8 Key Pre-Season Planter Checks

1. **Thorough Cleaning and Lubrication:**
   Prior to making any repairs or adjustments make sure to give your planter a thorough cleaning. This includes removing seed and insecticide boxes, seed tubes and depth wheels. Dirt and other foreign objects can work themselves into tight places causing unnecessary wear on bearings, bushings and chains. This also makes checking tolerances on openers, seed tubes and meters easier to accomplish. Dirty or worse rusty chains can bind and cause issues in seed placement or singulation, so make sure to use an approves lubricant on all recommended areas.

2. **Make sure all row units are running level:**Check the hitch height. Each planter has a recommended height that the hitch is to be operated at, depending on tractor, tire height and soil conditions this setting can and will change. Traditionally the hitching point will run slightly uphill from the main frame of the planter. **Read and follow the manufacturers recommendation for your planter model**. A hitch running too low will cause openers to run deep, causing a false bottom to the seed trench and inadequate pressure on the closing wheels. A hitch riding too high can have the opposite effect. Once you have obtained the correct height check your parallel arms of each row unit. Do they run level to the soil, if not check hitch height or bushings for wear, allowing for free play within each arm. View each row from the back as well, do they track straight or is there movement from side to side?

3. **Disc openers and Depth Wheels:**
   Disc openers need to be checked for wear of both cutting surfaces and bearings. Make sure all openers can turn freely when properly adjusted. Replace any opener that has loose or frozen bearings. You will also need to measure the diameter of each opener to make sure it is still within recommended specifications of the manufacturer.

8	New opener diameter	Minimum diameter
IH 400/500	13.5 inches	13 inches
CIH 800/900/950/955/1200	14 inches	13.5 inches
JD	15 inches	14.5 inches
Kinze	15inches	14.5 inches
White 5100/5700	13.5 inches	13 inches
White 6000 series	15 inches	14.5 inches
White 9000 series	15.75 inches	15.25 inches

   Check all depth wheels for cracks, splits and overall wear. Wheels should rub firmly against the disc opener when in the planting position, this ensures no soil will fall into seed furrow. Re-shim or install eccentric bushings to obtain the proper depth wheel setting. Lastly run a row by row check on depth control. Each row is unique, since each has run across different soil conditions since installed new. Do not take for granted that each row should be set at the

same setting to achieve uniform seed depth. Place blocks (a 2x4 will work) under each set of depth control wheels and measure from bottom of disc openers to a hard surface. Make note of any differences +/- on depth stop.

4. **Meter drive system:**
   Whether your planter is ground driven or hydraulically driven with GPS, a smooth seamless transition of power is necessary for accurate seed spacing. Worn or rusty chains can bind and cause shock to the drive system causing meters to misplace seed. Worn sprockets will catch on chain links or allow for slippage of chains when placed under a load. Make sure hydraulic systems are free from leaks which can cause pulsing of hydraulic fluid initiating hydraulic motors to have uneven performance. Frequently check all chains and idlers to make sure they stay in like new condition throughout the planting season. Quickly replace if an issue arises.

5. **Meters and Seed tubes:**
   Uncalibrated or poorly maintained seed meters can cost 7+ bushel/acre losses. Throughout the year clean all meters with air and remove any buildup of seed treatments or lubricants. On vacuum planters check all discs, brushes, gaskets and airlines. Drums also need to be inspected for cracks and wear. If you are running a finger pick-up meter check fingers, springs, brushes and seed belts. We recommend to annually have meters run through a Meter Max test stand to make sure they maintain singulation accuracy. Seed tube most often wear at the bottom near the soil. If you notice uneven wear towards the left side it is time to replace them as well.

6. **Closing Wheels:**
   Getting complete seed to soil contact is the key purpose of the closing wheel system. Make sure the closing wheels are running evenly over the seed trench from side to side. In addition, make sure there is adequate pressure being applied to the soil from the closing wheels to press out air pockets. If you are planting into cool and moist soil conditions you may wish to consider the addition of an aftermarket closing wheel. Depending on how aggressive your system needs to be will dictate wheel size and combinations.

7. **Attachments:**
   Planter attachments such as row-cleaners, seed firmers and fertilizer all have proven to be valuable in row crop production. Make sure that they don't interfere with the principle activities of the planter. Unless it is going to improve your plant stand and maintain the uniformity of emergence you may wish to reconsider adding them to your planter.

8. **Be Safe:**
   There is no substitution for a safe work environment. Make sure your activities in the field are well thought out with both personal and employee safety in mind. What may seem like a quick fix, could end up costing time in a hospital or a life if precautions are not observed when working on any piece of farm machinery.