

JOHN DEERE DRILLS INSTRUCTIONS FOR INSTALLATION OF THE GENIUS SEAL

OVERVIEW

Congratulations on your purchase of the new Genius Seal (GS) program, a maintenance free operation, for the life of your drill.

Irogran PS441-400 is the material used for the injection molding of your new GS and has a temperature operating range from -50* all the way up to 230* Fahrenheit, with extremely high durability.

The side of the GS that mounts against the drill opener marked (Silicone Side) designed to mount against opener arm, when installed, this keeps out all dust and water from mounting pin and chamber.

The other side of the GS has grease-retaining depressions that have fill ports all connected, and they are hand filled with grease when installed on the drill opener for the initial installation lubrication.

After the initial installation, the Patent Pending GS's need not be greased through the zerk for the life of the machine, as they are permanently sealed from dust and moisture.

The steel Zink-plated (slip-clutch plates), constantly have a rotational movement against the surface of the GS.

As this is happening, the two arms are continuously bouncing up and down rapidly following the terrain, and planting your valuable timely crop, with no more locked arms, ever.

The four (4) top and bottom GS's keep the wheel closing arms and firming wheel arms from ever locking up with dirt, permitting the wheels to float over any type of terrain, always, to keep you going.

THERE ARE THREE (3) STEPS INVOLVED

1. Disassemble, closing wheel arm and seed firming wheel arm from the opener on the planter.
2. Cleaning, out the two opener housing chambers where the one (1) inch mounting pins of different lengths go through.
3. On each opener arm, reassemble and install (4) GS's with (5) spacers 0.080, and one (1) internal lower zerk plate, four (4) slip-clutch plates, and torque tight to 100 FT lbs.

Supplies and tools needed:

One (1) 5/8 by 4" bolt without washer on head per arm (68) on 42"

Air chuck for cleaning chamber where pins goes through

Impact wrench and opened-end box wrench for mounting bolts

Torque wrench set to 100 #'s

Grease gun and a case of grease

Hammer and flat screwdriver if chamber is packed full of dirt

Paper towels for cleaning drill opener chamber sidewalls and pins

12" strip of emery cloth or one (1) sheet of extra fine sand paper

W-D 40 or similar lubricant and bottle of Windex, or degreaser

Lok-tight for the two 5/8 arm mounting nuts

Included in Genius Seal Program:

Luke's Cell # number: 605-216-2303 for installation problems, or
Heintzman Farms 800-333-5813 business hours.

Genius Seals (GS's) that are made of Irogran PS441-400

Cup shaped Zink-plated steel slip-clutch plates, for GS's

Special internal flat zerk plate for lower 2 3/4" pin, and for the zerk
clearance problem

Internal spacer washers, that are 0.080 thick, and 1" OD and 5/8" ID

(1) tube of lithium grease

Instructions and Lifetime Guarantee

DISASSEMBLY OF THE TWO ARMS

With your impact wrench, remove the upper and lower lock nuts
that hold both arms mounted to opener.

DISCARD the large 2 inch top spacer washer used on arm for seed
closing wheel (DO NOT USE AGAIN)!

Remove pins and wipe clean, and with emery cloth buff 1/2 inch on
both ends of the two pins to eliminate nicks or burrs, and then set
pins aside on a clean paper towel surface.

CLEANING OF THE TWO CHAMBERS

Use air chuck to blow all dirt and grease residue, from both chambers, where the two pins go through.

If residue buildup is hard, break loose with hammer and flat screwdriver, and then blow chambers clean.

Using grease gun, give a couple of pumps to make sure zerk is clear, and then blow out rest of chamber to make sure there is no dirt contamination before assembling.

NOTE: If you have JD1850-1860 with no zerks, fill chambers and Seals best you can!

ASSEMBLY OF SEALS & ARMS BACK ON THE OPENER

Spray a lubricant, or (WD-40) on the two respective pins and put them in their correct chambers and center both of them.

Now, take grease gun, and fill the two chambers with grease and stop pumping, when grease comes out between pin and chamber opening.

Slide the pin to the right so it is flush with opener sidewall arm, and wipe excess grease away.

Now, with Windex or other suitable product, spray that area and wipe clean with dry paper towel.

Your goal is to have a dry clean oil free surface, where the GS can adhere like a gasket on the sidewall of the opener arm.

Next, slide pin over to the left, so it is flush with that side of the opener arm, and clean in the same manner as described before.

Now, re-center the two pins in their respective chambers.

On lower pin, install special flat, notched zerk plate, and place zerk cutout positioned over zerk

PREPARATION WITH LITHIUM GREASE

Now, put dabs of grease into the (3) little round depressions and groove channels, then smooth with your finger filling in all the port runs that lead to outside edge over the entire face of the GS.

Now, take the closing wheel arm assembly, and put bolt through arm, apply grease inside the slip-clutch plate, slide plate on bolt, then slide 0.080 spacer on bolt and install assembly through pin on drill arm.

A special 0.080 spacer designed for installation, allowed extra material to flow into the GS when molding for a greater thickness of the Seal for durability, and a lifetime of trouble free operation.

Next, on the opposite side of the opener, onto the 5" protruding bolt, install the second greased slip-clutch plate, and turn on locknut with lock-tight and torque bolt to 100'FT pounds tight to set the two (2) slip-clutches. (DO NOT USE IMPACT WRENCH!)

Replace, lower 4" JD Bolt/Molded Heavy Washer to a regular bolt without a washer to have the needed clearance for seal installation.

↖
with
Loctite
Blue or
Red

Assemble the lower pin with your 4" long 5/8 bolt, instead of the JD bolt with built in washer; spacers applicable in wording below and torque nut with lock-tight to the same 100' #'s.

1. All drill openers with a 4-inch top pin have just one 0.080 pin spacer.
2. All drill openers with a 2 ³/₄ -inch lower pin, which also will have the one (1) special flat zerk plate installed, have four (4) 0.080 spacers placed two (2) left of pin and two (2) on the other side of the pin.

Now, grease opener arm assembly chamber(s) to force out any trapped air, and that final action fills all runs in the GS.

AFTER COMPLETING INSTALLATION.....YOU NEVER NEED TO GREASE THIS ARM AGAIN!

Special Note: If pins/bushings are worn, you need not replace, as GS assembly will firm up arms...otherwise, replacement pin and bushing cost is about \$60 per row.

Also, at trade time if arms are locked up, dealer takes about \$5,000 protection money to service drill...in this case, all arms will be free, and no discount to the farmer !!!!!

Rick Esq.

IMPORTANT!!!!

with 3 used on 3" pin

Spacer 0.080 4 used on (new) 2.75" pin

Lower 3" pin assembly show below

Top pin of 4" long has only one (1) spacer of 0.080 used.

