**“OUT THE BACK”**

**FERILIZER DISC MOUNTING INSTRUCTIONS**

*PATENT PENDING*

John Deere, Kinze, and White Planters

(Read Instructions Completely before Beginning Installation)

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**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.

**Mounting Instructions!**

Before you begin, verify the “package contents” to ensure all items are included.

**Step #1:** Insert the spindle bolt (does not matter which end) into the bottom, rear hole under the stop tab, of the mounting bracket. Insert up to the shoulder of the bolt and tighten down with a 5/8” full nut.

**Step #2:** Remove the left presswheel and bolt the mounting bracket with adjustable depth stop in place using the 5/8” x 1 1/2” bolts with full nuts on Kinze / White planters - use the 5/8” x 1 1/4” button head bolts with jam nuts on JD late 7300 - XP 1700 planters. (Install using 3/8” hex bit). Be sure mounting surface is flat and smooth. (Fig. A)

**Step #3:** Slide the walking arm over the spindle bolt making sure the angled arm is toward the front of the planter and the straight arm for the disc is toward the back. Slide a 5/8” washer onto the shoulder of the spindle and tighten down with the (2) 5/8” jam nuts against each other, so they don’t bind the arm. (Figure A).

**Step #4:** Insert 3/4” bolt from the backside of the straight arm, slide on the 3/4” flat washer, then the 8” steel disc with the hub facing out. Tighten down with the 3/4” jam nut and attach fertilizer hose. (Figure A).

**Step #5:** You are now ready to reinstall the presswheel to the front of the fertilizer arm. IMPORTANT: Be sure to use the 5/8” lock washer provided as a spacer, or your original spacer between the plastic wheel and the fertilizer arm. There are 4 holes of adjustment on the arm for the press wheel. The bottom hole will let the Fertilizer disc run approximately 2” deep. The top hole will let the Fertilizer disc run approximately 1/2” deep and the 2 middle holes allow for additional adjustments in 1/2” increments.

**Option 1:** 0-10 gal./acre - Insert the 6” Anhydrous type hose over the bottom of the stainless steel tube and clamp down with the hose clamp. Insert black or grey hose through the stainless tube until 1/4” to 1/2” of hose is past the bottom of the anhydrous hose as shown in Fig. B. The NH3 hose will keep the smaller hose from splattering fertilizer.

**Option 2:** 10 gal./acre or more - Insert the 6” anhydrous hose over the bottom of the stainless steel tube and clamp with the hose clamp. Use the second hose clamp to attach anhydrous (not included) coming from the manifold to the top of the stainless tube as shown in Fig. C.

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**Fertilizer Disc Package Contents (per single row)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4 x 2” bolt</td>
<td>1</td>
</tr>
<tr>
<td>5/8” nuts (Kinze/White)</td>
<td>4</td>
</tr>
<tr>
<td>5/8” jam nut</td>
<td>2</td>
</tr>
<tr>
<td>5/8” flat washer</td>
<td>1</td>
</tr>
<tr>
<td>5/8” lock washer</td>
<td>1</td>
</tr>
<tr>
<td>3/4” washer w/ trash deflector</td>
<td>1</td>
</tr>
<tr>
<td>spindle bolt</td>
<td>1</td>
</tr>
<tr>
<td>3/4” jam nut</td>
<td>1</td>
</tr>
<tr>
<td>BDH 8” steel disc</td>
<td>1</td>
</tr>
<tr>
<td>NH3 Hose 6”</td>
<td>1</td>
</tr>
<tr>
<td>Hose Clamp</td>
<td>2</td>
</tr>
<tr>
<td>Fertilizer Disc Arm</td>
<td>1</td>
</tr>
<tr>
<td>Small Mt. Bracket</td>
<td>1</td>
</tr>
<tr>
<td>3/8” Set Screw (installed at factory)</td>
<td>1</td>
</tr>
<tr>
<td>Instruction Sheet</td>
<td>1</td>
</tr>
</tbody>
</table>

**Depth Stop Package Contents (per single row)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8 x 1-1/4” bolts (button head JD)</td>
<td>2</td>
</tr>
<tr>
<td>3/4 x 2” bolt</td>
<td>1</td>
</tr>
<tr>
<td>5/8” x 1 1/2” bolt (Kinze/White)</td>
<td>2</td>
</tr>
<tr>
<td>5/8” jam nuts</td>
<td>2</td>
</tr>
<tr>
<td>Depth stop bracket</td>
<td>1</td>
</tr>
</tbody>
</table>
“OUT THE BACK”
FERTILIZER DISC ADDITIONAL INSTALLATION INFORMATION
*PATENT PENDING*

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.

**TIP:** try to keep pressures for injection nozzle at 15# or less to eliminate splashing of fertilizer.
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.

Additional Adjustment Tips

Due to irregularities in factory tail sections and wheels on some planters the rough castings may need to be ground down a little so our liquid bracket will bolt up and be properly positioned so the liquid disc and press wheel will run straight. (Fig a) shows how the fertilizer disc bracket needs to be positioned on the tail section. Sample shown is the John Deere tail section. The spindle bolt we provide with each kit must be level and 90 degree to the center line of the row unit. Check adjusting cams or slots to make sure the tail section is tracking straight behind the opening discs and planter unit, and tires are evenly spaced from where the furrow is made. It is very important that the liquid disc runs straight. If standard adjustments don’t correct the problem to make the disc run straight then you might have to bend the arm or mounting plate to make things run straight.

If loose dry worked soils make the disc run deeper than normal—move the press tire up in the mounting bracket. If this doesn’t correct the problem of depth then loosen up on the down pressure of the tail section. Some pressure is necessary on the press wheel so the disc doesn’t nose dive in to the soil past the hub. If the disc still wants to nose dive too deep into loose soils then call us for a bracket to put the tire forward and the disc out behind the planter.

If planting in firm or hard soils you may have to increase the down pressure by one notch on the press wheel bracket. In normal planting conditions you probably won’t have to increase the pressure on the press wheels. The liquid disc helps eliminate side wall compaction on the side it runs, thus letting the press wheel firm soil over the seed trench better.

Sometimes in heavier wetter soils more down pressure needs to be added to the row units so proper pressure is exerted on the press wheels. Keeping seed boxes full in conditions like this also helps. When you increase down pressure on the press wheels in reality you put up pressure on the row unit making the double discs plant shallower when seed boxes get low. This is why it is better many times to increase the air pressure or add heavy duty down pressure springs to the planter units. Many times adding the Furrow V Closer to each row will let you run the same pressures you normally run in conventionally tilled fields giving you excellent seed to soil contact.

We have experimented with the Furrow V Closer in firm soils on the opposite side of the liquid disc and it helps to break up side wall compaction and fill in the seed V. Another alternative in firm soils would be to add some type of finger wheel opposite the liquid disc in the place of the press wheel. As of yet we have not experimented with a finger wheel on the side with the liquid disc. If the finger wheels are larger in diameter than the regular press wheel then they probably won’t work. Drag chains probably won’t work either unless you lengthen them out. The disc sets the press wheel back about 7” which would interfere with the drag chain.

CONTINUED ON BACKSIDE....
(Fig b.) Take the short piece of NH3 hose provided in the kit and grind a little groove in from the end that contacts the ground so the fertilizer won't slop around when running in the field in heavy residue or rough ground. This helps keep fertilizer off the press wheel.

High pressure injection with the fertilizer disc probably will not work very well because the nozzle will have to be connected to the pivot arm of the walking beam of the fertilizer disc. This would cause fertilizer to splash up on the press wheel. We have made a walking beam where the press wheel goes in front and the disc behind so you can put an injector nozzle on the disc behind the planter. Call for details. (Fig c.) With the disc behind the planter in drier soil conditions the fertilizer slice may cause the moisture to wick out in this area causing the seed slice to dry out. This can happen when running the disc 2” deep.

As of yet we haven’t developed a mud scraper for the press wheels with the new liquid disc attachment. We will be looking at that in the near future.

We at Schaffert Mfg. Co. value our customers and their ideas as many good things come from people like you running products like this. Also help us write better mounting instructions or if you have questions about trouble shooting write them down or call us with suggestions.
Adjusting Closing Wheel Down Force

NOTE: Closing wheel down force can affect seed placement and depth. Do not use more force than necessary to close seed furrow especially in light soils.

Angled closing wheels trail behind seed opener and close the seed trench created by openers. The closing wheels firm soil on each side of seed, not directly over seed. Adjustable spring-force permits proper closing of seed trench.

Place handle in slots (A), (B), (C) and (D) to adjust down force for varying ground conditions. Placing handle in middle slot (E) will allow closing wheels to FLOAT with only the weight of closing wheel system on soil surfaçe.

A - Slot A (Min)
B - Slot B
C - Slot C
D - Slot D (Max)
E - Slot E (Float)

Centering Closing Wheels

If closing wheels (A) are not centered over seed furrow proceed as follows:

1. Raise machine
2. Loosen cap screws (B) and adjust closing wheels to right or left. Visually center as required.
3. Tighten cap screws (B)

A - Closing Wheels
B - Cap Screws
Adjusting Closing Wheel Spacing

NOTE: Spacing between closing wheels is adjustable so closing system can be tailored to meet the requirements of planting small seeds at shallow depths.

To change spacing, remove nuts and spacers (A). Install closing wheels with spacers located to the outside (for narrow spacing) or to the inside (for wide spacing)

A - Nuts and Spacers

Staggering Closing Wheels

In mulch till or no-till conditions, residue or root balls may get lodged between closing wheels. To reduce the chance of this happening remove one closing wheel from planting unit and install in rear hole (A) of casting.

A - Rear-Hole