

RevealTM

Reveal Installation Manual



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Universal Parallel Arm Mounting Bracket Installation – 757112

This section is intended for use during the installation of mounting bracket 757112. For installation of the older style parallel arm brackets 757050, 757053, 757056, and 757082, continue to the next section.

Step 1:

Remove the front (closest to planter bar) parallel arm bolts on one side of the row unit. It may be necessary to support the row unit.

Step 2:

Locate the appropriate left or right bracket and position it on the outside of the parallel arms. The bracket should angle in toward the center-line of the row unit when installed on the correct side. Proceed to the appropriate instructions for the model of row unit being used, then repeat for the opposite side.

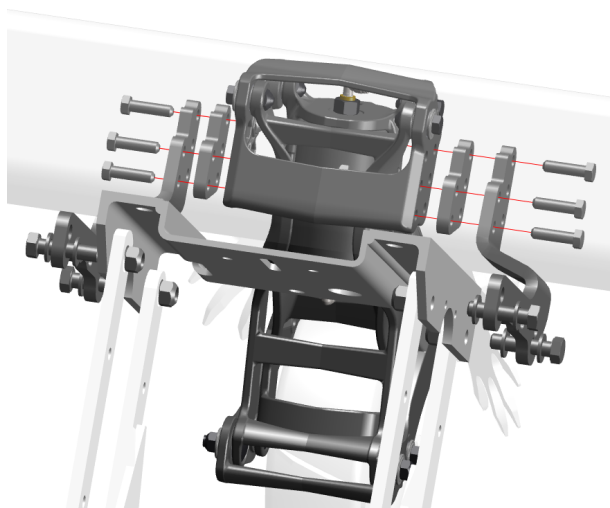
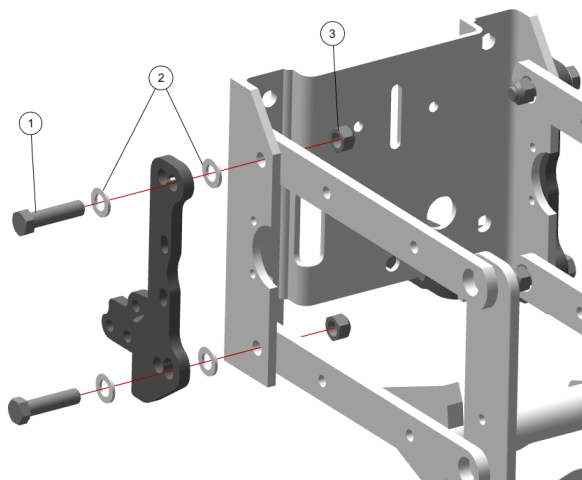
Step 3:

The following are recommendations for mounting the 757112 Parallel Arm bracket on several models of row units. Adjustments to these instructions may be needed in some situations. These adjustments could include, but are not limited to: using different hardware or adding washers or spacers. Also note that bolts may be mounted from the inside if clearance allows.

Note: To ensure accurate alignment, leave all installed hardware loosely tightened until the entire Reveal assembly is bolted to the mounting brackets whenever possible.

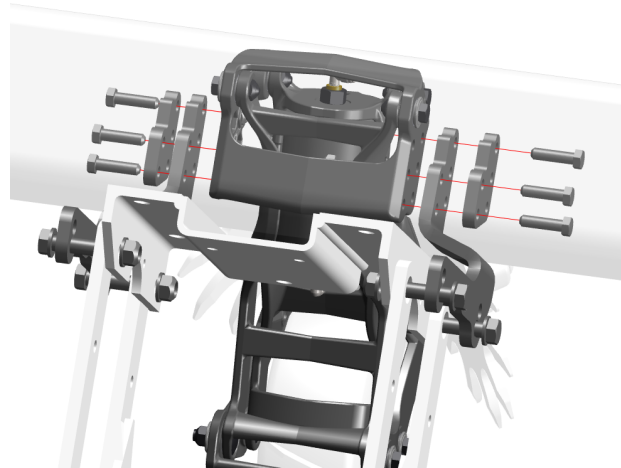
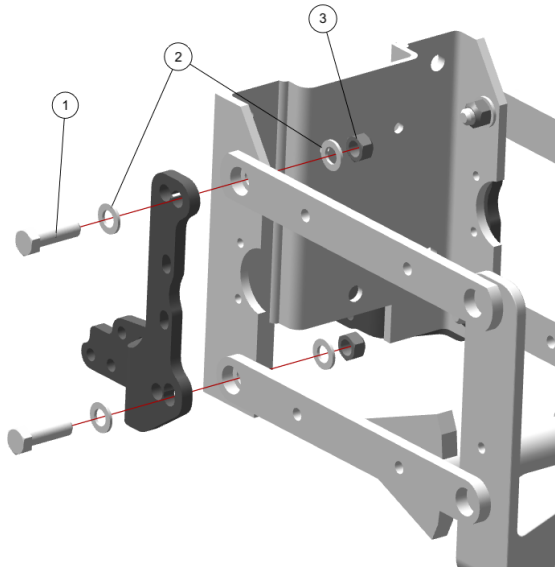
John Deere with WIDE w-plate

1. Attach the parallel arm bracket to the outside of the w-plate through the back holes of the Reveal bracket using the supplied M16x55 bolts (1), washers (2), and M16 top lock nuts (3).
2. Install one washer between the parallel arm bracket and w-plate on each bolt, as shown below.
3. When the Reveal assembly is mounted, the spacer will be installed between the Reveal bracket and the Reveal head casting, using the supplied M12x45 bolts and M12 top lock nuts (see the *Reveal Installation* section for further details).



John Deere with NARROW w-plate

1. Attach the parallel arm bracket to the outside of the w-plate through the back holes of the Reveal bracket using the supplied M16x55 bolts (1), washers (2), and M16 top lock nuts (3).
2. When the Reveal assembly is mounted, the spacer should be installed on the outside of the parallel arm bracket using the supplied M12x45 bolts and M12 top lock nuts, or 12x30mm bolts can be used without the spacer (see the *Reveal Installation* section for further details).

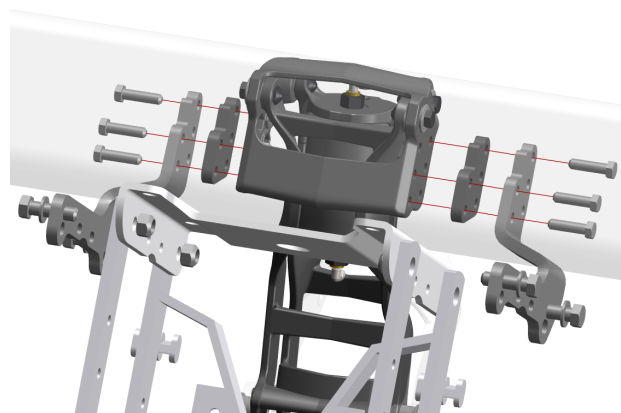
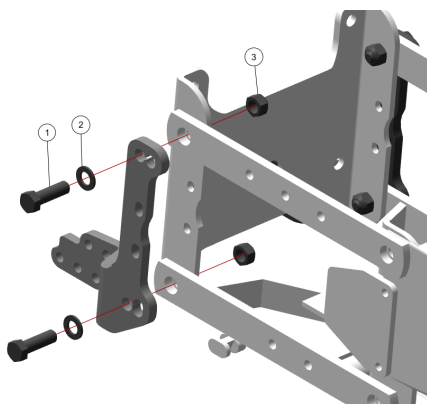


Kinze 3000 & White Row Units

1. Attach the parallel arm brackets to the outside of the parallel arms through the front holes of the Reveal bracket using the supplied M16x55 bolts (1), washers (2), and M16 top lock nuts (3).

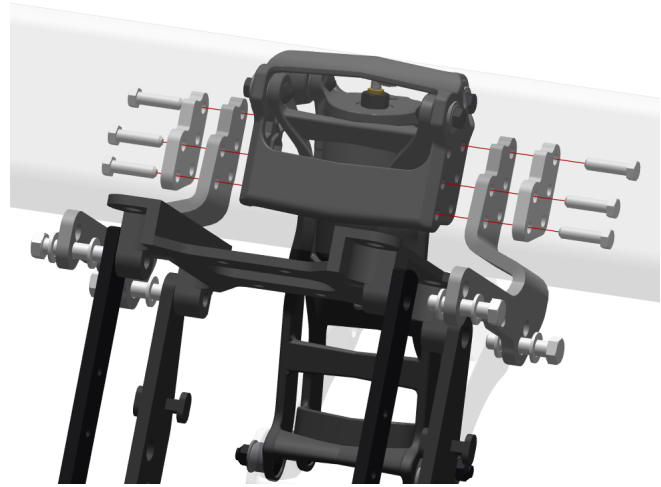
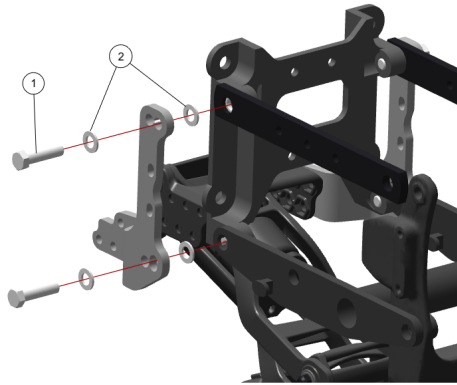
Note If installing the 757112 kit on Kinze 3000 row units that have DeltaForce installed, longer bolts will be needed. Use 5/8 x 3" bolts on the front lower parallel arm mounting locations.

2. When the Reveal assembly is mounted, the spacer will be installed between the Reveal bracket and the Reveal head casting, using the supplied M12x45 bolts and M12 top lock nuts (see the *Reveal Installation* section for further details).



Kinze 4900 Row Units

1. Attach the parallel arm bracket to the outside of the parallel arms through the upper holes of the Reveal bracket using the included 5/8 Bolts.
2. Install one M16 washer between the parallel arm bracket and w-plate on each bolt.
3. When the Reveal assembly is mounted, the spacer should be installed on the outside of the parallel arm bracket using the supplied M12x45 bolts and M12 top lock nuts, or 12x30mm bolts can be used without the spacer (see the *Reveal Installation* section for further details).



Older Style Parallel Arm Mounting Bracket Installation

This section is for use during installation of mounting brackets 757050, 757053, 757056, and 757082.

Step 1:

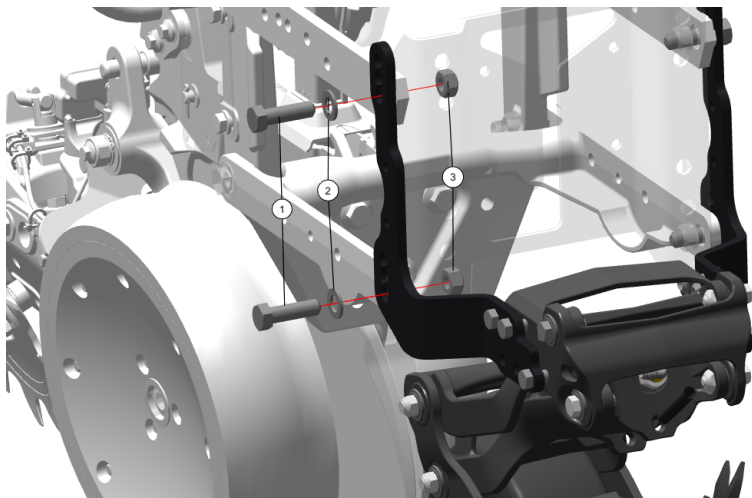
Remove the front (closest to planter bar) parallel arm bolts on one side of the row unit. It may be necessary to support the row unit.

Note: To ensure accurate alignment, leave all installed hardware loosely tightened until the entire Reveal assembly is bolted to the mounting brackets whenever possible.

Step 2:

Locate the appropriate parallel arm bracket and position it on the outside of the parallel arms. The bracket should angle in toward the center-line of the row unit when installed on the correct side. Align the bottom holes (each location) of the bracket with the parallel arms and install the supplied M16x55 bolts (1) and M16 washers (2). Secure with the M16 top lock nut (3), but **do not** fully tighten at this time. Bolts may be installed from the inside out to simplify installation if clearance allows.

- a: If installing the 757056 kit on Kinze 3000 row units that have DeltaForce installed, use a 5/8 x 2.75 bolt to mount each bracket through the lower parallel arm and DeltaForce cylinder bracket. Secure with a 5/8 top lock nut, but **do not** fully tighten at this time.



Note: The parallel arm brackets should always be installed as high as possible. If there are clearance concerns/obstructions with Reveal when the parallel arm brackets are mounted in this position, the brackets can be moved down to provide clearance.

Step 3:

Repeat for the opposite side using the same parallel arm mounting bracket hole locations.

In-between Bracket – 757101

This section is for use during installation of mounting bracket 757101

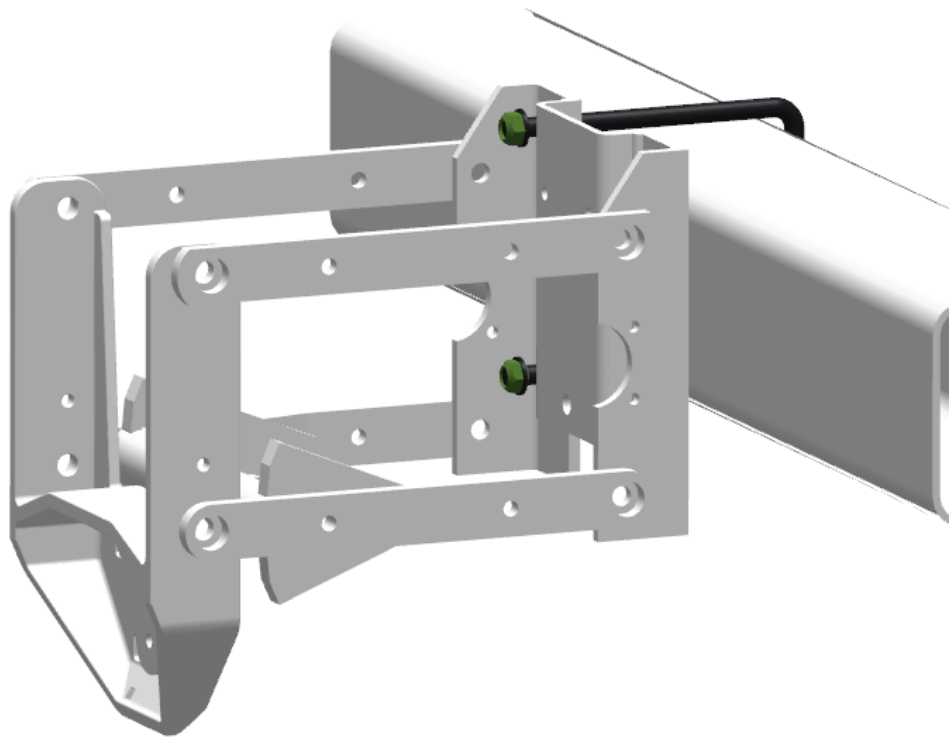
Step 1:

Support the row unit with a lift or engine hoist.

Note: To ensure accurate alignment, leave all installed hardware loosely tightened until the entire Reveal assembly is bolted to the mounting brackets whenever possible.

Step 2:

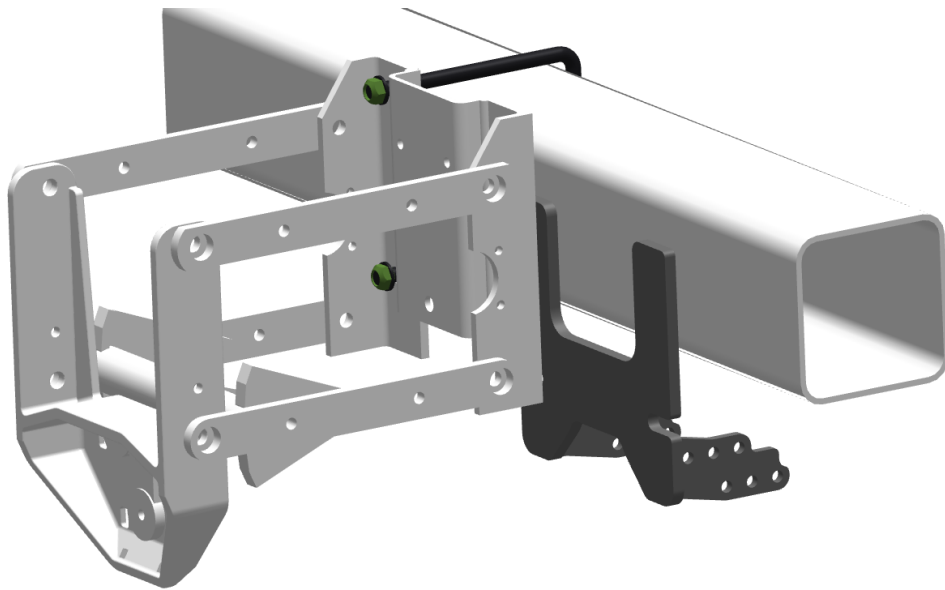
Loosen both of the u-bolts that secure the w-plate to the planter bar. Then remove one of the u-bolts completely while keeping the other loosely fastened.



Note: Some installations may require longer u-bolts to be installed in place of existing u-bolts to mount all components on the bar.

Step 3:

Pull the Row unit away from the toolbar and slip the bracket in between the w-plate and planter bar.

**Step 4:**

Reinstall the second u-bolt, leaving u-bolt nuts loose.

Note: If installing on a planter with a mechanical drive system, note that the 757101 In-Between Bracket moves the W-plate back 1/2" from the toolbar. This will affect hex-shaft mounting/alignment, and may not be compatible on some hex-shaft drive applications.

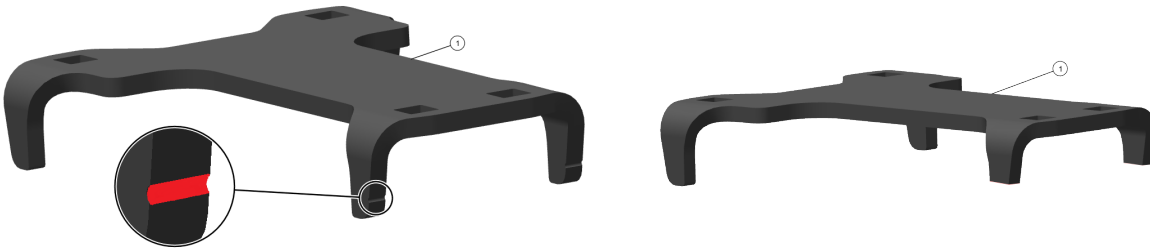
7x7 Direct Mount Bracket Installation — 757059

This section is for use during installation of mounting bracket 757059 on a 7x7 bar.

Step 1:

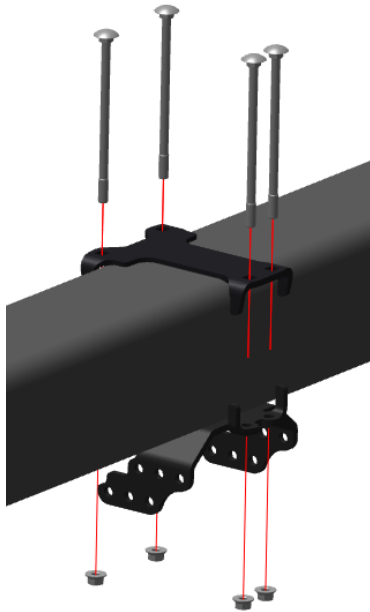
Install the upper plate on top of the 7x7 bar. The narrow side of the plate should face toward the row unit.

Note: The center two rows of 12 row (6 and 7) and 16 row (8 and 9) planters require modification to the upper plate (1) so it can be installed through the holes on the frame plates. Locate the narrow side of the bracket and trim each ear at the pre-formed notch. This will allow the plate to fit through the holes on the frame plates.



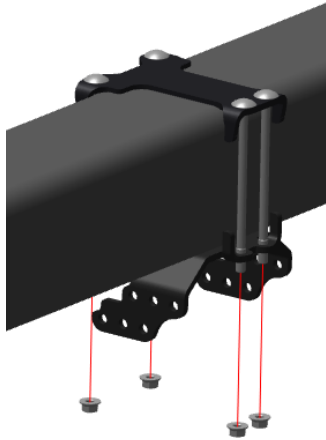
Step 2:

Install the four supplied carriage bolts from the top down through the plate.



Step 3:

Orient the lower bracket under the 7x7 bar with the bottom row of holes sticking out toward the hitch and aligned with the wide side of the top plate. Install the four top lock nuts as shown.

**Step 4:**

Center the bracket assembly with the row unit and fully tighten the lock nuts until the ears of the brackets draw down snug around the planter bar.

John Deere 1770NT 24 Row Direct Mount Bracket Installation — 757071

This section includes steps for installing direct mount bracket 757071 on wing pivot rows of John Deere 24 row NT style planters.

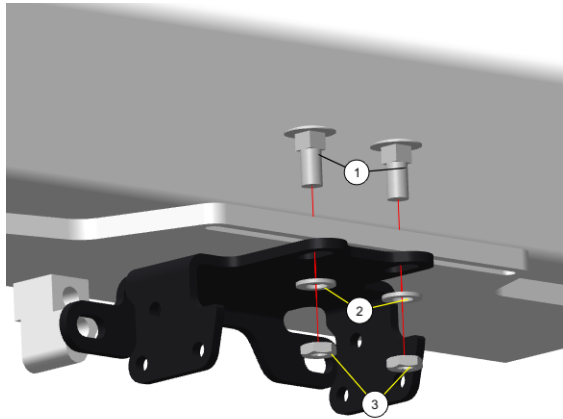
Step 1:

Position the bracket under the planter bar and align it with the planter bar bracket.

Step 2:

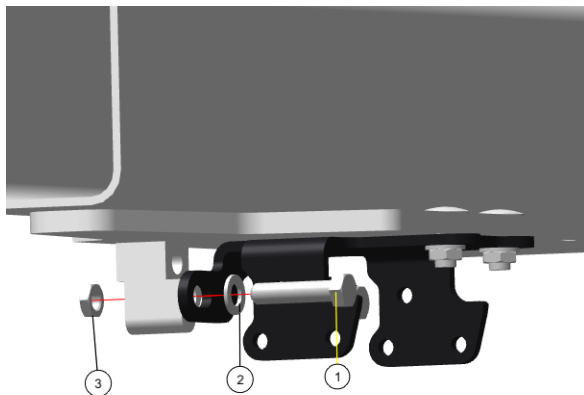
Install two M16 x 40 carriage bolts (1) through the planter bar bracket and the direct mount bracket and secure with a M16 washer (2) and M16 locking jam nut (3). Do not fully tighten the jam nuts.

Note: The jam nuts must be installed with the non-dimpled side first (facing up toward the bottom of the planter bar) or they will cross thread.



Step 3:

Align the direct mount bracket tabs with the cast lugs on the planter bar and install a M16 x 70 hex cap screw (1) and M16 washer (2) through each mounting location. Secure with a M16 locking jam nut (3). Ensure the bracket is centered with the row and fully tighten each nut.



Step 4:

Once the lower hex cap screws are tight, fully tighten the two carriage bolts/jam nuts from step 2.

Setback Bracket Installation – 757061 and 757063

This section covers steps for installing the 6.25” setback bracket (757061) and the 10” setback bracket (757063).

Step 1:

Support the row unit with a lift or engine hoist.

Step 2:

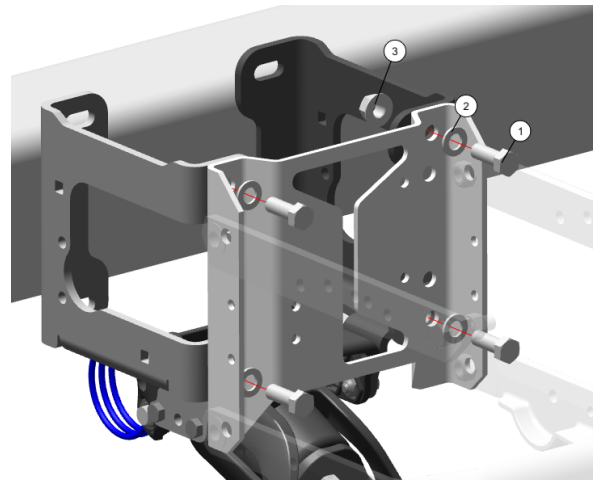
Remove the nuts from the u-bolts that secure the w-plate to the planter bar, then remove the row unit.

Step 3:

Install the left and right hand brackets, oriented as shown below, onto the existing u-bolts and loosely re-install each nut.

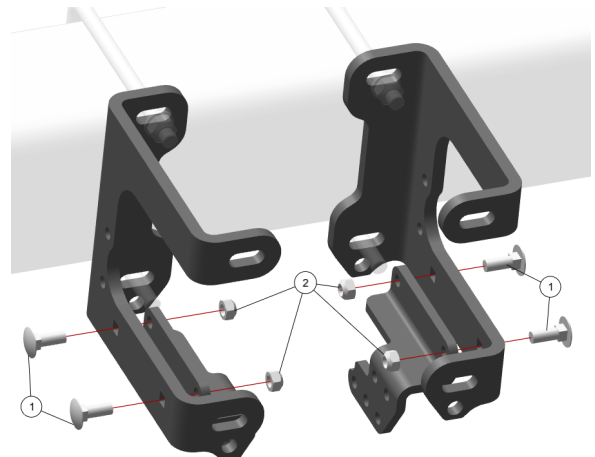
Step 4:

Install the w-plate/row unit onto the setback brackets using the supplied M16x45 bolts (1), placing a M16 washer (2) between the bolt head and the setback bracket. Secure with a M16 top lock nut (3).



Step 5:

If installing the 10” setback, bolt the inner Reveal mounting brackets to the outer setback brackets using the supplied M12x35 carriage bolts (1) and M12 top lock nuts (2).



Note: If installing on a planter with a mechanical drive system, the row unit drive sprocket will need to be relocated to the outside of the setback bracket. Add additional drive chain (or a longer drive cable) and sprocket/jack shaft to the w-plate as needed.

Case 1200 Mounting Bracket Installation — 757078

This section is for installation of mounting bracket 757078.

Step 1:

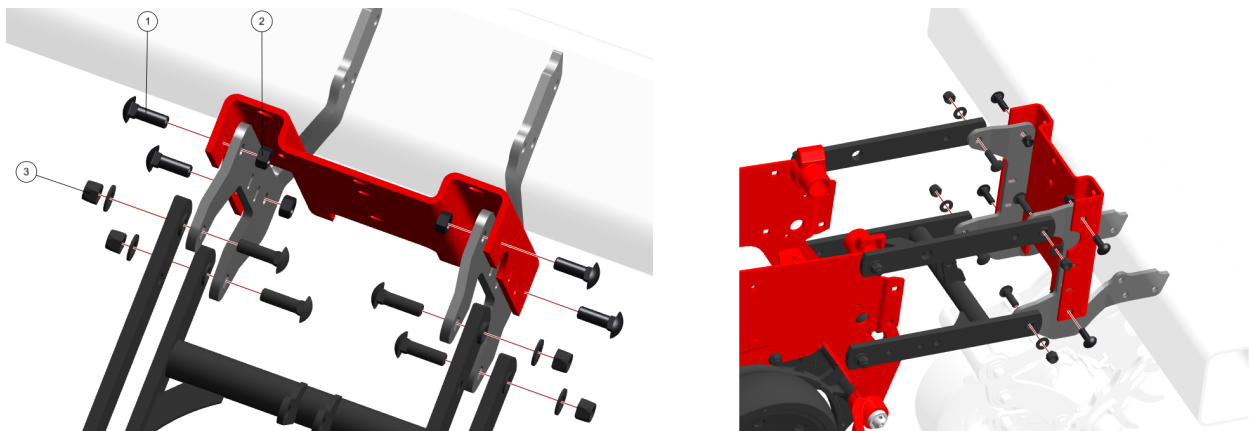
Support the row unit with a lift or engine hoist.

Step 2:

Remove the bolts that secure the w-plate to the parallel arms.

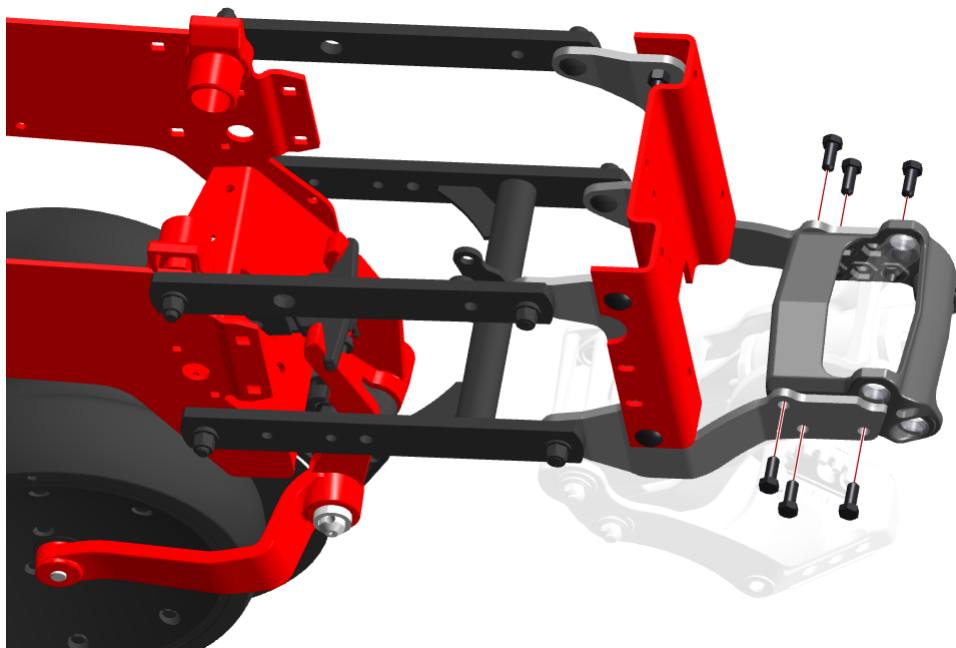
Step 3:

Install the left and right brackets. Both brackets should angle in toward the center of the row unit. Align the holes on the bracket with the w-plate and install the supplied 1/2" carriage bolts (1) and 1/2" lock nuts (2). Secure the Reveal bracket to the parallel arms with OEM hardware (3). **Do not** fully tighten hardware.



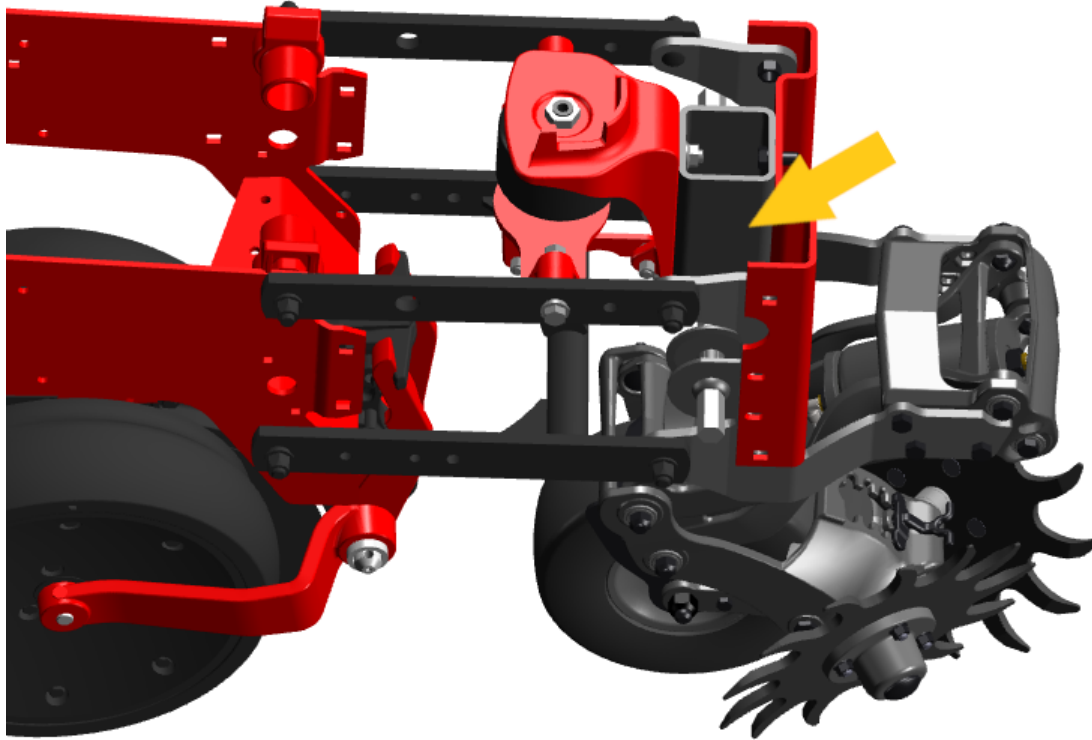
Step 4:

Attach the Reveal mounting bracket to the parallel arms using the supplied M12 bolts. The Reveal head casting will be attached to the mounting bracket using the supplied M12 bolts and lock nuts. Refer to the *Reveal Installation* section for more details.



Step 5:

On Case 1200 row units where Delta Force is not installed, an additional spacer bracket 757105 will be required to maintain proper alignment of the OEM airbag downforce system.



1. Remove the OEM airbag system from the w-plate.
2. Attach the spacer bracket to the w-plate using the supplied 1/2" bolts and lock nuts
3. Attach the airbag bracket to the spacer bracket with the original OEM hardware.

Note: The hex shaft should mount in the original location. Longer harnessing or air hoses may be required as the row unit/OEM airbag is set back 3 1/2" from the original position.

Case 2100 Mounting Bracket Installation — 757092

This section is for installation of mounting bracket 757092.

Step 1:

Remove the front (closest to planter bar) parallel arm bolts on one side of the row unit. It may be necessary to support the row unit.

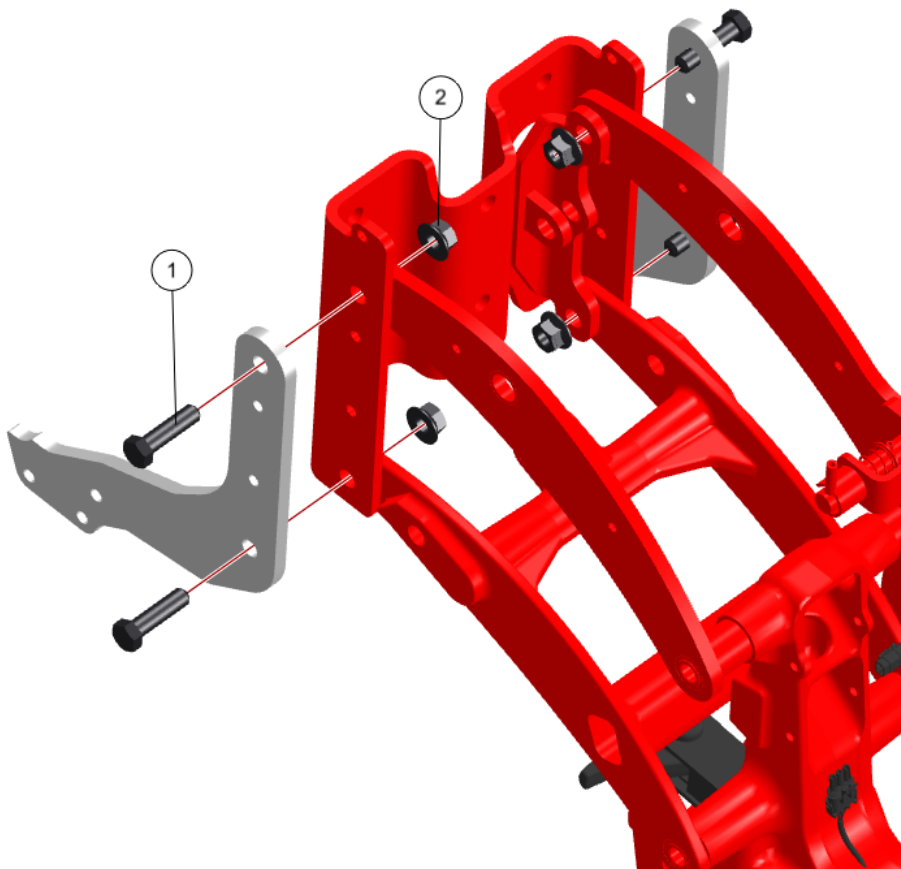
Step 2:

Locate the appropriate left or right bracket and position it on the outside of the parallel arms. The bracket should angle in toward the center-line of the row unit when installed on the correct side.

Step 3:

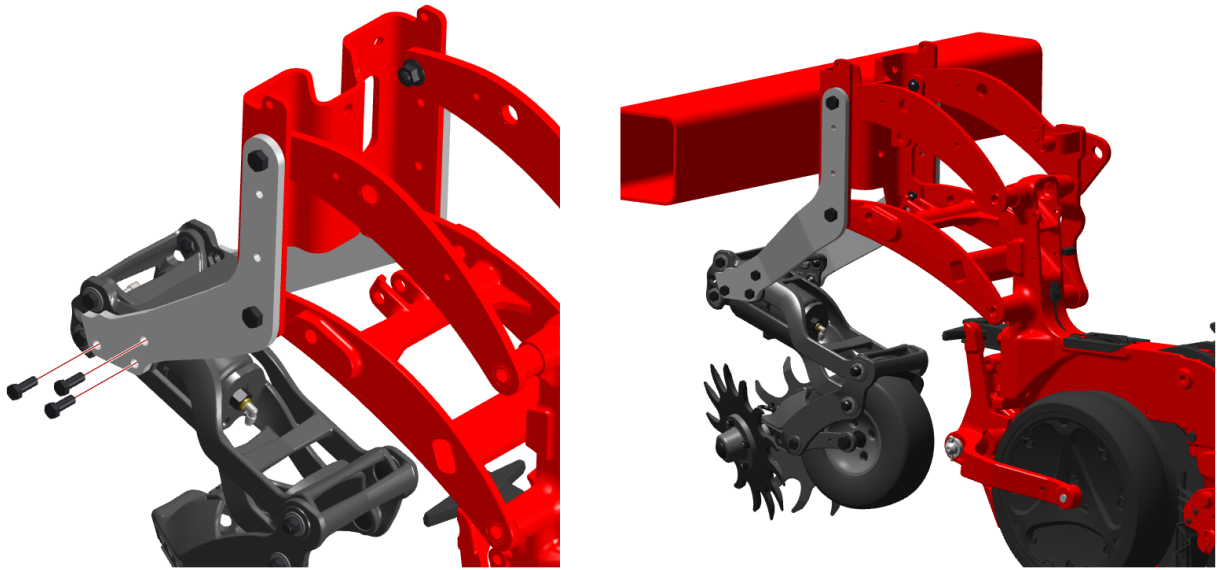
Bolt the parallel arm bracket to the outside of the w-plate through the back holes of the Reveal bracket using the supplied M16 bolts (1) and M16 top lock nuts (2).

Note: If hose support brackets are installed on the row unit, add a 1/8" or 1/4" spacer between the Reveal mounting bracket and the W-plate. Add an additional spacer of the same size to each of the 3 M12 bolts located between the Reveal mounting bracket and the Reveal head casing in Step 4.



Step 4:

The Reveal head casing will be attached to the Reveal mounting bracket using the supplied M12 bolts and lock nuts as shown below. Refer to the *Reveal Installation* section for more details.

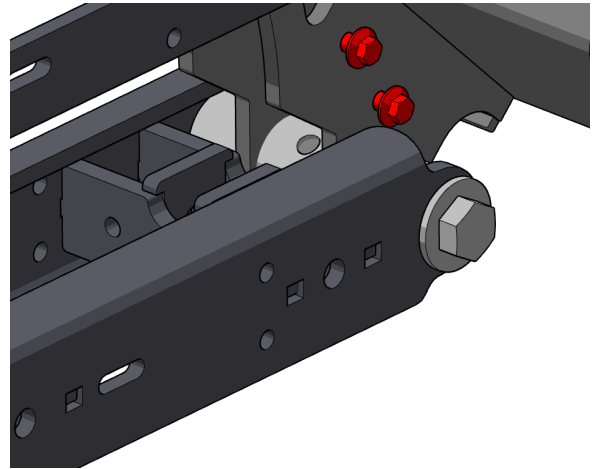


Fendt Momentum (Pre–Mid 2022 Models Only) – 757121

This section is for installation of mounting bracket 757121. *Note that this bracket is only compatible with Momentum planters manufactured before June 2022. Design changes to the momentum bar and mounting brackets on later models do not provide adequate clearance to attach the 757121 bracket.*

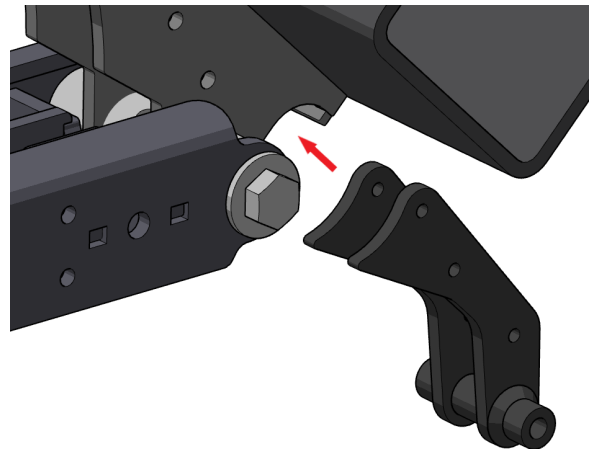
Step 1:

Remove the flange bolts indicated in red. These bolts are typically used to fasten the row unit travel stop plates. There will be two bolts on each side.

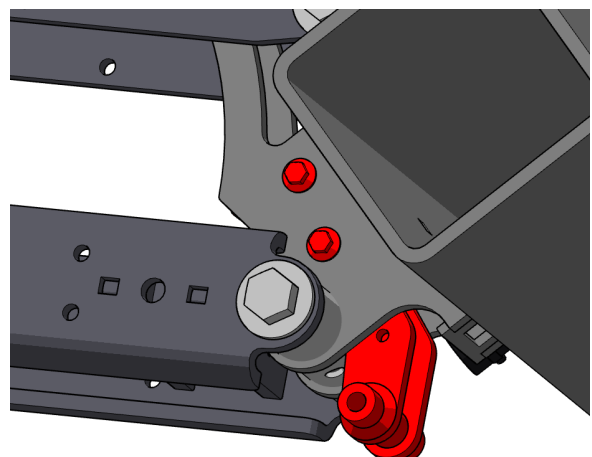


Step 2:

Slide the center bracket assembly (757124) into the area indicated.

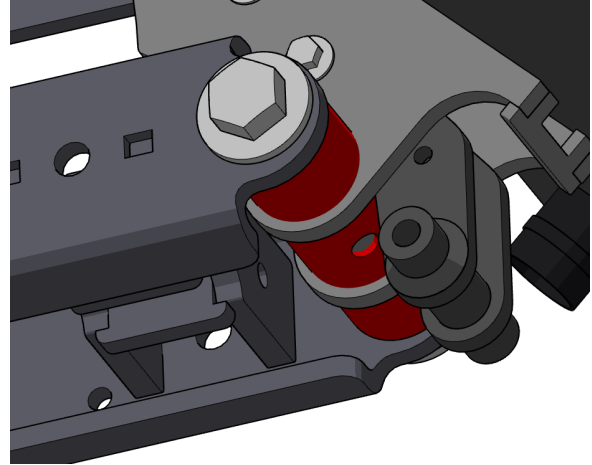


Attach using the flange bolts removed in **step 1**. Apply high-strength thread locker to the bolts and tighten completely.



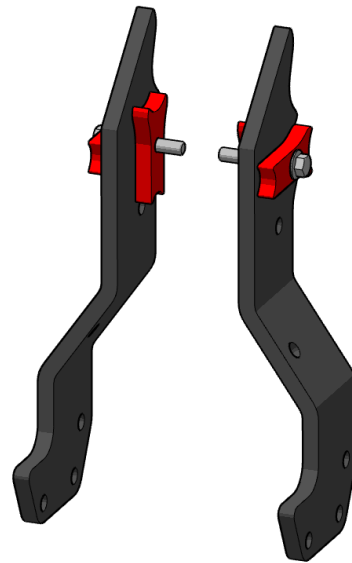
Step 3:

Measure the diameter of the circular cross-tube indicated in red. If the tube measures **1.75** inches, continue to **step 4**. If the tube measures **2** inches, skip to **step 6**.



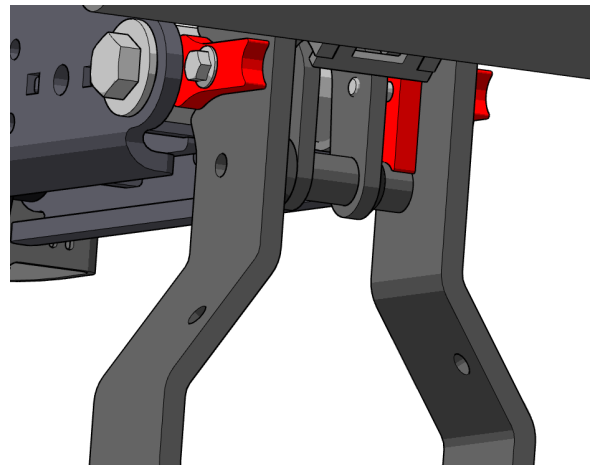
Step 4:

Pre-assemble each side bracket (**757122/757123**) using two spacer plates (**757128**) each in the configuration depicted. Apply high-strength thread locker to the M10x60mm bolts, but **do not** fully tighten.



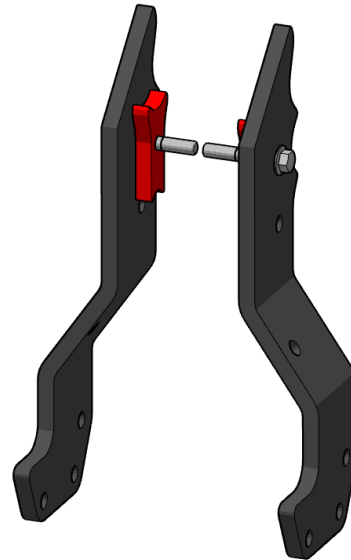
Step 5:

Align both side bracket assemblies to the center bracket assembly in the orientation depicted. Skip to **step 8**.



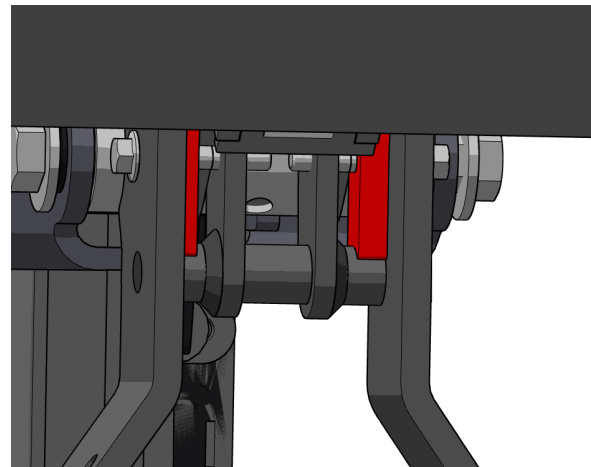
Step 6:

Pre-assemble each side panel bracket (**757122/757123**) using one spacer plate (**757128**) each in the configuration depicted. Apply high-strength thread locker to the M10x60mm bolts, but **do not** fully tighten.



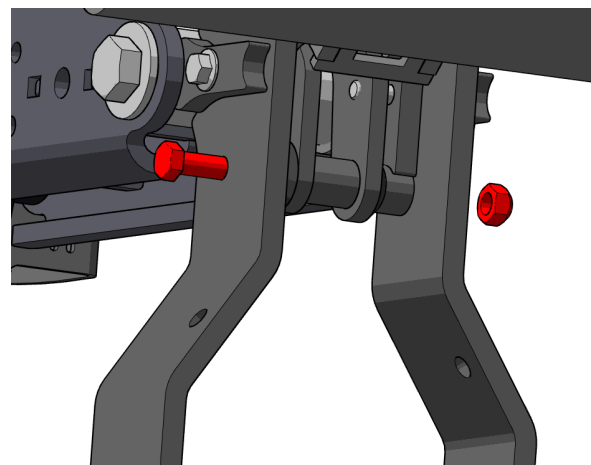
Step 7:

Align both side bracket assemblies to the center bracket assembly in the orientation depicted.



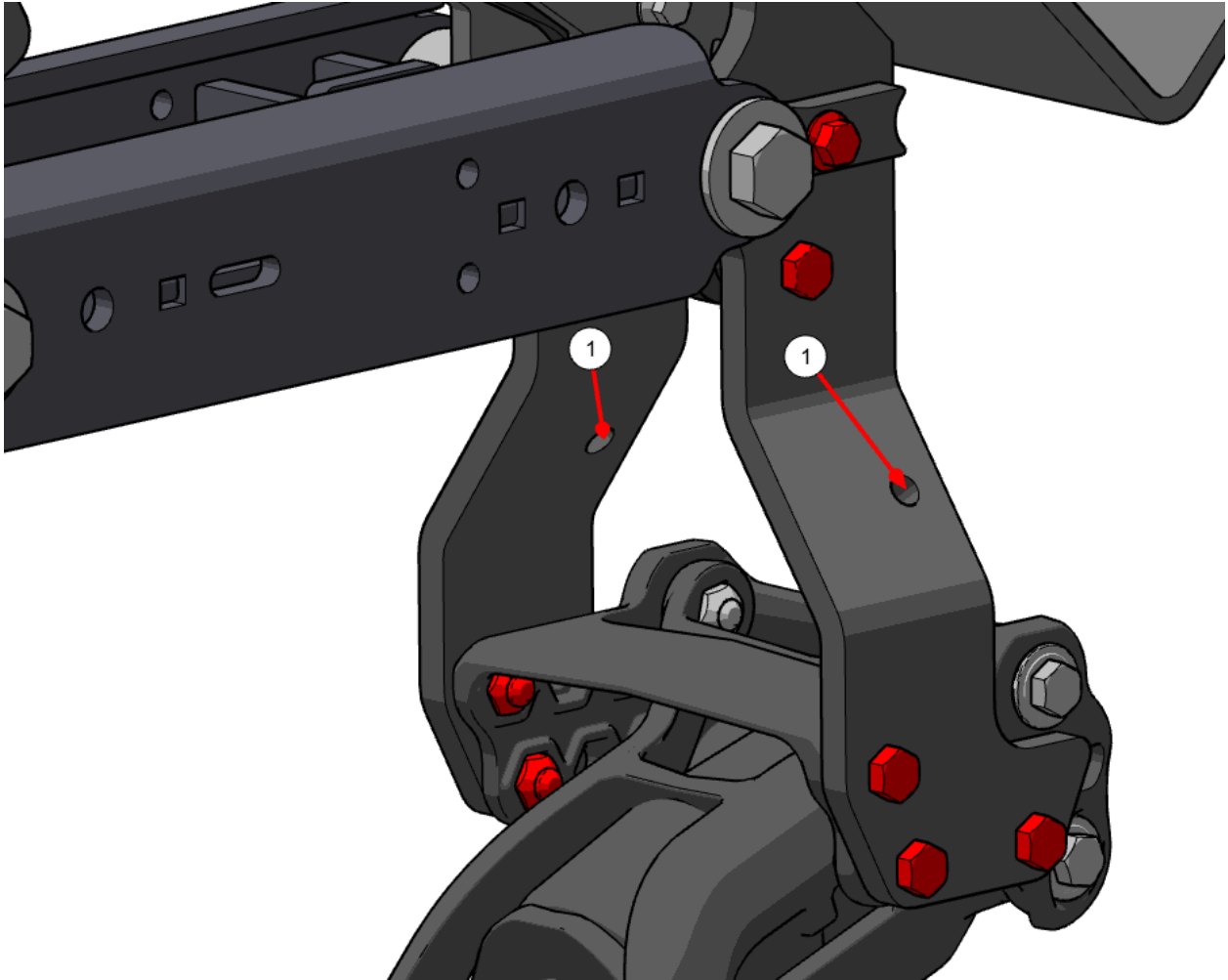
Step 8:

Attach the side bracket assemblies to the center bracket assembly using the included M10x140mm bolt and top lock nut indicated in red. **Do not** fully tighten.



Step 9:

Mount the row cleaner assembly (757000) to the side bracket assemblies using the included M12x35mm bolts and top lock nuts. Fully tighten all bolts indicated in red. Use zip ties at the pre-drilled holes (1) to route air lines as desired.



Installation Complete

Reveal Assembly Installation

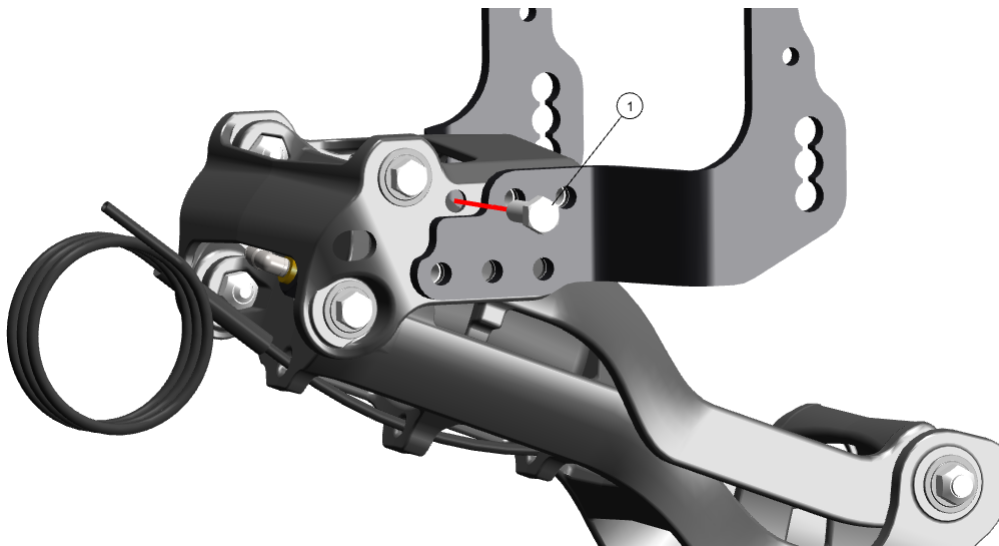
Reveal can be installed in multiple positions on the mounting brackets. Proper installation can depend on additional products installed, planter make, model, row number, and overall clearance of Reveal. Always verify proper travel and clearance after completing installation.

Row units with Conceal installed may need to mount Reveal to the mounting bracket using the rear holes (closest to the row unit) of the Reveal bracket. This will provide more clearance between Reveal and the row unit face plate.

In other situations where more clearance is needed in front of Reveal, install Reveal to the mounting bracket using the front holes (farthest from the row unit) of the Reveal bracket.

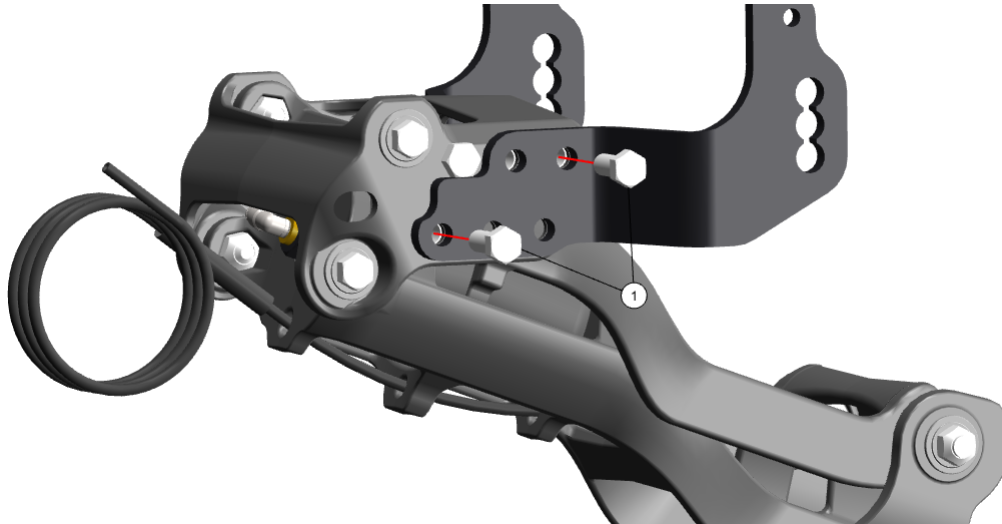
Step 1:

To install Reveal in the default location, insert a supplied M12 x 30 bolt (1) through the top front mounting hole on each side of Reveal. This will allow Reveal to rest on the mounting brackets while the other hardware is installed.



Step 2:

Place Reveal on the mounting brackets and insert the four remaining M12 bolts (1) through each mounting bracket and Reveal. Install 2 M12 bolts on each side, positioning them in opposite holes on the top and bottom as shown below, and secure with a M12 top lock nut.

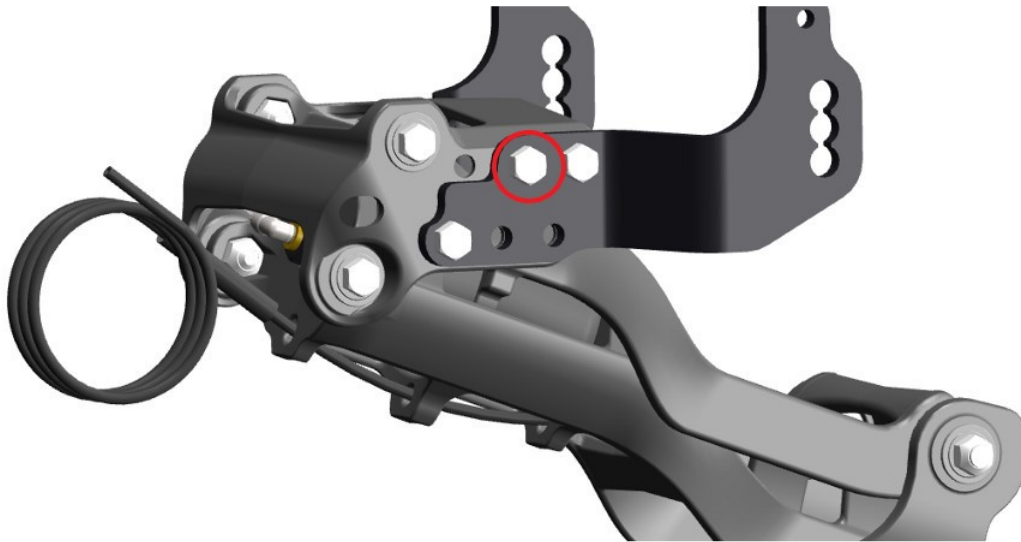


- a: The Universal Parallel Arm mounting bracket requires a spacer installed either inside or outside the Reveal mounting bracket, as shown below. Refer to the specific row unit section used earlier for more information.

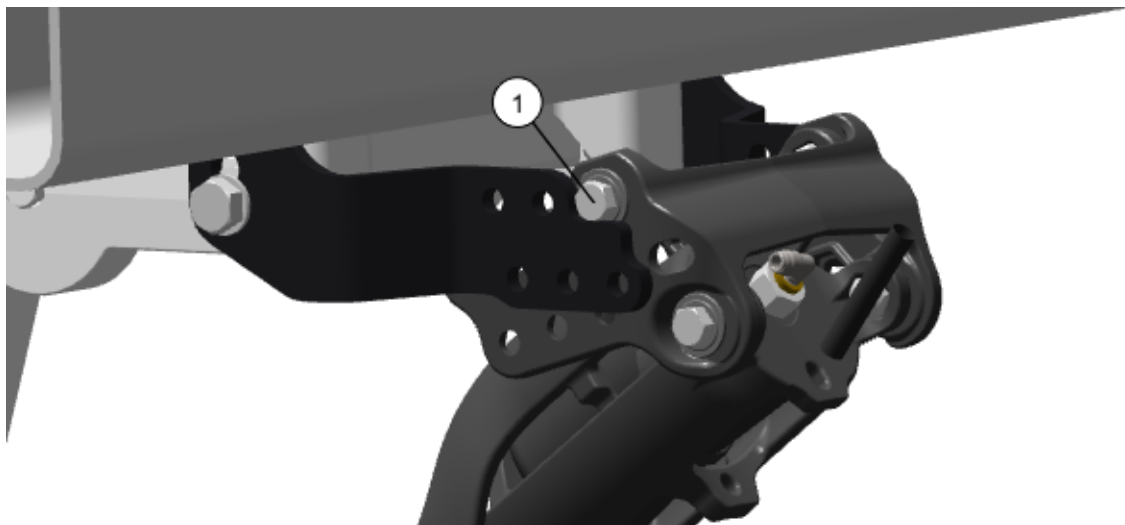


Step 3:

Remove the two bolts that allowed Reveal to rest on the mounting brackets and install them through the remaining open top hole of each mounting bracket as shown below.



Note: If direct mount bracket 757071 is installed, or different mounting holes are used, the unit can rest on the mounting brackets using the pre-installed M12 hex screws (1). Install all six M12 x 30 bolts through the mounting brackets and Reveal.



Step 4:

Move Reveal through a full range of motion checking for any clearance issues. Adjust the Reveal mounting position as needed.

Step 5:

Make any final adjustments to position and alignment and fully tighten any loose hardware on the mounting brackets.

Gauge Wheel Installation

Step 1:

If using the Nose shroud and/or Gauge wheel scraper options, install them now if they are not already installed.



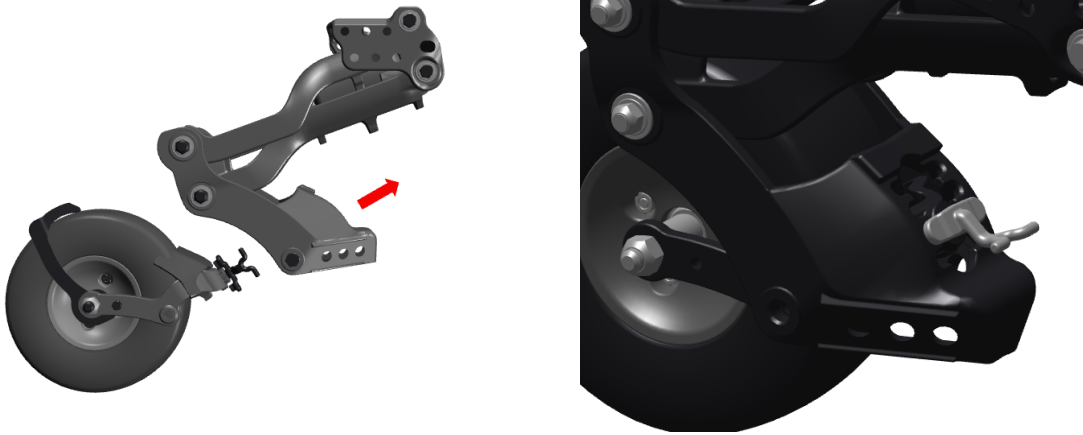
Step 2:

Locate the gauge wheel assembly and pull out and rotate the T-handle so it is parallel with the wheel.

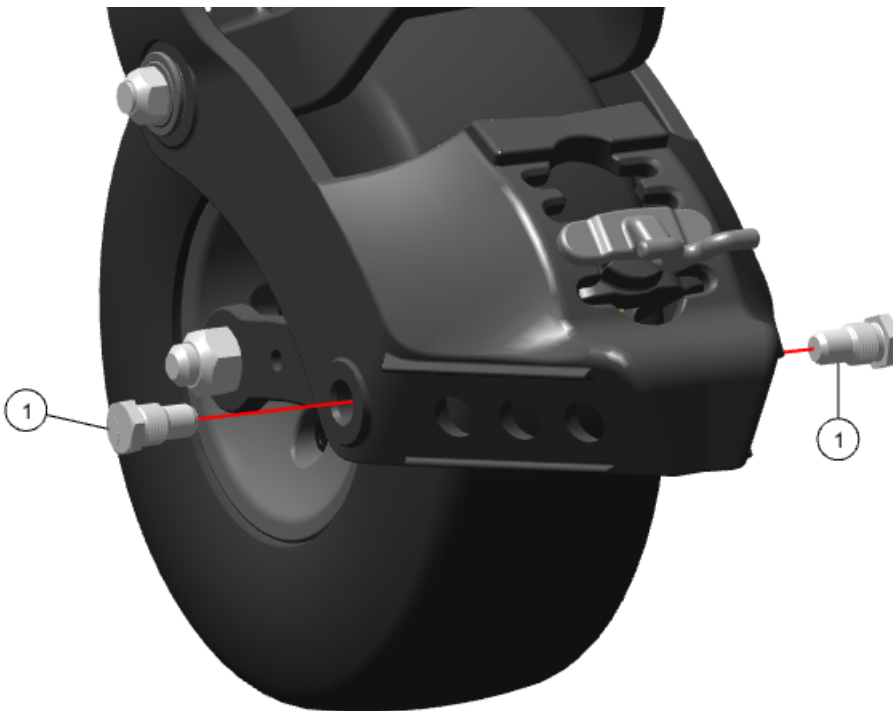


Step 3:

Install the gauge wheel assembly up through the bottom of the Reveal frame and rotate the T-handle to hold the wheel in place.

**Step 4:**

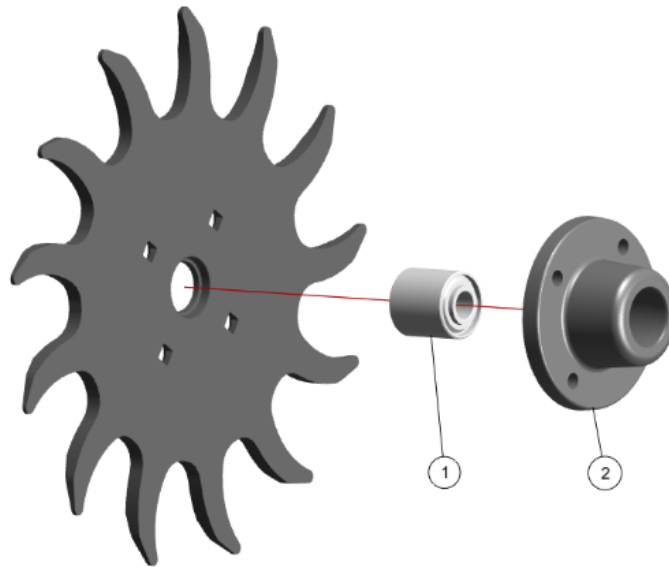
Align the mounting holes in the gauge wheel frame with the nose piece and insert the two gauge wheel frame pivot pins (1).



Cleaning Wheel Bearing and Hub Installation

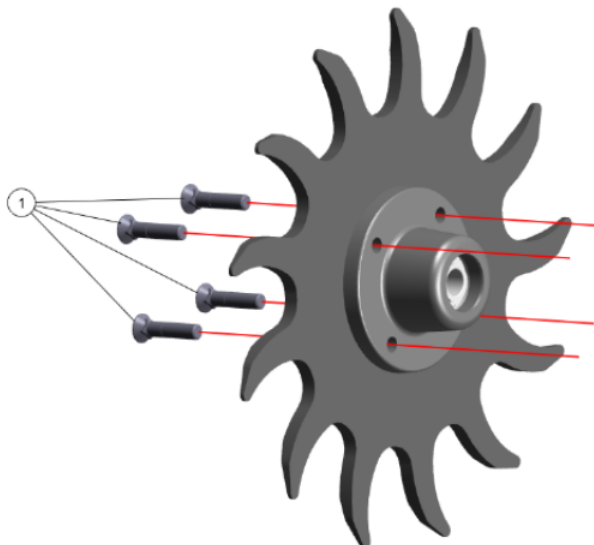
Step 1:

Insert the bearing (1) into the hub (2) and place the assembly on the outside face of the wheel.



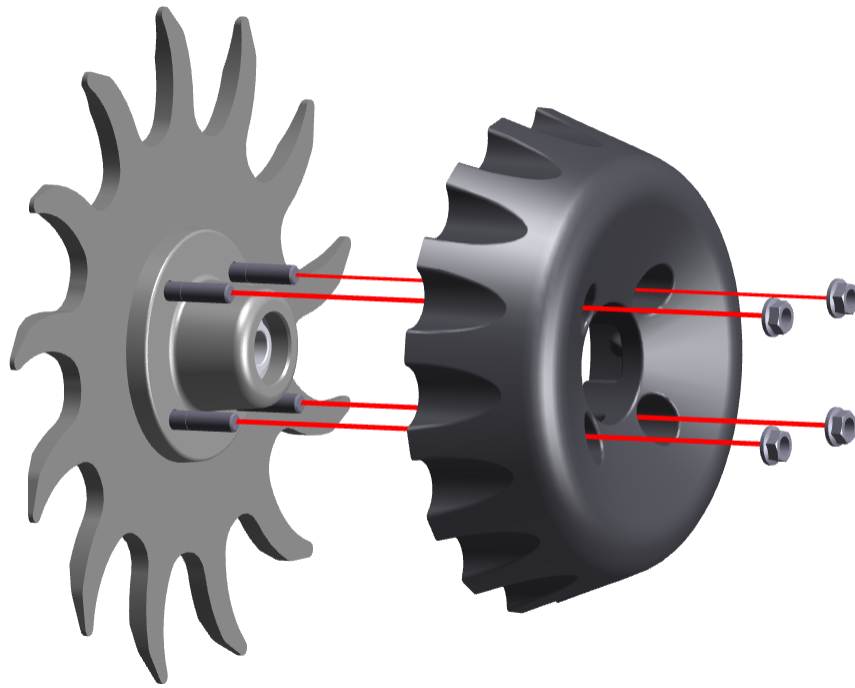
Step 2:

To install with treader wheels, use the **long** plow bolts (1) included in the kit to attach the hub as shown below.



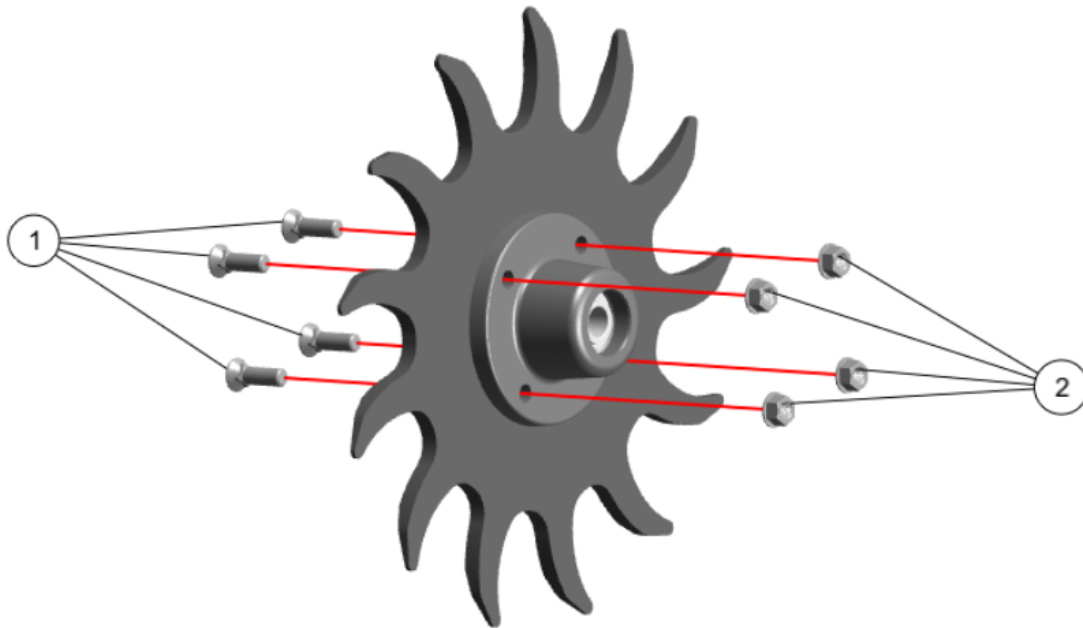
Step 3:

Place the treader wheel (1) on top of the hub assembly as shown below, then use the flange nuts (2) to secure the treader wheel.



Step 4:

When installing without treader wheels, install the four shorter plow bolts (1) through the wheel and hub assembly. Secure with the four flange nuts (2). Ensure the plow bolts are flush with the wheel surface.



Note: Save the hub dust cap to install on the hub after the wheel assembly is installed on the Reveal nose frame.

Spindle Kit Installation

There are two spindle kits available for installation with Reveal cleaning wheels, the standard spindle kit (757036) and the narrow spindle kit (757037). Refer to the appropriate section for the style being installed.

Standard Spindle Kit

Note: The following instructions will set up the Reveal cleaning wheels in an staggered configuration, which is the recommended configuration. To configure Reveal with interlocking wheels, install each wheel in the middle frame mounting hole using only one spacer on each side.

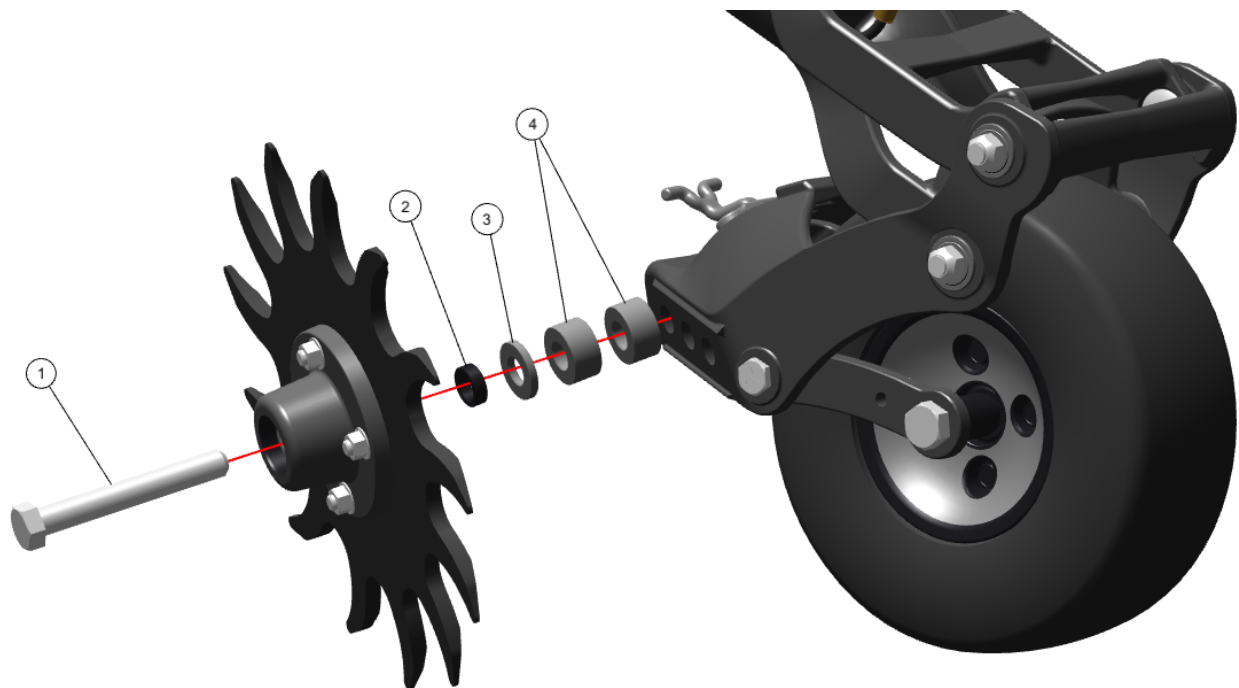
Step 1:

Align the leading wheel with the front hole of the Reveal frame. Wheels are side specific so ensure wheels are installed on the correct side (see label stamped into wheel). The top tines/blades on the wheel should sweep back toward the row unit, with the bevels inward.

Step 2:

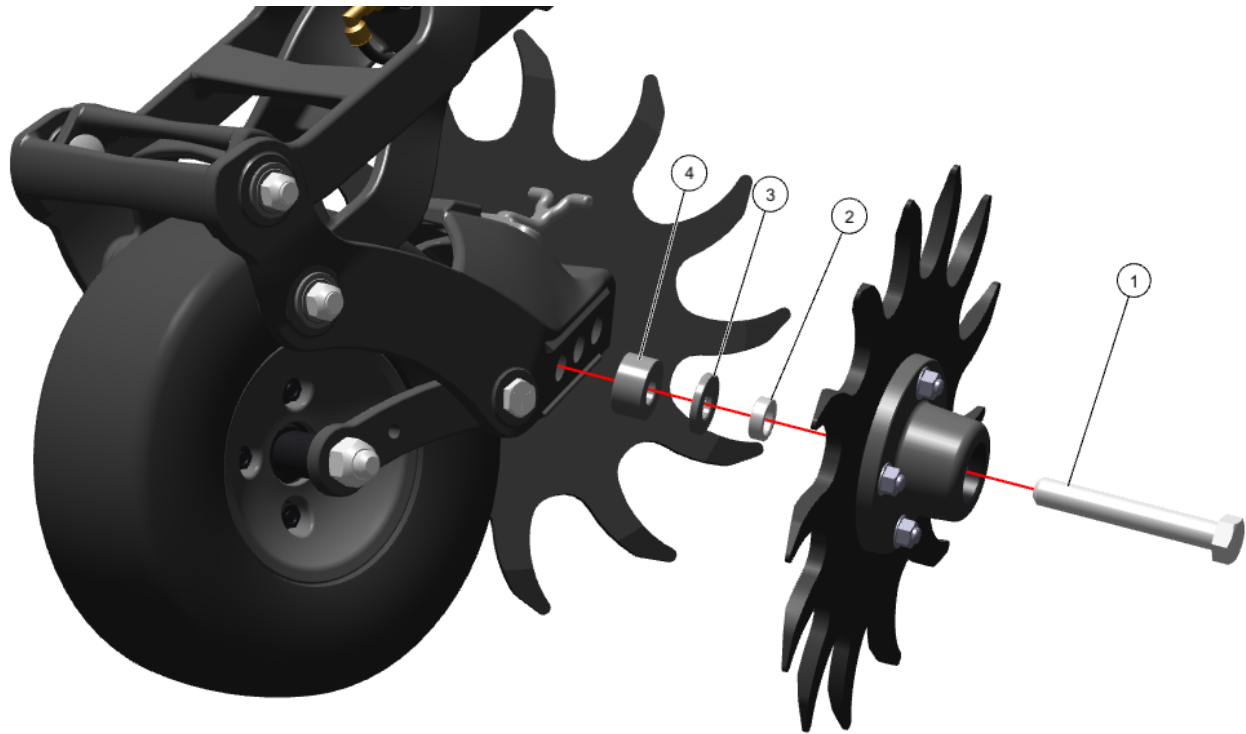
Insert the M16 x 120 gold zinc bolt (1) through the wheel hub assembly. Next place the small spacer (2), spacer washer (3) and two large spacers (4) onto the bolt. Apply medium or high strength thread locker to bolt and secure with a M16 top lock nut placed inside the Reveal frame. Tighten the lock nut completely unless using the optional scraper (see note below).

Note: An optional scraper may be ordered separately and installed in place of the spacer washer (3). Alignment of the scraper is detailed later in this section.



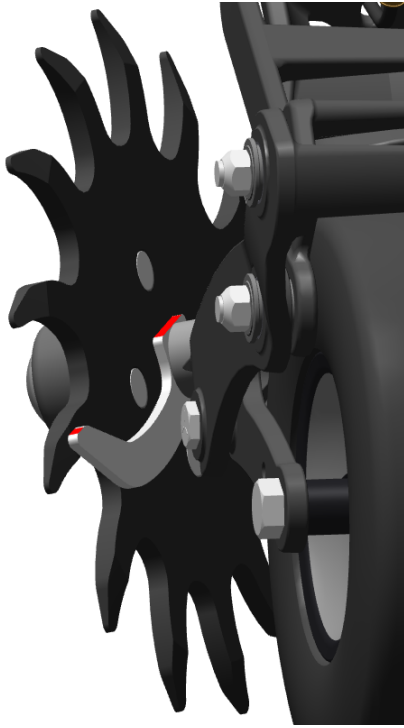
Step 3:

Insert the M16 x 110 bolt (1) through the wheel hub assembly. Next place the small spacer (2), spacer washer (3) and large spacer (4) onto the bolt. Apply medium or high strength thread locker to bolt and secure with a M16 top lock nut placed inside the Reveal frame. Tighten the lock nut completely unless using the optional scraper.



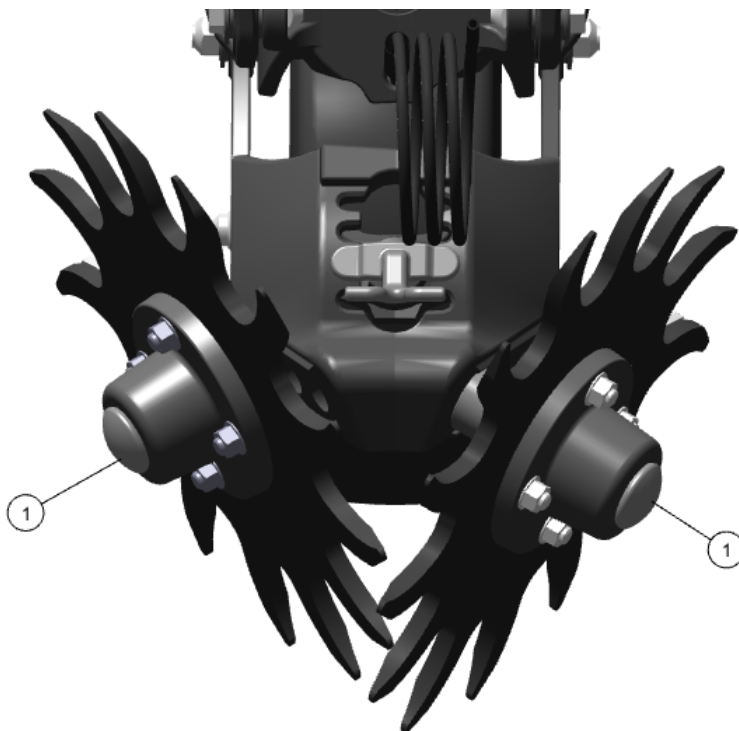
The following step is intended for use when installing the optional scrapers to ensure proper scraper alignment. These scrapers are not recommended in most conditions.

- a: Lay a level across the two flat spots on the wheel scraper. Adjust the scraper so it is level. Fully tighten the lock nut. Repeat for the scraper on the opposite side



Step 4:

Install the dust cap (1) over the spindle bolt on each wheel hub using a soft mallet or dead-blow hammer.



Narrow Spindle Kit

Note: The following instructions will set up the Reveal cleaning wheels in an staggered configuration, which is the recommended configuration. To configure Reveal with interlocking wheels, install each wheel in the middle frame mounting hole using only one spacer on each side.

Step 1:

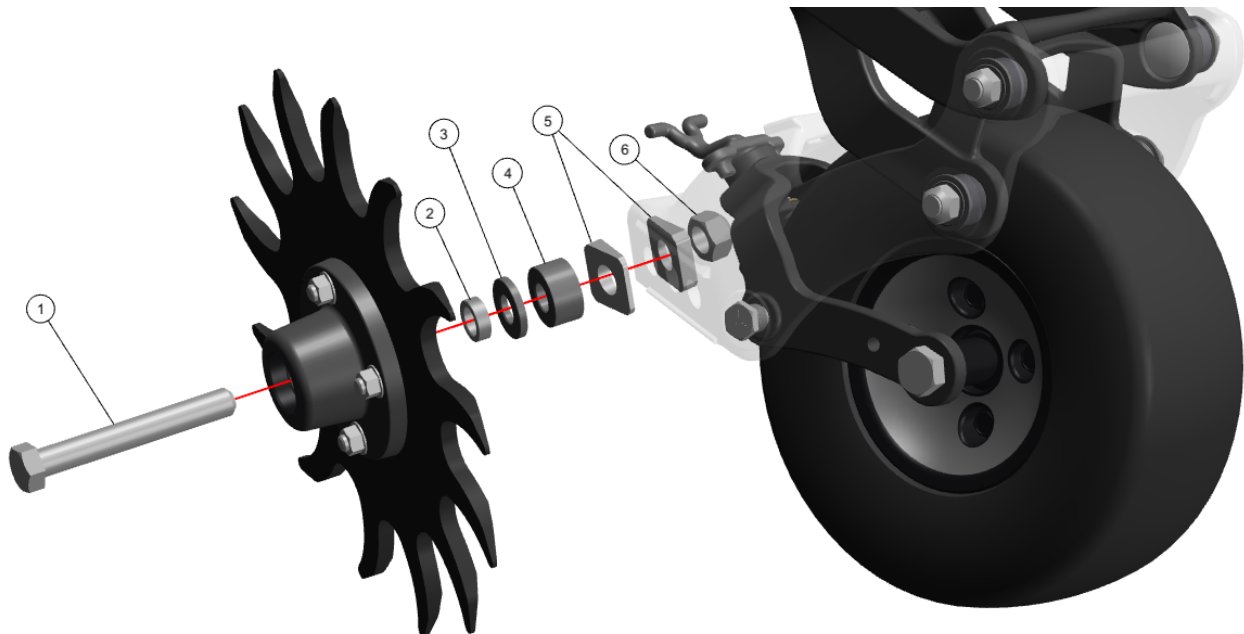
Align the leading wheel with the front hole of the Reveal frame. Wheels are side specific. Refer to the label stamped into the wheel to ensure they are installed on the correct side. The top tines/blades on the wheel should sweep back toward the row unit when installed correctly.

Step 2:

Insert the M16 x 120 gold zinc bolt (1) through the wheel hub assembly. Next place the small spacer (2), spacer washer (3) large spacer (4) and spindle wedge (5) onto the bolt. Apply medium or high strength thread locker to bolt, place one spindle wedge (5) inside the Reveal frame, and secure with a M16 top lock nut (6) placed inside the Reveal frame. Tighten the lock nut completely unless using the optional scraper.

Note: The spindle wedge on the outside of the frame should be installed with the angled face against the frame and the thicker end toward the tractor. The spindle wedge on the inside of the frame should be installed with the angled face against the frame and the thicker end toward the row unit. Refer to the image below.

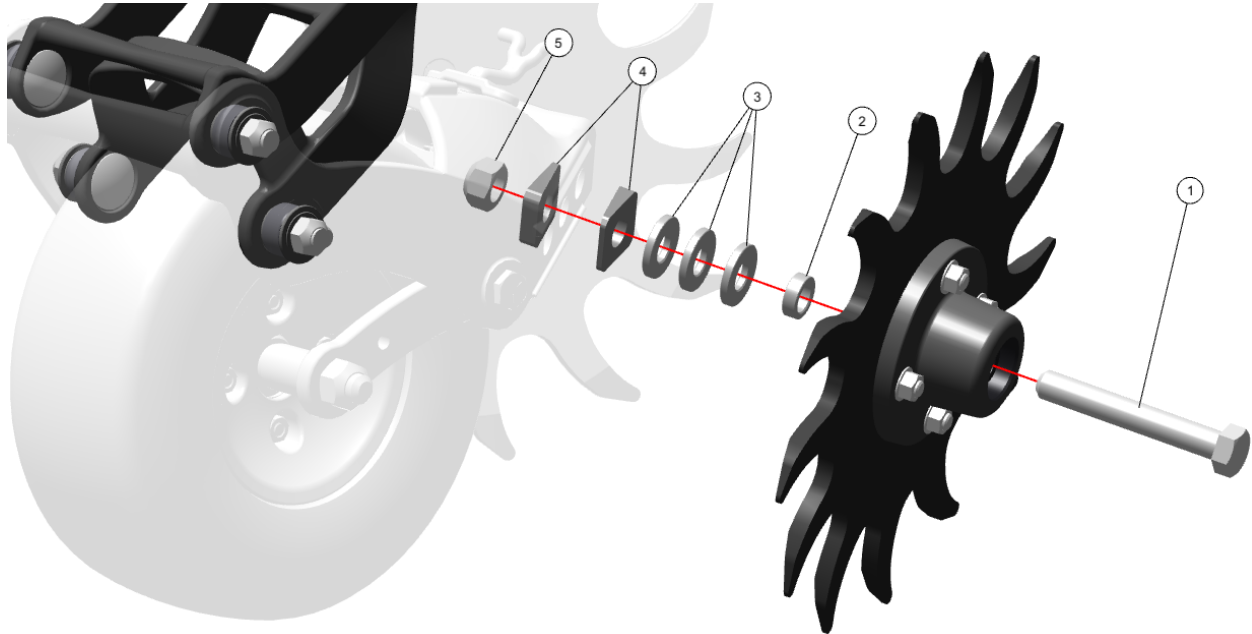
Note: An optional scraper may be ordered separately and installed in place of the spacer washer (3). Alignment of this scraper is detailed later in this section.



Step 3:

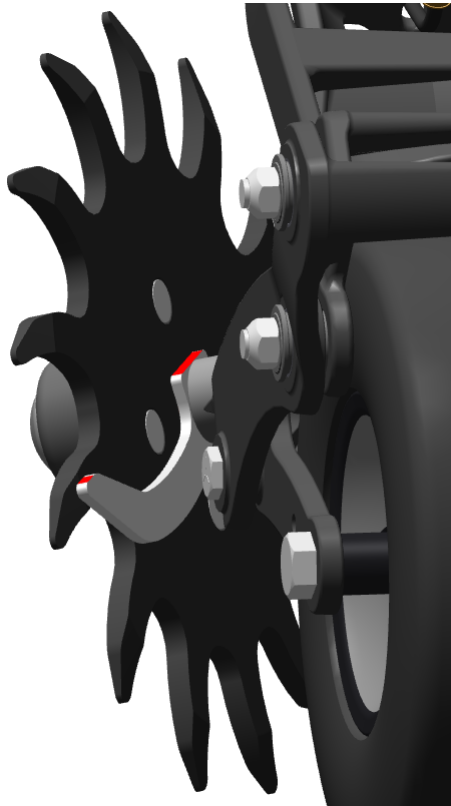
Insert the M16 x 110 bolt (1) through the wheel hub assembly. Next place the small spacer (2), spacer washer (3) large spacer (4) and spindle wedge (5) onto the bolt. Apply medium or high strength thread locker to bolt, place one spindle wedge (5) inside the Reveal frame, and secure with a M16 top lock nut (6) placed inside the Reveal frame. Tighten the lock nut completely unless using the optional scraper.

Note: The spindle wedge on the outside of the frame should be installed with the angled face against the frame and the thicker end toward the tractor. The spindle wedge on the inside of the frame should be installed with the angled face against the frame and the thicker end toward the row unit. Refer to the image below.



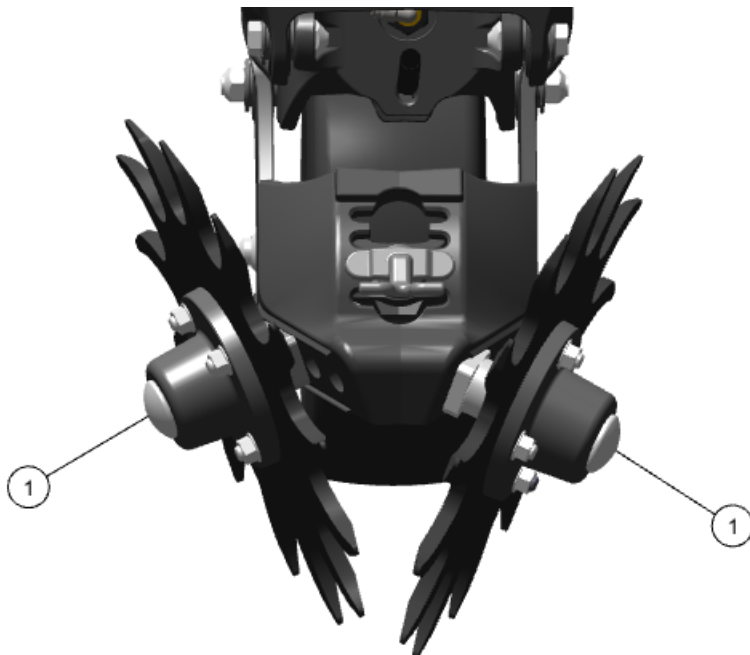
The following step is intended for use when installing the optional scrapers to ensure proper alignment. These scrapers are not recommended in most situations.

- a: Lay a level across the two flat spots on the wheel scraper. Adjust the scraper so it is parallel to the ground. Fully tighten the flange nut. Repeat for the scraper on the opposite side.



Step 4:

Install the dust cap (1) over the spindle bolt on each wheel hub using a soft mallet or a dead-blow hammer.

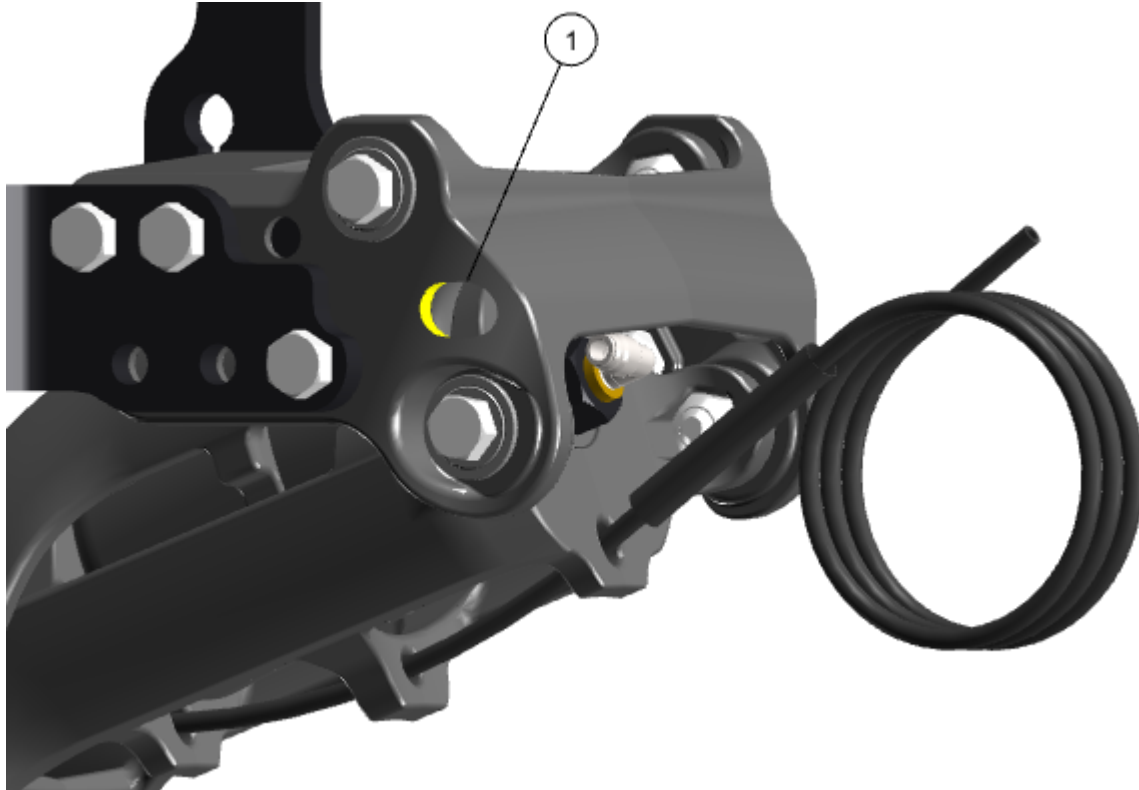


Air Line Installation

Reveal comes pre-installed with four feet of black air line and a piece of heat shrink. The black air line is attached the down pressure (lower) bag, while silver air line should be used for the lift pressure (upper) bag . Silver line is not included with the Reveal kit.

Step 1:

Route the free end of the black air line through the opening (1) in the side of the Reveal head piece as shown. Either the left-hand or right-hand opening can be used. Rotate the elbow fitting on the upper airbag accordingly.



Step 2:

Route the silver air line along the black air line, through the heat shrink, and insert it into the push-to-connect fitting in the upper air bag.

Step 3:

Position the heat shrink so it covers the air lines where they go through the opening and use a heat gun to shrink it tight to the air lines.

Step 4:

Route the air lines along the side of the Reveal unit and up around the back of the planter bar. Connect the black line to the system wide down pressure line and the silver line to the system wide lift pressure line. After all rows are installed and the air system is fully connected, cycle the Reveal units from full down to full lift pressure to check for any leaks or interference with the planter.

For additional resources, refer to the Reveal Operation Guides, located in the Reveal section of the Product Resources web page accessible at cloud.precisionplanting.com