IMPLEMENTS
RATE CONTROLLER

MIDWEST
MACHINERY CO

GREENSTAR RATE CONTROLLER SETUP

Setting up a GreenStar Rate Controller (Not Rate Controller 2000) on Gen4 4640 Universal Display.
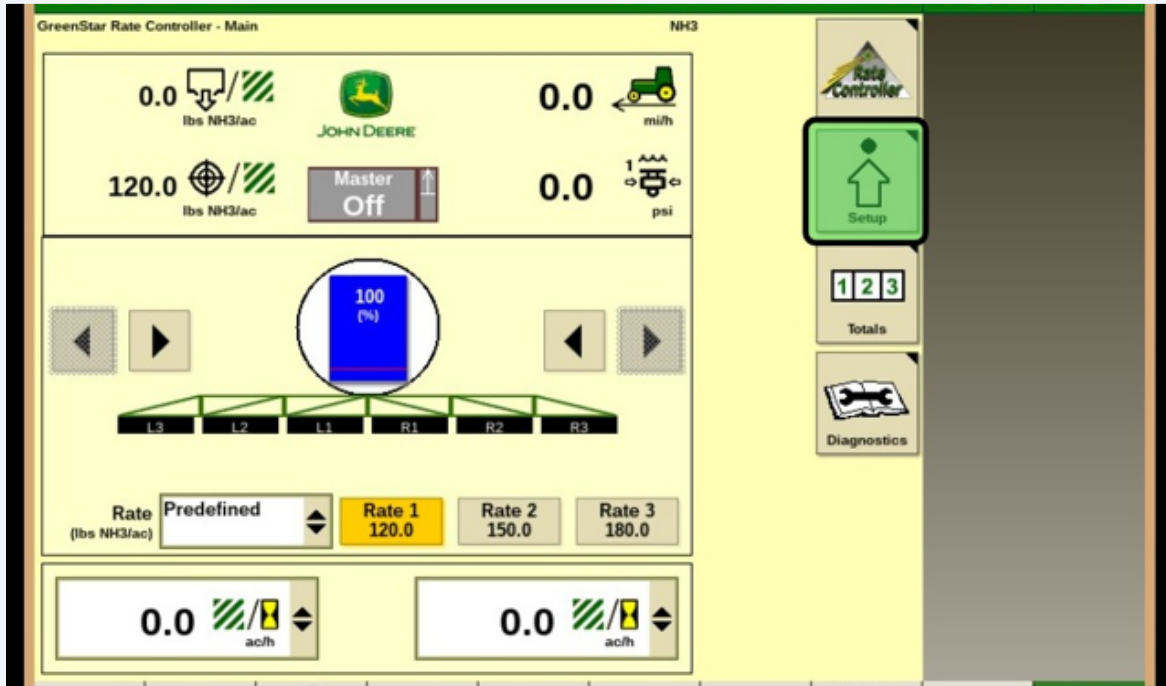
Gen 4 - GreenStar Rate Controller Setup

Setting up a GreenStar Rate Controller (Not RateController2000) on Gen4 4640 Universal Display. This setup is utilizing a Raven standard control valve and flowmeter.

1 Go into the ISOBUS VT menu of the Display and select the Rate Controller.
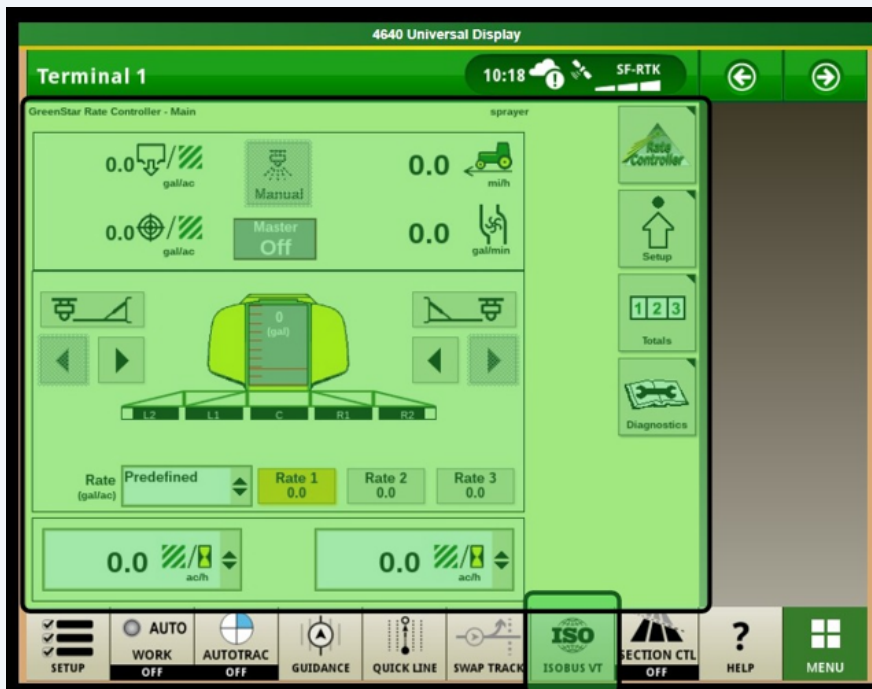
2 Select "Setup" soft key on the right side of the screen.

3 Select the correct Implement from the drop down. Select "New" underneath the bottom drop down and name your Implement. It's encouraged to be specific if the Rate Controller will be used on other implements in addition to the sprayer. Ex. "FAST 9600 Pull Behind" rather than just "pull behind sprayer."
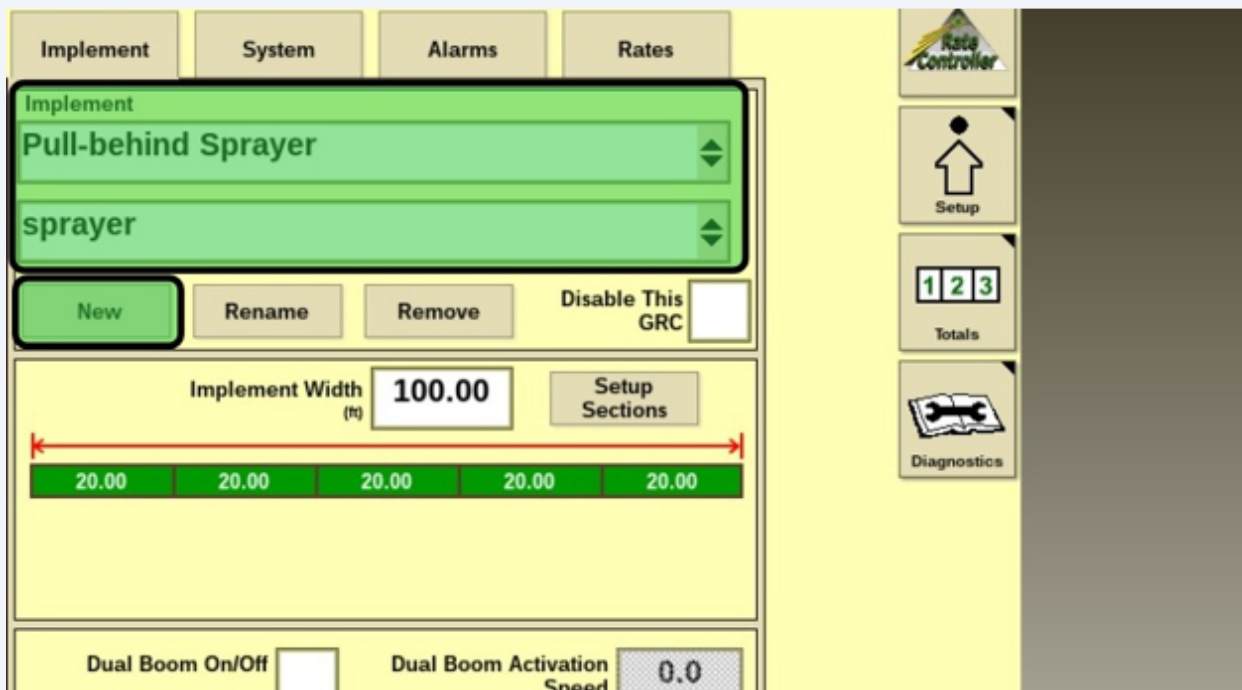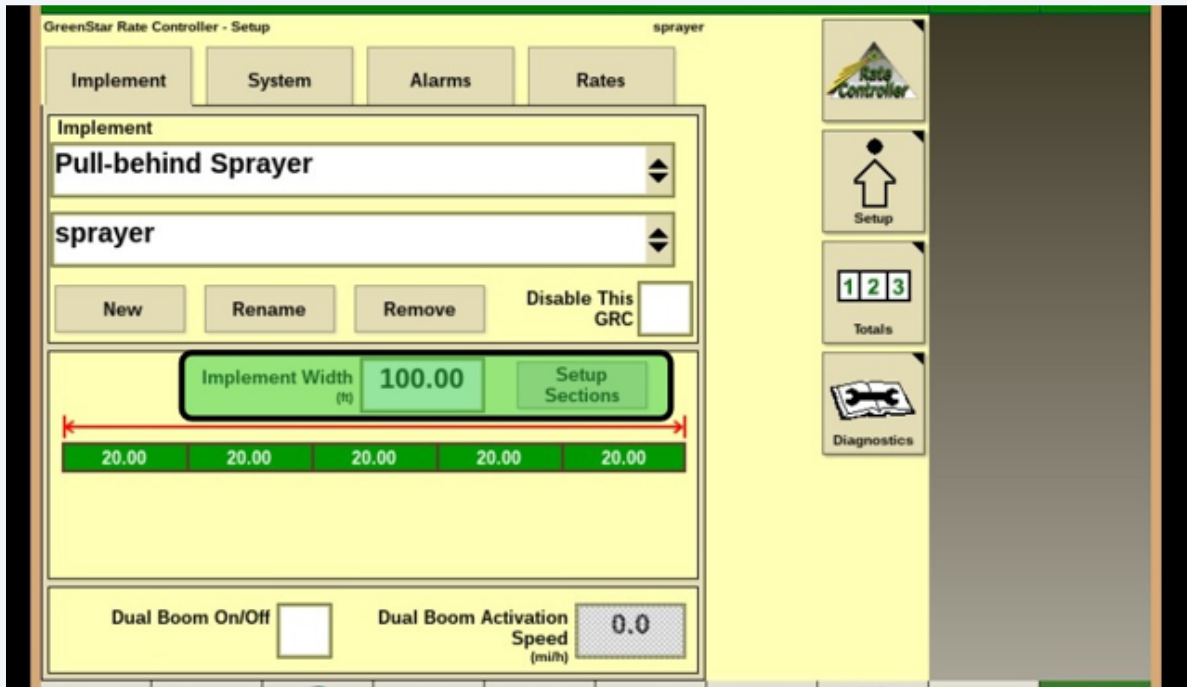
ⓘ Name entered for Step 3 is the name display will show in the Equipment section of the Work Setup page later on in this How-To Guide (Step 15)
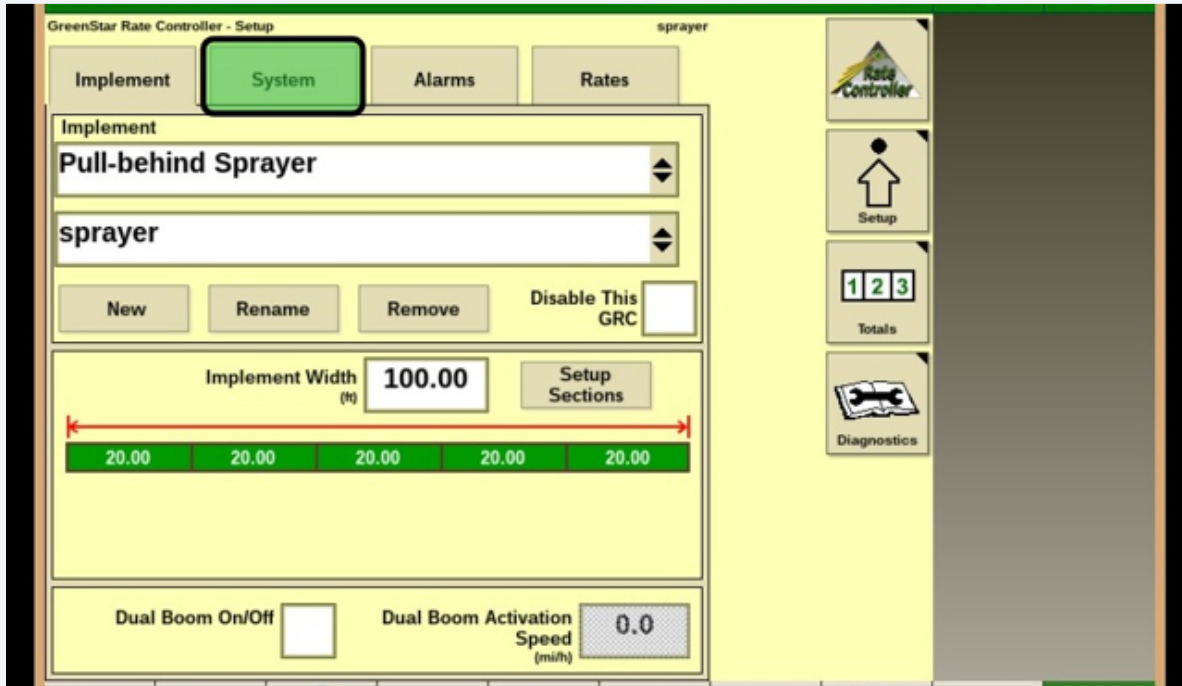
4 Once Implement has been named, enter the correct implement width (boom width) and setup how many sections the boom has.
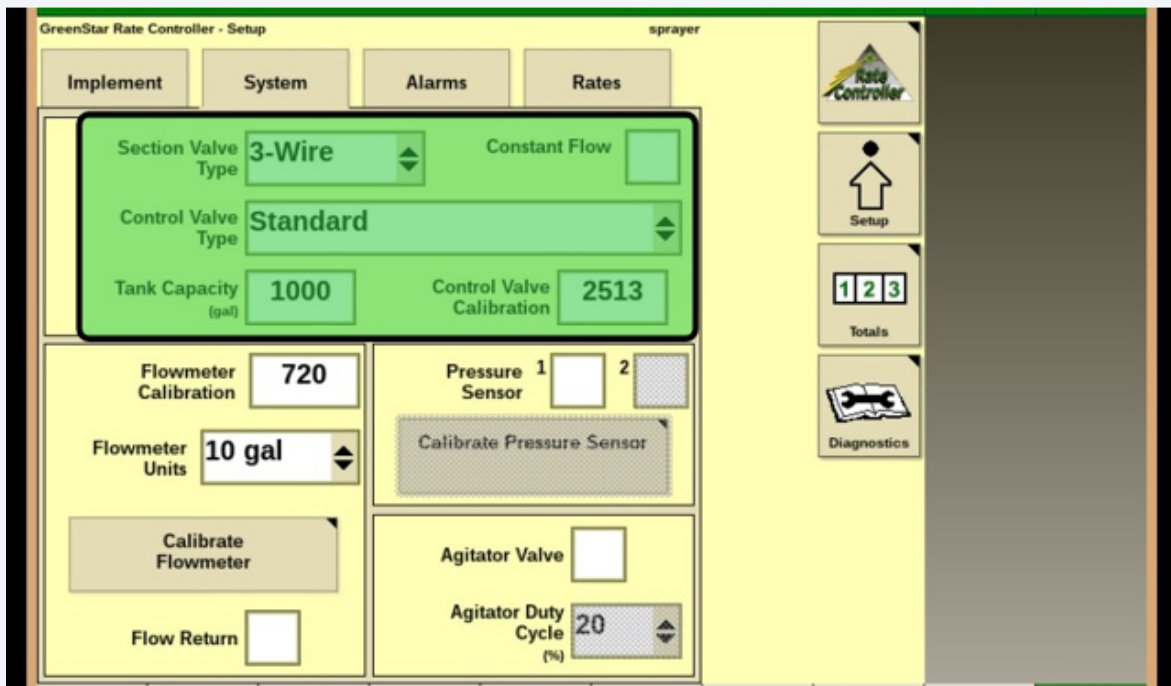

ⓘ Tip! Up to 10 sections if there are no fence nozzles, Up to 8 with fence nozzles selected.

5 Select "System" Tab at top of the screen.

6 Select the Section Valve Type and the Control Valve Type. Once entered, also enter in the Tank Capacity and the Control Valve Calibration number.

> ⓘ Tip! Control Valve(s) and Flowmeter(s) should have their calibration numbers listed on a tag connected to each respective component. If the tag is not available, common valve calibration numbers (listed in the next step) are found in the Operator's Manual of the Rate Controller

7 Control Valve Type(s) and corresponding calibration numbers.

ion Valve Type

Standard Valve Type	Valve Calibration Number (XXYZ)
Raven 165	2513
Raven 894	2513
Raven 125	2513
TeeJet®	1003
HARDI®	7051

ion Valve Type

Fast-Close Valve Type	Valve Calibration Number (XXYZ)
Raven 177	0753
HINIKER™ Servo Valve (8160 Monitor Compatible)	0433
KZCO® Servo Valve (John Deere 2510 Liquid Fertilizer system)	1031

ion Valve Type

PWM-Close Valve Type	Valve Calibration Number (XXYZ)
Sauer-Danfoss™ Hagie MFG T540	1533
Command Controls Corporation FV1501	1411

ional)

to track your diagnostics work.

Are issues when attempting to launch Service ADVISOR Office or use office functionality while using Google Chrome, please switch to Microsoft Edge and reference Knowledge Article KB04407XX for more information

8 For Flowmeter calibration, check the flowmeter for the calibration number. If not available, Raven flowmeters are generally a 720 calibration number and are in "10 Gal" flowmeter units.
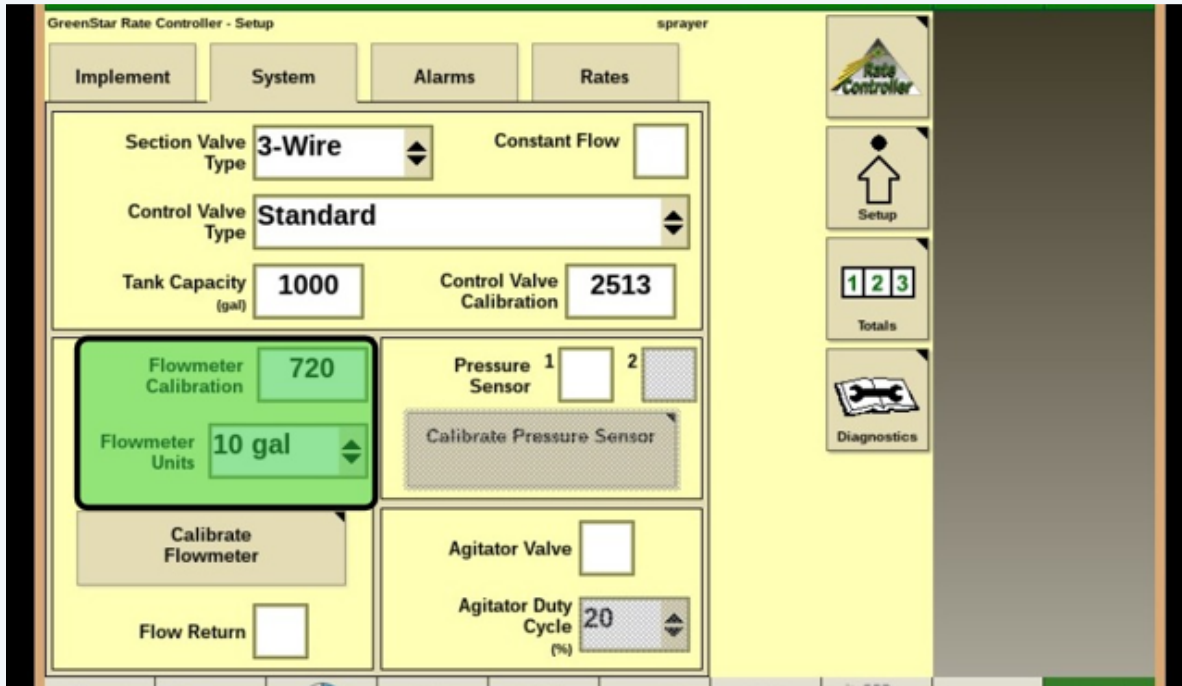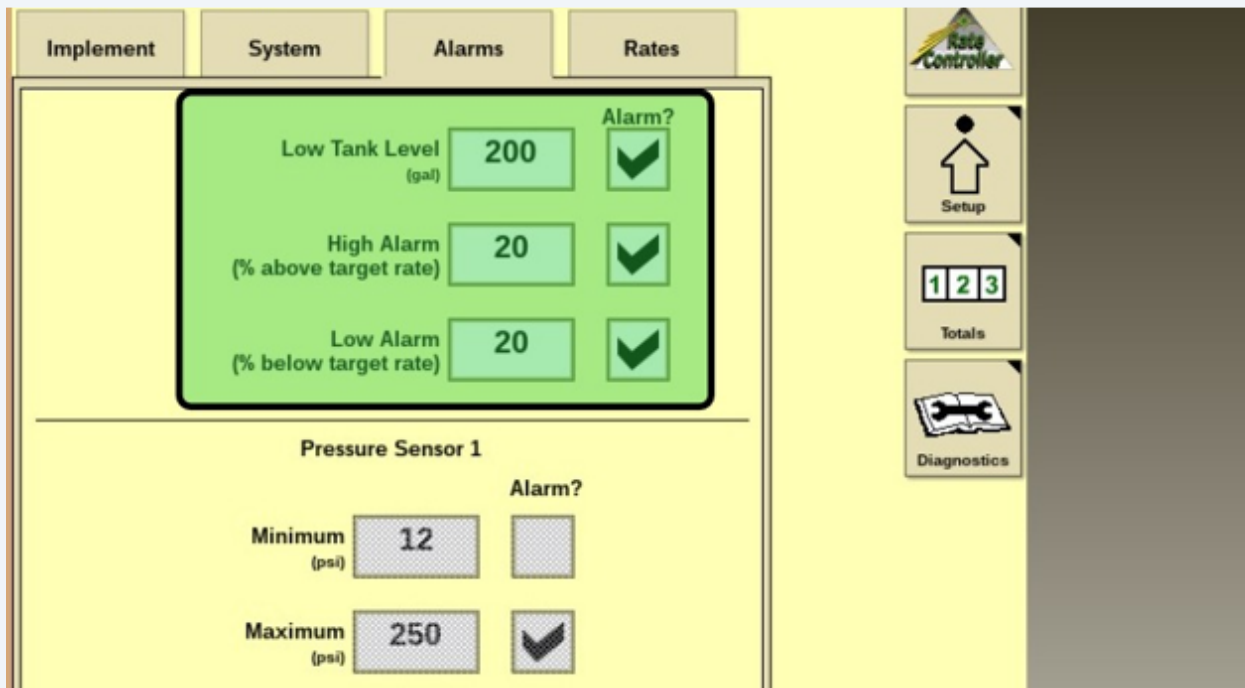

Pressure sensor & agitator valve boxes in Step 8 only need to be checked if they are wired into the Rate Controller system. If it is a manual pressure sensor, box does not need to be checked.
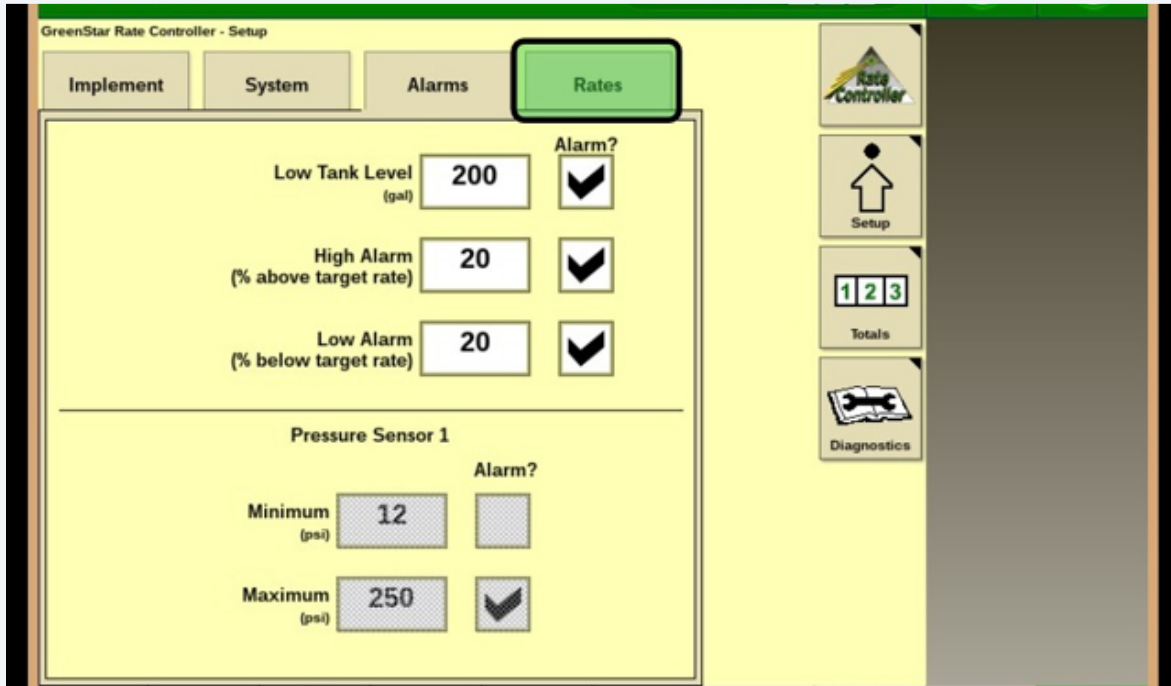
9 Select "Alarms" Tab
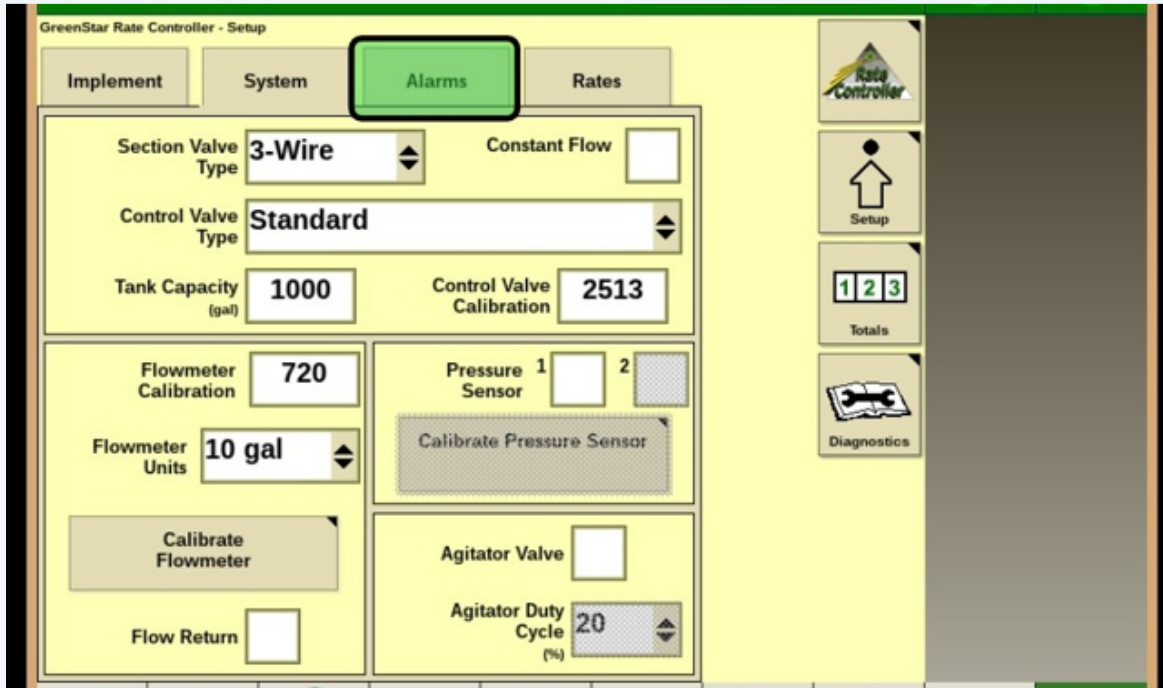
10 Check the boxes for each Alarm the operator would like to receive. Operator can modify each box to match their preferences
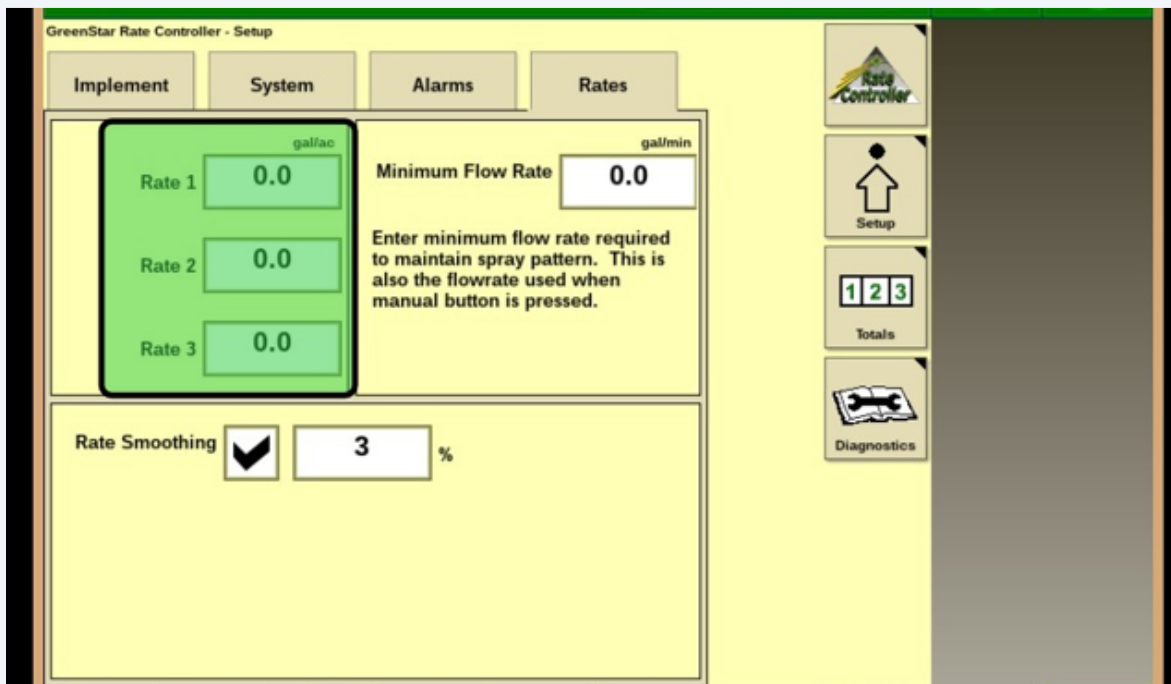
11 Select "Rates" tab

12 Operator should enter 3 preset rates to allow for easy switching back and forth on the main Rate Controller page. Once rates have been entered, switch the drop-down menu on the main Rate Controller page to "Predefined"

Implement Setup

13 Once Rate Controller has been setup, Select Work Setup shortcut in bottom left of the screen. If shortcut bar has been modified, Work Setup will be located in the Menu > Applications > Work Setup
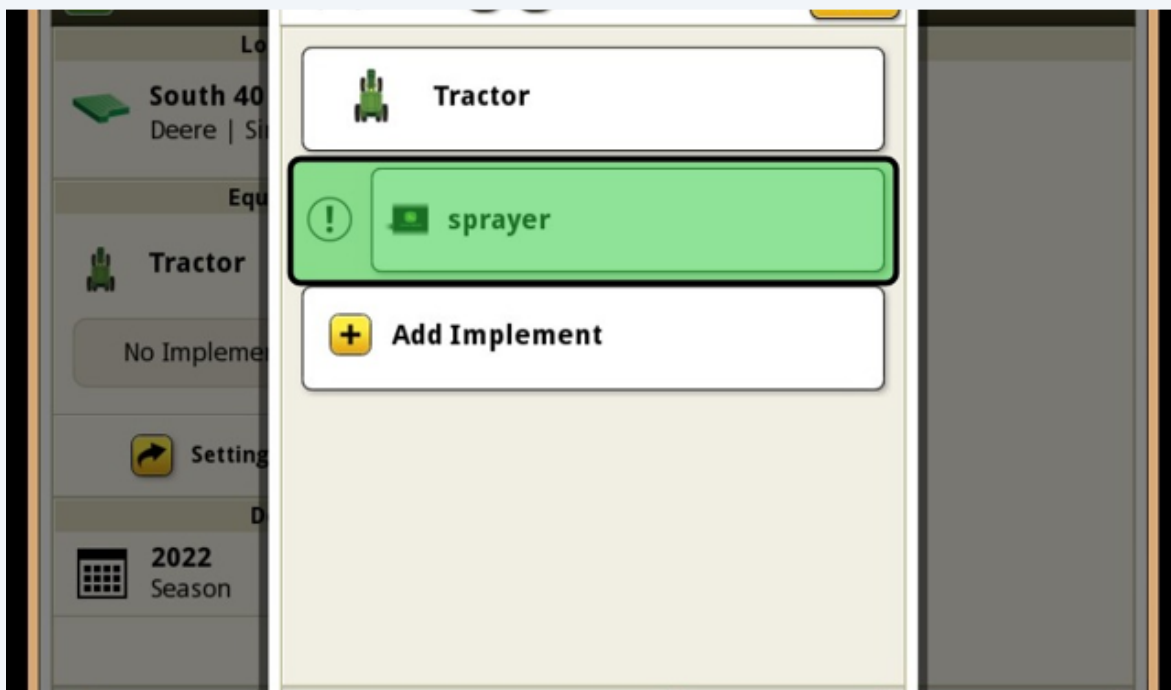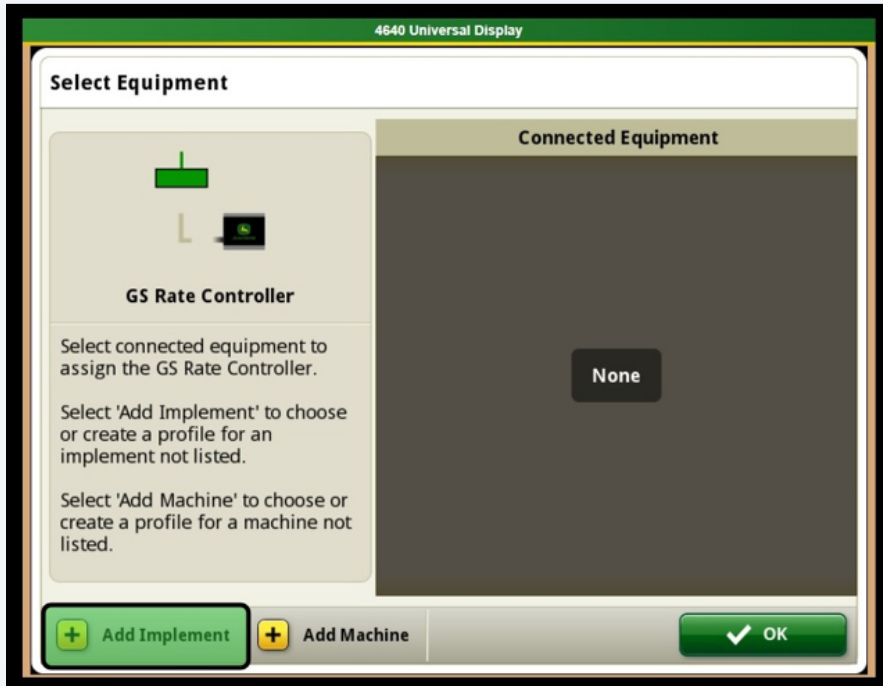
14 Select "Equipment" section of screen

15 Select the white box of the Rate Controller. It will be named whatever it is named in the Rate Controller page

16 Click "Add Implement" at bottom of the screen.

ℹ️ If Operator has loaded a setup file, they can add one of their preloaded implements at this time. If not, proceed to Step 17
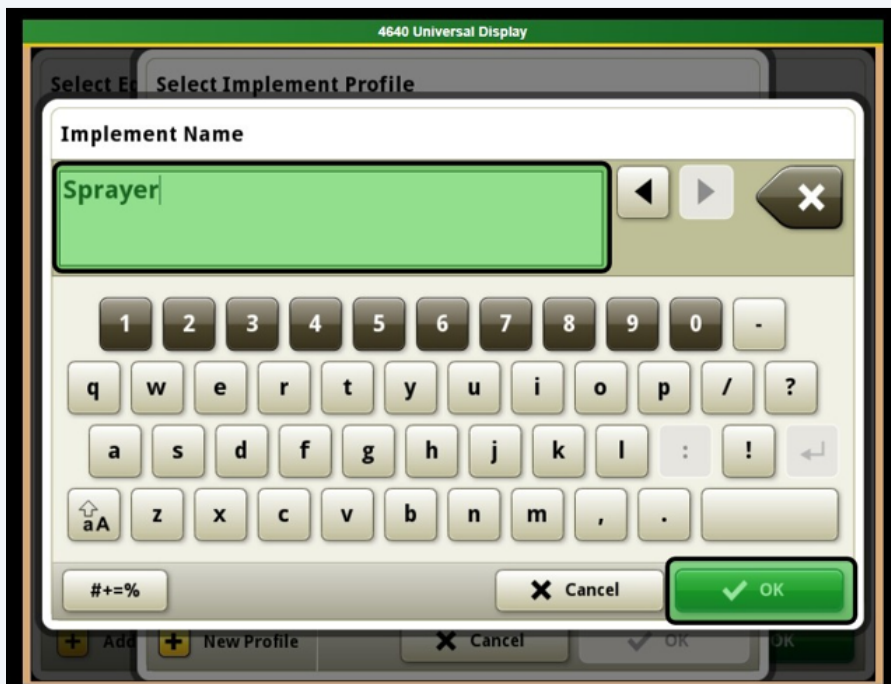
Making a New Implement Profile

17 If a Setup File has not been loaded to the display with an applicable implement, operator will need to add one by selecting "New Profile." If a Setup File has been loaded, they can select an implement from the implement(s) listed.

18 Name the Implement. Once again, operator is encouraged to be specific.

19 Check the box next to Rate Controller in the "Controller" section. This tells the system there will be a Rate Controller controlling this implement

Profile Name

Sprayer

Controller	○ None
	◉ Rate Controller
	○ Yield Documentation, Specialty Crop

| Air Cart | ○ Yes | ◉ No |

Implement Frame

20 Enter in Measurements for the Implement. Be as precise as possible.

Implement Profile ⓘ

Implement Frame

Dimensions	**C** Lateral Offset	0.0 in
	D Center of Rotation	---
	E Rear Connection	None

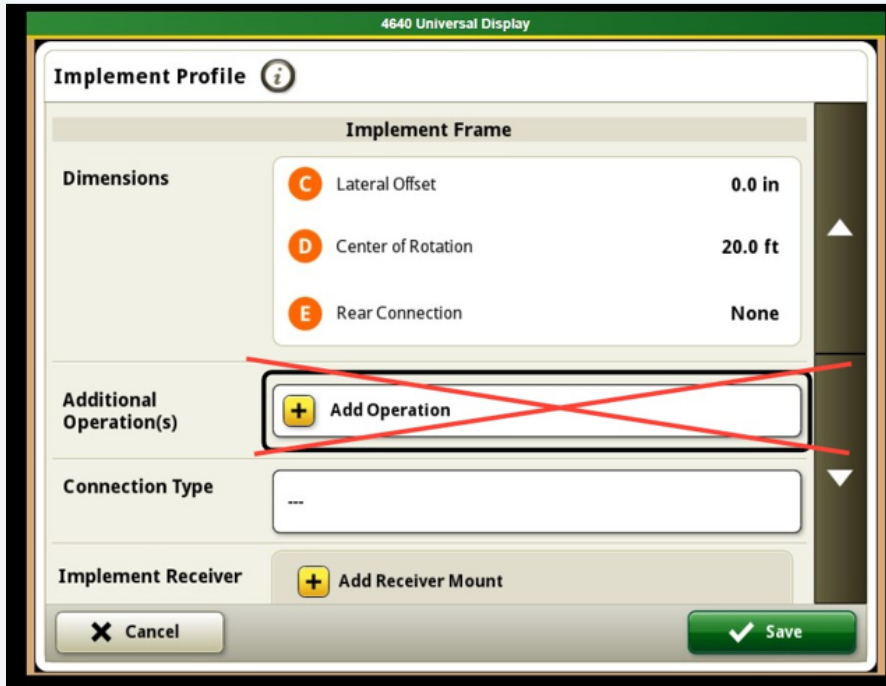| Additional Operation(s) | ➕ Add Operation |

| Connection Type | --- |

| Implement Receiver | ➕ Add Receiver Mount |

✖ Cancel   ✔ Save

21 DO NOT Add an Operation. An Operation will be created automatically once the Implement and Rate Controller have been paired
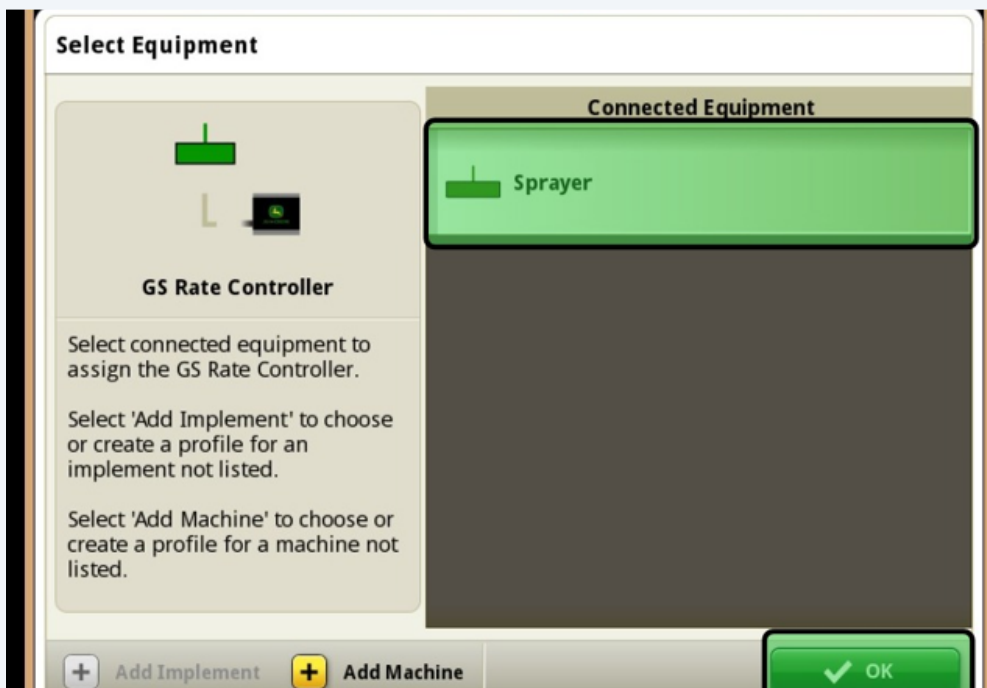

22 Select a Connection Type

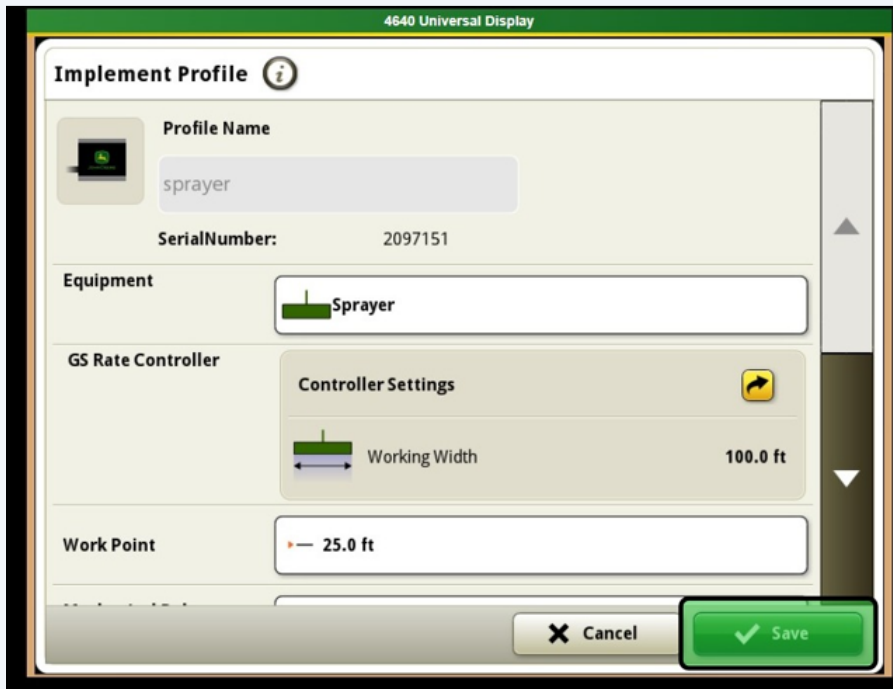**23** Save the settings for the Implement

24 Next, Operator will select the implement just created as the "Connected Equipment." Then, select Ok

25 Verify Settings for the Implement Profile. This includes the equipment it is connected to, the working width, the work point measurement (Section Control runs off this measurement), and the mechanical delay on/off times. Once verified, hit Save

Setting Up the Work Summary

**26** Fill out the Work Summary area for accurate documentation.

Additional Notes

ⓘ Operator NEEDS a constant power harness to connect the Rate Controller master switch to the Front Extension Harness. BPF10403 for Row Crop tractors and BPF10404 for 4WD Tractors

27 When completed, Rate Controllers setup for spraying should look something similar to the screen below. The implement (FAST 9600) should have a gray "L" connecting it to the Rate Controller box (FAST)
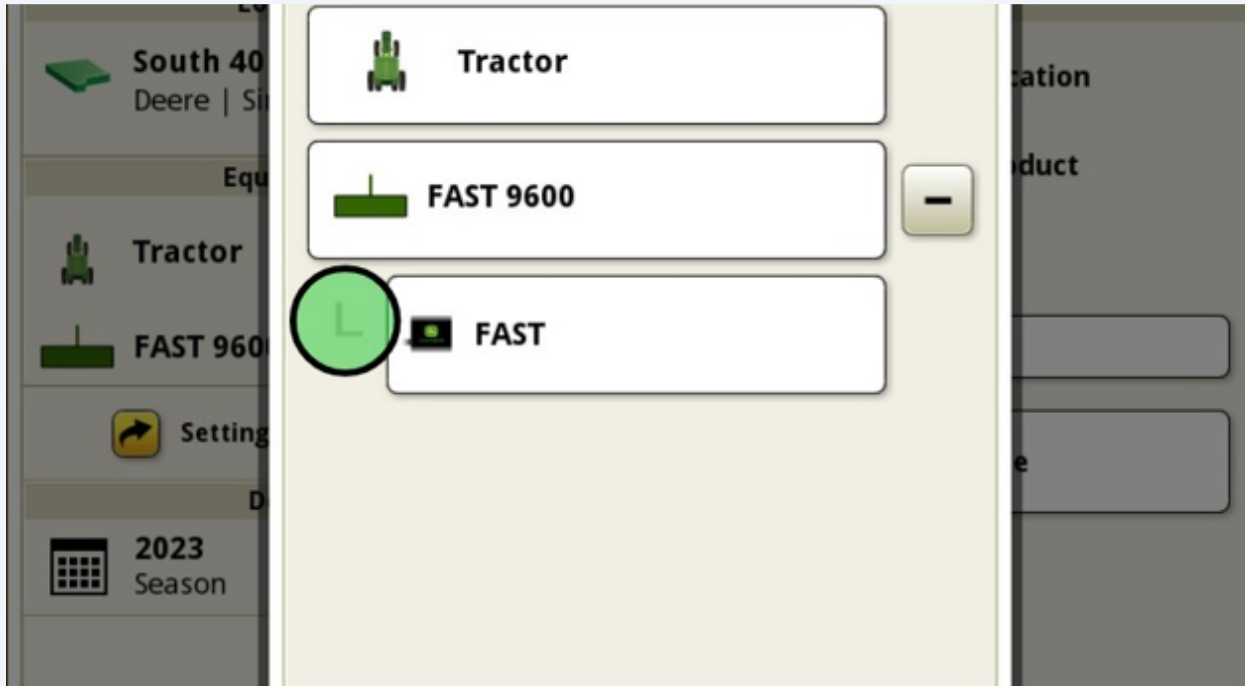
28 Equipment section should NOT look like this step. It should look like Step 26