

Tech For Ag

Heritage CIP Receiver Group Controller Operation & Maintenance Guide



Manufactured by *North American Phoenix* for:

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Index:

1. System Overview
2. Assembly Information
3. Controller Hardware
4. Controller Hardware Cont..
5. Touchscreen-Control Screens
6. Touchscreen-Configuration Screens
7. Touchscreen-Configuration Screens:
Chemical Pump Timers – 1st screen
8. Touchscreen-Configuration Screens:
Air Injector Timers – 2nd screen
9. Touchscreen-Configuration Screens:
Sanitize Times – 3rd screen
10. Touchscreen-Configuration Screens:
Wash Cycle Times – 4th screen
11. Touchscreen-Configuration Screens:
Wash Cycle Drain Times – 5th screen
12. Touchscreen-Configuration Screens:
System Time & Date – 6th screen
13. Touchscreen-Lockout Screen
14. Troubleshooting Reference Guide

This document is intended to be used as a general guide only and may not represent actual system purchased due to options selected.

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System Overview




- The Heritage CIP Receiver Group Controller is used to control the Heritage CIP Receiver Group operation during both during milking and the washing cycles.
- The controller enables the milk and vacuum pump Variable Frequency Drives, the receiver group float system during the milking cycle, and provides control of all devices used during the wash cycle.
- The controller is a digital-based system with integral control logic to perform system operational sequences.
- Manual and automatic operational sequences are enabled through a touch screen located on the front of the control panel.
- All wash cycle settings are configurable through the touch screen located on the front of the control panel.
- Up to 3 configurable sanitization times.

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Assembly Information

(Located on cover interior)

A rectangular form with a white background and a thin border. It contains the North American Phoenix logo on the left and contact information on the right. Below this is a list of fields for customer and technical information, each followed by a horizontal line for input.

 8310 Technology Drive
Schofield, WI 54476
Phone: 715.359.0209
Fax: 715.359.1049

Customer: _____
Manufactured Date: _____
Job No.: _____
Panel No.: _____
Application- _____
Voltage _____ VAC/ _____ Amps/ _____ Phase/ _____ Hz
Largest Motor- _____ HP/ _____ Amps _____ Phase/ _____ Hz
Short Circuit Current - 5kA rms sym., _____ V max.
Drawing Number(s) - _____
Duty Cycle - _____
Enclosure Type - _____



Assembly Manufacturer Tag

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Controller Hardware



Touchscreen for controlling operation cycles and entering configurations



Digital Controller



120VAC & 24VDC Power & Control Fuse

Powersupply

Control Relays



Control Terminals

Conduit Connection locations at bottom of enclosure

Controller Hardware Cont.

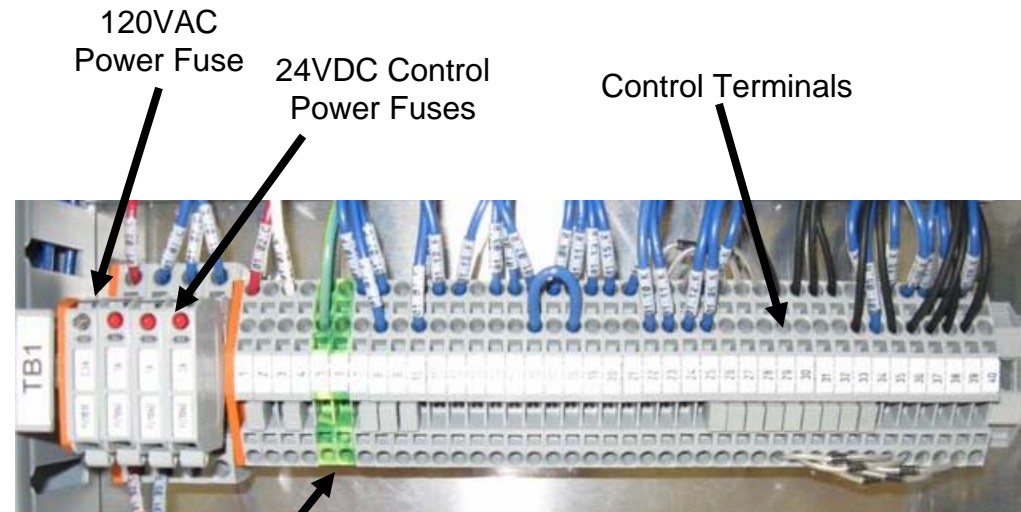


System Control Inputs & Outputs

Power Connection

Digital Controller

The digital controller provides for all automatic sequences performed by the assembly. The control logic is supplied by North American Phoenix and is preloaded within the controller. The controller incorporates flash-memory, which provides for the retention of memory in the event of a power loss.

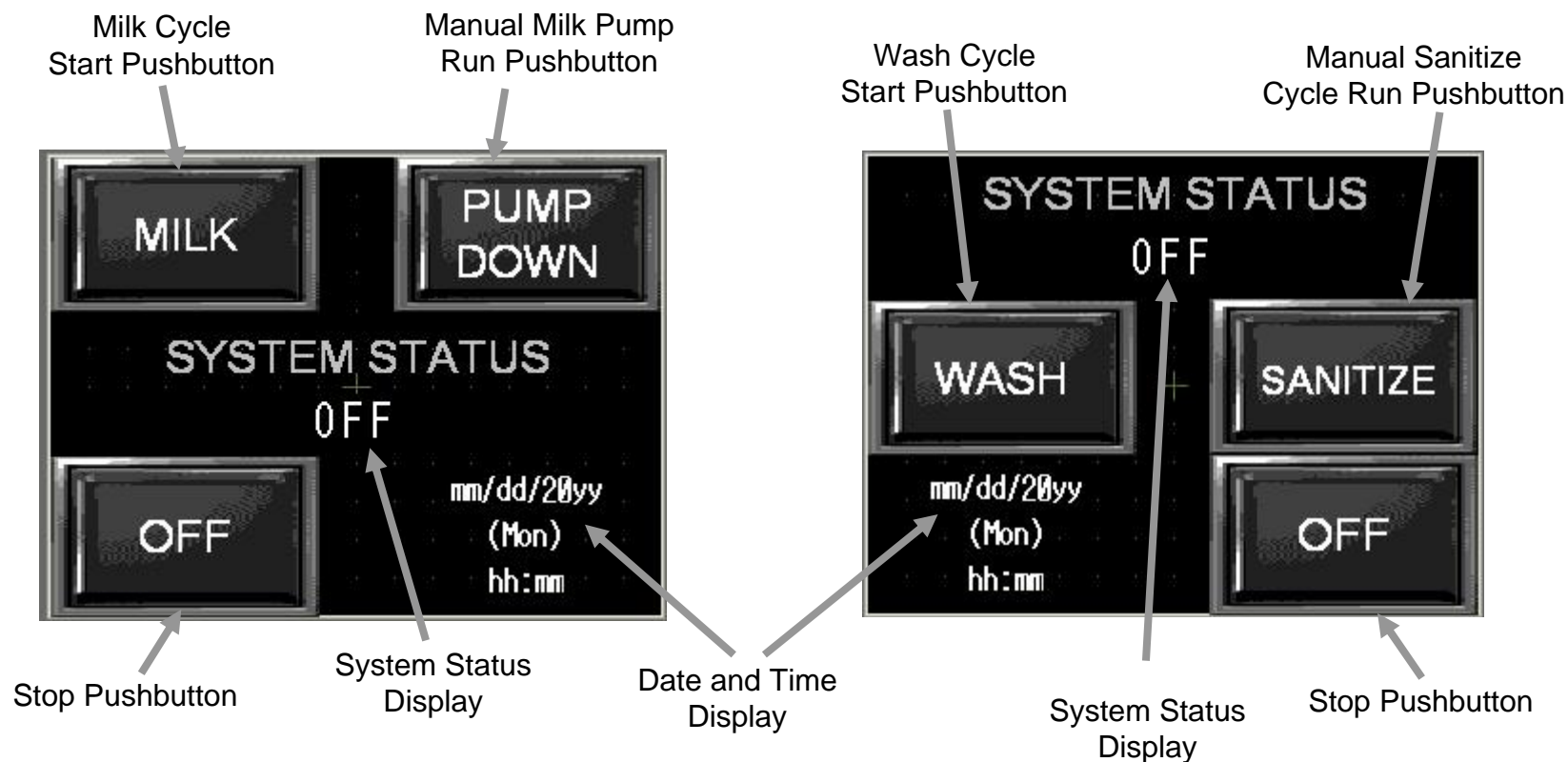


Ground Connection

Control Logic Fuse and Terminals

The 120VAC and 24VDC fusing provides for electrical circuit protection of the digital controller and all inputs and outputs to/from the digital controller. The fuse holders have blown fuse indication lights that light up if a fuse has failed. Terminals provide for the interface of all internal panel components and provide for a means to interface system field connections.

Touchscreen-Control Screens



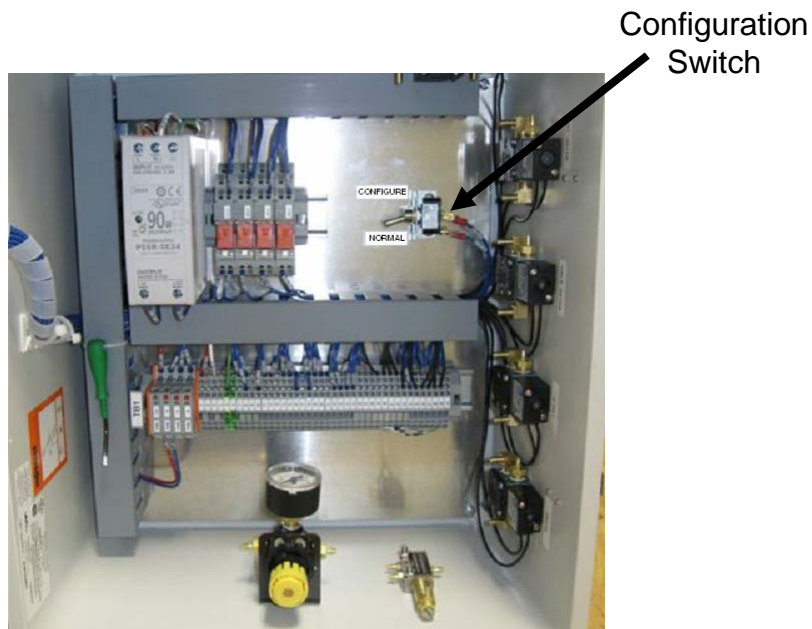
Milk Cycle Screen

This screen will be displayed when the milk swing line is placed in the milking position and the configuration switch is in the normal position.

Wash Cycle Screen

This screen will be displayed when the milk swing line is placed in the washing position and the configuration switch is in the normal position.

Touchscreen-Configuration Screens



Configurable settings:

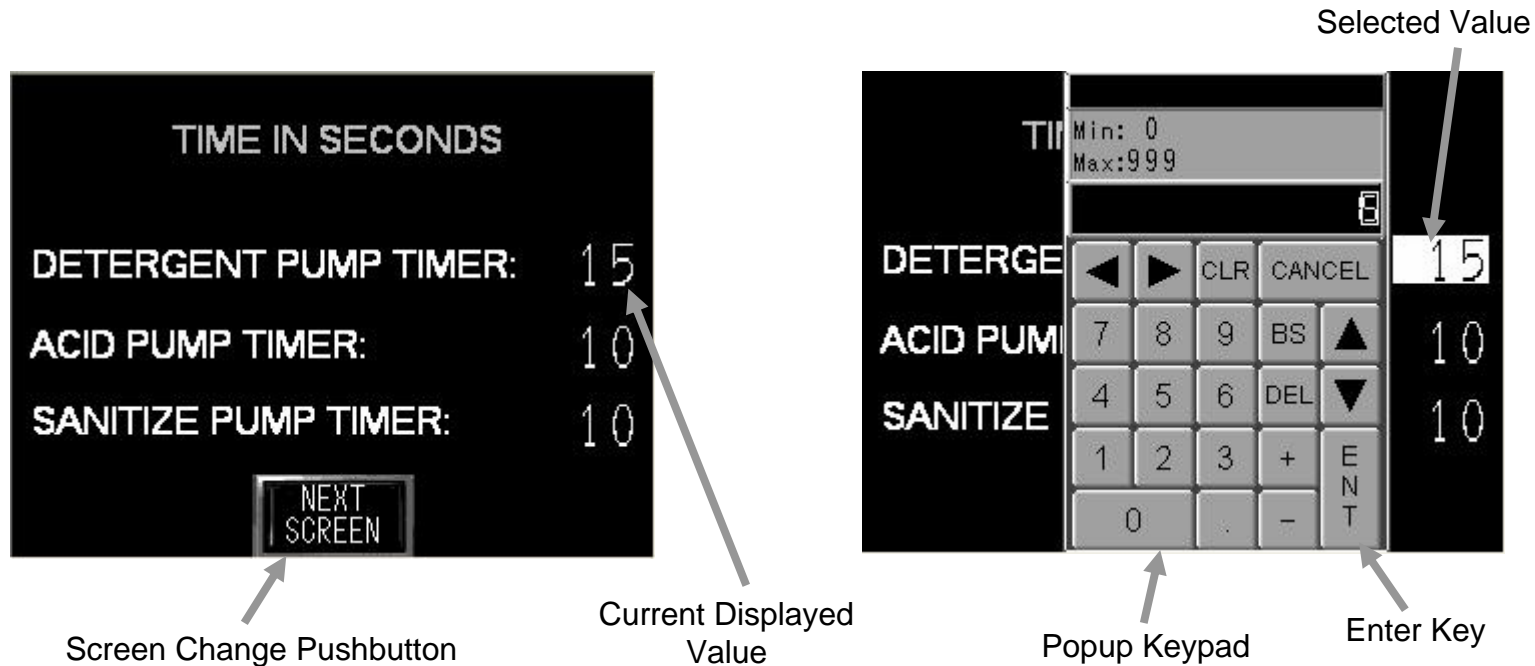
- Chemical pump runtimes
- Air injector on/off times
- Automatic sanitize cycle start times (up to 3 per day)
- Rinse/detergent/acid/sanitize cycle times
- Rinse/detergent/acid/sanitize cycle drain times
- System clock & calendar
- System lockout date (when enabled)

Configuration Switch

The configuration screens are enabled when the configuration switch inside the controller enclosure is placed in the 'CONFIGURE' position. The first configuration screen (chemical pumps timers) is displayed when the configuration switch is placed in the 'CONFIGURE' position. Return the configuration switch, inside the controller enclosure, to the 'NORMAL' position to return to the control screens. Configuration changes can be made while the Milk or Wash cycles are in progress but be aware that making configuration changes during an operating cycle may effect that cycle.

Touchscreen-Configuration Screens

Chemical Pump Timers – 1st screen

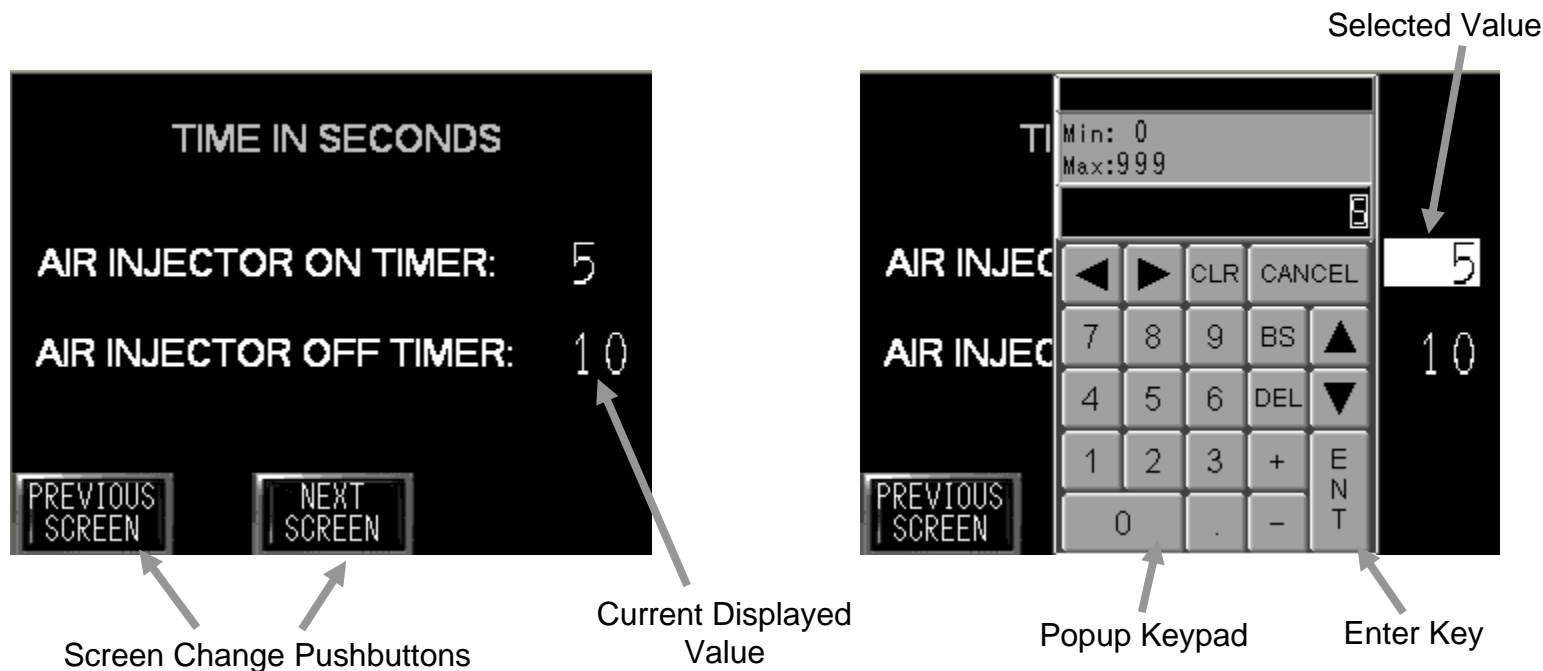


Chemical Pump Timers Screen

This screen will be displayed when the configuration switch inside the controller enclosure is placed in the 'CONFIGURE' position. This screen displays the current run time, in seconds, for each of the chemical pumps. The run times can also be changed from this screen. To change times, press the current displayed value and enter a new value on the popup keypad then press the enter key on the popup keypad to apply the new value entered. Press the 'NEXT SCREEN' button to move to the next configuration screen.

Touchscreen-Configuration Screens

Air Injector Timers – 2nd screen

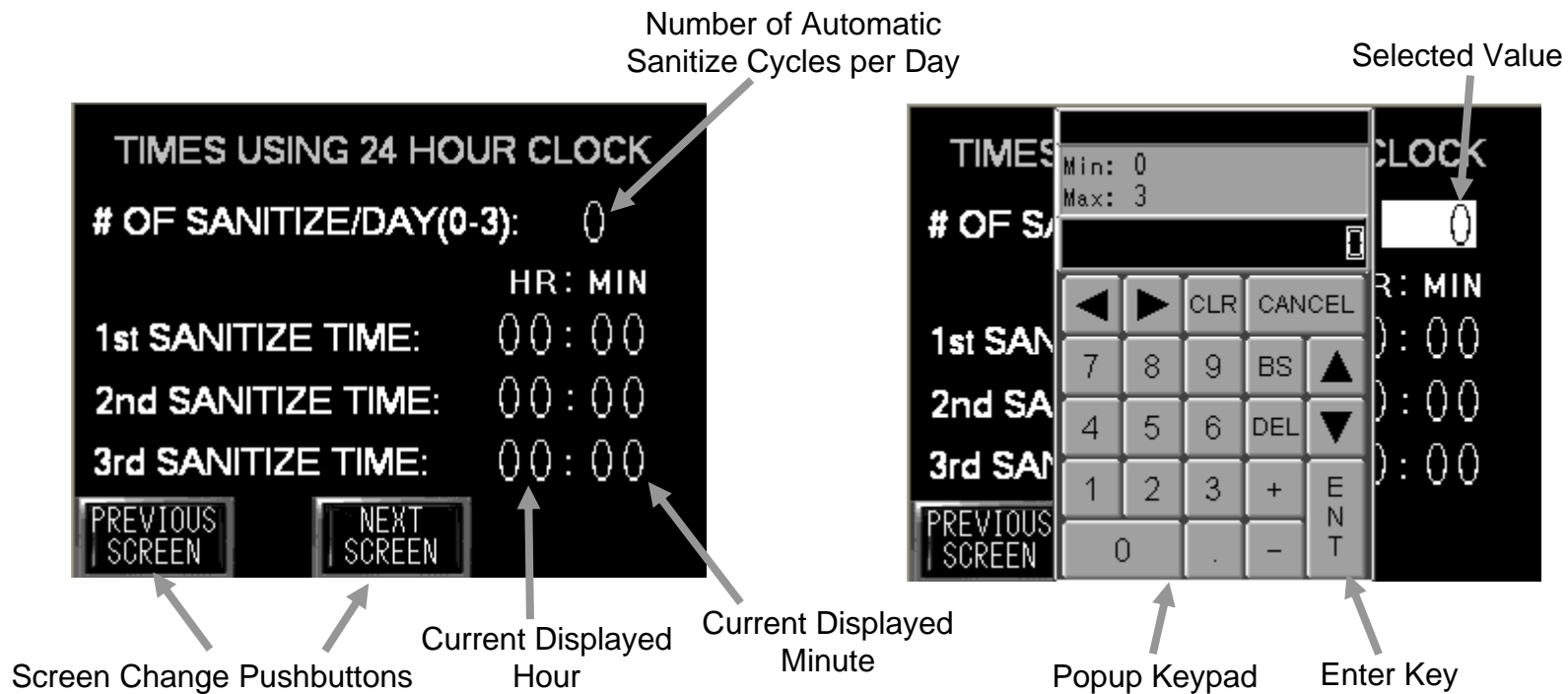


Air Injector Timers Screen

This screen displays the current on and off times, in seconds, for the air injector. The on/off times can also be changed from this screen. To change times, press the current displayed value and enter a new value on the popup keypad then press the enter key on the popup keypad to apply the new value entered. Press the 'PREVIOUS SCREEN' button to move to the previous configuration screen. Press the 'NEXT SCREEN' button to move to the next configuration screen.

Touchscreen-Configuration Screens

Sanitize Times – 3rd screen

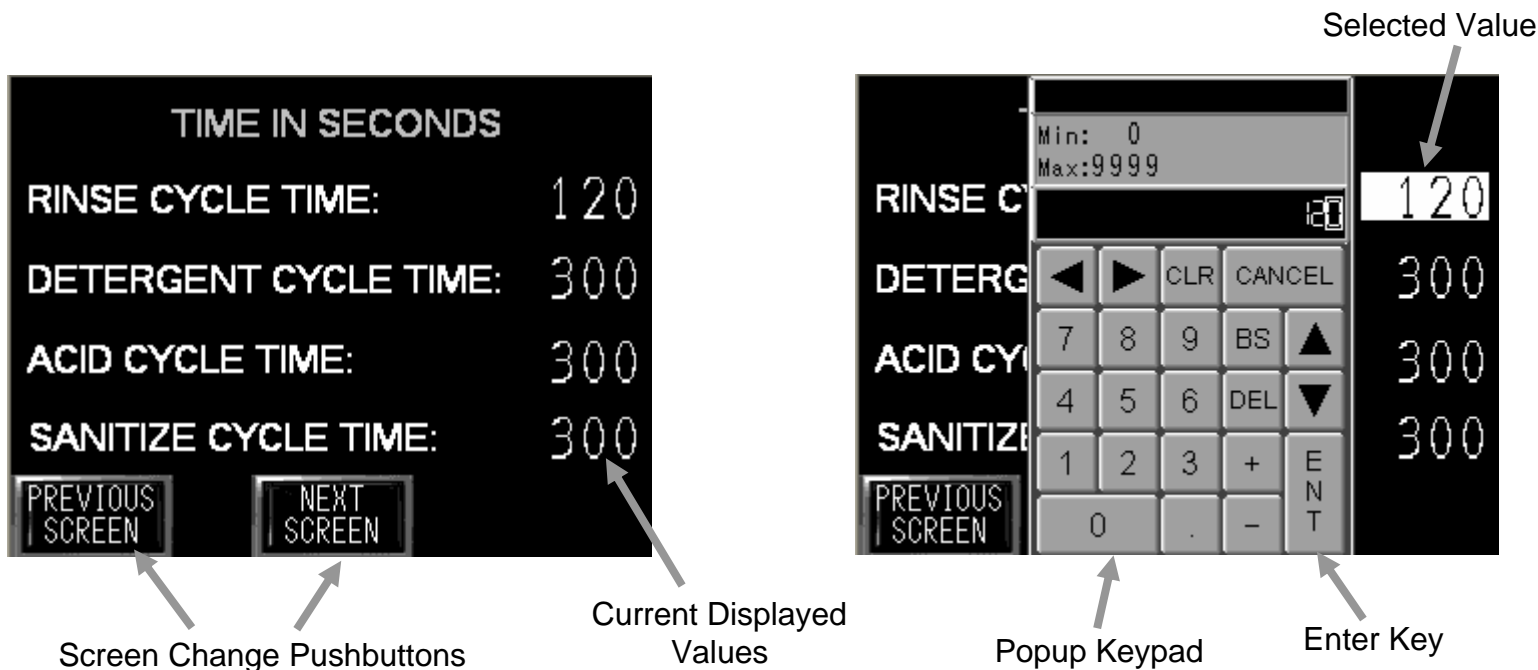


Sanitize Times Screen

This screen displays the current number of automatic sanitize times and the time that each sanitize cycle will start. The number of cycles and the start times can also be changed from this screen. To change times, press the current displayed value and enter a new value on the popup keypad then press the enter key on the popup keypad to apply the new value entered. Start times can only be changed if the number of sanitize cycles per day is large enough to include that selected time. Start time hour and minute are entered as separate values using 24 hour clock for the hour. Press the 'PREVIOUS SCREEN' button to move to the previous configuration screen. Press the 'NEXT SCREEN' button to move to the next configuration screen.

Touchscreen-Configuration Screens

Wash Cycle Times – 4th screen

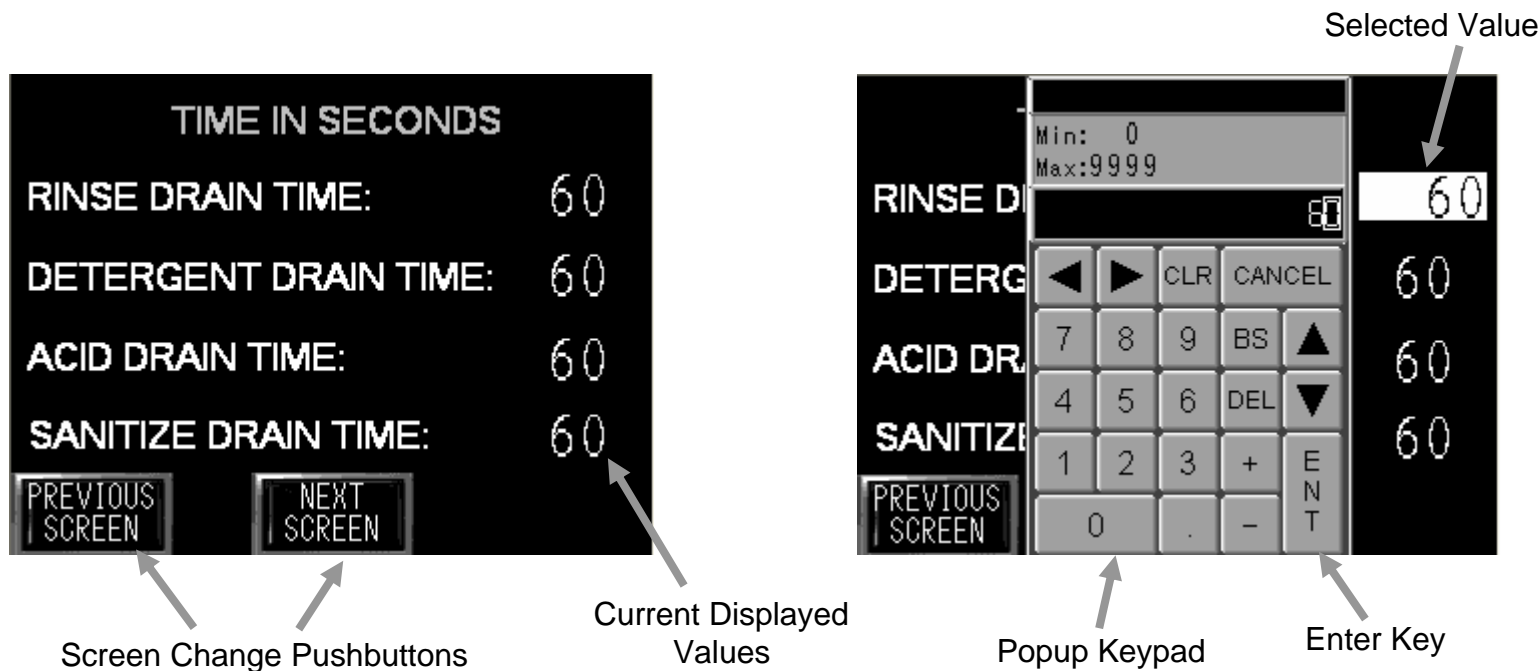


Wash Cycle Times Screen

This screen displays the current cycle times, in seconds, for each of the wash cycle. The cycle times can also be changed from this screen. Press the current displayed value and enter a new value on the popup keypad then press the enter key on the popup keypad to apply the new value entered. Press the 'PREVIOUS SCREEN' button to move to the previous configuration screen. Press the 'NEXT SCREEN' button to move to the next configuration screen.

Touchscreen-Configuration Screens

Wash Cycle Drain Times – 5th screen

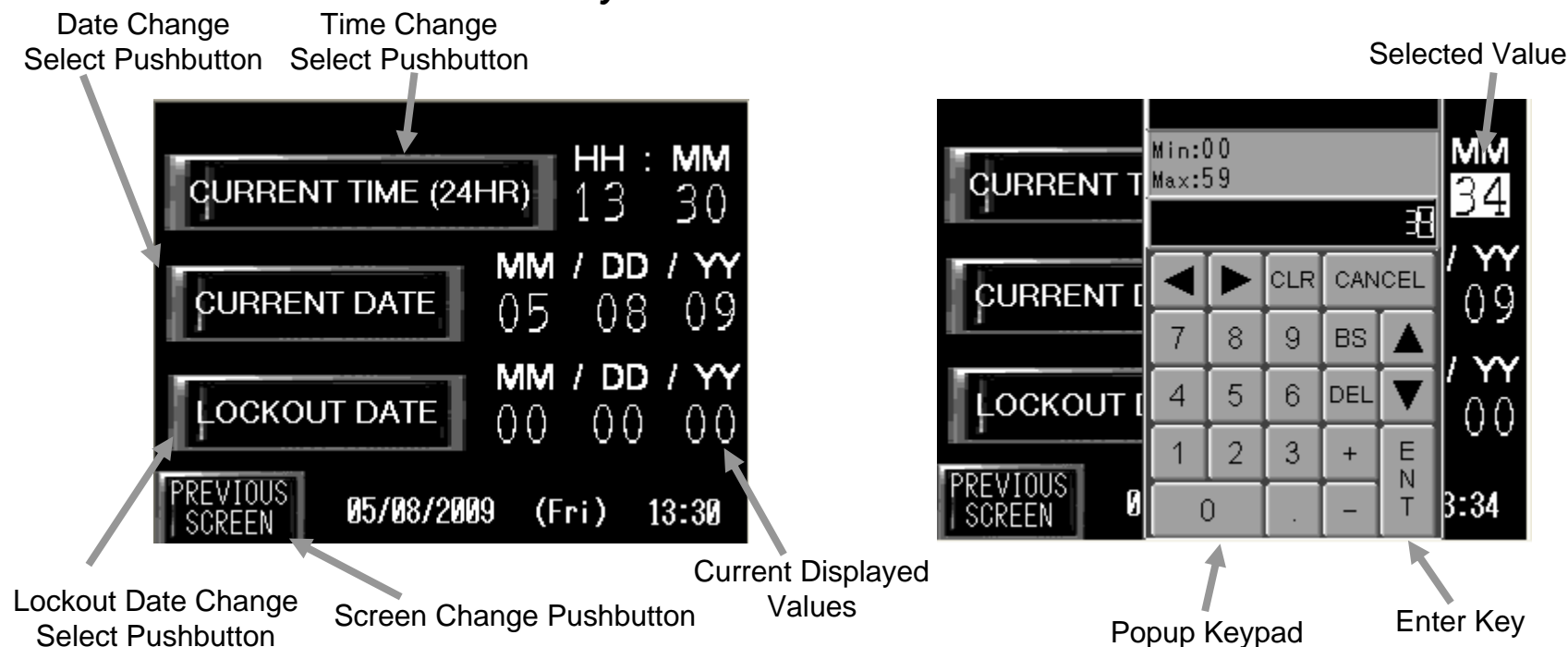


Wash Cycle Drain Times Screen

This screen displays the current drain times, in seconds, for each of the wash cycle. The drain times can also be changed from this screen. Press the current displayed value and enter a new value on the popup keypad then press the enter key on the popup keypad to apply the new value entered. Press the 'PREVIOUS SCREEN' button to move to the previous configuration screen. Press the 'NEXT SCREEN' button to move to the next configuration screen.

Touchscreen-Configuration Screens

System Time & Date – 6th screen



System Time & Date Screen

This screen displays the time (24 hour clock), current date and lockout date. The time, current date and lockout date can also be changed from this screen. First press the Time/Date Change Select Pushbutton for the parameter you want to change. Next press the current displayed value and enter a new value on the popup keypad then press the enter key on the popup keypad to apply the new value entered. Last, press the Time/Date Change Select Pushbutton for the parameter you changed to complete the change. The time hour and minute are entered as separate values using 24 hour clock for the hour. The date month, day and year values are entered as separate values. These values cannot be changed if the System Lockout has been enabled, even if the system has not been disabled by the System Lockout. Press the 'PREVIOUS SCREEN' button to move to the previous configuration screen.

Touchscreen-Lockout Screen



Lockout Screen

This screen displays if the System Lockout has been enabled by the installer and the Lockout Date has passed. The system will be lock and will not operate in any mode – Milk, Wash, or Configuration. Also, the system will shutdown if it is operating in any mode when the Lockout Date is pass and the System Lockout is enabled. Contact the installer to reset the System Lockout.

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1855A West Davenport St.
Rhineland, WI 54501
Phone: 715-360-3660
Or: 715-550-4684

Troubleshooting Reference Guide



North American Phoenix
8310 Technology Drive
Schofield, WI 54476
Phone: 715.359.0209

- **Issue:** Display screen is blank. **Potential Cause:** Power connections to control assembly not made or power fusing not installed/blown or control power not present or control fusing not installed/blown or internal powersupply failure or display/controller failure. **Corrective Action:** Check 120 VAC power source for potential, ensure power fusing present/not blown, check for proper control voltage, check for indicator light on internal powersupply, check for indicator light on display/controller.
- **Issue:** Display screen reads “Missed Payment Lockout” and milk or wash system will not start. **Potential Cause:** System has been set to stop operation if payment is not received before lockout time. **Corrective Action:** Contact Tech For Ag to make arrangements for payment and to have the system reset.
- **Issue:** Milk screen or wash screen not displayed when desired. **Potential Cause:** Milk swing line is not in correct position or configuration switch is left in the ‘Configuration’ position or fuse ‘FU106C’ is blown or milk swing line position switch failure. **Corrective Action:** Verify/move milk swing line to correct position for desired operation, place configuration switch in ‘Normal’ position, check/replace fuse ‘FU106C’ if blown fuse indicator light is on, replace milk swing line position switch.
- **Issue:** Unable to change system time or date. **Potential Cause:** System has been set to stop operation if payment is not received before the lockout time. **Corrective Action:** Contact Tech For Ag to make arrangements for payment and to have the system reset. Time and date can not be changed while the system lockout is enabled, even if the system has not yet reached the lockout date.
- **Issue:** Control power fuse is blown. **Potential Cause:** Over current condition exists. **Corrective Action:** Check for short-circuit condition. Start by checking all field connected devices i.e. milk swing line position switch, water level switch, chemical pumps. Replace/correct condition and replace control fusing.
- **Issue:** Milk cycle or wash cycle will not start when screen button is pressed. **Potential Cause:** Wash or sanitize cycle has not completed drain down at end of cycle or after an interrupted cycle. **Corrective Action:** Wait until the system drain down delay is complete and try starting again.

WARNING! Installation and maintenance is strongly recommended to be performed by qualified personnel only. Extreme caution is necessary to avoid electrical hazard, which can result in serious injury and potential death.