Panel to Base) | 9545-018-018 | 9545-018-013 |  | 6 |
|  | 2 | Screw, (Side Panel to Base) |  |  | 9545-018-013 | 8 |
|  | * | Nut, Hex 1/4-20 UNC | 8640-414-006 | 8640-414-006 |  | 6 |
|  | * | Nut, Hex 1/4-20 UNC |  |  | 8640-414-006 | 8 |
|  | * | Pad-Foam, Side Panel | 0904-904-001 | 0904-904-001 | 0904-904-001 | 2 |
|  | 3 | Vault Assembly, Coin | 9942-041-002 | 9942-041-002 | 9942-041-002 | 1 |
|  | 4 | Back-Coin Vault | 9050-066-001 | 9050-066-001 | 9050-066-001 | 1 |
|  | * | Screw, \#10B $\times 1 / 2$ | 9545-008-026 | 9545-008-026 | 9545-008-026 | 8 |
|  | 5 | Chute-Coin | 9119-032-001 | 9119-032-001 | 9119-032-001 | 1 |
|  | * | Screw, 10B $\times 1 / 4$ | 9545-008-001 | 9545-008-001 | 9545-008-001 | 1 |
|  | * | Bracket, Side Panel under front panel | 9029-263-001 | 9029-263-001 | 9029-263-001 | 1 |
|  | * | Nut, Hex (to tub front) | 8640-413-002 | 8640-413-002 | 8640-413-002 | 2 |
|  | * | Screw, \#10B $\times 1 / 2$ | 9545-008-026 | 9545-008-026 | 9545-008-026 | 2 |
|  | 6 | Panel, Control (Mounts Nameplate) | 9989-557-001 | 9989-558-001 | 9989-559-001 | 1 |
|  | * | Screw, Control Panel to Sides | 9545-008-026 | 9545-008-026 | 9545-008-026 | 4 |
|  | 7 | Nameplate Decal, Control Panel (Blue) | 9412-208-002 | 9412-210-002 | 9412-212-002 | 1 |
|  | 7 | Nameplate Decal, Control Panel (Black) | 9412-208-001 | 9412-210-001 | 9412-212-001 | 1 |
|  | 8 | Label-Nameplate, RH (Blue) | 8502-744-002 |  |  | 1 |
|  | 8 | Label-Nameplate, RH (Black) | 8502-744-001 |  |  | 1 |
| 웅 | * | Stop Button Mounting Plate | 9452-725-001 | 9452-725-001 | 9452-725-001 | 1 |
|  | 9 | Kit-Stop button with harness \& Switch | 9732-223-001 | 9732-223-001 | 9732-223-001 | 1 |
|  | 10 | Accector, Coin-Optical switch w/harness | 9021-041-001 | 9021-041-001 | 9021-041-001 | 1 |
|  | * | Retainer-Dual coin Accecptor | 9486-149-001 | 9486-149-001 | 9486-149-001 | 2 |
|  | * | Screws, Coin Accecptor | 9545-053-002 | 9545-053-002 | 9545-053-002 | 4 |
|  | 11 | Panel Assy, Front | 9454-893-001 | 9454-894-001 | 9454-895-001 | 1 |
|  | * | Trim Edge Protector | 9578-092-005 | 9578-092-005 | 9578-092-005 | 1 |
|  | * | Screw, Hex- To Control Panel | 9545-008-031 | 9545-008-031 | 9545-008-031 | 2 |
|  | * | Nut, Spring- To Control Panel 10/32 | 8640-399-005 | 8640-399-005 | 8640-399-005 | 4 |
|  | 12 | Screw, Flat Head- Front to Sides | 9545-008-014 | 9545-008-014 | 9545-008-014 | 2 |
|  | 13 | Washer, Finish | 8641-585-001 | 8641-585-001 | 8641-585-001 | 2 |
|  | * | Nut, Spring-To Front Panel | 8640-442-001 | 8640-442-001 | 8640-442-001 | 2 |
|  | 14 | Label, Door Opening-Blue | 8502-757-002 | 8502-757-002 | 8502-757-002 | 1 |
|  | 14 | Label, Door Opening-Black | 8502-757-001 | 8502-757-001 | 8502-757-001 |  |
|  | 15 | Label, Warning Risk of Injury-Blue | 8502-759-002 | 8502-759-002 | 8502-759-002 | 1 |
|  | 15 | Label, Warning Risk of Injury-Black | 8502-759-001 | 8502-759-001 | 8502-759-001 | 1 |
|  |  |  |  |  |  |  |
| 을 응 |  |  |  |  |  |  |

Part \# 8533-114-001 2/24

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :--- | :--- | :--- | :--- | :---: |
| 16 | Bumper-Loading door | $9051-055-001$ | $9051-055-001$ | $9051-055-001$ | 1 |
| $*$ | Nut, $1 / 4-20$ UNC, 2 ZB | $8640-414-006$ | $8640-414-006$ | $8640-414-006$ | 1 |
| 17 | Door, Lower Service (includes handle \& Rivits) | $9960-286-001$ | $9960-286-002$ | $9960-286-002$ | 1 |
| 18 | Handle (bumper guard) | $9244-086-001$ | $9244-086-002$ | $9244-086-002$ | 1 |
| $*$ | Rivet | $9491-009-003$ | $9491-009-003$ | $9491-009-003$ | 4 |
| 19 | Screw Mtg., Flat Head | $9545-008-014$ | $9545-008-014$ | $9545-008-014$ | 2 |
| 20 | Washer, Finish | $8641-585-001$ | $8641-585-001$ | $8641-585-001$ | 2 |
| $*$ | Nut, Spring | $8640-442-001$ | $8640-442-001$ | $8640-442-001$ | 2 |
| 21 | Coin Box Assy, Blue | $9807-099-002$ | $9807-099-002$ | $9807-099-002$ | 1 |
| 21 | Coin Box Assy, Black | $9807-099-004$ | $9807-099-004$ | $9807-099-004$ | 1 |


|  |  |  | rt \# by $24,25$ | Model $26$ | Continu <br> 2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Key | Description | T300 | T400 | T600 |  |
|  | 22 | Panel Top, Assembly (includes catch) | 9989-563-001 | 9989-563-003 | 9989-563-005 |  |
|  | * | Catch, Top Panel | 9086-017-001 | 9086-017-001 | 9086-017-001 | 2 |
|  | * | Rivit-Catch, Top Panel | 8638-190-009 | 8638-190-009 | 8638-190-009 | 4 |
|  | 23 | Lock, Top (w/Key) | 8650-012-003 | 8650-012-003 | 8650-012-003 | 1 |
|  | * | Lock Spacer | 9538-189-001 | 9538-189-001 | 8538-189-001 | * |
| $\begin{aligned} & \text { 눙 } \\ & \hline 0 \\ & \hline \end{aligned}$ | * | Key, Top- \# 6324 | 6292-006-007 | 6292-006-007 | 6292-006-007 | 1 |
|  | * | Cam, Lock-Top | 9095-049-001 | 9095-049-001 | 9095-049-001 | 1 |
|  | * | Nut, 9/32-28 Hex | 8640-426-001 | 8640-426-001 | 8640-426-001 | 1 |
|  | * | Washer Flat 5/16 | 8641-581-008 | 8641-581-008 | 8641-581-008 | 1 |
|  | 24 | Screw, Locator | 9545-008-023 | 9545-008-023 | 9545-008-023 | 2 |
|  | 25 | Plastic Sleeve, Locator | 9355-001-001 | 9355-001-001 | 9355-001-001 | 2 |
|  | 26 | Locator Post | 9467-024-001 | 9467-024-001 | 9467-024-001 | 2 |
|  | * | Nut, Locator Post | 8640-411-003 | 8640-411-003 | 8640-411-003 | 2 |
|  | 27 | Door, Dispenser | 9108-095-005 | 9108-095-005 | 9108-095-005 | 1 |
|  | 28 | Post, Door Mounting | 9467-025-001 | 9467-025-001 | 9467-025-001 | 2 |
|  | * | Pin, Plain-SS | 9451-191-001 | 9451-191-001 | 9451-191-001 | 2 |
|  | * | Screw, Disp.Post Mtg | 9545-045-002 | 9545-045-002 | 9545-045-002 | 4 |
|  | 29 | Dispenser, Soap | 9122-005-004 | 9122-005-004 | 9122-005-004 | 1 |
|  | 30 | Gasket, Dispenser | 9206-416-001 | 9206-416-001 | 9206-416-001 | 1 |
|  | * | Nut,Spring-Ss | 8640-399-007 | 8640-399-007 | 8640-399-007 | 4 |
|  | 31 | Screw, Disp. Mtg | 9545-008-012 | 9545-008-012 | 9545-008-012 | 4 |
|  | * | Flow Restrictor | 9475-002-002 | 9475-002-002 | 9475-002-002 | 2 |
|  | * | Plastic Plug $11 / 2^{\prime \prime}$-(inside cylinder) | 9456-041-007 | 9456-041-007 | 9456-041-007 | 1 |
|  | * | Hose-Dispenser outlet | 9242-450-002 | 9242-450-002 | 9242-450-002 | 1 |
|  | * | Clamp-Hose, \#32 | 8654-117-008 |  |  | 2 |
| $\begin{aligned} & \text { 울 } \\ & \text { 응 } \end{aligned}$ | 32 | Bracket, Side Panel under front panel | 9029-263-001 | 9029-263-001 | 9029-263-001 | 1 |
|  | 33 | Nut, Hex (to tub front) | 8640-413-002 | 8640-413-002 | 8640-413-002 | 2 |
|  | 34 | Screw, \#10B x 1/2 | 9545-008-026 | 9545-008-026 | 9545-008-026 | 2 |



Cylinder, Seals \& Bearings Part \# by Model

Part \# 8533-114-001 2/24



Door Latching Assembly Part \# by Model

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :--- | :--- | :--- | :--- | :---: |
| 33 | Latching Assy, Complete (\#1-22) (includes \#1 thru \#22) | $9885-024-001$ | $9885-024-001$ | $9885-024-001$ | 1 |
| 1 | Plate Assy, Door Lock | $9982-346-001$ | $9982-346-001$ | $9982-346-001$ | 1 |
| 2 | Washer, Flat | $8641-581-030$ | $8641-581-030$ | $8641-581-030$ | 1 |
| 3 | Actuator, Latching Switch | $9008-005-001$ | $9008-005-001$ | $9008-005-001$ | 1 |
| 4 | Pawl, Locking | $9732-346-002$ | $9732-346-002$ | $9732-346-002$ | 1 |
| 5 | Washer, Spring | $8641-569-003$ | $8641-569-003$ | $8641-569-003$ | 1 |
| 6 | Ring, Retaining | $9487-200-004$ | $9487-200-004$ | $9487-200-004$ | 1 |
| 7 | Bracket Switch | $9029-163-001$ | $9029-163-001$ | $9029-163-001$ | 1 |
| 8 | Nut, Hex $10-32$ UNF | $8640-413-002$ | $8640-413-002$ | $8640-413-002$ | 2 |
| 9 | Spring, Actuating | $9534-364-002$ | $9534-364-002$ | $9534-364-002$ | 1 |
| $*$ | Door Stud Pin, $3 / 16^{\prime \prime} \times 3 / 4^{\prime \prime}$ | $9451-181-004$ | $9451-181-004$ | $9451-181-004$ | 1 |

Door Latching Assembly Part \# by Model Cont.

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | Screw, Hx. 10-32 x $1^{\prime \prime}$ | 9545-012-020 | 9545-012-020 | 9545-012-020 | 1 |
| 11 | Nut, Elastic Stop 10-32 | 8640-413-004 | 8640-413-004 | 8640-413-004 | 2 |
| 12 | Spring, Return | 9534-364-001 | 9534-364-001 | 9534-364-001 | 2 |
| 13 | Pin, Guide | 9451-193-001 | 9451-193-001 | 9451-193-001 | 1 |
| 14 | Ring, Retaining | 9487-200-005 | 9487-200-005 | 9487-200-005 | 1 |
| 15 | Washer | 8641-581-031 | 8641-581-031 | 8641-581-031 | 1 |
| 16 | Switch, Latching Sensing | 9539-461-008 | 9539-461-008 | 9539-461-008 | 1 |
| 17 | Shield, Switch | 9550-169-003 | 9550-169-003 | 9550-169-003 | 3 |
| 18 | Screw 4-40 x 5/8" | 9545-020-001 | 9545-020-001 | 9545-020-001 | 2 |
| 18 | Nut, Twin 4-40 | 8640-401-001 | 8640-401-001 | 8640-401-001 | 1 |
| 19 | Switch, Locking Sensing | 9539-461-007 | 9539-461-007 | 9539-461-007 | 2 |
| 20 | Actuator, Switch Locking | 9008-006-003 | 9008-006-003 | 9008-006-003 | 1 |
| 21 | Screw 4-40 $\times 1$ 1/8" | 9545-020-003 | 9545-020-003 | 9545-020-003 | 2 |
| 21 | Nut, Twin 4-40 | 8640-401-001 | 8640-401-001 | 8640-401-001 | 1 |
| * | Spacer Sensor | 9538-182-001 | 9538-182-001 | 9538-182-001 | * |
| 22 | Pin, Dowel | 9451-181-004 | 9451-181-004 | 9451-181-004 | 1 |
| * | Shim, Door Lock, Thin | 9552-037-001 | 9552-037-001 | 9552-037-001 | AR |
| * | Screw, Lock mtg $1 / 4^{\prime \prime}-20 \times 3 / 4^{\prime \prime}$ | 9545-018-004 | 9545-018-004 | 9545-018-004 | 3 |
| * | Lockwasher 1/4"Ext tooth | 8641-582-007 | 8641-582-007 | 8641-582-007 | 3 |
| * | Harness Door-Switches, P4 | 9627-791-003 | 9627-791-003 | 9627-791-004 | 1 |
|  | Switch, Door Hinge | 9539-492-001 | 9539-492-001 | 9539-492-001 | 1 |
|  | Wire Assy, Red | 8220-063-025 | 8220-063-025 | 8220-063-025 | 1 |




Loading Door Part \# by Model

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :---: | :---: | :---: | :---: | :---: |
| * | Loading Door, Complete \#1-10 | 9960-308-001 | 9960-309-001 | 9960-309-001 | 1 |
| 1 | Loading Door, Ring | 9487-264-002 | 9487-265-002 | 9487-265-002 | 1 |
| 2 | Gasket, Loading Door | 9206-411-002 | 9206-419-001 | 9206-419-001 | 1 |
| 3 | Window, Loading Door | 9635-018-001 | 9635-016-001 | 9635-016-001 | 1 |
| * | Shaft Assy, Locking (includes 4 thru 7) | 9913-136-001 | 9913-136-001 | 9913-136-001 | 1 |
| 4 | Shaft, Door Locking | 9537-195-002 | 9537-195-002 | 9537-195-002 | 1 |
| 5 | Cam, Locking | 9095-040-002 | 9095-040-002 | 9095-040-002 | 1 |
| 6 | Pin, Groove ( $11 / 4$ ) | 9451-181-005 | 9451-181-005 | 9451-181-005 | 1 |
| 7 | Pin, Groove (3/4) | 9451-181-004 | 9451-181-004 | 9451-181-004 | 1 |
| 8 | Spring, Lock Cam | 9534-360-002 | 9534-360-002 | 9534-360-002 | 1 |
| 9 | Handle, Door | 9244-091-001 | 9244-091-001 | 9244-091-001 | 1 |
| 10 | Pin, Door Handle (groove) | 9451-181-005 | 9451-181-005 | 9451-181-005 | 1 |
| 11 | Door Hinge Assembly Mounts to Tub Front | 9955-030-001 | 9955-030-001 | 9955-030-001 |  |
| * | Shim, Loading Door Hinge (Thin) | 9552-036-001 | 9552-036-001 | 9552-036-001 | 2 |
| * | Screw, 5/16-18×3/4 | 9545-014-009 | 9545-014-009 | 9545-014-009 | 3 |
| * | Lock Washer, 5/16 | 8641-582-009 | 8641-582-009 | 8641-582-009 | 3 |
| 12 | Leaf Assembly-Hinge, Top | 9845-008-001 | 9845-008-001 | 9845-008-001 | 1 |
| 13 | Leaf Assembly-Hinge, Bottom | 9845-005-002 | 9845-005-002 | 9845-005-002 | 1 |
| * | Screw, 5/16x5/8 | 9545-056-002 | 9545-056-002 | 9545-056-002 | 3 |
| 14 | Bumper-Loading Door | 9051-055-001 | 9051-055-001 | 9051-055-001 | 1 |
| * | Nut, 1/4, 20UNC, 2B | 8640-414-006 | 8640-414-006 | 8640-414-006 | 1 |




Drain Valve Group Part \# by Model

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :--- | :--- | :--- | :--- | :---: |
| 1 | Valve, Drain (includes \#2 thru \#11) | $9379-199-001$ | $9379-202-001$ | $9379-202-001$ | 1 |
| 2 | Body, Valve (w/ball) | $9064-068-002$ | $9064-072-001$ | $9064-072-001$ | 1 |
| 3 | Motor \& Gear Train (complete) | $9914-137-020$ | $9914-137-023$ | $9914-137-023$ | 1 |
| 4 | Plate, Motor Mtg | $9452-538-001$ | $9452-538-001$ | $9452-538-001$ | 1 |
| 5 | Screw | $8639-994-001$ | $8639-994-001$ | $8639-994-001$ | 3 |
| 6 | Spring, Drive | $9534-340-001$ | $9534-339-001$ | $9534-339-001$ | 1 |
| 7 | Screw | $9545-054-001$ | $9545-054-001$ | $9545-054-001$ | 2 |
| 8 | Screw | $9545-054-002$ | $9545-054-002$ | $9545-054-002$ | 1 |
| 9 | Seal, V Packer | $9532-134-001$ | $9532-134-001$ | $9532-134-001$ | 2 |
| 10 | Washer | $8641-584-001$ | $8641-584-001$ | $8641-584-001$ | 1 |
| 11 | Pin, Main Drive | $9451-196-001$ | $9451-196-001$ | $9451-196-001$ | 1 |
| $*$ | Plate (spacers needed for replacement motor mtg. plate) | $9538-149-001$ | $9538-149-001$ | $9538-149-001$ | 4 |
| 12 | Kit - Seal Replacement | $9732-327-001$ | $9732-327-001$ | $9732-327-001$ | 1 |



Chassis and Drain Part \# by Model

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Base Assy,Frame | 9945-093-002 | 9945-140-002 | 9945-097-002 | 1 |
| 2 | Outer Tub Assy | 9930-174-002 | 9930-161-001 | 9930-163-001 | 1 |
| 3 | Tub \& Cylinder Assy | 9869-038-001 | 9869-030-001 | 9869-032-001 | 1 |
| 4 | Ring Assy, Tub Mtg-Front | 9950-045-002 | 9950-051-004 | 9950-051-004 | 1 |
| 5 | Bolt, $1 / 2-13 \times 11 / 4$ (Ring to Base) | 9545-017-009 |  |  | 4 |
| 5 | Nut, Wizlock, 1/2-13 (Ring to Base) | 8640-417-005 |  |  | 4 |
| 5 | Bolt, $5 / 8-11 \times 11 / 2$ (Ring to Base) |  | 9545-060-001 | 9545-060-001 | 4 |
| 5 | Nut, Wizlock, 5/8-11 (Ring to Base) |  | 8640-425-001 | 8640-425-001 | 4 |
| * | Ring Assembly, Tub Mounting, Rear | 9487-247-002 | 9487-232-004 | 9950-049-002 | 1 |
| 6 | Back Ass'y, Tub | 9962-012-001 | 9962-014-001 | 9962-013-002 | 1 |
| 7 | Ring Assy.Clamp Tub Mtg.- Rear | 9950-046-002 | 9950-056-002 | 9950-056-002 | 1 |
| 8 | Bolt, 3/8-16x1 $1 / 2$ | 9545-029-003 |  |  | 12 |
| 8 | Nut, Wizlock, 3/8-16 | 8640-415-004 |  |  | 12 |
| 8 | Bolt, 7/16-14 $\times 2$ |  | 9545-059-002 | 9545-059-002 | 12 |
| 8 | Nut, Wizlock, 7/16-14 |  | 8640-416-005 | 8640-416-005 | 12 |
| 8 | Lockwasher |  |  | 8641-582-018 | 4 |
| 8 | Nut, Hex 5/8-11 |  | 8640-425-001 | 8640-425-001 | 4 |
| * | Shim, Support Assembly (thin) | 9552-038-003 | 9552-038-003 | 9552-038-001 | AR |
| 9 | Hose, Tub to Drain Valve | 9242-468-001 | 9242-456-001 | 9242-456-001 | 1 |
| 10 | Clamp, Hose (Tub to Drain Valve) | 8654-117-014 | 8654-117-014 | 8654-117-014 | 2 |
| 11 | Valve, Drain | 9379-199-001 | 9379-202-001 | 9379-202-001 | 1 |
| 12 | Hose, Drain Valve to Tube | 9242-451-002 | 9242-457-001 | 9242-457-001 | 1 |
| 13 | Clamp, Hose (Drain Valve to Tube) | 8654-117-014 | 8654-117-014 | 8654-117-014 | 2 |
| 14 | Bracket, Drain Valve | 9029-005-001 | 9029-056-001 | 9029-030-002 | 1 |
| * | Screw, Valve to Bracket 12ABx1/2 | 9545-008-026 | 9545-031-010 | 9545-030-002 | 2 |
| 15 | Tube Assy, Drain | 9915-116-004 | 9915-119-002 | 9915-118-002 | 1 |
| 16 | Screw Tube (Bracket to Base 1/4Bx3/4 | 9545-030-002 | 9545-030-002 | 9545-030-002 | 2 |
| 17 | Hose, Overflow to drain | 9242-449-002 | 9242-449-002 | 9242-449-002 | 1 |
| 18 | Clamp, Overflow Hose | 8654-117-015 | 8654-117-015 | 8654-117-015 | 1 |
| 19 | Fill Hose, Vacuum Brkr. to Tub | 9242-458-001 | 9242-458-002 | 9242-458-002 | 1 |
| * | Dispenser Soap | 9122-005-004 | 9122-005-004 | 9122-005-004 | 1 |
| * | Gasket, Dispenser | 9206-416-001 | 9206-416-001 | 9206-416-001 | 1 |
| * | Nut Spring SS | 8640-399-007 | 8640-399-007 | 8640-399-007 | 4 |
| 20 | Hose, Dispenser to Tub | 9242-450-002 | 9242-450-002 | 9242-450-001 | 1 |
| * | Clamp, Dispenser Hose | 8654-117-008 | 8654-117-008 | 8654-117-008 | 2 |
| 21 | Hose, Pressure Switch | 9242-175-000 | 9242-175-007 | 9242-175-001 | 1 |
| * | Clamp, Pressure Switch Hose | 8654-117-015 | 8654-117-015 | 8654-117-015 | 1 |



Part \# 8533-114-001 2/24

| 8 | Notes |
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| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Key | Description | T300 | T400 | T600 | QTY |
|  | 1 | Channel Assembly, Rear | 9947-025-001 | 9947-026-001 | 9947-026-001 | 1 |
|  | 2 | Screw, \#10B $\times 1 / 2$ | 9545-008-026 | 9545-008-026 | 9545-008-026 | 4 |
|  | * | Nut, Spring | 8640-399-007 | 8640-399-007 | 8640-399-007 | 4 |
|  | 3 | Mounting Plate Water Valves | 9452-813-001 | 9452-813-001 | 9452-813-001 | 1 |
|  | 4 | Nut-Elastic stop, \#10-32 | 8640-413-004 | 8640-413-004 | 8640-413-004 | 2 |
|  | 5 | Valve, Water Inlet (dual outlet) (see Water Inlet Valve Breakdown for individual parts) | 9379-183-012 | 9537-195-002 | 9537-195-002 | 2 |
|  | 6 | Screw, Valve Mtg | 9545-008-026 | 9545-008-026 | 9545-008-026 | 4 |
|  | 7 | Wire-Assy, Jumper, Yellow | 8220-123-001 | 8220-123-001 | 8220-123-001 | 1 |
|  | 8 | Shield over Water Valves Plastic | 9550-194-001 | 9550-194-001 | 9550-194-001 | 1 |
|  | 9 | Push Clip | 9083-121-001 | 9083-121-001 | 9083-121-001 | 2 |
|  | 10 | Vacuum Breaker | 9610-001-001 | 9610-001-001 | 9610-001-001 | 1 |
|  | * | Bracket, Vacuum Breaker | 9029-266-001 | 9029-077-001 | 9029-077-001 | 1 |
|  | * | Vacuum Breaker Cap (Red) | 0935-135-002 | 0935-135-002 | 0935-135-002 | * |
|  | 11 | Screw, \#10B $\times 1 / 2$ | 9545-008-026 | 9545-008-026 | 9545-008-026 | 4 |
|  | * | Clamp, Hose to Vacume Braker | 8654-117-015 | 8654-117-015 | 8654-117-015 | 1 |
|  | * | Hose, Vacuum Breaker to Tub | 9242-458-001 | 9242-458-002 | 9242-458-002 | 1 |
|  | * | Clamp, Tub End | 8654-117-009 | 8654-117-009 | 8654-117-009 | 1 |
|  | 12 | Hose, Valve to Vac. Braker | 9242-453-020 | 9242-453-020 | 9242-453-020 | 4 |
|  | * | Hose, Cold, Vac. Brkr. dispenser | 9242-453-013 | 9242-433-016 | 9242-453-009 | 1 |
|  | * | Hose, Hot, Vac. Brkr. dispenser | 9242-453-007 | 9242-453-017 | 9242-453-008 | 1 |
|  | 13 | Clamp, Hose-Worm | 8654-117-015 | 8654-117-015 | 8654-117-015 | 12 |
|  | 14 | Hose, overflow Suds | 9242-463-003 | 9242-463-003 | 9242-463-003 | 4 |
|  | * | Clamp, Hose-Spring (overflow to tub back) | 8654-117-018 | 8654-117-018 | 8654-117-018 | 2 |
| Lo 응 | 15 | Plate Assembly, Drive Mounting | 9452-847-001 | 9452-847-001 | 9452-847-001 | 1 |
|  | 16 | Nut-\#10-32UNF, 2B | 8640-413-002 | 8640-413-002 | 8640-413-002 | 4 |
|  | 17 | VFD Delta "MS300" drive 120 volt | 9375-033-002 |  |  | 1 |
| 응 <br> 잉 <br> 1 | * | VFD Cooling Fan | 9189-016-001 |  |  | 1 |
|  | 17 | VFD Delta "MS300" drive 208-240 volt | 9375-034-002 | 9375-035-002 | 9375-035-005 | 1 |
|  | * | VFD Cooling Fan | 9189-015-001 | 9189-016-001 | 9189-016-001 | 1 |
|  | * | Key Pad-Display Delta "MS300" Drive | 9150-058-001 | 9150-058-001 | 9150-058-001 | 1 |
| $\begin{aligned} & \frac{4}{6} \\ & \frac{5}{0} \\ & \frac{0}{0} \\ & \frac{0}{0} \end{aligned}$ | 18 | Cable-Data, Communication | 9806-025-001 | 9806-025-001 | 9806-025-001 | 1 |
|  | 19 | Bushing, 7/8 | 9053-067-002 | 9053-067-002 | 9053-067-002 | 1 |
|  | * | Cord assembly (-10 model only) | 9802-037-009 | N/A | N/A | 1 |
|  | 20 | Clip Strain Relif | 8618-037-001 | N/A | N/A | 1 |
|  | 21 | Plug, 7/8 | 9545-041-006 | 9545-041-006 | 9545-041-006 | 1 |
|  | 22 | Bracket, Terminal-Mounting | 9029-265-001 | 9029-265-001 | 9029-265-001 | 1 |
|  | 23 | Screw, \#10B $\times 1 / 2$ | 9545-008-026 | 9545-008-026 | 9545-008-026 | 4 |
|  | 24 | Label-Warning | 8502-639-001 | 8502-639-001 | 8502-639-001 | 1 |
|  | 25 | Strip-Terminal Marker | 9558-025-001 | 9558-025-001 | 9558-025-001 | 1 |
|  | 26 | Terminal Block | 9897-033-002 | 9897-033-002 | 9897-033-002 | 1 |
|  | 27 | Screw-Phillips, 6ABx3/4 | 9545-031-010 | 9545-031-010 | 9545-031-010 | 2 |
|  | 28 | Harness-Power, Terminal Block | 9627-747-003 | 9627-747-003 | 9627-747-003 | 1 |
|  | 29 | Bushing, $1^{\prime \prime}$ | 9053-067-004 | 9053-067-004 | 9053-067-004 | 1 |
|  | 30 | Terminal Lug, Solderless | 8652-134-001 | 8652-134-001 | 8652-134-001 | 1 |
| $\begin{aligned} & \text { 울 응 } \\ & \text { 응 } \end{aligned}$ | 31 | Lock-Washer Extooth \#10 | 8641-582-006 | 8641-582-006 | 8641-582-006 | 1 |
|  | 31 | Screw, \#10-32 TTX 1/2 GRN | 9545-008-027 | 9545-008-027 | 9545-008-027 | 1 |
|  | 32 | Bushing, $3 / 4$ | 9053-067-002 | 9053-067-002 | 9053-067-002 | 1 |



| $\begin{aligned} & \text { "ob } \\ & 0 \\ & \text { \$8 } \\ & 8 \\ & 8 \end{aligned}$ | Key | Description | т300 | T400 | T600 | QTY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | Trough Assy,Controls 120 Volt (all parts below 7-28 \& trough) | 9857-200-001 |  |  | 1 |
|  | 1 | Trough Assy, Control 208 -240 volt (all parts below 7-28 \& trough) | 9857-254-001 | 9587-256-001 | 9857-258-001 | 1 |
|  | * | Trough only | 9839-018-001 | 9839-018-001 | 9839-018-001 | 1 |
|  | * | Screw, Trough Sides | 9545-008-026 | 9545-008-026 | 9545-008-026 | 4 |
|  | * | Lockwasher \#10 | 8641-582-006 | 8641-582-006 | 8641-582-006 | 4 |
|  | 2 | Angle Support Trough | 9003-377-001 | 9003-337-001 | 9003-271-001 | 1 |
|  | * | Screw, Trough Bracket | 9545-008-026 | 9545-008-026 | 9545-008-026 | 3 |
|  | 3 | Screw GRN. \#10-32x 1/2" | 9545-008-027 | 9545-008-027 | 9545-008-027 | 1 |
|  | * | Lockwasher \#10 | 8641-582-006 | 8641-582-006 | 8641-582-006 | 1 |
|  | 4 | Transformer, Control 208/240 (Secondary Voltage to 115 volts) | 8711-004-001 | 8711-004-001 | 8711-004-001 | 1 |
|  | 5 | Screw, Mtg \#10Bx1/2" | 9545-008-026 | 9545-008-026 | 9545-008-026 | 4 |
|  | * | Lockwasher \#10 | 8641-582-006 | 8641-582-006 | 8641-582-006 | 4 |
|  | 6 | Wire Assy-BLK/RED, $81 / 2^{\prime \prime}$ | 8220-001-230 | 8220-001-230 | 8220-001-230 | 1 |
|  | 7 | Wire Assy-BLK/BLUE, 8 1/2" | 8220-001-231 | 8220-001-231 | 8220-001-231 | 1 |
|  | 8 | Terminal Block Assy, POWER | 9897-026-004 | 9897-026-004 | 9897-026-004 | 1 |
|  | * | Screw, Mtg 88x3/8" | 9545-045-012 | 9545-045-012 | 9545-045-012 | 2 |
|  | 9 | Wire Assy, RED, \#36, 7" | 9631-381-018 | 9631-381-018 | 9631-381-018 | 3 |
|  | 10 | Fuse Holder | 9200-001-002 | 9200-001-002 | 9200-001-002 | 1 |
|  | * | Fuse 1.5 amp | 8636-018-001 | 8636-018-001 | 8636-018-001 | 1 |
|  | * | Label Fuse 1.5 amp | 8502-716-001 | 8502-716-001 | 8502-716-001 | 1 |
|  | 11 | PCB assembly Relay Main | 9473-006-001 | 9473-006-001 | 9473-006-001 | 1 |
|  | * | Support-PCB, 3/8 Edge Holding | 9548-285-001 | 9548-285-001 | 9548-285-001 | 6 |
|  | 12 | Harness Drain/Therm/Sol, P17 | 9627-796-001 | 9627-796-001 | 9627-796-002 | 1 |
|  | 13 | Screw GRN. \#10-32x 1/2" | 9545-008-027 | 9545-008-027 | 9545-008-027 | 1 |
|  | * | Lockwasher \#10 | 8641-582-006 | 8641-582-006 | 8641-582-006 | 1 |
| 2 응 | * | Lug, Grounding | 8652-130-037 | 8652-130-037 | 8652-130-037 | 1 |
|  | 14 | Harness P19/Water Valve | 9627-795-003 | 9627-795-003 | 9627-795-004 | 1 |
|  | 15 | Harness P8/P16 | 9627-794-001 | 9627-794-001 | 9627-794-001 | 1 |
|  | 16 | Harness P20/P21 | 9627-993-001 | 9627-993-001 | 9627-793-001 | 1 |
|  | 17 | Bushing, Wire 7/8 | 9053-067-002 | 9053-067-002 | 9053-067-002 | 2 |
|  | 18 | Standoff Twistlock | 9527-002-002 | 9527-002-002 | 9527-002-002 | 4 |
|  | 19 | Harness P5/Pressure - 10 | 9627-908-001 |  |  |  |
|  | 20 | Harness P5/Pressure | 9627-908-002 | 9627-908-004 | 9627-908-007 | 1 |
|  | * | Harness Doorlock, Switch P4/P15 | 9627-791-003 | 9627-791-003 | 9627-791-004 | 1 |
|  | 21 | Transformer, (Step Down)120VAC / 24 VAC 50/60hz | 8711-009-004 | 8711-009-004 | 8711-009-004 | 1 |
|  | 22 | Screw, Transformer \#8Bx1/4" | 9545-045-001 | 9545-045-001 | 9545-045-001 | 2 |
|  | * | Lockwasher \#6 exttooth | 8641-582-005 | 8641-582-005 | 8641-582-005 | 2 |
|  | 23 | PCB assembly Control/Display | 9473-010-001 | 9473-010-001 | 9473-010-001 | 1 |
|  | * | Kit-Pressure Sensor, Electronic | 9732-314-001 | 9732-314-001 | 9732-314-001 | 1 |
|  | 24 | Kit-Repacement, Pressure Sensor (only) | 9732-315-001 | 9732-315-001 | 9732-315-001 | 1 |
|  | * | Support-PCB, $3 / 8{ }^{\prime \prime}$, Edge Holding | 9548-285-001 | 9548-285-001 | 9548-285-001 | 1 |
|  | 25 | Screw, \#8B $\times 1 / 4^{\prime \prime}$ | 9545-045-001 | 9545-045-001 | 9545-045-001 | 1 |
|  | * | Wire Assy BLK/BLU | 8220-001-233 | 8220-001-233 | 8220-001-233 | 1 |
|  | * | Wire Assy RED/BLU | 8220-001-232 | 8220-001-232 | 8220-001-232 | 1 |

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Electrical Components - Top Compartment


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## Section 9:

Coin Handling
Parts:
Wiring Diagrams
\& Schematics \&
maintenance Procedures

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :--- | :--- | :--- | :--- | :---: |
| 1 | Optical Coin Acceptor | $9021-092-002$ | $9021-092-002$ | $9021-092-002$ | 1 |
| 2 | Replacement Optical Sensor | $9801-099-001$ | $9801-099-001$ | $9801-099-001$ | 1 |
| $*$ | Screw, Highth Bar, 3mm | $9545-039-002$ | $9545-039-002$ | $9545-039-002$ | 2 |



Electronic Acceptor Coin Drop Setting the electronic coin acceptor switches

Some washer models come equipped with an electronic coin acceptor. Follow the instructions below for setting the switches for the desired country and currencies.

1. The electronic coin acceptor has switch settings depending on the coins and country. See the table below for available values of the left and right coin inputs for the available countries.

WARNING: turn power off before and leave power off when changing the switches of the electronic coin acceptor
2. Turn power back on and test coins to ensure proper operation.


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[^1]
## Maintenance Instructions

 Electronic Acceptor

## Cleaning the electronic coin selector

he EMP 500 v 5 is an extraordinarily robust coin selector and operates relatively maintenance free. However, it should be cleaned at regular intervals (minimum once a year) especially if it is operating in an environment with high levels of dust, smoke or nicotine. The cleaning intervals are of course dependent on the level of air borne contaminants.


Clean the coin path with soft brush and wipe the exposed surfaces. Use an alcohol moistened cloth. If you find solid residues stuck to the coin rail remove it with an alcohol moistened cloth.


Optical sensors may be cleaned with a soft brush very carefully with an air spray duster


T-300: Vended 120 Volt Wiring Diagram


T-300: 208-240V Schematic


[^2]T-300: 208-240V Diagram



T-400: 208-240V Wiring



## Section 10:

Parts 50Hz
Models:
Parts in this section used only in these models. All other parts are same as standard 60 Hz pages.
Wiring Diagrams \& Schematics

Water Valve Assy \# by Model 50Hz.

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :--- | :--- | :--- | :--- | :---: |
| 1 | Circuit Breaker | $5198-211-002$ | $5198-211-002$ | $5198-211-002$ | 1 |
| 2 | Transformer 200/250V-24V | $8711-004-004$ | $8711-004-004$ | $8711-004-004$ | 1 |
| $*$ | Hose Inlit | $9990-027-015$ | $9990-027-015$ | $9990-027-015$ | 2 |
| $*$ | Harness, Power Terminal Block | $9627-747-006$ | $9627-747-006$ | $9627-747-006$ | 1 |
| $*$ | Harness Main, V1.5 | $9627-914-001$ | $9627-914-001$ | $9627-914-001$ | 1 |
| $*$ | Harness, Coin Accecptorless | $9627-895-001$ | $9627-895-001$ | $9627-895-001$ | 1 |
| $*$ | EMI Filter (CE -59) | $9183-053-001$ | $9183-053-001$ | $9183-053-001$ | 1 |
| $*$ | Line Reactor (CE -59) | $9477-006-001$ | $9477-006-001$ | $9477-000-001$ | 1 |
| $*$ | Wiring Label , Schematic \& Diagram (Before Serial \#) | $9506-882-001$ | $9506-882-001$ | $9506-882-001$ | 1 |
| $*$ | Owners Booklet (Before Serial \#) | $8514-296-001$ | $8514-296-001$ | $8514-296-001$ | 1 |
| $*$ | Wiring Schematic/Diagram Label (After Serial \#) | $9506-938-001$ | $9506-938-001$ | $9506-938-001$ | 1 |
| $*$ | Operators Manual (After serial \#) | $8514-300-001$ | $8514-300-001$ | $8514-300-001$ | 1 |


$\overline{\text { Part \# 8533-14-001 2/24 }}$


Part \# 8533-114-001 2/24

Drain Valve Group Part \# by Model 50Hz.

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :--- | :--- | :--- | :--- | :---: |
| 1 | Valve, Drain (includes \#2 thru \#11) | $9379-199-002$ | $9379-202-002$ | $9379-202-002$ | 1 |
| 2 | Body, Valve (w/ball) | $9064-068-002$ | $9064-072-001$ | $9064-072-001$ | 1 |
| 3 | Motor \& Gear Train (complete) | $9914-137-020$ | $9914-137-023$ | $9914-137-023$ | 1 |
| 4 | Plate, Motor Mtg | $9452-538-001$ | $9452-538-001$ | $9452-538-001$ | 1 |
| 5 | Screw | $8639-994-001$ | $8639-994-001$ | $8639-994-001$ | 3 |
| 6 | Spring, Drive | $9534-340-001$ | $9534-339-001$ | $9534-339-001$ | 1 |
| 7 | Screw | $9545-054-001$ | $9545-054-001$ | $9545-054-001$ | 2 |
| 8 | Screw | $9545-054-002$ | $9545-054-002$ | $9545-054-002$ | 1 |
| 9 | Seal, V Packer | $9532-134-001$ | $9532-134-001$ | $9532-134-001$ | 2 |
| 10 | Washer | $8641-584-001$ | $8641-584-001$ | $8641-584-001$ | 1 |
| 11 | Pin, Main Drive | $9451-166-001$ | $9451-196-001$ | $9451-196-001$ | 1 |
| $*$ | Plate (spacers needed for replacement motor mtg. plate) | $9538-149-001$ | $9538-149-001$ | $9538-149-001$ | 4 |
| 12 | Kit - Seal Replacement | $9732-327-001$ | $9732-327-001$ | $9732-327-001$ | 1 |



CE Labels and Diagrams (-59) After Serial \#

| Key | Description | T300 | T400 | T600 | QTY |
| :---: | :--- | :--- | :--- | :--- | :--- |
| $*$ | Do Not Enter/Confined Space Warning Label | $8502-748-001$ | $8502-748-001$ | $8502-748-001$ | 1 |
| $*$ | Do Not Operate w/ Gear Label | $8502-748-003$ | $8502-748-003$ | $8502-748-003$ | 2 |
| $*$ | Do Not Operate w/out Gear Label | $8502-748-004$ | $8502-748-004$ | $8502-748-004$ | 2 |
| $*$ | Elec. Shock Warning Label | $8502-748-005$ | $8502-748-005$ | $8502-748-005$ | 2 |
| $*$ | Explosive Material Warning Label | $8502-748-006$ | $8502-748-006$ | $8502-748-006$ | 1 |
| $*$ | Flammable Material Warning Label | $8502-748-007$ | $8502-748-007$ | $8502-748-007$ | 1 |
| $*$ | Lockout Warning Label | $8502-748-008$ | $8502-748-008$ | $8502-748-008$ | 1 |
| $*$ | Read Manual Warning Label | $8502-748-009$ | $8502-748-009$ | $8502-748-009$ | 2 |
| $*$ | Emergency Stop Label | $8502-765-001$ | $8502-765-001$ | $8502-765-001$ |  |
| $*$ | Wiring Schemati/Diagram Label | $9506-938-001$ | $9506-940-001$ | $9506-942-001$ | 1 |
| $*$ | Operators Manual | $8514-300-001$ | $8514-300-001$ | $8514-300-001$ | 1 |




T-400: Vended 230/50/1 Voltage Schematic


T-400: Vended 230/50/1 Voltage Diagram


T-600: Vended 230/50/1 Voltage Schematic



Section 12:
Maintenance


## Preventative Maintenance

## Daily

Step 1: Check that the loading door remains securely locked and cannot be opened during an entire cycle.

Step 2: Clean the top, front, and sides of the cabinet to remove residue.
Step 3: Clean the soap dispenser and lid and check that all dispenser mounting screws are in-place and tight.

Step 4: Check the loading door for leaks. Clean the door seal of all foreign matter.
Step 5: Leave the loading door open to aerate the washer when not in use.

## Quarterly

Step 1: Make sure the washer is inoperative by switching off the main power supply.
Step 2: Check the V-belts for wear and proper tension.
Step 3: Clean lint and other foreign matter from around motor.
Step 4: Check all water connections for leaks.
Step 5: Check the drain valve for leaking and that it opens properly.
Step 6: Wipe and clean the inside of the washer and check that all electrical components are free of moisture and dust.

Step 7: Remove and clean water inlet hose filters. Replace if necessary.
Step 8: Check anchor bolts. Retighten if necessary.


[^0]:    $\overline{\text { Part \# 8533-114-001 2/24 }}$

[^1]:    Part \# 8533-114-001 2/24

[^2]:    $\overline{\text { Part \# 8533-114-001 2/24 }}$

