

**\*Please Note\***

**All Instructions, Manuals, Extra Orifices,  
Adjustment Tools, Setting Charts, Etc.**

**MUST BE GIVEN TO END USER!**

# 1760/65 12 Row Fertilizer Installation Instructions



- L&D Ag Service  
507-845-2100

L & D Ag Service, Inc. **assumes no liability** of any damage occurring to customer's equipment  
(Tractors, planters, field cult, etc.)  
Resulting from the mounting of spray or fertilizer tanks.

L & D Ag Service, Inc. **assumes no liability for crop yield performance.**

L & D Ag Service, Inc. **assumes no liability** of loss of contents, environmental damage, or clean up resulting from tank or mounting failure.

## Before Going to the Field

- Prime your pump and system using Primer Assembly to check for leaks and rid system of any contaminants and air. (See Page 17)
- Be sure to have proper orifices in Anti-Drip (according to desired rate and speed). See provided Orifice Charts.
- Make sure pump is set to for desired rate. See provided pump setting worksheet.

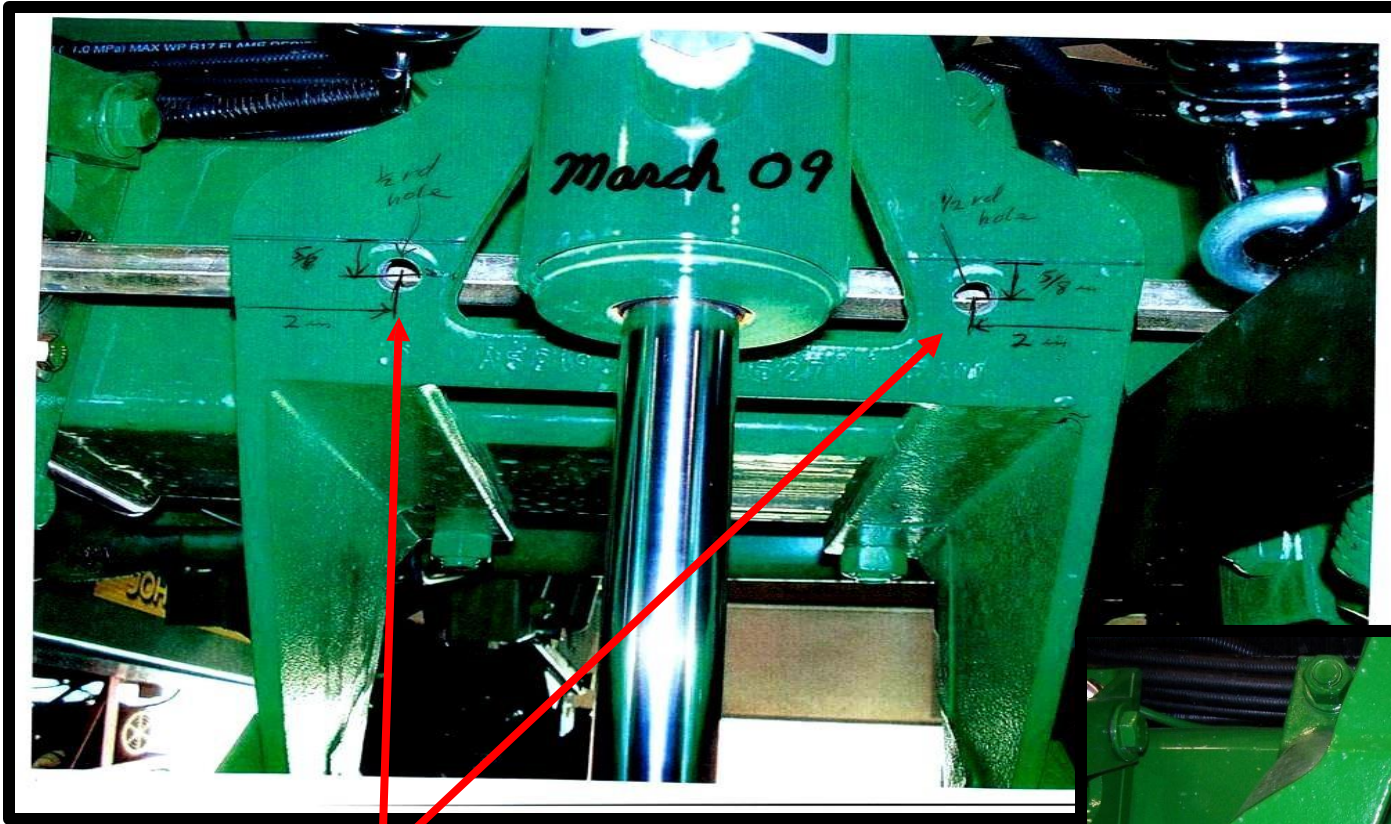
## Maintenance

- Grease pump daily.
- Change oil every season. [See pump manual for oil specs.](#)
- Winterize system properly to avoid freezing. (See Page 17)
- Check each Anti-Drip/Check Valve to ensure that each one works properly. If Diaphragms in Check Caps are hard or stretched they should be replaced.

# Troubleshooting

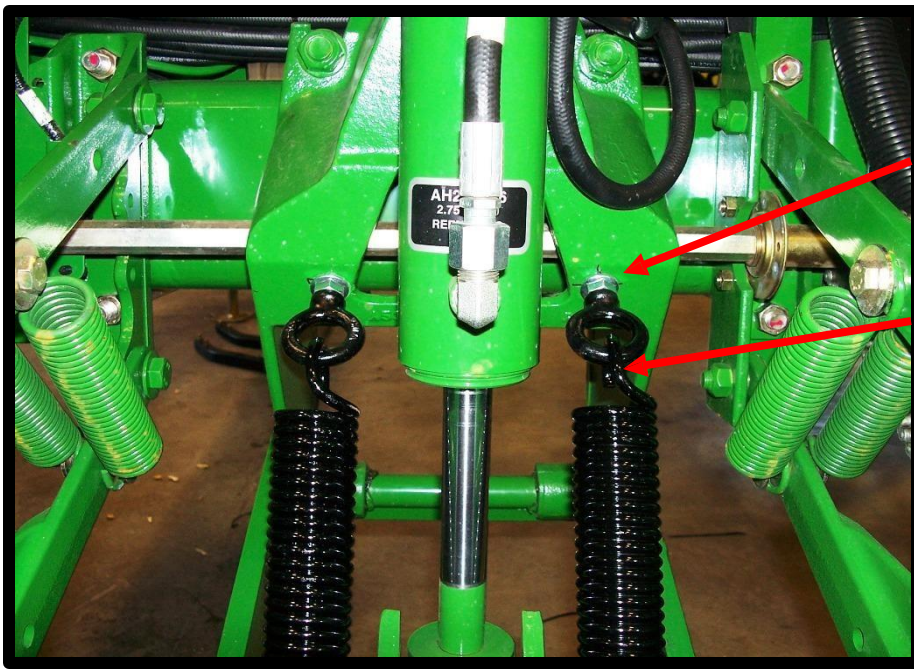
- If desired fertilizer rate is not being applied, double check that pump is set for desired rate. See pump setting worksheet. Also check the main line strainer assembly on inlet side of pump to see if the screen is plugged.
- If Red Glass Balls in Flow Columns are not rising evenly or pulsing there may be air in the lines. To release air loosen check cap on Anti-Drip and turn pump over until liquid flows out. Check to see that proper orifice is installed. If problem persists you may need to replace Diaphragms and/or Check Caps.
- If pump is air locked remove one ¼” plug on top of outlet manifold on pump. Turn pump over slowly until liquid comes out.
- If system has extremely high pressure you may need to change to a larger orifice in the Anti-Drip. Also there may be a blockage somewhere in the feed lines to the row units. Check pump setting to ensure that pump is set for desired rate and not set for a higher rate than desired. \* Note: Fertilizer gets thicker and creates more pressure when the air temperature is colder. Do not change pump setting if desired rate is being applied.
- If system is not building enough pressure to get flow to every row you may need to change to a smaller orifice in the Anti-Drip. Red Glass Balls in Flow Columns may not rise evenly if system is not building enough pressure. See provided Orifice Charts for proper orifice size. Check the main line strainer assembly on inlet side of pump to see if the screen is plugged.

# Contact Tire Drive Mounting Instructions

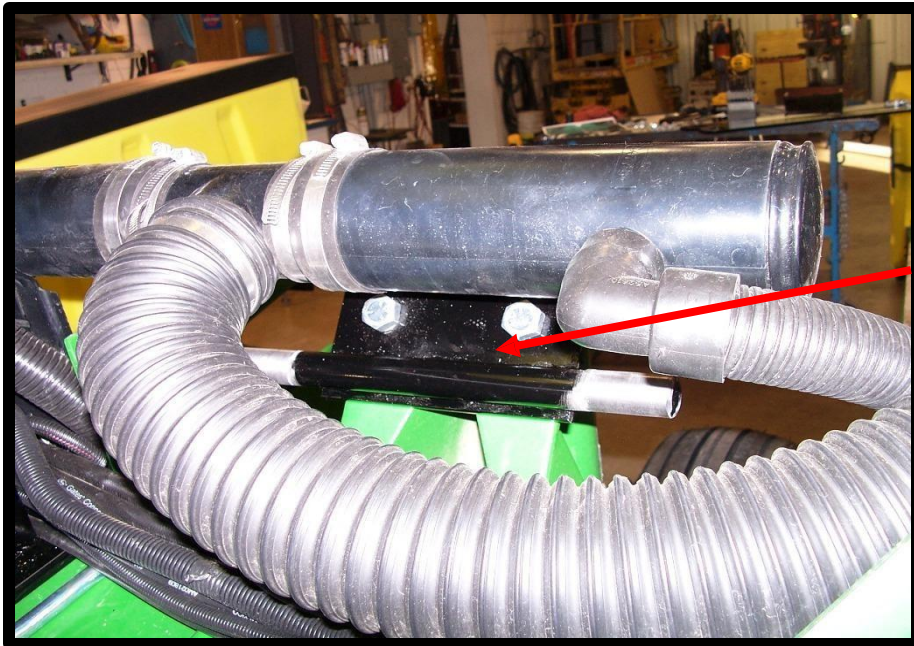


- Mark and Drill 2 - 9/16" Holes Into Wheel Tower on Right Side Closest to Center of the Planter

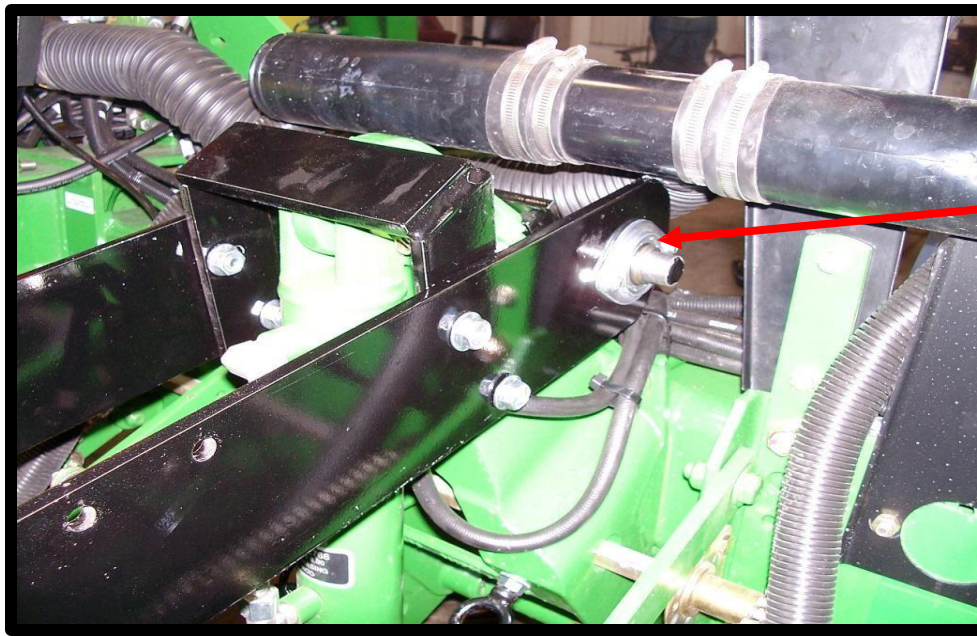




- Insert Eye Bolts Into 9/16" Holes.
- Attach Springs to Eye Bolts.

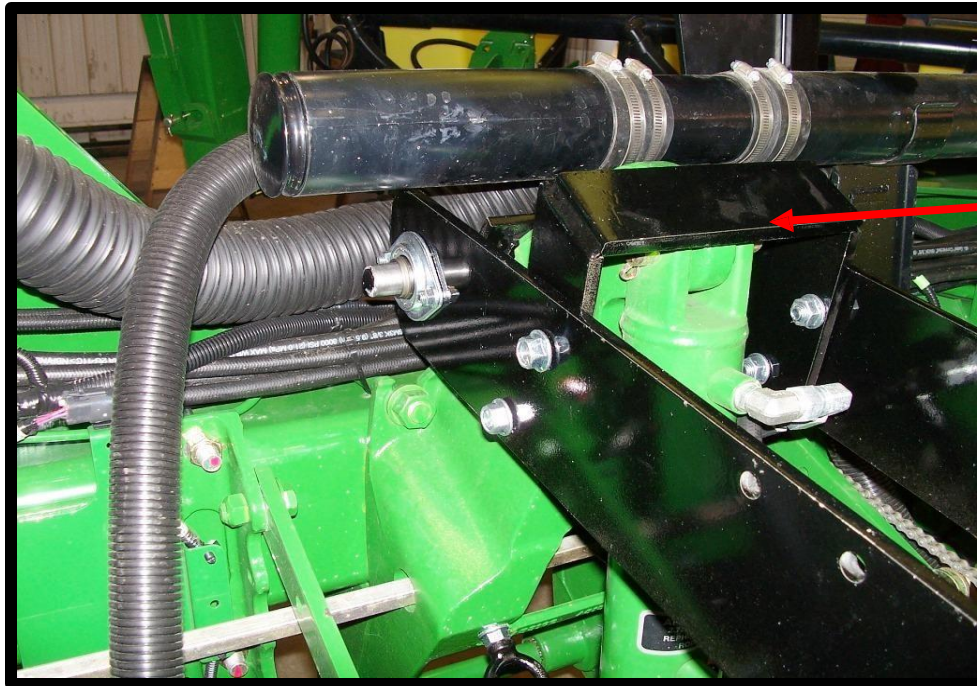


- Fasten Pivot Bracket to Top of Wheel Tower Using two 2-1/2"x5/8" Bolts.

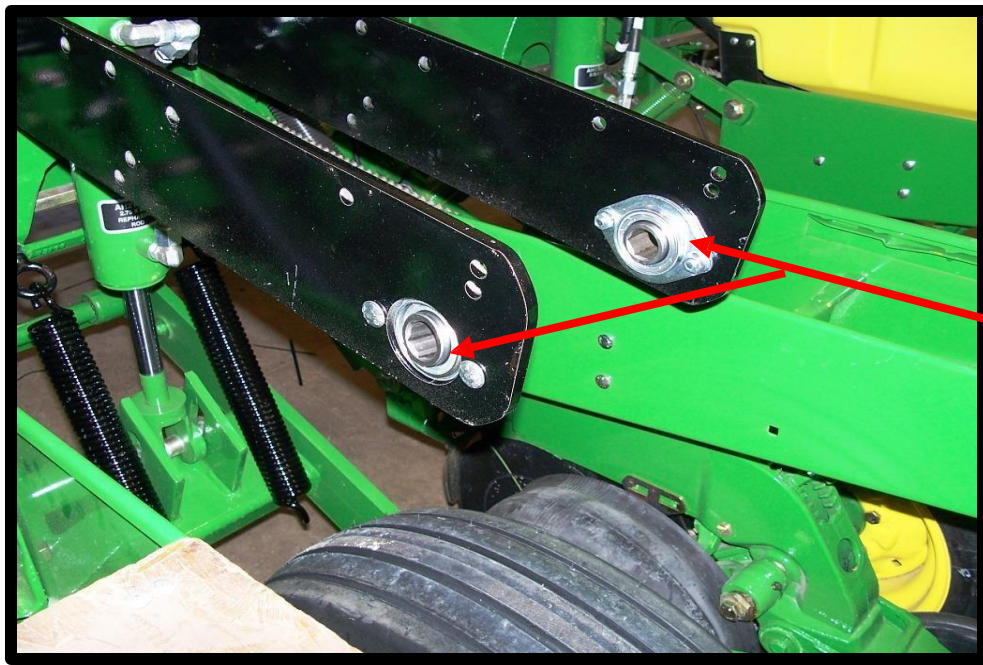


- Using 2-hole Bearing Flanges and 5/16"x1" Carriage Bolts Fasten the 1" Round Bearings to Side plates.

- Slide Side plates onto Round Shaft.

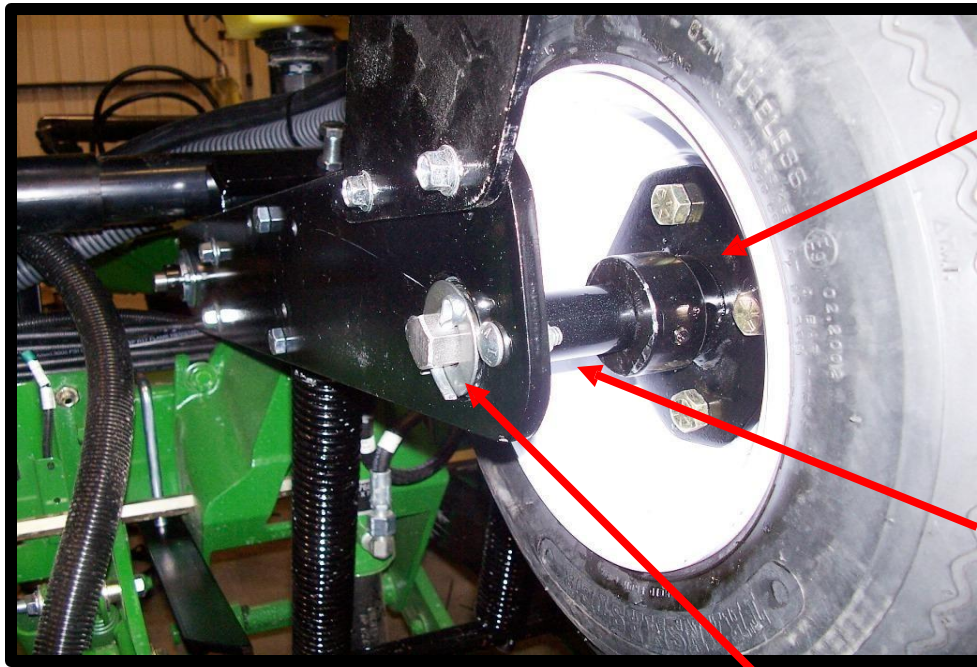


- Fasten Spring Stop Assembly to Side plates Using four 1/2"x1-1/2" Whiz Bolts and Whiz Nuts.



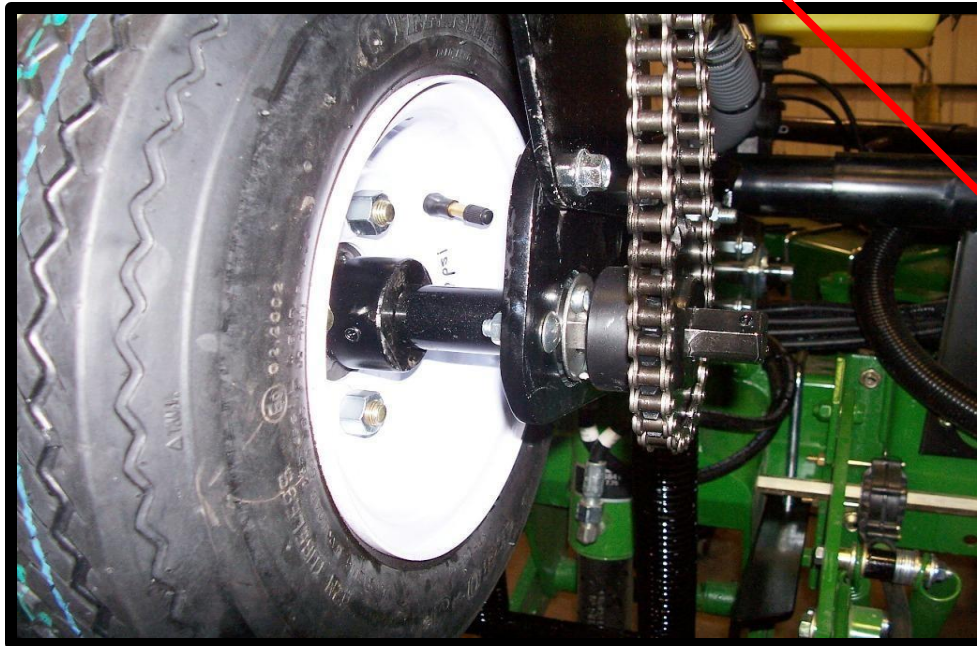
- Using 2-hole Bearing Flanges and 5/16"x1" Carriage Bolts Fasten the 7/8" Hex Bearings to Inside of Side plates.





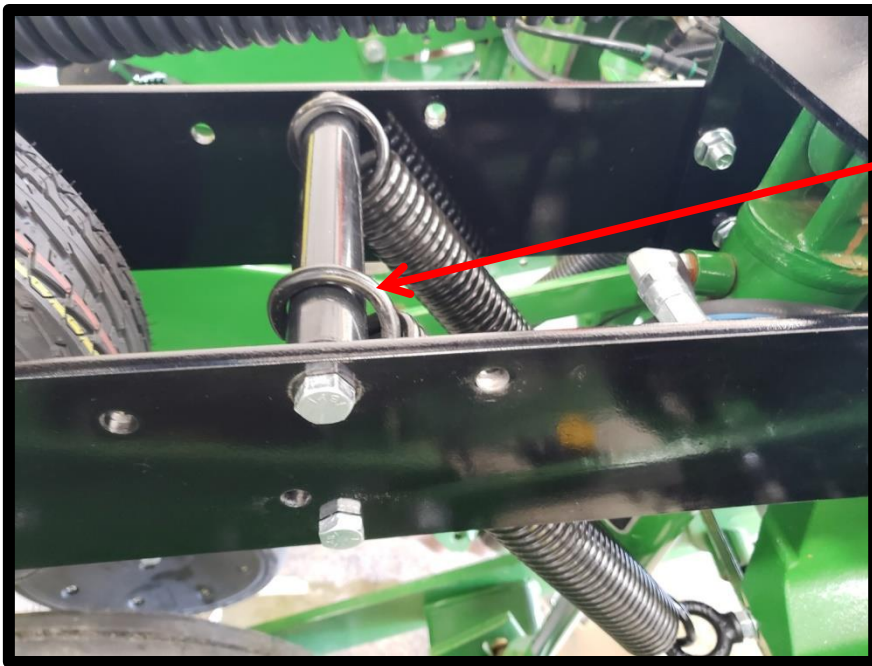
- Fasten Wheel Hub Assembly to Wheel Using 1/2"x1-1/4" Fine Thread Bolts and Lug Nuts.

- Insert Hex Shaft Through Hex Bearings Making Sure to Place a 1"IDx1-1/4"ODx1-15/16" Long Spacer on Either Side of Wheel Hub.

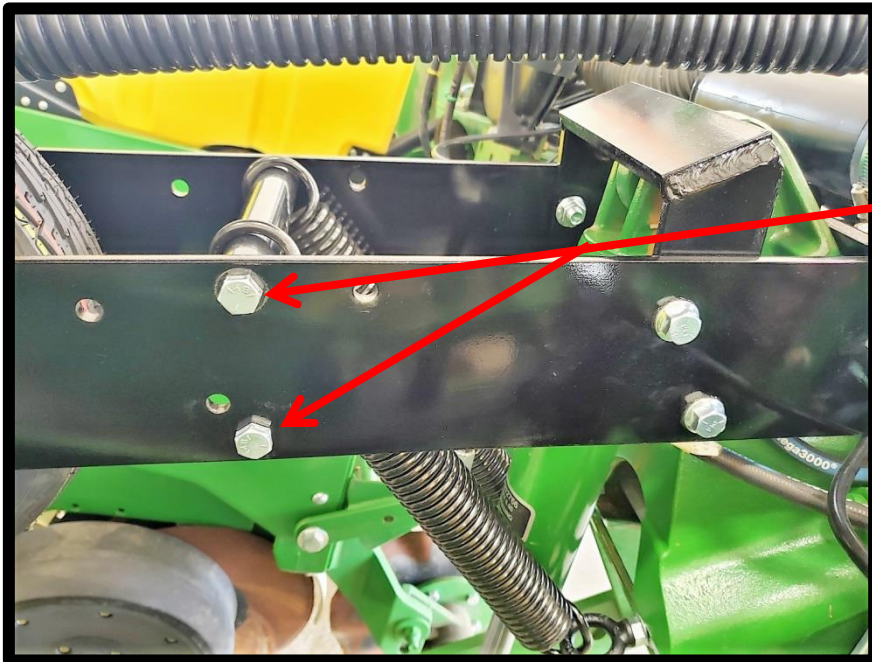


- Place Machine Washers on Outside of Side plates and Secure Hex Shaft with 1/4"x1-1/2" Cotter Pins.

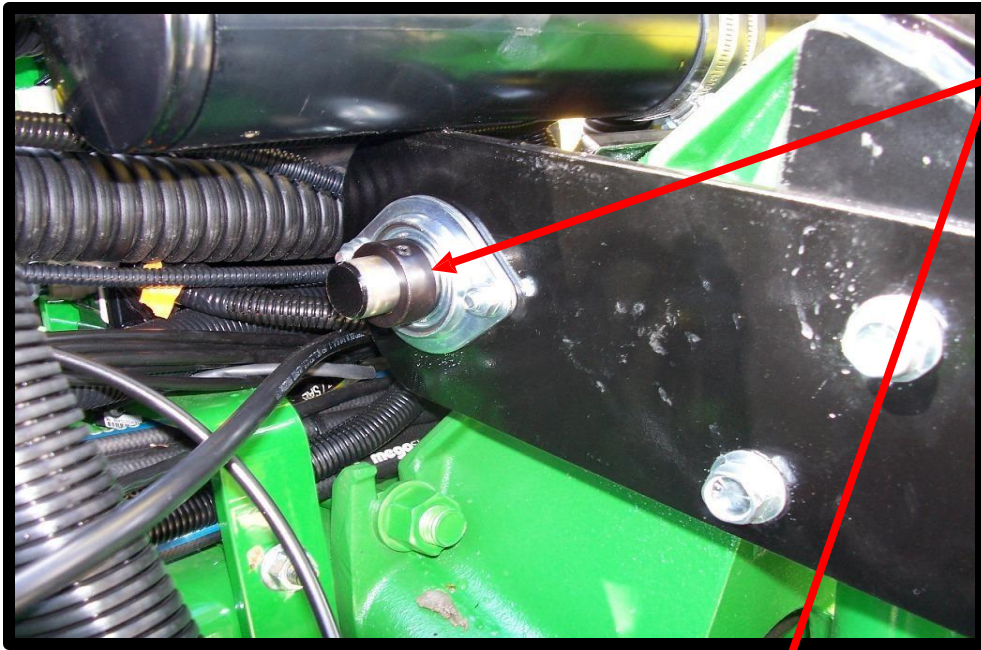
❖ Tire Pressure Should Be **50 P.S.I.**



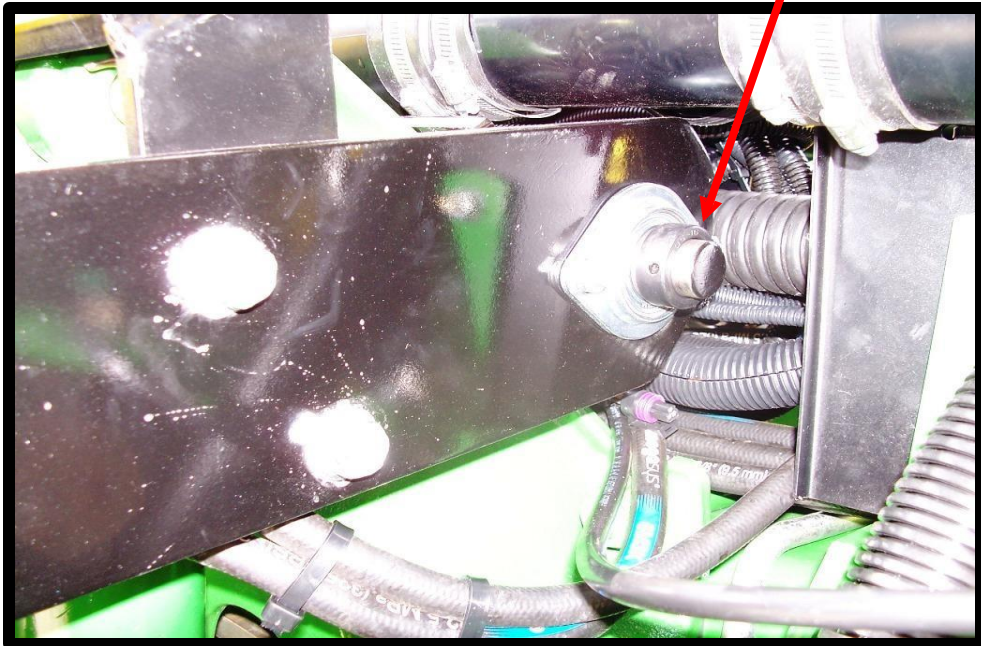
- Secure Springs to the Larger Spacer.

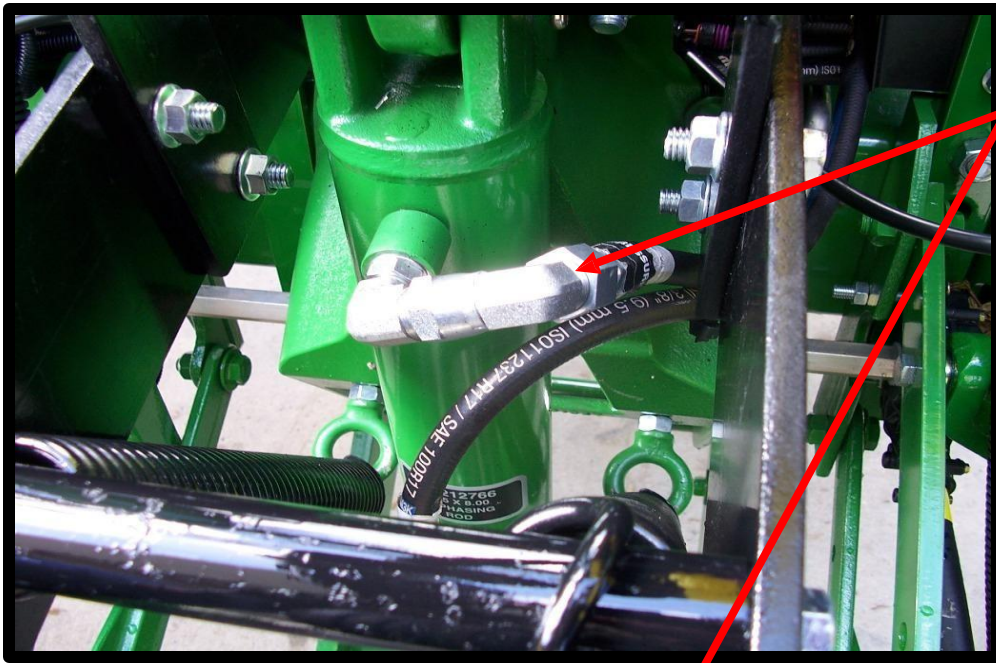


- Using  $\frac{1}{2}$ "x10" Bolts Secure Both 8-1/4" Spacers in Holes as Shown.

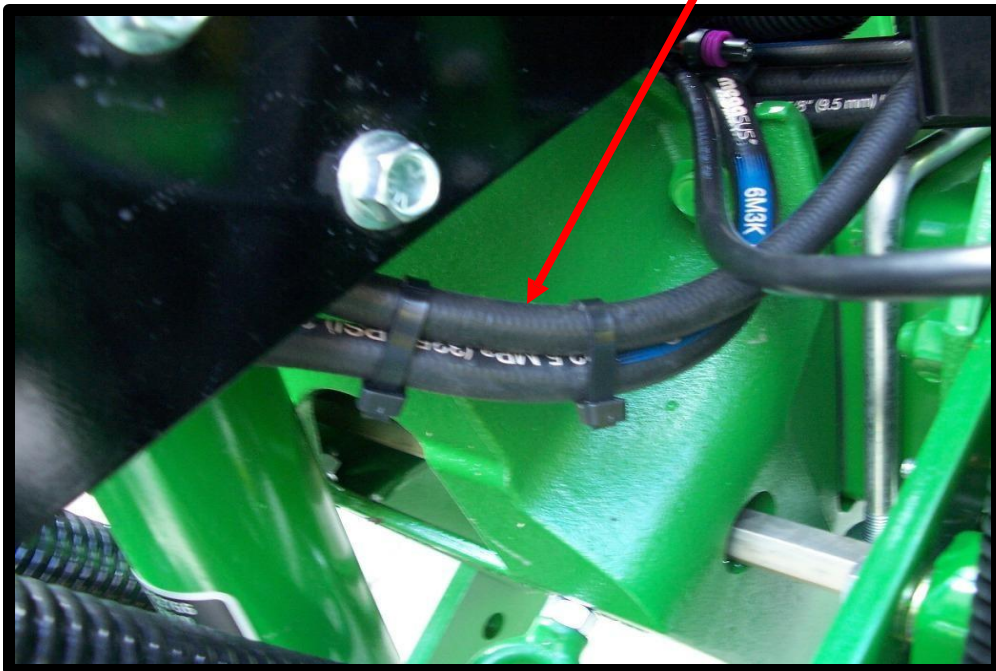


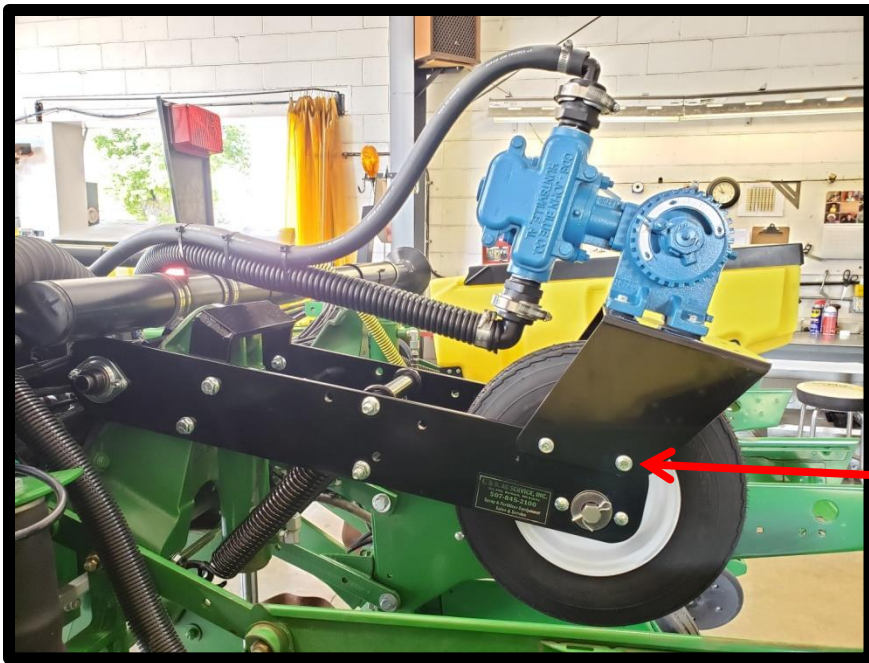
- Secure Round Bearing Lock Collars in Place on Round Shaft.





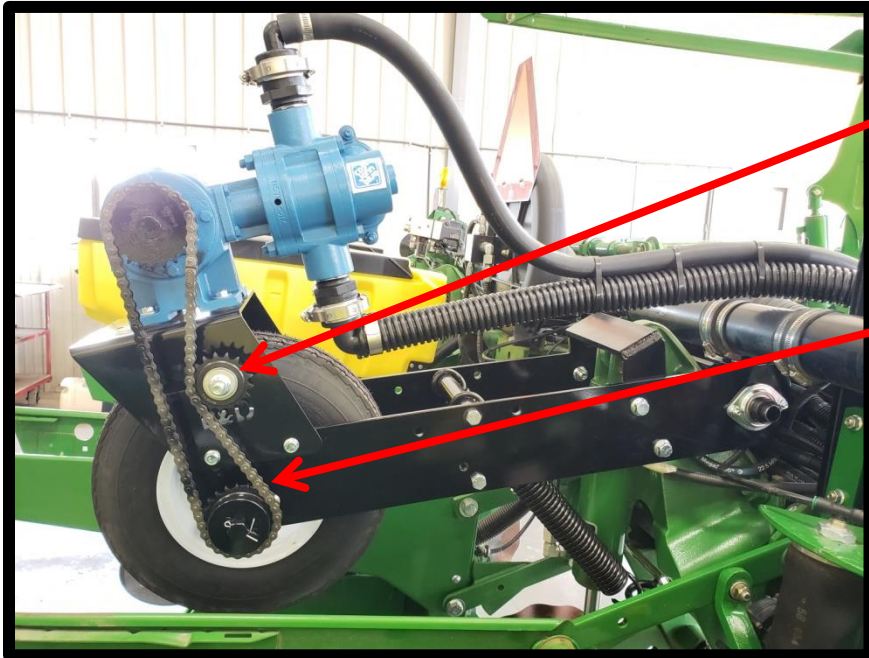
- Adjust Hyd. Fittings and Hoses so They do not Rub or Hit on Drive Assembly.





- Fasten Pump Mount to Side plates Using 3/8"x1" Whiz Bolts and Whiz Nuts.

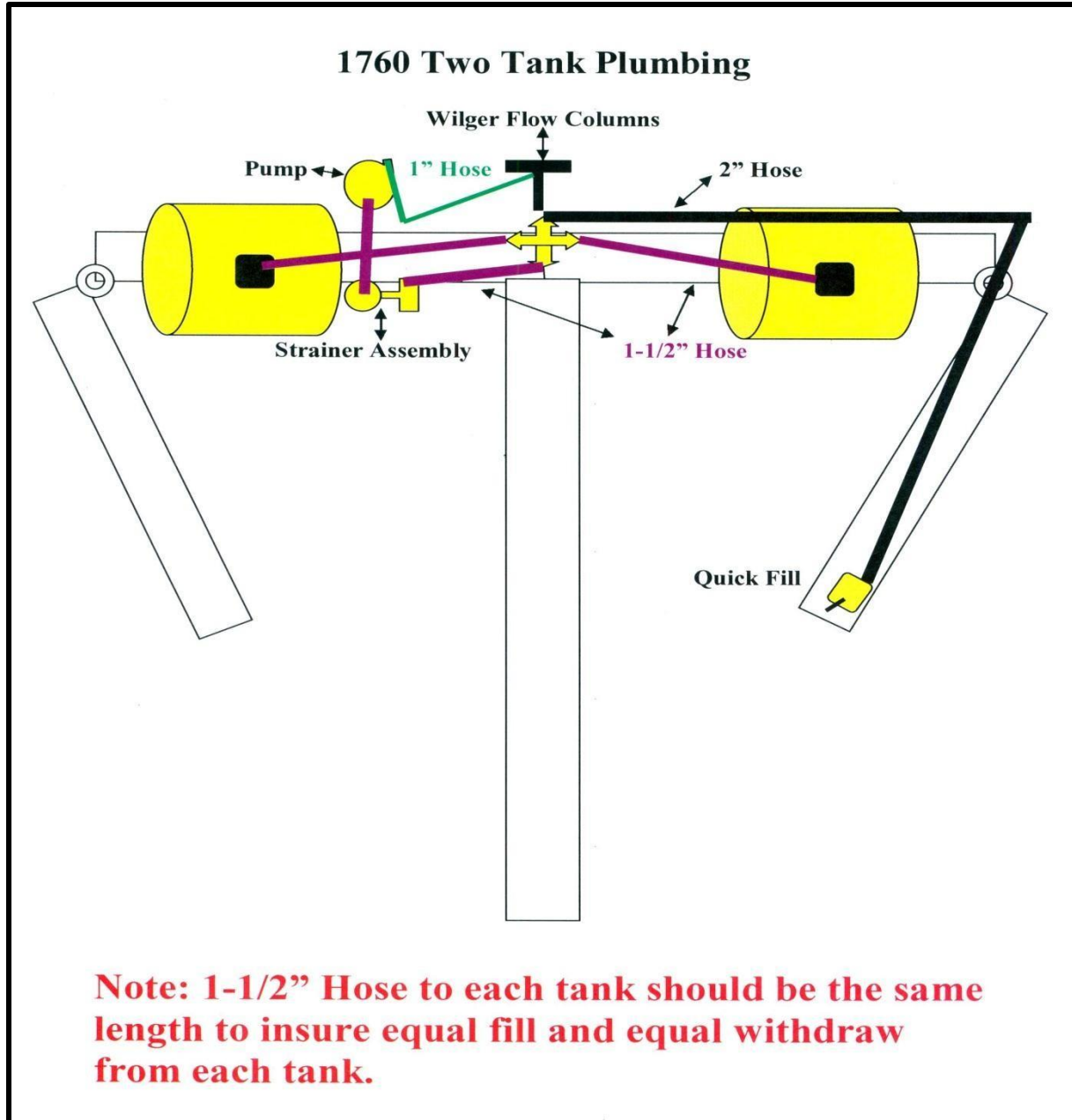
- Fasten Pump to Mount Using 3/8"x1" Whiz Bolts and Whiz Nuts.



- Mount Idler Sprocket Assembly to Pump Mount.

- Mount Provided Sprockets to Pump and Hex Drive Shaft. Secure Chain at Proper Tension.

# Plumbing Diagram

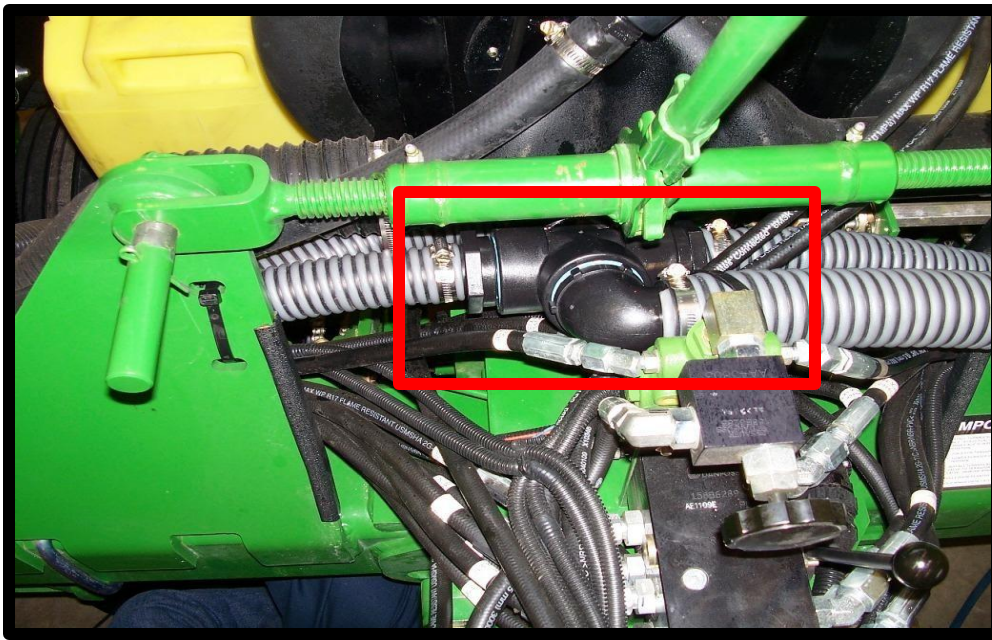


## Quick Fill Valve

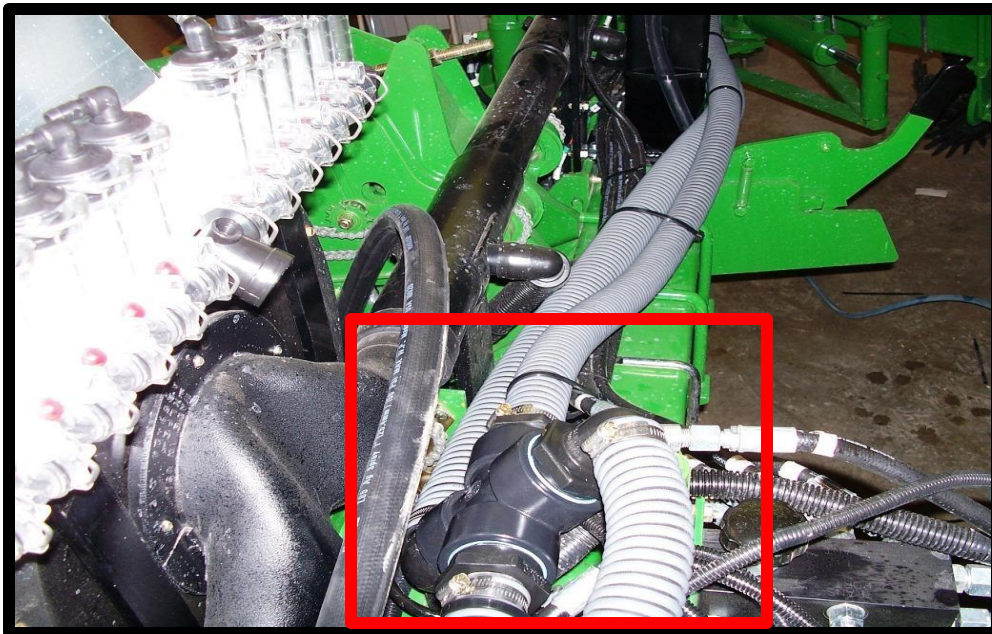
- Secure Quick Fill Valve in Place with Provided Valve Bracket to Left Side Wing.



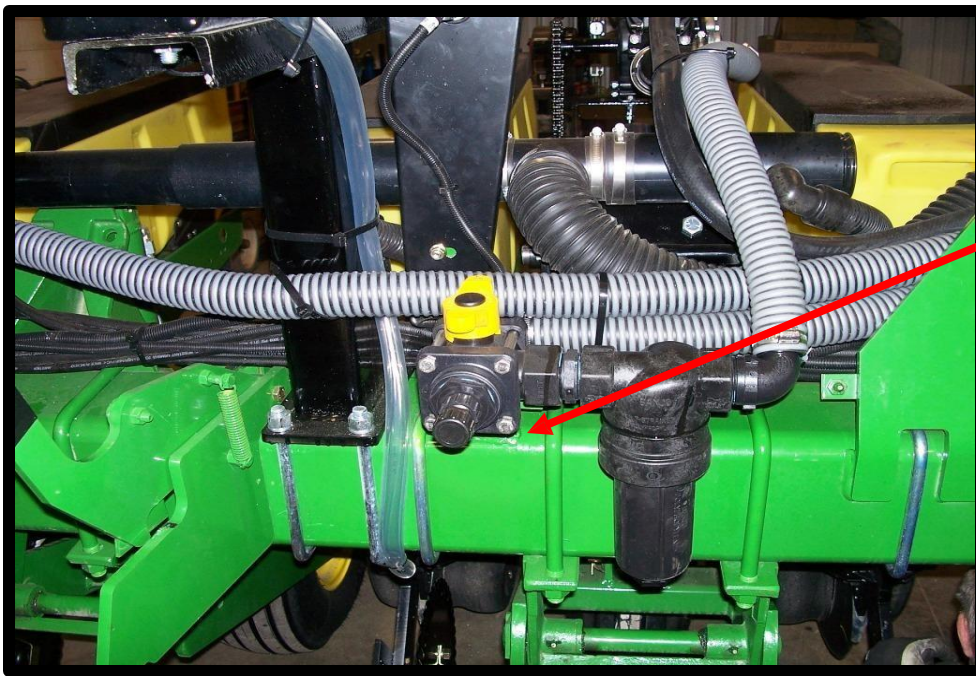
## Center Cross



- Quick Fill Line Will Feed Center Cross to Fill Tanks. Be Sure that the Hose Lengths to Each Tank are Equal in Length to Ensure Even Filling of Tanks.

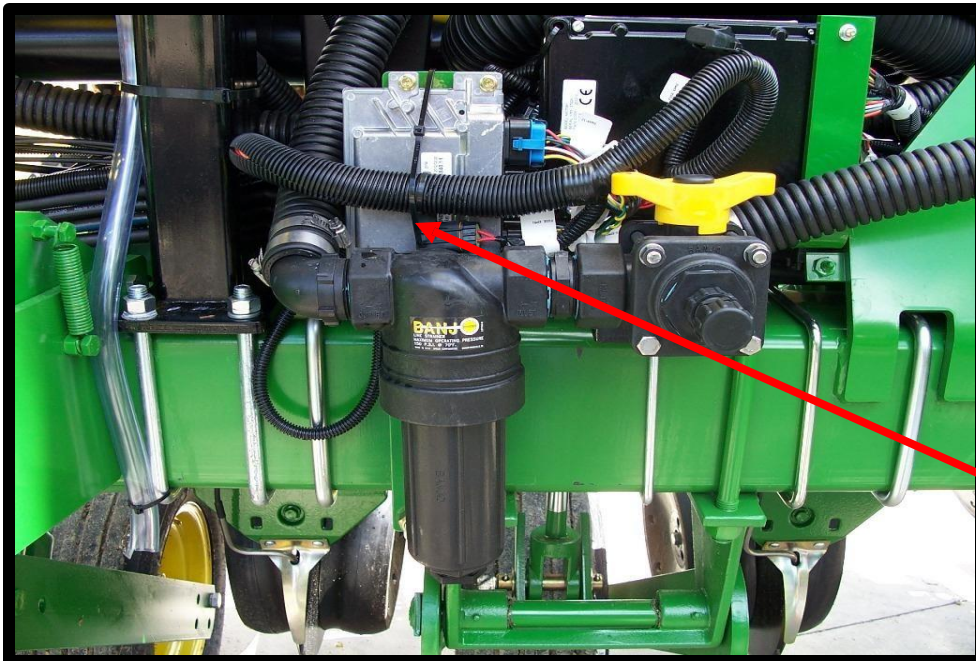


- Suction Line to Inlet of Pump Will also Come From the Center Cross.



## Strainer Assembly

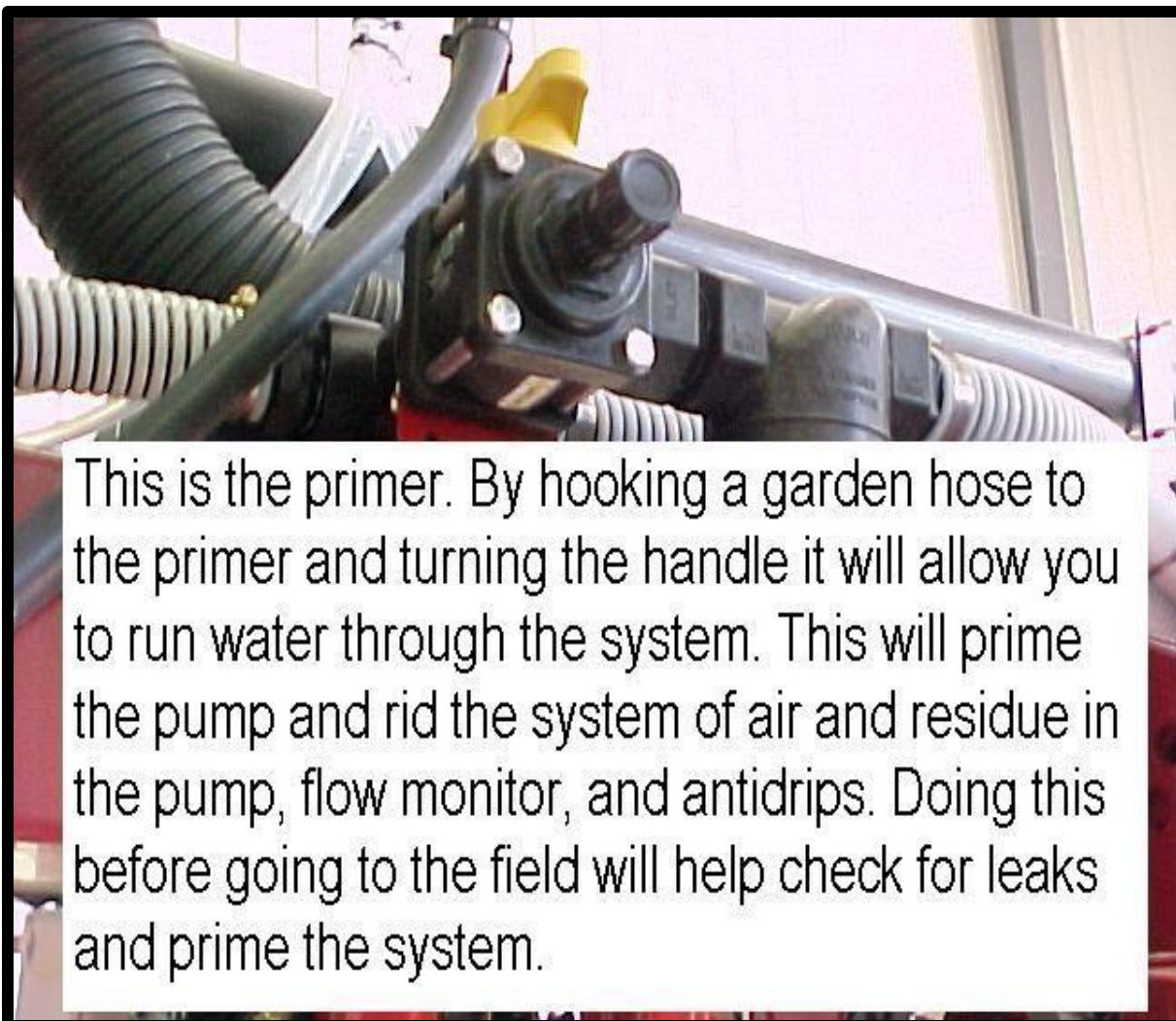
- Secure Strainer Assembly in Place.



- Note: Strainer Configuration Differs if Planter has this Module.

## Primer Assembly

- When Priming Your System with a Garden Hose You Should Have Some Product or Water in Your Tank. This Will Ensure that When You Turn the Primer Handle Back to Tank Flow You Will Not Lose Prime.
- Primer Can also be Used to Flush Your System After Planting is Done for the Season. Winterize Your System with RV Anti-Freeze to be Sure that Freezing will not Occur.



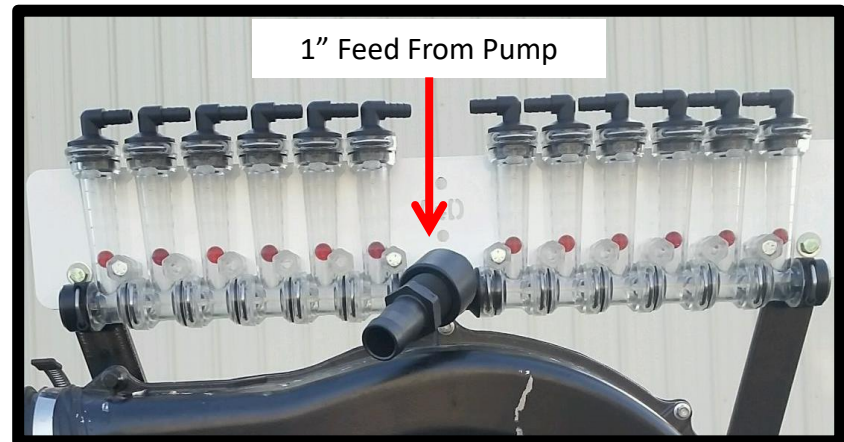
This is the primer. By hooking a garden hose to the primer and turning the handle it will allow you to run water through the system. This will prime the pump and rid the system of air and residue in the pump, flow monitor, and antidrips. Doing this before going to the field will help check for leaks and prime the system.

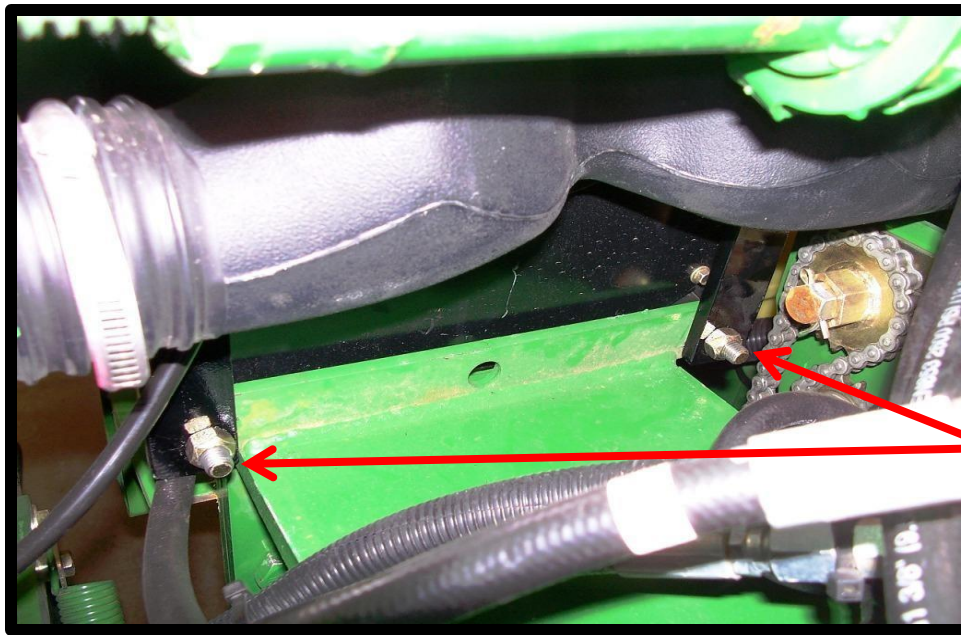
❖ When using water to prime your system the Red Glass Balls may not rise in the Flow Columns due the weight of water compared to the weight of fertilizer.

New Style

## Wilger Flow Columns

- Flow Column Stands Will be Mounted to Existing Bolts Behind the Blower Fan.

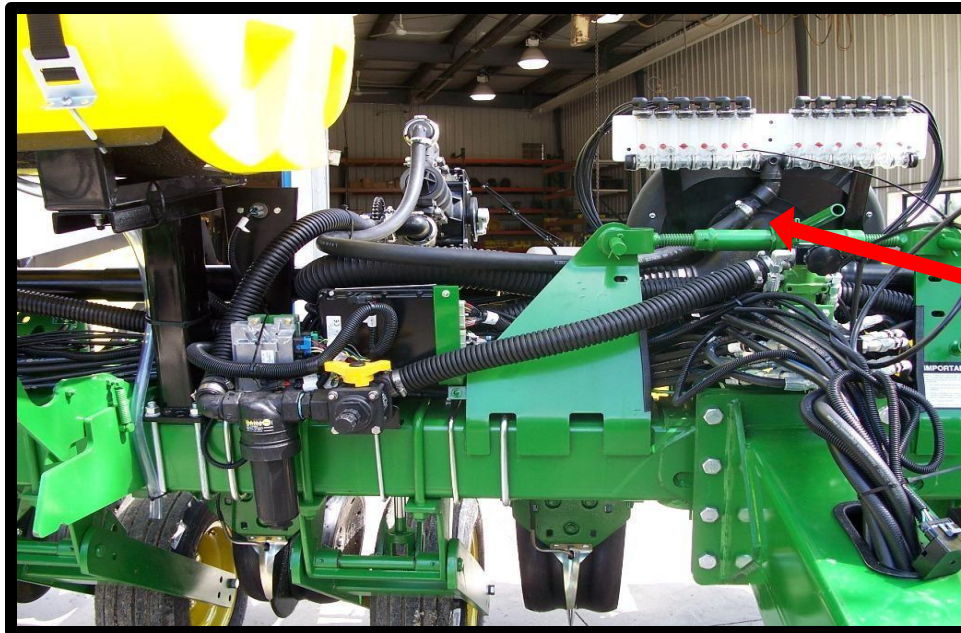




Old Style

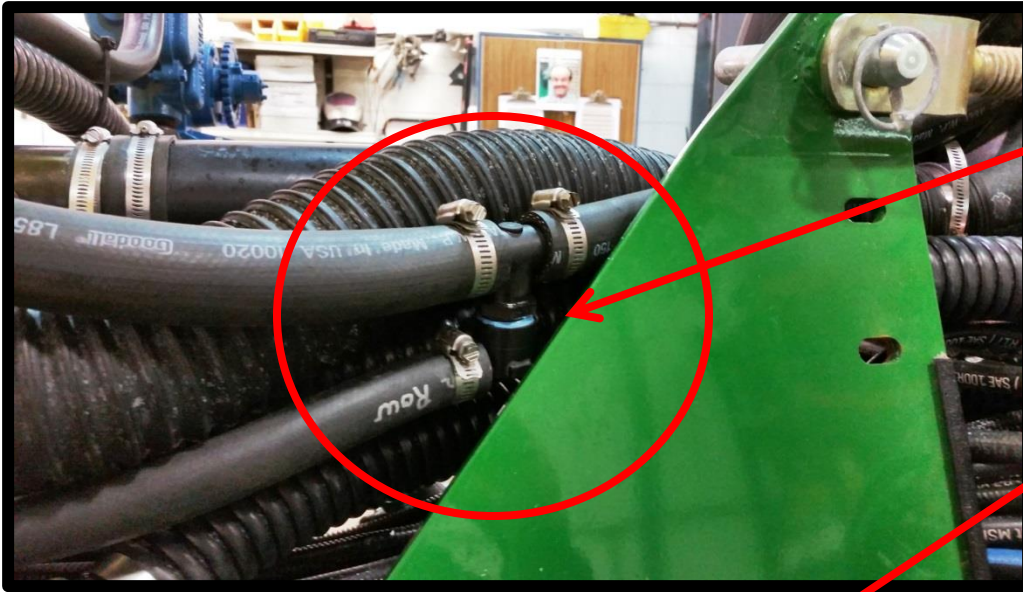
## Wilger Flow Columns

- Flow Column Stands Will be Mounted to Existing Bolts Below the Blower Fan.



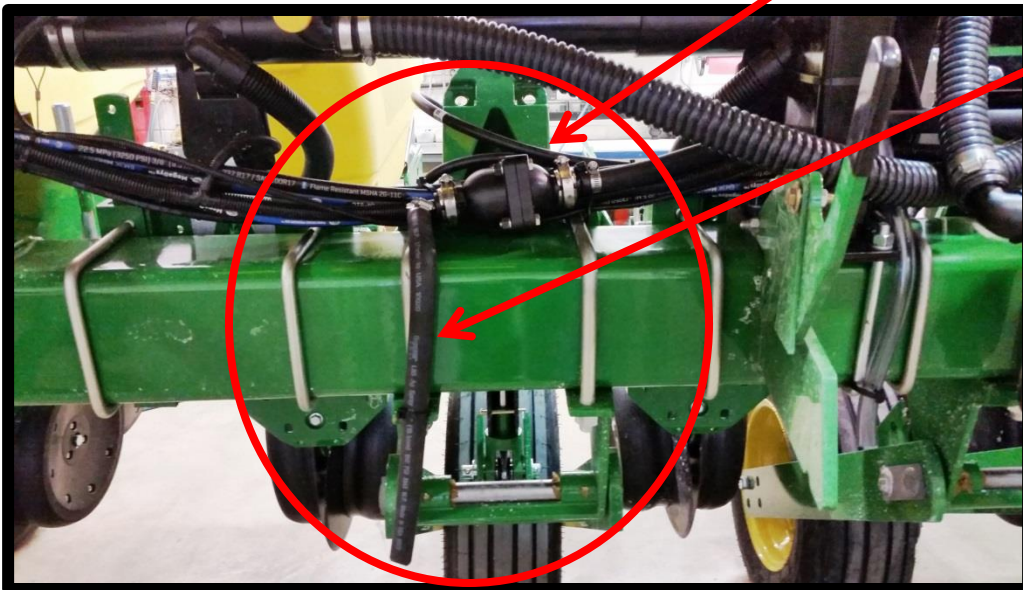
- Feed Line to The Flow Columns is 1" Pressure Hose.

## Pressure Spike Relief Kit



- Install the provided tee into the main 1" pressure feed line going to the Flow Columns as shown.

- Next position the Pressure Spike Valve on the main planter bar as shown.



- Install a long enough piece of hose to the outlet of the Pressure Spike Valve to dump onto the ground.

- ❖ The Pressure Spike Valve will open if the system pressure reaches 75 PSI or Higher.

# Anti-Drip/Check Valve Assembly

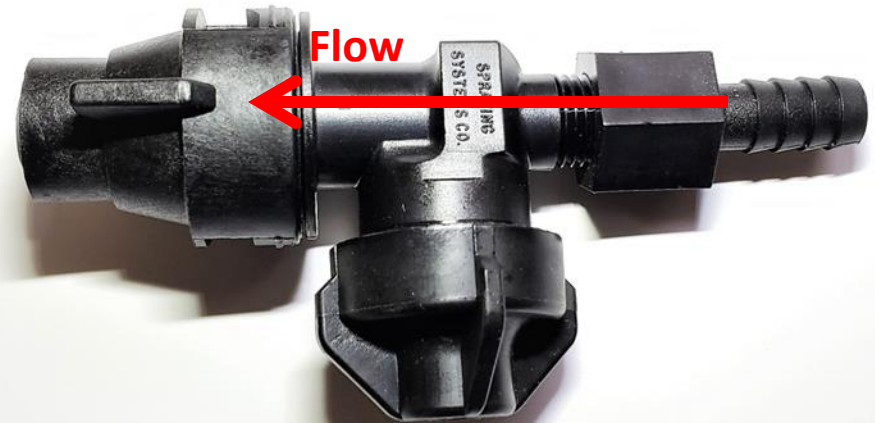
Insert Orifice and Gasket Assembly into the Outlet Cap/Orifice Holder with the number side facing down.



Insert Orifice into Split Gasket



Fully Assembled Anti-Drip/Check Valve



Outlet Cap/ Orifice Holder



Orifice



Split Gasket



Anti-Drip/Check Valve Body



Inlet Barb



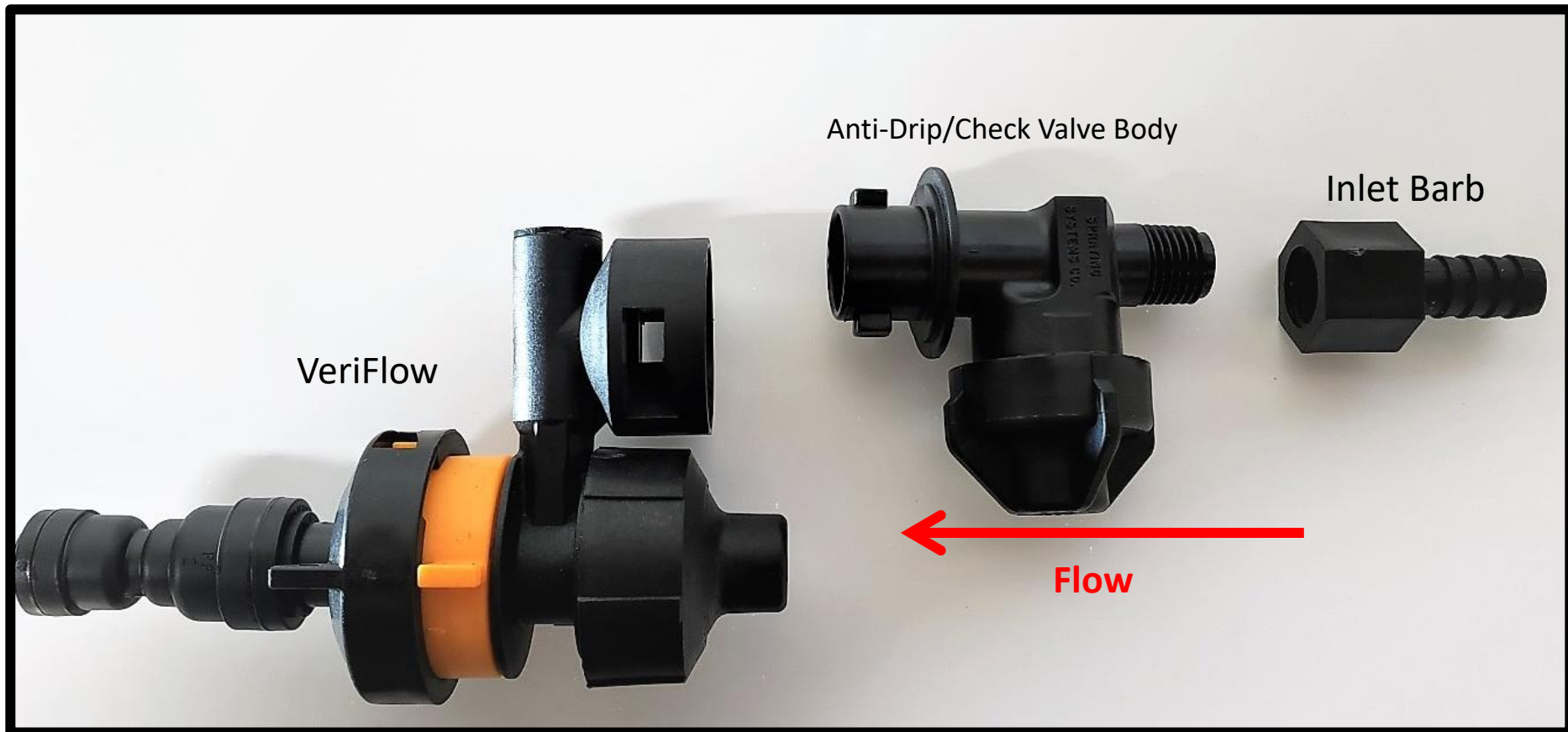
# Anti-Drip/Check Valve

- Install Anti-Drip/Check Valve Bracket to the outside of the right side parallel arm with the existing bolt as shown. If there is no bolt a 3/8" x 1" bolt will be necessary.
- Mount Anti-Drip/Check Valve as shown, zip tied to the bracket with check cap facing to the side.
- Orifice Disc should be installed in Anti-Drip/Check Valve with the numbered side facing the outlet of the cap.

• ¼" Hose Lengths from the Flow Columns to Inlet of Each Anti-Drip/Check Valve Should be No Less Than ½ the Length of the Longest Hose. All Hoses on Outlet of Anti-Drip/Check Valve Should Be Equal Length to the Placement Tube or Tube Holder.

• When using 3/8" hose, it is not necessary to equalize the hose lengths from the Flow Columns to the Anti-Drip/Check Valve. The ¼" hose on the outlet side of the Anti-Drip/Check Valve however does need to be the same length to the placement tube or tube holder.

# Anti-Drip/Check Valve Assembly with VeriFlow



## Anti-Drip/Check Valve with Veri Flow Variable Rate Nozzle



- Use Mounting Bracket to mount assembly as shown.
- Before going to the field be sure to Purge your liquid system with at least 60 PSI in order for the Veri Flow nozzles to work properly.

• When using 3/8" hose, it is not necessary to equalize the hose lengths from the Flow Columns to the Anti-Drip/Check Valve. The 1/4" hose on the outlet side of the Anti-Drip/Check Valve however does need to be the same length to the placement tube or tube holder.



## Back and Beside Placement Tube

- Install the tube onto the rear press wheel assembly using a 3/8" x 1" bolt.
- Be sure to route the delivery hose in a way so that it will not rub on the gauge wheel and so that it has enough flex to allow for up and down movement of the press wheel assembly.

## Fertilizer Tube

- Cut a piece of  $\frac{1}{4}$ " hose 48" long.
- Before installing the fertilizer tube you will need to insert the  $\frac{1}{4}$ " hose into the stainless tube.
- Push the hose through the stainless tube until it gets to the second bend.



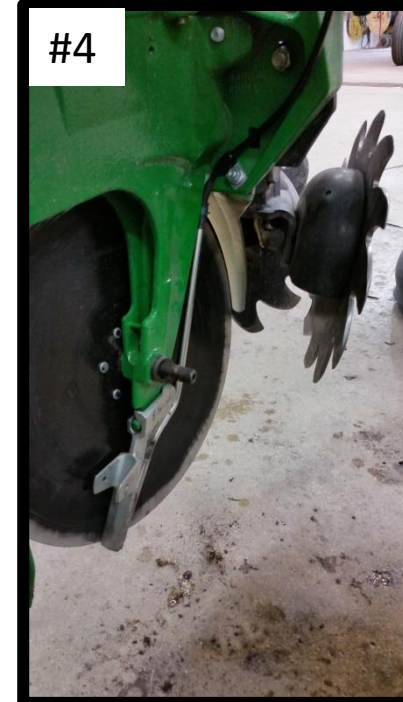
## Fertilizer Tube



- A piece of heat shrink tube should be applied to the top of each Fertilizer Tube where the  $\frac{1}{4}$ " line is inserted into the tube. You may need to buff the Fertilizer Tube with emery cloth or wire wheel before applying heat shrink tube. Position the heat shrink so that it is no less than  $\frac{3}{4}$ " and no more than 1" onto the plastic tubing.
- Use a heat gun to shrink the heat shrink. **DO NOT OVER HEAT AND DO NOT USE OPEN FLAME!**
- Next position the provided clamp over the heat shrink on the stainless steel side. Position the clamp so that the ears are facing forward toward the front of the row unit.

## Fertilizer Tube

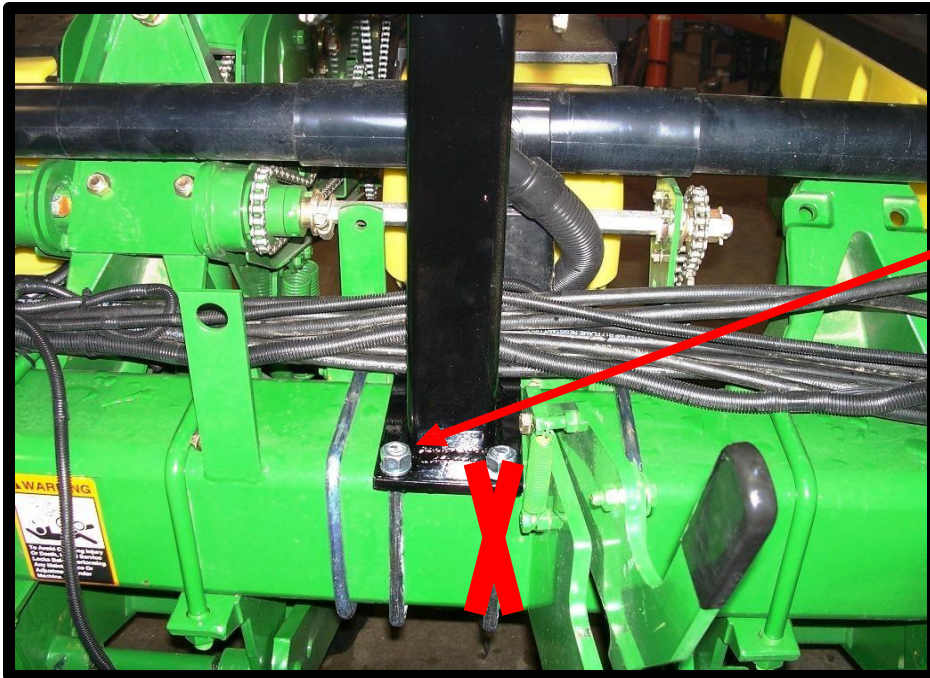
- Remove gauge wheels, discs, and seed tube protector.
- Be careful not to kink the hose when positioning the tube into place.
- When the tube is in position remove the right side nut that holds the disc opener guard in place and install the rubber coated clamp as shown in Illustration #3.
- Reassemble the row unit.





## Left Side Outer Tank Mount

- Fasten Tank Mount to Flange at Wing Break with 5/8" x 2" Bolts.



## Left Side Inner Tank Mount

- Fasten Tank Mount to Main 7"x7" Frame Using one 7"x7"x5/8" U-bolt with the Bolt Tab Facing Away From the Wing Lock.

# Left Side Tank and Mounts Fully Installed

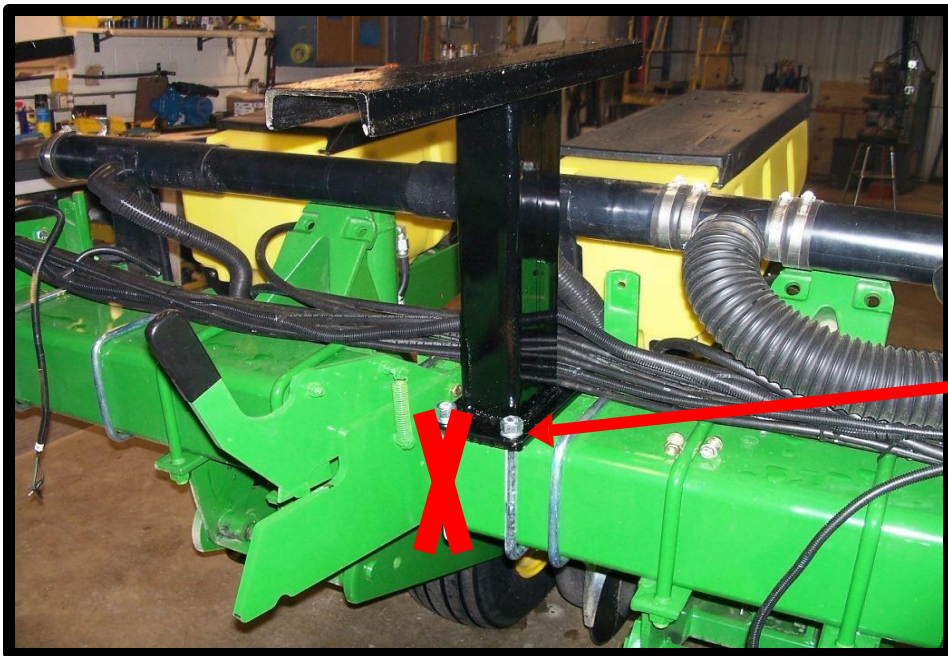
- Secure tank to saddle with provided strap kit.
- Secure saddle to tank mounts.



- Install  $\frac{3}{4}$ " clear hose to provided tank lid with hose barb.



- Right Side Outer Tank Mount
- Same as Left Side.



- Right Side Inner Tank Mount
- Same as Left Side.

# Right Side Tank and Mounts Fully Installed

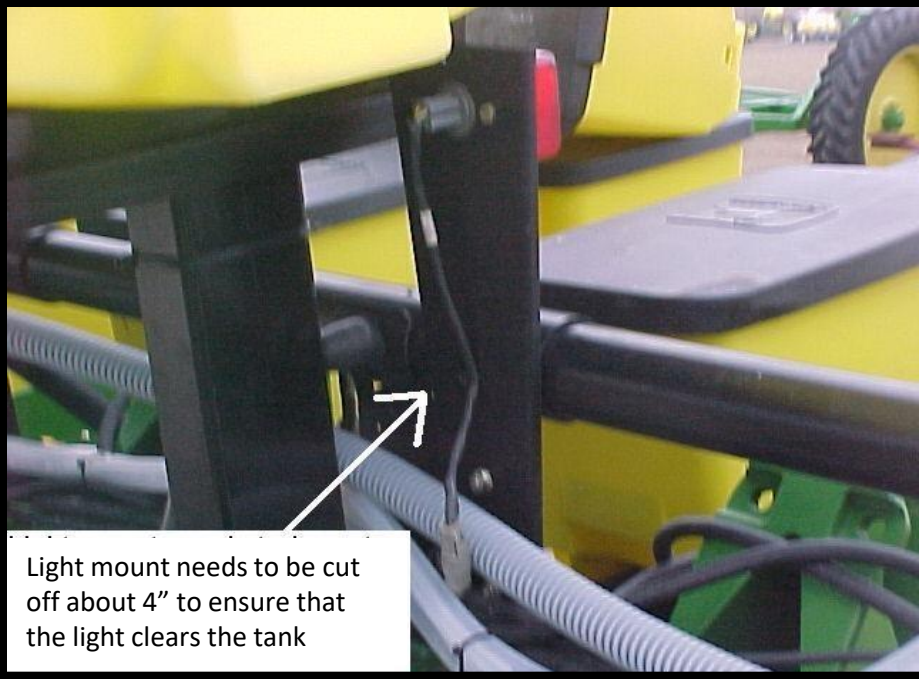
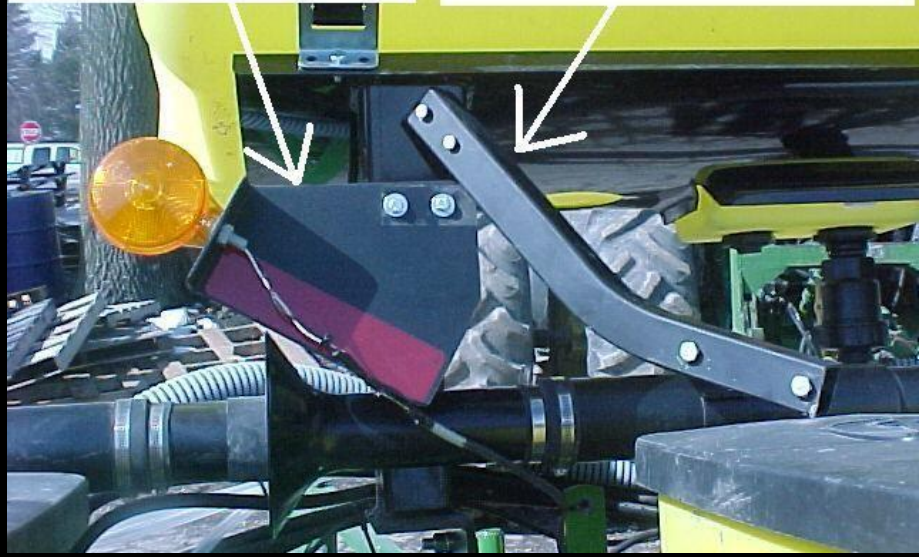
- Secure tank to saddle with provided strap kit.
- Secure saddle to tank mounts.



- Install  $\frac{3}{4}$ " clear hose to provided tank lid with hose barb.

This portion of the factory light assembly is bolted on to the outside tank mount bracket

Light mount bracket that is removed for tank installation. This bracket is not used in this application.



Light mount needs to be cut off about 4" to ensure that the light clears the tank

## Light Assemblies

- Remove John Deere light assembly off of square tube, set aside for later installation. Remove square light mount tube, this will not be re-used.
- Tail light assembly needs to be Lowered 4". Cut 4" off the bottom of the bracket leaving existing top mounting hole. Drill new hole above existing hole to re-mount bracket in same location.

# Fully Installed Starter Fertilizer Kit



# FERTILIZER ORIFICE SIZING CHART: 30" SPACING

Formula:  $GPA \times MPH \times Row\ Width / 5940 \times 1.15 = GPM\ per\ Row$

	MPH	4.00	4.5	5	5.5	6	6.5	7
Gal. Per/Acre								
<b>3</b>		25	28	30	30	31	34	34
3.5		28	30	31	34	34	35	37
<b>4</b>		30	31	34	34	35	37	40
4.5		31	34	35	37	40	40	43
<b>5</b>		34	35	37	40	40	43	43
5.5		34	37	40	40	43	45	45
<b>6</b>		37	40	40	43	45	45	48
6.5		37	40	43	45	48	48	51
<b>7</b>		40	43	43	45	48	51	51
7.5		40	43	45	48	51	51	55
<b>8</b>		43	45	48	51	51	55	55
8.5		43	45	48	51	51	55	57
<b>9</b>		45	48	51	51	55	57	59
9.5		48	48	51	55	57	59	61
<b>10</b>		48	51	51	55	57	59	61
10.5		48	51	55	57	59	61	63
<b>11</b>		51	51	55	59	61	63	65
11.5		51	55	57	59	61	65	65
<b>12</b>		51	55	59	61	63	65	67
12.5		55	55	59	61	65	67	70
<b>13</b>		55	57	61	63	65	70	70
13.5		55	59	61	65	67	70	72
<b>14</b>		55	59	63	65	70	70	75
14.5		57	59	63	67	70	72	75

*\*Target Pressure is 30 P.S.I.*

*For IH Factory Pump Systems Use Next Smallest Orifice*