

PinPoint™ III ENVELOP on Hagie STS MY 2018-2021

Note: prior to performing any setup on the machine, perform the factory reset procedure.

Tap the **Settings** icon  and select **Initial Setup > Configuration > Factory Reset > Yes**.

Below is an example of the PinPoint III home screen.

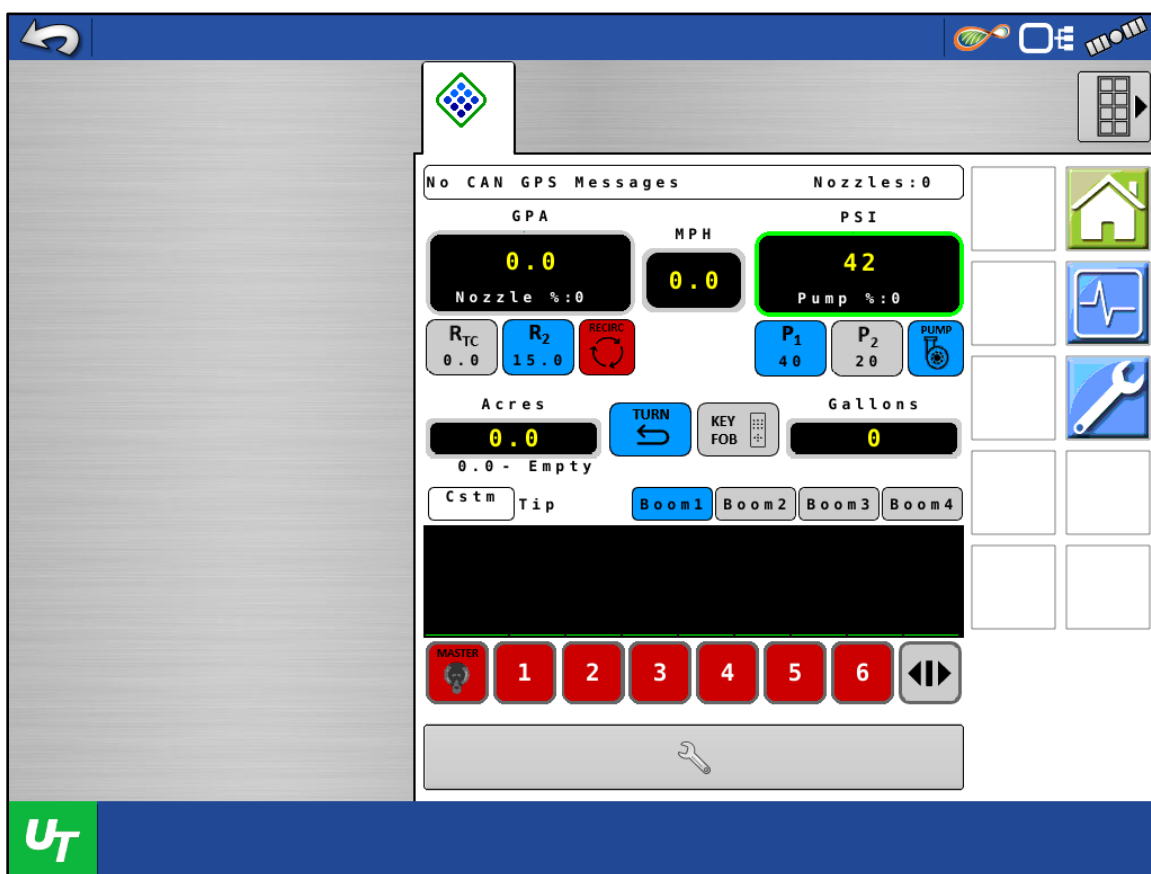



Figure 1 — Task Controller Home Screen

Menu Setup

1. *Figure 1:* Select CapstanAG PinPoint III icon  from 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.

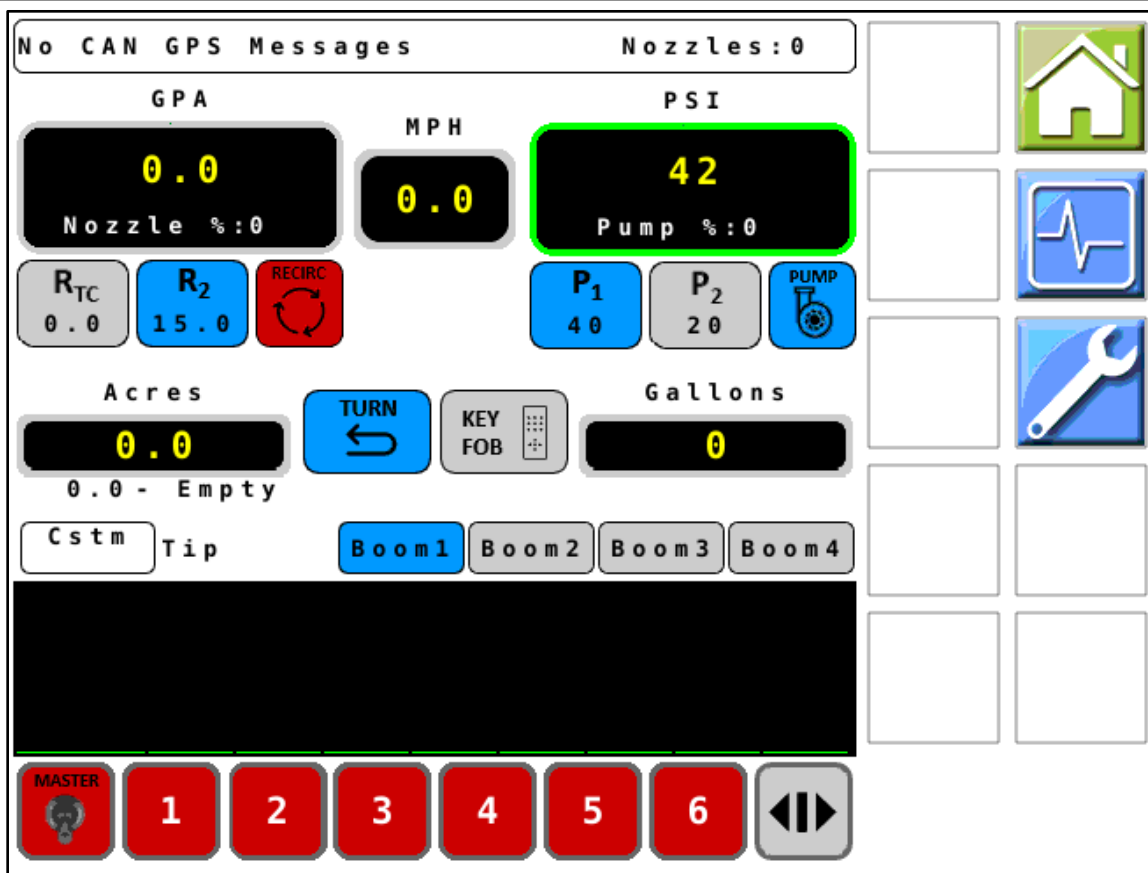



Figure 2 — PinPoint™ III Home Screen

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.

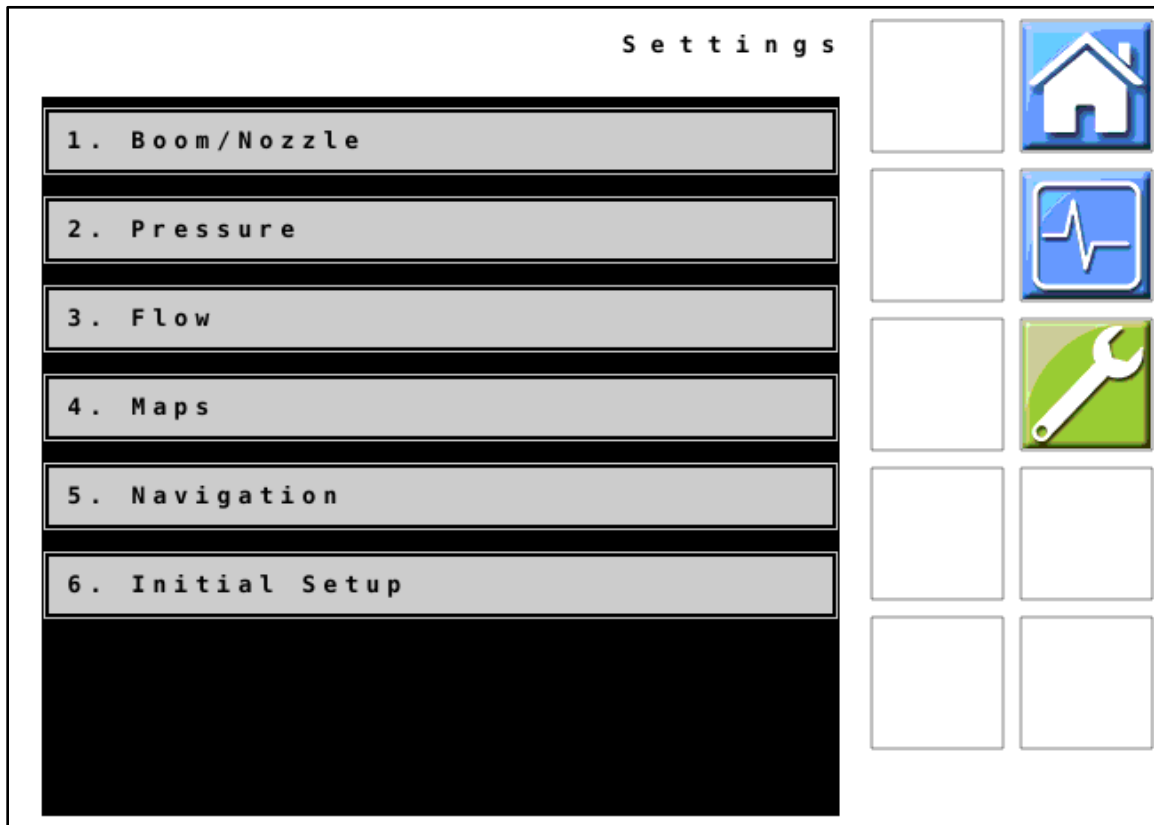


Figure 3 — Settings Menu

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.

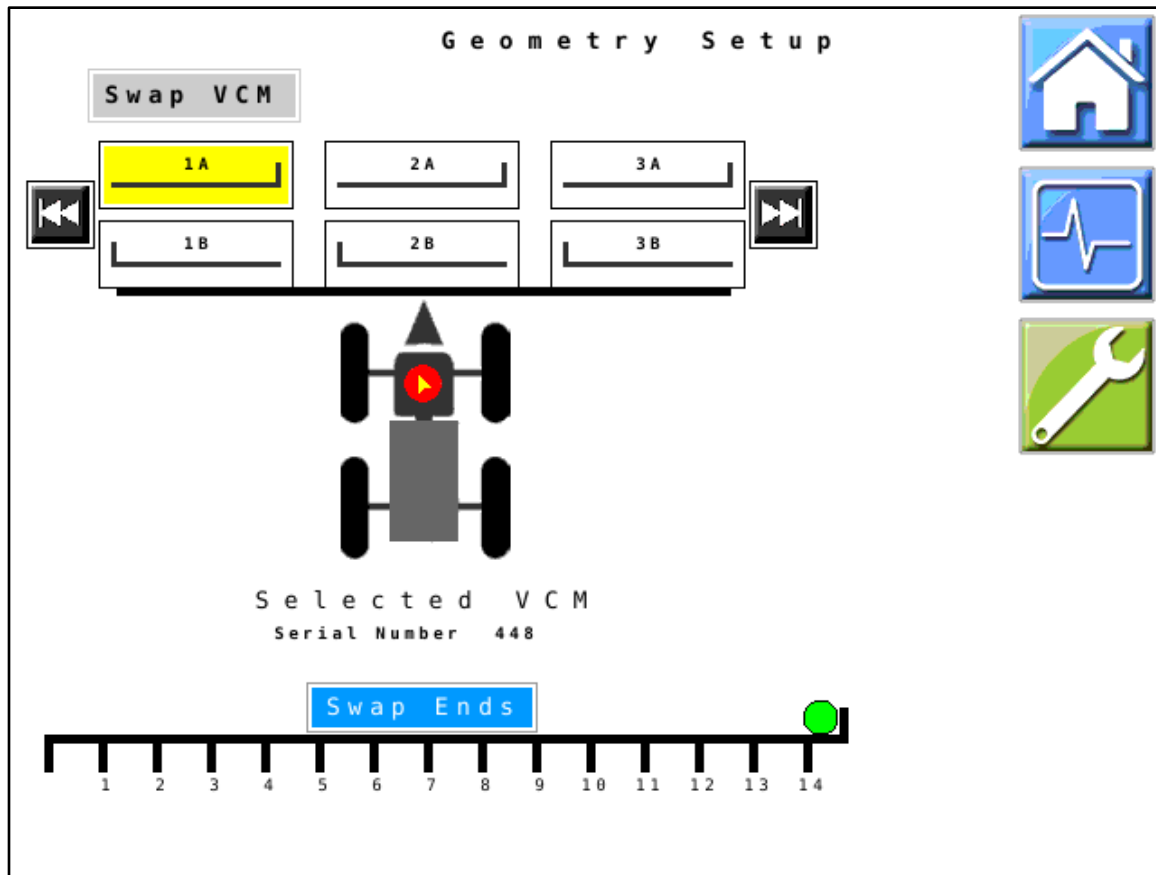






Figure 4 — Geometry Setup

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.

8. 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.

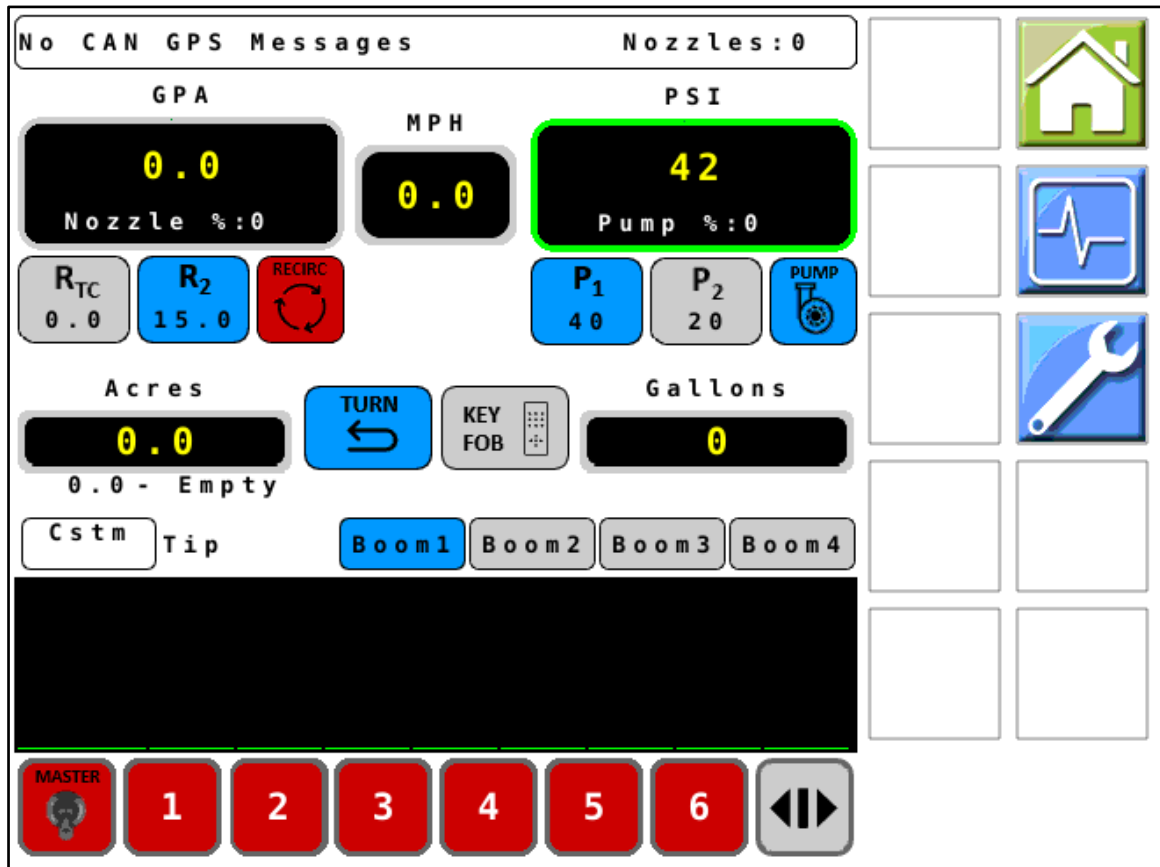


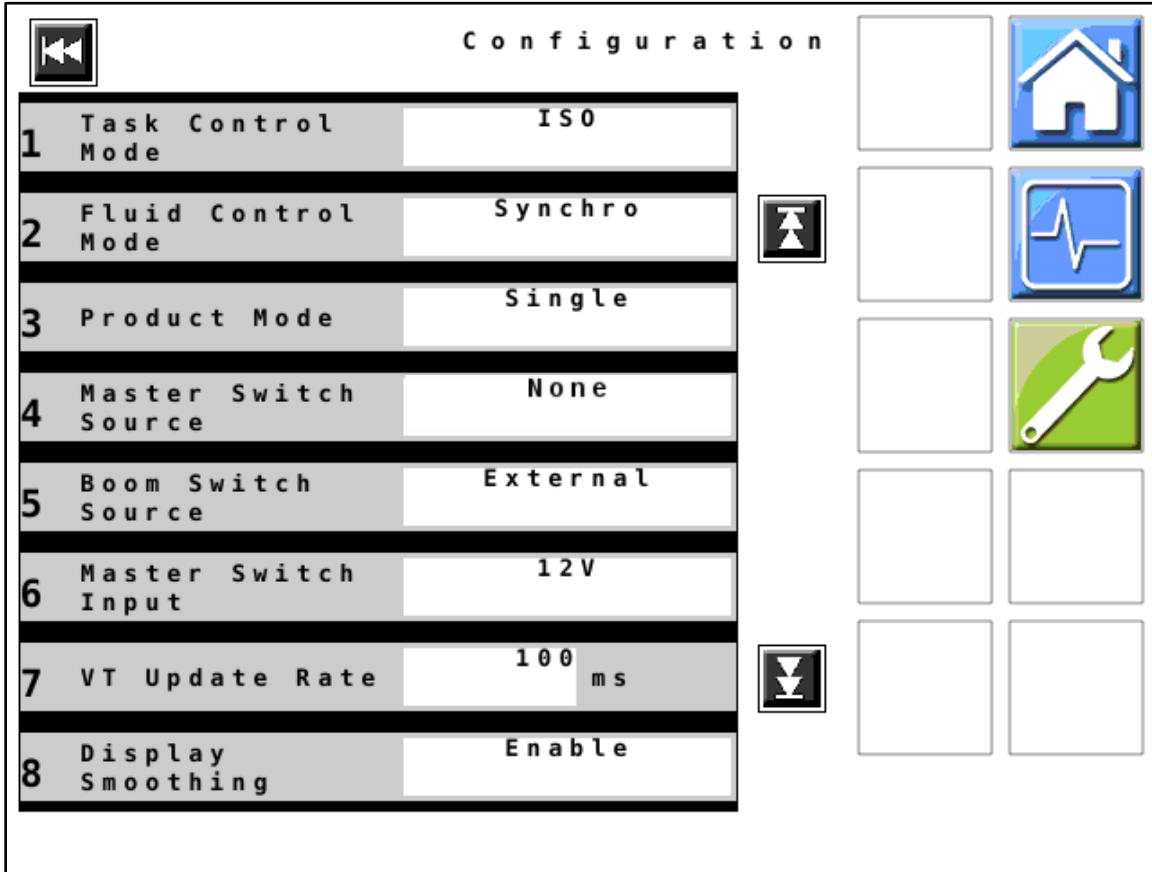


Figure 5 — Key Fob Verification

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

9. *Figure 5:* Tap the **Home** icon  to return to the home screen.
10. Tap the **Key Fob** icon to set key fob mode to **ON**.
11. 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 > Configuration**.




The screenshot shows the 'Configuration' screen with a list of settings on the left and a navigation menu on the right. The settings list includes:

Item	Setting
1 Task Control Mode	ISO
2 Fluid Control Mode	Synchro
3 Product Mode	Single
4 Master Switch Source	None
5 Boom Switch Source	External
6 Master Switch Input	12V
7 VT Update Rate	100 ms
8 Display Smoothing	Enable

The navigation menu on the right includes icons for Home, a heart rate monitor, a wrench (Settings), and a list of other options.

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.

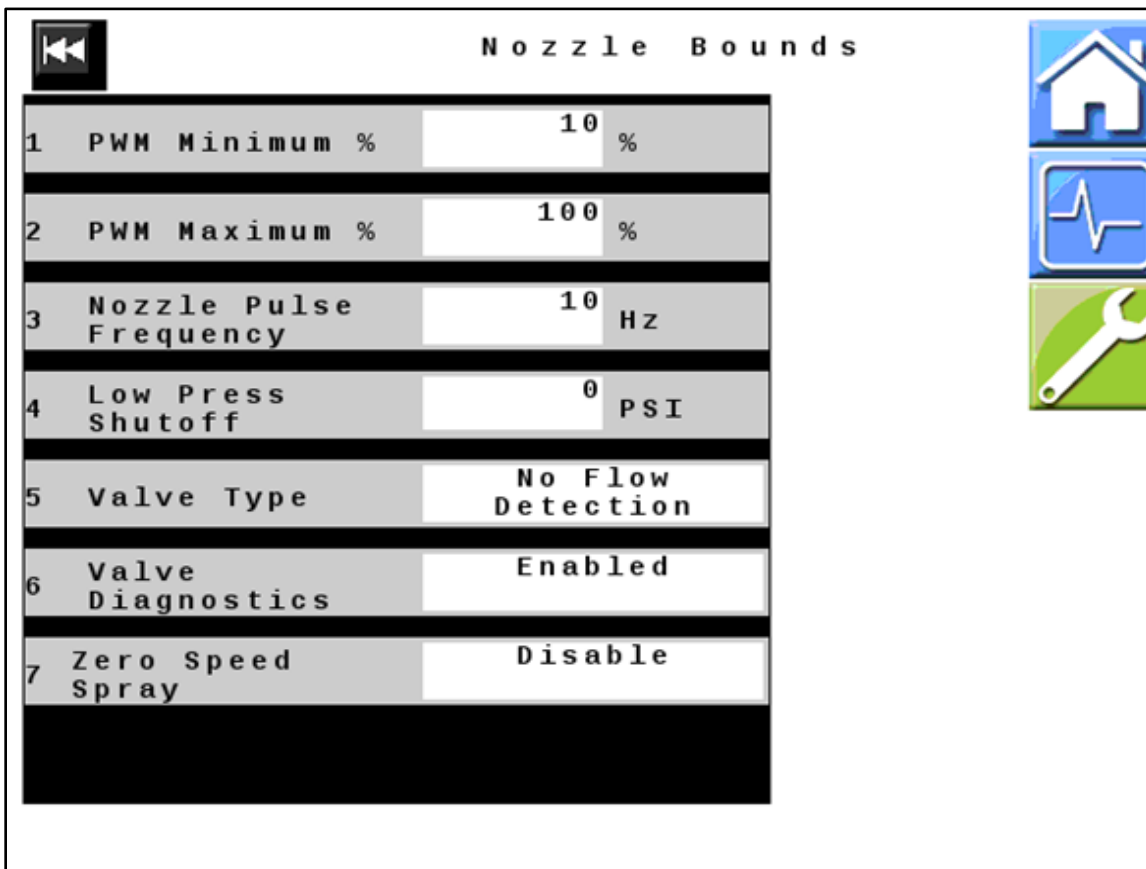
Note: In order for “On Center” machines to map correctly, nozzle spacing must be adjusted slightly less than the actual spacing. Failure to do so may result in the outer nozzles flickering on and off. Due to rounding, a value higher than what is intended may need to be entered in the field to achieve 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	
19	Language	English	
20	Units (Pressure)	PSI	

Figure 8 — Configurations Page 3

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



Nozzle Bounds			
1	PWM Minimum %	10	%
2	PWM Maximum %	100	%
3	Nozzle Pulse Frequency	10	Hz
4	Low Press Shutoff	0	PSI
5	Valve Type	No Flow Detection	
6	Valve Diagnostics	Enabled	
7	Zero Speed Spray	Disable	

Figure 9 — Nozzle Bounds

16. *Figure 9:* 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.

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

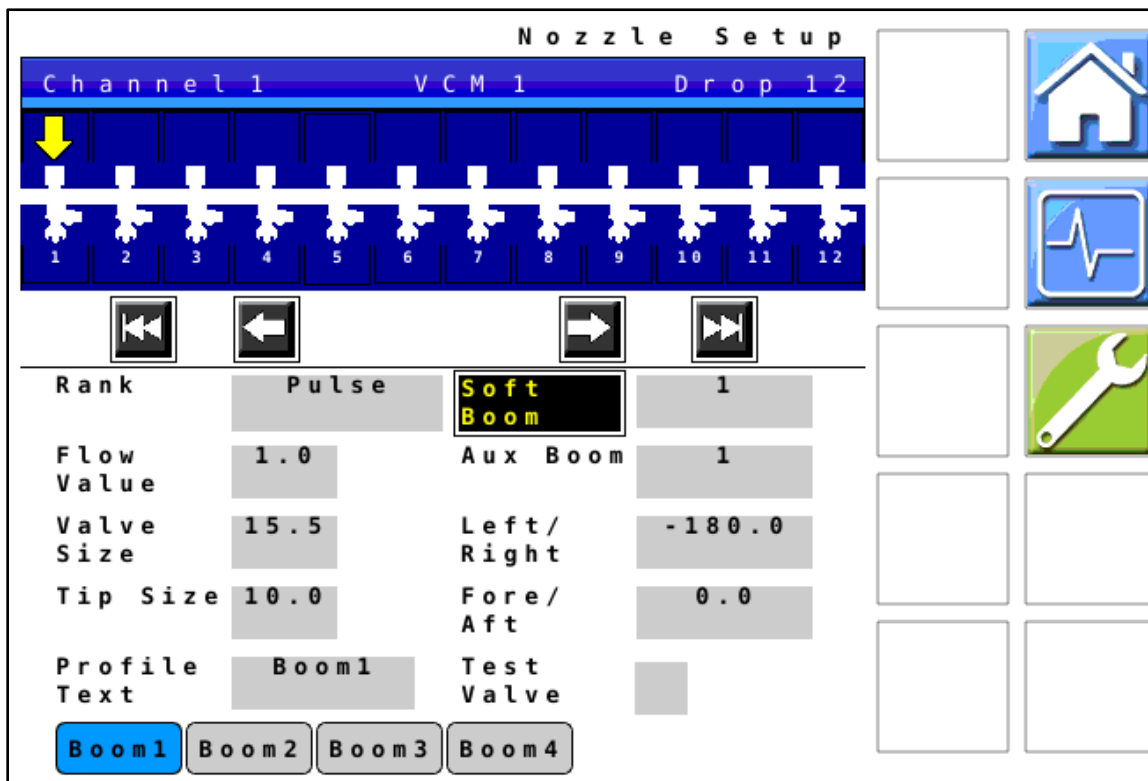




Figure 10 — Nozzle Setup

18. *Figure 10*: 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.

19. 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.

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



P u m p S e t u p




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 11 — Pump Setup Page 1

20. *Figure 11:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

21. *Figure 12:* Use the **Scroll Down** icon  to view the second page and verify the values there as well.



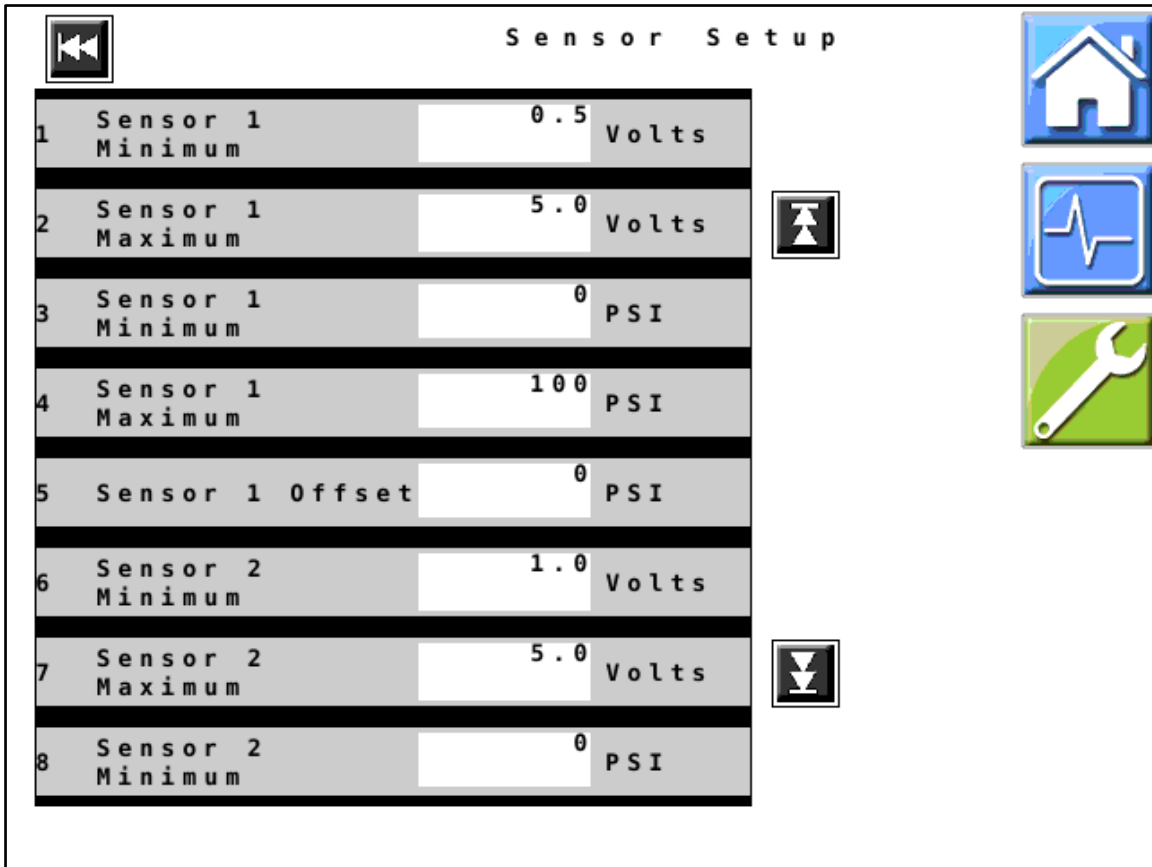


9	Min Pressure	0	PSI	
10	Max Pressure	100	PSI	
11	Max Flow	0	Gal / Min	
12	Pump Power Up Status	OFF		
13	Conventional Standby	40	PSI	
14	Fill Station PWM	50	%	

Figure 12 — Pump Setup Page 2

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




Sensor Setup

1	Sensor 1 Minimum	0.5	Volts	
2	Sensor 1 Maximum	5.0	Volts	
3	Sensor 1 Minimum	0	PSI	
4	Sensor 1 Maximum	100	PSI	
5	Sensor 1 Offset	0	PSI	
6	Sensor 2 Minimum	1.0	Volts	
7	Sensor 2 Maximum	5.0	Volts	
8	Sensor 2 Minimum	0	PSI	

Navigation icons on the right: Home, ECG, Wrench.

Figure 13 — Sensor Setup Page 1

23. *Figure 13*: Verify that all values displayed on your unit match those shown here. Change values if necessary.
24. *Figure 14*: Use the **Scroll Down** icon  to view the second page and verify the values there as well.

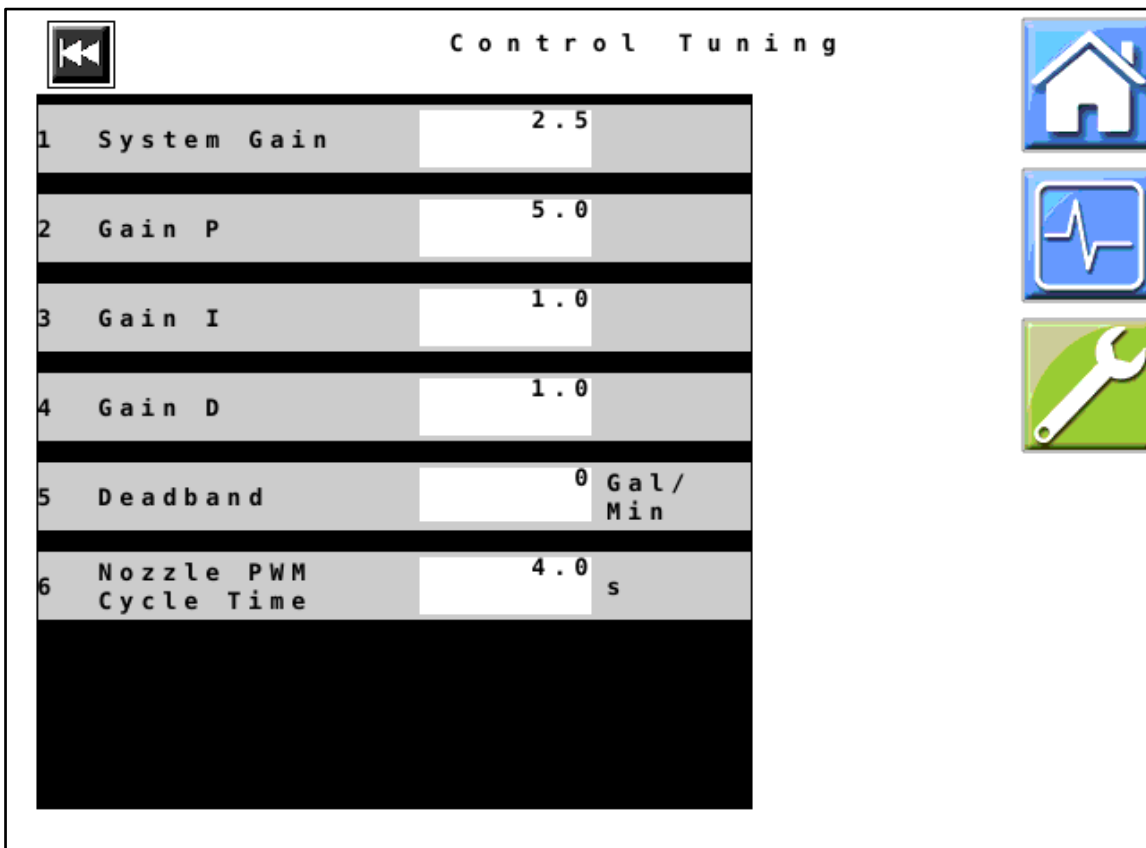


Sensor Setup

9	Sensor 2	100	PSI	
10	Sensor 2 Offset	0	PSI	

Figure 14 — Sensor Setup Page 2


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



Control Tuning			
1	System Gain	2.5	
2	Gain P	5.0	
3	Gain I	1.0	
4	Gain D	1.0	
5	Deadband	0	Gal / Min
6	Nozzle PWM Cycle Time	4.0	s

Figure 15 — Control Tuning

26. *Figure 15:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

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

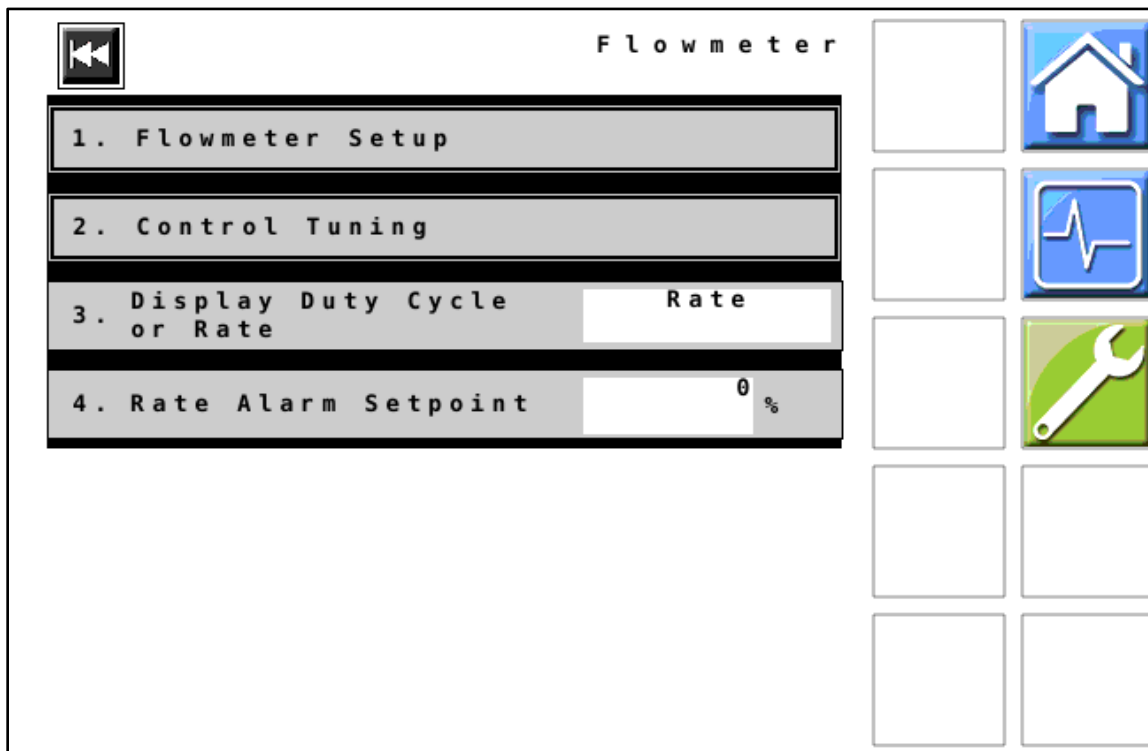
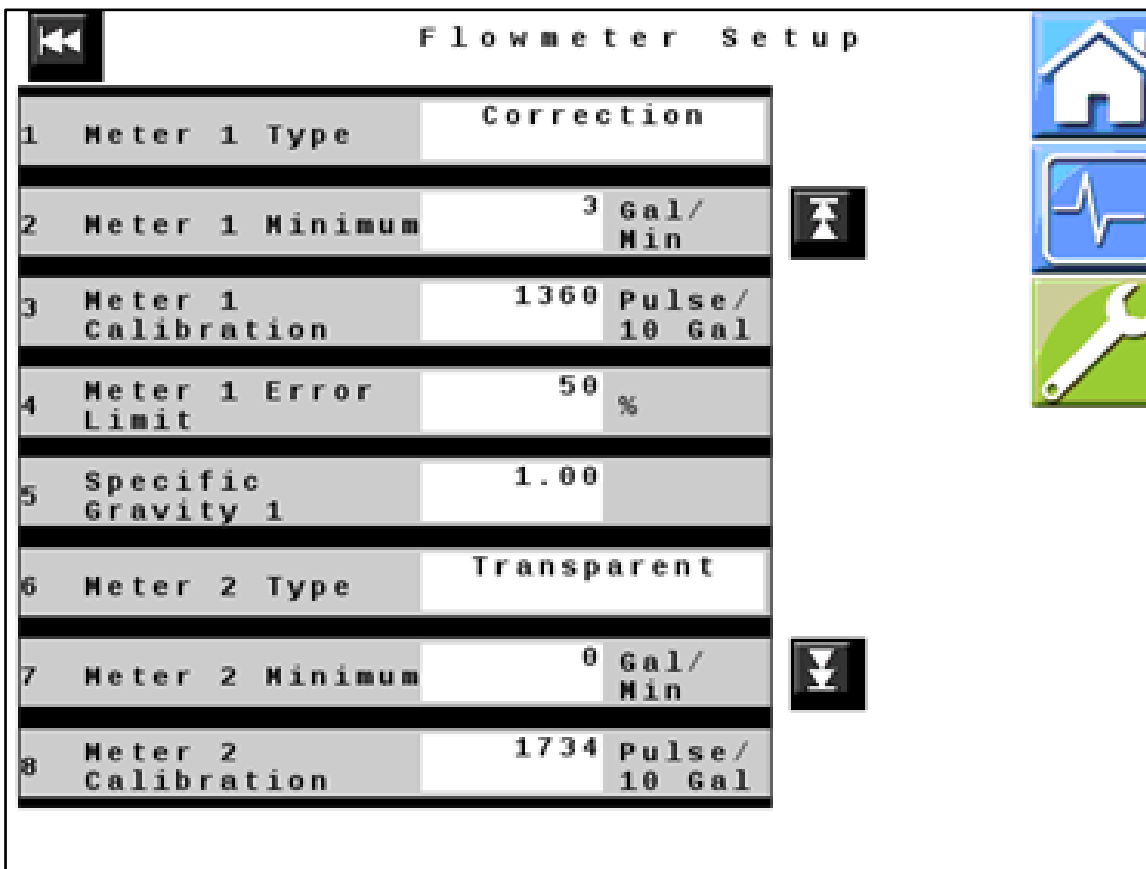


Figure 16 — Flowmeter

28. *Figure 16:* 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.

29. 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 17 — Flowmeter Setup Page 1

30. *Figure 17*: 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 from flowmeter tag. If machine is equipped with a fill-station flowmeter, obtain Meter 2 Calibration value also.

31. *Figure 18:* Use the **Scroll Down** icon  to view the second page and verify the values there as well.




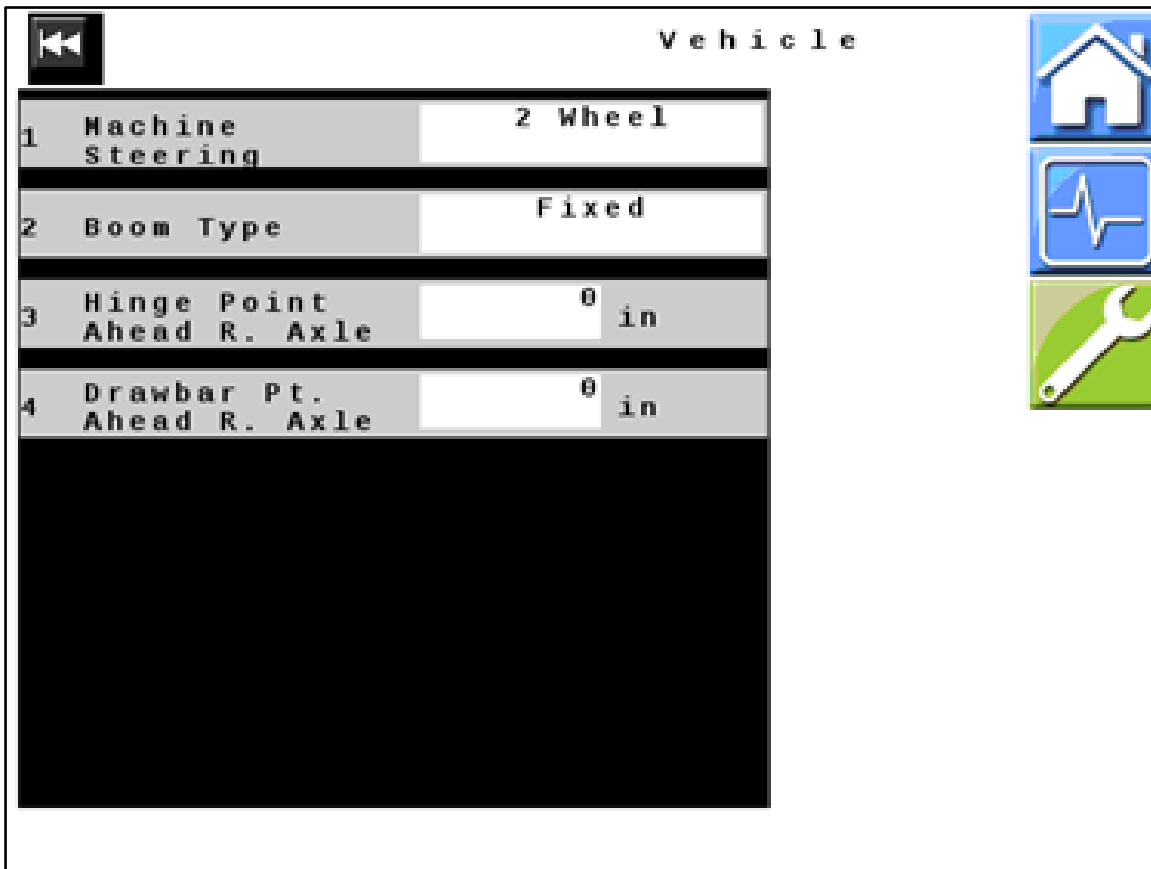
9	Meter 2 Error Limit	0 %	
10	Specific Gravity 2	1.00	
11	JD-R Low Flow Mode	0 Gal/Min	
12	Preset Rate Average	Average	
13	Flowmeter Sense Resistor	Pull-Up	
14	Tank Sensor Calibration	Not Started	
			

Figure 18 — Flowmeter Setup Page 2


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

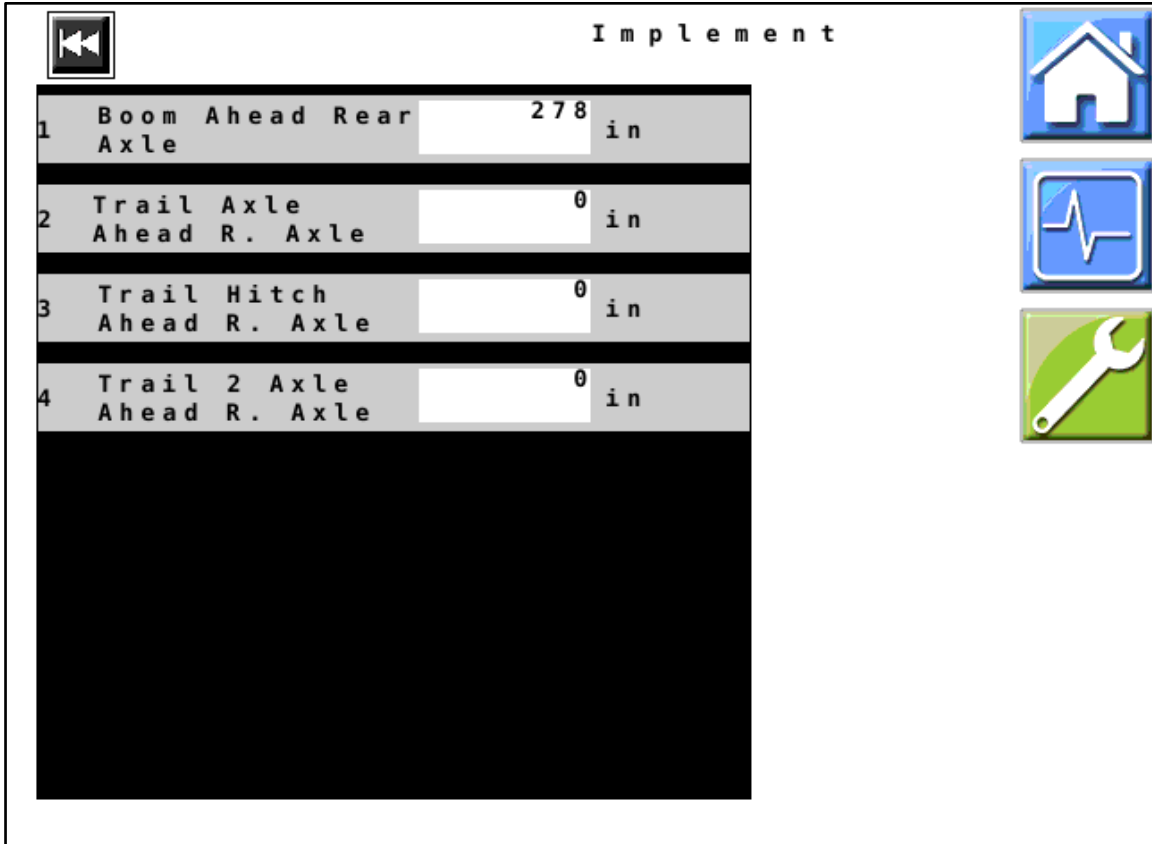


Vehicle	
1	Machine Steering 2 Wheel
2	Boom Type Fixed
3	Hinge Point Ahead R. Axle 0 in
4	Drawbar Pt. Ahead R. Axle 0 in

Figure 19 — Vehicle

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

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



I m p l e m e n t		
1	Boom Ahead Rear Axle	278 in
2	Trail Axle Ahead R. Axle	0 in
3	Trail Hitch Ahead R. Axle	0 in
4	Trail 2 Axle Ahead R. Axle	0 in

Figure 20 — Implement

35. *Figure 20*: 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.

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

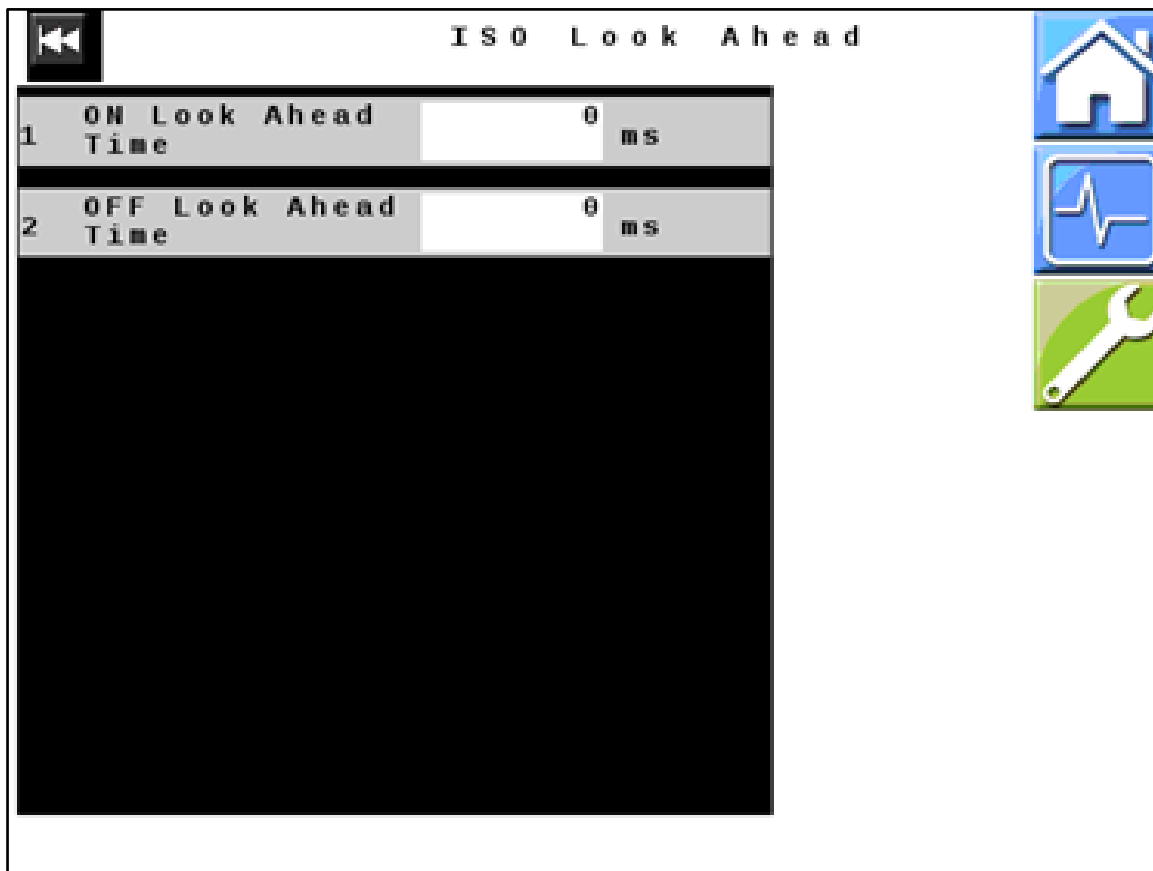



Figure 21 — ISO Look Ahead

37. *Figure 21:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

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

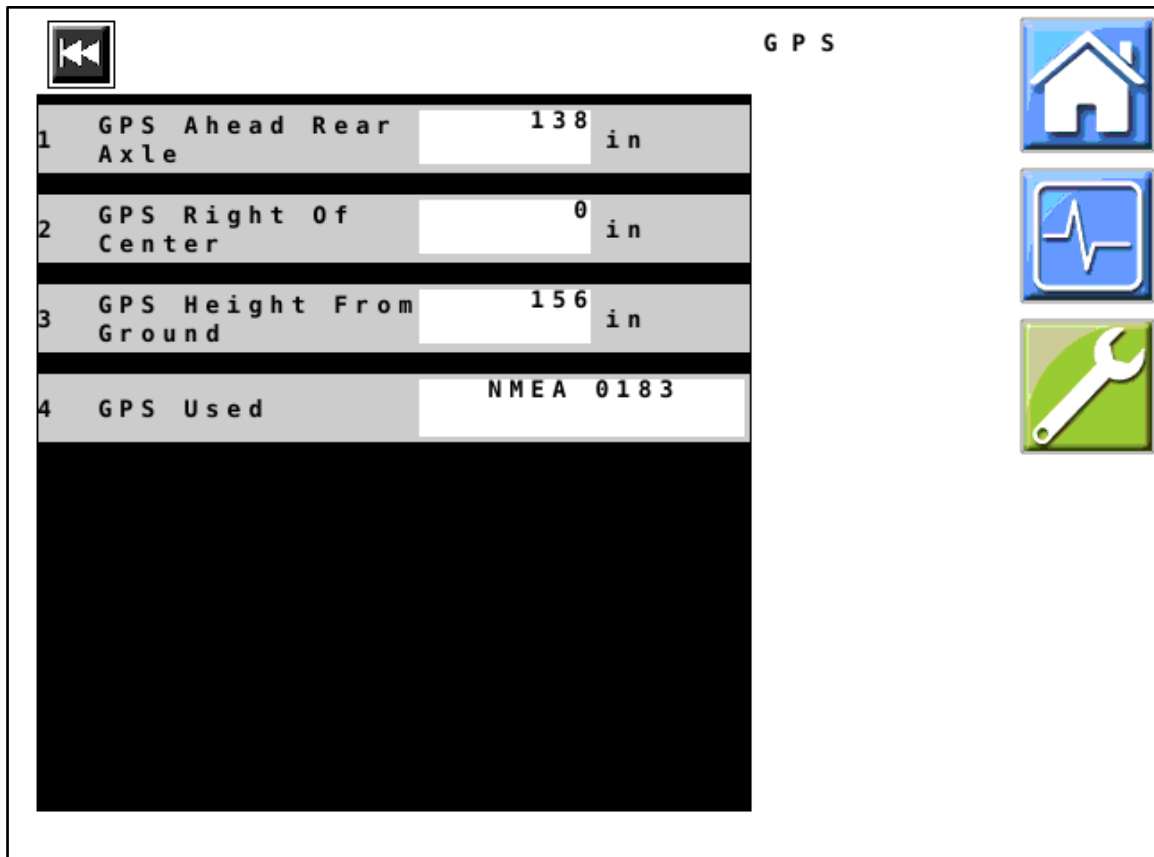



Figure 22 — GPS

39. *Figure 22*: 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.

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

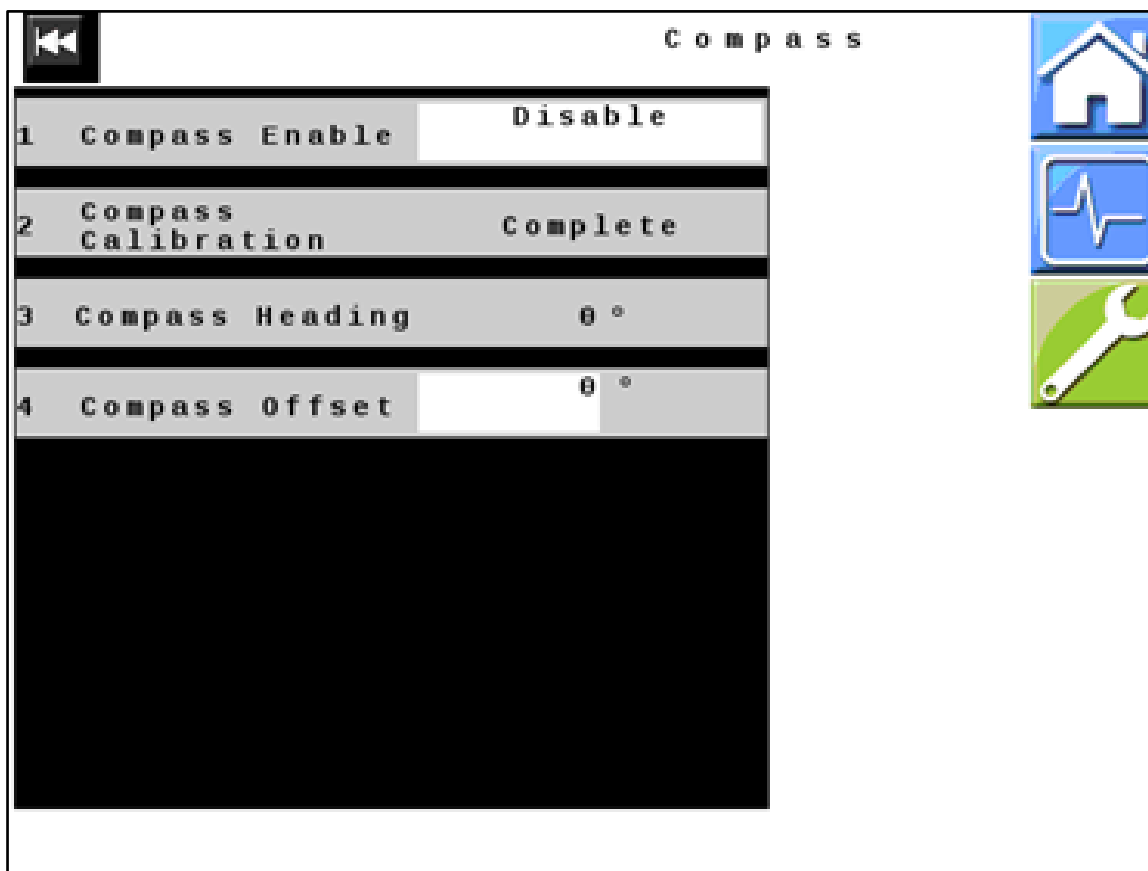



Figure 23 — Compass

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

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

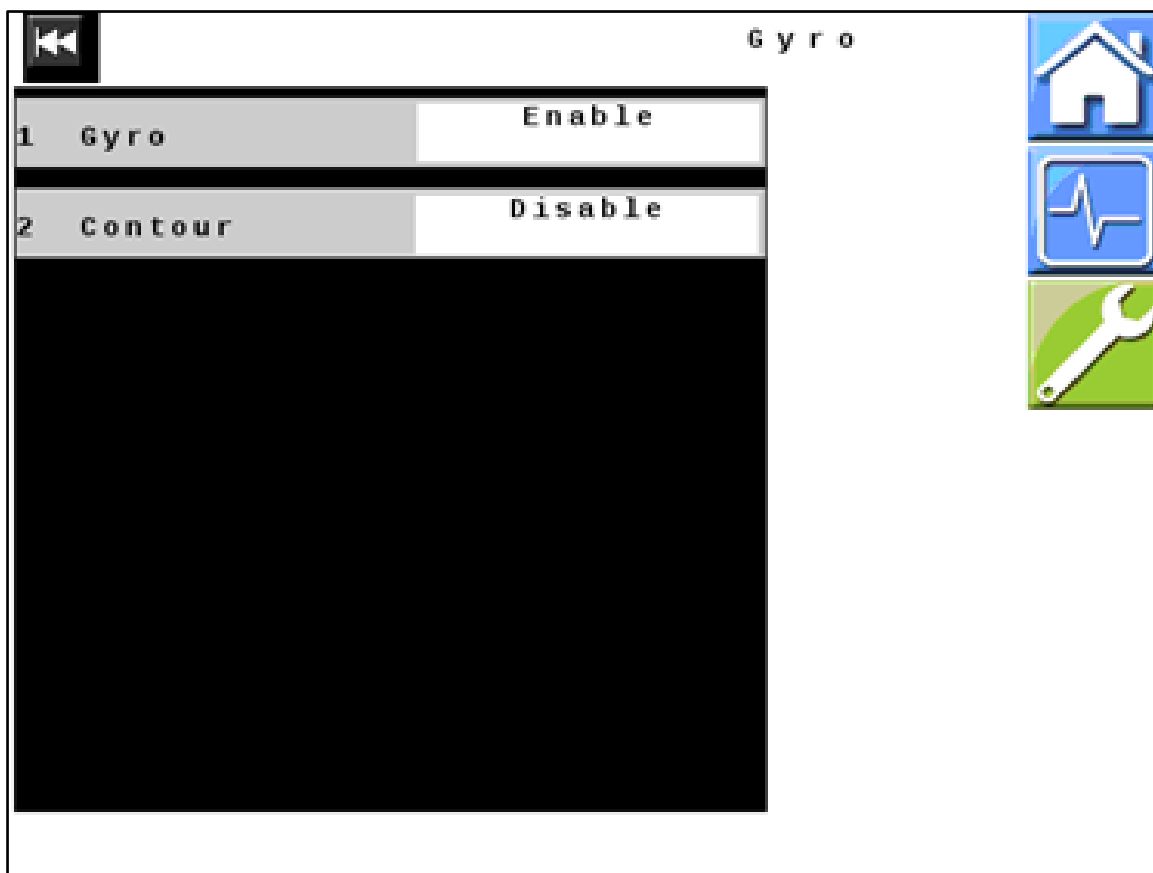


Figure 24 — Gyro

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

Soft Boom Configurations

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	4	11	0	0	✓
2	5	12	12	0	0	✗
3	13	22	13	0	0	⬆
4	23	32	14	0	0	
5	33	41	15	0	0	
6	42	51	16	0	0	
7	52	61	17	0	0	
8	62	69	18	0	0	⬇
9	70	73	19	0	0	
10	0	0	20	0	0	

2011-2020 90x15 Dry Steel

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	4	11	0	0	✓
2	5	12	12	0	0	✗
3	13	23	13	0	0	⬆
4	24	32	14	0	0	
5	33	41	15	0	0	
6	42	50	16	0	0	
7	51	61	17	0	0	
8	62	69	18	0	0	⬇
9	70	73	19	0	0	
10	0	0	20	0	0	

2011-2020 90x15 Wet Steel

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	3	11	0	0	✓
2	4	9	12	0	0	✗
3	10	17	13	0	0	⬆
4	18	24	14	0	0	
5	25	31	15	0	0	
6	32	38	16	0	0	
7	39	46	17	0	0	
8	47	52	18	0	0	⬇
9	53	55	19	0	0	
10	0	0	20	0	0	

2011-2020 90x20 Wet/Dry Steel

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	8	11	0	0	✓
2	9	16	12	0	0	✗
3	17	26	13	0	0	⬆
4	27	36	14	0	0	
5	37	45	15	0	0	
6	46	55	16	0	0	
7	56	65	17	0	0	
8	66	73	18	0	0	⬇
9	74	81	19	0	0	
10	0	0	20	0	0	

2011-2020 100x15 Dry Steel

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	8	11	0	0	✓
2	9	16	12	0	0	✗
3	17	27	13	0	0	⬆
4	28	36	14	0	0	
5	37	45	15	0	0	
6	46	54	16	0	0	
7	55	65	17	0	0	
8	66	73	18	0	0	⬇
9	74	81	19	0	0	
10	0	0	20	0	0	

2011-2020 100x15 Wet Steel

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	6	11	0	0	✓
2	7	12	12	0	0	✗
3	13	20	13	0	0	⬆
4	21	27	14	0	0	
5	28	34	15	0	0	
6	35	41	16	0	0	
7	42	49	17	0	0	
8	50	55	18	0	0	⬇
9	56	61	19	0	0	
10	0	0	20	0	0	

2011-2020 100x20 Wet/Dry Steel

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	10	11	0	0	✓
2	11	20	12	0	0	✗
3	21	32	13	0	0	⬆
4	33	44	14	0	0	
5	45	53	15	0	0	
6	54	65	16	0	0	
7	66	77	17	0	0	
8	78	87	18	0	0	
9	88	97	19	0	0	⬇
10	0	0	20	0	0	

2012-2017 120x15 Wet Alum

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	7	11	0	0	✓
2	8	15	12	0	0	✗
3	16	24	13	0	0	⬆
4	25	33	14	0	0	
5	34	40	15	0	0	
6	41	49	16	0	0	
7	50	58	17	0	0	
8	59	66	18	0	0	
9	67	73	19	0	0	⬇
10	0	0	20	0	0	

2012-2017 120x20 Wet Alum

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup 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	

2018+ 120x15 Hybrid

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	9	11	0	0	✓
2	10	18	12	0	0	✗
3	19	25	13	0	0	⬆
4	26	33	14	0	0	
5	34	40	15	0	0	
6	41	48	16	0	0	
7	49	55	17	0	0	
8	56	64	18	0	0	
9	65	73	19	0	0	⬇
10	0	0	20	0	0	

2018+ 120x20 Hybrid

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	12	11	0	0	✓
2	13	22	12	0	0	✗
3	23	32	13	0	0	⬆
4	33	41	14	0	0	
5	42	51	15	0	0	
6	52	61	16	0	0	
7	62	73	17	0	0	
8	0	0	18	0	0	
9	0	0	19	0	0	⬇
10	0	0	20	0	0	

2021+ 90x15 Wet Hybrid

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	9	11	0	0	✓
2	10	16	12	0	0	✗
3	17	24	13	0	0	⬆
4	25	31	14	0	0	
5	32	39	15	0	0	
6	40	46	16	0	0	
7	47	55	17	0	0	
8	0	0	18	0	0	
9	0	0	19	0	0	⬇
10	0	0	20	0	0	

2021+ 90x20 Wet Hybrid

Soft Boom	Start	Soft End	Boom Soft Boom	Setup Start	End	
1	1	8	11	0	0	✓
2	9	16	12	0	0	✗
3	17	26	13	0	0	⬆
4	27	36	14	0	0	
5	37	45	15	0	0	
6	46	55	16	0	0	
7	56	65	17	0	0	
8	66	73	18	0	0	
9	74	81	19	0	0	⬇
10	0	0	20	0	0	

2021+ 100x15 Wet Hybrid

Soft Boom	Start	Soft End	Boom Soft Boom	Setup Start	End	
1	1	6	11	0	0	✓
2	7	12	12	0	0	✗
3	13	19	13	0	0	⬆
4	20	27	14	0	0	
5	28	34	15	0	0	
6	35	42	16	0	0	
7	43	49	17	0	0	
8	50	55	18	0	0	
9	56	61	19	0	0	⬇
10	0	0	20	0	0	

2021+ 120x20 Hybrid

