

FLOW CONTROL QUICK GUIDE:

Lightbar Messages:

A "**flo error**" message on the lightbar may indicate a communication problem. Check the connection between the Air Star comm port and the flow control harness.

A "**flo flo**" or "**no flo**" message indicates a problem with the spray on/off microswitch or pressure switches.

"**hi flo**" or "**low flo**" indicates (meter) calibration problems.

AIR FLOW CONTROL - VALVE CAL SETTINGS

Every year we get calls about valve cal numbers. Here in summary form is the explanation.

Valve cal numbers are four digit numbers:

1st digit: is the backlash number - the least significant of the group simply use 0.

2nd digit is the valve speed. The **HIGHER** the number, the **slower the valve adjusts**. A number 9 in this location would mean the valve runs very slow, at only 10% of full speed. A 1 would mean the valve runs at 90% of full speed. This is the most important number in the valve cal setting. We need to set the valve to run at the fastest possible speed for the flow rate you are using. If the flow rate is low and the valve adjusts too fast you can get oscillation in the boom pressure. If this is your experience, you need to increase the speed digit to slow the valve down. To fine tune your system, start at the fastest speed and slow the valve down if your spray system starts to surge.

3rd digit is the braking digit. It tells the valve when to start slowing down. A 2 in this location would command the valve to start to slow down when you get within 20% of the target flow rate. This helps prevent spray system surge. This digit and the second digit (the valve speed) need to work together. If you set the valve to run at 100% speed and set the breaking digit to begin slowing within 90% of target you will get a very slow response. Normally, we use a "1" or "2" as the breaking digit.

4th digit is the accuracy digit. If we have a 3 in this location it commands the valve to stop any valve adjustment if we are within 3% of the target flow rate. If the flow rate needs to be 100 GPM the valve will not adjust if we are flowing between 97 and 103 GPM. Caution: setting this to 1 or 1% accuracy means the valve will work continuously to try to maintain the rate. This will decrease the life of the valve. Consider holding a closer tolerance while spraying low volumes, and a broader tolerance during high volume spraying.

These valve cal settings are recommended as a starting point:

High Flow Rates (5 to 10 gallons per acre): 0013

Medium Flow Rates (3 to 4 gallons per acre): 0113

Lower Flow Rates (below 3 gallons per acre): 0213

AIR FLOW CONTROL - METER CAL SETTINGS

(Short Cut Calibration)

If you find you are consistently **running out of product (applying too much)** the system is counting too fast so the calibration code needs to be smaller. **Decrease** the original calibration number. Start with 5 point changes (from 720 to 715 for example) and fine tune from there.

If you find you are **not applying enough** product (**product left in tank**) the system is counting too slow - **increase** your code in the same fashion.

Applying too much -> decrease the code

Not applying enough -> increase the code