

PUMP SYSTEM MOUNTING INSTRUCTIONS

Schaffert Fertilizer Application System



Schaffert
manufacturing & sales

PUMP SYSTEM

MOUNTING INSTRUCTIONS

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.

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.

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PUMP SYSTEM MOUNTING INSTRUCTIONS

GX1 GX2 Tower & Manifold

Step 1: GX1 or GX2 pump system mounts on most bars from 4" x 4" to 8" x 16"

Step 2: Bolt the center PVC manifold or visual Wilgers on the 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).

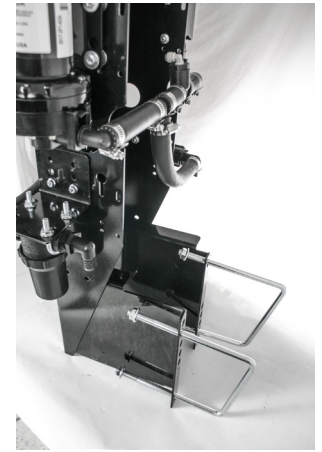
Step 4: Mount these to each wing bar with the u-bolts provided.



1



GX2 shown mounted on Landoll 8"x16" bar



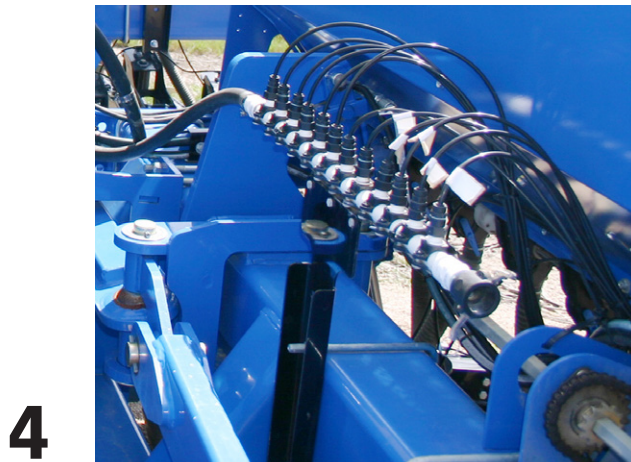
2



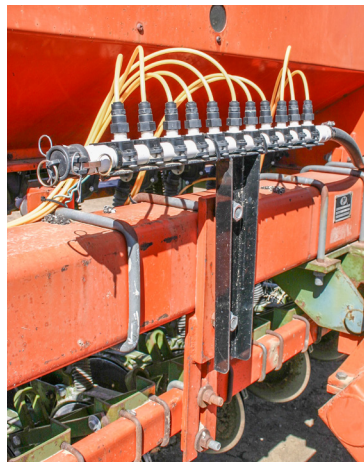
3



Wing manifold mount swivels for best view



4



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:

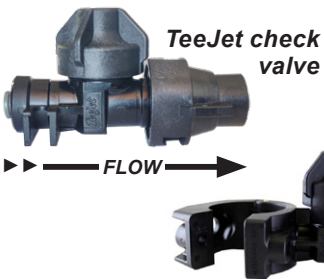
Run the individual 1/4" black line from the tops of the manifolds down to the row.



Hoses running from PVC manifold

STEP #2:

Connect black hose to the TeeJet check valve.



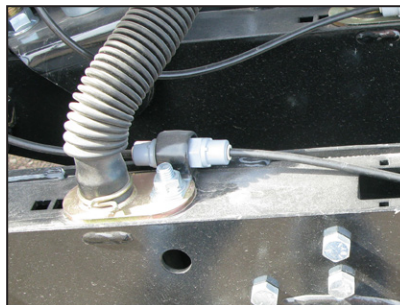
TeeJet check valve



#5 check valve



PVC 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



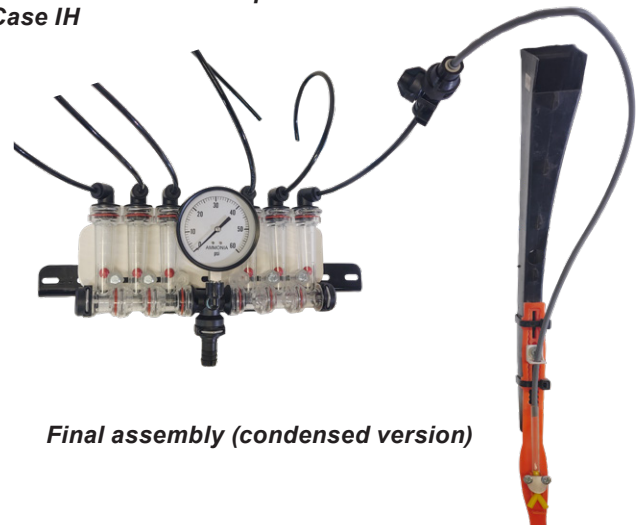
Rebounder with Straight Shot fertilizer attachment



2x2 fertilizer tube setup on Case IH



G2 2x2 fertilizer disc setup



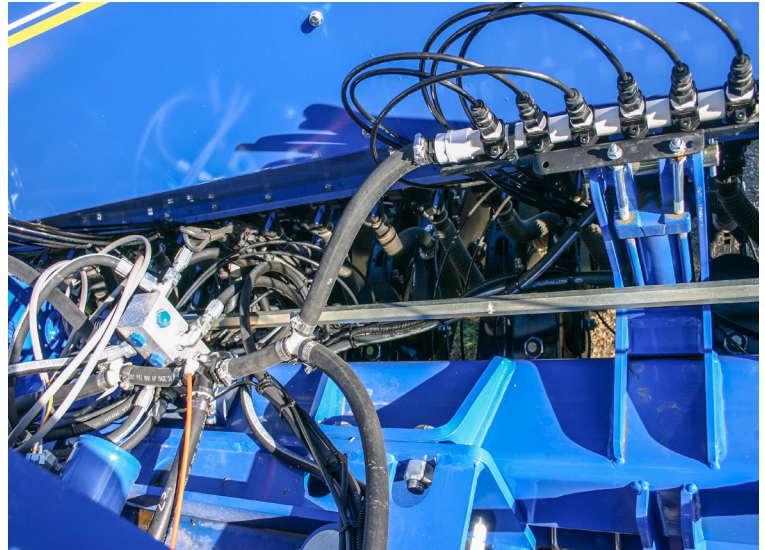
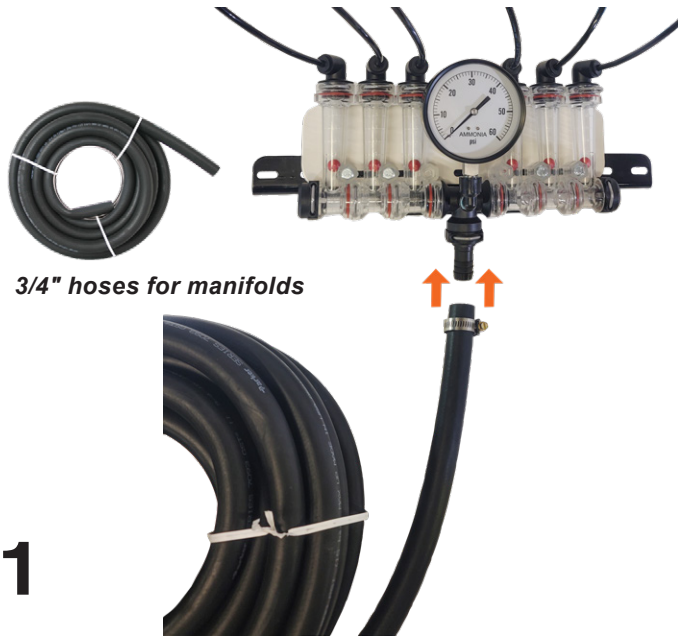
Final assembly (condensed version)

PUMP SYSTEM MOUNTING INSTRUCTIONS

Running Hoses : Main Lines

Step 1: Run the 3/4" hose to 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 the hose into the fitting.



Tank (not included)



3/4" ball valve

50 mesh filter



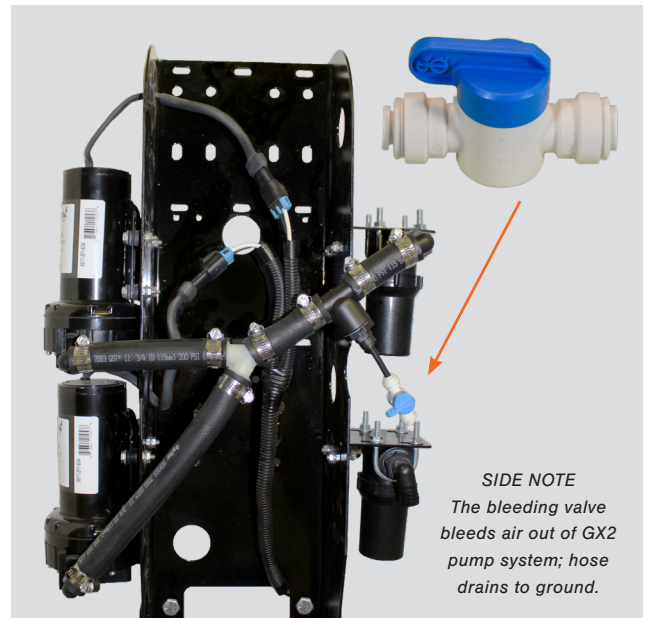
See bottom left image for picture example.



50 mesh filter

3/4" ball valve

Tank



SIDE NOTE
The bleeding valve bleeds air out of GX2 pump system; hose drains to ground.

PUMP SYSTEM MOUNTING INSTRUCTIONS

Pressure Gauge

Pressure gauge is pre-assembled and built into the manifold.



Pressure gauge assembly options

DIRECT TO MANIFOLD



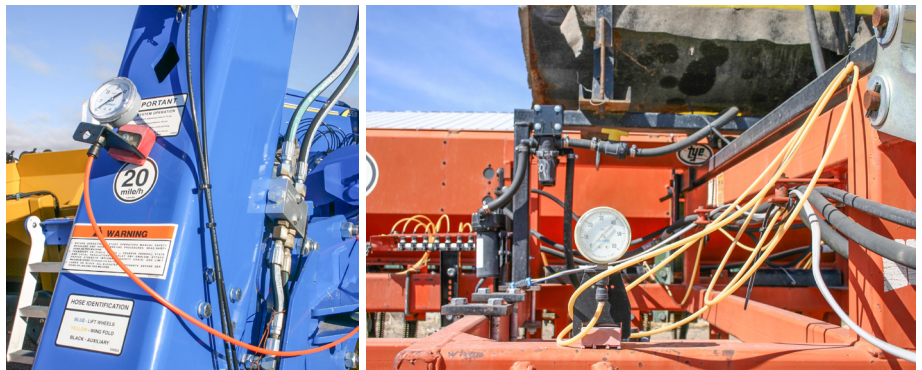
optional REMOTE PRESSURE GAUGE KIT

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.



Side mount gauge & Magmount



Run the 1/4" 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.

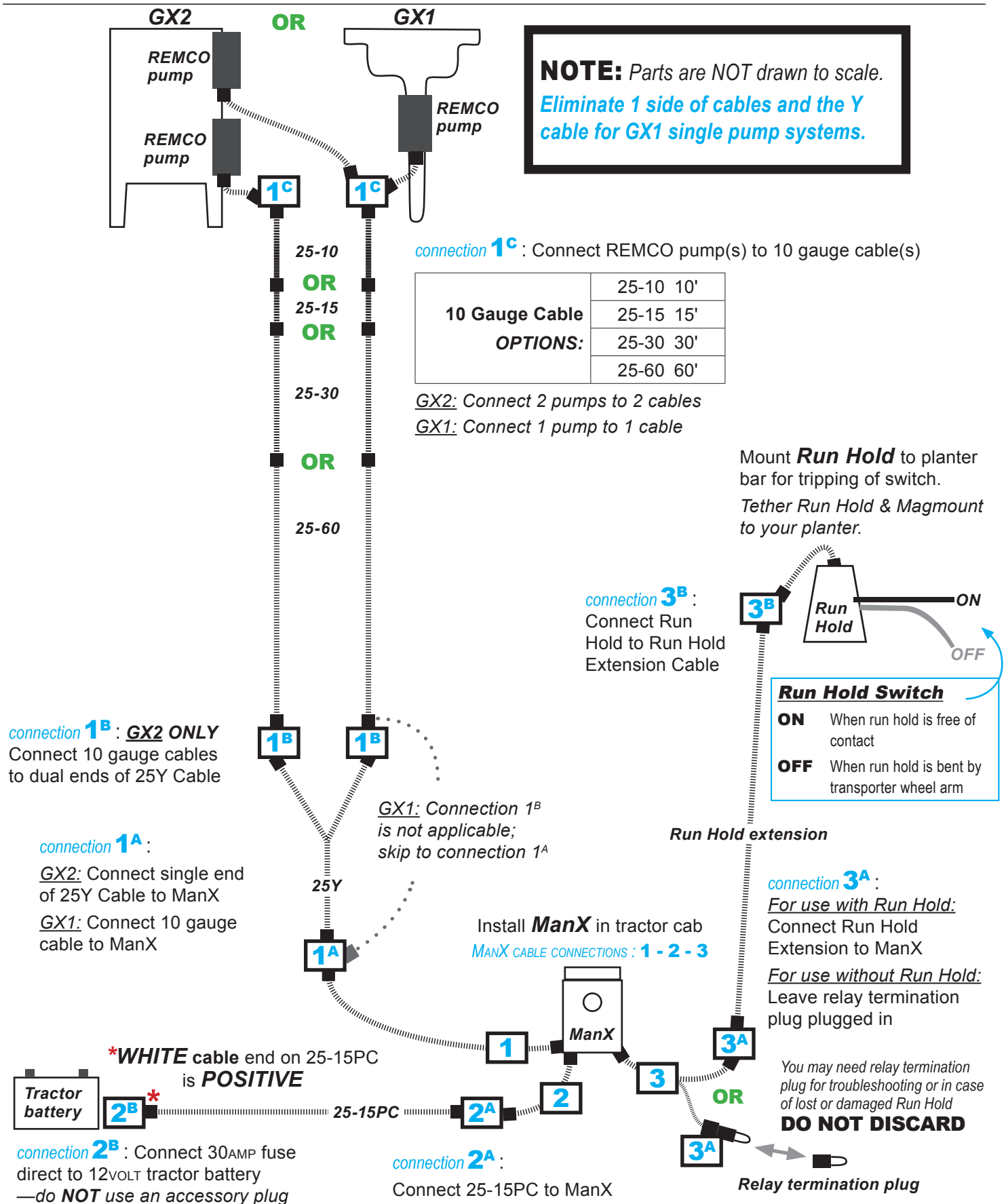


Top mount gauge & Magmount



PUMP SYSTEM MOUNTING INSTRUCTIONS

Electrical Connections



PUMP SYSTEM MOUNTING INSTRUCTIONS

ManX Controller

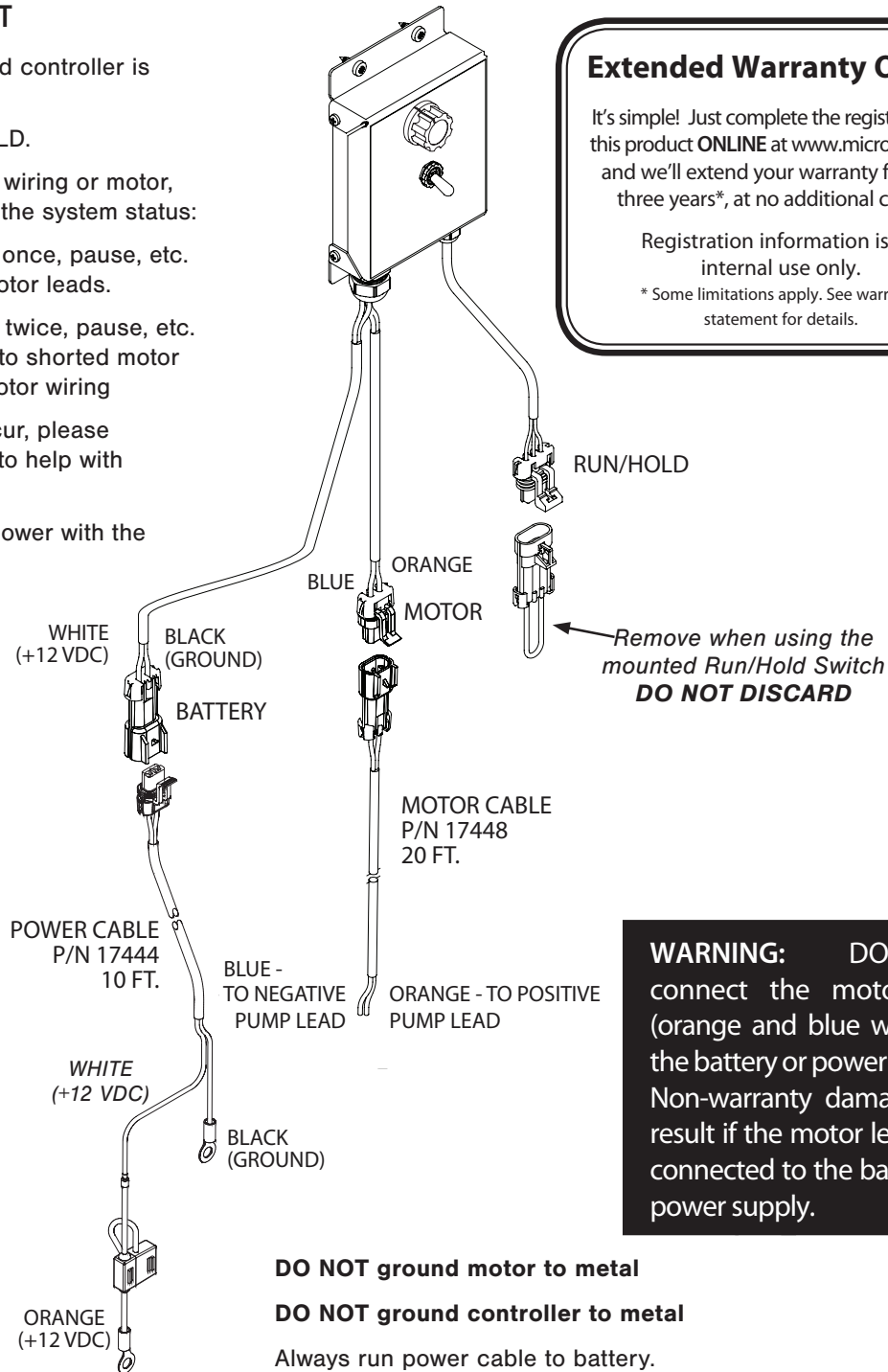
RED STATUS INDICATOR LIGHT

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 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:***

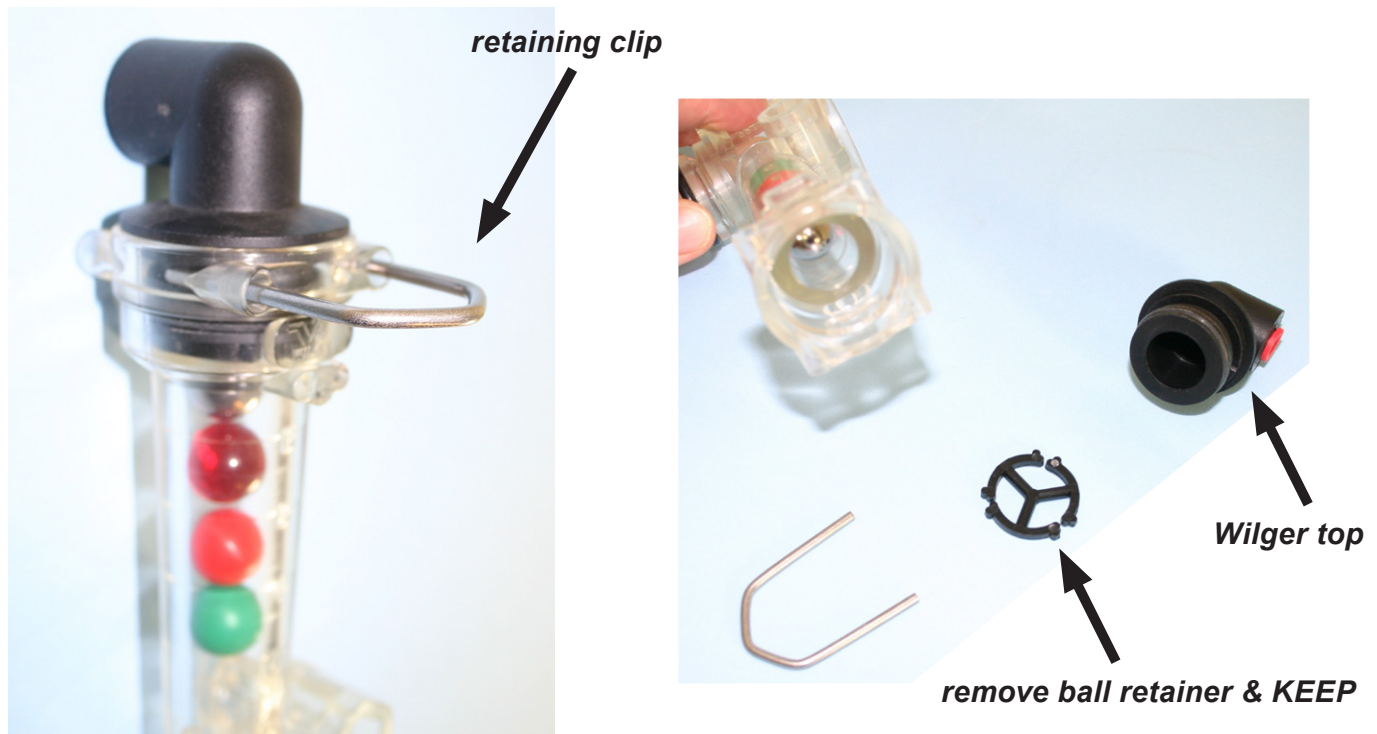
- *Use the correct size orifice above for 15-30 psi pressures*
- *Use 2-3 times size orifice below, creating 5-7 lbs pressure to stream fertilizer into the soil*

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

Step #1: Select proper ball for rates and place in columns.

Step #2: Insert pie-shaped ball retainer.

Step #3: Install Wilger top and secure with clip.



PUMP SYSTEM MOUNTING INSTRUCTIONS

Orifices : Colored Disc

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- 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!

DIAPHRAGM CHECK VALVE

Remove seal from cap and insert orifice into the grooves in the seal.

Place orifice and seal dish up into cap. Reinstall cap on check valve body.

IMPORTANT: Do *not* use wrench on cap, hand tighten only!



orifice in seal in cap



TeeJet check valve with orifice in seal and cap



PVC check valve

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!

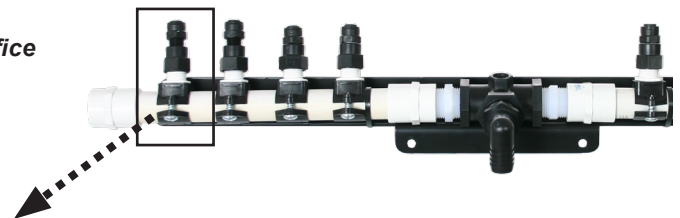
Note: This PVC Manifold is an older style, this is reference only for customers who still have this version.



cap



orifice



PUMP SYSTEM MOUNTING INSTRUCTIONS

Orifices : Injector

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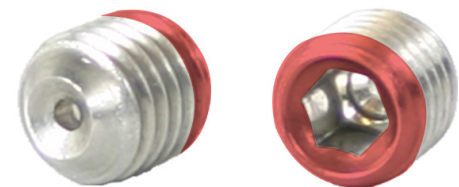
NOTE: We normally recommend using only 1 orifice under pressure when running 7-15 lbs of pressure. However, using 2 orifices under pressure can be beneficial because it will help eliminate fertilizer splatter or misting/volatilization of fertilizer *when done in the following manner:*

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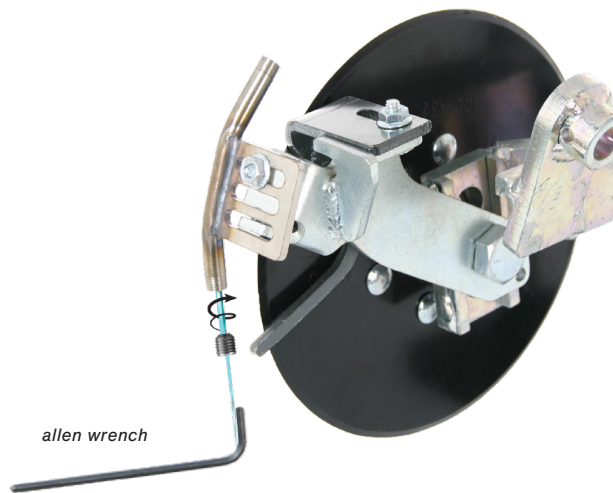
The injector orifice is used for applying liquid fertilizer 2x2 with either the G2's high pressure kit or the 2x2 fertilizer tube for Case IH.

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

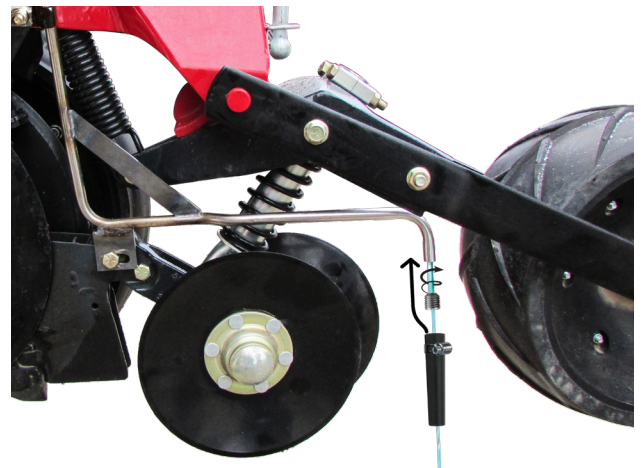


ORIFICE END

HEX END



allen wrench



TROUBLESHOOTING THE 2X2 FERTILIZER TUBE & INJECTOR ORIFICE

Problem	Solutions
Filings and crud in tubes and fertilizer application system from the manufacturing process	USE WATER TO FLUSH your entire fertilizer application system and the fertilizer tubes out before use and before installing injector orifices. This will clean out all the debris 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 debris can get lodged in the threads.