

Displaying Diagnostic Mode

The Dflow+ control box has a Diagnostic Mode that can be useful for fault finding in the event of a problem with the applicator. This can be used with the consultation of one of Selmech's engineers. In Diag Mode the message DIAG appears occasionally.

To enter diagnostic mode have the control box turned on and in run mode and do the following: -



Press and hold down the “PRESS TO SELECT” knob. The calculated amount being dispensed will be displayed first: -

Continue to hold the knob down and after a short time a series of dashes will be displayed: -

Continue to hold the knob down and after a short time a series of dashes will be displayed: -

After approximately 5 seconds DiagMode will be displayed: -

Release the knob!

Sensor pulses

The first screen is an incremental count of pulses from the flow sensor will be displayed. It can count from 0 up to 600000.

What does this mean?

Firstly if it is counting up it shows that the control box is registering pulses flow sensor/speed sensor.

If the display is showing a series of zeros then it shows that the control box is not registering any pulses from the flow sensor.

This could be because: -

There is no fluid flowing because the pump is not running or there is a blockage.

The signal wire between the flow sensor and control box is broken.

The flow sensor is not working.



Pump drive

Press and release the “PRESS TO SELECT” knob and next the current drive to the pump will be displayed as a percentage.

What does this mean?

The percentage drive to the pump shows how hard the pump is being asked to work. This depends on the setting you have entered into the control box. If the percentage drive is 100% but your application rate is well within the maximum range of the pump it could mean that there is a blockage or the flow sensor is not sending a signal back to the control box. This would have showed up in the previous section with a zero count of pulses.



Supply voltage

Press and release the “PRESS TO SELECT” knob and next the current supply voltage level will be displayed.

What does this mean?

To get an accurate reading of voltage it should be done when the pump is pumping and with the harvester/tractor running!

The voltage displayed should be between 12.00 volts and 14.00 volts it would normally be 13.80 volts. If the voltage is low or erratic it could mean a bad connection anywhere from the battery to the pump. If the voltage is high there could be a problem with charging system of the machine.



Crop sensor

Press and release the “PRESS TO SELECT” knob and the display will show messages relating to a thru beam crop detector. See page 2 if you have one fitted, if not the display will show -- CROP.



Exit DiagMode

Press and release the “PRESS TO SELECT” knob and the display briefly show ExitDiag and returns to the Run Mode.



If you have a thru beam crop detector connected

After pressing and releasing “PRESS TO SELECT” knob when the current supply voltage level is displayed one of the following will be displayed: -

This indicates that there is no thru beam crop detector connected or that the control box is not seeing it. Check all connections are made properly and cabling for damage.



This indicates that the thru beam crop detector is not detecting any crop. If there is nothing breaking the beam then this shows it is working. If the beam is broken then it shows the there is a fault. Check all connections are made properly and cabling for damage.



This indicates that the thru beam crop detector is detecting crop. If there is something breaking the beam then this shows it is working. If the beam is not broken then it shows the there is a fault. Check all connections are made properly and cabling for damage.



Press and release the “PRESS TO SELECT” knob and the display briefly show ExitDiag and returns to the Run Mode.



Note!

Check Flow: -

If check flow is being displayed when entering diagnostic mode it will continue being displayed while in diagnostic mode so you will not be able to see anything else on the display.

This can be overcome: -

From switching on Check Flow will not be displayed until 12 seconds have elapsed.

It takes 9 seconds for the box to enter DiagMode.

So: -

Turn the control box off.

Turn it back on and immediate press down the “PRESS TO SELECT” knob. Doing this will allow you to get into and scroll through the DiagMode before check flow starts to displayed.

It should be noted that if check flow is being displayed it most likely means the control box is not receiving pulses from the sensor which will be highlighted on the first screen by it showing a series of zeros. If this is the case and you have a tank kit or module, check there is liquid in the tank and the 3 way valve is set to flow to the pump. If so next check the wiring. The green yellow wire in the cable from the applicator carries the pulses to the control box. If there is no connectivity between the connection on the tag board to the control box this will be the problem.

