

Installation Manual

Model 4684553

***Electronic Preservative Applicator
For Marcrest High-Capacity SS Baler***



HarvestTec®

EST. 1976

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Introduction

Read this manual carefully to ensure correct steps are done to attach the applicator to the baler. This applicator is designed to apply Harvest Tec buffered propionic acid. Use of alternative products may cause complications and voids warranty. Complications may include inaccurate pressure readings and damage to system components.

Electronic applicators can be installed on many square balers, with the proper model number and installation kit. Before installing the unit on the baler, make sure you have the proper installation kit (see the chart below). Contact your local authorized dealer for specifications if you are unsure about your installation kit.

Left and Right sides are determined by facing in the direction of forward travel.

Model Kit Reference – for High-Capacity / Double Small Square Balers

Electronic Applicator Systems

Baler Make	Baler Model	Model Number	Installation Kit	Tank Size
Grady TwinPak	SB2XR	467	4552	55 Gallon
Kubota	SSB2014, SSB2012	432	4554	55 Gallon
Marcrest	210 Baler	468	4553	75 Gallon
Massey Ferguson	1436 Double Baler	470	4556	75 Gallon

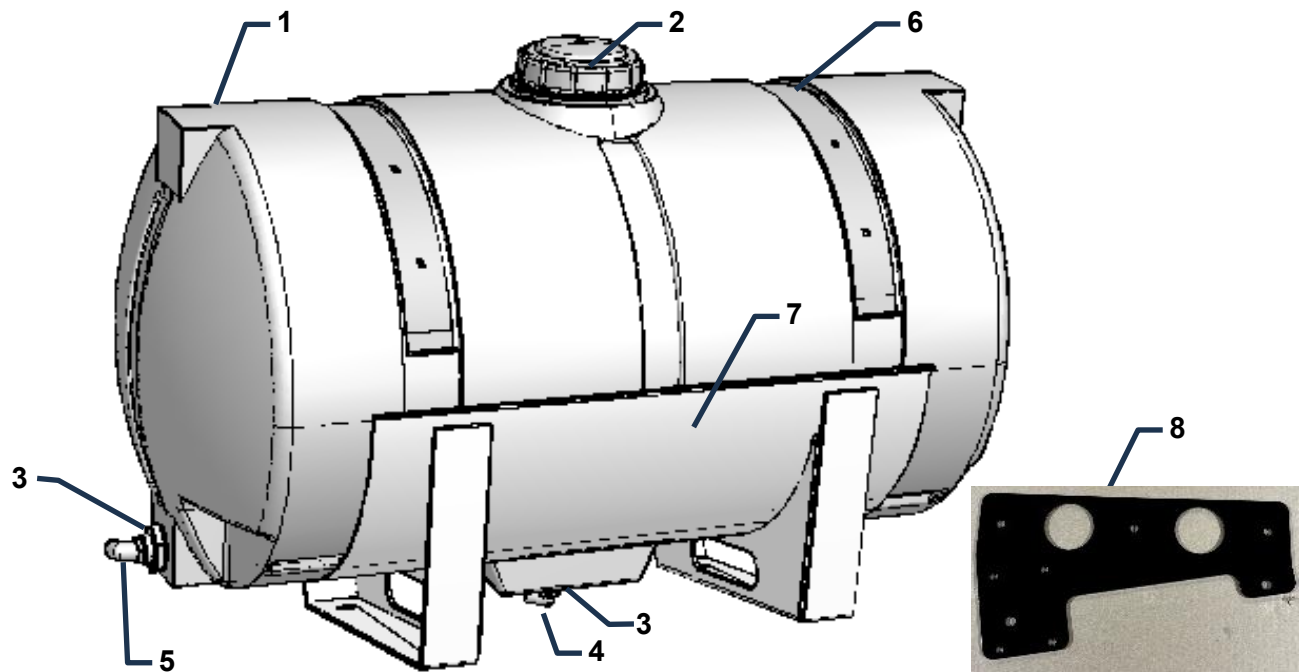
Tools Needed

Standard wrench and socket set
Hose cutter
Metal drilling and cutting tools
Straight edge

Standard screwdriver set
Crescent wrench
Tape measure

Side cutter
Hammer
Center punch

Parts Breakdown - Model 768, 468 Base Kits Tank Saddle Kit 030-0468-TK



<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	Tank - 75 gal.	005-9207	1	6	Tank Strap	001-4402M	2
2	Tank Lid	005-9022C	1	7	Tank Saddle	001-4445M	1
NP	Lid Breather (replacement)	005-9022B5	1				
NP	Lid Gasket (replacement)	005-9022CG	1	8	Pump Mount Plate	001-4445MP	1
3	Tank Fitting (replacement)	005-9100	2				
4	Elbow 3/4MPTx1/2HB (replacement)	003-EL3412	1		Replacement Tank (Inc. bottom tank fitting only)	005-9207	
5	Elbow /3/4MPTx3/4HB (replacement)	003-EL3434	1				

Complete Tank Saddle Kit 030-0470-TK

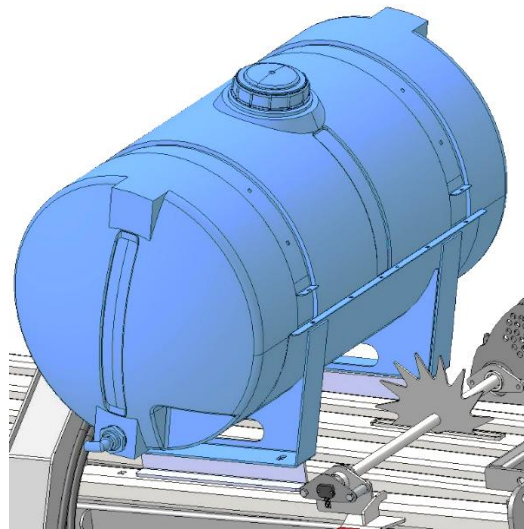
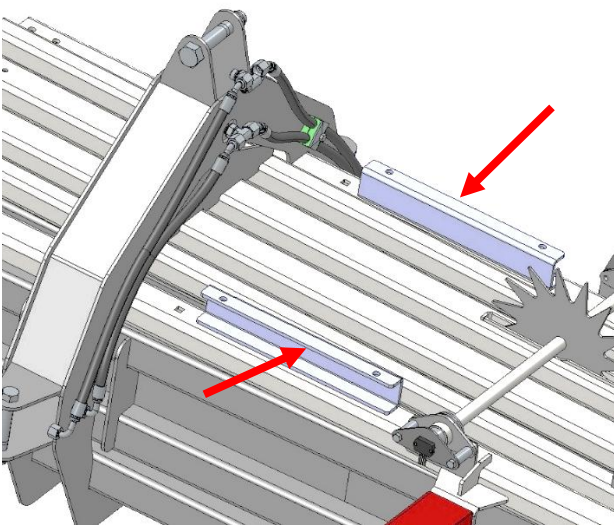
Tank Saddle Kit (030-0468-TK)

Installation – Tank Mounting

Tank Saddle Kit comes with the tank secured to the tank saddle. Recommended to use an overhead lift or multiple persons to safely place and secure the tank saddle kit onto the baler.

Locate the factory C-channel rails (see arrows) on the top of the chamber, to mount Tank Saddle (001-4445M). Use 4x 1/2-13 x 1-1/2" hex bolt, flat washer, lock washer, and 1/2-13 nut to attach the tank saddle to the baler frame. Orient side tank fitting towards the RH side of the baler. Center the saddle side to side and tighten hardware.

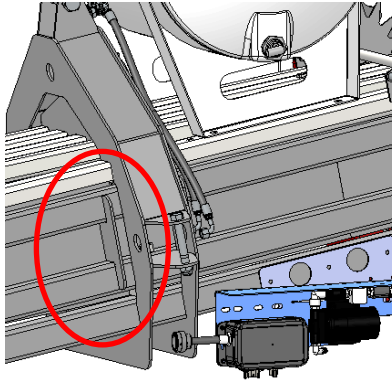
Install the 1/2" elbow fitting (003-EL3412) into the bottom tank fitting on the tank and tighten, orientating towards right-hand side of baler. Install the 3/4" elbow (003-EL3434) into the side tank fitting on the tank, orientating towards the rear of the baler.



Drain Fill Kit and Hoses

Installation - Drain Fill Kit (030-0493DFK)

Locate Parts Bag 1 and secure the drain/fill bracket and valve assembly to the side of the baler in an area where it will be accessible and not interfere with the operation of the baler (circled). Route the 3/4" hose from the elbow on the side of the tank to the fitting at the top of the drain/fill assembly, secure with hose clamps on each end. Secure hoses so they will not interfere with moving parts, avoiding points where the hose may pinch or rub.

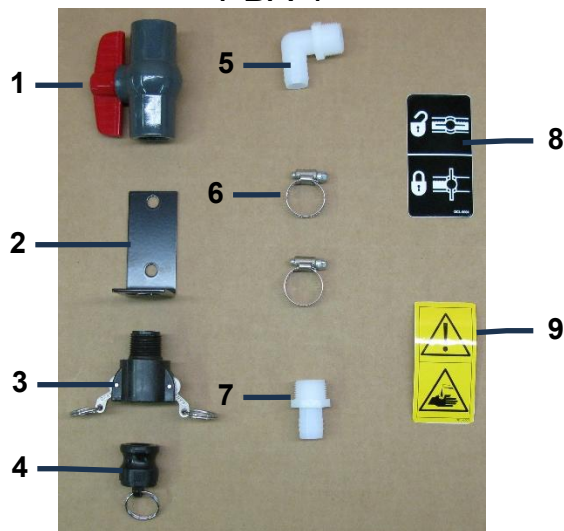


Tank Plumbing – Tank to Pump

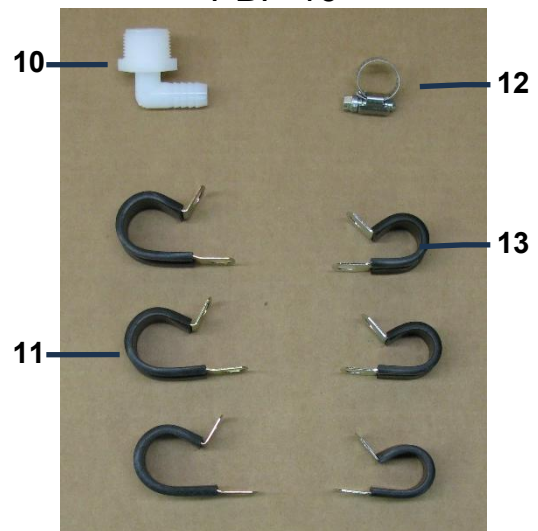
The 1/2" hose will attach from the elbow at the bottom of the tank to the inlet side of the ball valve on the pump plate/filter assembly and be secured with hose clamps on each end. Route and secure hose so it will not interfere with moving parts, avoiding points where the hose may pinch or rub.

Drain Fill Line, Parts Bag Packages and Hosing

PBA-1



PBP-16



Ref	Description	Part #	Qty
1	3/4" Ball Valve	002-2200	1
2	Valve Holder	001-6702H	1
3	Female Coupler	002-2204A	1
4	Male Shut-Off Plug	002-2205G	1
5	3/4" x 3/4" Elbow	003-EL3434	1
6	#10 Hose Clamp	003-9004	2
7	3/4" x 3/4" Straight Fitting	003-A3434	1

Complete Drain Fill Kit
(Includes 3/4" Hose Not Pictured)

030-0493DFK

Ref	Description	Part #	Qty
8	Valve Decal	DCL-8004	1
9	Hazard Decal	DCL-8001	1
10	3/4" x 1/2" Elbow	003-EL3412	1
11	3/4" Jiffy Clip	008-9010	3
12	#6 Hose Clamp	003-9003	1
13	Small Jiffy Clip	008-9009	3

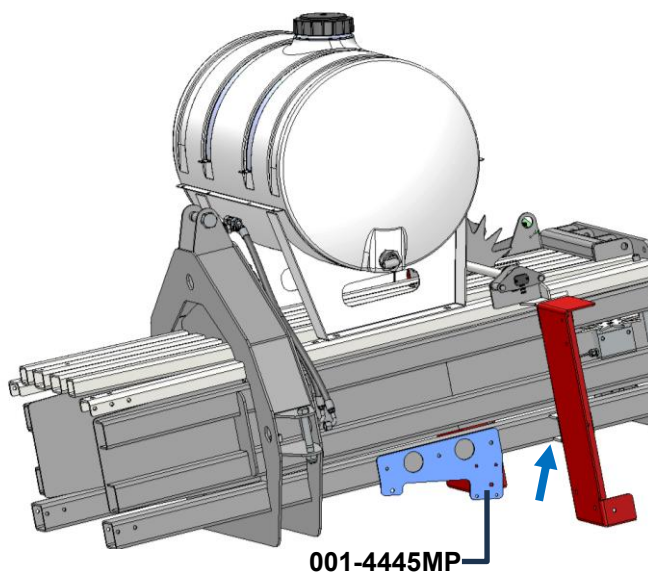
Hoses

NP	1/2" EVA Tubing (Pump to Tips)	002-9001	20 ft
NP	3/4" EVA Tubing (Drain/Fill Line)	002-9002	6 ft

Pump Plate Assembly (PMP-7636P) **Using Pump Plate Mount (001-4445MP)**

Installation

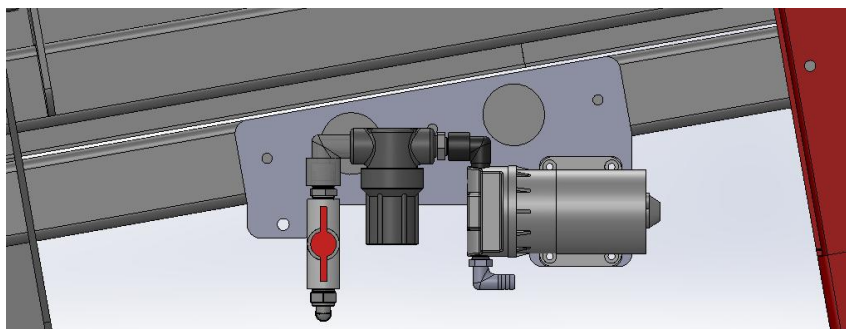
Pump Plate Mount Bracket (001-4445MP) is mounted to the RH side of the bale chamber. Locate the bottom RH tube on the side of the bale chamber. Align the top of the pump plate adapter bracket flush with the top edge of the bale chamber tube. Space the front edge of the bracket 6" rearward of the shield support bracket (see arrow). Locate the three 3/8" holes in the pump plate adapter bracket and mark the center of each hole. Use a 9/32" drill bit to drill 3 holes into the tube. Use the 5/16-18 x 1-1/4" thread cutting bolts to tap each hole. Remove the bolts, align the pump plate adapter bracket, and secure the bracket to the tube with the 3 bolts.



Pump Assembly – Electronic Applicator

Installation

Locate the four 5/16" holes in the bottom RH corner of the pump plate mount bracket (001-4445MP). Secure the electronic pump assembly to bracket, using supplied 1/4" hex nuts, compressing the rubber grommets.



Pressure Gauge

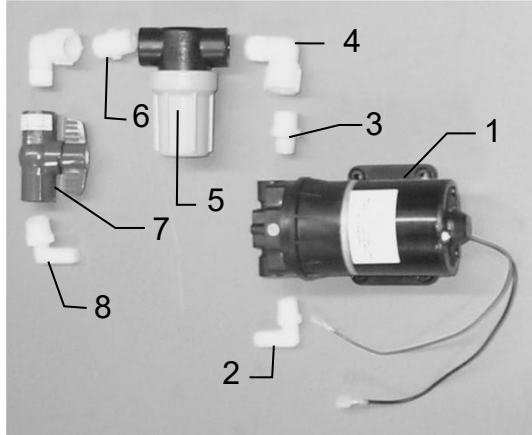
Mounting - Gauge Holder (001-4717)

Gauge placement is at the discretion of the installer. Mount the gauge assembly to the top front shield of the baler in a suitable location to be easily seen by the operator in the tractor. Choose a location that will not inhibit opening the front shield and allow adequate hosing so lines are not stretched when shield is lifted.

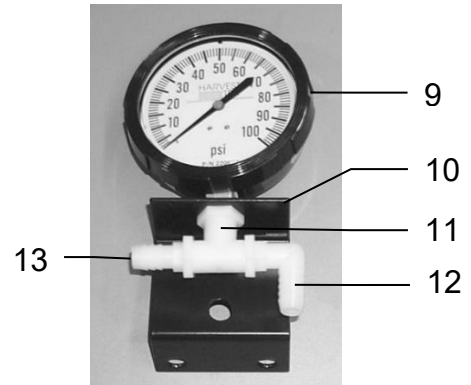
The discharge hose from the pump assembly must be routed to the gauge before connecting to the hose manifold assembly of the spray shield assembly.



Filter Bowl, Pump and Gauge Breakdown

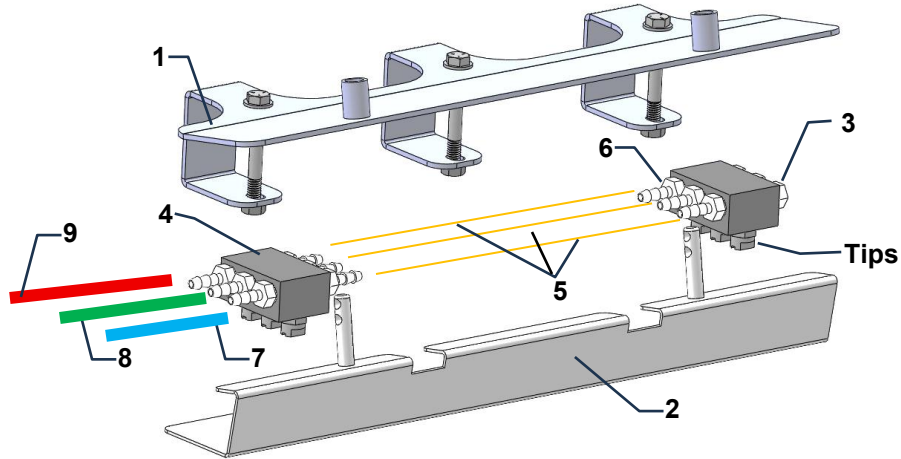


<u>Ref</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	Pump	007-4120S	1
2	Elbow	003-EL3812	1
3	Reducing Nipple	003-M1238	1
4	Street Elbow	003-SE12	2
5	Filter Bowl Asm.	002-4315-80	1
NP	Replace Screen	002-4315B	1
NP	Replace Gasket	002-4315D	1
6	Nipple	003-M1212	1
7	Ball Valve	002-2212	1
8	Elbow	003-EL1212	1



<u>Ref</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
9	Gauge	002-2208Z	1
10	Gauge Holder	0001-4717	1
11	Tee	004-TT14	1
12	Elbow Fitting	003-EL1412	1
13	Straight Fitting	003-A1412	1

Spray Shield Assembly- Install Kit 4553



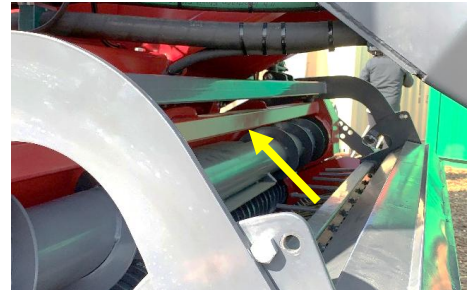
Ref	Description	Part #	Qty	Ref	Description	Part #	Qty
1	Shield Holder	001-4445M	1	NP	Tip* -Low (White Line)	004-T8001-PT	2
NP	Lynch Pin	008-4576	2	NP	Tip* -Med (Green Line)	004-T8002-PT	2
2	Spray Shield	001-4435NSX	1	NP	Tip* -High (Blue Line)	004-T8004-PT	2
3	1/4" Hex Plug	003-F14	3	*Tip color subject to change			
4	Spray Manifold	001-4435NSB	2	7	1/4" Hose	002-9016	6ft
5	1/4" EVA Tubing	002-9006	3 ft	8	1/4" Hose- Green	002-9016G	6 ft
6	1/4MPT x 1/4HB	003-A1414	9	9	1/4" Hose- Blue	002-9016B	6 ft
NP	Hose Clamp	003-9002	9	NP	Hose Manifold Asm.	030-4720	

Complete Assembly

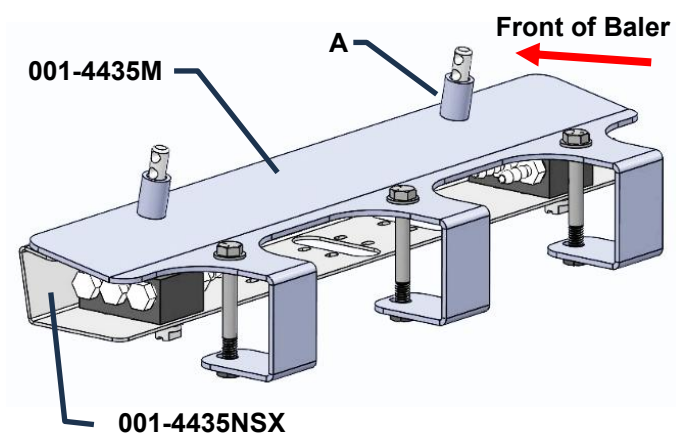
030-4553

Spray Shield Mounting – Automatic or Electronic

Locate the tube connecting the two sides of the roller wind guard (see arrow) on balers pickup head. Hook Spray Shield Holder (001-4435M) around the back side of the tube and center on the tube. Secure to baler using supplied 3x 5/16-18 x 3" bolts and flat washer from the top side, and 5/16-18 flange nuts on the bottom side. Note, flange with pipes welded on top (**A**) should be towards the front of the baler.



Attach Spray Shield Assembly (001-4435NSX) by inserting the pins through the tubes on the holder and secure in place using the two lynch pins (008-4576). Route the spray shield hosing towards the RH side of the baler, avoiding interference with moving parts, and secure with cable ties so the hoses will not be pinched or rubbed.

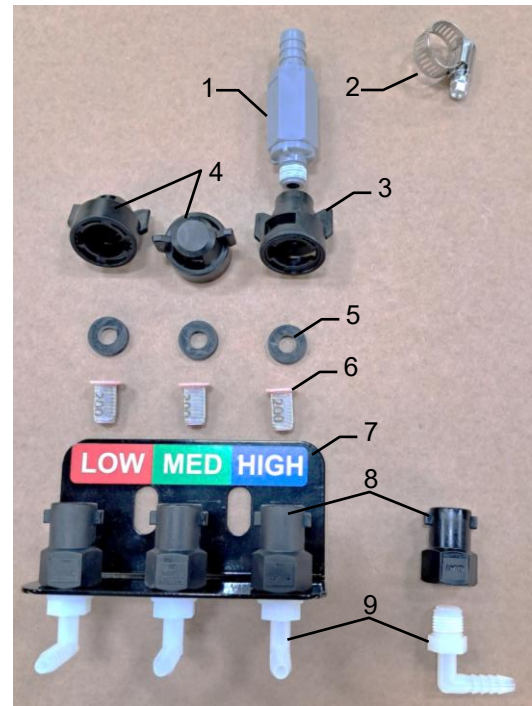


Hose Manifold Assembly (030-4720)

Mounting- Mount the hose manifold on the front of the baler in an accessible location on the RH side. Make sure the bracket placement will not interfere with any baler operations. Connect spray shield lines to appropriate hose barb elbow, using hose clamps supplied with the spray shield assembly:

White / Clear line connects to 'LOW'
 Green Striped line connects to 'MED'
 Blue Striped line connects to 'HIGH'

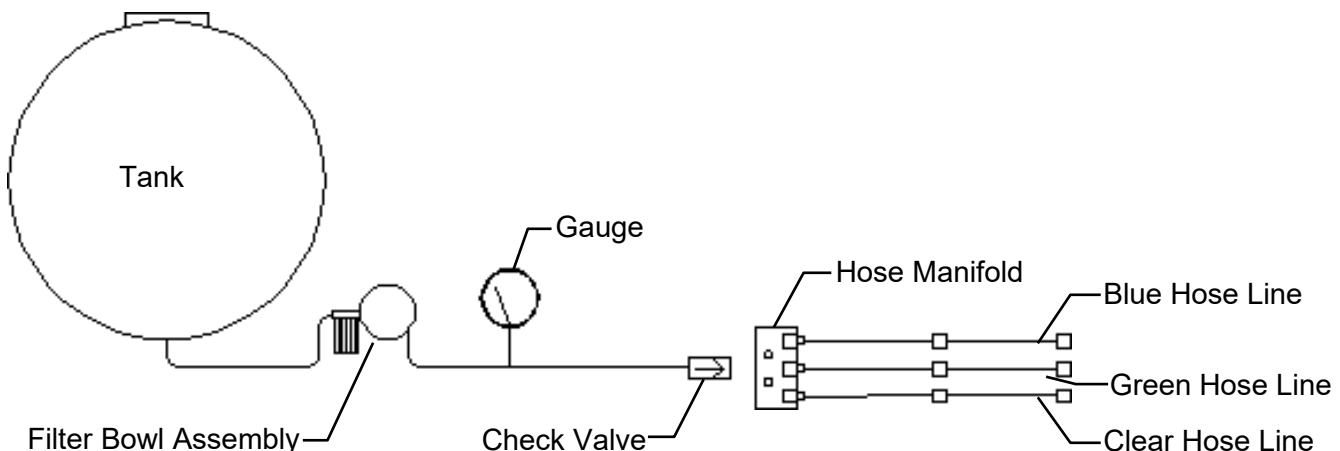
Ref	Description	Part#	Qty
1	Check Valve	002-4564X	1
2	Hose Clamp	003-9003	1
3	Female Quick Connect	004-1207H	1
4	Shutoff Cap	004-1207F	2
5	Washer	004-1207W	3
6	Tip Strainer	004-1203-200	3
7	Hose Manifold Bracket	001-4720	1
8	Quick Connect	004-1207G	3
9	Elbow	003-EL1414	3
Complete Assembly		030-4720	



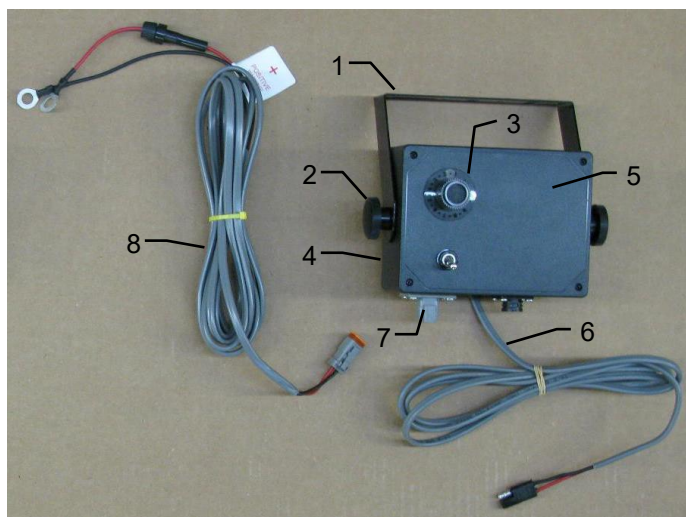
Installation of Plumbing

Intake- Screw the 003-EL3412 (3/4" to 1/2" elbow) into the bottom of the tank. Second, screw the 002-2212 (1/2" ball valve) with elbow into the filter assembly. Lastly, route the 002-9001(1/2" hose) from bottom of the tank to ball valve. Secure with hose clamps.

Outlet- Run 1/2" hose from the pump outlet to the gauge assembly. The gauge is assembled with two straight fittings; an elbow is supplied in the parts bag to be used if necessary. From the gauge the hose will need to be run to the hose manifold. Cut the hose to length and attach the check valve (002-4564X) and female coupler (004-1207H) from the hose manifold assembly parts bag. Use the supplied caps (004-1207F) to cover the remaining disconnects (004-1207G) when not connected to the pump supply line.



Model 457 Control Box



<u>Ref</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	U-Bracket Mount	001-2012E	1
2	Control Box Mount Knob	008-0923	2
3	Speed Dial Knob	006-2022A	1
<u>For Controls After Serial # 4550:</u>			
4	Control Box Enclosure	006-2015A	1
5	Control Box Cover	006-2015B	1
6	Pump Lead	006-4583	1
7	Box Plug	006-4580M	1
8	Power Lead	006-4581M	1
NP	Baler Pump Harness (26')	006-4574	1
NP	Baler Pump Harness (35')	006-4575	

Complete Replacement Control Box 030-0457

Installation of Control Box (030-0457)

Locate parts bag 13 for hardware to mount control box in a suitable location within the tractor cab.

Route the wire to the starter solenoid on all 12v tractors. Connect the green lead marked + to the hot terminal on the starter. Connect the black lead to a good ground. **Do not reverse the leads.** Be sure to use a voltmeter to verify that you do have 12 volts running to the box.

Note: For tractors with 24v starters, connect the power leads to the tractor's right hand battery. Do not connect the leads to the starter. Connect the lead marked + to the positive battery terminal and the lead marked- to the negative on the battery. Wiring connections to the battery normally results in corrosion; terminal coating is recommended.

Caution: Do not run a pump or use an electronic control box directly off a battery charger. For stationary use, the applicator can be connected to a new battery and the battery connected to a charger

Optional Crop Eye Forage Indicators

Installation – Marcrest Balers

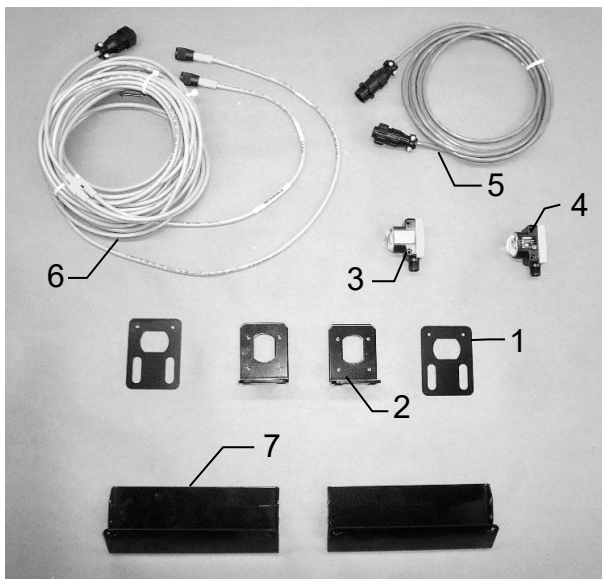


Sensor Placement: Crop eye sensors must be mounted directly across from each other on the baler pickup. Locate the factory EOR/Hay Indicator mounting holes on each side of the baler pickup assembly. Attach the red Receiver Eye sensor (006-5105R) on the RH side of baler with supplied plastic retaining nut. No additional mounting brackets are used for mounting. Do not over-tighten retaining nut to eye sensor. Repeat process on the LF side of the pickup for mounting the bracket and green Emitter Eye sensor (006-5105G).

Harness Routing (Electronic Systems): Route the green leg of the EOR harness to the green sensor on the LH side of the pickup, and route the red leg of the EOR harness to the red sensor on the RH side of the pickup. Follow existing wires/hoses where possible, securing with cable ties. Avoid pinch points and allow for complete range of motion of pickup head without stretching the harness.

From the front LH corner of the baler, route the opposite end of the wire harness (001-7502H and Extension Wire 006-7500A) towards the hitch of the baler to connect to the port on the bottom of control box in the tractor. Secure excess wiring with cable ties.

Harvest Tec 474A Parts Breakdown



<u>Ref#</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	Trash Plate	001-5105S	2
2	Hay Indicator Bracket	001-5105E	2
3	Sensor -Receiver (Red)	006-7502R	1
4	Sensor -Emitter (Green)	006-7502E	1
5	Extension Wire- Amp Plug	006-7500A	1
6	Hay Indicator Harness -Amp Plug	006-7502H	1
7	Hay Diverter	001-5105F	2
	(used with NH and Case IH SBX only)		
NP	Hay Indicator Retaining Nut	006-7502N	2
	(Replacement, included with crop eye)		

Harvest Tec LLC. Warranty and Liability Agreement

Harvest Tec, LLC. 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, LLC. 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, LLC.

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, LLC. within 30 days of the failure. If it is determined that a non-Harvest Tec branded hay preservative has been used inside the Harvest Tec applicator system where the failure occurred, then Harvest Tec reserves the right to deny the warranty request at their discretion. Parts must be returned through the selling dealer and distributor, transportation charges prepaid.

This warranty shall not be interpreted to render Harvest Tec, LLC. 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, LLC. 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, LLC. will not affect our ability to obtain materials or manufacture necessary replacement parts.

Harvest Tec, LLC. 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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