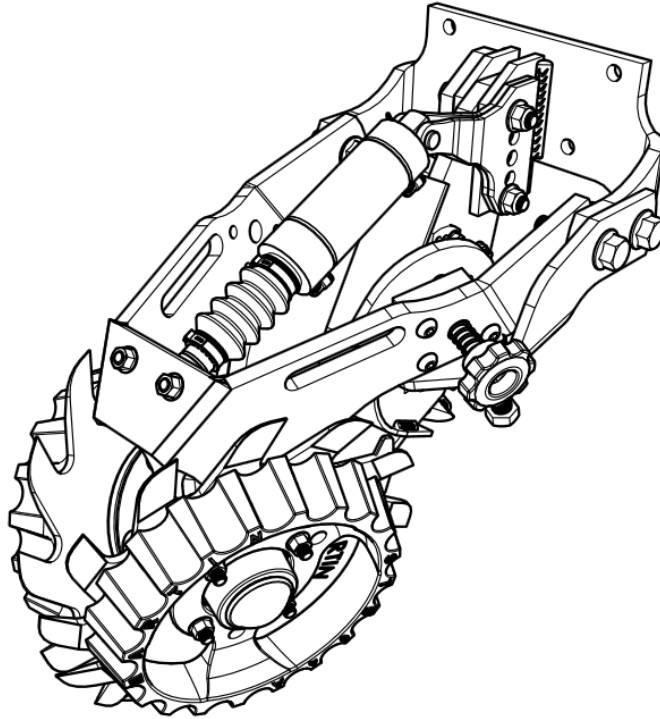


# **UMO-1345**

**APPLIES TO ALL 1345 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 (CA03-1345)**



### **Martin Planter Attachments**

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E-Mail: [martin@martintill.com](mailto:martin@martintill.com)

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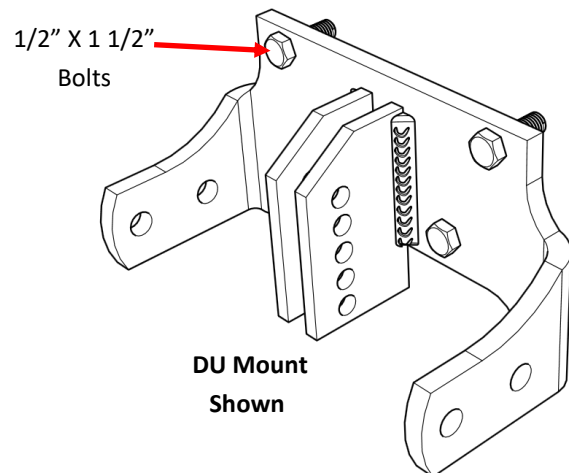
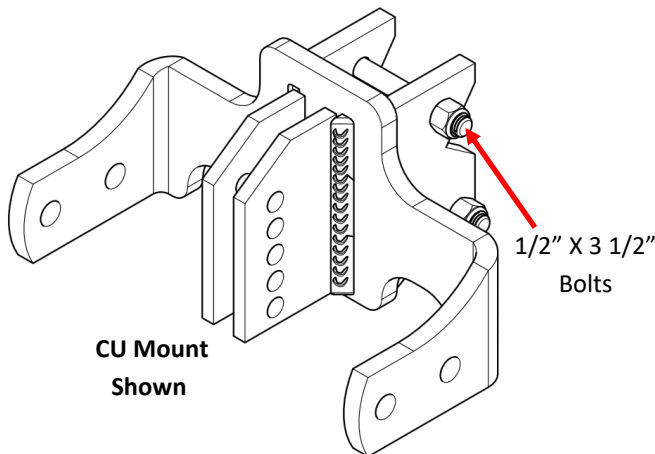


## STEP 1 : ATTACH THE MOUNT TO THE PLANTER

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 or 150) 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

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.

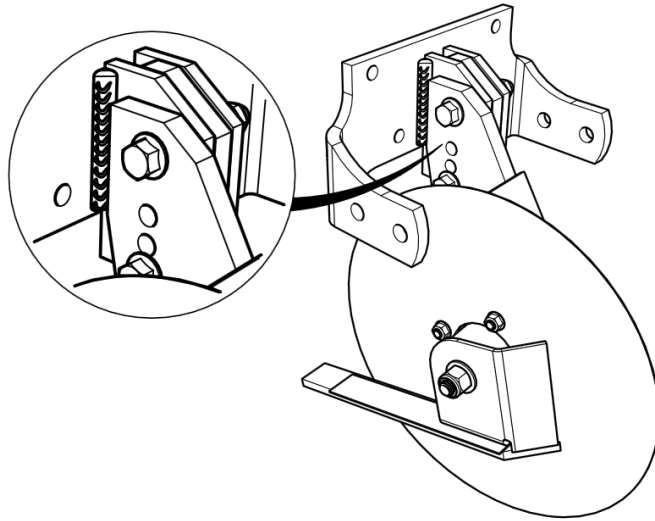
#### Position B: (RECOMMENDED)

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.

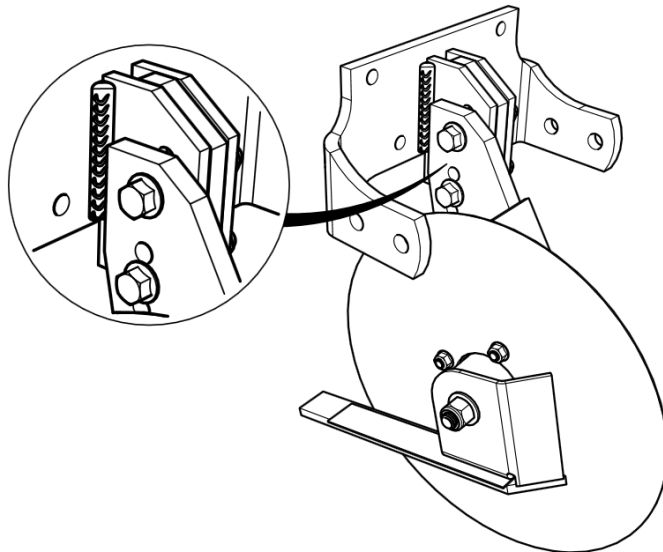
#### Position C:

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.

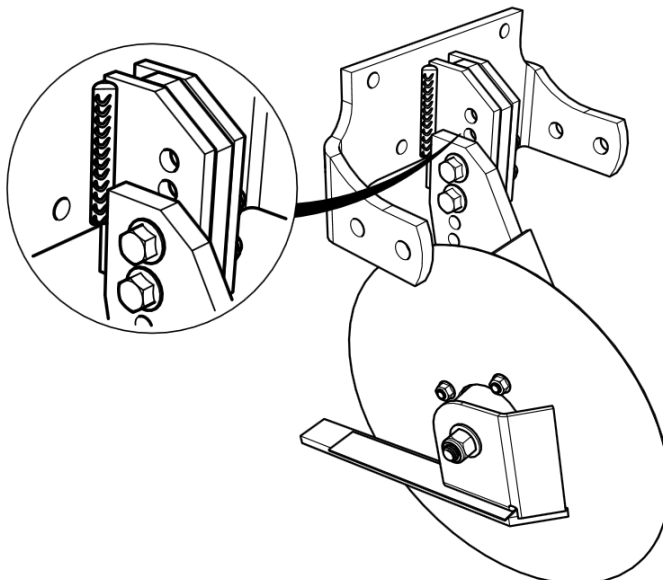
**Position A**  
**3/4" above seed depth**



**Position B**  
**Even with seed depth**  
**(Recommended)**



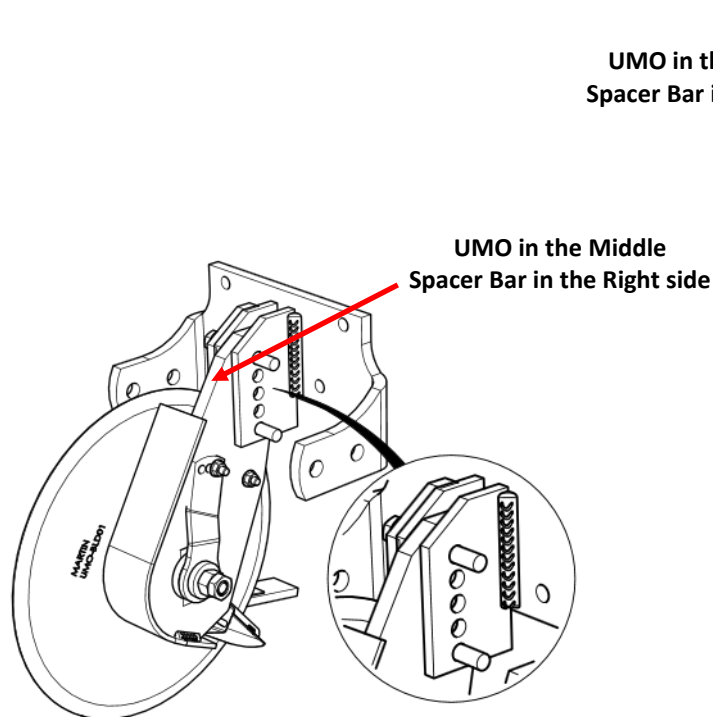
**Position C**  
**3/4" below seed depth**



## **STEP 2B: UMO 100/150 OFFSET SETTING OPTION**

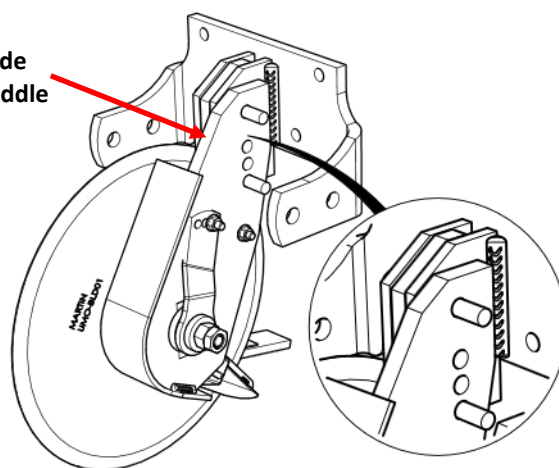
Three different offset settings are shown in the pictures. The UMO can be installed to the right side (Offset 1" from seed furrow), in between (Offset 2" from seed furrow), or to the left side (Offset 3" from seed furrow) of the mount flanges. Place the UMO-12 spacer bar according to the pictures.

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



**Position B:** Offset 2" from seed furrow

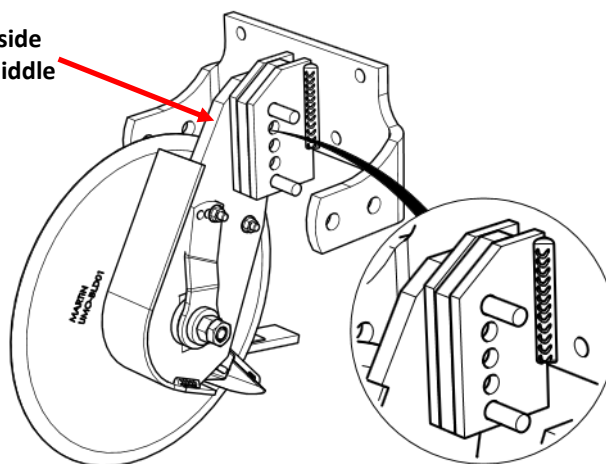
\*Recommended for fertilizer application rates of 10-20 GPA.



**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

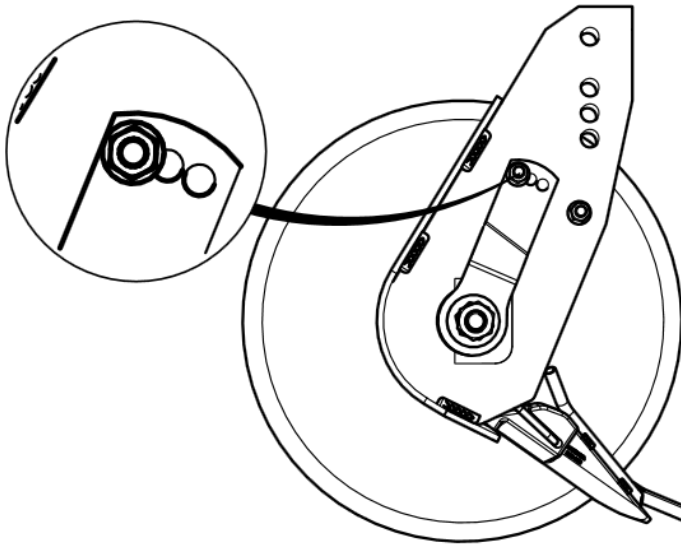
\*Recommended for fertilizer application rates of 20-30 GPA.

### **NOTE:**

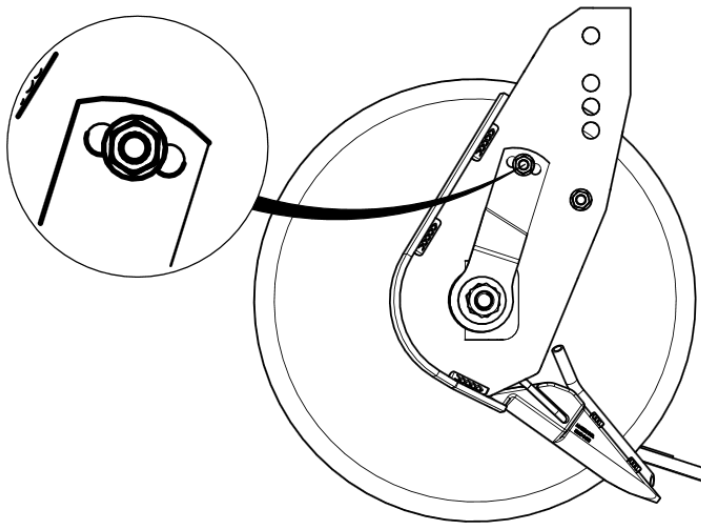
*\*Recommendations based on general rule of thumb of 1" offset for every ten gallons of fertilizer applied per acre.*

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

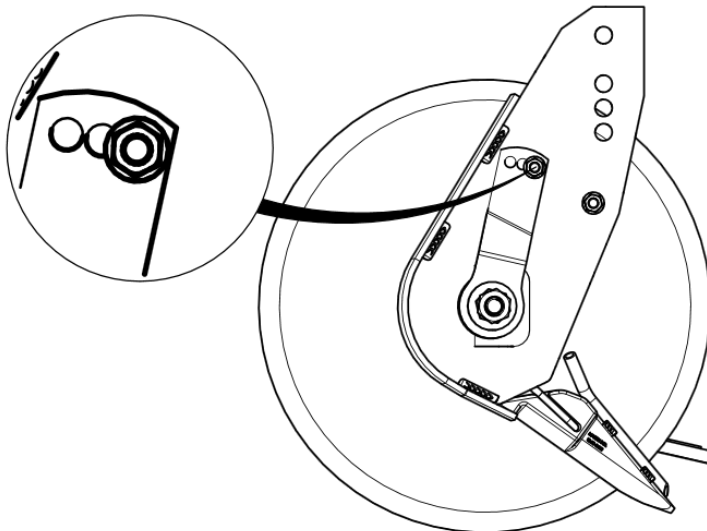
## **STEP 2C: FURROW CONTROL LEVER GROUND PRESSURE ADJUSTMENT**



**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.

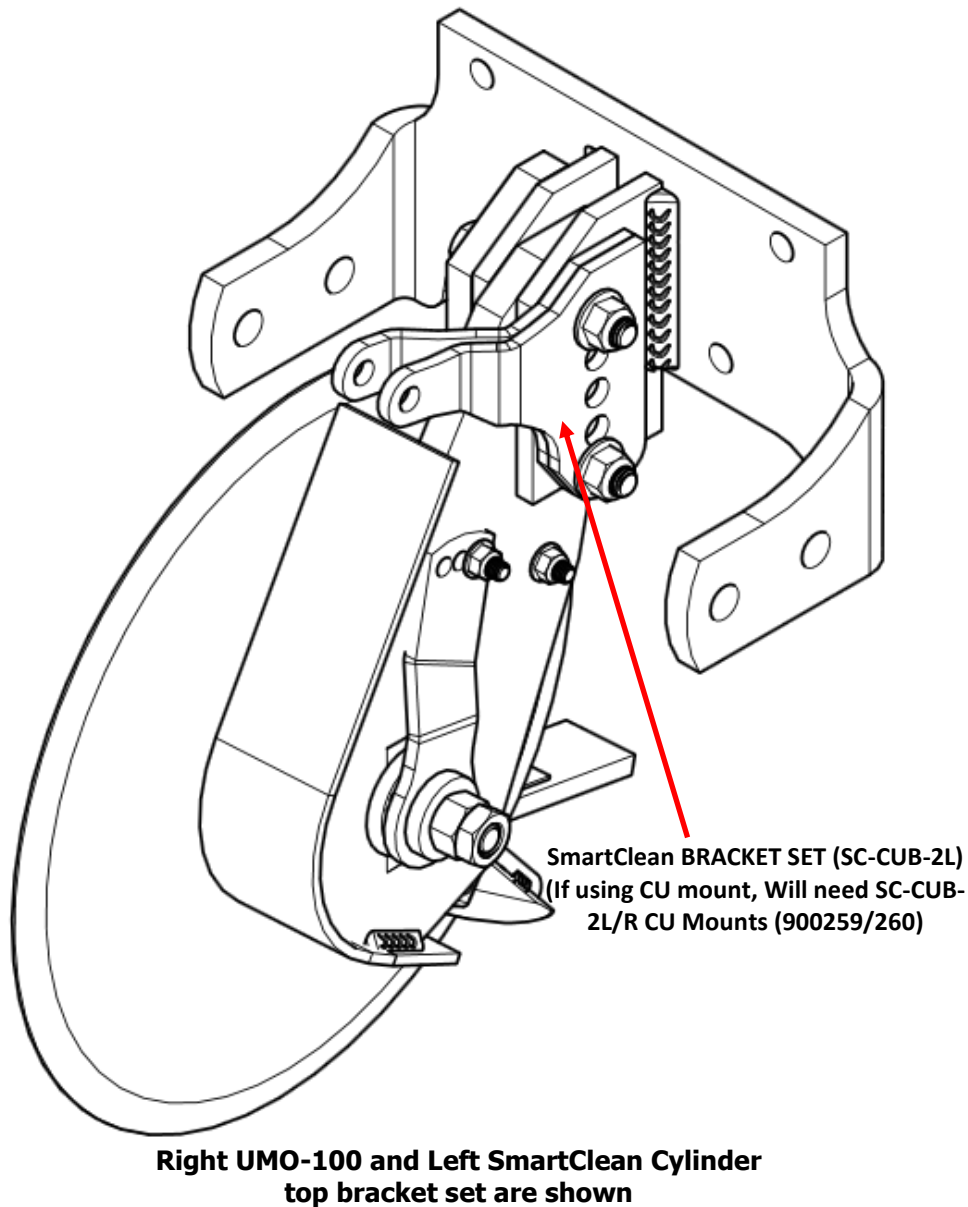
### STEP 3 : ATTACH UMO-100/150 TO THE MOUNT

After selecting the desired depth and offset settings, attach the UMO-100 or 150 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-100/150 and the left set mounts on the right UMO-100/150. The correct configuration will bring the bracket pin point to the center of the row cleaner.

Torque the bolts to 80 ft-lbs.

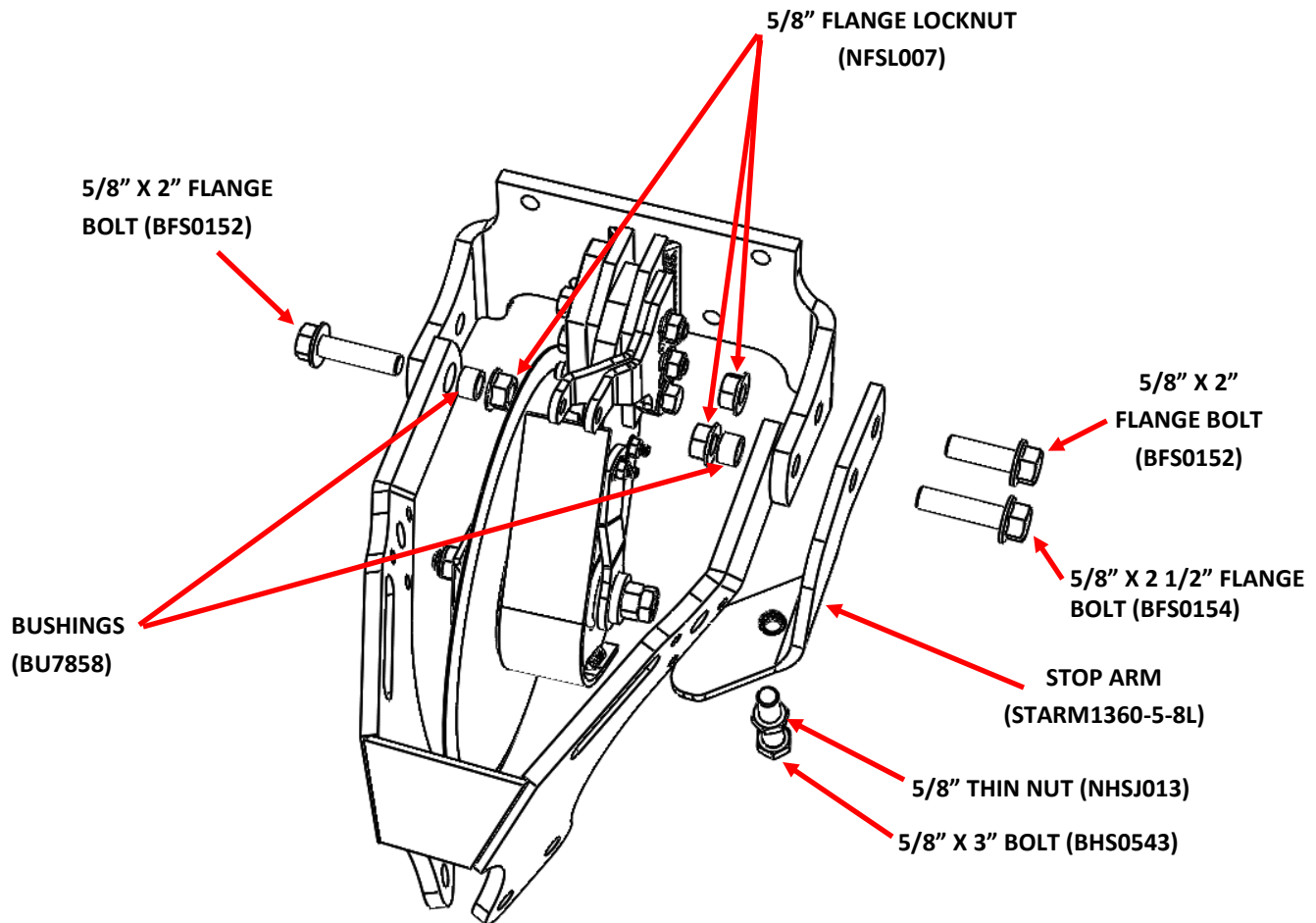
**\*NOTE:** *Confirm half of UMO's are left sided and half are right sided for proper planter drafting.*



## STEP 4 : ATTACH 1345 FRAME ASSEMBLY TO THE MOUNT

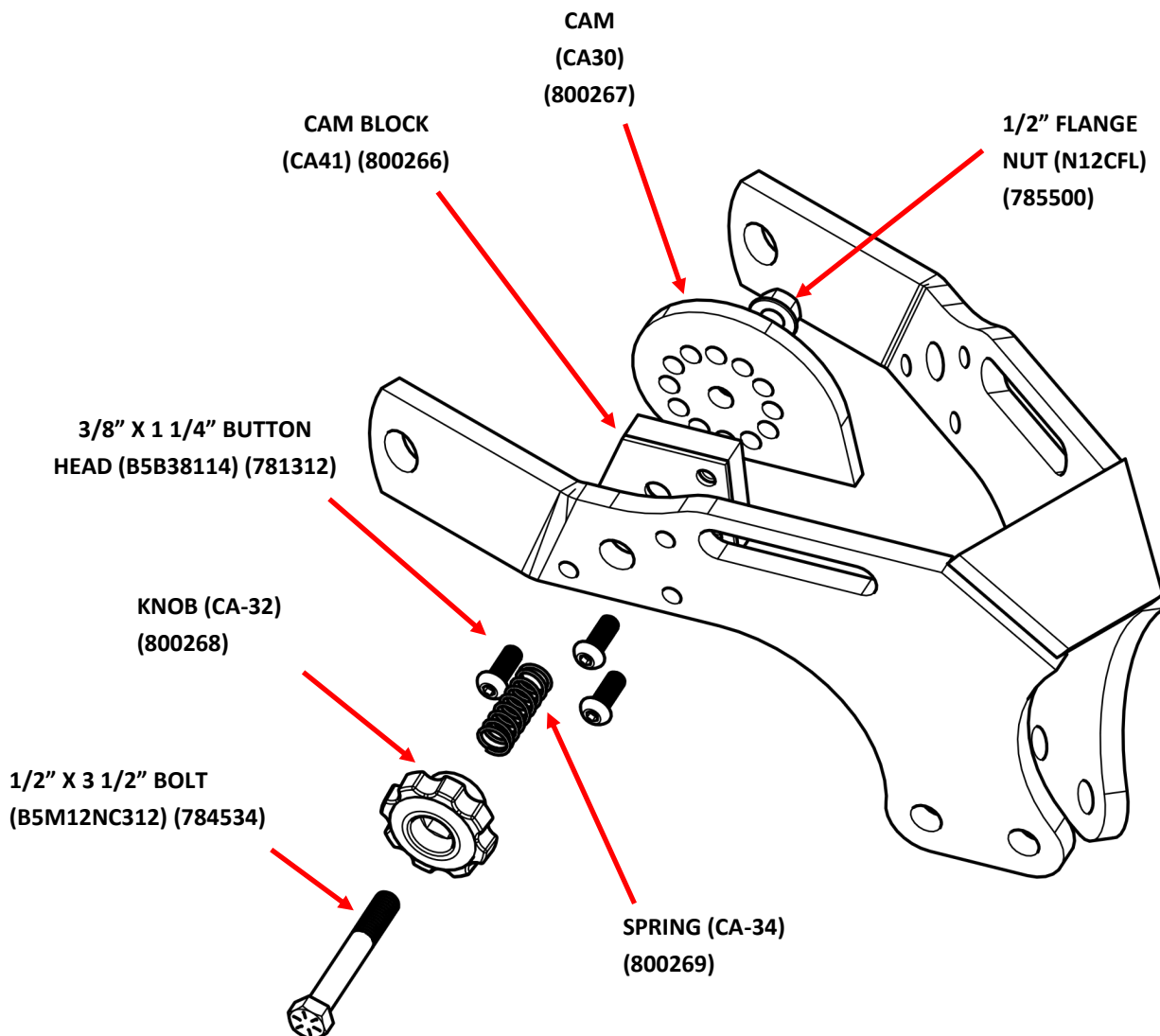
**IMPORTANT:** Stop arm installation, as shown in the picture, is for the right UMO configuration . For a left UMO configuration, install the right stop arm (STARM1360-5-8R) on the opposite side.

1. 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 the bushings (BU7858) and nuts on the 5/8" x 2" bolt and on the 5/8" x 2 1/2" bolt from inside.
2. 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 threaded adjustment assembly and tighten the 5/8" Thin Nut to lock it after the adjustment.



## INSTALL OPTIONAL CAM ADJUSTMENT ASSEMBLY

1. Mount the cam block to the frame using the three 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.



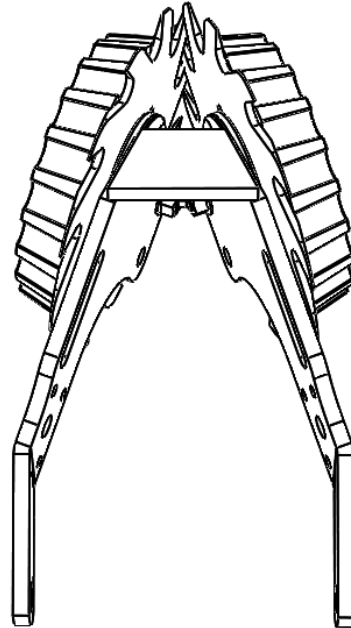
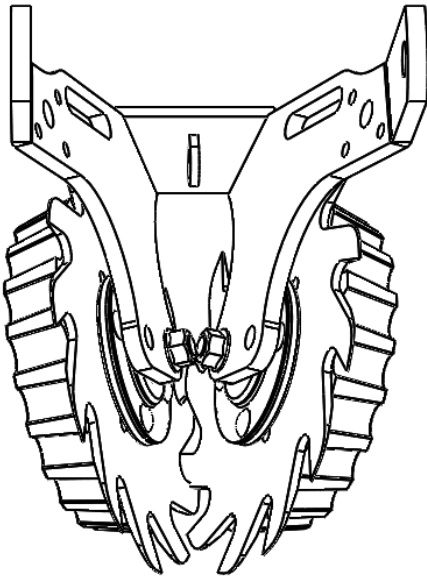


## STEP 5 : DETERMINE THE BEST WHEEL CONFIGURATION FOR YOUR SOIL CONDITIONS

### 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.

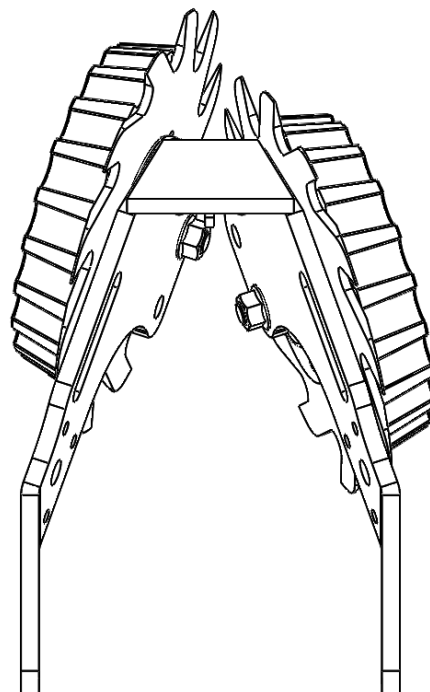
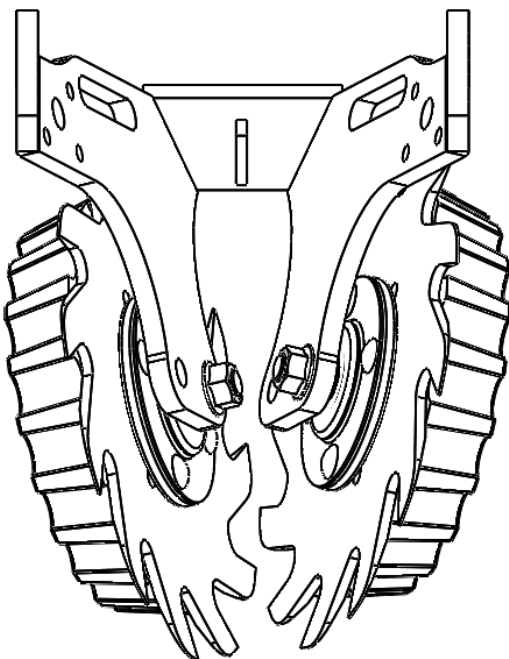


### OPTION B: OFFSET

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

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

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

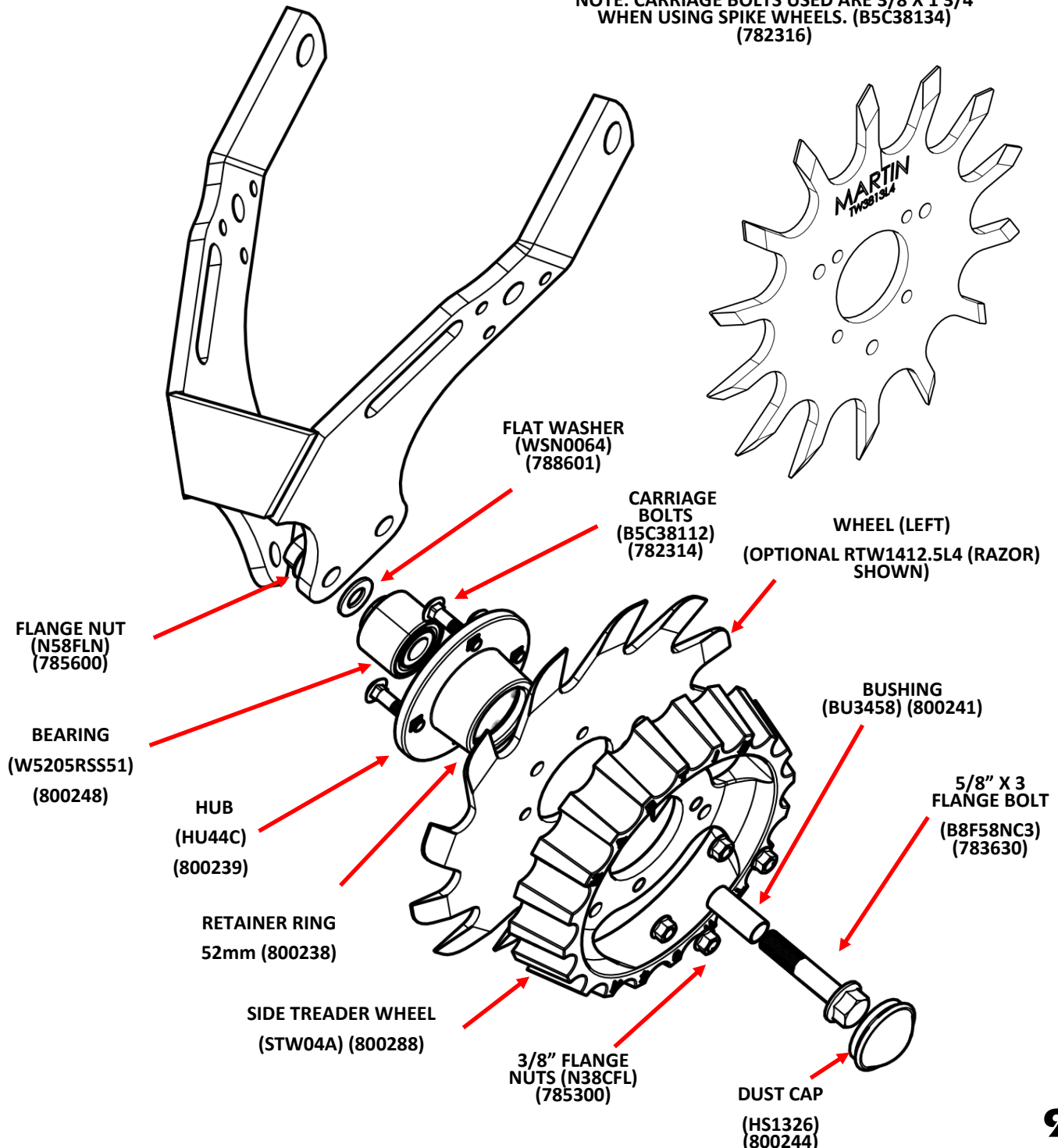


## STEP 6: INSTALL WHEEL ASSEMBLIES

- 1) Secure the hub to the frame with the 5/8" X 3" flange bolt, washer and nut. Using a torque-wrench, tighten to 116 ft-lbs. Install the dust cap.
- 2) 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.
- 3) The wheel marked TW3813L4 is for use on the left side of the frame (as viewed from behind the machine). Repeat for opposite side.

**SPIKE WHEEL (TW3813L4 SHOWN)**

**NOTE: CARRIAGE BOLTS USED ARE 3/8 X 1 3/4  
WHEN USING SPIKE WHEELS. (B5C38134)  
(782316)**



## STEP 7: INSTALL OPTIONAL DEFLECTOR (SCRAPER)

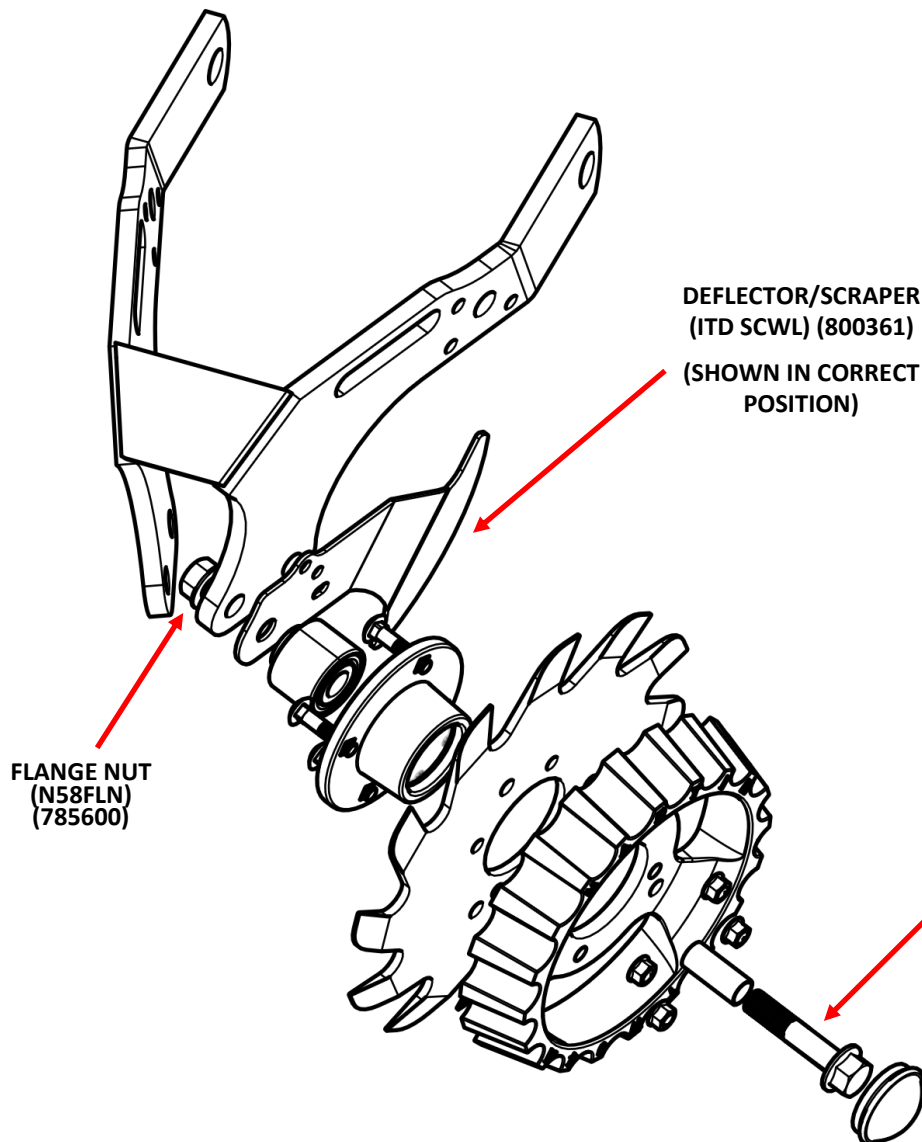
**NOTE:** The Deflector (Scraper) is recommended when operating in wetter conditions, or damp stringy residue, to reduce wrapping.

**NOTE:** The Deflector (Scraper) comes in pair of left and right for left and right wheels.

### Intersected Configuration ( Wheel in front hole)

- 1) Place the deflector (Scraper) on the back of the assembled wheel unit (previously assembled in step 6) as shown here and pass the flange bolt (BFS0156) through the wheel assembly and the deflector and attach the flange nut (NFSL007) hand tighten and locate the deflector as shown and torque the flange bolt (BFS0156) to 116 ft-lbs being careful not to allow the deflector to rotate during bolt tightening.
- 2) The wheel marked TW3813L4 (Or RTW1412.5L4 for the Razor wheel) is for use on the left side of the frame (as viewed from behind the machine). Repeat for opposite side.

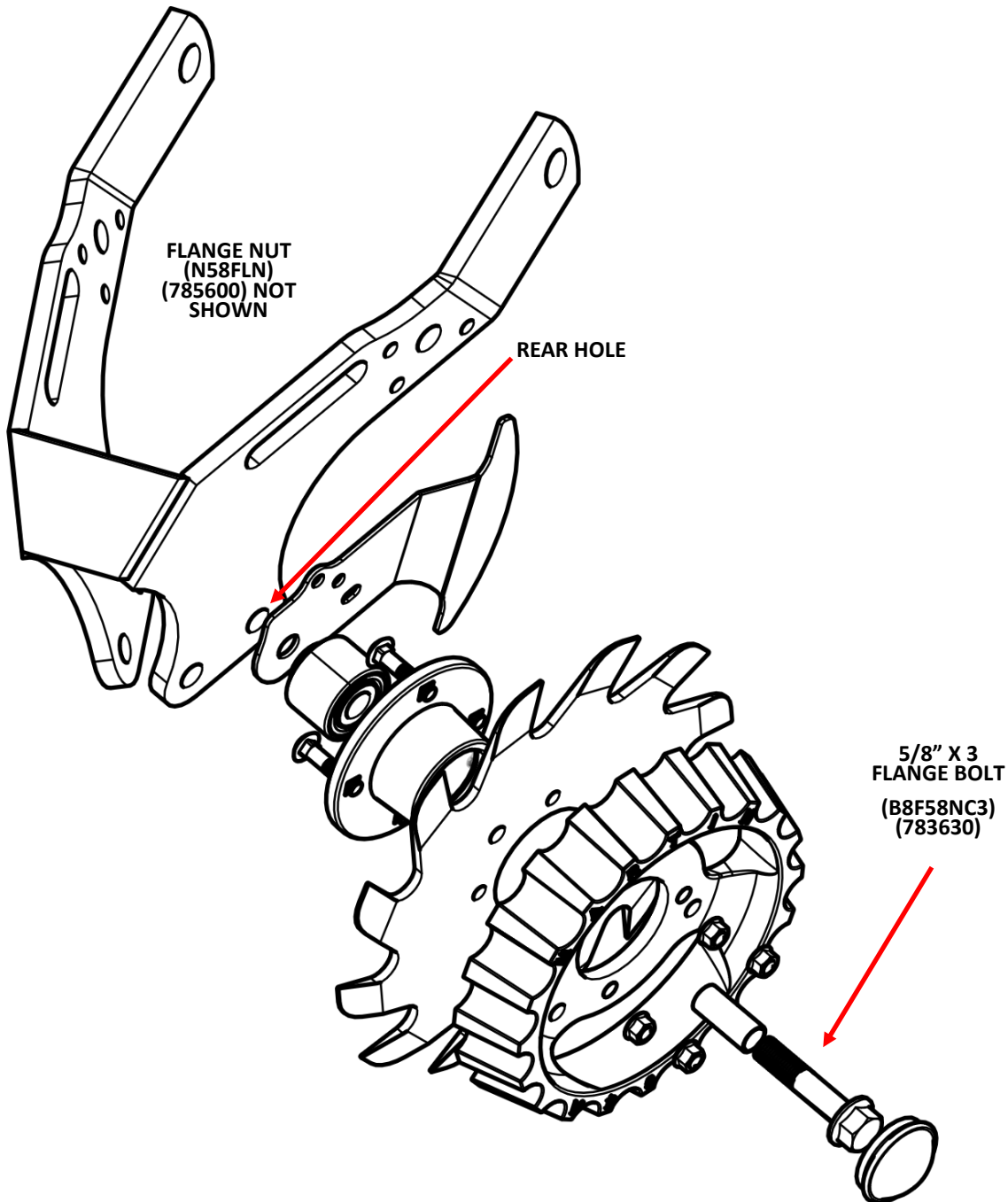
NOTE: When the deflector (scraper) is to be installed the washer (WSN0064) is NOT used



## **Offset Configuration ( Wheel in rear hole)**

- 1) Place the deflector (scraper) on the back of the assembled wheel unit (previously assembled in step 6) as shown here and pass the flange bolt (BFS0156) through the wheel assembly and the deflector using the rear hole in the frame unit and attach the flange nut (NFSL007) hand tighten and locate the deflector (scraper) as shown and torque the flange bolt (BFS0156) to 116 ft-lbs being careful not to allow the deflector to rotate during bolt tightening.
- 2) The wheel marked TW3813L4 (Or RTW1412.5L4 for the Razor wheel) is for use on the left side of the frame (as viewed from behind the machine). Repeat for opposite side.

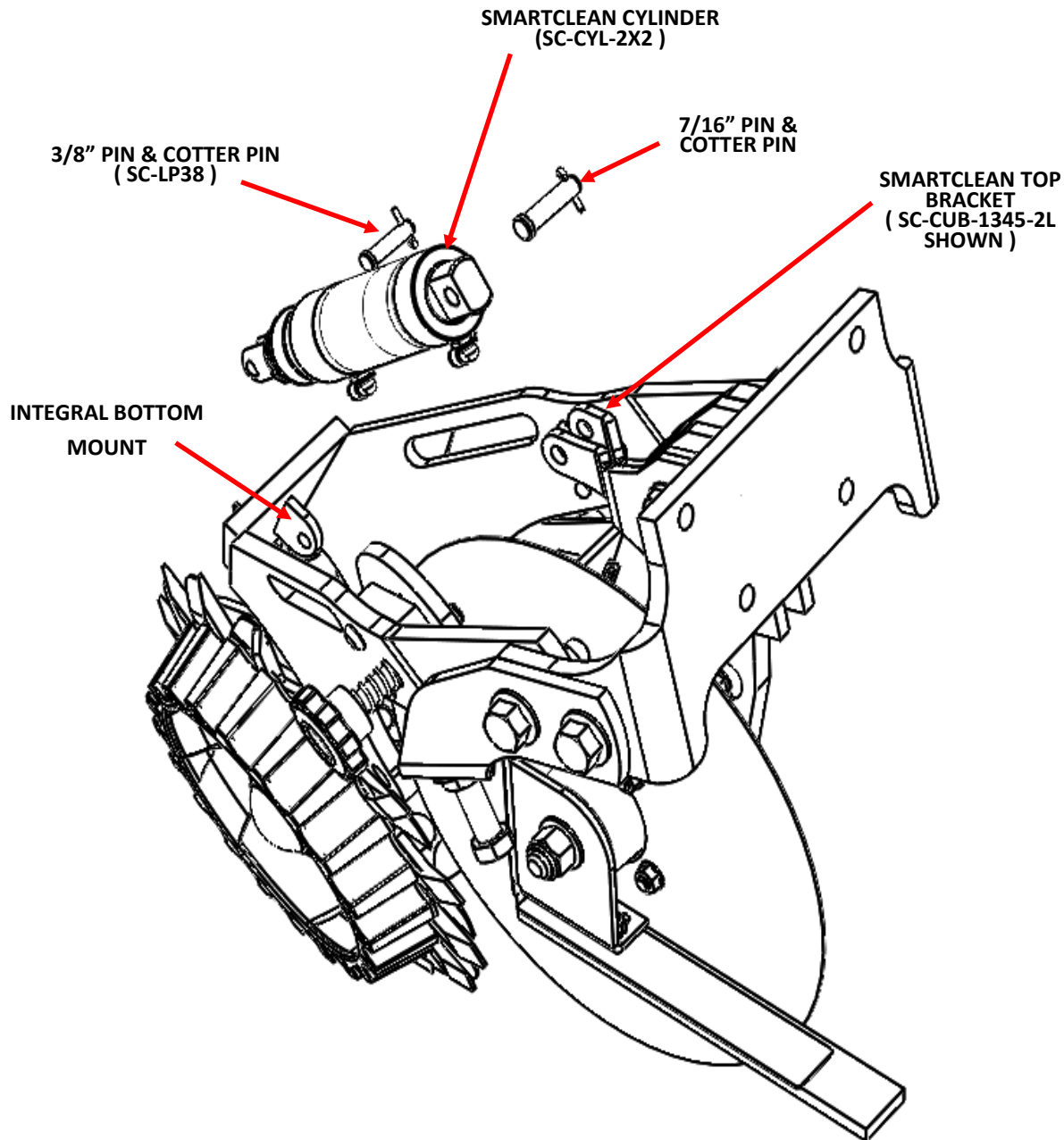
NOTE: When the deflector (scraper) is used the washer (WSN0064) is NOT used



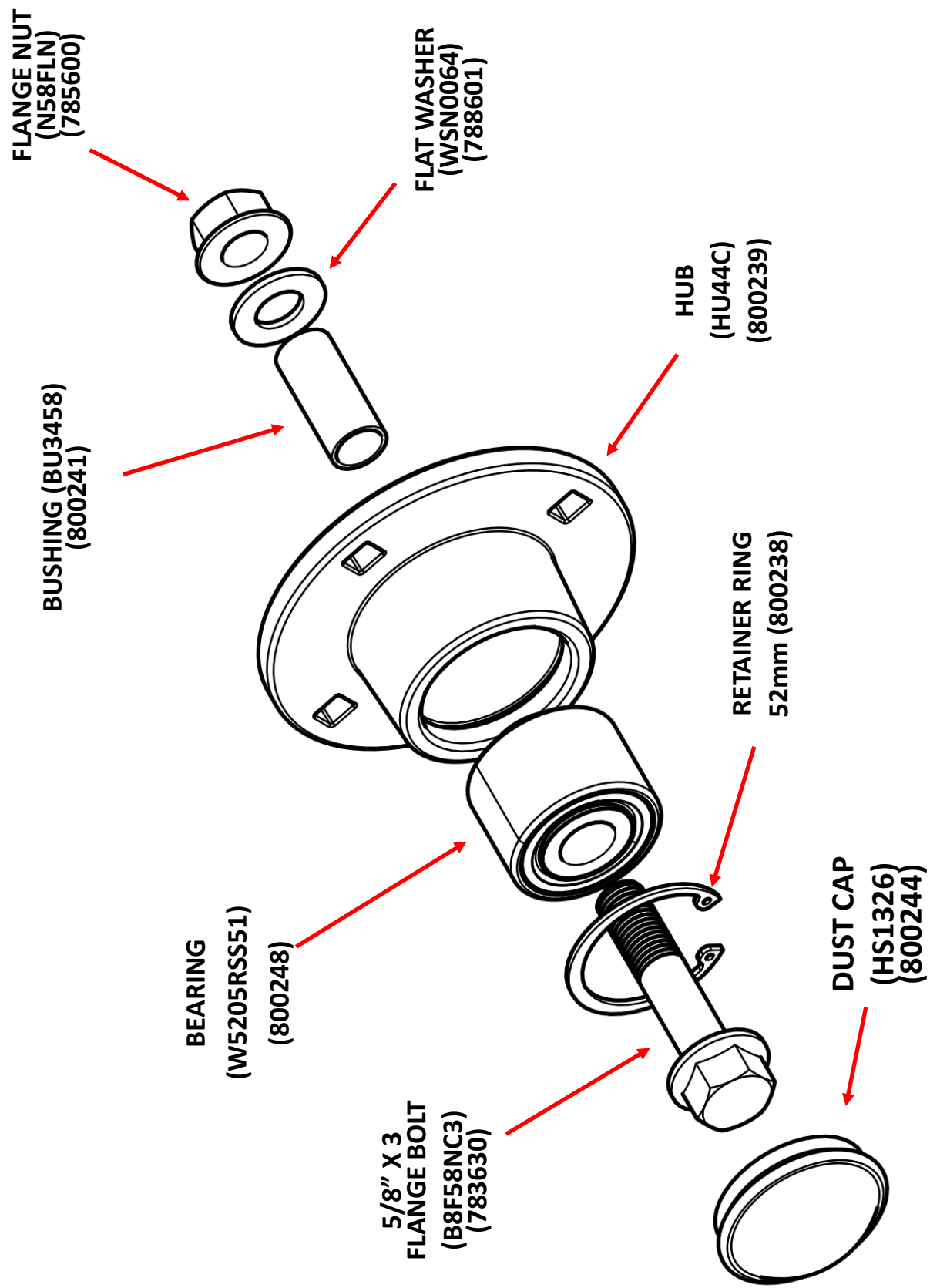
## STEP 8 : INSTALL THE OPTIONAL SMART CLEAN CYLINDER

Install the SmartClean cylinder between the top bracket (LH =SC-CUB-1345-2L / RH =SC-CUB-1345-2R.) and the integral bottom mount point supplied. Use pins as shown in the picture below.

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



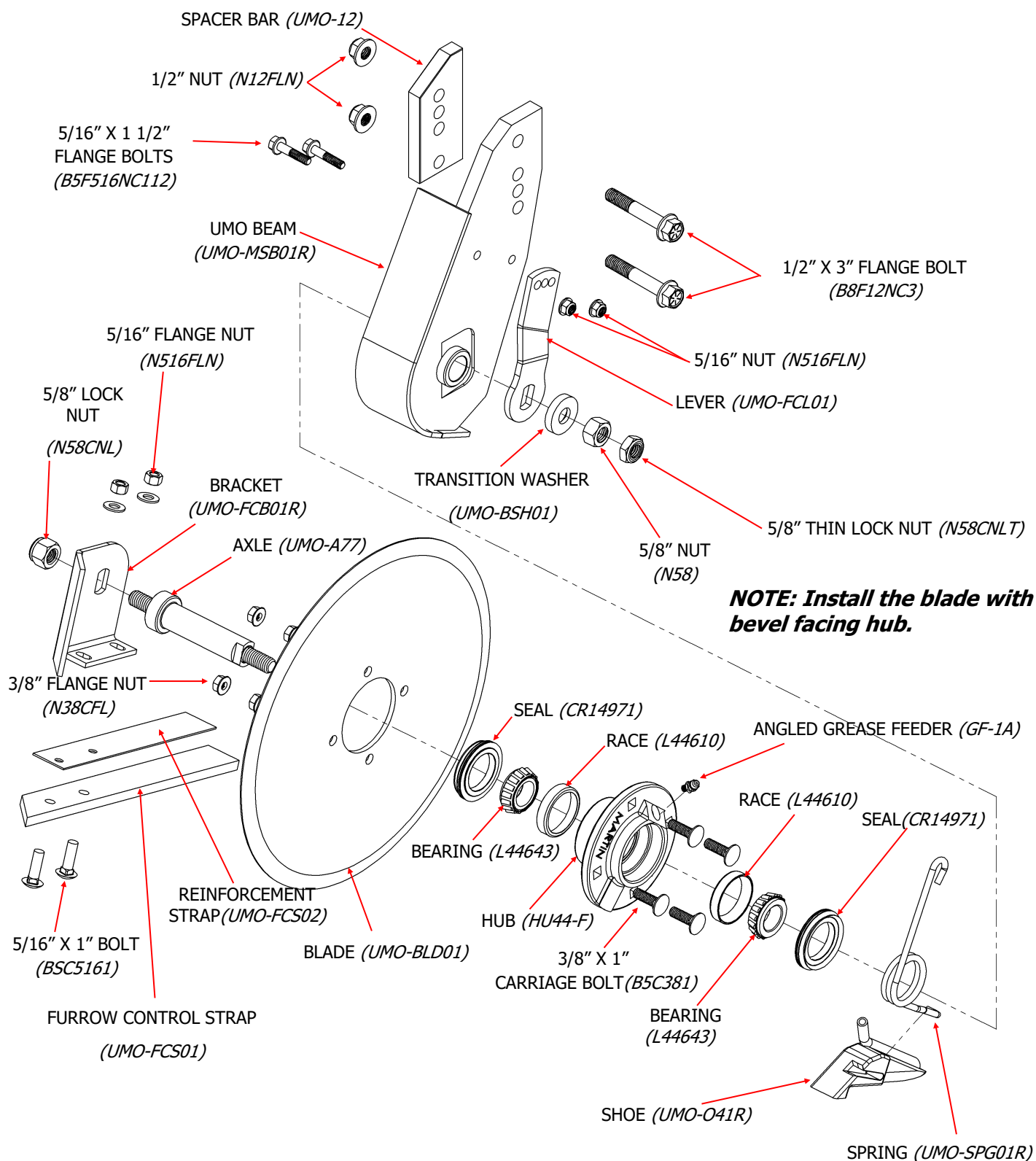
## PARTS LIST FOR 1345 C-HUB ASSEMBLY (HU44C) (900101)





## PARTS LIST FOR UMO-100

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



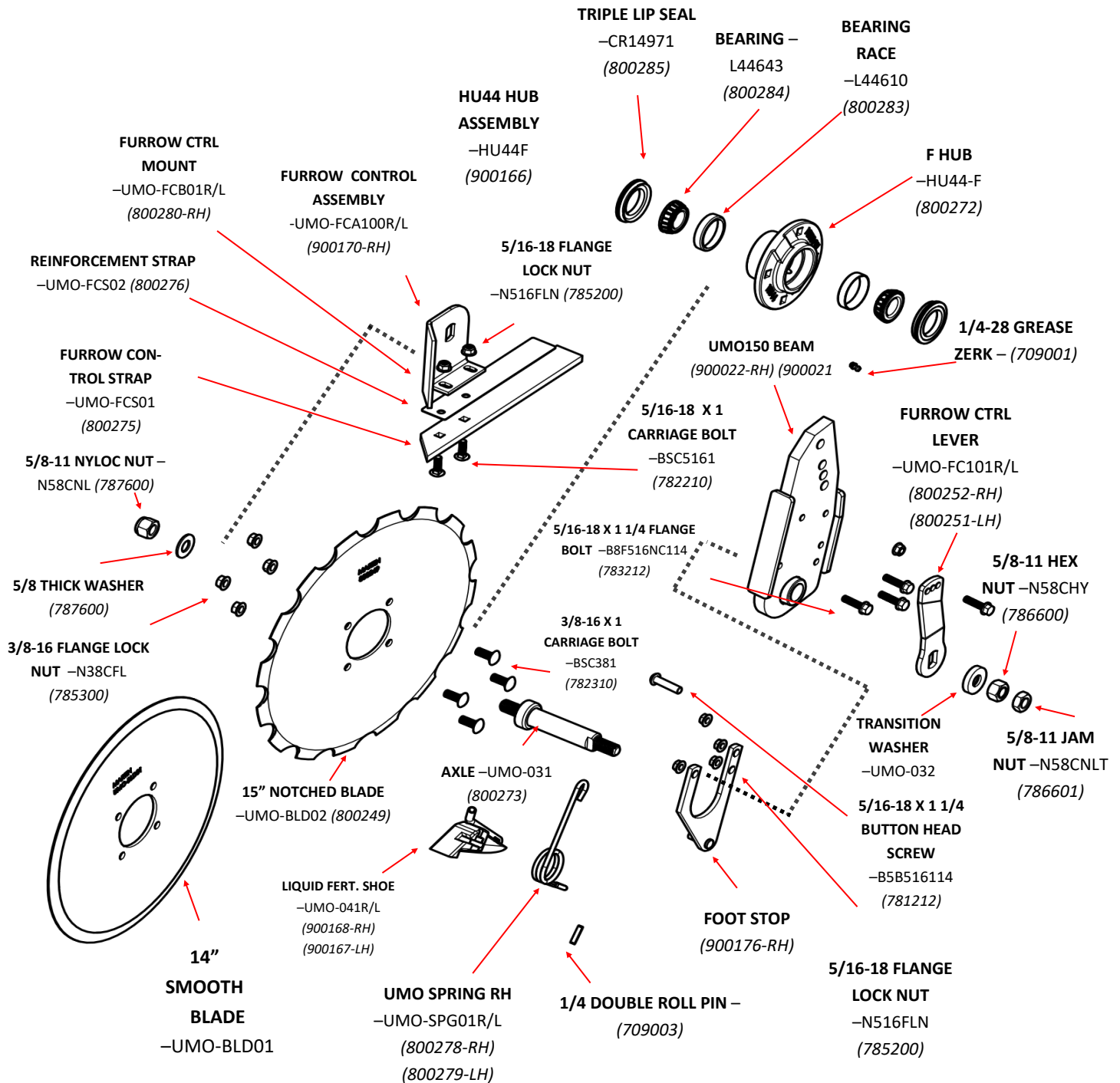
**NOTE: UMO-100R SHOWN**

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

# PARTS LIST FOR UMO150

## UMO150R- 900172

## UMO150L- 900171



**NOTE: UMO-150R SHOWN**

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

**NOTE: INSTALL THE BLADE WITH BEVEL FACING HUB.**



## MAINTENANCE TIPS

### 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”.

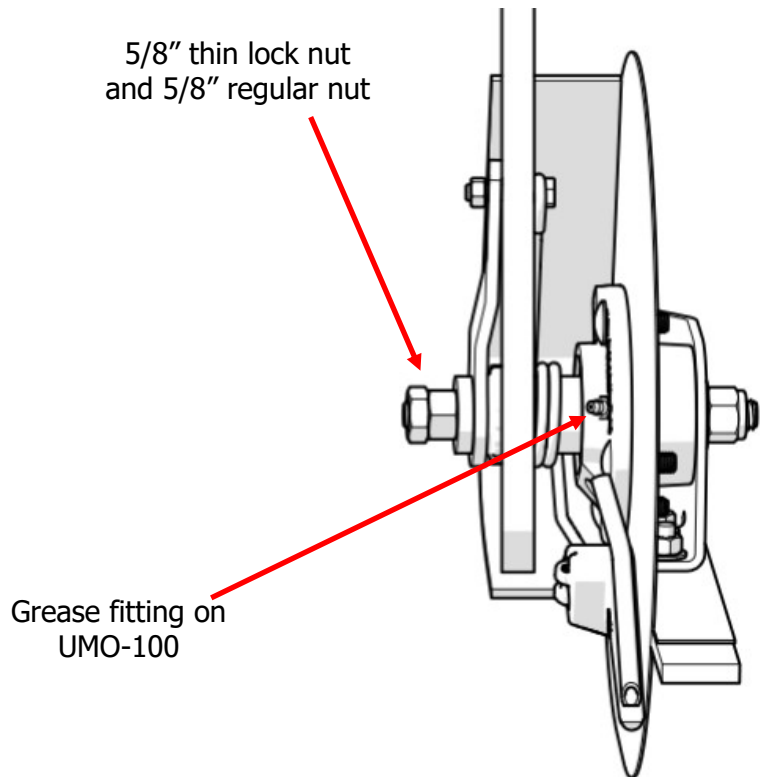
### UMO — 100 Hub Bearing Preload Adjustment

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

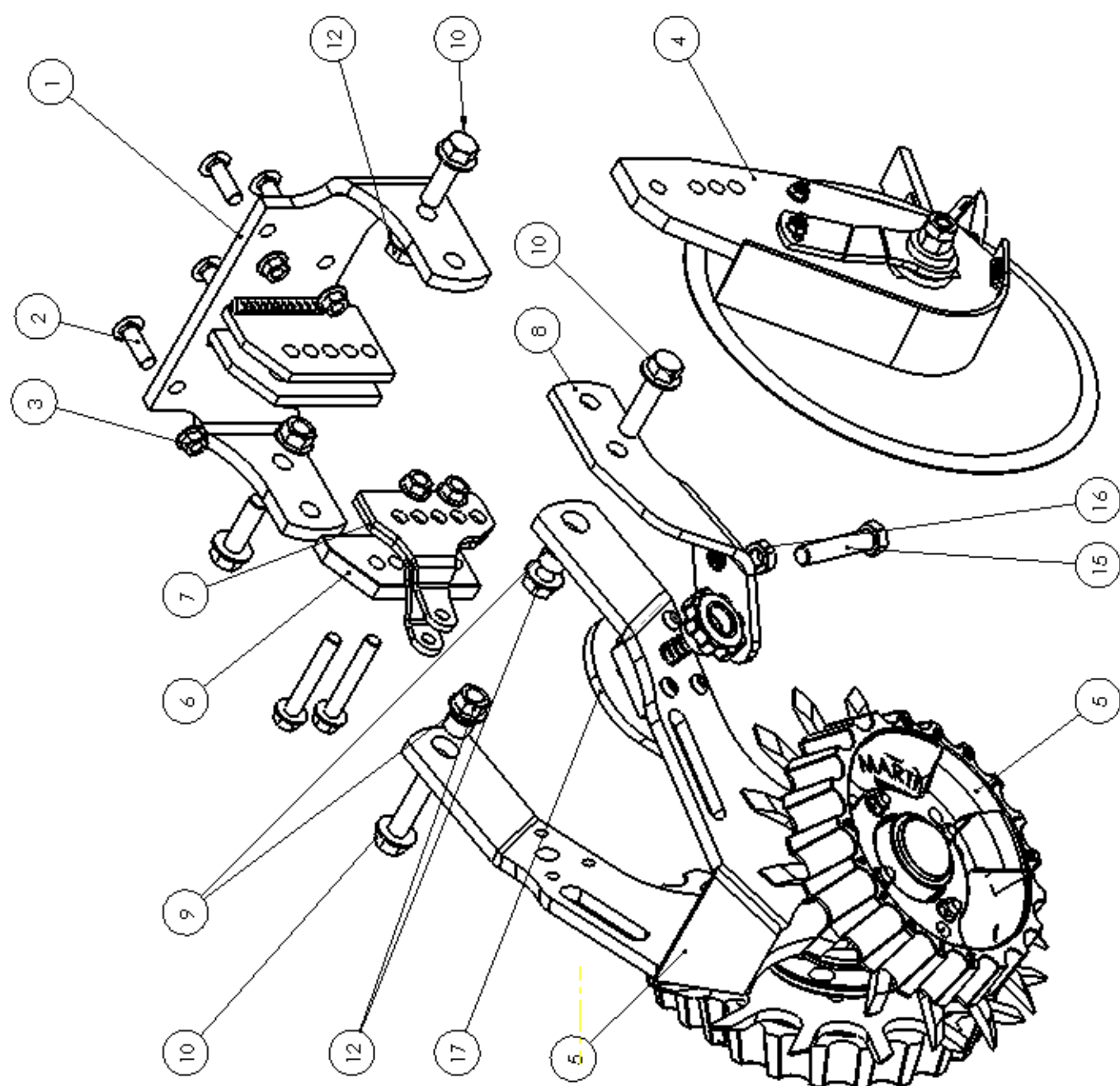
To adjust:

- 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



# EXPLODED VIEW FOR UMO-WA1345



## PARTS LIST FOR UMO-WA 1345

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MT1360DU-W	MOUNT	1
2	87698852	M12 X 40 CARRAIGE BOLT 10.9ZND	4
3	87681209	M12 FLANGE BOLT 10ZND	4
4	UMO-100R/L	RIGHT/LEFT UMO UNIT	1
5	WA1345R/L	RIGHT/LEFT ROW CLEANER	1
6	UMO-012 (800306)	SPACER BAR	1
7	SC-CUB-1345-2R/L	R/L SMARTCLEAN TOP BRACKET SET	1
8	STARM1360-5-8R/L (800253-254)	R/L STOP ARM	1
9	BU7858 (800277)	7/8" X 5/8" BUSHING	2
10	BFS0152 (783620)	5/8" X 2" FLANGE BOLT GR8	2
11	BFS0154 (783624)	5/8" X 2 1/2" FLANGE BOLT GR8	2
12	NFSL0007 (785600)	5/8" FLANGE NUT GR8	3
13	BFS0187 (783532)	1/2" X 3 1/4" FLANGE BOLT GR8	2
14	NFS0005 (785500)	1/2" FLANGE NUT GR8	2
15	BHS0543 (784630)	5/8" X 3" ADJUSTMENT BOLT	1
16	NHSJ013 (786601)	5/8" THIN NUT	1
17	CA-1345 ASSEMBLY (900160-161)	CAM ASSEMBLY	1

Note: Item 2 and 3 may substitute with 1/2" X 1 1/2" Bolt and 1/2" nut.



**The most trusted name in no-till**  
**Established 1991**

**Martin Industries LLC**

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