

Integration Instructions

PinPoint™ III ENVELOP on Hagie STS

Below is an example of the PinPoint™ III home screen. Note that in this example, PinPoint™ III is running on a Raven Viper 4 task controller for reference. The PinPoint™ III interface remains the same on any task controller.

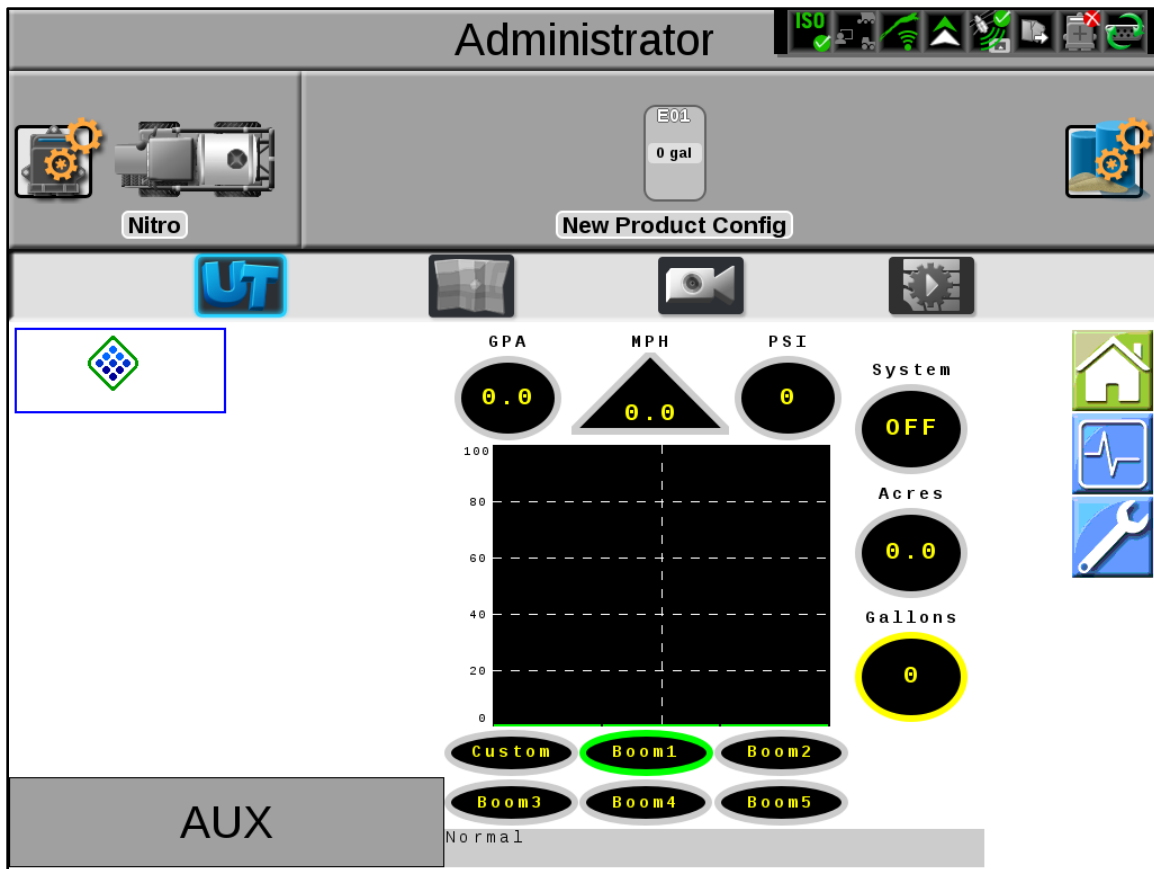



Figure 1 — Task Controller Home Screen

Menu Setup

1. *Figure 1*: Select the CapstanAG PinPoint™ III icon  from the program icons on the left side of the task controller screen. This icon may be located in slightly different places depending on the task controller.

Note: ANYTIME you change settings, you MUST tap the **Settings** icon  to go into the **Settings** menu and select **Initial Setup > Configurations > Software Restart** to save settings. If the unit is turned off or loses battery power before this is done, the new settings will not be saved. Refer to *Figure 6* for the location of this function.

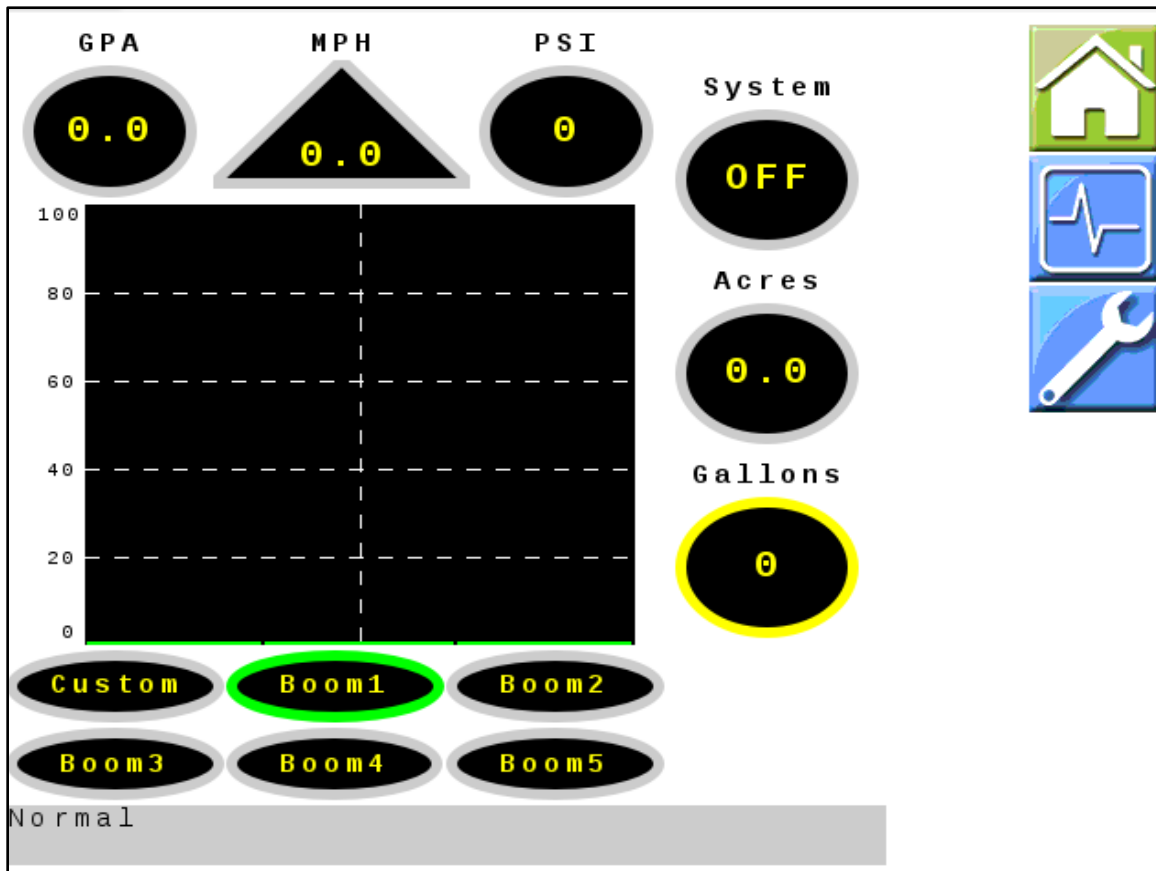



Figure 2 — PinPoint™ III Home Screen

2. *Figure 2:* Basic running settings and information are displayed on the PinPoint™ III home screen. The boom configuration can be selected from the saved configurations at the bottom of the screen. To edit these configurations and set up other features of the PinPoint™ III software, tap the **Settings** icon  at the right side of the screen.

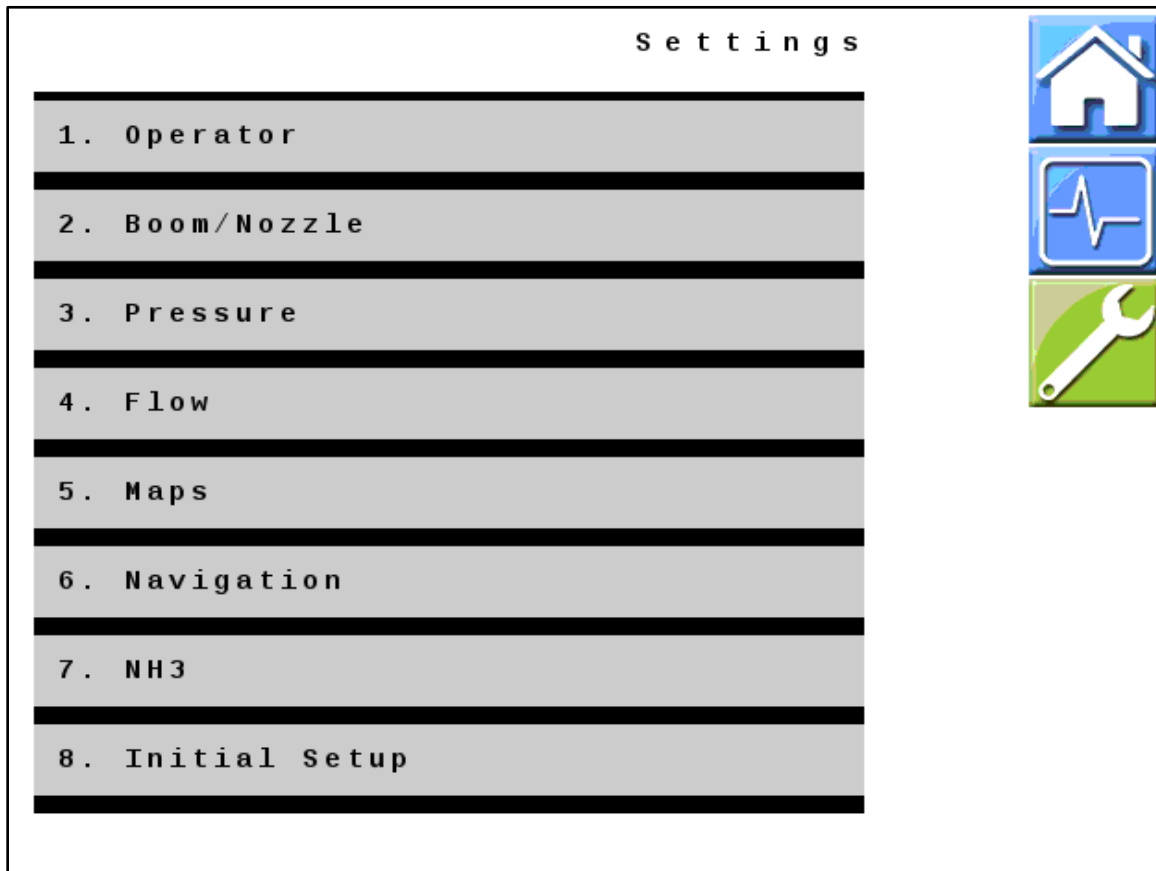


Figure 3 — Settings Menu

3. *Figure 3:* Take note of the different menus which are reached from the settings menu. Some of these will require input of machine specific variables. Other settings only need to be verified correct from the factory.

4. Select **Initial Setup** > **VCM Setup** > **Geometry Setup**

Note: Complete this step BEFORE performing any other boom setup.

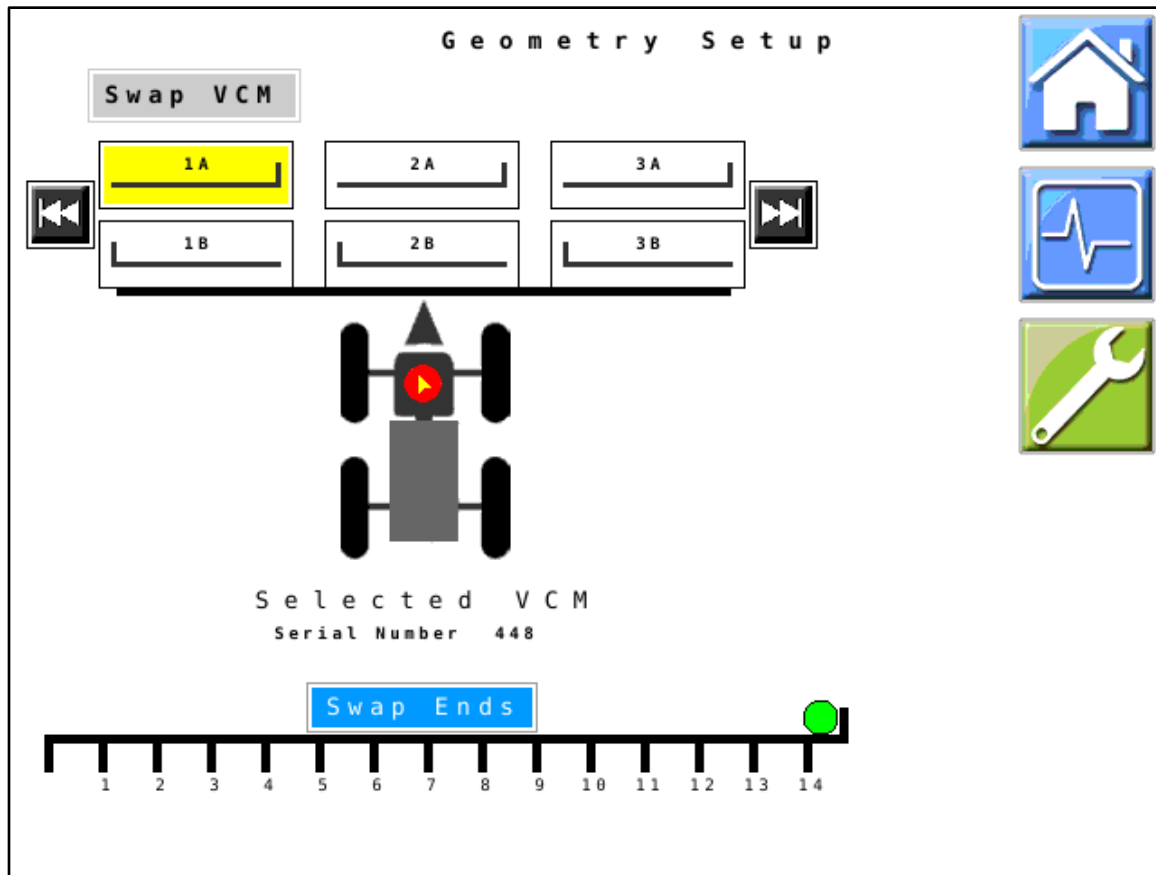
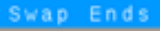
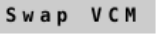




Figure 4 — Geometry Setup

Note: The green dot on the display indicates the position of the selected VCM (highlighted in yellow) in relation to the nozzles on its hub CAN channel.

5. *Figure 4:* VCMs must be in the correct order and orientation on the boom. If there is only one VCM connected to a hub CAN channel, use the **Swap Ends** icon  with that VCM highlighted to orient the VCM correctly on the boom. VCMs can be mounted with the tube towards the center of the machine (green dot) and the pigtail running towards the outside tip, or vice versa.

If two VCMs are located on the same hub CAN channel, first use the **Swap VCM** icon  with these VCMs highlighted to orient them correctly left to right, and then make sure the orientation (swap ends) is correct.

6. Verify that the serial number on each VCM matches that shown on the display.
7. Use the **Left** and **Right Scroll** icons   to scroll through all the VCMs installed on the machine. Verify each of their locations and serial numbers. When the orientation and position of VCMs is correct, all the VCMs will show in order left to right on the screen exactly as they do across the boom on the machine.

- Verify the order and orientation of the VCMs using the unit key fob or Capstan app.

Note: This MUST be done before continuing any further with setup. Failure to verify the VCM orientation will result in incorrect automatic nozzle shutoff.

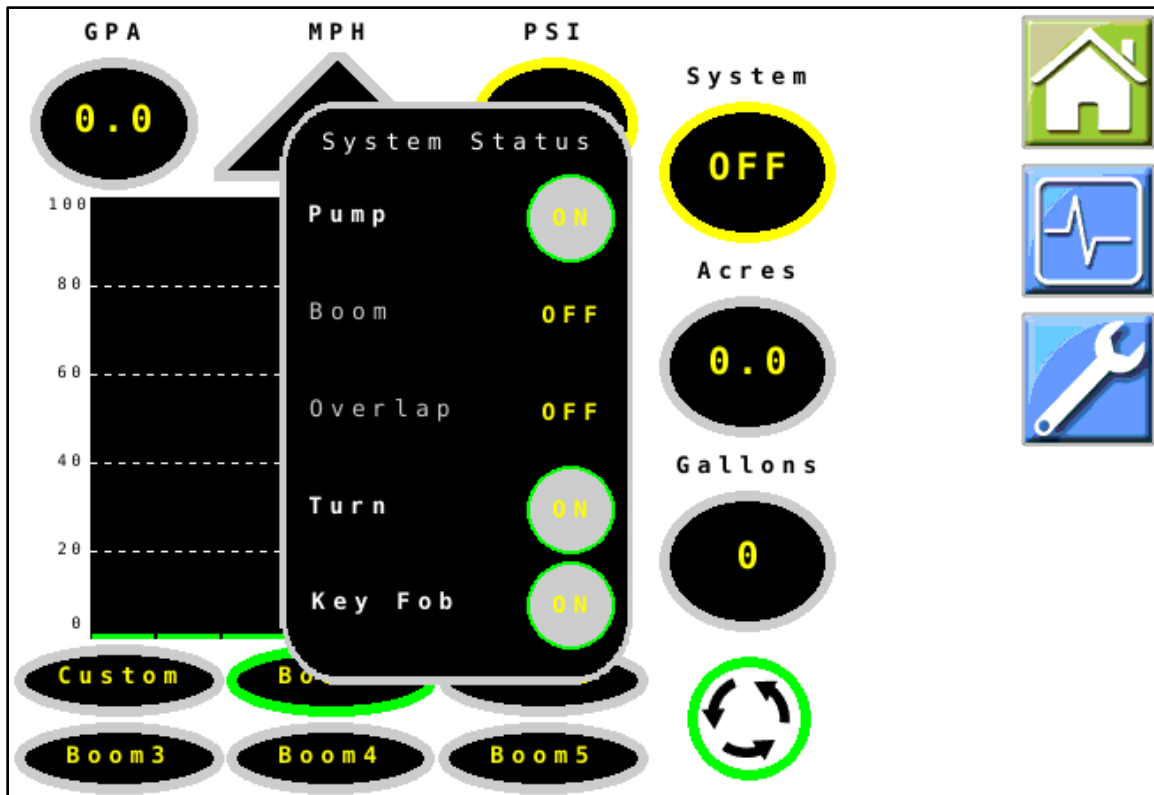




Figure 5 — Key Fob Verification

Note: The CapstanAG Mobile App can be used with the system in key fob mode for this test procedure.

- Figure 5: Tap the **Home** icon  to return to the home screen. Select **System > Key Fob**.
- Set Key Fob to **ON**.
- Locate the key fob remote control or use the Capstan app. Using the right arrow key on the key fob or the app, turn on each of the nozzles one at a time across the boom. If the VCM orientation and position is correct, the nozzles will turn on in order left to right across the boom. If the nozzles do not turn on in the correct order, navigate back to the **Geometry Setup** screen and correct any errors.

12. Tap the **Settings** icon  and select **Initial Setup > Configurations**.

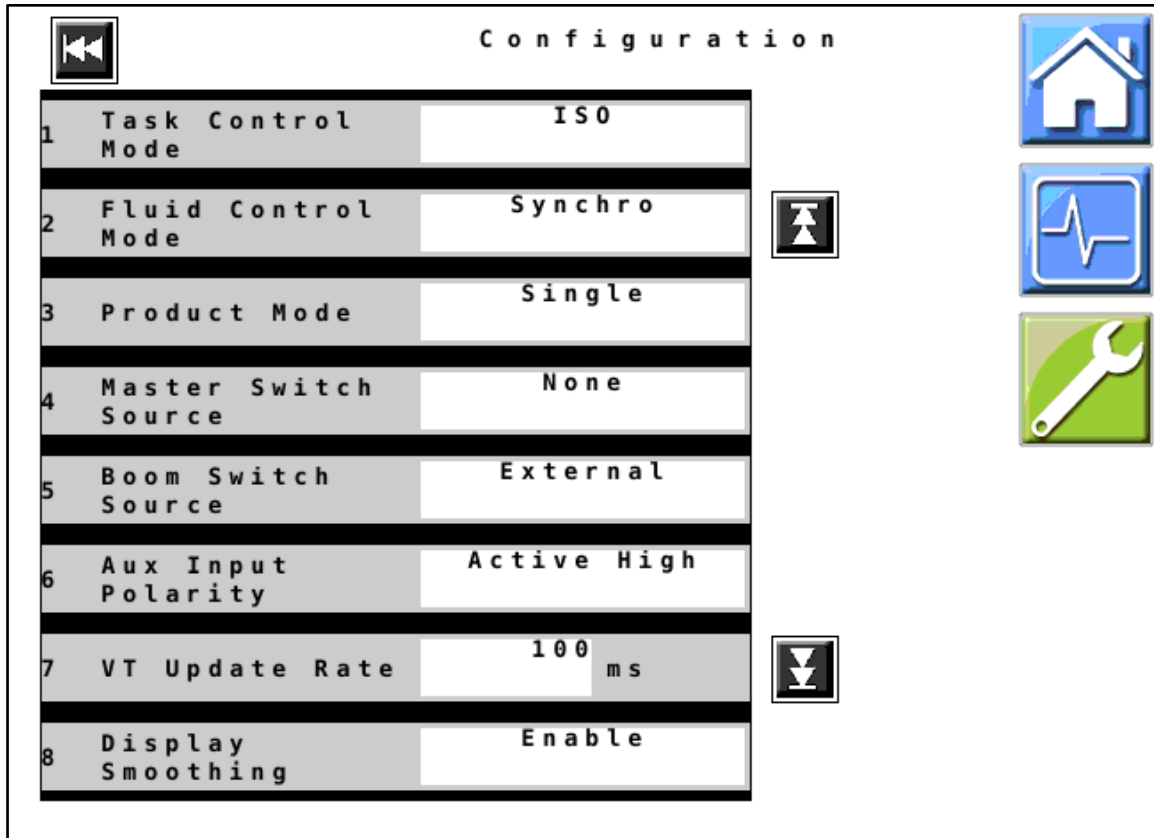



Figure 6 — Configurations Page 1

13. *Figure 6*: Verify that the data displayed in these fields on your unit correctly matches your machine's specifications.

14. Figures 7 & 8: Use the **Scroll Down** icon  to view the second and third pages and verify the values there as well.

9	Nozzle Spacing	20.00	in
10	Total Number of Nozzles	80	
11	Factory Reset		
12	Maximum TC Sections	80	
13	Selected VT	Raven, 128	
14	Selected TC	Raven, 130	
15	Aux Boom Configuration	No Config	
16	Software Restart		

Figure 7 — Configurations Page 2

Note: Line 16 is the **Software Restart** function used to save settings after editing. If the unit is turned off or loses battery power before this is done, the new settings will not be saved.

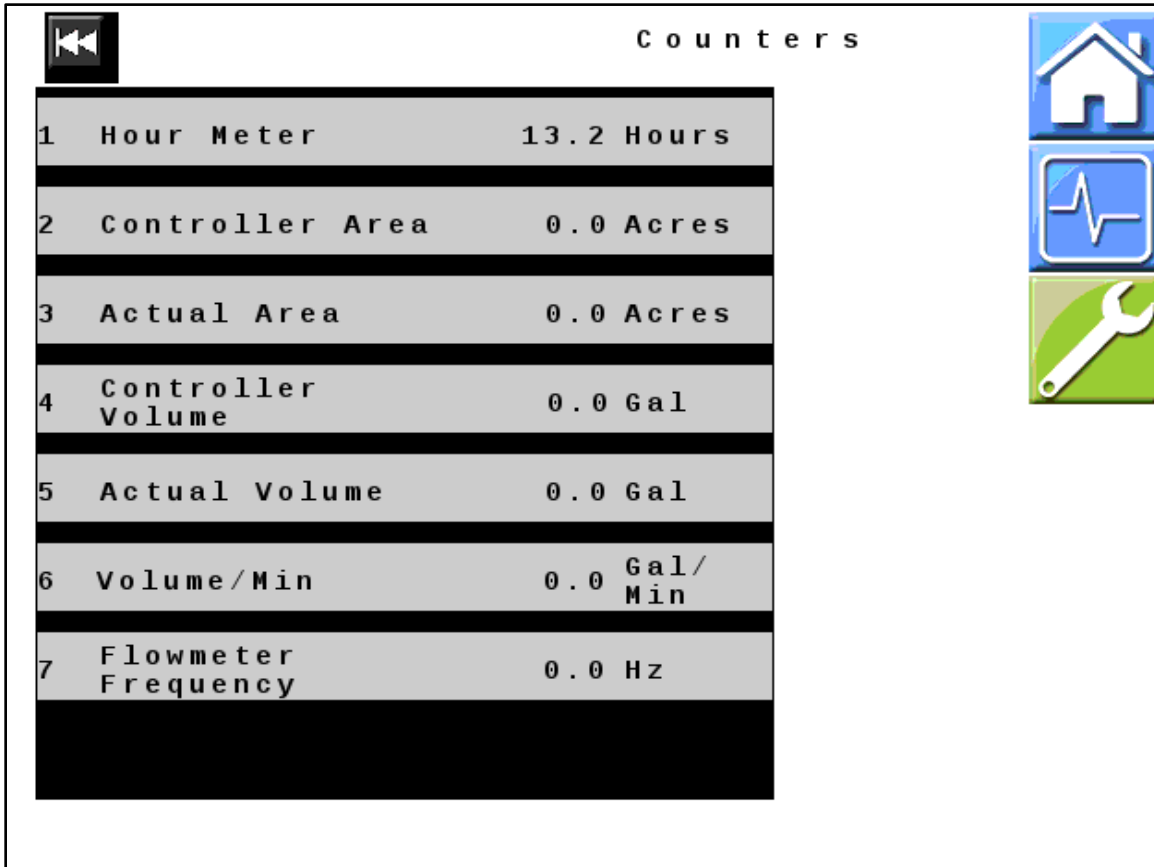
Note: In order for “On Center” machines to map correctly, nozzle spacing must be adjusted slightly less than the actual spacing. Failure to do so may result in the outer nozzles flickering on and off. Due to rounding, a value higher than what is intended may need to be entered in the field to achieve the desired final value. For example: entering 14.86” in the field will result in a value of 14.84” being captured by the system.

Note: The Maximum TC Sections field must be greater than or equal to the number of nozzles on the boom, with the exception of rate controllers which will not accept as many nozzles. For example, the Case Pro 700 only accepts 32 sections.

17	Machine Configuration	<New Config>	
18	Fill Station	Disable	

Figure 8 — Configurations Page 3


15. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Operator > Counters**



C o u n t e r s		
1	H o u r M e t e r	13.2 H o u r s
2	C o n t r o l l e r A r e a	0.0 A c r e s
3	A c t u a l A r e a	0.0 A c r e s
4	C o n t r o l l e r V o l u m e	0.0 G a l
5	A c t u a l V o l u m e	0.0 G a l
6	V o l u m e / M i n	0.0 G a l / M i n
7	F l o w m e t e r F r e q u e n c y	0.0 H z

Figure 9 — Counters

16. *Figure 9:* Verify that the data displayed in these fields on your unit correctly matches your machine's specifications.

17. Tap the **Back** icon  to return to the **Operator** menu. Select **Diagnostics**.

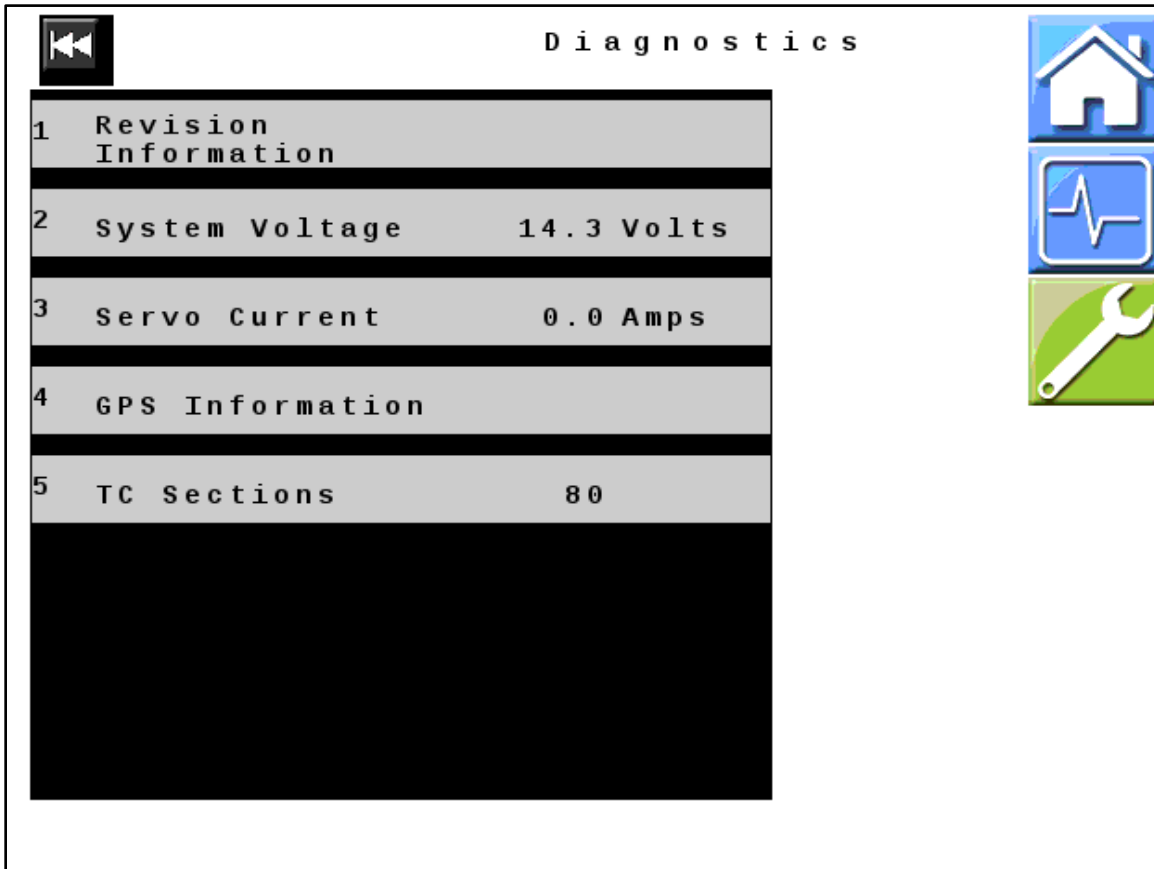


Figure 10 — Diagnostics

18. *Figure 10:* Verify that the data displayed in these fields on your unit correctly matches your machine's specifications.

19. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Boom/Nozzle** > **Nozzle Bounds**.

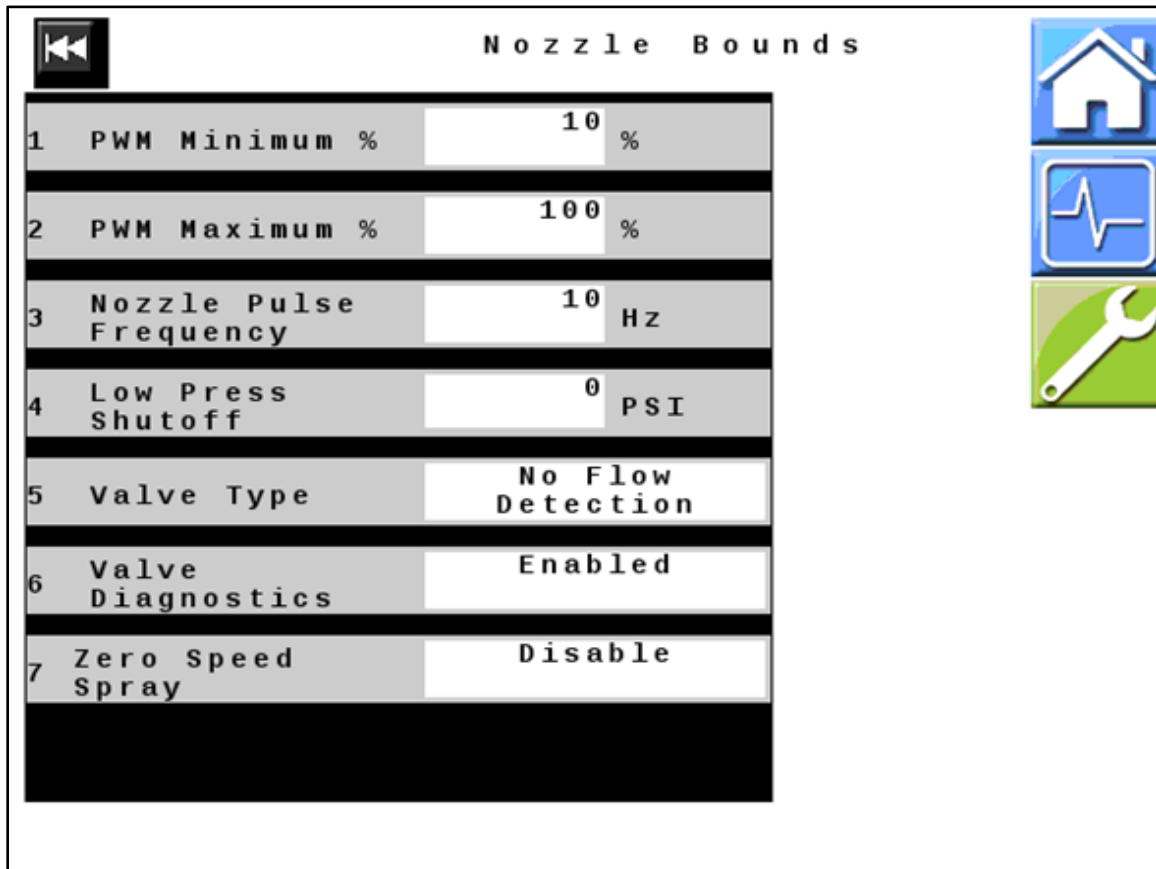



Figure 11 — Nozzle Bounds

20. *Figure 11:* The information in the fields on this screen is machine specific, verify that it is correct for your machine, and change any settings if necessary.

21. Tap the **Back** icon  to return to the **Boom/Nozzle** menu. Select **Nozzle Setup**.

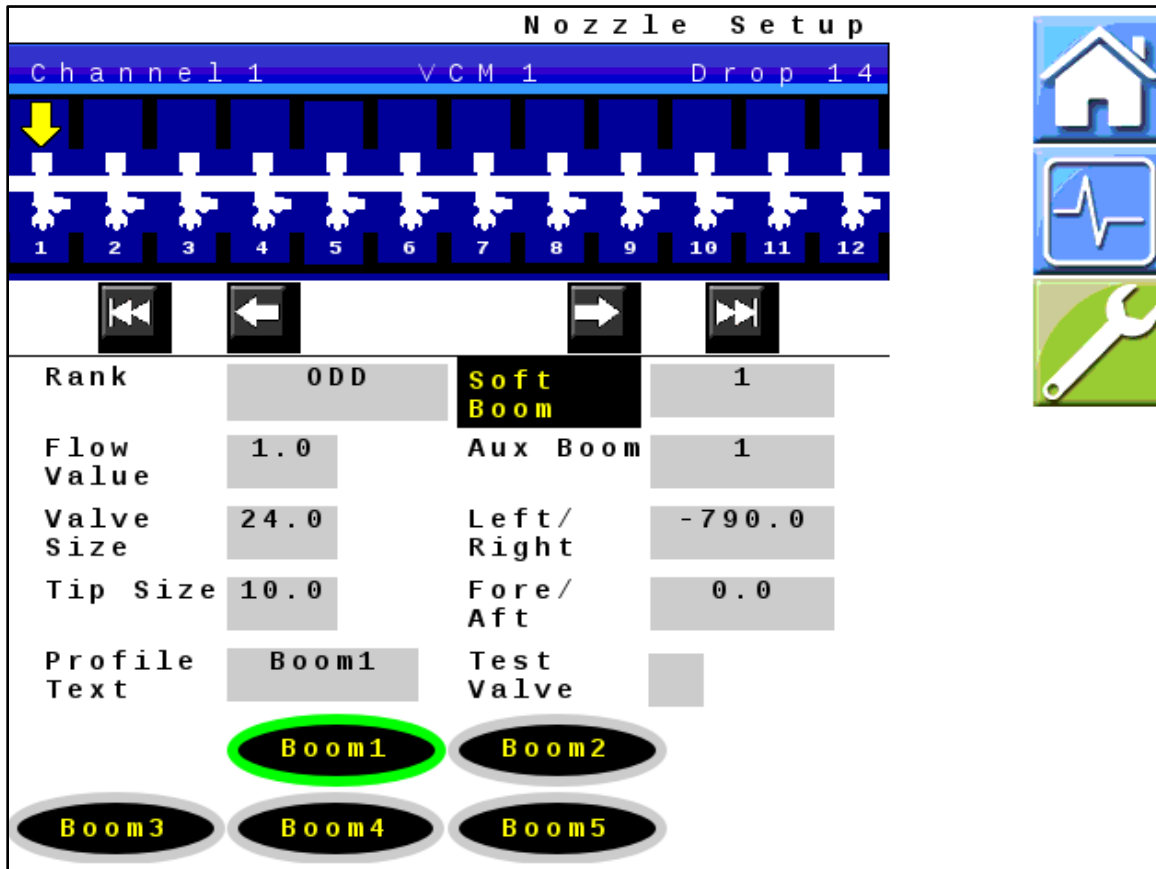




Figure 12 — Nozzle Setup

22. *Figure 12:* Use the Nozzle Setup screen to set up and name custom boom profiles.

Note: Valve size value may be either 15.5 (for 7-watt valves with black heat shrink tubing) or 24 (for 12-watt valves with blue heat shrink tubing). Verify which valves your unit is equipped with.

23. Select the **Soft Boom**  icon to configure the soft boom setup for each profile. Refer to the tables at the end of this document for the correct soft boom configuration for your machine.

24. After setting up all desired soft boom configurations, tap the **Back** icon  twice to return to the **Boom/Nozzle** menu. Select **Boom Sway**.

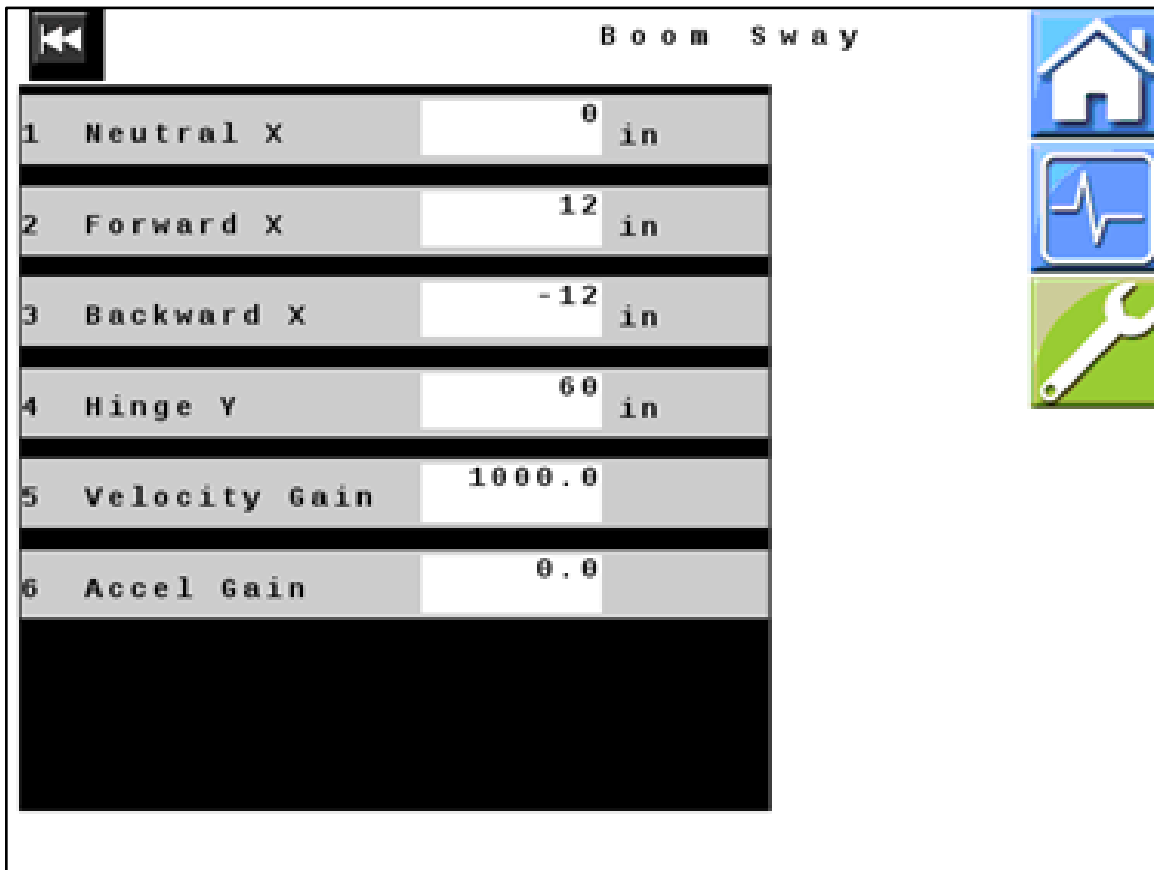
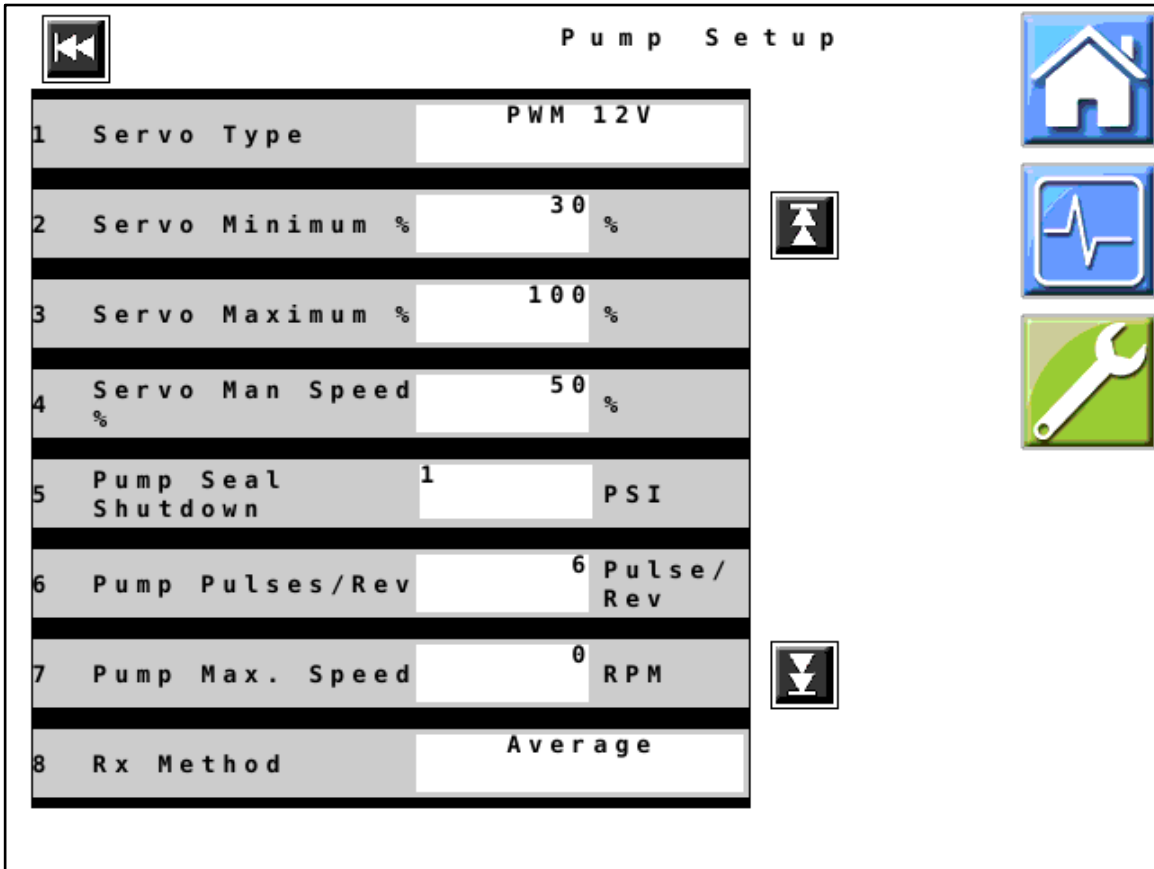


Figure 13 — Boom Sway

25. *Figure 13:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

26. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Pressures > Pump Setup**.




The screenshot shows the 'Pump Setup' screen with a list of 8 parameters. A back icon is in the top left, and navigation icons (home, pulse, wrench) are on the right. Up and down arrow icons are next to rows 2 and 7.

Item	Parameter	Value	Unit
1	Servo Type	PWM	12V
2	Servo Minimum %	30	%
3	Servo Maximum %	100	%
4	Servo Man Speed %	50	%
5	Pump Seal Shutdown	1	PSI
6	Pump Pulses/Rev	6	Pulse/Rev
7	Pump Max. Speed	0	RPM
8	Rx Method	Average	

Figure 14 — Pump Setup Page 1

27. *Figure 14:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

28. *Figure 15:* Use the **Scroll Down** icon  to view the second page and verify the values there as well.



9	Min Pressure	15	PSI		
10	Max Pressure	100	PSI		
11	Max Flow	0	Gal/ Min		
12	Pump Power Up Status	OFF			
13	Recirculation	Disable			
14	Recirculation Valve	Normally Open			
15	Cycle Boom Valves	Disable			

Figure 15 — Pump Setup Page 2

29. Tap the **Back** icon  to return to the **Pressures** menu. Select **Sensor Setup**.

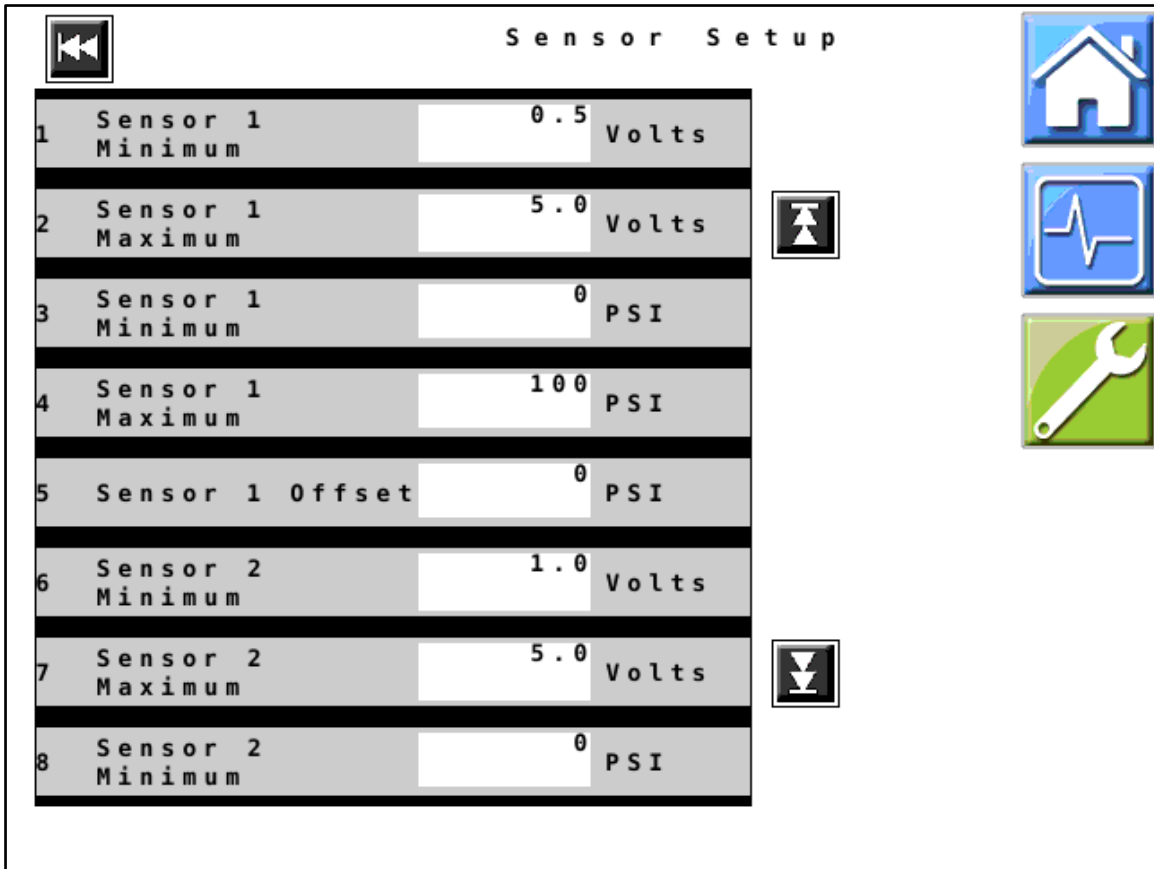


Figure 16 — Sensor Setup Page 1

30. *Figure 16*: Verify that all values displayed on your unit match those shown here. Change values if necessary.


31. *Figure 17*: Use the **Scroll Down** icon  to view the second page and verify the values there as well.



Figure 17 — Sensor Setup Page 2

32. Tap the **Back** icon  to return to the **Pressures** menu. Select **Control Tuning**.

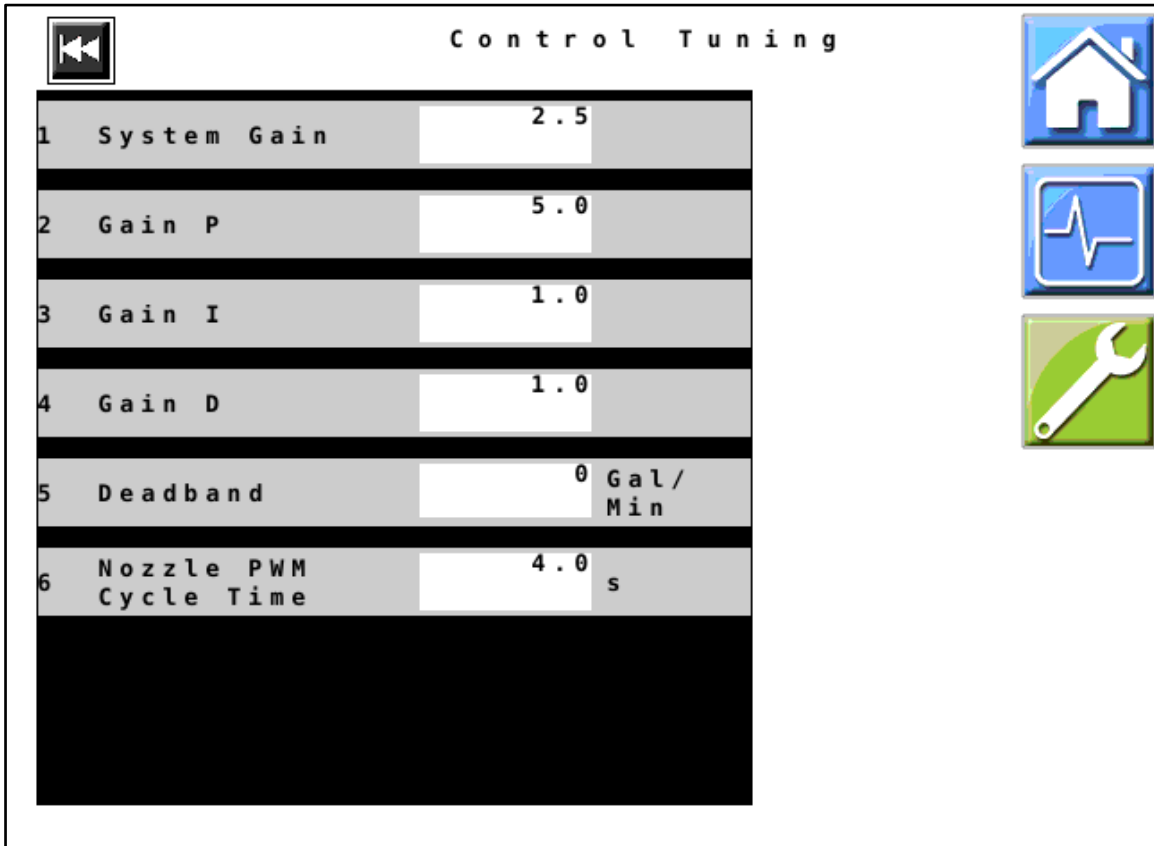



Figure 18 — Control Tuning

33. *Figure 18*: Verify that all values displayed on your unit match those shown here. Change values if necessary.

34. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Flow > Flowmeter**.

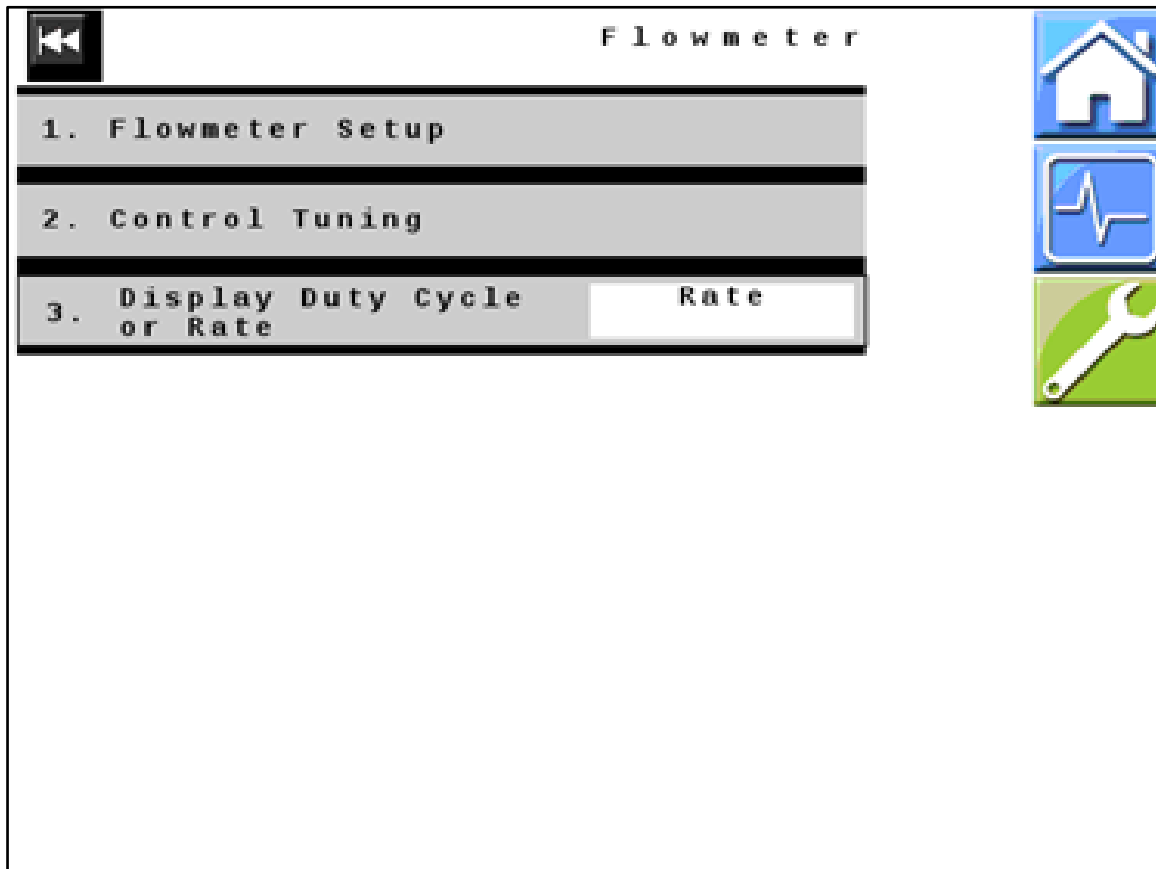


Figure 19 — Flowmeter

35. *Figure 19:* Verify that all values displayed on your unit match those shown here. Change values if necessary

Note: tapping the **Display Duty Cycle or Rate** icon changes which value is displayed on the home screen.


36. Select **Flowmeter Setup**.

Flowmeter Setup		
1	Meter 1 Type	Correction
2	Meter 1 Minimum	3 Gal/Min
3	Meter 1 Calibration	1360 Pulse/10 Gal
4	Meter 1 Error Limit	50 %
5	Specific Gravity 1	1.00
6	Meter 2 Type	Transparent
7	Meter 2 Minimum	0 Gal/Min
8	Meter 2 Calibration	1734 Pulse/10 Gal

Figure 20 — Flowmeter Setup Page 1

37. *Figure 20*: The information in the fields on this screen is machine specific, verify that it is correct for your machine, and change any settings if necessary.

Note: Obtain the Meter 1 Calibration value with your flowmeter.

38. *Figure 21:* Use the **Scroll Down** icon  to view the second page and verify the values there as well.



9	Meter 2 Error Limit	0 %	
10	Specific Gravity 2	1.00	
11	JD-R Low Flow Mode	0 Gal/Min	
12	Preset Rate Average	Average	
13	Flowmeter Sense Resistor	Pull-Up	
14	Tank Sensor Calibration	Not Started	

Figure 21 — Flowmeter Setup Page 2

39. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Navigation > Vehicle**.

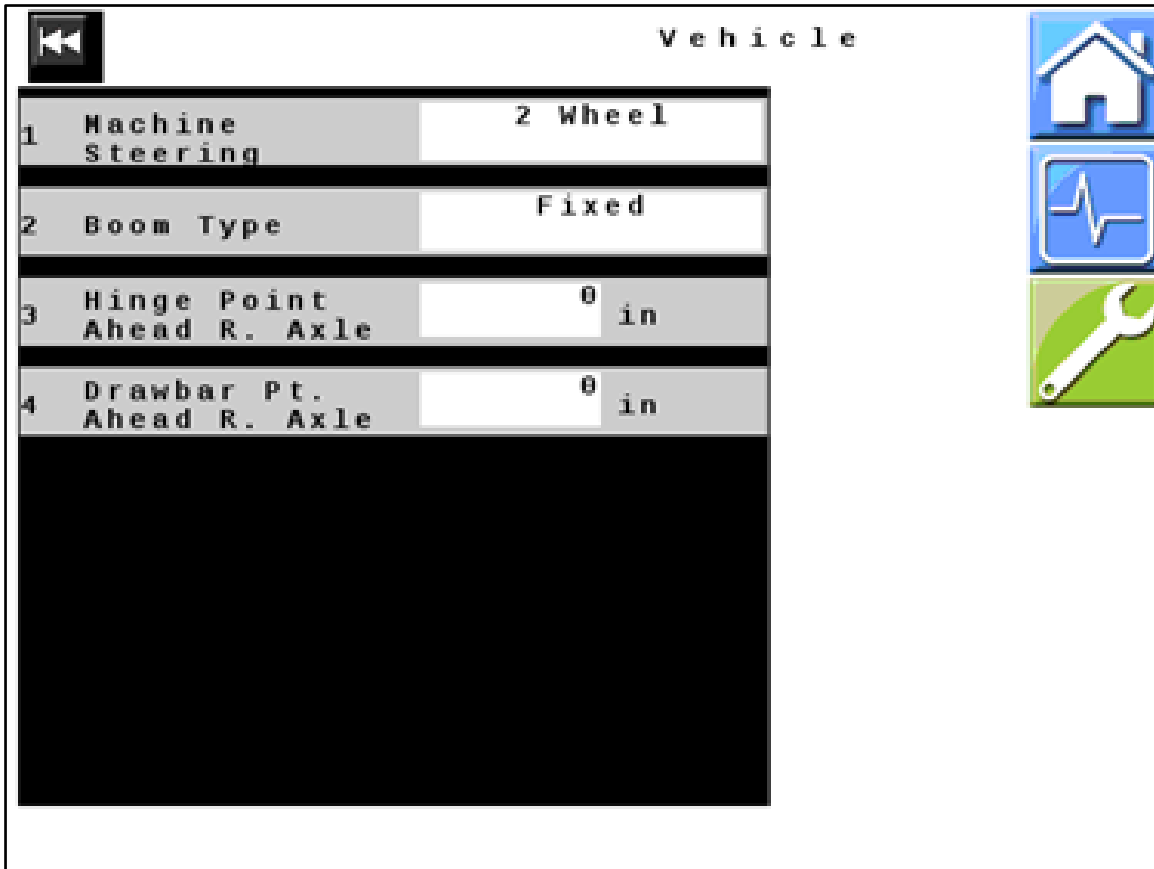



Figure 22 — Vehicle

40. *Figure 22:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

41. Tap the **Back** icon  to return to the **Navigation** menu. Select **Implement**.

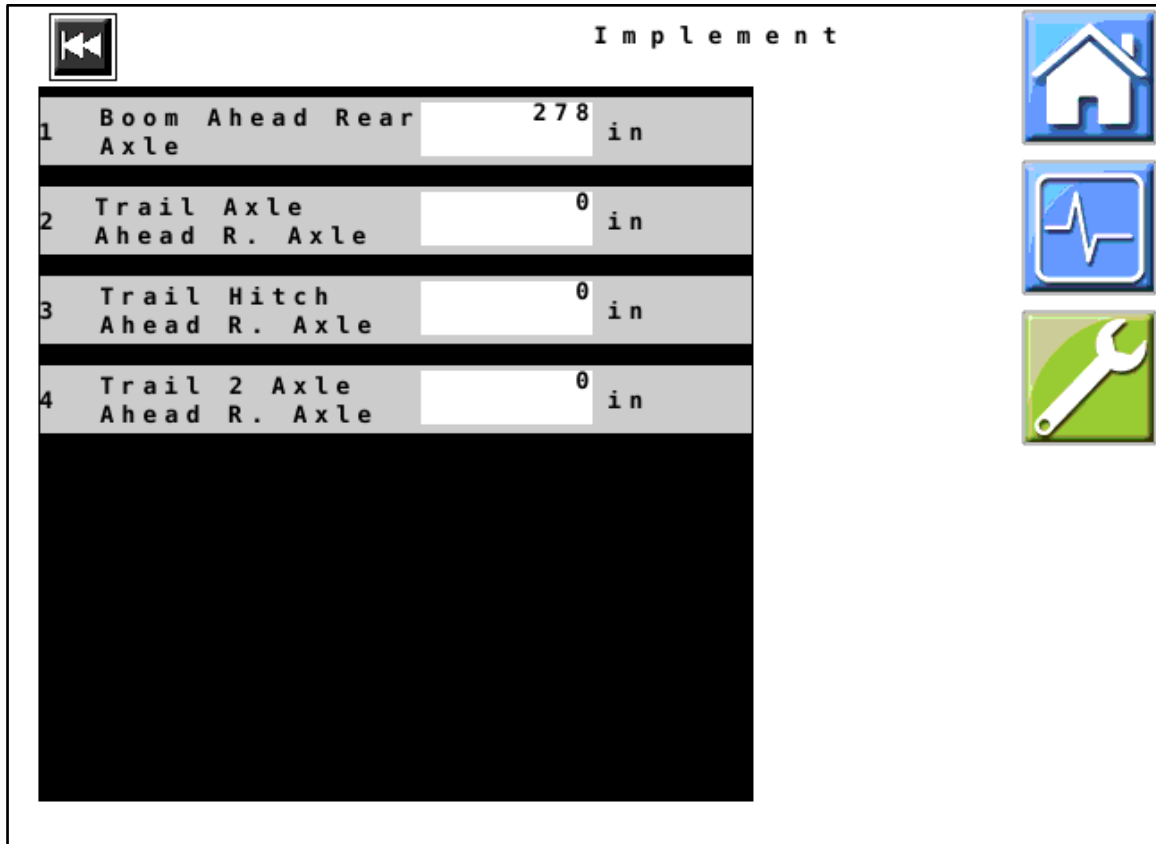


Figure 23 — Implement

42. *Figure 23*: Verify that all values displayed on your unit match those shown here. Change values if necessary.

Note: Verify that the task controller and the PinPoint™ III system both show the same measurements.

43. Tap the **Back** icon  to return to the **Navigation** menu. Select **ISO Look Ahead**.

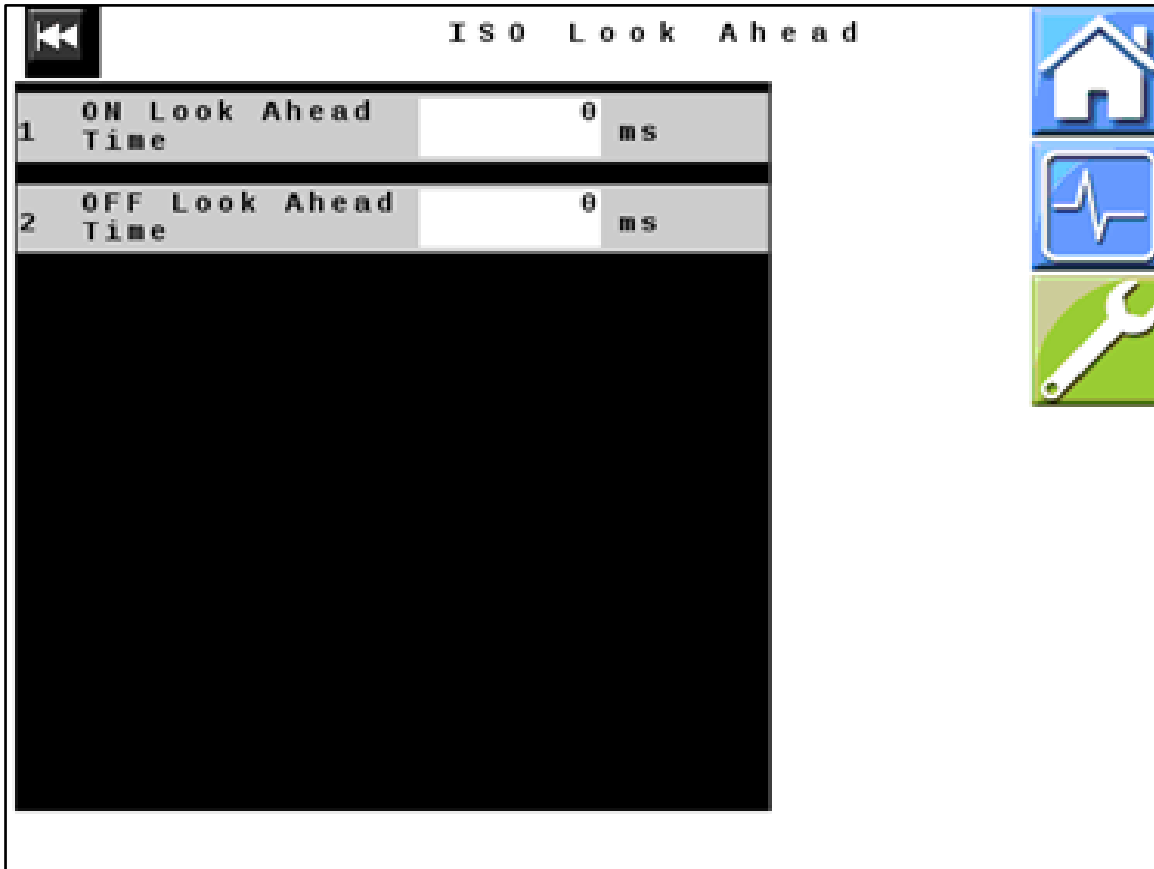



Figure 24 — ISO Look Ahead

44. *Figure 24:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

45. Tap the **Back** icon  to return to the **Navigation** menu. Select **GPS**.

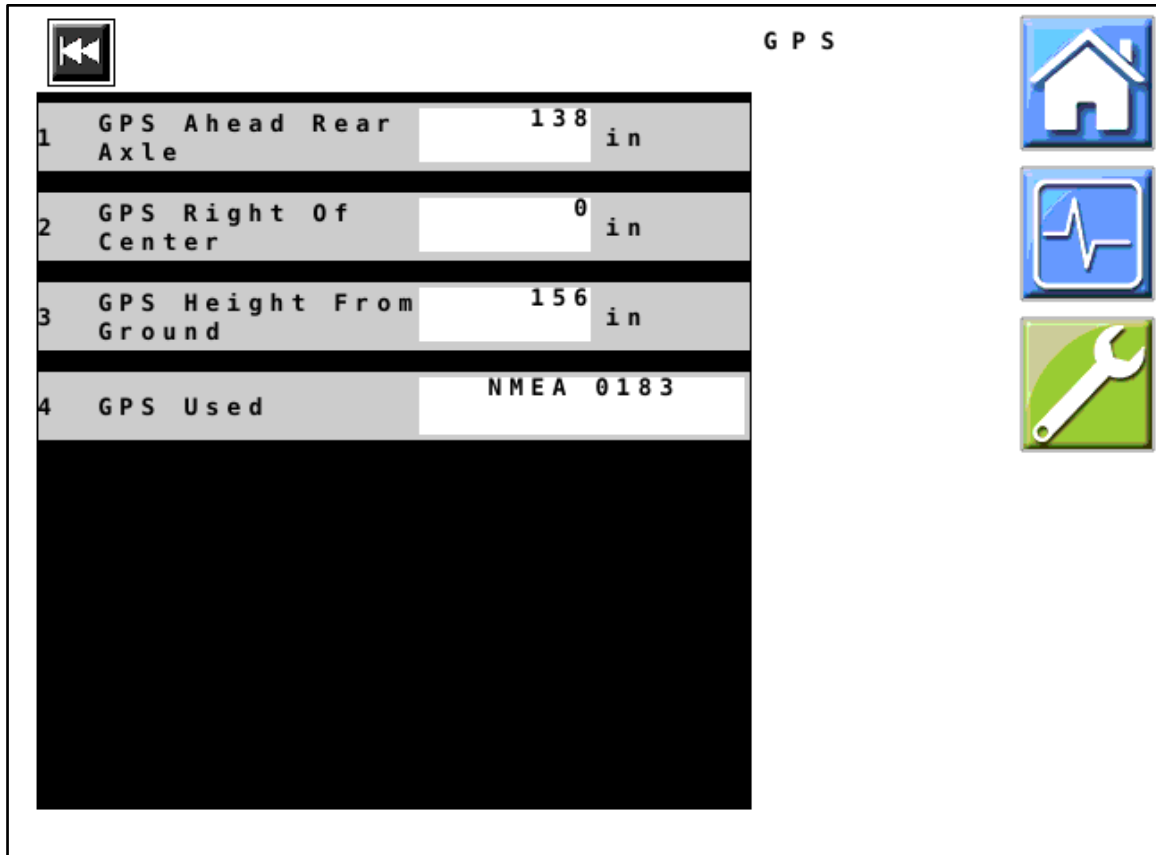



Figure 25 — GPS

46. *Figure 25*: Select the type of GPS from the list of available options. Not all of the options listed here may show on your system. Only the types available for your system will show on your list.

- If your machine has serial GPS, select NMEA0183
- If your machine has CAN GPS, available types include—in preference order:
 - a. J1939
 - b. ISO 11783
 - c. NMEA2000

Verify that all other values displayed on your unit match those shown here. Change values if necessary.

47. Tap the **Back** icon  to return to the **Navigation** menu. Select **Compass**.

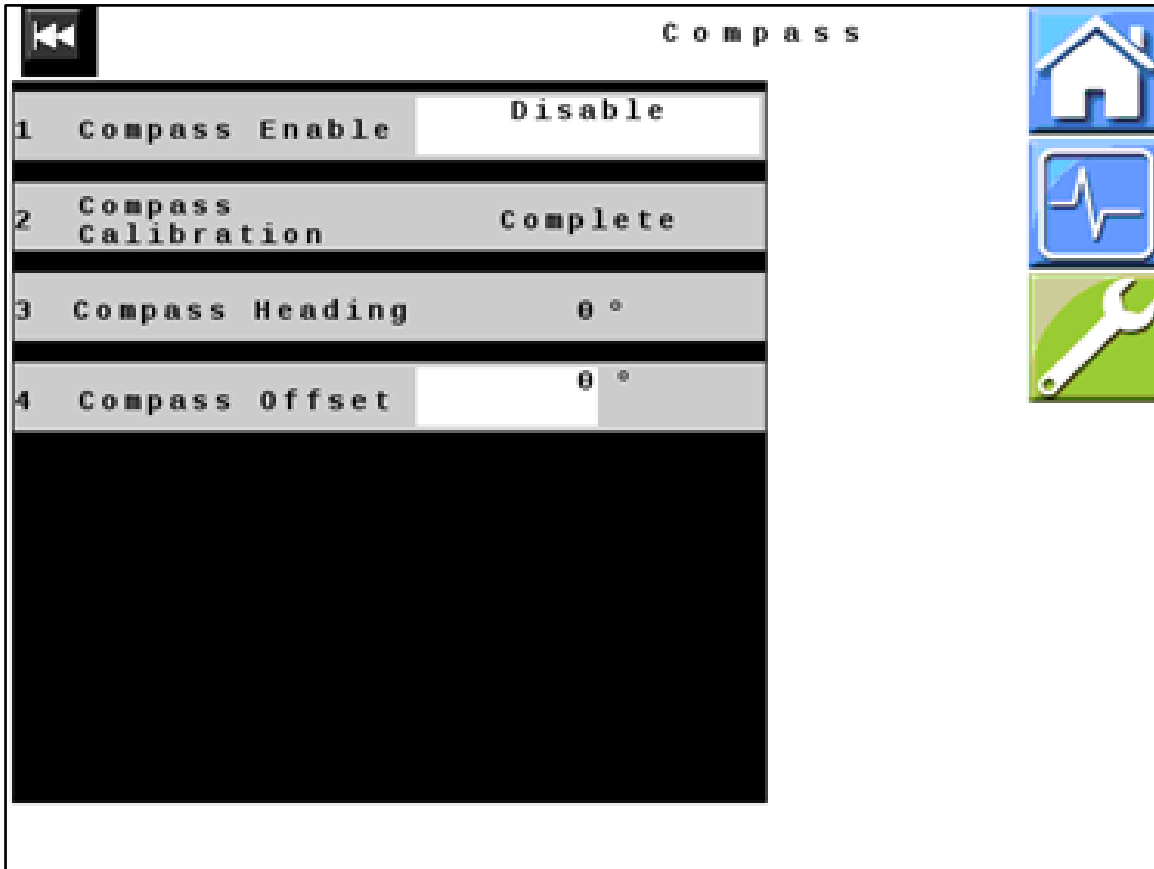



Figure 26 — Compass

48. *Figure 26:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

49. Tap the **Back** icon  to return to the **Navigation** menu. Select **Gyro**.

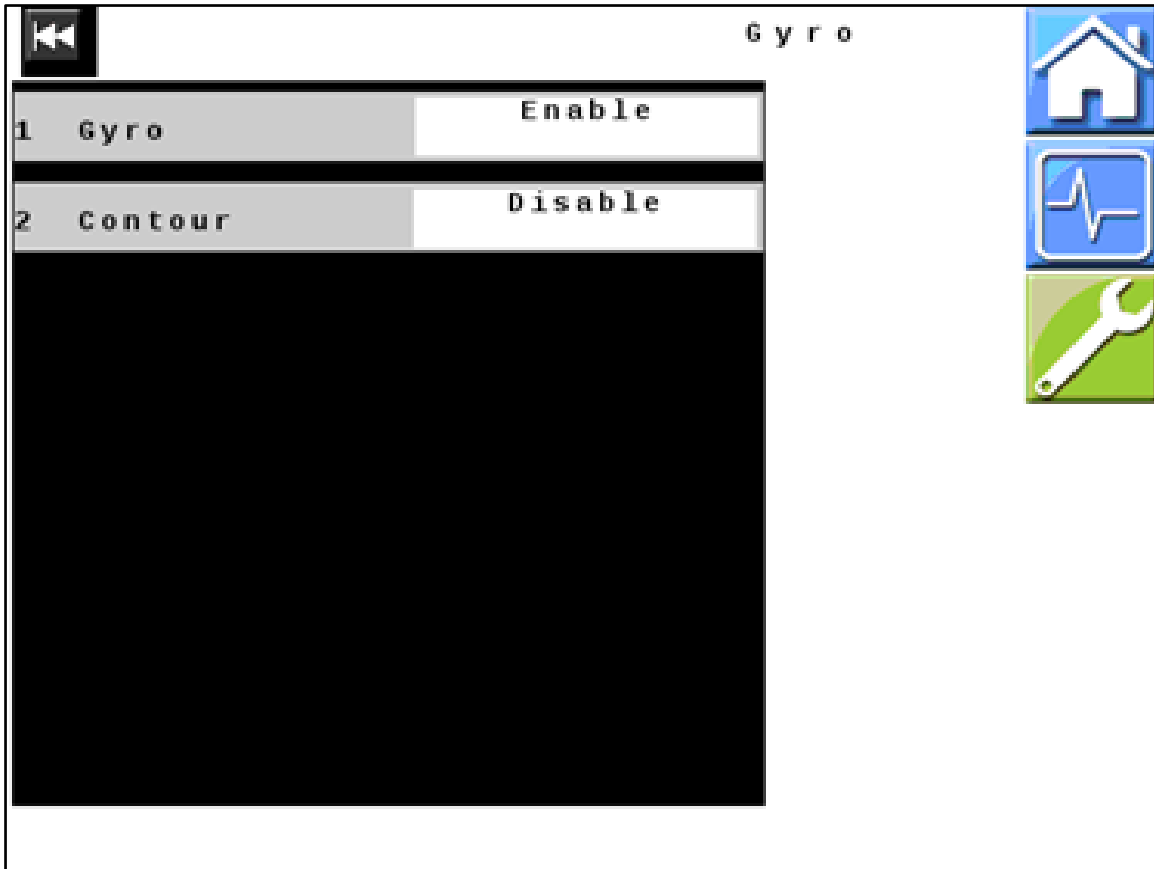






Figure 27 — Gyro

50. *Figure 27:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

Soft Boom Configurations

Soft Boom	Soft Boom		Setup			
	Start	End	Soft Boom	Start		End
1	1	12	11	0	0	
2	13	24	12	0	0	
3	25	34	13	0	0	
4	35	44	14	0	0	
5	45	53	15	0	0	
6	54	63	16	0	0	
7	64	73	17	0	0	
8	74	85	18	0	0	
9	86	97	19	0	0	
10	0	0	20	0	0	