

PODZILLA

Podzilla Daily Operation Manual

Model:
RG Group Produced Units

Revision:
(Initial release)

Date: 7/18/22

INDEX

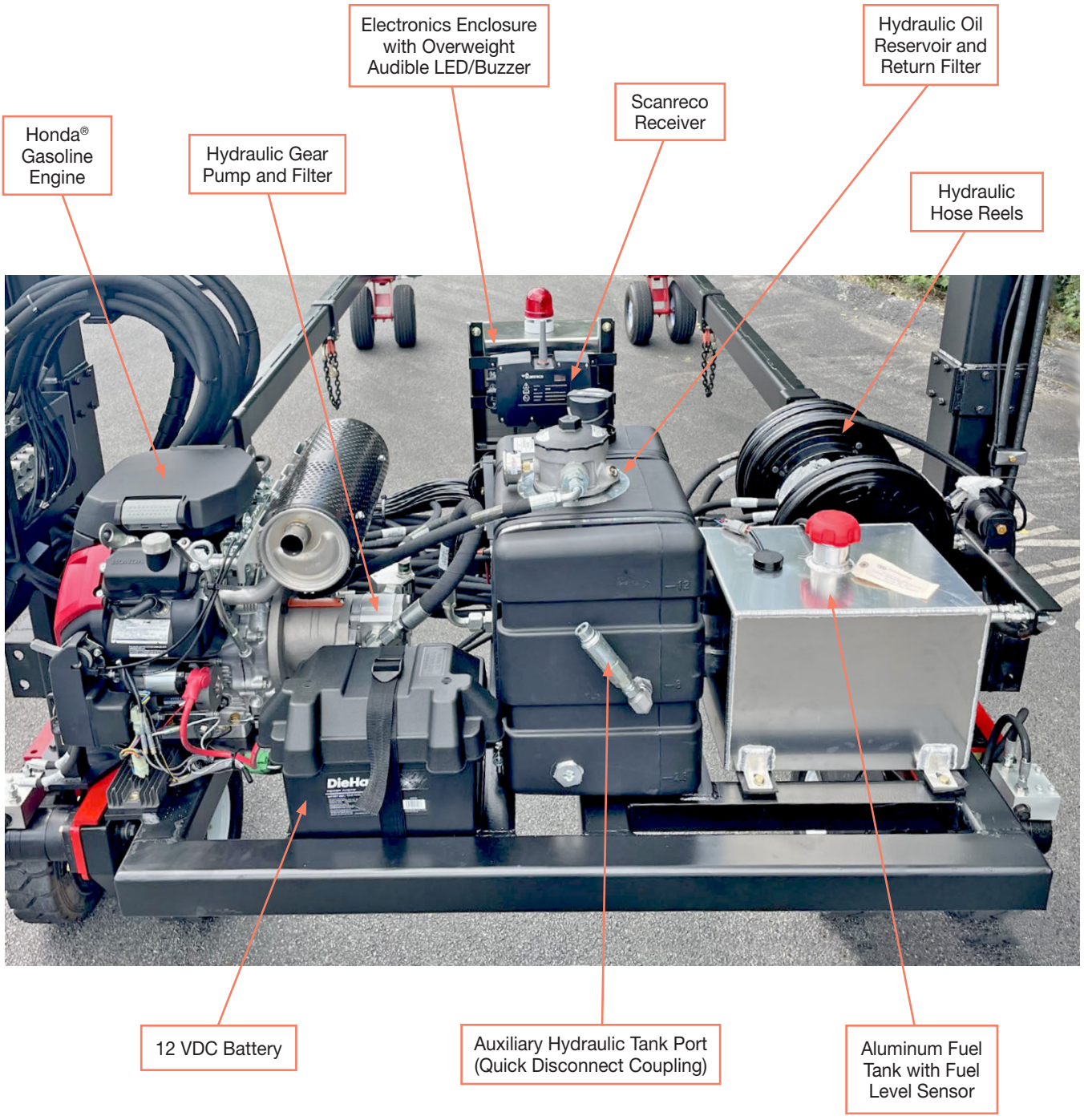
This **Daily Operation Manual** is intented to give operators a brief overview of the new/modified functions found on RG Group produced Podzilla lifts vs. what is currently in field operations. Regular preventative maintenance procedures, troubleshooting information, HMI menu overview or advanced operations (such as programming) is not covered in this manual.

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Mechanical Overview



Mechanical Overview (Power Rack)



Mechanical Overview (Control Tree and HMI)





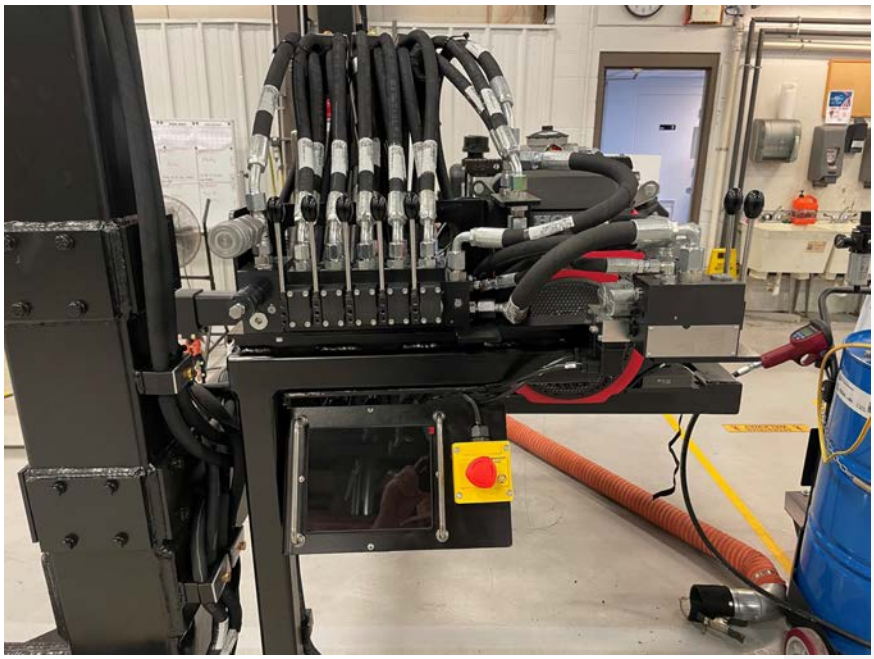
Operation

HONDA

Operation of the gasoline engine via the on-board Honda® motor control panel is unchanged. However, the engine is now tied into the E-stop circuit of the lift and certain conditions must be meet for the Honda engine to be able to run.







The most noticeable additions to the Podzilla lift are HMI screen/ E-Stop button at the control tree and the addition of the Scanreco remote control belly box. The next few slides will detail these additions, how “traditional” operation is affected and new smachine behaviors with the integrated electronics.



Emergency-Stop Circuit



Two red mushroom top buttons, one at the control tree and one on the remote transmitter, comprise the **E-stop circuit.**

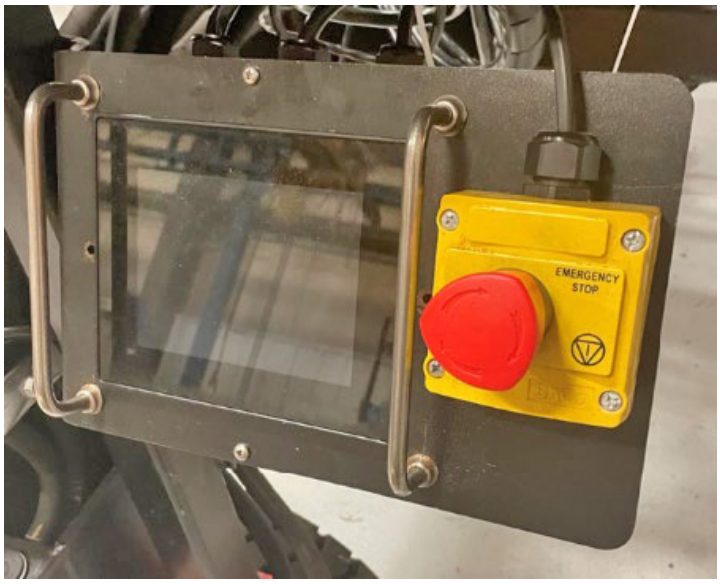
Control Tree



Scanreco Remote

Emergency-Stop Circuit

When either button is depressed the E-stop circuit will inhibit the engine from running.



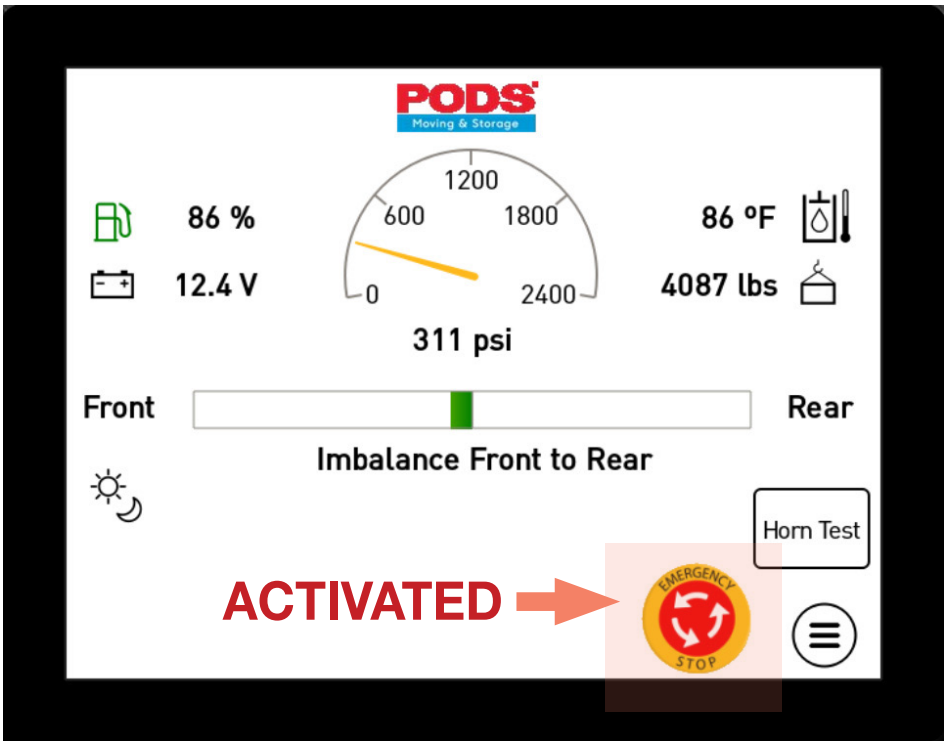


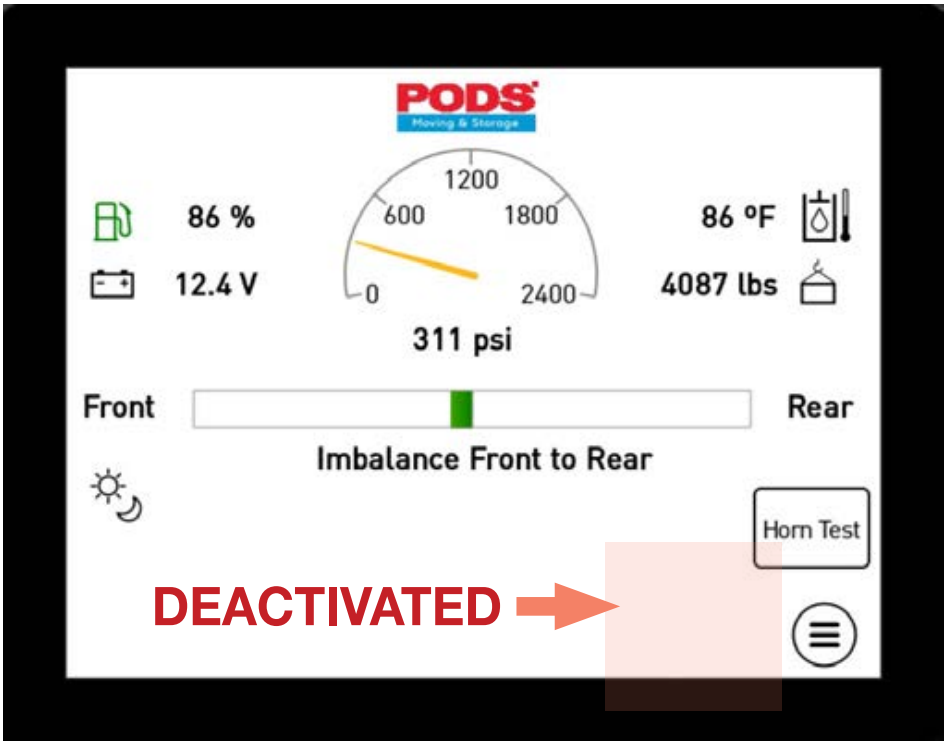


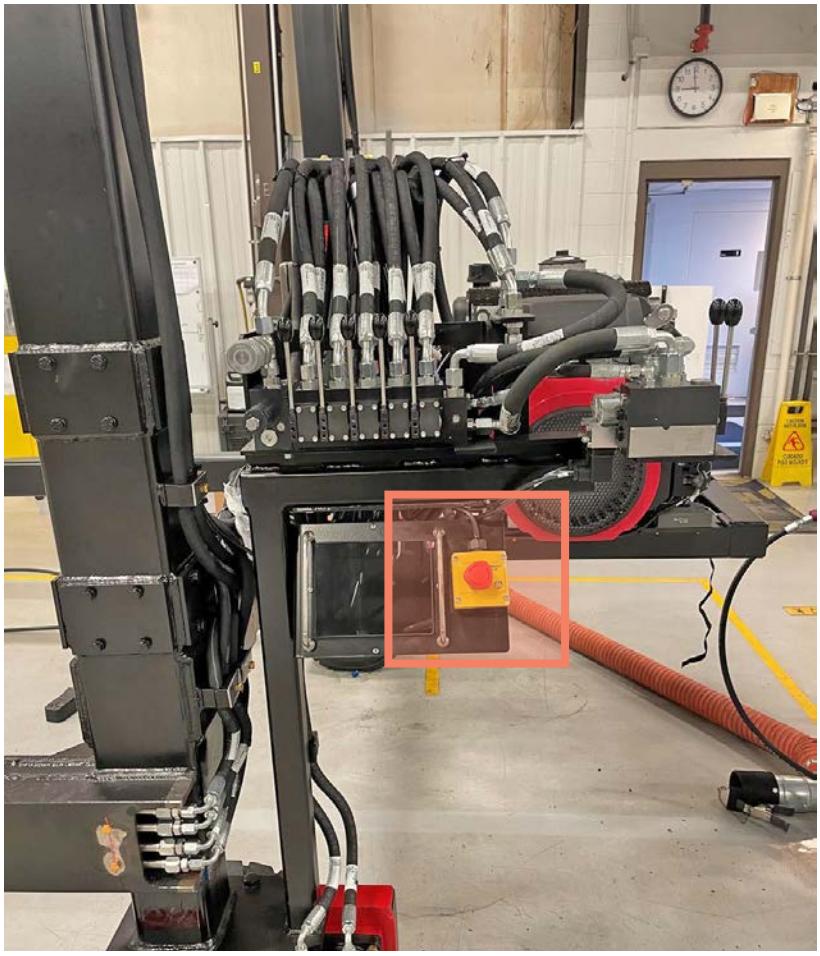


Emergency-Stop Circuit

There is also an E-Stop indicator on the HMI screen.







When starting the Honda® engine, ensure the E-stop button located on the control tree is in the released (non-activated/non-depressed) position. To do this, twist the red button top clockwise to release.





Start-Up

Check that the Scanreco Bypass switch is in the OFF position.



Turn the Honda® engine key switch to the ON position. You will notice the HMI powering up.





Using the Scanreco remote transmitter, release the red mushroom top button to power on the remote. The same twisting motion as the HMI E-stop box is used to release the Scanreco E-stop button.

Next, press and hold the pushbutton to the right of the red mushroom top button for 3+ seconds. While pressing this pushbutton, both Red LED lights will illuminate, and once a secure link is made with the receiver, the left side LED will turn off and only the right-side LED will be illuminated.





Start-Up

Finally, turn Honda® engine key switch to the Start position and hold until the engine is running.



Note: the choke may need to be used to start the engine.



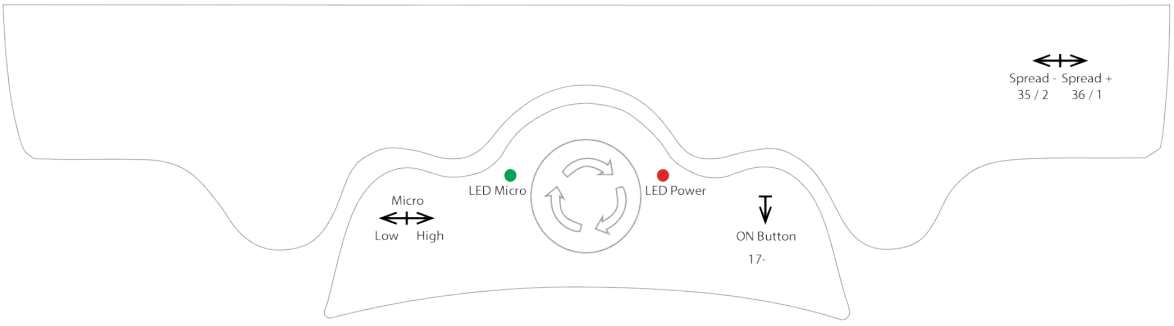


The operator now has full function of the Podzilla lift via the remote belly box controller. Directional movement controls of the lift are labeled on the Scanreco remote control.



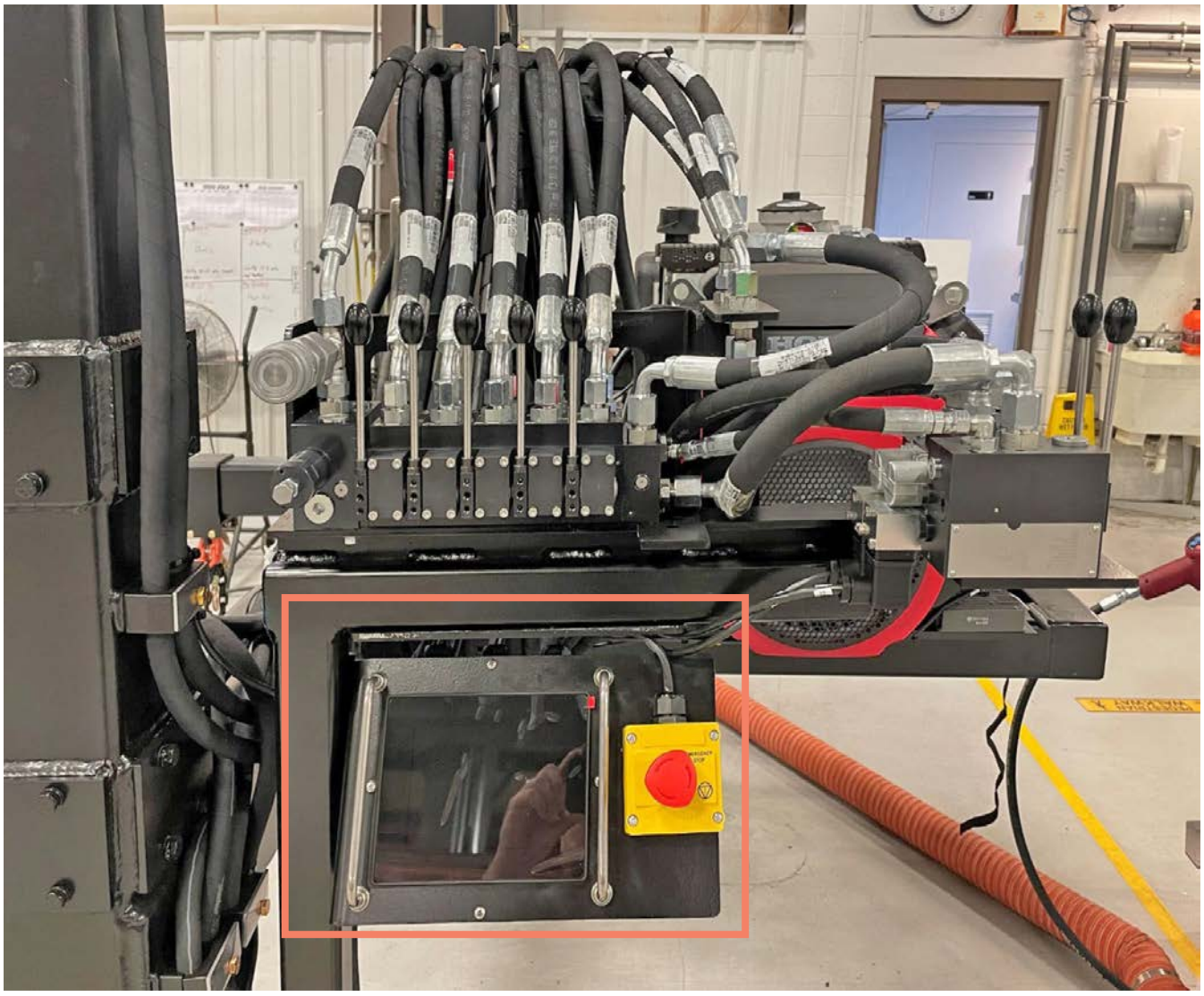
Start-Up



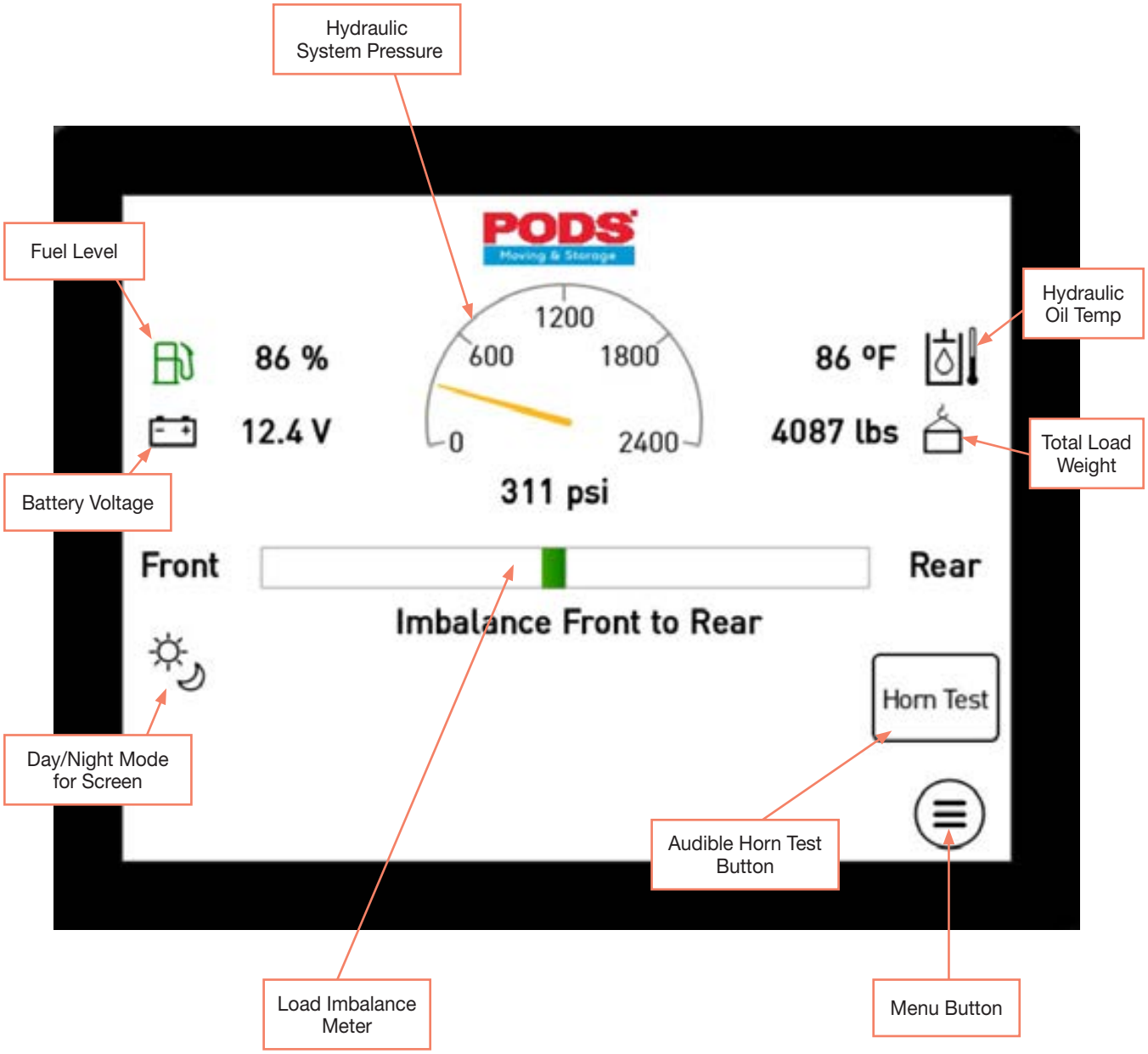


Push button.
2-way detent switch.
2-way spring return switch.
3-way spring return/detent with center position.
3-way detent with center position.
3-way spring return with center position.
X-Y X: Digital function - Y: Digital output

With the lift running, the operator will now notice the other new addition to the Podzilla lift, the HMI screen. This screen provides Realtime feedback to the operator and is used for informational purposes only.

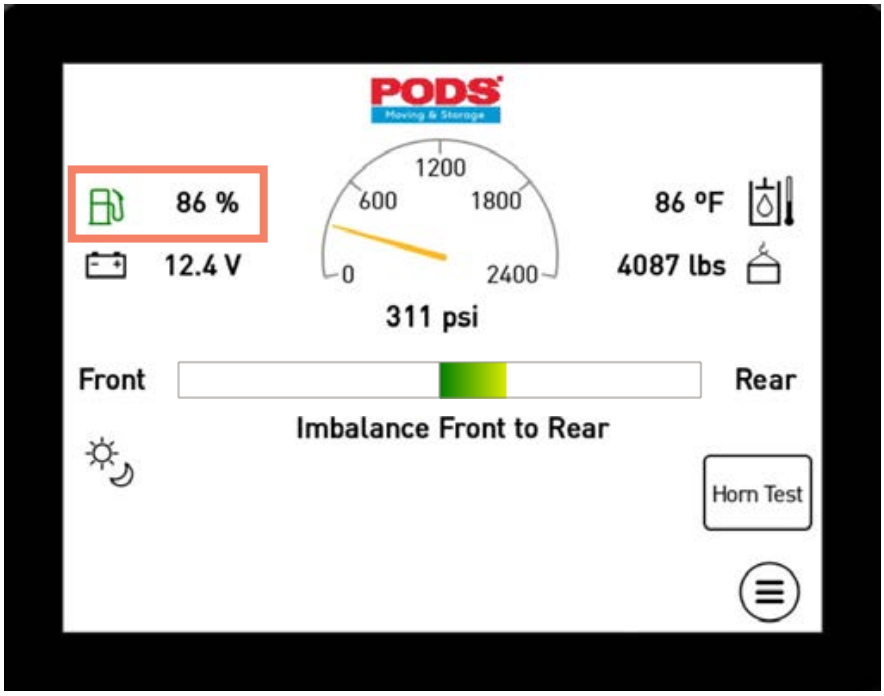


Main Home Screen



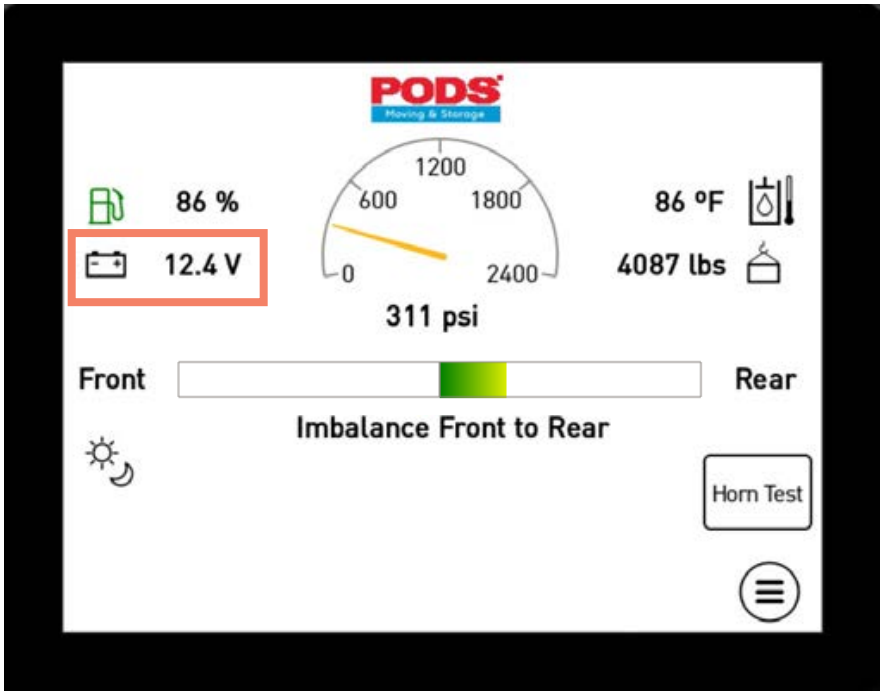
Fuel Level

When the fuel level reaches 20% or less, the fuel icon will change from **green** to yellow, indicating to the operator that fuel is getting low.



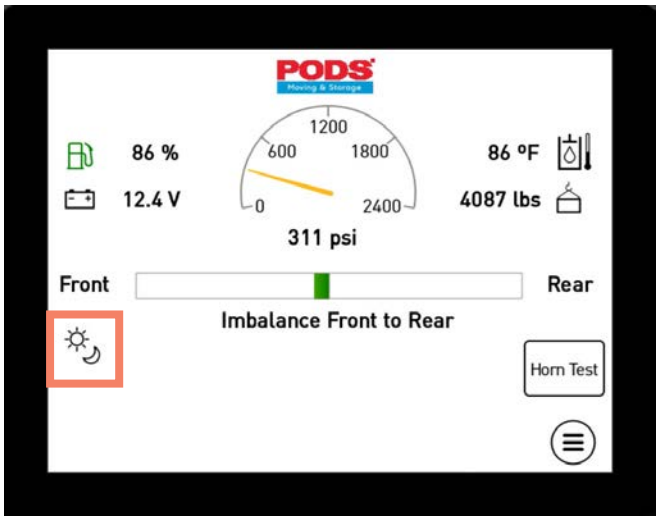
Battery Voltage

Displays the real-time measured voltage of the battery.

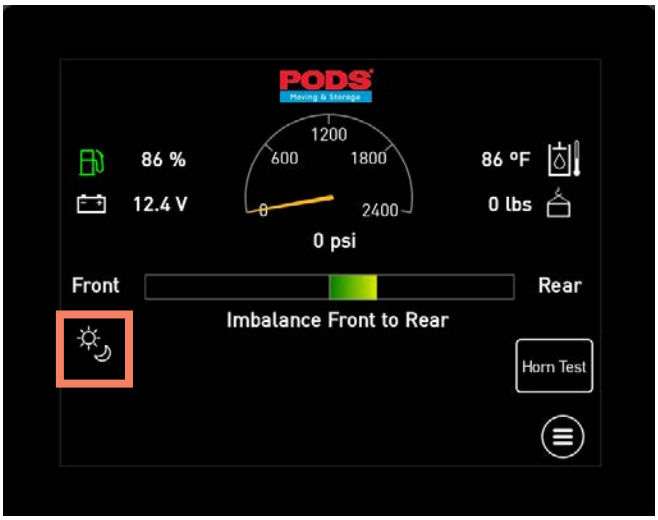


Day/Night Mode

When pressed will change the HMI display to be either white background/black text (easier to see during the day) or black background/white text (easier to see at nighttime).



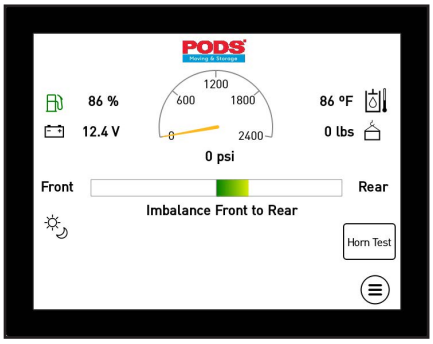
Day Time Mode



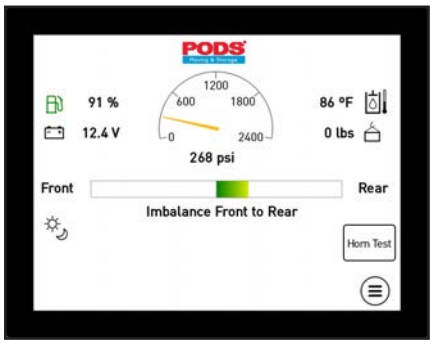
Nighttime Mode

Hydraulic System Pressure

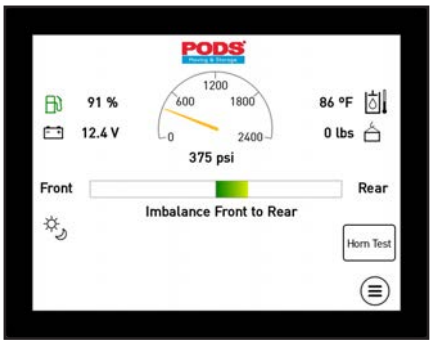
Displays real-time hydraulic system pressure with graphical analog style gauge plus the numerical psi reading.



Engine Off



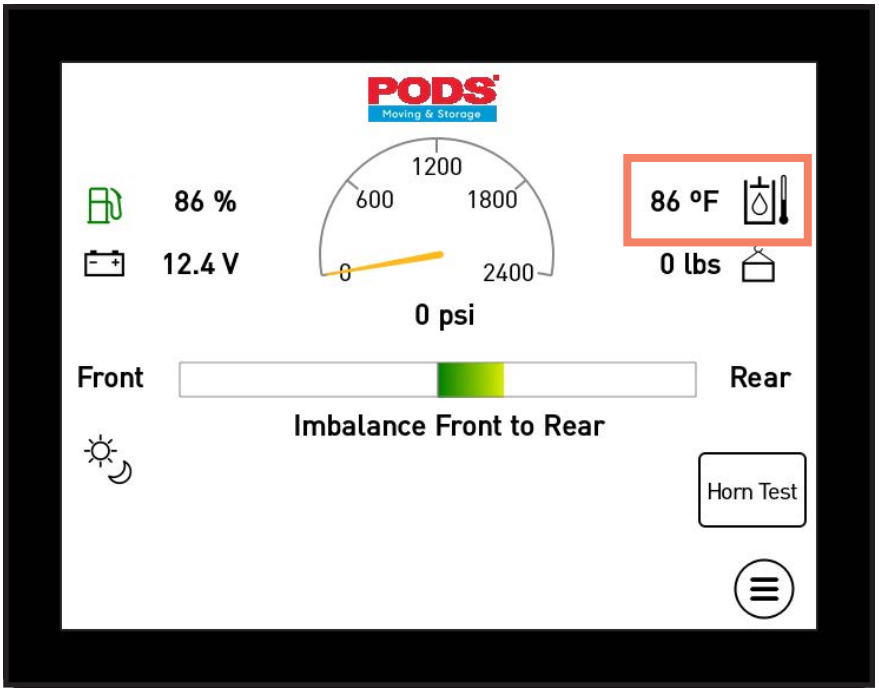
Engine On
Idle RPM (No Load)



Engine On
Full Gov'n RPM (No Load)

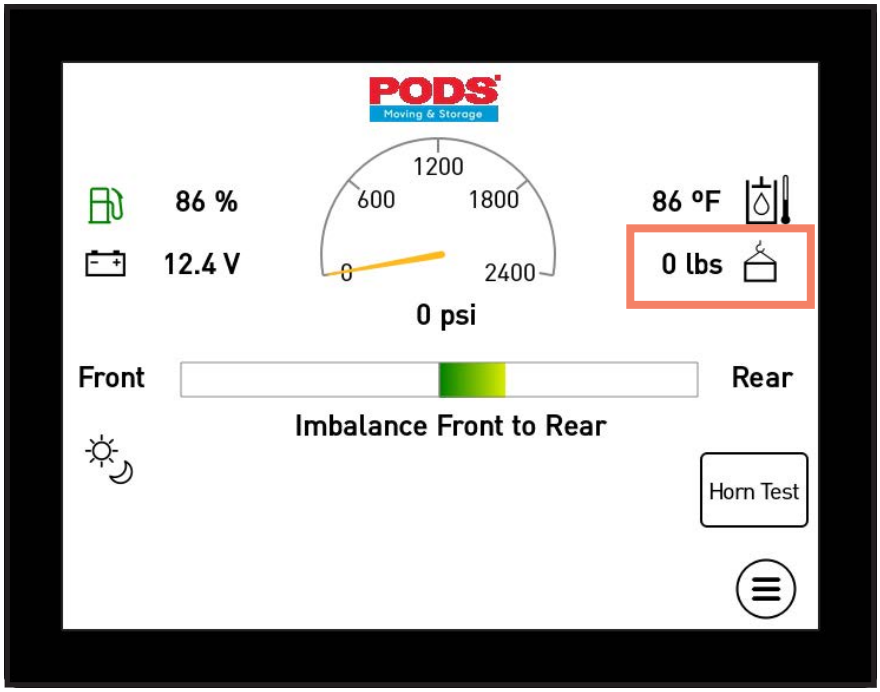
Hydraulic Oil Temperature

Displays real-time hydraulic oil temperature (measured at the hydraulic oil reservoir).

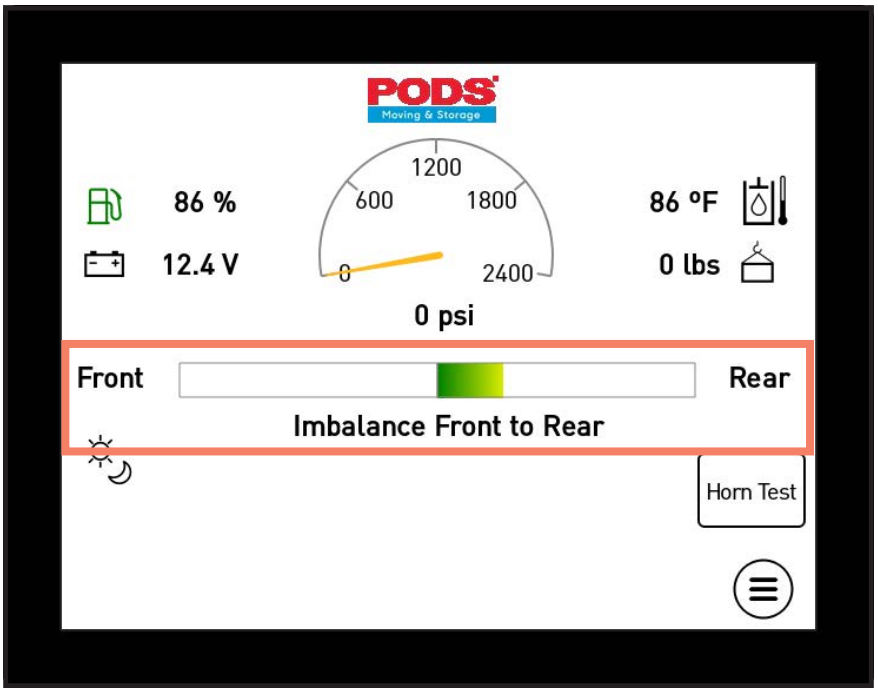


Total Load Weight

Displays real-time estimated combined weight of the PODs container and all the contents inside.

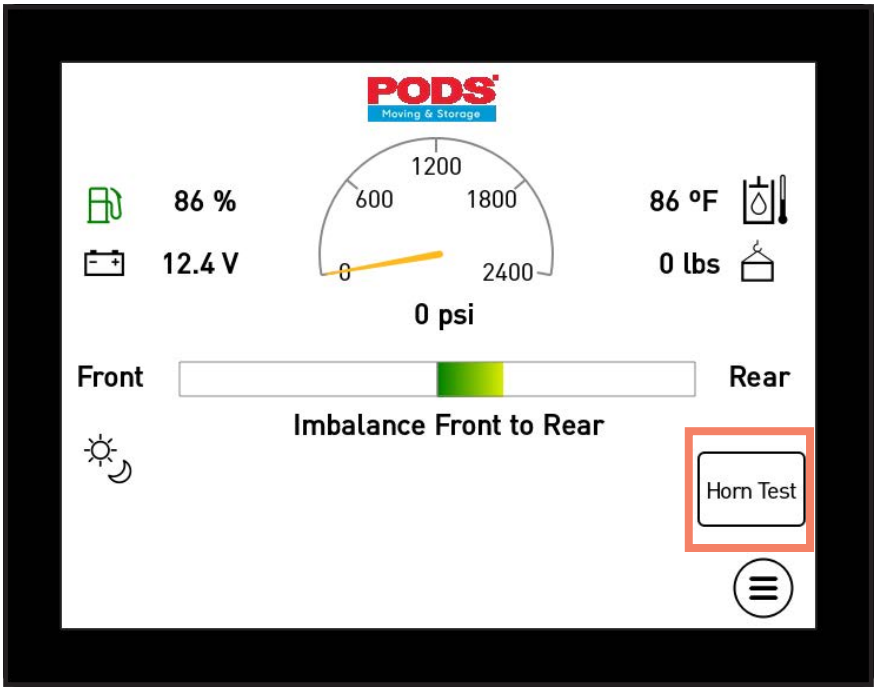


Load Imbalance Meter



Displays a real-time graphical estimate of the load's center of gravity shifting from front to rear (or vice-versa) once lifted. The more the bar graphic is in the green, the more the load is balanced from front to rear. The more the bar graphic is in the red, the more unbalanced the load is from front to rear. The system cannot detect imbalances from left to right (or vice-versa) of the load.

Audible Horn Test Button

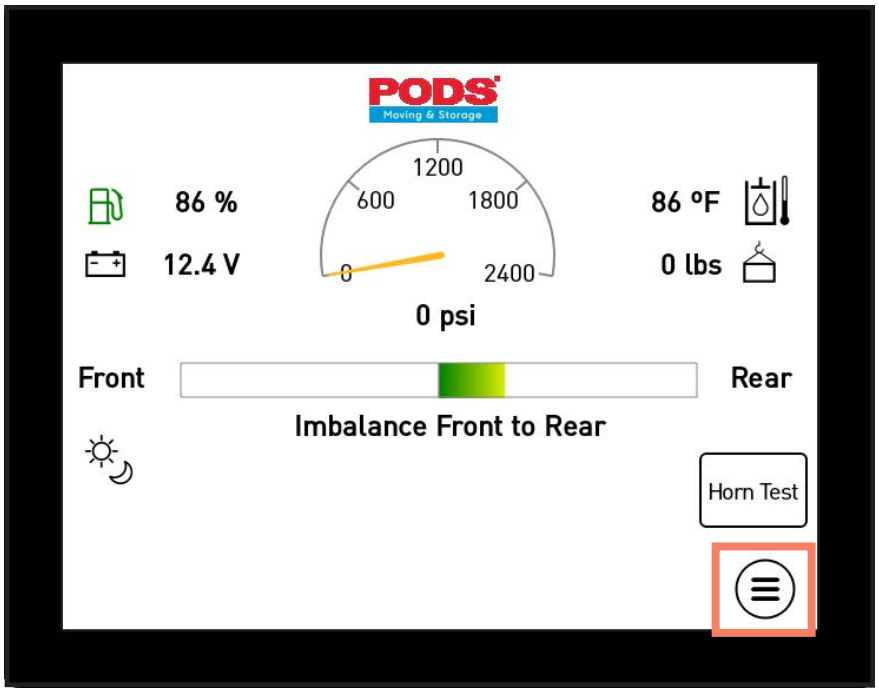


At any point, the operator can press the **Horn Test** button to ensure the audible buzzer is working correctly. The buzzer will sound for as long as this button is pressed.

Menu Button

When pressed, takes the user to the Main Menu Screen.

**See "Podzilla Operator User Manual" for detailed information on the Menu screens.*



Lift Operation and Load Weight Estimations



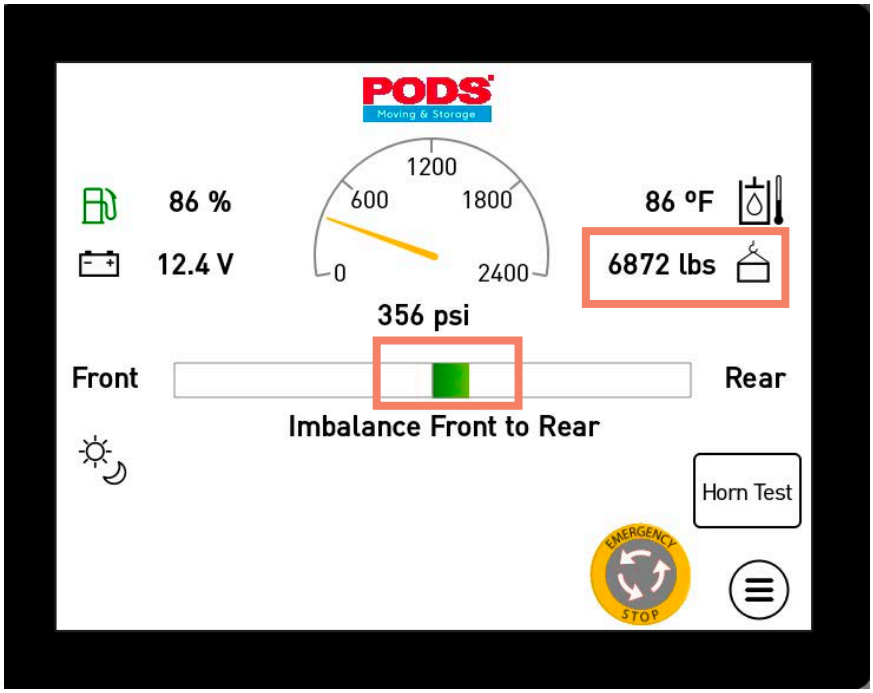
Lift Operation and Load Weight Estimations

To obtain accurate load weight estimations via the HMI screen, the following tips should be followed:

- Lift the container approx. 6-12” up off the ground and try to lift the container with all 4 legs lifting simultaneously
- Keep the container as level as possible
- Lifts should occur while the Honda engine is at the max. governed rpm
- The lift frame should be in as tight as possible around the container, keeping the lift chains more vertical than horizontal



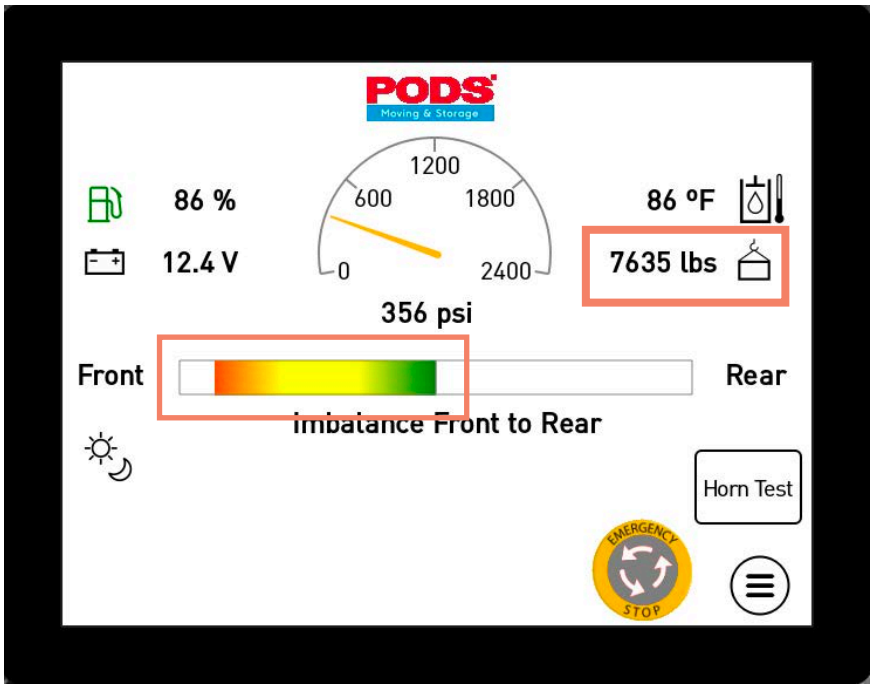
Example Main Home Screen – Load Weight Estimation



- Measured load weight of 6,872lbs
- The load is centered and balanced in the container, as the Imbalance front to rear meter is almost perfectly centered in the green.

** Load weights should only be read when the container is static (not moving) and immediately following a simultaneously extension (lift) of the leg cylinders. Weights displayed during retraction (lowering) of the cylinders will produce less accurate estimated weight readings.*

Example Main Home Screen – Load Weight Estimation



- Measured load weight of 7,635lbs
- The load is now not centered and creates an imbalance towards the front of the lift, as the Imbalance front to rear meter is shifted to the left (front) and in the red zone. The load inside the container should be corrected before it is transported.

** Load weights should only be read when the container is static (not moving) and immediately following a simultaneously extension (lift) of the leg cylinders. Weights displayed during retraction (lowering) of the cylinders will produce less accurate estimated weight readings.*

Load Weight Estimation

Load imbalance towards front of lift, signify that most of the content's weight (center of gravity) is shifted towards the front of the lift.

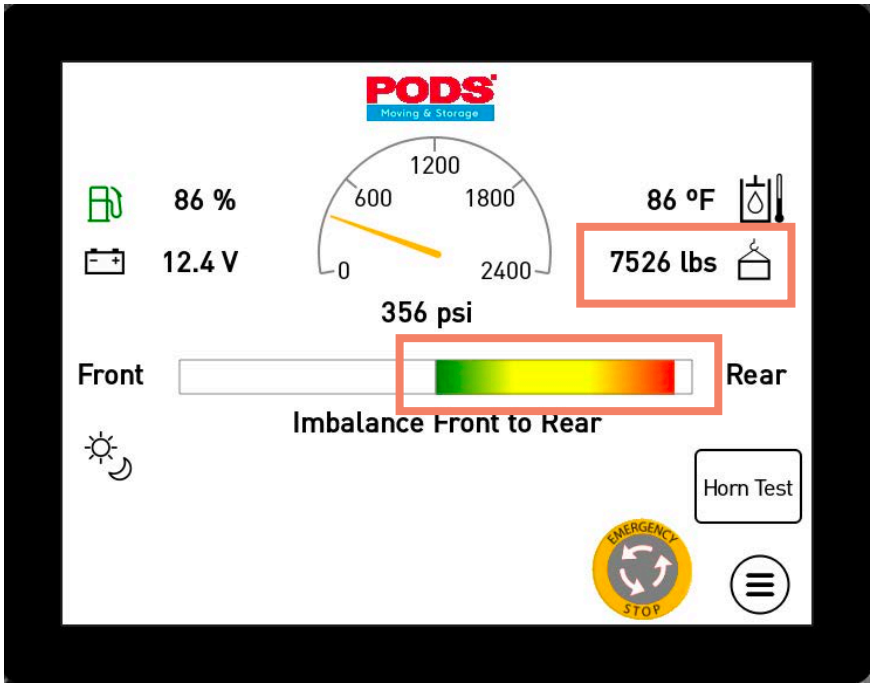
Note: Once the load imbalance **(Heavy End)** of the container is determined, please add **Blue** magnet to that end of the container.



Example Main Home Screen

- Measured load weight of 7,526lbs
- The load is now not centered and creates an imbalance towards the rear of the lift, as the Imbalance front to rear meter is shifted to the right (rear) and in the red zone. The load inside the container should be corrected before it is transported.

** Load weights should only be read when the container is static (not moving) and immediately following a simultaneously extension (lift) of the leg cylinders. Weights displayed during retraction (lowering) of the cylinders will produce less accurate estimated weight readings.*



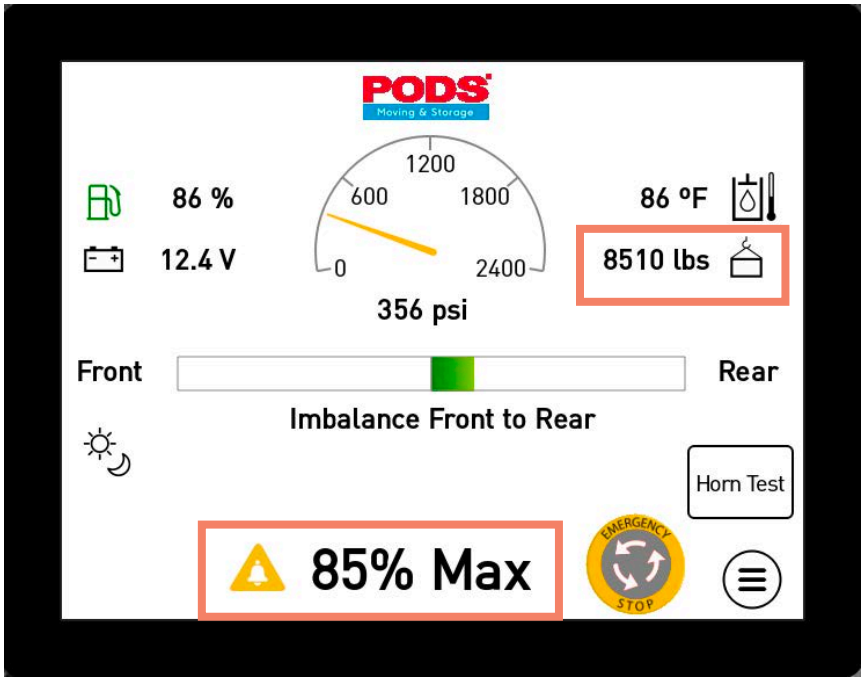
Load Weight Estimation



Load imbalance towards rear of lift, signify that most of the content's weight (center of gravity) is shifted towards the rear of the lift.

Note: Once the load imbalance **(Heavy End)** of the container is determined, please add **Blue** magnet to that end of the container.

Example Main Home Screen – Load Weight Estimation



- Measured load weight of 8,510lbs
- The load is centered and balanced but now has reached a weight that is within 85% limit threshold of the maximum weight setting. The operator is given a **85% MAX** warning at the bottom of the screen to alert of the increased weight.
- As long as the system is measuring this weight, the warning will be active. As soon as weight drops below the Max weight setting threshold, the warning will disappear.

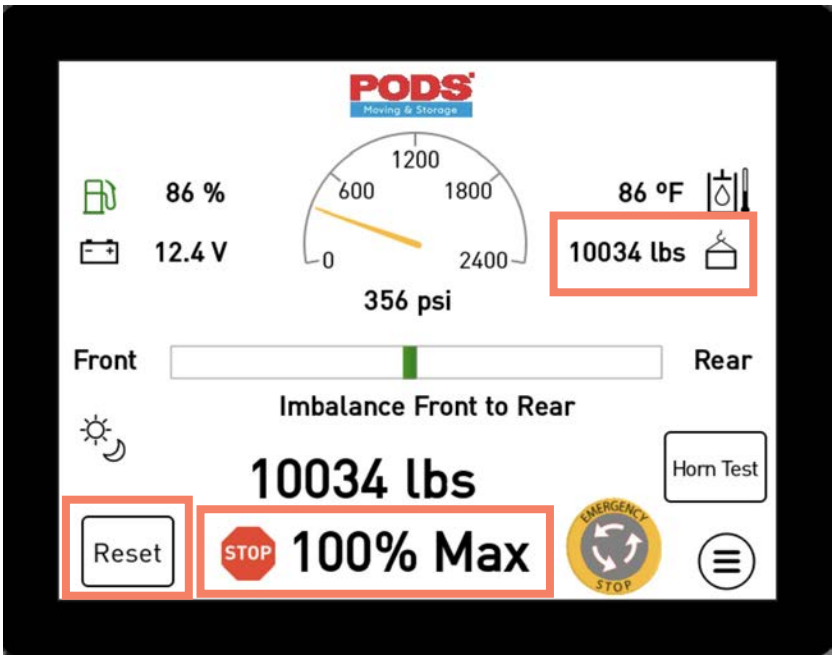
** Load weights should only be read when the container is static (not moving) and immediately following a simultaneously extension (lift) of the leg cylinders. Weights displayed during retraction (lowering) of the cylinders will produce less accurate estimated weight readings.*

Example Main Home Screen – Load Weight Estimation

- Measured load weight of 10,034lbs

- The load is centered and balanced but has now reached/exceeded the maximum weight setpoint. The operator is given a **100% MAX** alarm at the bottom of the screen and advised to stop the lift (immediately lower the container). The audible buzzer/red LED is activated and remains active the entire time the system is in this condition.

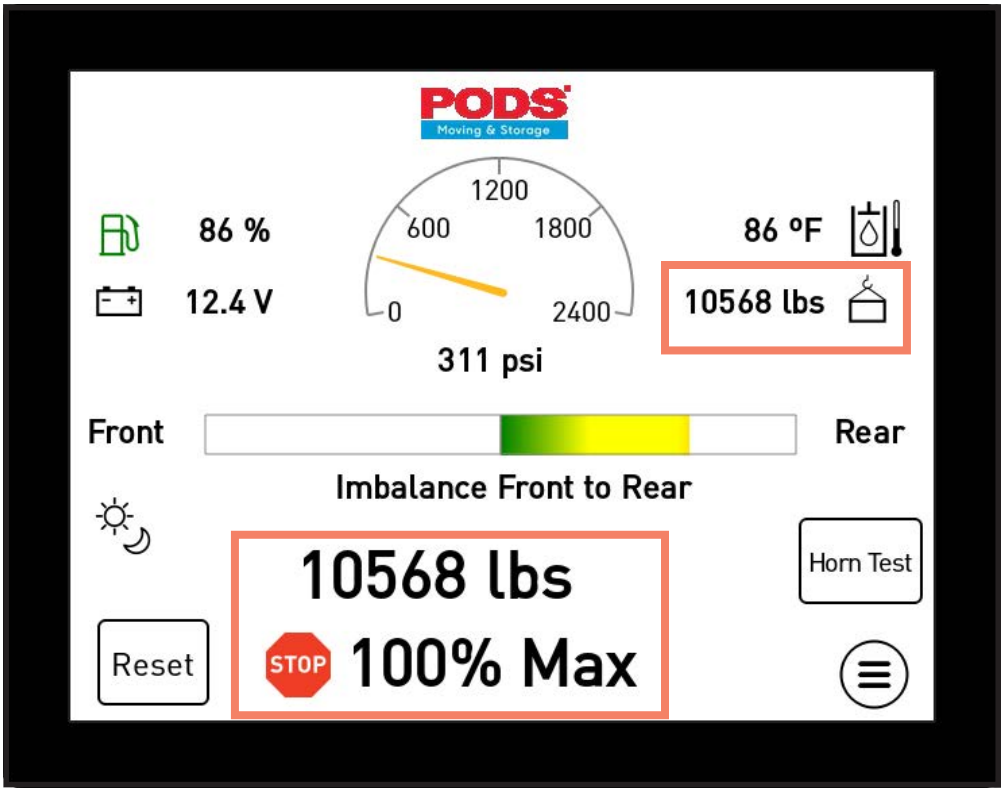
- When this alarm occurs, the buzzer will stay on until the alarm conditions are nonexistent and the **reset** button is pressed on the screen. If the system is still measuring over the max weight, the alarm will retrigger.



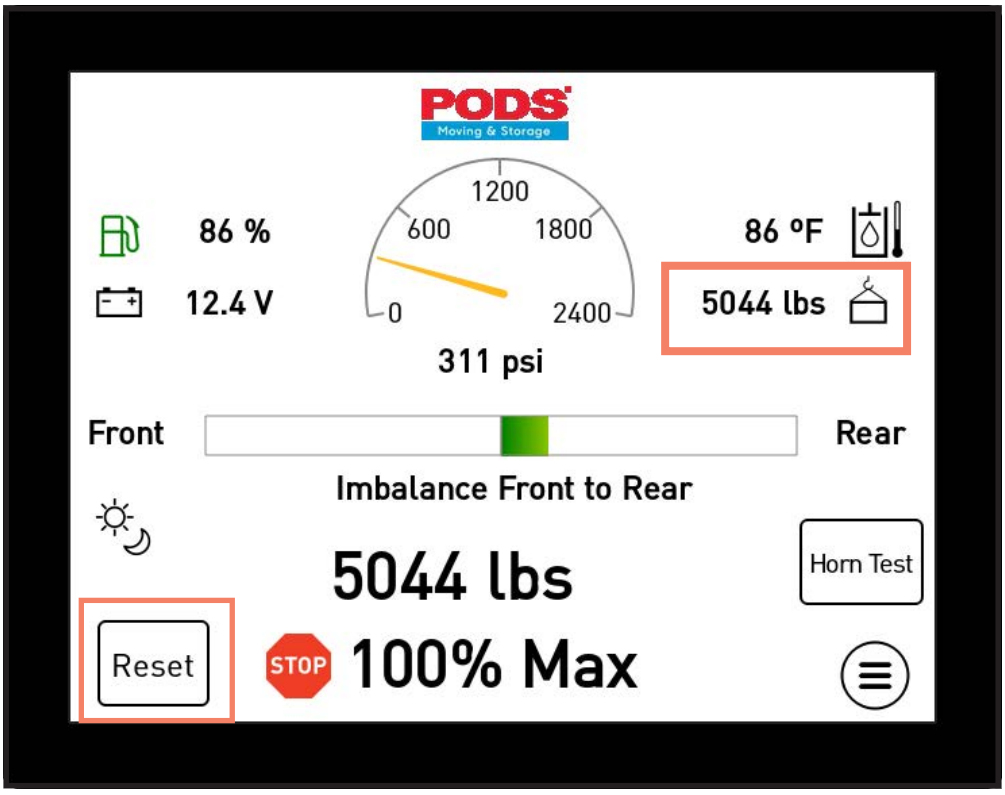
**Load weights should only be read when the container is static (not moving) and immediately following a simultaneously extension (lift) of the leg cylinders. Weights displayed during retraction (lowering) of the cylinders will produce less accurate estimated weight readings.*

Resetting Overweight Alarm on HMI

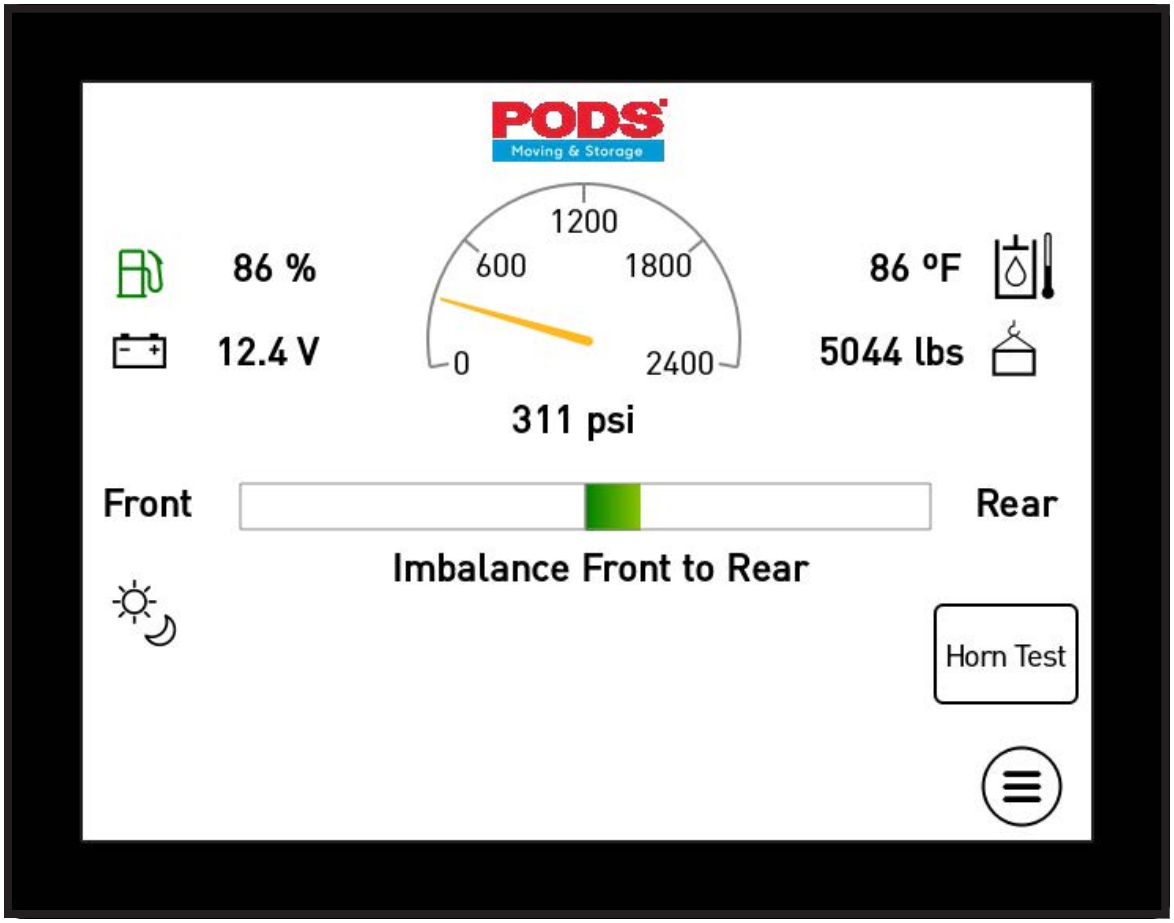
The load weight has exceeded the 10,000lbs limit and has triggered the overweight alarm.



Before the alarm can be cleared, the load weight must first be below the 10,000lbs threshold. Once the load weight is below, the operator can press the **reset** button to clear the alarm



Overweight Alarm on HMI Cleared and Reset



False Over-Weight Alarms

Lift loaded on a PODS flatbed with cylinders in the fully retracted position, which can cause the dead head pressure spikes and false overweight alarm.



False Over-Weight Alarms

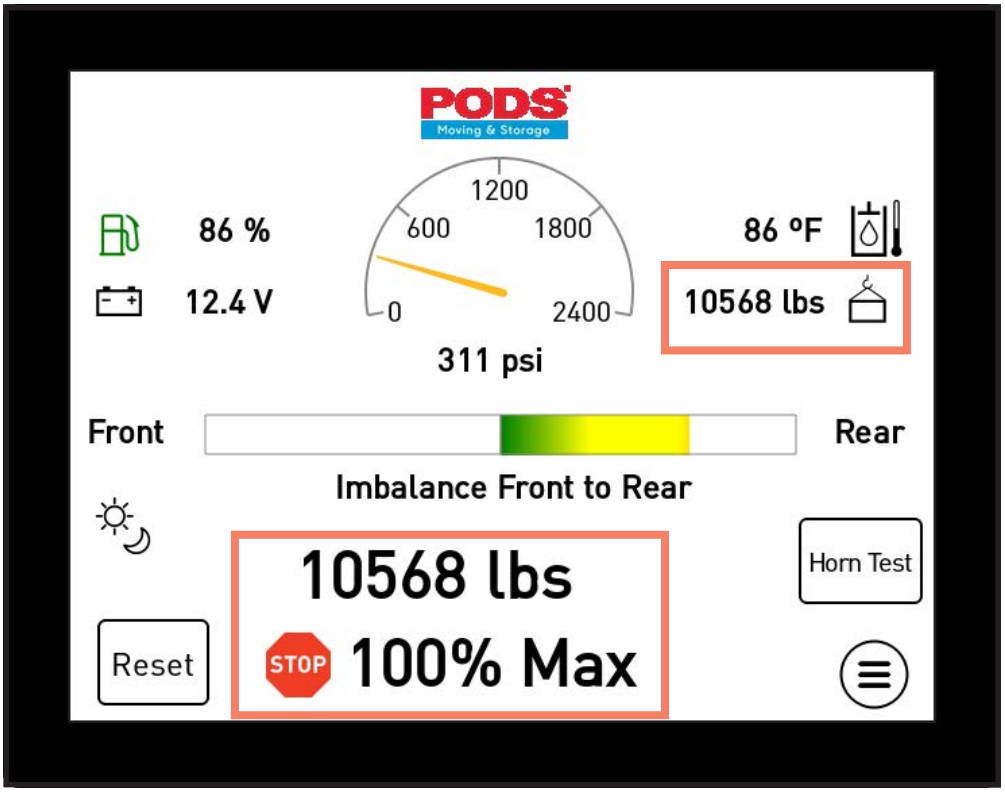
Lift in the fully extend position, which can cause the dead head pressure spikes and false overweight alarm.



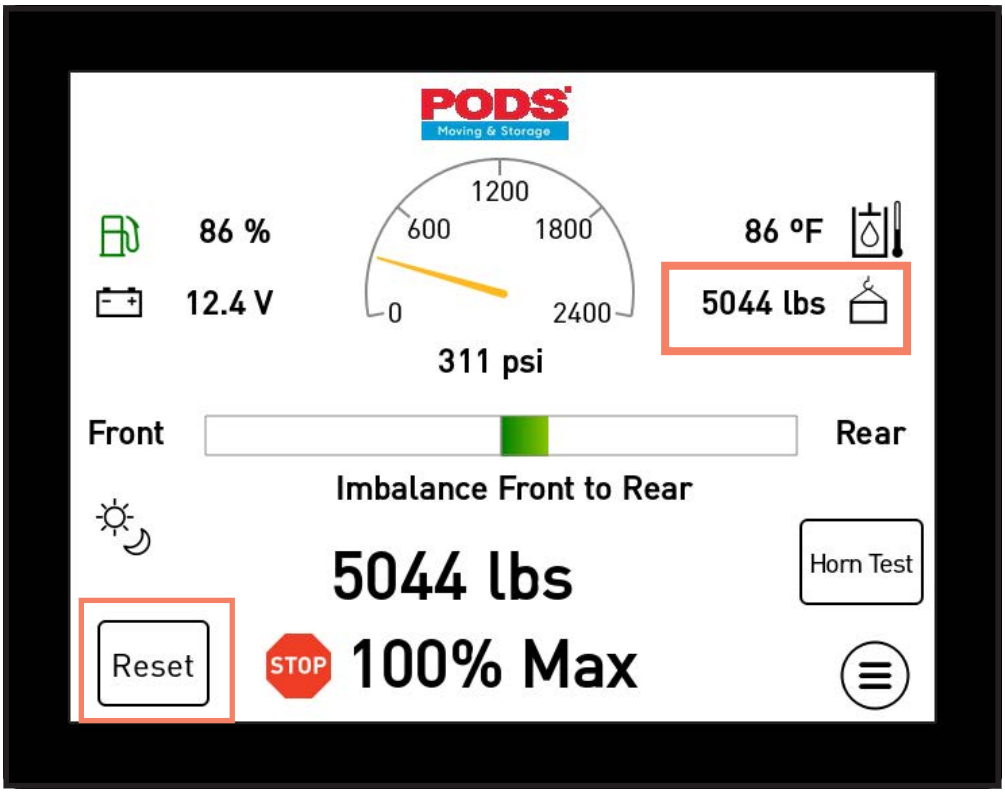
Resetting False Overweight Alarm on HMI

The system has falsely calculated a weight that exceeds the 10,000lbs limit and has triggered the overweight alarm.

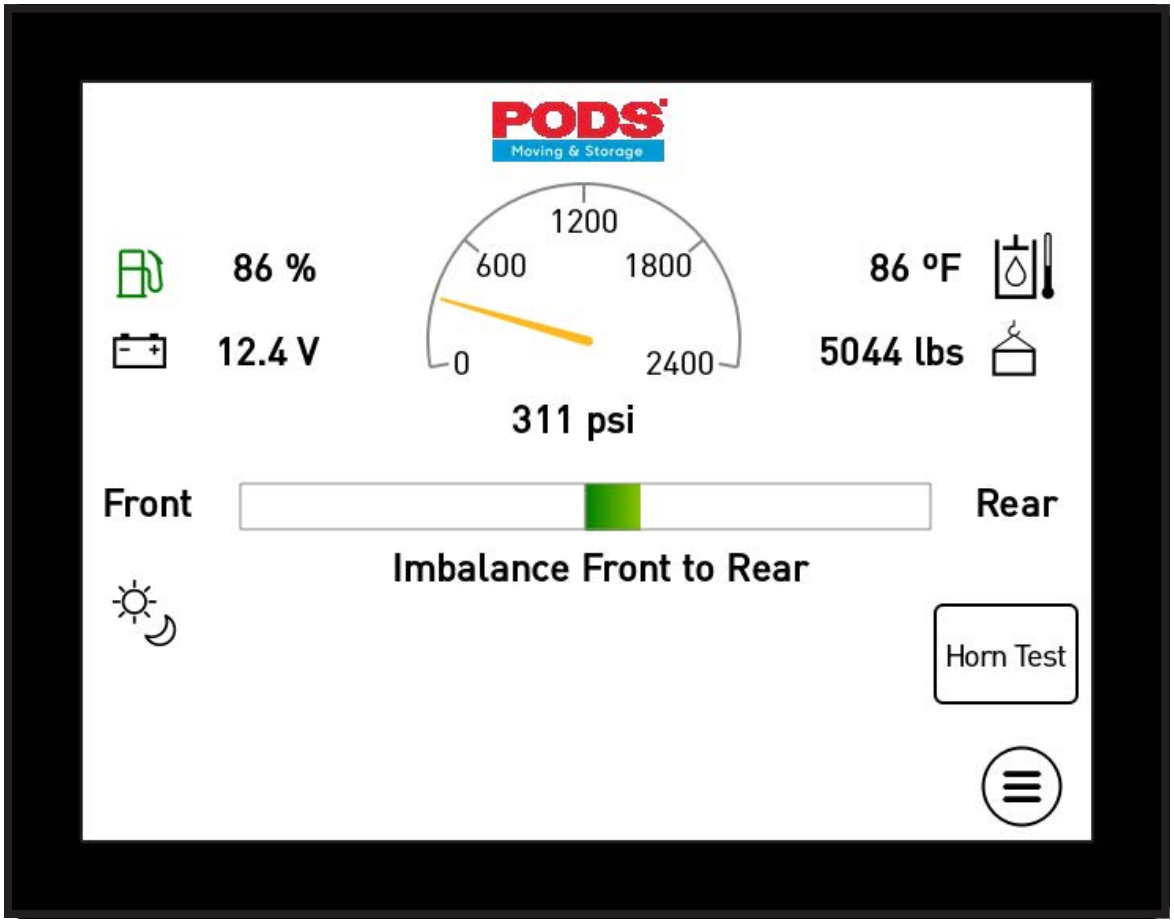
This occurred because of the cylinder dead head pressure.



Before the alarm can be cleared, the calculated load weight must first be below the 10,000lbs threshold. To correct that situation reverse the directional control for the lift cylinders that are at the end of travel. You only need the cylinder to barely move in the opposite direction. Once the load weight is below 10,000lbs, the operator can press the **reset** button to clear the alarm



Overweight Alarm on HMI Cleared and Reset



Remote Transmitter





In the event the Scanreco remote transmitter is not operational (missing, broken, dead battery, etc.) the system can be run using the control tree valve levers only. To operate the system in this fashion, first put the **Scanreco Bypass** switch is in the **ON** position. Then ensure the E-stop button is in the released position.

Remote Transmitter

You'll now notice that the Scanreco receiver will no longer power on, and if you try to link the remote transmitter, it will not link thus not allowing the lift to be operated remotely. All movement and operation of the lift can now only occur at the control tree.





With the lift in a non-E-stop condition, the engine will start normally. The lift can now be solely operated by the manual control levers at the Hawe valves on the control tree.





Remote Transmitter

Remote operation of the lift can only be restored once the **Scanreco Bypas** switch is moved back to the OFF position and a fully charged/functioning Scanreco transmitter remote is linked to the system





PODZILLA

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