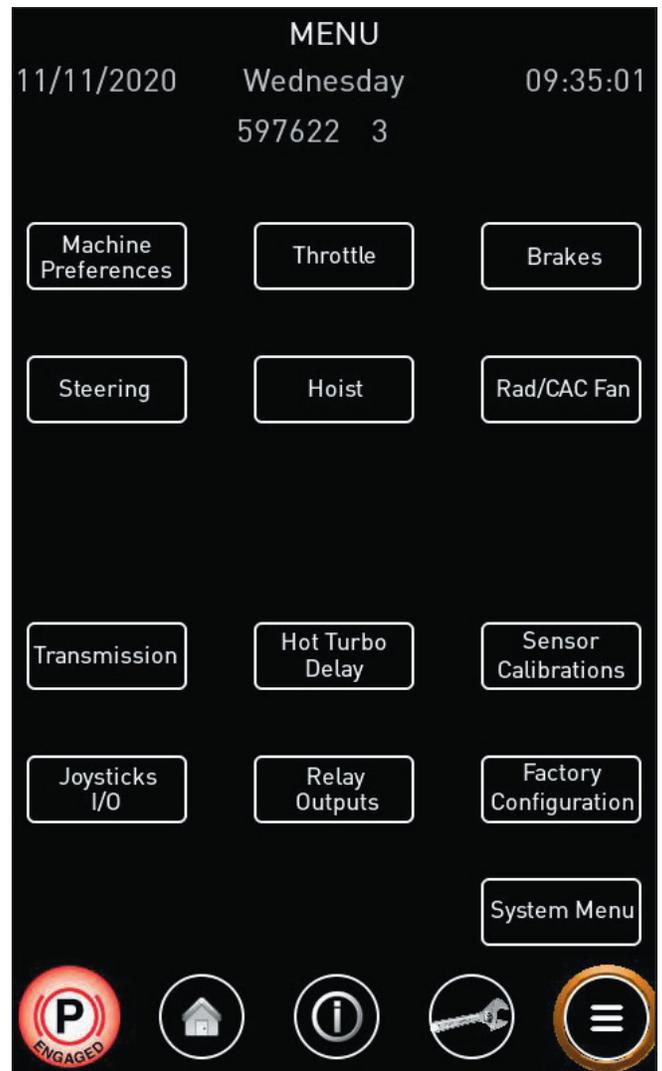


IQAN Service/Troubleshooting screens



Menu Button



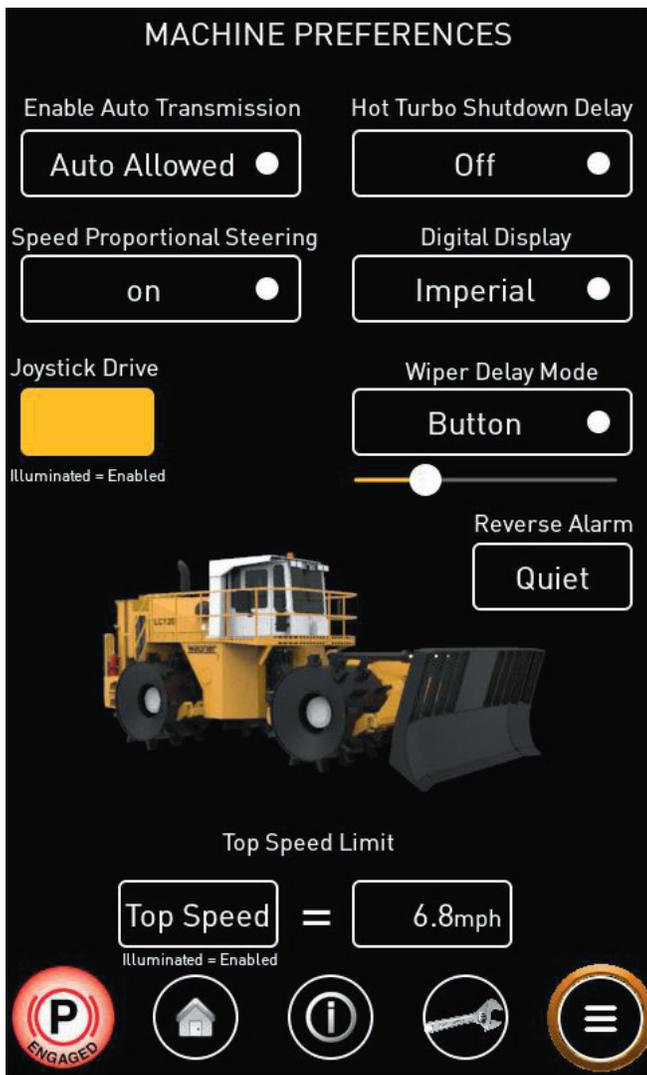
PIN code login

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, those 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 with the joystick button or the screen button on the home page.
- **Auto Only** - Only automatic shifting is allowed.

Speed Proportional Steering

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

Hot Turbo Shutdown Delay

- **Off** - The engine will shut down immediately after the key is turned off.
- **On** - 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 intake manifold temperature, and may range from 0 to 3 minutes.

Digital Display

Configures units on the home screen. Settings:

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

Joystick Drive

When illuminated, "Drive" mode for the joystick is enabled.

Wiper Delay Mode

- **Button** - If one of the buttons on the joysticks is set to “Wiper Delay” and this option is selected, the joystick button may be used to set the delay interval. Set the overhead switch to the “Delay” setting, press the button once, and the wipers will sweep across the windshield once and pause. Press the button a second time to activate the wipers again. This will set the delay interval, and the wipers will continue to activate at that interval until turned off or reset to a new interval. The interval may be set between 2 seconds and 2 hours. If the interval needs to be reduced, press the button and the interval will reset to a shorter time. If the interval needs to be increased, press and hold the button until you hear a beep. This will reset the timer to over 2 hours. Then you can press the button to reset to timer as needed.
- **Slider** - The delay interval is set by the slider on this screen, or the one on the operator’s screen.
- **Pulse** - With this option selected, if the wiper switch is set to “Delay”, the wipers will actuate only when the joystick button is pressed.

Reverse Alarm

Temporarily silences the reverse alarm.

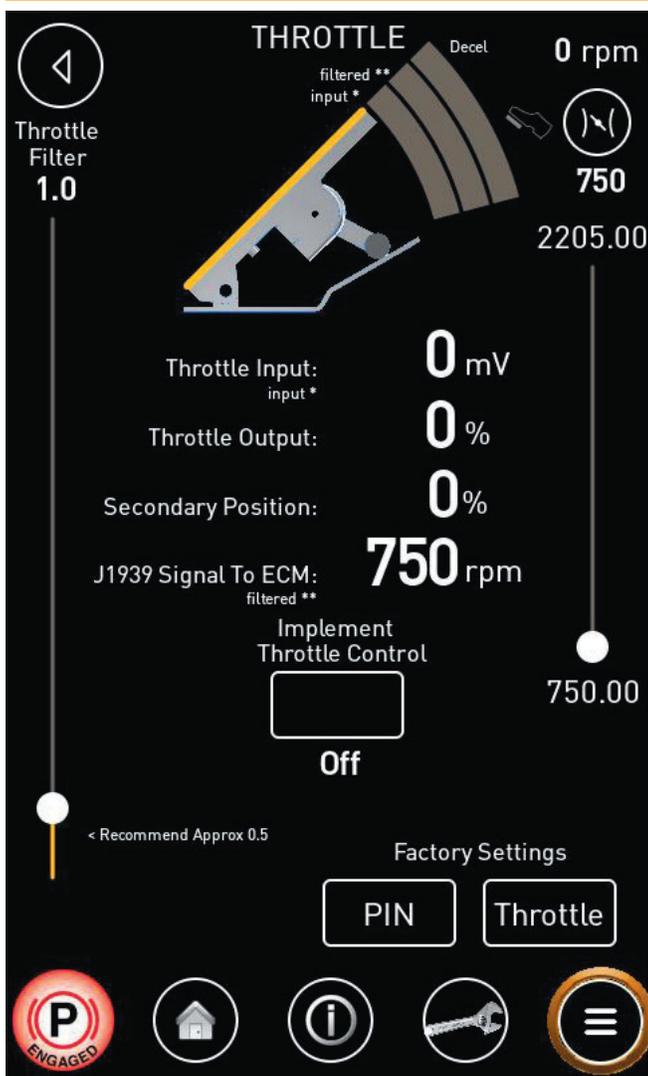


WARNING

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.

Top Speed Limit

Engages a speed limit for the machine. When the “Top Speed” button is illuminated, the machine will not be able to exceed the speed shown.

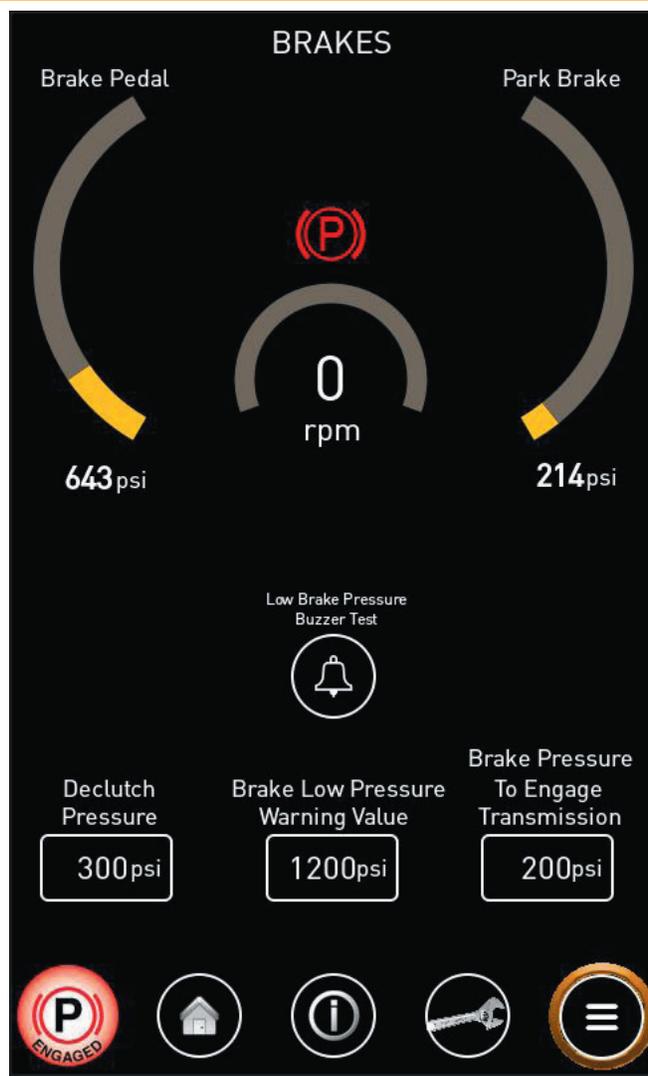


Throttle

The Throttle screen displays the throttle pedal inputs and the output signal to the ECM. Implement Throttle Control allows the joysticks to ramp up throttle at the end of the stroke during active declutch.

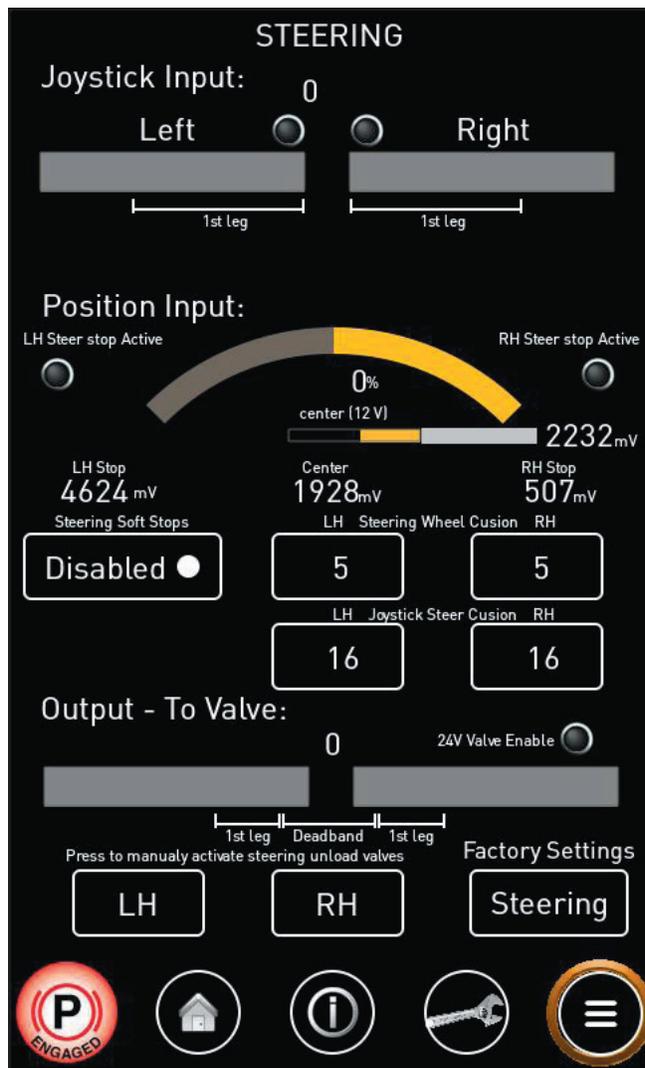
The Throttle Filter is intended to reduce seat-induced throttle surges. Recommended value is 0.5.

The Throttle Slider to set the throttle set point. The bottom of the scale corresponds to engine idle, 750 RPM, and the top of the scale corresponds to high free idle, ~2205 RPM.



Brakes

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

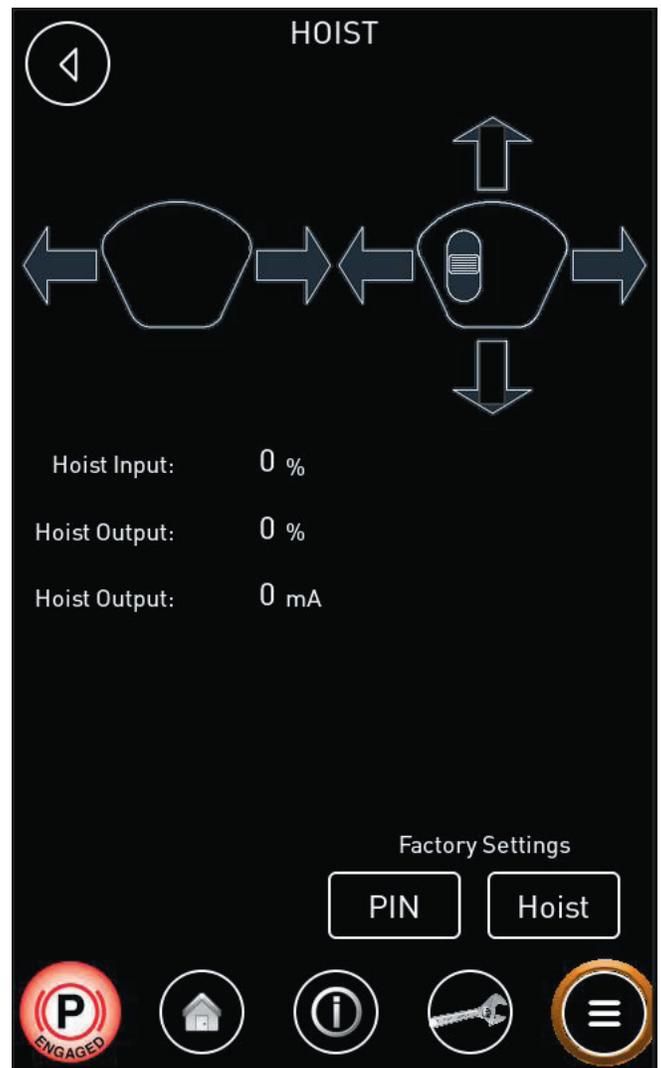


Steering

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.

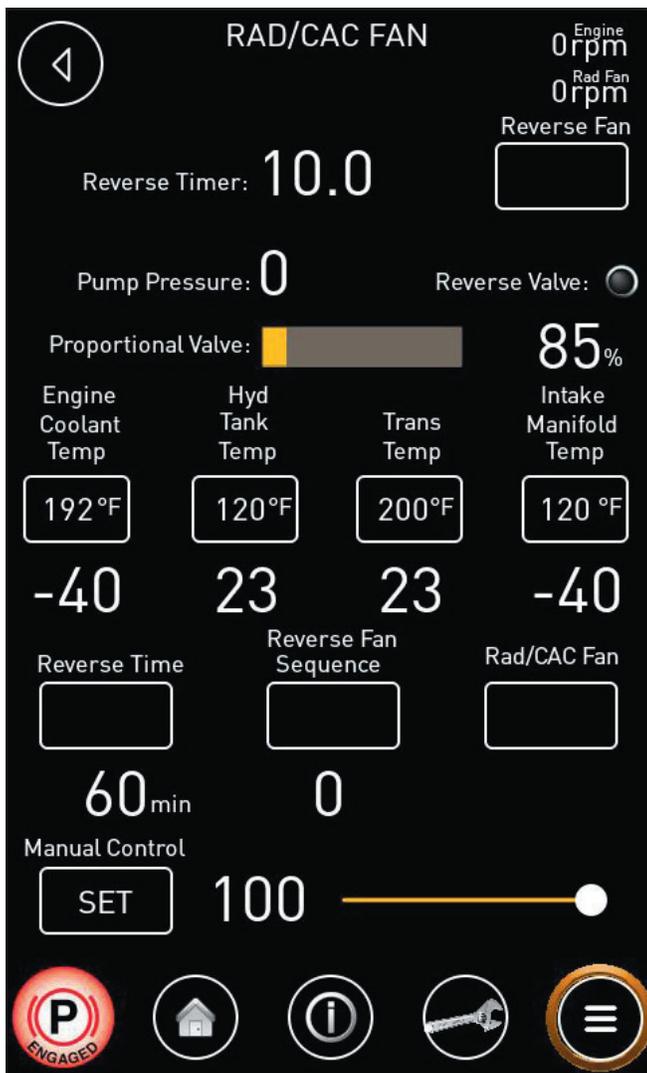
The steering stops may be enabled (recommended), or disabled. When disabled, the steering control will not be cushioned at the end of travel.

The steering unload valves buttons manually apply unloader valves to test steering wheel function.



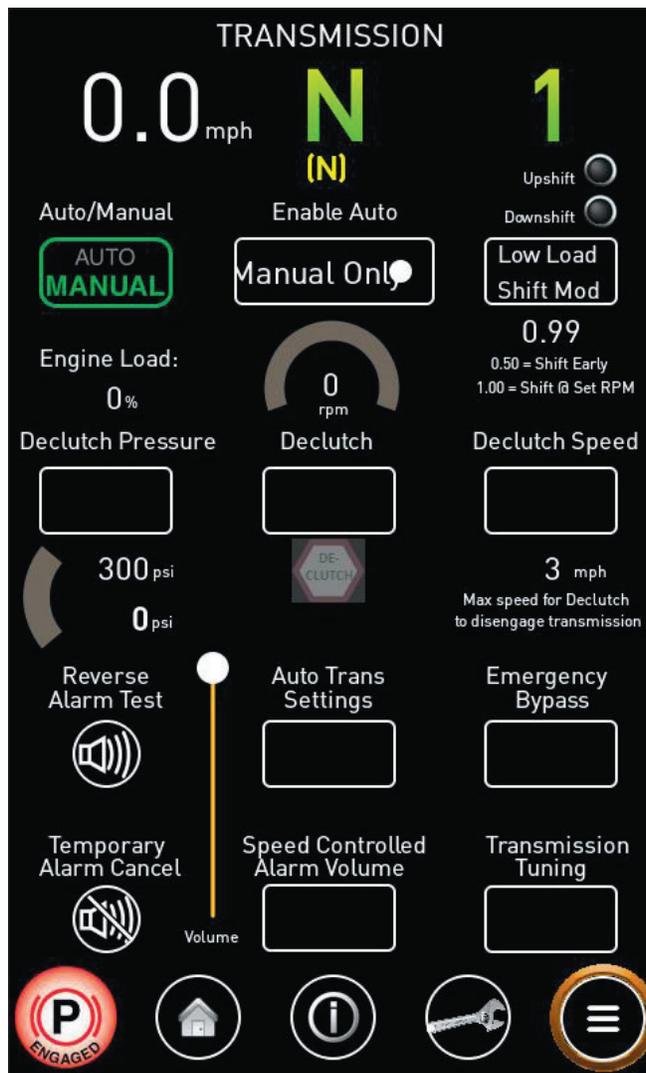
Hoist

The Hoist screen displays the hoist input and output. Factory settings adjust deadband and current to start movement.



Rad/CAC Fan

The Rad/CAC Fan screen monitors and adjusts the engine cooling fan. “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. Transmission ramps up to 20 degrees over this while intake manifold is 10 degrees over for max speed.



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 shift right at shift speeds set to 1.

Declutch Pressure - *Requires Factory Pin.* 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 Test - Tests the reverse alarm.

Auto Trans Settings - *Requires Factory Pin.* Sets various transmission and declutch pressures.

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

Temporary 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.

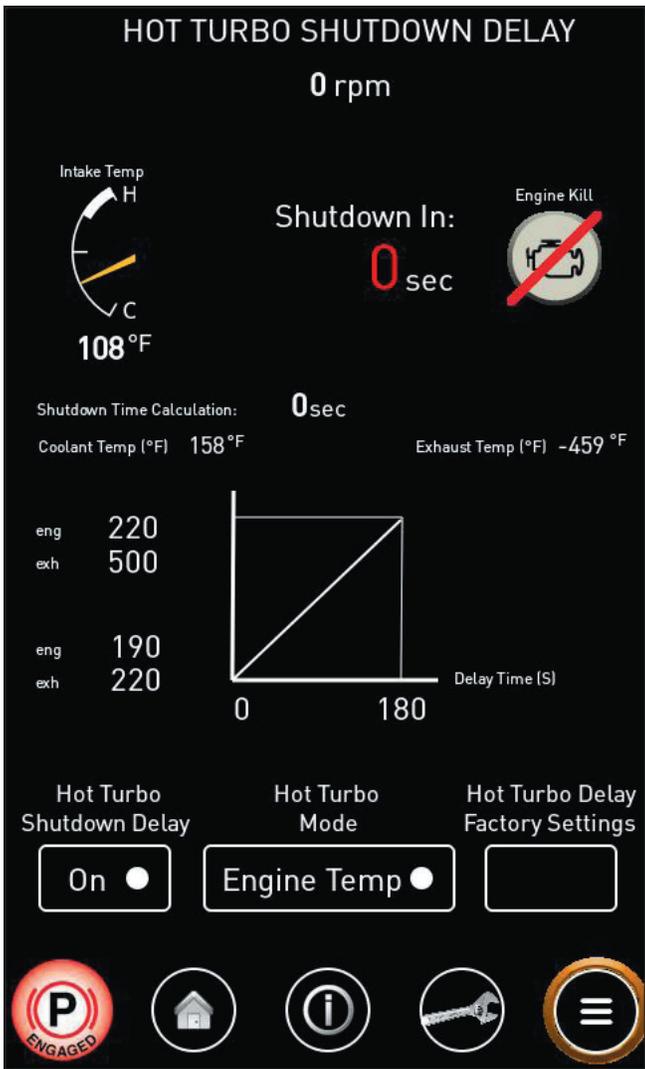


WARNING

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.

Speed Controlled Alarm Volume - When engaged, the reverse alarm will be at 20% volume initially, and ramp up to 100% volume when the machine reaches 2 mph in reverse.

Transmission Tuning - *Requires Factory Pin.* This screen allows factory personnel to fine tune the transmission to create a smooth shifting response.



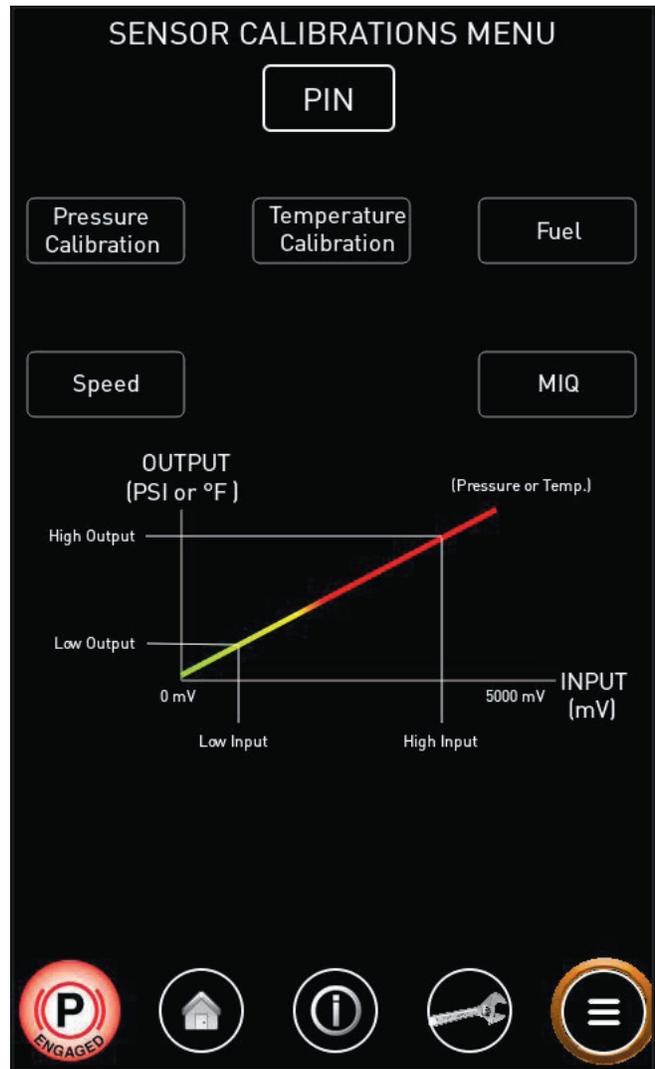
Hot Turbo Shutdown Delay

The Hot Turbo Shutdown Delay screen displays the state of the function, including current intake temperature, and current time to engine shutdown.

When enabled, the hot turbo shutdown delay will capture the engine intake manifold temperature at the point the key is cycled off and calculate the time until shutdown. By default, intake temps below 80 degrees F will not delay shutdown and temps above 120 degrees will delay shutdown for a maximum of 3 minutes. When in the shutdown cycle, throttle and implement controls are disabled.

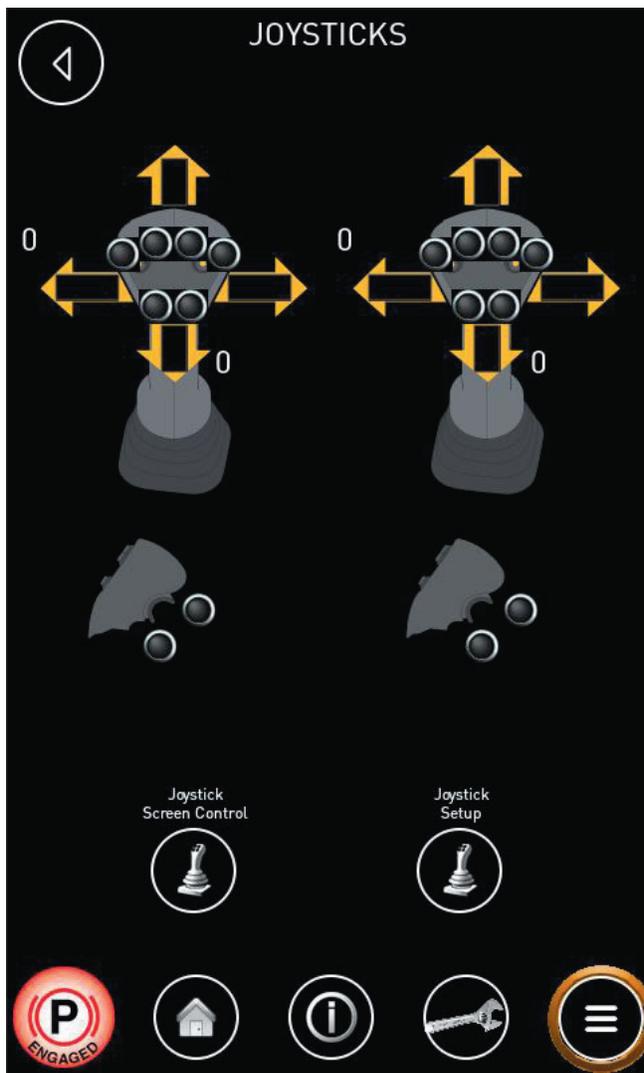
The Hot Turbo Mode may be set to either Engine Temp or Exhaust Temp. This should be set to Engine Temp.

The Engine Kill button may be selected in emergency situations when it is more important to shutdown the engine immediately than it is to protect the turbo.



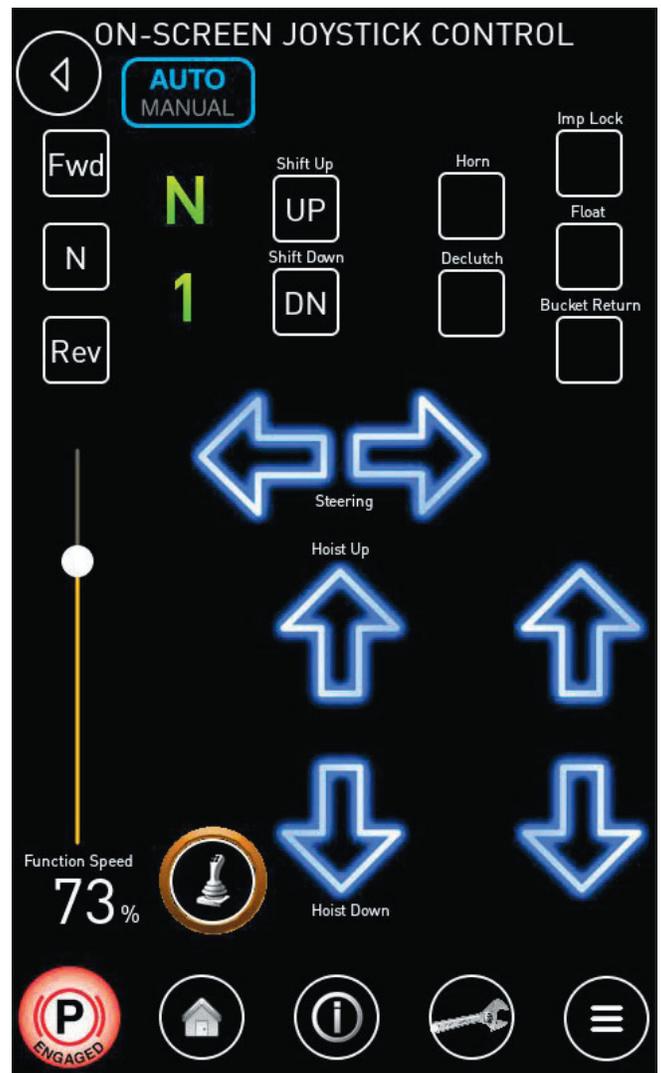
Sensor Calibrations Menu

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

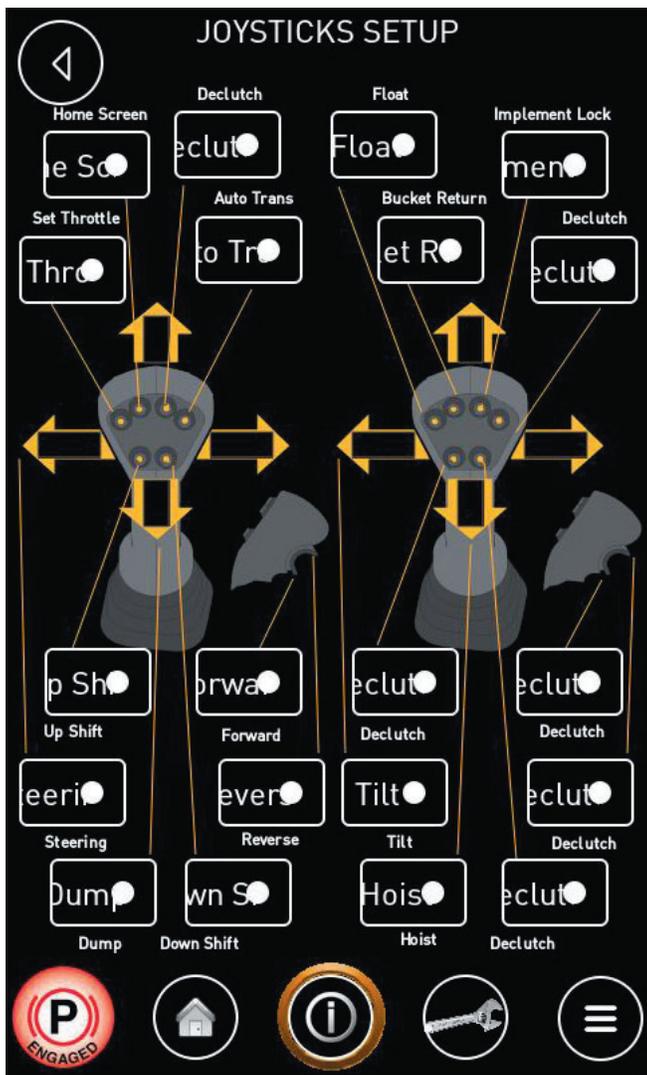
The Joysticks screen displays all the joystick inputs for troubleshooting. Joystick Screen Control opens the On-Screen Joystick Control screen. Joystick Setup opens the Joysticks Setup screen.



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 “73” as shown above, pressing an arrow button will be equivalent to pushing the joystick to 73 percent of its total travel.



Joysticks Setup

The Joysticks Setup screen allows you to assign different functions to the various buttons and handles to suit your operator's preferences.

See your operator's manual for descriptions of the various functions.

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.



Relay Outputs

This screen allows you to manually apply various relays that are normally IQAN controlled for troubleshooting.



Menu System

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.