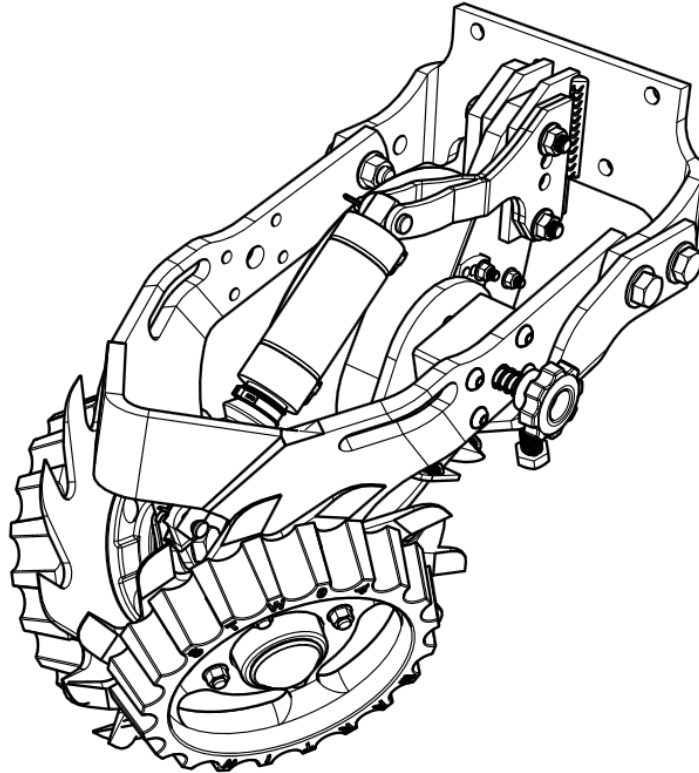


UMO-WA1360

APPLIES TO ALL 1360 ROW CLEANER WITH UNIT MOUNTED FERTILIZER OPENER

INSTALLATION INSTRUCTIONS



SHOWN WITH DS 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

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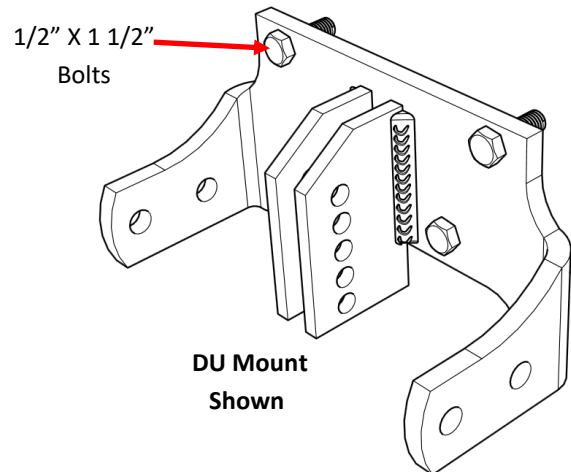
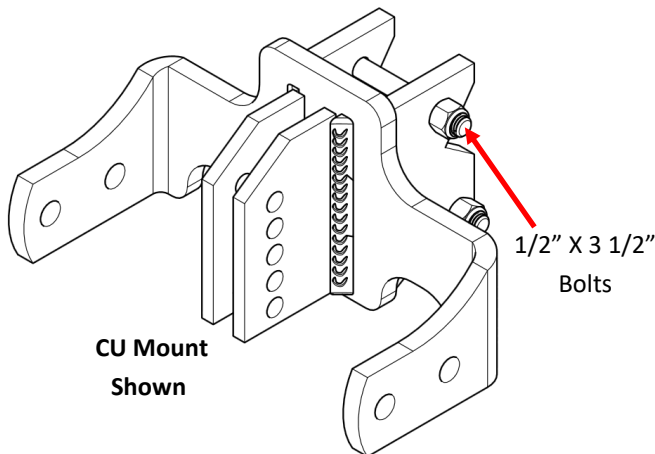


STEP 1 : ATTACH THE MOUNT TO THE PLANTER

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 (Right Picture).

For CaseIH 1200 series planter, use provided two 1/2" X 3 1/2" Grade 8 bolts and nuts . Torque to 80 ft-lbs (Left picture).



STEP 2 : DETERMINE DESIRED FERTILIZER PLACEMENT

The Martin-Till Unit Mounted Fertilizer Opener (UMO — 100) allows you to place fertilizer in three different horizontal (offset), and three different vertical (depth), distances from the seed.

The options on STEP 2A determine the vertical distance from the seed (depth).

The options on STEP 2B determine the horizontal distance from the seed (offset).

STEP 2A: UMO — 100 DEPTH SETTING OPTIONS

Looking at the pictures of page 3, select one of the following UMO vertical installation positions (A, B, or C)

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.

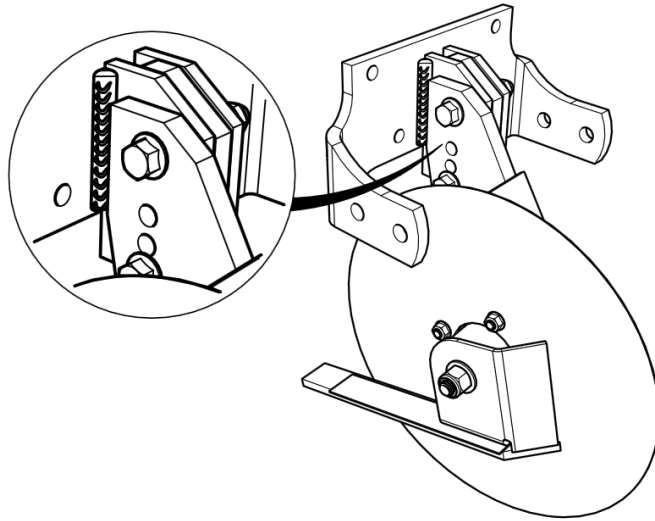
Position B: (RECOMMENDED)

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.

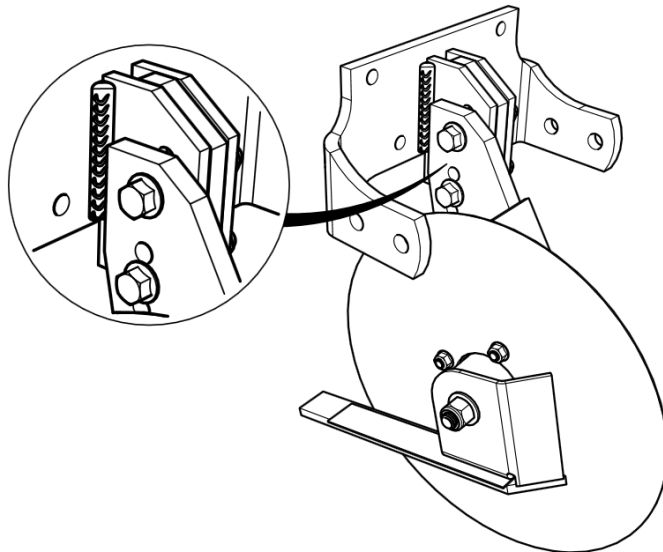
Position C:

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.

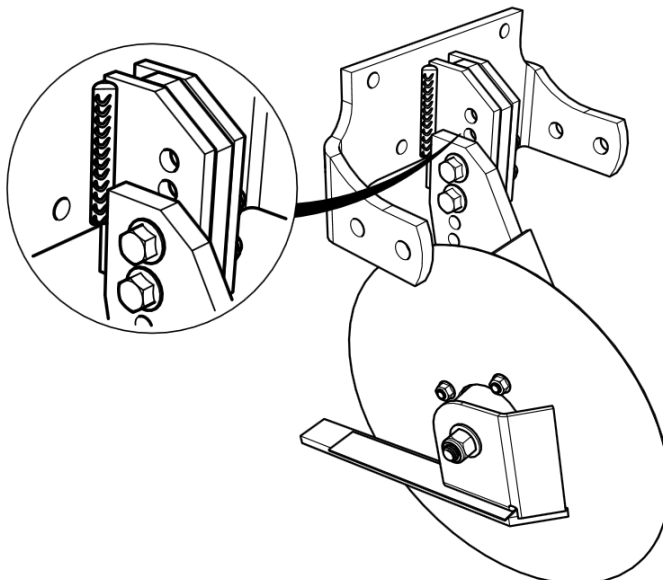
Position A
3/4" above seed depth



Position B
Even with seed depth
(Recommended)



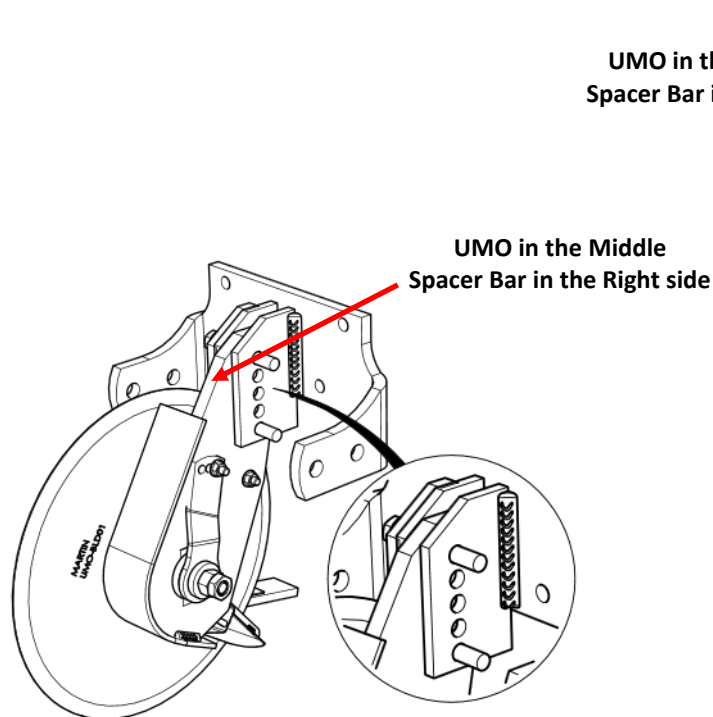
Position C
3/4" below seed depth



STEP 2B: UMO — 100 OFFSET SETTING OPTION

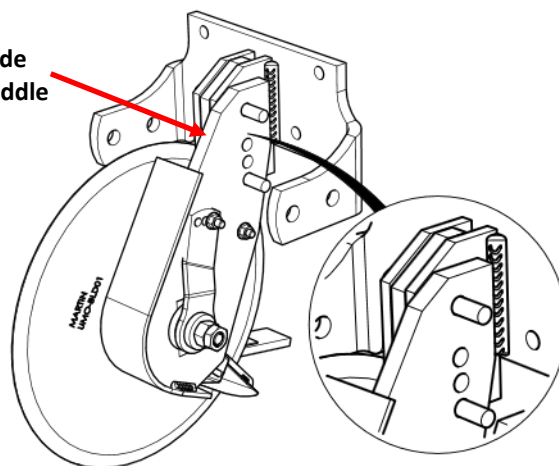
Three different offset settings are shown in the pictures. The UMO can be installed to the right side (Offset 1" from seed furrow), in between (Offset 2" from seed furrow), or to the left side (Offset 3" from seed furrow) of the mount flanges. Place the UMO-12 spacer bar according to the pictures.

Select one of the following UMO horizontal installation positions (A, B, or C)



Position B: Offset 2" from seed furrow

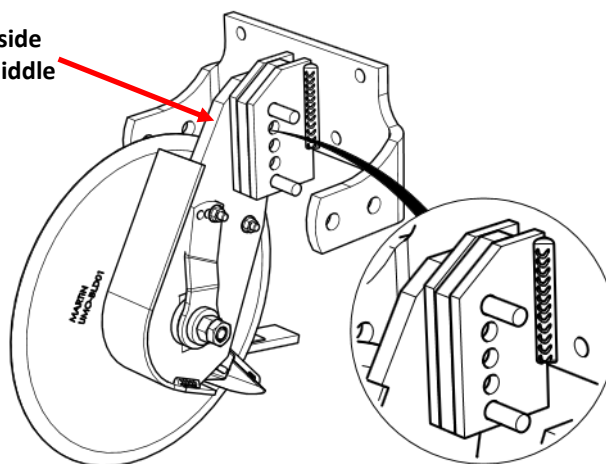
*Recommended for fertilizer application rates of 10-20 GPA.



Position A: Offset 1" from seed furrow

*Recommended for fertilizer application rates of 10 GPA and under.

UMO in the Right side
Spacer Bar in the middle



Position C: Offset 3" from seed furrow

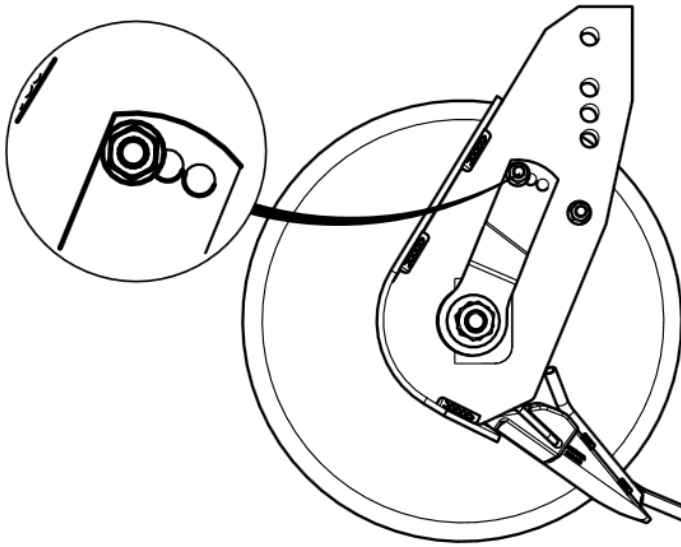
*Recommended for fertilizer application rates of 20-30 GPA.

NOTE:

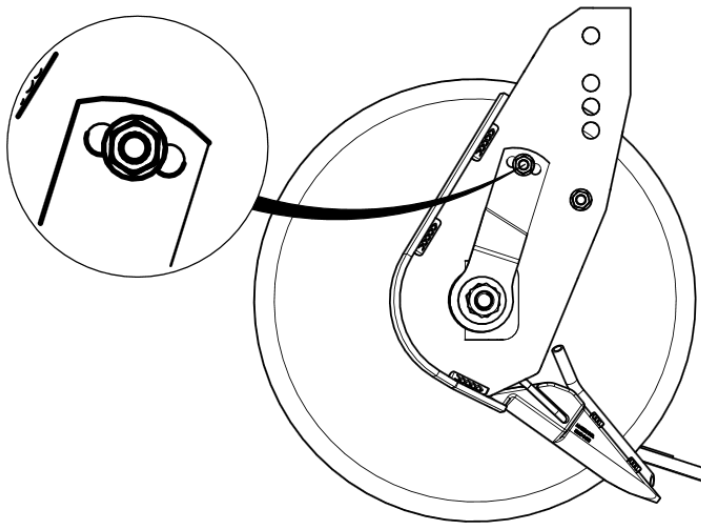
**Recommendations based on general rule of thumb of 1" offset for every ten gallons of fertilizer applied per acre.*

**Consult with your agronomist for specific application rate information unique to your operation, soil properties, and conditions.*

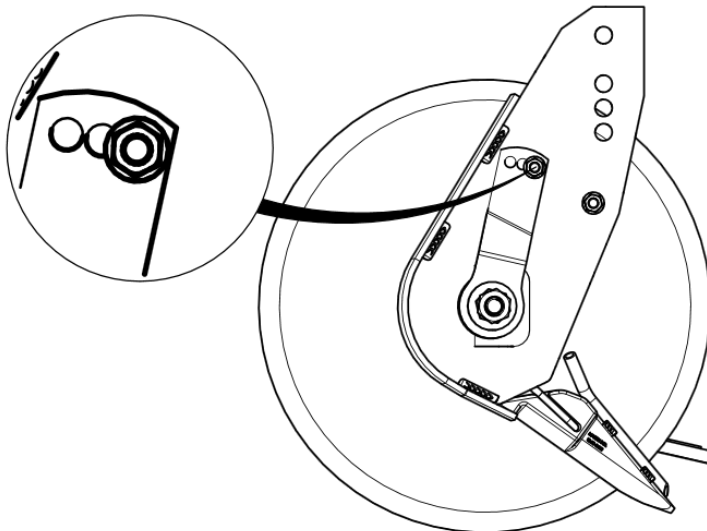
STEP 2C: FURROW CONTROL LEVER GROUND PRESSURE ADJUSTMENT



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.

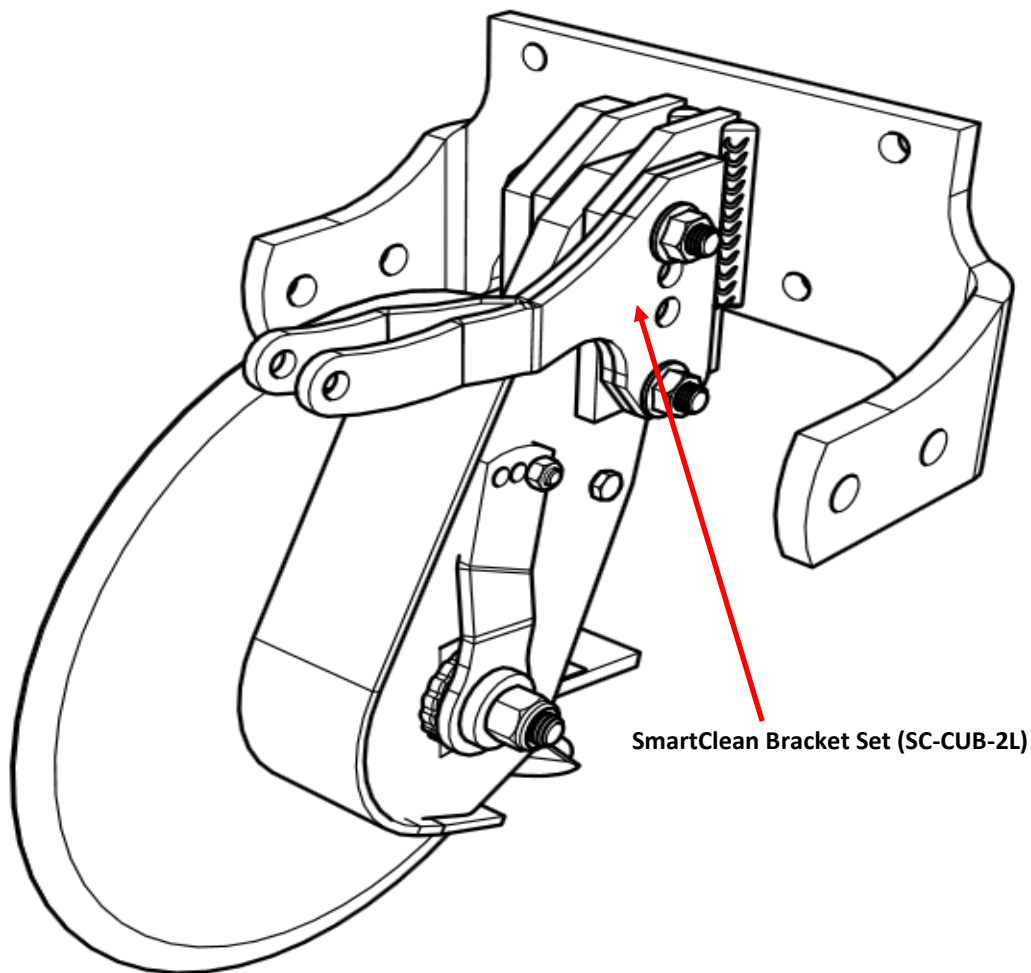
STEP 3 : ATTACH UMO-100 TO THE MOUNT

After selecting the desired depth and offset settings, attach the UMO-100 to the mount using two 1/2" X 3" flange bolts, and Flange locknuts, provided for you. If you purchased the optional SmartClean System, you will install the SmartClean cylinder top brackets on the side of the mount flanges. Use the 1/2" X 3 1/2" bolts provided in place of the 3" bolts. The SmartClean cylinder top brackets are available in right and left sets.

*The right set mounts on the left UMO-100 and the left set mounts on the right UMO-100. The correct configuration will bring the bracket pin point to the center of the row cleaner.

Torque the bolts to 80 ft-lbs.

***NOTE:** *Confirm half of UMO's are left sided and half are right sided for proper planter drafting.*

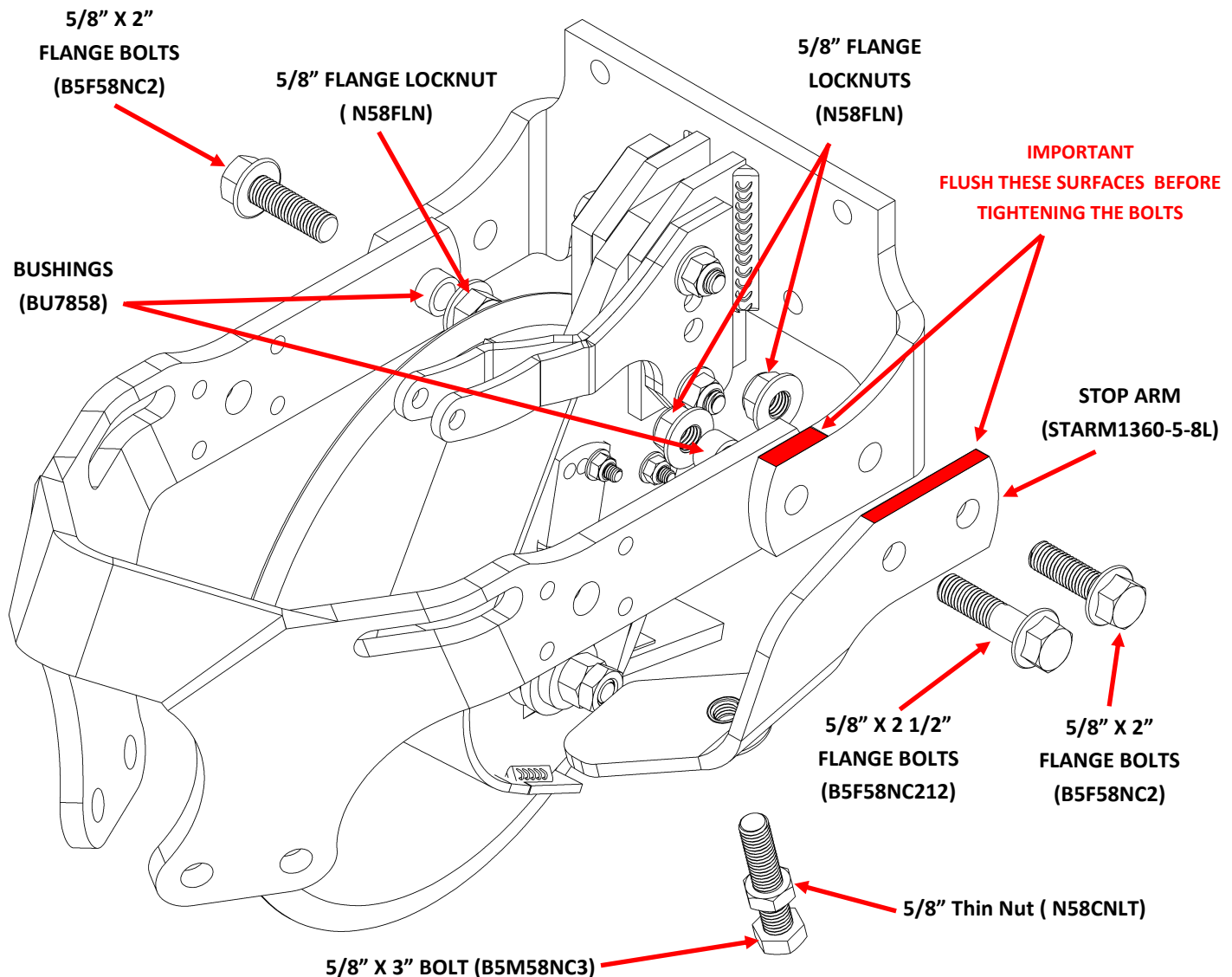


Right UMO-100 and Left SmartClean Cylinder top bracket set are shown

STEP 4 : ATTACH 1360 FRAME ASSEMBLY TO THE MOUNT

IMPORTANT: Stop arm installation, as shown in the picture, is for the right UMO configuration . For a left UMO configuration, install the right stop arm (STARM1360-5-8R) 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. If you don't purchase the Optional Cam Adjustment (Page 8), 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.

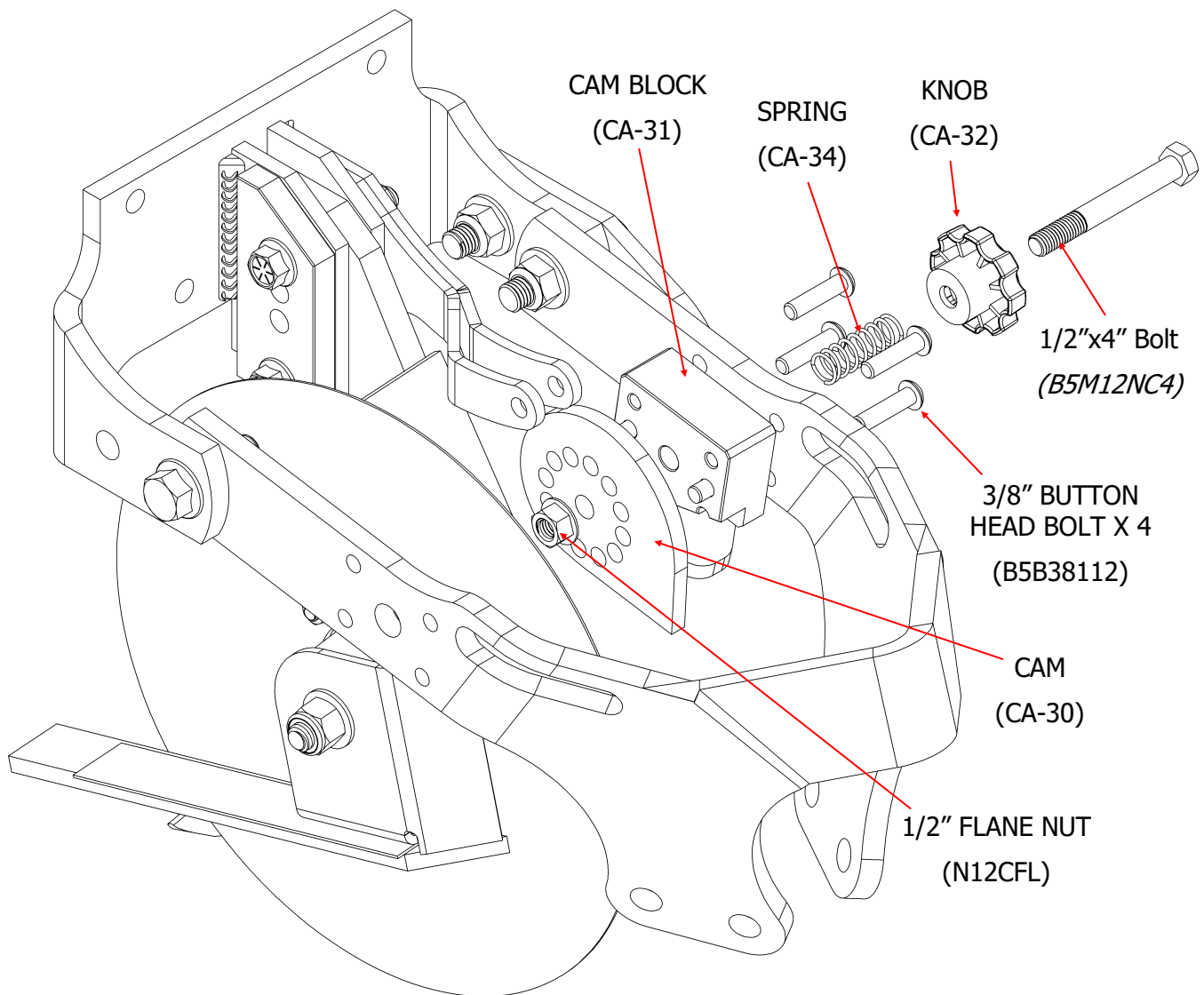


STEP 5 : INSTALLING THE OPTIONAL CAM ADJUSTMENT ASSEMBLY

This step is unnecessary if using the standard threaded adjustment bolt (see page 7)

IMPORTANT: The cam installation shown in the picture is for the right UMO configuration. For a left UMO configuration, install the same cam assembly with the cam pointing forward 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. Torque to 57 ft-lbs.

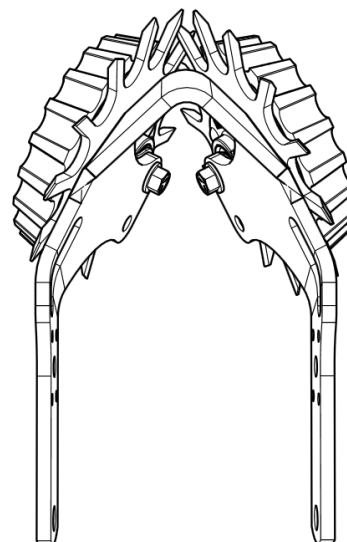
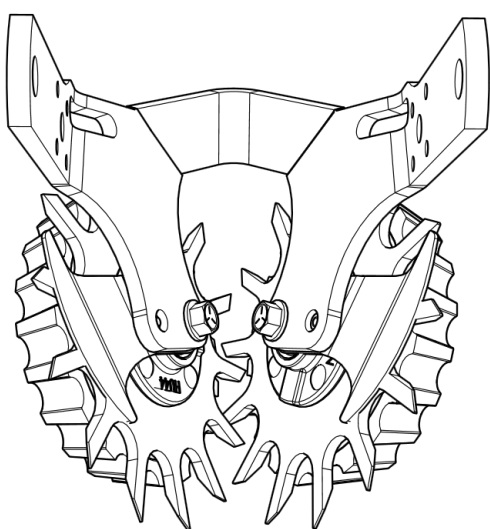


STEP 6 : DETERMINE THE BEST WHEEL CONFIGURATION FOR YOUR SOIL CONDITIONS

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.

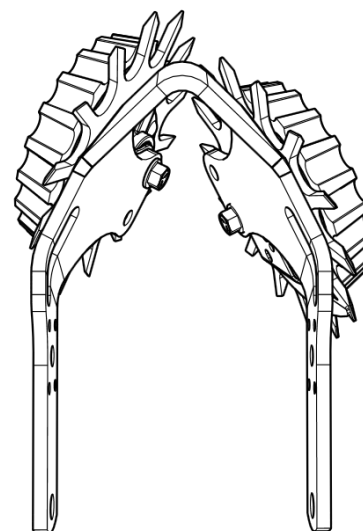
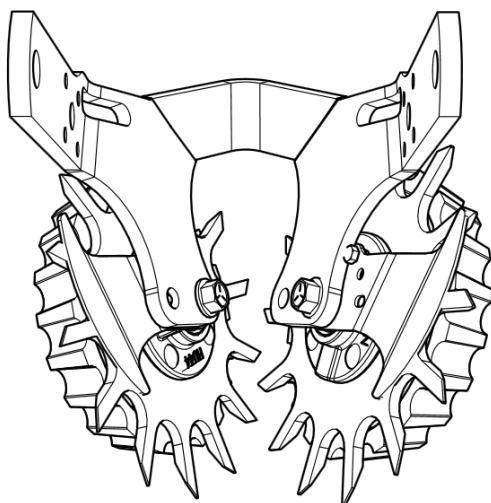


OPTION B: OFFSET

(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 7: INSTALL SMART CLEAN CYLINDER BOTTOM ANCHOR

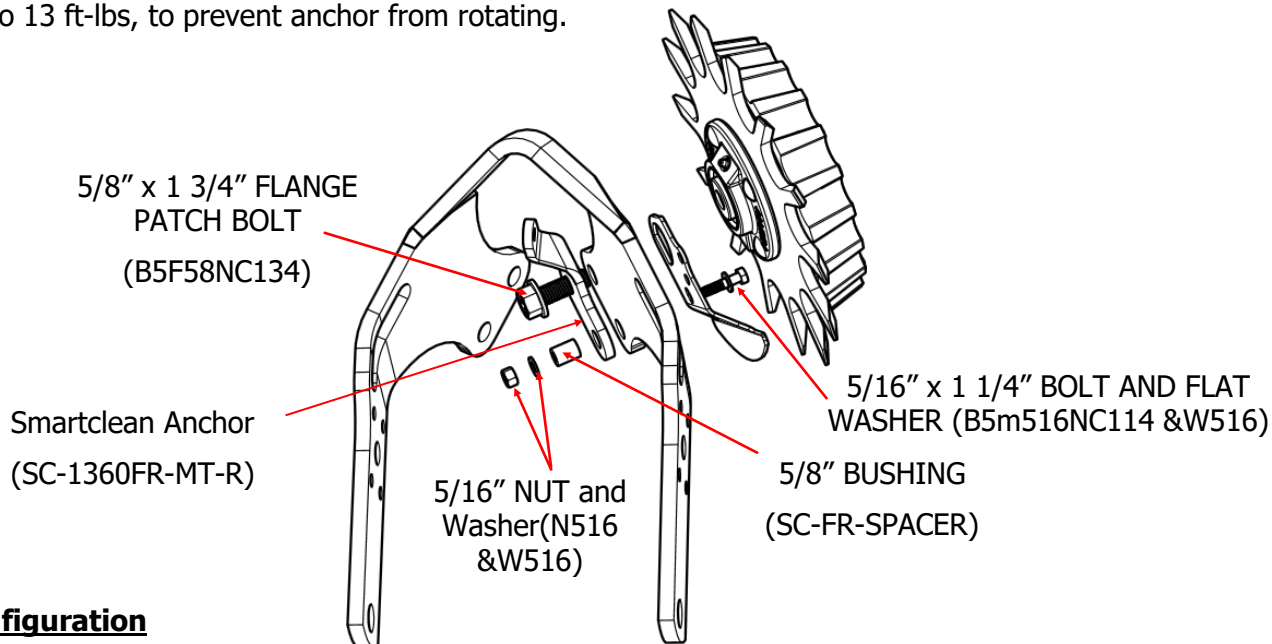
IMPORTANT: Skip to [Step 8](#) if optional SmartClean System was not purchased

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 from page 9. 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.

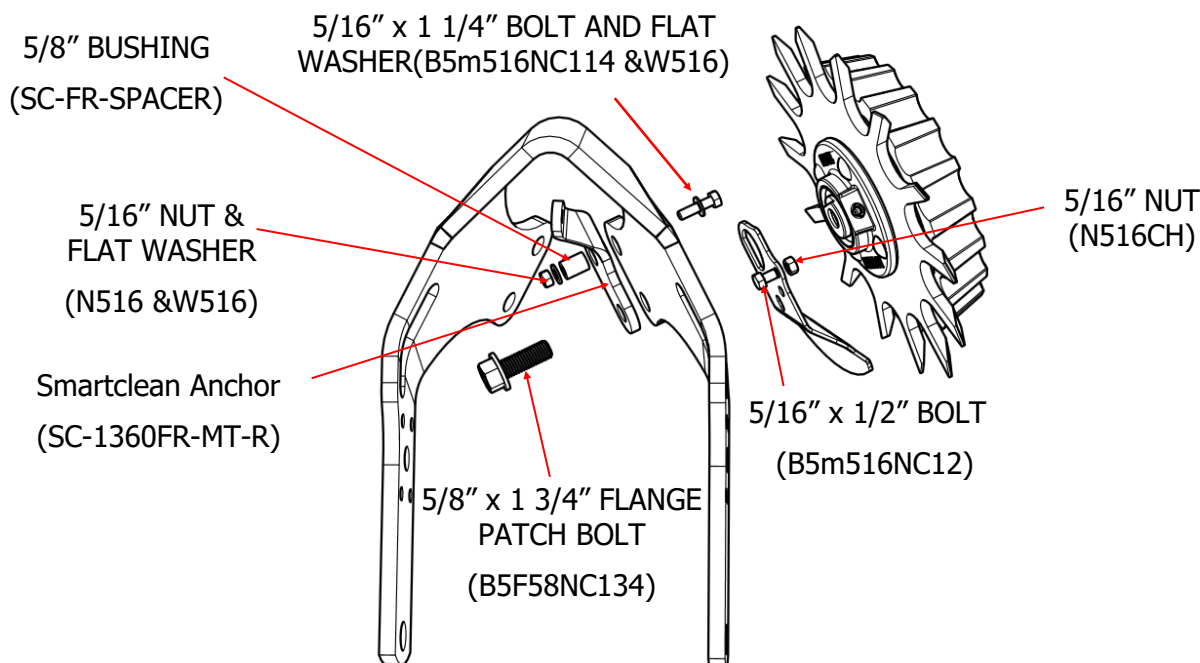
Intersected Configuration

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 8: INSTALL WHEEL ASSEMBLIES

IMPORTANT: Skip to **Step 8C** 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.

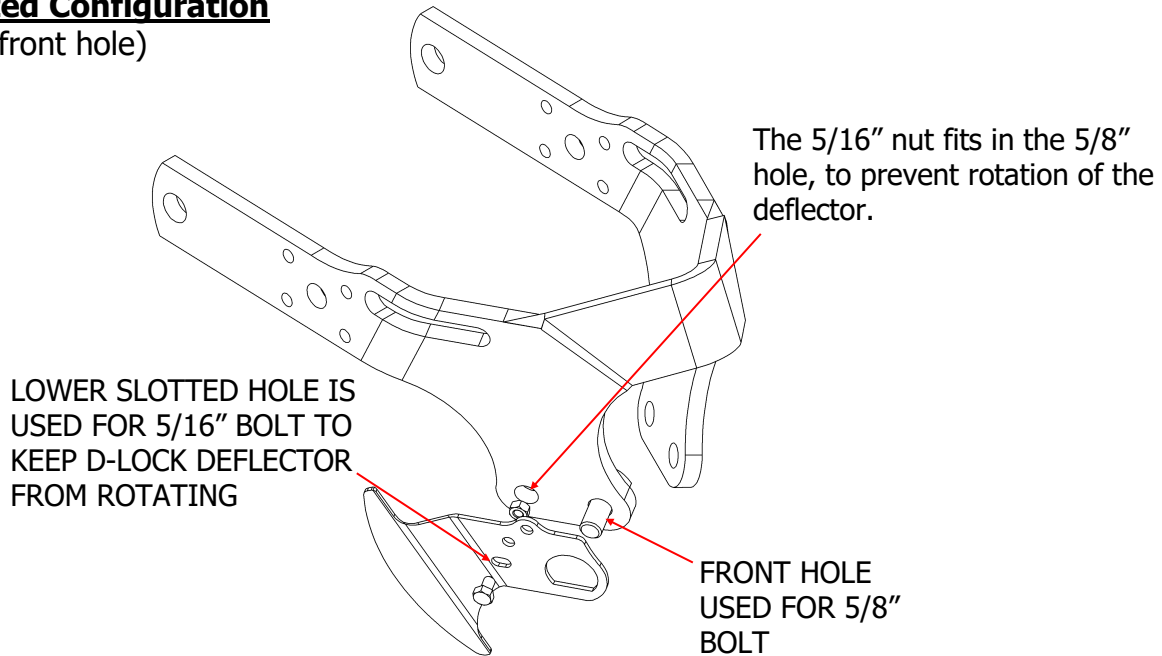
NOTE: Either the D-Lock deflector (illustrated below and on next page) or the D-Lock (illustrated on page 13) must be installed to allow the 5/8" bolt to tighten without the hub rotating.

NOTE: Proper location of the D-Lock Deflector is determined by wheel configuration chosen on page 9.

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

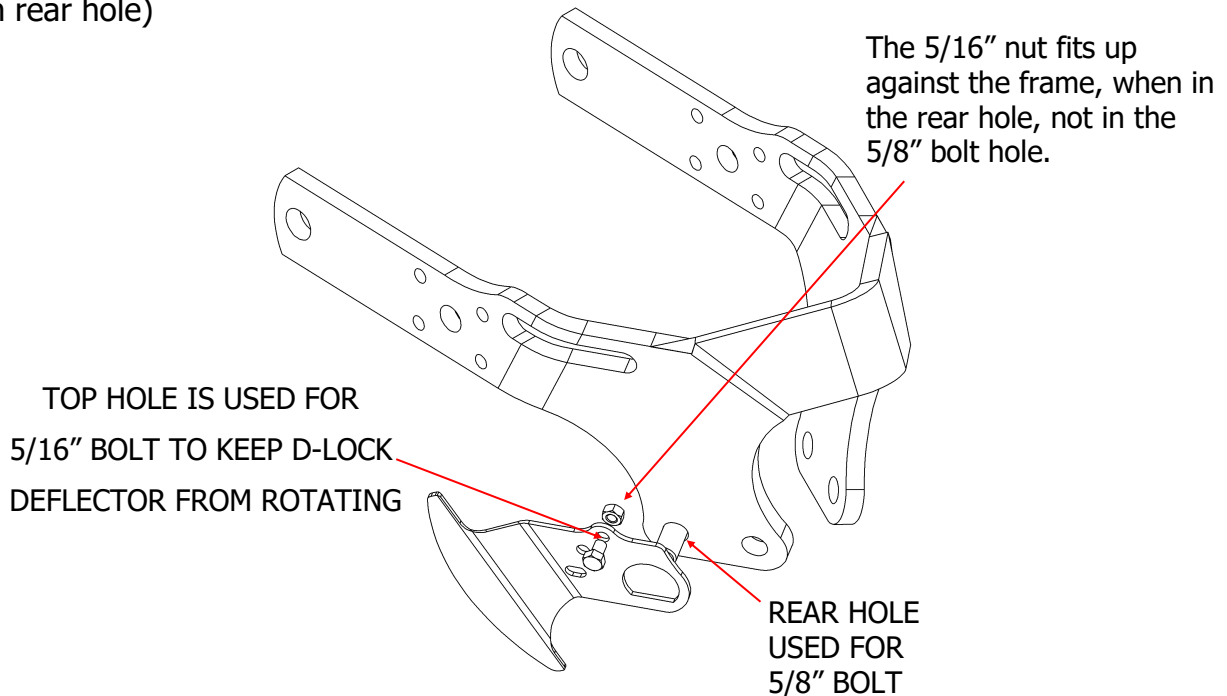
Intersected Configuration

(Wheel in front hole)



Offset Configuration

(Wheel in rear hole)

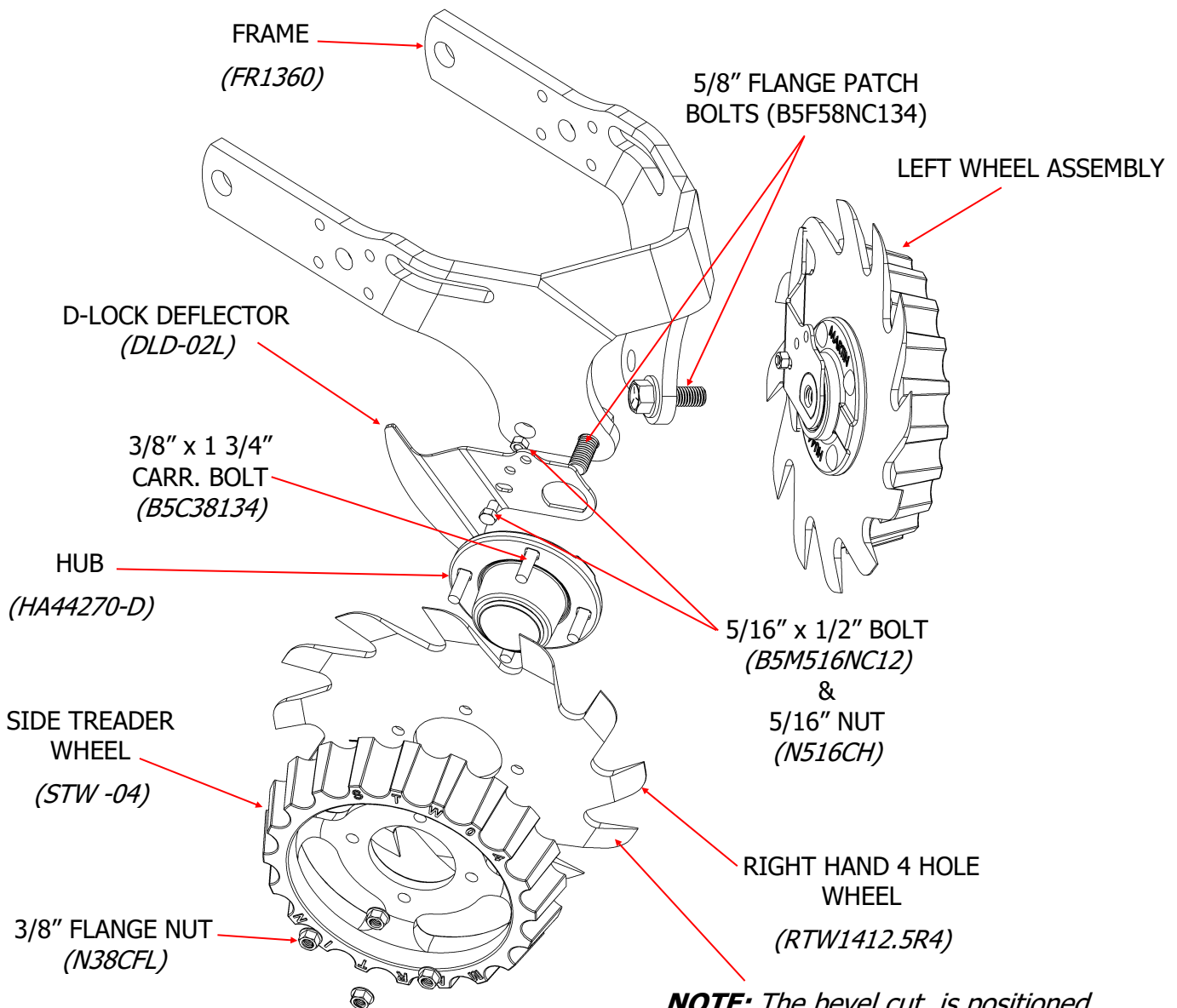


STEP 8: INSTALL WHEEL ASSEMBLIES (CONT.)

IMPORTANT: Skip to [Step 8C](#) if not using optional D-Lock Deflector (Scraper)

STEP 8B: 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 toothed 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 TW3813-R4 is for use on the right side of the frame (as viewed from behind the machine). Repeat for opposite side.

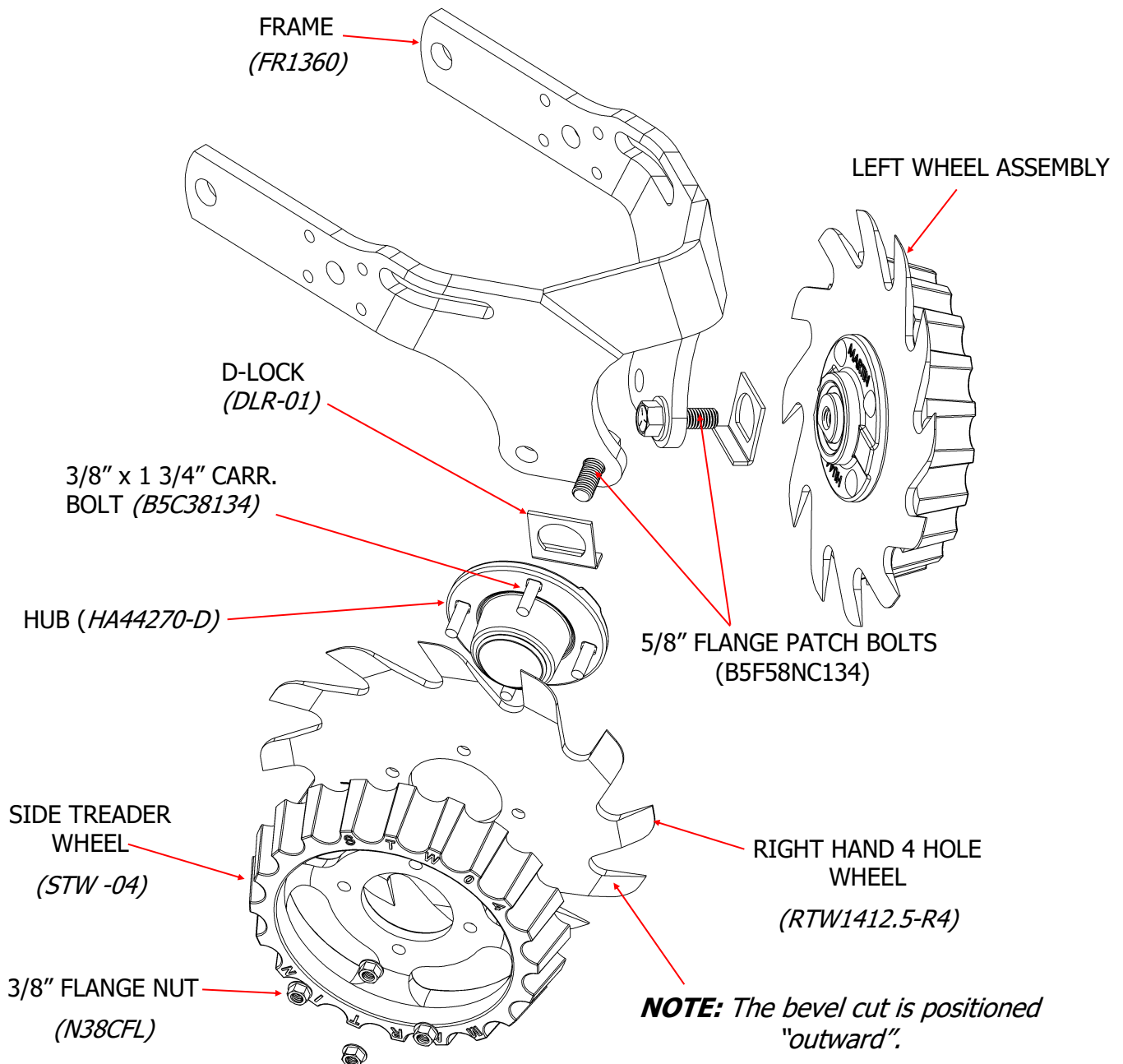


NOTE: The bevel cut is positioned "outward".

STEP 8: INSTALL WHEEL ASSEMBLIS (CONT.)

STEP 8C: INSTALL WHEEL ASSEMBLIES USING STANDARD D-LOCK

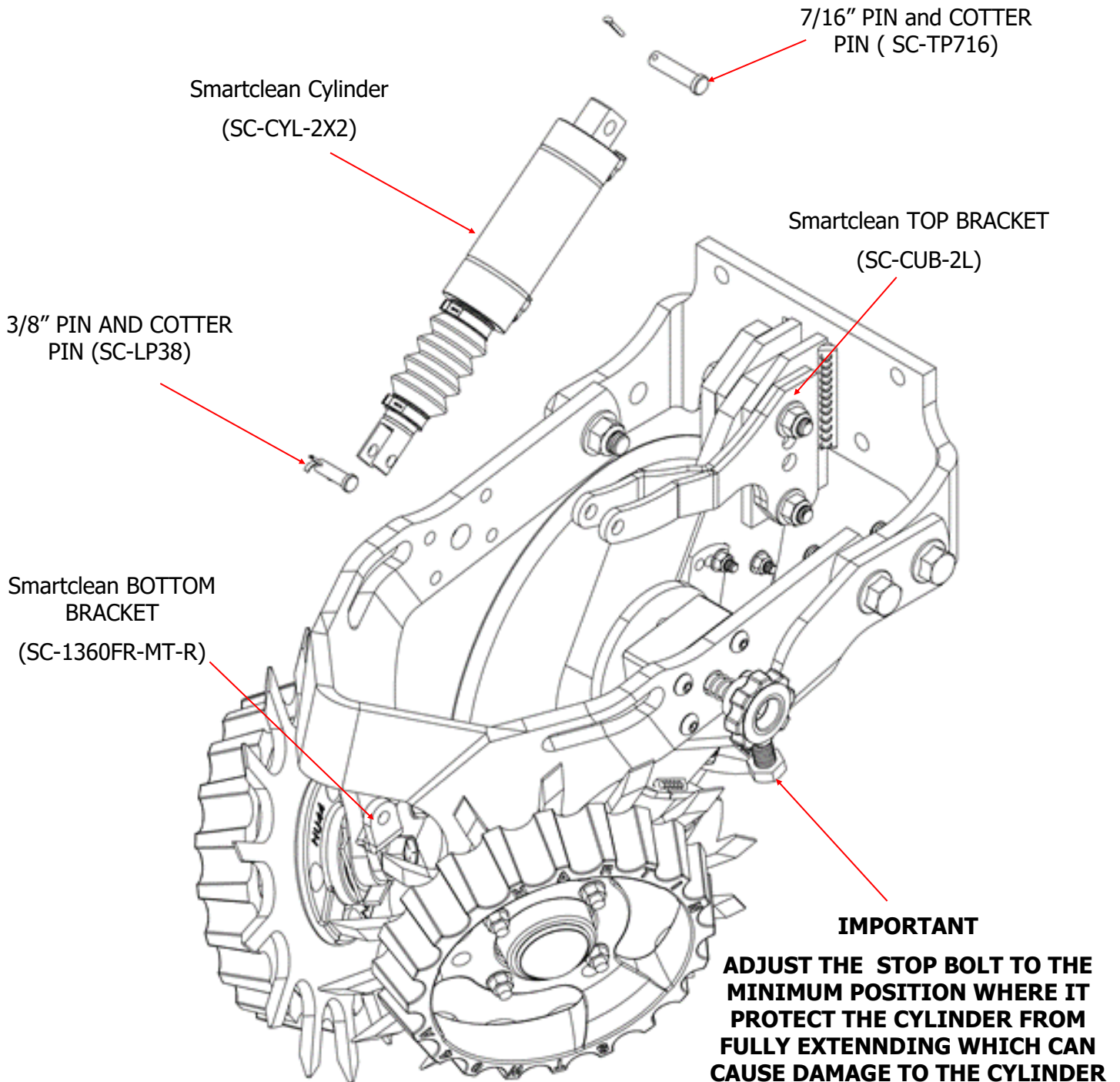
1. Attach the D-lock to the end of the hub axle making sure it is flush with the end of the axle before bolting the axle to the frame.
2. Secure the hub to the frame with the 5/8" bolt. Using a torque-wrench, tighten to 112 ft-lbs. Re-tighten after first day's use.
3. Install the toothed wheel (part # 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 TW3813-R4 is for use on the right side of the frame (as viewed from behind the machine). Repeat for opposite side.



STEP 9 : INSTALL THE OPTIONAL SMART CLEAN CYLINDER

Install the SmartClean cylinder between the top and bottom brackets. Use pins as shown in the picture below.

NOTE: Cylinder may be installed with elbow valves in either up or down orientation, depending on user preference.



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”.

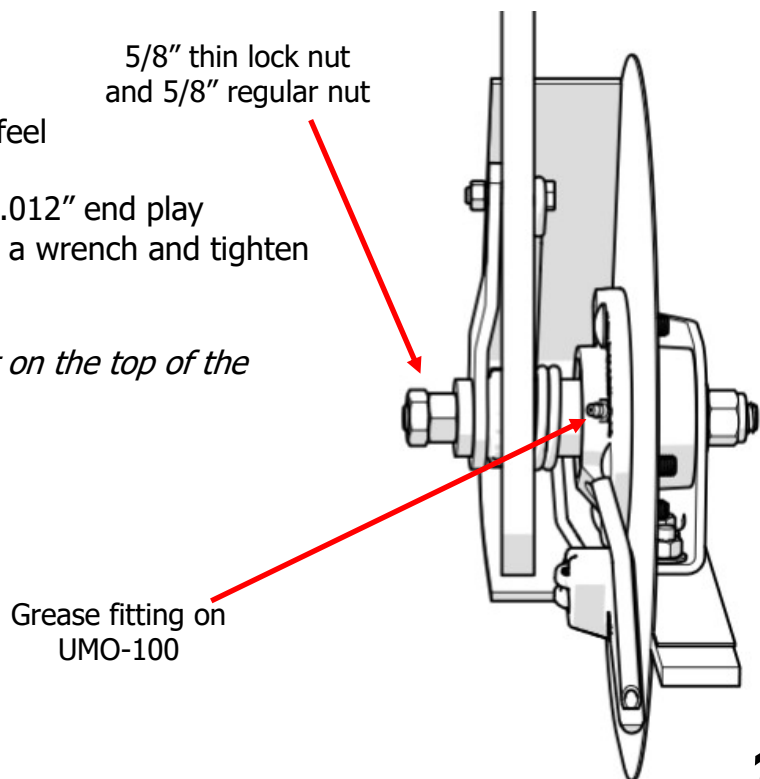
UMO — 100 Hub Bearing Preload Adjustment

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

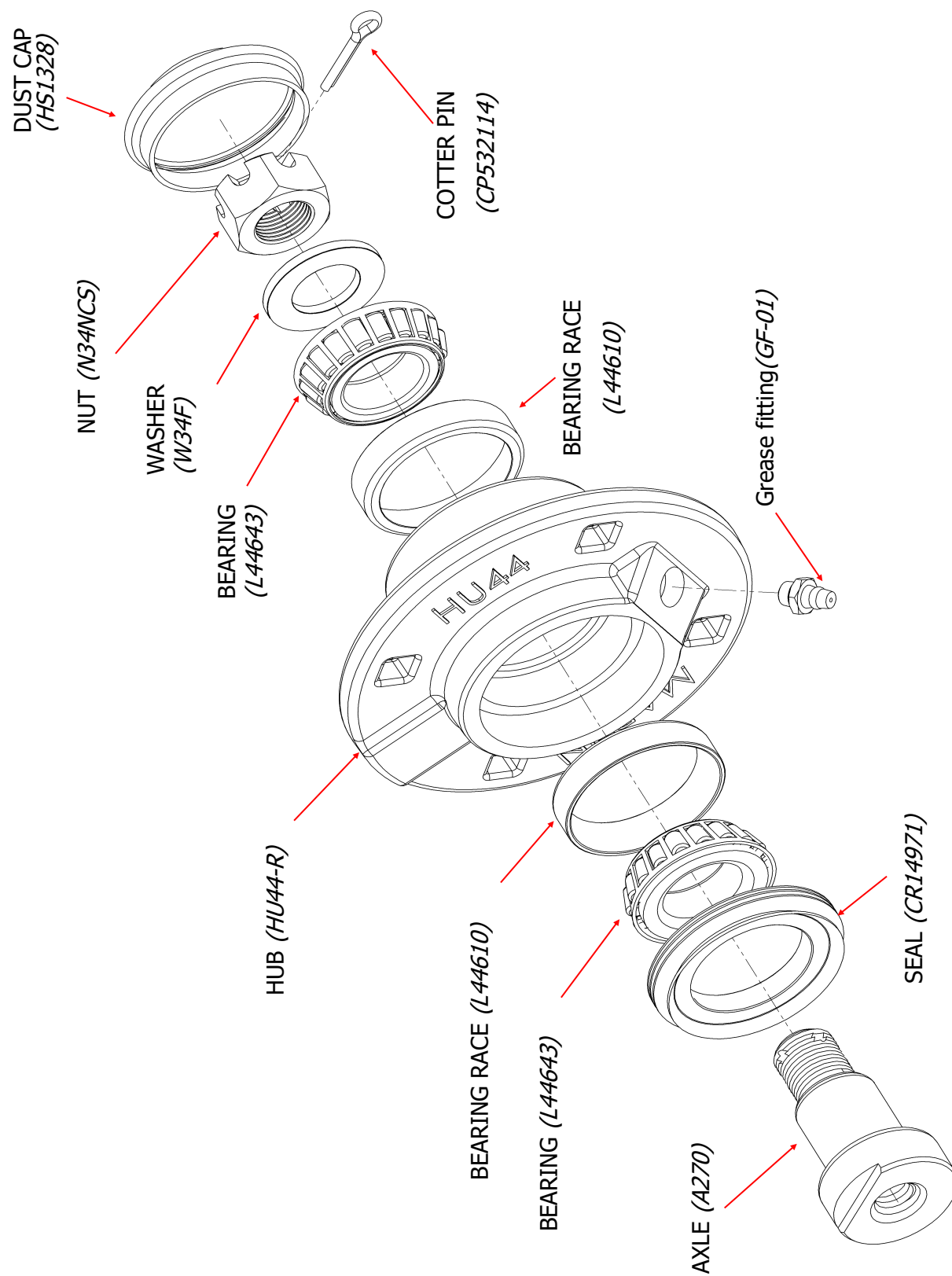
To adjust:

- 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

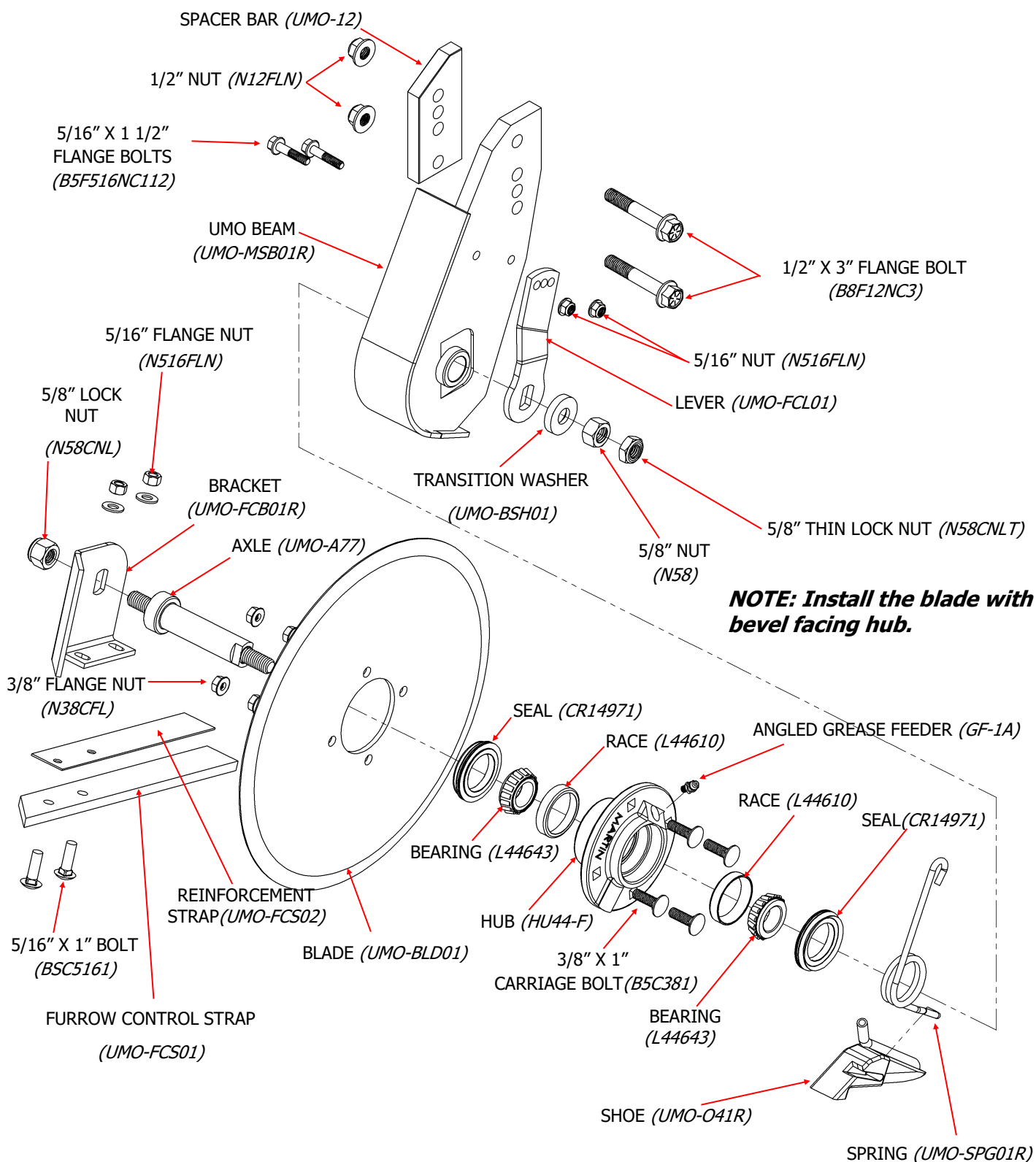


PARTS LIST FOR 1360 HUB ASSEMBLY (HA44270-D)



PARTS LIST FOR UMO-100

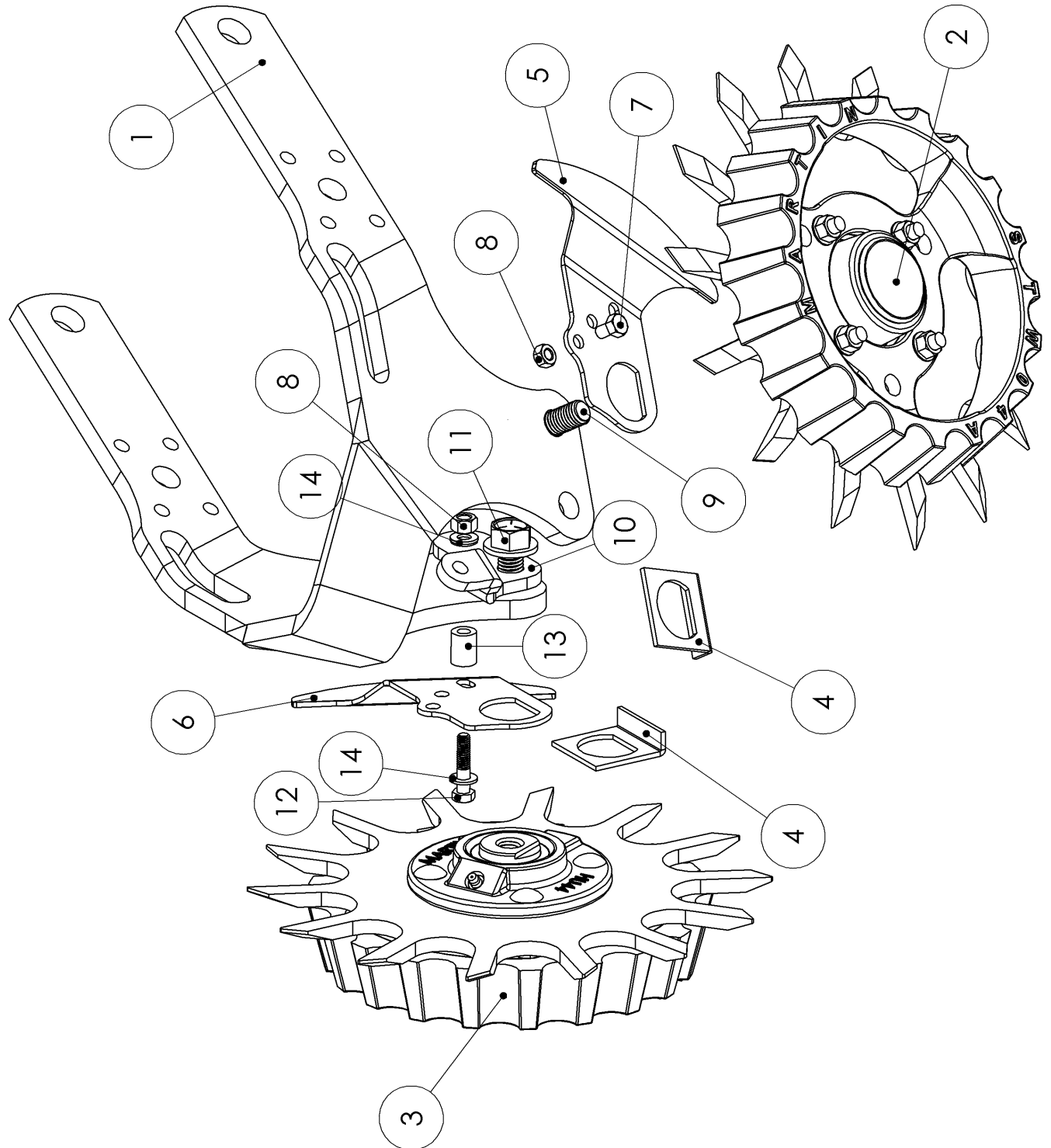
UMO — 100R shown, UMO — 100L (not shown) is the opposite side



NOTE: UMO-100R SHOWN

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

EXPLODED VIEW FOR WA1360



PARTS LIST FOR WA1360

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1360FR	Frame	1
2	ATW13L27044STW	Left Toothed Wheel Assembly	1
3	ATW13R27044STW	Right Toothed Wheel Assembly	1
4	DLR-01	D-Lock (Not used with Scrapers)	2
5	DLD-02L	Left Scraper (Substitute For D-Lock)	1
6	DLD-02R	Right Scraper(Substitute For D-Lock)	1
7	B5M516NC12	5/16" X1 1/2" Bolt	2
8	N516CH	5/16" Nut	3
9	B8F58NC112	5/8" X 1 1/2" Flange Patch Bolt	1
10	SC-1360FR-MT-R	Smartclean Anchor	1
11	B8F58NC134	5/8" X 1 3/4" Flange Patch Bolt	1
12	B5M516NC114	5/16" x 1 1/4" Bolt	1
13	SC-FR-Spacer	5/8" Bushing	1
14	W516	5/16" Washer	2



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