

# RFM 100 FLOW METER MAINTENANCE AND ADJUSTMENT PROCEDURE

- 1) Remove Flow Meter from sprayer and flush with clean water to remove any chemicals.
- 2) Remove flange bolts or clamp from the Flow Meter.
- 3) Remove the turbine hub and turbine from inside Flow Meter.
- 4) Clean turbine and turbine hub of metal filings and any other foreign material, such as wettable powders. Confirm that the turbine blades are not worn. Hold turbine and turbine hub in your hand and spin turbine. It should spin freely with very little drag.
- 5) If transducer (XDCR) assembly is replaced or if turbine stud is adjusted or replaced, verify the turbine fit before reassembling. Hold turbine hub with turbine on transducer. Spin turbine by blowing on it. Tighten turbine stud until turbine stalls. Loosen turbine stud 1/3 turn. The turbine should spin freely.
- 6) Re-assemble Flow Meter.

**\*IMPORTANT:** DO NOT OVERTIGHTEN FLOW METER BAND CLAMP. TIGHTEN BAND CLAMP UNTIL CLAMP FLANGES ARE .375 APART. SEE FIGURE 2. OVERTIGHTENING MAY DAMAGE FLOW METER.

- 7) Use a low pressure (5 psi) [34.5 kPa] jet of air thru Flowmeter in one direction and then again in opposite direction to verify that the turbine spins freely. If there is drag, loosen hex stud on the bottom of turbine hub 1/16 turn until the turbine spins freely.
- 8) If turbine spins freely, and if cables have checked out O.K., but Flow Meter is still not totalizing properly, replace Flow Meter transducer.

## PROCEDURE TO RE-CALIBRATE FLOW METER

- 1) Enter a METER CAL number of 10 [38] in .
- 2) Enter a TOTAL VOLUME of 0 in .
- 3) Switch OFF all booms.
- 4) Remove a boom hose and place in calibrated 5 gallon [19 liter] container.
- 5) Switch ON appropriate boom switch and MASTER switch. Pump exactly 10 gallons [38 liters].
- 6) Readout in TOTAL VOLUME is the new METER CAL number. This number should be within +/- 3% of the number stamped on the tag on Flow Meter.
- 7) Repeat this procedure several times to confirm accuracy. (Always "zero out" the TOTAL VOLUME display before retesting).

**NOTE:** For greatest precision, set METER CAL to 100 and pump 100 gallons (378 liters) of water.

- 8) To verify Flow Meter calibration, fill applicator tank with a predetermined amount of measured liquid (i.e. 250 gallons).

**DO NOT RELY ON GRADUATION NUMBERS MOLDED INTO APPLICATOR TANK.**

Empty the applicator tank under normal operating conditions. If the number displayed under TOTAL VOLUME is different from the predetermined amount of measured liquid by more than +/- 3%, complete the following calculation. See Example, Figure 3.

- 9) Enter corrected METER CAL before resuming application.

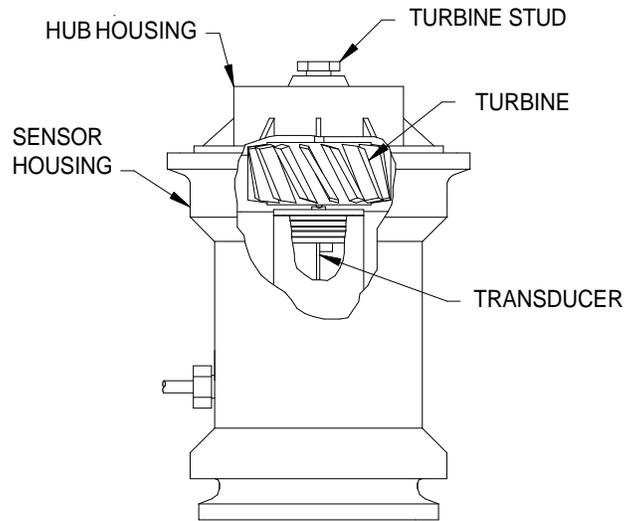


Figure 1

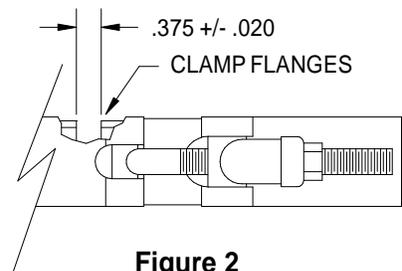


Figure 2

**EXAMPLE:**

METER CAL = 680 [164]  
 TOTAL VOLUME = 260 [984]  
 Predetermined amount of measured liquid = 250 [946]

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

ENGLISH UNITS:	METRIC UNITS:
$= \frac{680 \times 260}{250} = 707$	$= \frac{[164] \times [984]}{[946]} = [170]$

Corrected METER CAL = 707 [170]

Figure 3