

**Before working on your planter or drill**

**DANGER:** When storing or working on the planter always install cylinder stops or place the planter on stands to prevent personal injury or damage to the attachments.

**PLEASE:** Read instructions completely and verify all package contents before beginning installation



*Schaffert*  
manufacturing & sales

# PUMP SYSTEM

## MOUNTING INSTRUCTIONS

**NOTE:** *Your pump system configuration will vary from the images shown.* These images are taken from a variety of our custom-made systems and depict only some of the possible setups. These instructions and their corresponding images are a guide only.

For further assistance, please call us at 308-364-2607 or toll-free 800-382-2607.



# PUMP SYSTEM MOUNTING INSTRUCTIONS

## GX1, GX2 Tower & Manifolds

### STEP #1:

GX1 or GX2 pump system mounts on most bars from 4"x4" to 8"x16".

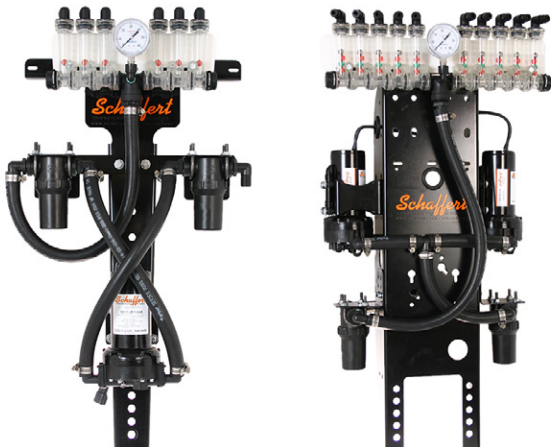


*GX2 shown mounted on Landoll 8"x16" bar*



### STEP #2:

Bolt the center PVC manifold or visual Wilgers on to top of the main pump system tower.



### STEP #3:

Attach wing of other PVC manifolds or visual Wilgers to each GX1 chassis (long black stand).

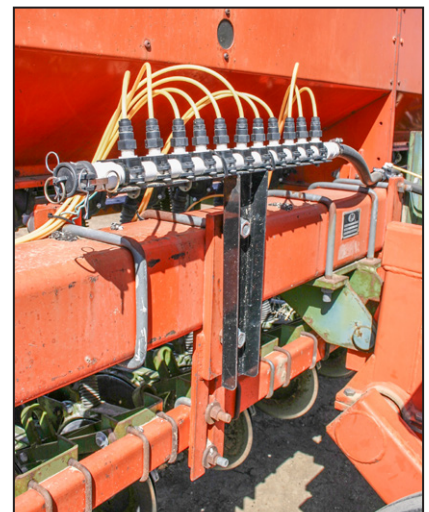
*Wing manifold mount swivels for best view*



### STEP #4:

Mount these to each wing bar with the u-bolts provided.

*GX1 chassis and PVC manifolds shown on 7"x7" wing bar*





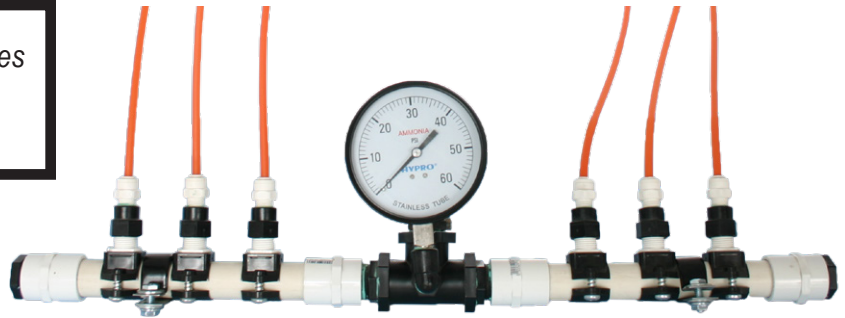
# PUMP SYSTEM MOUNTING INSTRUCTIONS

## Running Hoses: Plumbing the Manifolds Down to the Rows

**NOTE:** As regards to hose length, individual hoses do not need to all be the same length. However, hoses should be within 5' to each other.

### STEP #1:

Run the individual 1/4" orange line from the tops of the manifolds down to the row.



Hoses running from PVC manifold

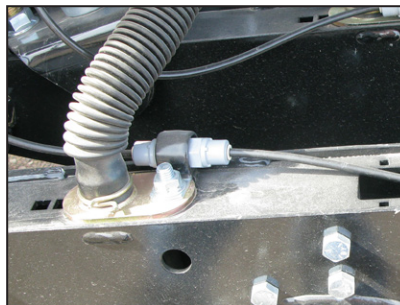
### STEP #2:

Connect orange or black hose to the gray check valve.

Make sure the arrow is pointing down or away from the manifold (the arrow indicates the direction of flow).



5# check valve



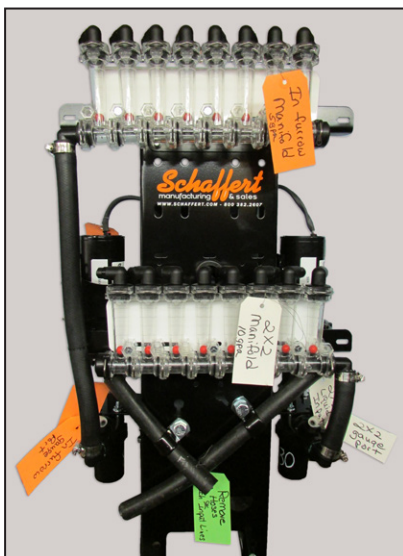
Check valve and hoses on Landoll



Check valve and hoses on Tye

### STEP #3:

Run another piece of orange or black hose from the check valve down to the Rebounder's in-furrow fertilizer attachment or the 2x2 set-up.



GX2 pump system with manifolds for both in-furrow and 2x2 fertilizer application



Rebounder with Straight Shot fertilizer attachment



2x2 fertilizer tube setup on Case IH



G2 2x2 fertilizer disc setup



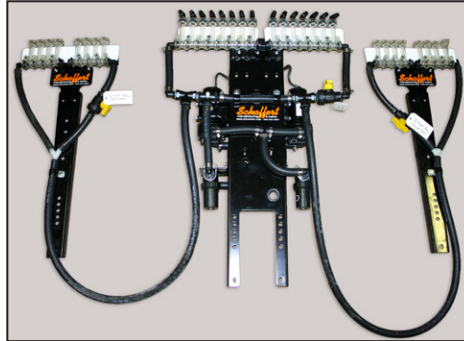
Final assembly (condensed version)

# PUMP SYSTEM MOUNTING INSTRUCTIONS

## Running Hoses: Main Lines

### STEP #1:

Run the 3/4" hose to all three manifolds.

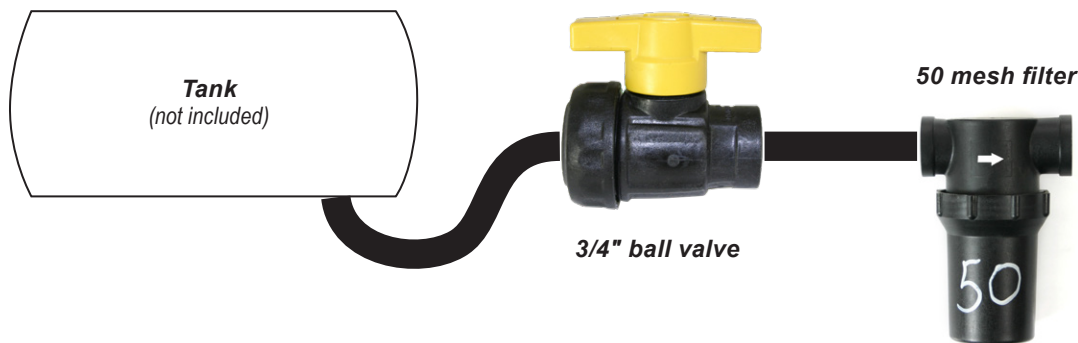
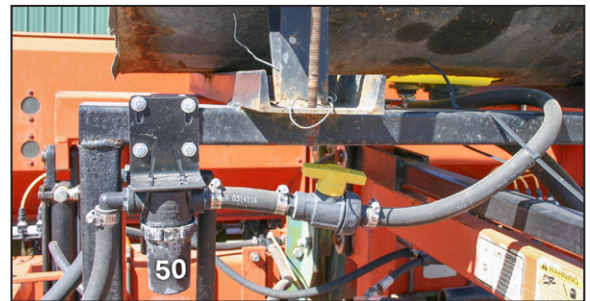
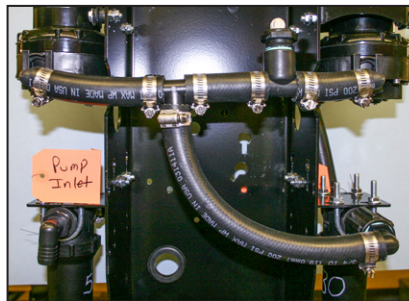


### STEP #2:

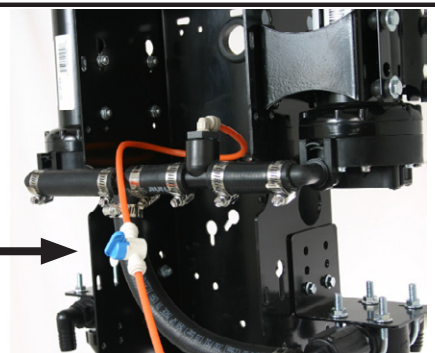
Connect the 3/4" line from the tank to the pump system where it reads INLET. This should be on the 50 mesh filter side with an elbow pointing down.

Place the 3/4" ball valve in between the tank and the pump. Make sure the arrow is pointed in the direction of flow (away from the tank).

Connect hose into the fitting.



**Bleeding valve**  
Bleeds air out of GX2 pump system; hose drains to ground





# PUMP SYSTEM MOUNTING INSTRUCTIONS

## Pressure Gauge

Screw the pressure gauge to the top of the manifolds or place it closer to the cab for better visibility by attaching it to the Magmount.

Make sure to place the pressure gauge in the best viewing location.



*Pressure gauge assembly options*



*Side mount gauge & Magmount*



*Top mount gauge & Magmount*

### DIRECT TO MANIFOLD



### REMOTE PRESSURE GAUGE KIT

The remote pressure gauge kit includes a bracket and magnet (Magmount) so the pressure gauge can be easily mounted to the most visible location on your equipment.

The bracket is adjustable so that the Magmount can be placed on the top or the side of a metal frame.



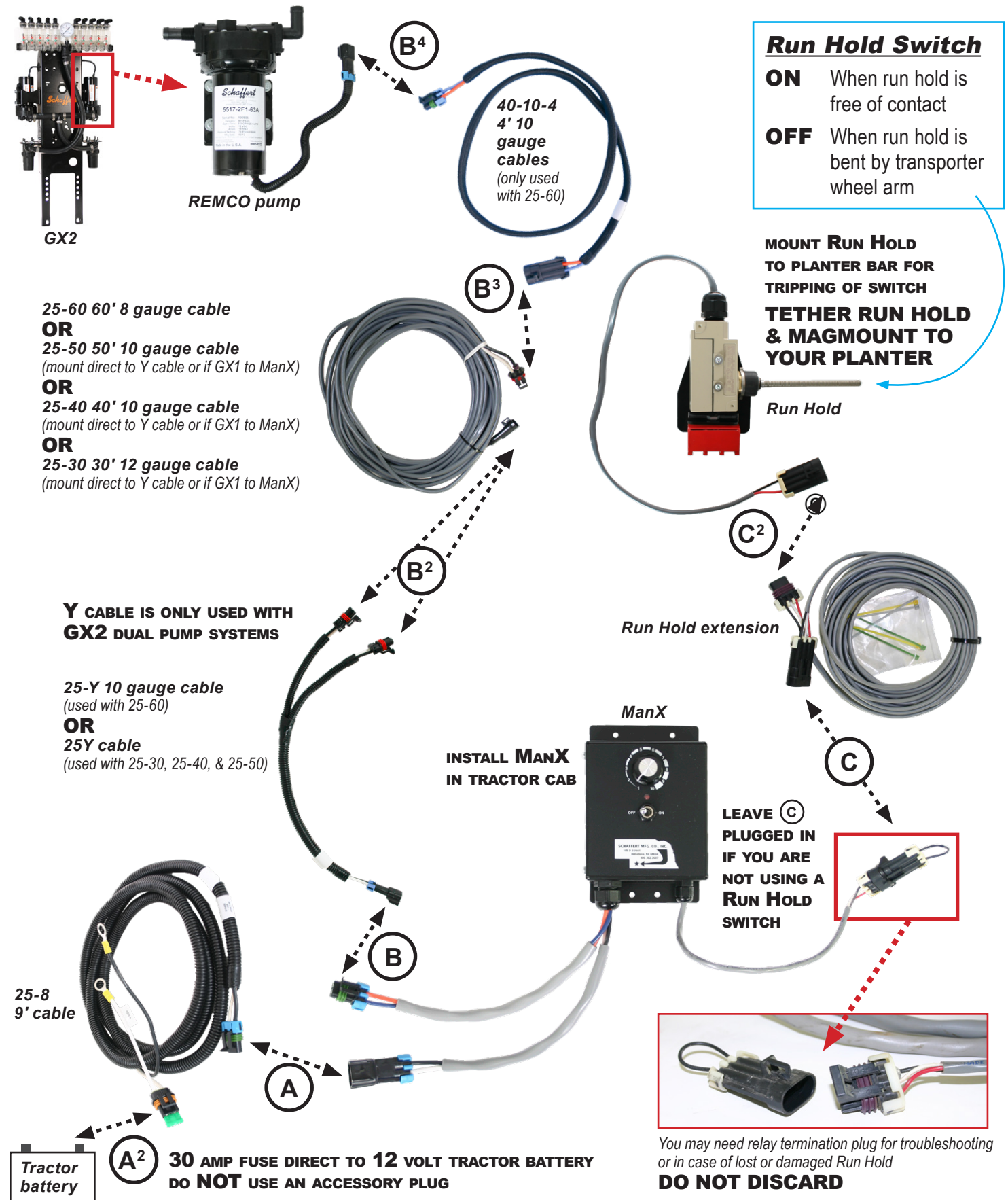
Run the 1/4" orange or black tubing from the mounted pressure gauge to quick connect on the 3/4" tee assembly that taps into the system's main plumbing.

This tee assembly connects the 3/4" black rubber hose coming from the 80 mesh filter on the main tower to the 3/4" black rubber hoses running to the wing manifolds.



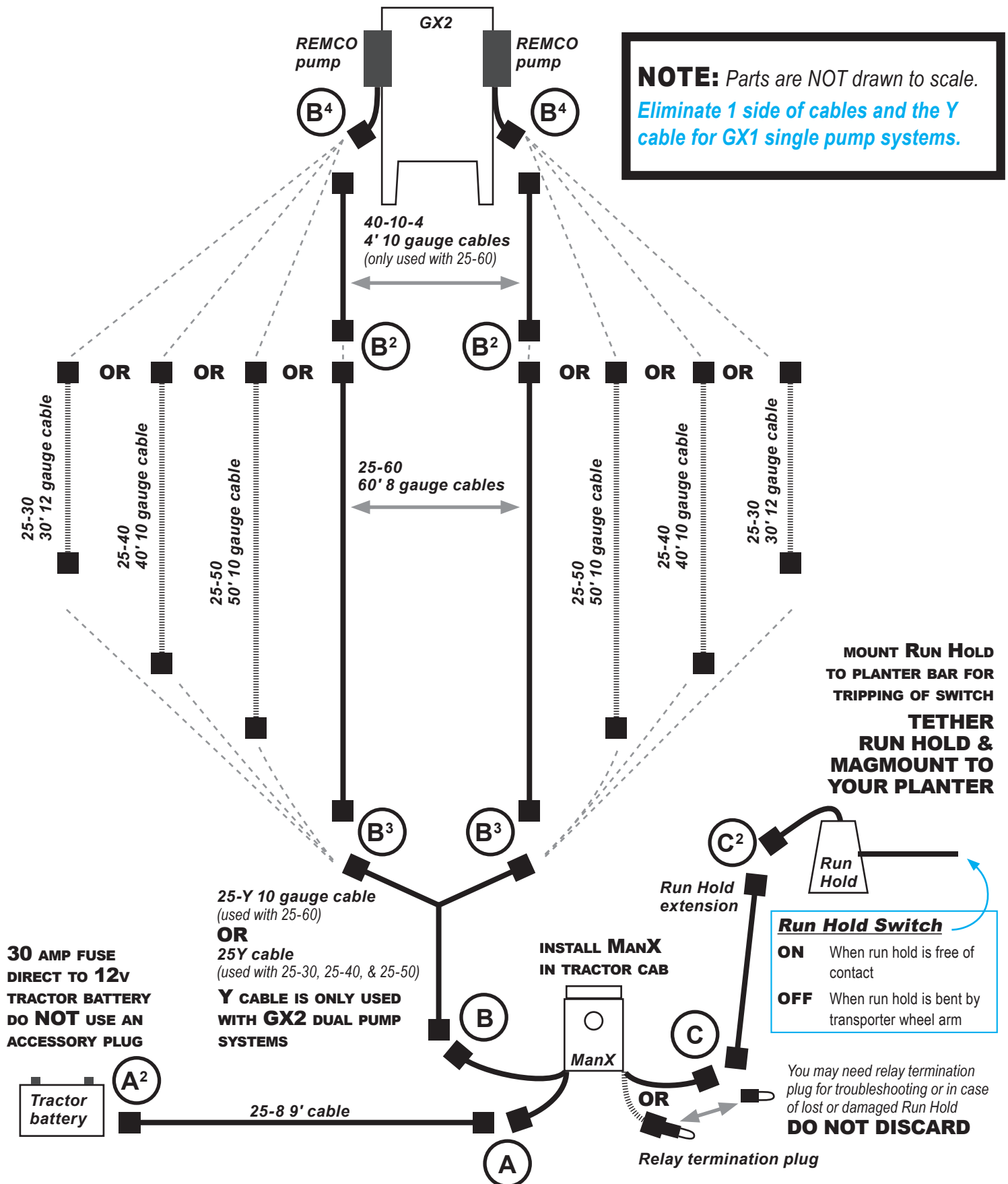
# PUMP SYSTEM MOUNTING INSTRUCTIONS

## Electrical Connections



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# PUMP SYSTEM MOUNTING INSTRUCTIONS

## ManX Controller

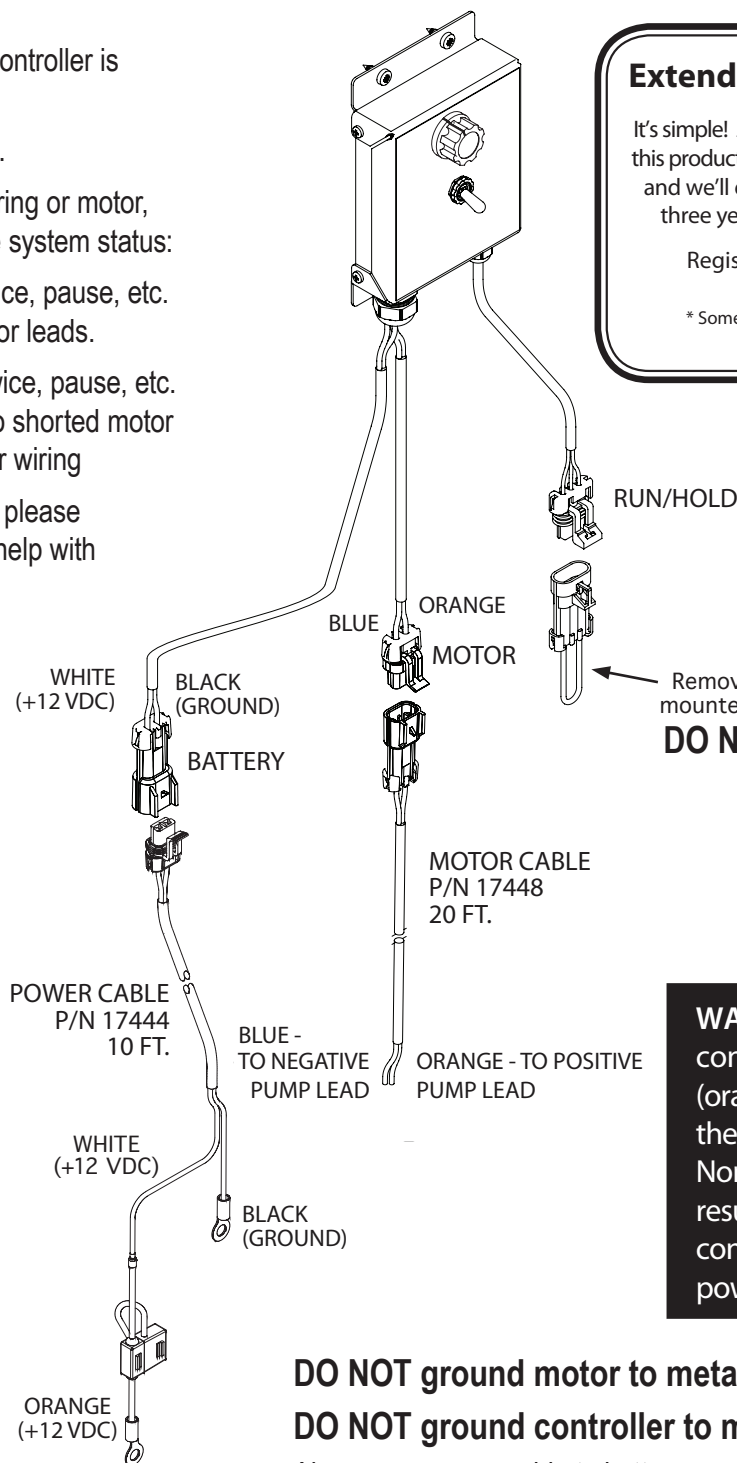
### RED STATUS INDICATOR LIGHT

1. On steadily if switch is on and controller is operating normally.
2. Flashes steadily when in **HOLD**.
3. If there is a problem with the wiring or motor, the light will flash to indicate the system status:
  - Flash once, pause, flash once, pause, etc.  
→ Open circuit, check motor leads.
  - Flash twice, pause, flash twice, pause, etc.  
→ Thermal overload due to shorted motor or motor leads, check motor wiring

If other system problems occur, please count the number of flashes to help with troubleshooting.

To clear a fault code, cycle power with the controller ON/OFF switch.

**For troubleshooting,  
contact Schaffert Mfg.  
308-364-2607**



### Extended Warranty Option

It's simple! Just complete the registration for this product **ONLINE** at [www.micro-trak.com](http://www.micro-trak.com) and we'll extend your warranty for up to three years\*, at no additional charge.

Registration information is for internal use only.

\* Some limitations apply. See warranty statement for details.

**WARNING:** DO NOT connect the motor leads (orange and blue wires) to the battery or power supply. Non-warranty damage will result if the motor leads are connected to the battery or power supply.

**DO NOT ground motor to metal**

**DO NOT ground controller to metal**

Always run power cable to battery

Controller controls speed of pump and pressure to rows or orifices

Grounding motor or controller can damage the controller

# PUMP SYSTEM MOUNTING INSTRUCTIONS

## Orifices: Wilger Columns

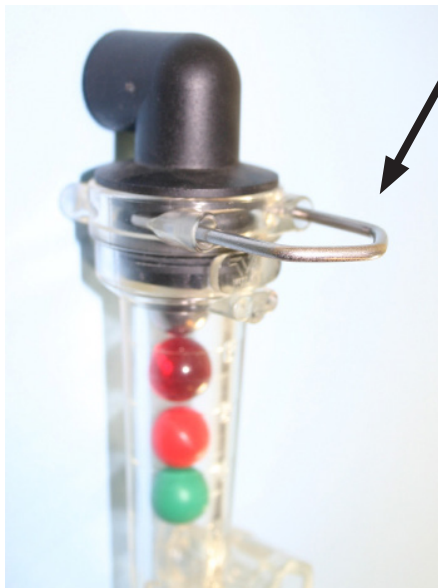
**! DO NOT RUN ORIFICES WITH SQUEEZE PUMPS.** *This cannot be done because squeeze pumps do not put out enough pressure for an orifice system. Squeeze pumps only put out 2-3 pounds of pressure.*

**NOTE:** *We normally recommend using only 1 orifice under pressure when running 7-15 lbs of pressure. However, using 2 orifices under pressure can be beneficial because it will help eliminate fertilizer splatter or misting/volatilization of fertilizer **when done in the following manner:***

- *Use the correct size orifice above for 15-30 psi pressures*
- *Use 2-3 times size orifice below, creating 5-7 lbs pressure to stream fertilizer into the soil*

**! NEVER USE 2 OF THE SAME SIZE ORIFICES IN YOUR SYSTEM!**

- STEP #1:** Remove the clip that holds the top onto the Wilger column.
- STEP #2:** Remove the top from the column. Use **caution** so as to not spill the balls in the column.
- STEP #3:** Insert the desired orifice into the column top you've removed. The "O" ring side goes in first.
- STEP #4:** Inside the top of the column, you'll see a pie shaped ball retainer. The retainer is not used when using an orifice, set it aside.
- STEP #5:** Select the weighted ball, for the solution you are using. In most cases the green or red ball will be used.
- STEP #6:** Reinstall the top with the orifice and reinsert the retaining clip.



# PUMP SYSTEM MOUNTING INSTRUCTIONS

## Orifices: Colored Disc

**! DO NOT RUN ORIFICES WITH SQUEEZE PUMPS.** *This cannot be done because squeeze pumps do not put out enough pressure for an orifice system. Squeeze pumps only put out 2-3 pounds of pressure.*

**NOTE:** We normally recommend using only 1 orifice under pressure when running 7-15 lbs of pressure. However, using 2 orifices under pressure can be beneficial because it will help eliminate fertilizer splatter or misting/volatilization of fertilizer **when done in the following manner:**

- Use the correct size orifice above for 15-30 psi pressures
- Use 2-3 times size orifice below, creating 5-7 lbs pressure to stream fertilizer into the soil

**! NEVER USE 2 OF THE SAME SIZE ORIFICES IN YOUR SYSTEM!**

## DIAPHRAM CHECK VALVE

When installing optional orifice in TeeJet or Wilger inline diaphragm check valves:  
Colored Disc Orifice assemblies under the check valve cap in most cases.

Drop the orifice with the hole down into the check valve body, then put the cap on top of it.

**IMPORTANT:** Do not use wrench on cap. Hand tighten only!

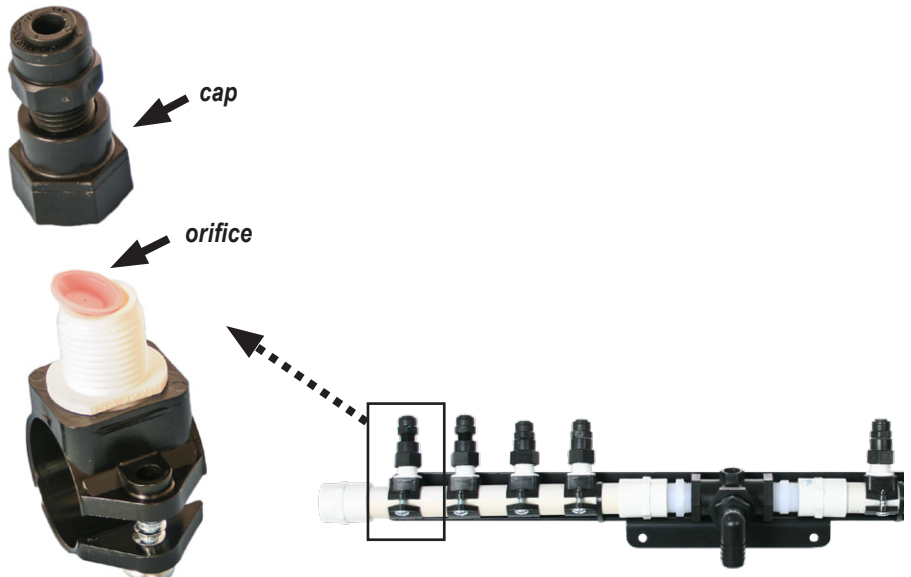


## PVC MANIFOLD

The orifice can also be installed in the PVC manifold.

Install orifice with dish down or convex side towards pressure to keep orifice from plugging or breaking.

**IMPORTANT:** Do not use wrench on cap. Hand tighten only!





# PUMP SYSTEM MOUNTING INSTRUCTIONS

## Orifices: Injector

**! DO NOT RUN ORIFICES WITH SQUEEZE PUMPS.** *This cannot be done because squeeze pumps do not put out enough pressure for an orifice system. Squeeze pumps only put out 2-3 pounds of pressure.*

**NOTE:** *We normally recommend using only 1 orifice under pressure when running 7-15 lbs of pressure. However, using 2 orifices under pressure can be beneficial because it will help eliminate fertilizer splatter or misting/volatilization of fertilizer when done in the following manner:*

- *Use the correct size orifice above for 15-30 psi pressures*
- *Use 2-3 times size orifice below, creating 5-7 lbs pressure to stream fertilizer into the soil*

**! NEVER USE 2 OF THE SAME SIZE ORIFICES IN YOUR SYSTEM!**

*The injector orifice is used for applying liquid fertilizer 2x2 with either the G2's high pressure kit or the 2x2 fertilizer tube for Case IH.*

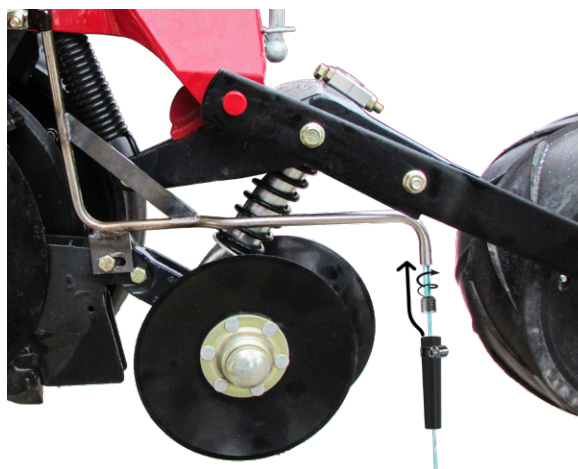
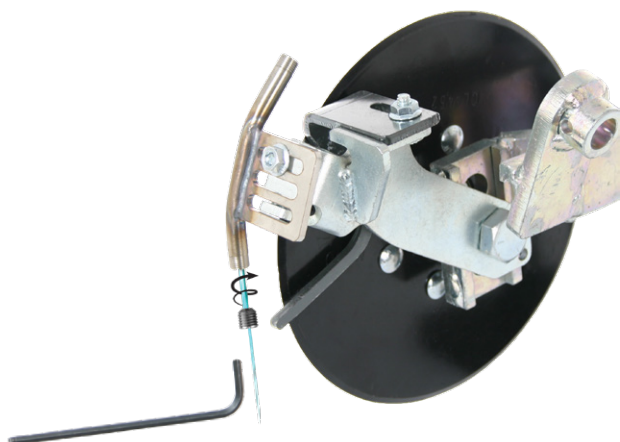
Use an Allen wrench to screw orifice inside threaded 3/8" stainless steel tube.



ORIFICE END



HEX END



## Troubleshooting the 2x2 Fertilizer Tube & Injector Orifice

PROBLEM	SOLUTIONS
Filings and crud in tubes and fertilizer application system from the manufacturing process	<b>USE WATER TO FLUSH</b> your entire fertilizer application system and the fertilizer tubes out before use and before installing injector orifices. This will clean out all the crud and filings left over from the manufacturing process and also test for leaks.
2x2 fertilizer tubes are plugging	Use 50 or 80 mesh filters ahead of the tubes to keep them from plugging.
Injector orifice will not thread into 2x2 fertilizer tube	Use a 5/16-24 standard tap threader to clean out the tube's threads. During the manufacturing process, filings and crud can get lodged in the threads.