

# INSTRUCTIONS FOR 360 CHAINROLL™

## John Deere 40 and 90 Series

You are only a few steps away from better residue management. If you have any issues along the way, feel free to give us a call at 309-321-0090. Or, jump online for video instructions: 360YIELDCENTER/CHAINROLL.



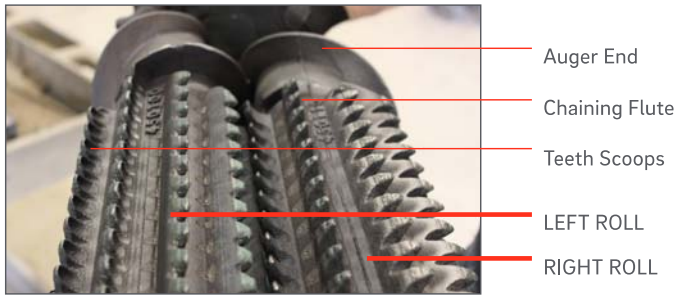
### PARTS OVERVIEW

- + 360 CHAINROLL Row Unit Kit (Part No. 451300):
  - Left Roll (Part No. 450300)
  - Right Roll (Part No. 450310)
  - 4 – 1/2" Roll Pins (Part No. 207032)
  - 4 – 5/16" Roll Pins (Part No. 207033)
  - 4 – Socket Head Cap Screw (Part No. 207034)
  - Trash Knife Rework Pattern
- + Thread Locker (Part No. 207030)
- + Anti-Seize (Part No. 207031)

### HELPFUL TIPS & SAFETY PRECAUTIONS

- + Have another individual working with you for removal of the old rolls, as help is needed to turn the rolls to access the screws.
- + If no one is available, the following shortcuts can be used:
  - When reorienting the rolls for bolt/part removal, work on multiple row units at a time. Other rolls will be oriented in the same way, allowing access to their bolts and screws.
  - Use the 360 CHAINROLL Custom Stalk Roll Puller to more easily remove the roll from the shaft.
- + Raise the corn head in order to get underneath and slide the large stop in place to prevent the head from falling while you work.
- + Wear protective eyewear, as rust and dirt debris will fall from the rolls.
- + Wear metal handling gloves to prevent injuries from handling sharp metal.

### ROLL COMPONENTS AND ORIENTATION



### HOW TO TELL THE LEFT ROLL FROM THE RIGHT ROLL

- When we reference left and right rolls, it is always from the perspective of the cab.
- Each roll has a part number on it - left roll is 450300 and right roll is 450310.
- The chaining flute on the left roll has teeth scoops on the back that make it easy to distinguish at a glance. See photo at left.
- On both rolls, the chaining flutes face the same direction.

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### STEPS FOR REMOVAL - FLUTED STALK ROLLS

#### Step 1. Remove Trash Knives

Tools and Parts Required:

- + 18 mm Socket
- + Low Torque Impact or Ratchet Wrench

- 1: Remove the four, 18 mm bolts from the trash knife. Start from the rear.
- 2: Repeat Step 1 for the opposite side.



#### Step 2. Remove Bolts and Roll Pins

Tools and Parts Required:

- + 3/4" or 19 mm Socket
- + Impact or Ratchet Wrench
- + Roll Pin Punch and Hammer
- + Air Hammer (with 1/2" or 12.75 mm straight punch bit)

- 1: Orient the stalk roll to access one of the two clamp bolts (near the middle of the casting).
- 2: Use an impact wrench and 3/4" socket to remove the bolts.
- 3: Orient the stalk roll to access the roll pin (near the front of the casting).
- 4: Using a roll pin punch (or air hammer), drive the roll pins out of the casting.
- 5: Repeat Steps 1 to 4 for the opposite side.



#### Step 3. Remove Old Stalk Rolls

Tools and Parts Required:

- + 360 CHAINROLL Stalk Roll Puller
- + 5/8" Socket Wrench
- + Impact or Ratchet Wrench

- 1: Orient the old stalk rolls to allow for better access to pulling features on the castings. Improve accessibility by opening up stripper plates, if possible.
- 2: Attach the puller arms to pulling features on the castings, as shown.
- 3: Tighten the puller and the extension rod on the shaft.
- 4: Extend hydraulic puller by driving center ram, as shown. Steps 3 and 4 may need to be repeated several times to get the old stalk roll off the shaft. The roll will likely need to be hammered off for complete removal from the shaft.
- 5: Repeat Steps 1 to 4 for the opposite side.



## STEPS FOR REMOVAL - KNIFE OR THREE-PIECE STALK ROLLS

### Step 1. Remove Trash Knives

Refer to Step 1 from Removal Steps for Fluted Stalk Rolls (on page 2).

### Step 2. Remove Rear Stalk Roll Bolts

Tools and Parts Required:  
+ 1/2" or 13 mm Socket  
+ Impact or Ratchet Wrench

- 1: Rotate the stalk roll to access one of the rear bolts.
- 2: Remove bolt using extension.
- 3: Rotate the stalk roll to access and remove the second rear bolt.
- 4: Repeat Steps 1 to 3 for the opposite side.



### Step 3. Remove Stalk Roll Halves

Tools and Parts Required:  
+ 16 mm Socket  
+ Impact or Ratchet Wrench

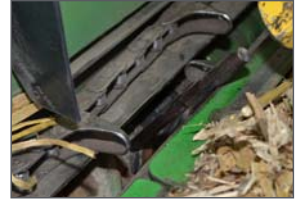
- 1: Orient the stalk rolls to access the four bolts on one half of the roll.
- 2: Remove all four bolts and stalk roll half.
- 3: Rotate the stalk roll to access the other stalk roll half and bolts.
- 4: Remove the bolts and stalk roll half.
- 5: Repeat Steps 1-4 for the opposite side.



### Step 4. Remove Machine Screws and Roll Pins

Tools and Parts Required:  
+ T45 Torx Bit  
+ Roll Pin Punch and Hammer  
+ Air Hammer (with 1/2" or 12.75 mm straight punch bit)

- 1: Orient stalk roll to access the T45 machine screws.
- 2: Using the T45 torx bit, remove the two screws.
- 3: Orient the stalk roll to access the roll pins (near the front of casting).
- 4: Use the roll pin punch and hammer (or Air Hammer) to drive the roll pins out of the casting.
- 5: Repeat Steps 1 to 4 for the opposite side.



### Step 5. Remove Old Stalk Rolls

Refer to Step 3 from Removal Steps for Fluted Stalk Rolls (on page 2).

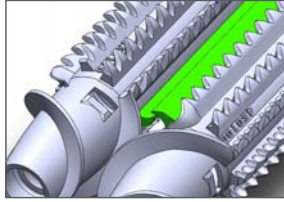
## STEPS FOR 360 CHAINROLL INSTALLATION

### Step 1. Install 360 CHAINROLL Stalk Rolls

Tools and Parts Required:  
+ Anti-Seize  
+ 360 CHAINROLL Left and Right Rolls  
+ 1/2" and 5/16" Roll Pins  
+ 1/2" and 5/16" Roll Pin Punches  
+ Hammer

- 1: Orient the drive shafts so the roll pin holes face upwards diagonally from left to right as you look at the row unit, as shown.
- 2: Apply anti-seize around the outer surface of the first and third sections of the steel shafts.
- 3: Orient 360 CHAINROLL stalk rolls so that the part number is facing up and the cutting flutes are intermeshing, as shown.
- 4: Slide the stalk rolls simultaneously onto the drive shafts making sure the roll pin holes on the drive shafts align with roll pin holes on stalk rolls.
- 5: Insert one of the 1/2" roll pins into the pin hole and tap in slightly until it won't fall out. In the hole that is open, insert a long punch or straight tool (approximately 1/2" dia.) through the hole to ensure the roll pin holes on the shaft stay aligned with the stalk roll.
- 6: Using a hammer and roll pin punch, drive the first roll pin in until it is inset slightly on both sides of the stalk roll.
- 7: Insert one of the 5/16" roll pins into the 1/2" roll pin already in the stalk roll and tap in slightly until it doesn't fall out.
- 8: Using the hammer and 5/16" roll pin punch, drive 5/16" roll pin through 1/2" pin until it is inset slightly on both sides.

See steps continued at top of right column.



### Step 1 Continued

9. Repeat Steps 5 to 8 for roll pin on the opposite roll.
10. Manually turn stalk rolls a full revolution to ensure no interferences exist.
11. Repeat Steps 5 to 8 for any remaining roll pin holes.

### Step 2. Clamp the 360 CHAINROLL Rolls

Tools and Parts Required:  
+ Socket Head Cap Screw  
+ 8 mm Hex Socket and Torque Wrench  
+ Thread Locker

- 1: Orient the stalk rolls to access the bolt holes near the center of stalk roll.
- 2: Apply thread locker to one of the cap screws supplied.
- 3: Insert the first cap screw and torque it to 75 lb./ft. (100 Nm), as shown.
- 4: Repeat Steps 2 to 3 for the second cap screw.
- 5: Repeat Steps 1 to 4 for the other stalk roll.

### Step 3. Reinstall Trash Knives

Tools and Parts Required:  
+ 18 mm Socket and Impact or Ratchet Wrench  
+ Trash Knife Rework Pattern

- 1: The trash knives will likely need to be modified to fit up with 360 CHAINROLL. Refer to the Trash Knife Rework Pattern and instructions in your kit.
- 2: After the rework is complete, install four, 18 mm bolts. Start from the rear and do not fully tighten.
- 3: Adjust spacing between the trash knife and the roll to approximately 1/4 in. Tighten the first and third bolts.
- 4: Tighten the remaining bolts.
- 5: Repeat Steps 1 to 4 for the opposite side.

