

# AGXCEL SYSTEM TROUBLE SHOOTING GUIDE FOR GX FERTILIZER SYSTEMS



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## TROUBLESHOOTING

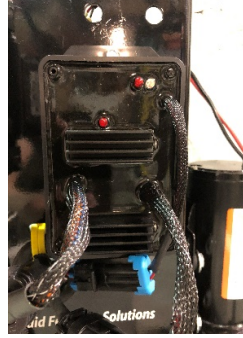
(Read Instructions Completely before Beginning Installation)

### ELECTRIC SYSTEM WON'T TURN ON...

- Check for Voltage to your PWM. You can do this by checking to see if you have 12 volts going into your PWM.
  - If you don't have 12 volts going into your PWM, check the harness for a pinched wire and check the battery to make sure that the prongs are making a good connection with the battery.
- AgXcel has 2 different styles of PWM's.



You should have a consistent **GREEN** light on signaling 12 volts. You should also have a blinking **BLUE** light signaling a PWM signal exists.



You Should have a blinking **RED** light signaling 12 volts (The light in the middle). This light should be solid **RED** when the system is running.

- Make sure that the PWM is getting a signal.
  - This can be done by checking for 12 volts on the cable with the Green and Yellow wire extending out of the PWM when the system is running.
  - If there is no voltage, make sure that you are doing a NOZZLE FLOW CHECK. You can also check the pins to see if they are burned, bent or corroded. Check the harnessing to make sure that there are no pinched cables or cuts in the line.
- Check to see that the pumps are getting 12 volts
  - Check the male cable extending out of the PWM while the system is running for 12 volts. If a signal is not being sent out while the system is running, then your PWM might be bad.
  - Plug the Pumps directly to the battery to see if they kick on at full blast. If they do, then the pumps are alright and the PWM might not be sending a signal to the pumps.
  - If the pumps don't kick on when connected directly to the battery and when the PWM is sending 12 volts to the pumps, then your pumps might be bad.
- Make sure that your planter is DOWN or that your RUN/HOLD switch is looped if you are not using a RUN/HOLD switch

### PUMP SYSTEM WON'T PRIME...

- Make sure that your filters are clean and you have no blockage in your plumbing.
- You can open your bleeder valve to allow air to escape the system
- Raising your rates while you are doing a Nozzle Flow Check can also get the liquid flowing through your system faster.
- Make sure that your filters are completely clean
- Make sure that your bypass valve is closed all of the way and locked



Opening the bleeder valve while the system is priming can let air escape your system that might be trapped. Keep this open until liquid starts to shoot out.



## TROUBLESHOOTING

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### MY RATES ARE JUMPING AROUND...

- Make sure that liquid has reached and is flowing through your Flow Meter
- Check for 12 volts on the harness that plugs into the Flow Meter
- Ensure that you have the correct harness and the correct Flow Calibration number in your settings

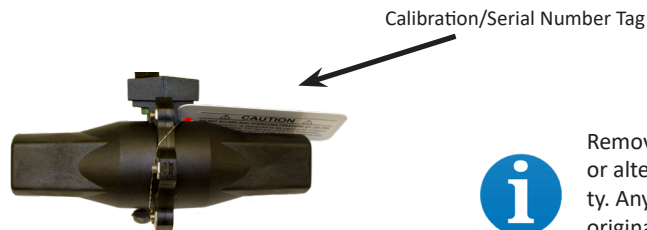
FLOW RANGE (GPM) DIVIDE BY 8 REQUIRED	PULSES PER GALLON	JOHN DEERE GS2/GS3		AG LEADER		TRIMBLE		MICROTRAK	
		DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#
0.08 - 1.6	22710	YES	2839	YES	2839	NO	22710	YES	5677
0.13 - 2.6	22710	YES	2839	YES	2839	NO	22710	YES	5677
0.3 - 5	11355	YES	1419	YES	1419	NO	11355	YES	2839
0.6 - 13	4542	NO	4542	NO	4542	NO	4542	YES	1135
1.3 - 26	2271	NO	2271	NO	2271	NO	2271	NO	4542
2.6 - 53	1135	NO	1135	NO	1135	NO	1135	NO	2270

The Turbine flow meter may need to be disassembled for cleaning or to remove an obstruction. Open the Turbine flow meter by unscrewing the 6 screws surrounding the flow meter and clean the inside of the flow meter. If necessary use a mild detergent and brush to clean the flowmeter. The turbine should spin freely in the housing. After re-assembly, re-calibration of the flowmeter is recommended as it's flow characteristics may change.

**\*\* WARNING!! If you disassemble the Turbine flow meter for cleaning be EXTREMELY CAREFUL not to damage or alter the turbine or casing for this will VOID your warranty \*\***

The turbine flow meter is bi-directional so it can be reversed for even wear.

If these steps do not work, then your Flow Meter might be going



Removing metal tag from Turbine flow meters or altering casing or turbine will void warranty. Any returns or warranty issues will require original documentation (flow meter serial number/calibration tag).

### SYSTEM NOT BUILDING ENOUGH PRESSURE...

- Try using a smaller Orifice/Micro Tube size to build Pressure
- Try raising your GPA/MPH
- Make sure that your Bypass Valve is CLOSED and LOCKED
- Testing with water may be different than testing with fertilizer

ORIFICES		
SPECIAL ORDER ITEMS	PN#	DISC
	35327	30-DC-00 - BLANK
	18203	30-DC010 - GREY VERY LOW FLOW
	17591	30-DC018 - TERRACOTA
	17964	30-DC023 - PINK
	17965	0-DC-01 - GREY
	17966	30-DC-015 - BLACK
	17967	30-DC-02 - BROWN
	17968	30-DC-03 - ORANGE
	53501	30-DC-035 - MAROON
	17969	30-DC-04 - RED
	17970	30-DC-05 - BLUE
	17971	30-DC-06 - YELLOW
	17972	30-DC-07 - EMERALD GREEN
	17973	30-DC-08 - WHITE
	17974	30-DC-10 - IMPERIAL GREEN
	19962	30-DC-12 - ROYAL BLUE

Pink is the smallest orifice and Royal Blue is the biggest orifice

PINK
YELLOW
GREY
NAVY BLUE
BROWN
SKY BLUE
GREEN
PURPLE
ORANGE
RED
BLACK

Pink is the smallest Micro Tubing and Black is the biggest Micro Tubing

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### I CAN'T GET ALL MY CHECK VALVES TO OPEN...

- Try using a smaller Orifice/Micro Tube size to build Pressure
- Try raising your GPA/MPH
- If you have a Hydraulic System and are doing low rates (5 GPM or lower), you may need to switch to a smaller Wilger Check Valve
- Make sure that your Bypass Valve is CLOSED and LOCKED
- Testing with water may be different than testing with fertilizer



All of our Hydraulic Systems come with 10LB Check Valves (Black Cap) but you may need to switch to the 4LB Check Valves ([Blue Cap](#))

### ELECTRIC PUMPS WON'T TURN ON...

- If you are using a variable rate controller, make sure that you are getting 12 volts coming out of your PWM while doing a NOZZLE FLOW CHECK.
- If you are using the MANX controller, make sure that your controller is plugged directly to the battery and not into the cab.
- Then make sure that you are getting 12 volts to the pumps from the controller.
- You can also try plugging the pumps directly to the battery to see if they kick on at full blast.

### HYDRAULIC SYSTEM WON'T TURN ON...

- Make sure that your planter is DOWN
- Make sure that you have enough Hydraulic Fluid going to the Silver PWM Cylinder. Our PWM will only use as much Hydraulic Fluid as it needs.
- While you are running a NOZZLE FLOW CHECK, you can push down and turn the red knob on the PWM block counter clockwise. This will put the pump into MANUAL MODE. If your Hydraulic Pump kicks on, then you might not be getting enough hydraulic flow to your pump system.



When the **RED** knob is pushed down, your pump system will be controlled by your controller.



When the **RED** knob is up, your pump system is in manual mode.





**TROUBLESHOOTING**  
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**HYDRAULIC SYSTEM IS SURGING...**

- Try raising and/or lowering your GPA/MPH
- Double check that your PWM SETTINGS are correct
- Check to see how many sections you have open/closed. You may not be able to close as many sections as you desire with the rates you are running at.
- Make sure that your filters are completely clean.

**HYDRAULIC SYSTEM IS LEAKING...**

- If your Hydraulic Pump is 3 years old or older, you may need to put in new diaphragms
  - If your diaphragms are cracked, oil or fertilizer may escape through that crack causing leaks and lower performances.
  - You can also tell if fertilizer is out of your system by looking at your oil sight glass on the top of your pump system and seeing if it looks milky.
- Your Hydraulic Pump System does come with a spare diaphragm kit. If you cannot find, AgXcel stocks a variety of diaphragm kits, o'ring kits and replacement oil. The diaphragms are under the black caps on your hydraulic system. Before calling count the number of diaphragms so the correct kit needed can be determined.



55564	LFP45/BP45 BLUE FLEX DIAPHRAGM KIT
55568	LFP 45 VITON DIAPHRAGM KIT
37703	D70 BLUE FLEX DIAPHRAGM KIT
37720	D70 DAMPER DIAPHRAGM BLUE FLEX
55570	LFP 80/BP80 BLUE FLEX DIAPHRAGM KIT
55569	LFP 80 VITON DIAPHRAGM KIT
37708	D115 BLUE FLEX DIAPHRAGM KIT
55572	LFP120 BLUE FLEX DIAPHRAGM KIT
55574	LFP120 VITON DIAPHRAGM KIT
37730	D160 BLUE FLEX DIAPHRAGM KIT
37732	D250 BLUE FLEX DIAPHRAGM KIT
31326	OIL QUART

# *Precision Liquid Fertilizer Solutions*



*FOR ALL YOUR LIQUID FERTILIZER NEEDS*

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