



RAVEN TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE & CORRECTIVE ACTION
<p>1. Rate display is inaccurate or unstable.</p>	<ol style="list-style-type: none"> 1. Check to see if your strainer is plugged. 2. Verify that there is product being discharged from each of the vapour tubes – If not, disassemble and clean out your supercooler with compressed air. 3. Unplug, Check and reconnect all wiring harnesses – Just one corroded pin or loose connection could cause the system to malfunction. 4. Test Your Flow Cable – (See Fig. 2 on next page) Ensure that power is actually getting to your flow meter by testing for the required voltages. If no power can be found, check connections or replace your flow cable. If there is power at your flow cable, replace your flow sensor. 5. Replace your flow sensor – The black wire connected to your flow meter is called the flow sensor. Remove the old sensor and thread in the new sensor, making sure to follow the installation instructions. No calibration changes are required. 6. Replace your flow meter – If you are still having issues after replacing the flow sensor, the turbine inside your flow meter may have burnt out. Flow meter replacement parts are on page 10 of the DyTerra Parts & Equipment catalogue.
<p>2. Rate does not change in either manual or automatic control modes.</p>	<ol style="list-style-type: none"> 1. Check the control valve cabling for wear or breaks. 2. Check and clean cable connections. 3. Check the voltage at the control valve: (see Fig. 1) 4. Power on the console. 5. Set the master switch on the console to “On”. 6. Set the console to “Manual” mode. 7. Hold the Increase/Decrease switch while testing voltage at the flow cable. 8. If voltage is found, plug the control valve back in. 9. If the valve will not turn while holding the Increase/Decrease Switch, replace the valve.
<p>3. Are you still having issues?</p>	<p>The flow of NH₃ through your metering system is solely controlled by tank pressure. When applying in colder temperatures, tank pressure will drop. If tank pressure drops too low, your cooler will be starved for product, which causes rates to fluctuate. Your options are to slow down or try the following:</p> <ol style="list-style-type: none"> 1. Increase plumbing size from tank. 2. Upgrade to a high flow breakaway. 3. Use a larger nurse tank with a high-flow withdrawal. 4. Upgrade to a higher capacity supercooler.
<p>4. Vapour tubes leaving green steaks in field. Too much N.</p>	<ol style="list-style-type: none"> 1. Split and increase vapour tubes from 2 to 4 shanks diversifying the N vapour discharge.
<p>5. Vapour still coming from vapour tubes with valve shut.</p>	<ol style="list-style-type: none"> 1. O-rings inside cooler are bad 2. If using only a single section shut-off valve configuration, the section shut-off valves will not shut off flow to the return line allowing flow through the vapour tubes.
<p>6. Fast valve not working correctly.</p>	<p>Check valve type setting in SCS440 console. Select C-FC (Fast Closing)</p>

PROBLEM

PROBABLE CAUSE & CORRECTIVE ACTION

7. Why is my rate too high? Ensure meter calibration is set to pounds per actual N not gallons.

8. Rate is erratic and takes a long time to find the rate when applying a lower rate with a fast valve.
 Note: A fast valve has trouble finding low rates.
 1. Change the valve calibration or
 2. Go to a two valve system

9. If you're still having trouble call RAVEN at 1-800-243-5435

Fig. 1

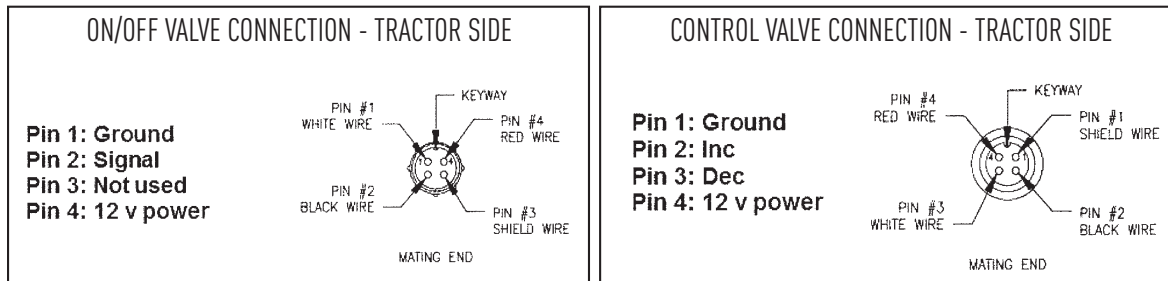
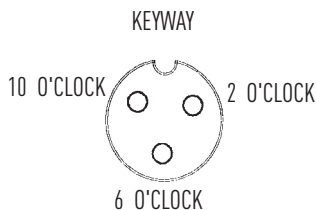


Fig. 2

PROCEDURE TO TEST FLOW METER CABLES:

1. Disconnect cable from flow sensor.
2. Hold flow cable so that the keyway is pointing to the 12 o'clock position:



PIN DESIGNATIONS

2 o'clock socket location is ground.
 10 o'clock socket location is power.
 6 o'clock socket location is signal.

VOLTAGE READINGS

- a) 2 o'clock socket to 6 o'clock socket = +5 VDC
- b) 2 o'clock socket to 10 o'clock socket = +5 VDC

FOR FURTHER INFORMATION, PLEASE CONTACT DYTERRA CUSTOMER SERVICE:

MANITOBA P: 204-885-8260 | SASKATCHEWAN P: 306-244-4448

