

Commander II Startup Procedure and Troubleshooting Testing

Be sure the harnessing is plugged in correctly. The cable from the Astro speed sensor must be plugged into the connector with the Yellow zip tie. If it is plugged into the Gray zip tie, as soon as you start driving, the Commander will have a fast, clicking sound and it will switch quickly and repeatedly between RUN and HOLD as the pulses from the speed sensor change the system from RUN to HOLD and back quickly.

There is also a place on the implement where connections can be made wrong. If the RUN/Hold connector on the implement is plugged into the flowmeter, as soon as product starts flowing, the pulses from the flowmeter will make a fast clicking sound on the Commander II as the system switches between RUN and HOLD.

There are two basic tests for the Commander II when doing a pre-season check or when doing any other troubleshooting.

The first test is the **MANUAL test**. In this test, we will turn the pump on, speed it up, and slow it down. During this test we can observe flow (Volume/min-gpm) and pressure.

To run the **MANUAL test**:

1. Put the Commander II in MANUAL mode (MAN) by pushing the AUTO/MAN button.
2. Put the dial at Volume/min (that's 2nd from the top on the left side).
3. Put the system in RUN (it must NOT say HOLD on the screen). First, put the Run/Hold switch in Run. Lower the implement or turn the mercury switch or unplug it.
4. If it is a hydraulic pump, turn on the hydraulic flow to the pump.
5. Turn on Boom 1. The section valve should open. (You can also turn on Boom 2 and Boom 3 if desired.)
6. Press and hold the (+) button. The pump should start running, liquid should start flowing, and there should be a reading on the screen in GPM.
7. You can turn the dial to Pressure to see what that is. (If you are testing with water, the pressure will be much lower than it will be with a heavier and thicker fertilizer product.)
8. Turn boom switches off to stop the test.

The second test is the **AUTO test**. In this test we will simulate driving through the field with the system automatically locking on to the target rate.

To run the **AUTO test**:

1. Go to CALIBRATION mode by pressing and holding the CAL button until the red light comes on.
2. Push the AUTO/MAN button until the screen says AUTO.
3. Turn the dial to SPEED (that's in the lower right corner). Press the (+) button to set the desired speed.
4. Turn the dial to RATE. Verify that the correct Target Rate is showing. If necessary, use (+) or (-) to set the desired rate.
5. Turn the RUN/HOLD switch to RUN. If necessary, lower the implement, turn the mercury switch or unplug the mercury switch so the system is in RUN mode, not HOLD.
6. Turn at least Boom 1 on.
7. The pump should start. It should lock on to the desired rate. You can press (+) or (-) to increase or decrease the rate.
8. You can turn the dial to speed to change the speed.
9. You can turn the dial to pressure to read this. (Pressure will be much lower with water.)
10. You can turn the dial to 'Volume/Minute to see how many GPM are being pumped.
11. Turn the boom switches off. Press and hold CAL to turn off the red light.

In the field, set the system to AUTO, put the dial on RATE, Turn on the boom switches, lower the implement, and drive. Go to www.surefireag.com/support for more troubleshooting information and complete system manuals.