

eSet® Pro-Series™ Installation Instructions

Parts included:

1. Complete eSet Pro Kit, (720136)
2. Disk, (1)
3. Liner, (1)
4. Singulator, (1)
5. Mini Hopper, (1)
6. Short Brush Holder, (1)
7. Short Brush, (1)
8. Long Brush, (1)
9. Singulator Shim, (1)
10. Fragment Extractor, (1)
11. Vent, (1)
12. D-Tube, (1)
13. Vented Hopper Lid, (1)
14. Foam Gasket
15. Seed Deflector Cover Tube, (1)
16. Hardware Kit, (1)
 - A. ½" Pan Hi-Lo Screw, (720187) (20)
 - B. ¾" Hi-Lo Screw, (720188) (24)
 - C. Flat Washer, (720193) (4)
 - D. #6 Flat Hi-Lo Screw, (720046) (8)
 - E. M4 X 7 Flat Phillips Screw, (720259) (4)
 - F. #6-32 Flat Phillips Screw, (720070) (4)



The tools required for assembly include: knife, needle nose pliers, pliers, Flat and #2 Phillips screwdrivers, ratchet with 10mm socket, 7/32 nut driver, 5/16" bit, drill.

Some Planter Configurations will require additional parts.

Some planters will require additional components to complete installation of the ProFlow Hopper.

- **JD 1790 with 20" Rows:** Order one 720244 check-valve flap per eSet row and one 720196 Step Kit per planter. The check valve flaps prevent seed from flowing back into the seed supply tubes on rows that tip forward during transport. Check valve flaps are needed before installing eSet. The Step Kit (Part # 720196) is an extension that bolts on the existing step. This eliminates interference with the ProFlow hopper. The step kit is not needed on planters with the JD rear hitch.
- **JD 1790 with 15" or 30" Rows:** Order one Elbow Kit - 720206 (Order 1 kit that contains four elbows) This kit improves the routing of the supply tube to the ProFlow hopper on the center rows of this model planter.
- **JD 1790 with eSet installed on 15" Rows:** Order one 720244 check-valve flap per row.
- **2003 ProSeries Models:** Need part number A76666 (1 per row) plastic mounting bracket. In 2003, Deere used a fabricated metal mount bracket for the ProSeries Meter planters. The ProFlow hopper requires the plastic mount bracket or a modified metal bracket.
- **DB ProSeries Meter planters with more than 32 rows:** Inspect the elbows on the right front corner of the mini-hoppers on your current planter. Order one 720245 DB Y-Tube for each "Y" style elbow on your current planter. (One for each additional row over 32)

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eSet® Pro-Series™ Installation Instructions (Continued)

Step 1: Housing Preparation

Remove the **handle**, **shaft adapter**, and the **gearbox** from the drive shaft. Remove **both of the elbows** that are mounted onto the seed hopper (one on the outside and one on the inside). Remove the **clear plastic window** from the aluminum housing. Remove the **black plastic mounting bracket** from the seed hopper by prying in on the locking tab with a flat blade screwdriver and then sliding it out of grooves (2003 models have a green metal mount and you will need to purchase the black plastic mount or modify the metal mount). Remove the **10 screws** that retain the **seed hopper** to the meter housing and then remove the seed hopper. *Keep the handle, shaft adapter gearbox, mount bracket and all hardware for reassembly.* Remove the **brush and brush holders** from the housing. Prevent damage to the holders by using a needle nose pliers to pinch the tabs together from the rear.



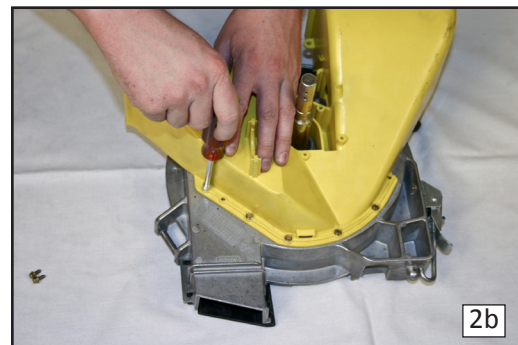
Do not discard any of your original JD parts. Keep the original parts so, when it's time to trade your planter, you can put the original components back into your old housings and keep your eSet system to install in your new planter.



Step 2: Install the ProFlow Hopper

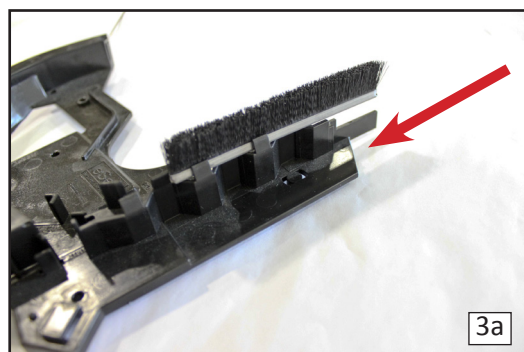
Insert the rubber lid strap into the housing before you install the Pro Flow hopper. (See Figure 2a)

Mount the Pro Flow mini-hopper using the screws you took out of the original mini hopper. (See Figure 2b)



Step 3: Insert the brush into the Liner

Locate the liner and push the long brush in from the end while bending the flexible finger that locks the brush in place. (See Figure 3a)

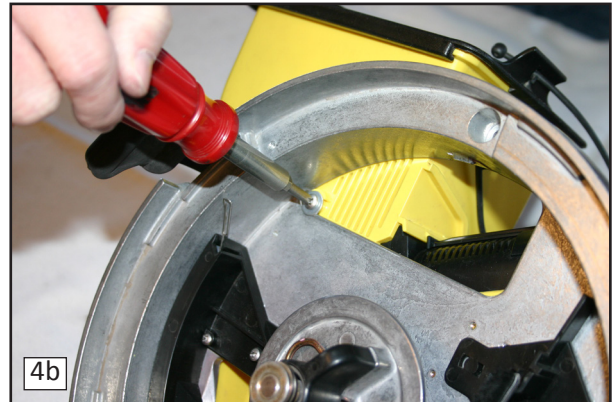
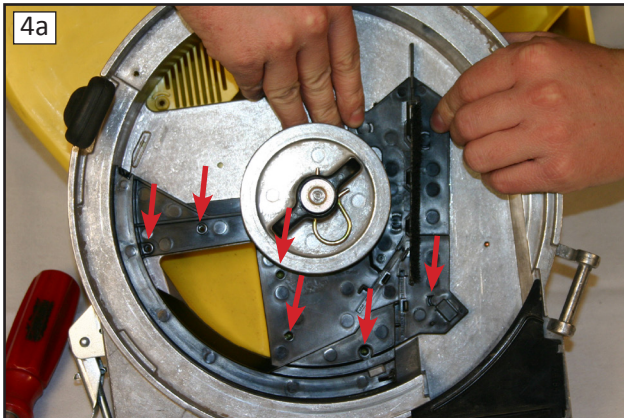


eSet® Pro-Series™ Installation Instructions (Continued)

Step 4: Insert the Liner into the Housing

Slide the liner underneath the hub, locate the snaps on the back of the liner with the holes in the aluminum housing and snap the liner into place ensuring that it is snug against the housing floor. Using Screw B ($\frac{3}{4}$ " Hi-Lo) provided, insert into the holes in the liner, through the aluminum housing and into the Pro Flow hopper. Tighten all six screws until snug. (See Figure 4a) Place the cover tube (720281) over the seed deflector. This will be used for all crops.

Insert Screw A ($\frac{1}{2}$ " Pan Hi-Lo Screw) and Washer C into the hole in the hopper. Make sure that the washer overlaps the lip of the aluminum housing. Snug the screw, but do not over tighten. (See Figure 4b)



Step 5: Singulator Installation For Pre 2008



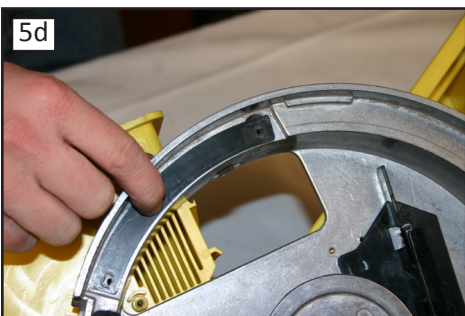
Drill a $\frac{1}{8}$ " hole at the small Singulator hole.



Drill a $\frac{5}{16}$ " hole at the large Singulator hole.



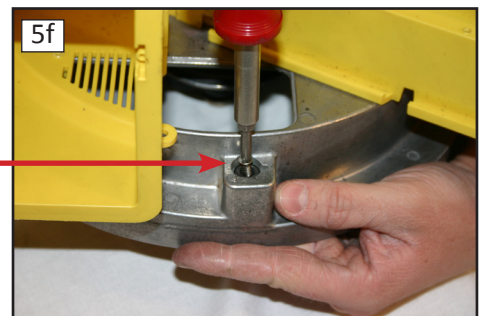
Clip the washer from the Singulator shim molding.



Insert the protrusion of the shim into the large hole.



Insert Screw D (#6 Flat Hi-Lo) into the shim washer.

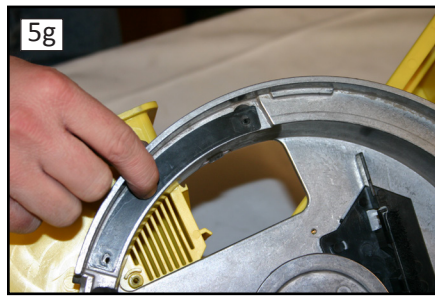


Install the screw and spacer through the back of the housing and into the shim protrusion.



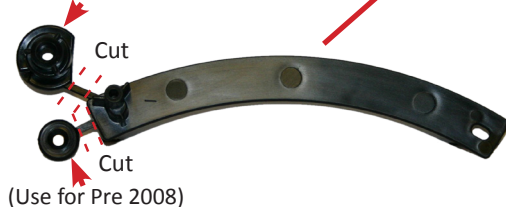
eSet® Pro-Series™ Installation Instructions (Continued)

Step 5 (continued): Singulator Installation For 2008+



Insert the protrusion of the shim into the large hole.

Use for 2008+



Insert Screw D (#6 Flat Hi-Lo) into the shim washer.



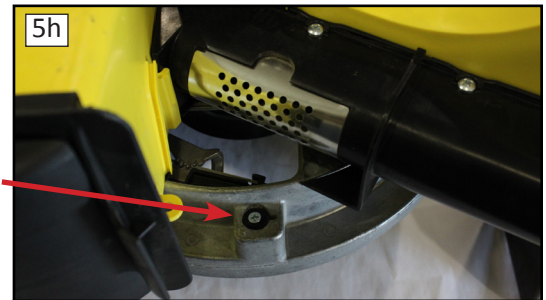
Install the screw and spacer through the back of the housing and into the shim protrusion.

Insert Screw D (#6 Flat Hi-Lo) into the right Singulator hole.

For Pre 2008: Use Screw F (#6-32 Flat Phillips Screw) in the left hole first.

For 2008+: Use Screw E (M4 X 7 Flat Phillips) or Screw F (#6 x 32 Flat Phillips).

Finish tightening all screws in this order: Left and then right on singulator, and rear screw holding shim.



Step 6: Hub Height Adjustment

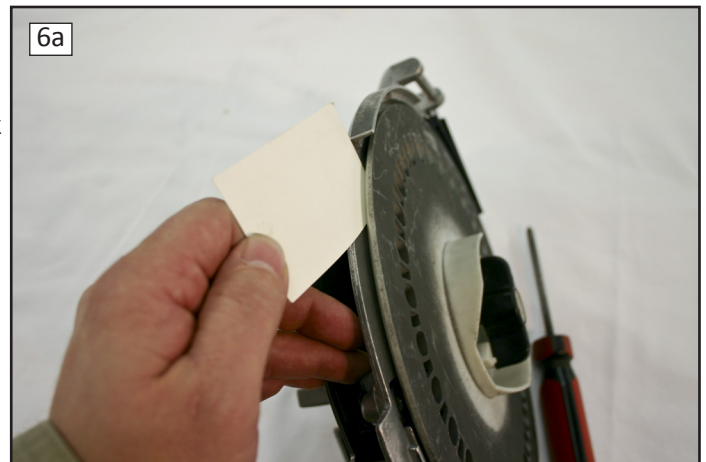
The eSet® disk has been designed to fit interchangeably with the John Deere soybean and specialty crop disks. Avoid too much housing/disk contact — or too little. Make sure the disk doesn't bind on the housing and make sure that seeds can't slip between the housing and disk. The proper adjustment of the hub will result in light contact between the disk and housing as the meter is rotated.

Begin by checking for proper adjustment of the hub with your eSet® disk. With the eSet® disk installed, rotate the disk while holding a business card between the disk and the housing. The disk should rub the business card at its tightest point, slightly pinching the card between the disk and the housing.

To check to make sure that the gap is not too wide, use a 1/16" drill bit and make sure that it will not fit in the gap between the disk and the bottom of the housing. Rotate the disk by hand to ensure that at the widest point, the gap is smaller than the 1/16" drill bit. Before planting with other disks (such as JD specialty crop or soybean disks), follow the same procedure above and verify that the proper gap exists.

Once singulator is installed verify that the singulator assembly is riding securely on the disk. The last lobe of the singulator should remain in contact with the disk when the meter is under vacuum on the MeterMax® stand. If a gap larger than .015" is present, determine and resolve the source of the problem.

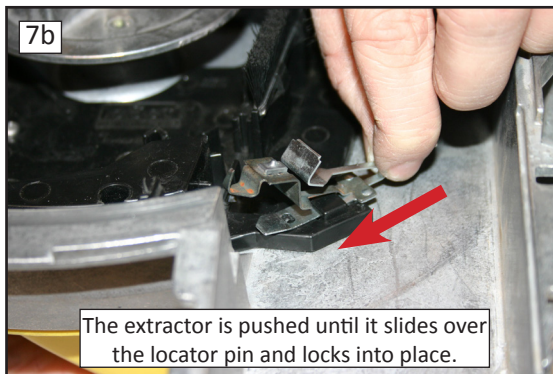
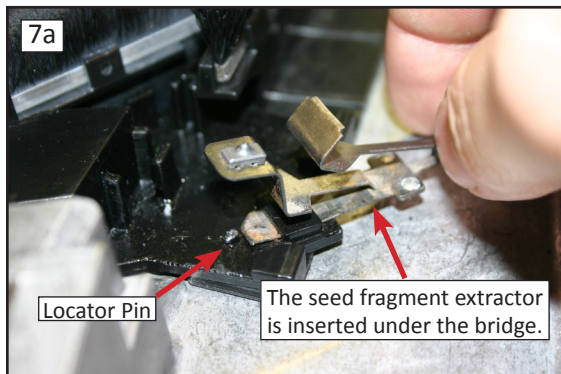
You may notice that all disks have a slight warp to them. The eSet® system has been specially designed to compensate for this in the design of the singulator. It is spring-loaded in order to ensure constant contact with the disk and compensate for any run-out in the disk. You may find that by removing the disk and rotating it 180 degrees relative to the hub, it will run more true. In this case, mark the position of the plate and the hub with a paint pen and number the disk to correspond to the row number of the meter it belongs to.



eSet® Pro-Series™ Installation Instructions (Continued)

Step 7: Seed Fragment Extractor Installation

Locate the plastic bridge and locating pin at the bottom right hand side of the liner. Slide the Seed Fragment Extractor under the plastic bridge and over the locating pin until it locks into place.



Specialty Extractor



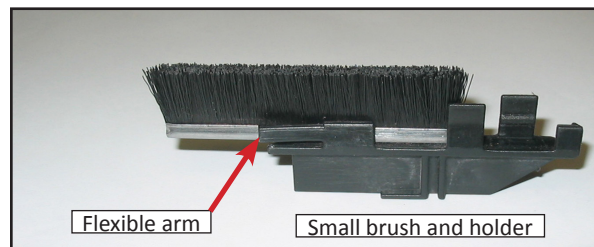
Standard Extractor

Note:

When using specialty eSet discs for specialty crops be sure to use the specialty extractor instead of the standard eSet extractor. The difference between the standard extractor and the specialty extractor is that the standard extractor has a pick located at the back and the specialty extractor does not have the pick.

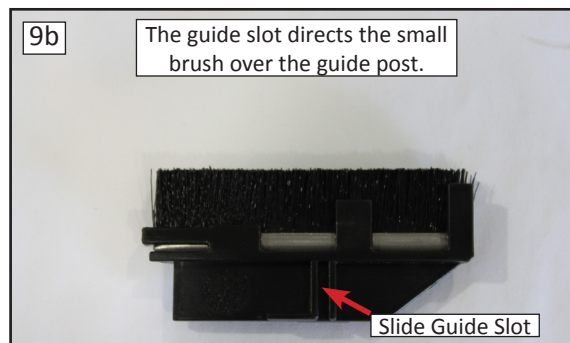
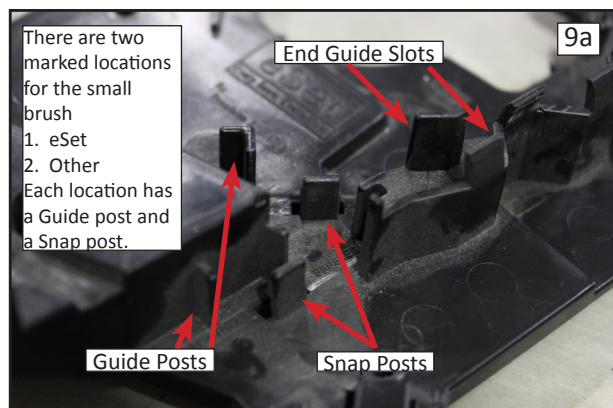
Step 8: Insert Small Brush into Holder:

Bend back the flexible arm on the small brush holder and slide the small brush into place.



Step 9: Small Brush Installation

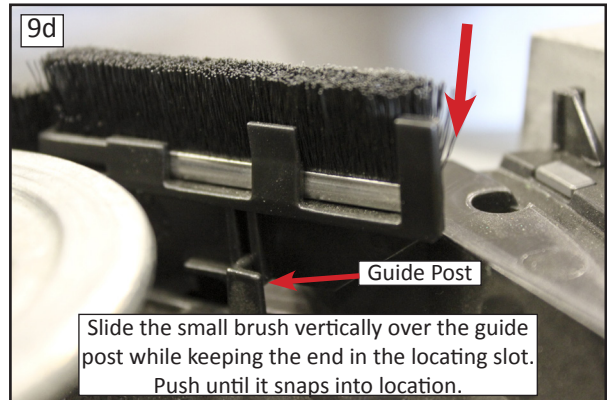
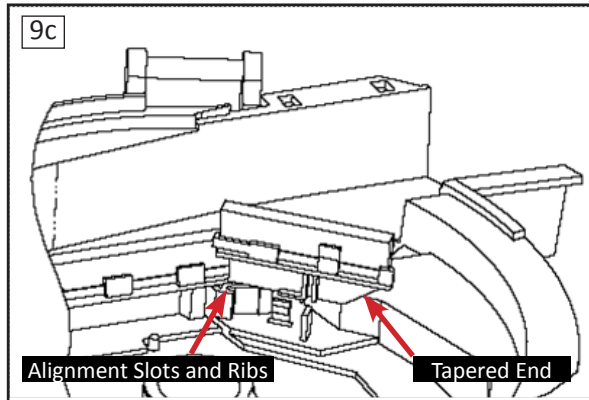
The small brush can be mounted into one of two different locations: one for planting with the eSet® disk and another for planting with all other standard vacuum plates. The locations are marked on the liner; each location has a guide slot, guide post, and snap post (Fig 9a). The small brush has a guide slot that will span the guide post in either location (Fig 9b).



eSet® Pro-Series™ Installation Instructions (Continued)

Slide the brush vertically (Fig 9c) downward into the provided grooves (Fig 9d):

1. Slide guide slot over the guide post, and the end of the brush into the end guide slot.
2. Snap into place.



Step 10: D Tube Installation

Remove the tape cover from one side of the gasket and adhere it to the front right corner of the D-Tube. Trim off any excess length of the gasket. Position the D Tube over the Pro Flow Hopper. Locate the long and short slots on the hopper and slide the D Tube into the short slot making sure that it is engaged in the long slot along the back edge of the Tube.



Step 11: Install the Vent Cover

Slide the transparent vent cover under the aluminum housing and snap it into place on the Pro Flow hopper.

When removing the cover pinch the tab and pull the cover away from the housing.



Secure the D Tube to the hopper using 4 of Screw A (½" Pan Hi-Lo Screw). Poke the screws through the foam gasket. **Do not over tighten.**

Step 12: Reinstall the hexshaft, gearbox, handle, cotterpins and mounting bracket.



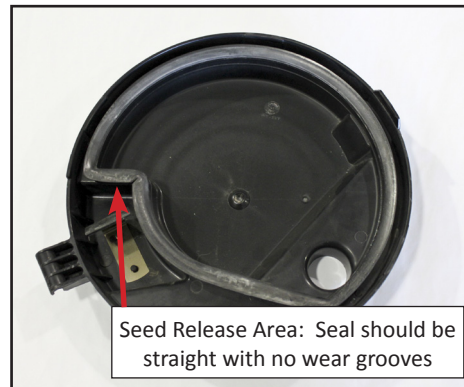
eSet® Pro-Series™ Installation Instructions (Continued)

Step 13: Inspect Vacuum Seal

The seal should not have any wavy sections and the height of the seal should be very uniform around the entire circumference. The section of the seal where the seed is released should be free from wear grooves. If this area is grooved, replace the seal.

Note: John Deere made a design change to the seal in recent years that makes the seal more stiff. They recommend that the soft and stiff seals not be intermixed within the same planter to ensure uniform vacuum pressure from row to row.

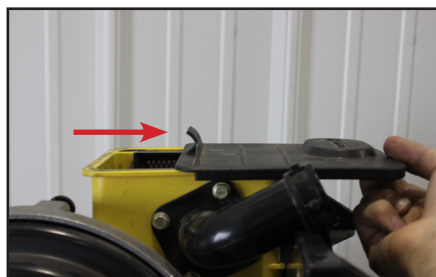
Precision Planting has replacement seals available in a pack of 2 pcs (order part number 720076 for two outer seals and 720077 for two hub seals).



Step 14: Install Vented Hopper Lid

The purpose of the vented hopper lid is to release the excess pressure in the hopper when the CCS tank empties and seed flow to the meter has stopped. The lid prevents back pressure which can cause the seed in the meter to flow over the brush.

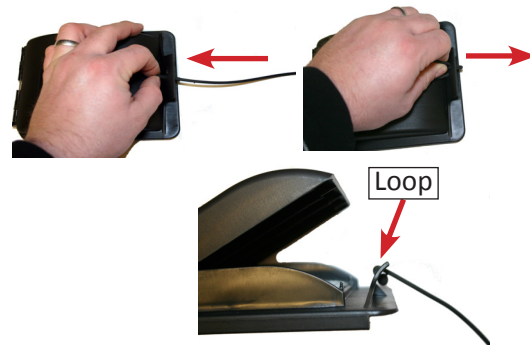
1.) Remove the old lid from the hopper by undoing the rubber lanyard and pulling the lid off the hopper.



3.) Replace lid by sliding it on until it locks into place. Replace lanyard to hopper.



2.) Take the rubber lanyard and feed the T-shaped end through the lower hole until tab end stops on lower hole. Feed T shaped end through top hole and pull till loop is tight to the lid.



Note:

The vented lid will only open halfway and then stops. **DO NOT** try to force lid open. This stop is so the lid can seal itself again after it has vented.



eSet® Pro-Series™ Installation Instructions (Continued)

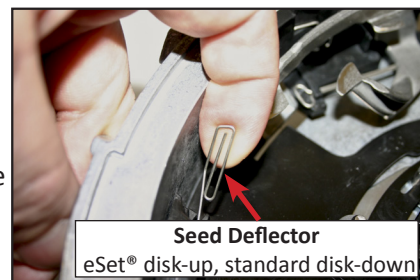
Switching from an eSet Disk to a JD disk.

Switchover to other disks:

There are three steps when changing from eSet to other disc.

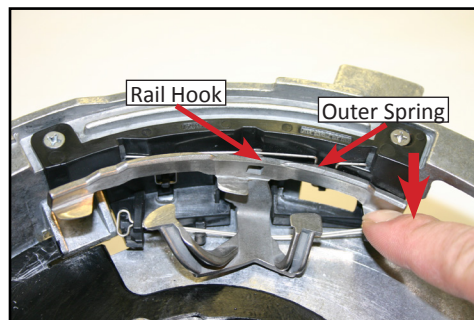
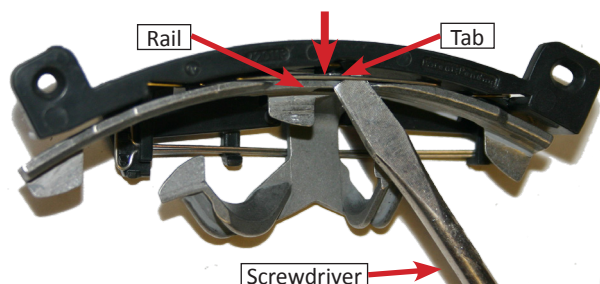
Step 1: Seed Deflector

Locate the seed deflector on the liner. For eSet the deflector must be in the up position (away from the base of the liner/housing). For other discs, pull up and to the right to release the deflector, and lower it so that it rests close to the liner/housing base.



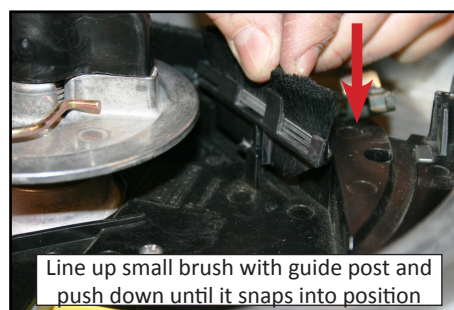
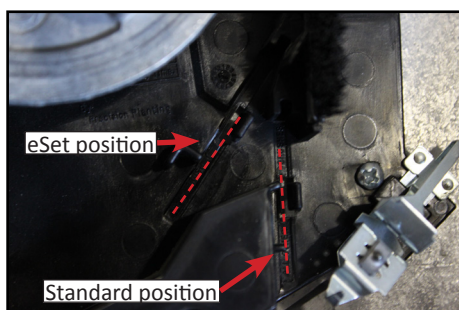
Step 2: Singulator Changes for Other Crops

The singulator needs to be locked into the lower position for any crop that uses a disk other than the eSet disk. Push the Singulator rail under the outer spring as shown below. The spring will click over the tab and snap into the locked position. To unlock, push down on the right lobe to release the rail from the spring.



Step 3: Short Brush

Remove the short brush from the eSet® position and locate it into the straight up and down position for standard JD disk. Reverse procedure to return back to eSet®.



Troubleshooting Guide

Problem	Solution
<i>Lots of Skips</i>	1. Increase vacuum. 2. Check to make sure singulator is floating and not locked down. 3. Check for debris caught in singulator. 4. Make sure singulator is centered and in correct position. Verify that 5th lobe does not cover more than 50% of hole.
<i>Seeing Doubles</i>	1. Check to make sure Singulator is in correct position and floating. 2. Check for damaged singulator.
<i>Inconsistent Spacing</i>	1. Check shafts for proper alignment, especially where planter flexes. 2. Check bearings of drive shaft. 3. Check for meter alignment over seed tube. 4. Check seed tube for debris or defects. 5. Use correct amount of eFlow or talc.
<i>Consistent Low or High Population</i>	1. Verify population settings are correct. 2. The JD population charts may not be compensating for wheel slippage or incorrect distance. 3. Check air pressure in drive tires.
<i>Cannot Maintain Vac Pressure</i>	1. Check vac lid style to make sure lid has 1992+ seal. 2. Check lid seals and vac hoses.

Always pay attention to your seed monitor, operating manual, and the amount of seed you are planting compared to your expectations.

Always Investigate Abnormalities!

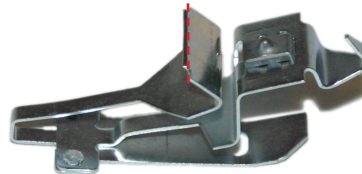
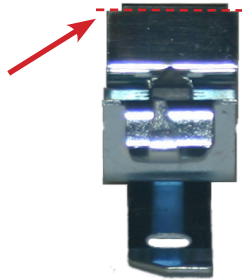


Annual Maintenance

eSet should be inspected and maintained annually.

1. Check fragment extractor for wear.
2. Inspect short & long brush for wear. (replace if necessary)
3. Check back side of disk to see if graphite is worn away. (Respray with graphite if gone)
4. Check vac seals for wear.
5. **Test meters on MeterMax® Test Stand to insure Maximum performance.**

If wiper is worn below this line replace.



***If singulator lobe #5 covers more than 50% of hole, tune or replace singulator.
See your MeterMax Rep for singulator inspection and tuning.***

Precision Planting Warranty & Liability Policy (Revision effective 7-1-10)

Warranties, Disclaimers, and Limitation of Remedies:

These terms and conditions represent the entire agreement between the parties hereto and there are no collateral, oral, or other agreements or understandings, unless expressly stipulated.

Precision Planting warrants that all Precision Planting products, equipment and merchandise are free from defects in material and workmanship. The term of the express warranty recited herein shall be limited to one (1) year from the date of sale by Precision Planting. This warranty shall only extend to the dealer if this warranty is properly presented to Customer. With respect to 20/20 SeedSense, AirForce and RowFlow, the express warranty recited herein shall only apply if such products are properly registered by the Customer.

These terms and conditions represent the entire agreement between the parties hereto and there are no collateral, oral, or other agreements or understandings, unless expressly stipulated.

The express warranty recited herein does not extend to any costs or damages other than one of the following, which Precision Planting shall elect at its sole discretion: replacement, repair, or refund of the purchase price. Precision Planting makes no other warranty of any kind whatsoever, express or implied.

ANY EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY PRECISION PLANTING. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

Precision Planting is NOT LIABLE FOR CONSEQUENTIAL DAMAGES of any nature whatsoever, including without limitation lost yield, replanting cost, supplies or other expenses. Precision Planting is NOT LIABLE FOR INCIDENTAL DAMAGES of any nature whatsoever, including without limitation diagnostic and installation expenses, travel expenses, and shipping expenses. The limitations of remedy recited herein apply to any action by the Customer whether or not such action is based in warranty.

Some states or jurisdictions do not allow the exclusion or limitation of implied warranties, incidental damages or consequential damages; so the above limitations or exclusions may not apply to you.

Liability:

Customer assumes all liability for damages from accidents caused by or incurred in the use of transportation of said equipment. Customer agrees to indemnify and hold harmless the said Precision Planting, its officers, agents, and employees from any and all damages and/or liability to any person whatsoever arising out of or resulting from the use, storage, or transportation of said equipment by the Customer or anyone else while the equipment is in the custody of the Customer. The Customer acknowledges receipt of the equipment in good working condition and repair. In the event of any accident involving said equipment, Customer shall promptly furnish to Precision Planting a complete report in writing, with names and addresses of witnesses and parties involved and Customer shall make all reports required by law. Customer agrees to review and follow any published safety instructions in the product manual.

Notice of Non-Waiver:

The failure by Precision Planting, at any one or more time, to insist upon the strict performance by the Customer of the covenants, conditions and/or terms of this agreement, shall not be construed as a waiver of Precision Planting's right to demand strict compliance with and performance of all covenants, conditions and/or terms hereof. Notice of demand for strict compliance is hereby waived by the Customer, and time is expressly made of the essence of this agreement.

Choice of Law:

Any dispute or claim arising from or related to this Policy, or related to a product governed by this Policy, shall be governed by the laws of the State of Illinois.

Questions? Visit www.precisionplanting.com or call us at 309-925-5050.

Precision®
PLANTING



PLEASE DETACH THIS FORM AND KEEP FOR QUICK REFERENCE

eSet® OPERATING GUIDELINES

Thank you for placing your confidence in Precision Planting's eSet®. While this revolutionary system offers unparalleled operating simplicity, there are some guidelines to keep in mind for optimum performance.

Vacuum Setting:

Seed Corn Bag Weight	Vacuum Level
Less than 60 lbs (>1350 seeds/lb)	18"+
Greater than 60 lbs (<1350 seeds/lb)	20-22"+

Baffle Position:

Crop	Baffle Position
Soybeans	1 or 2
Corn	1
Sweetcorn	2
Large specialty crops	2
JD celled disks	2

The baffle regulates the amount of seed entering the meter. Numbers molded to the left of the metal post designate the position.

Lubricant: As with all vacuum planters, eSet® works best with lubricated seed. Follow the general recommendation below and adjust as necessary to prevent excess accumulation of talc in the meter.

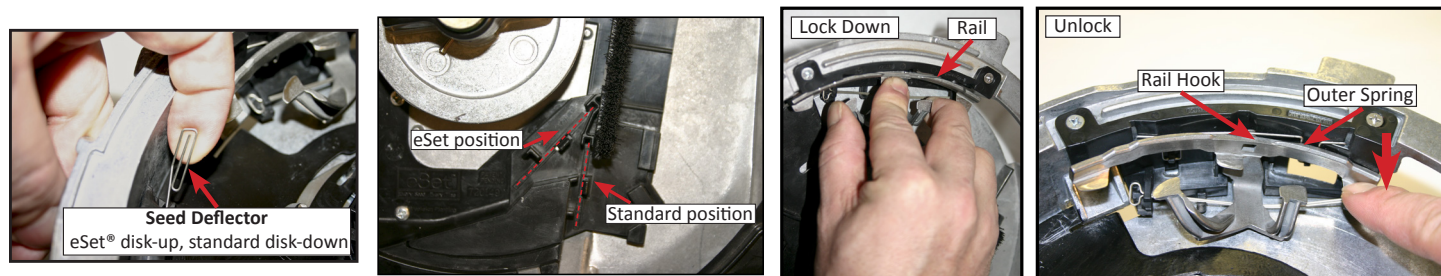
Seed corn characteristics	Application rate	Type of Lubricant
Less than 60 lbs (>1350 seeds/lb)	1/4 Cup per Unit	eFlow (80% Talc, 20% graphite)
Greater than 60 lbs (<1350 seeds/lb)	1/8 Cup per Unit	eFlow (80% Talc, 20% graphite)
Humid planting conditions	Increase rate as necessary	eFlow (80% Talc, 20% graphite)
Treated seed (Poncho/Cruiser)	Increase rate as necessary	eFlow (80% Talc, 20% graphite)

Other Crops: In addition to the eSet corn disc, Precision Planting has a range of discs for other crops. These crops include sweetcorn, popcorn, sunflowers, soybeans, cotton, sugar beets, sorghum, small edible beans and other crops not mentioned here. For more information or to test your specialty seed with eSet, contact your Precision Planting dealer or go to our website www.precisionplanting.com.

Changing to JD Discs: There are three parts that need to be adjusted when you are switching from the eSet® disk to a JD disk. The Short Brush, the Seed Deflector and the Singulator. All three are described below. When planting specialty crops or using celled disks, verify that seeds are not interfering with the singulator assembly and remove singulator assembly if necessary.

Warning: For some larger crops like edible beans or kidney beans you may need to remove the entire singulator to avoid interference.

Singulator: To lock the Singulator out of the way for other crops, push down while rotating back on the metal Singulator until the outer spring clicks over the tab on the rail. To return to the unlocked position for corn, push down on the right hand lobe of the Singulator and the tab will walk out from under the spring.



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