First time and annual start up

After familiarizing yourself with the model 457 control, fill the tank with 5 gallons of water. Turn on the power to the pump by pushing the toggle switch up. You might hear the buzzing of the motor. Turn the dial on the control box until the pressure gauge starts to climb. By turning the dial clockwise the pressure will go up. By turning the dial counter clockwise the pressure will decrease. With the applicator spraying at about 30 PSI, look for leaks at all the hose connections and fittings. When you are comfortable with the operation of the controls you can set the applicator to apply the amount of chemical you would like it to put on.

Field operation

Calibration

There are three things that you need to know when calibrating your applicator. First you need know how many tons per hour you bale. Second you need to know the rate, or how many pounds of product to apply for a given ton per hour. Finally you need to know what tips to use and at what pressure to set the gauge.

Determining your tons per hour

1. Time 3 bales and average the time it takes to make a bale.
2. Estimate the weight of the bale.
3. Use the Bale Rate Chart below to determine the tons you are harvesting per hour.

Example: You are baling 1000 pound bales, with 2 minutes of time per bale. Looking at the chart below your tons per hour is 14.

Large Square Bale Rate Chart (tons per hour)

Weight per bale

Average time to make a bale	600	800	1000	1200	1400	1600	1800	2000
1.0 MN	18	24	30	36	42	48	54	60
1.5 MN	12	16	20	24	28	32	36	40
2.0 MN	9	12	14	18	21	24	27	30
2.5 MN	7	10	12	14	17	19	22	25
3.0 MN	6	8	10	12	14	16	18	20
4.0 MN	5	6	8	9	10	12	14	16
5.0 MN	4	5	6	7	8	9	11	13
6.0 MN	3	4	5	6	7	8	9	10
8.0 MN	3	3	4	5	5	6	7	8
10.0 MN	2	3	3	4	4	5	6	7

Determine the Rate of Chemical

The number of pounds of chemical required to be applied to a given ton of hay, depends on the moisture and the type of chemical used. The moisture of the hay is important in determining how much chemical to use. By knowing the moisture, you can make sure you are treating the hay correctly. Under applying will save money but spoilage most likely occurs. Over applying will waste money however, the hay will be saved. Some chemicals require more or less to treat the same amount of hay. To find the exact number of pounds required, for a given hay moisture, refer to the label on the drum or contact the manufacture. Harvest Tec applicators come with a set of low, medium, and high tips. If your chemical requires rates other than what these tips deliver you will need to purchase them through your dealer.

Selecting Tips and Setting Pressure

Once you have determined your tons per hour and the amount of chemical needed for the moisture you are applying at, you can select your tips and determine your gauge settings.

1. Multiply the tons per hour by the amount of chemical required for the moisture you are applying at. This sum will give you the application rate.
2. Select the proper set of tips from the application rate chart and install them.
3. For the tips you have selected, you will need to keep the gauge at the recommended PSI to achieve the proper application rate.
4. Set the pressure by adjusting the dial on the control box and by reading the pressure of the gauge to match the desired rates. The numbers on the dial are for reference only. Rate is determined by watching the pressure gauge.

Example: You are baling at 12 tons per hour with your large square baler. The moisture that you are baling at requires you to apply 6 pounds per ton. Multiply the 12 tons x 6lbs = 72 lbs per hour. Using the chart on page 28 you will notice the orange set of tips at 20 PSI will give you that output.

General calibration charts

Pounds per hour with two nozzles

		Comes w/ applicator kit			
	YELLOW SET 800067PT	ORANGE SET TT11001VP	GREEN SET TT10015VP	BLUE SET TT11003VP	BROWN SET TT11005VP
PSI					
15	42	64	95	196	323
20	49	74	111	222	376
25	53	80	122	249	413
30	60	90	138	275	461
35	65	98	148	296	
40	70	106	159	317	
45	74	111	170	336	
50	78	117	180	354	
55	81	122	188	370	
60	85	127	196	386	

Gallons per hour with two nozzles

		Comes w/ applicator kit			
	YELLOW SET 800067PT	ORANGE SET TT11001VP	GREEN SET TT10015VP	BLUE SET TT11003VP	BROWN SET TT11005VP
PSI					
15	5.2	7.3	10.7	22.0	31.9
20	5.6	8.4	12.7	24.1	42.2
25	6.3	9.5	14.1	28.3	47.3
30	7.0	10.3	15.5	31.0	52.2
35	7.5	11.3	16.6	33.5	
40	8.0	12.2	17.8	36.0	
45	8.4	12.6	19.2	38.3	
50	8.9	13.2	20.6	40.7	
55	9.3	13.8	21.3	42.5	
60	9.7	14.4	22.0	44.4	

***ONLY THE OPERATOR CAN DETERMINE HOW MUCH PRODUCT IS APPLIED.**