

# THE LEADING EDGE

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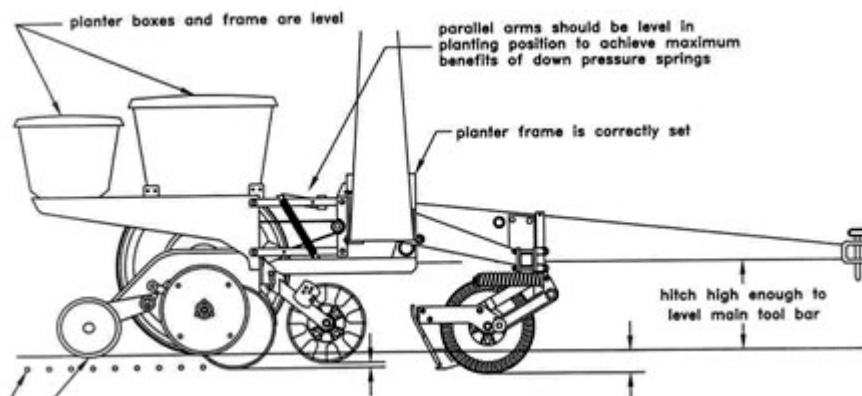
**A PUBLICATION DEDICATED TO MAXIMIZING YIELD POTENTIAL**

## **No-till Planting Trouble Shooting Guide**

### **√ Preliminary Checklist for all Planters regardless of Make and Model**

**It is recommended that the following items be checked before planting:**

- Make sure tire pressure on the planter is set to the operator manual's recommendations
- Make sure the seed double disc openers are set properly and not excessively worn
- Remember to plant with the planter frames and planter units level with the soil
- When planting make sure the planter hitch is set no lower than the recommended height as stated in the planter's operator manual
- Make sure the soil is not too wet. If the soil is too wet, any coulter attachments on the planter will not be able to adequately break up the soil, and the closing wheels will merely pack the damp soil over the seed instead of effectively firming it. As a result, the potential drying and cracking of the seed trench may leave the seed bed exposed and possibly effect seed germination.
- Make sure the soil has had sufficient time to warm up. IF time and weather permit, it may be necessary to delay planting for an additional period of time compared to conventional tillage practices.



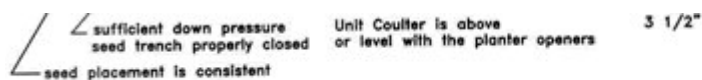


Illustration I. – Planter which has been leveled

Notice the planter frames and the planter boxes are level with the soil. It is very important for the planter to be level when no-till planting. In most cases, the planter will be outfitted with one or more attachments to enhance the performance of the planter under no-till conditions. These attachments are designed to operate in a specific range of depth (*notice in the above illustration that the unit mounted coulters is running  $\frac{1}{2}$ " above the seed double disc openers while the frame mounted fertilizer coulters is running at a depth of  $3\frac{1}{2}$ "*). These are ideal depths and are only obtainable when the planter is level. Also notice that seed placement is consistent.

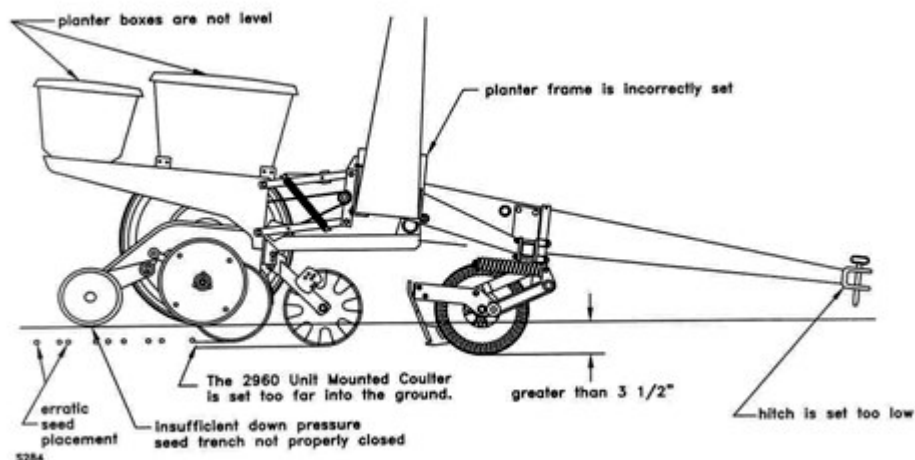


Illustration II. – Planter which has not been leveled

For conventional tillage practices this configuration will work, however, this is not the case with no-till farming. With the planter in this position, the unit mounted coulters is running below the seed double disc openers, and the frame mounted fertilizer coulters is running at a depth greater than  $3\frac{1}{2}$ ". These depths are not recommended as they will greatly affect the performance of each attachment. For example, with the unit mounted coulters running below the seed double disc openers, the formation of air pockets below the seed is very likely. Also, notice from the illustration that seed placement is erratic.

### ✓ In-the-field Checklist for all Planters regardless of Make and Model

**It is recommended, while in the field, the following periodic checks be made to ensure the effectiveness of your planter and planting methods:**

- Make sure the closing wheels are adequately closing the seed trench. The closing wheels require a certain amount of loose soil in order to effectively close the seed trench.
- Make sure the planter frames and planter units are level with the soil. This is done while the planter is lowered in its normal

planting position. An unlevelled planter can cause one or two things. First, it may prevent the closing wheels from sufficiently firming the seed trench. Second, it may force the unit mounted coulters too deep into the soil causing them to work soil at a level below seed placement. This may result in the formation of air pockets below the seed which may effect the germination of the seed.

**For the following some soil may need to be removed from the top of the seed trench for visual verification .**

- Make sure there is good soil to seed contact.
- Make sure the seed is planted deep enough and in a moist seedbed.
- Make sure residue is not being hairpinned into the seed trench. Residue which becomes lodged in the seed trench, will tend to draw moisture out and away from the seed.

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Remedy</b>
Seed trench not closing	Insufficient down pressure on the closing wheels	Increase the down pressure on the closing wheels
	The unit mounted coulters are not providing enough soil disturbance	Ensure that <i>in operation</i> the planter hitch is set to the correct height (consult the planter's operator manual)  Use wavy coulters blade  Adjust coulters blade no deeper than seeding depth  Install spike closing wheels
Poor soil to seed	The planter unit and or frame mounted coulters are running too deep	Properly adjust coulters height & ensure that in operation the planter hitch is set to the correct height

contact	The double disc openers are excessively worn	Replace the openers
	The soil is too wet	Allow the soil time to dry
Seed being planted too shallow	Excessive down pressure on the closing wheels	Decrease the down pressure on the closing wheels
	The planter needs additional ballast	Add ballast to the planter
	The double disc fertilizer openers are causing too much soil disturbance in the path of the seed double disc opener gauge wheels	Double disc fertilizer openers should be mounted a minimum distance of 2 ½" – 3" from either side of the row or the planter should be equipped with single disc fertilizer openers
	Damp soil is collecting on the seed double disc opener gauge wheels	Allow the soil time to dry
	Planter unit depth is improperly set	Adjust the depth setting of the planter unit
Erratic seed	Excessive residue in the seed trench	Use a residue clearing device
	Low tire pressure	Inflate tires to the recommended psi
	Excessive speed causing the planter unit and the unit mounted coulters to bounce	Decrease planting speed and increase down pressure spring tension
	Dry drive chains causing jerky movement	Lubricate drive chains
	Planter unit bounce	Add ballast to the planter

placement		
Starter fertilizer is not being placed in the proper zone by the double disc fertilizer openers	Most double disc fertilizer openers are not built for pinpoint fertilizer placement	Equip planter with single disc fertilizer openers for pinpoint fertilizer placement
Row markers are not leaving a visible mark	Row markers are too light or incorrect marker blade setting is being used	Use a notched marker blade or reset angle of marker blades

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