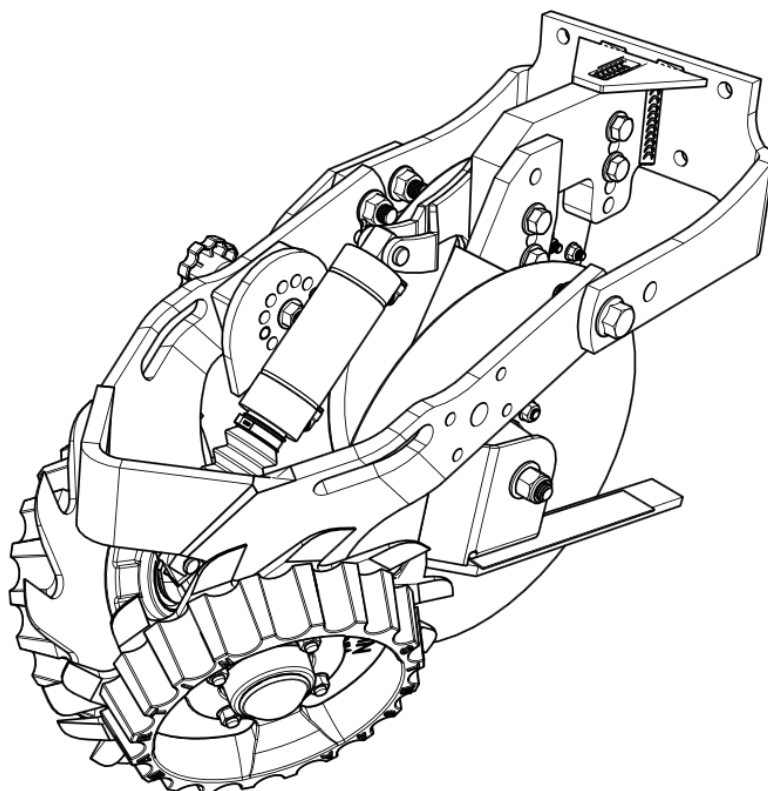


DUAL UMO-1360

1360 ROW CLEANER WITH TWO UNIT MOUNTED FERTILIZER OPENERS

INSTALLATION INSTRUCTIONS



SHOWN WITH DDU MOUNT AND OPTIONAL SMARTCLEAN CYLINDER
AND BRACKETS, RAZOR WHEEL(RTW1412.5) , SIDE TREADER WHEELS
(STW-04) & CAM ADJUST (CA03-D)



Martin Planter Attachments

Martin Industries LLC

206 Elk Fork Road

Elkton, KY 42220

Telephone: 270-265-5817

E-Mail: martin@martintill.com

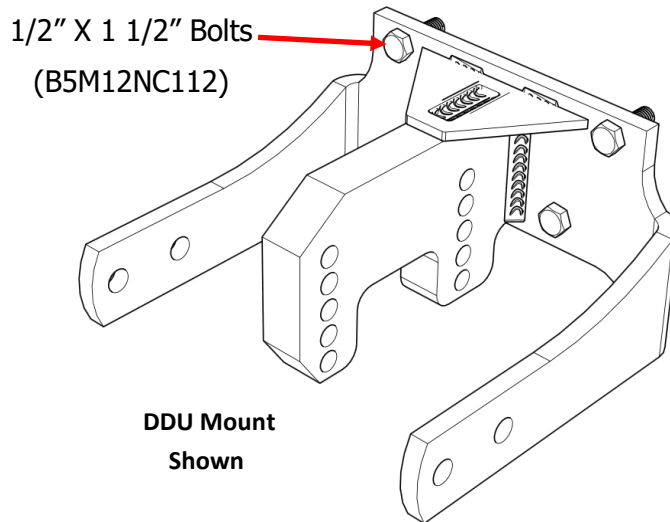
www.martintill.com



STEP 1 : ATTACH THE MOUNT TO THE PLANTER

Use a square or a level tool to make sure that the planter base plate is set parallel to the Planter's W-Bracket (The bracket that attaches the planter to the tool bar).

Using four 1/2" X 1 1/2" bolts, attach the Mount to the Planter's base plate, and torque mounting nuts to 57 ft-lbs.



STEP 2 : INSTALLING THE UMOs

IMPORTANT NOTES:

In this instruction , the left UMO is leading. We recommend installing half of the planter with left UMO leading and half with right UMO leading.

For a right UMO leading installation, use left top SmartClean bracket set and left stop arm.

STEP 2A: INSTALLING THE RIGHT UMO

Select one of the shown UMO installation positions (A, B, or C) and attach the right UMO to the mount using 1/2" X 2 1/2" bolts and tighten the 1/2" flange nuts to 80 ft-lbs.

Position A:

The top bolt passes through the first holes of the mount and the UMO. The bottom bolt passes through the fifth hole of the mount and the forth hole of the UMO. This position will place the fertilizer 3/4" above seed depth.

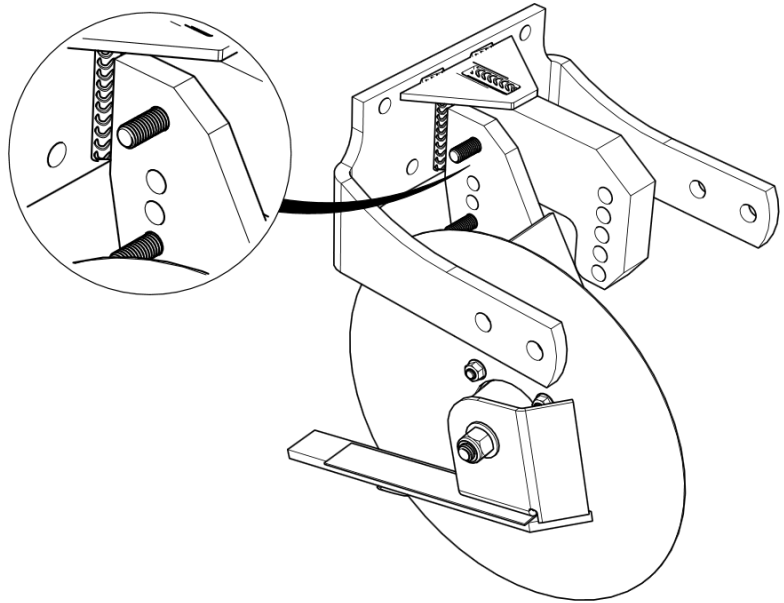
Position B: (RECOMMENDED)

The top bolt passes through the second hole of the mount and the first hole of the UMO. The bottom bolt passes through the fifth holes of the mount and the third hole of the UMO. This position will place the fertilizer "even" with seed depth.

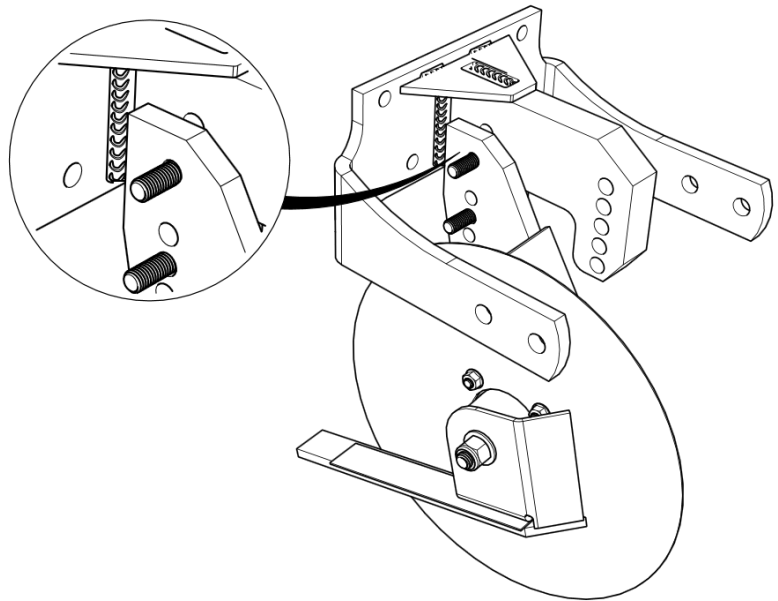
Position C:

The top bolt passes through the third hole of the mount and the first hole of the UMO. The bottom bolt passes through the fifth holes of the mount and the second hole of the UMO. This position will place the fertilizer 3/4" below seed depth.

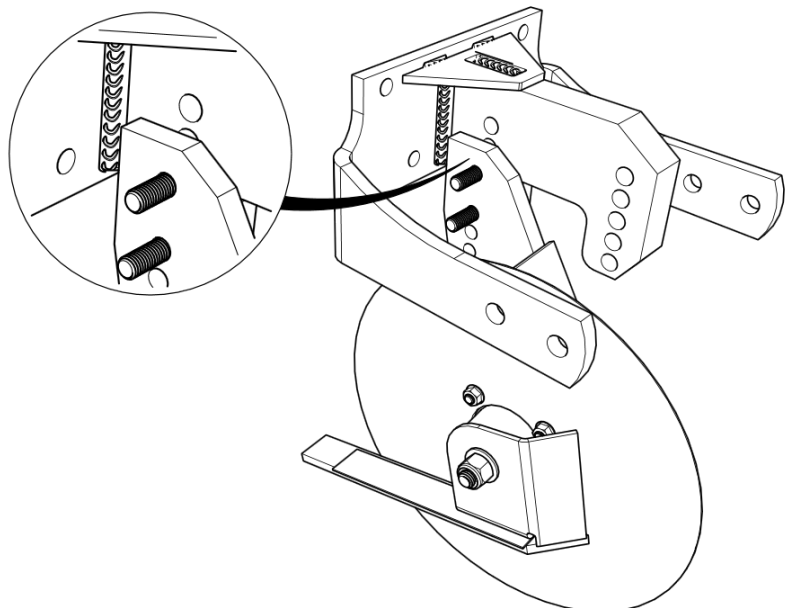
Position A
3/4" above seed depth



Position B
Even with seed depth
(Recommended)



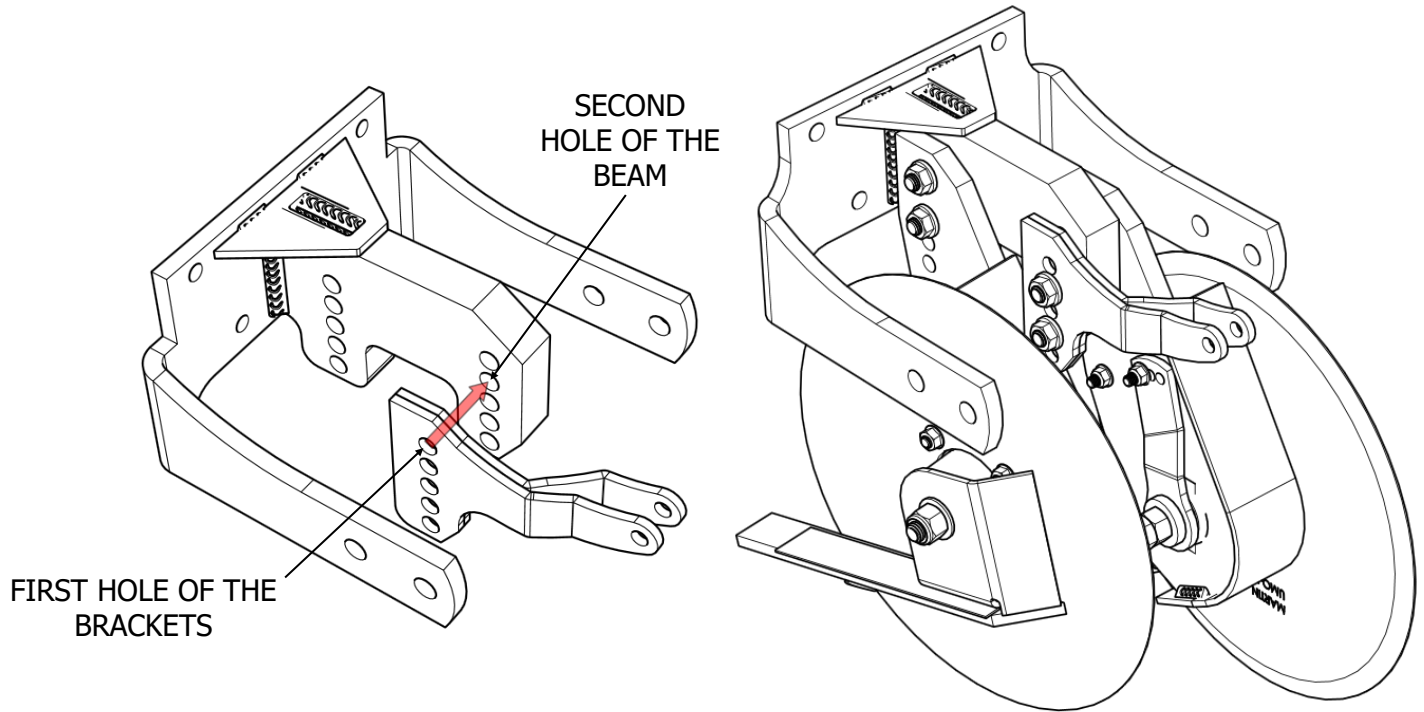
Position C
3/4" below seed depth



STEP 2B: INSTALLING THE LEFT UMO AND AIR CYLINDER TOP BRACKETS

Attach the left UMO to the mount according to the picture using 1/2" X 2 1/2" bolts (Or 1/2" X 3" bolts when optional cylinder top brackets are used) and tighten the flange nuts to 80 ft-lbs.

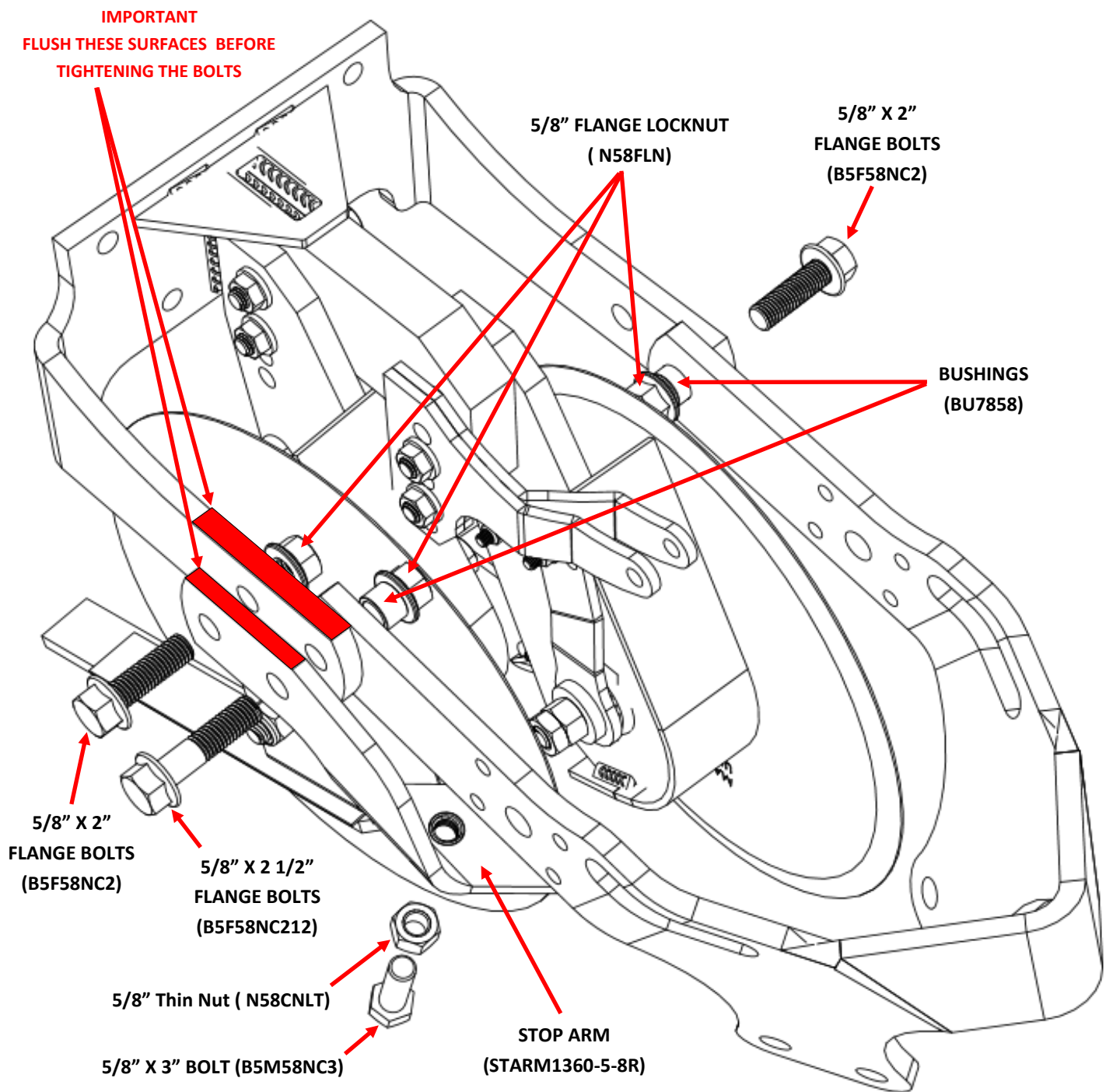
Note : The optional cylinder top brackets are installed one hole down rather than beam's holes in this unit. Therefore the first hole on the brackets lines up with the second hole of the beam.



STEP 3: ATTACH 1360 FRAME ASSEMBLY TO THE MOUNT

IMPORTANT: Stop arm installation, as shown in the picture, is for the left UMO configuration . For a right UMO configuration, install the left stop arm (STARM1360-5-8L) on the opposite side.

1. Place the bushings (BU7858) inside the frame's arms pin point holes.
2. Align the holes in the mount and the frame assembly. Insert the 5/8" x 2 1/2" and the 5/8" x 2" bolts from the outside. Add the Stop Arm and other 5/8" x 2" bolt as it is shown in the picture. Place nuts on the 5/8" bolts from inside and tighten the three bolts to 112 ft-lbs. Check after first day of use.
3. Check to ensure the frame is not binding on the mounting bracket and is free to float up and down.
4. install the 5/8" X 3" bolt on the Stop Arm as factory threaded adjustment assembly and tighten the 5/8" Thin Nut to lock it after the adjustment.

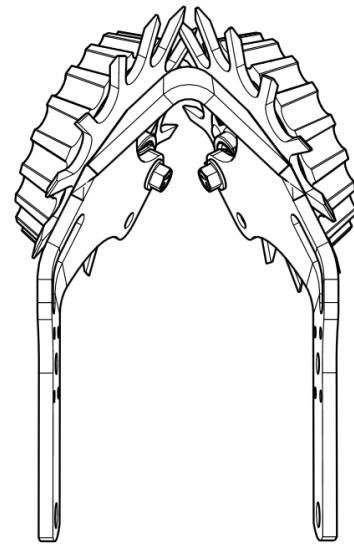
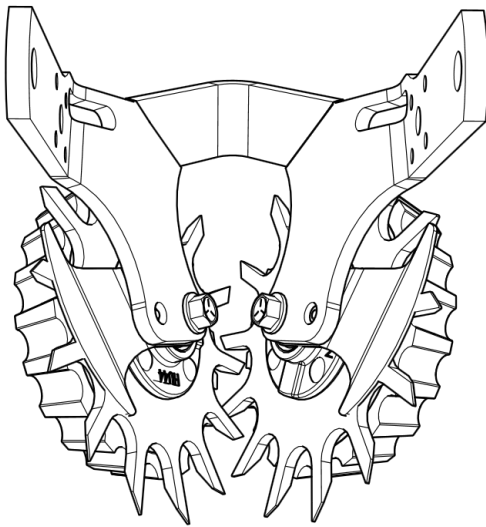


STEP 4 : DETERMINE THE BEST WHEEL CONFIGURATION FOR YOUR SOIL CONDITIONS

OPTION A: INTERSECTED

(Both wheels in front hole)

Both wheels forward provides maximum cleaning effect. The interlocked wheels till the middle of the seed row.

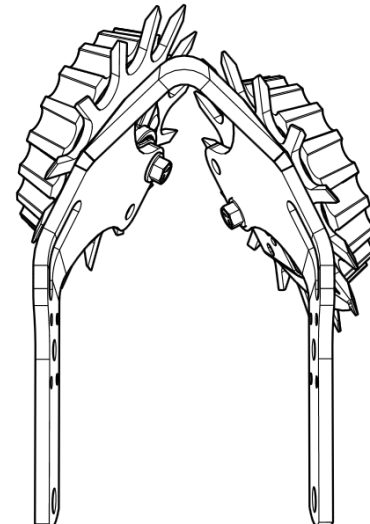
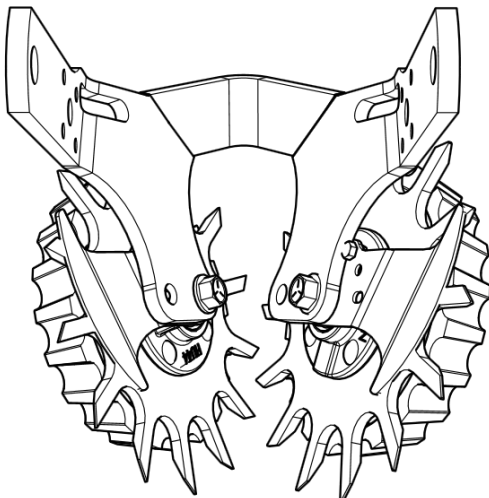


OPTION B: OFFSET

(Left wheel in front hole and right wheel in rear hole)

The staggered configuration allows the wheels to turn more easily in loose soil.

With this configuration, we suggest running the left wheels in the rear hole on the half of the planter and the right wheels in the rear hole on the other half of the planter (when viewed from behind).



STEP 5: INSTALL SMART CLEAN CYLINDER BOTTOM ANCHOR

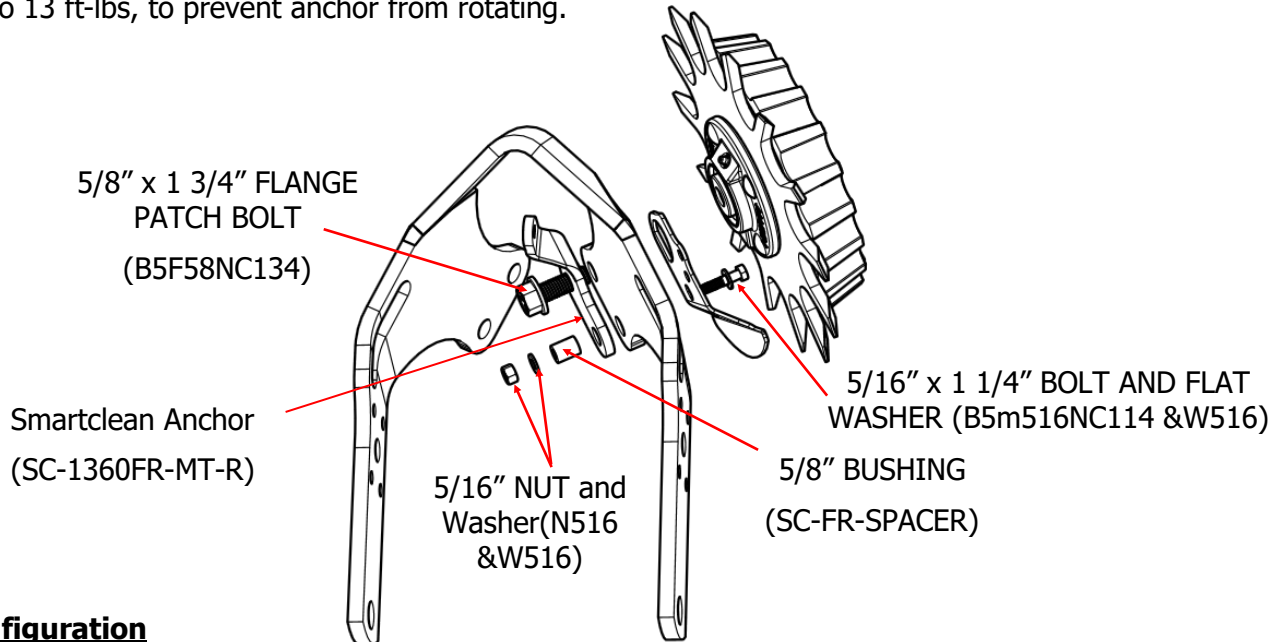
IMPORTANT: Skip to [Step 6](#) if optional SmartClean System was not purchased

If the optional SmartClean cylinder was purchased, install the SmartClean cylinder bottom anchor, before installing the wheels, as shown below. Proper location of the bottom anchor mounting bolts is determined by the wheel configuration you've chosen. The anchor is installed on the right side of the frame.

- The first picture shows proper anchor mounting for the intersected wheel configuration.
- The second picture shows proper anchor mounting for the offset wheel configuration.

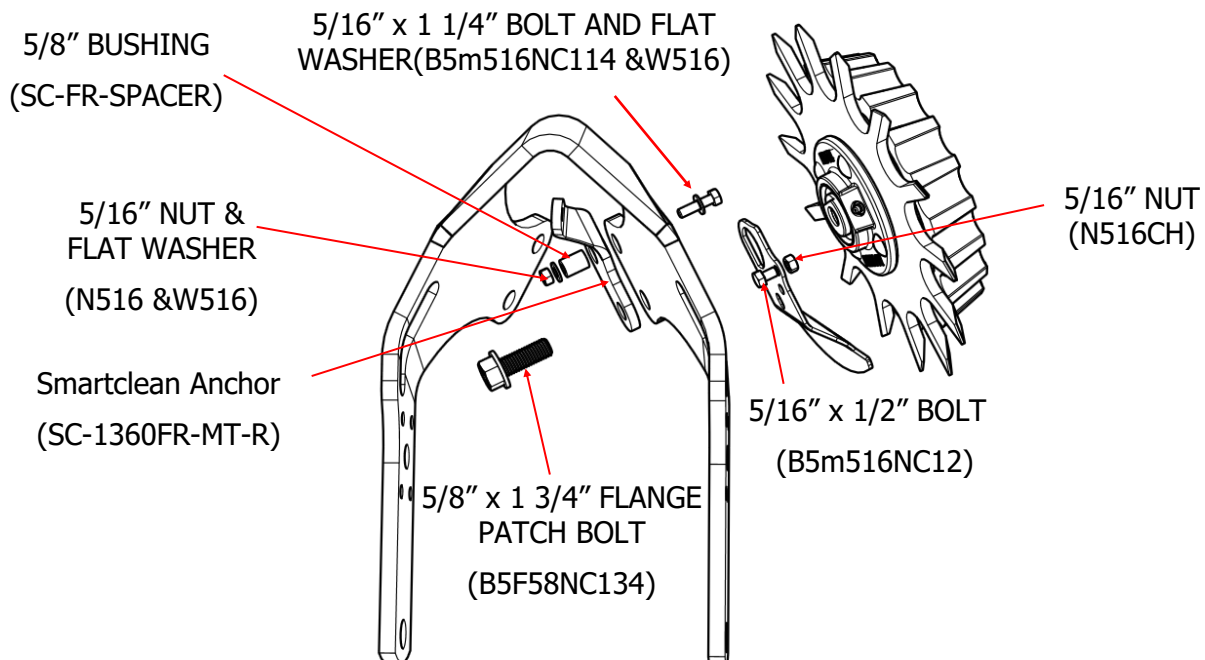
Intersected Configuration

1. Place 5/8" x 1 3/4" flange patch bolt through front hole of frame and torque to 112 ft-lbs, to secure anchor and hub axle to frame.
2. Place 5/16" x 1 1/4" BOLT, 5/16" FLAT WASHER, 5/8" BUSHING & 5/16" NUT in rear hole of frame and torque to 13 ft-lbs, to prevent anchor from rotating.



Offset Configuration

1. Place 5/8" x 1 3/4" flange patch bolt through rear hole of frame and torque to 112 ft-lbs, to secure anchor and hub axle to frame.
2. Place 5/16" x 1 1/4" BOLT, 5/16" FLAT WASHER, 5/8" BUSHING, & 5/16" NUT in front hole of frame and torque to 13 ft-lbs, to prevent anchor from rotating.



STEP 6: INSTALL WHEEL ASSEMBLIES

IMPORTANT: Skip to [Step 6C](#) if not using optional D-Lock Deflector (Scraper)

NOTE: The D-Lock Deflector (Scraper) is recommended (in place of the standard D-Lock) when operating in wetter conditions, or damp stringy residue, to reduce wrapping.

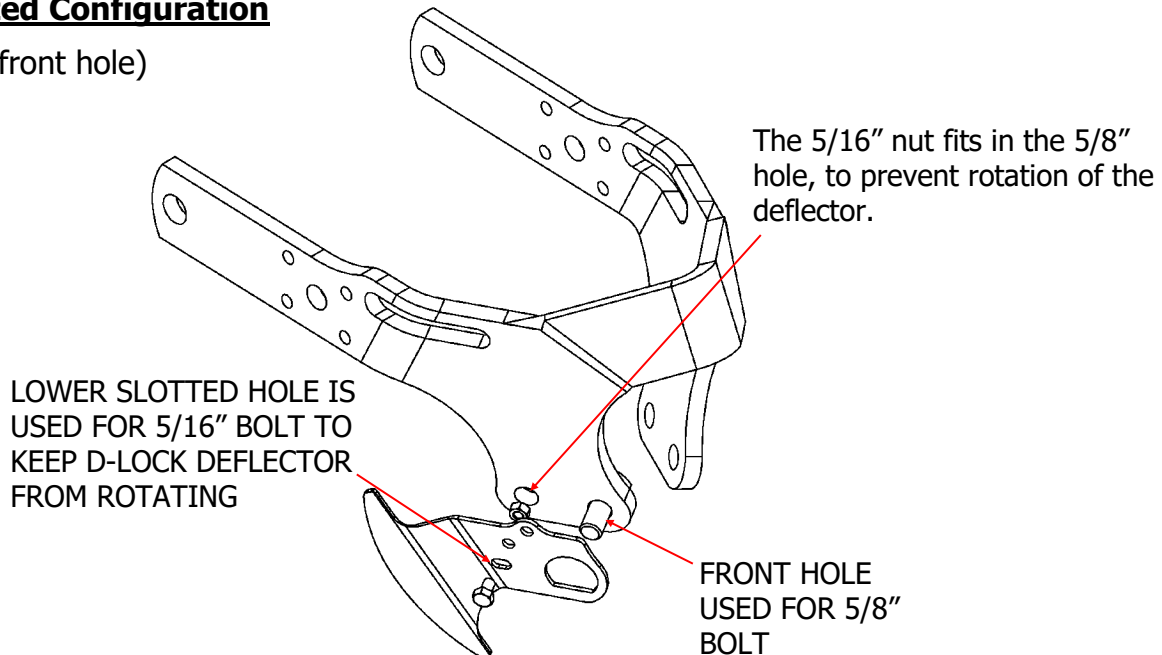
NOTE: Either the D-Lock deflector (illustrated below and on next page) or the D-Lock (illustrated on page 13) must be installed to allow the 5/8" bolt to tighten without the hub rotating.

NOTE: Proper location of the D-Lock Deflector is determined by selected wheel configuration.

STEP 8A: PROPERLY CONFIGURE THE D-LOCK DEFLECTOR (SCRAPER)

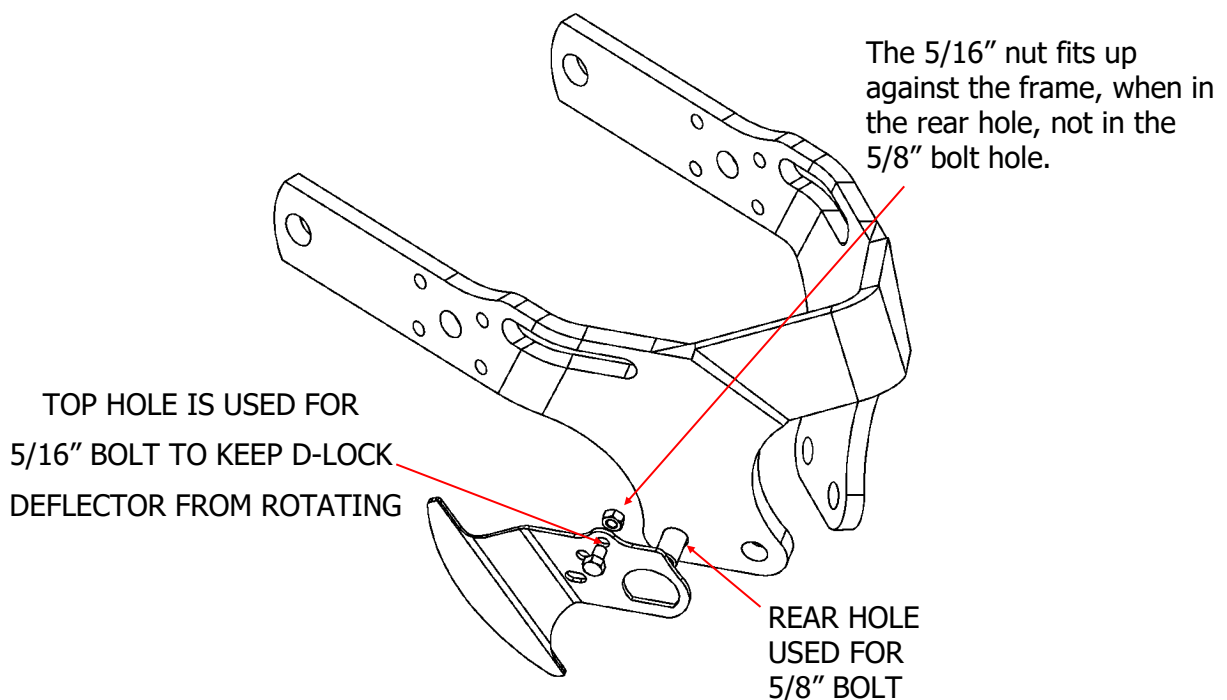
Intersected Configuration

(Wheel in front hole)



Offset Configuration

(Wheel in rear hole)

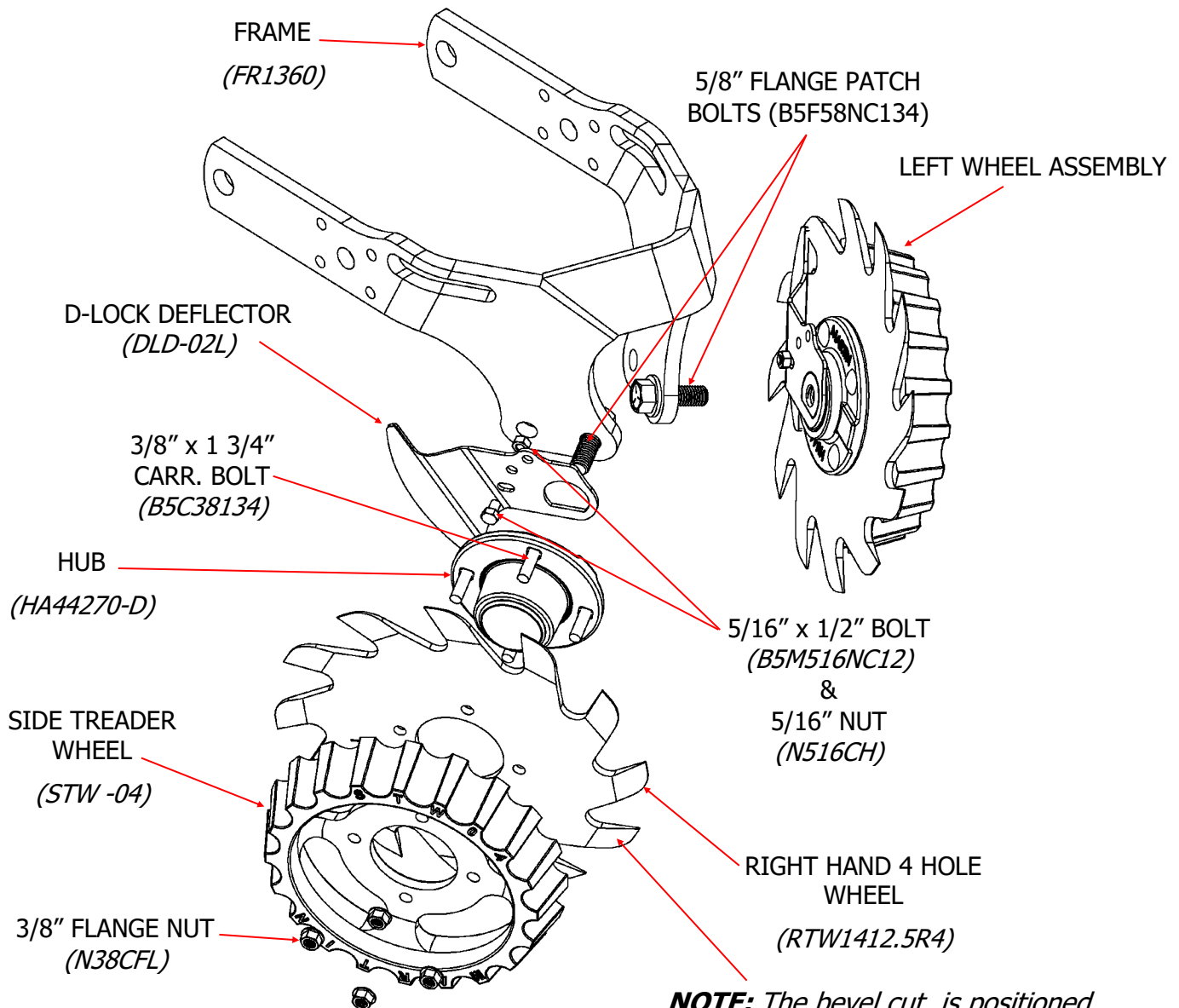


STEP 6: INSTALL WHEEL ASSEMBLIES (CONT.)

IMPORTANT: Skip to [Step 6C](#) if not using optional D-Lock Deflector (Scraper)

STEP 6B: INSTALL WHEEL ASSEMBLIES USING OPTIONAL D-LOCK DEFLECTOR (SCRAPER)

- 1) Attach the D-lock deflector (DLD-02L) to the end of the hub axle, making sure it is flush with the end of the axle, before bolting the axle to the frame. (For placement of 5/16" stop bolt see figure on previous page)
- 2) Secure the hub to the frame with the 5/8" flange patch bolt. Using a torque-wrench, tighten to 112 ft-lbs. Re-tighten after first day's use.
- 3) Install the wheel (part # to the outside) and side treader wheel on the hub, using the four carriage bolts and flange nuts. Torque to 23 ft-lbs. Re-tighten after first day's use.
- 4) The wheel marked RTW1412.5R4 (Razor wheel) or TW3813-R4 (Spike wheel) is for use on the right side of the frame (as viewed from behind the machine). Repeat for opposite side.

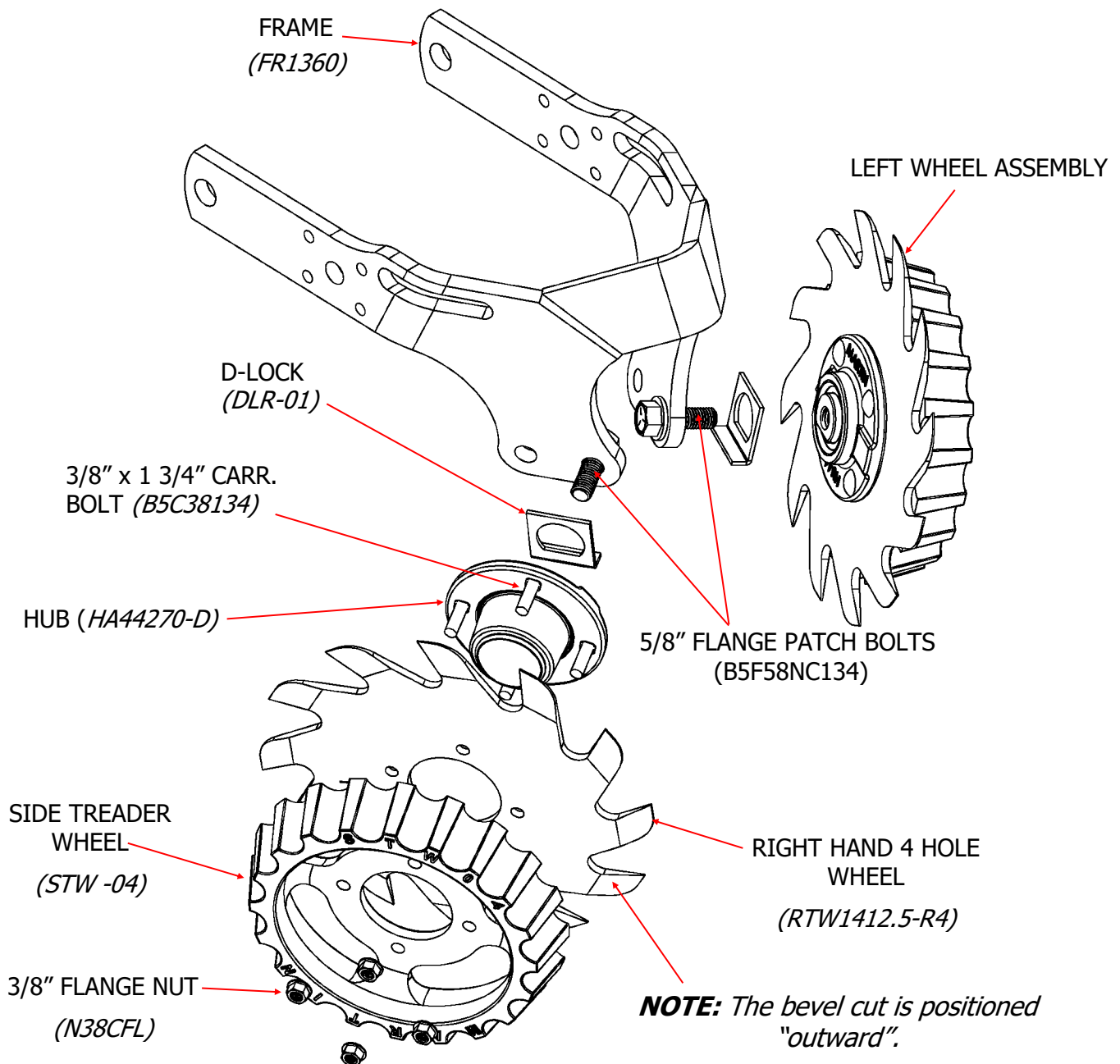


NOTE: The bevel cut is positioned "outward".

STEP 6: INSTALL WHEEL ASSEMBLIS (CONT.)

STEP 6C: INSTALL WHEEL ASSEMBLIES USING STANDARD D-LOCK

1. Attach the D-lock to the end of the hub axle making sure it is flush with the end of the axle before bolting the axle to the frame.
2. Secure the hub to the frame with the 5/8" bolt. Using a torque-wrench, tighten to 112 ft-lbs. Re-tighten after first day's use.
3. Install the wheel (part # to the outside) and side treader wheel on the hub, using the four carriage bolts and flange nuts. Torque to 23 ft-lbs. Re-tighten after first day's use.
4. The wheel marked RTW1412.5R4 (Razor wheel) or TW3813-R4 (Spike wheel) is for use on the right side of the frame (as viewed from behind the machine). Repeat for opposite side.

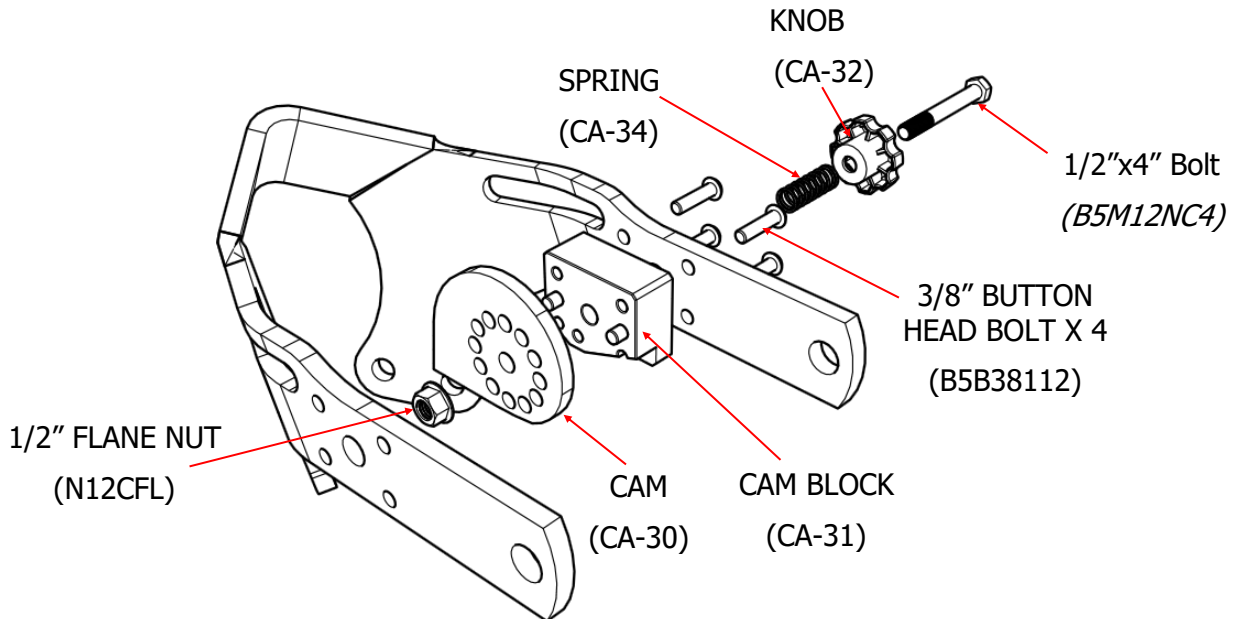


STEP 7: INSTALLING THE OPTIONAL CAM ADJUSTMENT ASSEMBLY

IMPORTANT NOTE:

Cam installation as shown in the picture, is for the left UMO leading configuration . For a right UMO leading configuration, install the Cam assembly on the opposite side.

1. Mount the cam block to the frame using the four 3/8" button head bolts.
2. Slide the 1/2" x 4" bolt through the knob, spring, and support block and thread it into the cam.
3. Tighten the bolt until the cam is directly adjacent the support block but still loose enough to be disengaged from the pin by pushing on the knob.
4. Install the 1/2" nut on the end of the bolt and tighten securely against the cam.

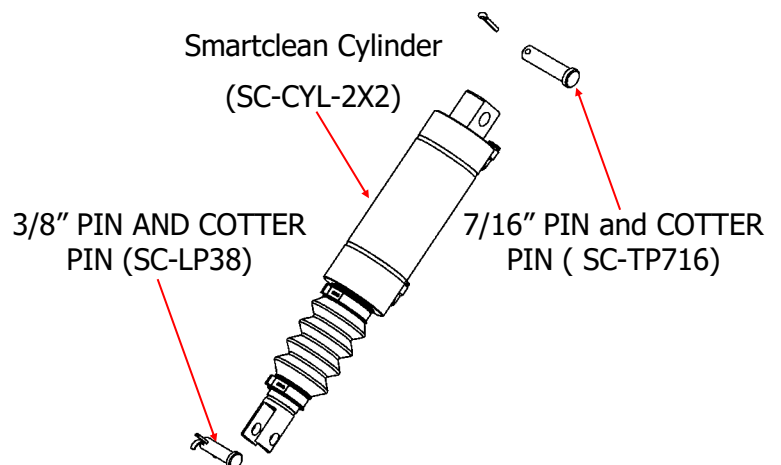


STEP 8 : INSTALL THE OPTIONAL SMARTCLEAN CYLINDER

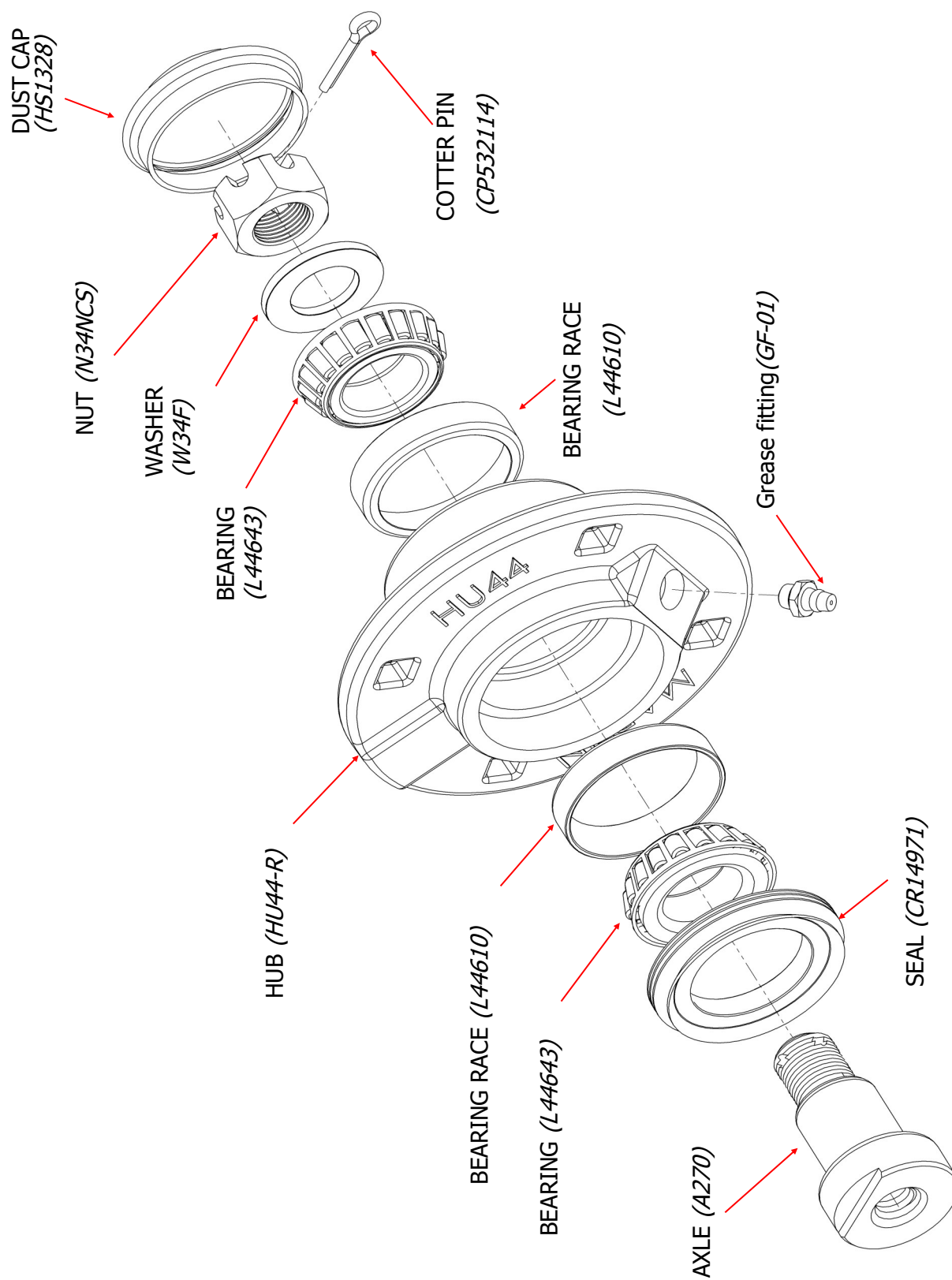
Install the SmartClean cylinder between the top and bottom brackets. Use thicker (7/16") pin on the top brackets and thinner (3/8") pin on the bottom bracket as shown in the picture below.

Note:

It is very important to limit the row cleaner down travel to prevent the air cylinder from extending fully. This is accomplished by setting the threaded stop bolt adjustment or optional cam adjustment to catch the row cleaner just before the cylinder reaches the end of its stroke. Failure to do so can result in premature cylinder failure.

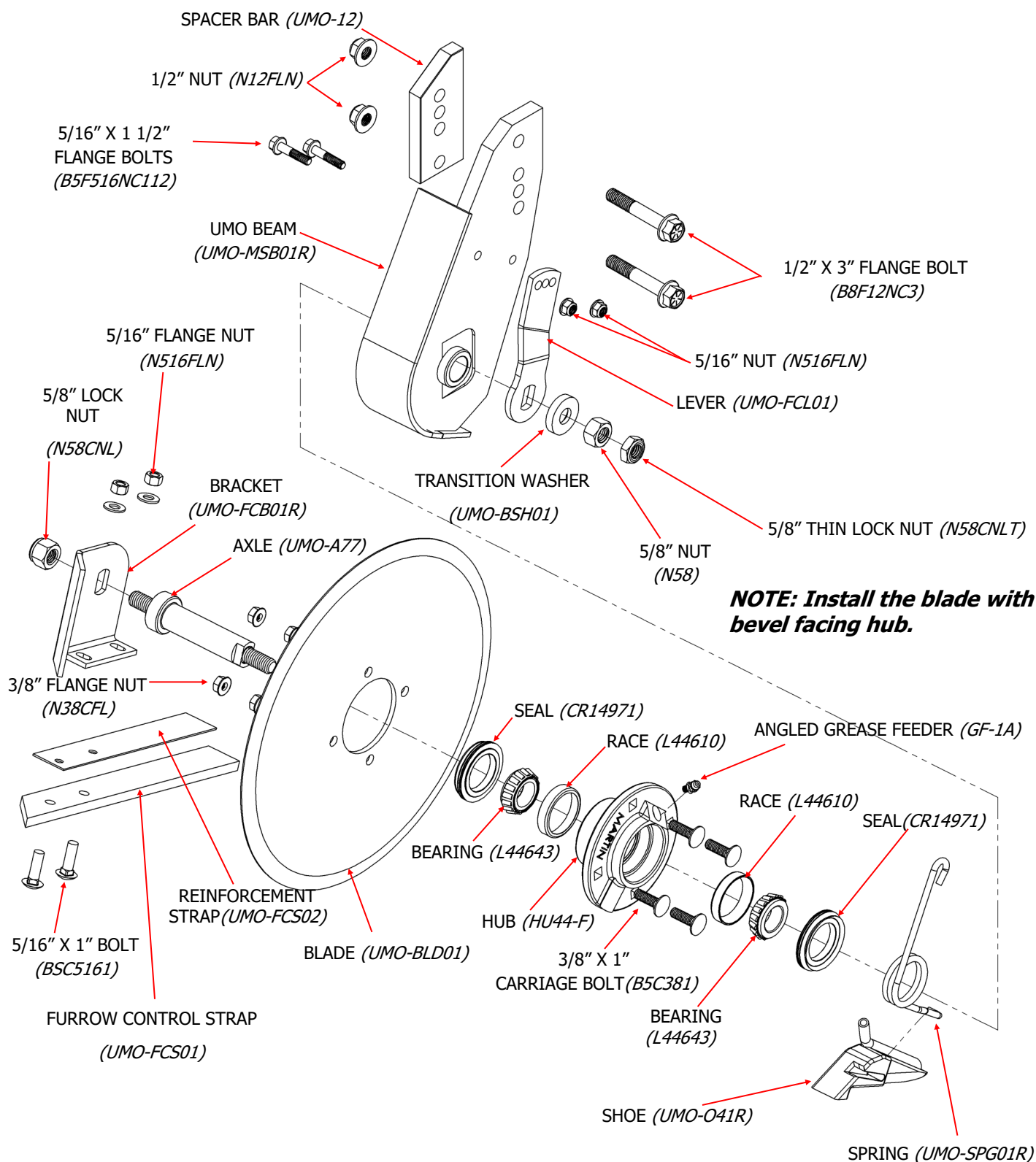


PARTS LIST FOR 1360 HUB ASSEMBLY (HA44270-D)



PARTS LIST FOR UMO-100

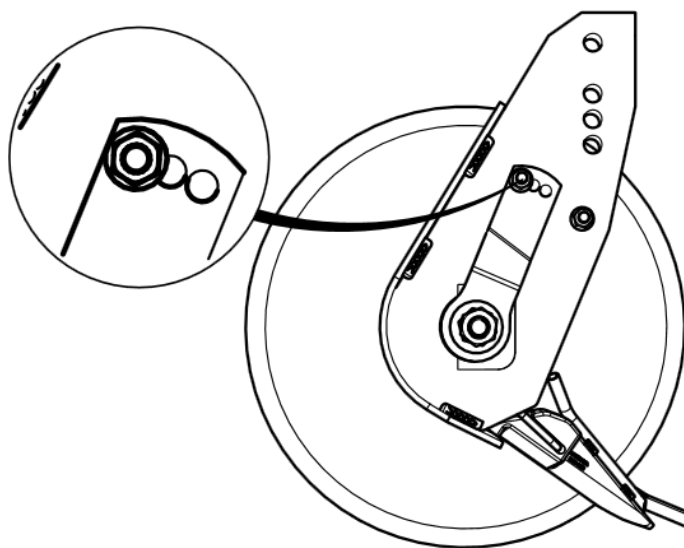
UMO — 100R shown, UMO — 100L (not shown) is the opposite side



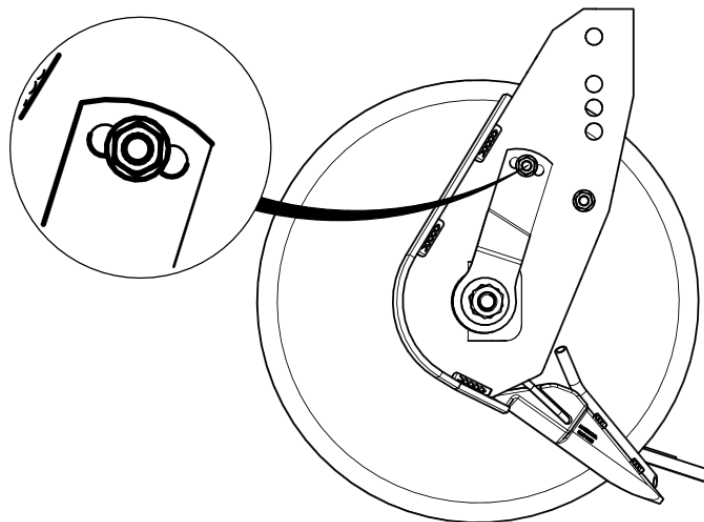
NOTE: UMO-100R SHOWN

- R DESIGNATES RIGHT HAND PARTS
- L DESIGNATES LEFT HAND PARTS

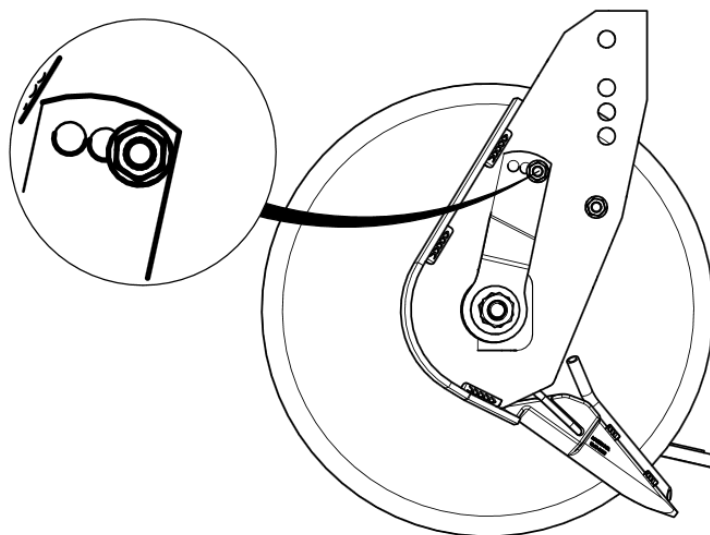
FURROW CONTROL LEVER GROUND PRESSURE ADJUSTMENT



SETTING #1: This configuration provides maximum ground pressure.



SETTING #2: This configuration provides medium ground pressure.



SETTING #3: This configuration provides the least ground pressure.

NOTE: This is the default and recommended position.

MAINTENANCE TIPS

1360 Row Cleaner Hub Preventative Maintenance

The 1360 Row Cleaner hub is designed to be “flushed out” with lubrication, without damaging the triple lip seal. To “flush” the hub, lubricate until fresh grease is visible around the seal.

- In most conditions annual lubrication of the 1360 Row Cleaner hub is sufficient
- More frequent lubrication is recommended in dusty or sandy conditions

NOTE: Hubs may feel tight when first installed. They will loosen after they “run in”.

1360 Row Cleaner Hub Bearing Preload Adjustment

Maintaining proper bearing preload is crucial to bearing life. Monitor and adjust annually.

To adjust:

- Remove the dust cap
- Remove the cotter pin
- Tighten the 3/4” nut until you feel zero end play
- Gently back the nut off, leaving .01” - .012” end play
- Replace the cotter pin and dust cap

NOTE: End play is checked by pulling out on the top of the wheel while pushing in on the bottom

UMO — 100 Hub Preventative Maintenance

The UMO hub is designed to be “flushed out” with lubrication, without damaging the triple lip seal. To flush the hub, lubricate until fresh grease is visible around the seal.

- In worked ground, lubricate every 20 hours of run time
- In No-Till ground, lubricate every 40 hours of run time

NOTE: Hubs may feel tight when first installed. They will loosen after they “run in”.

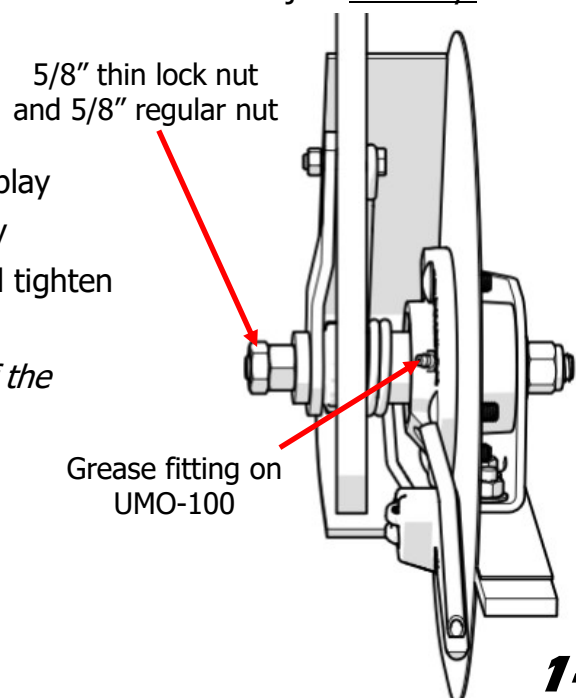
UMO — 100 Hub Bearing Preload Adjustment

Maintaining proper bearing preload is crucial to bearing life. Monitor and adjust annually.

To adjust:

- Loosen the 5/8” thin lock nut
- Tighten the 5/8” regular nut until you feel zero end play
- Gently back the nut off, leaving .01” - .012” end play
- Hold the 5/8” regular nut in place with a wrench and tighten the 5/8” thin lock nut

NOTE: End play is checked by pulling out on the top of the blade while pushing in on the bottom





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