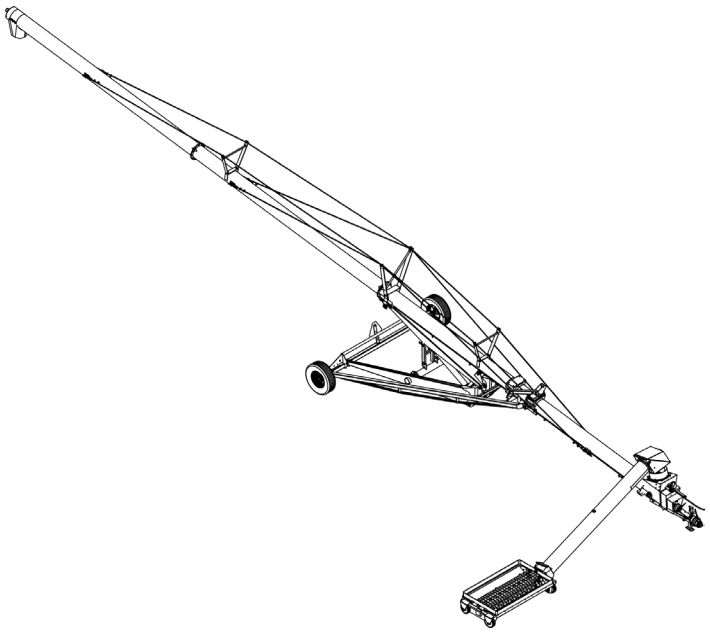
Farm King

ASSEMBLY

BACKSAVER AUGER

Models 1370, 1385, 1395, 13114



062022 FK429

ASSEMBLY

GENERAL ASSEMBLY INFORMATION

Component Unloading And Identification

Unload the crate(s) and components in flat level area of adequate size to assemble the auger.

DANGER

ELECTROCUTION HAZARD

To prevent serious injury or death from electrocution:

- **Be aware of overhead power lines.**
- **Keep away from power lines when unloading and assembling the auger.**
- **Electrocution can occur without direct contact.**

WARNING

DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling components.

IMPORTANT

Unload crate(s) and auger components carefully, not to cause damage to any of the components.

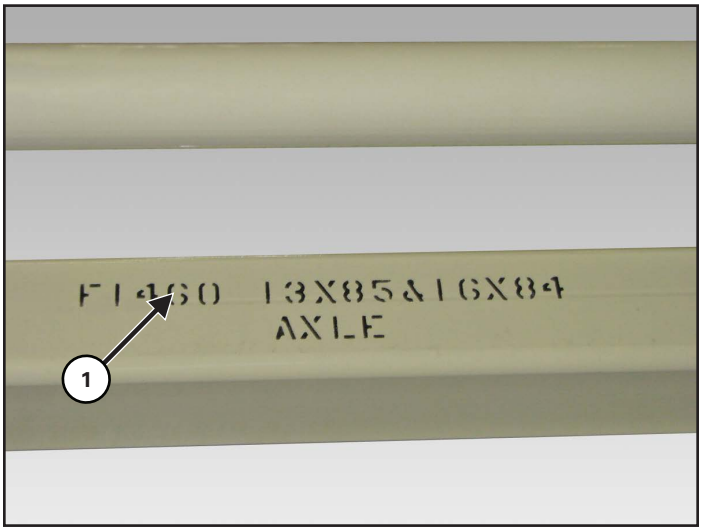
Using the packing list, locate and place all components and hardware in one area. Count the individual components and verify that you have received the correct number of components to fully assemble the auger.

If any components are damaged, missing or replacement parts are required, contact your Farm King Dealer.

Assemble the Auger in the following order:

1. Undercarriage
2. Tube sections and driveline
3. Intake auger
4. Hydraulics

Figure 1



Larger components are marked (Item 1) for identification **[Figure 1]**.

UNDERCARRIAGE

Assemble the tube sections on a flat level surface.

NOTE: The following images throughout the assembly section of this manual may not show your exact auger components as they appear but the procedure is correct for all 13 in. Backsaver Augers.

WARNING

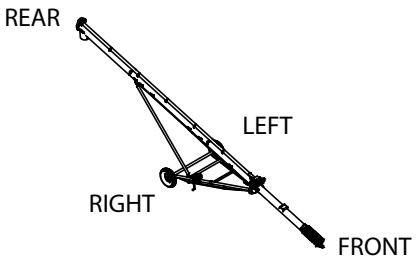
DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

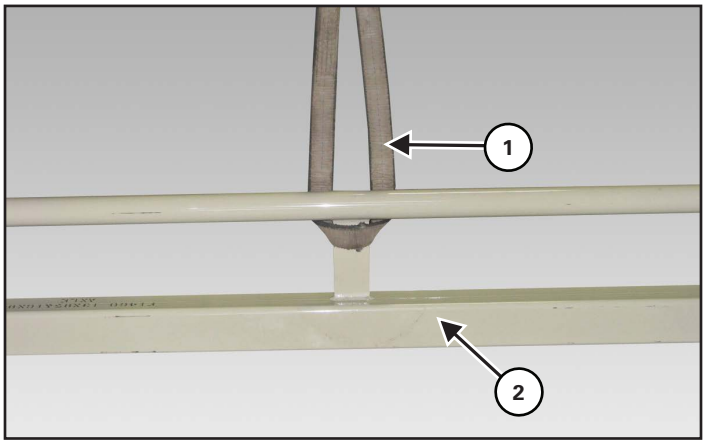
Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling components.

IMPORTANT



The directions left, right, front and rear, as mentioned throughout this manual, are as viewed as the operator sitting in the tractor's seat with the equipment hitched to the tractor.

Figure 2



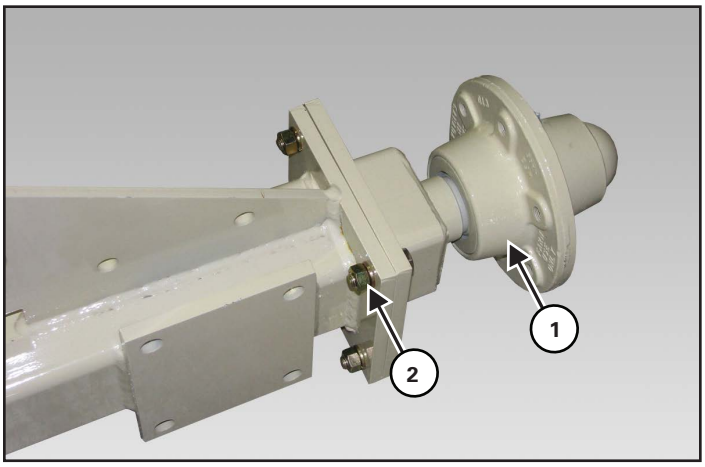
Install a strap (Item 1) around the center of the axle (Item 2) **[Figure 2]**.

Connect the strap to an approved lifting device.

Raise and move the axle to the assembly area.

Lower the axle to the ground and remove strap.

Figure 3



Align the hub (Item 1) with the axle **[Figure 3]**.

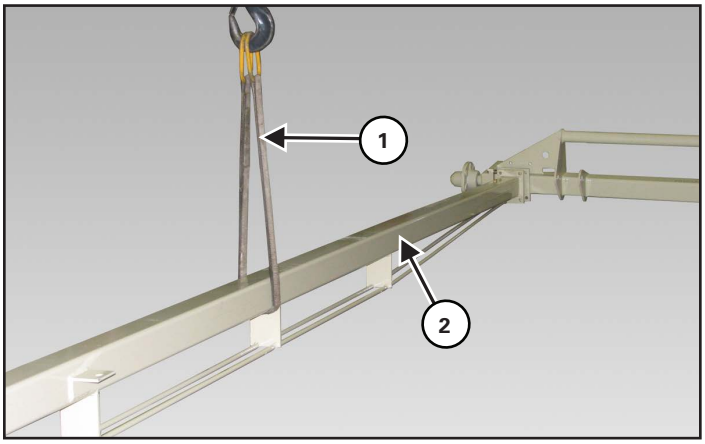
Stub Axle Mounting Bolt Sizes:

- 1/2" x 1-3/4" - Models 1370, 1385, 1395
- 3/4" x 2-1/2" - Models 13114

Install and tighten the four bolts (Item 2) and lock nuts **[Figure 3]**.

Repeat procedure and install the opposite hub onto the axle **[Figure 3]**.

Figure 4

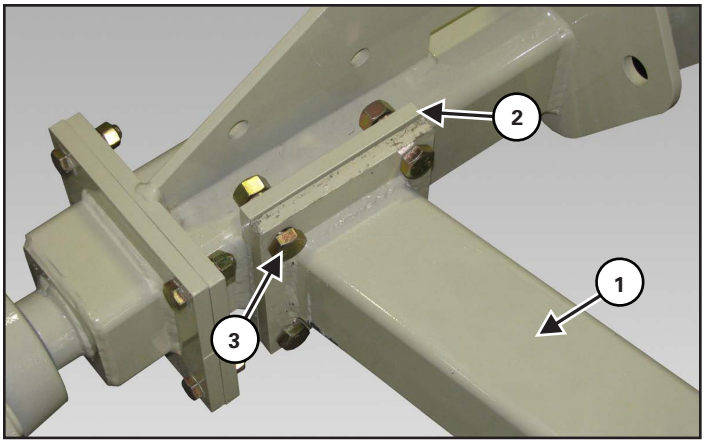


Install a strap (Item 1) around the center of the right undercarriage arm (Item 2) **[Figure 4]**.

Connect the strap to an approved lifting device.

Raise and move the right undercarriage arm towards the axle.

Figure 5



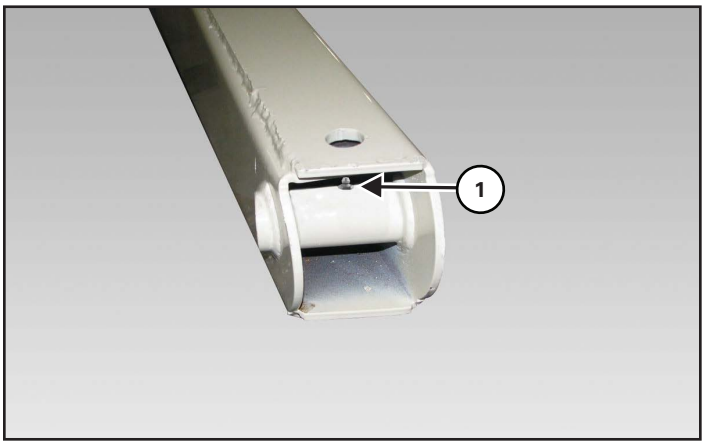
Align the right undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 5]**.

Undercarriage Arm Mounting Bolt Sizes

- 5/8" x 2" - Models 1370, 1385, 1395
- 3/4" x 2-1/2" - Models 13114

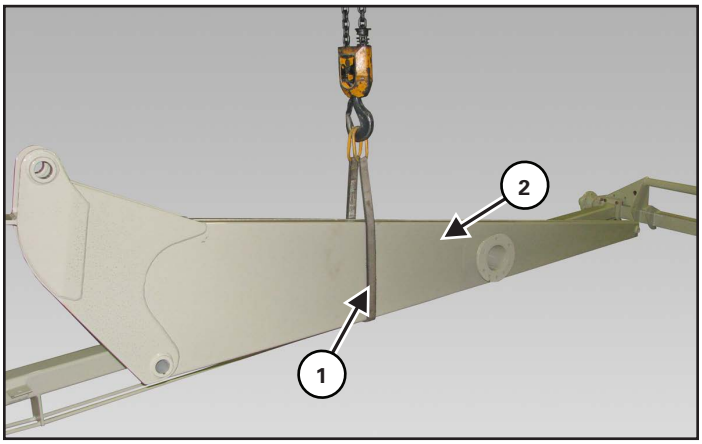
Install four bolts (Item 3) and lock nuts. Do not tighten bolts and nuts at this time **[Figure 5]**.

Figure 6



Install the grease zerk (Item 1) into the right and left lower lift arms **[Figure 6]**.

Figure 7

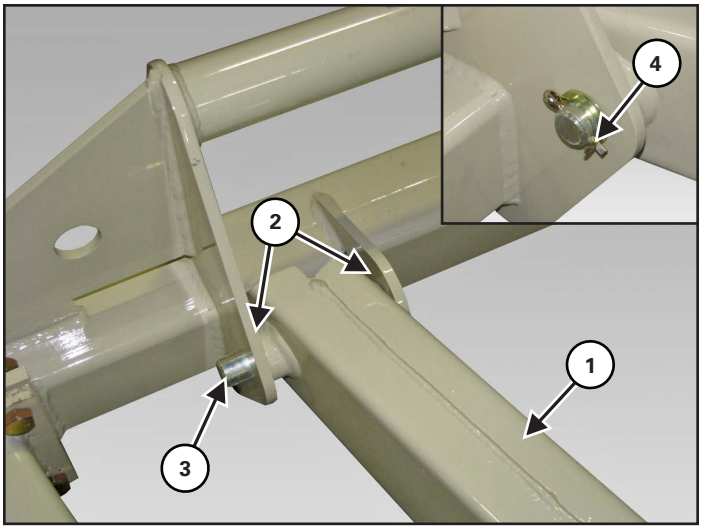


Install a strap (Item 1) around the RH lower lift arm (Item 2). Connect the strap to an approved lifting device **[Figure 7]**.

NOTE: Move strap forward or backward until the component hangs level when raised off the ground.

Raise and move the RH lower lift arm to the assembly area.

Figure 8



Locate the two lift arm axle pins.

Lift Arm Axle Pin Sizes:

- 1″ x 5.63″ - 1370 Models
- 1″ x 6.38″ - 1385 & 1395 Models
- 1.25″ x 7.259″ - 13114 Models

Align the RH lower lift arm (Item 1) with the two mounts (Item 2) on the axle **[Figure 8]**.

Install one axle pin (Item 3) through the axle mounts and RH lower lift arm **[Figure 8]**.

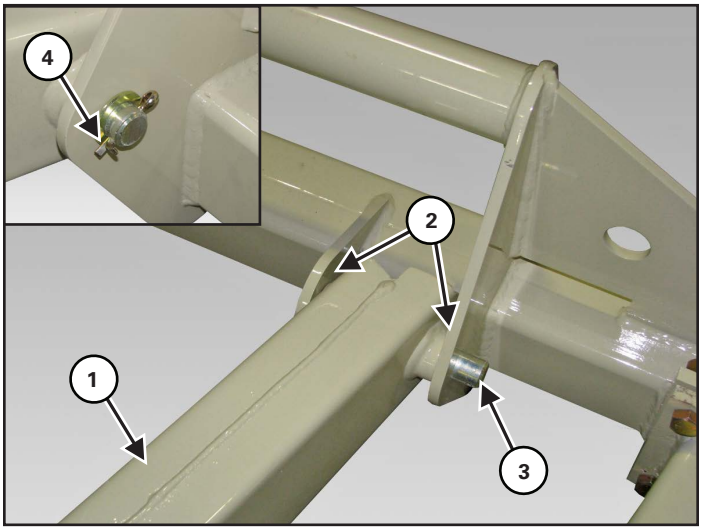
Install one 1-1/4″ narrow rim washer and 1/4″ x 2″ cotter pin (Item 4) onto the axle pin, securing the RH lower lift arm to the axle **[Figure 8]**.

Install a strap around the LH lower lift arm. Connect the strap to an approved lifting device.

NOTE: Move strap forward or backward until the component hangs level when raised off the ground.

Raise and move the LH lower lift arm to the assembly area.

Figure 9



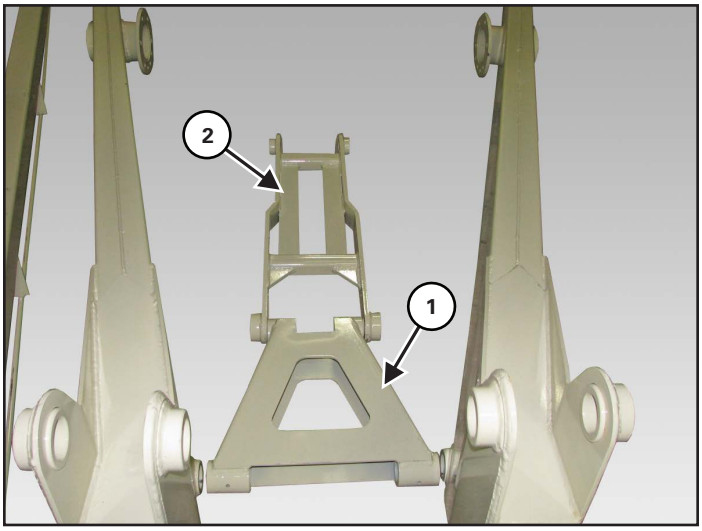
Align the LH lower lift arm (Item 1) with the two mounts (Item 2) on the axle **[Figure 9]**.

Install one axle pin (Item 3) through the axle mounts and LH lower lift arm **[Figure 9]**.

Install one 1-1/4″ narrow rim washer and 1/4″ x 2″ cotter pin (Item 4) onto the axle pin, securing the LH lower lift arm to the axle **[Figure 9]**.

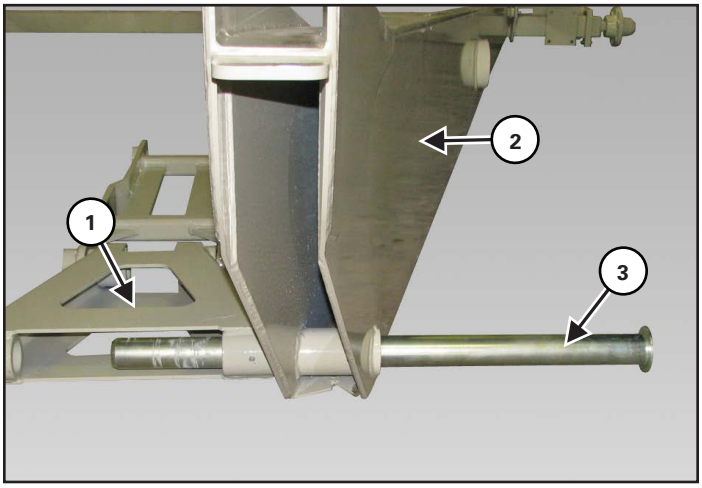
Lift Arms and Hydraulic Cylinders - 1370, 1385, 1395 Models

Figure 10



Place the connecting link (Item 1) and pivot yoke (Item 2) on the ground, between the LH & RH lower lift arms **[Figure 10]**.

Figure 11



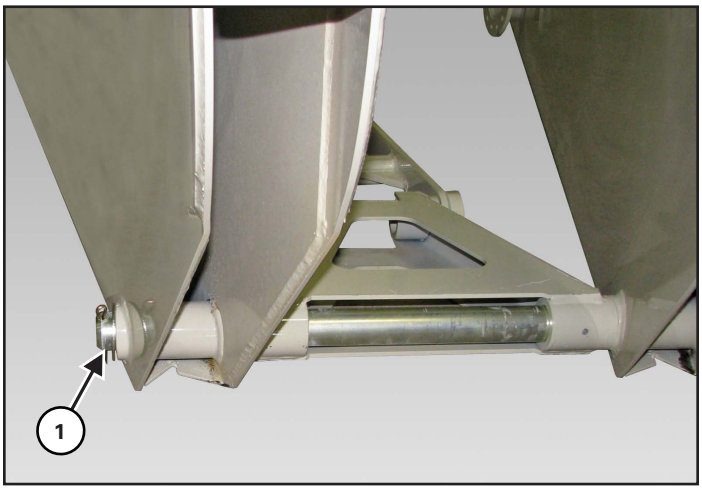
Align the connecting link (Item 1) with LH lower lift arm (Item 2) **[Figure 11]**.

Connecting Link Pin Sizes:

- 2″ x 27 - 15/16″ - 1370 Models
- 2″ x 34 - 3/16″ - 1385 & 1395 Models

Install the connecting link pin (Item 3) through the LH lower lift arm and connecting link **[Figure 11]**.

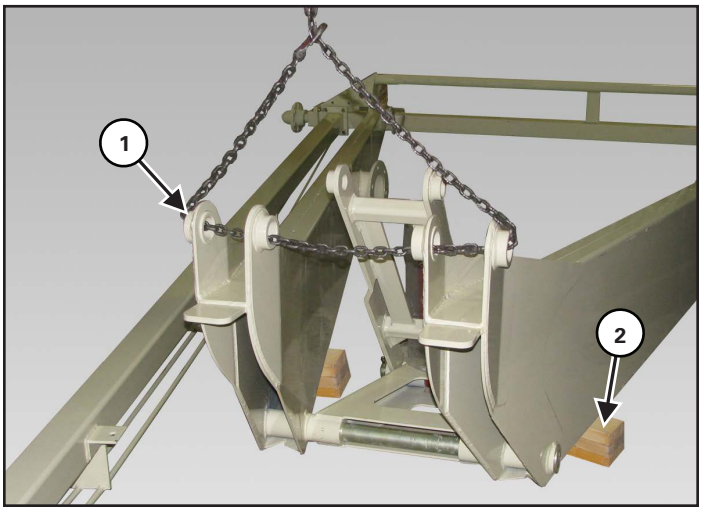
Figure 12



Continue installing the connecting link pin through the connecting link and RH lower lift arm.

Install one 2″ x 10 ga. narrow rim washer and one 15/16″ x 3″ cotter pin (Item 1) onto the connecting link pin and secure **[Figure 12]**.

Figure 13



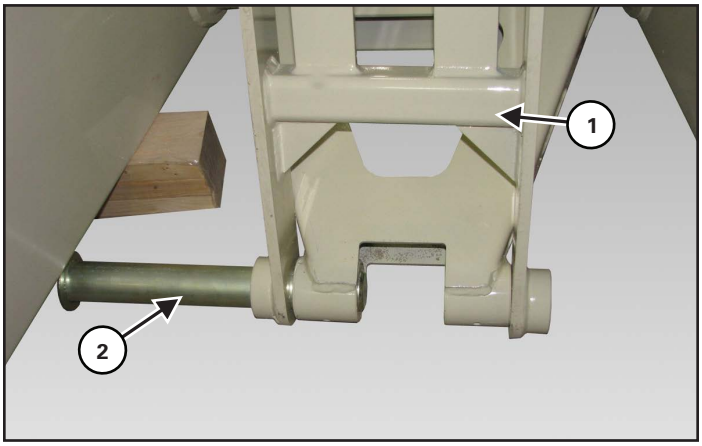
Install a chain (Item 1) through the upper LH & RH lower lift arm mounts. Connect the chain to an approved lifting device **[Figure 13]**.

Lift the LH & RH lower lift arms. Install blocks (Item 2) under the LH & RH lower lift arms **[Figure 13]**.

NOTE: Verify that there is adequate space under the LH & RH lower lift arms for installing the bottom cylinder pin.

Lower the LH & RH lower lift arms onto the blocks.

Figure 14



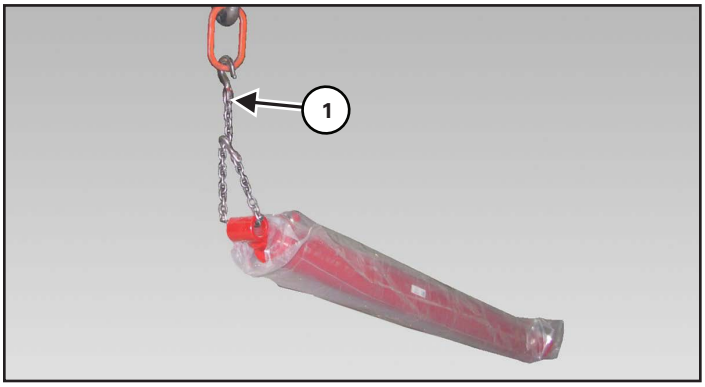
Rotate the pivot yoke (Item 1) up **[Figure 14]**.

Bottom Cylinder Pin Sizes:

- 1-1/2″ x 12-3/8″ - 1370 Models
- 2″ x 14-13/16″ - 1385 & 1395 Models

Align the pivot yoke and connecting link. Install the bottom cylinder pin (Item 2) through the connecting link and first side of the pivot yoke **[Figure 14]**.

Figure 15

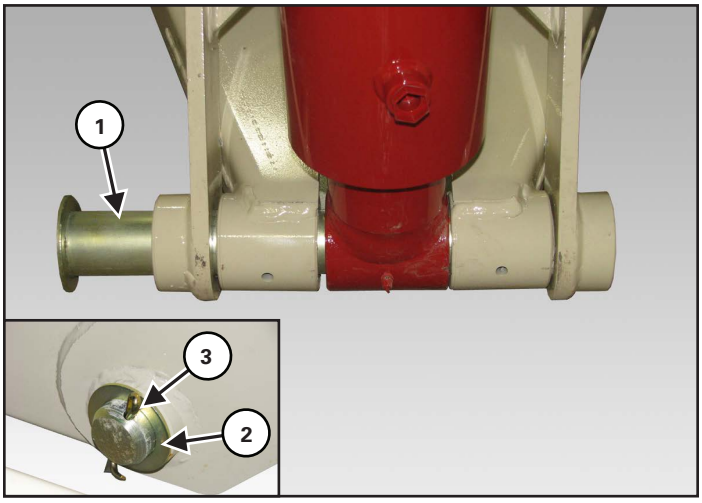


NOTE: It is recommended to leave the plastic on the hydraulic cylinders during assembly. This will help to prevent damage to the paint and minimize touch-up painting.

Install a chain or strap (Item 1) through the base end of the hydraulic cylinder. Connect the chain or strap to an approved lifting device **[Figure 15]**.

Raise and move the hydraulic cylinder to the assembly area.

Figure 16



Lower the hydraulic cylinder and align the rod end of the cylinder with the pivot yoke (with grease zerks facing as shown).

Continue installing the bottom cylinder pin (Item 1) through the connecting link and opposite side of the pivot yoke **[Figure 16]**.

Narrow Rim Washer Sizes:

- 1-1/2″ x 10 Ga. - 1370 Models
- 2″ x 10 Ga. - 1385 & 1395 Models

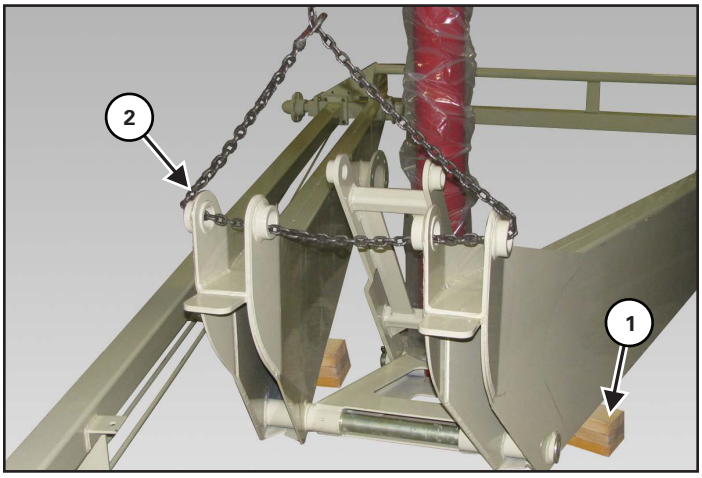
Cotter Pin Sizes:

- 1/4″ x 2″ - 1370 Models
- 5/16″ x 3″ - 1385 & 1395 Models

Install one 2″ narrow rim washer (Item 2) and one cotter pin (Item 3) onto the bottom cylinder pin **[Figure 16]**.

NOTE: Do not remove chain from base end of the cylinder.

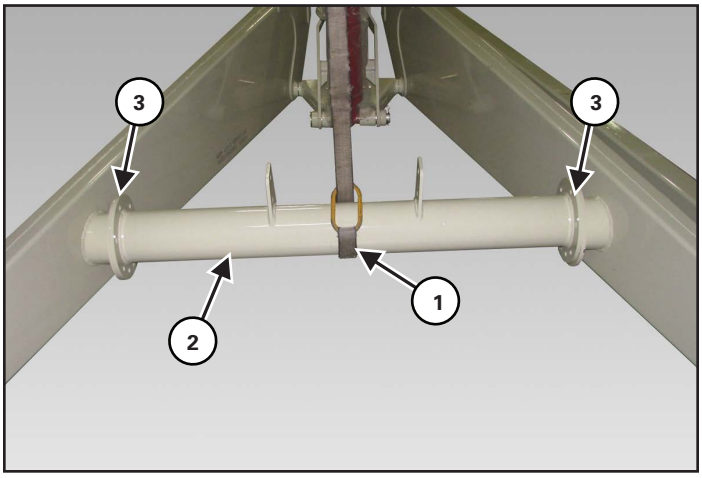
Figure 17



Lift the LH & RH lower lift arms. Remove blocks (Item 1). Lower LH & RH lower lift arms to the ground **[Figure 17]**.

Remove chain (Item 2) **[Figure 17]**.

Figure 18

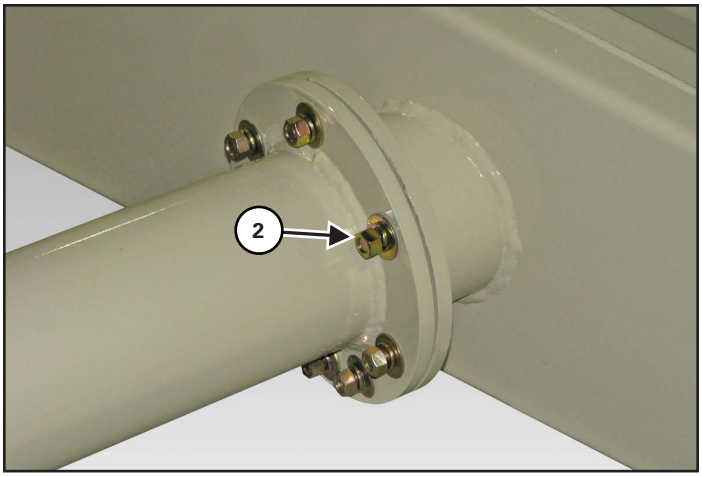


Install a strap (Item 1) around the lift arm torque tube (Item 2). Connect the strap to a second approved lifting device **[Figure 18]**.

Raise and move the lift arm torque tube to the assembly area.

Align the lift arm torque tube with the LH & RH lower lift arm mounting plates. Install one 1/2" flat washer on two 1/2" x 2" bolts (Item 3), install the two bolts through the top holes (both ends). Install one 1/2" flat washer and 1/2" lock nut on the bolts **[Figure 18]**.

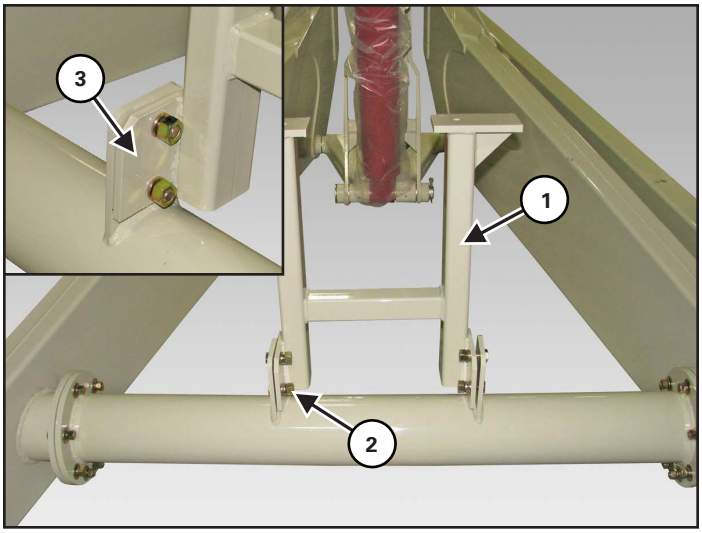
Figure 19



Install one 1/2" flat washer on the remaining 1/2" x 2" bolts (Item 1), install bolts through the lift arm torque tube and LH & RH lower lift arm mounting plates. Install 1/2" flat washers and 1/2" lock nuts (both sides). Do not tighten bolts and lock nuts at this time **[Figure 19]**.

Remove the strap.

Figure 20

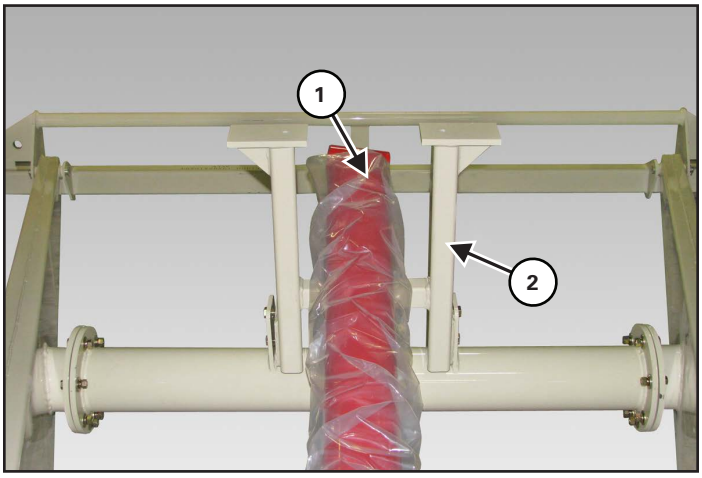


Align the cradle rest (Item 1) with the two mounting plates on the lift arm torque tube **[Figure 20]**.

Install the four 5/8" x 3-1/2" bolts (Item 2) and 5/8" lock nuts **[Figure 20]**.

NOTE: Install the cradle rest with the tabs (Item 3) towards the axle **[Figure 20]**.

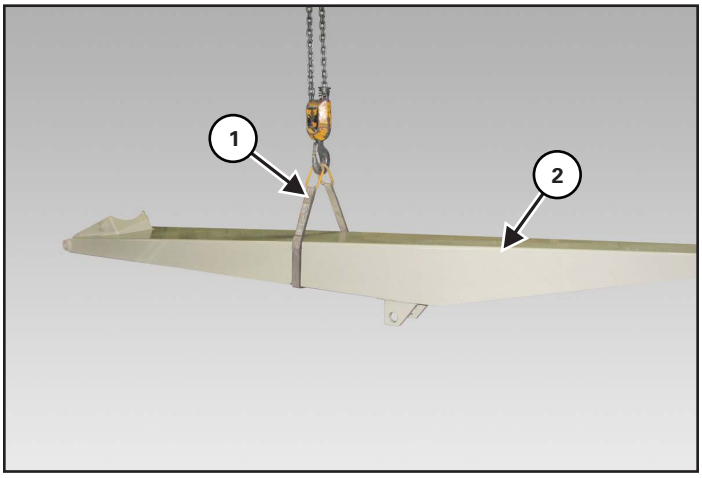
Figure 21



Lower the hydraulic cylinder (Item 1) onto the cradle rest (Item 2) **[Figure 21]**.

Rotate the cylinder 180° or until the hydraulic fitting ports are facing down.

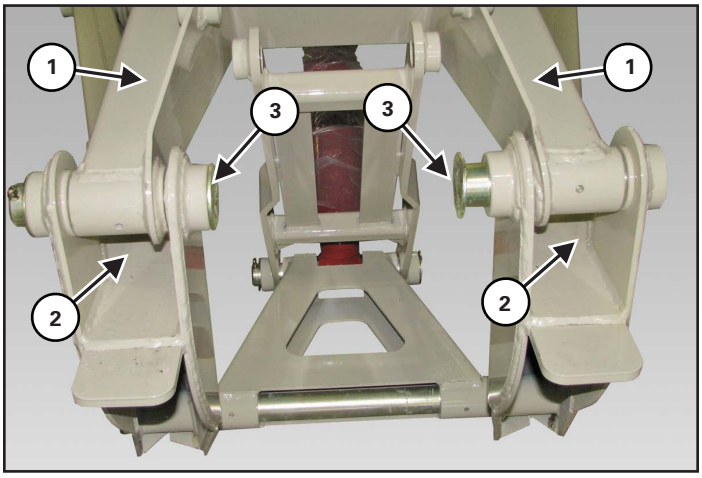
Figure 22



Install a strap (Item 1) around the upper lift arm (Item 2). Connect the strap to an approved lifting device **[Figure 22]**.

Raise and move the upper lift arm to the assembly area.

Figure 23



Align and lower the upper lift arm (Item 1) until the upper lift arm is inside the two mounts (Item 2) on the lower lift arms **[Figure 23]**.

Lower Lift Arm Pin Sizes:

- 1-1/2″ x 7-1/8″ - 1370 Models
- 2″ x 9-1/16″ - 1385 & 1395 Models

Narrow Rim Washer Sizes:

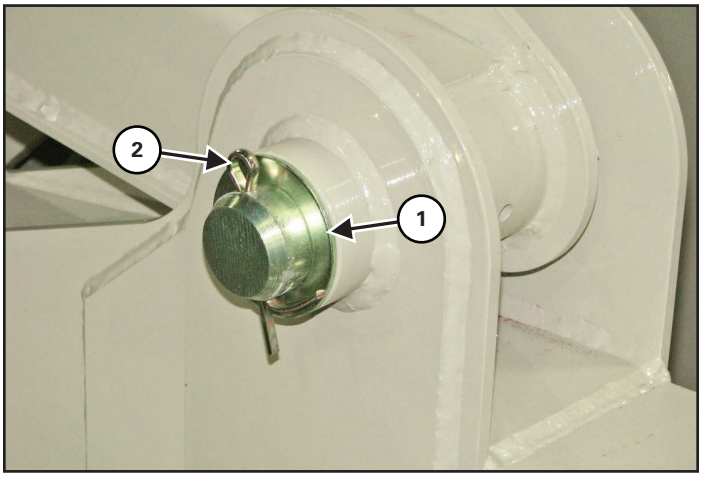
- 1-1/2″ x 10 Ga. - 1370 Models
- 2″ x 10 Ga. - 1385 & 1395 Models

Cotter Pin Sizes:

- 1/4″ x 2″ - 1370 Models
- 5/16″ x 3″ - 1385 & 1395 Models

Install the two lift arm pins (Item 3) (from the inside) **[Figure 23]**.

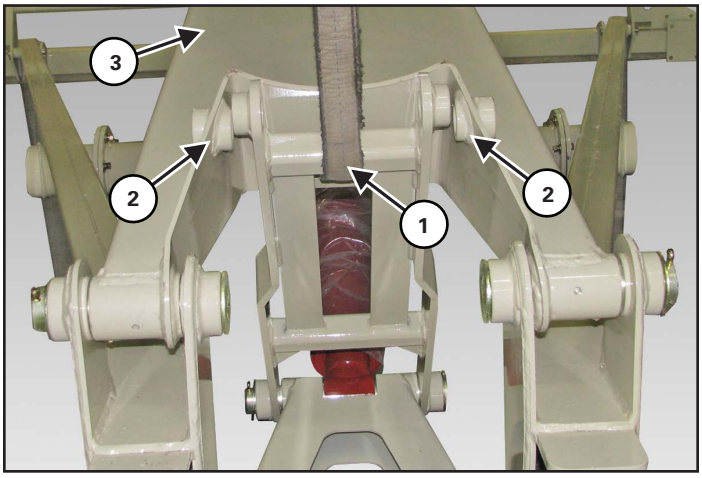
Figure 24



Install one 2″ narrow rim washer (Item 1) and cotter pin (Item 2) on the lift arm pin (both pins) **[Figure 24]**.

Lower the upper lift arm onto the cradle rest.

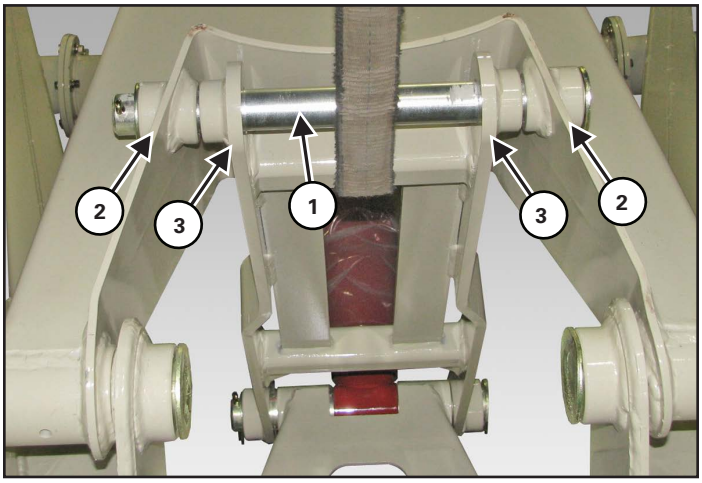
Figure 25



Install a strap (Item 1) on the upper cross member of the connecting link **[Figure 25]**.

Lift and align the connecting link with the mounts (Item 2) on the upper lift arm (Item 3) **[Figure 25]**.

Figure 26



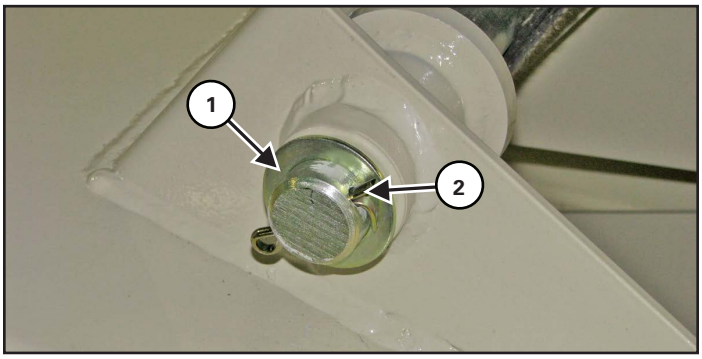
Install the top yoke pin (Item 1) through the upper lift arm mounting holes (Item 2) and pivot yoke mounting holes (Item 3) **[Figure 26]**.

Top Yoke Pin Sizes:

- 1-1/2″ x 13-11/16″ - 1370 Models
- 1-1/2″ x 16-11/16″ - 1385 & 1395 Models

Remove the strap from the pivot yoke.

Figure 27



Install one narrow rim washer (Item 1) and cotter pin (Item 2) onto the top yoke pin **[Figure 27]**.

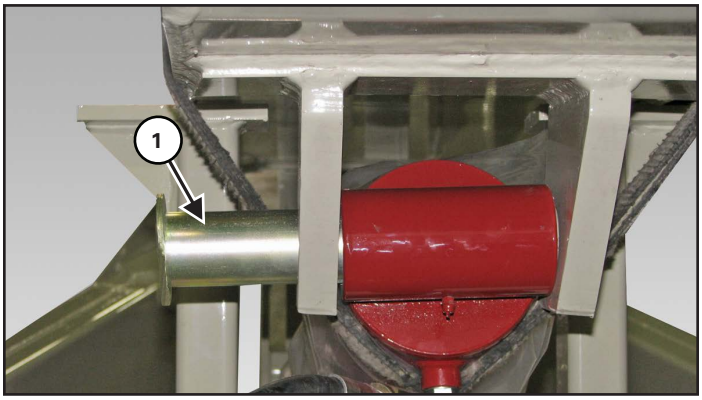
Narrow Rim Washer Sizes:

- 1-1/2″ x 10 Ga. - 1370 Models
- 1-1/2″ x 10 Ga. - 1385 & 1395 Models

Cotter Pin Sizes:

- 1/4″ x 2″ - 1370 Models
- 1/4″ x 2″ - 1385 & 1395 Models

Figure 28



Align the base end of the hydraulic cylinder with the mounting holes of the upper lift arm.

Top Cylinder Pin Sizes:

- 1-1/2″ x 8-11/16″ - 1370 Models
- 2″ x 9″ - 1385 & 1395 Models

Install the cylinder pin (Item 1) through the upper lift arm and cylinder **[Figure 28]**.

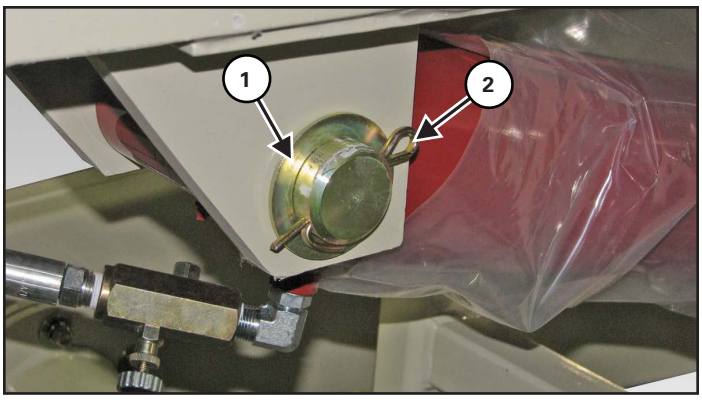
Narrow Rim Washer Sizes:

- 1-1/2″ x 10 Ga. - 1370 Models
- 2″ x 10 Ga. - 1385 & 1395 Models

Cotter Pin Sizes:

- 1/4″ x 2″ - 1370 Models
- 5/16″ x 3″ 1385 & 1395 Models

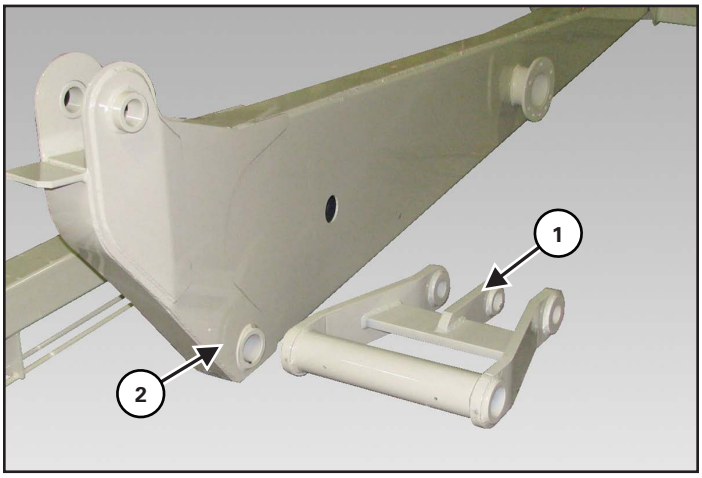
Figure 29



Install one narrow rim washer (Item 1) and cotter pin (Item 2) onto the cylinder pin, securing the cylinder to the upper lift arm **[Figure 29]**.

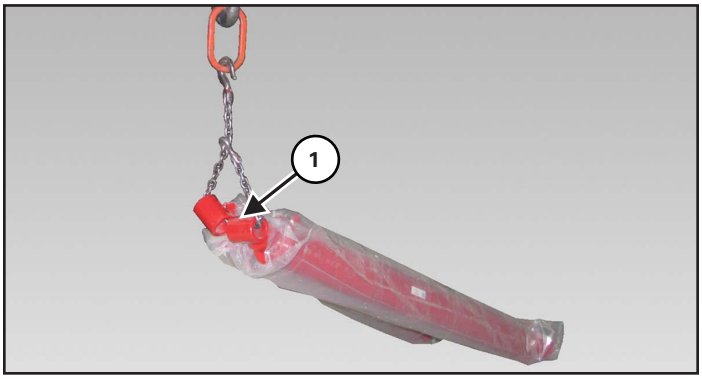
Lift Arms and Hydraulic Cylinders - 13114 Models

Figure 30



Place the connecting link (Item 1) on the ground, at the front of the RH lower lift arm (Item 2) **[Figure 30]**.

Figure 31

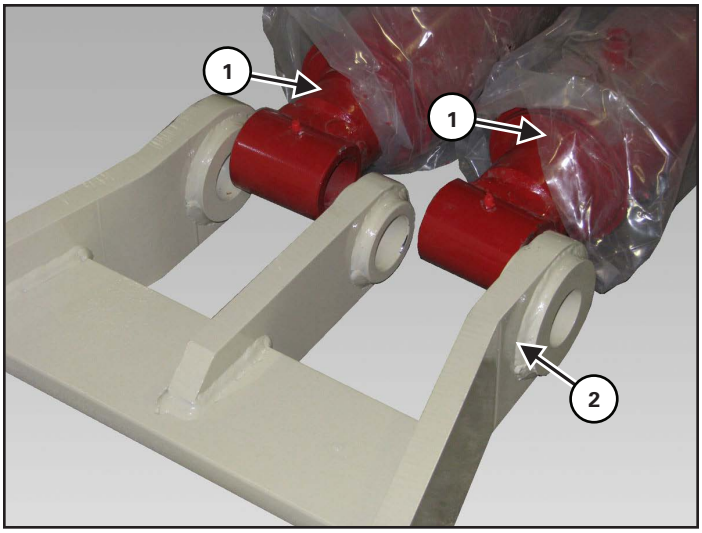


NOTE: It is recommended to leave the plastic on the hydraulic cylinders during assembly. This will help to prevent damage to the paint and minimize touch-up painting.

Install a chain or strap (Item 1) through the rod end of the two hydraulic cylinders. Connect the strap to an approved lifting device **[Figure 31]**.

Raise and move the two hydraulic cylinders to the assembly area.

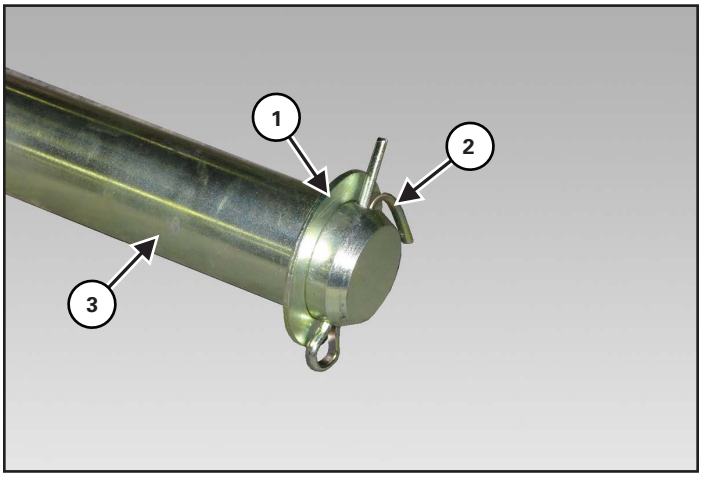
Figure 32



Raise the hydraulic cylinders (Item 1) and move the two cylinders on the back side of the link (Item 2). Lower the cylinders to the ground and remove the chain or strap **[Figure 32]**.

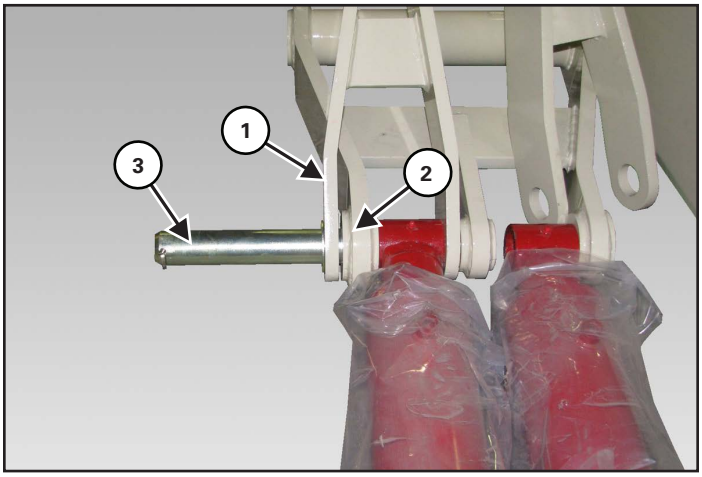
Align the two rod ends of the cylinders with the link (with grease zerks facing up).

Figure 33



Install one 2″ narrow rim washer (Item 1) and one 5/16″ x 3″ cotter pin (Item 2) onto the 2″ x 18-7/8″ lift pin rod (Item 3) **[Figure 33]**.

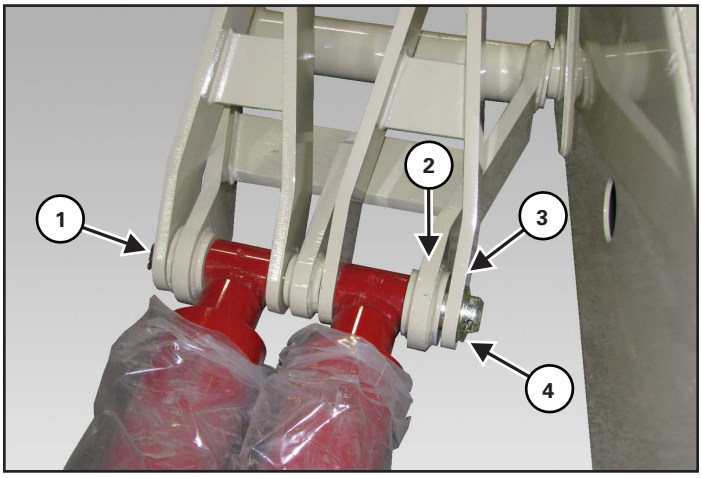
Figure 34



Place the left yoke arm (Item 1) on the outside of the link (Item 2). Position cylinder inside the link and opposite side of the yoke arm **[Figure 34]**.

Install the lift pin rod (Item 3) through the left yoke arm, link and cylinder (stop when the pin enters the center mount of the link) **[Figure 34]**.

Figure 35

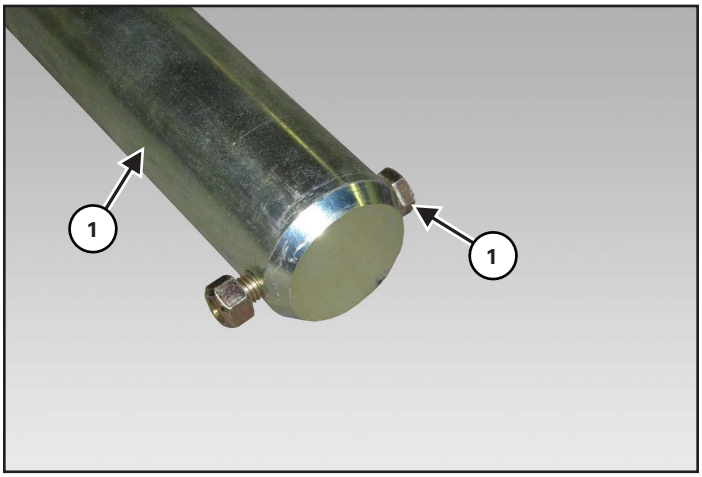


Place the right yoke arm (Item 1) on the outside of the link (Item 2). Position cylinder inside the link and opposite side of the yoke arm **[Figure 35]**.

Install the lift pin rod (Item 3) through the right yoke arm, cylinder and link **[Figure 35]**.

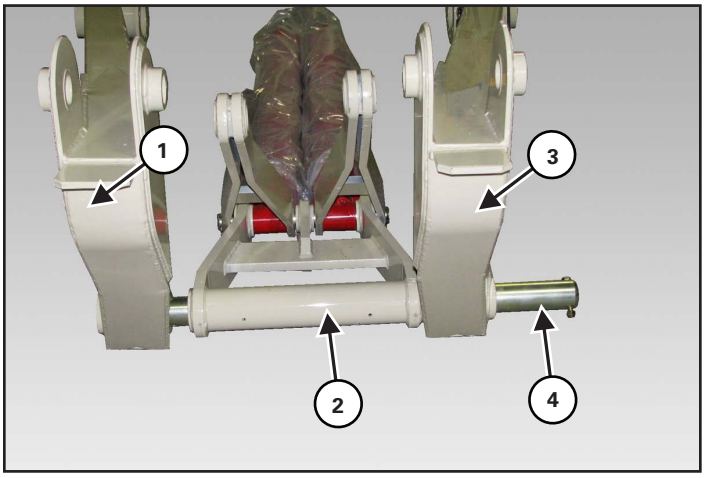
Install one 2" narrow rim washer (Item 4) and one 5/16" x 3" cotter pin to secure the yoke arms, cylinders and link together **[Figure 35]**.

Figure 36



Install one 1/2" x 3-1/2" bolt (Item 1) through one end of the 2 3/4" x 39" connecting yoke pin (Item 2), then install one 1/2" lock nut onto the bolt **[Figure 36]**.

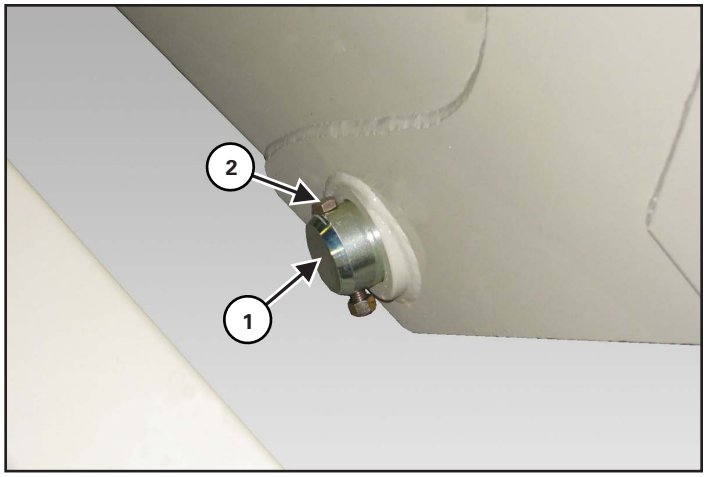
Figure 37



Align the RH lower lift arm (Item 1), link (Item 2) and LH lower lift arm (Item 3) **[Figure 37]**.

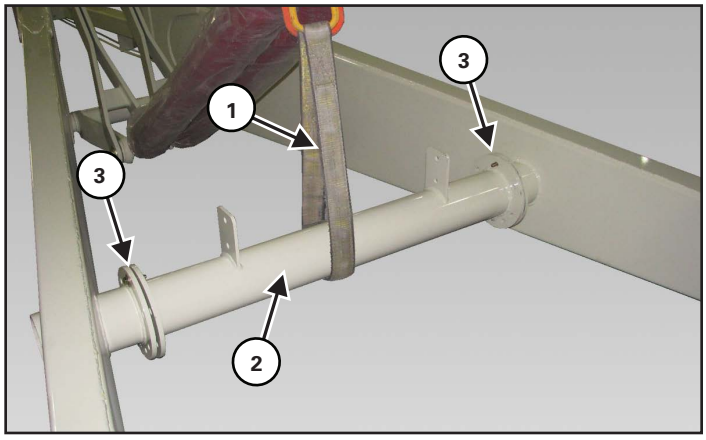
Install the 2-3/4" x 39" connecting yoke pin (Item 4) through the LH lower lift arm, link and RH lower lift arm **[Figure 37]**.

Figure 38



Install one 1/2" x 3-1/2" bolt (Item 1) through one end of the 2-3/4" x 39" connecting yoke pin (Item 2), then install one 1/2" lock nut onto the bolt **[Figure 38]**.

Figure 39



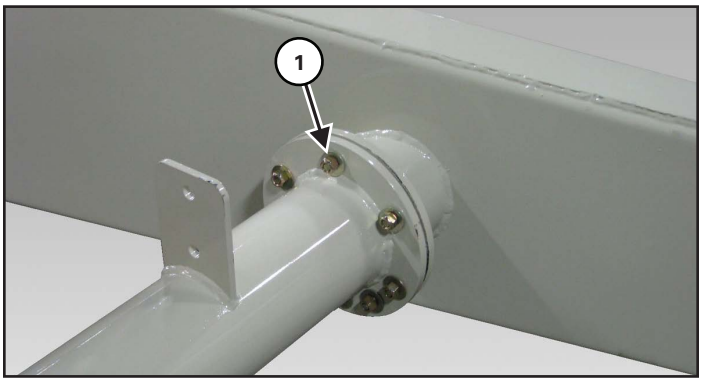
NOTE: Install a chain or strap through the base ends of the hydraulic cylinders. Connect the chain or strap to an approved lifting device. Raise the hydraulic cylinders above the RH & LH lower lift arms before installing the lift arm torque tube.

Install a strap (Item 1) around the lift arm torque tube (Item 2). Connect the strap to a second approved lifting device **[Figure 39]**.

Raise and move the lift arm torque tube to the assembly area.

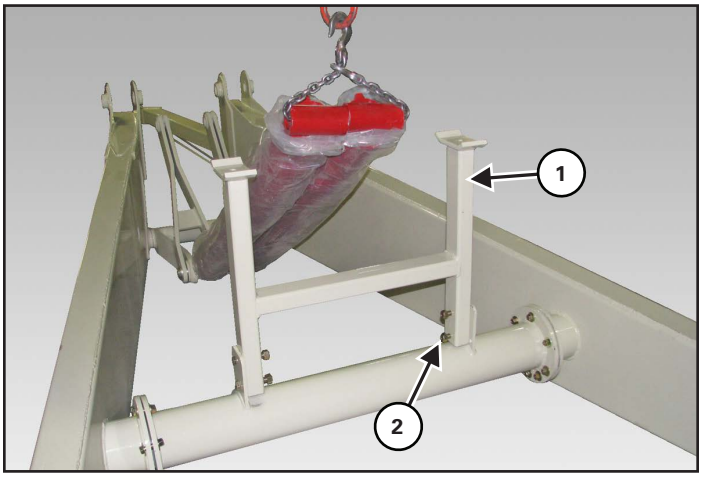
Align the lift arm torque tube with the LH & RH lower lift arm mounting plates. Install one 1/2" x 2" bolt (Item 3) through the top holes (both ends). Install one 1/2" flat washer and 1/2" lock nut on the bolts **[Figure 39]**.

Figure 40



Install the remaining 1/2" x 2" bolts (Item 1), 1/2" flat washers and 1/2" lock nuts (both sides). Do not tighten bolts and lock nuts at this time. Remove the strap **[Figure 40]**.

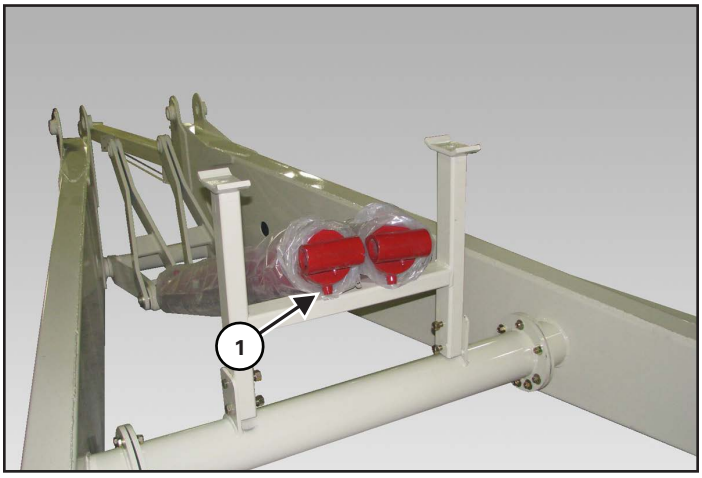
Figure 41



Align the cradle rest (Item 1) with the two mounting plates on the lift arm torque tube **[Figure 41]**.

Install the four 5/8" x 3-1/2" bolts (Item 2) and 5/8" lock nuts **[Figure 41]**.

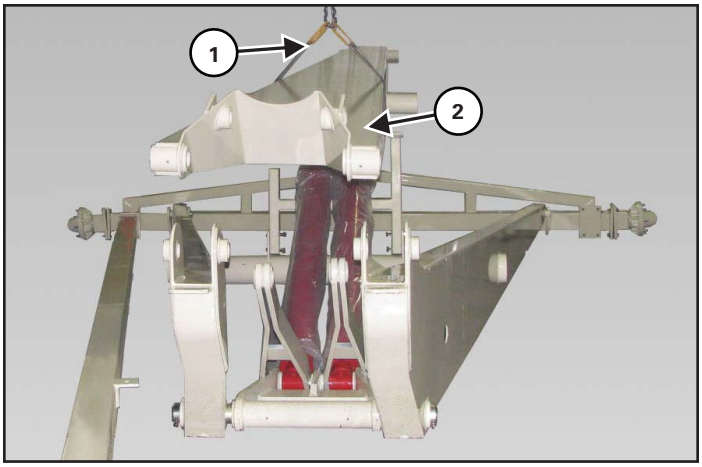
Figure 42



Lower the two hydraulic cylinders onto the cradle rest.

Rotate each cylinder 180° or until the hydraulic fitting ports (Item 1) are facing down **[Figure 42]**.

Figure 43

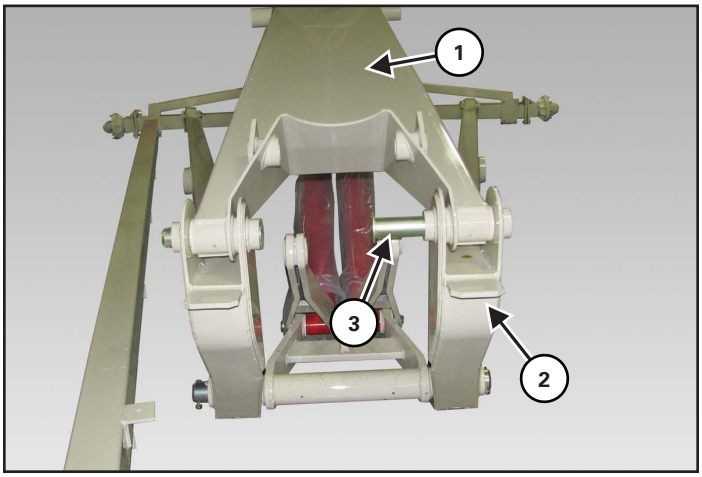


Install a strap (Item 1) around the upper lift arm (Item 2). Connect the strap to an approved lifting device **[Figure 43]**.

Raise and move the upper lift arm to the assembly area.

Move the upper lift arm over the lower lift arms.

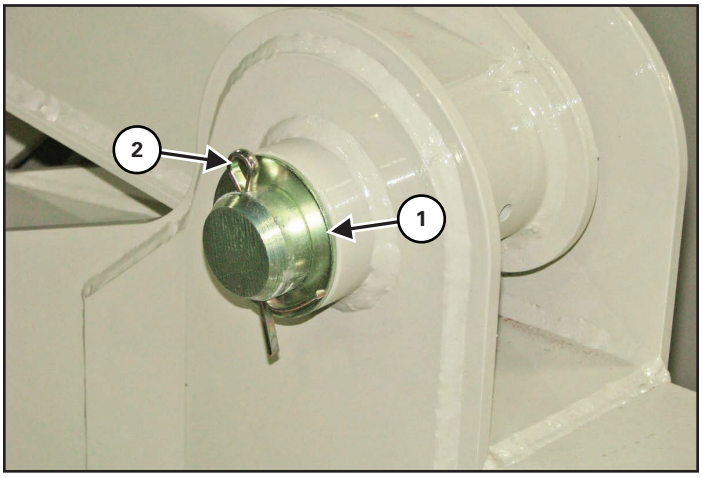
Figure 44



Align and lower the upper lift arm (Item 1) until the upper lift arm is inside the two mounts (Item 2) on the lower lift arms **[Figure 44]**.

Install the two 2" x 5/8" lift arm pins (Item 3) (from the inside) **[Figure 44]**.

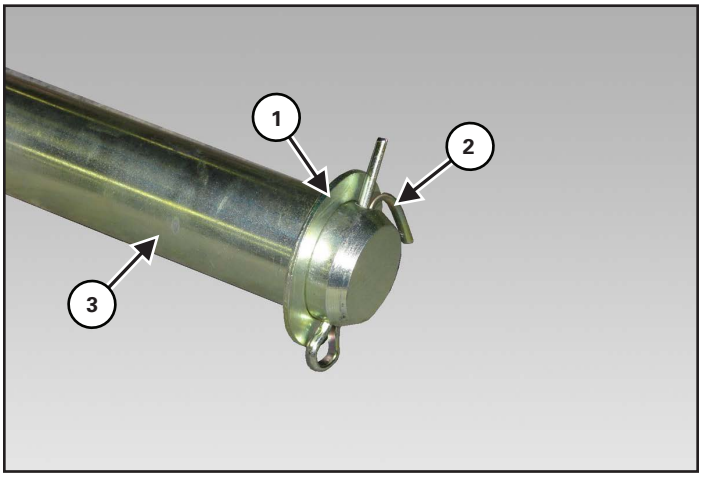
Figure 45



Install one 2" narrow rim washer (Item 1) and 5/16" x 3" cotter pin (Item 2) on the lift arm pin (both sides) **[Figure 45]**.

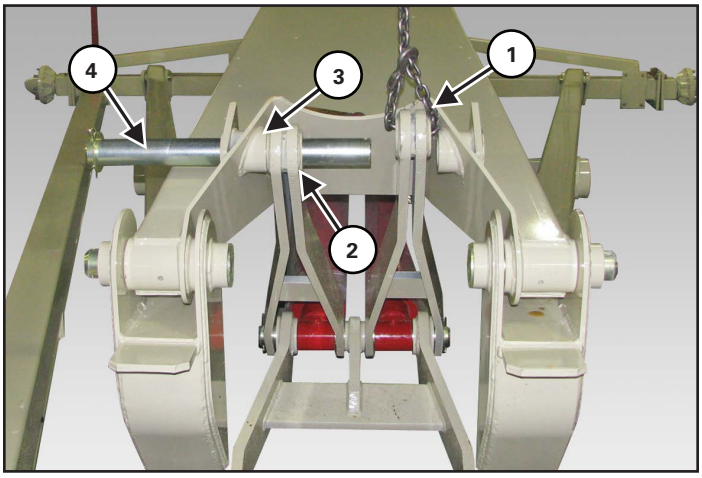
Lower the upper lift arm onto the cradle rest.

Figure 46



Install one 2" narrow rim washer (Item 1) and 5/16 x 3" cotter pin (Item 2) onto the 2" x 20-1/2" upper lift arm pin rod (Item 3) **[Figure 46]**.

Figure 47

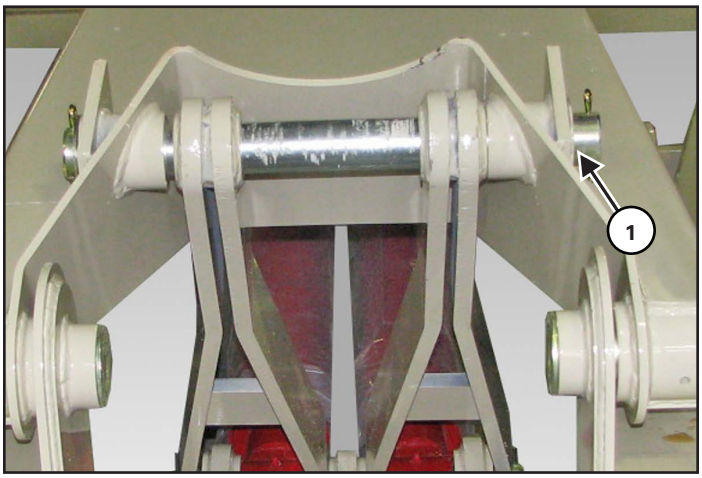


Install a chain through the mounting hole of the left yoke arm (Item 1). Lift the left yoke arm until the right yoke arm (Item 2) (lift right yoke arm by hand) is aligned with the upper lift arm mounting hole (Item 3) **[Figure 47]**.

Install the upper lift arm pin rod (Item 4) through the upper lift arm mounting hole and right yoke arm **[Figure 47]**.

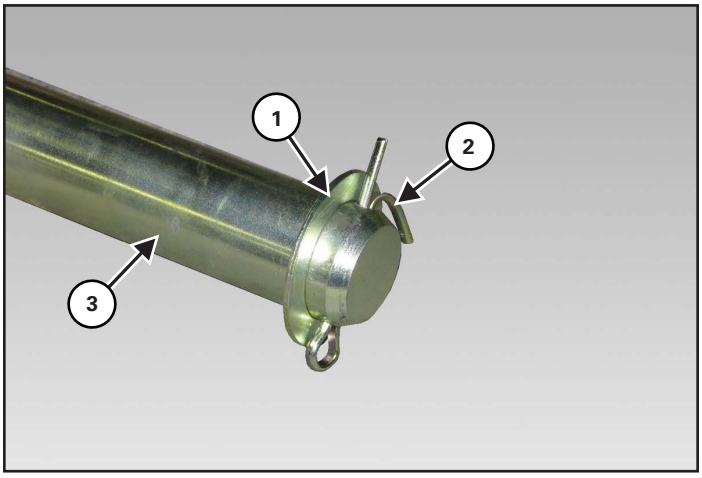
Remove the chain from the left yoke arm. Lift the left yoke arm and install the upper lift arm pin rod through the left yoke arm and upper lift arm mounting hole.

Figure 48



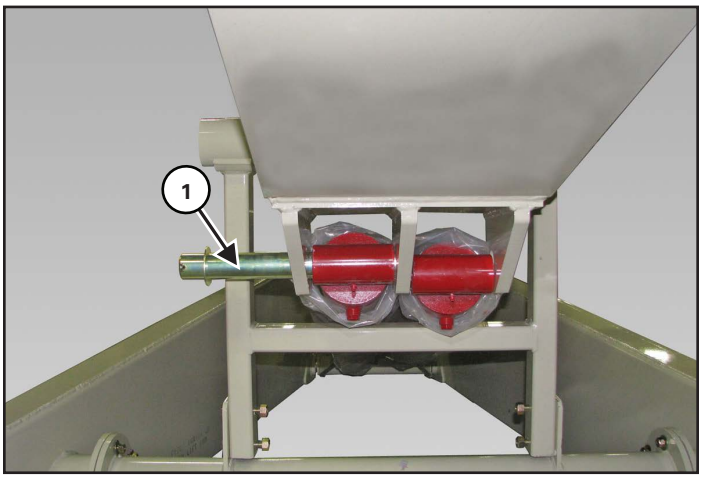
Install one 2″ narrow rim washer (Item 1) and 5/16 x 3″ cotter pin onto the 2″ x 20-1/2″ upper lift arm pin rod **[Figure 48]**.

Figure 49



Install one 2″ narrow rim washer (Item 1) and 5/16 x 3″ cotter pin (Item 2) onto the 2″ x 17-1/4″ cylinder pin rod (Item 3) **[Figure 49]**.

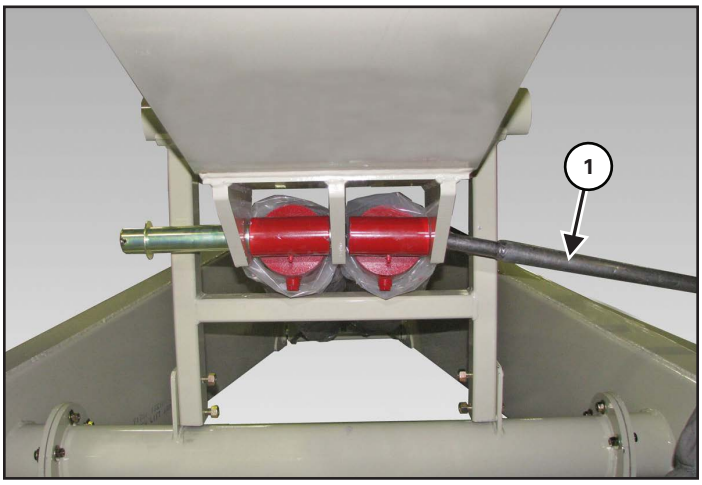
Figure 50



Align the left cylinder mounting holes of the upper lift arm.

Install the cylinder pin rod (Item 1) through the upper lift arm and left cylinder (stop when the pin enters the center mount of the upper lift arm) **[Figure 50]**.

Figure 51



Using a bar (Item 1), align the right cylinder with the mounting holes of the upper lift arm **[Figure 51]**.

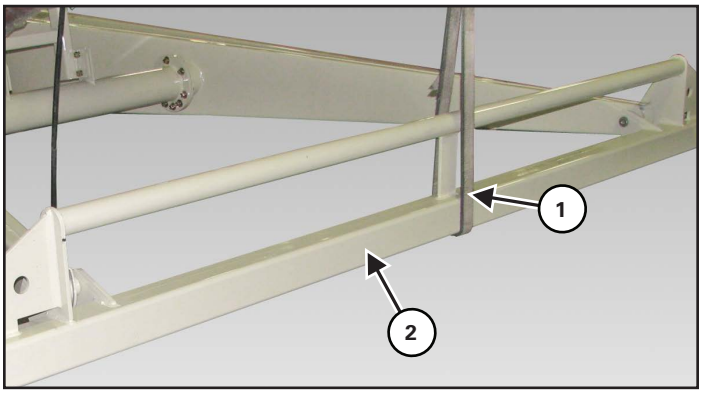
Continue installing the cylinder pin rod through the upper lift arm and right cylinder.

Figure 52

Install one 2" narrow rim washer (Item 1) and 5/16" x 3" cotter pin onto the cylinder pin rod, securing the cylinders to the upper lift arm **[Figure 52]**.

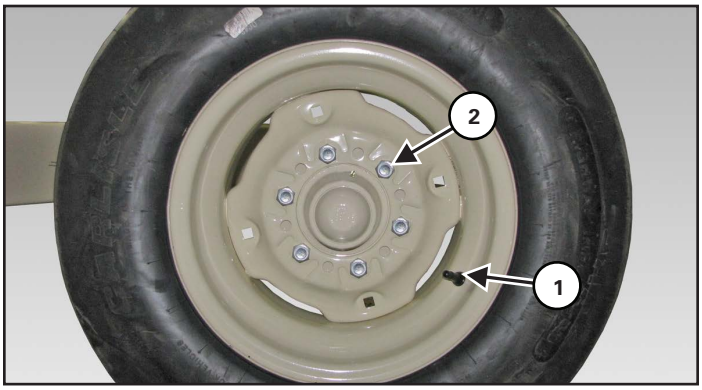
Wheels and Lift Arm Rest

Figure 53



Install a strap (Item 1) around the center brace (Item 2) on the axle. Connect the strap to an approved lifting device. Raise the axle high enough to install the tires **[Figure 53]**.

Figure 54



Install the tires with the valve stem (Item 1) facing out **[Figure 54]**.

Models 1370, 1385 and 1395: Install six wheel bolts.

Models 13114: Install eight wheel bolts.

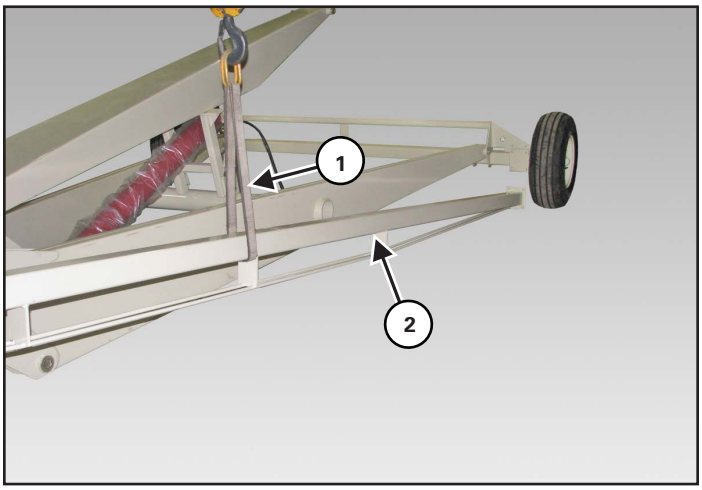
Tighten wheel nuts (Item 2) in a criss-cross pattern **[Figure 54]**.

Torque wheel nuts to 120 lb. / ft. (162 N•m).

Lower the axle and tires to the ground. Remove the strap and lifting device. Check tire pressure.

Recommended tire pressure is 45 - 50 PSI (310 - 345 kpa). Maximum tire pressure of 60 PSI (415 kpa).

Figure 55

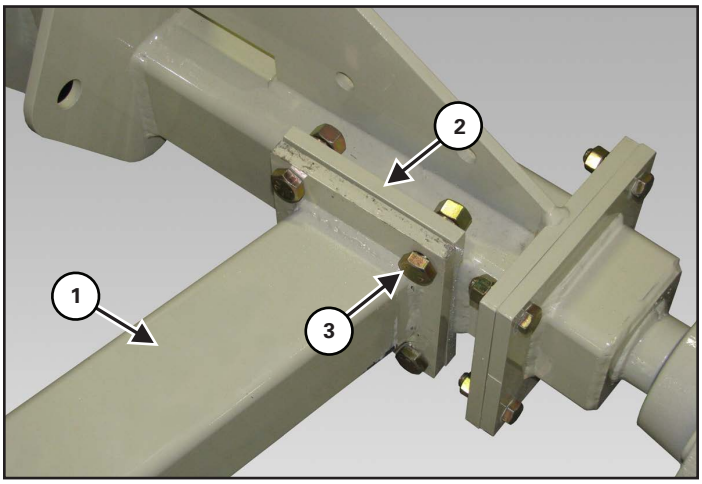


Install a strap (Item 1) around the center of the left undercarriage arm (Item 2) **[Figure 55]**.

Connect the strap to an approved lifting device.

Raise and move the left undercarriage arm towards the axle.

Figure 56

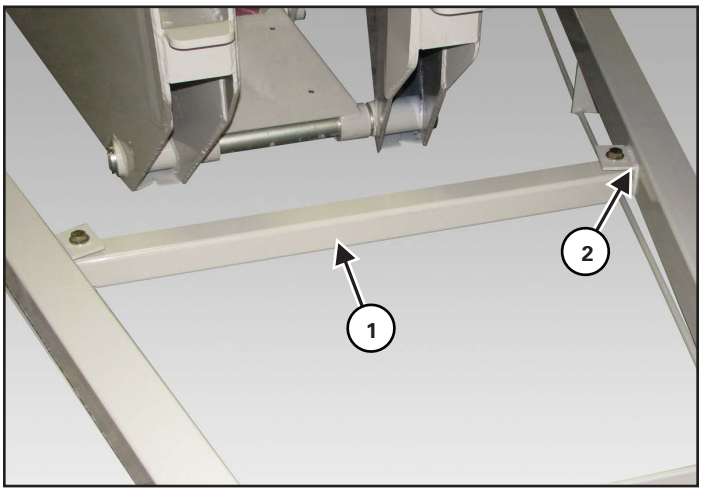


Align the left undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 56]**.

Models 1370, 1385 and 1395: Install four 5/8" x 2" bolts (Item 3) and 5/8" lock nuts. Do not tighten bolts and nuts at this time **[Figure 56]**.

Models 13114: Install four 3/4" x 2.5" bolts (Item 3) and 3/4" lock nuts. Do not tighten bolts and nuts at this time **[Figure 56]**.

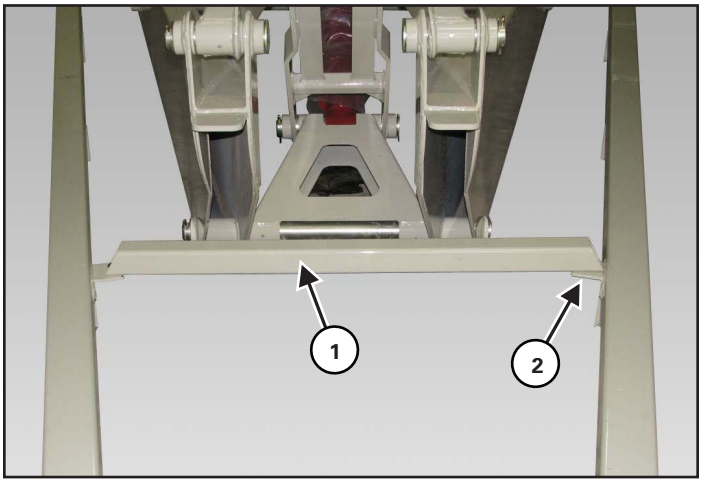
Figure 57



1370 Models: Place the rest tube (Item 1) under the tabs (Item 2). Atach using two 5/8" x 1-3/4" bolts, two 5/8" flat washers, and two 5/8" lock nuts **[Figure 57]**.

Do not tighten at this time.

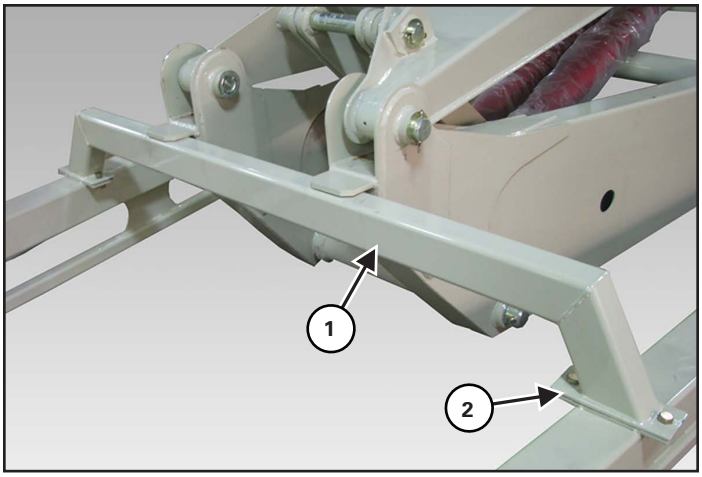
Figure 58



1385 & 1395 Models: Place the lift arm rest tube (Item 1) on top of the mounts (Item 2). Attach using two 5/8" x 1-3/4" bolts, two 5/8" flat washers, and two 5/8" lock nuts **[Figure 58]**.

Do not tighten at this time.

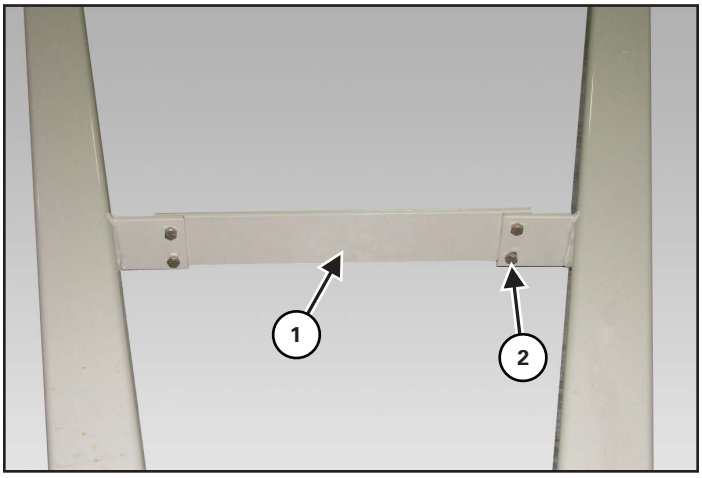
Figure 59



13114 Models: Place the rest tube (Item 1) on top of the mounts (Item 2). Attach using four 5/8" x 1-1/2" bolts and four 5/8" lock nuts **[Figure 59]**.

Do not tighten at this time.

Figure 60



1370, 1385, 1395 Models: Align the brace plate (Item 1) with the mounting plates (Item 2). Attach using four 7/16" x 1-1/2" bolts, four 7/16" flat washers, and four 7/16" lock nuts **[Figure 60]**.

Do not tighten at this time.

Figure 61

1370, 1385, 1395 Models: Position the 1-1/2" x 15-5/16" pin (Item 1) within the top mount of the upper lift arm. Attach using one 1-1/2" x 10 Ga. narrow rim washer (Item 2) and one 1/4" x 2" cotter pin **[Figure 61]**.

NOTE: The upper lift arm pin, narrow rim washer and cotter pin are installed at this time, so these components are available when connecting to the tube.

TUBES

Assemble the tube on flat level surface.

WARNING

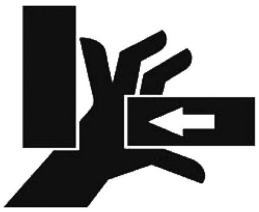
DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

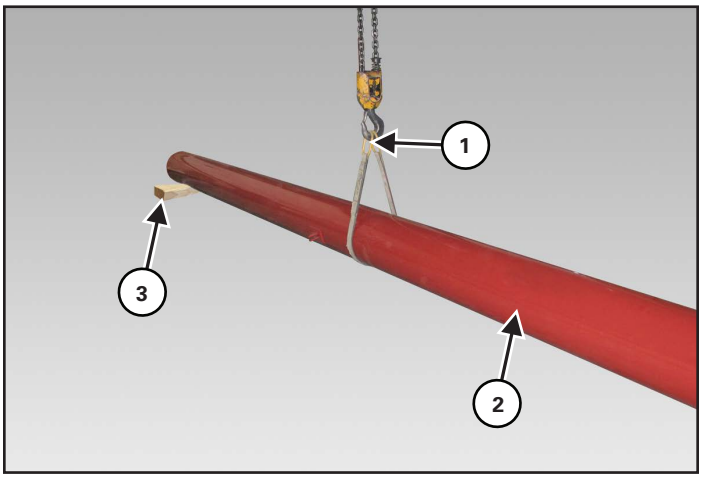
Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling components.

WARNING



Keep fingers and hands out of pinch points when assembling the equipment.

Figure 62

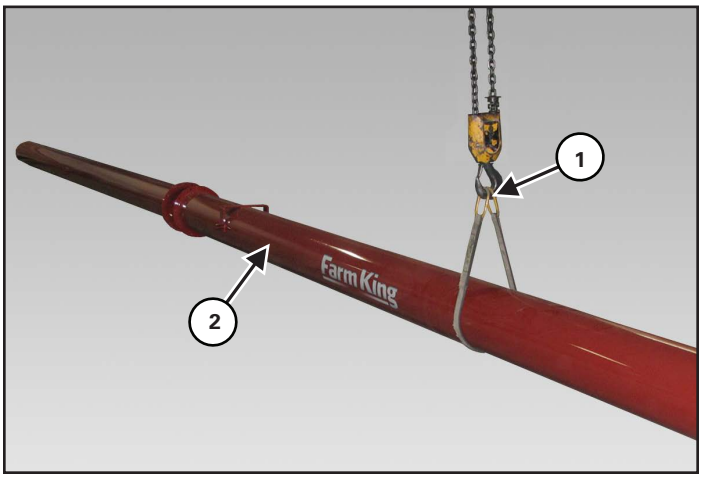


Install a strap (Item 1) around the top tube (Item 2) **[Figure 62]**.

Raise and move the top tube to the assembly area.

Place a block (Item 3) under the discharge spout end of the tube. Lower the tube onto the block. Remove strap **[Figure 62]**.

Figure 63



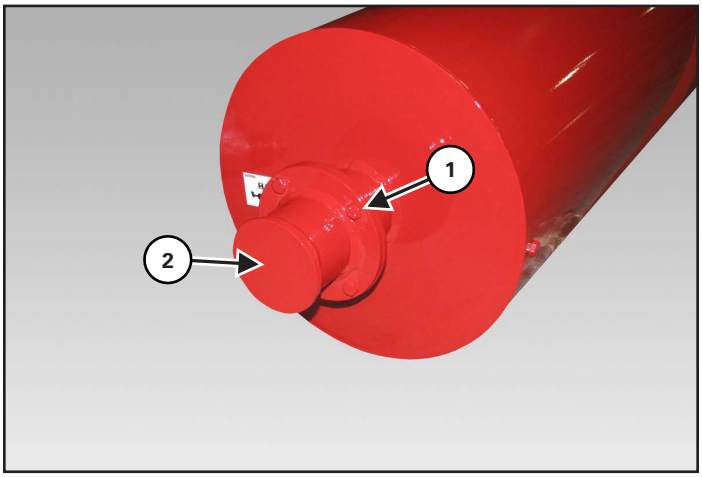
Install a strap (Item 1) around the center tube (Item 2) **[Figure 63]**.

Raise and move the center tube to the assembly area.

IMPORTANT

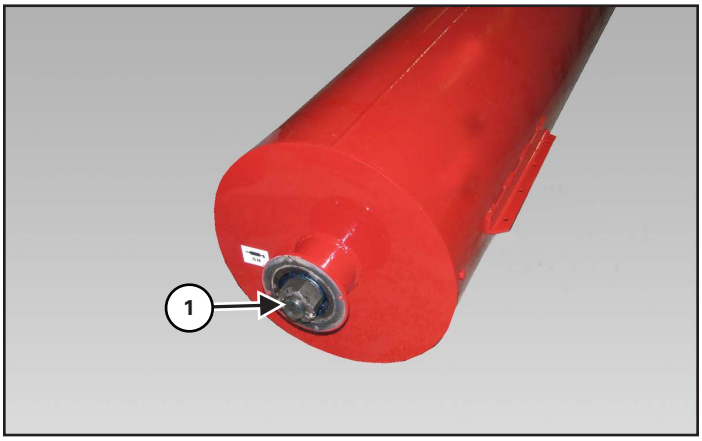
When assembling the Model 1395 tube, install the 10 ft. extension tube between the top and center tubes.

Figure 64



Remove four bolts (Item 1) and remove dust cap (Item 2) from the end of the top tube **[Figure 64]**.

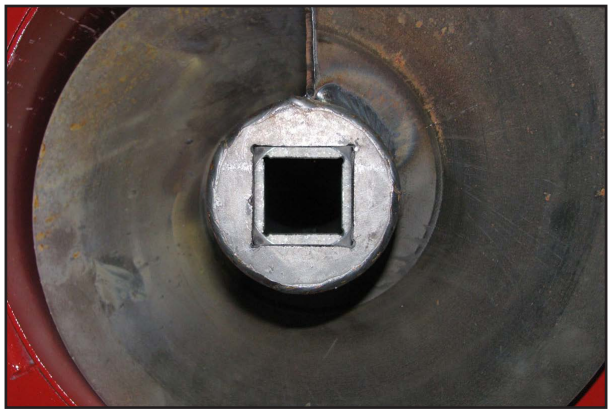
Figure 65



Remove the cotter pin and loosen the castle nut (Item 1). Do not remove the castle nut **[Figure 65]**.

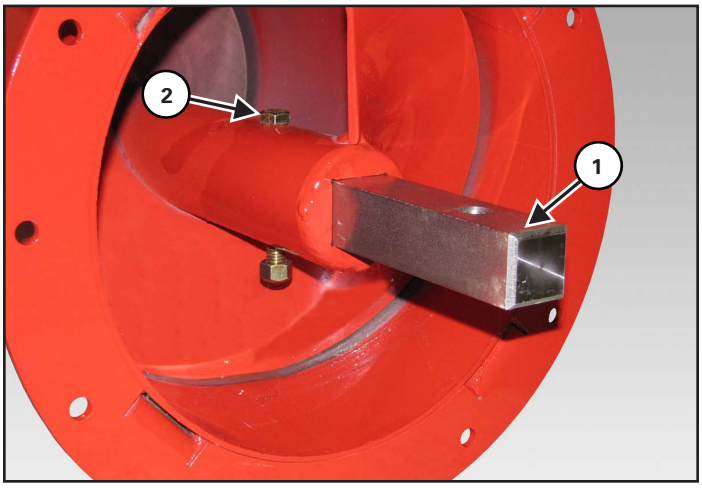
NOTE: Loosening the castle nut will allow the flighting to move in the tube for connecting bottom tube and input box.

IMPORTANT



When installing the connecting shaft, the shaft will need to be aligned with and inserted into the inner collar of flighting tube.

Figure 66

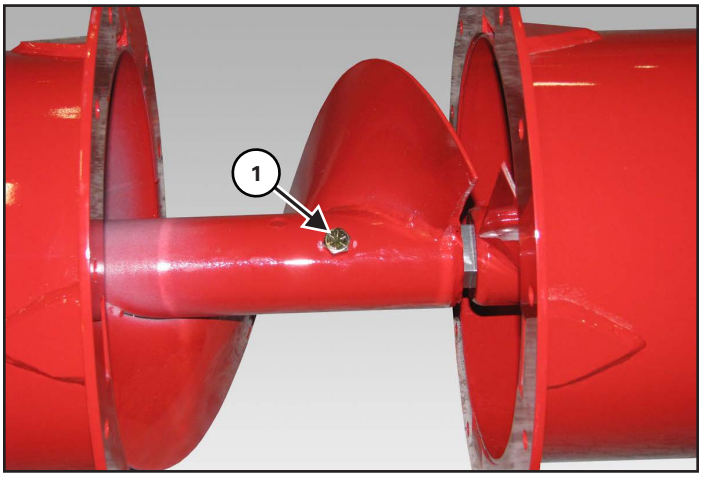


Slide the flighting out of the top tube until the bolt hole in the end of the flighting is clear of the mounting flange.

Align the bolt holes and install the connecting shaft (Item 1) **[Figure 66]**.

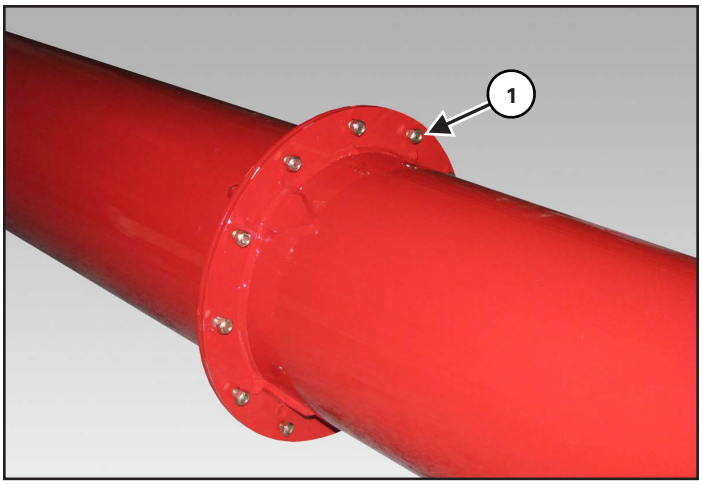
Apply thread locker to the bolt threads, install and tighten one 1/2" x 4" Gr. 8 bolt (Item 2) and 1/2" lock nut **[Figure 66]**.

Figure 67



Slide the flighting from the center tube forward onto the connecting shaft. Apply thread locker to the bolt threads, install one 1/2" x 4" Gr. 8 bolt (Item 1) and 1/2" lock nut. Tighten bolt and lock nut **[Figure 67]**.

Figure 68

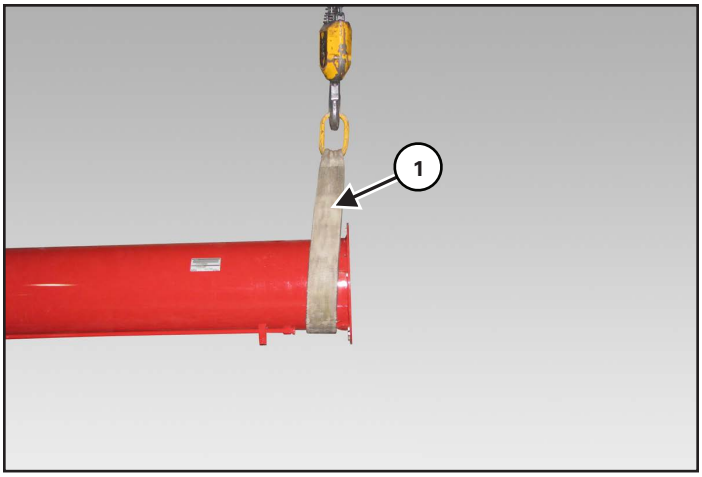


Slide the top and center tubes together until the mounting flanges contact each other **[Figure 68]**.

Install 7/16" x 1-1/4" bolts (Item 1) through the tube flanges. Install one 7/16" lock nut on each bolt. Tighten bolts and lock nuts (top bolt first, then bottom bolt **[Figure 68]**.

Repeat the procedure for connecting remaining tube sections.

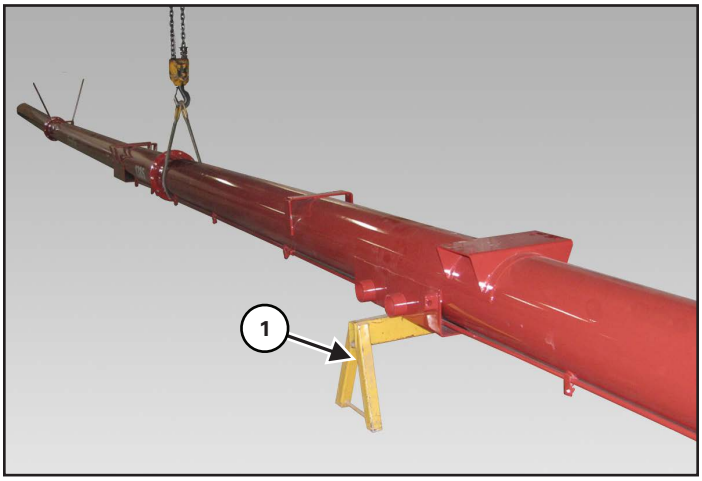
Figure 69



Install a strap (Item 1) around the end of the bottom tube **[Figure 69]**.

NOTE: Use a second strap and lifting device on tube #3 when lifting the 13114 auger assembly.

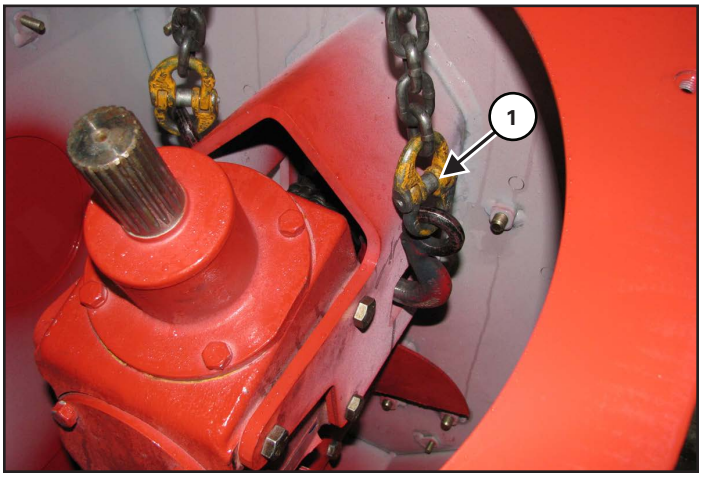
Figure 70



Raise the tube assembly and place a support stand (Item 1) under the tube, lower the tube onto the support stand **[Figure 70]**.

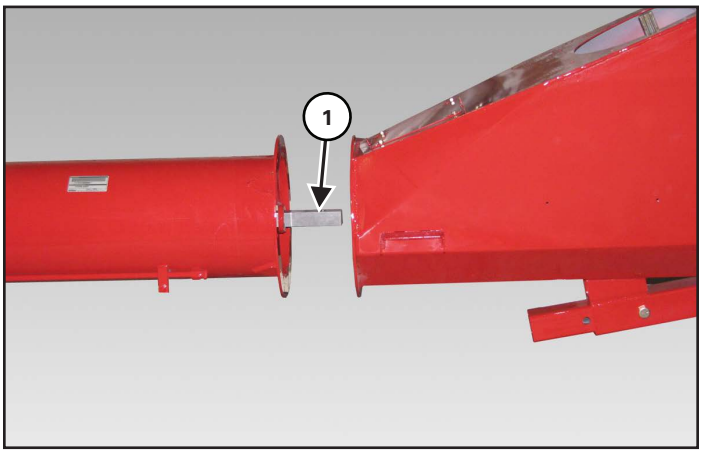
Remove strap.

Figure 71



Install the chains (Item 1) onto the input box gearbox mounting bracket. Raise and move the input box to the end of the bottom tube **[Figure 71]**.

Figure 72

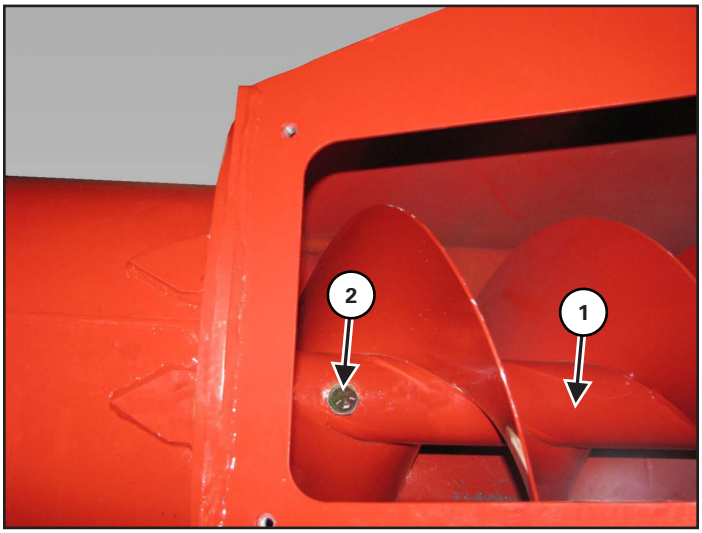


Align the input box flighting with the flighting shaft of the bottom tube.

Align the bolt holes and install the connecting shaft (Item 1) **[Figure 72]**.

Apply thread locker to the bolt threads, install and tighten one 1/2" x 4" Gr. 8 bolt and 1/2" lock nut.

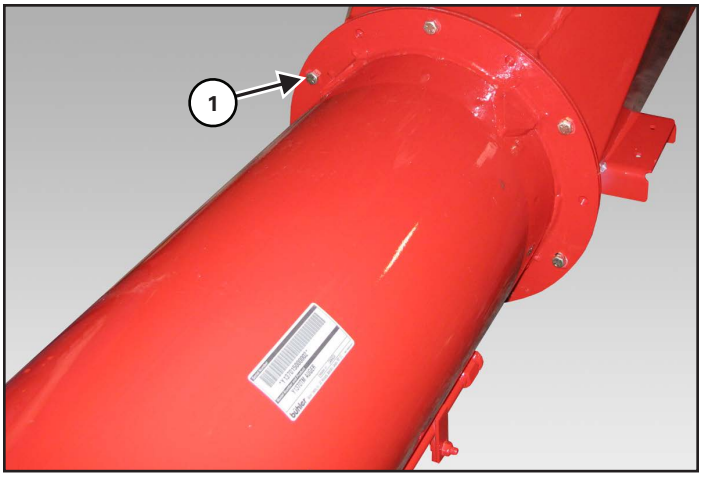
Figure 73



Align the input box flighting (Item 1) with the hole in the bottom tube flighting **[Figure 73]**.

Apply thread locker to the bolt threads, install and tighten one 1/2" x 4" Gr. 8 bolt (Item 2) and 1/2" lock nut. Tighten bolt and lock nut **[Figure 73]**.

Figure 74



Move the input box towards the bottom tube until the two mounting flanges make contact.

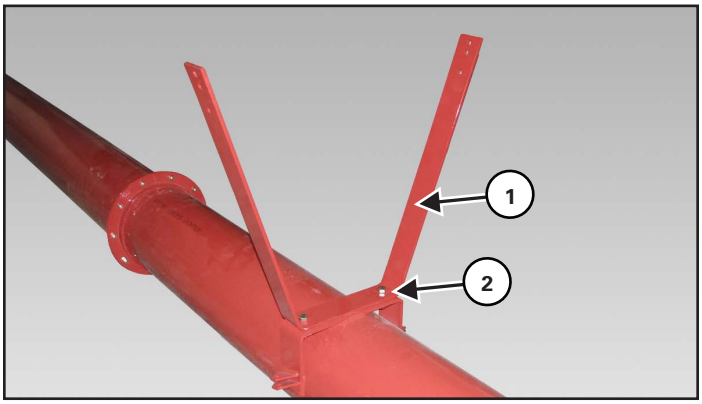
Align the mounting holes and install the eight 7/16" x 1-1/4 bolts (Item 1) and 7/16" lock nuts around the mounting flanges of the bottom tube and input box. Tighten bolts and lock nuts **[Figure 74]**.

Bridging

Locate and uncoil the four 1/2" cables.

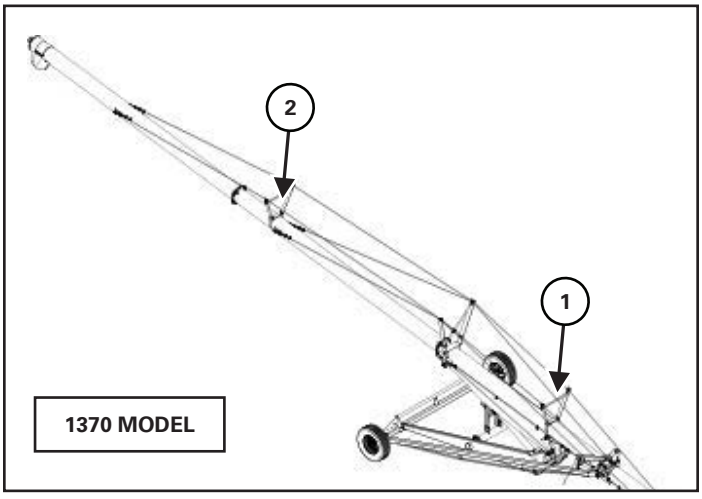
Place one long and one short 1/2" cable on each side of the tube assembly (longest 1/2" cable towards the outside).

Figure 75



Install trusses (Item 1) to the tube assembly. Use appropriate hardware (Item 2) **[Figure 75]**.

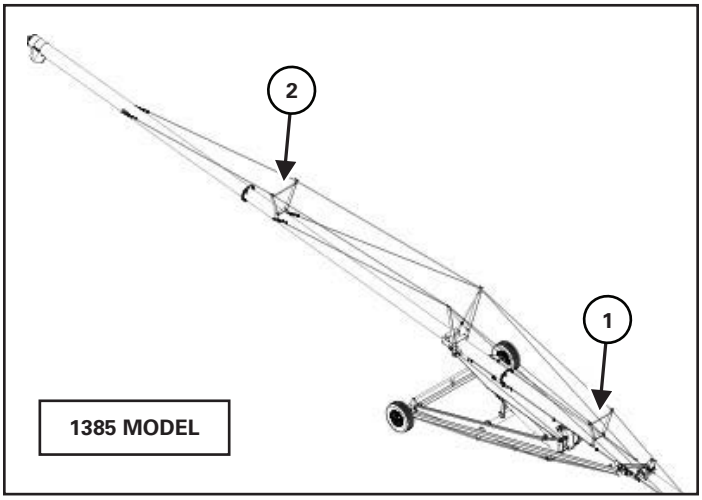
Figure 76



1370 Model trusses (width/height):

- Lower truss - 68.5" x 26.6" (Item 1)
- Upper truss - 68.5" x 26.6" (Item 2)
- Hardware - 5/8" x 2" hex bolts, 5/8" lock nuts **[Figure 76]**

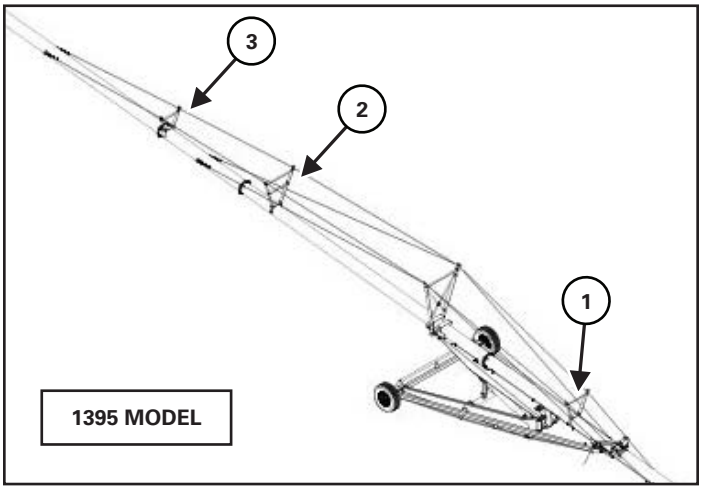
Figure 77



1385 Model trusses (width/height):

- Lower truss - 68.5" x 26.6" (Item 1)
- Upper truss - 78.5" x 31.3" (Item 2)
- Hardware - 5/8" x 2" hex bolts, 5/8" lock nuts **[Figure 76]**

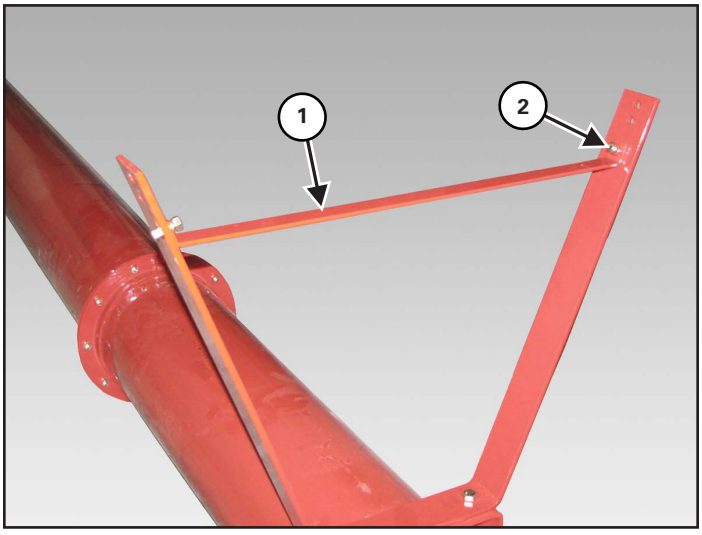
Figure 78



1395 Model trusses (width/height):

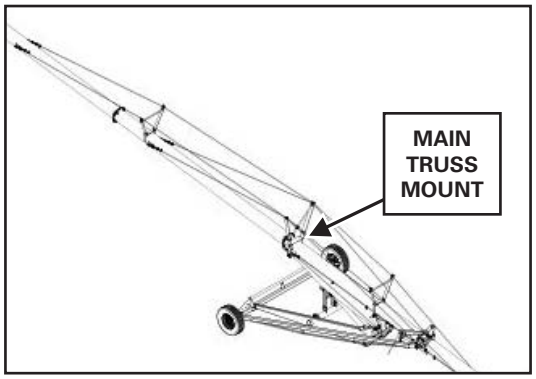
- Lower truss, 68.5" x 26.6" (Item 1)
- Upper truss, 98.5" x 40.7" (Item 2)
- Extension tube truss, 57" x 21.2" (Item 3)
- Hardware - 5/8" x 2" hex bolts (Item 1, 2), 5/8" x 1-3/4" hex bolts (Item 3), 5/8" lock nuts **[Figure 78]**

Figure 79



Install braces (Item 1) to the appropriate trusses. Attach each brace using 7/16" X 1-1/2" hex bolts and 7/16" lock nuts (Item 2) **[Figure 79]**.

IMPORTANT

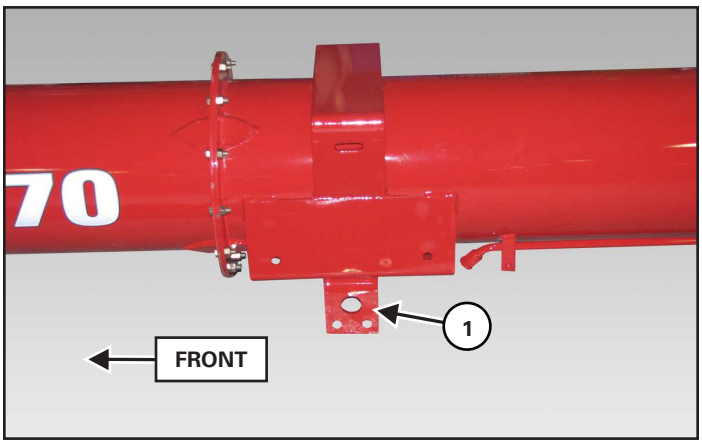


Install a strap around the intake end of the tube assembly.

Connect the strap to an approved lifting device.

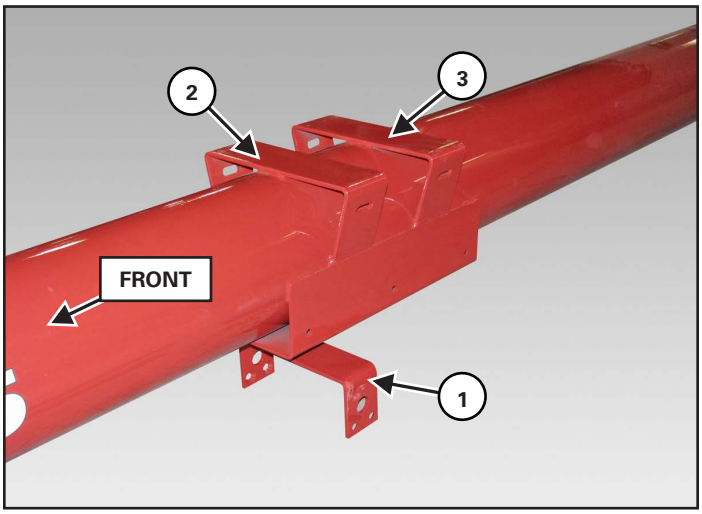
Raise the tube assembly to allow adequate space under the main truss mount.

Figure 80



1370 Models: Position the truss mount bracket (Item 1) below the main tube mount **[Figure 80]**.

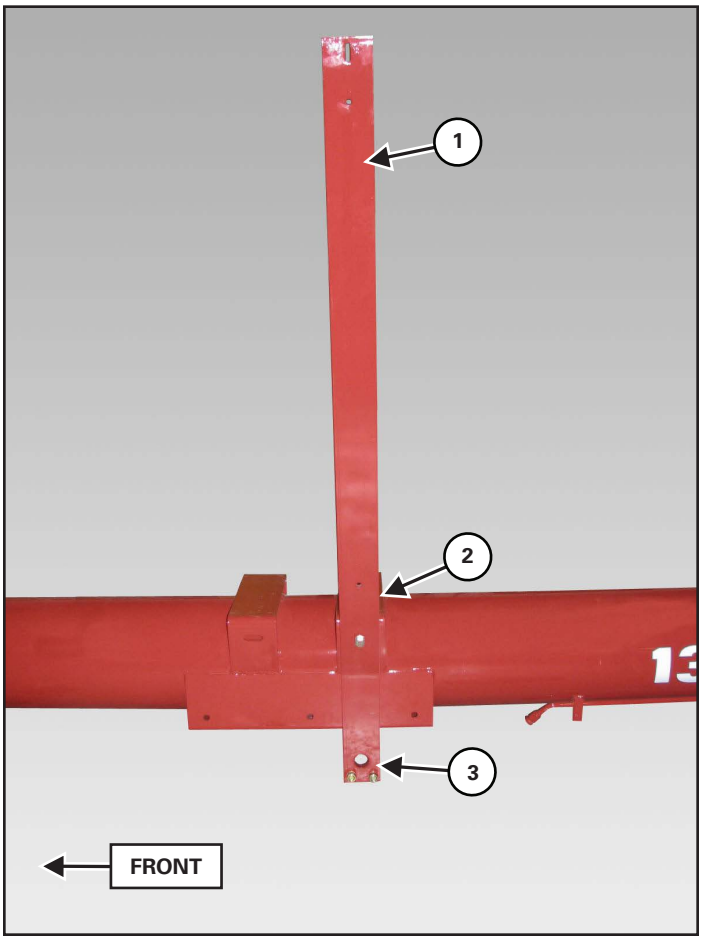
Figure 81



1385 Models: Position the truss mount bracket (Item 1) below the forward tube mount (Item 2) **[Figure 81]**.

1395 Models: Position the truss mount bracket below the rearward tube mount (Item 3) **[Figure 81]**.

Figure 82



Align the truss (Item 1) with the tube mount (Item 2) and mount bracket (Item 3) **[Figure 82]**.

Attach the truss to the tube mount (Item 2) using one 5/8" X 2" hex bolt, two 5/8" flat washers (both sides), and one 5/8" lock nut **[Figure 82]**.

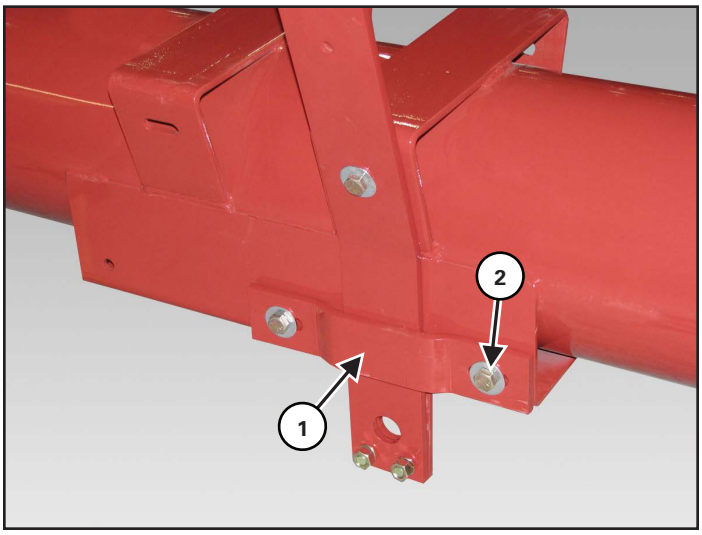
Attach the truss to the mount bracket (Item 3) using two 5/8" x 1-3/4" flat head socket bolts and two 5/8" lock nuts **[Figure 82]**.

Repeat to install the truss on the opposite side.

Do not tighten the bolts at this time.

NOTE: 1395 Model is pictured. The procedure is the same for all auger models.

Figure 83

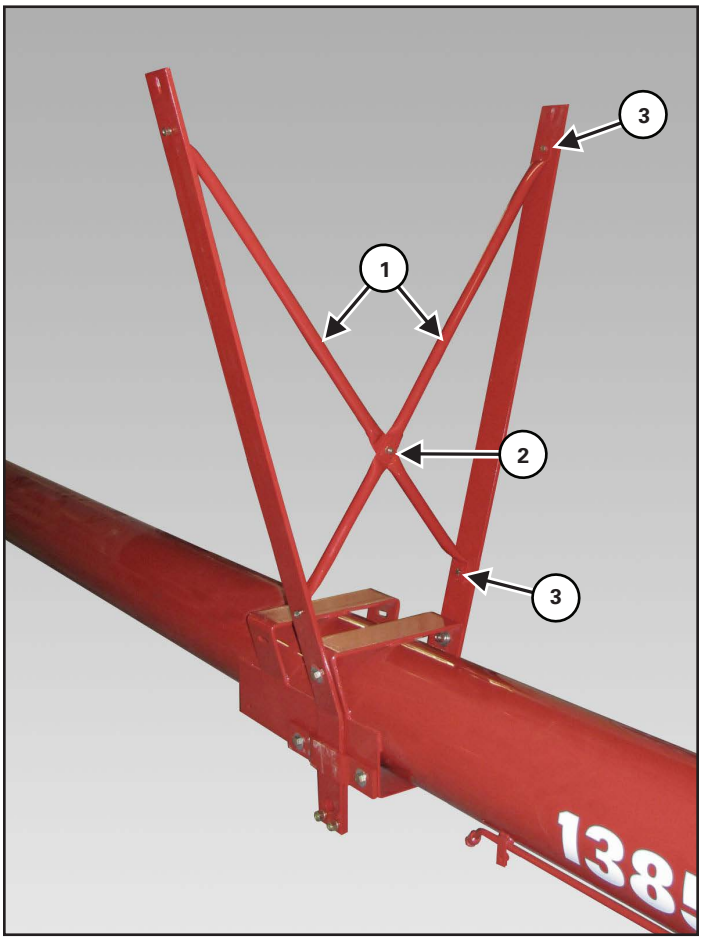


Install one truss clamp (Item 1) over the truss. Attach using two 5/8" x 2" hex bolts, two 5/8" flat washers, and two 5/8" lock nuts **[Figure 83].**

Repeat to install clamp on the opposite side.

Tighten bolts and nuts.

Figure 84



Position the two main braces (Item 1). Install one 7/16" x 1-1/4" bolt (Item 2) through the two braces. Install one 7/16" lock nut onto the bolt **[Figure 84]**.

Do not tighten at this time.

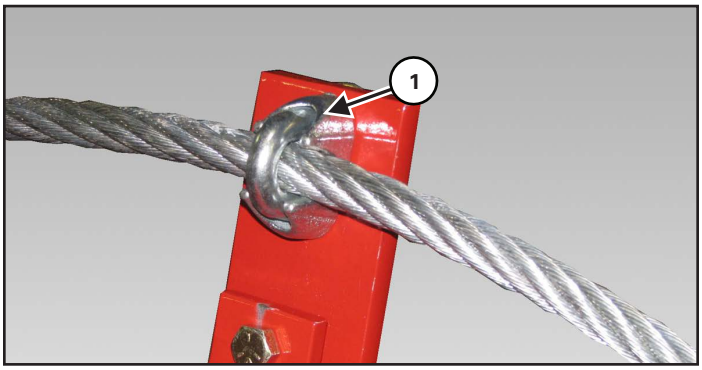
Align and install the two braces onto the main trusses using four 7/16" x 1-1/4" bolts (Item 3) and four 7/16" lock nuts **[Figure 84]**.

Tighten center cross brace bolt (Item 2) and lock nut first. Next, tighten the bottom cross brace bolts (Item 3) and lock nuts **[Figure 84]**.

Tighten upper cross brace bolts (Item 3) and lock nuts **[Figure 84]**.

NOTE: 1395 Model is pictured. The procedure is the same for all auger models.

Figure 85



Install one 1/2" cable clamp (Item 1) around the long 1/2" cable and to the upper truss (on the center tube or 10 ft. extension tube) (both sides) **[Figure 85]**.

Install one 1/2" cable clamp around the long 1/2" cable and to the lower truss (on the bottom tube) (both sides).

Install one 1" x 7/16" x 10 ga. flat washer and nut onto each clamp u-bolt. Do not tighten the 1/2" cable clamps at this time.

Figure 86

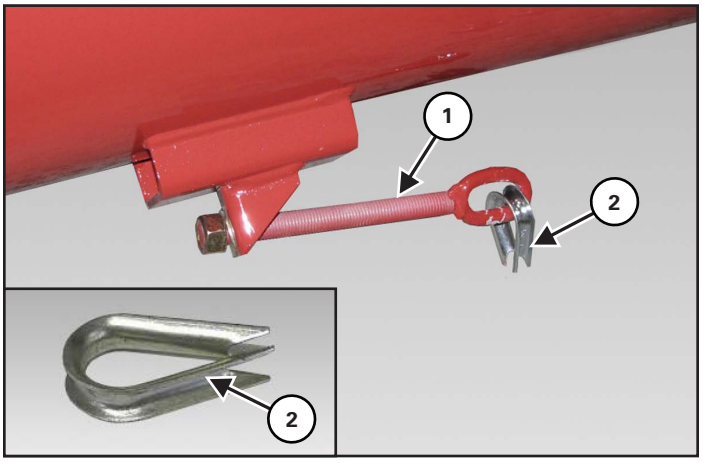
NOTE: Remove clamp section of two 1/2" cable clamps. Use only the u-bolts and nuts.

Install one 1/2" cable clamp (Item 1) around both the long and short 1/2" cables and install into the main truss (on the center tube) (both sides) **[Figure 86]**.

When installing the u-bolt around the two 1/2" cables, place the short 1/2" cable (Item 2) into the u-bolt first (both sides) **[Figure 86]**.

Install one 1" x 7/16" x 10 ga. flat washer and nut onto each u-bolt. Do not tighten the 1/2" cable clamps at this time.

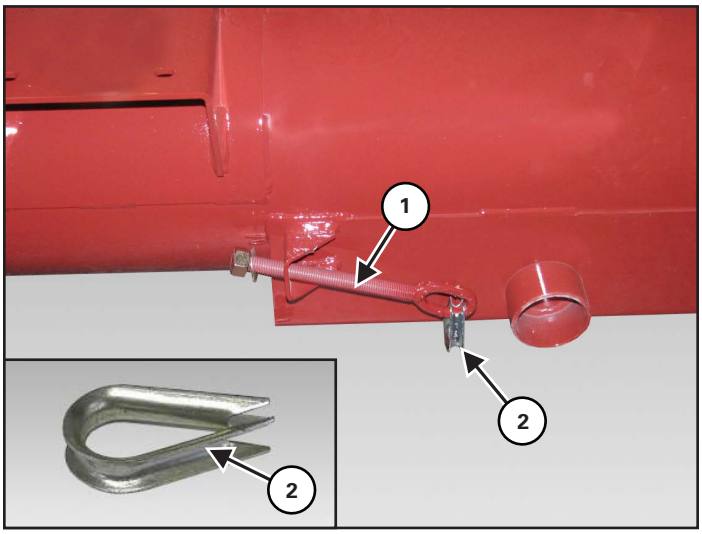
Figure 87



Install one eyebolt (Item 1) (with eye towards discharge spout) into the hole of the mounting bracket (closest to the intake end) on the bottom tube (both sides). Install one 3/4″ flat washer and 3/4″ nut onto the eyebolt (both sides) **[Figure 87]**.

Install one 1/2″ cable thimble (Item 2) onto the eyebolt (both sides) **[Figure 87]**.

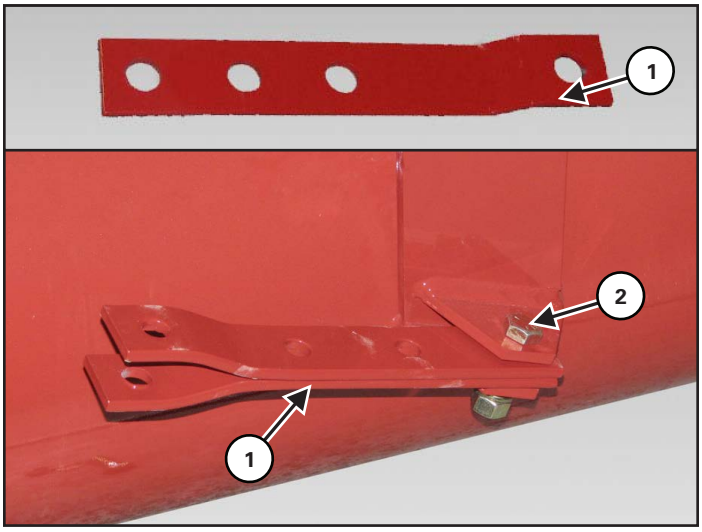
Figure 88



Install one eyebolt (Item 1) (with eye towards discharge spout) into the hole of the mounting bracket (farthest from the intake end) on the bottom tube (both sides). Install one 3/4″ flat washer and 3/4″ nut onto the eyebolt (both sides) **[Figure 88]**.

Install one 1/2″ cable thimble (Item 2) onto the eyebolt (both sides) **[Figure 88]**.

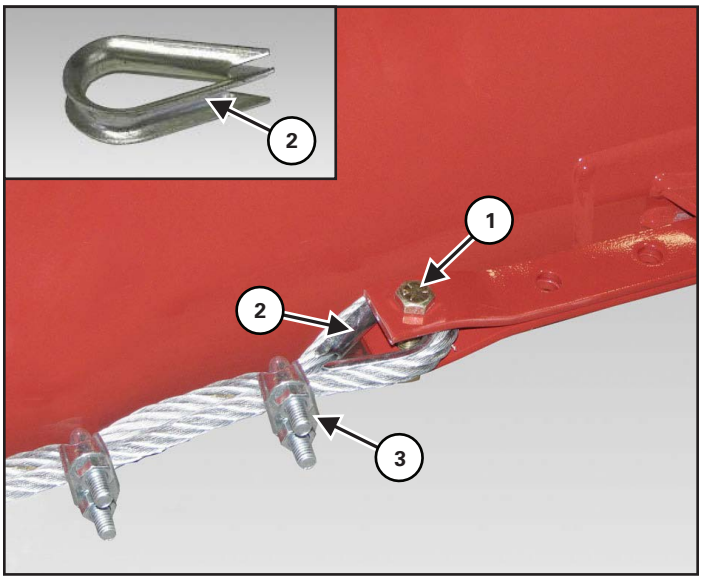
Figure 89



Locate two cable brackets (Item 1). Install one 1/2″ x 2″ bolt (Item 2) through the mounting bracket and cable brackets. Install one 1/2″ lock nut on the bolt. Do not tighten at this time **[Figure 89]**.

Repeat above procedure for three remaining locations.

Figure 90



Install one 1/2″ x 2″ bolt (Item 1) through the mounting bracket and cable thimble (Item 2). Install one 1/2″ lock nut on the bolt. Do not tighten at this time **[Figure 90]**.

Thread the cable through the cable thimble.

IMPORTANT

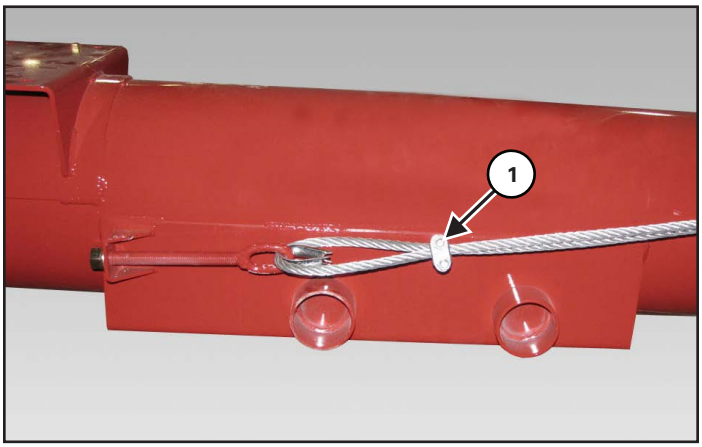
Always insert the tail of the cable into the thimble first when forming a loop in a cable.

Loop the cable around the thimble. Install one cable clamp (Item 3) on the cable. Slide the cable clamp as close to the thimble as possible and tighten **[Figure 90]**.

Install and slide the second cable clamp approximately 4 inches (102 mm) from the end of the tail and tighten (both sides).

Repeat the above procedure for the three remaining locations.

Figure 91

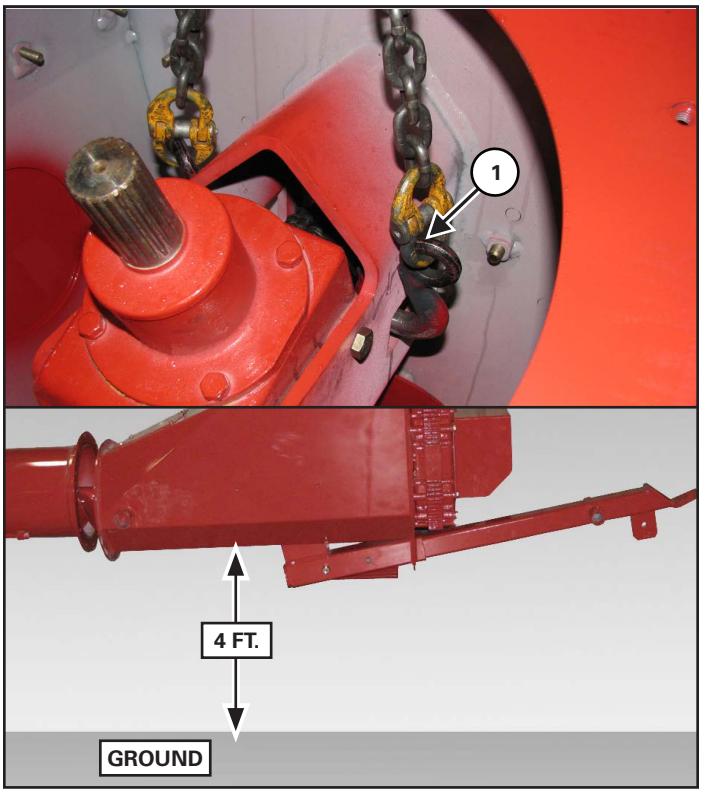


Thread the cable through the eyebolt and around the thimble (both sides). Pull cable as tight as possible.

Loop the cable around the thimble. Install one cable clamp (Item 1) around the cable. Slide the cable clamp as close to the thimble as possible and tighten **[Figure 91]**.

Install and slide the second cable clamp approximately 4 inches (102 mm) from the end of the tail and tighten (both sides).

Figure 92

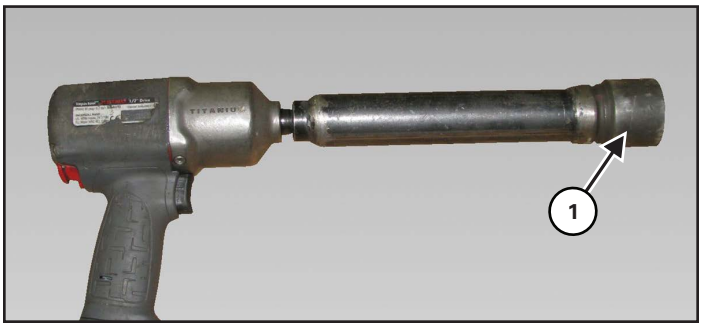


Install chains (Item 1) onto the input box gearbox mounting bracket **[Figure 92]**.

Raise the intake auger / tube assembly approximately 4 ft. (1.22 m) off the ground.

Remove support stand from under the tube assembly.

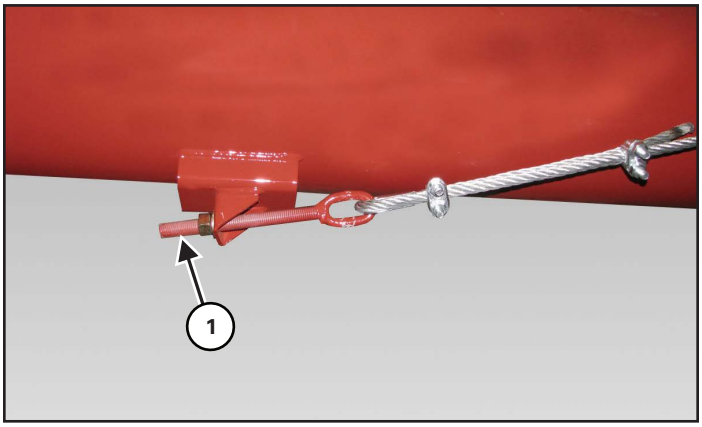
Figure 93



Place a mark (Item 1) on the cable tightening tool. This will help to tighten the cables evenly **[Figure 93]**.

Count the revolutions as the tool is turning while tightening.

Figure 94



NOTE: Cable lengths may vary. The following is a starting point and cables may need to be tightened more or loosened depending on the cable length.

Tighten the long cable until there is approximately 3 - 4 inches (76 - 102 mm) of exposed threads (Item 1) on the eyebolt **[Figure 94]**.

Repeat tightening procedure for the remaining cables.

NOTE: Tighten short cables less than the longer cables.

Lower the input box / tube assembly to the ground.

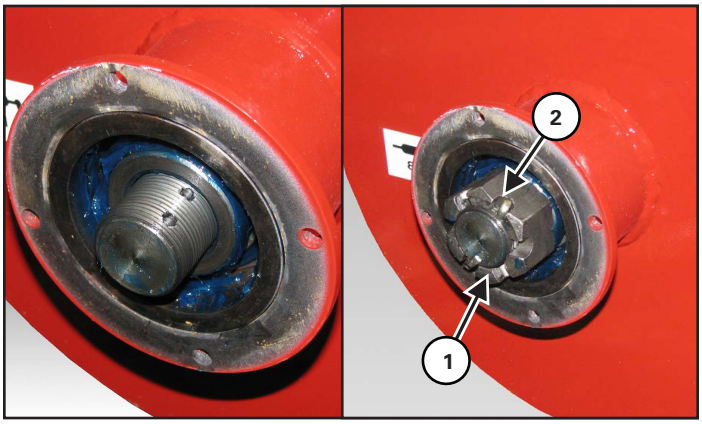
With the input box / tube assembly on the ground, the discharge spout end of the tube assembly should be bowed up (enough to install the discharge spout).

Stand behind the intake end and look down the full length of the tube assembly to verify the tube is straight. Adjust short cables to straighten the tube (left to right) as needed.

With the tube assembly straight and slightly bowed up, tighten all the cable clamps and brackets on the tube assembly.

NOTE: The following images may not show your exact bearing assembly as it appears but the procedure is correct.

Figure 95



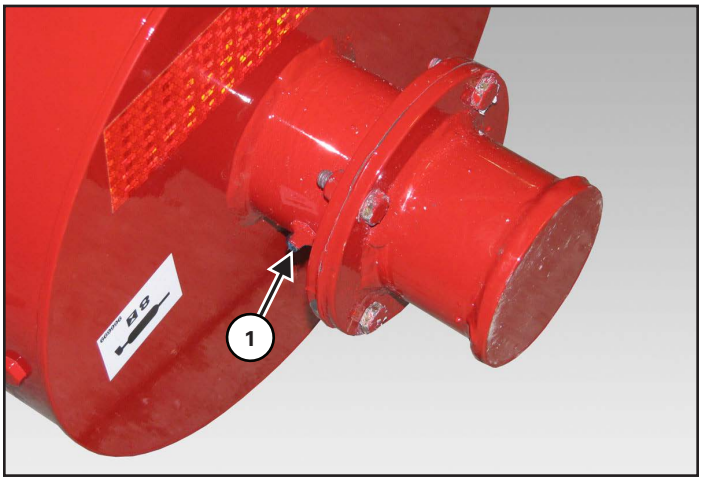
NOTE: The castle nut has been removed in the left picture to show cotter pin hole options.

With the tube assembly complete, tighten the castle nut (Item 1) until the castle nut contacts the washer / flighting shaft **[Figure 95]**.

Check for cotter pin hole in the shaft. Tighten or back the castle nut off (applying some tension on the flighting) until the closest cotter pin hole(s) is exposed.

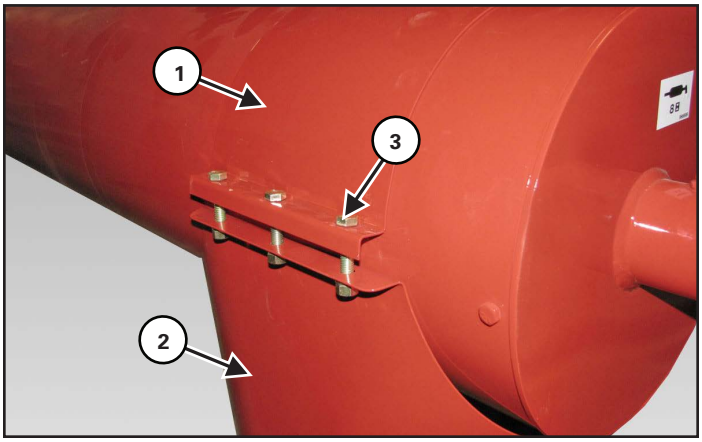
Install the cotter pin (Item 3) **[Figure 95]**.

Figure 96



Apply eight pumps of grease to the flighting bearing assembly (Item 1) **[Figure 96]**.

Figure 97

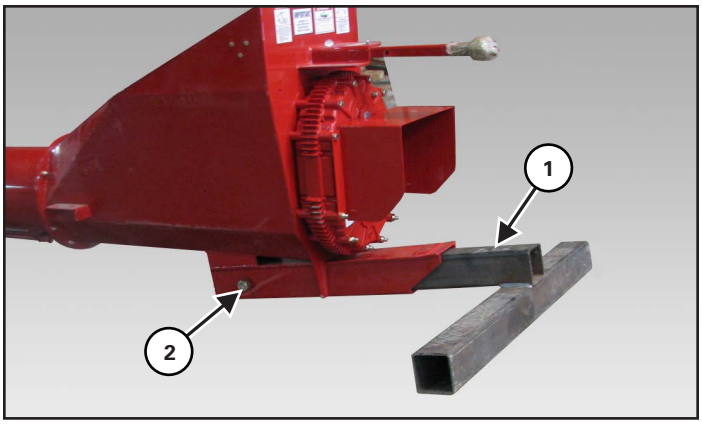


Align the spout clamp (Item 1) and discharge spout (Item 2) with discharge opening in the top tube **[Figure 97]**.

Install the six 3/8" x 2" bolts (Item 3) and 3/8" lock nuts. Tighten bolts and lock nuts evenly until the discharge spout contacts the top tube **[Figure 97]**.

Truss Beams - 13114 Models

Figure 98



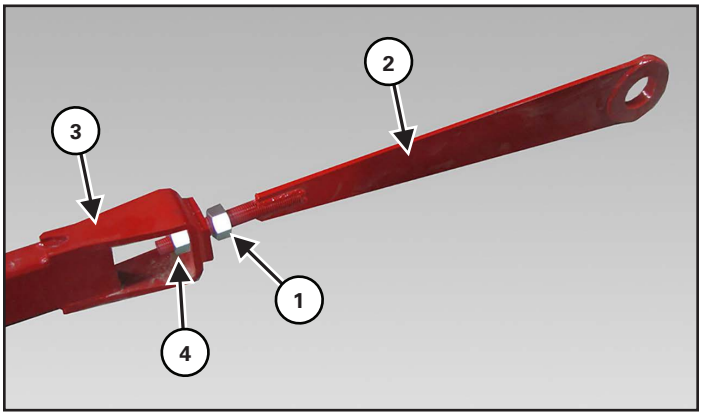
Install the T-bar (Item 1) as shown, install a bolt and nut (Item 2) through the hitch mount and T-bar **[Figure 98]**.

NOTE: The T-bar is installed before truss beam assembly, the T-bar prevents the tube assembly from rolling during truss beam installation.

See **"Trusss Beam Identification - 13114 Models" on page 40** for truss beam identification.

NOTE: The 13114 tube assembly consists of four tubes. When referring to the tubes the lower tube will be tube #1, tube #2, tube #3 and top tube #4.

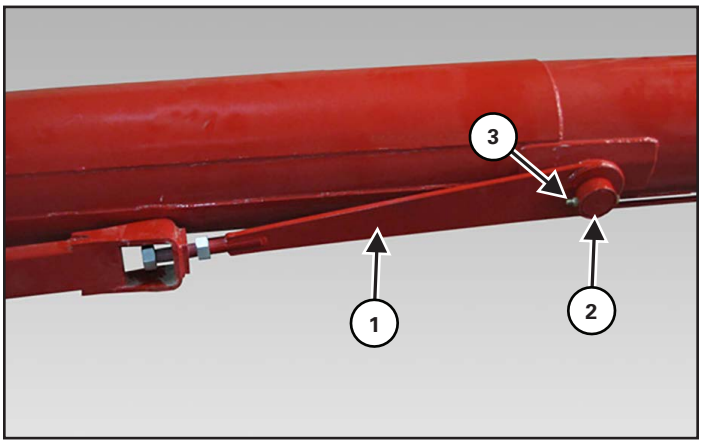
Figure 99



Install the 1-1/4" nut (Item 1) onto the truss fastener (Item 2). Install the truss fastener into the truss beam (Item 3). Install the 1-1/4" nut (Item 4) onto the truss fastener **[Figure 99]**.

Repeat procedure for the opposite side.

Figure 100

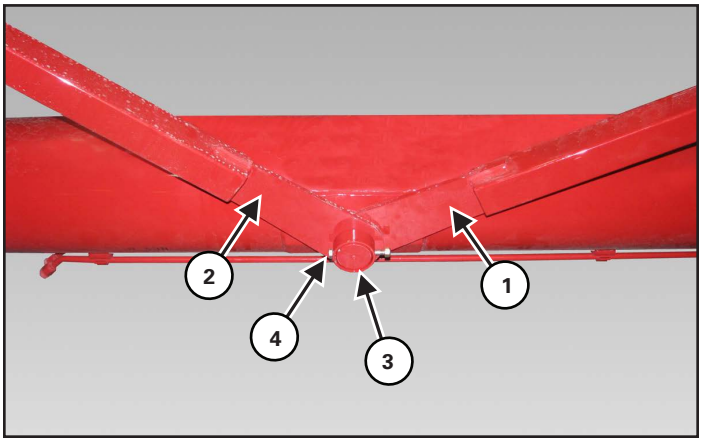


Install the truss fastener / beam assembly (Item 1) onto the lower tube #1 truss beam mount (Item 2) **[Figure 100]**.

Install the undercarriage pin sleeve (Item 3) and 1/2" x 4-1/2" bolt and 1/2" lock nut (Item 4). Tighten the bolt and lock nut **[Figure 100]**.

Repeat procedure on opposite side of lower tube #1.

Figure 101



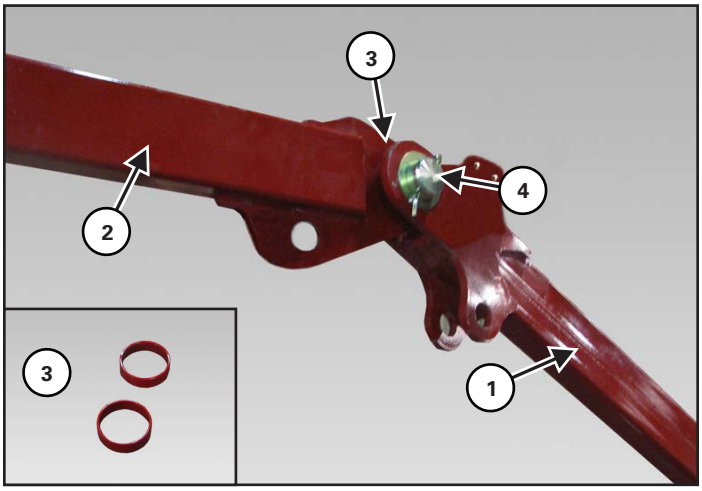
Install the truss beams (Items 1 & 2) onto the tube #1 truss beam mount **[Figure 101]**.

NOTE: The lower truss beam (Item 1) must be installed onto the truss beam mount first (both sides).

Install the undercarriage pin sleeve (Item 3), 1/2" x 4-1/2" bolt and 1/2" lock nut (Item 4). Tighten lock nut and bolt **[Figure 101]**.

Repeat procedure on the opposite side.

Figure 102

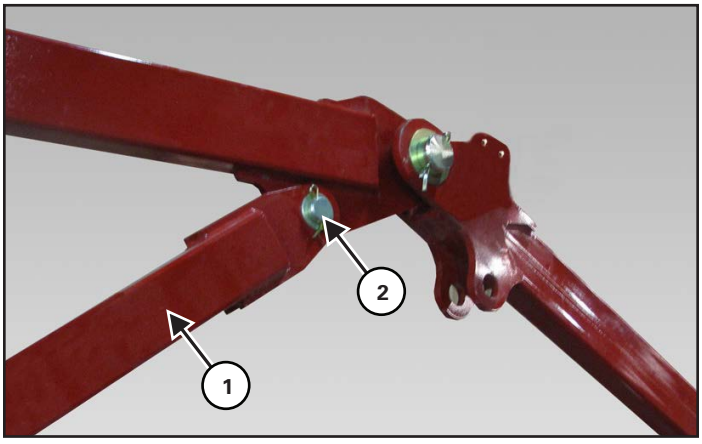


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) **[Figure 102]**.

Place the truss spacers (Item 3) on each side of the truss beam, install the truss pin (Item 4), 2" x 10 ga. narrow rim washer and 5/16" x 3" cotter pin **[Figure 102]**.

Repeat procedure on the opposite side.

Figure 103



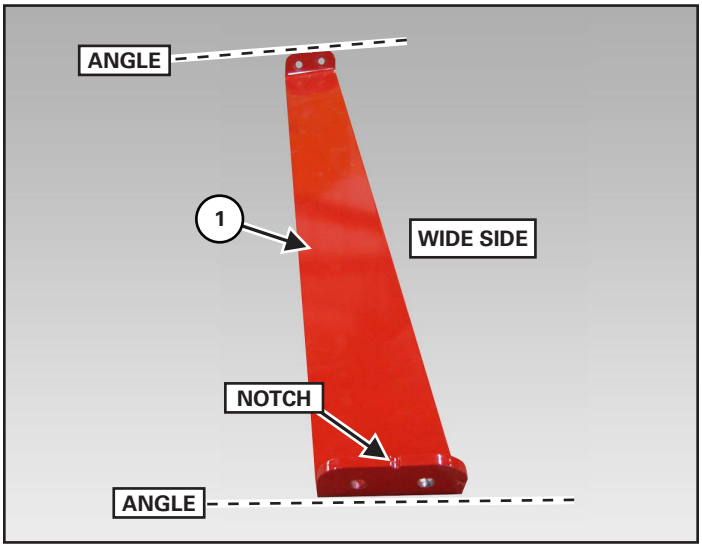
Raise and align truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin **[Figure 103]**.

Repeat procedure on the opposite side.

Truss Support Bracket Assembly

See **"Trusss Beam Identification - 13114 Models" on page 40** for truss support bracket identification.

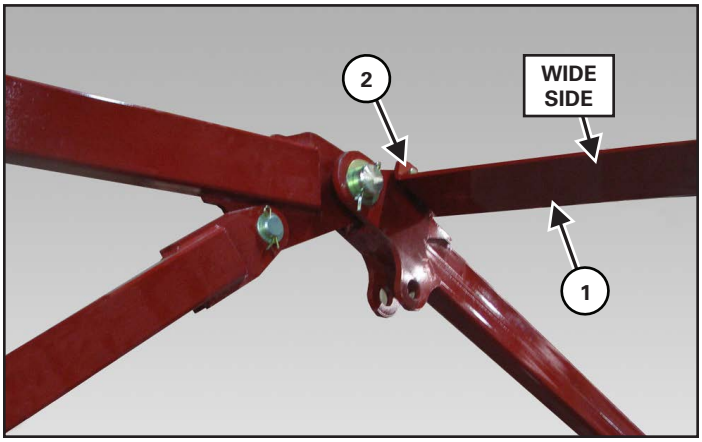
Figure 104



The truss support brackets (Item 1) have one, two, three or four notches and are different lengths **[Figure 104]**.

The truss support brackets are also angled on the ends and must be installed correctly.

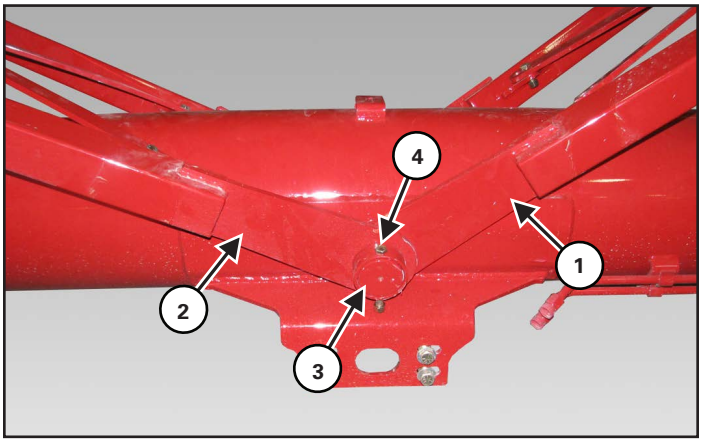
Figure 105



Place the truss support bracket (one notch) (Item 1) between the left side and right side truss beams (wide side of support bracket toward the top tube) **[Figure 105]**.

Install two 1/2" x 1-3/4" bolts (Item 2) and lock nut on each side. Do not tighten at this time **[Figure 105]**.

Figure 106



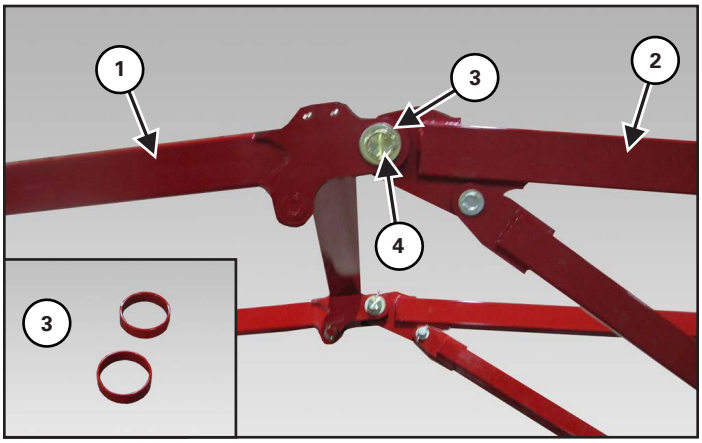
Install the truss beam (Items 1 & 2) onto the tube #2 truss beam mount **[Figure 106]**.

NOTE: The lower truss beam (Item 1) must be installed onto the truss beam mount first (both sides).

Install the undercarriage pin sleeve (Item 3), 1/2" x 4-1/2" bolt and 1/2" lock nut (Item 4). Tighten lock nut and bolt **[Figure 106]**.

Repeat procedure on the opposite side.

Figure 107

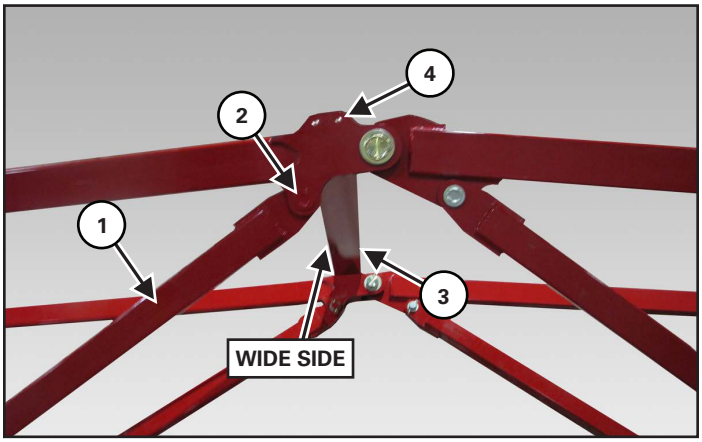


Raise the truss beams (Items 1 & 2) **[Figure 107]**.

Align the truss beams and place the truss spacers (Item 3) on each side of the truss beam, install the truss pin (Item 4), 2" x 10 ga. narrow rim washer and 5/16" x 3" cotter pin **[Figure 107]**.

Repeat procedure on the opposite side.

Figure 108



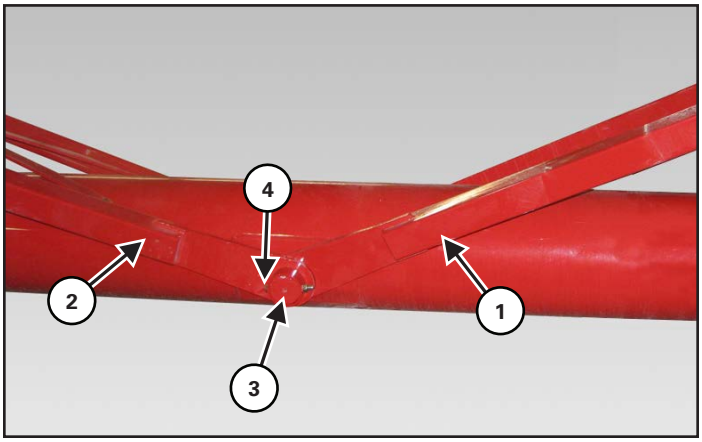
Raise and align the truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin **[Figure 108]**.

Repeat procedure on the opposite side.

Place the truss support bracket (two notches) (Item 3) between the left side and right side truss beams (wide side of support bracket toward the top tube) **[Figure 108]**.

Install two 1/2" x 1-3/4" bolts (Item 4) and lock nut on each side. Do not tighten at this time **[Figure 108]**.

Figure 109



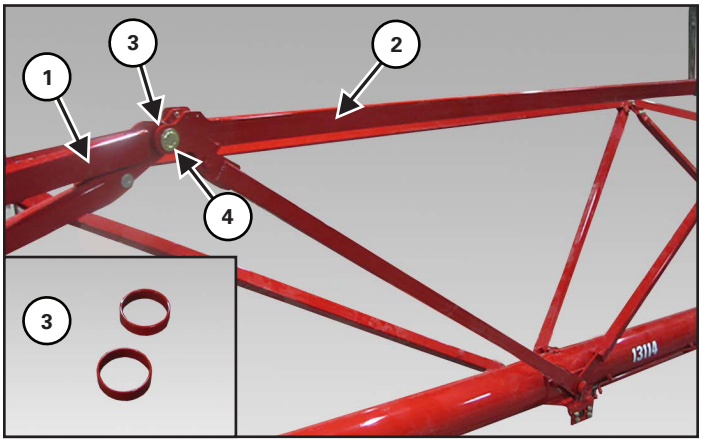
Install the truss beam (Items 1 & 2) onto the tube #3 truss beam mount **[Figure 109]**.

NOTE: The lower truss beam (Item 1) [Figure 110] must be installed onto the truss beam mount first (both sides).

Install the undercarriage pin sleeve (Item 3), 1/2" x 4-1/2" bolt and 1/2" lock nut (Item 4). Tighten lock nut and bolt **[Figure 109]**.

Repeat procedure on the opposite side.

Figure 110

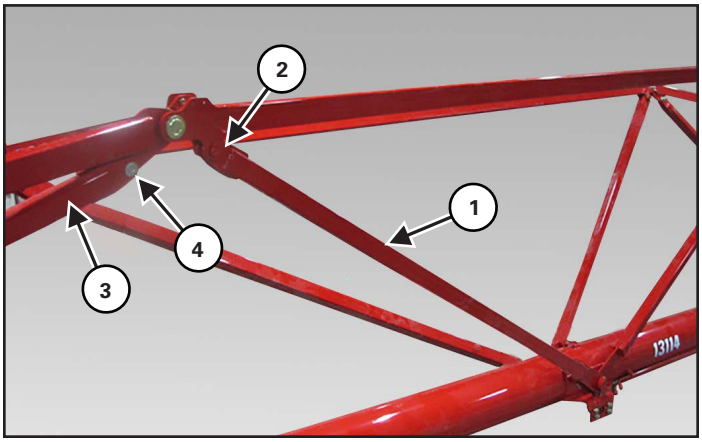


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) **[Figure 110]**.

Place the truss spacers (Item 3) on each side of the truss beam, install the truss pin (Item 4), 2" x 10 ga. narrow rim washer and 5/16" x 3" cotter pin **[Figure 110]**.

Repeat procedure on the opposite side.

Figure 111



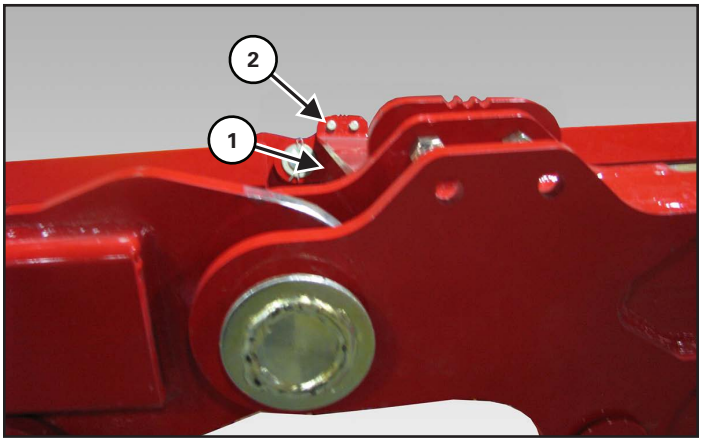
Raise and align truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin **[Figure 111]**.

Repeat procedure on the opposite side.

Raise and align truss beam (Item 3), install the 1-1/4" pin (Item 4), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin **[Figure 111]**.

Repeat procedure on the opposite side.

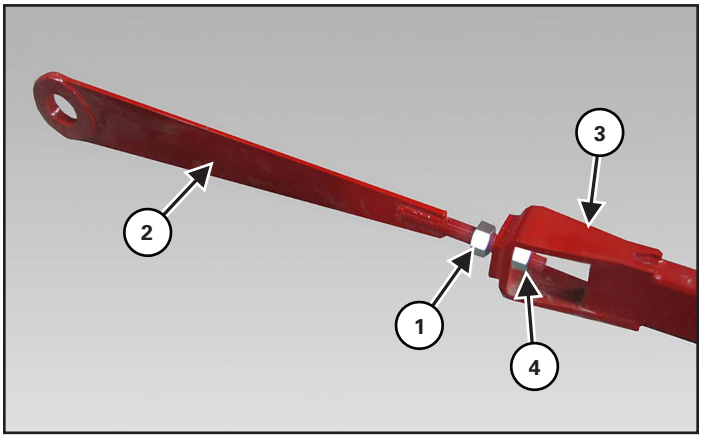
Figure 112



Place the truss support bracket (three notches) (Item 1) between the left side and right side truss beams (wide side of support bracket toward the lower tube) **[Figure 112]**.

Install two 1/2" x 1-3/4" bolts (Item 2) and lock nut on each side. Do not tighten at this time **[Figure 112]**.

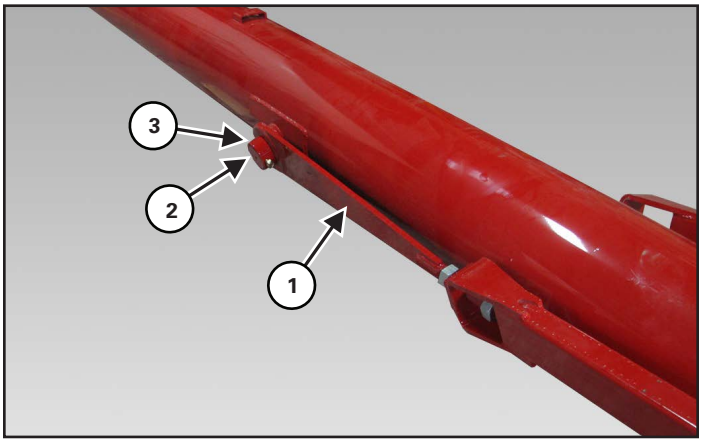
Figure 113



Install the 1-1/4″ nut (Item 1) onto the truss fastener (Item 2). Install the truss fastener into the truss beam (Item 3). Install the 1-1/4″ nut (Item 4) onto the truss fastener **[Figure 113]**.

Repeat procedure for the opposite side.

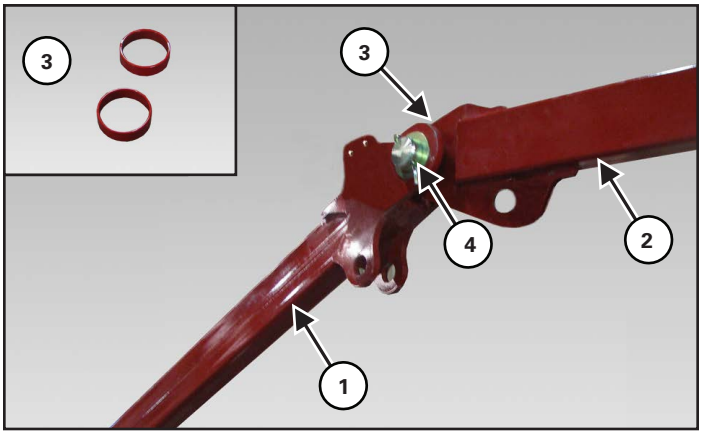
Figure 114



Install the truss fastener / beam assembly (Item 1) onto the upper tube #4 truss beam mount (Item 2) **[Figure 114]**.

Install the undercarriage pin sleeve (Item 3) and 1/2″ x 4-1/2″ bolt and 1/2″ lock nut. Tighten the bolt and lock nut **[Figure 114]**.

Figure 115

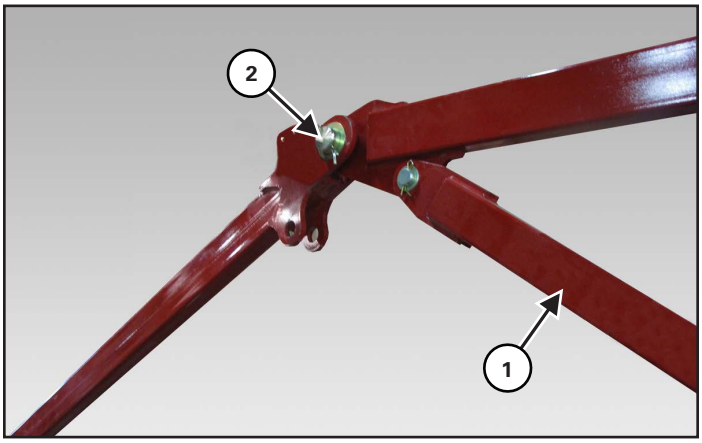


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) **[Figure 115]**.

Place the truss spacers (Item 3) on each side of the truss beam, install the truss pin (Item 4), 2″ x 10 ga. narrow rim washer and 5/16″ x 3″ cotter pin **[Figure 115]**.

Repeat procedure on the opposite side.

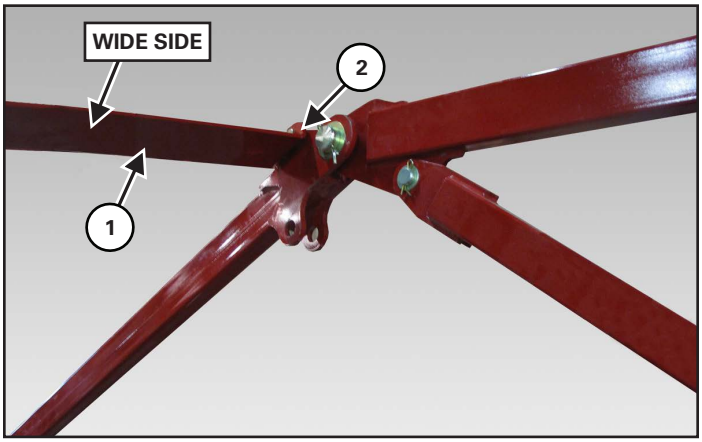
Figure 116



Raise and align truss beam (Item 1), install the 1-1/4″ pin (Item 2), 1-1/4″ narrow rim washer and 1/4″ x 2″ cotter pin **[Figure 116]**.

Repeat procedure on the opposite side.

Figure 117



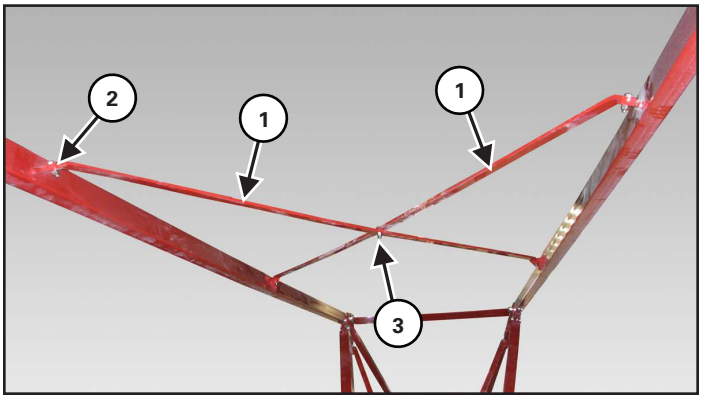
Place the truss support bracket (four notches) (Item 1) between the left side and right side truss beams (wide side of support bracket toward the lower tube) **[Figure 117]**.

Install two 1/2″ x 1-3/4″ bolts (Item 2) and lock nut on each side. Do not tighten at this time **[Figure 117]**.

Cross Brace Plate Assembly

See **"Trusss Brace Identification - 13114 Models" on page 42** for cross brace identification.

Figure 118

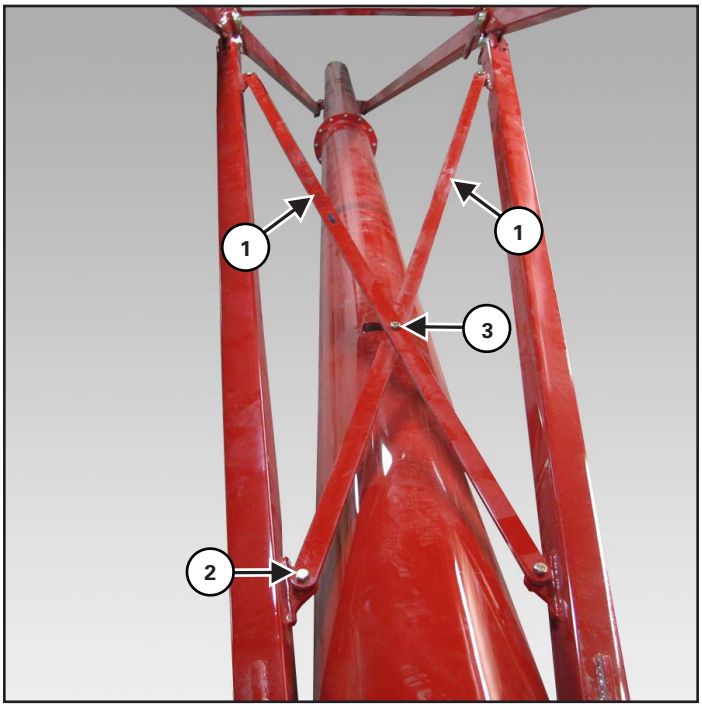


Align the cross brace plates (Item 1) diagonally with the tabs on the left side and right side truss beams **[Figure 118]**.

Install one 1/2″ x 1-1/2″ bolt (Item 2) and lock nut in each end of the cross brace plates **[Figure 118]**.

Install one 1/2″ x 1-1/2″ bolt (Item 3) through intersecting holes in cross plate braces **[Figure 118]**.

Figure 119



Align the cross brace plates (Item 1) diagonally with the tabs on the left side and right side truss beams **[Figure 119]**.

Install one 1/2″ x 1-1/2″ bolt (Item 2) and lock nut in each end of cross brace plate **[Figure 119]**.

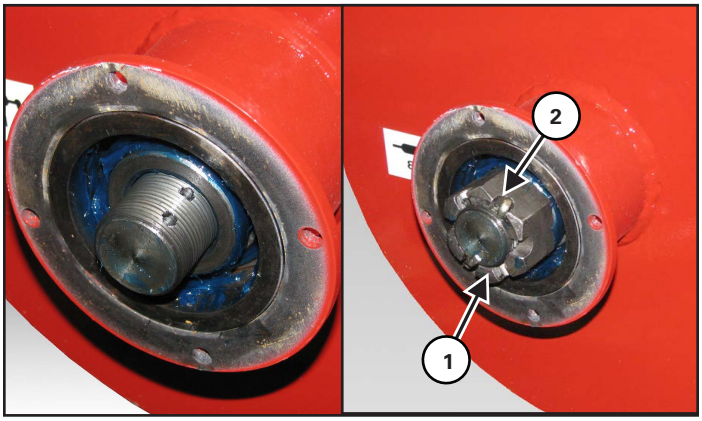
Install one 1/2″ x 1-1/2″ bolt (Item 3) through intersecting holes in cross plate braces. Do not tighten at this time **[Figure 119]**.

Repeat procedure for all cross brace plates.

Tighten all cross brace bolts.

NOTE: The following images may not show your exact bearing assembly as it appears but the procedure is correct.

Figure 120



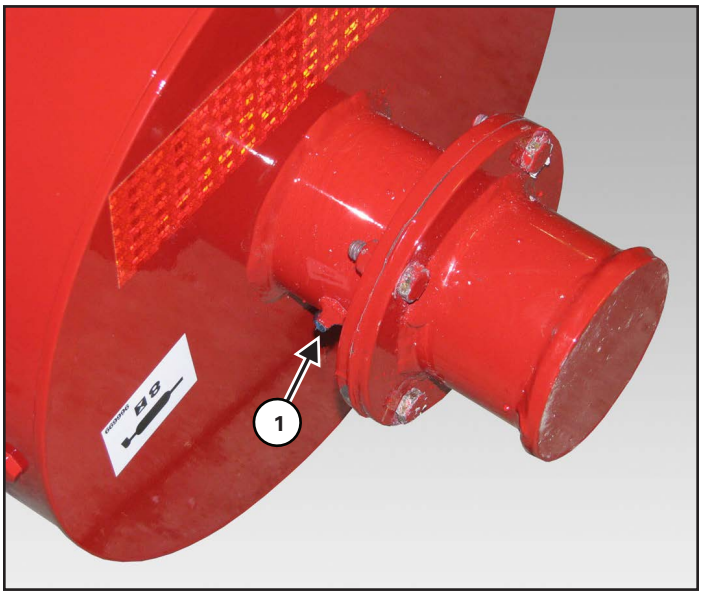
NOTE: The castle nut has been removed in the left picture to show cotter pin hole options.

With the tube assembly complete, tighten the castle nut (Item 1) until the castle nut contacts the washer / flighting shaft (Item 2) **[Figure 120]**.

Check for cotter pin hole in the shaft. Tighten or back the castle nut off (applying some tension on the flighting) until the closest cotter pin hole(s) is exposed.

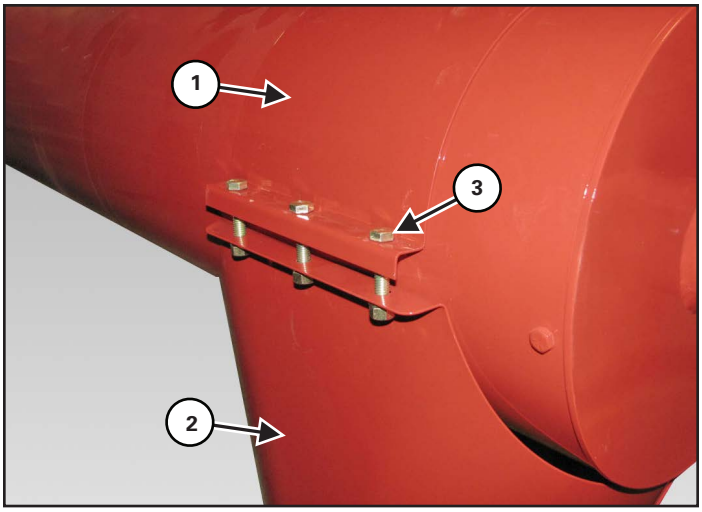
Install the cotter pin.

Figure 121



Apply eight pumps of grease to the flighting bearing assembly (Item 1) **[Figure 121]**.

Figure 122

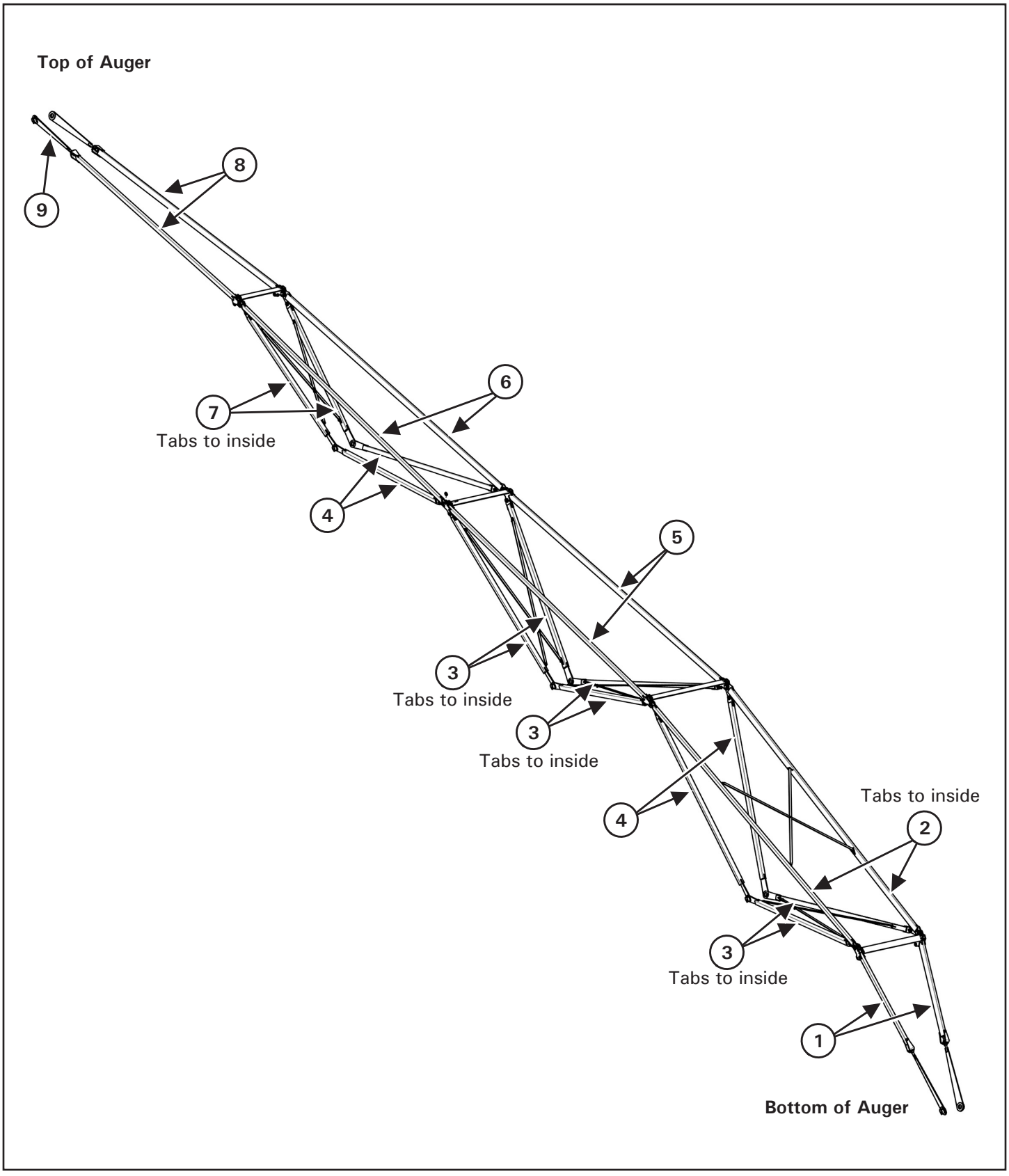


Align the spout clamp (Item 1) and discharge spout (Item 2) with discharge opening in the top tube **[Figure 122]**.

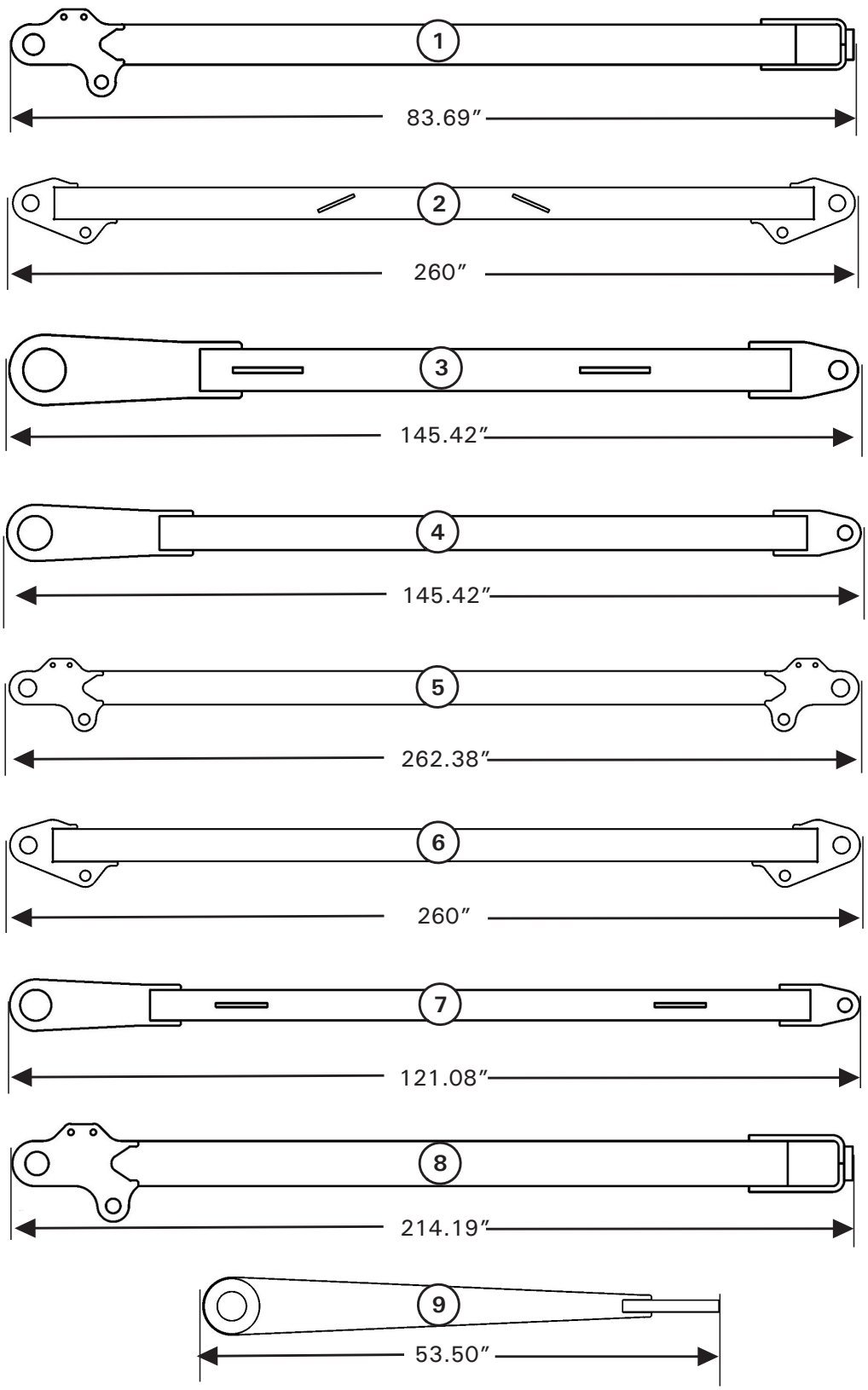
Install the six 3/8" x 2" bolts (Item 3) and 3/8" lock nuts. Tighten bolts and lock nuts evenly until the discharge spout contacts the top tube **[Figure 122]**.

Trusss Beam Identification - 13114 Models

Figure 123

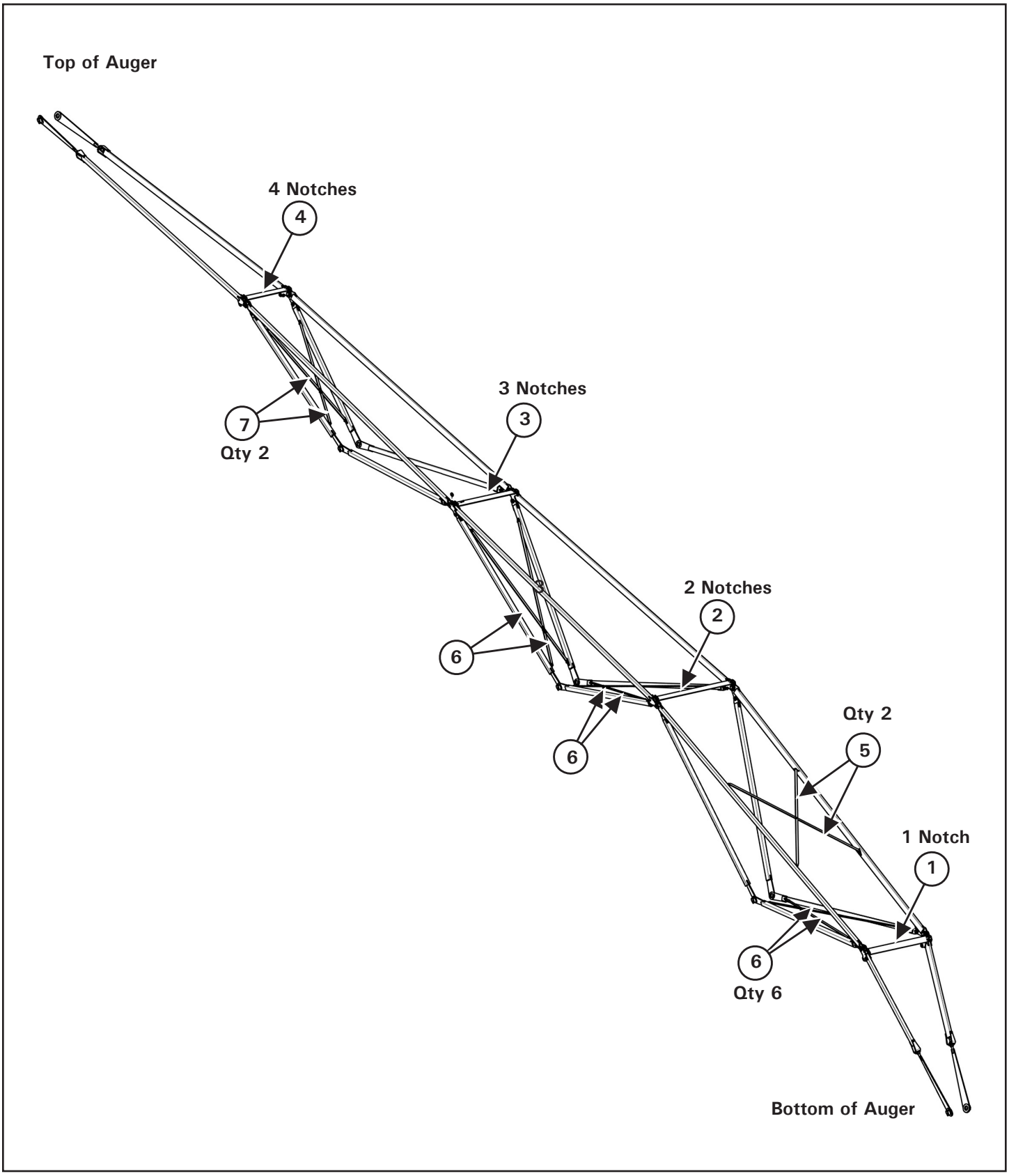


Truss Beams **[Figure 123]**

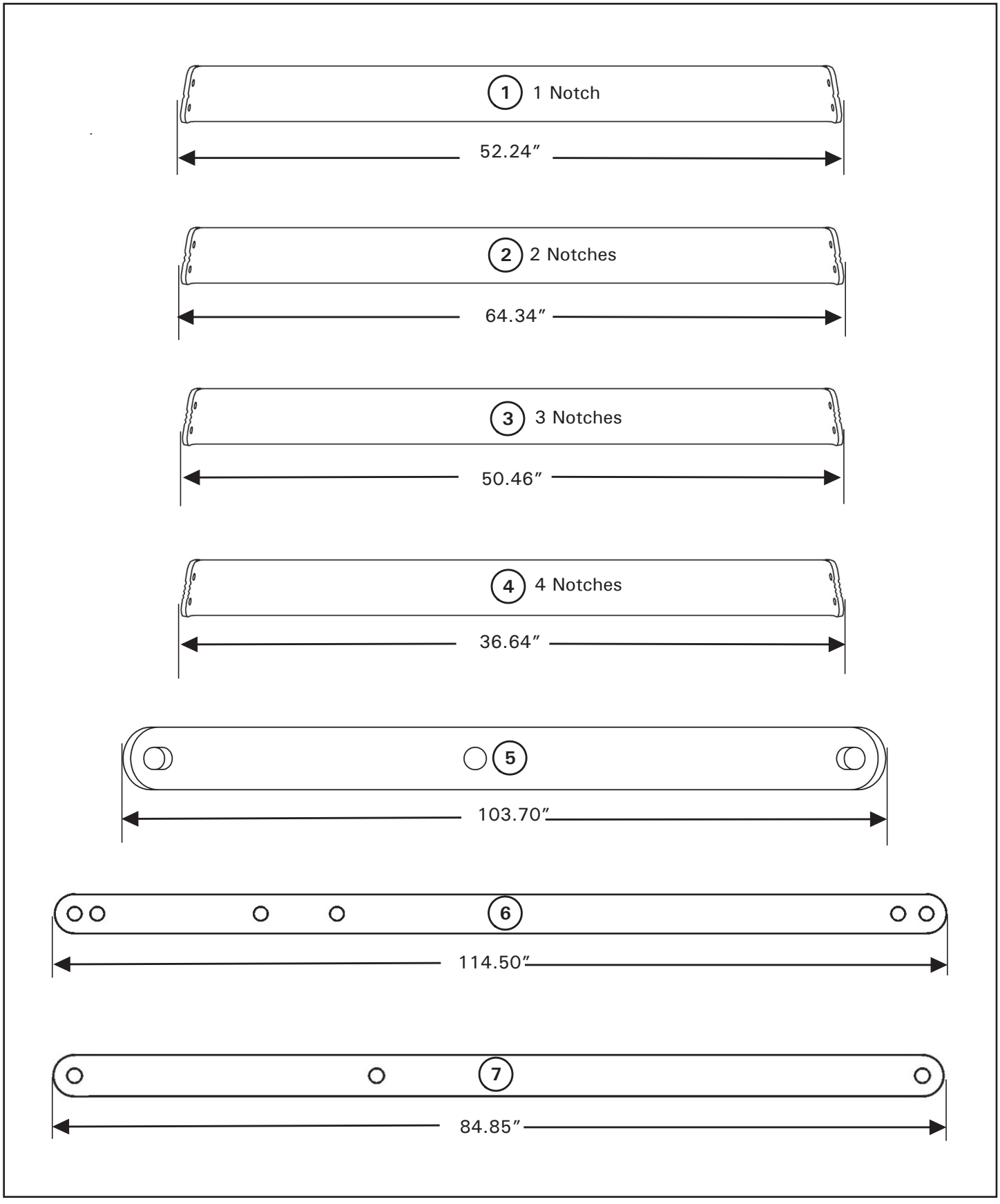


Trusss Brace Identification - 13114 Models

Figure 124



Truss Braces **[Figure 124]**



TUBE AND UNDERCARRIAGE - 1370, 1385, 1395 MODELS

Install the tube on the undercarriage on a flat level surface.

WARNING

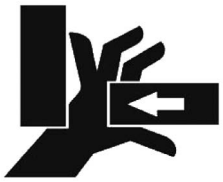
DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling components.

WARNING



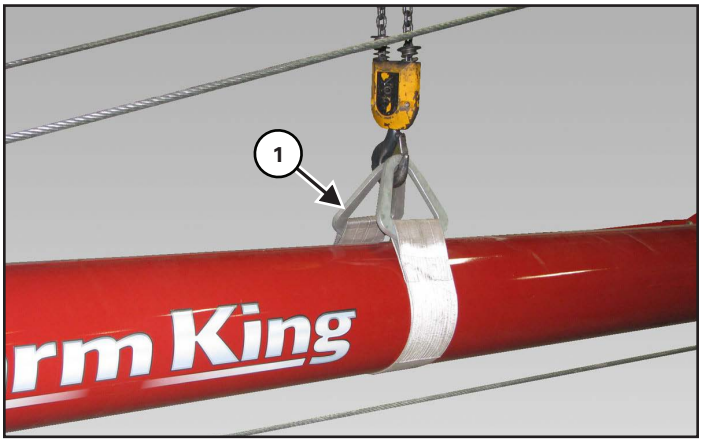
AVOID INJURY OR DEATH

Keep fingers and hands out of pinch points when assembling the equipment.

IMPORTANT

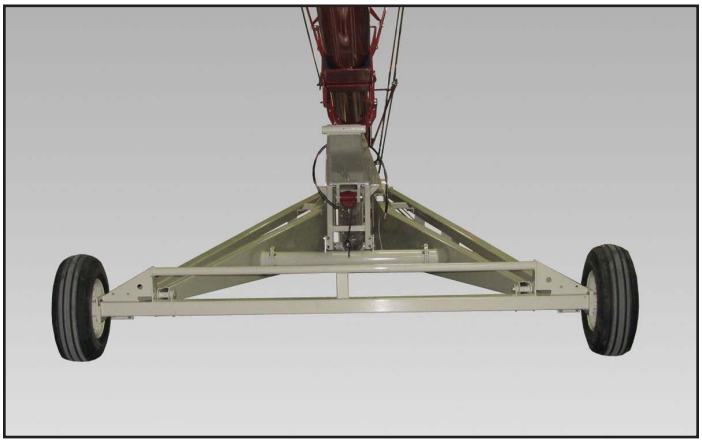
Fully tighten all tube assembly hardware before installing the tube assembly onto the undercarriage.

Figure 125



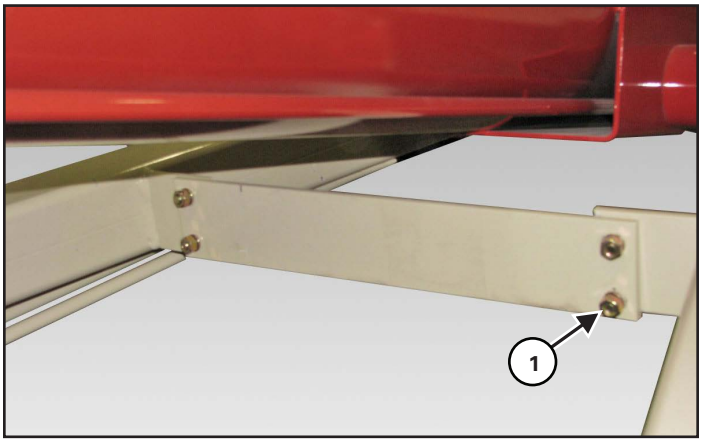
With the strap (Item 1) installed around the center tube and connected to an approved lifting device, raise the tube assembly high enough to allow the undercarriage to be moved under the tube assembly **[Figure 125]**.

Figure 126



Move the undercarriage into position below the tube assembly **[Figure 126]**.

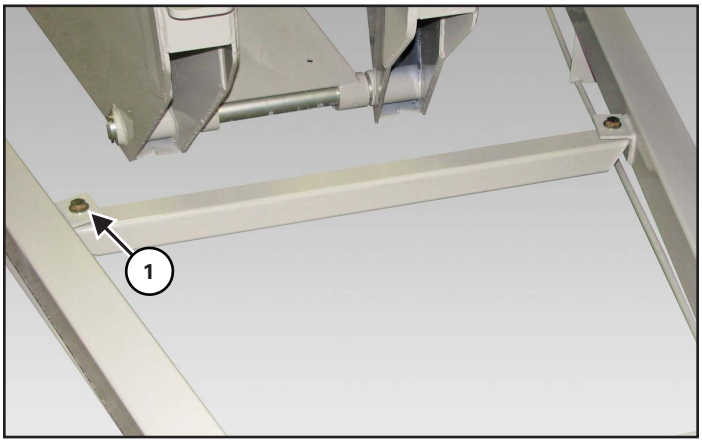
Figure 127



Remove the two 7/16" x 1-1/2" bolts (Item 1), 7/16" lock nut and 7/16" flat washers from the undercarriage tie plate.

NOTE: Loosening the undercarriage tie plate will allow the RH & LH undercarriage arms to be moved during installation to the tube assembly.

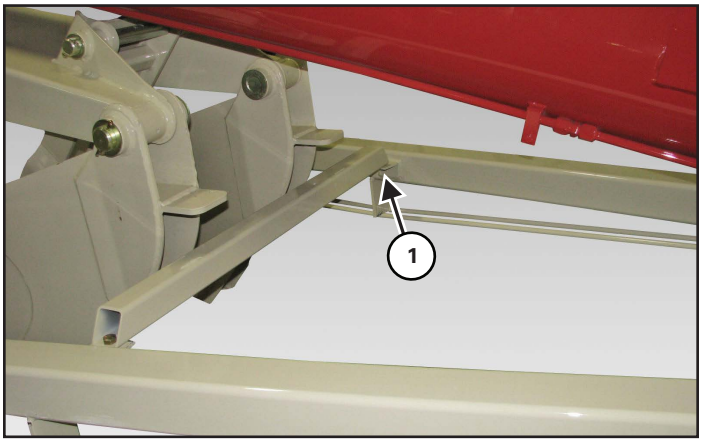
Figure 128



Remove the 5/8" x 1-3/4" bolt (Item 1), 5/8" lock nut and 5/8" flat washer from the lift arm cradle. Rotate the lift arm cradle away from the LH undercarriage arm **[Figure 128]**.

NOTE: Loosening the lift arm cradle will allow the RH & LH undercarriage arms to be moved during installation to the tube assembly.

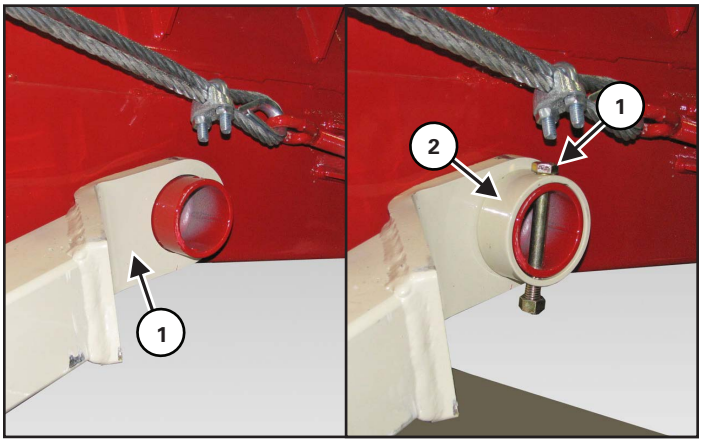
Figure 129



Remove the 5/8" x 1-3/4" bolt (Item 1), 5/8" lock nut and 5/8" flat washer from the lift arm cradle. Rotate the lift arm cradle away from the LH undercarriage arm **[Figure 129]**.

NOTE: Loosening the lift arm cradle will allow the RH & LH undercarriage arms to be moved during installation to the tube assembly.

Figure 130

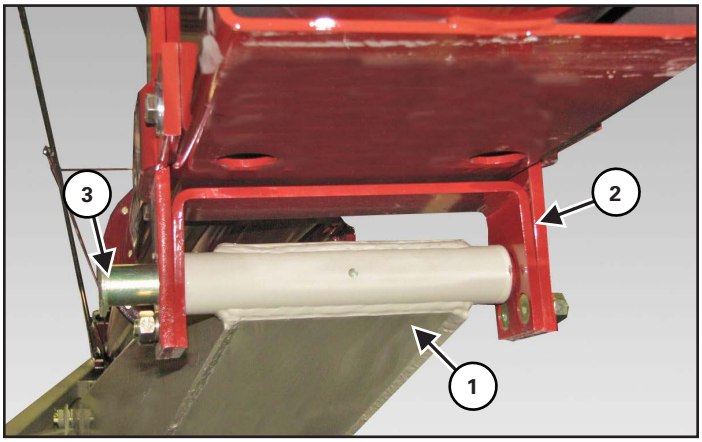


Fully install the RH & LH undercarriage arms (Item 1) onto the mounts of the bottom tube section **[Figure 130]**.

Install the undercarriage pin sleeve (Item 2), align holes and install one 1/2" X 4-1/2" bolt (Item 3) through the sleeve and mount of the bottom tube section. Install one 1/2" lock nut on the bolt and tighten (both sides) **[Figure 130].**

Reinstall the two 7/16" x 1-1/2" bolts (Item 1), 7/16" lock nuts and 7/16" flat washers. Do not tighten bolts and lock nuts at this time **[Figure 130]**.

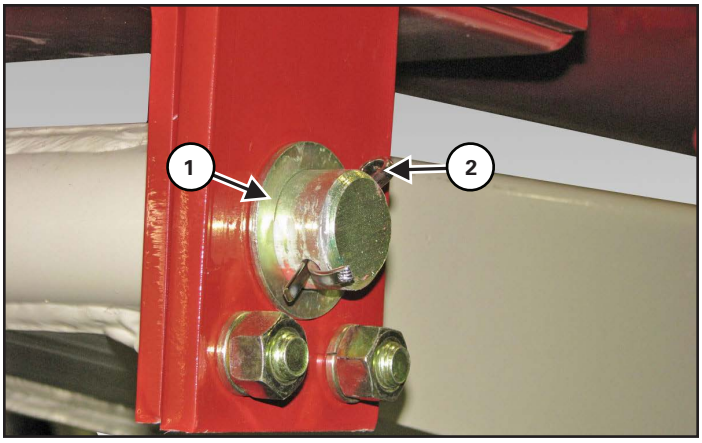
Figure 131



Align upper lift arm (Item 1) with the main bridging yoke (Item 2) on the center tube section **[Figure 131]**.

Install the lift arm pivot pin (Item 3) [Figure 130] through the main bridging yoke and upper lift arm **[Figure 131]**.

Figure 132

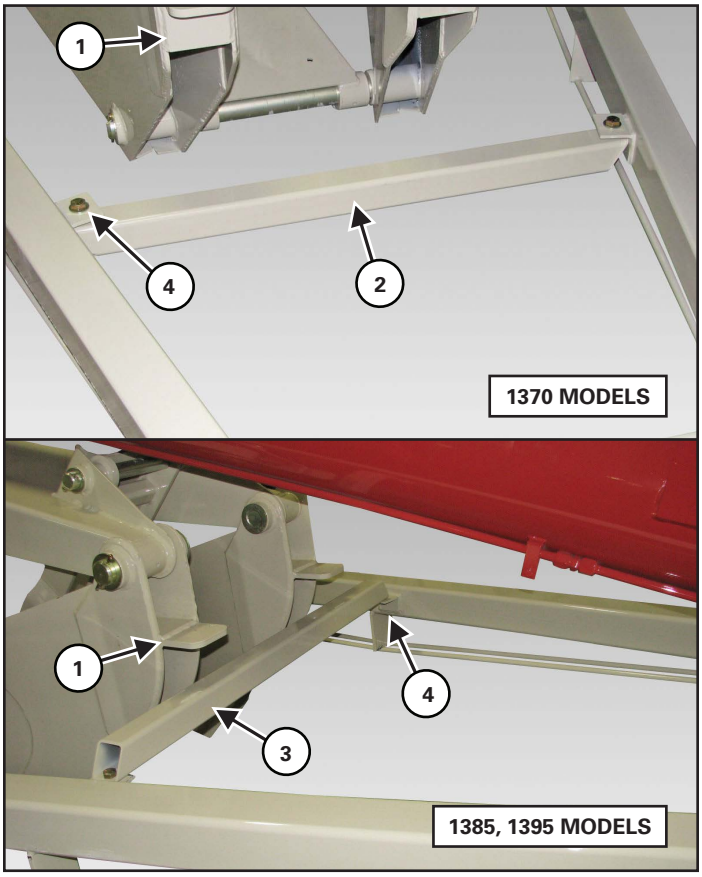


Install one 1-1/2" x 10 ga. narrow rim washer (Item 1) and one 1/4" x 2" cotter pin (Item 2) through the lift arm pivot pin **[Figure 132]**.

IMPORTANT

Place chock blocks in front and behind the tires of the undercarriage to prevent the auger assembly from moving.

Figure 133



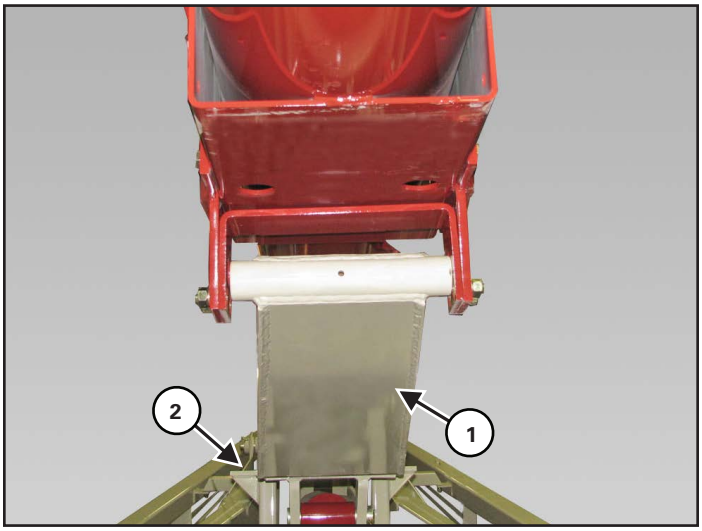
Install a strap around the lower lift arm (Item 1). Connect the strap to an approved lifting device and raise the lower lift arm assembly **[Figure 133]**.

1370 Models: Position the lift arm cradle (Item 2) under the undercarriage arm mount. Install bolt (Item 3) and lock nut **[Figure 133]**.

1385, 1395 Models: Position the lift arm cradle (Item 3) on top of the undercarriage arm mount. Install bolt (Item 4) and lock nut **[Figure 133]**.

Lower the lower lift arm assembly onto the lift arm cradle.

Figure 134



With the upper lift arm (Item 1) resting on the lift arm rest (Item 2) and cradle rest, verify that the tube assembly is centered left to right on the undercarriage **[Figure 134]**.

Adjust tube assembly as needed until the tube assembly is centered on the undercarriage.

Slightly raise the tube assembly above the undercarriage lift arm rest and cradle rest.

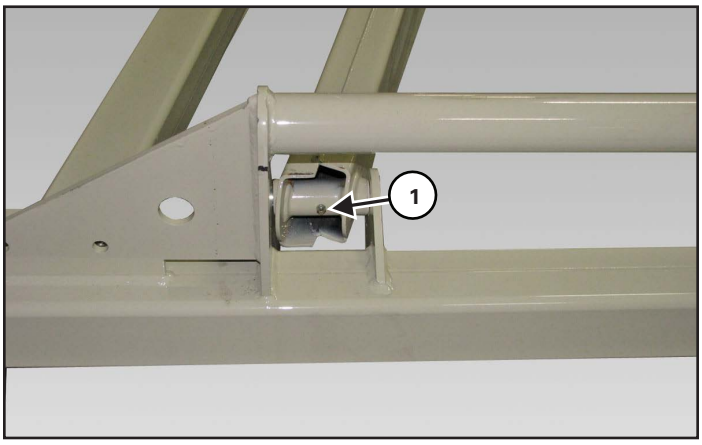
Tighten all remaining undercarriage bolts.

IMPORTANT

Fully tighten all undercarriage hardware before lowering the tube assembly onto the undercarriage.

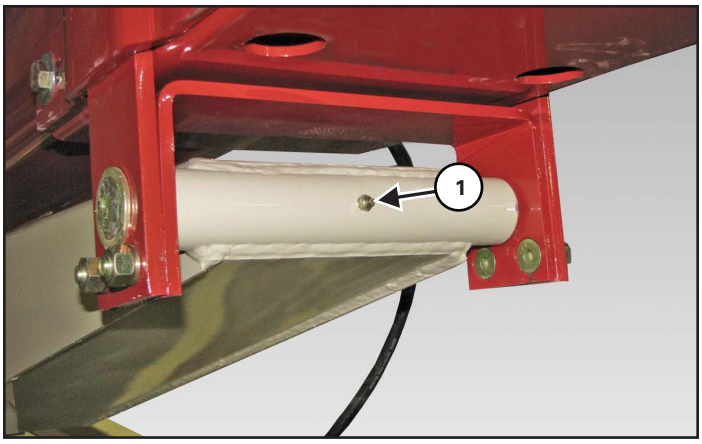
Lower tube assembly onto the undercarriage and remove the strap from tube assembly.

Figure 135



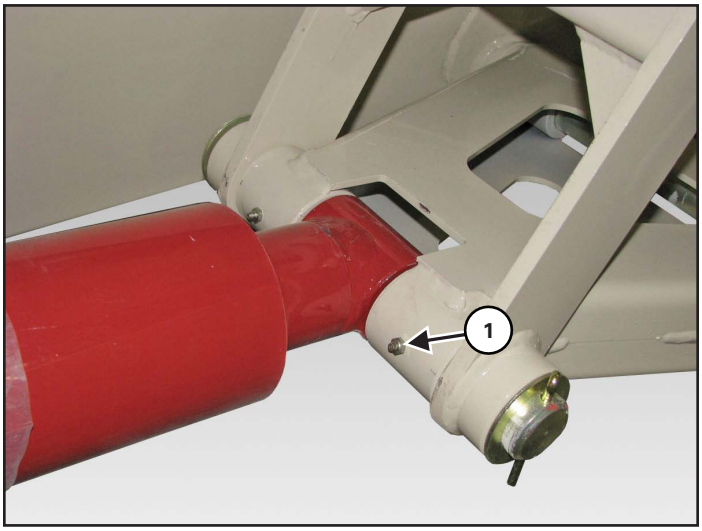
Install two grease zerks (Item 1) to the axle end of the LH & RH lower lift arms **[Figure 135]**.

Figure 136



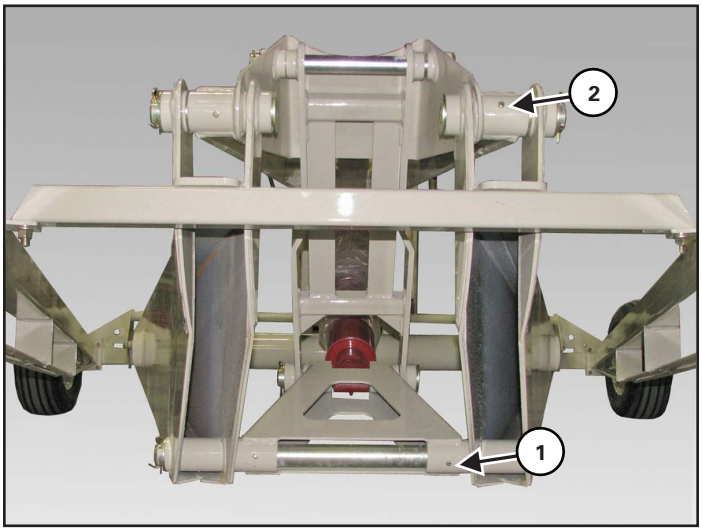
Install one grease zerk (Item 1) into the upper lift arm **[Figure 136]**.

Figure 137



Install two grease zerks (Item 1) into the connecting link **[Figure 137]**.

Figure 138



Install two grease zerks (Item 1) into the connecting link **[Figure 138]**.

Install two grease zerks (Item 2) into the upper lift arm **[Figure 138]**.

Grease all zerks on undercarriage.

IMPORTANT

Check over undercarriage, verify all bolts are tight, all zerks are greased and cotter pins bent over.

TUBE AND UNDERCARRIAGE - 13114 MODELS

Install the tube on the undercarriage on a flat level surface.

WARNING

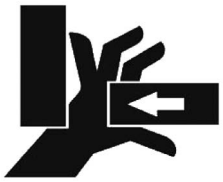
DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling components.

WARNING



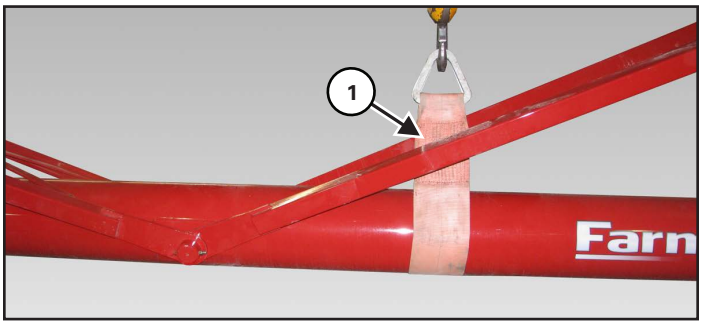
AVOID INJURY OR DEATH

Keep fingers and hands out of pinch points when assembling the equipment.

IMPORTANT

Fully tighten all tube assembly hardware before installing the tube assembly onto the undercarriage.

Figure 139



Attach one strap (Item 1) around the #3 tube. Attach another strap around the #1 tube. Straps must be connected to an approved lifting device **[Figure 139]**.

Make sure the length of the tube assembly is fully supported.

WARNING

AVOID INJURY OR DEATH

DO NOT attach straps to the individual trusses.

DO NOT attempt to lift the equipment using the trusses.

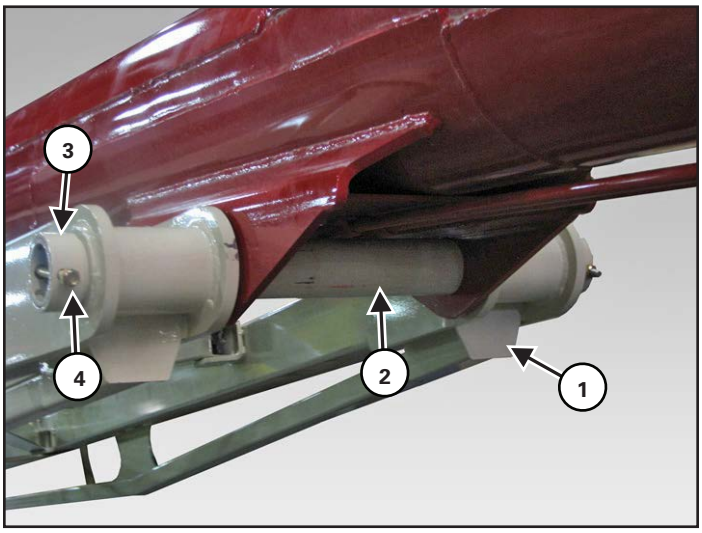
Tube and truss assembly is top heavy. Make sure assembly is properly secured to avoid tipping.

Raise the tube assembly high enough to allow the undercarriage to be moved underneath.

Figure 140

Move the undercarriage into position underneath the tube assembly **[Figure 140]**.

Figure 141

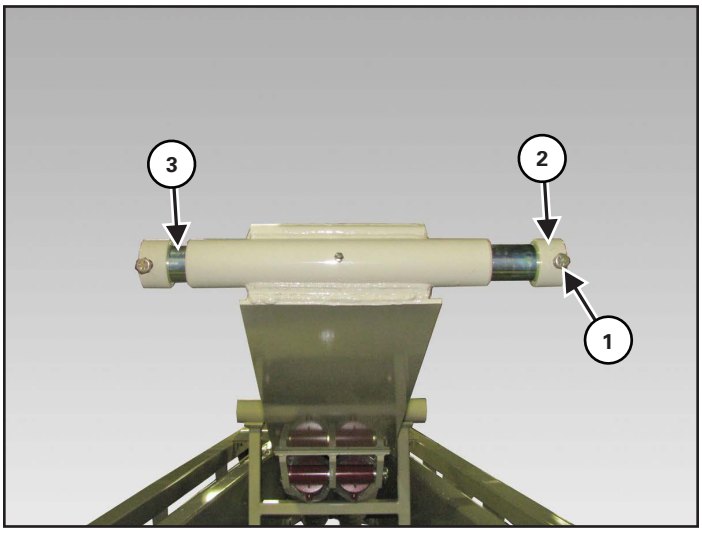


Raise the front of the undercarriage (Item 1) and align the holes of the undercarriage with the mount holes on the tube **[Figure 141]**.

Install the undercarriage lift arm pin (Item 2) through the left undercarriage arm, tube mount holes, and right undercarriage arm **[Figure 141]**.

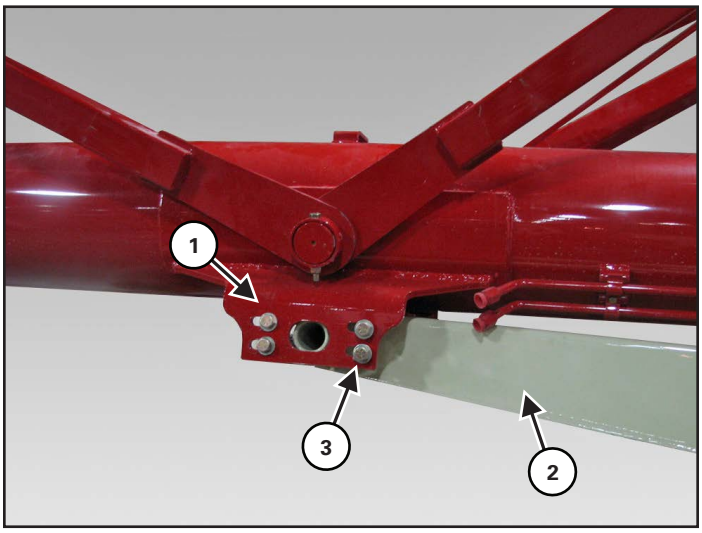
Install the collar (Item 3), 1/2" x 4-1/2" bolt and 1/2" lock nut (Item 4). Tighten the bolt and lock nut until the lock nut contacts the collar (both sides) **[Figure 141]**.

Figure 142



Remove the 1/2" x 3-1/2" bolt (Item 1), 1/2" lock nut, collar (Item 2) and upper lift arm pin (Item 3) **[Figure 142]**.

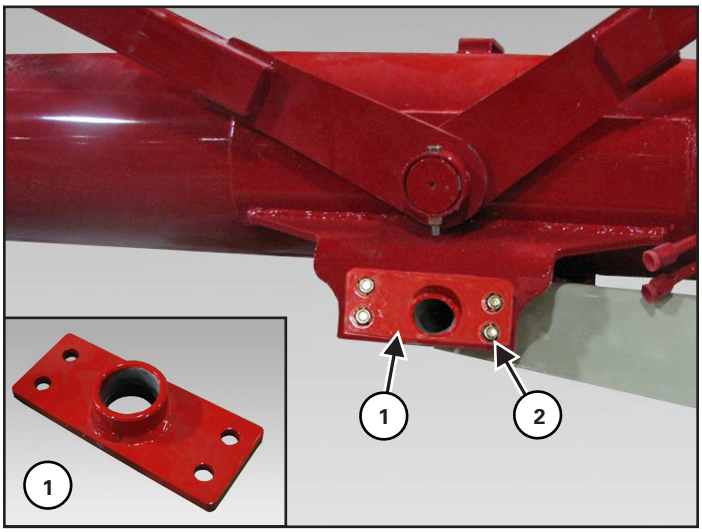
Figure 143



Lower the tube assembly and align the holes of the tube undercarriage mounting plate (Item 1) and upper lift arm (Item 2) **[Figure 143]**.

Remove the four nuts, bolts and washers (Item 3) (both sides) **[Figure 143]**.

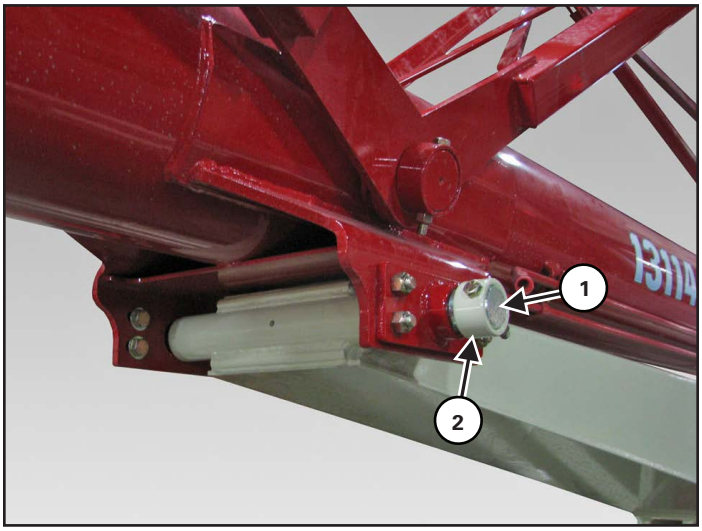
Figure 144



Install the plate (Item 1) using the bolts, washers and nuts just removed (both sides) **[Figure 144]**.

Install the bolts and flat washers into the slotted holes on the undercarriage mounting plate. Install lock nuts (Item 2) onto the bolts. Do not tighten at this time **[Figure 144]**.

Figure 145

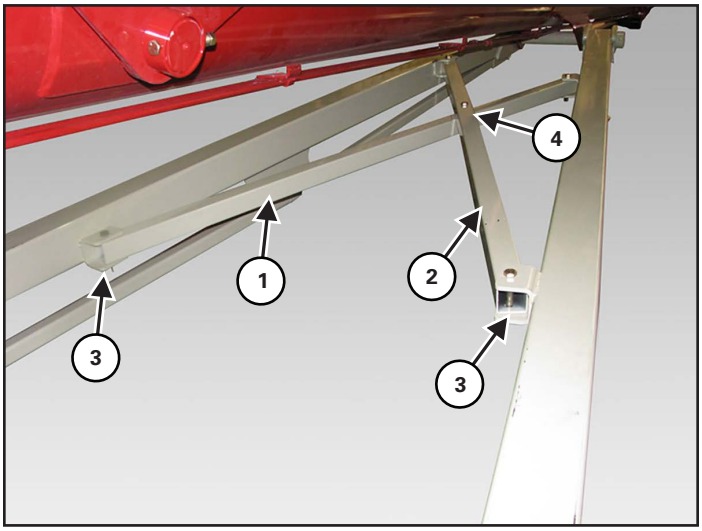


Install the upper lift arm pin (Item 1) through the bridging plate and upper lift arm **[Figure 145]**.

Install collar (Item 2), 1/2" x 3-1/2" bolt and 1/2" lock nut **[Figure 145]**.

Tighten the bolt and lock nut until the lock nut contacts the collar (both sides).

Figure 146



Align the cross brace tube (Item 1) with the lower cross brace mounts on the left and right undercarriage arms **[Figure 146]**.

Install a 5/8" x 4-1/2" bolt (Item 3) and lock nut. Do not tighten at this time **[Figure 146]**.

Align the cross brace tube (Item 2) with the upper cross brace mounts on the left and right undercarriage arms **[Figure 146]**.

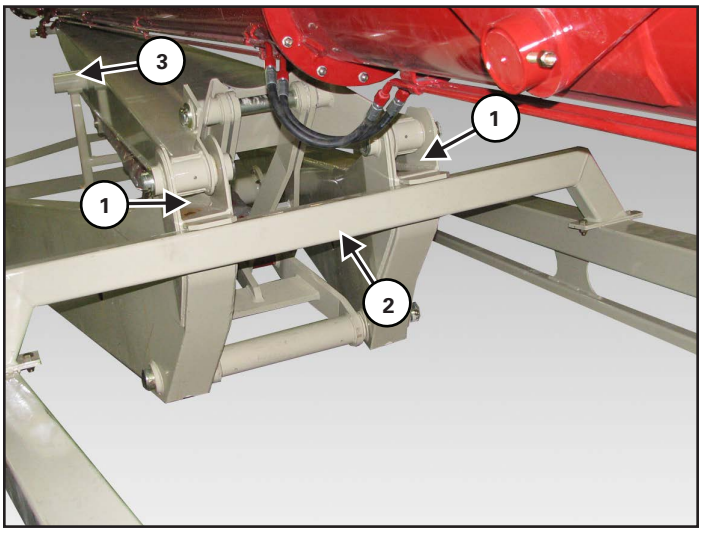
Install a 5/8" x 4-1/2" (Item 3) bolt and lock nut at each end. Do not tighten at this time **[Figure 146]**.

Install one 5-8" x 6" bolt (Item 4) through both cross braces and install a lock nut. Do not tighten at this time **[Figure 146]**.

IMPORTANT

Place chock blocks in front and behind the tires of the undercarriage to prevent the auger assembly from moving.

Figure 147



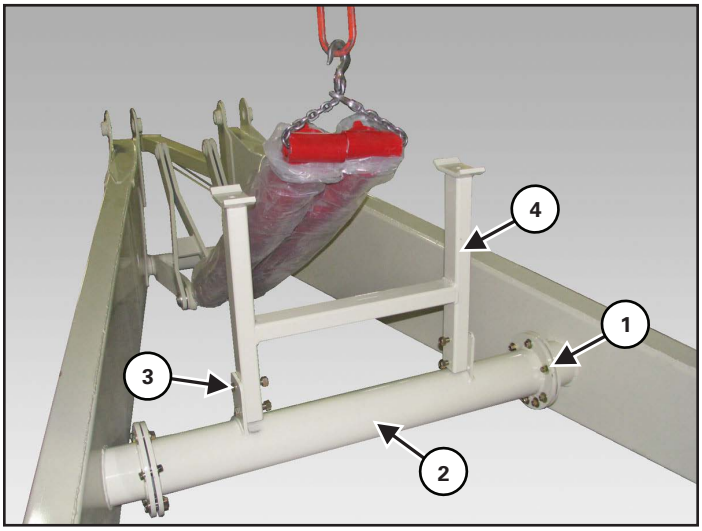
Lower the tube assembly until the upper lift arm (Item 1) is resting on the lift arm rest (Item 2) and cradle rest (Item 3) **[Figure 147]**.

With the upper lift arm resting on the lift arm rest and cradle rest, verify that the tube assembly is centered left to right on the undercarriage.

Adjust tube assembly as needed until the tube assembly is centered on the undercarriage.

Slightly raise the tube assembly above the undercarriage lift arm rest and cradle rest.

Figure 148



Tighten the sixteen 1/2″ bolts (Item 1) and nuts on the torque tube (Item 2) **[Figure 148]**.

Tighten the four 1/2″ bolts (Item 3) and nuts on the cradle rest (Item 4) **[Figure 148]**.

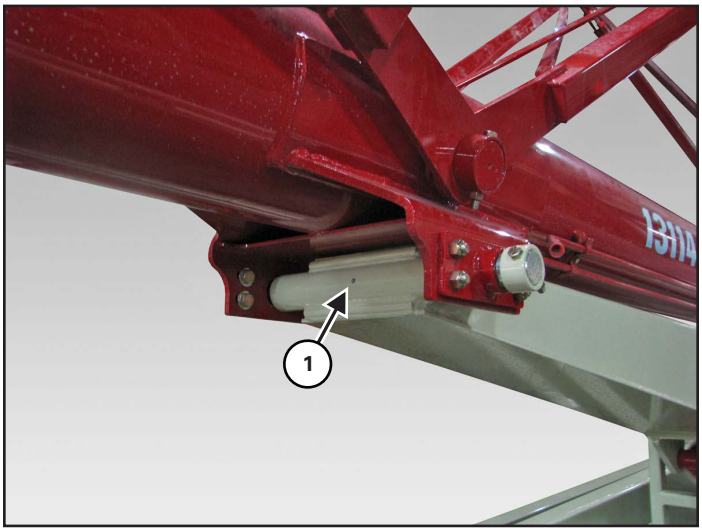
Tighten all remaining undercarriage bolts.

IMPORTANT

Fully tighten all tube assembly hardware before installing the tube assembly onto the undercarriage.

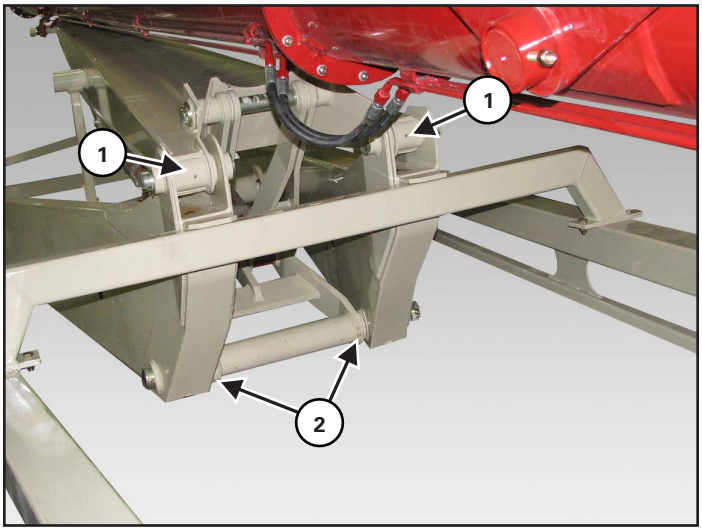
Lower tube assembly onto the undercarriage and remove the strap and lifting device from tube #3 and tube #1.

Figure 149



Install one grease zerk (Item 1) into the upper lift arm **[Figure 149]**.

Figure 150



Install two grease zerks (Item 1) into the upper lift arm **[Figure 150]**.

Install two grease zerks (Item 2) into the lower link pivot **[Figure 150]**.

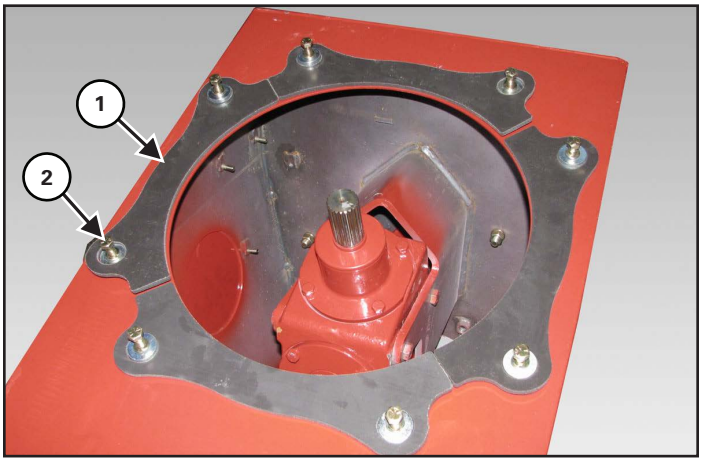
Grease all zerks on undercarriage.

IMPORTANT

Fully tighten all tube assembly hardware before installing the tube assembly onto the undercarriage.

INTAKE AUGER

Figure 151

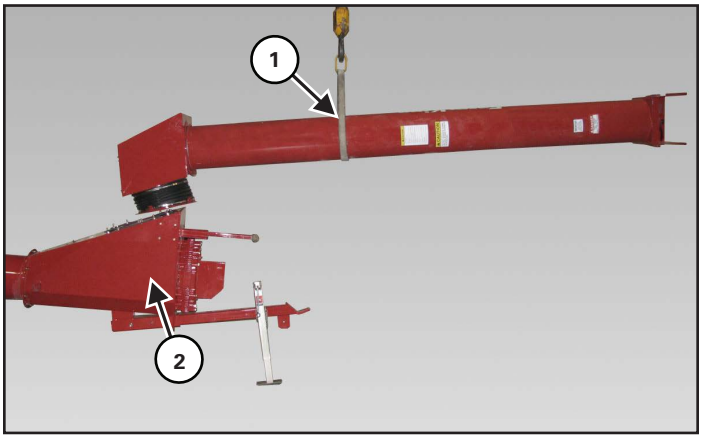


Install the intake spacers (Item 1) on the top of the input box **[Figure 151]**.

Attach each spacer using two 1/4" x 13/32" ID x 1-1/4" OD washers (Item 2) and two 3/8" x 1-1/2" bolts **[Figure 151]**.

Place the bolts only to keep the spacers in place. Do not tighten at this time.

Figure 152

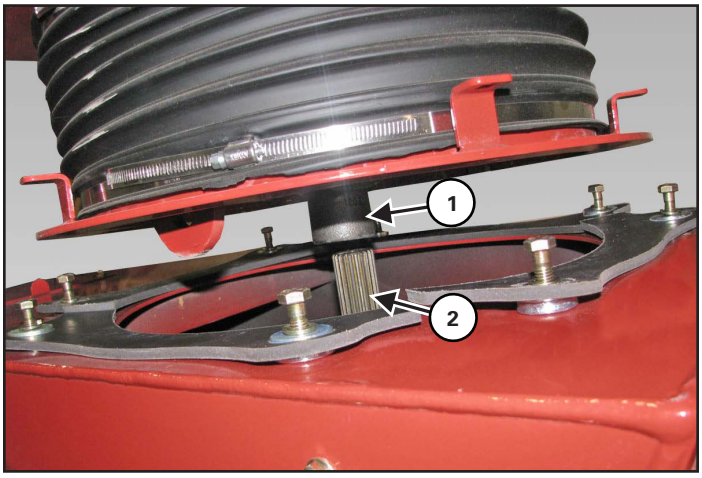


Install a strap (Item 1) around the intake auger **[Figure 152]**.

Connect the strap to an approved lifting device.

Raise the intake auger and position over the input box (Item 2) **[Figure 152]**.

Figure 153

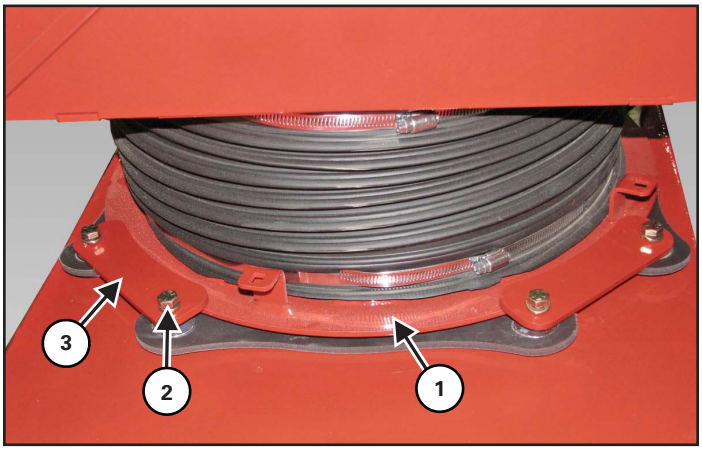


Lower the intake auger, align the u-joint (Item 1) with the top gearbox shaft (Item 2) of the input box **[Figure 153]**.

NOTE: Lubricate top gearbox shaft before lowering the intake auger onto the shaft.

Lower the intake auger onto the shaft.

Figure 154



Position the intake auger mounting plate (Item 1) on top of the spacers **[Figure 154]**.

Remove the bolts (Item 2) **[Figure 154]**.

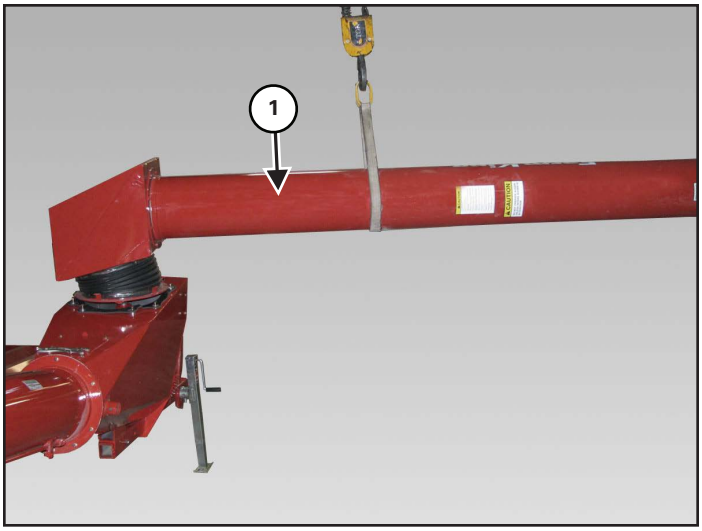
Align one ring clamp (Item 3) with two corner bolt holes. Reinstall the bolts (Item 2) **[Figure 154]**.

Repeat to install the remaining ring clamps.

Tighten the eight bolts.

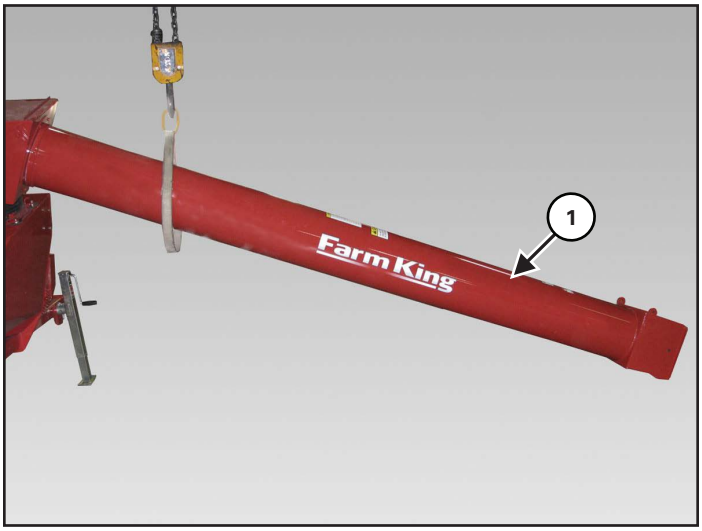
NOTE: The intake auger should rotate freely.

Figure 155



Rotate the intake auger (Item 1) 90° towards the right side of the auger **[Figure 155]**.

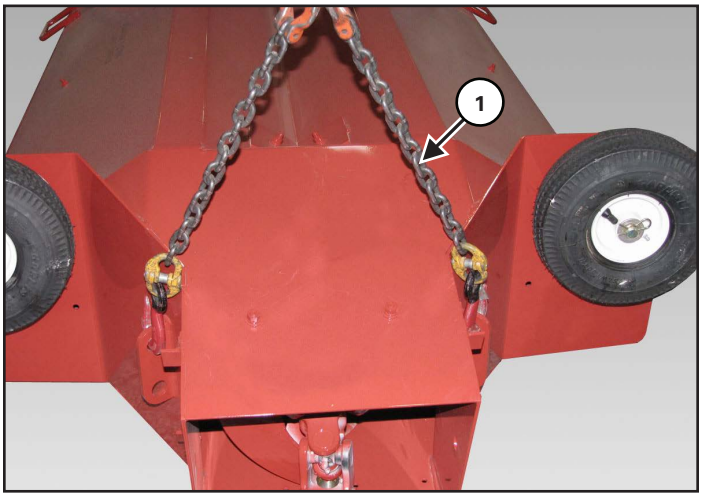
Figure 156



Lower the intake auger (Item 1) **[Figure 156]**.

HOPPER

Figure 157



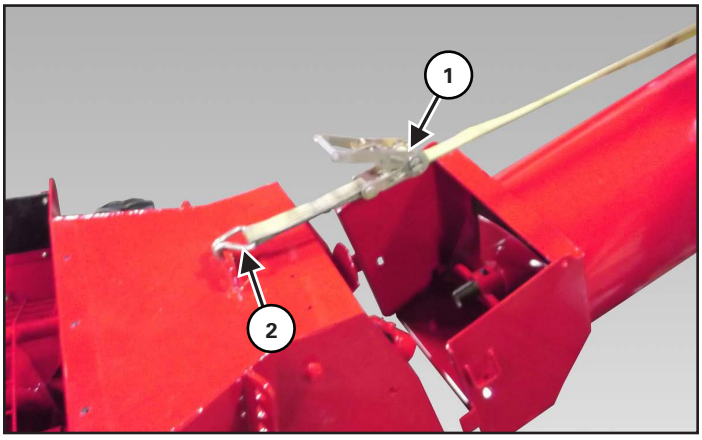
Install chains (Item 1) onto the hopper (Item 2) **[Figure 157]**.

Figure 158

Raise the hopper until vertical, then lower the hopper until the lower wheels contact the ground. Continue lowering, while guiding the hopper to the ground with all four wheels on the ground) **[Figure 158]**.

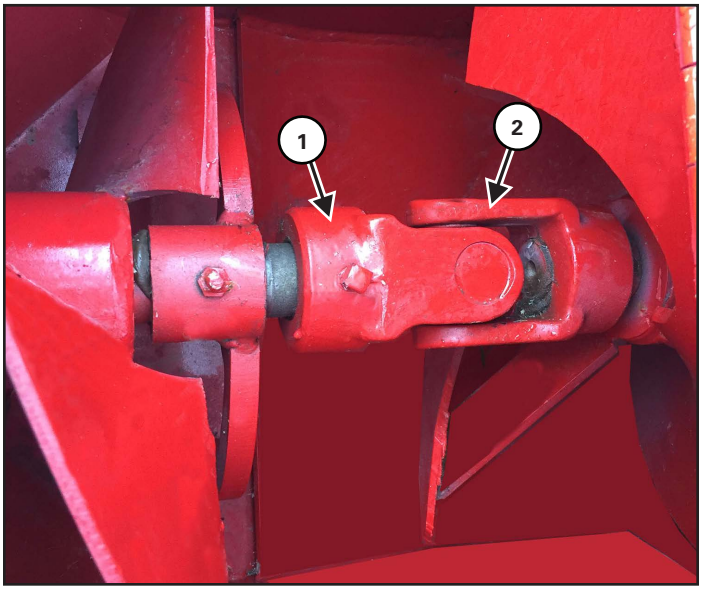
Adjust chains and move the hopper in front of the intake auger.

Figure 159



Install a ratchet strap (Item 1) onto the bracket (Item 2) on the top of the hopper (connect the opposite end of the ratchet strap to the mounting bracket on the top of the intake auger) **[Figure 159]**.

Figure 160



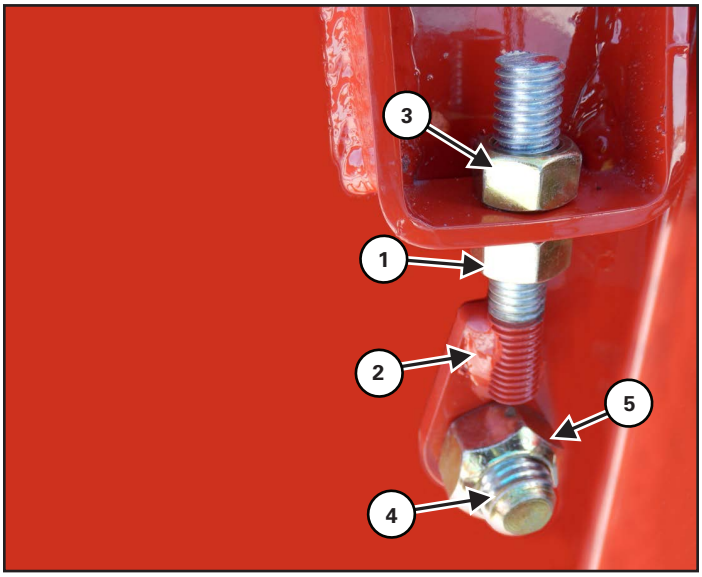
Install 0.313" square x 1.375" key onto the intake auger shaft.

Remove the two 3/8" x 3/4" set screws on hopper u-joint.

Tighten the ratchet strap, align the hopper u-joint (Item 1) with the shaft (Item 2) on the intake auger. Tighten the ratchet strap until the u-joint is all the way on the shaft **[Figure 160]**.

Apply thread locker to the two set screws, install and tighten against the key.

Figure 161



Align the mounting holes on the hopper and intake auger.

Thread one 1/2" nut (Item 1) onto the hopper adjustment bolt (Item 2), install the adjustment bolt up, into the bracket on the intake auger. Install a second 1/2" nut (Item 3) to hold the adjustment bolt in position **[Figure 161]**.

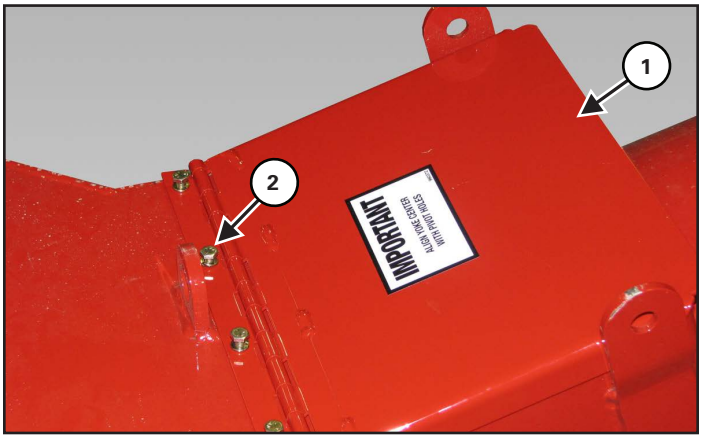
Install one 3/4" x 1-5/8" bolt (Item 4) (from inside) through the hopper, adjustment bolt and intake auger. Install one 3/4" lock nut (Item 5) onto the bolt **[Figure 161]**.

Repeat the procedure on the opposite side of the hopper and intake auger.

Tighten the bolt (Item 4) and lock nut first (both sides) **[Figure 161]**.

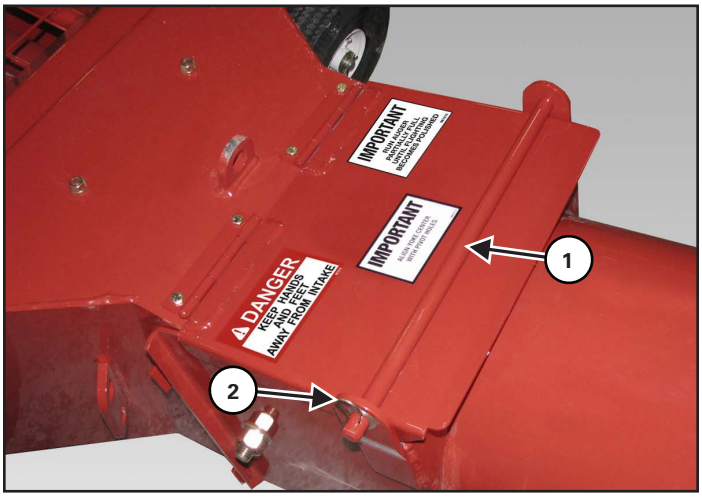
Tighten both adjustment bolts (Item 2) evenly **[Figure 161]**.

Figure 162



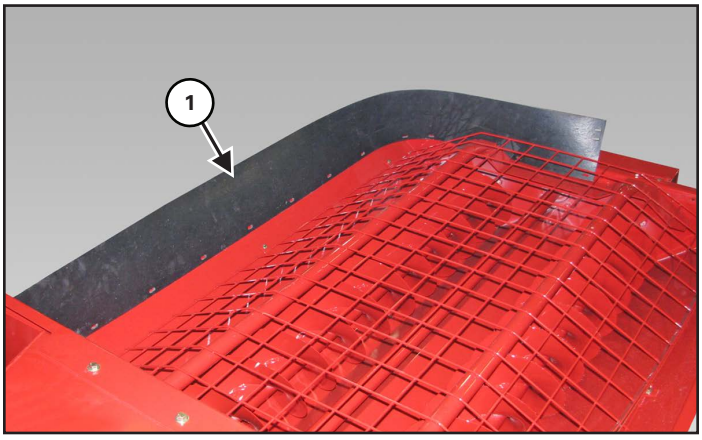
Align the hinged intake auger cover (Item 1) with the four mounting holes in the hopper. Install four 1/4″ x 3/4″ bolts (Item 2) and 1/4″ lock washers through the hinged intake auger cover and into the hopper. Tighten bolts **[Figure 162]**.

Figure 163



Install the pivot hopper lid rod (Item 1) 5/8″ flat washer and #7 hair pin clip (Item 2) **[Figure 163]**.

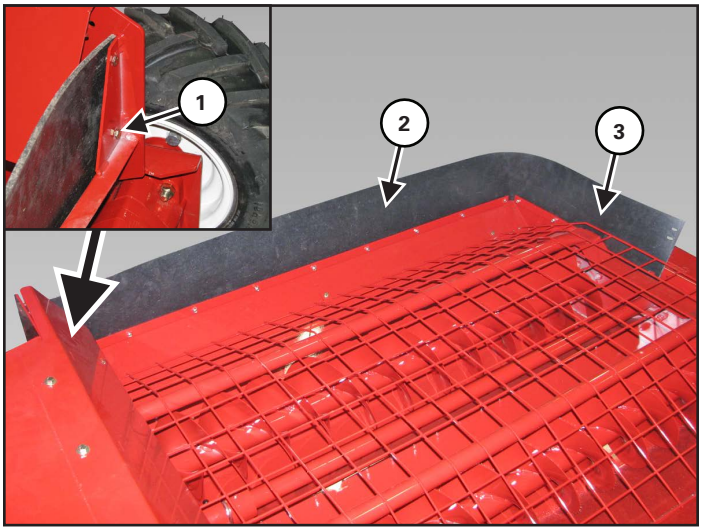
Figure 164



Place the rubber edge (Item 1) inside the outer flange of the hopper **[Figure 164]**.

NOTE: Install the rubber edge with the smooth side facing IN.

Figure 165



Align the end of the rubber edge with the two holes at the back of the hopper. Install two 1/4" x 1" bolts (Item 1) through the hopper and rubber edge. Install one 1/4" flat washer and 1/4" lock nut on each bolt (both ends) **[Figure 165]**.

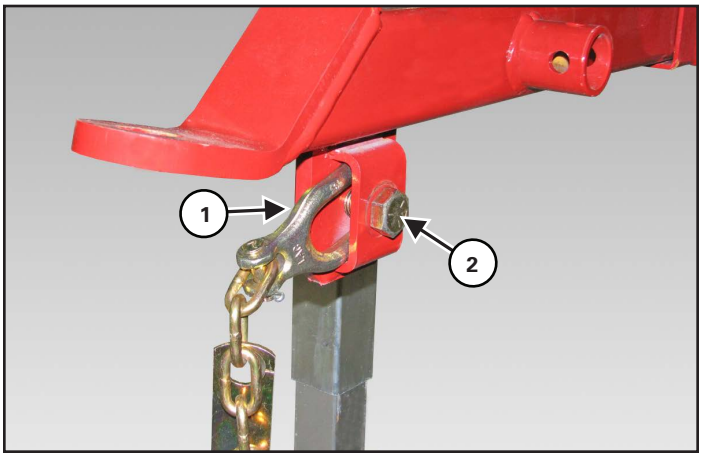
Align one long rubber reinforcement (Item 2) and one short rubber reinforcement (Item 3) with holes in the rubber edge and outer hopper flange (both sides). Install 1/4" x 1" bolts through the hopper, rubber edge and rubber reinforcements (install bolts from the outside of the hopper flange). Install a 1/4" lock nut on each bolt. Do not tighten bolts and lock nuts at this time **[Figure 165]**.

NOTE: When tightening the rubber edge bolts and lock nuts, tighten until the lock nut contacts the rubber reinforcements. Do not over tighten and cause the rubber reinforcements to become wavy.

Tighten all bolts and lock nuts to secure the rubber edge to the hopper.

SAFETY CHAIN

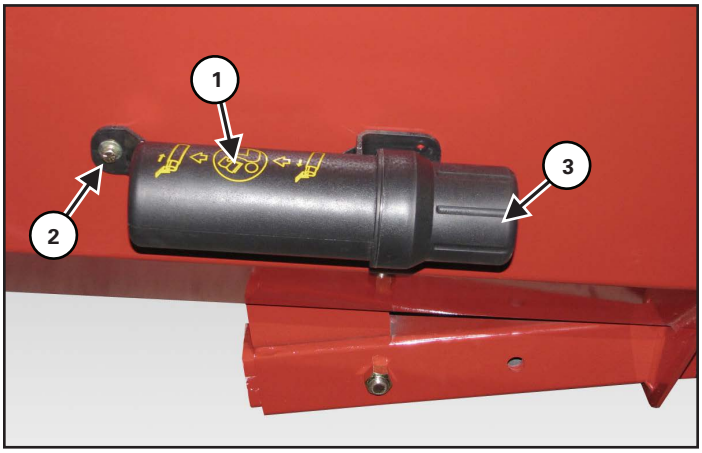
Figure 166



Install the safety chain loop (Item 1) into the opening on the bottom side of the hitch, install one 3/4" x 2-1/2" bolt (Item 2) through the hitch and safety chain loop. Install one 3/4" lock nut and tighten to secure the safety chain to the hitch **[Figure 166]**.

MANUAL HOLDER

Figure 167

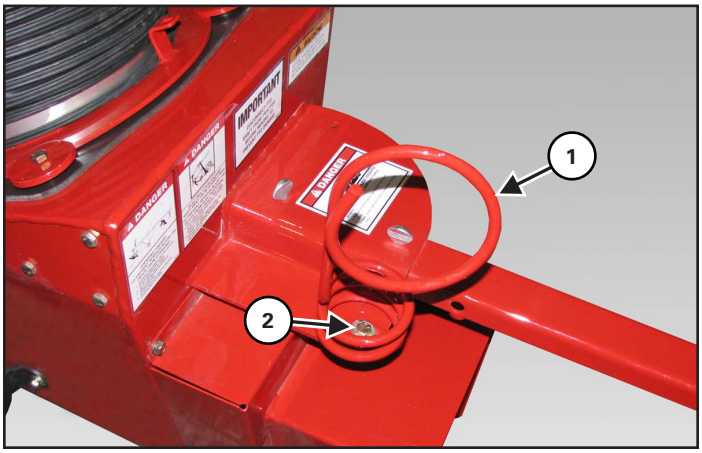


Align the manual holder (Item 1) with mounting holes on the right side of the input box **[Figure 167]**.

Attach using two 5/16" lock washers and two 5/16" x 3/4" bolts (Item 2). Install cap (Item 3) **[Figure 167]**.

HYDRAULIC HOSE HOLDER

Figure 168

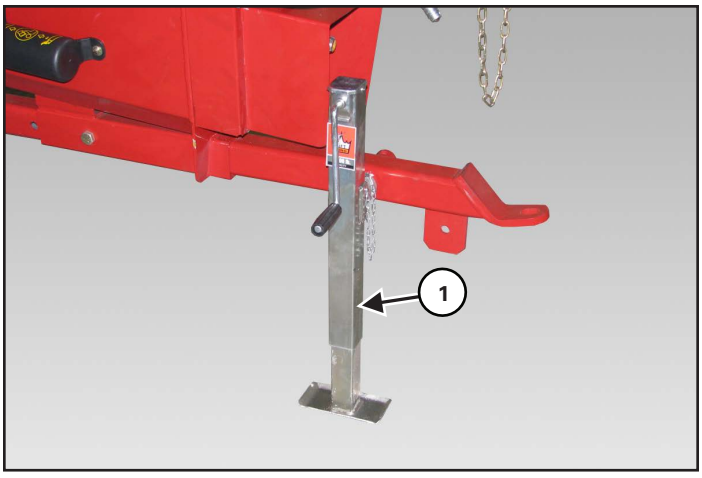


Install the hydraulic hose holder (Item 1) onto the mounting bracket located on the top of the gearbox (above the hitch) **[Figure 168]**.

Install one 3/8″ flat washer onto one 3/8″ x 1-1/4″ bolt (Item 2), install the bolt down through the storage bracket and mounting bracket. Install one 3/8″ lock nut on the bolt and tighten to secure the hydraulic hose holder to the gearbox **[Figure 168]**.

Jack Installation

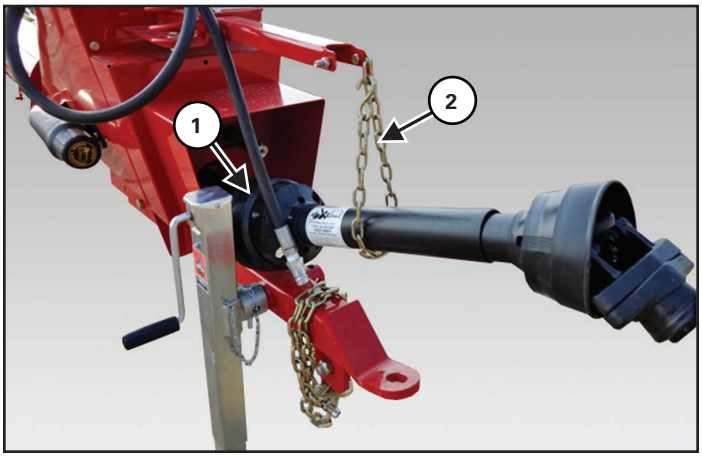
Figure 169



Align and install the jack (Item 1) onto the hitch (hopper side) **[Figure 169]**.

PTO DRIVELINE

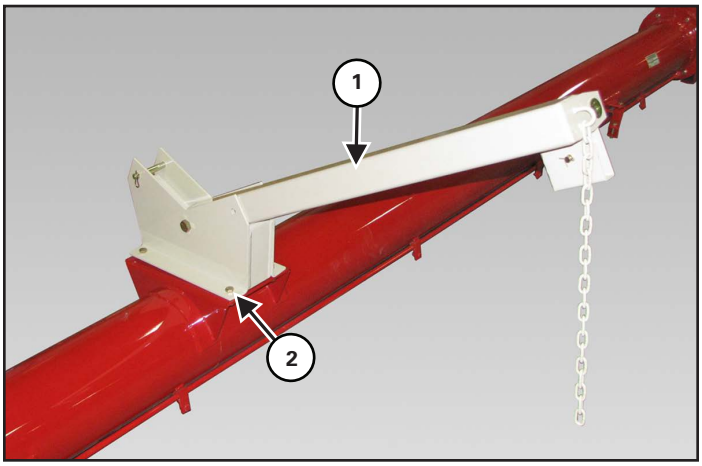
Figure 170



Push back on the collar (Item 1) and install the shaft into the gearbox until the collar slides forward, locking the shaft in the gearbox. Place the PTO holder chain (Item 2) around the PTO driveline and hook chain back to itself **[Figure 170]**.

LIFT BOOM ARM

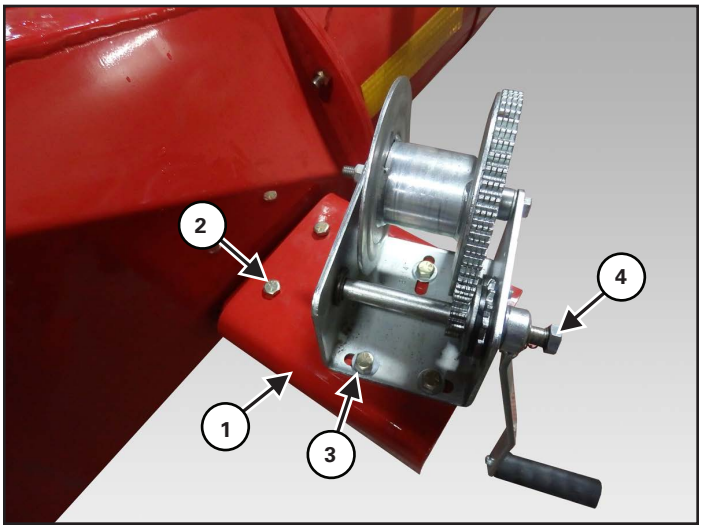
Figure 171



Align the intake lift boom (Item 1) with the mounting plate on the bottom tube section. Install four 1/2″ x 1-1/2″ bolts (Item 2), down through the intake lift boom and mounting plate. Install one 1/2″ flat washer and 1/2″ lock nut on each of the four 1/2″ bolts. Tighten the bolts and nuts **[Figure 171]**.

HAND WINCH AND CABLE

Figure 172



Install the hand winch mounting bracket (Item 1) on the input box (opposite side of the hopper) **[Figure 172]**.

Install two 3/8" x 1" bolts (Item 2) through the hand winch mounting bracket and input box mount. Install one 3/8" lock nut on each bolt. Tighten bolts and lock nuts to secure the hand winch mounting bracket to the input box **[Figure 172]**.

Align the hand winch with the three mounting slots on the hand winch mounting bracket.

Install one 7/16" flat washer onto three 3/8" x 1" (Gr. 5) bolts (Item 3). Install the three bolts and flat washers down through the winch and mounting bracket. Install one 7/16" flat washer and 3/8" lock nut on the three bolts. Tighten bolts and nuts **[Figure 172]**.

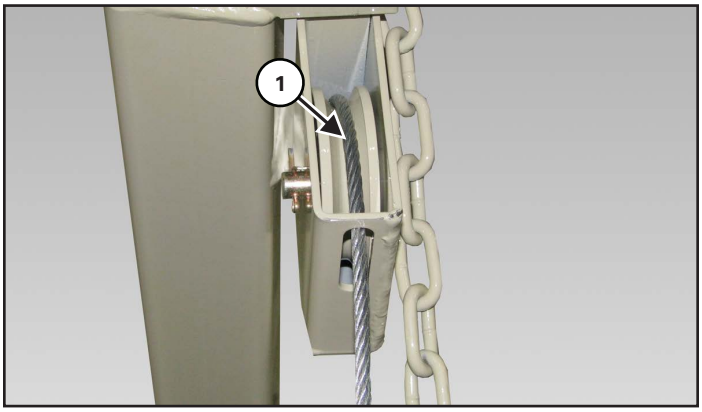
Tighten the nut (Item 4) against the handle and torque to 22 - 25 ft.-lb. (30 - 34 N•m) **[Figure 172]**.

IMPORTANT

Do not over torque the nut against the handle.

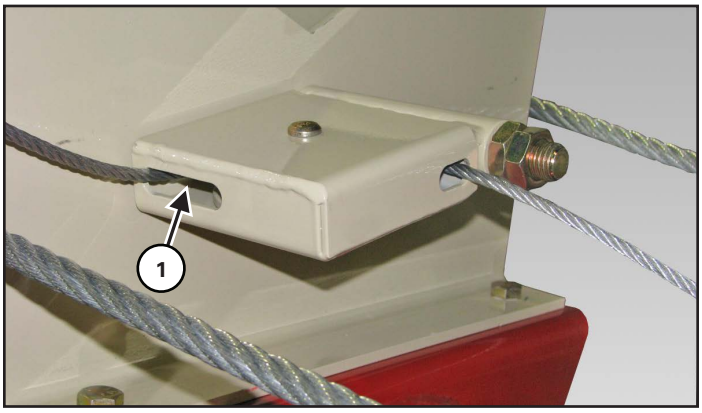
Do not adjust the double lock nuts on the long end of the input shaft.

Figure 173



Locate the winch cable. Install the open end of the cable (Item 1) through the slot and over the pulley on the top of the lift boom **[Figure 173]**.

Figure 174



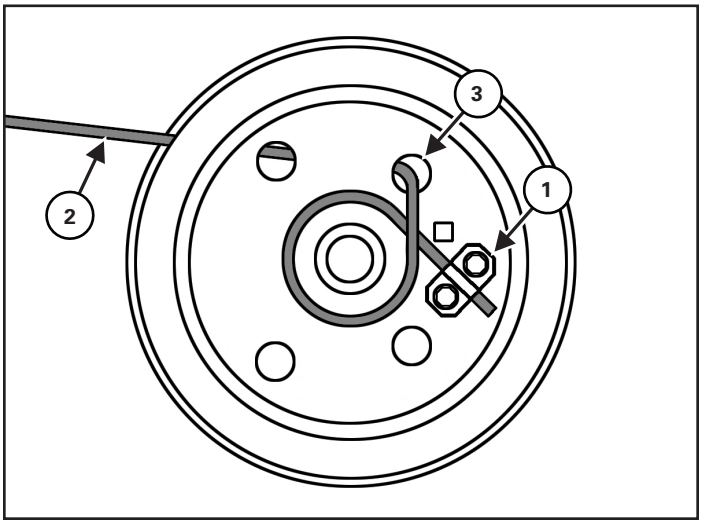
Feed the open end of the cable through the slot (Item 1) and around the lower pulley on the bottom of the lift boom **[Figure 174]**.

Route the cable to the hand winch.

IMPORTANT

Do not remove the drum to install the cable.

Figure 175



Install the cable clamp (Item 1) using the two bolts provided with winch. Leave bolts loose **[Figure 175]**.

Route the cable over the top of the hand winch drum.

Install the cable (Item 2) from the inside of the drum through one of the dimpled holes (Item 3) in the outer plate **[Figure 175]**.

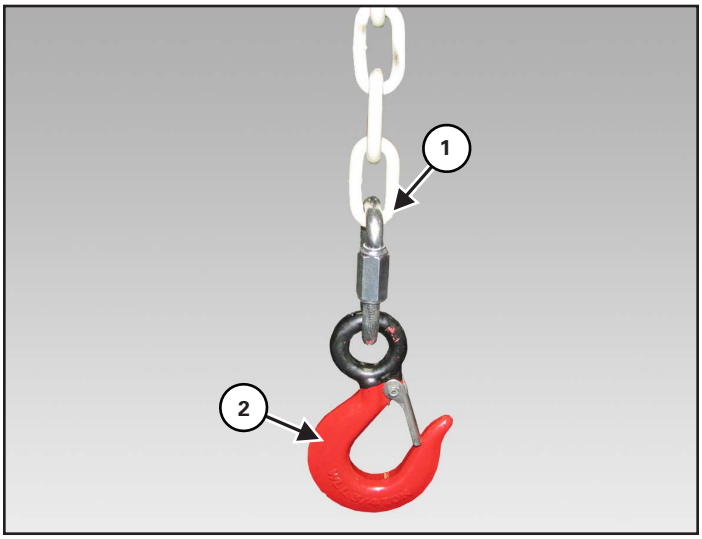
Loop the cable around the drum bearing. Feed the cable between the loop and outer plate, then through the cable clamp.

Leave approximately 1" of cable extending past the clamp. Tighten and torque the clamp bolts to approximately 2 ft.-lb. (3 N•m).

Turn handle to wrap cable around drum.

HOPPER SAFETY HOOK

Figure 176



Install the quick link (Item 1) through the eye of the hook (Item 2). Install the quick link onto the safety chain at the desired location. Tighten the quick link nut to securely fasten the quick link and hook to the safety chain **[Figure 176]**.

NOTE: The quick link and hook may need to be adjusted higher on the safety chain to make sure the hopper is approximately 16" above the ground for transport.

HYDRAULICS - 1370, 1385, 1395 MODELS

Hydraulic Cylinder Hose Installation

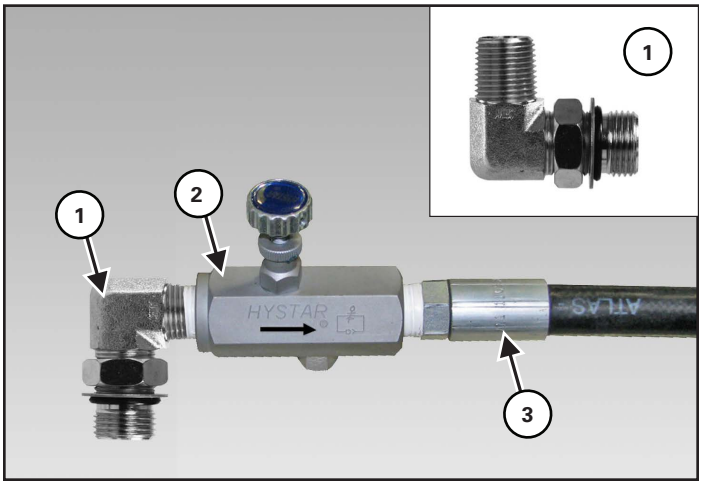
IMPORTANT

When installing and servicing hydraulic systems, clean the work area before assembly or disassembly and keep all parts clean. Always use caps and plugs on hoses, hydraulic tubes and ports to keep dirt out. Dirt can quickly damage the system.

IMPORTANT

Contain and dispose of any oil leakage in an environmentally safe manner. See local, state and federal regulations for the correct disposal.

Figure 177



Locate one each of the following components:

- 08 MNPT x 08 MNPT 90° Elbow (Item 1)
- 08 FNPT One Way Flow Control Valve (Item 2)
- 08 x 10 MJIC x 08 MNPT Hydraulic Hose (Item 3) **[Figure 177]**

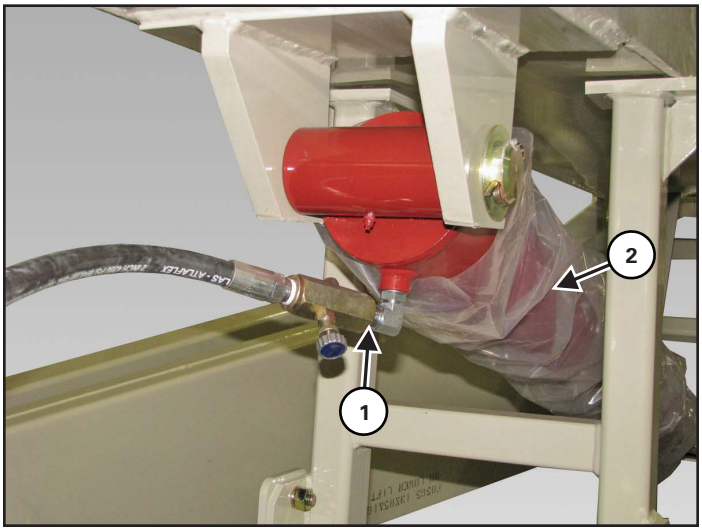
Apply teflon tape to the male threads of each fitting.

Install the 08 MNPT x 08 MNPT 90° elbow into the flow control valve.

Install the 08 x 00 MJIC x 08 MNPT hydraulic hose into the 08 FNPT One Way Flow Control Valve.

NOTE: Place a collection container under the hydraulic cylinder ports before removing the plugs.

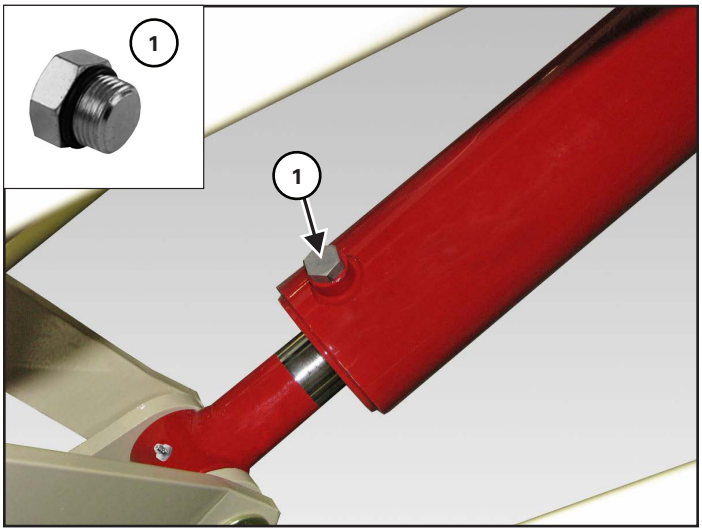
Figure 178



Remove the plug from the base end (upper) of the hydraulic cylinder.

Install the flow control valve assembly (Item 1) into the hydraulic cylinder. Tighten all connections. Remove the protective plastic (Item 2) from the hydraulic cylinder **[Figure 178]**.

Figure 179



Remove the plug from the rod end (lower) of the hydraulic cylinder.

Install the 08 MORB vent plug (Item 1) into the hydraulic cylinder **[Figure 179]**.

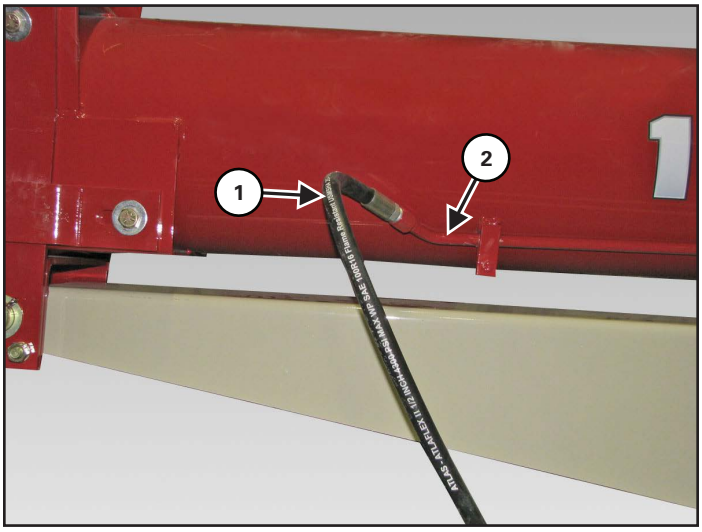
IMPORTANT

CHECK FOR ANY POSSIBLE EXCESS OF OIL

Hydraulic cylinder might contain residual oil in the rod side of the cylinder.

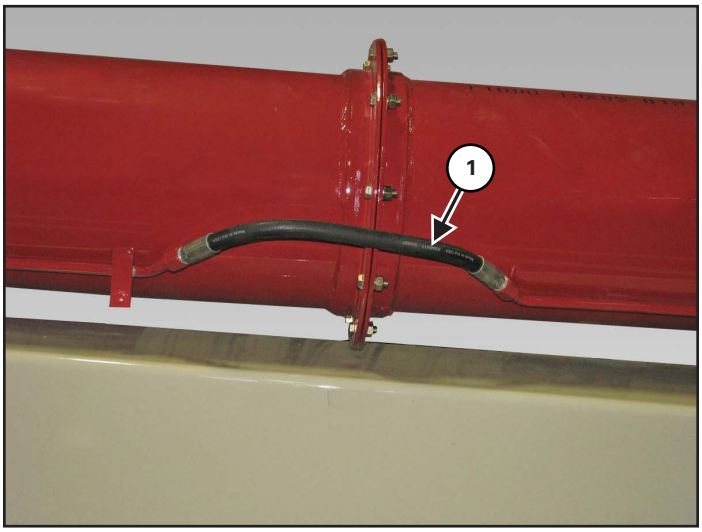
Before installation: Remove the rod end cap/plug, tilt the cylinder, and drain excess oil out of the rod end port. Drain for up to 15 mins.

Figure 180



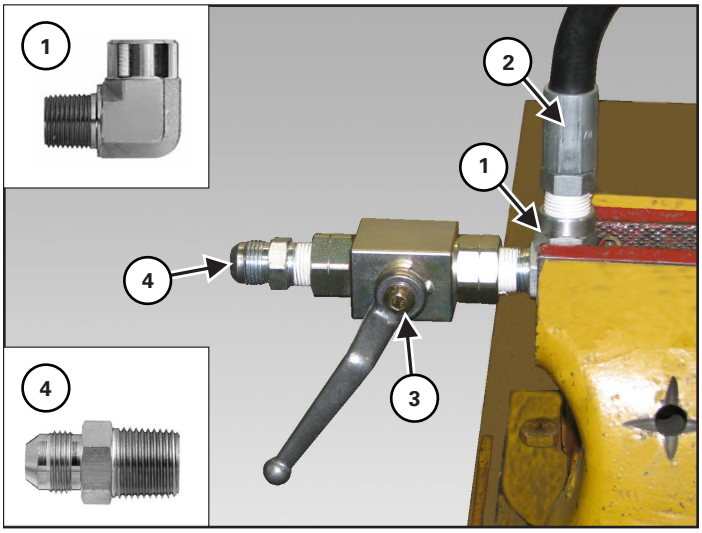
Install and tighten the 08 x 010 MJIC x 08 MNPT hydraulic hose (Item 1) into the tube (Item 2) on the center tube section **[Figure 180]**.

Figure 181



Install and tighten the 08 x 010 MJIC x 08 MNPT hydraulic hose (Item 1) into the tubes on the center and bottom tube sections **[Figure 181]**.

Figure 182



Locate one 90° elbow (Item 1) and place in a vise **[Figure 182]**.

Apply teflon tape to the threads of the hydraulic hose fitting, then install and tighten quick coupler hose (Item 2) assembly into the 90° elbow **[Figure 182]**.

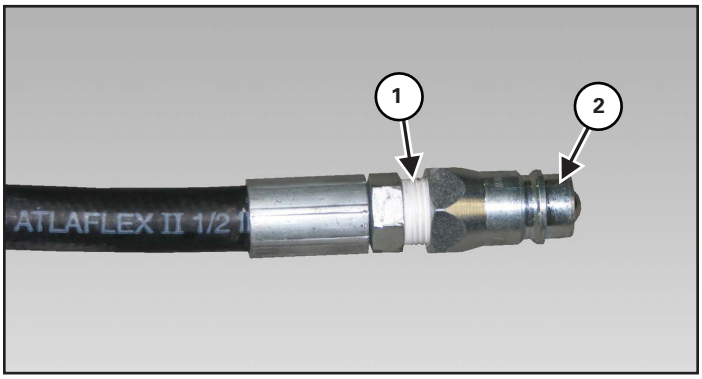
Apply teflon tape to the threads of the 90° elbow.

Locate, install and tighten the 1/2" ball valve (Item 3) onto the 90° elbow **[Figure 182]**.

Locate one adapter fitting (Item 4) **[Figure 182]**.

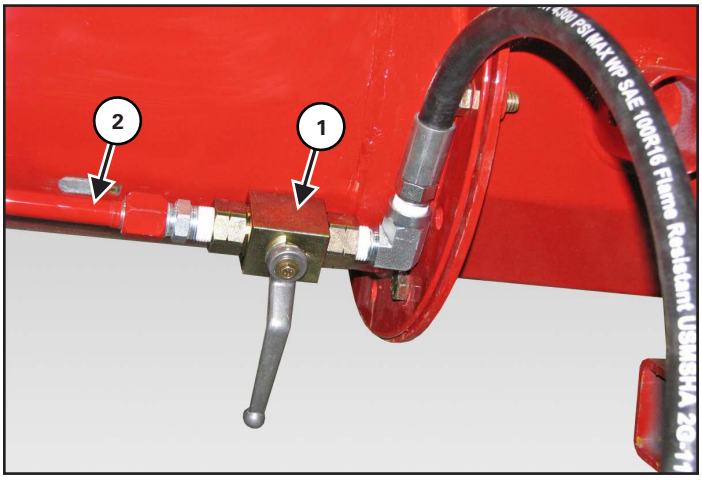
Apply teflon tape to the threads of the adapter fitting, then install and tighten adapter fitting into the 1/2" ball valve (Item 3) **[Figure 182]**.

Figure 183



Apply teflon tape to the threads (Item 1) of the hydraulic hose fitting, then install and tighten the male quick coupler fitting (Item 2) **[Figure 183]**.

Figure 184



Install hose assembly (Item 1) into the hydraulic tube (Item 2) on the bottom tube section. Route the hose towards the hitch and install into the hydraulic hose holder **[Figure 184]**.

HYDRAULICS - 13114 MODELS

Hydraulic Cylinder Hose Installation

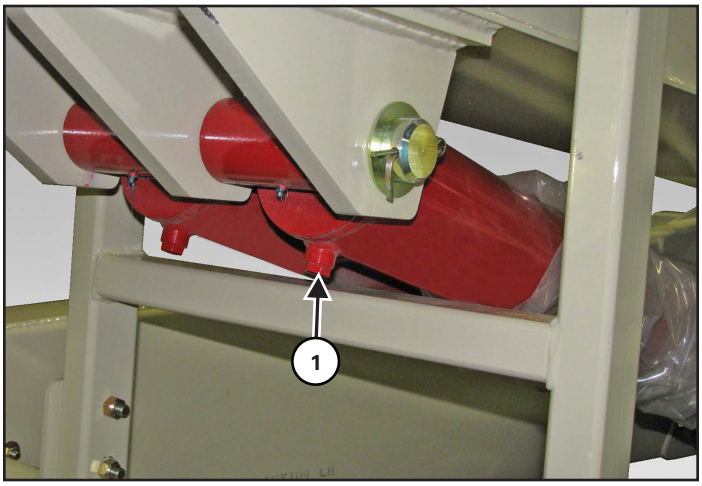
IMPORTANT

When installing and servicing hydraulic systems, clean the work area before assembly or disassembly and keep all parts clean. Always use caps and plugs on hoses, hydraulic tubes and ports to keep dirt out. Dirt can quickly damage the system.

IMPORTANT

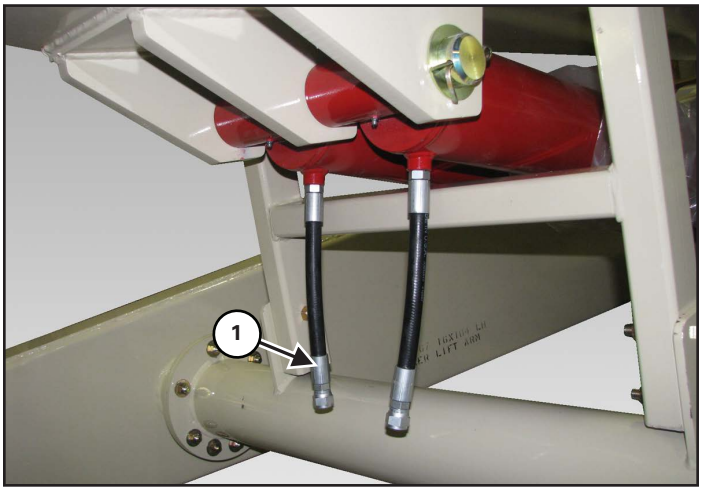
Contain and dispose of any oil leakage in an environmentally safe manner. See local, state and federal regulations for the correct disposal.

Figure 185



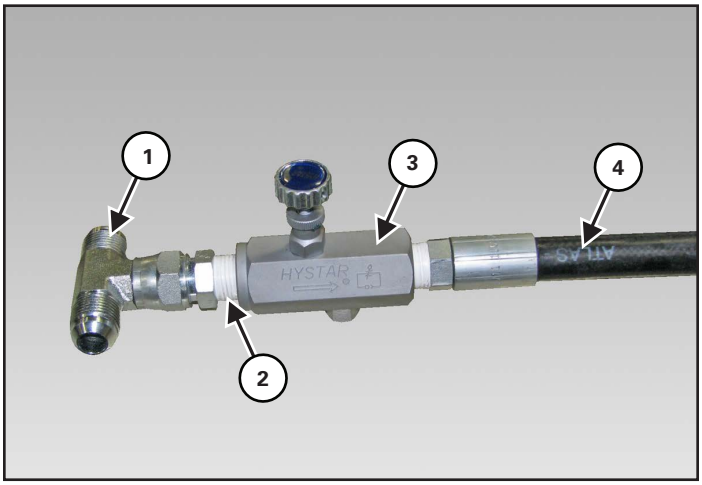
Remove the plugs (Item 1) from the base end of the hydraulic cylinders **[Figure 185]**.

Figure 186



Locate and install the two hydraulic hoses (Item 1) on the base end of the cylinders **[Figure 186]**.

Figure 187



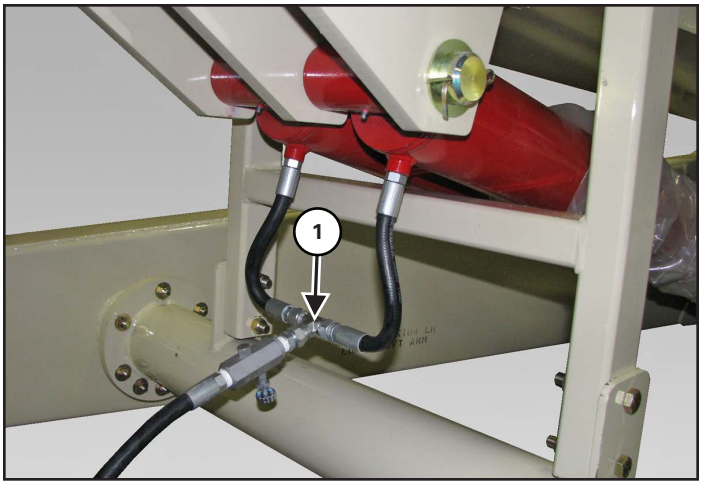
Locate one tee fitting (Item 1), adapter fitting (Item 2), flow control valve (Item 3) and hydraulic hose (Item 4). Apply teflon tape to the threads of the adapter fitting and hydraulic hose fitting **[Figure 187]**.

Install and tighten the hose into the flow control valve.

Install and tighten the adapter fitting into the flow control valve.

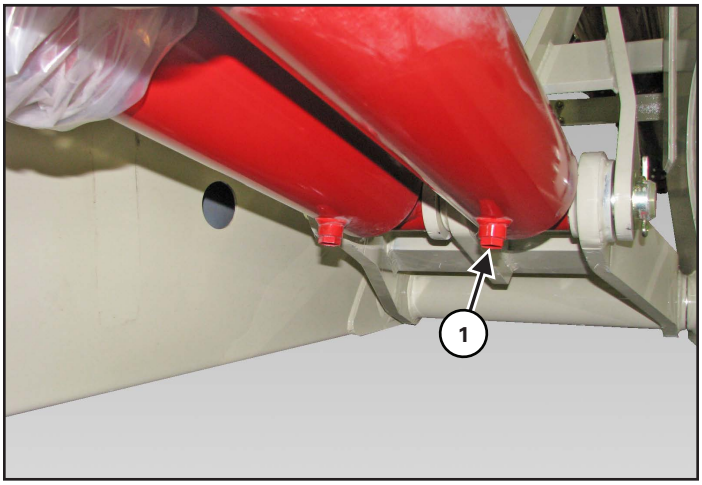
Install and tighten the tee fitting onto the adapter fitting.

Figure 188



Install and tighten the two hoses from the base ends of the cylinders onto the tee fitting (Item 1) **[Figure 188]**.

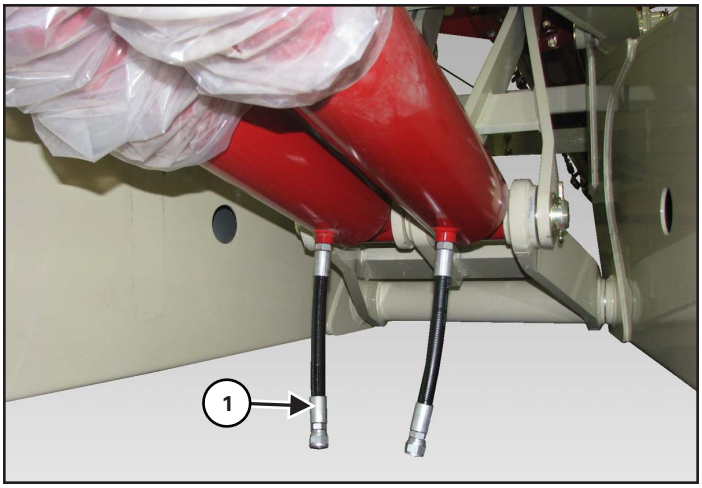
Figure 189



NOTE: Place a collection container under the hydraulic cylinder ports before removing the plugs.

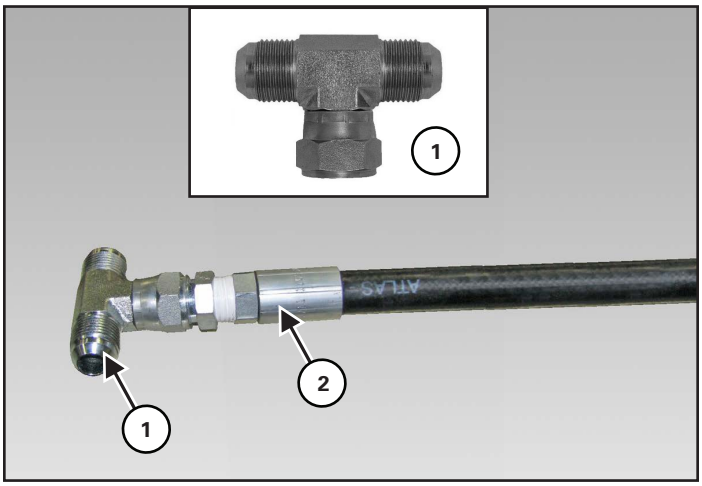
Remove the two plugs (Item 1) from the rod end of the hydraulic cylinders **[Figure 189]**.

Figure 190



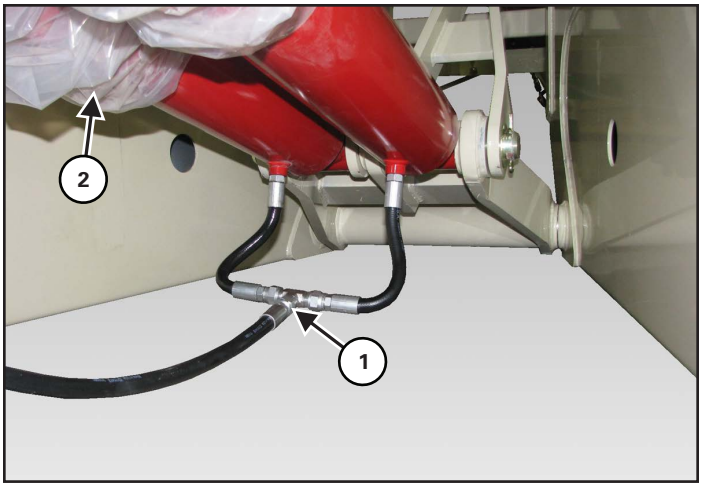
Locate and install the two hydraulic hoses (Item 1) on the rod end of the cylinders **[Figure 190]**.

Figure 191



Locate one tee fitting (Item 1) and hydraulic hose (Item 2). Apply teflon tape to the threads of the hydraulic hose fitting. Install the hose into the tee fitting and tighten **[Figure 191]**.

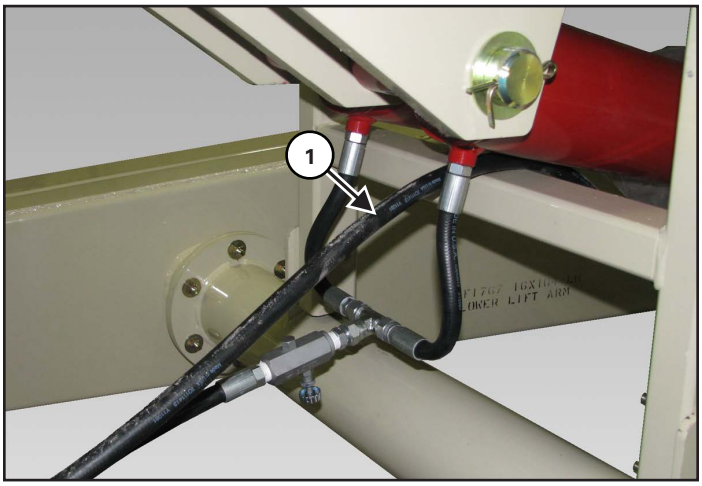
Figure 192



Install and tighten the two hoses from the rod ends of the cylinders onto the tee fitting (Item 1) **[Figure 192]**.

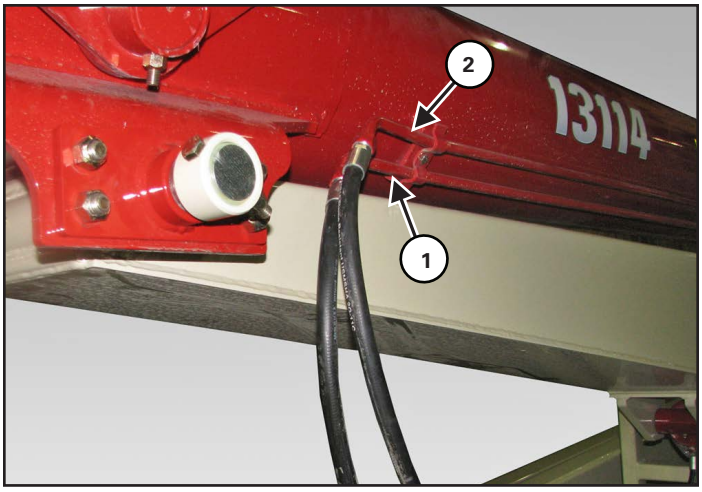
Remove the protective plastic (Item 2) from the hydraulic cylinders **[Figure 192]**.

Figure 193



Route the hydraulic hose (Item 1) over the top of one of the cylinders **[Figure 193]**.

Figure 194

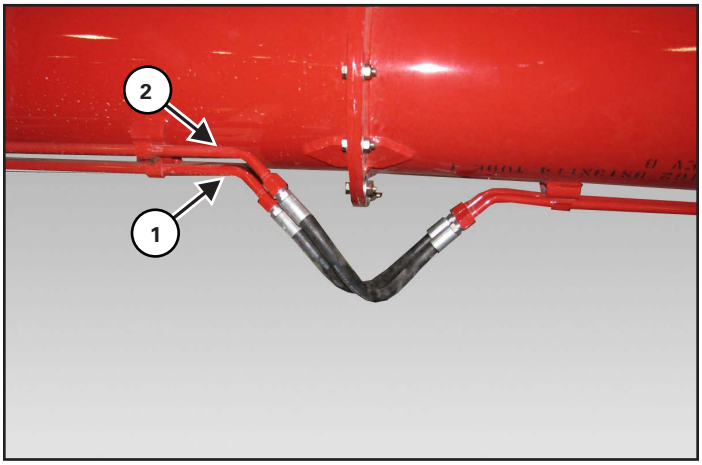


Route the rod end and base end hydraulic hoses up to the hydraulic tubes on the #2 tube (on the right side, just in front of the upper lift arm pin).

Install and tighten the base end hydraulic hose to the bottom hydraulic tube (Item 1) **[Figure 194]**.

Install and tighten the rod end hydraulic hose to the top hydraulic tube (Item 2) **[Figure 194]**.

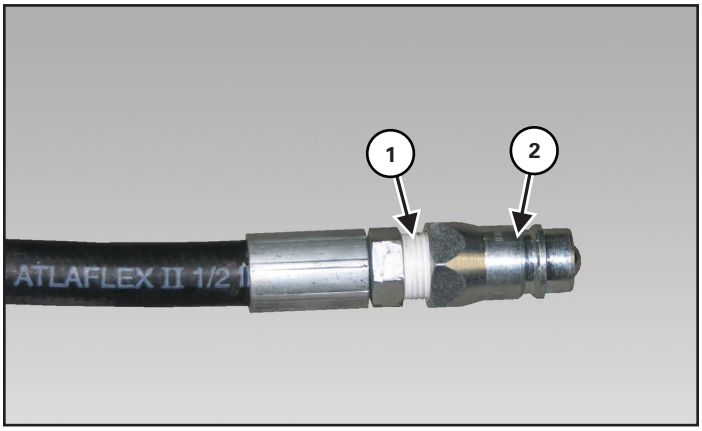
Figure 195



Install one hydraulic hose to connect the two bottom tubes (Item 1) **[Figure 195]**.

Install one hydraulic hose to connect the two top tubes (Item 2) **[Figure 195]**.

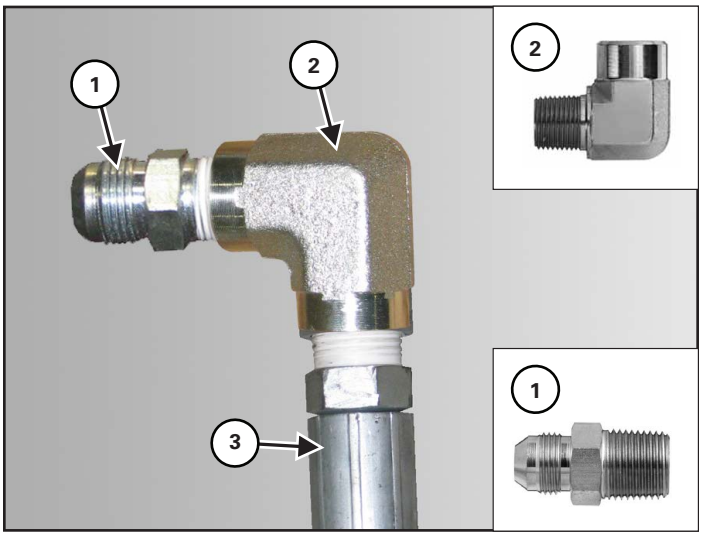
Figure 196



Apply teflon tape to the threads (Item 1) of the hydraulic hose fitting, then install and tighten the male quick coupler fitting (Item 2) **[Figure 196]**.

Repeat for second quick coupler hose.

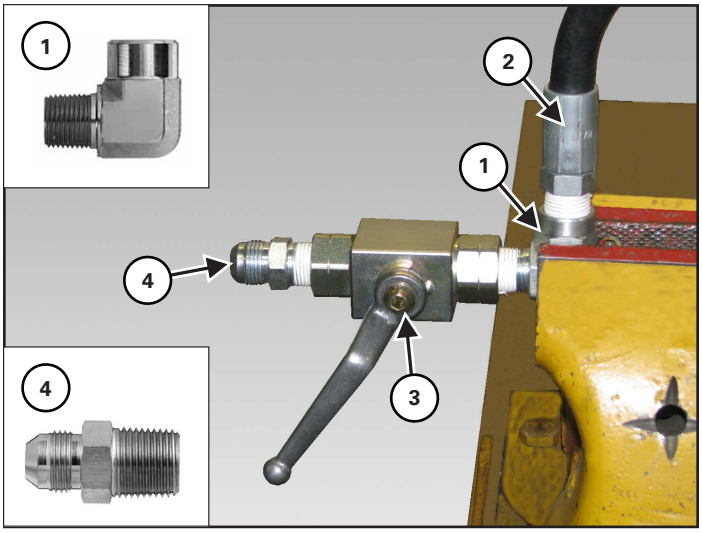
Figure 197



Locate one adapter fitting (Item 1) and 90° elbow fitting (Item 2) **[Figure 197]**.

Install one hydraulic quick coupler hose assembly (Item 3) into the 90° elbow **[Figure 197]**.

Figure 198



Locate one 90° elbow (Item 1) and place in a vise **[Figure 198]**.

Apply teflon tape to the threads (Item 1) of the hydraulic hose fitting, then install and tighten quick coupler hose assembly into the 90° elbow (Item 2) **[Figure 198]**.

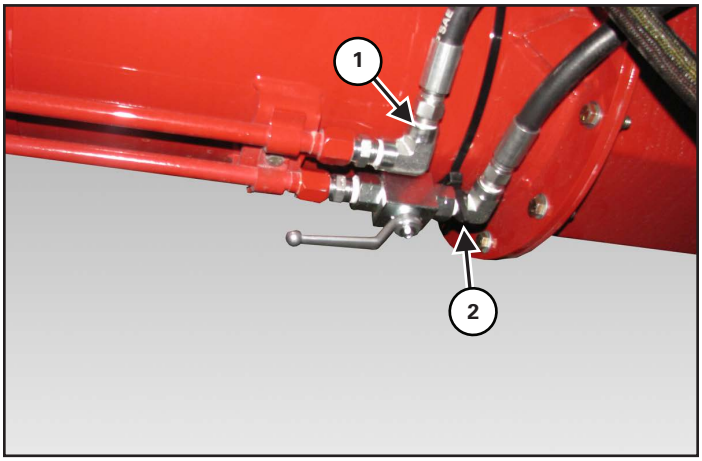
Apply teflon tape to the threads of the 90° elbow.

Locate, install and tighten the 1/2" ball valve (Item 3) onto the 90° elbow **[Figure 198]**.

Locate one adapter fitting (Item 4) **[Figure 198]**.

Apply teflon tape to the threads of the adapter fitting, then install and tighten adapter fitting into the 1/2" ball valve (Item 3) **[Figure 198]**.

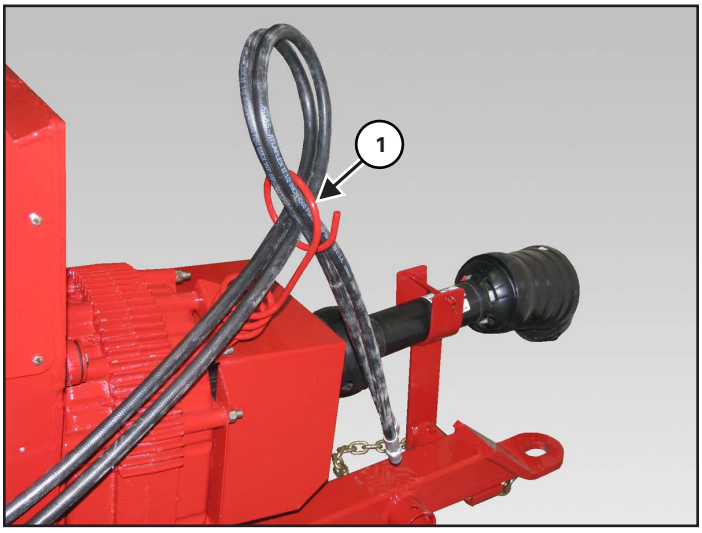
Figure 199



Install hose assembly (Item 1) onto the right side hydraulic tube **[Figure 199]**.

Install hose / valve assembly (Item 2) onto the left side hydraulic tube **[Figure 199]**.

Figure 200

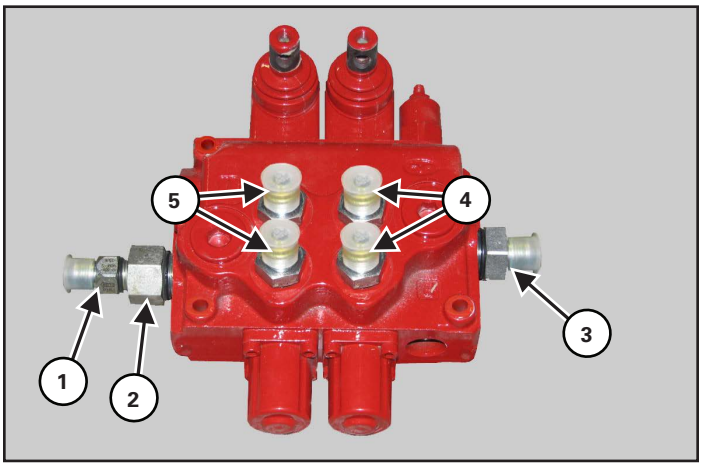


Route the quick coupler hoses along the input box and install into the storage bracket (Item 1) **[Figure 200]**.

HYDRAULIC HOPPER MOVER AND WINCH

Hydraulic Control Valve Installation

Figure 201



Install fitting (Item 1) into the valve block. Install fitting (Item 2) **[Figure 201]**.

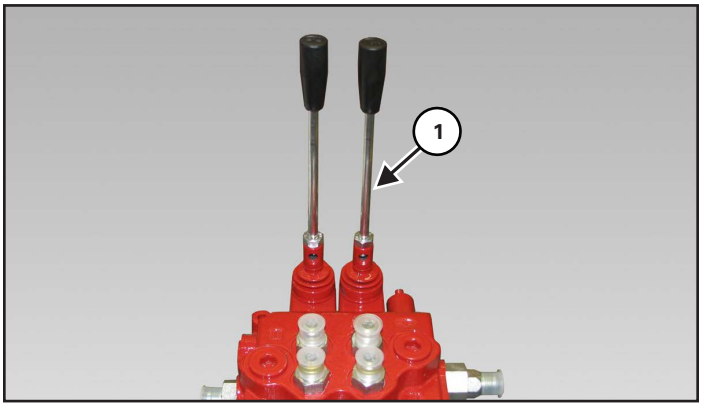
Install fitting (Item 3) into the valve block **[Figure 201]**.

Install the two restrictor fittings (Item 4) into the valve block **[Figure 201]**.

Install the two fittings (Item 5) into the valve block **[Figure 201]**.

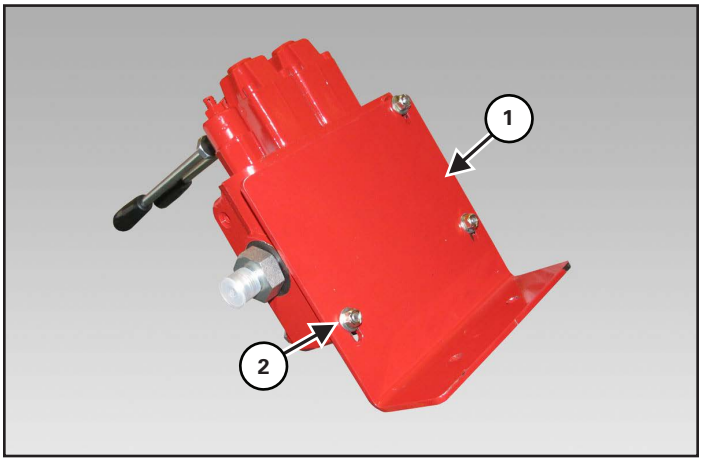
Tighten all fittings.

Figure 202



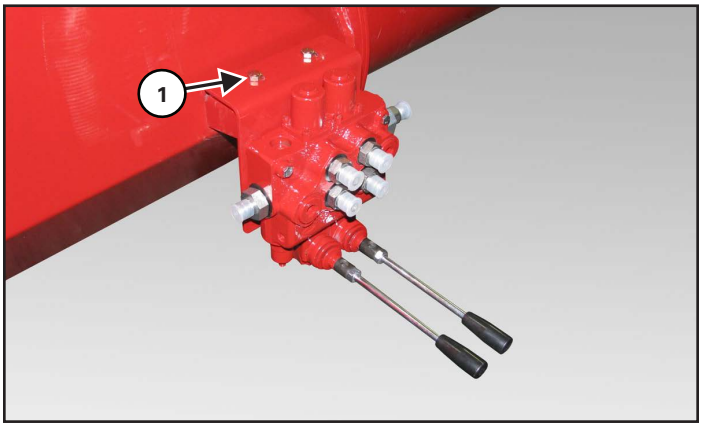
Install the two levers (Item 1) into the valve block **[Figure 202]**.

Figure 203



Install the mounting bracket (Item 1) onto the valve block using three 1/4" x 2-3/4" bolts, three 1/4" flat washers and three 1/4" lock nuts (Item 2). Tighten bolts and lock nuts **[Figure 203]**.

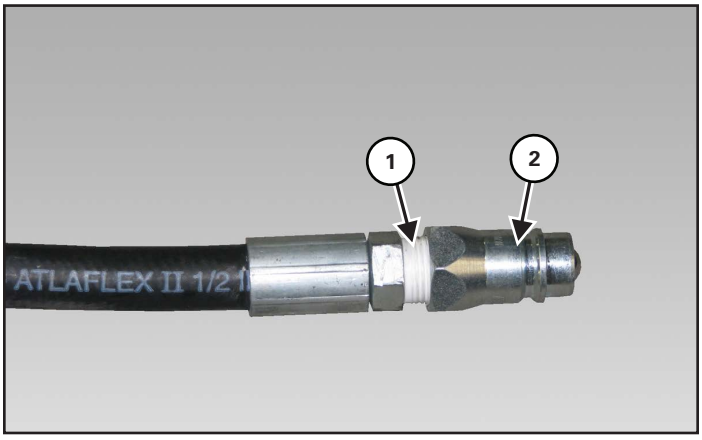
Figure 204



Install the valve block assembly onto the left side of the input box.

Install two 3/8" x 1" bolts (Item 1) through the valve block mounting bracket and input box mount. Install two 3/8" lock nuts on the bolts and tighten **[Figure 204]**.

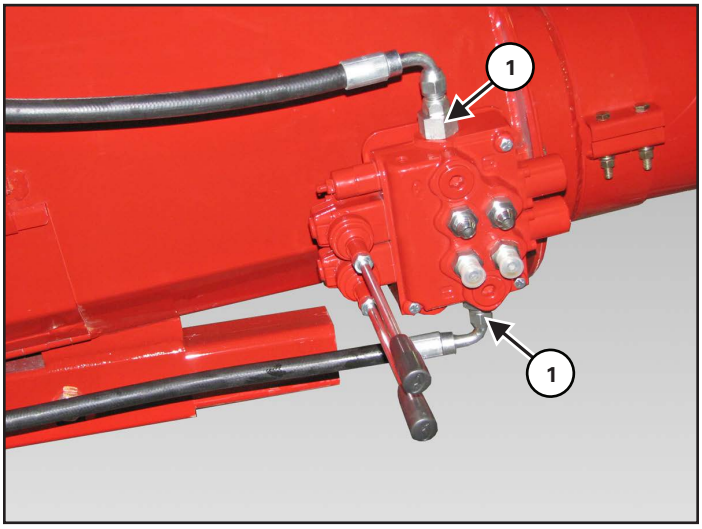
Figure 205



Apply teflon tape to the threads (Item 1) of the hydraulic hose fitting, then install and tighten the male quick coupler fitting (Item 2) **[Figure 205]**.

Repeat for second quick coupler hose.

Figure 206



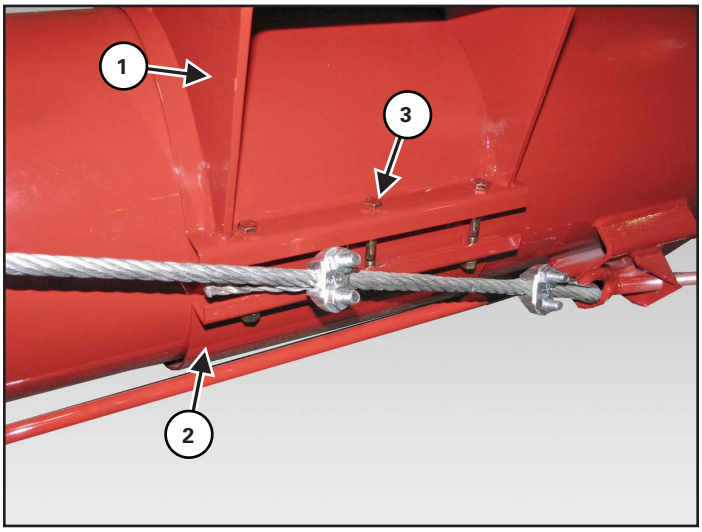
Install the quick coupler hoses (Item 1) onto the control valve **[Figure 206]**.

Hydraulic Winch Installation

Remove the cable from the hand winch (if equipped).

Remove the hand winch from the input box (if equipped).

Figure 207



Position the upper winch mount (Item 1) on top of the bottom tube (approximately 32" from the lift arm boom) **[Figure 207]**.

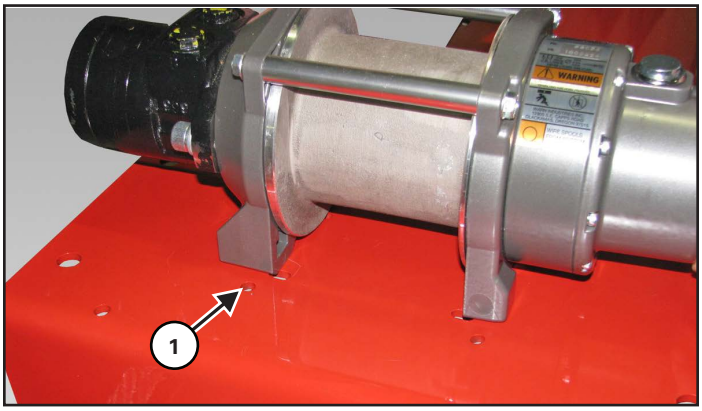
NOTE: Loosen the hydraulic tube clamps to allow the lower winch mount to be installed.

Install and align the lower winch mount (Item 2) with upper winch mount. Install three 3/8" x 2-3/4" bolts (Item 3) through the two mounts and install one 3/8" lock nut on each bolt (both sides) **[Figure 207]**.

NOTE: Center and level the upper winch mount on the top of the bottom tube.

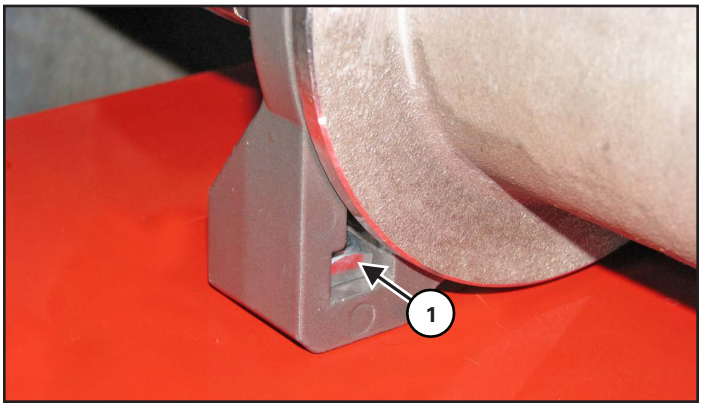
Tighten bolts and lock nuts until the two mounts are securely fastened around the bottom tube.

Figure 208



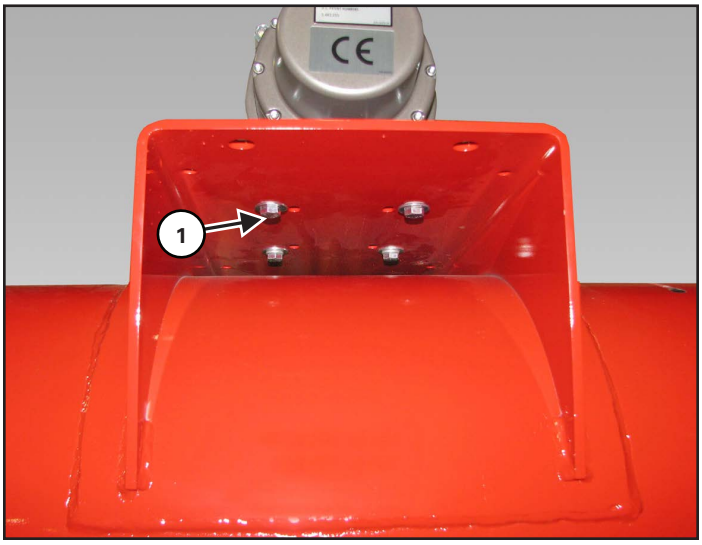
Align the winch with four holes (Item 1) in the winch mounting plate on the top of the bottom tube **[Figure 208]**.

Figure 209



Install one square head nut (Item 1) into each foot of the winch (hardware supplied with winch) **[Figure 209]**.

Figure 210



Install one lock washer and flat washer onto the four bolts

While holding down on the square nut (Item 1), install one bolt, lock washer and flat washer (Item 1) up through the winch mounting plate and into the square head nut. Repeat for the remaining three bolts, lock washers and flat washers. Tighten all four bolts **[Figure 210]**.

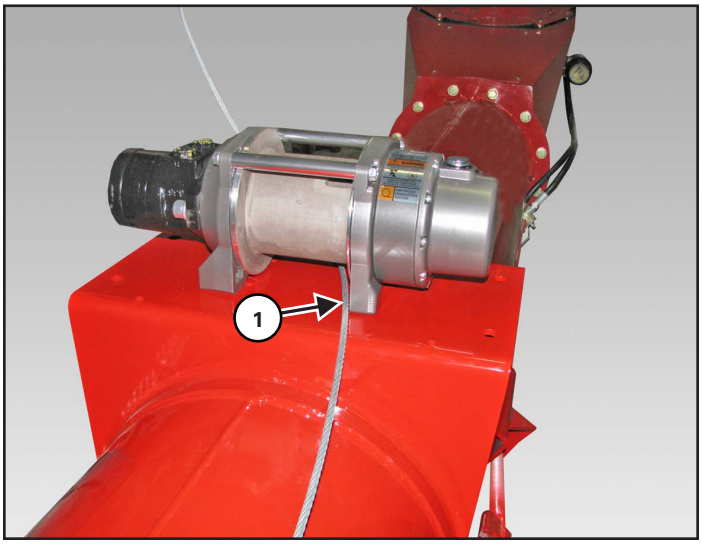
CAUTION

CUT HAZARD

To prevent injury to fingers and hands:

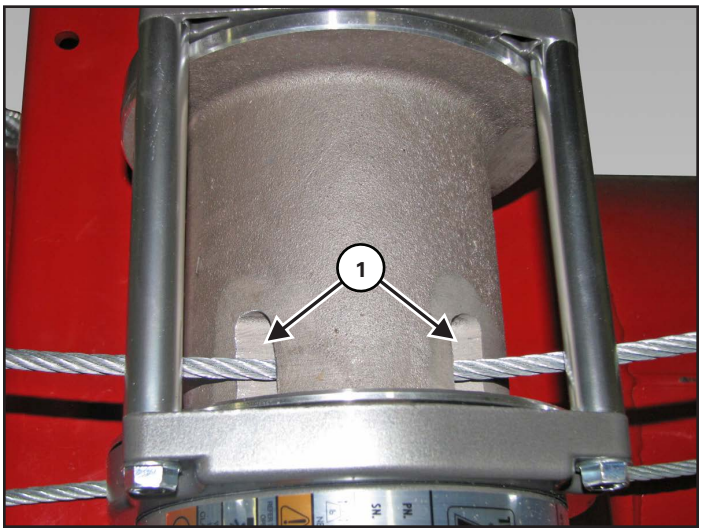
- **Always wear heavy leather gloves when handling a wire rope.**
- **Never let wire rope slip through your hands.**

Figure 211



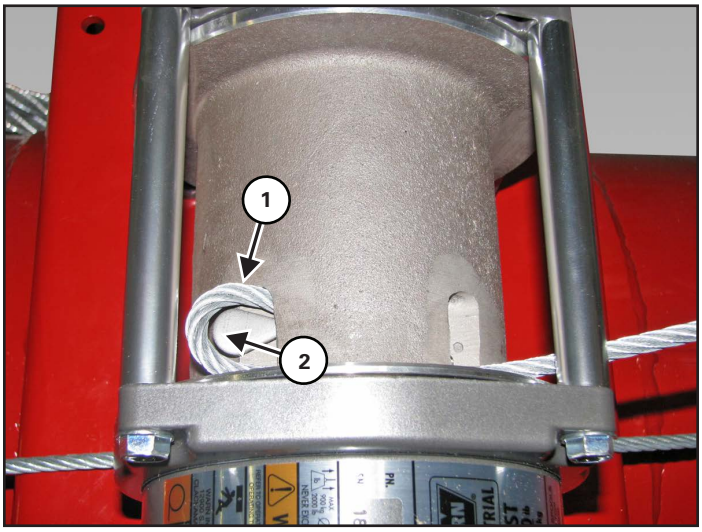
Route the winch cable (Item 1) through the end pulley of the lift boom, down through the bottom pulley of the lift boom, across the top of the bottom tube and between the winch and winch mounting plate **[Figure 211]**.

Figure 212



With the winch cable routed under the winch, feed the cable back through the two slots (Item 1) of the winch **[Figure 212]**.

Figure 213

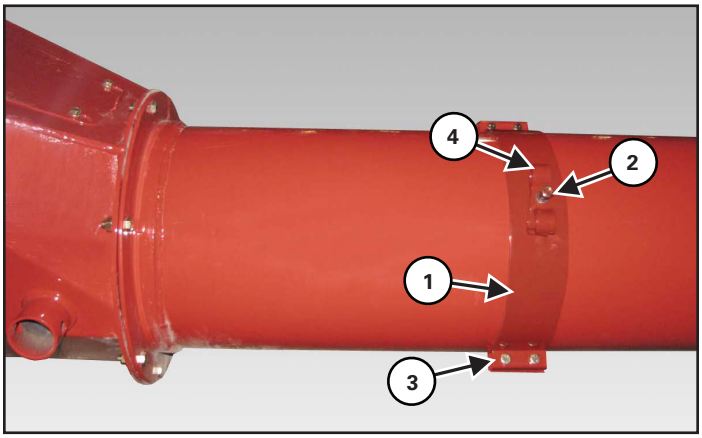


Loop the tail end (Item 1) of the cable and feed back into the slot, install the wedge (Item 2) inside the loop **[Figure 213]**.

Figure 214

Pull back on the cable (Item 1) until the loop and wedge are inside the slot **[Figure 214]**.

Figure 215



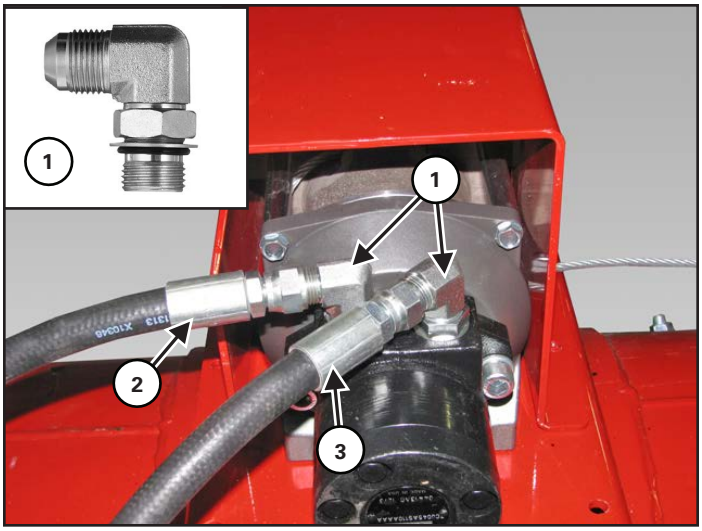
Position one bracket half (Item 1) on the tube, approximately 36" from the input box. Position the bolt (Item 2) angled away from the top center of the tube **[Figure 215]**.

Position the bottom bracket half with the top bracket half. Attach using four 3/8" x 2" bolts (Item 3) and four 3/8" lock nuts **[Figure 215]**.

Tighten bolts and lock nuts until the two bracket halves are securely fastened around the intake auger tube.

Install two hose clamps (Item 4) (one up & one down) onto the bracket halve bolts (Item 2). Attach each clamp using one 3/8" lock nut **[Figure 215]**.

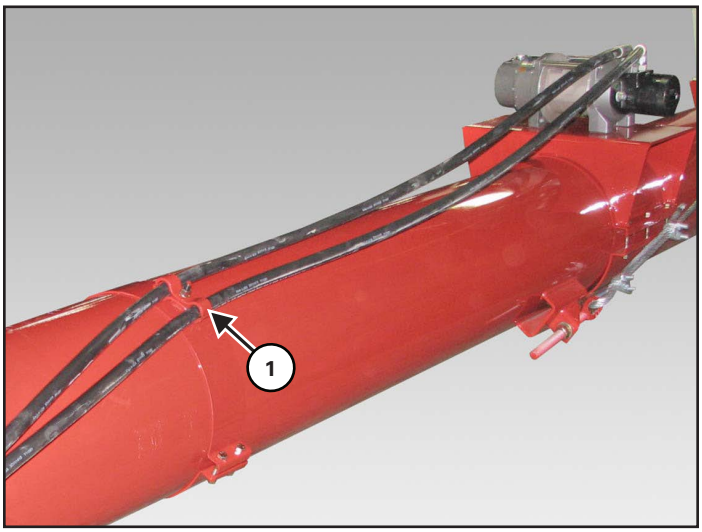
Figure 216



Install and tighten two 90° elbow fittings (Item 1) into the winch **[Figure 216]**.

Install and tighten the hydraulic hoses (Items 2 & 3) onto the 90° elbow fittings **[Figure 216]**.

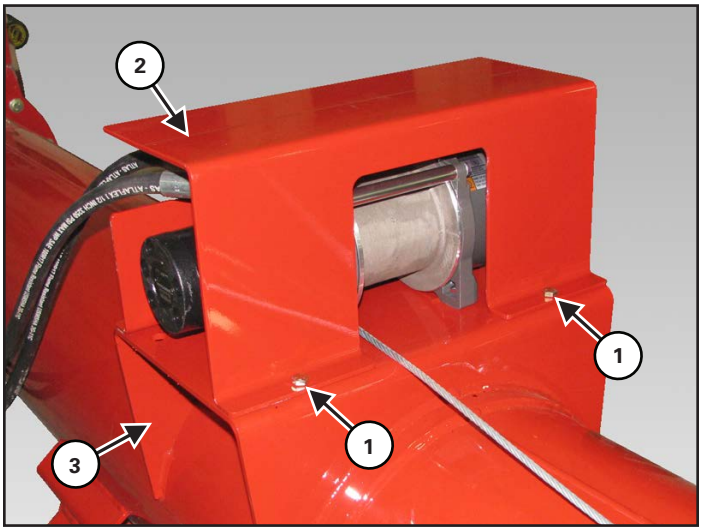
Figure 217



Route the two winch hydraulic hoses along the bottom tube and towards the input box / control valve **[Figure 217]**.

Install hoses into the clamps (Item 1) clamps on the bottom tube (do not cross hoses). Tighten the 3/8" lock nut to secure the hoses in the clamps **[Figure 217]**.

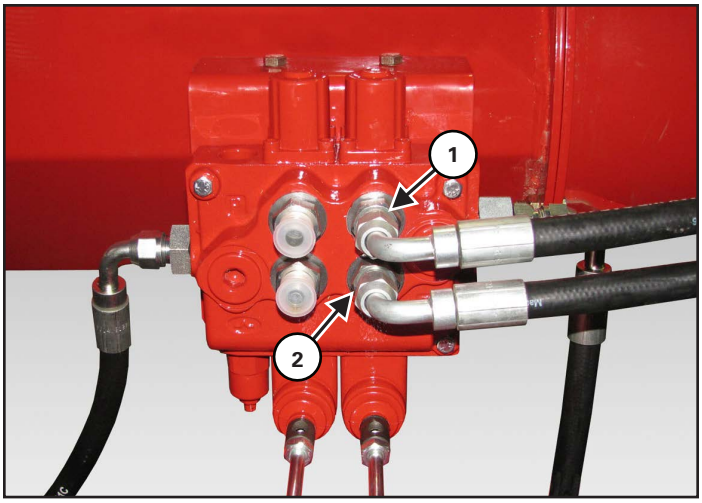
Figure 218



Using four bolts (Item 1) (two each side) and lock nuts, install the winch shield (Item 2) onto the winch mounting plate (Item 3) **[Figure 218]**.

Tighten the four bolts and lock nuts to secure the winch shield to the winch mounting plate.

Figure 219



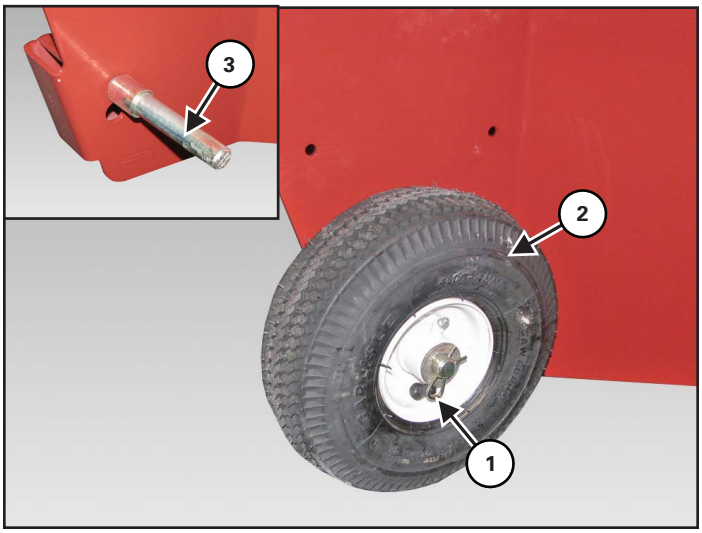
Install and tighten the inside winch hydraulic hose (Item 1) onto the bottom right fitting on the valve block **[Figure 219]**.

Install and tighten the outside winch hydraulic hose onto the bottom left fitting (Item 2) on the valve block **[Figure 219]**.

NOTE: Install plugs in all control valve ports not being used.

Hydraulic Wheel Motor And Wheel Installation

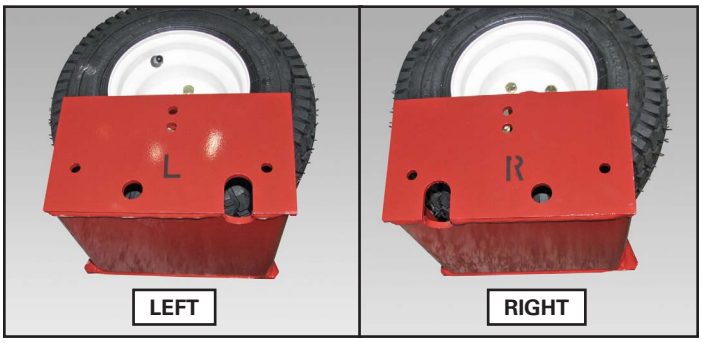
Figure 220



Remove the retaining clip (Item 1), washer and tire (Item 2) (intake auger end of the hopper). Remove the shaft (Item 3) **[Figure 220]**.

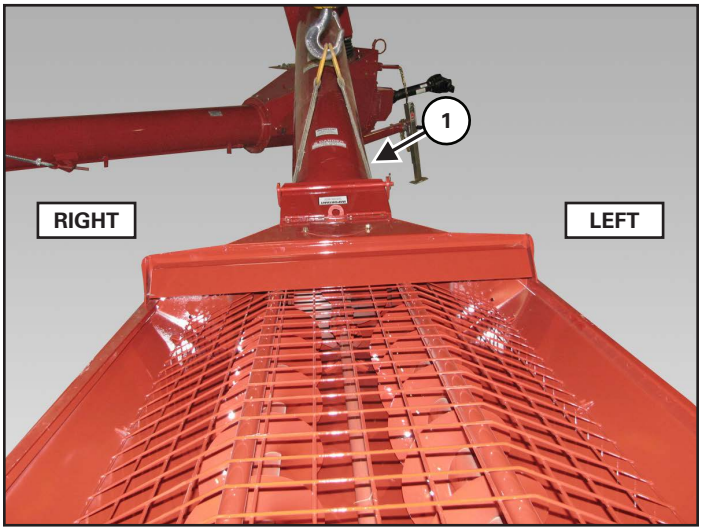
Repeat to remove opposite wheel and shaft.

Figure 221



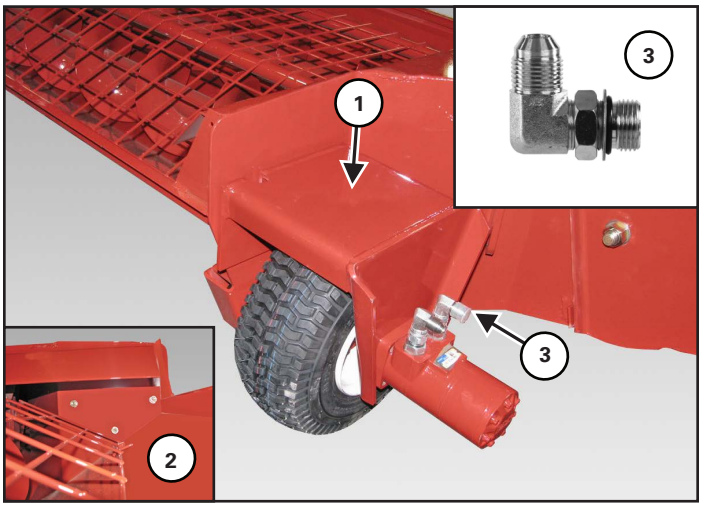
Locate the left hand (L) & right hand (R) hydraulic motor / wheel assemblies **[Figure 221]**.

Figure 222



Right hand (RH) and left hand (LH) sides of the hopper are as viewed from the end of the hopper, looking towards the intake auger (Item 1) **[Figure 222]**.

Figure 223

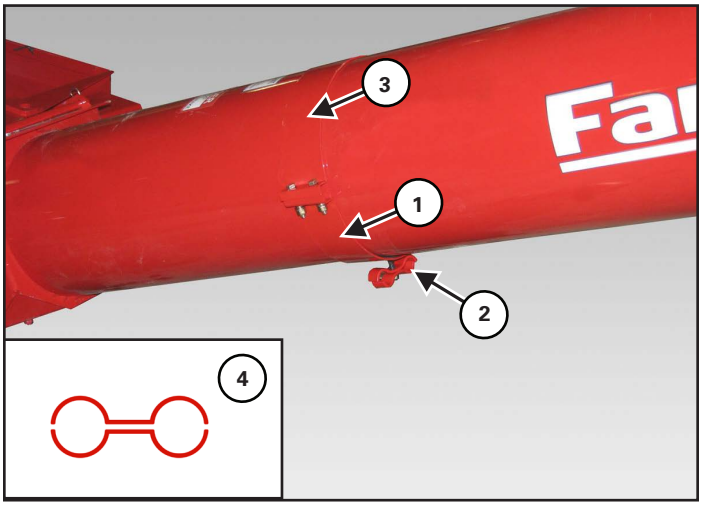


Install the left hand (L) hydraulic motor / wheel assembly (Item 1) onto the hopper using three 3/8" x 1" bolts and 3/8" lock nuts (Item 2). Tighten bolts and nuts **[Figure 223]**.

Repeat for installing the right hand (R) hydraulic motor / wheel assembly.

Locate two 90° fittings (Item 3). Install the two fittings in the left hand (L) hydraulic motor. Repeat for installing fittings into the right hand (R) hydraulic motor **[Figure 223]**.

Figure 224



Position one half clamp with bolt (Item 1) just above the two lower decals on the intake auger tube with the bolt (Item 2) centered on the bottom of the tube **[Figure 224]**.

NOTE: Do not cover decals.

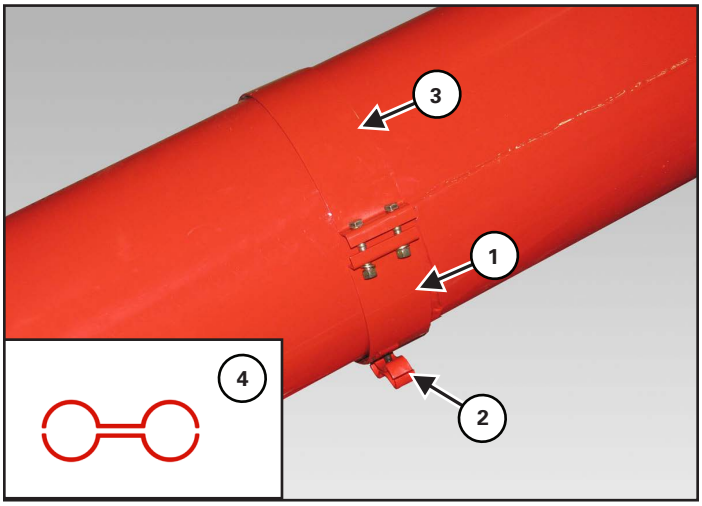
Align another half clamp (Item 3) and attach using four 3/8″ x 1-1/2″ bolts and four 3/8″ lock nuts **[Figure 224]**.

Tighten bolts and lock nuts until the two clamps are securely fastened around the intake auger tube.

Install two hose clamps (Item 4) (one up & one down) onto the half clamp bolt (Item 2). Install one 3/8″ lock nut onto the bolt **[Figure 224]**.

Do not tighten at this time.

Figure 225



Position one half clamp with bolt (Item 1) just below the intake elbow with the bolt (Item 2) centered on the bottom of the tube **[Figure 225]**.

NOTE: Do not cover decals.

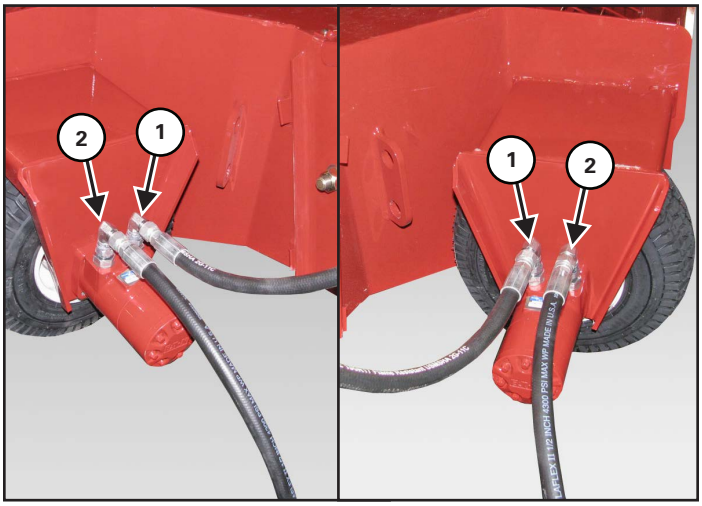
Align another half clamp (Item 3) and attach using four 3/8″ x 1-1/2″ bolts and four 3/8″ lock nuts **[Figure 225]**.

Tighten bolts and lock nuts until the two clamps are securely fastened around the intake auger tube.

Install two hose clamps (Item 4) (one up & one down) onto the half clamp bolt (Item 2). Install one 3/8″ lock nut onto the bolt **[Figure 225]**.

Do not tighten at this time.

Figure 226



Locate one 60" hydraulic hose (Item 1) and two 84" hydraulic hoses (Item 2) **[Figure 226]**.

Install the 60" hydraulic hose (Item 1) onto the inside elbow fitting on the left hand (L) hydraulic wheel motor. Route the hose over the hopper and install the hose onto the inside elbow fitting of the right hand (R) hydraulic wheel motor **[Figure 226]**.

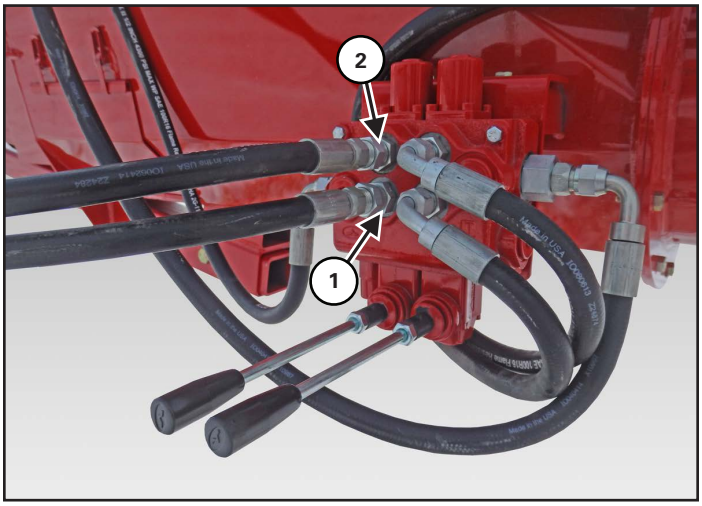
Install one 84" hydraulic hose onto the outside elbow fitting of the left hand (L) and right hand (R) hydraulic wheel motors.

Figure 227

Route the two 84" hoses from the left hand (L) and right hand (R) hydraulic wheel motors along the bottom of the intake auger tube and around the intake auger elbow.

Install hoses into the lower and upper (Item 1) clamps on the intake auger tube (do not cross hoses). Tighten the 3/8" lock nut to secure the hoses in the clamps **[Figure 227]**.

Figure 228



Install the left wheel motor hydraulic hose (Item 1) onto the upper left fitting on the valve block **[Figure 228]**.

Install the right wheel motor hydraulic hose (Item 2) onto the upper right fitting on the valve block **[Figure 228]**.

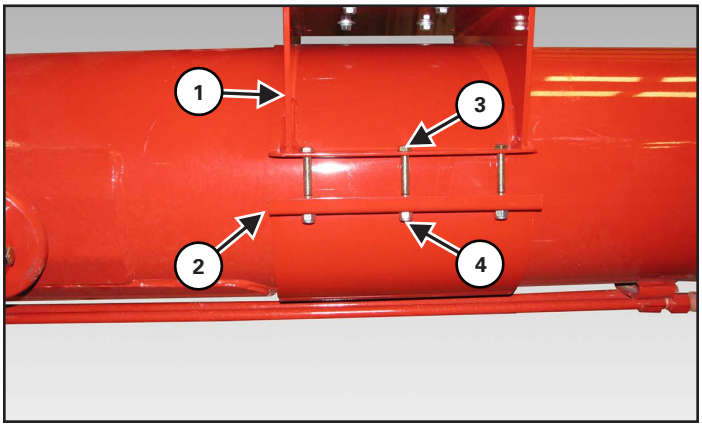
Electric Mover And Winch

NOTE: The following images may not show your winch exactly as it appears but the procedure is correct.

Remove the cable from the hand winch (if equipped).

Remove the hand winch from the input box (if equipped).

Figure 229



Locate one upper winch mount (Item 1), one lower winch mount (Item 2), six 3/8" x 2-3/4" bolts (Item 3) and six 3/8" lock nuts (Item 4) **[Figure 229]**.

Position the upper winch mount (Item 1) on top of the bottom tube (approximately 32" from the lift arm boom) **[Figure 229]**.

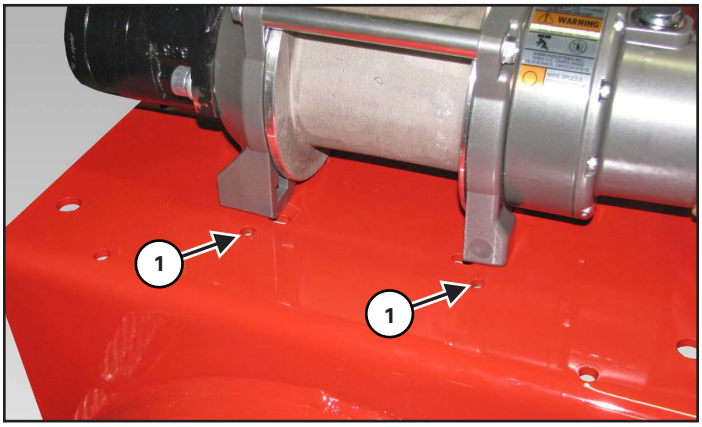
NOTE: Loosen the hydraulic tube clamps to allow the lower winch mount to be installed.

Install and align the lower winch mount (Item 2) with upper winch mount. Install three 3/8" x 2-3/4" bolts through the two mounts and install one 3/8" lock nut on each bolt (both sides) **[Figure 229]**.

NOTE: Center and level the upper winch mount on the top of the bottom tube.

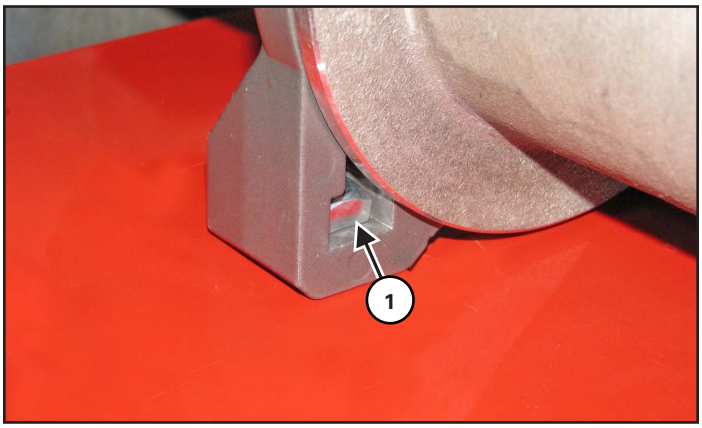
Tighten bolts and lock nuts until the two mounts are securely fastened around the bottom tube.

Figure 230



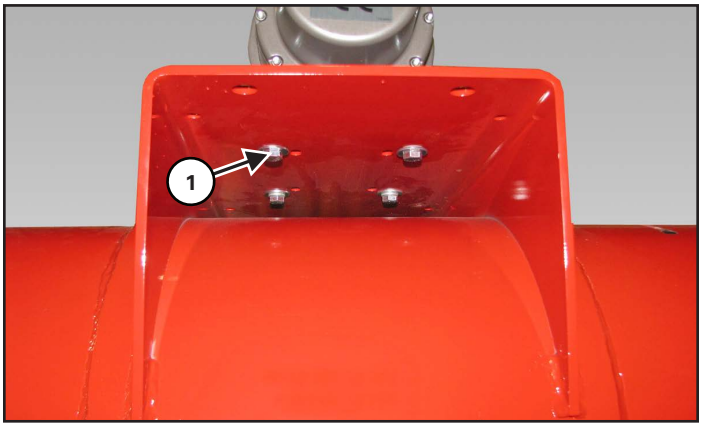
Align the winch with four holes (Item 1) in the winch mounting plate on the top of the bottom tube **[Figure 230]**.

Figure 231



Install one square head nut (Item 1) into each foot of the winch (hardware supplied with winch) **[Figure 231]**.

Figure 232



Install one lock washer and flat washer onto the four bolts

While holding down on the square nut (Item 1), install one bolt, lock washer and flat washer (Item 1) up through the winch mounting plate and into the square head nut. Repeat for the remaining three bolts, lock washers and flat washers. Tighten all four bolts **[Figure 232]**.

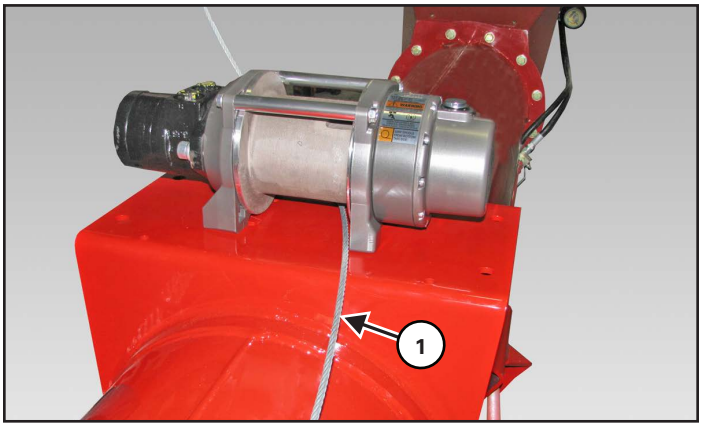
CAUTION

CUT HAZARD

To prevent injury to fingers and hands:

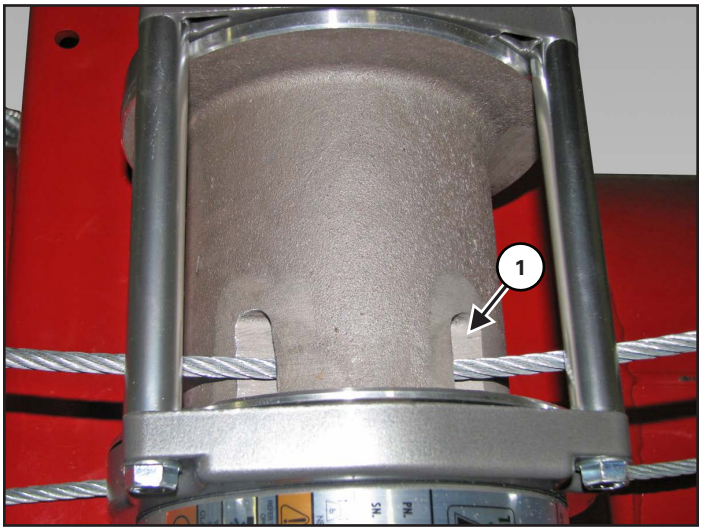
- **Always wear heavy leather gloves when handling a wire rope.**
- **Never let wire rope slip through your hands.**

Figure 233



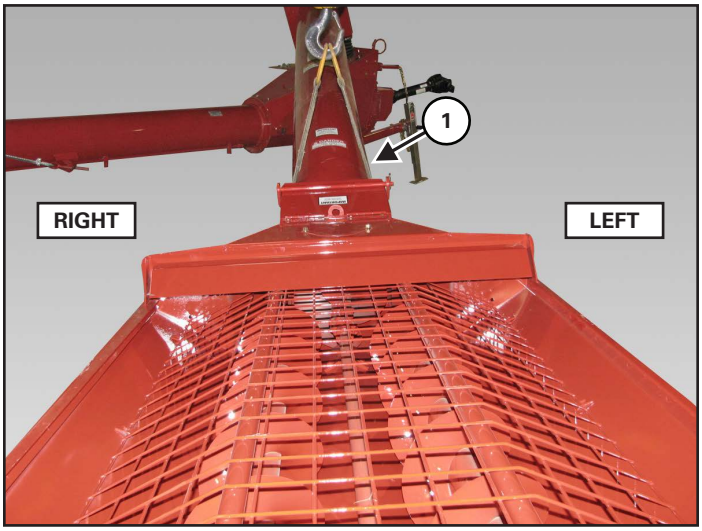
Route the winch cable (Item 1) through the end pulley of the lift boom, down through the bottom pulley of the lift boom, across the top of the bottom tube and between the winch and winch mounting plate **[Figure 233]**.

Figure 234



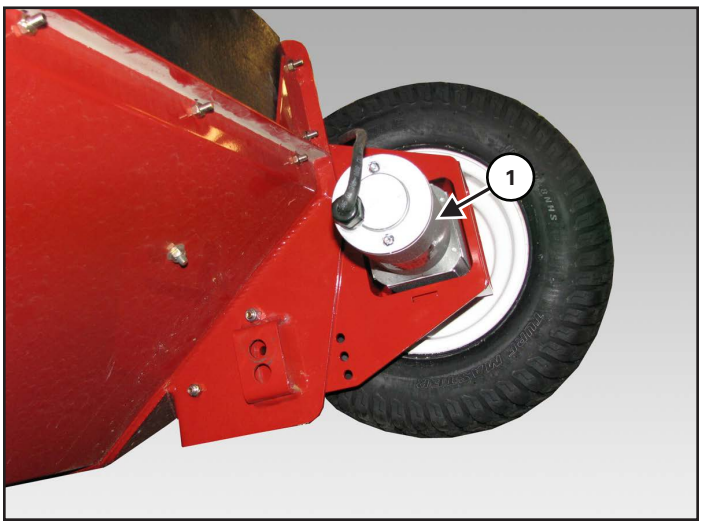
With the winch cable routed under the winch, feed the cable back through the two slots (Item 1) of the winch **[Figure 234]**.

Figure 235



Right hand (RH) and left hand (LH) sides of the hopper are as viewed from the end of the hopper, looking towards the intake auger (Item 1) **[Figure 235]**.

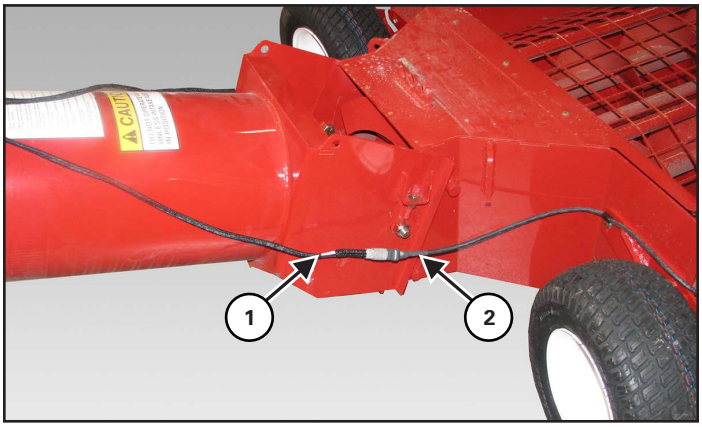
Figure 236



Install the left hand (L) electric motor / wheel assembly (Item 1) onto the hopper using three 3/8″ x 1″ bolts and 3/8″ lock nuts. Tighten bolts and nuts **[Figure 236]**.

Repeat for installing the right hand (R) electric motor / wheel assembly.

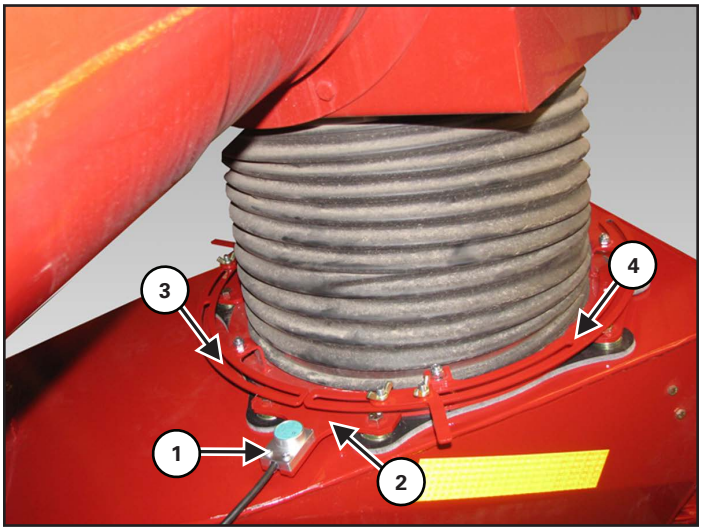
Figure 237



Install wiring harness connector (Item1) to right hand (R) electric motor wheel harness connector (Item 2) as shown **[Figure 237]**.

Repeat procedure for the left hand (L) electric motor.

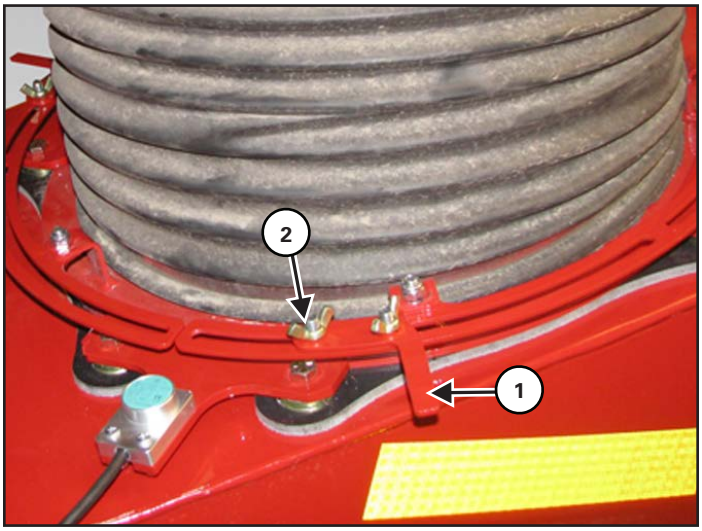
Figure 238



Install proximity sensor (Item 1) onto the ring clamp (Item 2) **[Figure 238]**.

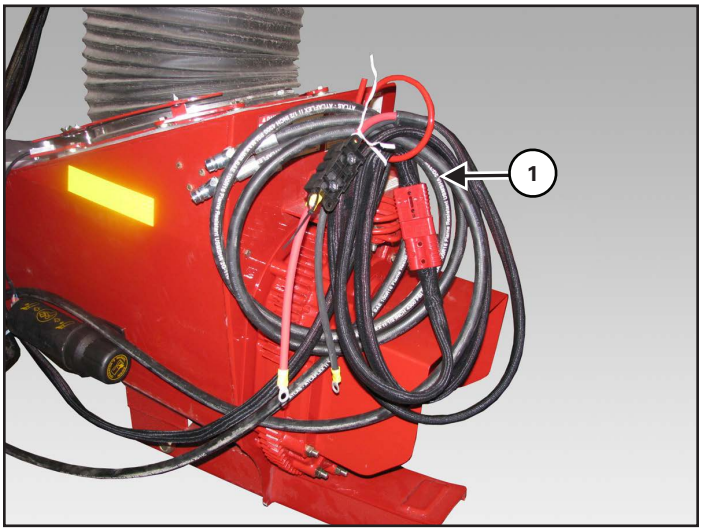
Align the proximity rails (Items 3 & 4) with the tabs and install four bolts and lock nuts **[Figure 238]**.

Figure 239



Install the two proximity indicators (Items 1) with the four bolts and wing nuts (Item 2) **[Figure 239]**.

Figure 240



Route the electrical harnesses (Item 1) from the control box along the input box and install into the storage bracket. Secure all harnesses **[Figure 240]**.

1000 RPM RETRO FIT KIT

Removing Intake Auger And Hopper

WARNING

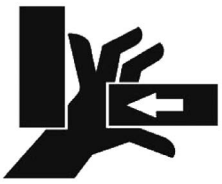
DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling components.

WARNING



AVOID INJURY OR DEATH

Keep fingers and hands out of pinch points when assembling the equipment.

IMPORTANT

All assembly, installation, removal and servicing of components is done with the auger fully lowered and disconnected from the tractor.

WARNING

AVOID INJURY OR DEATH

Hydraulic fluid escaping under pressure can have sufficient force to enter a person's body by penetrating the skin. This can cause serious injury and possible death if proper medical treatment by a physician familiar with this injury is not received immediately.

IMPORTANT

When repairing hydraulic systems, clean the work area before disassembly and keep all parts clean. Always install caps and plugs on hoses, tubelines and ports to keep dirt out. Dirt can quickly damage the system.

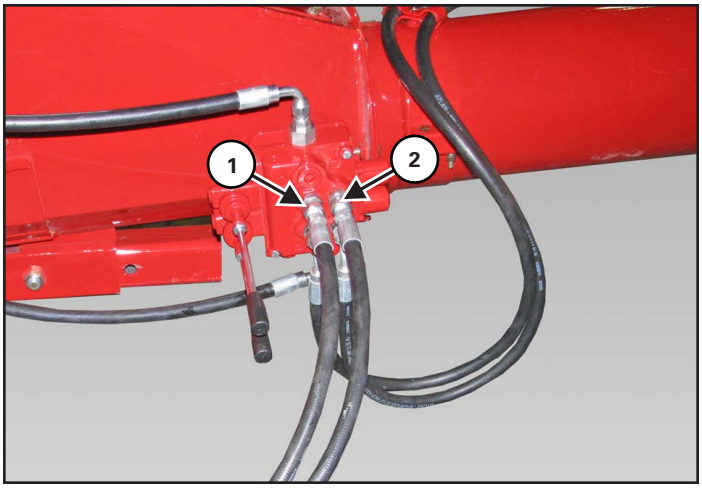
Lower the hopper to the ground.

Enter the tractor, place all controls in neutral, engage the park brake, stop the engine and wait for all moving parts to stop.

Perform the following before beginning work:

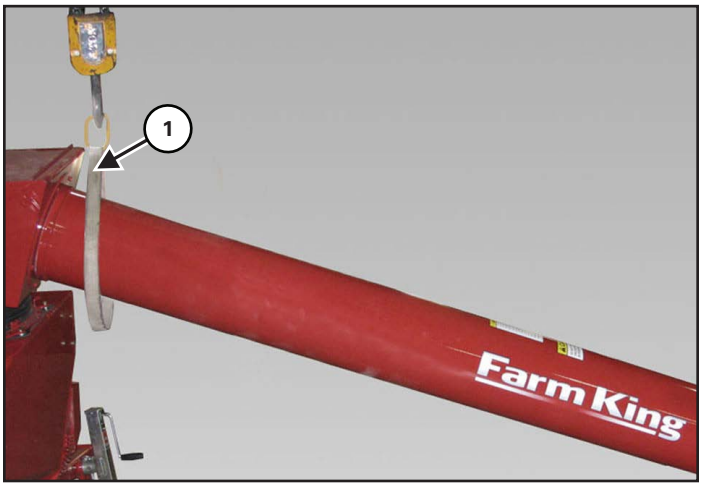
- Leave the operator's position.
- Disconnect the PTO driveline.
- Disconnect hydraulic hoses from tractor.
- Lower the jack stand.
- Disconnect the Backsaver Auger from the tractor.
- Move the tractor away from the auger.

Figure 241



Disconnect the left and right wheel motor hydraulic hoses (Items 1 & 2) from the valve block **[Figure 241]**.

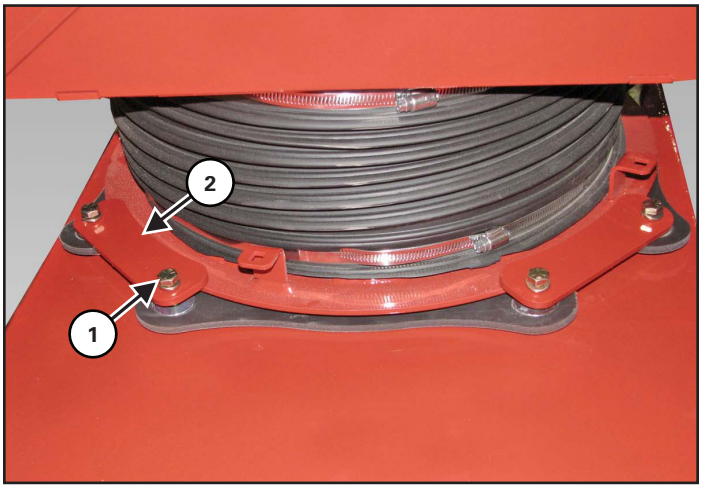
Figure 242



Install a strap (Item 1) around the top of the intake auger **[Figure 242]**.

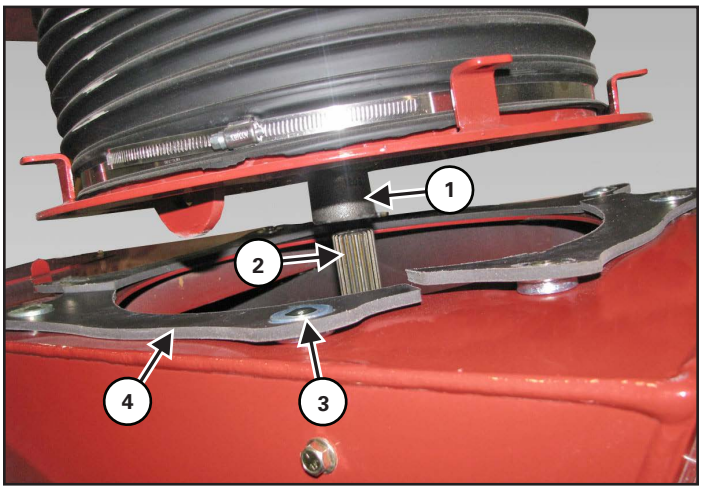
Connect the strap to an approved lifting device.

Figure 243



Remove the two bolts (Item 1) and ring clamp (Item 2). Repeat to remove the three remaining ring clamps **[Figure 243]**.

Figure 244



Raise the lifting device to remove the intake auger u-joint (Item 1) from the upper box shaft (Item 2) **[Figure 244]**.

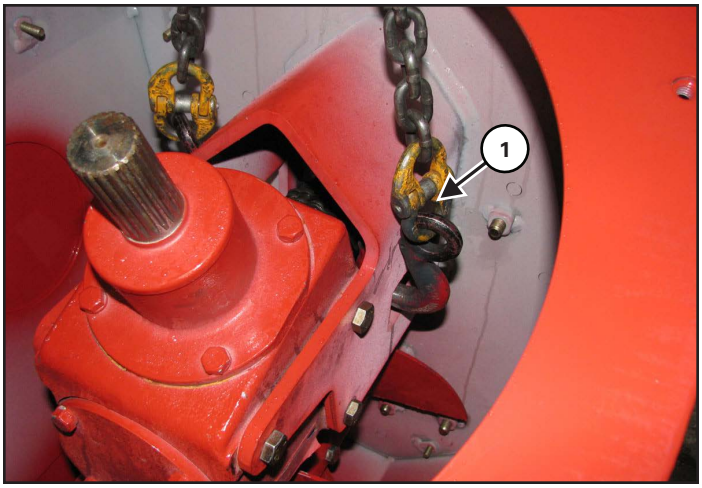
Remove the 1/4" x 13/32" ID x 1-1/4" OD washers (Item 3) and intake spacers (Item 4) **[Figure 244]**.

Move the intake auger and hopper away from the input box.

Lower the intake auger and hopper to the ground.

NOTE: Before lowering the intake auger to the ground, cover the u-joint to keep the coupling free of dirt and debris.

Figure 245



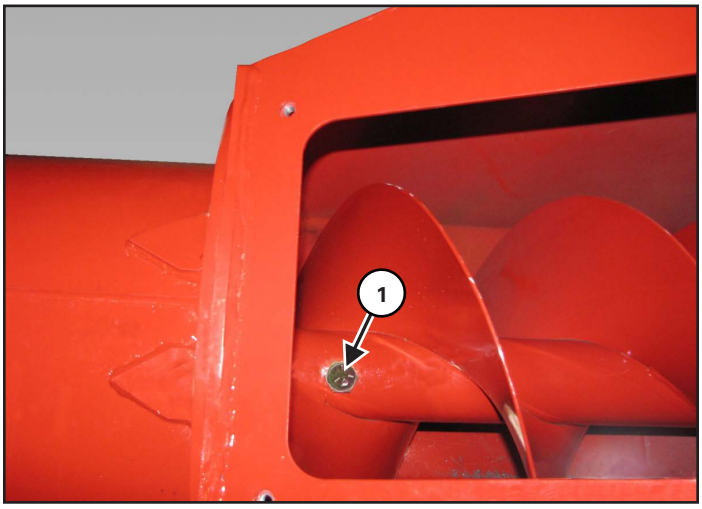
Install chains (Item 1) inside the input box **[Figure 245]**.

Connect the chain to an approved lifting device.

Raise the input box and place a support stand under the bottom auger tube.

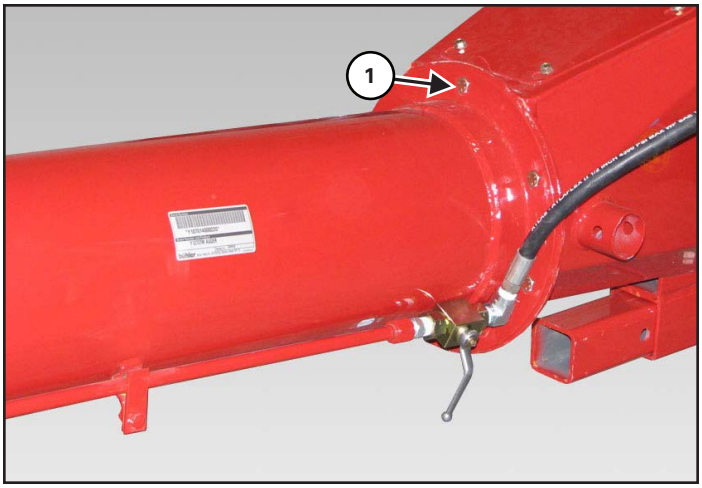
Lower input box until the tube is resting on the support stand.

Figure 246



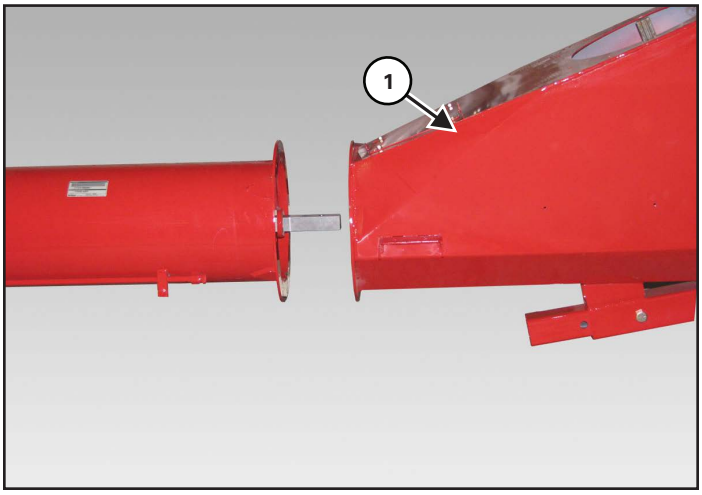
Remove the 1/2" x 3-1/4" bolt (Item 1) and lock nut from the bottom tube flighting and input box flighting **[Figure 246]**.

Figure 247



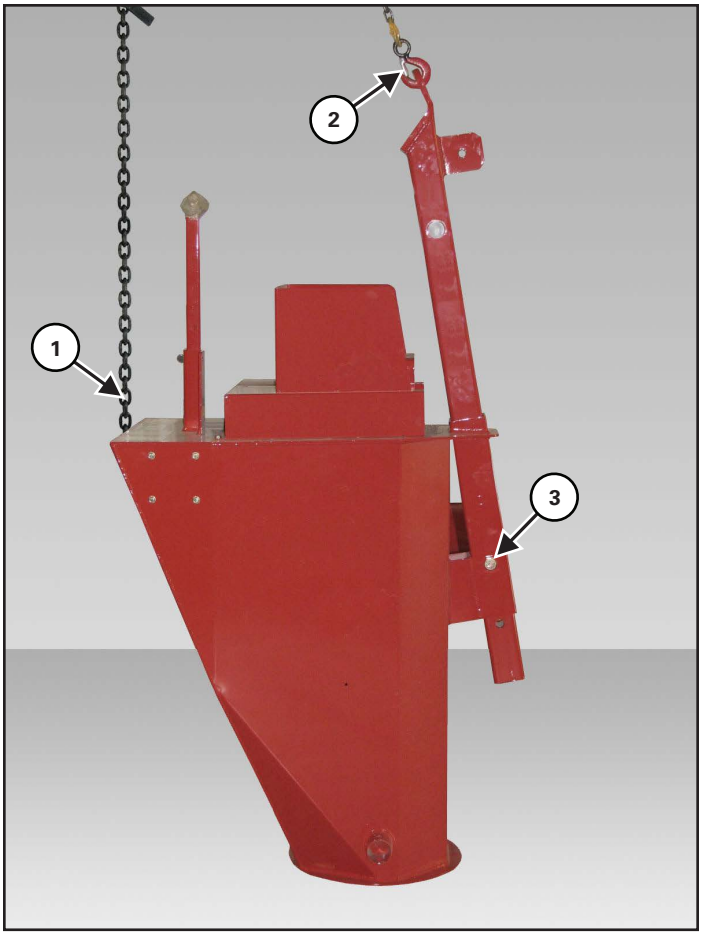
Remove the eight 7/16" x 1-1/4 bolts (Item 1) and 7/16" lock nuts around the mounting flanges of the bottom tube and input box **[Figure 247]**.

Figure 248



Move the input box (Item 1) away from the tube assembly **[Figure 248]**.

Figure 249



Lower the input box to the ground with the tube mounting flange flat on the ground **[Figure 249]**.

IMPORTANT

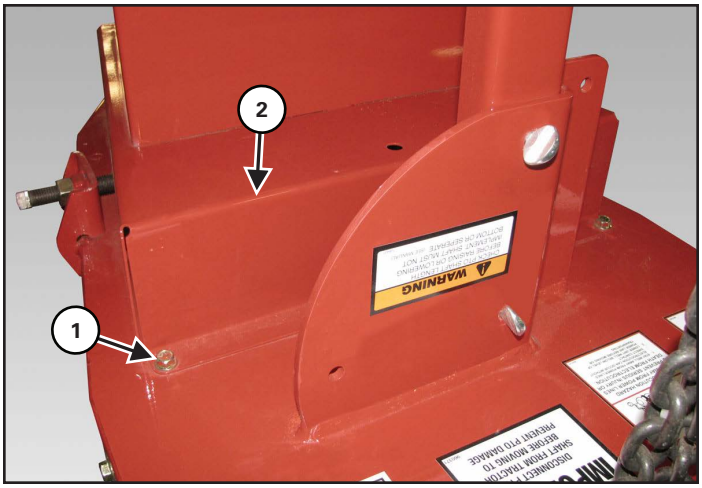
Do not remove chain (Item 1) used to remove the input box from the tube assembly. This chain will help support the input box during 1000 RPM retro kit installation [Figure 249].

Install a second chain (Item 2) onto the hitch and connect second chain to an approved lifting device **[Figure 249]**.

Remove the bolt (Item 3) and lock nut **[Figure 249]**.

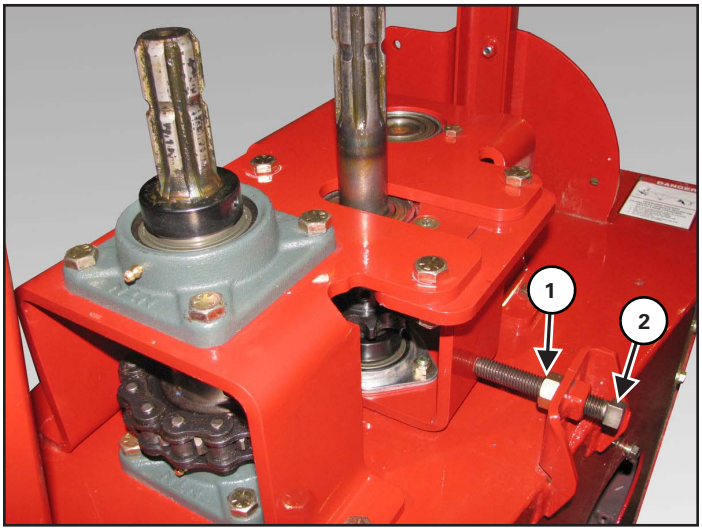
Raise the lifting device until the hitch is free from the input box.

Figure 250



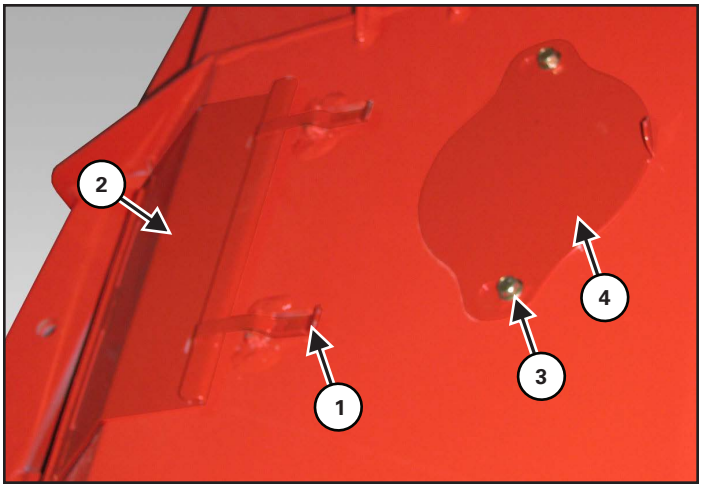
Remove the four bolts (Item 1), then remove guard (Item 2) **[Figure 250]**.

Figure 251



Loosen jam nut (Item 1) and remove tension bolt (Item 2) **[Figure 251]**.

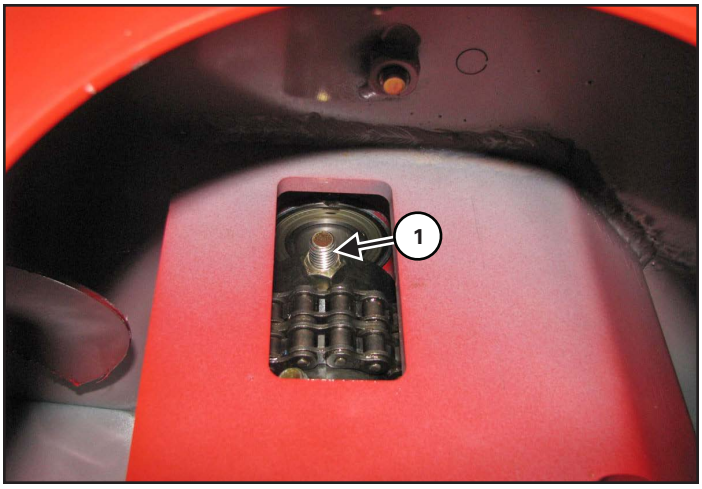
Figure 252



Release the two latches (Item 1) and open clean out cover (Item 2) **[Figure 252]**.

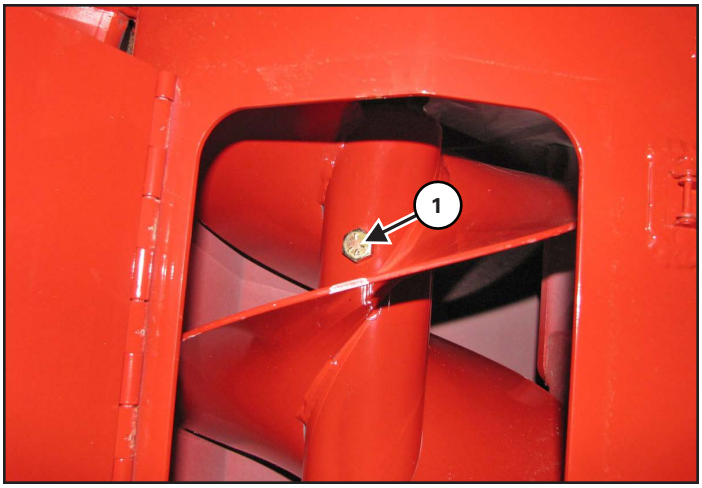
Loosen the two bolts (Item 3) and remove gearbox access cover (Item 4) **[Figure 252]**.

Figure 253



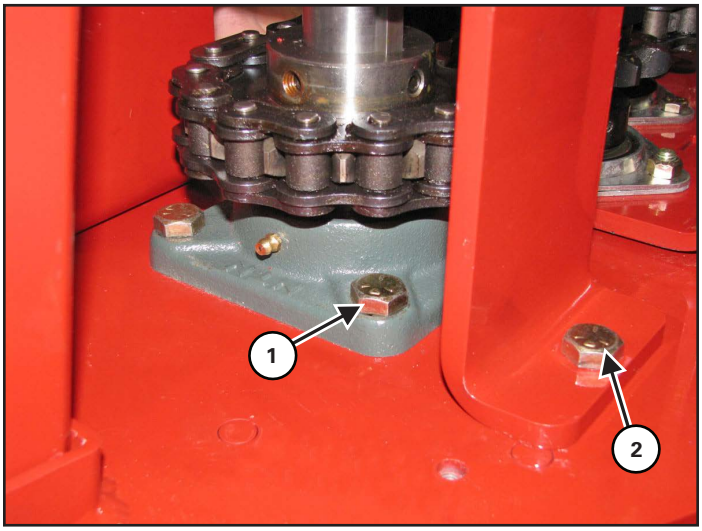
Remove bolt (Item 1) **[Figure 253]**.

Figure 254



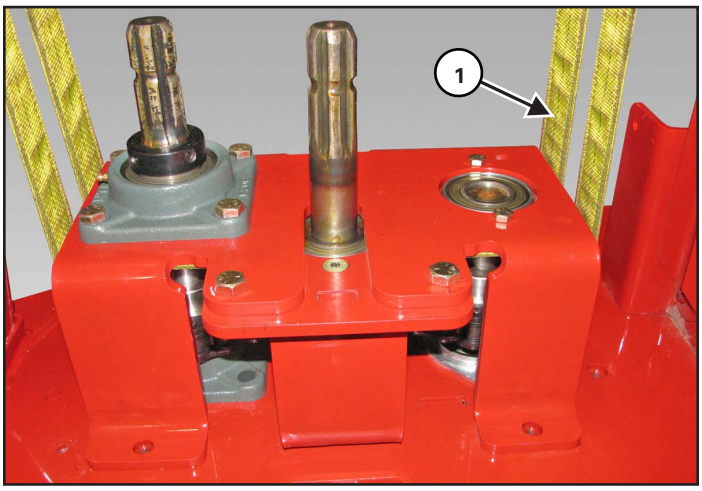
Remove the bolt (Item 1) from input box flighting **[Figure 254]**.

Figure 255



Remove the four bolts (Item 1) from the collar. Remove the four bolts from the weldment (Item 2) **[Figure 255]**.

Figure 256

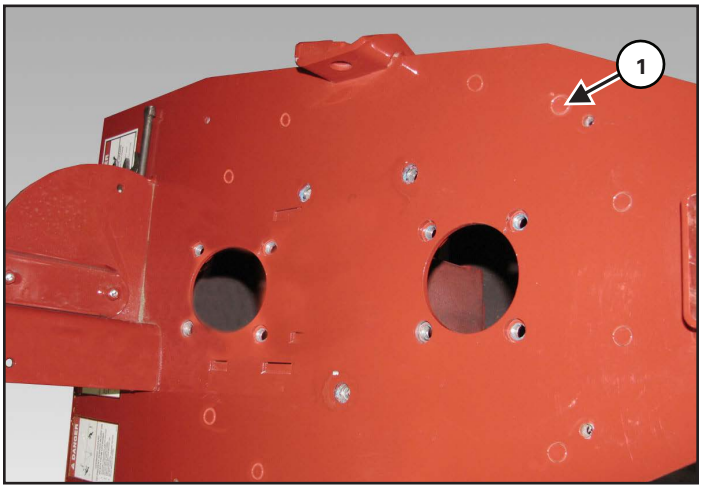


Install straps (Item 1) through the drive assembly **[Figure 256]**.

Connect the straps to an approved lifting device.

Raise and remove the drive assembly from the input box.

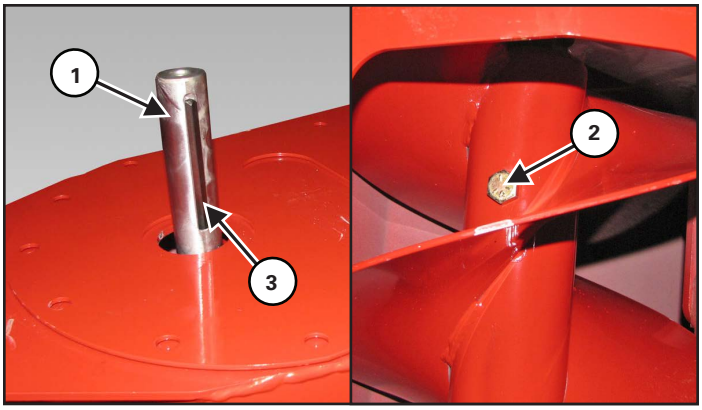
Figure 257



Locate the ten knock-outs (Item 1) on top of intake box **[Figure 257]**.

Using a punch, remove all ten knock-outs.

Figure 258



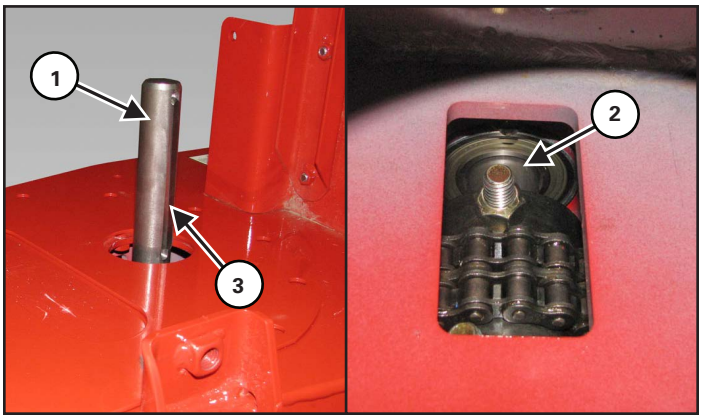
Install the square end of the bar shaft (Item 1) into the input box flighting **[Figure 258]**.

NOTE: Hold on to the bar shaft when installing into the input box flighting. If released before bolt is installed, the shaft will drop down inside the input box flighting tube.

Align the holes of the drive shaft and flighting. Install bolt (Item 2) through the drive shaft and input box flighting. Install lock nut and tighten **[Figure 258]**.

Install key (Item 3) **[Figure 258]**.

Figure 259

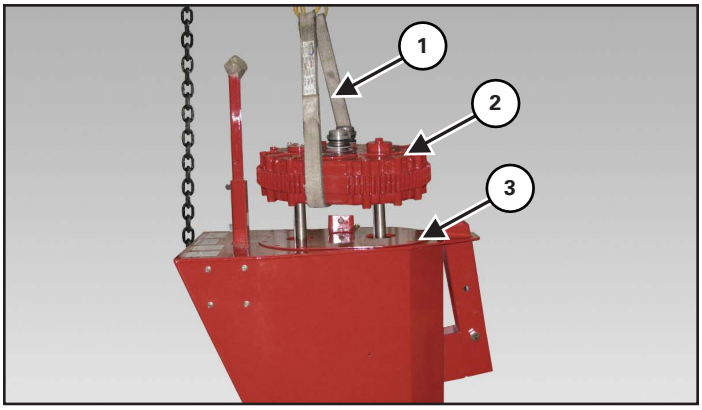


Install the gearbox shaft (Item 1) into the input box gearbox cv joint **[Figure 259]**.

Align the holes of the gearbox shaft and input box gearbox cv joint. Install bolt (Item 2) through the gearbox shaft and input box gearbox cv joint. Install lock nut and tighten **[Figure 259]**.

Install key (Item 3) **[Figure 259]**.

Figure 260



Install a strap (Item 1) around the 1000 RPM gearbox (Item 2). Connect the strap to an approved lifting device **[Figure 260]**.

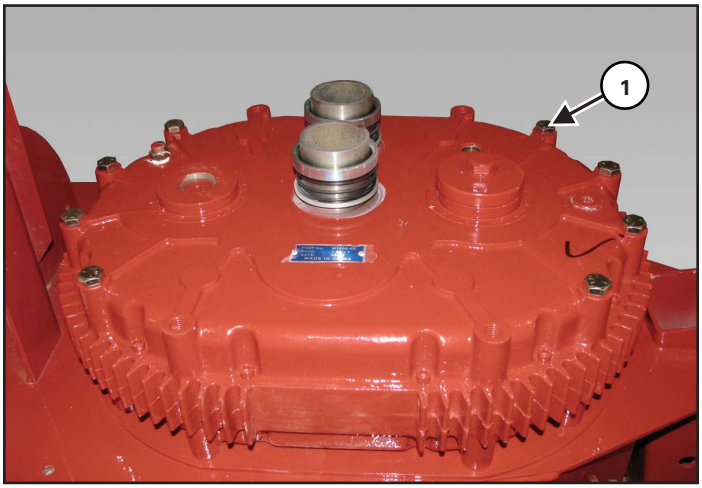
Align the spacer plate (Item 3) with punched out holes input box (only fits one way) **[Figure 260]**.

Raise the 1000 RPM gearbox and position over the intake box.

NOTE: When lowering the 1000 RPM gearbox onto the two shafts, verify that the keys remain in shaft's keyway.

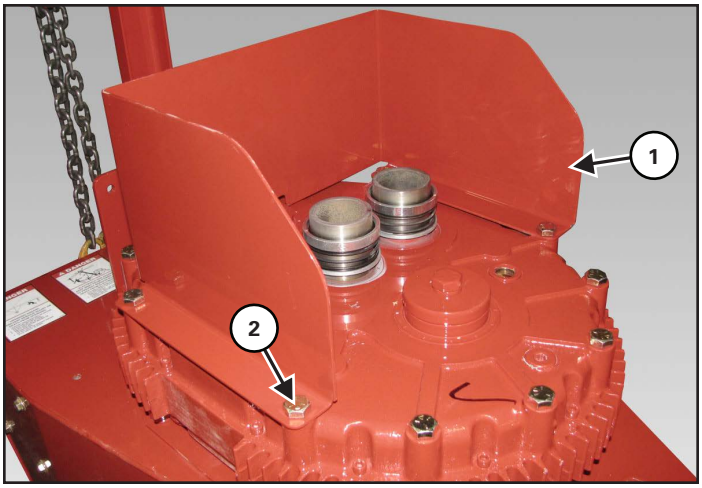
Align and lower the 1000 RPM gearbox onto the upper two shafts **[Figure 260]**.

Figure 261



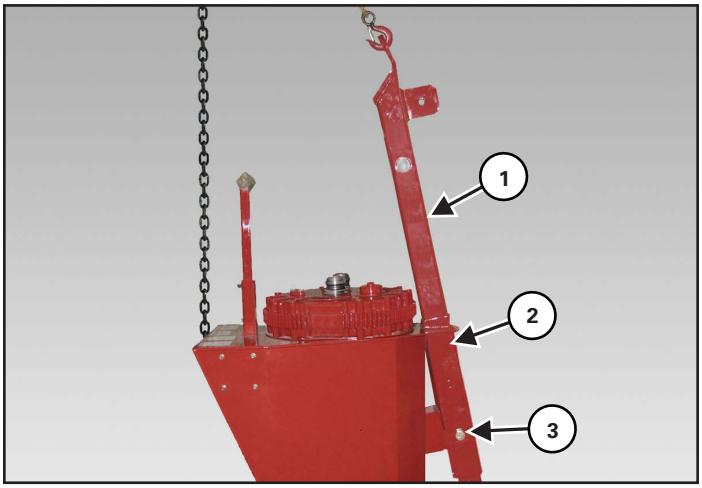
Install the eight bolts (Item 1) through the 1000 PRM gearbox, spacer plate and input box. Install one lock nut on each bolt and tighten **[Figure 261]**.

Figure 262



Place the guard (Item 1) on top of the input box and install the four bolts (Item 2) into the 1000 RPM gearbox **[Figure 262]**.

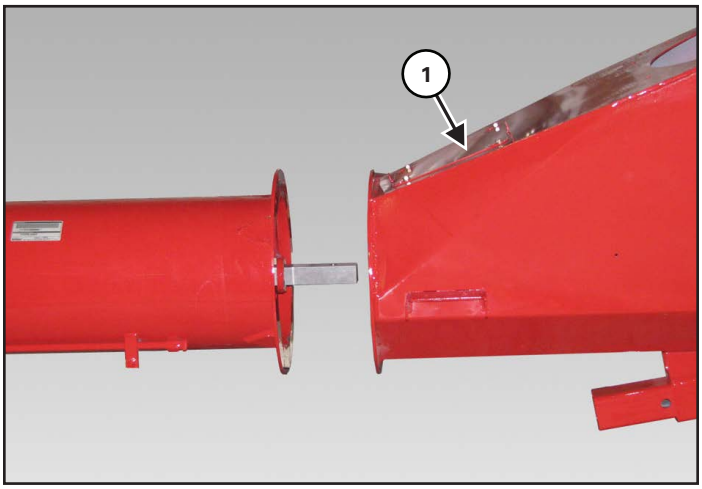
Figure 263



Raise the hitch (Item 1) and align with the mounting tube (Item 2) **[Figure 263]**.

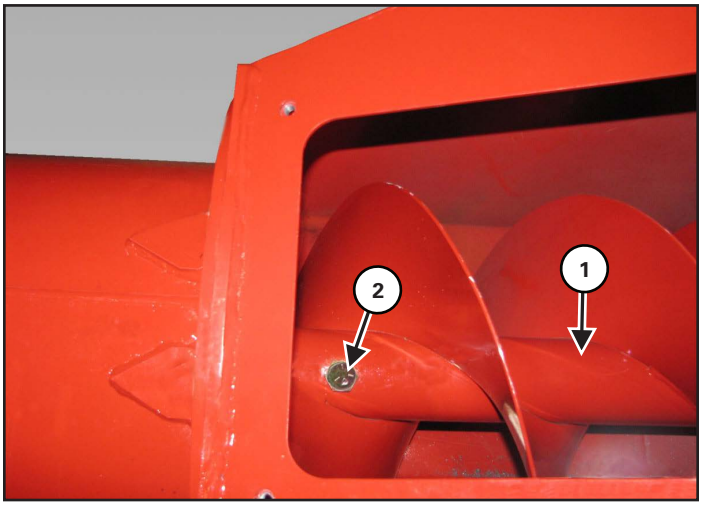
Align mounting holes, install bolt (Item 3) and lock nut. Tighten bolt and lock nut **[Figure 263]**.

Figure 264



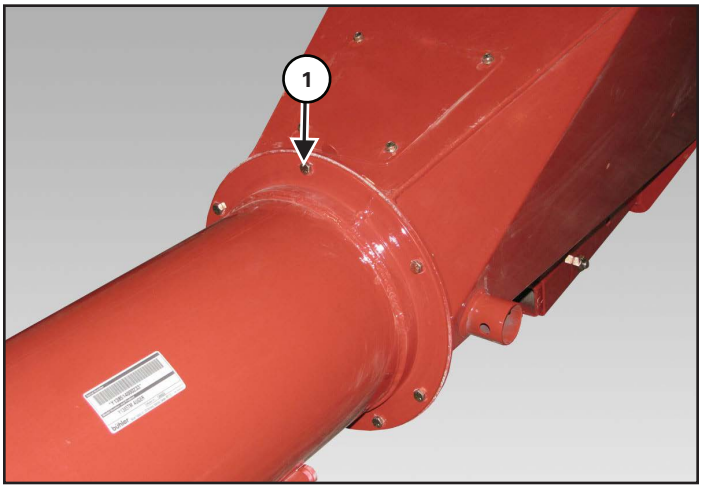
Raise the input box (Item 1). Move the input box in front of the tube assembly **[Figure 264]**.

Figure 265



Align the input box flighting (Item 1) with the hole in the bottom tube flighting. Install bolt (Item 2) and lock nut. Tighten bolt and lock nut **[Figure 265]**.

Figure 266



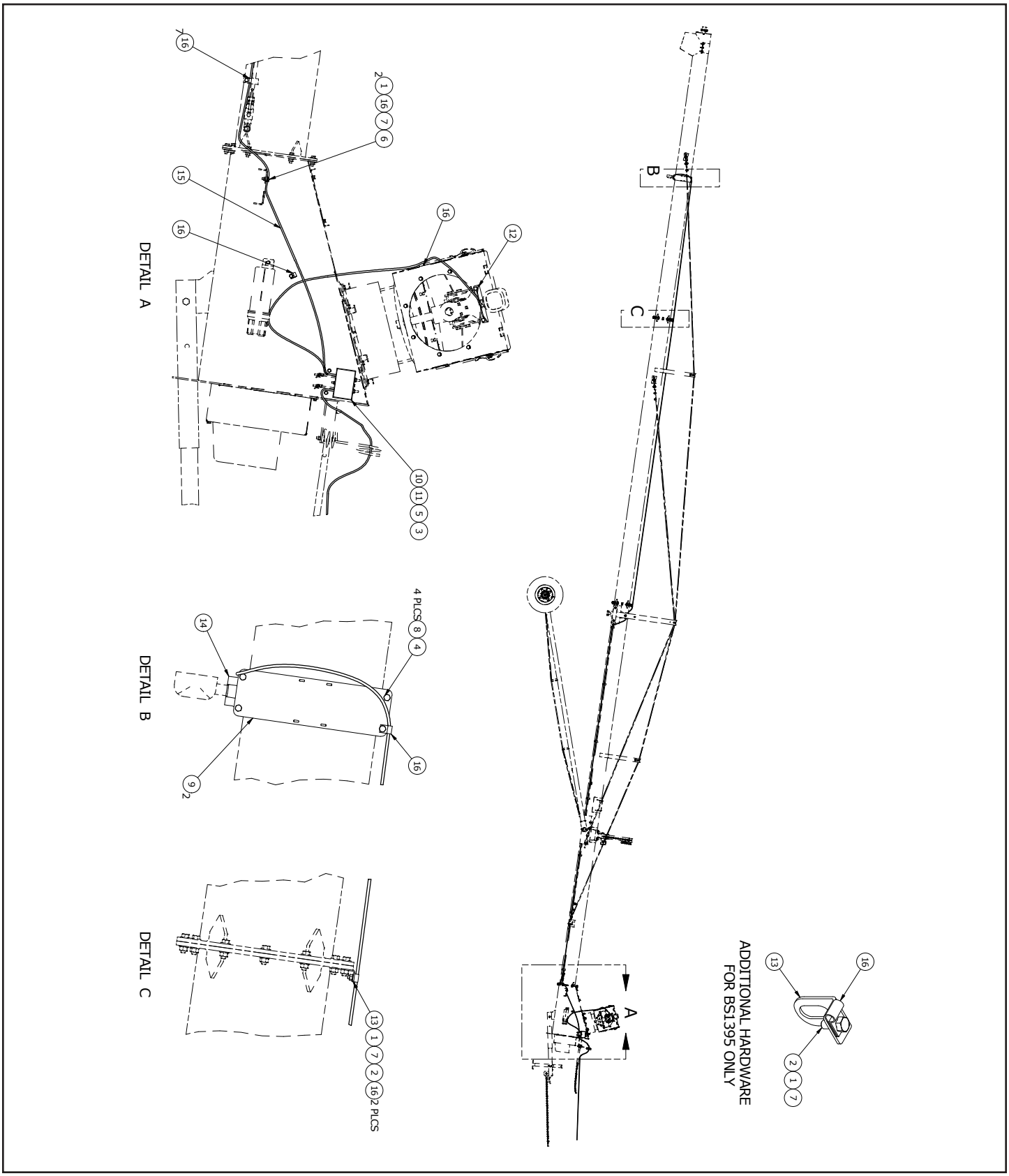
Move the input box towards the bottom tube until the two mounting flanges make contact.

Align the mounting holes and install the eight 7/16" x 1-1/4 bolts (Item 1) and 7/16" lock nuts around the mounting flanges of the bottom tube and input box. Tighten bolts and lock nuts **[Figure 266]**.

Install intake auger / hopper.

WORK LIGHT WIRING INSTRUCTIONS - F2738

Figure 267

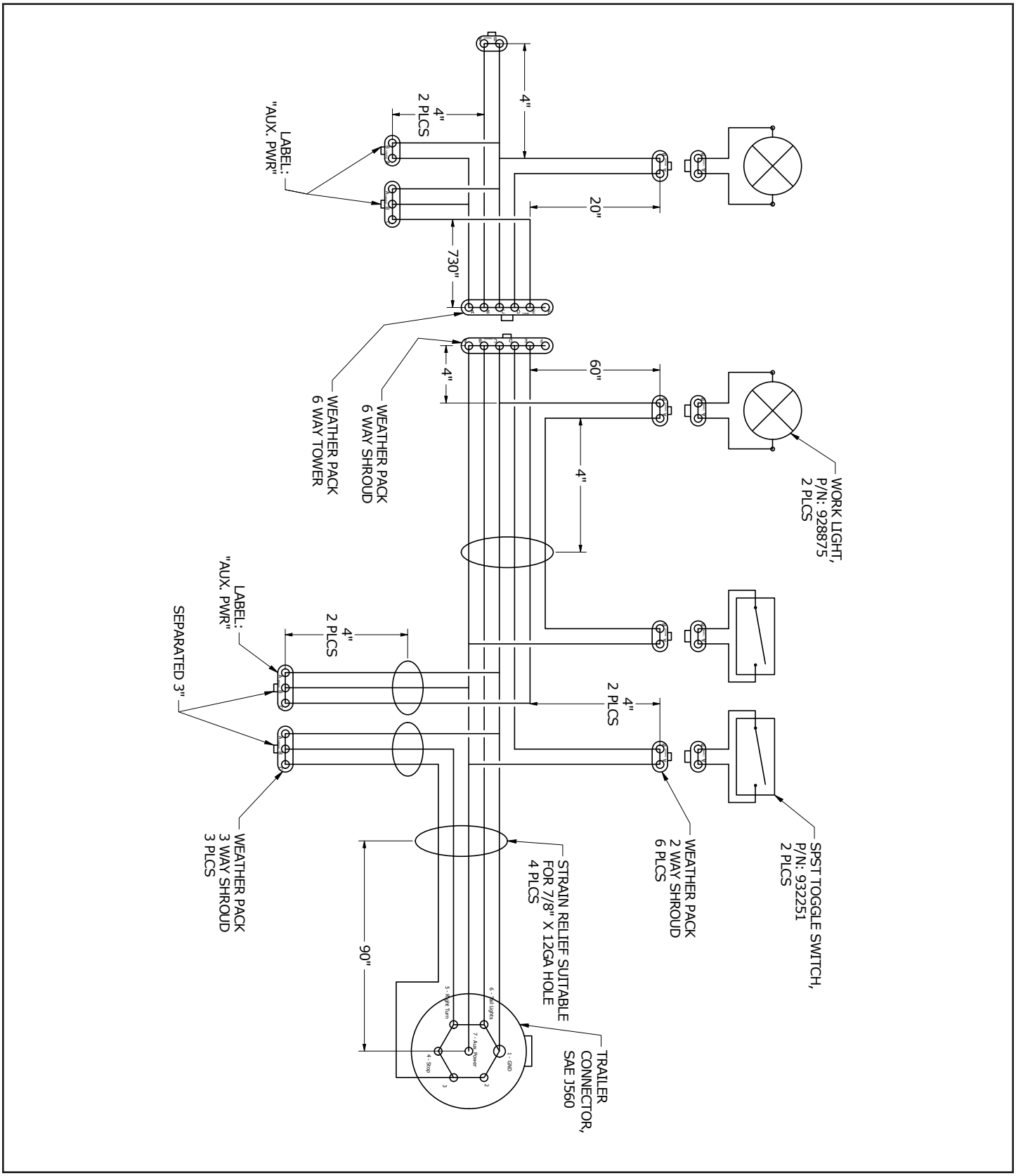


Bill Of Material

ITEM [Figure 267]	PART NUMBER	DESCRIPTION	QTY.
1	81546	5/16" FLAT WASHER (PL)	5
2	81549	5/16" X 3/4" HEX BOLT (PL)	3
3	84498	1/4" LOCK NUT (PL)	1
4	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	4
5	812025	BOLT HEX 0.250NC X 4.00GR5 PL	1
6	812026	5/16" X 1" HEX BOLT (PL)	1
7	812362	5/16" LOCK NUT (PL)	4
8	812363	3/8" LOCK NUT (PL)	4
9	937330	BRKT-13" HALF CLAMP	2
10	938844	BRKT-ELEC SWITCHES	1
11	938845	COVER-ELEC SWITCHES	1
12	938847	BRKT - INTAKE LIGHT MOUNT	1
13	938887	BRKT - CABLE CLIP MOUNT	3
14	938900	BRKT - LIGHT MOUNT	1
15	940587	HARNESS - BS WORKING LIGHT W/ AUX. PWR	1
16	SZ000566	5/16X0.406 HOLE VINYL DIP CLAMP	14

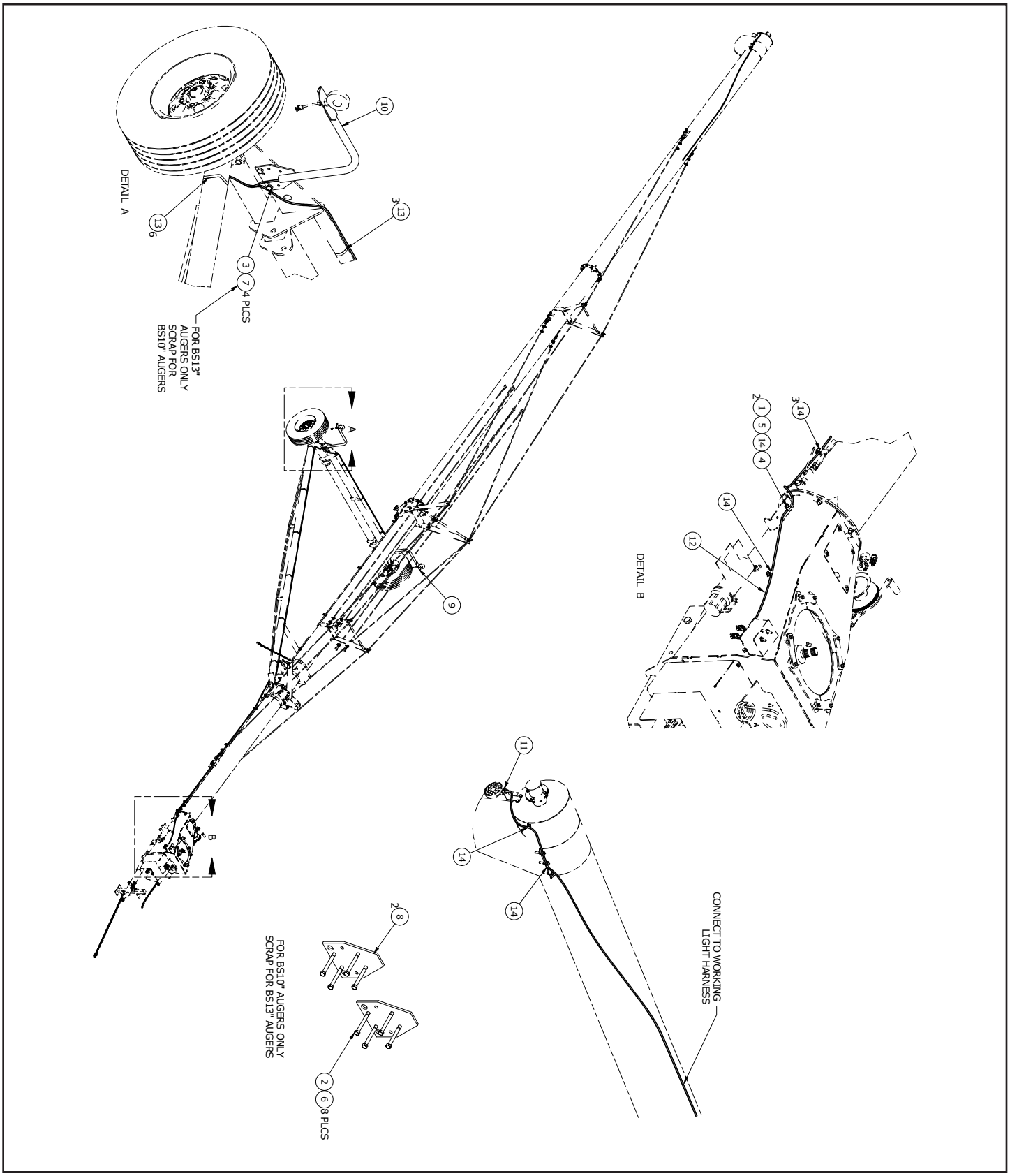
Work Light Harness Schematic

Figure 268



TRANSPORT LIGHT WIRING INSTRUCTIONS - F2739

Figure 269

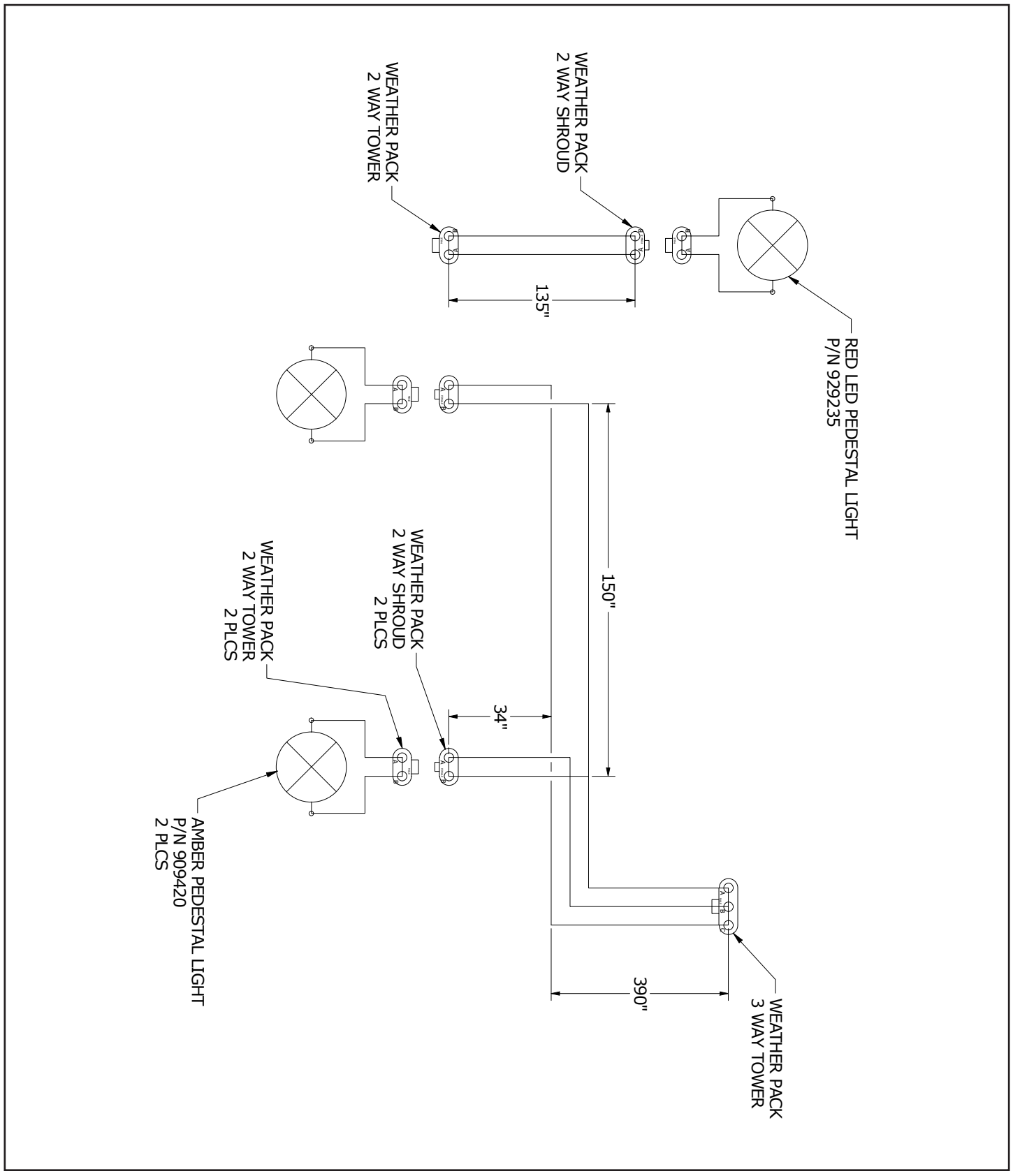


Bill Of Material

ITEM [Figure 269]	PART NUMBER	DESCRIPTION	QTY.
1	81546	5/16" FLAT WASHER (PL)	2
2	81587	3/8" X 4" HEX BOLT (PL)	8
3	84268	5/8" X 1 1/2" HEX BOLT (PL)	4
4	812026	5/16" X 1" HEX BOLT (PL)	1
5	812362	5/16" LOCK NUT (PL)	1
6	812363	3/8" LOCK NUT (PL)	8
7	812482	5/8" LOCK NUT (PL)	4
8	909225L	TURN SIGNAL MT PL 1/4" X 5 7/8" X 7"	2
9	909226	BLINKER MOUNT WELDT - RH	1
10	909227	BLINKER MOUNT WELDMENT - LH	1
11	938898	BRKT-LIGHT HOLDER	1
12	940586	HARNESS - BS TRANSPORT LIGHT KIT	1
13	967103	TIE 30"	9
14	SZ000566	5/16 X 0.406 HOLE VINYL DIP CLAMP	7

Transport Light Harness Schematic

Figure 270



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