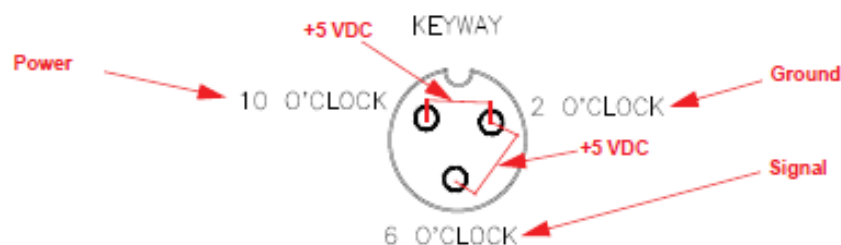


Raven flowmeter maintenance and calibration

Testing Flow Meter Cables

1. Disconnect the cable from the flow sensor.

FIGURE 1. Flow Sensor Connector Cable Connection



Note: If a +5 VDC voltage reading is not present, disconnect the speed sensor cable. If the flow reading is restored, refer to the Testing Speed Sensor Extension Cables section on page 46 to test the speed sensor extension cables.

1. Enter a METER CAL value of 1 into the console.
2. Press the TOTAL VOLUME button.
3. Place the RATE 1/RATE 2/MAN switch in the MAN position.
4. Turn the boom switches ON.
5. Create a short between the ground and signal sockets by inserting a small jumper wire or paper clip into both sockets simultaneously. Each time contact is made, the TOTAL VOLUME reading should increase in increments of 1 or more. If the TOTAL VOLUME does not increase:
 - a. Remove the section of cable closest to the console.
 - b. Repeat the ground-signal short test.
 - If the TOTAL VOLUME does not increase, replace the defective cable and repeat the ground-signal short test.
 - If the TOTAL VOLUME increases, replace the flow sensor.
6. Perform voltage checks as illustrated in the figure above.

Important: Re-enter the original METER CAL figure after testing is complete.

Recalibrating the Flow Meter

Note: This procedure should be performed when the tank is filled with water, not chemicals.

1. Enter a METER CAL value of 10 [38] into the console.
2. Enter a TOTAL VOLUME value of 0 into the console.
3. Turn OFF all booms.
4. Remove a boom hose and place it into a calibrated 5 gallon [19 liter] container.
5. Turn ON the boom switch for the boom hose that was removed.
6. Turn ON the Master switch and pump exactly 10 gallons [38 liters] of water. The TOTAL VOLUME readout is the new METER CAL number. This number should be within +/- 3% of the calibration number stamped on the tag of the flow meter.
7. Zero out the TOTAL VOLUME value and repeat the procedure several times to verify the accuracy of the new METER CAL value.
8. Verify the flow meter calibration.
 - a. Fill the tank with a predetermined amount of measured liquid (e.g., 250 gallons).

Important: Do not rely on the graduation numbers molded into the applicator tank - measure the liquid.

- b. Empty the tank under normal operating conditions.
- c. Check the TANK VOLUME value. If the number displayed is different from the predetermined amount of measured liquid by more than +/- 3%, perform the following calculation:

$$\frac{\text{METER CAL} \times \text{TOTAL VOLUME}}{\text{Predetermined amount of measured liquid}} = \text{Adjusted METER CAL value}$$

For Example:

METER CAL Value	=	720 [190]
TOTAL VOLUME Value	=	280 [984]
Predetermined amount of measured liquid	=	250 [946]

$$\frac{720 \times 280}{250} = 749 \text{ (English)}$$

$$\frac{[190] \times [984]}{[946]} = 198 \text{ (metric)}$$

9. Enter the adjusted METER CAL value before resuming application.

Conxall 5182-3PG-518



Conxall 3182-3SG-521

