

# INSTALLATION AND OPERATION INSTRUCTION MANUAL

## MODEL 453 FLOW METER

### INTRODUCTION

The model 453 flow meter is designed to be installed with the Harvest Tec hay preservative applicators designed to apply acid based preservatives using 1/2 I.D. hose. The flow meter is accurate in applications from 40 to 400 pounds per hour (.1 to 1.5 gallons per minute).

### INSTALLATION:

#### 1. MOUNTING THE FLOW METER

- A. Place flow meter in line as far away from the pump as possible.
- B. Make sure the arrow on sensor box is in the same direction as the flow of product.
- C. Keep flow meter as low as possible to eliminate air bubbles.
- D. Remove filter bowl and cover. Mark two holes from the backside of meter housing to baler frame.
- E. Drill two 3/16 holes and secure with two 1/4 self-tapping screws provided.
- F. Re-install cover and filter bowl.
- G. Do not replace the fittings on the flow meter with metal, for it will interfere with the meters accuracy.

#### 2. PLUMBING

- A. Cut into preservative line next to flow meter's inlet if installing on a used applicator, or run a line from the pump to the flow meter on a new applicator.
- B. Connect inlet hose to pump side of the flow meter. Be sure that fluid is flowing in the same direction as the arrow on the meter.
- C. Connect outlet side of meter to hose running towards tips.
- D. Secure with hose clamps provided.

#### 3. CONTROL

- A. Mount display box on tractor and hook up to a 12 volt source. Make sure to hook the positive, the green lead, to the hot terminal on the starter or battery and the black wire to an appropriate ground. Check with a volt meter before installation. **REVERSING THE POLARITY WILL CAUSE DAMAGE TO CONTROL BOX!**
- B. Run wires to baler and keep away from any moving or hot areas.

### OPERATION:

#### 1. RATE PER HOUR

Press the select button "**SEL**" on the display until the letter R appears on the left side of the display. The number displayed on the right of the display represents pounds per hour. Use this display to monitor your rate of flow.

<b>Example:</b>	<b>Baling rate</b>	<b>- 10 ton per hour</b>
	<b>Multiply by desired application rate</b>	<b>- 10 lb per ton</b>
	<b>Display read-out in lbs per hour</b>	<b>- R 100</b>

## 2. ACCUMULATED POUNDS:

Press the select button “**SEL**” on the display until the left side of the display is blank. The number displayed to the right of the display represents total pounds used. This number will increase as product is used.

**Example:**

<b>Make 4 round bales at 1000 pounds each</b>	<b>- 2 tons</b>
<b>Multiply by desired application rate</b>	<b>- 10 lb per ton</b>
<b>Display read out in total lbs. Used</b>	<b>- 20.0</b>

## 3. RESETTING METER

Press the reset button “**RST**” only if you want to zero out your accumulated pounds. The reset button will work in either pounds per hour or accumulated pounds screen so make sure you record that number before you press “**RST**”.

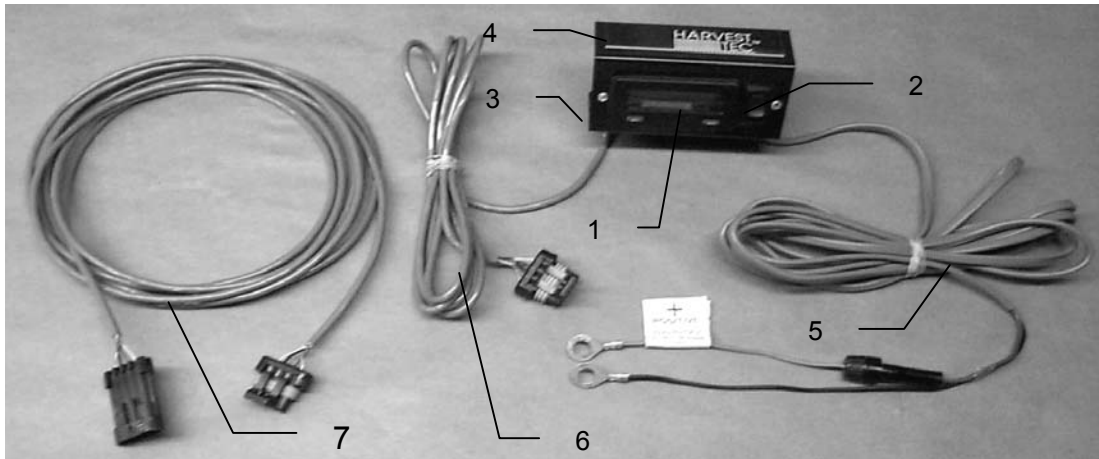
## MAINTENANCE

- A. Keep flow meter clean.
- B. Clean filter bowl after 10 hours of use.

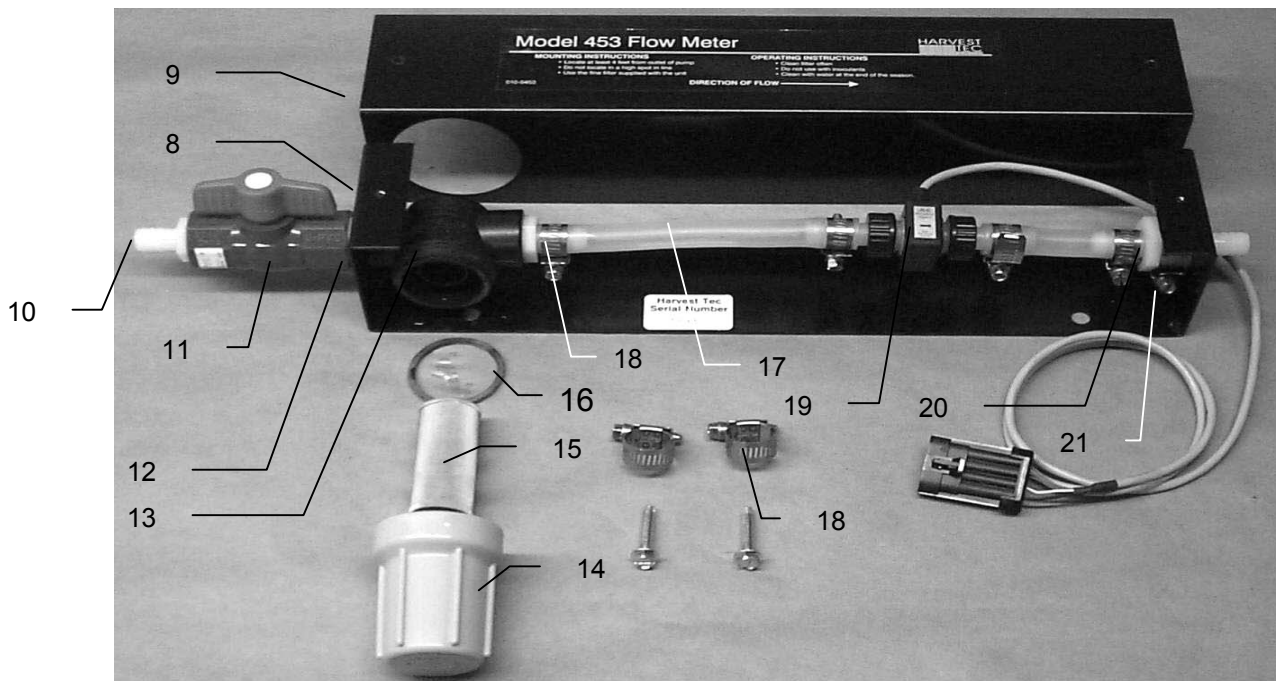
## TROUBLE SHOOTING:

<b>Problem:</b>	<b>Possible Cause:</b>	<b>Solution:</b>
1. Meter reading is inaccurate	1. Plugged filter on meter	1. Clean
	2. Meter is not in low spot, air bubbles are forming in meter.	2. Move meter to low spot in line.
	3. Screen is plugged	3. Back flush with water, do not use air.
	4. Meter is not receiving a full 12 volts.	4. Check with volt meter for under voltage problems.
2. Display shows dull background with no numbers	1. Positive and negative wires are reversed.	1. Have new display put into cab control box.

# MODEL 453 FLOW METER



<u>Ref</u>	<u>Description</u>	<u>Part#</u>	<u>Qty</u>	<u>Ref</u>	<u>Description</u>	<u>Part#</u>	<u>Qty</u>
1	Cub 5 meter	006-2023	1	12	Nipple fitting	003-M1212	1
2	15 amp rocker switch	006-2198	1	13	Filter bowl assembly	002-4315	1
3	Flow meter box base	001-2014A	1	14	Filter bowl only	002-4315F	1
4	Flow meter box cover	001-2014B	1	15	Screen – 200 mesh	002-4315E	1
5	Power lead with fuse	006-4723	1	16	Gasket	002-4315D	1
6	8' lead to box	006-4726C	1	17	3/8" Hose	002-9003	1ft
7	16' jumper cable	006-4726B	1	18	Hose clamp	003-9003	4
8	Flow sensor holder	001-2013A	1	19	Flow meter	006-4726A	1
9	Flow sensor cover	001-2013B	1	20	Straight fitting	003-A1212F	1
10	Straight fitting	003-A1212	3	21	Hose clamp	003-9004	1
11	Ball valve	002-2212	1				



**\*Purchase common hardware locally**

## **WARRANTY AND LIABILITY AGREEMENT**

Harvest Tec, Inc. will repair or replace components that are found to be defective within 12 months from the date of manufacture. Under no circumstances does this warranty cover any components which in the opinion of Harvest Tec, Inc. have been subjected to negligent use, misuse, alteration, accident, or if repairs have been made with parts other than those manufactured and obtainable from Harvest Tec, Inc.

Our obligation under this warranty is limited to repairing or replacing free of charge to the original purchaser any part that in our judgment shows evidence of defective or improper workmanship, provided the part is returned to Harvest Tec, Inc. within 30 days of the failure. Parts must be returned through the selling dealer and distributor, transportation charges prepaid.

This warranty shall not be interpreted to render Harvest Tec, Inc. liable for injury or damages of any kind, direct, consequential, or contingent, to persons or property. Furthermore, this warranty does not extend to loss of crop, losses caused by delays or any expense prospective profits or for any other reason. Harvest Tec, Inc. shall not be liable for any recovery greater in amount than the cost or repair of defects in workmanship.

There are no warranties, either expressed or implied, of merchantability or fitness for particular purpose intended or fitness for any other reason.

This warranty cannot guarantee that existing conditions beyond the control of Harvest Tec, Inc. will not affect our ability to obtain materials or manufacture necessary replacement parts.

Harvest Tec, Inc. reserves the right to make design changes, improve design, or change specifications, at any time without any contingent obligation to purchasers of machines and parts previously sold.

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