

Installation Manual

Model 4324554C

***Electronic Preservative Applicator
For Kubota High-Capacity Double Balers***



HarvestTec[®]

EST. 1976

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Introduction

Read this manual carefully to ensure correct steps are followed 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 readings from the flowmeter and damage to system components.

Harvest Tec applicators can be installed on many baler models when using the proper tank model number and installation kit. Before installing on your baler, make sure you have the proper model & installation kit (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	467	4553	75 Gallon
Massey Ferguson	1436 Double Baler	470	4556	75 Gallon

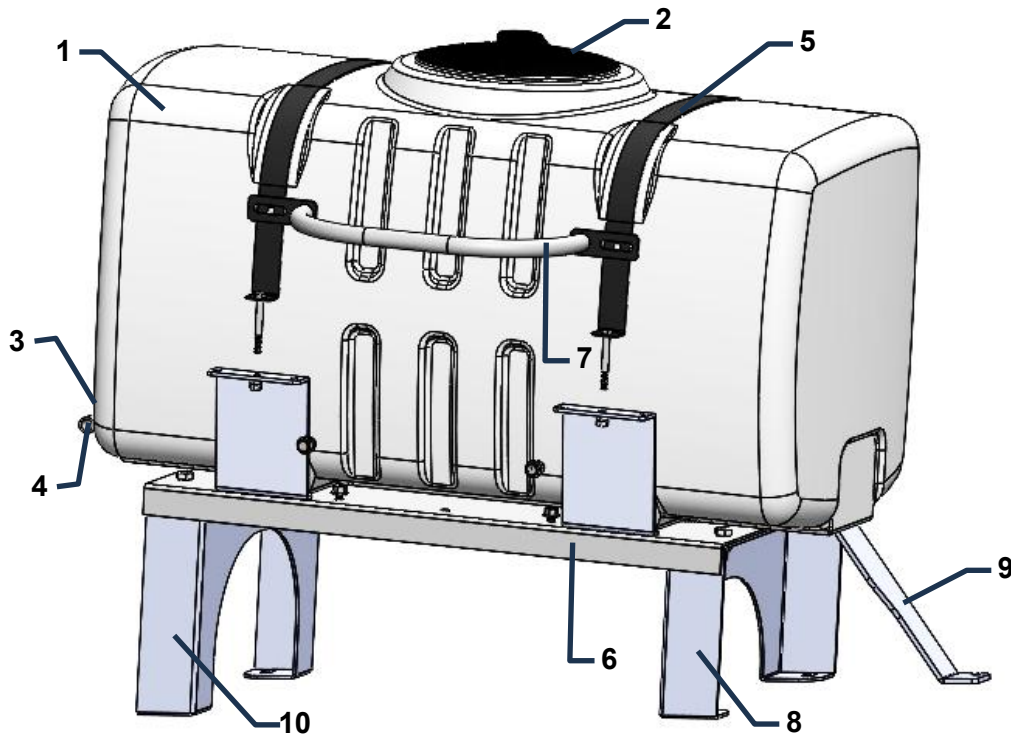
Tools Needed

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 732, 432 Base Kits Tank Saddle Kit 030-0432-TK and Tank Legs



<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 Asm. - 55 gal.	030-9203SQ	1	7	Handrail	001-6707HRS	2
2	Tank Lid	005-9022C	1	8	Tank Leg -Front	001-4703XGL	1
NP	Lid Breather (replacement)	005-9022B5	1	9	Tank Leg Strap	001-4703XGS	1
NP	Lid Gasket (replacement)	005-9022CG	1	10	Tank Leg -Rear	001-4703XGR	1
3	Tank Fitting (replacement)	005-9100	1				
4	Elbow 3/4MPTx1/2HB (replacement)	003-EL3412	1	NP	Pump Plate Mount (for auto system only)	001-4445DX	1
5	Tank Strap	001-4402C	2	NP	Pump Mount Asm. (for electronic system)	001-4647E	1
6	Tank Saddle	001-4703X	1				

Complete Replacement Tank 030-9203SQ
Tank Saddle Kit (parts 1-6) 030-0432-TK

Tank Saddle Kit – Kubota Double Balers

Installation – Tank Mounting

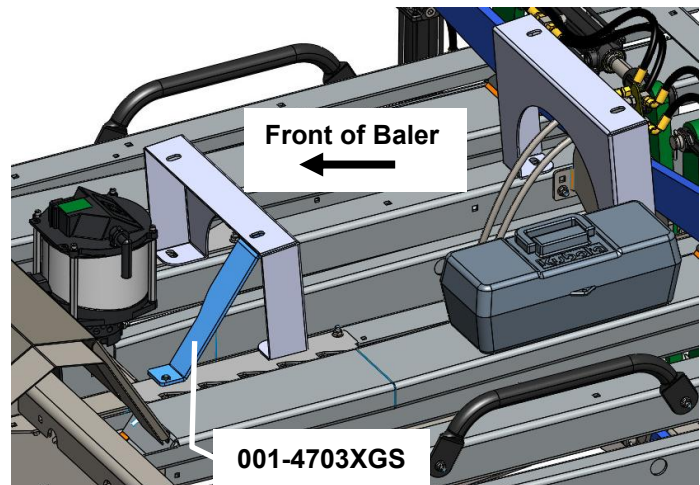
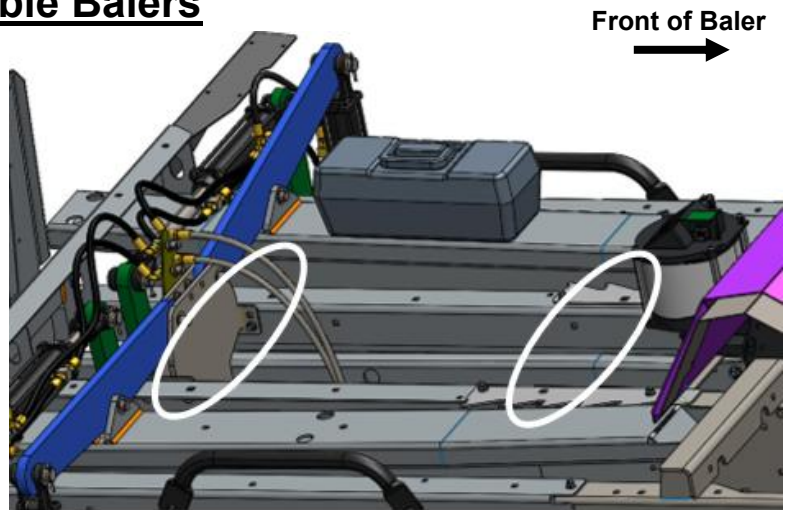
Locate factory mounting holes for the front and rear tank saddle legs, which are located on the inside rail of each bale chamber.

Install the Rear Tank Leg (001-4703XGR) at the rear set of factory mounting holes on the bale chamber using supplied 2x 1/2x1-1/2" carriage bolt, lock washer, and nuts; Leave hardware hand-tight.

Install the Front Tank Leg (001-4703XGL) at the forward set of factory mounting holes on the bale chamber using supplied 2x 1/2x1-1/2" carriage bolts, lock washers, and nuts; Leave hardware hand-tight.

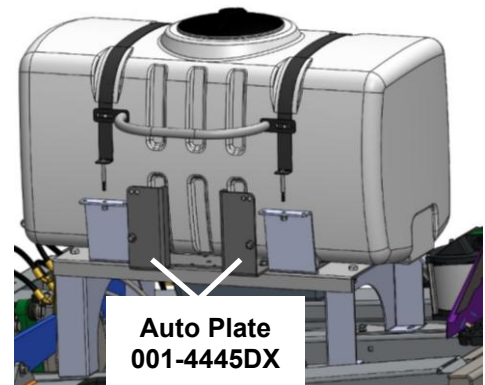
Attach Tank Leg Strap (001-4703XGS) to the baler using factory hardware; Leave hardware hand-tight. Be sure to place tab under the 001-4703XGL bracket, to support the front bracket stability.

Install the Tank Saddle Assembly (030-0432-TK) on top of the two tank legs with Pump Mounting Bracket (auto or electric) facing the RH side of the baler. The threaded studs on the bottom of the tank saddle go through the top of the tank legs. Center the tank saddle assembly and secure with supplied flat washers, lock washers, and nuts. Tighten all hardware.



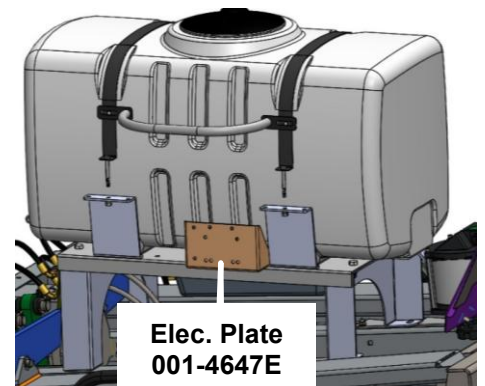
Pump Mounting Bracket – Auto Kits Only (001-4445DX)

Auto Pump Plate Mount Bracket (001-4445DX) comes pre-mounted onto the back side of the tank saddle. This bracket is used to support the pump plate assembly used with the automatic applicator system.



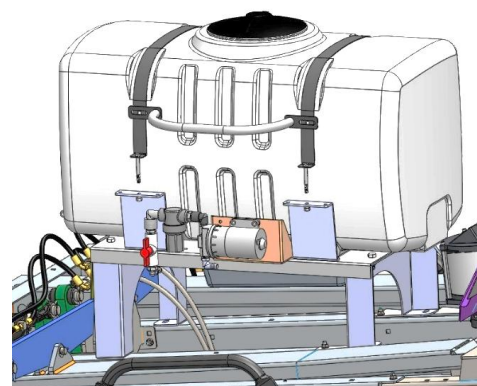
Pump Mounting Bracket – Electronic Kits Only (001-4647E)

Electronic Pump Mount Bracket (001-4647E) comes pre-mounted onto the back side of the tank saddle. This bracket is used to support the pump assembly used with the electronic applicator system.

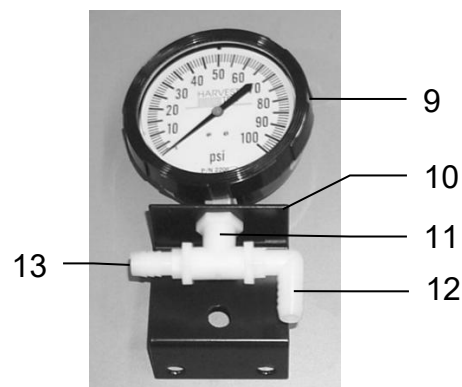
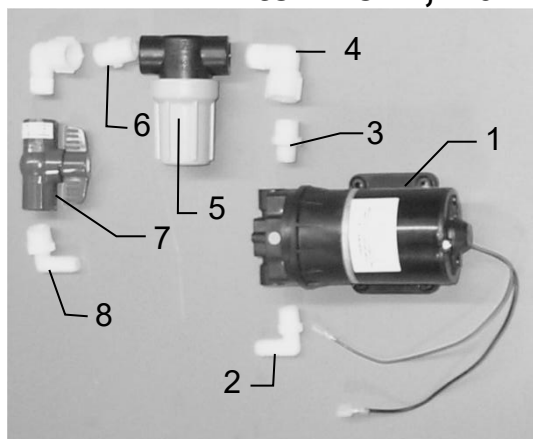


Pump Assembly – Electronic Applicator

Attach the Electronic Pump Assembly to Electronic Pump Bracket (001-4647E) by inserting the four 1/4" studs from the pump through the bracket, and reusing the 1/4" nuts from the pump on the backside of the bracket. Install 3/4" NPT x 1/2" HB elbow in bottom tank fitting, route 1/2" hose from bottom tank fitting to 1/2" Elbow fitting below ball valve. Secure hose with hose clamp on each end. Install 3/4" NPT x 3/4" HB Elbow into side tank fitting.



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

Pressure Gauge

Mounting - Gauge Holder (001-4717)

Mount the gauge assembly at the top right corner of the 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 of the shield. Route hoses, leading to and from the gauge assembly, near the pivot point of the front shield. Secure the two hoses so they will not be kinked or pinched when shields are opened.

The manifold assembly will be placed near the right-hand side of the pickup. Three hoses from the spray shield assembly attach to the manifold assembly. Hose coming from the gauge assembly will connect to the appropriate output port on the hose manifold assembly.



Drain Fill Kit and Hoses – Kubota Double Balers

Installation - Drain Fill Kit (030-0493DFK)

Install 3/4" Elbow Fitting (003-EL3434) into the side tank fitting. Tighten and aim towards the RH side of baler. Locate an area on the RH side of baler where the drain/fill bracket and valve assembly (from Parts Bag 1) can be mounted without the interfering with baler lights or functions. Bolt drain/fill bracket assembly to the back of the baler. Route the 3/4" hose from the elbow at the side of the tank to the fitting at the top of the drain/fill assembly, secure with hose clamps on each end.

Tank Plumbing – Tank to Pump

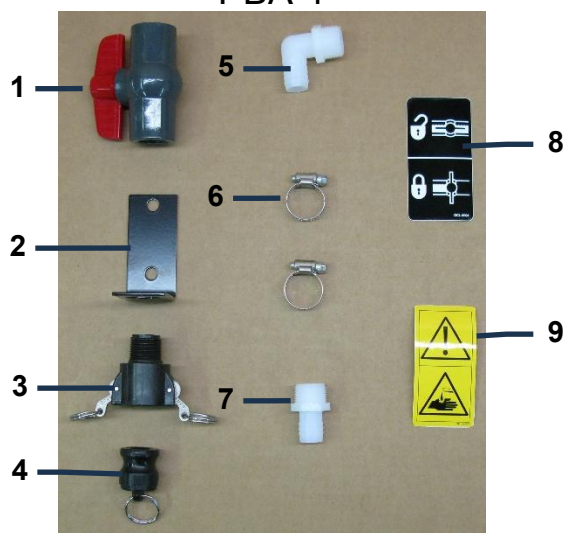
Install 3/4" Elbow Fitting (003-EL3412) into bottom tank fitting on tank. Tighten and aim towards front of baler. The 1/2" hose will attach from the elbow fitting at the bottom of the tank to the inlet side of the ball valve on the pump plate/filter assembly and be secured with hose clamps on each end.

Route hose so it will not interfere with moving parts, avoiding points where the hose may pinch or rub.

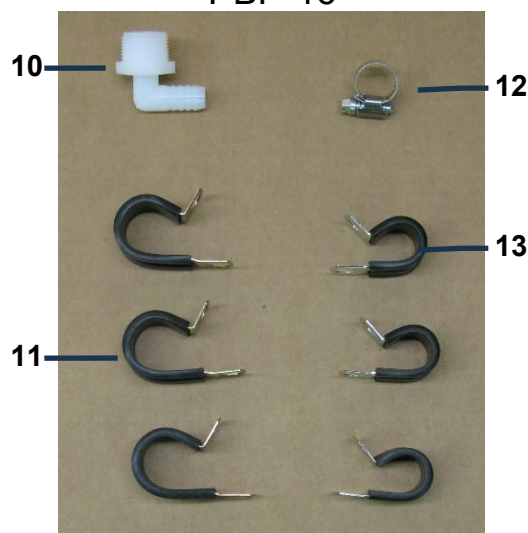


Drain Fill Line, Parts Bag Packages and Hosing

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

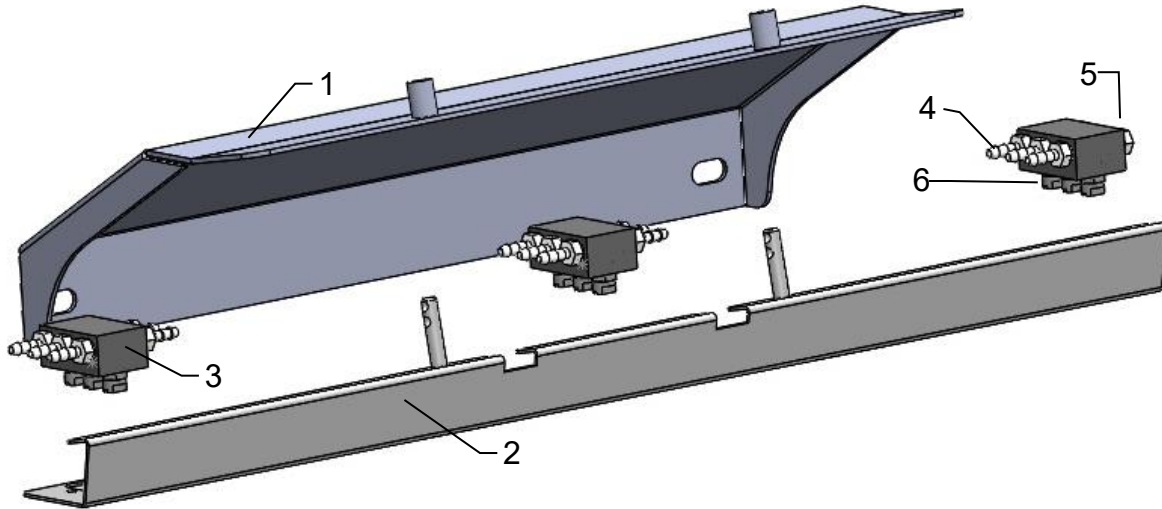
Complete Drain Fill Kit 030-0493DFK
(Includes 3/4" Hose Not Pictured)

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

Spray Shield - Installation Kit 4554



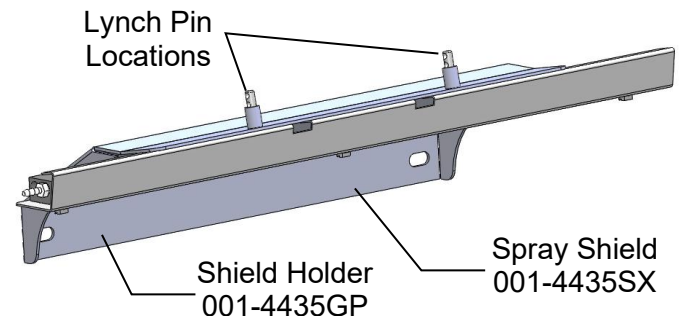
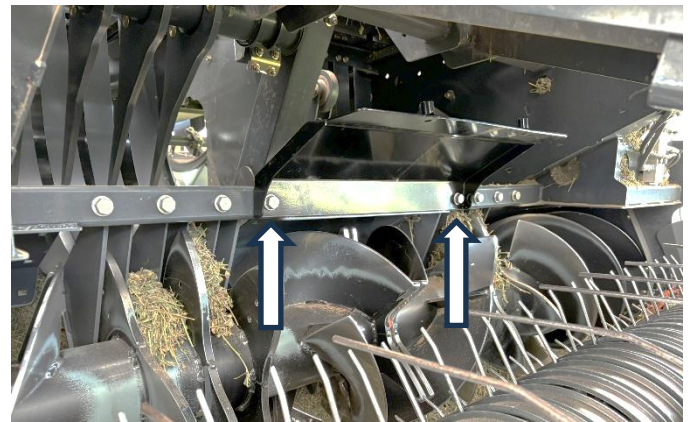
Ref	Description	Part #	Qty	Ref	Description	Part #	Qty
1	Shield Holder	001-4435GP	1	NP	Tip* -Low	004-T800067-SS	3
2	Spray Shield	001-4435GSX	1	6	Tip* -Medium	004-T80015-PT	3
NP	Lynch Pin	008-4576	2		Tip* -High	004-T8003-PT	3
3	Spray Manifold	001-4435NSB	3		*Tip color subject to change		
NP	1/4" EVA Tubing	002-9006	6.5ft	NP	Hose Manifold Asm.	030-7420	1
	1/4" Hose – White	002-9016	6ft				
	1/4" Hose – Green	002-9016G	6ft				
	1/4" Hose – Blue	002-9016B	6ft				
NP	Hose Clamp	003-9002	18				
4	1/4MPT x 1/4HB	003-A1414	15				
5	1/4" Hex Plug	003-F14	3				
Complete Spray Shield Asm.						030-4554	

Spray Shield Mounting – Installation Kit 030-4554

Remove the two center factory bolts in the front face of the channel above the auger. Place Spray Shield Holder (001-4435GP) at the front of the channel and install using the factory hardware and tighten in place.

Install the assembled Spray Shield (001-4435GSX) to the shield holder by inserting the pins up through the pipes on the holder and secure in place using the two supplied lynch pins. Hose should be routed towards the RH side of the pickup assembly and will attach to the Hose Manifold Assembly. Coil excess hose and leave for future adjustment/service of the spray shield.

Connect the braided solid white hose to the tips set closest to the shield holder (low tips); the Green striped hose to the center set of tips (med tips); and the Blue stripe hose to the tips set furthest from the shield holder (high tips); secure with hose clamps. Hoses connect to appropriate labeled locations on the Electronic Manifold Assembly.



Hose Manifold Assembly (030-4720)

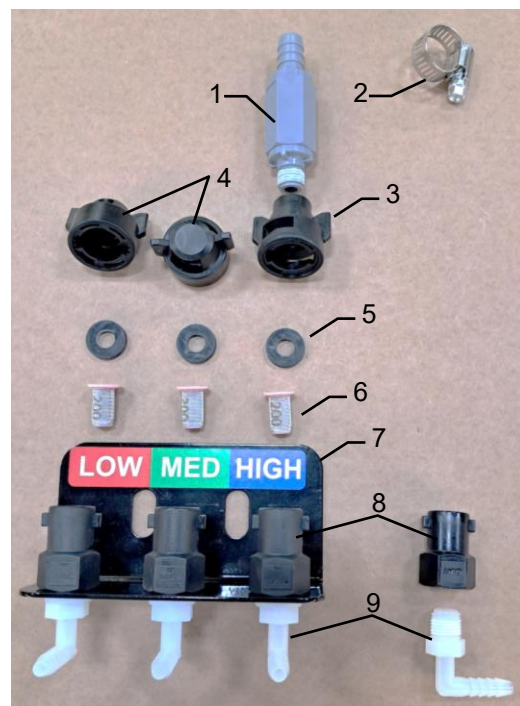
Mounting- Kubota Double Balers

Mount the hose manifold in an accessible location near the front right-hand side of the baler pickup. Make sure the bracket placement will not interfere with any baler operations.

Three hoses from the spray shield assembly attach to the manifold assembly. Hose coming from the gauge assembly will connect to the appropriate output port on the hose manifold assembly.

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'

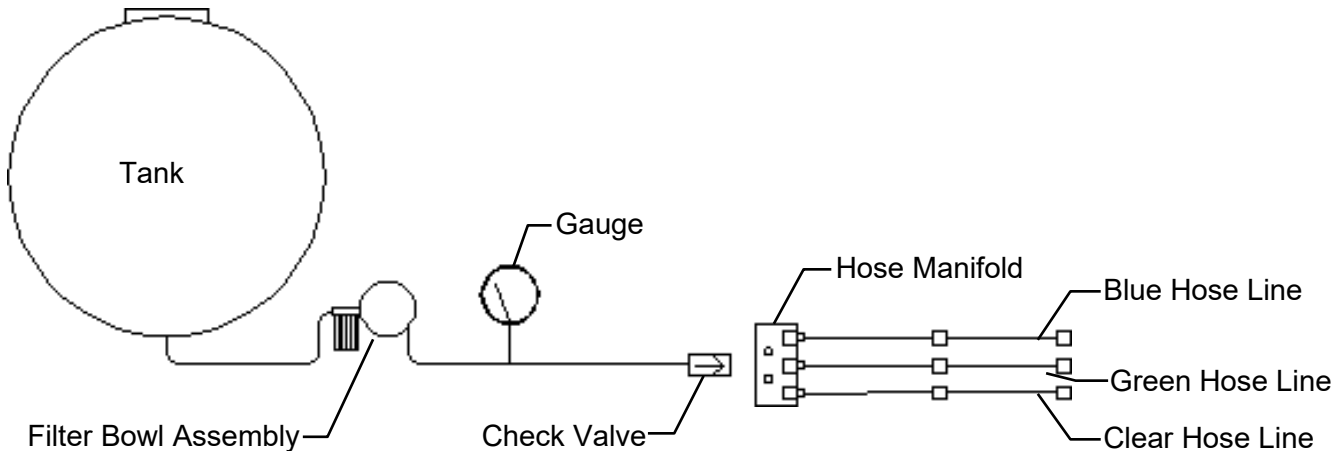


Ref	Description	Part#	Qty
1	Check Valve	002-4564X	1
2	Hose Clamp	003-9003	1
3	Female Quick Connect	004-1207H	1
4	Shutoff Cap	004-1207F	2
5	Washer	004-1207W	3
6	Tip Strainer	004-1203-200	3
7	Hose Manifold Bracket	001-4720	1
8	Quick Connect	004-1207G	3
9	Elbow	003-EL1414	3
Complete Assembly		030-4720	

Installation of Plumbing

Intake- Screw the 003-EL3412 (3/4" to 1/2" elbow) into the bottom of the tank. Next, 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 ran to the hose manifold. Cut the hose to length and attach the check valve (002-4564X) and female coupler (004-1207H) of 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.

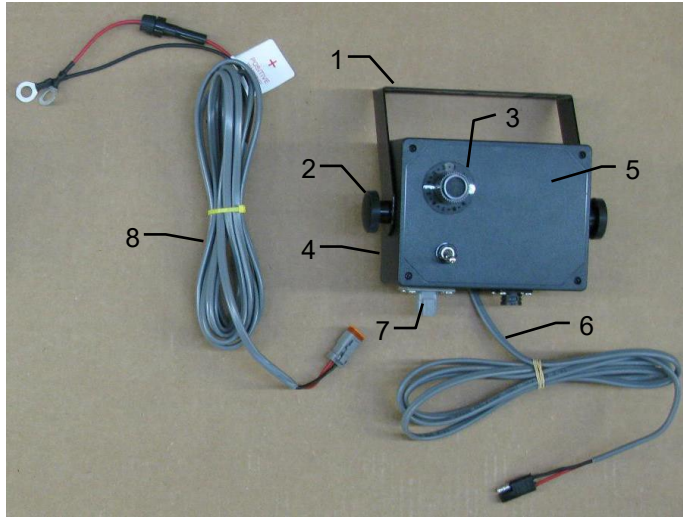


Hose Routing

Connect 1/2" hose to discharge pump fitting and route hose back under the tank and down the RH side of baler, following the existing wiring harness forward towards the right-hand side of the pickup assembly. Secure to existing lines with cable ties. Coil some excess hose to leave enough for adjustment/service later.



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 – Kubota Double Balers

Sensor Placement: Crop eye sensors must be mounted directly across from each other on the baler pickup.

1-1/4" holes will need to be made in each side of the pickup. Reference picture at right to locate where the 1-1/4" hole saw hole will be placed on both sides of the pickup: Measure 2" rearward from the front edge of the flange (white line) and mark a line parallel. Next measure 1-1/2" downward from the top of the flange (red line). Center and cut the 1-1/4" hole at the intersection of these two lines, ensuring that there will be clearance for the plastic sensor nut on the opposite side of the flange where the material is double thickness.

Place the Red Receiver Eye Sensor (006-7502R) on the RH side of the pickup, and the Green Emitter Eye Sensor (006-7502E) to the LH side of the pickup. Secure to baler using the plastic crop eye retaining nut. Position the sensor connectors either downward or angled back towards the base of the mounting bracket of the white roller.



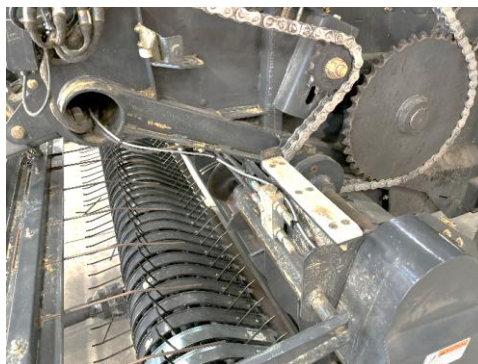
Harness Routing:

Place the yellow junction of the EOR Harness (006-7502H or 006-7503H) in the proximity of the Hose Manifold for Electronic systems or Solenoid for Auto systems.

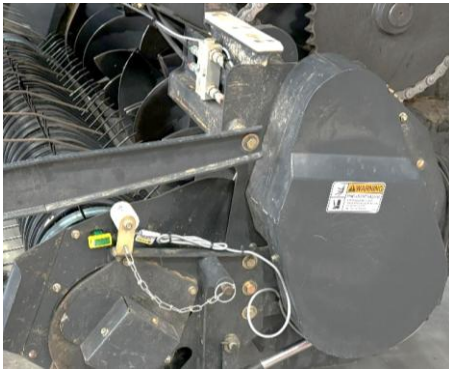
Route the red leg of the wire harness to the Red Crop Eye Sensor along the RH side of the pickup head. Route wire where it can be protected and secured while also not getting pinched or damaged.



Route the green leg of the wire harness through the center tube at the front of the baler to come out on the LH side of the baler. Follow existing wiring and hydraulic lines around the back side of the pickup head, to the pivot point, and continue to the LH green sensor.



Secure wire to sensors and leave enough slack near pivot point of pickup head so wire will not be strained or broken when head is fully extended or retracted. Working backwards from the crop eye sensors, remove excessive slack from the wiring and secure in place with cable ties and p-clips.



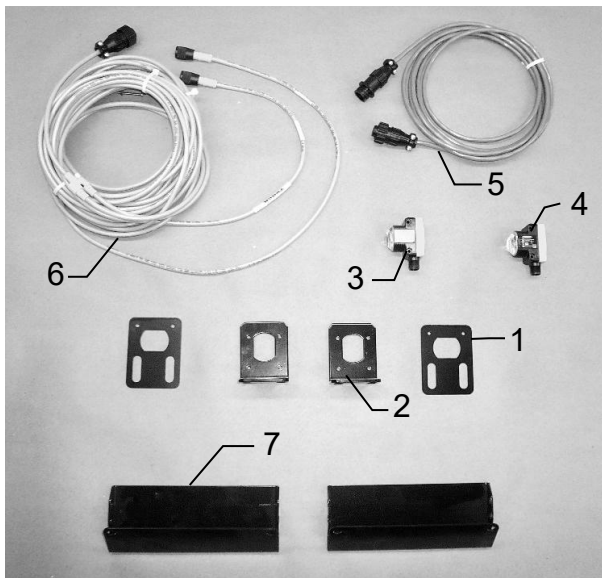
For Electronic Systems Only:

Once excessive slack has been taken out of both the red and green crop eye wires back to the yellow junction, use Extension Wire (001-7500A) to connect the EOR harness (006-7502H) to EOR port on the bottom of the 457 Control Box located at the tractor cab. Route along baler tongue and secure wiring using cable ties.

For Auto Systems Only:

Once slack has been taken out of both the red and green wires back to the yellow junction, move the connector on the EOR harness (006-7503H) to connect with the plug labeled 'EOR' on the 006-762B harness. 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.

Revised 4/17

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