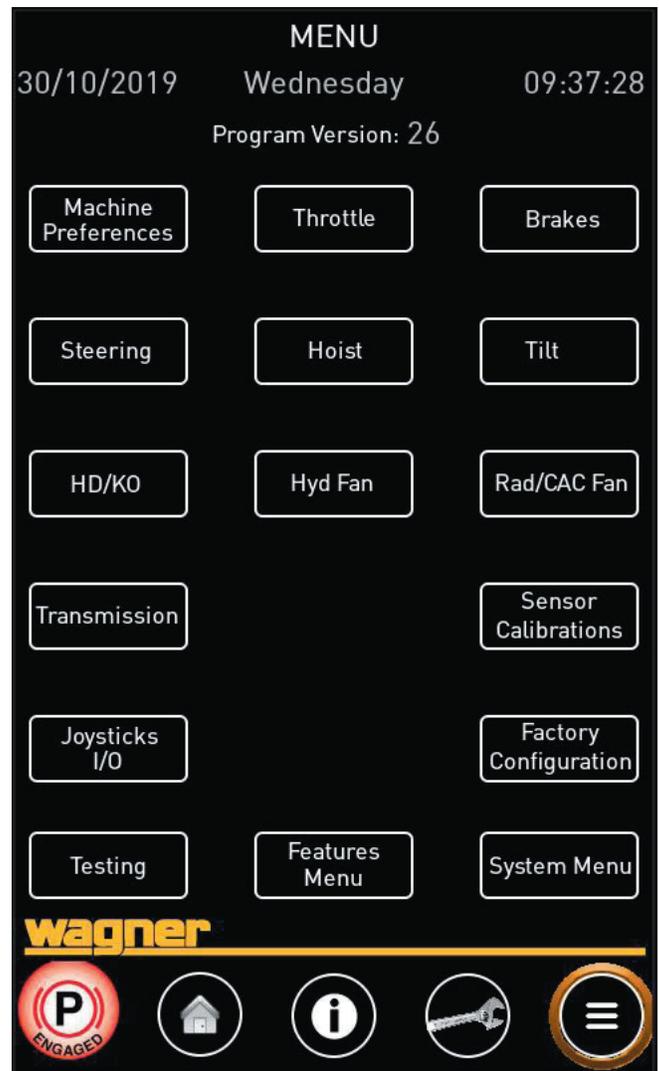


Wagner Smart Screen Service/Troubleshooting Screens



Menu Button



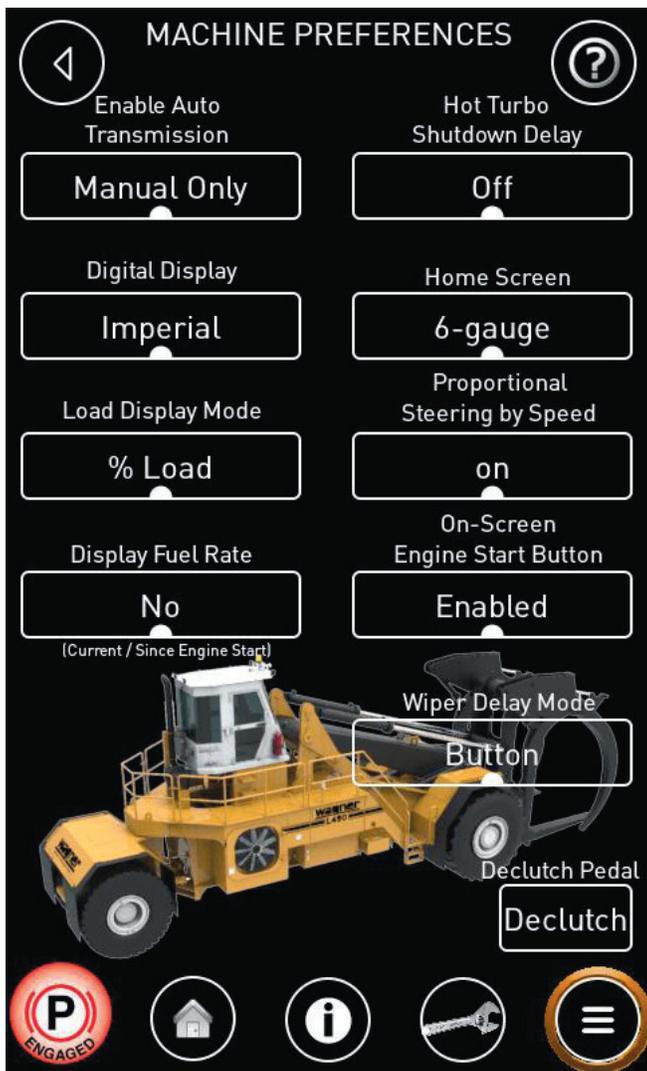
PIN code login

When you first click on the “Menu” button, you will be prompted for a PIN code. Enter **0070** and click the check mark. This will allow you to access the Menu Screen, which has links to all setup and troubleshooting screens.

Once the PIN code is entered, the menu screen will be available to select until the machine is powered down. When the machine is next started, that screens will not be available until the PIN code is reentered.

Menu Screen

Once the PIN code is accepted, the main menu screen is available. The menu options may be selected to open various screens for setting up preferences, calibrating, and troubleshooting.



Machine Preferences

The Machine Preferences screen allows you to configure the machine based on operator or site preferences.

Enable Auto Transmission

The transmission may be set to:

- **Manual Only** - Only manual shifting is allowed.
- **Auto Allowed** - Full automatic shifting in forward and reverse. May be toggled between Auto and Manual from the home screen.
- **Auto Only** - Only automatic shifting is allowed.

Digital Display

Configures units on the home screen. Settings:

- **Imperial**
- **Metric**

Load Display Mode

Configures the load display on the home screen. Options:

- **% Load**
- **Weight (Lbs)**
- **Weight (KG)**

Display Fuel Rate

Controls the display of the fuel consumption rate on the home screen.

Hot Turbo Shutdown Delay

- **Off** - The engine will shut down immediately after the key is turned off.
- **On - Recommended**. The engine may continue to idle for some time after the key is turned off. This allows oil to continue to circulate to cool the turbo. The time until the engine shuts down is determined by engine coolant temperature, and may range from 0 to 3 minutes.

Home Screen

Sets the layout of the home screen. Settings:

- **6-gauge** - Standard 6 gauge layout - *Default*
- **3-gauge** - Optional simplified 3 gauge layout. Will revert back to standard 6 gauge layout when the machine is restarted.

Proportional Steering by Speed

- **On - Recommended**. Joystick steering becomes less responsive as ground speed increases.
- **Off** - Joystick steering is consistent regardless of ground speed.

On-Screen Engine Start Button

Controls the display of the engine start button on the home screen.

- **Disabled** - The “Engine Start” button on the home screen will be disabled, regardless of engine RPM.
- **Enabled** - The “Engine Start” button on the home screen will be displayed whenever the engine RPM is 600 RPM or less.

Wiper Delay Mode

Sets the wiper delay control. Settings:

- **Button**
- **Slider**
- **Pulse**

See next section for descriptions of the wiper delay modes.

Wiper Delay Modes

Button Mode

The mode works when one of the buttons on either joystick is programmed for “Wiper Delay”.

With the wiper switch on the intermittent setting, press the Wiper Delay button on the joystick for 0.8 seconds. When you hear a beep, release the button. An internal timer (not shown on the screen) will start counting from 0 seconds.

When you press the Wiper Delay button again (momentarily), you will set the wiper delay period, which will appear on the home screen under the wiper icon. The wiper will actuate on that interval indefinitely until it is changed, or until the wiper switch is turned to off or on.

Press the Wiper Delay Button again for 0.8 seconds to reset the interval.

Slider Mode

With the wiper switch on the intermittent setting, a timer will appear on the home screen. The delay can be adjusted on the home screen by pressing the wiper icon. A slider will appear; slide the control up or down to increase or decrease the delay. The delay in seconds is shown below the wiper icon.

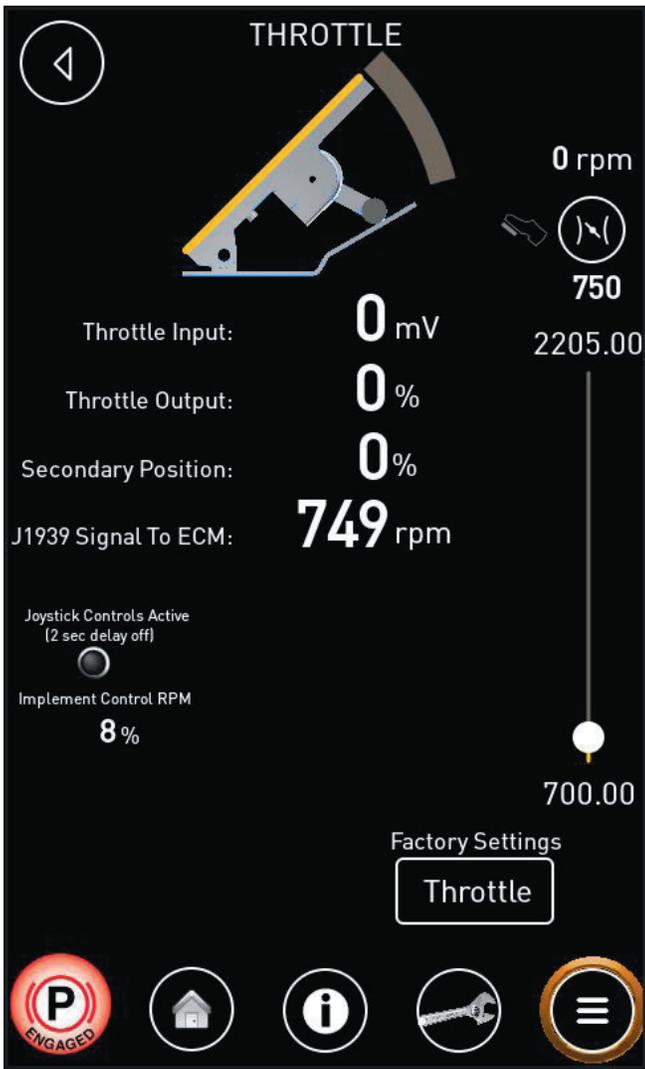
The wiper delay can also be set in the Operator’s Menu screen. Use the **DN** and **UP** buttons to increase or decrease the delay time in 1 second increments.

Pulse Mode

With the wiper switch on the intermittent setting, the wipers will actuate only when the Wiper Delay Button on the joystick is pressed. They will actuate only once per button press.



Slider Mode



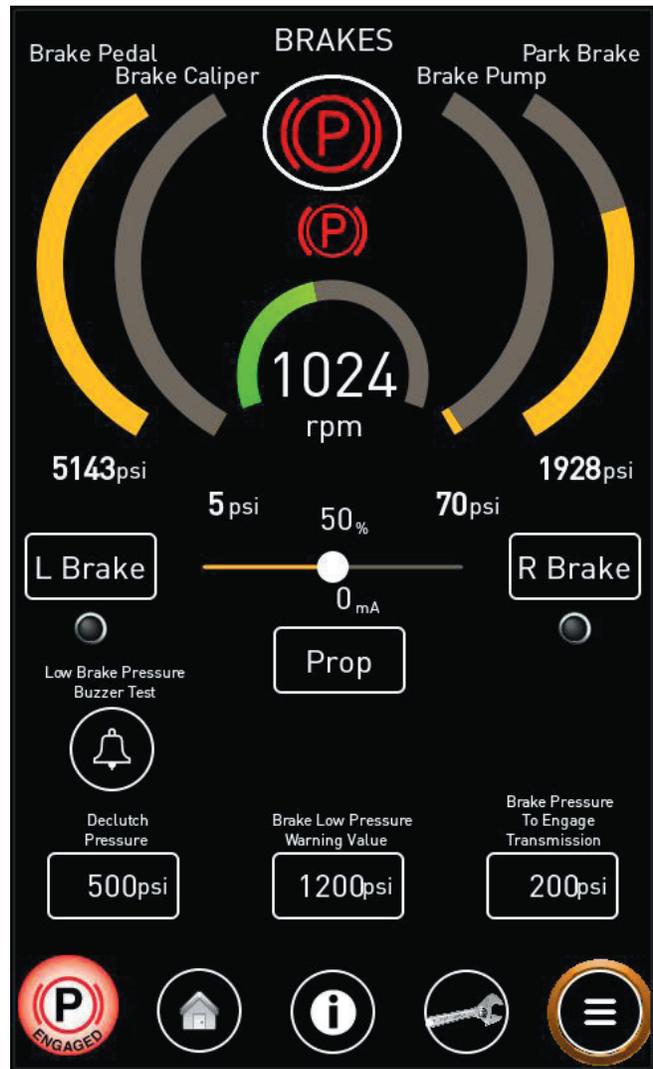
Throttle

The Throttle screen displays the throttle pedal inputs and the output signal to the ECM. The “Joystick Controls Active” light indicates if the engine RPM is being elevated to avoid engine stall during activation of a hydraulic function.

Additional settings are available behind the factory PIN. The factory PIN is 2300. Contact Allied Systems Company for details.



Use caution when accessing screens that are only available after entering the factory PIN. These screens are able to change the performance and calibration of the machine, and may render the machine inoperable or unsafe if adjusted incorrectly.



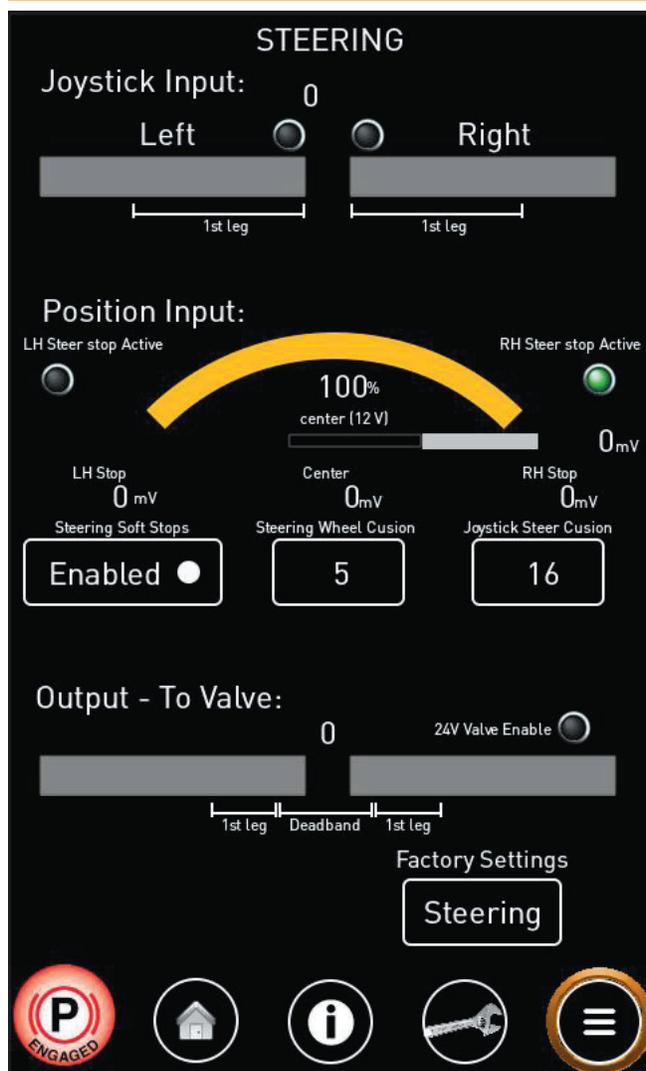
Brakes

The Brakes screen displays pressures for the service brake, the brake caliper, the brake pump, and the park brake, and allows you to test the low brake pressure alarm.

The “L Brake” and “R Brake” buttons allow you to manually apply the left side or right side brakes.

Declutch Pressure allows you to adjust the brake pressure point that disengages transmission for declutch.

Brake Pressure To Engage Transmission adjusts the amount of brake pressure (which is directly related to brake pedal force) required to come out of park.



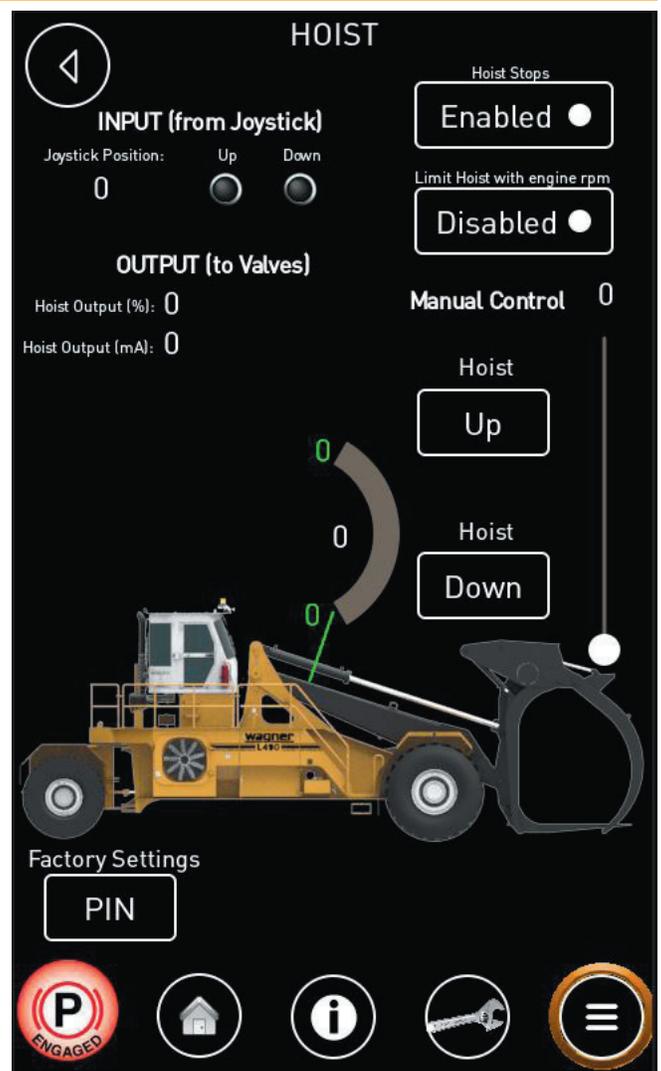
Steering

The Steering screen is used to view the joystick steering performance. The stroke of the joystick is split into a dual ramp functionality. The stroke of the 1st leg corresponds to the 1st leg of the output to valve. The remainder of the stroke then corresponds to the remainder of the output to valve. This is to smooth out the steering control.

The Position Input displays the current steering angle, and the indicator lights illuminate when the LH or RH steering stops are active.

The steering stops may be enabled (recommended), or disabled. When disabled, the steering control will not be cushioned at the end of travel.

Additional settings and cushion values are available behind the factory PIN. Contact Allied Systems Company for details.

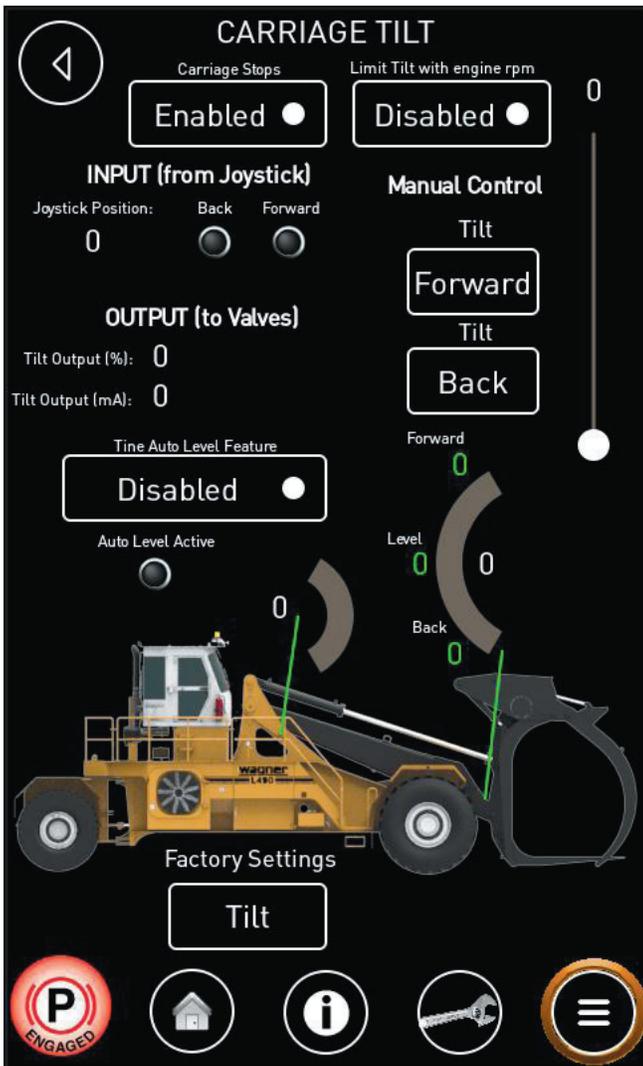


Hoist

The Hoist screen displays the hoist input from the joystick and output to the hydraulic valves. Hydraulic cushioning at the stops may be enabled (recommended) or disabled, and hoist speed may be set to be limited with engine RPM (recommended). This helps prevent stalling and surging when hoisting at low engine RPM.

The hoist may be manual raised or lowered. The slider sets the hoist speed during manual control.

Additional settings are available behind the factory PIN. Contact Allied Systems Company for details.

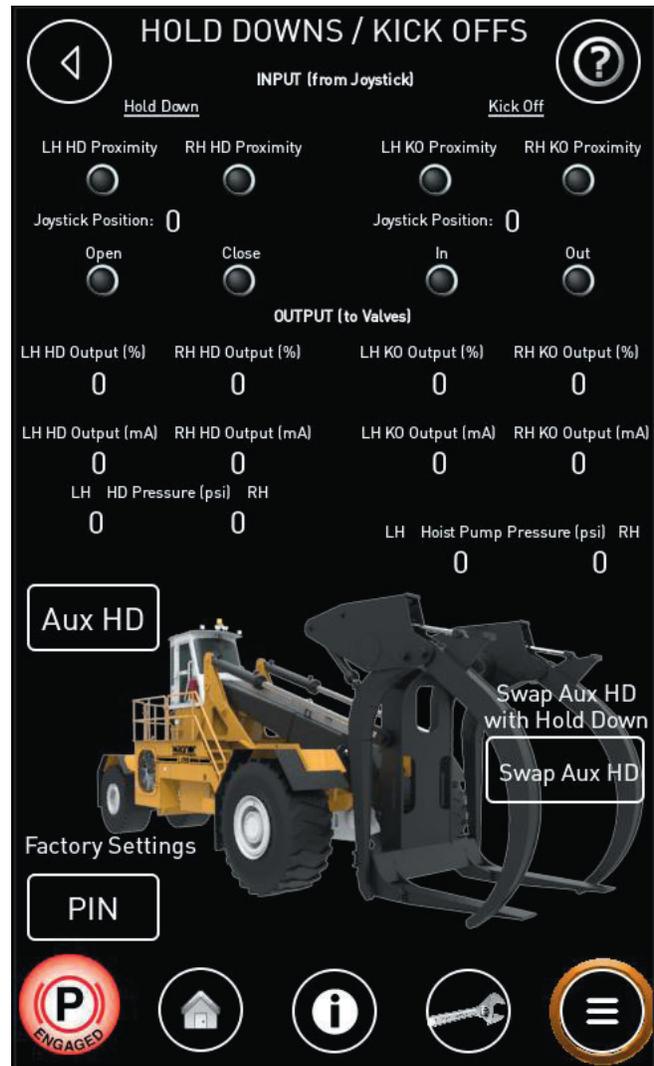


Carriage Tilt

The Carriage Tilt screen displays the tilt input from the joystick and output to the hydraulic valves. Hydraulic cushioning at the stops may be enabled (recommended) or disabled, tilt may be limited by engine RPM, and the tine auto level feature may be enabled or disabled.

The carriage may be manual tilted forward or back. The slider sets the tilt speed during manual control.

Additional settings are available behind the factory PIN. Contact Allied Systems Company for details.



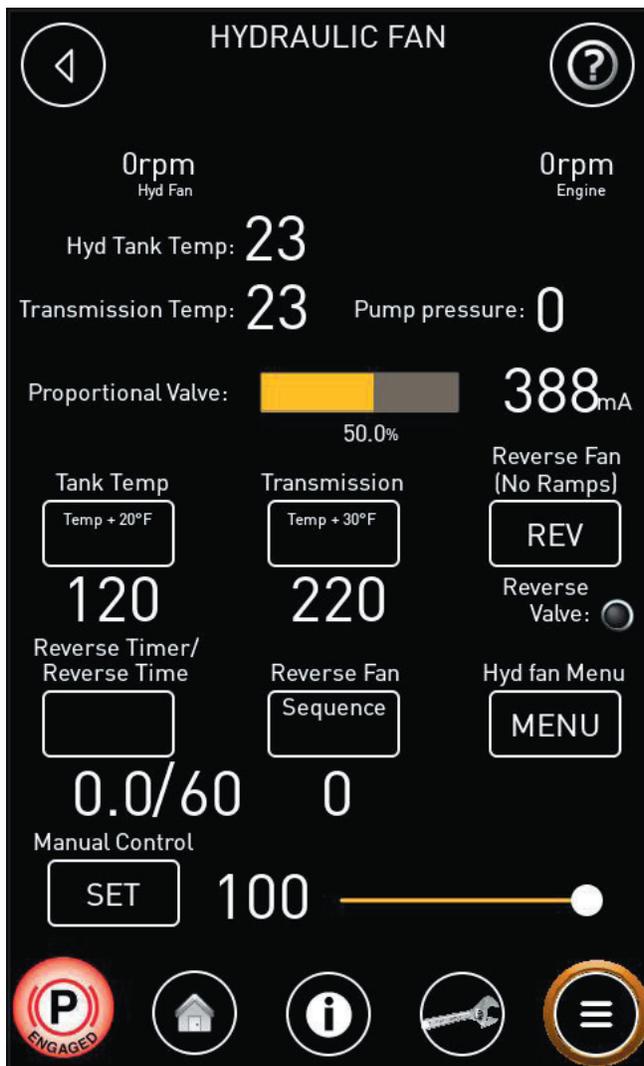
HD/KO Settings

The HD/KO screen displays the inputs from the joystick and outputs to the hydraulic valves for the holddown and kickoff functions. The indicator lights illuminate when the proximity sensors for the various functions are activated.

Press the “Aux HD” button to display the inputs from the joystick and outputs to the hydraulic valves for the aux holddown function (if so equipped).

Press the “Swap Aux HD” button to reverse the function of the main holddown arms and auxiliary holddown arms (if so equipped) on the joystick control. Select this option if the auxiliary holddown arms are primarily used.

Additional settings are available behind the factory PIN. Contact Allied Systems Company for details.



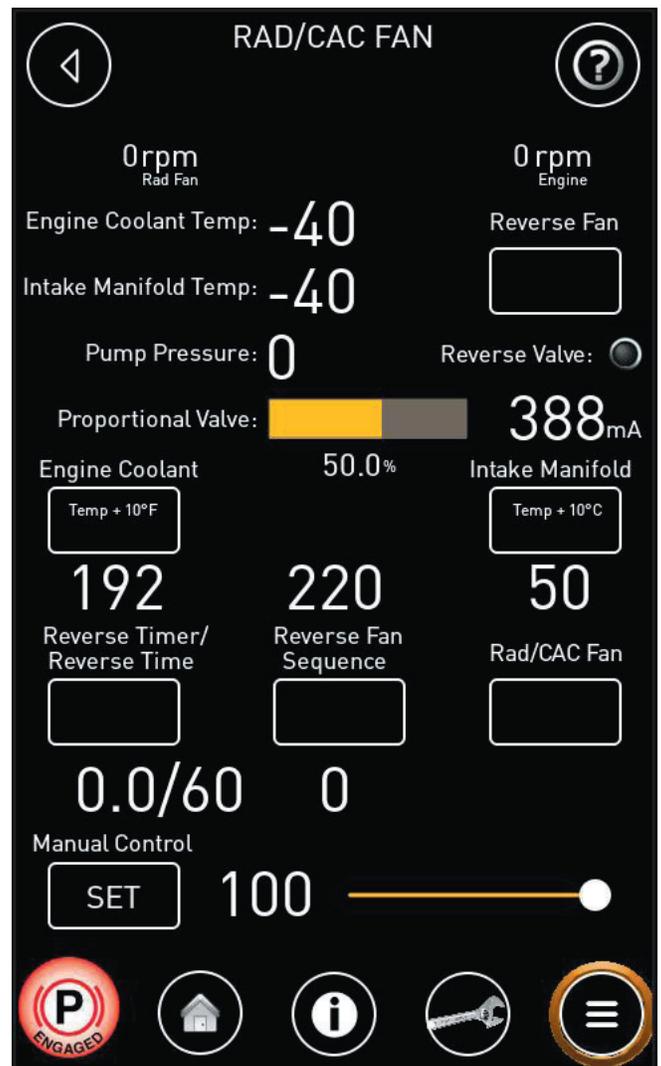
Hydraulic Fan

The Hydraulic Fan screen is for diagnosing and adjusting the hydraulic cooler fan.



Pressing the “REV” button will immediately reverse fan direction without ramping down the fan RPM, and should not normally be activated.

The tank, transmission, and return manifold temps are where the fan will begin ramping on, and will reach full speed 20 degrees above this point. Pressing “reverse fan sequence” will run the fan through the reverse cycle, ramping down and up between direction changes. Reverse time is the number of minutes between auto reverse cycles. Manual control and the slider bar allows setting a valve current value to manually drive the fan.



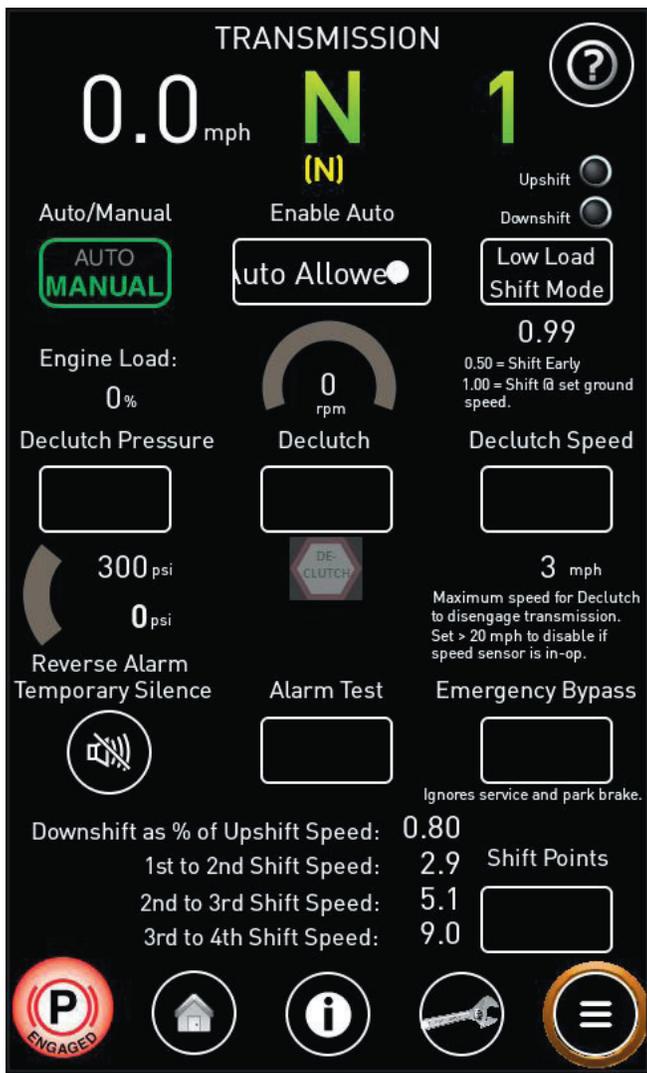
Rad/CAC Fan

Similar to Hydraulic Fan screen, the Rad/CAC Fan screen monitors and adjusts the engine cooling fan.



Pressing the “REV” button will immediately reverse fan direction without ramping down the fan RPM, and should not normally be activated.

“Engine coolant temp” is the beginning of fan ramp with max speed 10 degrees above this point. Reverse time is the number of minutes between auto reverse cycles. Pressing “reverse fan sequence” will run the fan through the reverse cycle, ramping down and up between direction changes. Reverse time is the number of minutes between auto reverse cycles. Manual control and the slider bar allows setting a valve current value to manually drive the fan.



Transmission

The Transmission screen allows you to monitor, setup, and tune the transmission.

Auto/Manual - Toggles between Automatic shifting and Manual shifting. This control only functions when Enable Auto is not set to Manual.

Enable Auto - Allows you to set the transmission to Manual Only, Auto Allowed, or Auto Only.

Low Load Shift Mod - *Requires Factory Pin.* Allows the transmission to shift up early and down late if engine is under low load to improve fuel economy. Default setting is 0.99.

Declutch Pressure - Sets pressure to disengage.

Declutch - Enables and Disables declutch.

Declutch Speed - *Requires Factory Pin.* Sets the maximum speed at which declutch will engage (to maximize engine braking while slowing).

Reverse Alarm Cancel - The reverse alarm may be temporarily disabled during troubleshooting. The alarm will be re-enabled whenever the machine is taken out of reverse.



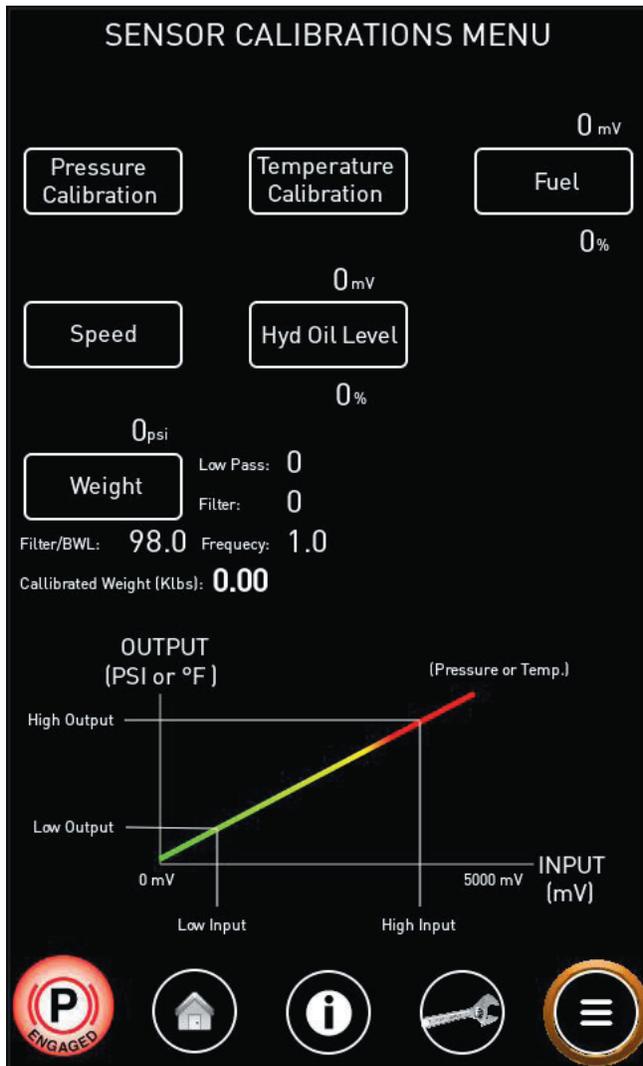
WARNING

The machine must **NEVER** be operated in reverse when the reverse alarm has been disabled. This feature is to be used only during troubleshooting under controlled circumstances. Extreme injury or death are possible if the machine is operated in reverse with the alarm disabled.

Alarm Test - Tests the reverse alarm.

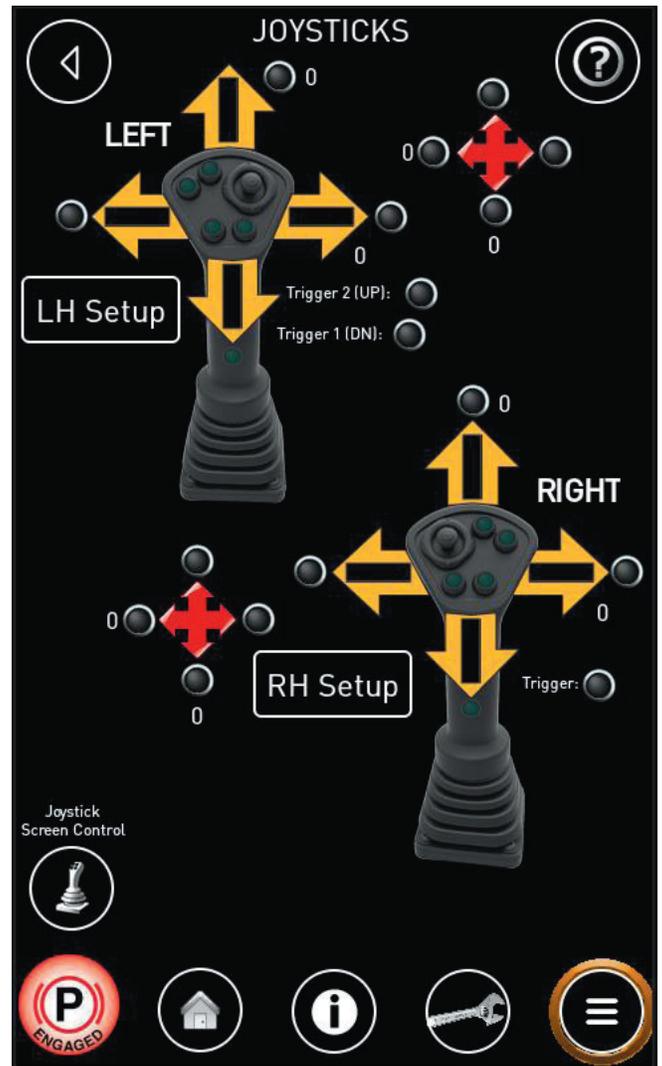
Emergency Bypass - Removes safety features, allowing the transmission to go into gear without brake input (limp mode in case of a sensor failure).

Shift Points - *Requires Factory Pin.* Adjusts shift points.



Sensor Calibrations Menu

The Sensor Calibrations Menu allows the factory to calibrate various sensors. The diagram shows the 2-point calibration used on all sensors except the speed sensor.

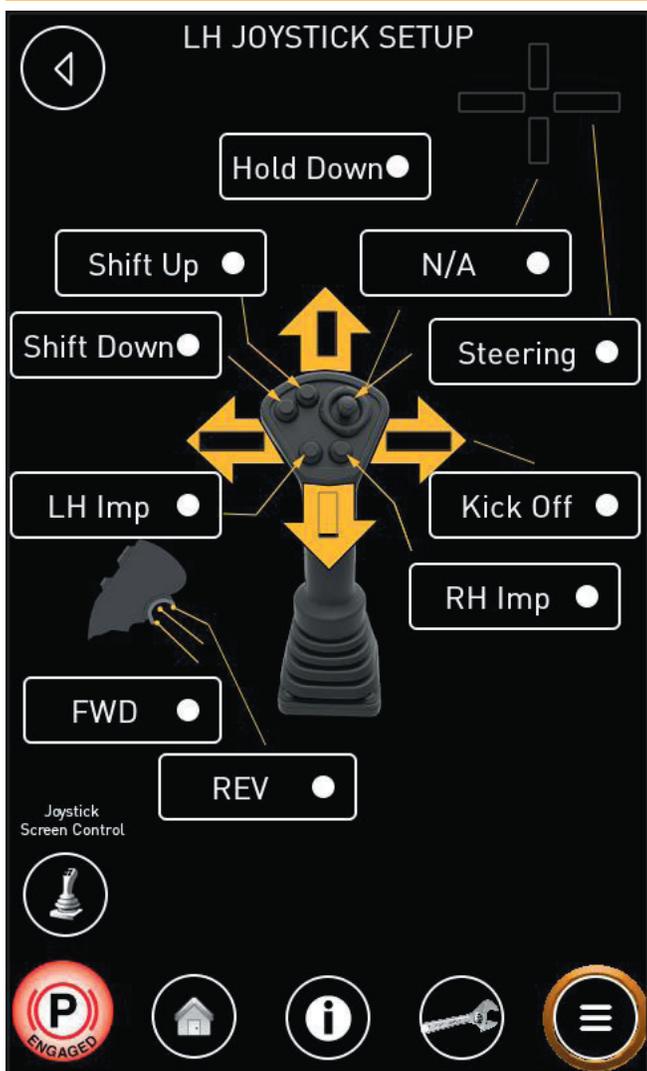


Joysticks

The Joysticks screen displays all the joystick inputs for troubleshooting.

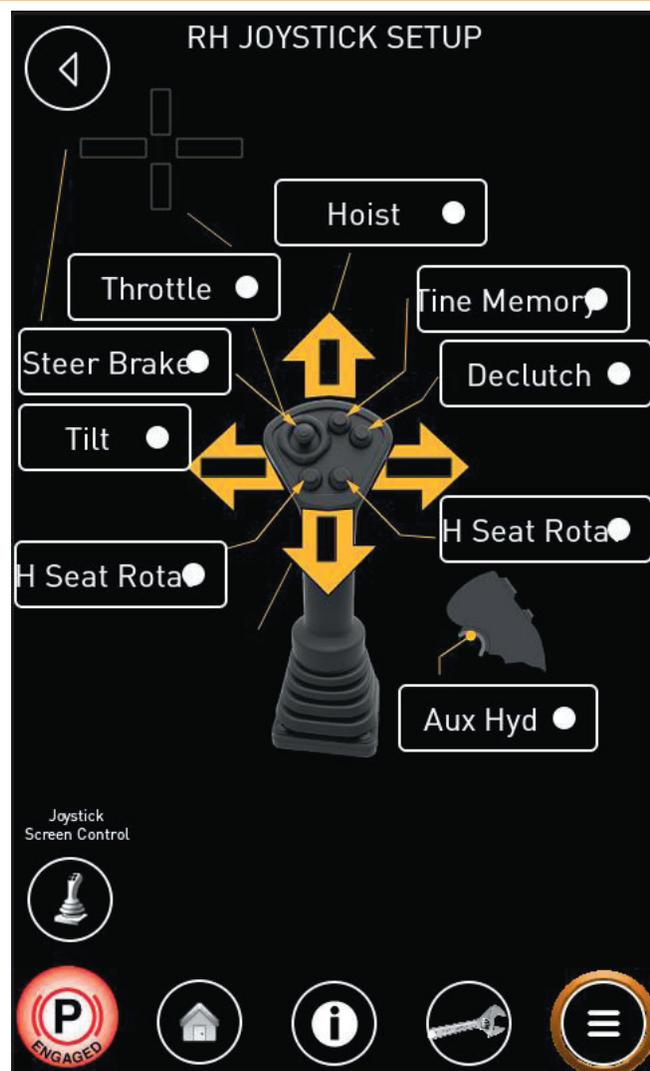
“LH Setup” opens a setup screen for the left joystick, and “RH Setup” opens a setup screen for the right joystick.

“Joystick Screen Control” opens the On-Screen Joystick Control screen.



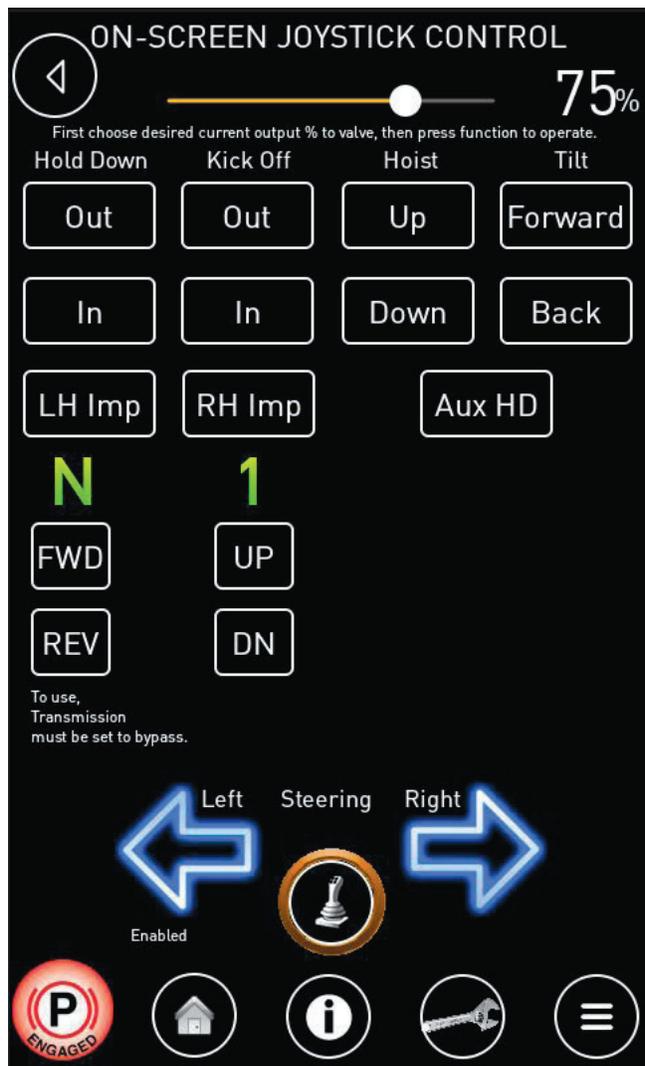
LH Joystick Setup

The LH Joystick Setup screen allows you to define the functions associated with some of the controls on the LH joystick. Click on the box associated with each control to see which functions are available for that control.



RH Joystick Setup

The RH Joystick Setup screen allows you to define the functions associated with some of the controls on the RH joystick. Click on the box associated with each control to see which functions are available for that control.



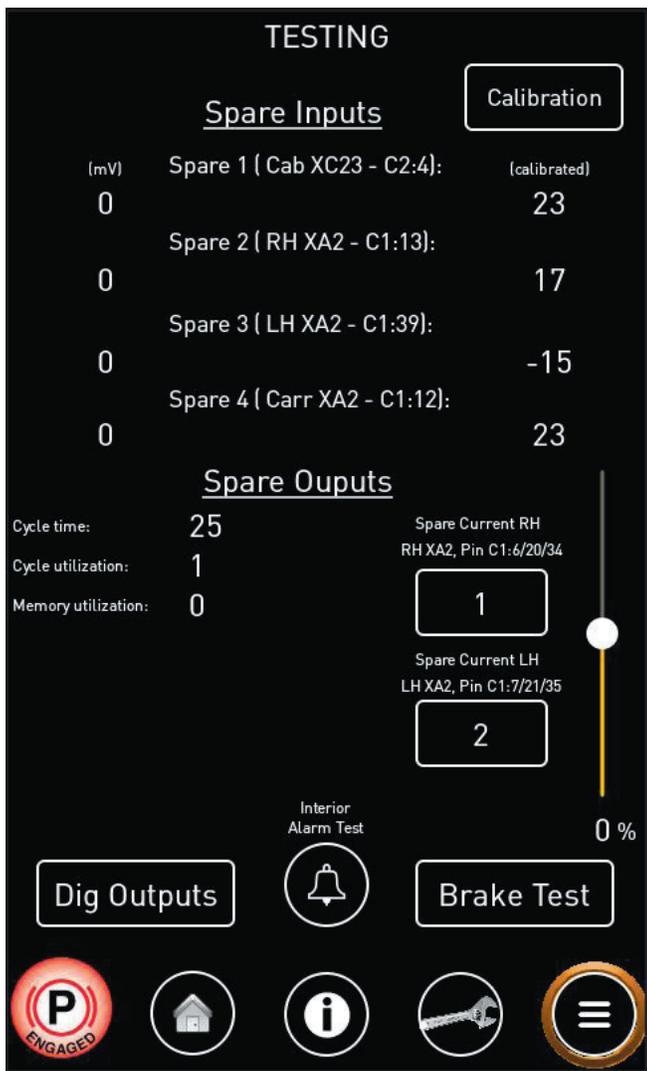
On-Screen Joystick Control

The On-Screen Joystick Control screen allows you to operate all joystick functions from the screen. This screen may be used when there is a malfunction with either joystick that prevents the operator from being able to use the joystick(s) to control the machine.

The slider allows you to adjust the signal for proportional controls. For example, with the slider set to “75” as shown above, pressing an arrow button will be equivalent to pushing the joystick to 75 percent of its total travel.

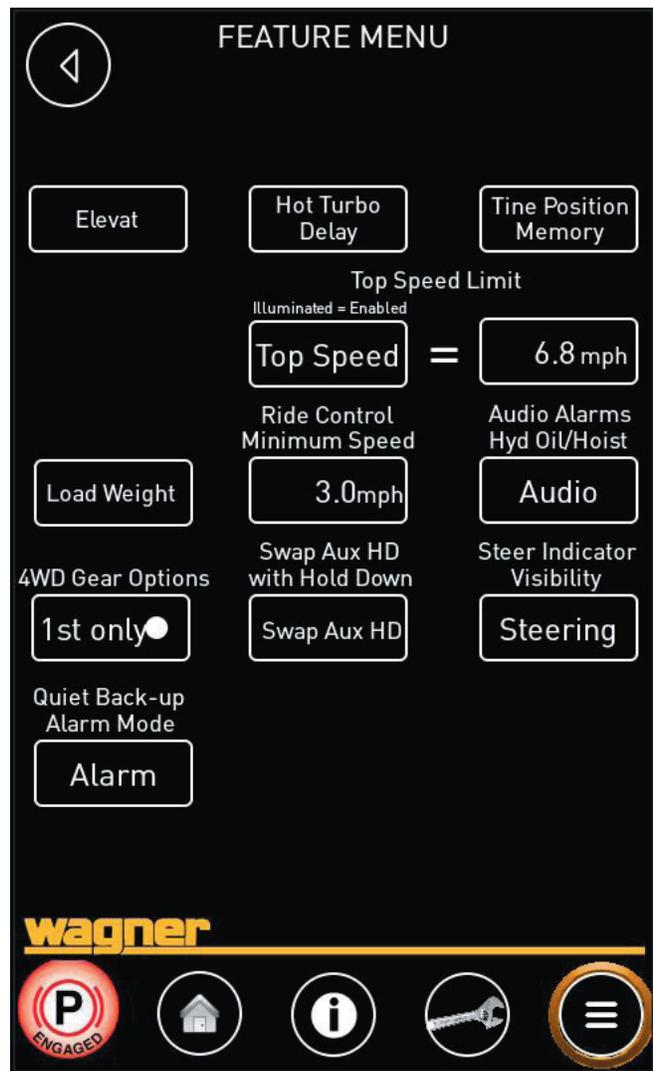
Factory Configuration

The Factory Configuration Screen is for factory personnel only, and includes one-time setup of parameters such as machine capacity, engine make, and options installed.



Testing

The Testing screen provides links to calibrate voltage inputs, digital relay outputs, and to perform a brake stopping distance test. Contact Allied Systems Company for details.



Feature Menu

The Feature Menu Screen is available only after entering the factory PIN. This screen allows you to enable, disable, or adjust various features based on site preferences.

Contact Allied Systems Company for details.



System Menu

The Menu System page is a built-in menu that accesses all parameters. The engine may be reached under “system” and then “J1939 Engine” where ECM codes can be retrieved. All relevant adjustments should be made outside of this menu system.



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