



Flange Bushing Rebuild

Installation Instructions

Full Ream Kit

CIH/New Holland

DeltaForce/SureForce

BITS REQUIRED FOR INSTALLATION

Verify appropriately sized reamers have been sourced, all reamers and bits are available through SI Distributing and should have been recommended at the time of purchase.

1. Parallel arm reamer: 1-1/16"
 - Be sure this reamer matches the flange bushing size in the kit you have purchased.
 - This reamer is used to clean up any wear in the pivot holes in the parallel arms.
 - If you choose to purchase this reamer from an alternative supplier be aware retaining compound may be needed to ensure the flange bushing seats tight into the parallel arms.
2. Parallel arm drill bits for dowel pin on flange bushing.
 - Flange bushing pin marker bit: 3/16".
 - This bit will be used in conjunction with the included template. You will mark the location of the larger hole in a similar fashion to a “center punch”.
 - Flange bushing pin hole bit: 7/16".
 - This bit will be used to drill all the way through the parallel arms to allow the flange bushing pin to seat into the arm.
3. Lower row unit and support plate reamer: 11/16"
 - The bolts used on the lower pivot locations are a 5/8” fine threaded bolt with an 11/16” shoulder.
 - This reamer will allow the lower holes to accommodate the 11/16” shoulder.

PRE-INSTALLATION PREPARATION

1. Sort and lay out packaged components by part number. Each bag should be labeled with S.I. Distributing’s part number which is helpful for reference.
 - The diagrams within these instructions will be used to reference to understand the placement of the various bolts you have in your kit.
2. Check each row for clearance issues with either the bolt and/or hex bushing.
 - If you have any of the following call S.I. Distributing for alternative solutions.
 - A location that may not allow fitment of either the bolt or hex bushing.
 - Row unit has attachments to support plate (row cleaner mount, down pressure spring bracket) inhibiting the use of either the bolt or hex bushing.
 - Any clearance issue that inhibits the installation or functionality of these kits.

SAFETY REMINDER

Always wear proper safety equipment when using power tools.

SAFETY GLASSES, HEARING PROTECTION, AND GLOVES ARE A MUST WHEN WORKING WITH REAMERS AND METAL SHAVINGS!



PARALLEL ARM REAMING

1. Using a drill press or mill begin reaming each hole on the parallel arms.
 - Use plenty of cutting fluid/oil to maintain the lifespan of your reamer.
 - Run drill press/mill around 300 RPM or slower if possible.
 - It's best to only use the large reamers on the last 1/16" of metal.
 - if more than 1/16" needs to be removed, consider using a drill bit 1/16" smaller than the reamer prior to reaming.
 - Do not pull reamer back through the hole while it is turning, turn off drill before backing out.

FLANGE BUSHING PIN HOLE DRILLING

When reaming of the parallel arms is complete, holes will need to be made to fit the flange bushing dowel pin.

1. Place the flange bushing template into the reamed hole on the parallel arm, center the small hole in template with parallel arm and clamp it down.



2. With a 3/16” drill bit, drill just enough to mark the hole through the template.
 - It is not necessary to drill completely through the arm with this bit. Doing so will cause wear to the template hole making it harder to center the bit appropriately.
3. Remove template and drill hole all the way through with a 7/16” drill bit.
 - Ensure hole for flange bushing dowel pin is properly located and drilled straight. A drill press works best for these holes.
4. Make sure hole lines up with flange bushing dowel.
 - If hole is not straight or is off location, damage to flange tab and/or dowel pin will occur.
 - If it is not clear all the way around the dowel, you will need to go to a larger hole size until the dowl is not contacting the side of the hole.

FLANGE BUSHING INSTALLATION

1. Install bushings using a hydraulic press,
 - Using a solid block apply even pressure over the entire surface of the flange bushing.
 - These bushings are extremely hard and may break during installation if pressure isn't applied evenly or dowel pin is in a bind.
2. Ensure flange bushings are pressing in tight.
 - If bushings do not require much effort to press in, check the following:
 - Does there appear to be a gap between any portion of the inserted part of the flange bushing in relation to the reamed hole?
 - A larger flange bushing and reamer is required if there are any gaps between bushing and arm.
 - Failure to increase the size of bushing will result in, in field damage to flange bushing.
 - Did you source a reamer from an alternative supplier?
 - Provided there are no gaps between the round part of the bushing and hole in parallel arm you will need to use retaining compound to seat bushing in tight.

UPPER PARALLEL ARM INSTALLATION

1. Check to make sure you have the correct bolts for each of the hole locations.
 - Some planters will use 4 carriage bolts for the upper arms, some will use 2 carriage bolts and 2 hex bolts. Both are included in this kit.
2. Make sure carriage bolt shoulder does not protrude outside of the hole.
 - If the shoulder is too long a washer can be placed under bolt head to shim the shoulder back. The hex bushings **must not** contact the bolt shoulder.
3. Install the bolts through the row unit/support plate holes then through the flange bushings in the parallel arms.
4. Place red thread locker starting ½” from the end of the bolt.
5. Locations “A” and “B”, install one 1/8” shim washer on each hex bushing then thread the hex bushing onto the bolt.”



6. Tighten hex bushing to torque value of 80 ft. lbs.
7. Apply one drop of red thread locker to end of bolt threads.
8. Install jam nut, torque to value of 65 ft. lbs.

LOWER PARALLEL ARM INSTALLATION

1. Due to extensive force applied by hydraulic down pressure systems. A 5/8" bolt with an 11/16" shoulder will now be used with the lower parallel arms.
2. Using 11/16" reamer, ream square carriage holes on the lower support plate and row unit.
 - Use plenty of cutting fluid/oil to maintain the lifespan of your reamer.
 - A right angle drill may be needed for better access to holes.
3. Install the bolts through the row unit/support plate holes then through the flange bushings in the parallel arms.
4. Place red thread locker starting 1/2" from the end of the bolt.
5. Location "C", install two 1/8" shim washers on the hex bushing then thread the hex bushing onto the bolt.
6. Location "D", install one 1/16" and one 1/8" shim washers on the hex bushing then thread the hex bushing onto the bolt.



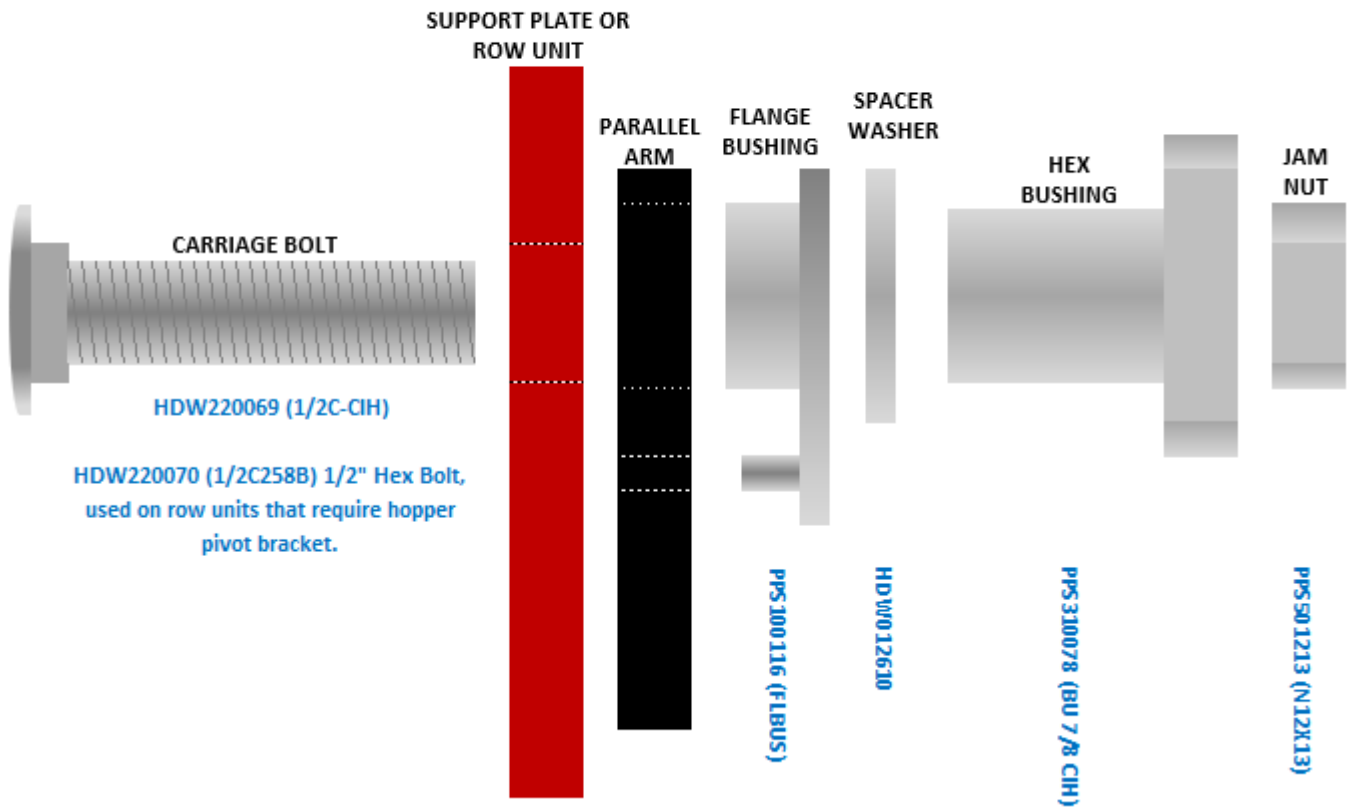
7. Tighten to torque value of 145 ft. lbs.
8. Apply one drop of red thread locker to end of bolt threads.
9. Install jam nut, torque to value of 100 ft. lbs.

FINAL CHECK

1. Spray each hex bushing on top and bottom with small amount of penetrating spray.
2. Make sure row unit moves freely.

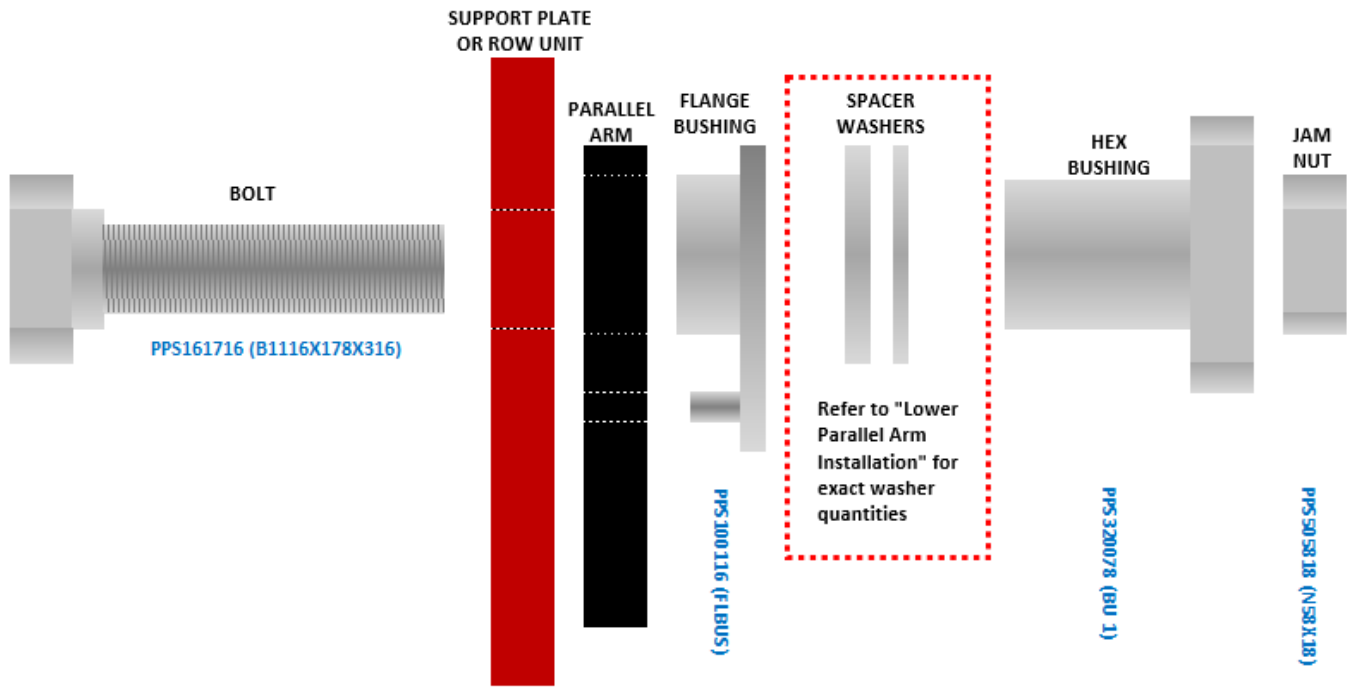
Installation Diagram

Locations "A" & "B"



Installation Diagram

Locations "C" & "D"





S.I. DISTRIBUTING

13540 Spencerville Road • Spencerville, Ohio 45887

Phone: 800-368-7773 • 419-647-4909

Fax: 877-398-8074 • 419-647-6290

www.sidist.com • info@sidist.com