Customized Controls

Touchscreen

Operation Manual For Rubbermaid

Rubbermaid®

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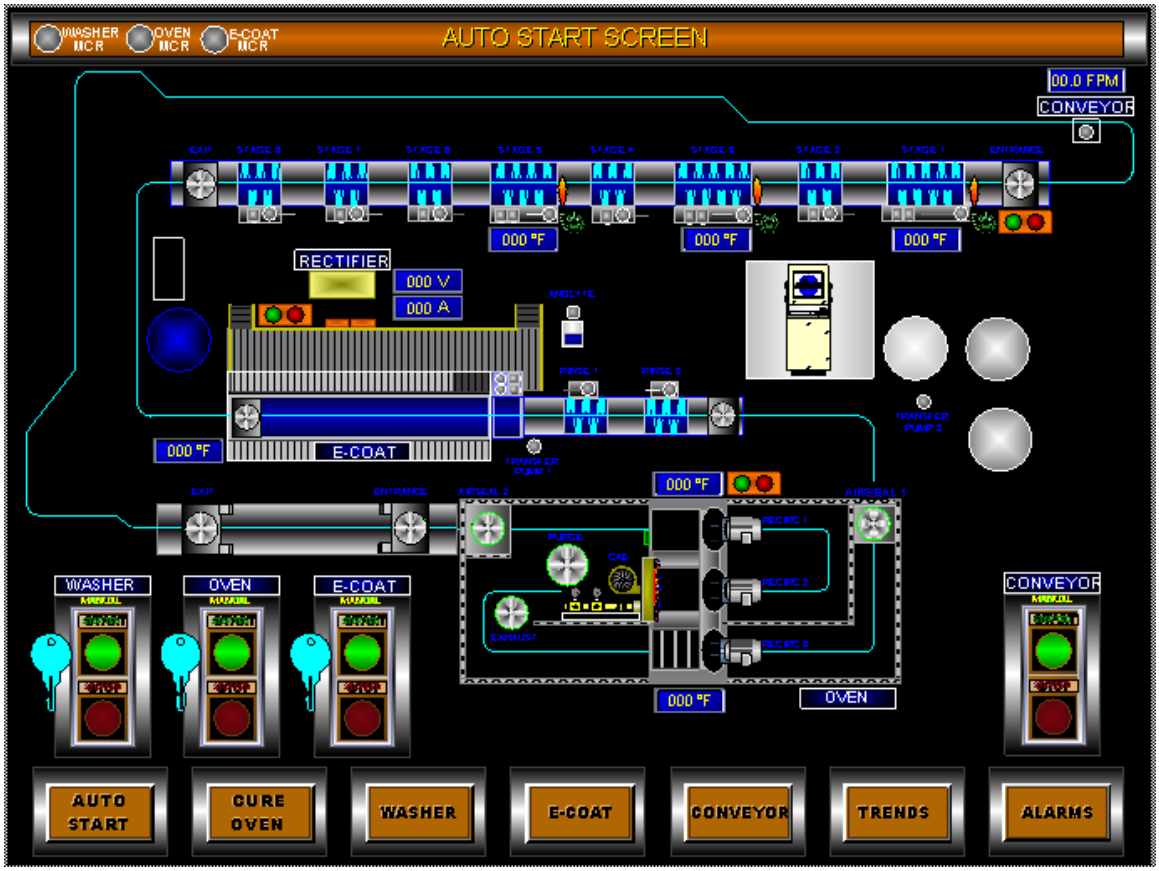
Automatic Mode-Starting of the SBS E-Coat Equipment

The System may be started from the **Auto Start** Screen accessed by depressing the **Auto Start** Function button on the bottom left side of any screen.



The Washer, Oven and E-Coat must be in **Auto Mode** to be started Automatically.

If the Component is in **Auto** mode then above the Start Button a green Auto will be displayed, if it is in **Manual** mode then a yellow Manual will be displayed.
Auto and **Manual** modes must be toggled from the individual **Manual Start** screens.

The **Cure Oven** will start when the **Oven Start Button** is depressed.

The **Washer** will start when the **Washer Start Button** is depressed.

The **E-Coat System** will start when the **E-Coat Start Button** is depressed.

The **Conveyor** will start when the **Conveyor Start Button** is depressed.

Automatic Mode-Starting of the SBS E-Coat Equipment

The **Cure Oven** will start when the **Oven Start Button** is depressed, if it is in **Auto** mode. The Honeywell controller will start the Burner Fan and following a twelve Minute Purge time, the burner will light.

*If the Conveyor is in **Auto** Mode, then it will be disabled until the Oven Temperature is within its operating parameter range.*

The **Washer** will start when the **Washer Start Button** is depressed if it is in **Auto** mode. The Honeywell controller will start the Burner Fans and following a two and one-half Minute Purge time, the burners will light. The pump motors will not step-start until the process temperatures are above100 degrees Fahrenheit while in **Auto** mode and if the Conveyor is in Auto mode then only if the Conveyor is currently running. .

If the Conveyor is in Auto Mode, then it will be disabled until the Washer Temperatures are within their operating parameter ranges or their individual Burners are disabled.

The **E-Coat Rinses** and **Rectifier** will start when the **E-Coat Start Button** is depressed if it is in **Auto** mode. The **Ultra Filter** and **Heat Exchanger Pumps** are controlled separately and should always be running. The **Heat Exchanger** operates continually and reduces the E-Coat Bath Temperature when needed. The Rinse Pump motors will start when the Conveyor Starts if the Conveyor is in **Auto** mode.

If the Conveyor is in Auto Mode, then it will be disabled until the E-Coat Bath Temperature is within its operating parameter range and the Rectifier is On.

The **Conveyor** will start when the **Conveyor Start Button** is depressed if it is in **Manual** mode. The Conveyor E-Stops must be reset and the VFD cannot be faulted.

If the Conveyor is in Auto Mode, then it will be disabled until all of the Process Temperatures are within their operating parameters and the Rectifier is turned ON.

All of the green Control Panel Status lights must be On and not flashing.

To Stop the **Cure Oven** in Automatic Mode:
Depress the **Oven Stop Button**, the Oven burner will turn off but all of the Oven Fans will continue running until the Oven Temperature is Below 200 Degrees. When the Oven has completed its Cool-Down all Fans and Motors will turn off.

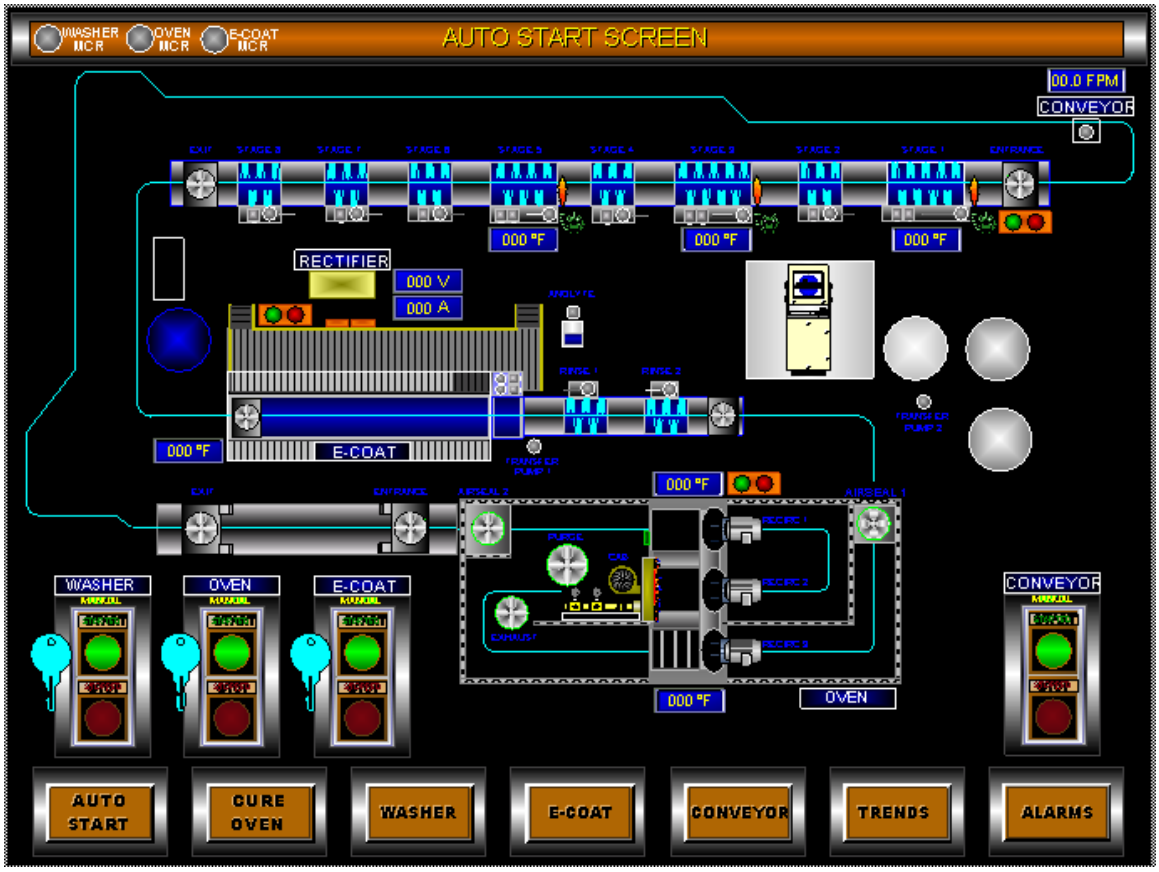
To Stop the **Washer** in Automatic Mode:
Depress the **Washer Stop Button**, the Washer Burners and pumps will turn off but the Exhaust Fans will continue running for Ten Minutes to evacuate excess steam from the Washer.

To Stop the **E-Coat** in Automatic Mode:
Depress the **E-Coat Stop Button**, the Rinse Pumps and Rectifier will turn off.

To Stop the **Conveyor** in Automatic Mode:
Depress the **Conveyor Stop Button**, the will coast to a stop.

Automatic Mode-Starting the Cure Oven

The Cure Oven may be started from the **Auto Start Screen** accessed by depressing the **Auto Start** Function button on the bottom left of any screen.



The Cure Oven must be in **Auto Mode** to be started automatically.
If **Auto** is not displayed above the **Start Button** then it must be toggled from **Manual** to **Auto.**

The **Oven Start Button** is depressed to **Automatically** start all of the Oven components.

Started will be displayed above the **Oven Start Button** and the burner will light following a **Twelve-Minute Purge**.

Automatic Mode-Starting the Cure Oven

If the **Key** is visible next to the Start/Stop buttons then the **Fan Enable** button on the front of the Oven Control Panel has been depressed and must be released with a Key before the Fans will start.

When a Fan starts its color will turn from gray to a green and its screen animation will begin.

The Current Burner Status indication includes the Burner Flame, when lit and its Size according to Gas Valve Position.

High Gas Pressure Indicator is yellow in normal condition and red when tripped.
Low Gas Pressure Indicator is yellow in normal condition and red when tripped. High **Temperature Limit** Switch Indicator is yellow in normal condition and red when tripped.

When the green **Ready Status light** on the Oven Control Panel is Flashing then the Oven is Operating Properly but is currently Preheating.

When the green **Ready Status light** on the Oven Control Panel is On the Oven is Operating Properly and the Temperature is within the parameter range.

The Oven Panel **Emergency Stop** Position Indicator is green in normal condition and red when depressed, it must be released and the reset pressed on the Oven Panel.

If the Cure Oven currently has an Alarm Condition then the red Alarm Light on the Cure Oven Control Panel will be Flashing.

The **Cure Oven Temperature** is displayed above the Oven burner box.
The **Dry-Off Oven Temperature** is displayed below the Oven burner box.

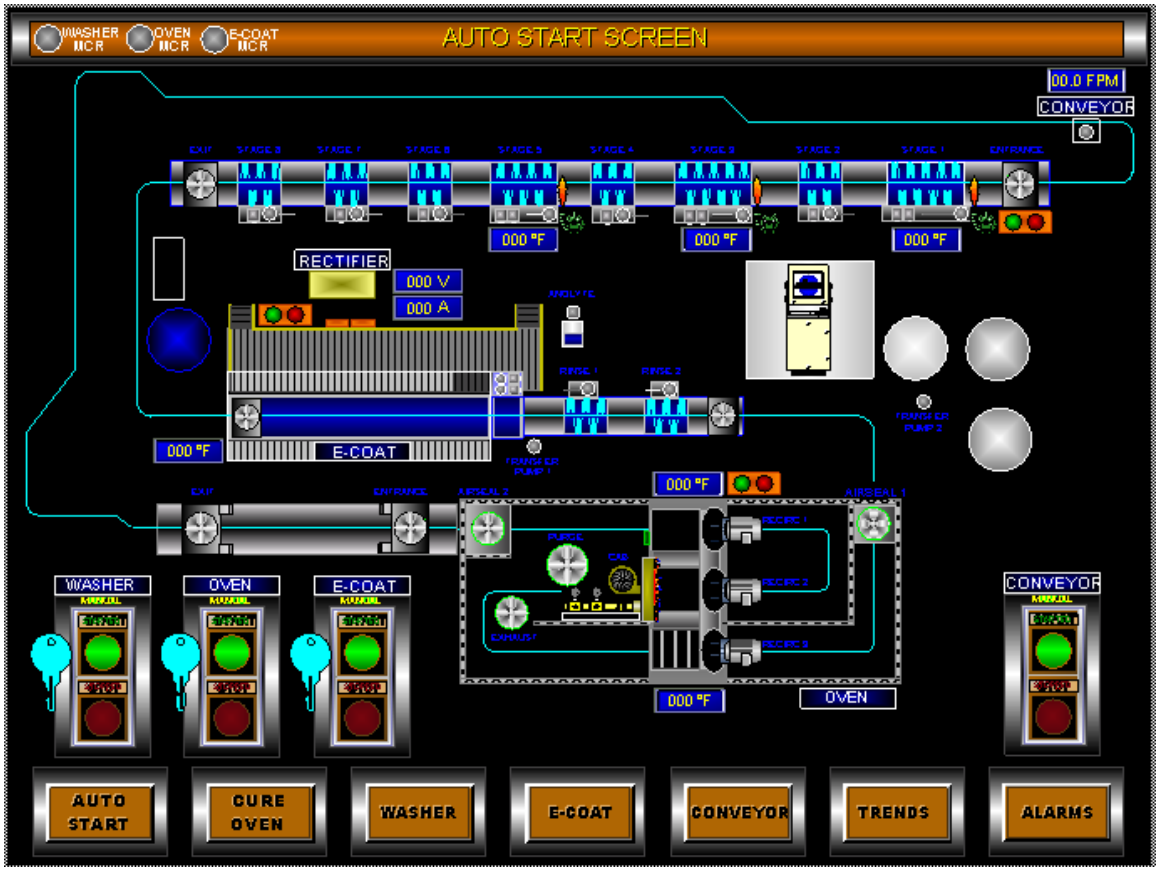
To Stop the Oven in Automatic Mode:
Depress the **Oven Stop Button**, the Oven burner will turn off but all of the Oven Fans will continue running until the Oven Temperature is Below 200 Degrees.

When the Oven has completed its Cool-Down all Fans and Motors will turn off.

After the Oven is started, all of the individual Fan Start Switches will display **Started**.
When the Oven is Stopped all of the individual Fan Stop Switches will display **Stopped**.

Automatic Mode-Starting of the Pretreatment System

The Washer may be started from the **Auto Start Screen** accessed by depressing the **Auto Start** Function button on the bottom of any screen.



The Washer must be in **Auto Mode** to be started automatically.

If **Auto** is not displayed to the right of the **Stop Button** then it must be toggled from **Manual** to **Auto.**
The **Washer Start Button** is depressed to **Automatically** start all of the Washer components.

Started will be displayed above the **Washer Start Button** and the burners will light but the pump motors will not step-start until the process temperatures are above 100 Degrees Fahrenheit while in **Auto** mode.

Automatic Mode-Starting of the Pretreatment System

If the **Key** is visible next to the Start/Stop buttons then the **Pump Enable** button on the front of the Washer Control Panel has been depressed and must be released with a Key before the Motors will start.

When a Fan or Pump starts its color will turn from gray to a green and its screen animation will begin.

The Current Burner Status indication includes the Burner Flame, when lit.

When the green **Ready Status light** on the Washer Control Panel is Flashing then at least one of the Pretreatment Chemical Stages is currently Preheating.

When the green **Ready Status light** on the Washer Control Panel is On then all of the Pretreatment Chemical Stages are Operating Properly and the Temperatures are within their parameter ranges.

The Washer Panel **Emergency Stop** Position Indicator is green in normal condition and red when depressed, it must be released and the reset pressed on the Washer Panel.

After the Washer Emergency Stop is **Reset**, the Conveyor Stop must be **Reset** on the Washer Panel, the Emergency Stop must be **Reset** on the Oven Control Panel and the Emergency Stop must be **Reset** on the E-Coat Control Panel.

If the Washer currently has an Alarm Condition then the red Alarm Light on the Washer Control Panel will be Flashing.

The **Stage 1 Temperature** is displayed below the Stage 1 Tank.
The **Stage 3 Temperature** is displayed below the Stage 3 Tank.
The **Stage 5 Temperature** is displayed below the Stage 5 Tank.
The Washer Range of Temperature is 80 to 160 Degrees Fahrenheit.

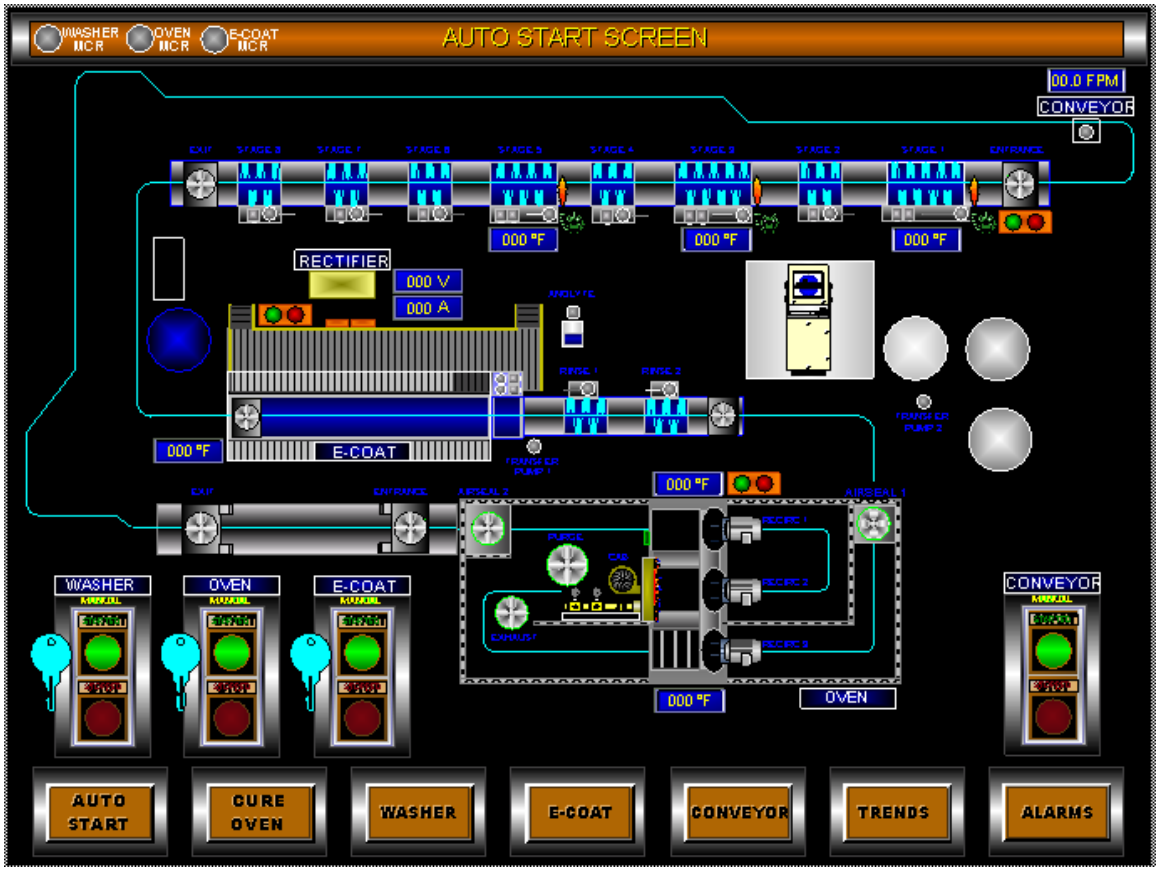
To **Stop** the Washer in **Automatic** Mode:

Depress the **Washer Stop Button**, the Washer Burners and pumps will turn off but the Exhaust Fans will continue running for Ten Minutes to evacuate excess steam from the Washer.

After the Washer is started, all of the individual Pump and Fan Start Switches will display **Started**.
When the Washer is Stopped all of the individual Pump and Fan Stop Switches will display **Stopped**.

Automatic Mode-Starting the E-Coat System

The E-Coat may be started from the **Auto Start Screen** accessed by depressing the **Auto Start** Function button on the bottom of any screen.



The E-Coat must be in **Auto Mode** to be started automatically.

If **Auto** is not displayed above the the **Start Button** then it must be toggled from **Manual** to **Auto.**
The **E-Coat Start Button** is depressed to **Automatically** start the Post Rinse Pumps and the Rectifier.

Started will be displayed above the **Washer Start Button** but the pump motors will not step-start until the Conveyor is running if the **Conveyor** is in **Auto** mode.

Automatic Mode-Starting the E-Coat System

If the **Key** is visible next to the Start/Stop button then the **Pump Enable** button on the front of the E-Coat Control Panel has been depressed and must be released with a Key before the motors will start.

When a Fan or Pump starts its color will turn from gray to a green and its screen animation will begin.

When the green **Ready Status light** on the E-Coat Control Panel is Flashing then the E-Coat Bath Temperature is not within its operating parameter range.

When the green **Ready Status light** on the E-Coat Control Panel is On then the E-Coat Bath Temperature is within its operating parameter range

The E-Coat Panel **Emergency Stop** Position Indicator is green in normal condition and red when depressed, it must be released and the reset pressed on the E-coat Control Panel.

If the E-Coat currently has an Alarm Condition then the red Alarm Light on the E-Coat Control Panel will be Flashing.

The **E-Coat Bath Temperature** is displayed to the left of the E-Coat Tank.
The E-Coat Bath Temperature Range is 80 to 120 Degrees Fahrenheit.

The **Rectifier Voltage** is displayed to the right of the Rectifier.
The Rectifier Voltage Range is 0 to 400 Volts DC.

The **Rectifier Amperage** is displayed to the right of the Rectifier.
The Rectifier Amperage Range is 0 to 1200 Amps DC.

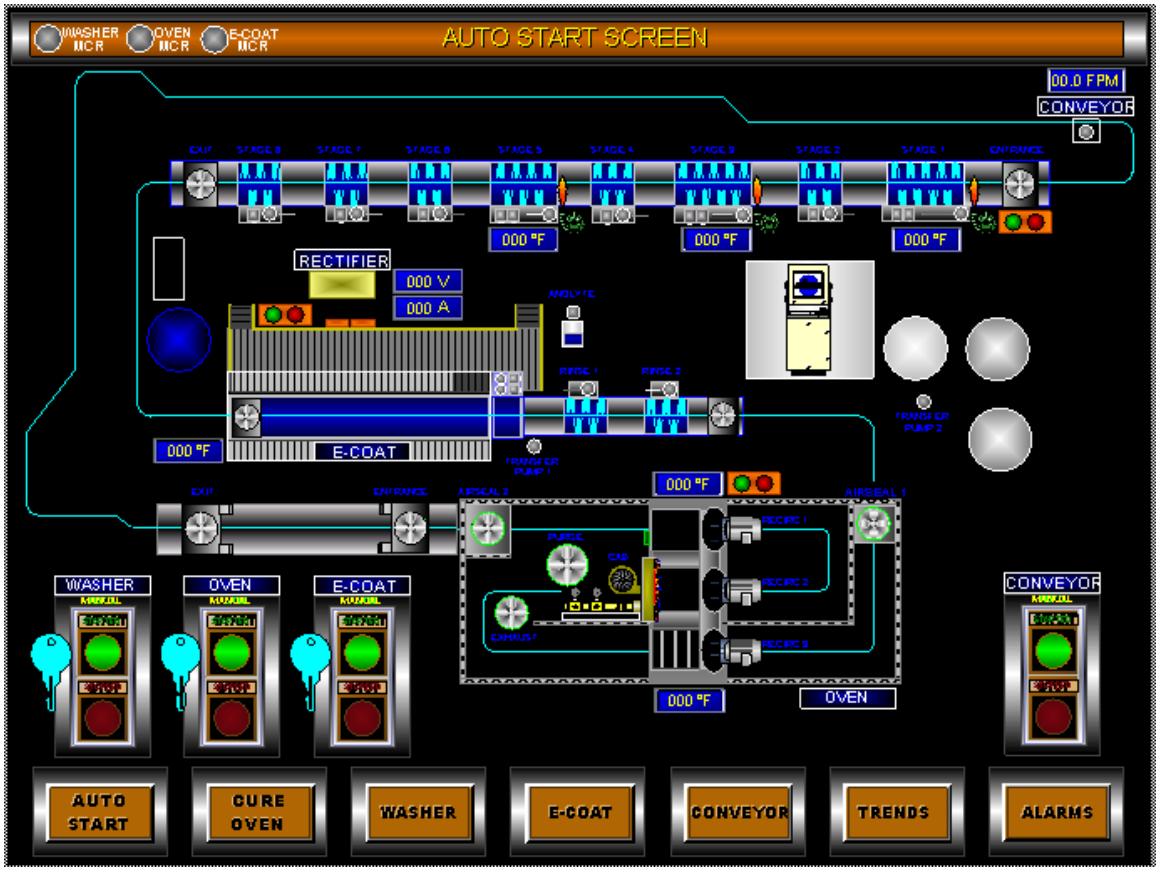
To **Stop** the E-coat System in **Automatic** Mode:

Depress the **E-Coat Stop Button**, the Post Rinse pumps and Rectifier will turn off.

After the E-Coat is started, all of the individual Pump and Fan Start Switches will display **Started**.
When the E-Coat is Stopped all of the individual Pump and Fan Stop Switches will display **Stopped**.

Automatic Mode-Starting the Conveyor

The Conveyor may be started from the **Auto Start Screen** accessed by depressing the **Auto Start** Function button on the bottom of any screen.



The Conveyor must be in **Auto Mode** to be stopped automatically when a Process Temperature is out of Range or if the Rectifier is turned off.

If **Auto** is not displayed above the **Start Button** then it must be toggled from **Manual** to **Auto.**

The **Conveyor Start Button** is depressed to start the Conveyor.
Started will be displayed above the **Conveyor Start Button** and the Conveyor Start Horn will sound three time before the Conveyor Starts.

The following conditions must be met for the Conveyor to run in Auto Mode:

All three Stages of the Washer must be within their Temperature Ranges.
E-Coat Bath Temperature must be within its Temperature Range.
Rectifier DC Power must be turned On.
Cure Oven Temperature must be within its Temperature Range.
All Pretreatment and Rinse Pumps must be Running.
DeviceNet Communication Scanner Must be Operating Properly.

All of these conditions can be bypassed by switching the Conveyor into Manual Mode or turning the Individual System Component that is out of Range into Manual Mode or Disabling the Flame Enable button for the Burner that is out of Range.

Automatic Mode-Starting the Conveyor

There is a Conveyor E-Stop located at each of the Control Panels as well as two at the Load Area and one at the Unload Area. When any of these E-Stops are depressed the Reset button located on the Washer Control Panel or the Reset button located in the Unload Area must be pressed.

The Conveyor may then be started from the Touchscreen in the E-Coat Lab or from the Remote Start button located at the Unload Area.

The green Indicator Light on the Remote Start/Stop Station at the Unload Area indicates the Status of the System Parameters, if an element is preheating the green light will be flashing, if the System is ready to start the Conveyor then the green light will be Off.

When the Conveyor is Running the green light will be On.

The Conveyor Line Drawing on the Auto Start Screen will change colors according to the Status of the Conveyor and System parameters.

When one of the Conveyor E-Stops have been depressed and the Reset button has not been pressed yet then the Conveyor Line will be yellow Colored.

After the Reset button has been pressed the Conveyor Line will be Aqua Colored.

When the Conveyor is Starting and the Conveyor Horn is sounding the Conveyor Line will be lime colored.

After the Conveyor is running the Conveyor Line will be green Colored and Flashing.

If the Conveyor is Starting and in Auto Mode but one of the System Parameters are not within the Operating Range then the Conveyor Line will be red Colored and Flashing only while the Conveyor Horn is Sounding.

If the Conveyor VFD has Faulted then the Conveyor Line will be red Colored.

The **Conveyor Speed** is displayed above the drive unit.
The Conveyor Speed Range is 6.0 to 18.0 Feet Per Minute.

To **Stop** the Conveyor in **Automatic** Mode:

Depress the **Conveyor Stop Button** on the Touchsreen or at the Remote Station located at the Unload Area, the Conveyor will Coast to a Stop.
To Stop the Conveyor immediately, depress one of the Conveyor E-Stop buttons located throughout the line.

After the Conveyor is started, the Conveyor Start button will display **Started**.
When the Conveyor is Stopped, the Conveyor Stop button will display **Stopped**.

Manual Mode-Starting of the Cure Oven

The Cure Oven Start must be started before any of the motors can be operated in Manual mode to ensure that the complete System will shut down any time the Cure Oven Stop is depressed. The Cure Oven Start/Stop buttons are located on the Auto Start screen and the Oven Manual Start Screen.

Individual motors may then be started from the **Oven Manual Screen** accessed by depressing the **Cure Oven** Function button on the bottom of any screen followed by the **Oven Manual** button.

All components must be in **Manual Mode** to be started Manually.
If **Manual** is not displayed and flashing on the left side of the screen then it must be toggled from the **Auto** to **Manual.**

The **Oven Start Button** must already be depressed to enable all of the Motors to be Manually toggled On or Off.

After the individual Fans have started all of the individual Fan Start Switches will display **Started**.
When the Oven is Stopped all of the individual Fan Stop Switches will display **Stopped**.

Manual Mode-Starting of the Cure Oven

Recirculation Fan 1 can be started when the button is green and **Start** is displayed.
Recirculation Fan 1 can be stopped when the button is red and **Stop** is displayed.

Recirculation Fan 2 can be started when the button is green and **Start** is displayed.
Recirculation Fan 2 can be stopped when the button is red and **Stop** is displayed.

Recirculation Fan 3 can be started when the button is green and **Start** is displayed.
Recirculation Fan 3 can be stopped when the button is red and **Stop** is displayed.

Exhaust Fan can be started when the button is green and the word **Start** is displayed.
Exhaust Fan can be stopped when the button is red and the word **Stop** is displayed.

Purge Fan can be started when the button is green and the word **Start** is displayed.
Purge Fan can be stopped when the button is red and the word **Stop** is displayed.

Entrance Airseal Fan can be started when the button is green and **Start** is displayed.
Entrance Airseal Fan can be stopped when the button is red **Stop** is displayed.

Exit Airseal Fan can be started when the button is green and **Start** is displayed.
Exit Airseal Fan can be stopped when the button is red **Stop** is displayed.

Heat Dissipation Tunnel Fans

Entrance Fan can be started when the button is green and **Start** is displayed.
Entrance Fan can be stopped when the button is red **Stop** is displayed.

Exit Fan can be started when the button is green and **Start** is displayed.
Exit Fan can be stopped when the button is red **Stop** is displayed.

To **Stop** the Oven in **Manual** Mode:

Depress the **Oven Stop Button**, *all of the Oven Fans will continue running until the Oven Temperature is Below 200 Degrees.*

When the Oven has Completed its Cool-Down all Fans and Motors will turn off.

After Oven is started, all of the individual Fan Start Switches will display **Started**.
When the Oven is Stopped all of the individual Fan Stop Switches will display **Stopped**.

Manual Mode-Starting of the Pretreatment System

The Washer Start must be started before any of the motors can be operated in Manual mode to ensure that the complete System will shut down any time the Washer Stop is depressed. The Washer Start/Stop buttons are located on the Auto Start screen and the Washer Manual Start Screen.

Individual motors may then be started from the **Washer Manual Screen** accessed by depressing the **Washer** Function button on the bottom of any screen followed by the **Washer Manual** button.

All components must be in **Manual Mode** to be started Manually. If **Manual** is not displayed in the box on the left of the screen then it must be toggled from the **Auto** to **Manual.**

The **Washer Start Button** must be depressed to enable all of the Motors to be Manually toggled On or Off.

After the individual Pumps and Fans have started the individual Start Switches will display **Started**.
When the Washer is Stopped all of the individual Stop Switches will display **Stopped**.

Manual Mode-Starting of the Pretreatment System

Stage 1 Pump can be started when the button is green and the word **Start** is displayed.
Stage 1 Pump can be stopped when the button is red and the word **Stop** is displayed.

Stage 2 Pump can be started when the button is green and the word **Start** is displayed.
Stage 2 Pump can be stopped when the button is red and the word **Stop** is displayed.

Stage 3 Pump can be started when the button is green and the word **Start** is displayed.
Stage 3 Pump can be stopped when the button is red and the word **Stop** is displayed.

Stage 4 Pump can be started when the button is green and the word **Start** is displayed.
Stage 4 Pump can be stopped when the button is red and the word **Stop** is displayed.

Stage 5 Pump can be started when the button is green and the word **Start** is displayed.
Stage 5 Pump can be stopped when the button is red and the word **Stop** is displayed.

Stage 6 Pump can be started when the button is green and the word **Start** is displayed.
Stage 6 Pump can be stopped when the button is red and the word **Stop** is displayed.

Stage 7 Pump can be started when the button is green and the word **Start** is displayed.
Stage 7 Pump can be stopped when the button is red and the word **Stop** is displayed.

Stage 8 Pump can be started when the button is green and the word **Start** is displayed.
Stage 8 Pump can be stopped when the button is red and the word **Stop** is displayed.

Entrance Exhaust Fan can be started when the button is green and **Start** is displayed.
Entrance Exhaust Fan can be stopped when the button is red and **Stop** is displayed.

Exit Exhaust Fan can be started when the button is green and **Start** is displayed.
Exit Exhaust Fan can be stopped when the button is red and **Stop** is displayed.

To **Stop** the Washer in **Manual** Mode:
Depress the **Washer Stop** button, *all of the Washer Pumps and Burners will stop but the Exhaust Fans will continue running for Ten Minutes to evacuate excess Steam from the Washer.*

Manual Mode-Starting of the E-Coat System

The E-Coat Start must be started before any of the motors can be operated in Manual mode to ensure that the complete System will shut down any time the E-Coat Stop is depressed. The E-Coat Start/Stop buttons are located on the Auto Start screen and the E-Coat Manual Start Screen.

Individual motors may then be started from the **E-Coat Manual Start** screen accessed by depressing the **E-Coat** Function button on the bottom of any screen followed by the **E-Coat Manual** button.

All components must be in **Manual Mode** to be started Manually. If **Manual** is not displayed in the box on the left of the screen then it must be toggled from the **Auto** to **Manual.**

The **E-Coat Start Button** must be depressed to enable all of the Motors to be Manually toggled On or Off.

After the individual Pumps and Fans have started the individual Start Switches will display **Started**.

When the E-Coat is Stopped all of the individual Stop Switches will display **Stopped**.

Manual Mode-Starting of the E-Coat System

The following Operate with the Manual Mode switch:

Rinse 1 Pump can be started when the button is green and the word **Start** is displayed.
Rinse 1 Pump can be stopped when the button is red and the word **Stop** is displayed.

Rinse 2 Pump can be started when the button is green and the word **Start** is displayed.
Rinse 2 Pump can be stopped when the button is red and the word **Stop** is displayed.

Rectifier can be started when the button is green and the word **Start** is displayed.
Rectifier can be stopped when the button is red and the word **Stop** is displayed.

The following are not dependent on the Manual Mode switch to Operate:

Entrance Fan can be started when the button is green and the word **Start** is displayed.
Entrance Fan can be stopped when the button is red and the word **Stop** is displayed.

Exit Fan can be started when the button is green and the word **Start** is displayed.
Exit Fan can be stopped when the button is red and the word **Stop** is displayed.

Transfer Pump 1 can be started when the button is green and **Start** is displayed.
Transfer Pump 1 can be stopped when the button is red and **Stop** is displayed.

Transfer Pump 2 can be started when the button is green and **Start** is displayed.
Transfer Pump 2 can be stopped when the button is red and **Stop** is displayed.

To Stop the E-Coat in **Manual** Mode:
Depress the **E-Coat Stop** button.

The E-Coat System also consists of Remote Start/Stop Stations for:

The Ultra Filter Cleaning Pump
The Ultra Filter Pump
The Heat Exchanger Pump
The Heat Exchanger Condenser Units
The Anolyte Pump and Anolyte Cells

Ultra Filter Cleaning Pump Remote Start/Stop Station

The Ultra Filter Cleaning Pump Remote Start/Stop Station is located on and supplied with the Ultra Filter Unit.

The Ultra Filter Cleaning Pump is used to circulate water or a cleaning solution through a single Ultra Filter Chamber while it is offline.

The Manual Start/Stop buttons are used to operate the pump when needed and should be under observation while running.

A separate Operation Manual is provided for the Ultra Filter Unit and for its operating parameter and maintenance.

A manufacture's contact number is (419) 873-8335.

Manual Mode-Starting of the E-Coat System

Ultra Filter Pump and Heat Exchanger Pump Remote Start/Stop Stations

The Ultra Filter Pump and Heat Exchanger Pump Remote Start/Stop Stations are configured exactly and operate the same.

Since these Pumps must operate continuously there is only a Pump Enable button, which may be depressed if the Pump must be shut down for maintenance or in an emergency. A Key must then be inserted and turned to release the Enable button and the Pump will immediately start.

If the Pump is turned Off the green Indicator Light will turn off and the Alarm timer will begin timing. When the timer finishes it will open the circuit for the Alarm System contact. An Alarm bypass switch is provided if the shut down is for maintenance purposes.

If there is a power outage the Alarm will trip immediately. When the power is reestablished, the pump will restart automatically and the Alarm condition will reset automatically.

Heat Exchanger Condenser Remote Start/Stop Station

The Heat Exchanger Condenser Remote Start/Stop Station is located on and supplied with the Condensing Units outside behind the Heat Dissipation Tunnel.

The Condensing Units are used to circulate cold water through the Heat Exchanger to cool the E-Coat Bath.

The Coolant Pump supplied by SBS is designed to operate continuously and if a Power disruption occurs an alarm will trip in the Condensing units and must be Reset.

The Manual Start/Stop buttons are used to Start the Condensers which then sense the load and cycle between units when needed.

A separate Operation Manual is provided for the Condensing Units and for its operating parameters and maintenance.

A local Service Company is Premium Mechanical Services, (573) 243-3918.

Anolyte Pump Remote Start/Stop Station and Anolyte Cells

The Anolyte Pump Remote Start/Stop Station is located on and supplied with the Anolyte Replenishing Unit.

The Anolyte Pump is used to circulate water and Anolyte through the Anolyte Cells located in the E-Coat Bath Tank.

The Manual Start/Stop buttons are used to operate the pump when needed and should only be shut down for maintenance.

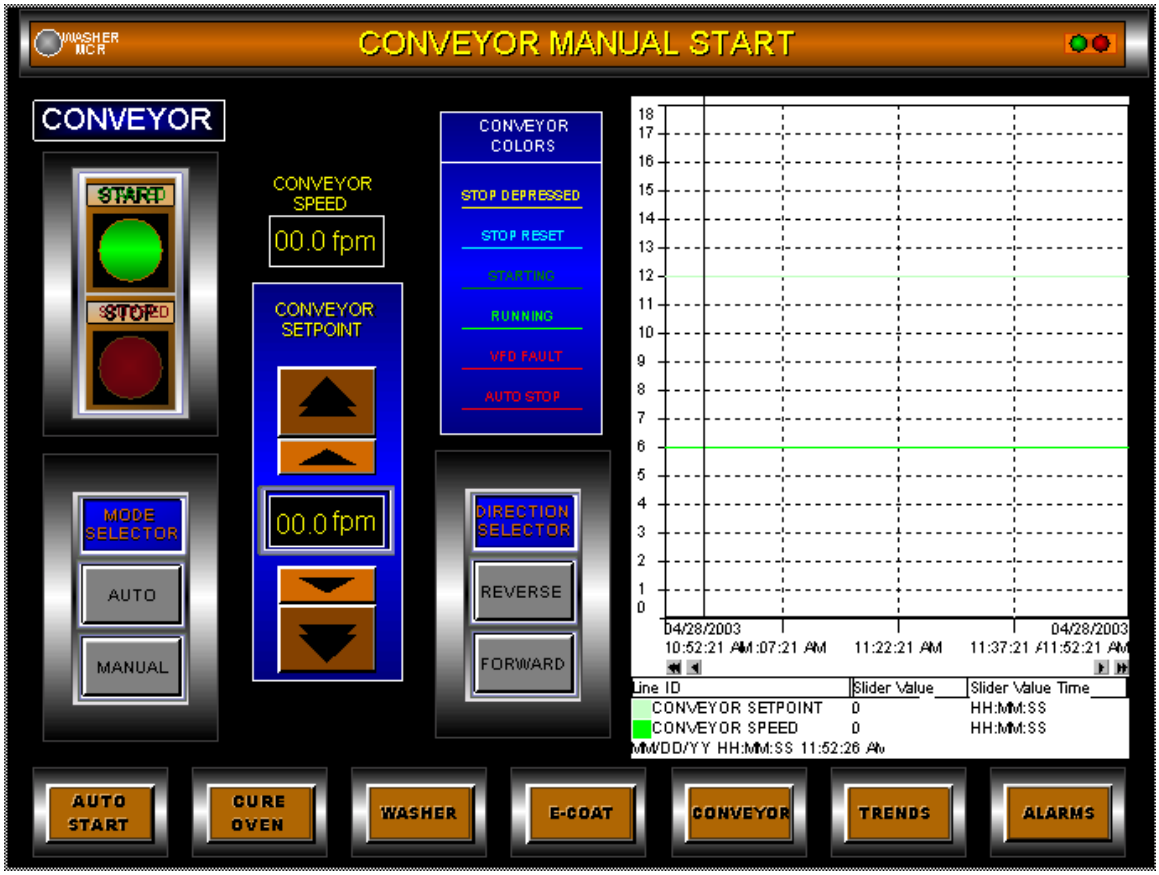
A separate Operation Manual is provided for the Anolyte Unit, the Anolyte cells, for their operating parameters and maintenance.

A manufacture's contact number is (419) 873-8335.

Manual Mode-Starting the Conveyor

The Conveyor Start/Stop buttons are located on the Auto Start screen and the Conveyor Manual Start Screen.

The **Conveyor Manual Screen** accessed by depressing the **Conveyor** Function button on the bottom of any screen followed by the **Conveyor Manual** button.



The Conveyor must be in **Manual Mode** to be started Manually. If **Manual** is not displayed in the box on the left of the screen then it must be toggled from the **Auto** to **Manual.**

The **Conveyor Start Button** on the Conveyor Manual Start screen, the Auto Start Screen or the Remote Start at the Unload Area are depressed to start the Conveyor.

After the Conveyor has started the Start Switch will display **Started**.
When the Conveyor is Stopped the Stop Switch will display **Stopped**.

The following conditions may be bypassed by switching to Manual Mode:

All three Stages of the Washer must be within their Temperature Ranges.
E-Coat Bath Temperature must be within its Temperature Range.
Rectifier DC Power must be turned On.
Cure Oven Temperature must be within its Temperature Range.
All Pretreatment and Rinse Pumps must be Running.
DeviceNet Communication Scanner Must be Operating Properly.

The Individual System Component can also be switched to Manual Mode or Disabled to Start the Conveyor.

Manual Mode-Starting the Conveyor

There is a Conveyor E-Stop located at each of the Control Panels as well as two at the Load Area and one at the Unload Area. When any of these E-Stops are depressed the Reset button located on the Washer Control Panel or the Reset button located in the Unload Area must be pressed.

The Conveyor may then be started from the Touchscreen in the E-Coat Lab or from the Remote Start button located at the Unload Area.

The green Indicator Light on the Remote Start/Stop Station at the Unload Area indicates the Status of the System Parameters, if an element is preheating the green light will be flashing, if the System is ready to start the Conveyor then the green light will be Off.

When the Conveyor is Running the green light will be On.

The Conveyor Line Drawing on the Auto Start Screen will change colors according to the Status of the Conveyor and System parameters, these colors are displayed in a box on this screen.

When one of the Conveyor E-Stops have been depressed and the Reset button has not been pressed yet then the Conveyor Line will be yellow Colored.

After the Reset button has been pressed the Conveyor Line will be Aqua Colored.

When the Conveyor is Starting and the Conveyor Horn is sounding the Conveyor Line will be lime colored.

After the Conveyor is running the Conveyor Line will be green Colored and Flashing.

If the Conveyor is Starting and in Auto Mode but one of the System Parameters are not within the Operating Range then the Conveyor Line will be red Colored and Flashing only while the Conveyor Horn is Sounding.

If the Conveyor VFD has Faulted then the Conveyor Line will be red Colored.

The **Conveyor Speed** may be changed by using the up or down arrow or touching the numbers and entering a new value.
The Conveyor Speed Range is 6.0 to 18.0 Feet Per Minute.

A short Conveyor Trend is provided to display the current and past operating speeds as well as the lengths of down time.

To **Stop** the Conveyor in **Manual Mode:**

Depress the **Conveyor Stop Button** on the Touchsreen or at the Remote Station located at the Unload Area, the Conveyor will Coast to a Stop.
To Stop the Conveyor immediately, depress one of the Conveyor E-Stop buttons located throughout the line.

After the Conveyor is started, the Conveyor Start button will display **Started**.
When the Conveyor is Stopped, the Conveyor Stop button will display **Stopped**.

System Set Points-Entering New Set Point Variables

The status of the System Temperature and Conveyor Speed Variables are viewed by depressing one of the Function buttons on the bottom of the screen and then selecting the **Set Points** Button.

A new Temperature Set Point Can be entered by depressing any of the Temperature Set Point buttons below the Current Temperature Displays.

A new Set Point can be entered when the Keypad window is displayed

The Cure Oven Set Point parameters are between 0 and 600 Degrees Fahrenheit.

The Washer Set Point parameters are between 80 and 160 Degrees Fahrenheit.

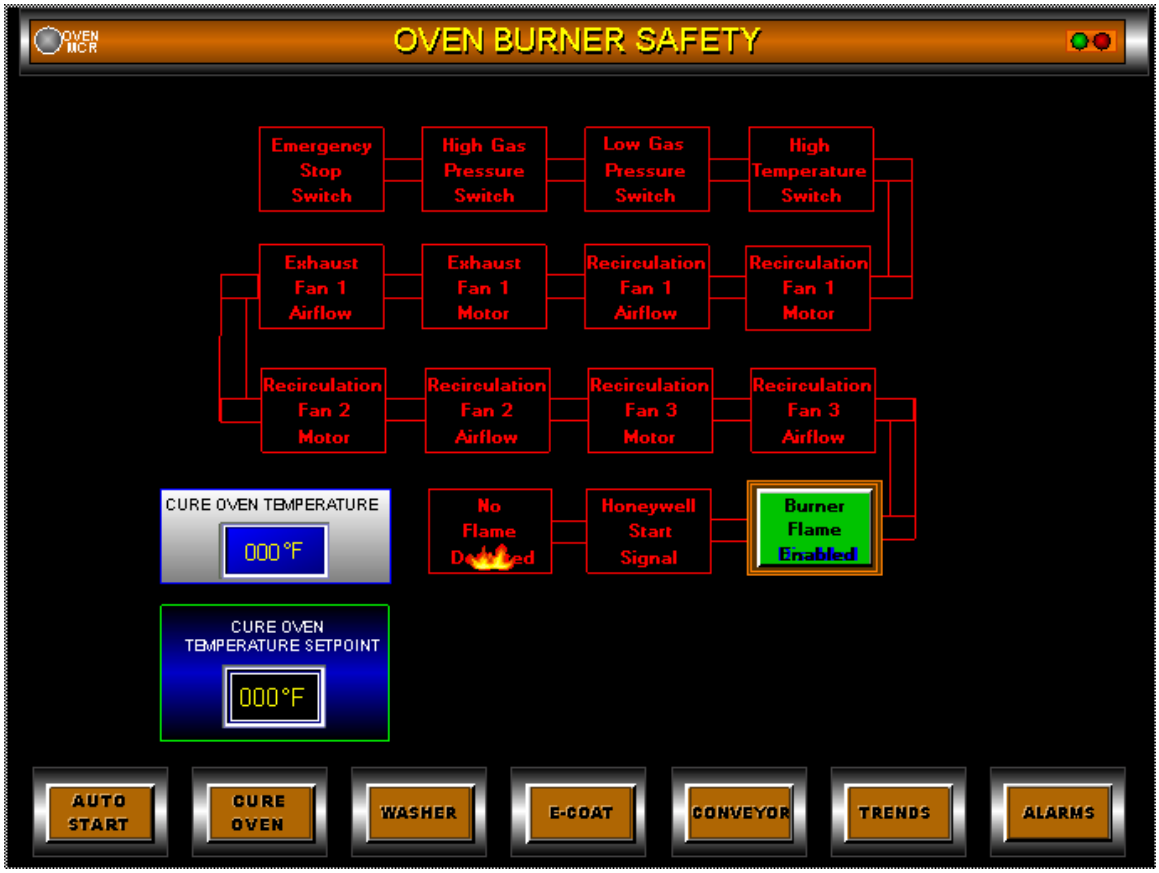
The Washer Set Point parameters are between 80 and 120 Degrees Fahrenheit.

The Conveyor Speed Set Point Range is between 6.0 and 18.0 Feet per Minute.

The Burners may also be disabled for the individual components for maintenance or if Heat is no longer needed for that component, this will enable the Conveyor to operate in Auto Mode by disabling the Temperature requirements for that component.

Oven Display-Viewing the Cure Oven Burner Flame Safety

Pressing the **Cure Oven** Function button followed by **Oven Burner Display** button. This screen is used for Troubleshooting the Oven Burner series wiring Circuit.



Each of the Flame Safeties are field wired in series, hence each must turn green on the Display Screen sequentially starting from the **Emergency Stop Switch**.

If both **Gas Pressures** are in range then the Display will be green up to the **High Temp Check**.

A Black **High Temp Check** indicates that it must be reset, it is located next to the Oven burner on top of the Oven.

Depressing the Flame **Enable\Disable** button will Maintain the burner **On** or **Off** if all of the safeties are made and following the purge time of 12 minutes for the Oven the Burner.

The **No Flame Detected** will change to an Animated Flame, which indicates the Current Flame Output when a **Main Flame** is detected.

Washer Display-Viewing the Washer Burner Flame Safety

Pressing the **Washer** Function button followed by **Washer Burner Display** button. This screen is used for Troubleshooting the Oven Burner series wiring Circuit.

Each of the Flame Safeties are field wired in series, hence each must turn green on the Display Screen sequentially starting from the **Emergency Stop Switch**.

If both **Gas Pressures** are in range then the Display will be green up to the **Low Water Switch**.

A Black **Low Water Switch** indicates that the Water in that Stage is too low to operate the Burner, it is located on top of the side tank and the Probe is in the Solution.

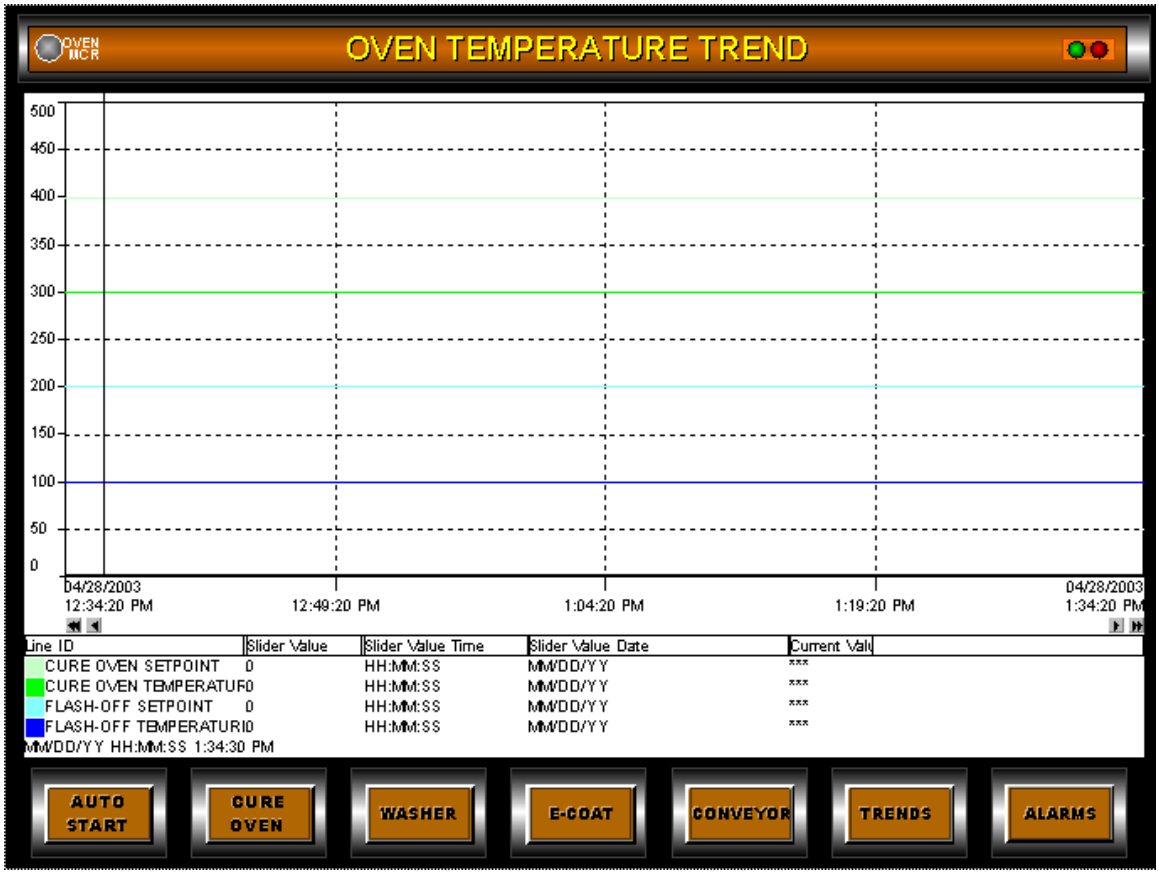
Current is transferred from this probe, through the solution, then to the side of the tank so it is not advisable to test this connection without using a test meter.

Depressing the Flame **Enable\Disable** button will turn the burner **On** and **Off** if all of the safeties are made and following the purge time of 2 ½ minutes for the Washer the Burners.

The **No Flame Detected** will change to an Animated Flame, which indicates the Current Flame Output when a **Main Flame** is detected.

Trend Display- Cure Oven Temperatures and Set Points

The status of the Cure Oven Temperatures and Set Points are viewed on a Trend by depressing the **Cure Oven Function** button followed by the **Oven Trend** Button from any screen.



The Temperature Range for this Trend Varies between 0 and 600 Degrees Fahrenheit.

The recorded Temperatures move from **Right** to **Left** the way a Chart recorder operates.

The Temperatures and Set Points are displayed in a One-Hour time span with the ability to Scroll left or Right.

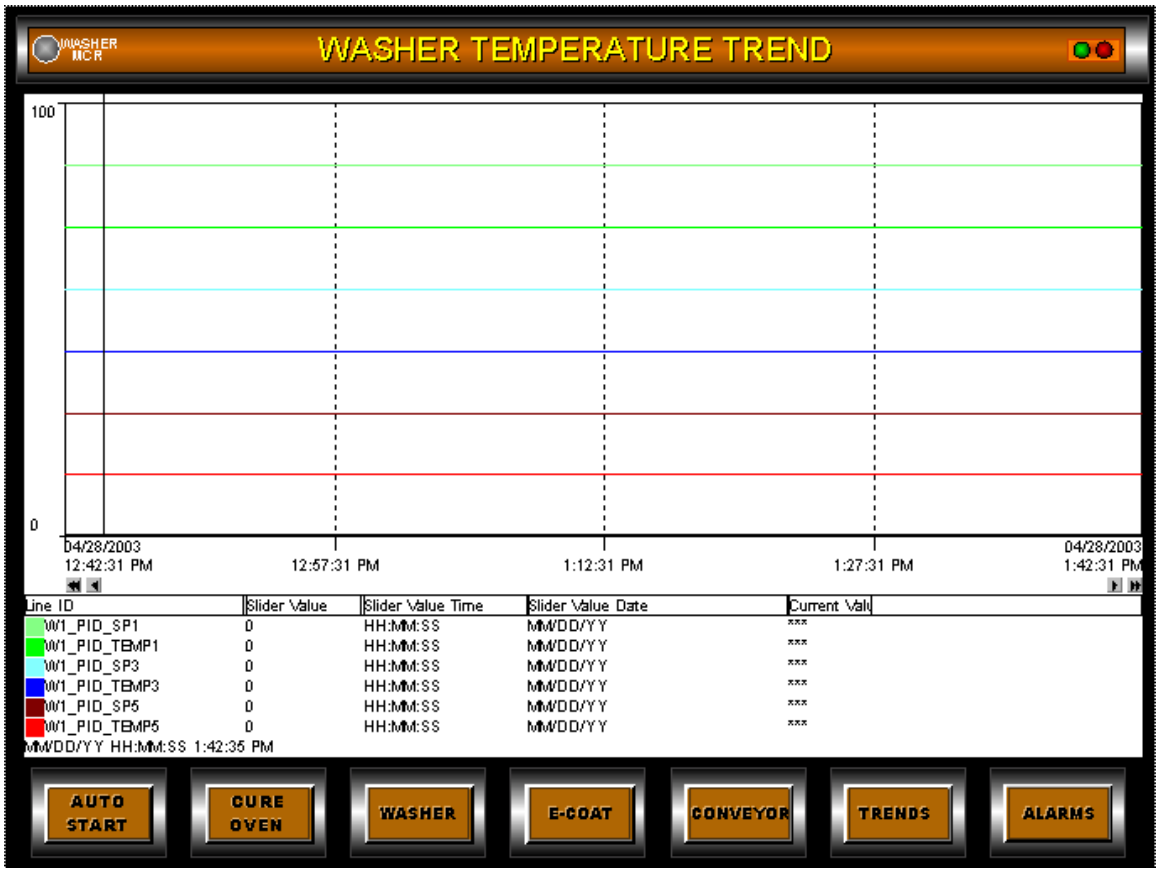
This Trend Display will update every Two Minutes.

The **Cure Oven Set Point** Temperature is Displayed with a **Light Green Line**.
The **Cure Oven Temperature** is Displayed with a **Dark Green Line**.

The **Flash-Off Set Point** Temperature is Displayed with a **Light Blue Line**.
The **Flash-Off Temperature** is Displayed with a **Dark Blue Line**.

Trend Display- Pretreatment Temperatures and Set Points

The status of the Pretreatment Temperatures and Set Points are viewed on a Trend by depressing the **Washer Function** button followed by the **Washer Trend** Button from any screen.



The Temperature Range for this Trend Varies between 0 and 160 Degrees Fahrenheit.

The recorded Temperatures move from **Right** to **Left** the way a Chart recorder operates.

The Temperatures and Set Points are displayed in a One-Hour time span with the ability to Scroll left or Right.

This Trend Display will update every Two Minutes.

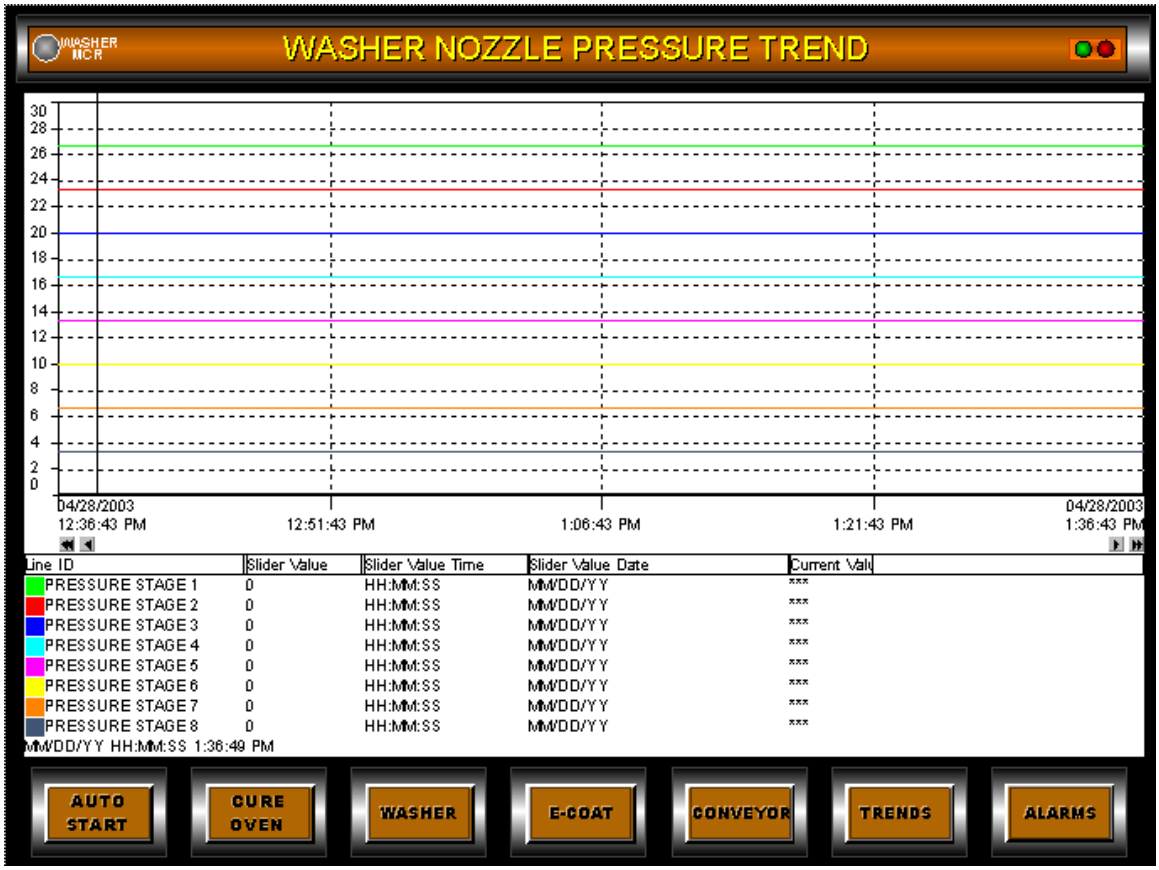
The **Stage 1 Set Point** Temperature is Displayed with a **Light Green Line**.
The **Stage 1 Temperature** is Displayed with a **Dark Green Line**.

The **Stage 3** Temperature is Displayed with a **Light Blue Line**.
The **Stage 3** is Displayed with a **Dark Blue Line**.

The **Stage 5** Temperature is Displayed with a **Dark Red Line**.
The **Stage 5** is Displayed with a **Red Line**.

Trend Display- Pretreatment Pump Pressures

The statuses of the Pretreatment Pump Nozzle Discharge Pressures are viewed on a Trend by depressing the **Trends** button followed by the **Trend PSI** Button from any screen.



The Pressure Range for this Trend Varies between 0 and 30 Pounds per Square Inch.

The recorded Pressures move from **Right** to **Left** the way a Chart recorder operates.

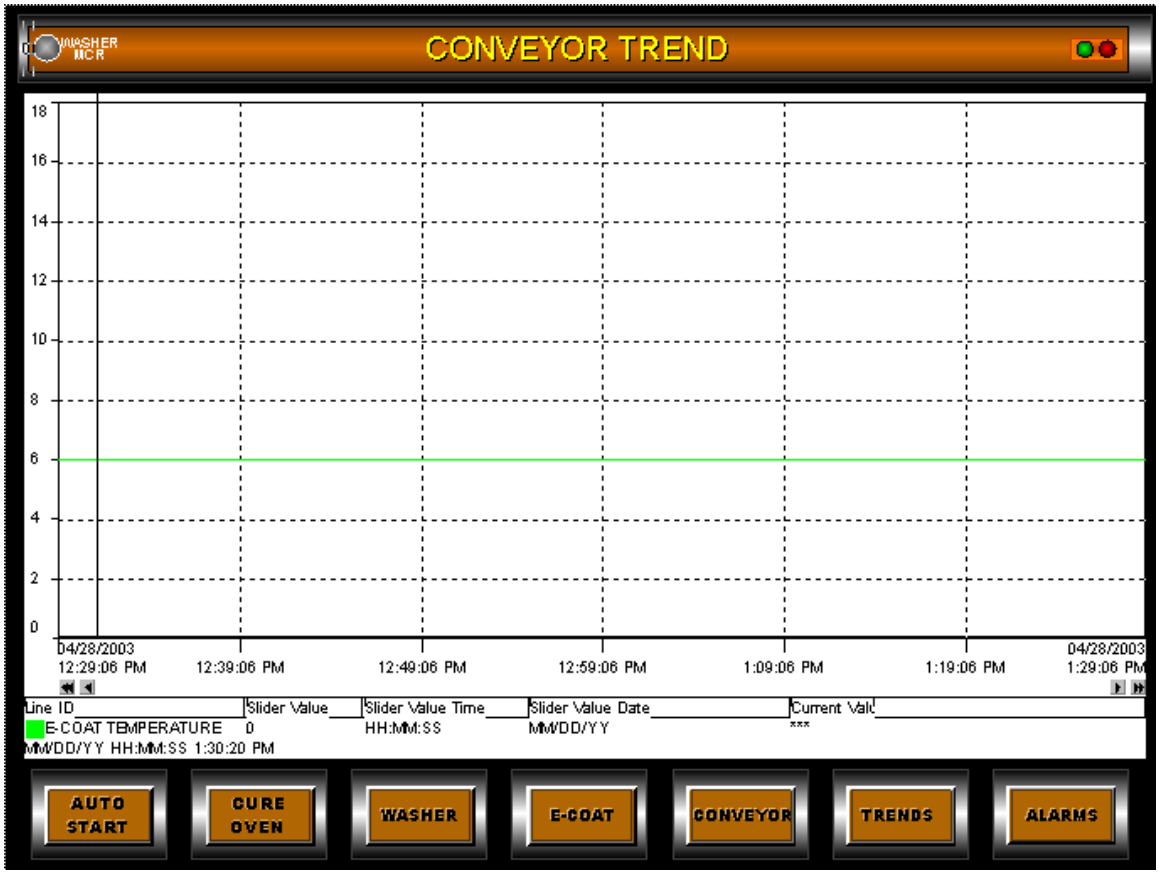
The Pressures are displayed in a One-Hour time span with the ability to Scroll left or Right.

This Trend Display will update every Two Minutes.

The **Stage 1 Pressure** is Displayed with a **Green Line**.
The **Stage 2 Pressure** is Displayed with a **Red Line**.
The **Stage 3 Pressure** is Displayed with a **Dark Blue Line**.
The **Stage 4 Pressure** is Displayed with a **Light Blue Line**.
The **Stage 5 Pressure** is Displayed with a **Purple Line**.
The **Stage 6 Pressure** is Displayed with a **Yellow Line**.
The **Stage 7 Pressure** is Displayed with a **Orange Line**.
The **Stage 8 Pressure** is Displayed with a **Gray Line**.

Trend Display- Conveyor Speed and Down-Time

The statuses of the Conveyor Speed and Down Times are viewed on a Trend by depressing the **Trends** button followed by the **Trend Conveyor** Button from any screen.



The Conveyor Speed Range for this Trend Varies between 0 and 18.0 Feet per Minute.

The recorded Speeds move from **Right** to **Left** the way a Chart recorder operates.

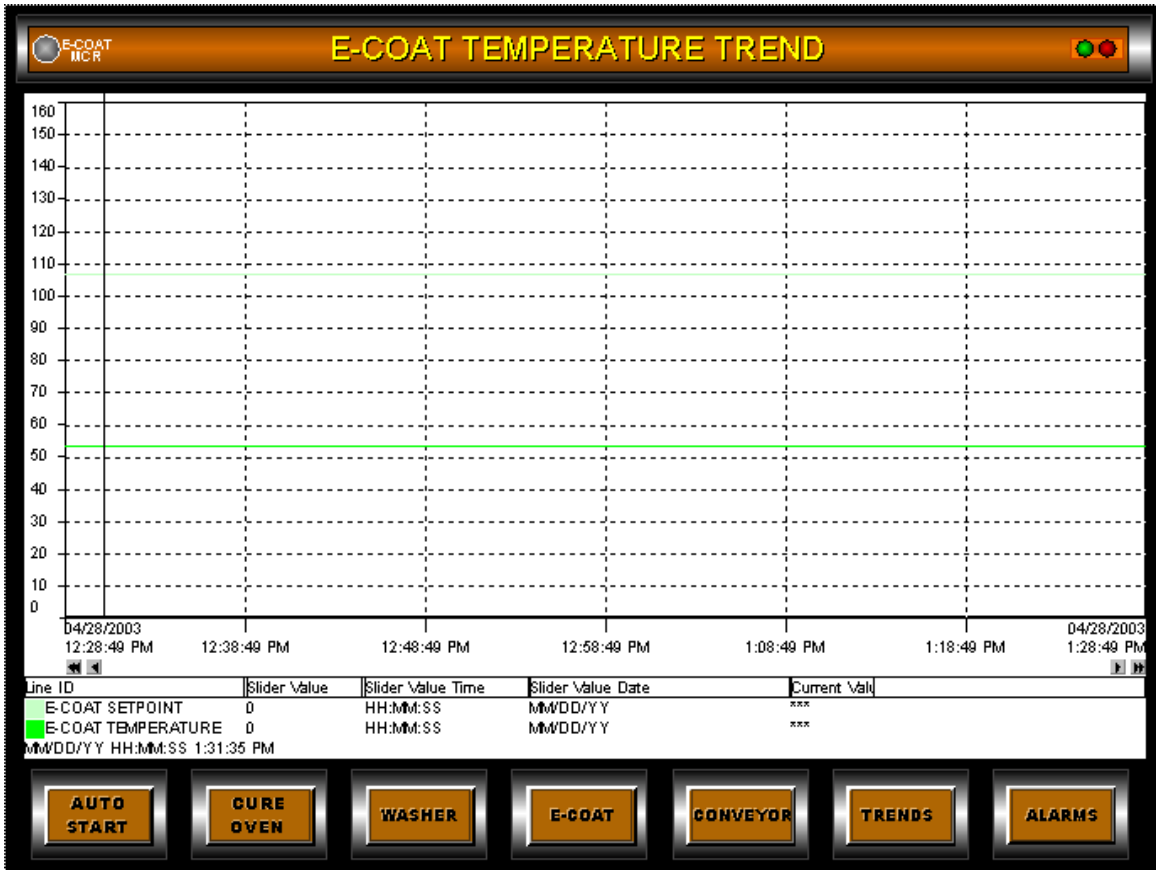
The Speeds are displayed in a One-Hour time span with the ability to Scroll left or Right.

This Trend Display will update every Two Minutes.

The **Conveyor Speed** is Displayed with a **Green Line**.

Trend Display- E-Coat Temperature and Set Point

The statuses of the E-Coat Bath Temperature and Set Point are viewed on a Trend by depressing the **Trends** button followed by the **E-Coat Trend** Button from any screen.



The Temperature Range for this Trend Varies between 0 and 160 Degrees Fahrenheit.

The recorded Temperatures move from **Right** to **Left** the way a Chart recorder operates.

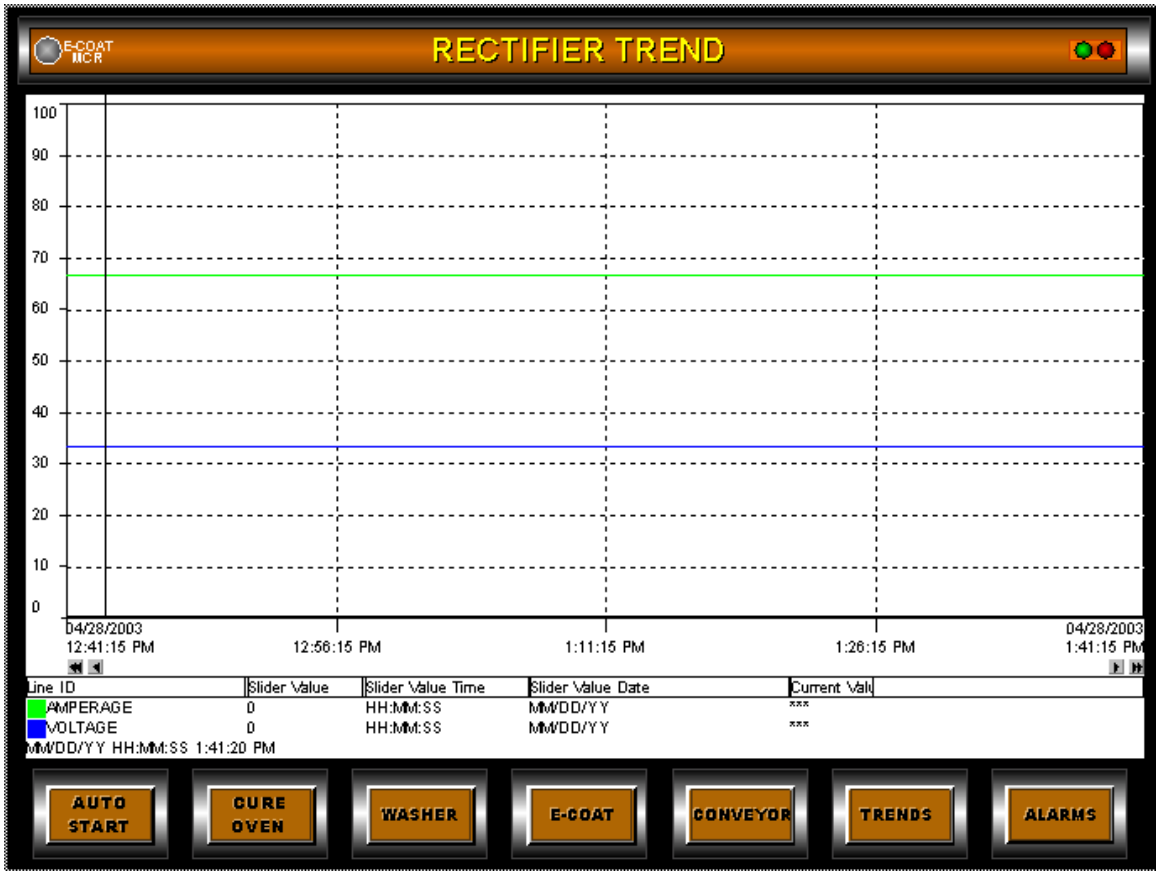
The Temperatures and Set Points are displayed in a One-Hour time span with the ability to Scroll left or Right.

This Trend Display will update every Two Minutes.

The **E-Coat Set Point** Temperature is Displayed with a **Light Green Line**.
The **E-Coat Temperature** is Displayed with a **Dark Green Line**.

Trend Display- Rectifier Voltage and Amperage

The statuses of the Rectifier Voltage and Amperage are viewed on a Trend by depressing the **Trends** button followed by the **Trend Rectifier** Button from any screen.



The Voltage Range for this Trend Varies between 0 and 400 Volts DC.
The Current Range for this Trend Varies between 0 and 1200 Amps DC.

The recorded Temperatures move from **Right** to **Left** the way a Chart recorder operates.

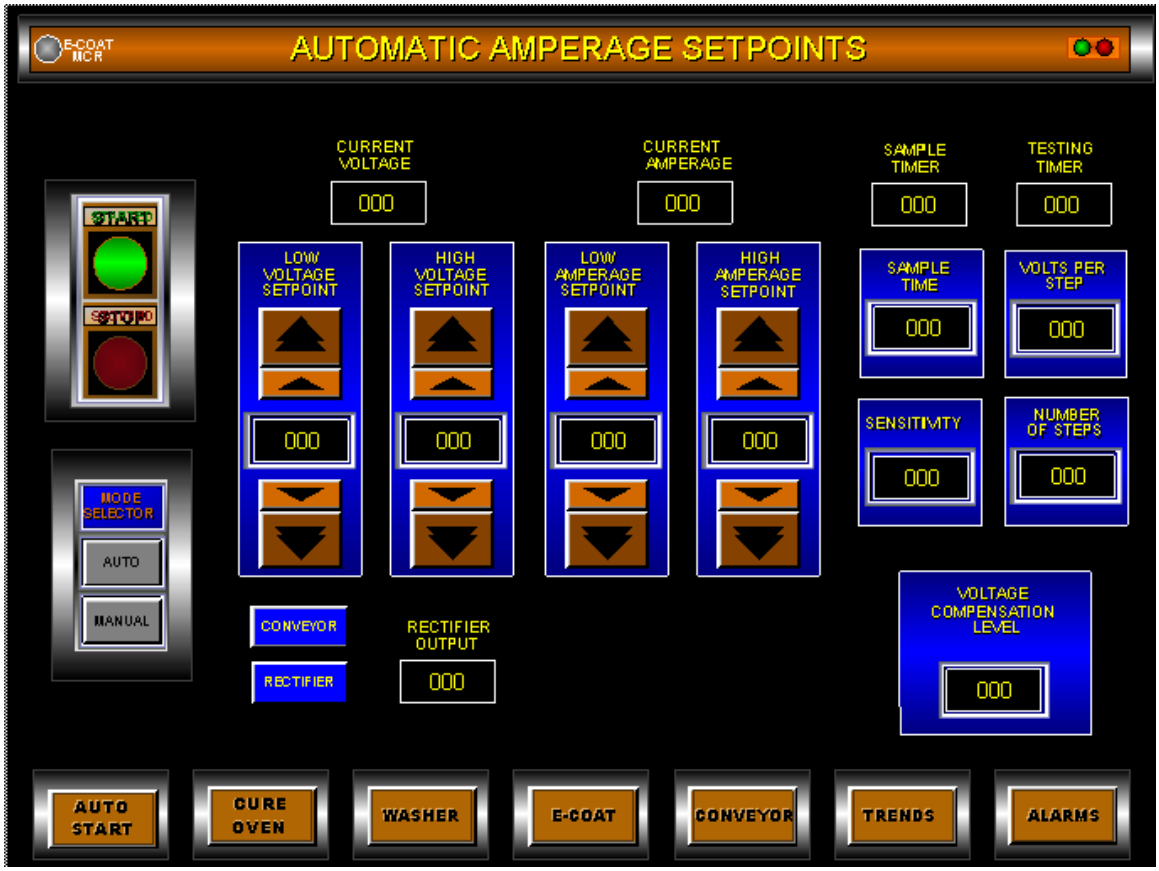
The Voltages and Amperages are displayed in a One-Hour time span with the ability to Scroll left or Right.

This Trend Display will update every Two Minutes.

The **Rectifier Amperage** is Displayed with a **Green Line**.
The **Rectifier Voltage** is Displayed with a **Blue Line**.

AACD Screen – Rectifier Auto Compensation

Depressing the **E-Coat Function** button followed by the **Rectifier** button accesses the AACD Screen.



When the E-Coat System is Started or Running in Auto Mode then the Rectifier will also Start. If the E-Coat Systems is in Manual Mode then the Rectifier may be Started with the Start button.
If the E-Coat Side Tank Lid is open the Rectifier will be disabled.

A separate Manual was provided for the AACD set-up and programming and should be employed for the calculations and operation of the Rectifier.

The Current Values entered and operating are as follows:
Sample Time = 7 Seconds
Rectifier Sensitivity = 2
Volts per Step = 12.5 [Calculated by Logic]
Number of Steps = 12
Voltage Compensation Level = 0 [Used to shift all ranges up or down]
Low Voltage Set Point = 250 Volts
High Voltage Set Point = 400 Volts
Low Amperage Set Point = 300 Amps
High Amperage Set Point = 1000 Amps

AACD Screen – Rectifier Auto Compensation

The **Low Voltage Set Point** is the Voltage that is required for a Tank that is loaded with the lightest part loading.

The **Low Amperage Set Point** is the Amperage that is attained by the lightest loaded Tank at the Set Voltage.

The **High Voltage Set Point** is the Voltage that is required for a Tank that is loaded with the Heaviest part loading.

The **High Amperage Set Point** is the Amperage that is attained by the Heaviest loaded Tank at the Set Voltage.

The AACD will operate with a wide range of loads but setting the values at 0 for minimums and setting the Maximums at the Rectifier maximum will not allow for the precise control that is needed for most production applications.

The Low and High Set Points should be set to the range that your most critical parts run within.

For this demonstration, lets assume that there are only two very different loads run through a tank, the first being a load that pulls maximum Voltage and the second being a load that pulls ¼ of the first load.

The most efficient way to operate the Set Points if precise control is desired for both loads is to set the Low and High Set Points for the heaviest load. When the light load is run the Voltage Compensation Level can be Set to –3, which will lower all of the Low and High settings at once but still keep your proportions.

If a greater span is required then the heavy load can be set to operate correctly with a Voltage Compensation Level of +3, this will give you a span of 6 for the lighter load.

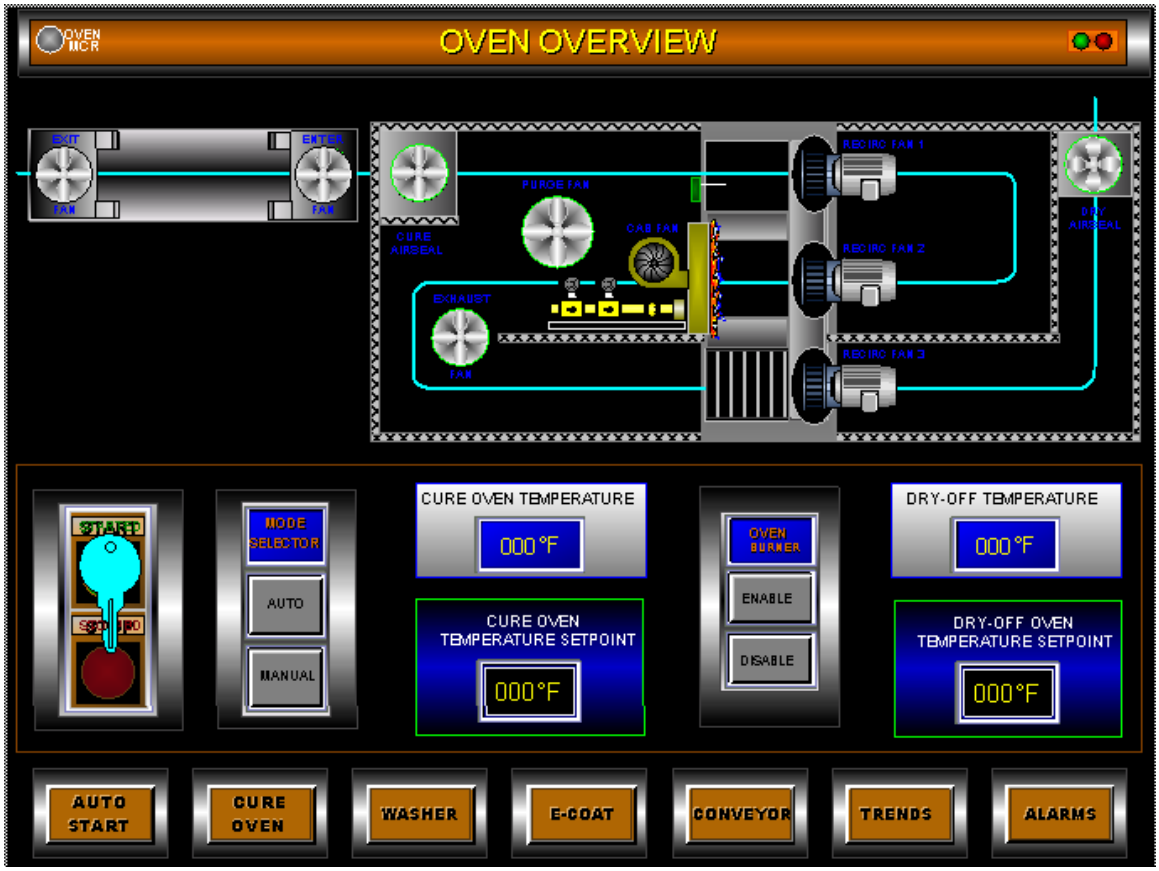
The Selector Switches on the Rectifier for AACD Control are:
Auto and **AACD.**

The Rectifier may be operated at a Constant Voltage by setting both Selector Switches in the Manual Position and increasing or decreasing the potentiometers on the Rectifier.

The Stopped Conveyor Voltage Set Point for the Rectifier is controlled with the Low Voltage potentiometer for both Auto and Manual control.

Overview Screen – Cure Oven

Depressing the **Cure Oven** Button followed by the **Oven Overview** Button accesses the status of the Cure Oven and Heat Dissipation Tunnel.

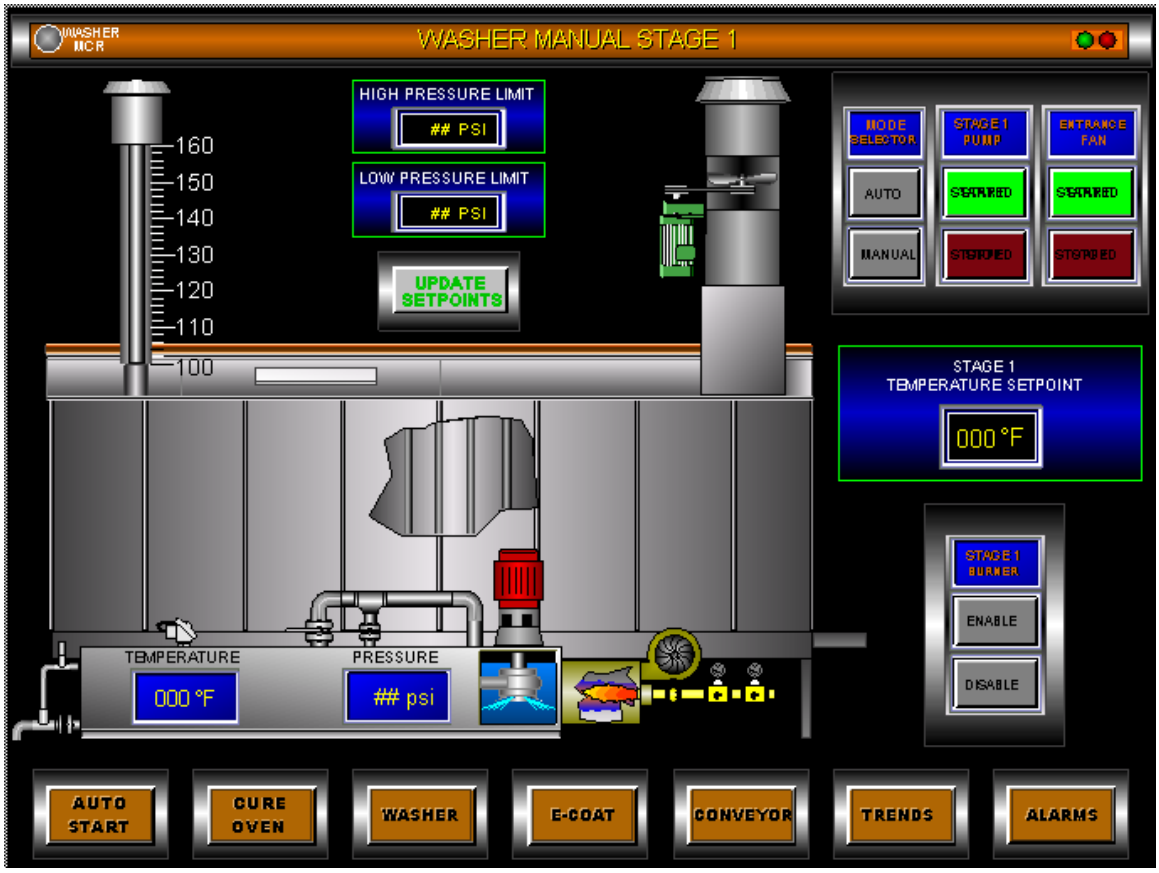


The Control options available on this screen are:
Starting and Stopping of the Cure Oven and Heat Dissipation Tunnel in Auto Mode.
Toggle between Auto and Manual Modes.
Toggle between Enable and Disable of Cure Oven Burner.
Input Temperature Set Point for Cure Oven Set Point.
Input Temperature Set Point for Dry-Off Oven Set Point.

The Visual Indicators available on this screen are:
The Current Cure Oven Temperature Display.
The Current Dry-Off Oven Temperature Display.
Oven Fans that are currently turned on; Green Indication and Movement.
The Burner Flame Status; Flame Visible and Size according to Gas Valve Position.
High Gas Pressure Indicator; Red when tripped.
Low Gas Pressure Indicator; Red when tripped.
High Temperature Limit Switch Indicator; Red when tripped
Oven Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling Fans on Cure Oven and Heat Dissipation Tunnel.

Overview Screen – Stage 1

Depressing the **Washer** Button followed by the **Stage 1** Button accesses the status of Stage 1 of the Pretreatment System.

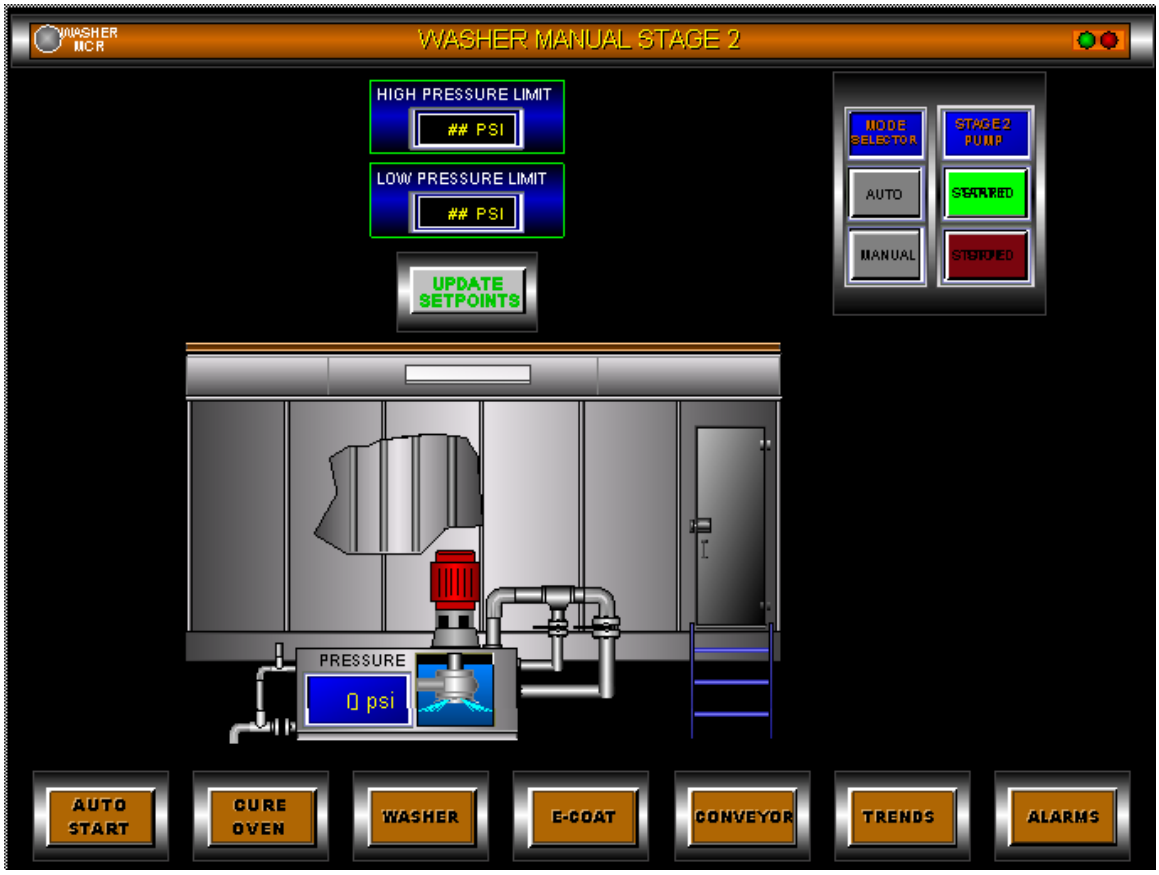


The Control options available on this screen are:
Start and Stop the Stage 1 Pump and the Entrance Exhaust Fan in Manual Mode.
Toggle between Auto and Manual Modes.
Toggle between Enable and Disable of the Stage 1 Burner.
Input the Set Point for Stage 1 Temperature Operating Range.
Input the High Pressure Limit for the Stage 1 Pump, must also Update Set Points.
Input the Low Pressure Limit for the Stage 1 Pump, must also Update Set Points.
The Update Set Points must always be depressed after a new limit is entered.

The Visual Indicators available on this screen are:
The Current Stage 1 Temperature Display.
The Current Stage 1 Pump Header Pressure Display.
Motors that are currently turned on; Green Indication and Movement.
The Burner Flame Status; Flame Visible.
High Gas Pressure Indicator; Red when tripped.
Low Gas Pressure Indicator; Red when tripped.
Washer Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling the Pretreatment System Pumps.

Overview Screen – Stage 2

Depressing the **Washer** Button followed by the **Stage 2** Button accesses the status of Stage 2 of the Pretreatment System.



The Control options available on this screen are:
Start and Stop the Stage 2 Pump in Manual Mode.
Toggle between Auto and Manual Modes.
Input the High Pressure Limit for the Stage 2 Pump, must also Update Set Points.
Input the Low Pressure Limit for the Stage 2 Pump, must also Update Set Points.
The Update Set Points must always be depressed after a new limit is entered.

The Visual Indicators available on this screen are:
The Current Stage 2 Pump Header Display.
Motors that are currently turned on; Green Indication and Movement.
Washer Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling the Pretreatment System Pumps.

Overview Screen – Stage 3

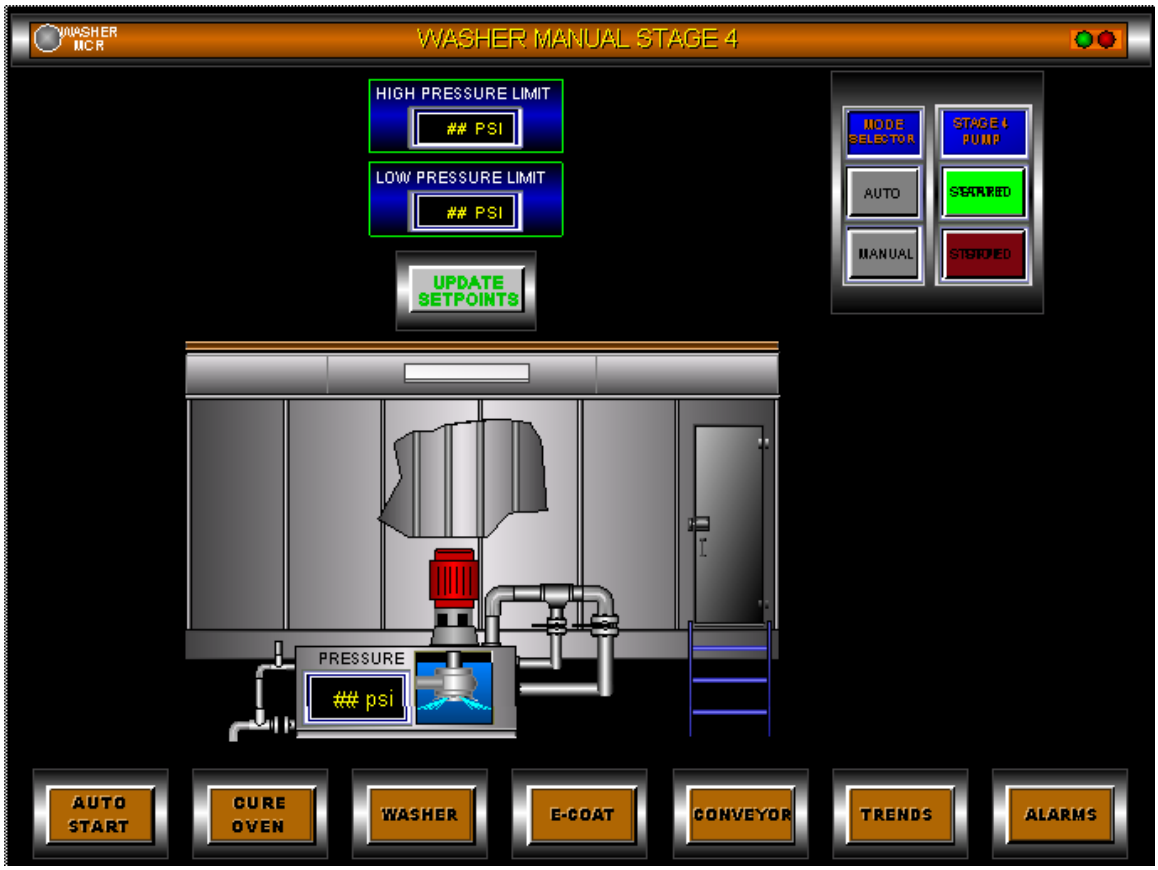
Depressing the **Washer** Button followed by the **Stage 3** Button accesses the status of Stage 3 of the Pretreatment System.

The Control options available on this screen are:
Start and Stop the Stage 3 Pump and the Entrance Exhaust Fan in Manual Mode.
Toggle between Auto and Manual Modes.
Toggle between Enable and Disable of the Stage 3 Burner.
Input the Set Point for Stage 3 Temperature Operating Range.
Input the High Pressure Limit for the Stage 3 Pump, must also Update Set Points.
Input the Low Pressure Limit for the Stage 3 Pump, must also Update Set Points.
The Update Set Points must always be depressed after a new limit is entered.

The Visual Indicators available on this screen are:
The Current Stage 3 Temperature Display.
The Current Stage 3 Pump Header Pressure Display.
Motors that are currently turned on; Green Indication and Movement.
The Burner Flame Status; Flame Visible.
High Gas Pressure Indicator; Red when tripped.
Low Gas Pressure Indicator; Red when tripped.
Washer Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling the Pretreatment System Pumps.

Overview Screen – Stage 4

Depressing the **Washer** Button followed by the **Stage 4** Button accesses the status of Stage 4 of the Pretreatment System.



The Control options available on this screen are:
Start and Stop the Stage 4 Pump in Manual Mode.
Toggle between Auto and Manual Modes.
Input the High Pressure Limit for the Stage 4 Pump, must also Update Set Points.
Input the Low Pressure Limit for the Stage 4 Pump, must also Update Set Points.
The Update Set Points must always be depressed after a new limit is entered.

The Visual Indicators available on this screen are:
The Current Stage 4 Pump Header Display.
Motors that are currently turned on; Green Indication and Movement.
Washer Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling the Pretreatment System Pumps.

Overview Screen – Stage 5

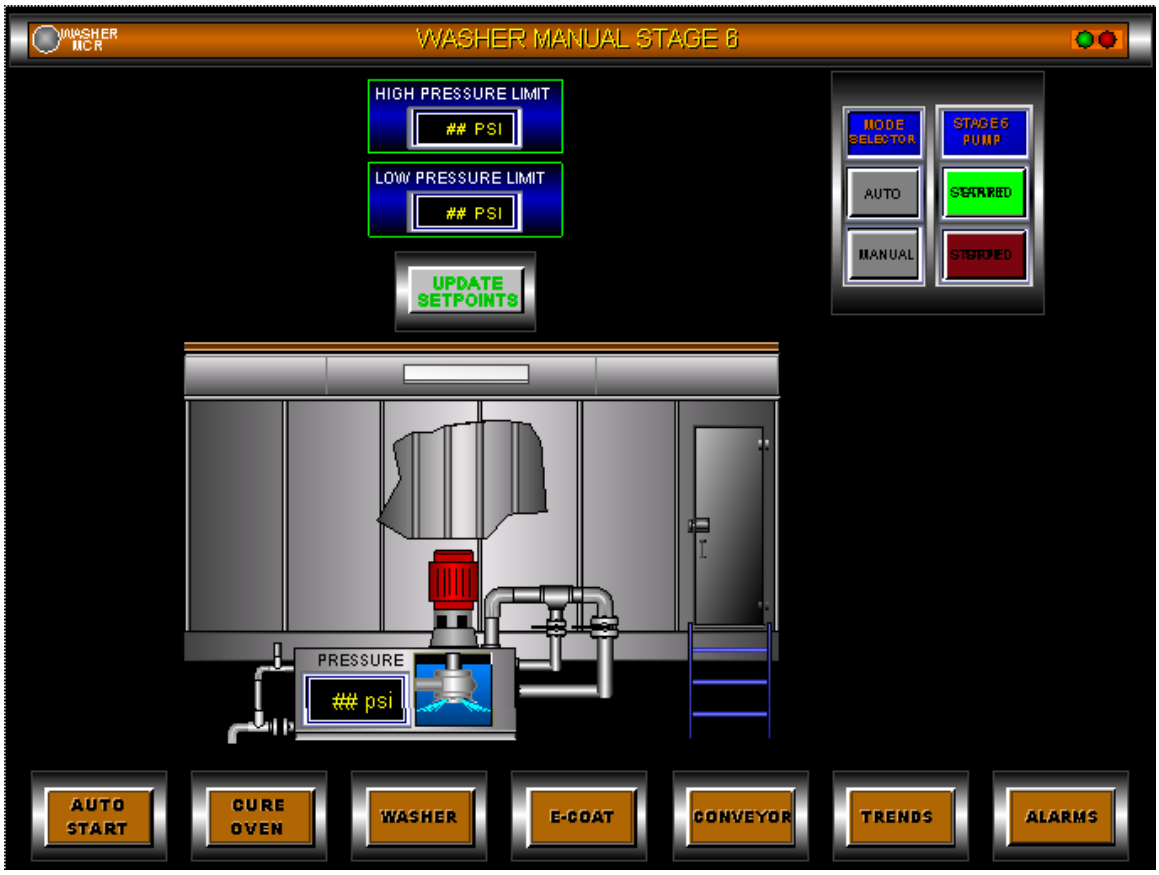
Depressing the **Washer** Button followed by the **Stage 5** Button accesses the status of Stage 5 of the Pretreatment System.

The Control options available on this screen are:
Start and Stop the Stage 5 Pump and the Entrance Exhaust Fan in Manual Mode.
Toggle between Auto and Manual Modes.
Toggle between Enable and Disable of the Stage 5 Burner.
Input the Set Point for Stage 5 Temperature Operating Range.
Input the High Pressure Limit for the Stage 5 Pump, must also Update Set Points.
Input the Low Pressure Limit for the Stage 5 Pump, must also Update Set Points.
The Update Set Points must always be depressed after a new limit is entered.

The Visual Indicators available on this screen are:
The Current Stage 5 Temperature Display.
The Current Stage 5 Pump Header Pressure Display.
Motors that are currently turned on; Green Indication and Movement.
The Burner Flame Status; Flame Visible.
High Gas Pressure Indicator; Red when tripped.
Low Gas Pressure Indicator; Red when tripped.
Washer Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling the Pretreatment System Pumps.

Overview Screen – Stage 6

Depressing the **Washer** Button followed by the **Stage 6** Button accesses the status of Stage 6 of the Pretreatment System.

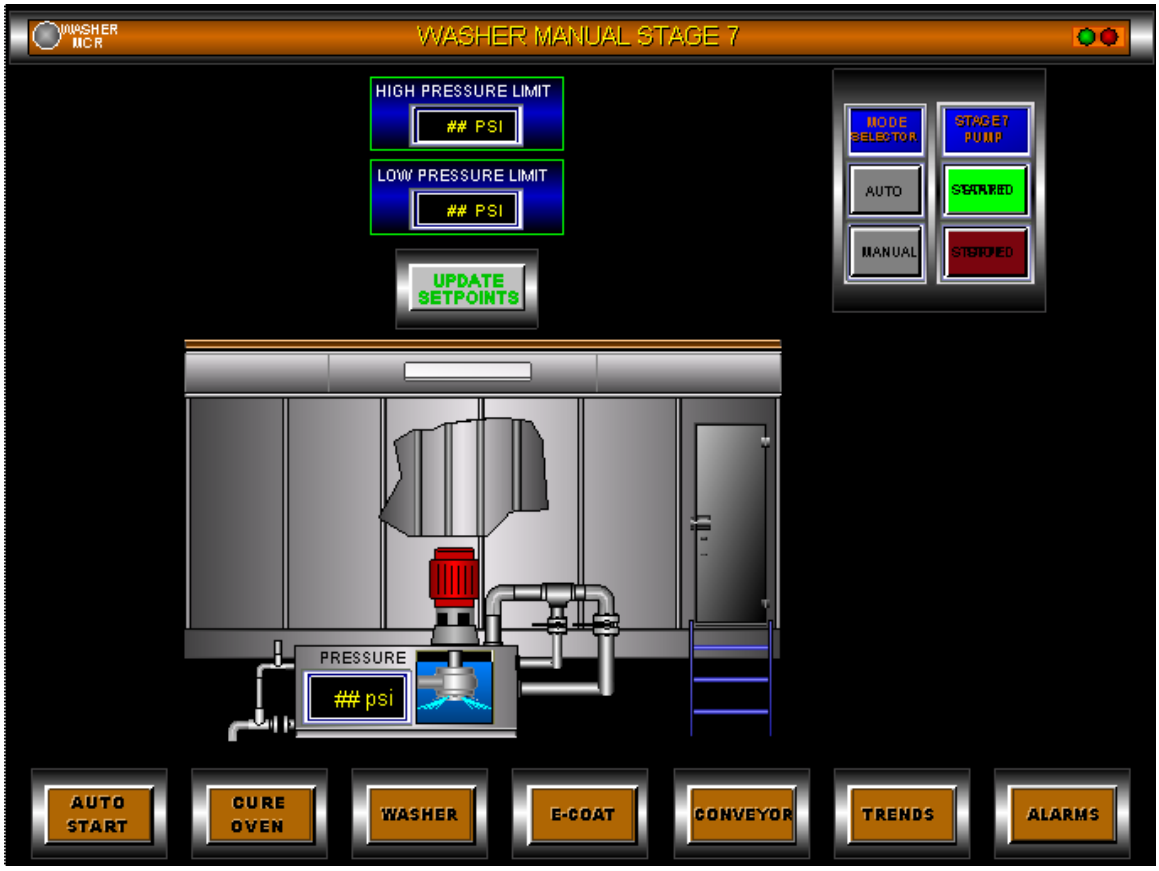


The Control options available on this screen are:
Start and Stop the Stage 6 Pump in Manual Mode.
Toggle between Auto and Manual Modes.
Input the High Pressure Limit for the Stage 6 Pump, must also Update Set Points.
Input the Low Pressure Limit for the Stage 6 Pump, must also Update Set Points.
The Update Set Points must always be depressed after a new limit is entered.

The Visual Indicators available on this screen are:
The Current Stage 6 Pump Header Display.
Motors that are currently turned on; Green Indication and Movement.
Washer Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling the Pretreatment System Pumps.

Overview Screen – Stage 7

Depressing the **Washer** Button followed by the **Stage 7** Button accesses the status of Stage 7 of the Pretreatment System.

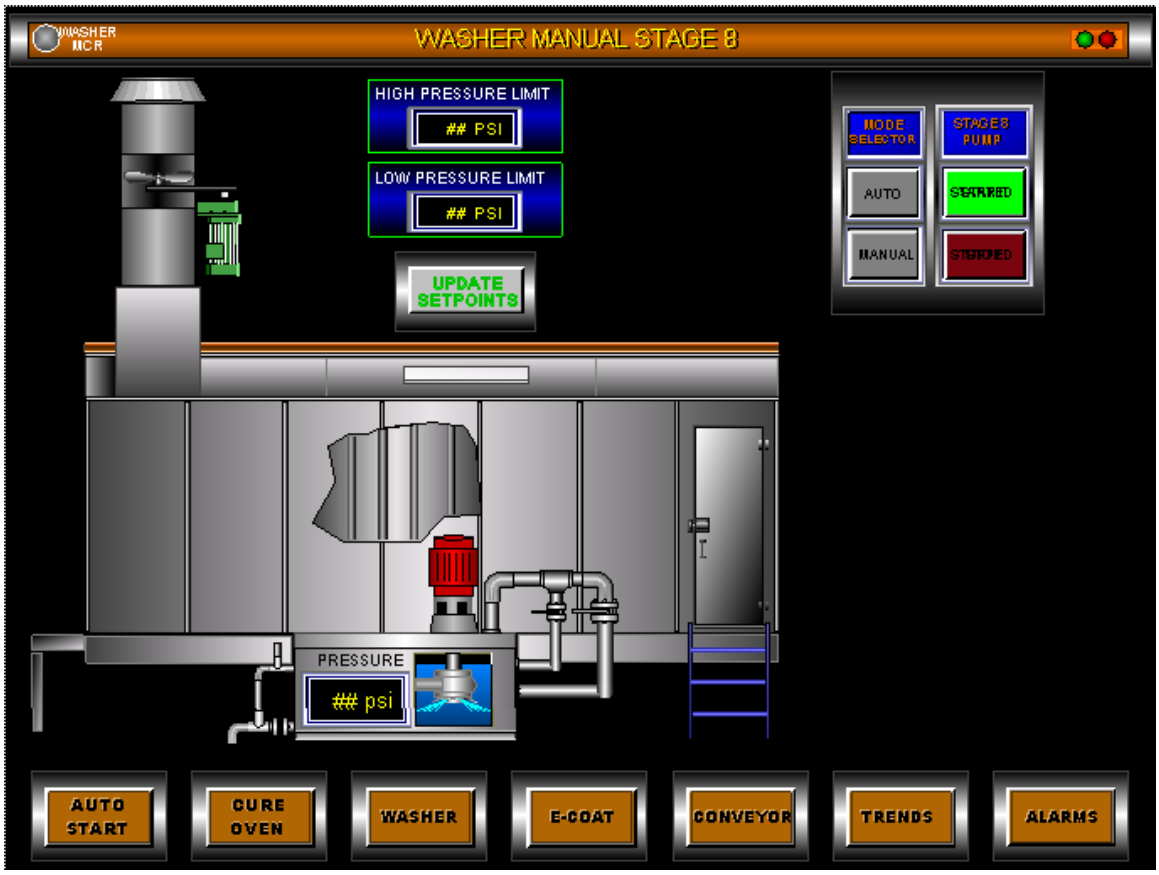


The Control options available on this screen are:
Start and Stop the Stage 7 Pump in Manual Mode.
Toggle between Auto and Manual Modes.
Input the High Pressure Limit for the Stage 7 Pump, must also Update Set Points.
Input the Low Pressure Limit for the Stage 7 Pump, must also Update Set Points.
The Update Set Points must always be depressed after a new limit is entered.

The Visual Indicators available on this screen are:
The Current Stage 7 Pump Header Display.
Motors that are currently turned on; Green Indication and Movement.
Washer Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling the Pretreatment System Pumps.

Overview Screen – Stage 8

Depressing the **Washer** Button followed by the **Stage 8** Button accesses the status of Stage 8 of the Pretreatment System.



The Control options available on this screen are:
Start and Stop the Stage 8 Pump and Exit Exhaust Fan in Manual Mode.
Toggle between Auto and Manual Modes.
Input the High Pressure Limit for the Stage 8 Pump, must also Update Set Points.
Input the Low Pressure Limit for the Stage 8 Pump, must also Update Set Points.
The Update Set Points must always be depressed after a new limit is entered.

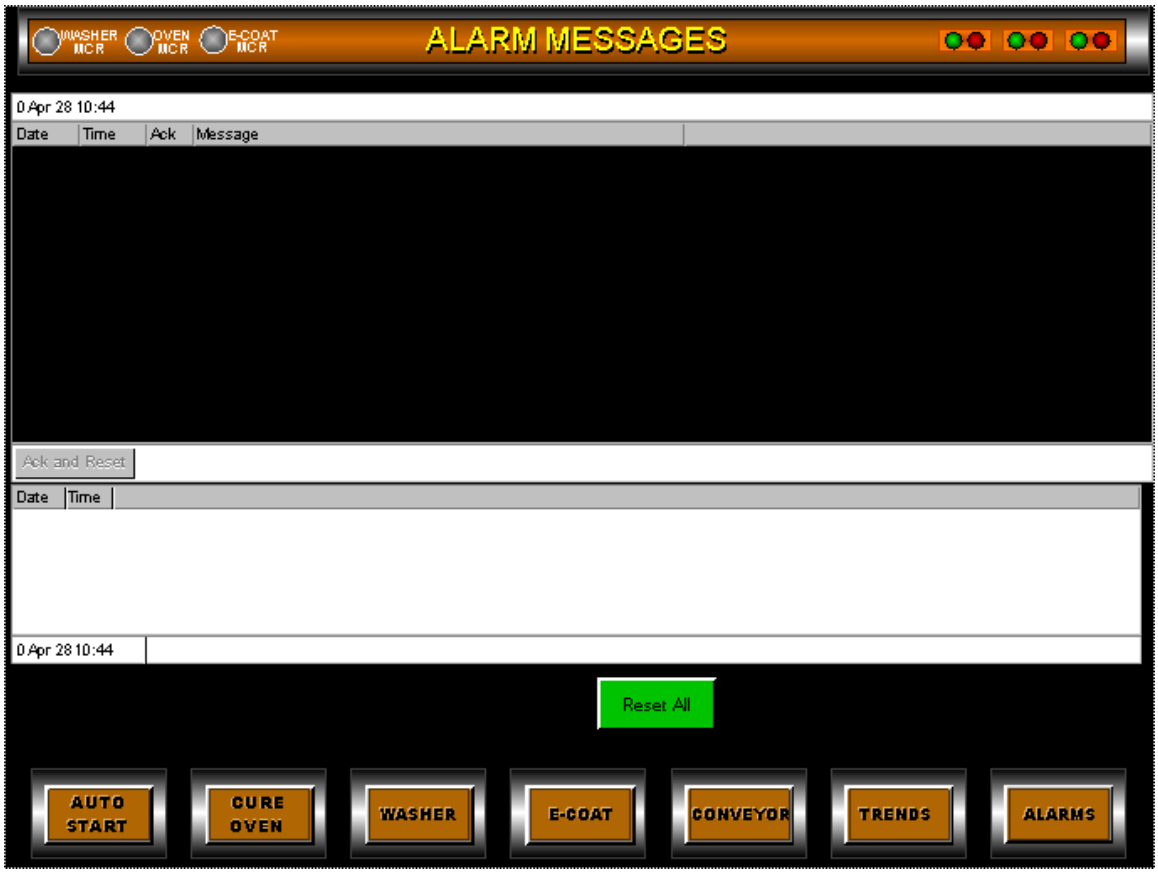
The Visual Indicators available on this screen are:
The Current Stage 8 Pump Header Display.
Motors that are currently turned on; Green Indication and Movement.
Washer Panel Emergency Stop Position Indicator; Red when tripped.
Alarm and Ready Light Status on Cure Oven Panel.
Key Switch Position for Enabling the Pretreatment System Pumps.

Alarms-Viewing Current and Acknowledged Alarms

When a new alarm occurs the Alarm Screen is Automatically Displayed. Depressing the **Alarms** from any screen will access the Alarm Screen.

IMPORTANT!

If an Alarm is Reset with the **Reset All** Button then if the Alarm is still Active it will reactivate the Alarm Screen and Beacon and will be displayed again, if it is not still Active then it will not be displayed again.



Alarm Messages- Currently Programmed Alarms

Currently Programmed Alarms are:

Cure Oven

Oven MCR Tripped [Must Release Stop and Press Reset]
Oven Production Temperature High [Temperature above Set Point Range]
Oven Production Temperature Low [Temperature below Set Point Range]
Oven Airflow Input Alarm Exhaust [Airflow Switch at Fan is not staying made]
Oven Airflow Input Alarm Recirc. 1 [Airflow Switch in Box is not staying made]
Oven Airflow Input Alarm Recirc. 2 [Airflow Switch in Box is not staying made]
Oven Airflow Input Alarm Recirc. 3 [Airflow Switch in Box is not staying made]
Oven Airflow Input Alarm Purge [Airflow Switch at Fan is not staying made]
Oven Hi Temp Limit [Switch on Burner Box is Tripped an must be Reset]
Oven High Gas Pressure [Switch on Gas Train is Tripped and must be Reset]
Oven Honeywell Flame [Flame Relay in Oven Panel is Tripped - must be Reset]
Oven Key Switch Off [Insert Key and Turn to Release Enable Button]
Oven Low Gas Pressure [Switch on Gas Train is Tripped and must be Reset]
Oven Overload Alarm Airseal 1 [Protector in Oven Panel Tripped – must Reset]
Oven Overload Alarm Airseal 2 [Protector in Oven Panel Tripped – must Reset]
Oven Overload Alarm Airseal 3 [Protector in Oven Panel Tripped – must Reset]
Oven Overload Alarm Airseal 4 [Protector in Oven Panel Tripped – must Reset]
Oven Overload Alarm CAB [Protector in Oven Panel Tripped – must Reset]
Oven Overload Alarm Exhaust [Protector in Oven Panel Tripped – must Reset]
Oven Overload Alarm Recirc. 1 [Protector in Oven Panel Tripped – must Reset]
Oven Overload Alarm Recirc. 2 [Protector in Oven Panel Tripped – must Reset]
Oven Overload Alarm Recirc. 3 [Protector in Oven Panel Tripped – must Reset]
Oven Purge Overload Alarm [Protector in Oven Panel Tripped – must Reset]
Oven Temperature Input 1 [Temperature Probe or Wiring Error]
Tunnel Overload Alarm Entrance [Protector in Oven Panel Tripped – must Reset]
Tunnel Overload Alarm Exit [Protector in Oven Panel Tripped – must Reset]

Conveyor

Conveyor1 VFD Alarm [VFD in Washer Panel Faulted - Must be Reset]
Oven Production Temperature High [Temperature above Set Point Range]
Oven Production Temperature Low [Temperature below Set Point Range]
Washer Production Temperature Low Stage 1 [Temperature below Range]
Washer Production Temperature Low Stage 3 [Temperature below Range]
Washer Production Temperature Low Stage 5 [Temperature below Range]
Washer Production Pumps Off [Conveyor Started at least one Pump is Off]

Alarm Messages- Currently Programmed Alarms

Washer

Washer MCR Tripped [Must Release Stop and Press Reset]
Washer Keyswitch Off [Insert Key and Turn to Release Enable Button]
Stage 1 Pump Pressure is out of Limits [High/Low Set Point on Stage 1 Screen]
Stage 2 Pump Pressure is out of Limits [High/Low Set Point on Stage 2 Screen]
Stage 3 Pump Pressure is out of Limits [High/Low Set Point on Stage 3 Screen]
Stage 4 Pump Pressure is out of Limits [High/Low Set Point on Stage 4 Screen]
Stage 5 Pump Pressure is out of Limits [High/Low Set Point on Stage 5 Screen]
Stage 6 Pump Pressure is out of Limits [High/Low Set Point on Stage 6 Screen]
Stage 7 Pump Pressure is out of Limits [High/Low Set Point on Stage 7 Screen]
Stage 8 Pump Pressure is out of Limits [High/Low Set Point on Stage 8 Screen]
Stage1 High Gas Pressure Alarm [Switch on Gas Train Tripped –Must be Reset]
Stage1 Honeywell Flame [Flame Relay in Washer Panel Tripped - Must be Reset]
Stage1 Low Gas Pressure Alarm [Switch on Gas Train Tripped – Must be Reset]
Stage1 Low Water Sensor Alarm [Probe in Tank is out of Water, Flame Disabled]
Stage1 Overload Alarm CAB 1 [Protector in Washer Panel Tripped – must Reset]
Stage1 Temperature Input Alarm [Temperature Probe or Wiring Error]
Stage3 High Gas Pressure Alarm [Switch on Gas Train Tripped –Must be Reset]
Stage3 Honeywell Flame [Flame Relay in Washer Panel Tripped - Must be Reset]
Stage3 Low Gas Pressure Alarm [Switch on Gas Train Tripped –Must be Reset]
Stage3 Low Water Sensor Alarm [Probe in Tank is out of Water, Flame Disabled]
Stage3 Overload Alarm CAB 3 [Protector in Washer Panel Tripped – must Reset]
Stage3 Temperature Input Alarm [Temperature Probe or Wiring Error]
Stage5 High Gas Pressure Alarm [Switch on Gas Train Tripped –Must be Reset]
Stage5 Honeywell Flame [Flame Relay in Washer Panel Tripped - Must be Reset]
Stage5 Low Gas Pressure Alarm [Switch on Gas Train Tripped –Must be Reset]
Stage5 Low Water Sensor Alarm [Probe in Tank is out of Water, Flame Disabled]
Stage5 Overload Alarm CAB 5 [Protector in Washer Panel Tripped – must Reset]
Stage5 Temperature Input Alarm [Temperature Probe or Wiring Error]
Washer Production Temperature Low Stage 1 [Temperature below Range]
Washer Production Temperature Low Stage 3 [Temperature below Range]
Washer Production Temperature Low Stage 5 [Temperature below Range]
Washer Keyswitch Off [Insert Key and Turn to Release Enable Button]
Washer Nozzle Pressure Alarm Stage 1 [Stage 1 Pump Pressure below 2 PSI]
Washer Nozzle Pressure Alarm Stage 2 [Stage 2 Pump Pressure below 2 PSI]
Washer Nozzle Pressure Alarm Stage 3 [Stage 3 Pump Pressure below 2 PSI]
Washer Nozzle Pressure Alarm Stage 4 [Stage 4 Pump Pressure below 2 PSI]
Washer Nozzle Pressure Alarm Stage 5 [Stage 5 Pump Pressure below 2 PSI]
Washer Nozzle Pressure Alarm Stage 6 [Stage 6 Pump Pressure below 2 PSI]
Washer Nozzle Pressure Alarm Stage 7 [Stage 7 Pump Pressure below 2 PSI]
Washer Nozzle Pressure Alarm Stage 8 [Stage 8 Pump Pressure below 2 PSI]

Alarm Messages- Currently Programmed Alarms

Washer

Washer Overload Alarm Entrance [Protector in Washer Panel Tripped –Reset]
Washer Overload Alarm Exit [Protector in Washer Panel Tripped – Must Reset]
Washer Overload Alarm Stage1[Protector in Washer Panel Tripped – Must Reset]
Washer Overload Alarm Stage2[Protector in Washer Panel Tripped – Must Reset]
Washer Overload Alarm Stage3[Protector in Washer Panel Tripped –Must Reset]
Washer Overload Alarm Stage4[Protector in Washer Panel Tripped –Must Reset]
Washer Overload Alarm Stage5[Protector in Washer Panel Tripped –Must Reset]
Washer Overload Alarm Stage6[Protector in Washer Panel Tripped –Must Reset]
Washer Overload Alarm Stage7[Protector in Washer Panel Tripped –Must Reset]
Washer Overload Alarm Stag 8[Protector in Washer Panel Tripped –Must Reset]
Washer Production Pumps Off [Conveyor Started at least one Pump is Off]

E-Coat

E-Coat MCR Tripped [Must Release Stop and Press Reset]
Ecoat Keyswitch Off [Insert Key and Turn to Release Enable Button]
Ecoat Chiller Fault Input [Condenser Panel Outside Tripped - Must be Reset]
E-Coat Chiller Pump Off [Chiller Pump for Water in Condenser Unit is Off]
E-Coat Heat Exchanger Pump Off [Heat Exchanger Pump for Paint Temp is Off]
Ecoat Heat Exchanger Pump Pressure High Limit [High Mechanical SP Limit]
Ecoat Heat Exchanger Pump Pressure Low Limit [Low Mechanical SP Limit]
Ecoat Ultra Filter High Pressure Limit [High Mechanical SP Limit]
Ecoat Ultra Filter Low Pressure Limit [Low Mechanical SP Limit]
Ecoat High Pressure Rinse 1[High Mechanical Set Point Limit -Pressure Switch]
Ecoat High Pressure Rinse 2[High Mechanical Set Point Limit - Pressure Switch]
Ecoat Low Pressure Rinse 1[Low Mechanical Set Point Limit on Pressure Switch]
Ecoat Low Pressure Rinse 2 [Low Mechanical Set Point Limit -Pressure Switch]
Ecoat Low Water Rinse 1 Rinse 1[Low Mechanical Float Level Switch]
Ecoat Low Water Rinse 2 [Low Mechanical Float Level Switch]
Ecoat Overload Input Anolyte Pump[Protector in Anolyte Panel Tripped –Reset]
Ecoat Overload Input Chiller Pump [Protector in E-Coat Panel Tripped –Reset]
Ecoat Overload Input Entrance Fan [Protector in E-Coat Panel Tripped –Reset]
Ecoat Overload Input Exit Fan [Protector in E-Coat Panel Tripped – Must Reset]
Ecoat Overload Input Heat Exchanger [Protector in Heat Panel Tripped –Reset]
Ecoat Overload Input Post Rinse 1 [Protector in E-Coat Panel Tripped -Reset]
Ecoat Overload Input Post Rinse 2 [Protector in E-Coat Panel Tripped –Reset]
Ecoat Overload Input Transfer 1 [Protector in E-Coat Panel Tripped –Reset]
Ecoat Overload Input Transfer 2 [Protector in E-Coat Panel Tripped –Reset]
Ecoat Overload Input Ultra Filter [Protector in Filter Panel Tripped –Reset]
Ecoat Production Post Rinse Pumps Off [Conveyor Started at least one pump Off]

Alarm Messages- Currently Programmed Alarms

E-Coat

Ecoat Production Rectifier Off [Conveyor Started-Rectifier is turned Off]
Ecoat Production Temperature High Alarm[Conveyor Started E-Coat Temp High]
Ecoat Production Temperature Low [Conveyor Started E-Coat Temperature Low]
Ecoat Rectifier Fault Input [Rectifier Panel is Faulted and Must be Reset]
Ecoat Side Tank Lid Open - Rectifier Disabled [Rectifier Disabled until Closed]
Ecoat Tank High Solution Level Alarm [Low Mechanical Float Level Switch]
Ecoat Tank Low Solution Level Alarm [High Mechanical Float Level Switch]
E-Coat Ultra Filter Pump Off [Ultra Filter Pump for Paint Circulation is Off]

PLC Communications

Communication Failure [DeviceNet Failure, E-Coat Panel or Oven Panel Error]
Device Failure on Network [DeviceNet Fail; E-Coat Panel or Oven Panel Error]
DeviceNet Power Failure [DeviceNet 24 VDC Power Failure]
Duplicate Node Failure [Two Devices on DeviceNet with the same Address]
Scanner Faulted [DeviceNet Scanner Faulted in Washer Panel]
Scanner Network Disabled [DeviceNet Scanner disabled in Software]
Scanner Stopped [DeviceNet Scanner is Stopped in Washer Panel]