396-2756Y1

Controller Setup For SurePoint Injection Pump

Specifications

Voltage:	12 VDC	Low Rate Pump	5-40 oz/min
Current:	16.3 Amps	Full Rate Pump	10-80 oz/min
Pump Speed:	0-120 RPM	Pressure:	0-290 PSI

John Deere Rate Controller Calibration Settings

Flowmeter Calibration (Low Rate pump)	4400	(High rate pump)	2200
Flowmeter Units			10 gal
PWM Settings Control Valve Calibration			211
PWM Low Limit			9

SurePoint Commander II

Flowmeter Calibration (Low Rate pump)	880	(Full Rate pump)	440
Valve Control Speed (CAL-Control Speed)			-3
PWM Minimum (Special CAL 3--Area)			5

Trimble Field-IQ Module

Flowmeter Calibration (Low Rate pump)	440	(Full Rate pump)	220
Allowable Error			1%
Lower PWM Limit and Minimum Response			3%
Drive Calibration			Integral--5 All other gains 0

(If system behaves erratically, try Process Gain = 0.1)

Ag Leader Control

Flowmeter Cal (Low Rate pump)	440	(High Rate pump)	220
Checkmark in Close Flow Control valve when rate off			
PWM Gain			311
Zero Flow Offset and PWM Standby			3
Allowable Error			1-2%

Operating Caution: Pump will produce up to 290 PSI. Limit operating pressure to 80 PSI. Pressure with water will be less than pressure with a thicker product.

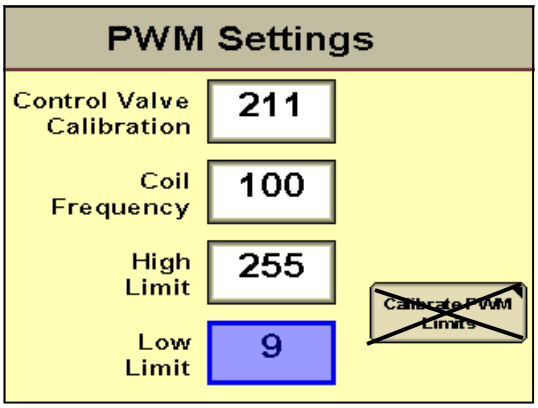
After setup, run a manual test (JD Section Test) and AUTO test (JD Nozzle Flow Check) to verify system control.

Run a Catch Test to verify Flowmeter Calibration. Catch the output from several (or all) of the rows and compare actual volume with volume recorded by flowmeter. Adjust flowmeter calibration number as needed.

SurePoint Ag Systems

Fertilizer Application and Control Experts

John Deere Rate Controller
and
SurePoint Low Rate Injection

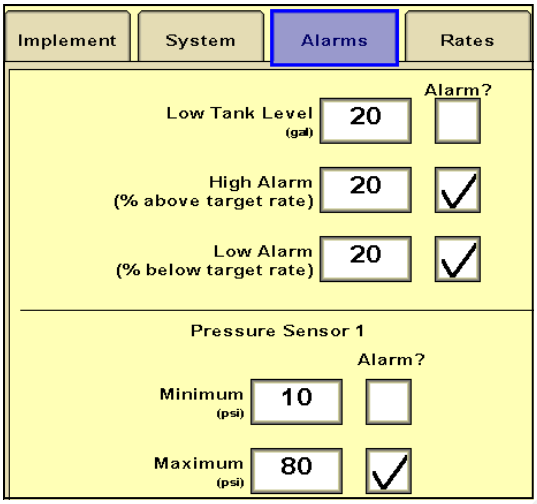


Control Valve Calibration **211**

If the system is slow getting to the Target Rate, increase the first digit of the Control Valve Calibration. If the system overshoots above and below the Target Rate, decrease the first digit.

Low Limit **9**

This must be set here to "jump-start" the pump. If the pump stalls and won't get to rate on start-up, increase this setting 1 digit at a time.

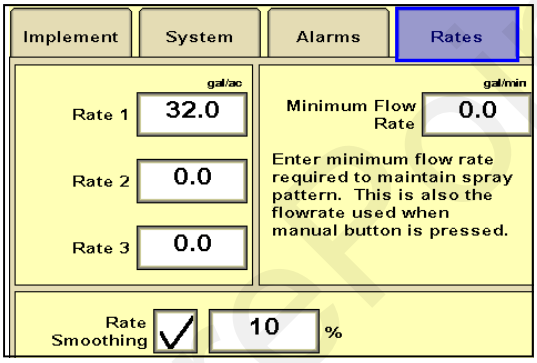


These are suggested settings for Alarms.

If using a Pressure Sensor, set the Alarms as shown.

The SurePoint Injector Pump is capable of achieving 290 PSI. Operating pressure should be kept at 80 PSI or less.

Operating pressure with water will typically be less than the pressure that will be experienced with thicker products.



Rates

Set the desired Rate in **oz/acre** (ignore the gal/ac label on the screen).

With the settings shown on this sheet, the flow will be measured and reported in **ounces** (oz/acre, oz/min, etc.).

After the system is plumbed, and the settings shown above have been entered, SurePoint recommends:

1. Run a **Section Test**. **Diagnostics—Tests—Section Test.** This will verify that you can start the pump and speed it up and slow it down. **Keep the pressure at 80 PSI or less during the Section Test.**
2. Run a **Nozzle Flow Check** with typical operating Rate and Speed to verify that the controller will lock on to the Target Rate. (Enter the Rate in **oz/acre)** You can change the speed to check out various possible operating speeds.
3. Do a **Catch Test** to verify the Flowmeter Calibration. Catch the output from several (or all) of the rows and compare that to what the flowmeter calculated. Adjust the Flowmeter Calibration number as needed.