

Farm King

ASSEMBLY MANUAL

BACKSAVER AUGER

Models 1370, 1385, 1395, 13114



ASSEMBLY

Manufacturer's Statement: For technical reasons, Farm King reserves the right to modify machinery design and specifications provided herein without any preliminary notice. Information provided herein is of descriptive nature. Performance quality may depend on soil fertility, applied agricultural techniques, weather conditions, and other factors.

GENERAL ASSEMBLY INFORMATION.....	3
Component Unloading And Identification.....	3
UNDERCARRIAGE.....	4
Lift Arms and Hydraulic Cylinders - 1370, 1385, 1395 Models.....	7
Lift Arms and Hydraulic Cylinders - 13114 Models.....	12
Wheels and Lift Arm Rest.....	18
TUBES.....	21
Bridging.....	25
Truss Beams - 13114 Models.....	33
Trusss Beam Identification - 13114 Models.....	40
Trusss Brace Identification - 13114 Models.....	42
TUBE AND UNDERCARRIAGE - 1370, 1385, 1395 MODELS.....	44
TUBE AND UNDERCARRIAGE - 13114 MODELS.....	49
INTAKE AUGER.....	54
HOPPER.....	55
SAFETY CHAIN.....	58
MANUAL HOLDER.....	58
HYDRAULIC HOSE HOLDER.....	59
PTO DRIVELINE.....	59
LIFT BOOM ARM.....	59
HAND WINCH AND CABLE.....	60
HOPPER SAFETY HOOK.....	61
HYDRAULICS - 1370, 1385, 1395 MODELS.....	62
Hydraulic Cylinder Hose Installation.....	62
HYDRAULICS - 13114 MODELS.....	65
Hydraulic Cylinder Hose Installation.....	65
HYDRAULIC HOPPER MOVER AND WINCH.....	69

Hydraulic Control Valve Installation.....	69
Hydraulic Winch Installation.....	71
Hydraulic Wheel Motor And Wheel Installation.....	75
ELECTRIC MOVER AND WINCH.....	78
1000 RPM RETRO FIT KIT.....	81
Removing Intake Auger And Hopper.....	81

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.

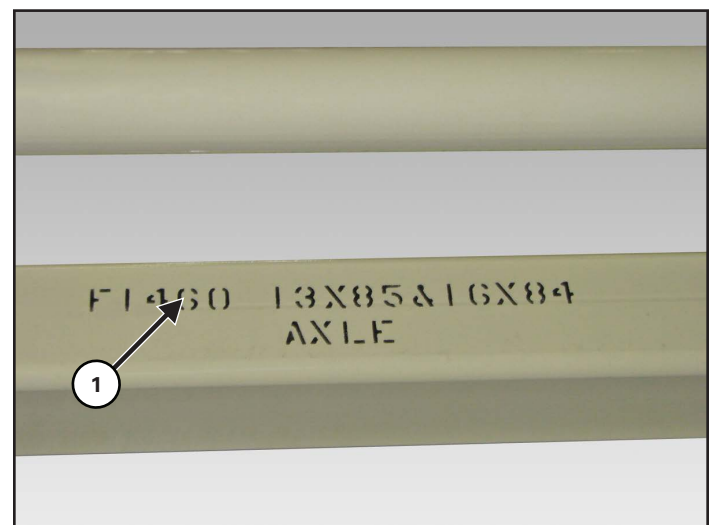
Using the packing list, locate and place all components and hardware in one area. Count the individual components and verify that you have received the correct number of components to fully assemble the auger.

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 5



Larger components are marked (Item 1) for identification [Figure 5].

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.

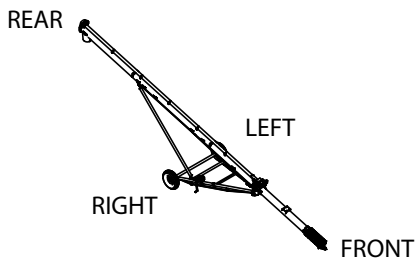
DO NOT work under suspended parts.

Keep away from moving parts.

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

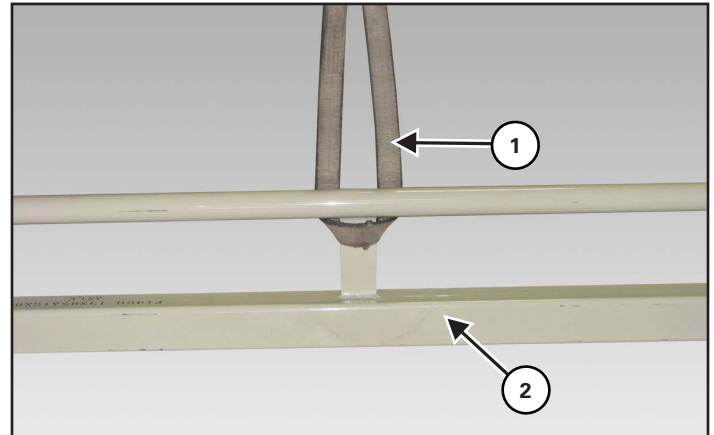


IMPORTANT



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 6



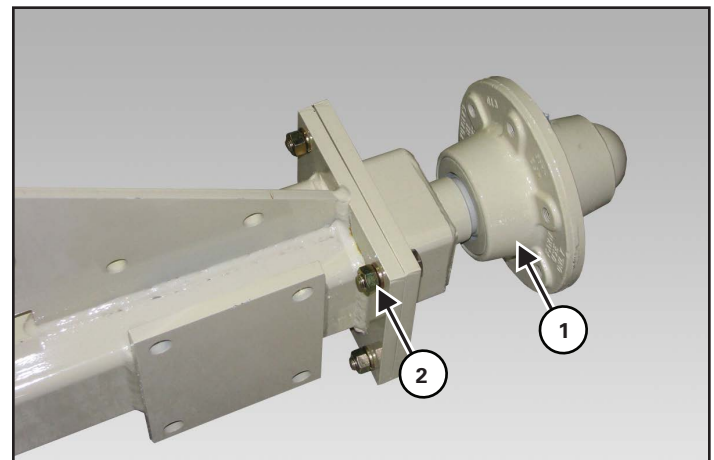
Install a strap (Item 1) around the center of the axle (Item 2) [Figure 6].

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 7



Align the hub (Item 1) with the axle [Figure 7].

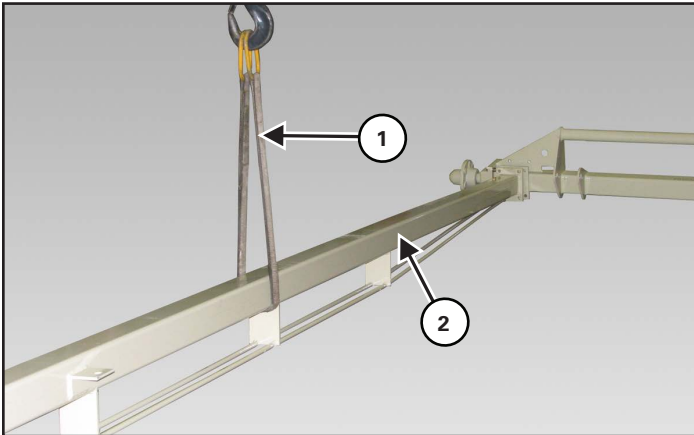
Stub Axle Mounting Bolt Sizes:

- 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 7].

Repeat procedure and install the opposite hub onto the axle [Figure 7].

Figure 8

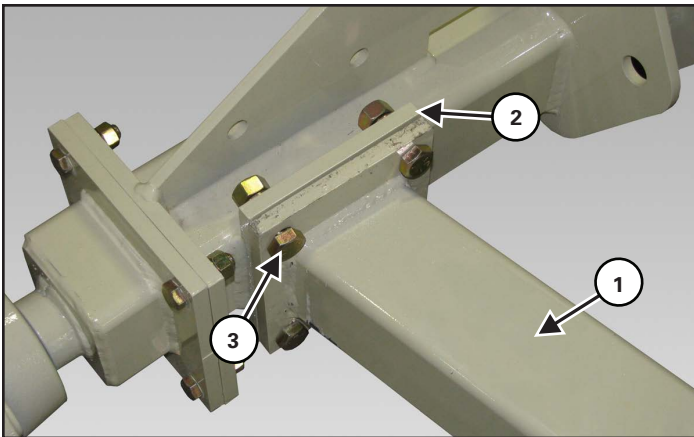


Install a strap (Item 1) around the center of the right undercarriage arm (Item 2) **[Figure 8]**.

Connect the strap to an approved lifting device.

Raise and move the right undercarriage arm towards the axle.

Figure 9



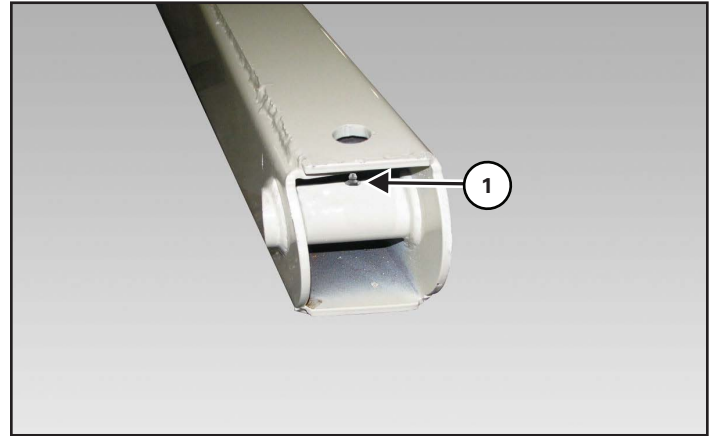
Align the right undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 9]**.

Undercarriage Arm Mounting Bolt Sizes

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

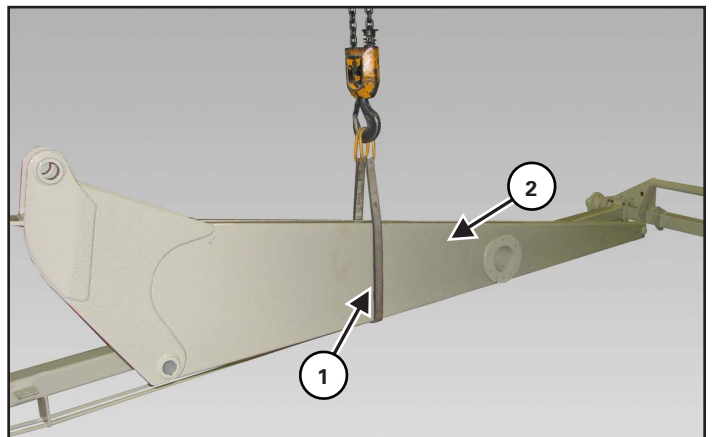
Install four bolts (Item 3) and lock nuts. Do not tighten bolts and nuts at this time **[Figure 9]**.

Figure 10



Install the grease zerker (Item 1) into the right and left lower lift arms **[Figure 10]**.

Figure 11

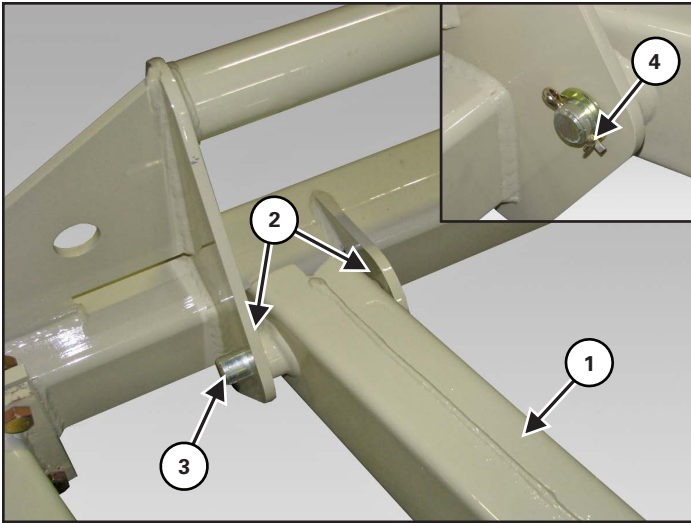


Install a strap (Item 1) around the RH lower lift arm (Item 2). Connect the strap to an approved lifting device **[Figure 11]**.

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 12



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 12]**.

Install one axle pin (Item 3) through the axle mounts and RH lower lift arm **[Figure 12]**.

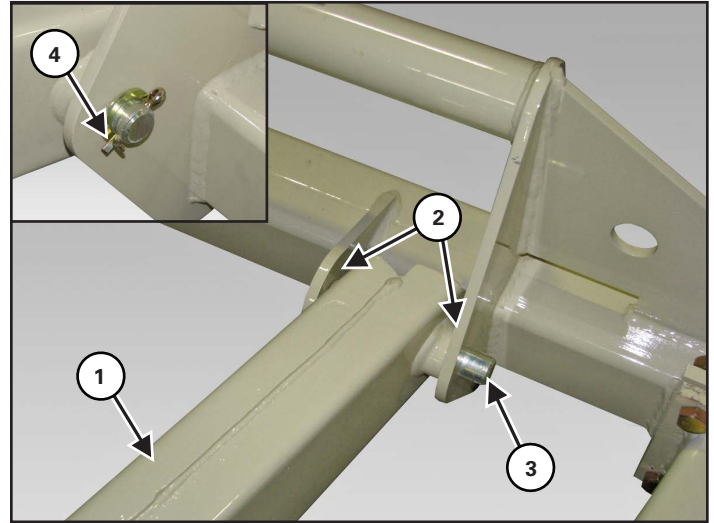
Install one 1-1/4" narrow rim washer and 1/4" x 2" cotter pin (Item 4) onto the axle pin, securing the RH lower lift arm to the axle **[Figure 12]**.

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 13



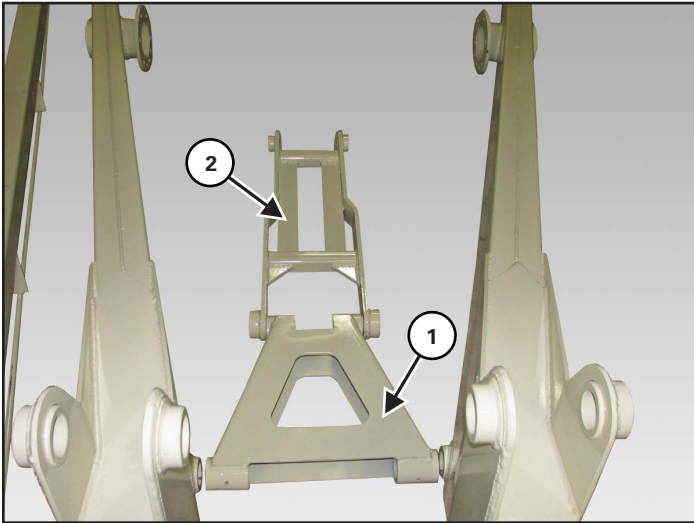
Align the LH lower lift arm (Item 1) with the two mounts (Item 2) on the axle **[Figure 13]**.

Install one axle pin (Item 3) through the axle mounts and LH lower lift arm **[Figure 13]**.

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 13]**.

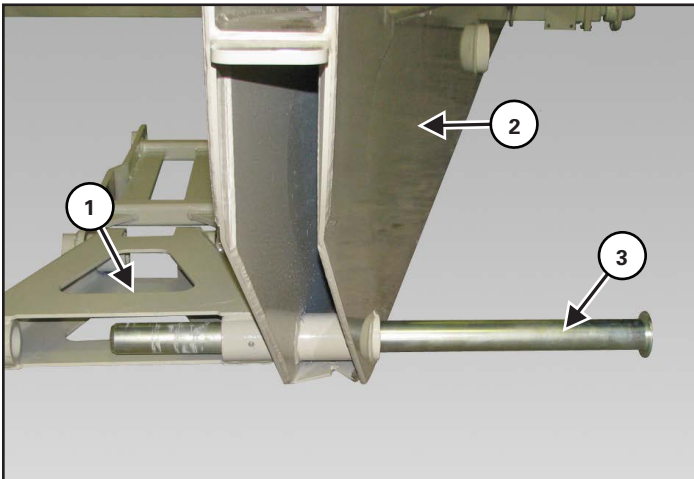
Lift Arms and Hydraulic Cylinders - 1370, 1385, 1395 Models

Figure 14



Place the connecting link (Item 1) and pivot yoke (Item 2) on the ground, between the LH & RH lower lift arms [Figure 14].

Figure 15



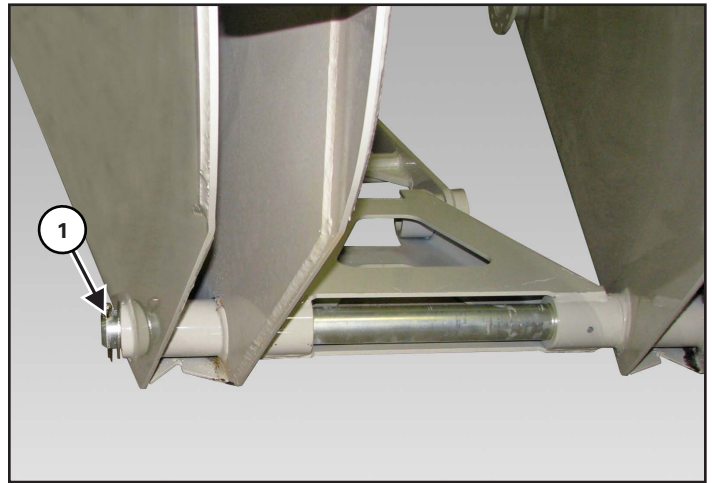
Align the connecting link (Item 1) with LH lower lift arm (Item 2) [Figure 15].

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 15].

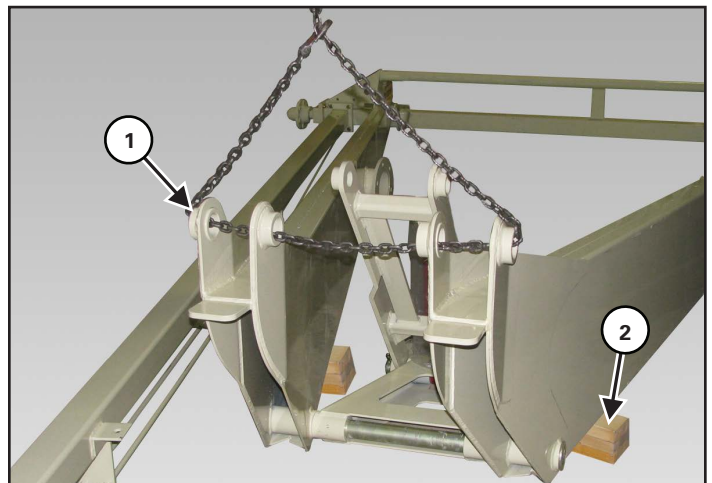
Figure 16



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 16].

Figure 17



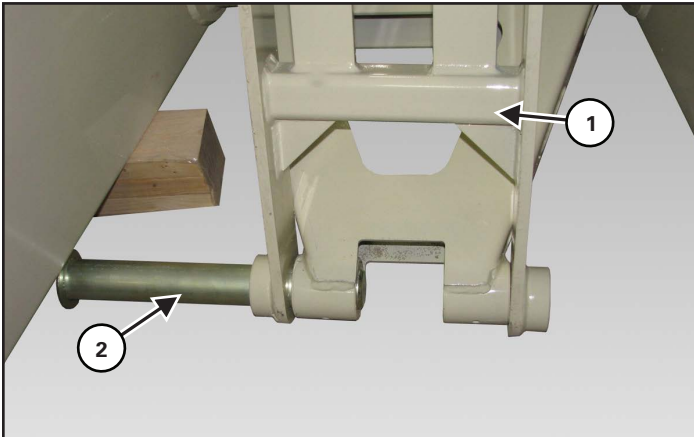
Install a chain (Item 1) through the upper LH & RH lower lift arm mounts. Connect the chain to an approved lifting device [Figure 17].

Lift the LH & RH lower lift arms. Install blocks (Item 2) under the LH & RH lower lift arms [Figure 17].

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 18



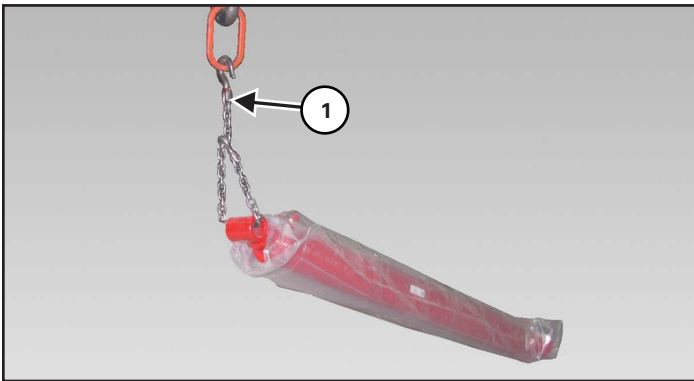
Rotate the pivot yoke (Item 1) up [Figure 18].

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 18].

Figure 19

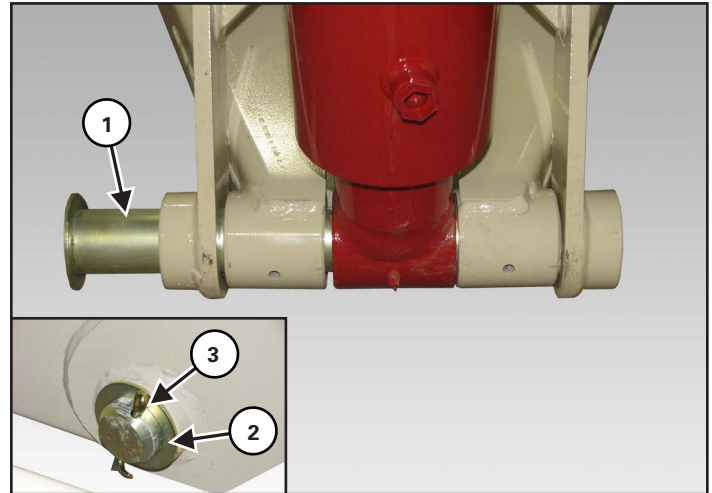


NOTE: It is recommended to leave the plastic on the hydraulic cylinders during assembly. This will help to prevent damage to the paint and minimize touch-up painting.

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 19].

Raise and move the hydraulic cylinder to the assembly area.

Figure 20



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 20].

Narrow Rim Washer Sizes:

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

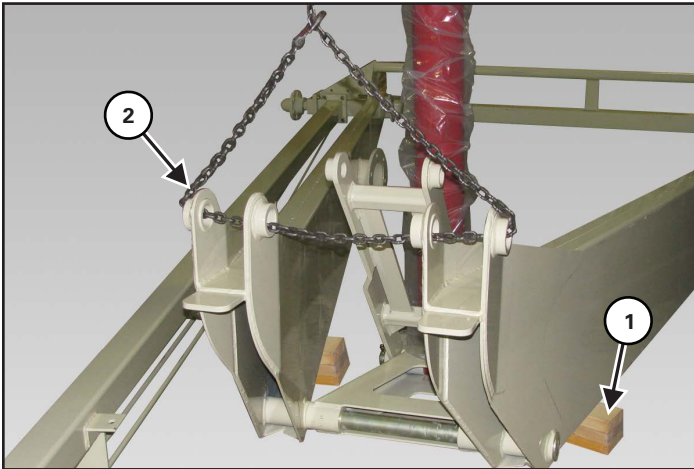
Cotter Pin Sizes:

- 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 20].

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

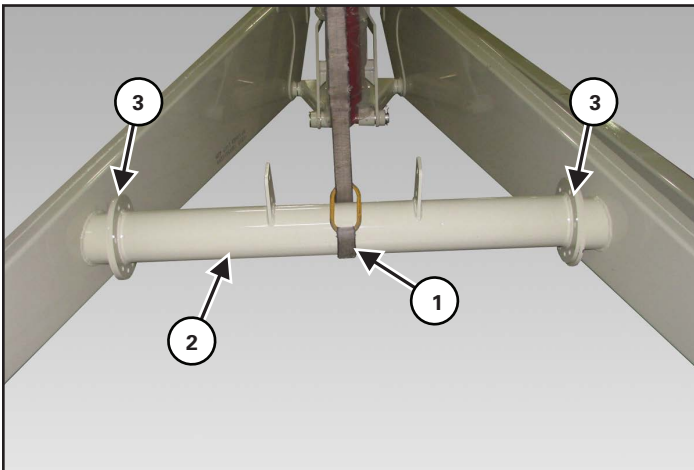
Figure 21



Lift the LH & RH lower lift arms. Remove blocks (Item 1). Lower LH & RH lower lift arms to the ground **[Figure 21]**.

Remove chain (Item 2) **[Figure 21]**.

Figure 22

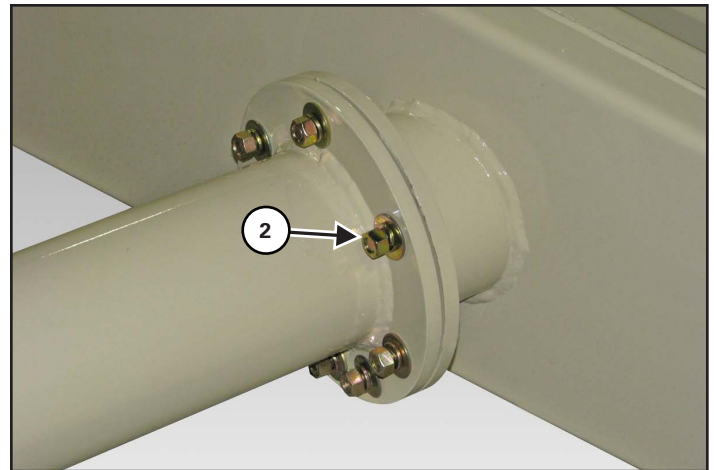


Install a strap (Item 1) around the lift arm torque tube (Item 2). Connect the strap to a second approved lifting device **[Figure 22]**.

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 22]**.

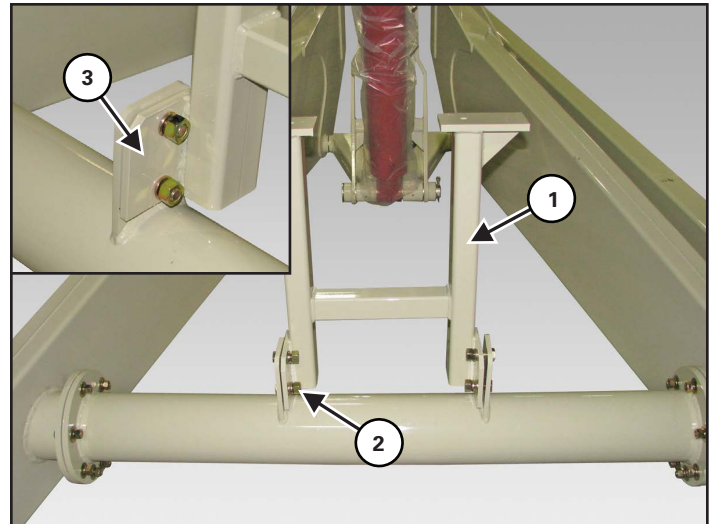
Figure 23



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 23]**.

Remove the strap.

Figure 24

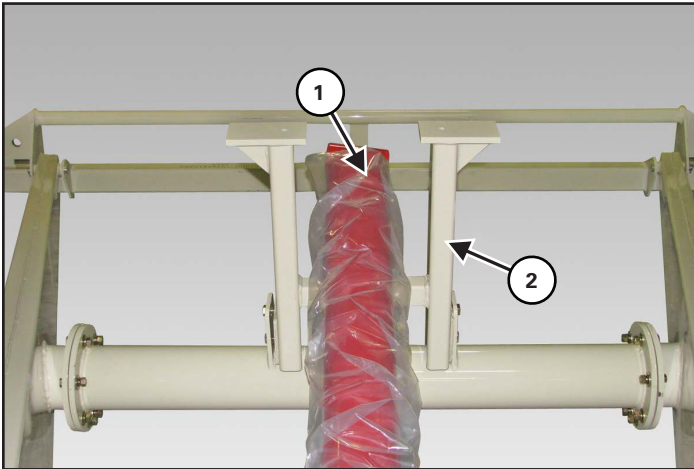


Align the cradle rest (Item 1) with the two mounting plates on the lift arm torque tube **[Figure 24]**.

Install the four 5/8" x 3-1/2" bolts (Item 2) and 5/8" lock nuts **[Figure 24]**.

NOTE: Install the cradle rest with the tabs (Item 3) towards the axle **[Figure 24]**.

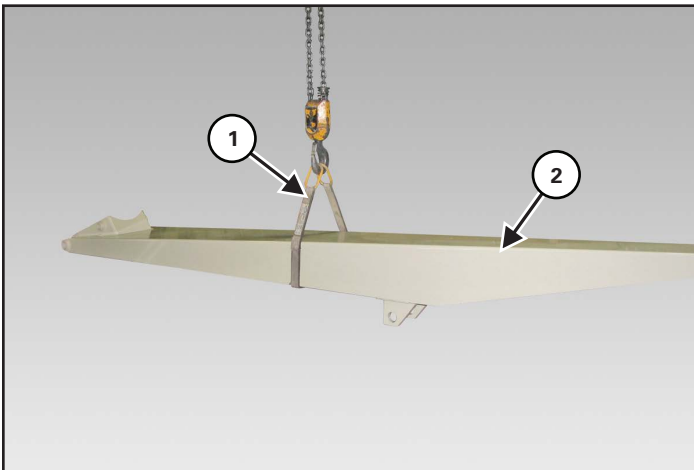
Figure 25



Lower the hydraulic cylinder (Item 1) onto the cradle rest (Item 2) **[Figure 25]**.

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

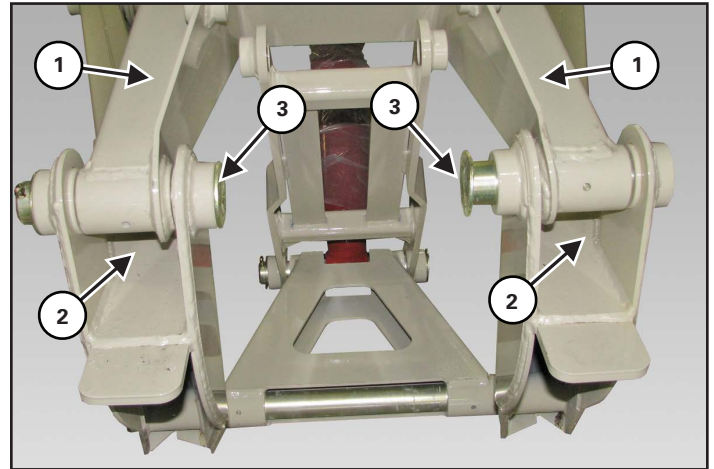
Figure 26



Install a strap (Item 1) around the upper lift arm (Item 2). Connect the strap to an approved lifting device **[Figure 26]**.

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

Figure 27



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 27]**.

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:

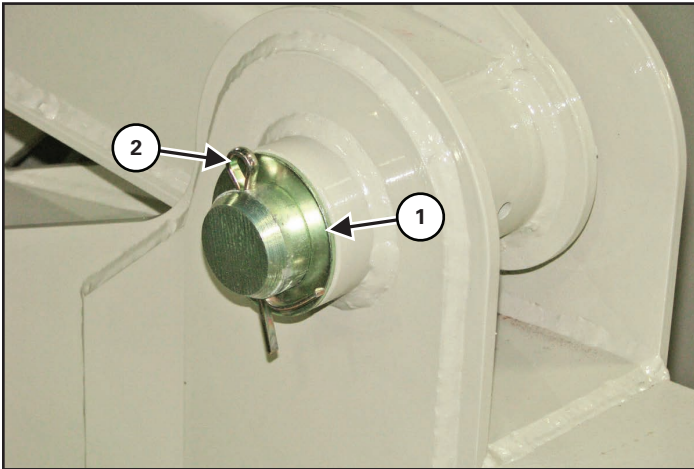
- 1-1/2" x 10 Ga. - 1370 Models
- 2" x 10 Ga. - 1385 & 1395 Models

Cotter Pin Sizes:

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

Install the two lift arm pins (Item 3) (from the inside) **[Figure 27]**.

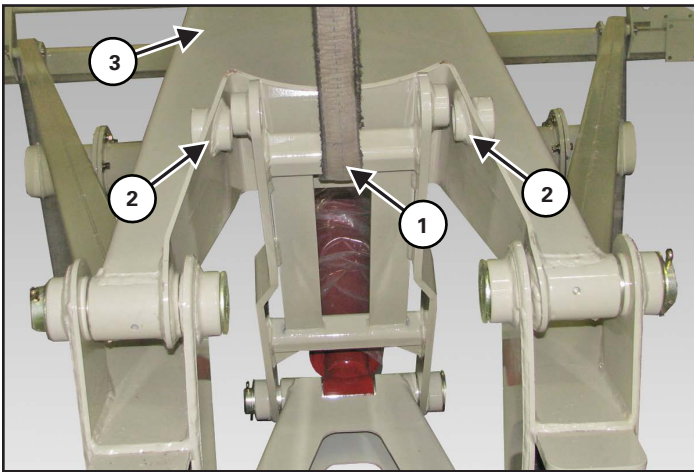
Figure 28



Install one 2" narrow rim washer (Item 1) and cotter pin (Item 2) on the lift arm pin (both pins) **[Figure 28]**.

Lower the upper lift arm onto the cradle rest.

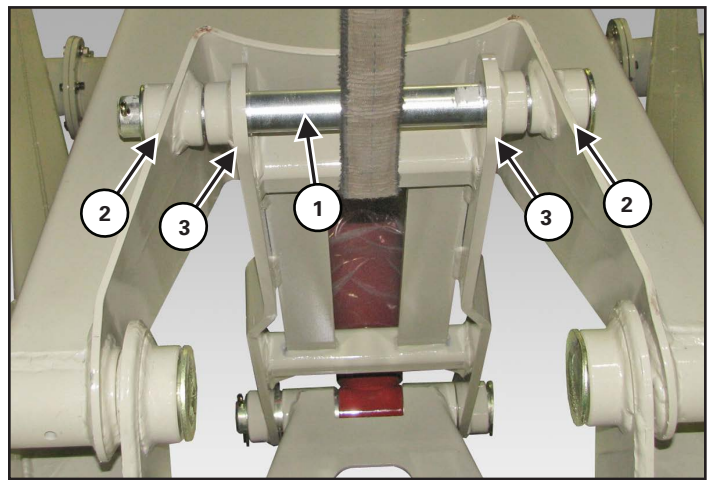
Figure 29



Install a strap (Item 1) on the upper cross member of the connecting link **[Figure 29]**.

Lift and align the connecting link with the mounts (Item 2) on the upper lift arm (Item 3) **[Figure 29]**.

Figure 30



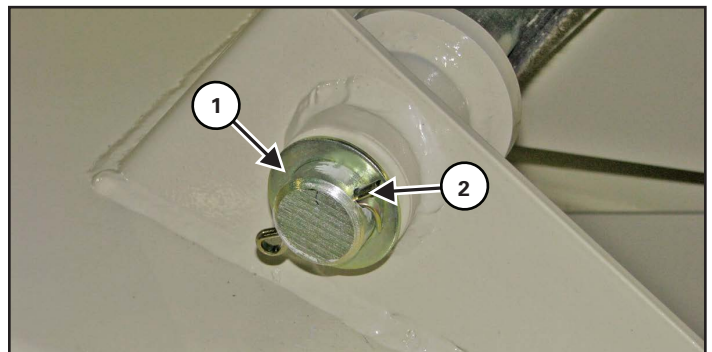
Install the top yoke pin (Item 1) through the upper lift arm mounting holes (Item 2) and pivot yoke mounting holes (Item 3) **[Figure 30]**.

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 31



Install one narrow rim washer (Item 1) and cotter pin (Item 2) onto the top yoke pin **[Figure 31]**.

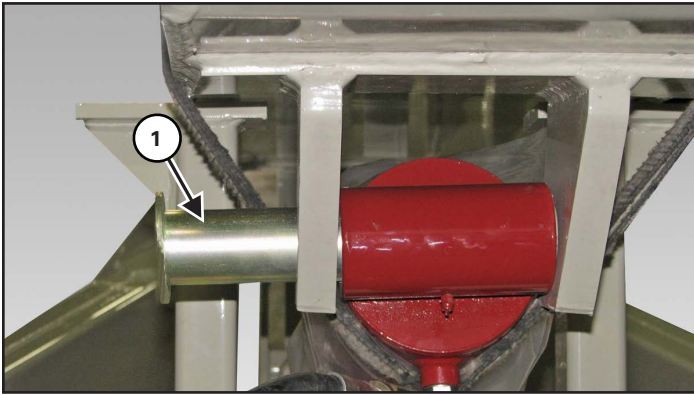
Narrow Rim Washer Sizes:

- 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 32



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 32]**.

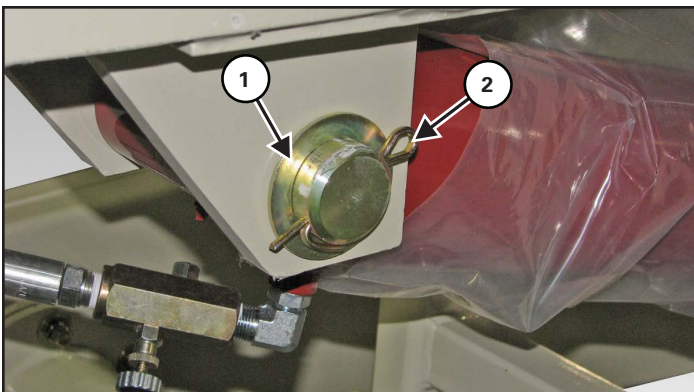
Narrow Rim Washer Sizes:

- 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

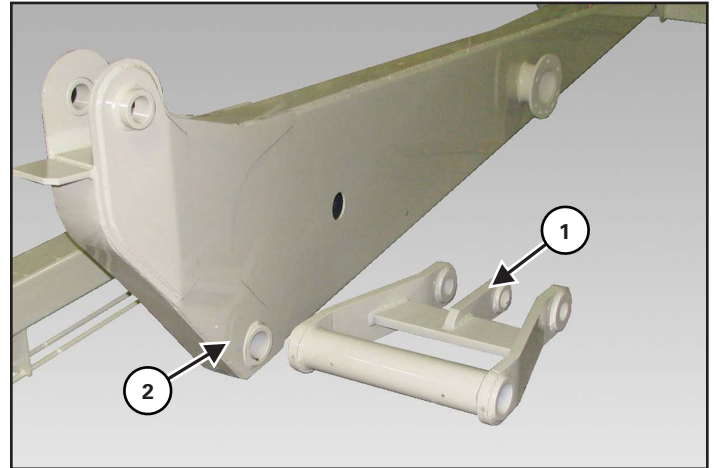
Figure 33



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 33]**.

Lift Arms and Hydraulic Cylinders - 13114 Models

Figure 34



Place the connecting link (Item 1) on the ground, at the front of the RH lower lift arm (Item 2) **[Figure 34]**.

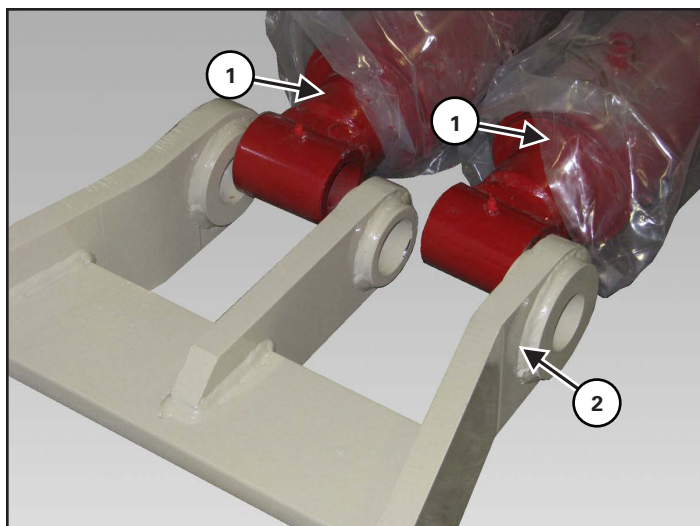
Figure 35



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.

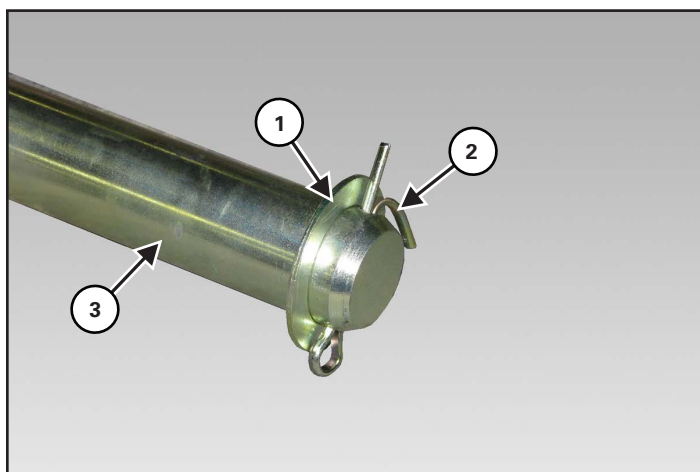
Install a chain or strap (Item 1) through the rod end of the two hydraulic cylinders. Connect the strap to an approved lifting device **[Figure 35]**.

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

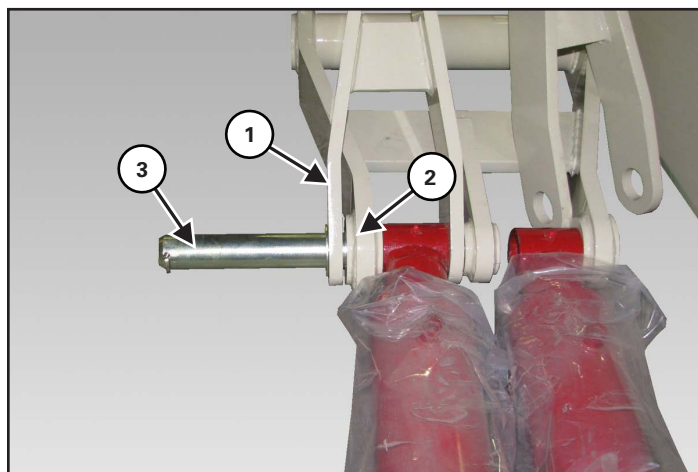
Figure 36


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 36]**.

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

Figure 37


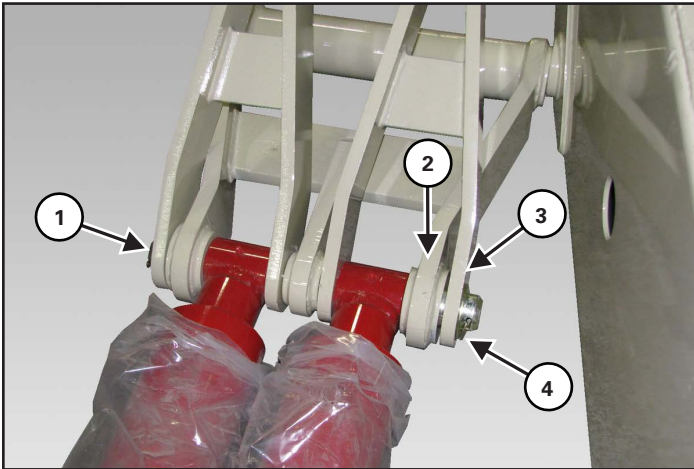
Install one 2" narrow rim washer (Item 1) and one 5/16" x 3" cotter pin (Item 2) onto the 2" x 18-7/8" lift pin rod (Item 3) **[Figure 37]**.

Figure 38


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 38]**.

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 38]**.

Figure 39

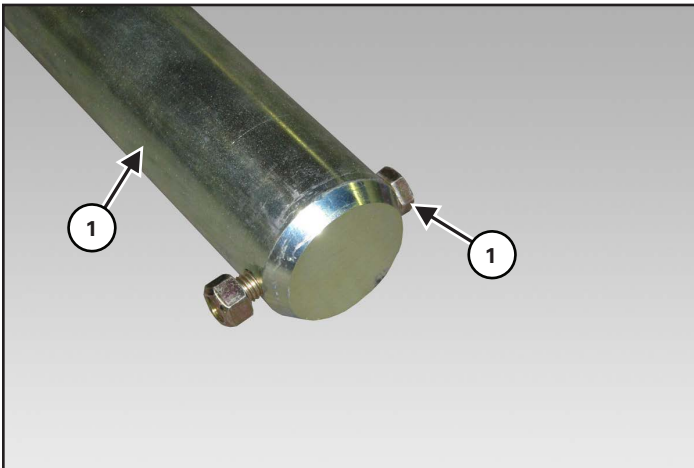


Place the right yoke arm (Item 1) on the outside of the link (Item 2). Position cylinder inside the link and opposite side of the yoke arm **[Figure 39]**.

Install the lift pin rod (Item 3) through the right yoke arm, cylinder and link **[Figure 39]**.

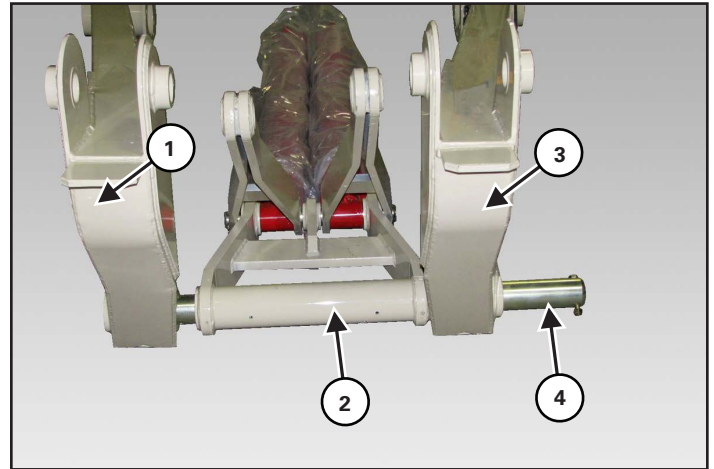
Install one 2" narrow rim washer (Item 4) and one 5/16" x 3" cotter pin to secure the yoke arms, cylinders and link together **[Figure 39]**.

Figure 40



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 40]**.

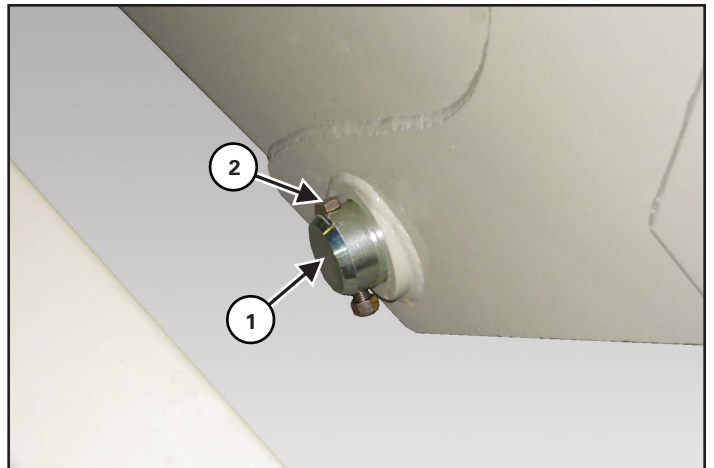
Figure 41



Align the RH lower lift arm (Item 1), link (Item 2) and LH lower lift arm (Item 3) **[Figure 41]**.

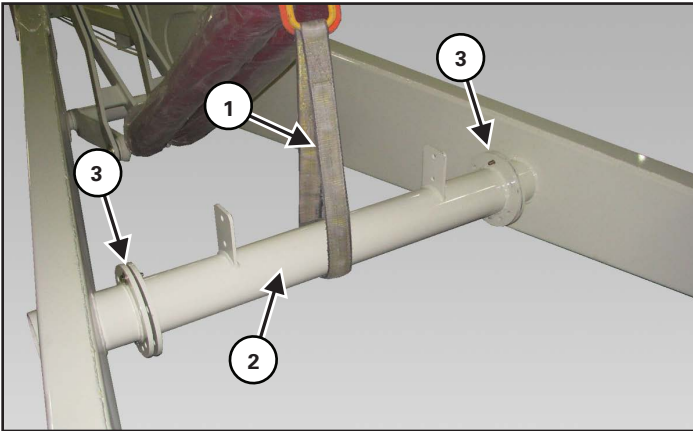
Install the 2-3/4" x 39" connecting yoke pin (Item 4) through the LH lower lift arm, link and RH lower lift arm **[Figure 41]**.

Figure 42



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 42]**.

Figure 43



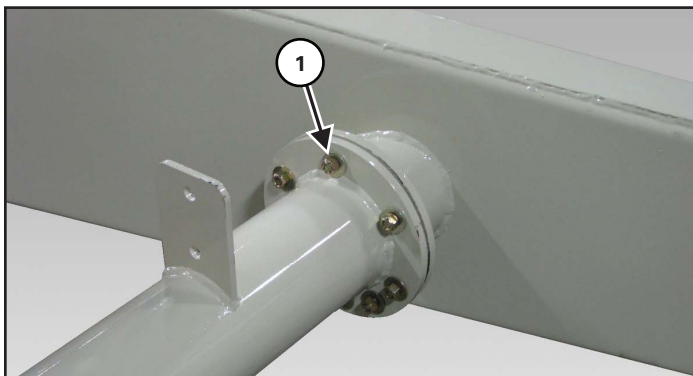
NOTE: Install a chain or strap through the base ends of the hydraulic cylinders. Connect the chain or strap to an approved lifting device. Raise the hydraulic cylinders above the RH & LH lower lift arms before installing the lift arm torque tube.

Install a strap (Item 1) around the lift arm torque tube (Item 2). Connect the strap to a second approved lifting device [Figure 43].

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

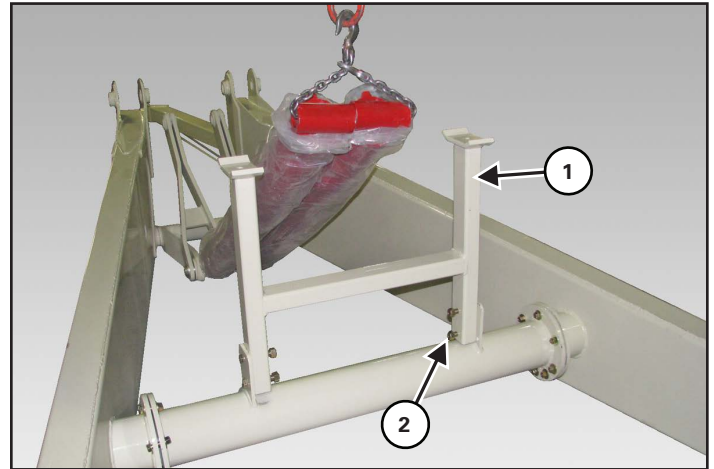
Align the lift arm torque tube with the LH & RH lower lift arm mounting plates. Install one 1/2" x 2" bolt (Item 3) through the top holes (both ends). Install one 1/2" flat washer and 1/2" lock nut on the bolts [Figure 43].

Figure 44



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 44].

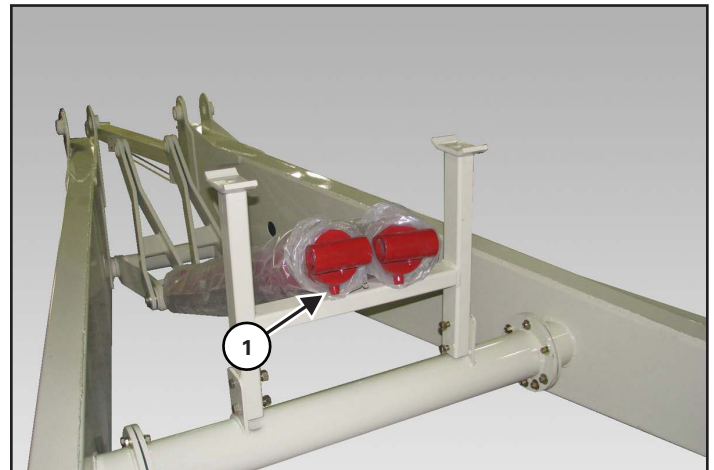
Figure 45



Align the cradle rest (Item 1) with the two mounting plates on the lift arm torque tube [Figure 45].

Install the four 5/8" x 3-1/2" bolts (Item 2) and 5/8" lock nuts [Figure 45].

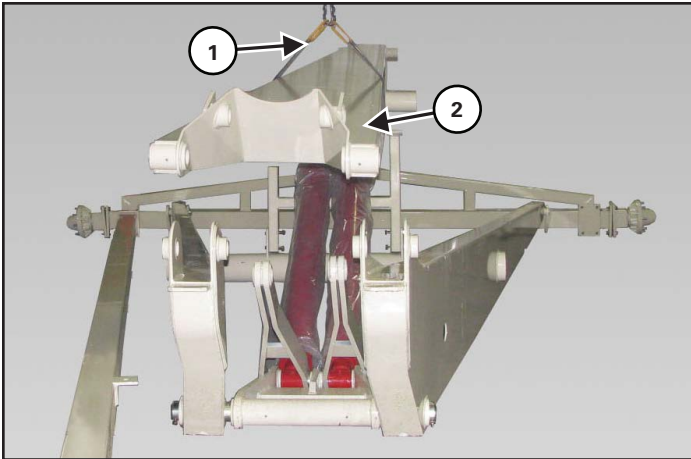
Figure 46



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 46].

Figure 47

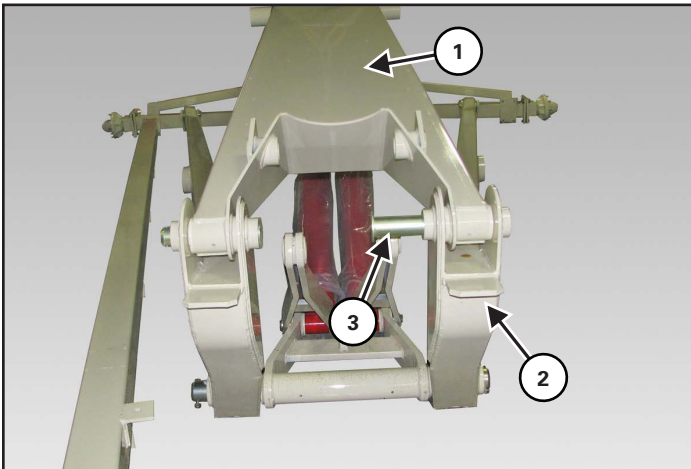


Install a strap (Item 1) around the upper lift arm (Item 2). Connect the strap to an approved lifting device **[Figure 47]**.

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

Move the upper lift arm over the lower lift arms.

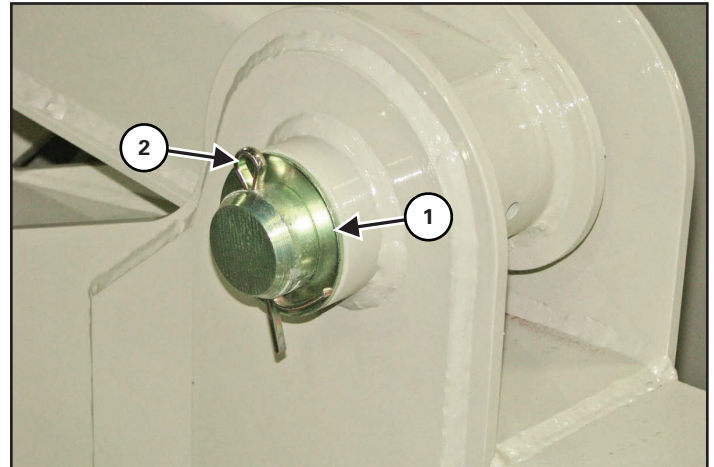
Figure 48



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 48]**.

Install the two 2" x 5/8" lift arm pins (Item 3) (from the inside) **[Figure 48]**.

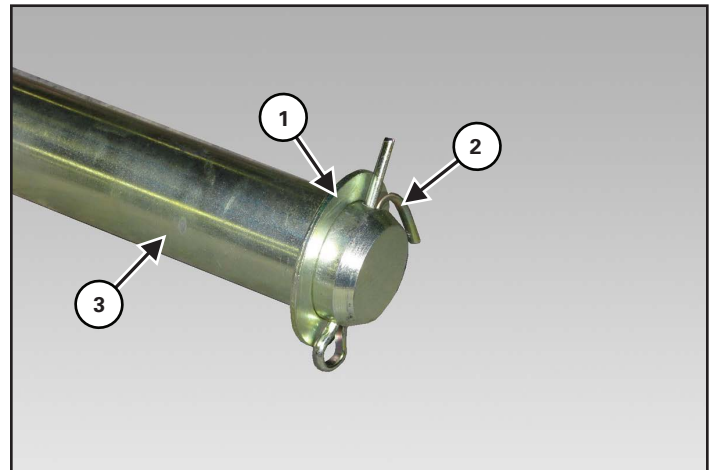
Figure 49



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 49]**.

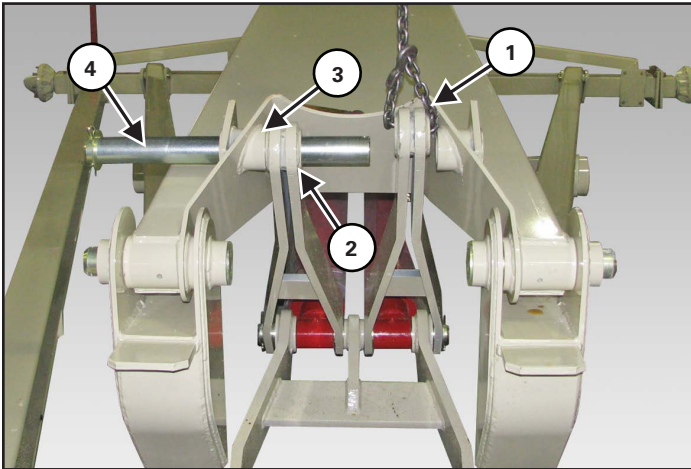
Lower the upper lift arm onto the cradle rest.

Figure 50



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 50]**.

Figure 51

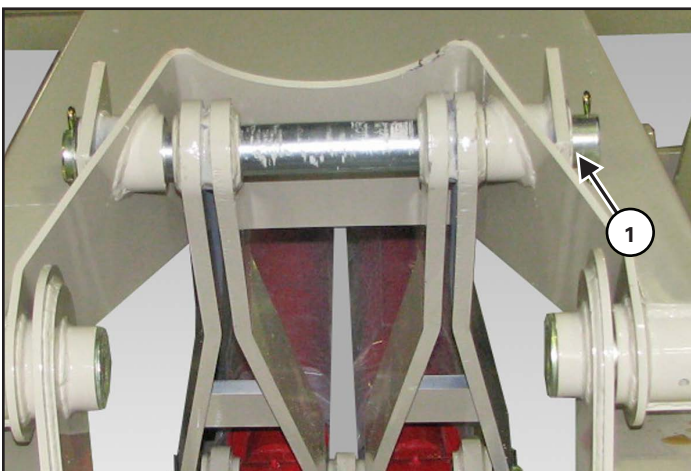


Install a chain through the mounting hole of the left yoke arm (Item 1). Lift the left yoke arm until the right yoke arm (Item 2) (lift right yoke arm by hand) is aligned with the upper lift arm mounting hole (Item 3) [Figure 51].

Install the upper lift arm pin rod (Item 4) through the upper lift arm mounting hole and right yoke arm [Figure 51].

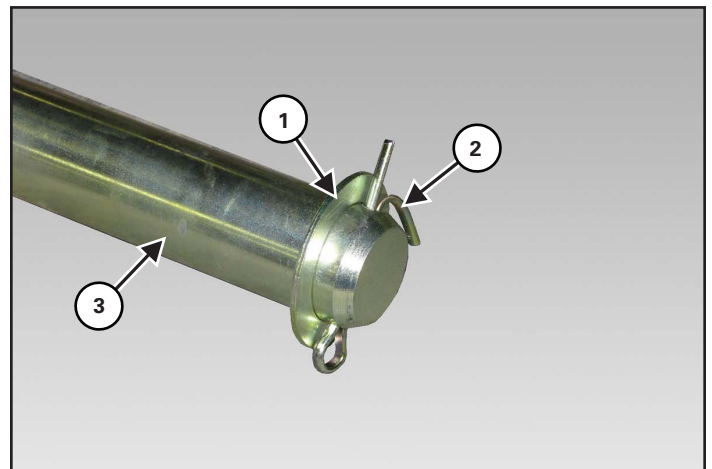
Remove the chain from the left yoke arm. Lift the left yoke arm and install the upper lift arm pin rod through the left yoke arm and upper lift arm mounting hole.

Figure 52



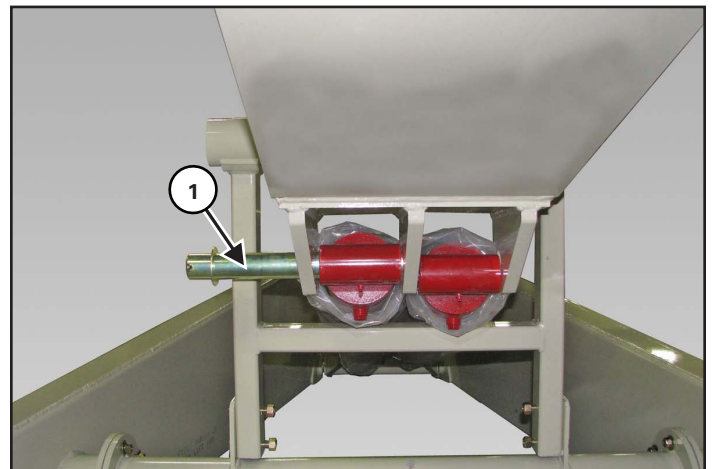
Install one 2" narrow rim washer (Item 1) and 5/16 x 3" cotter pin onto the 2" x 20-1/2" upper lift arm pin rod [Figure 52].

Figure 53



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 53].

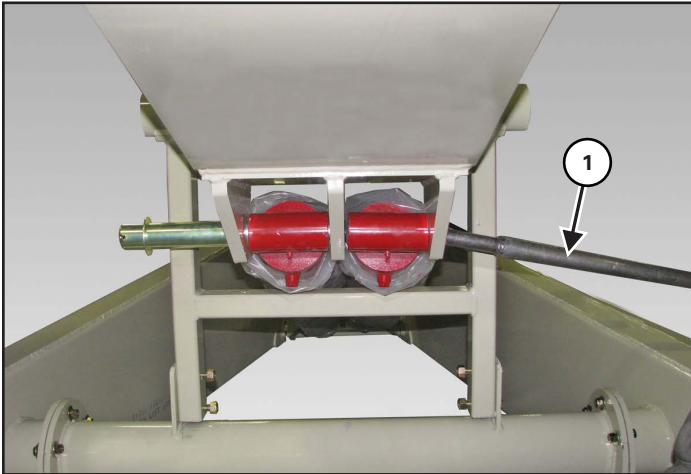
Figure 54



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 54].

Figure 55



Using a bar (Item 1), align the right cylinder with the mounting holes of the upper lift arm **[Figure 55]**.

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

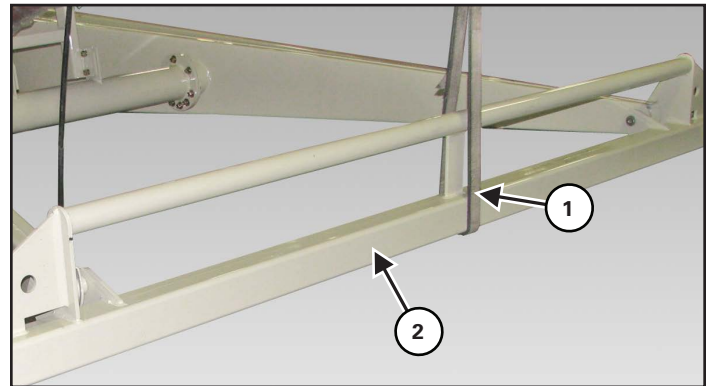
Figure 56



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 56]**.

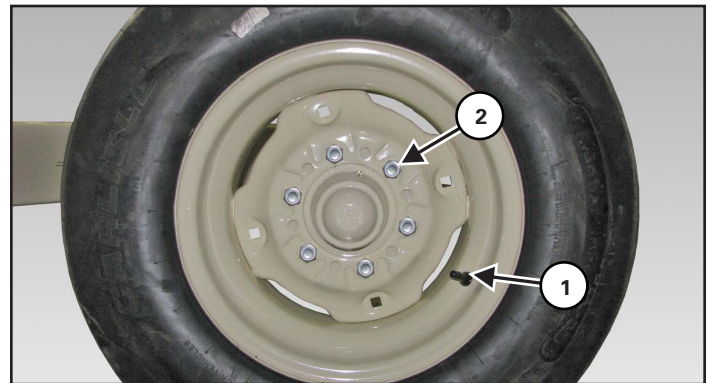
Wheels and Lift Arm Rest

Figure 57



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 57]**.

Figure 58



Install the tires with the valve stem (Item 1) facing out **[Figure 58]**.

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

Models 13114: Install eight wheel bolts.

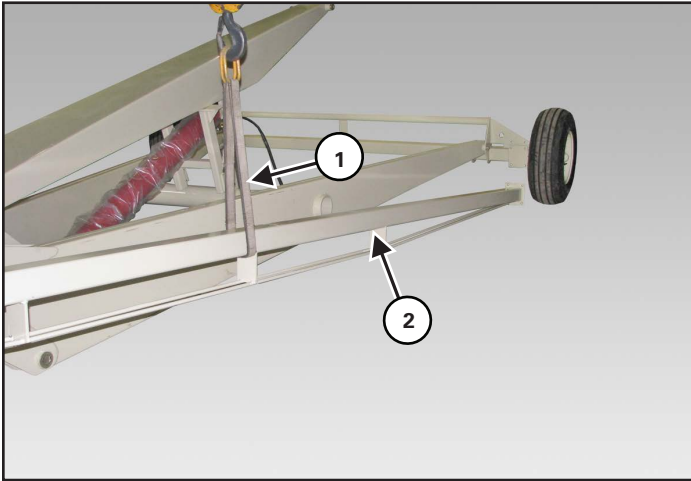
Tighten wheel nuts (Item 2) in a criss-cross pattern **[Figure 58]**.

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 59

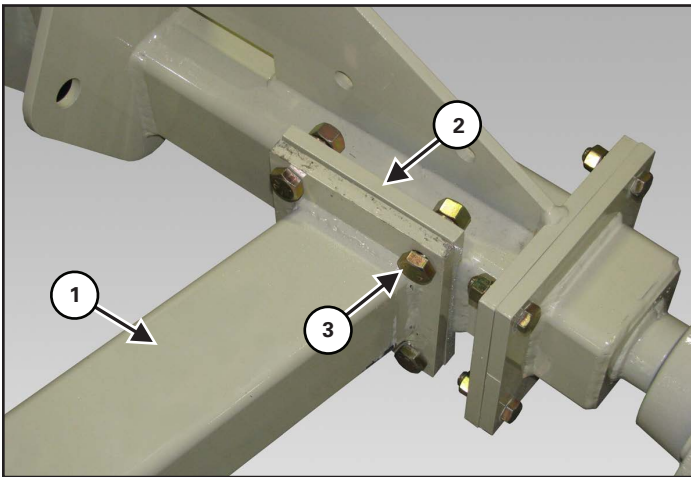


Install a strap (Item 1) around the center of the left undercarriage arm (Item 2) **[Figure 59]**.

Connect the strap to an approved lifting device.

Raise and move the left undercarriage arm towards the axle.

Figure 60

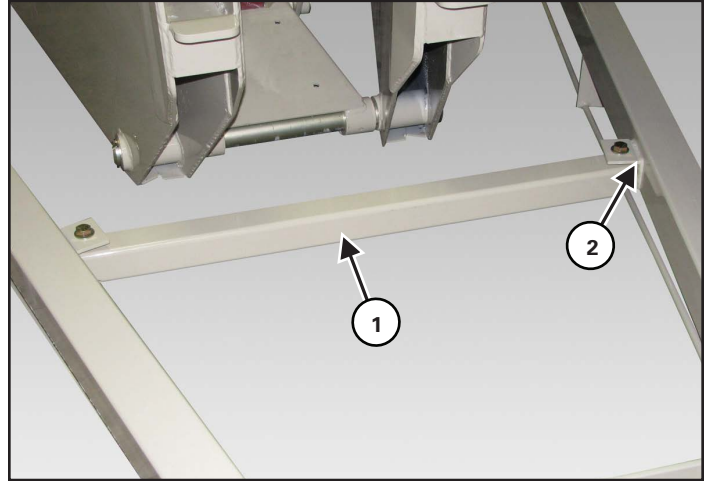


Align the left undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 60]**.

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 60]**.

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 60]**.

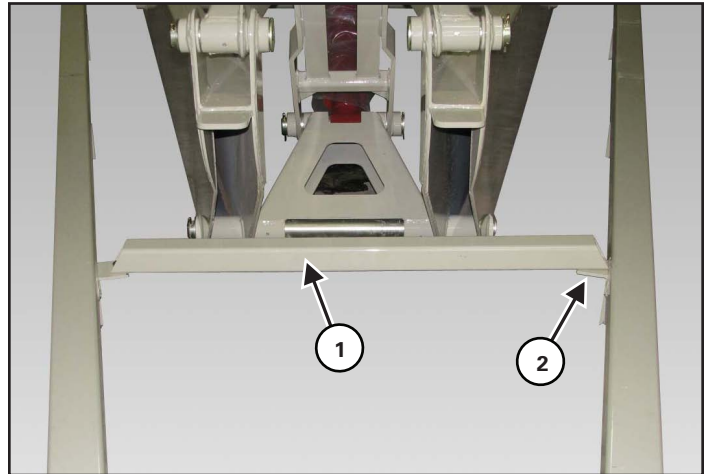
Figure 61



1370 Models: Place the rest tube (Item 1) under the tabs (Item 2). Attach using two 5/8" x 1-3/4" bolts, two 5/8" flat washers, and two 5/8" lock nuts **[Figure 61]**.

Do not tighten at this time.

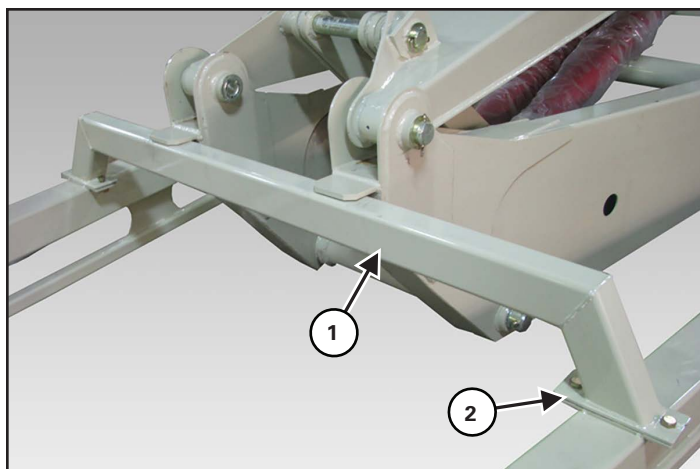
Figure 62



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 62]**.

Do not tighten at this time.

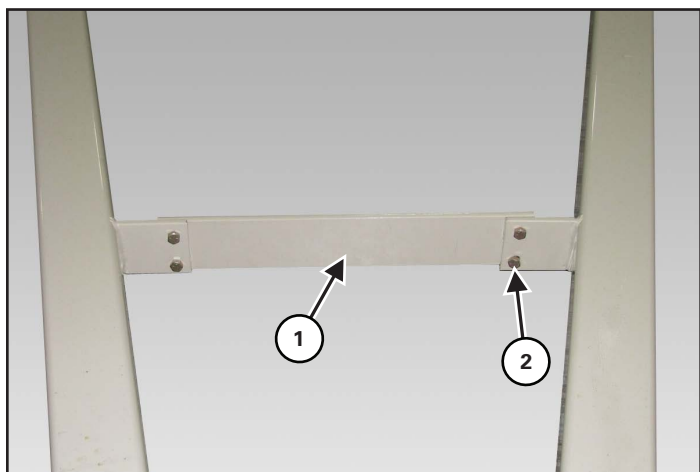
Figure 63



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 63]**.

Do not tighten at this time.

Figure 64



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 64]**.

Do not tighten at this time.

Figure 65



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 65]**.

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.

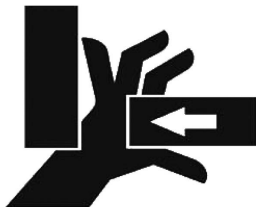


DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

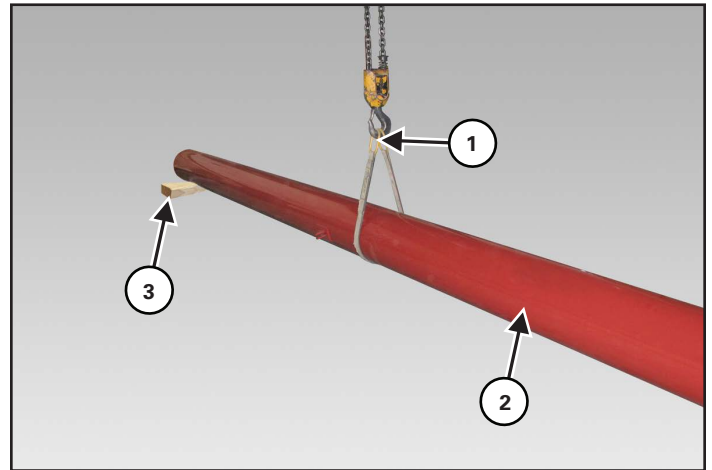
Keep away from moving parts.

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



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

Figure 66

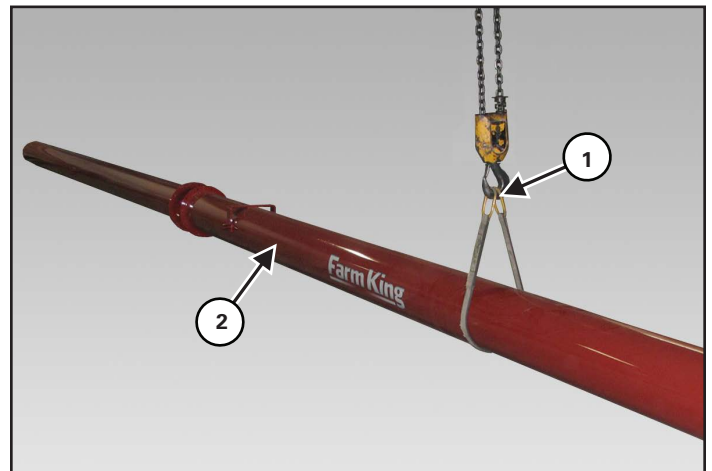


Install a strap (Item 1) around the top tube (Item 2) [Figure 66].

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 66].

Figure 67



Install a strap (Item 1) around the center tube (Item 2) [Figure 67].

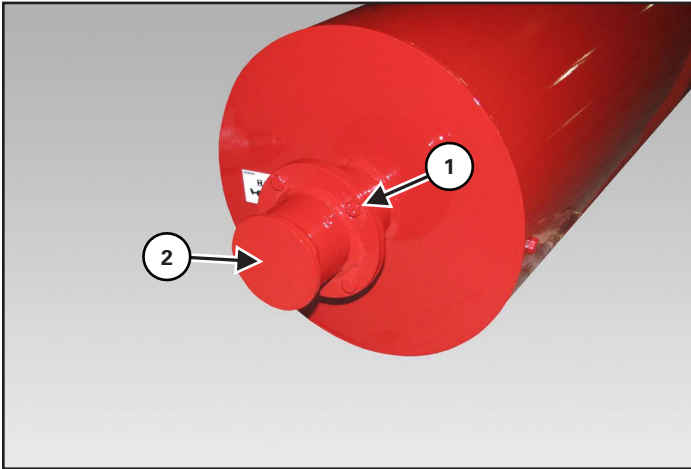
Raise and move the center tube to the assembly area.



IMPORTANT

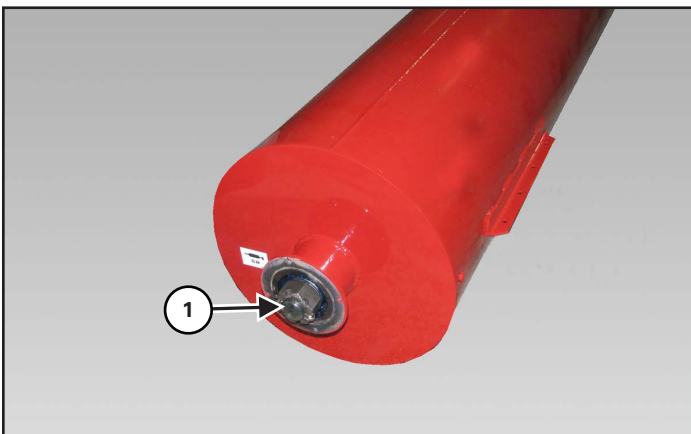
When assembling the Model 1395 tube, install the 10 ft. extension tube between the top and center tubes.

Figure 68



Remove four bolts (Item 1) and remove dust cap (Item 2) from the end of the top tube [Figure 68].

Figure 69

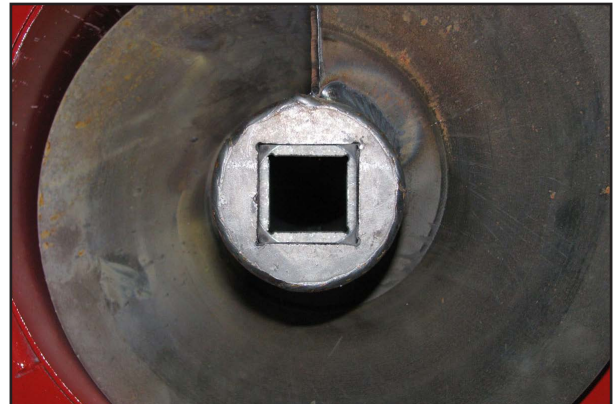


Remove the cotter pin and loosen the castle nut (Item 1). Do not remove the castle nut [Figure 69].

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

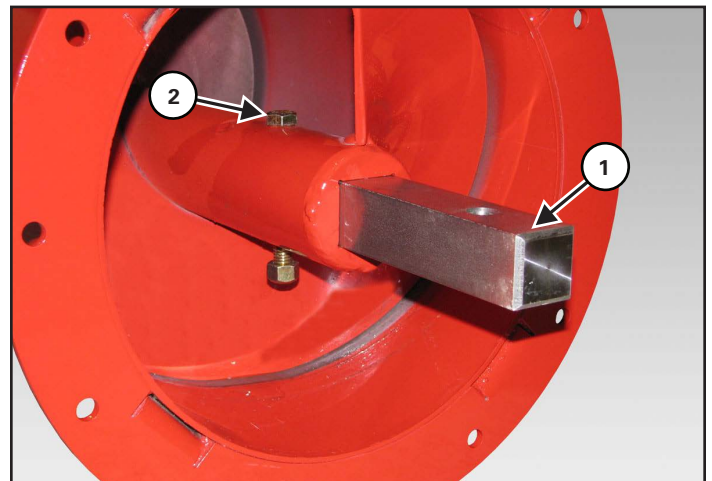


IMPORTANT



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

Figure 70

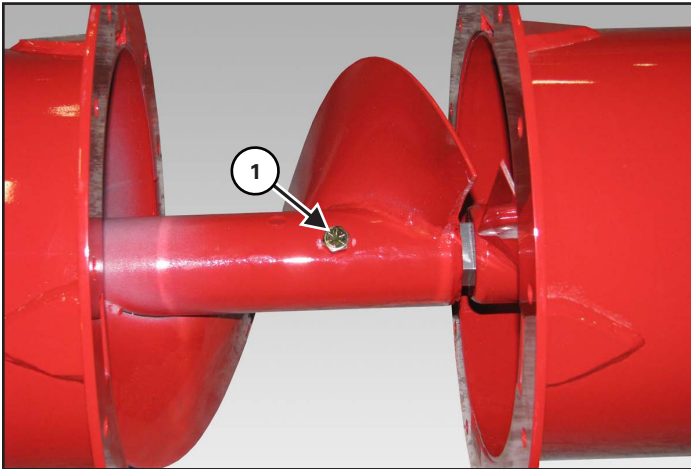


Slide the flighting out of the top tube until the bolt hole in the end of the flighting is clear of the mounting flange.

Align the bolt holes and install the connecting shaft (Item 1) [Figure 70].

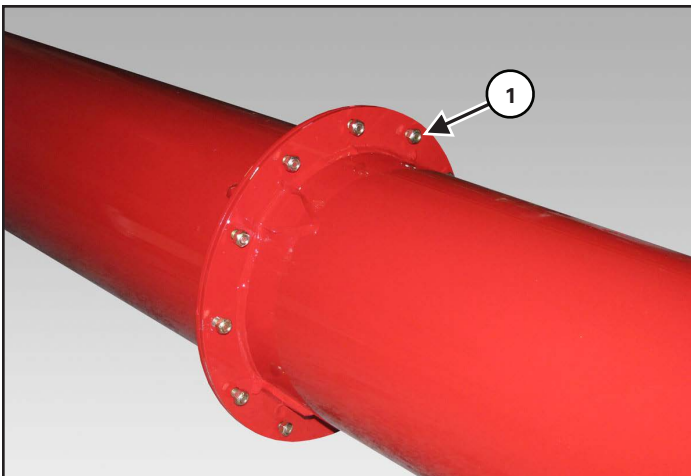
Apply thread locker to the bolt threads, install and tighten one 1/2" x 4" Gr. 8 bolt (Item 2) and 1/2" lock nut [Figure 70].

Figure 71



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 71].

Figure 72

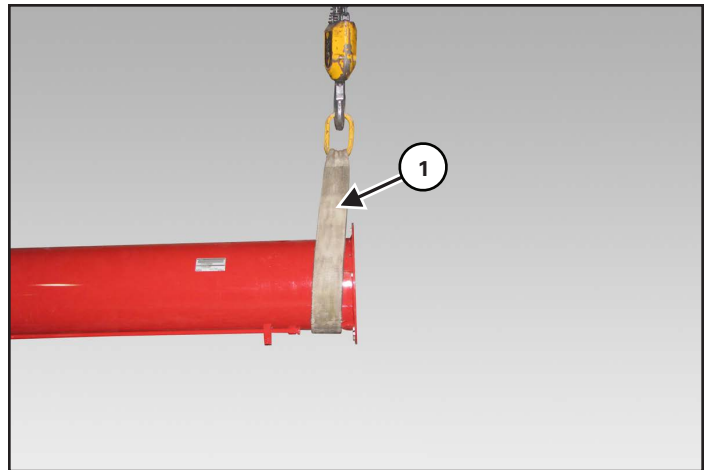


Slide the top and center tubes together until the mounting flanges contact each other [Figure 72].

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 72].

Repeat the procedure for connecting remaining tube sections.

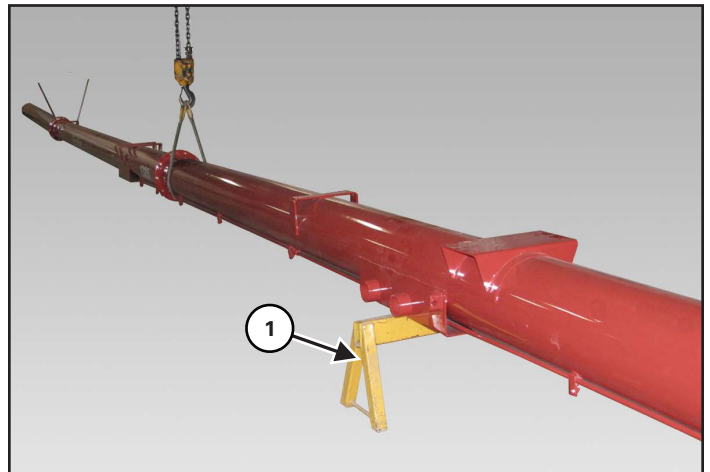
Figure 73



Install a strap (Item 1) around the end of the bottom tube [Figure 73].

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

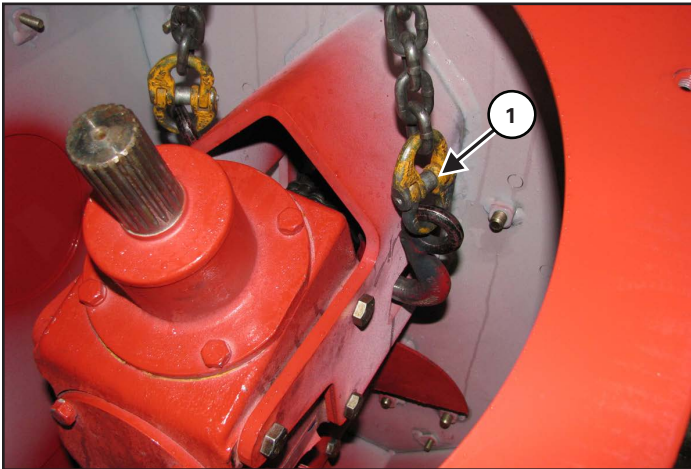
Figure 74



Raise the tube assembly and place a support stand (Item 1) under the tube, lower the tube onto the support stand [Figure 74].

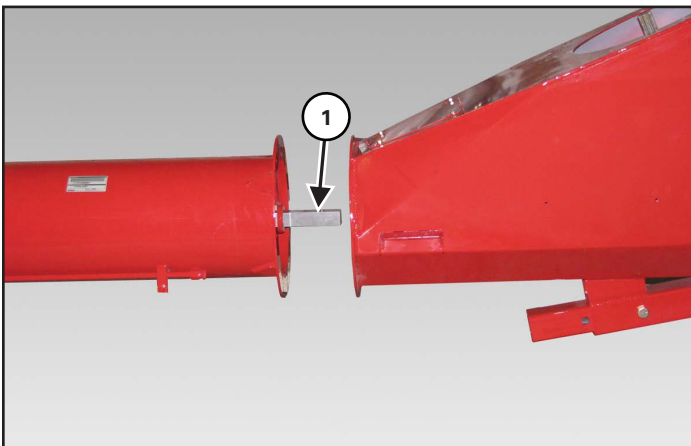
Remove strap.

Figure 75



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 75]**.

Figure 76

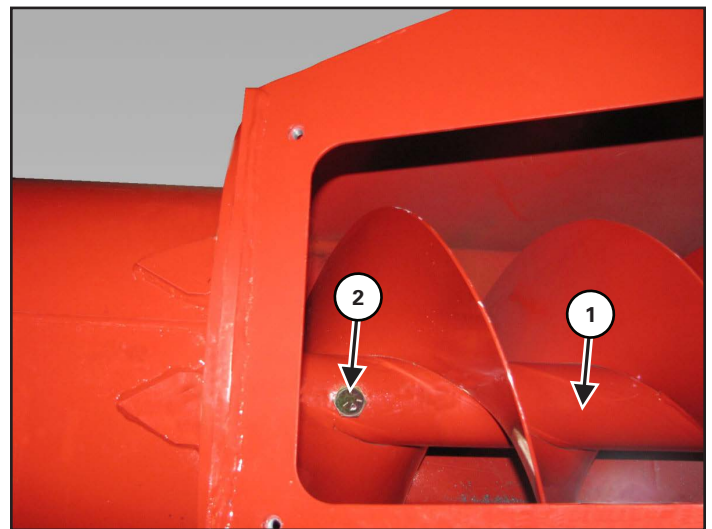


Align the input box flighting with the flighting shaft of the bottom tube.

Align the bolt holes and install the connecting shaft (Item 1) **[Figure 76]**.

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

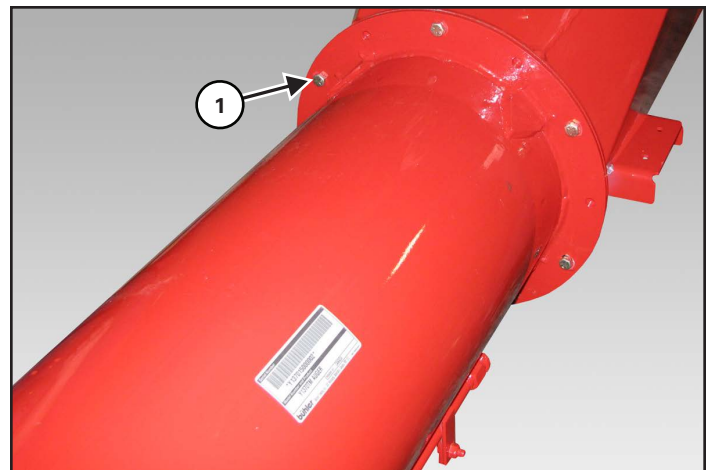
Figure 77



Align the input box flighting (Item 1) with the hole in the bottom tube flighting **[Figure 77]**.

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 77]**.

Figure 78



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

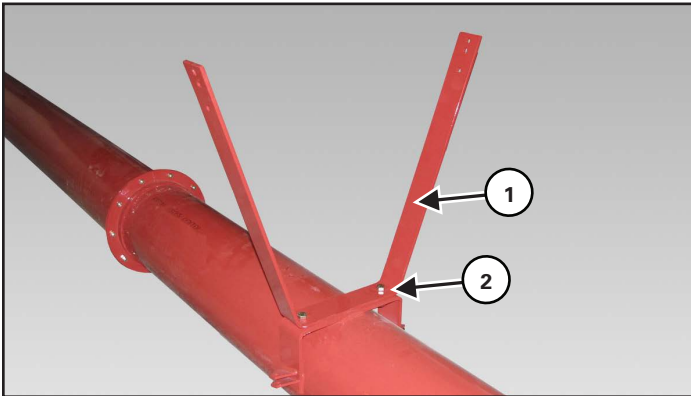
Align the mounting holes and install the eight 7/16" x 1-1/4 bolts (Item 1) and 7/16" lock nuts around the mounting flanges of the bottom tube and input box. Tighten bolts and lock nuts **[Figure 78]**.

Bridging

Locate and uncoil the four 1/2" cables.

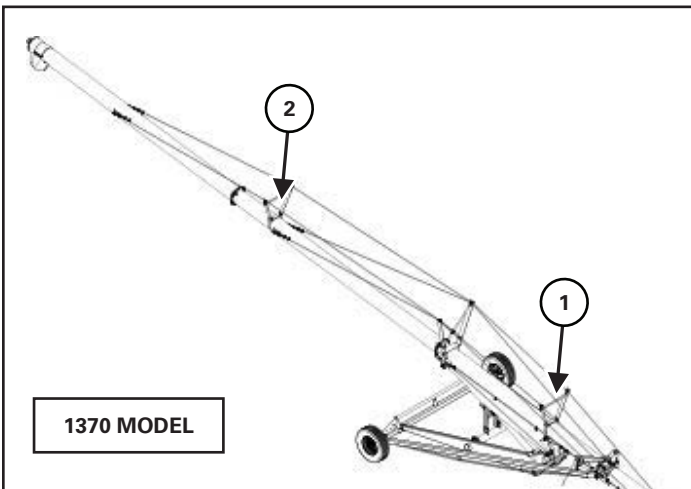
Place one long and one short 1/2" cable on each side of the tube assembly (longest 1/2" cable towards the outside).

Figure 79



Install trusses (Item 1) to the tube assembly. Use appropriate hardware (Item 2) [Figure 79].

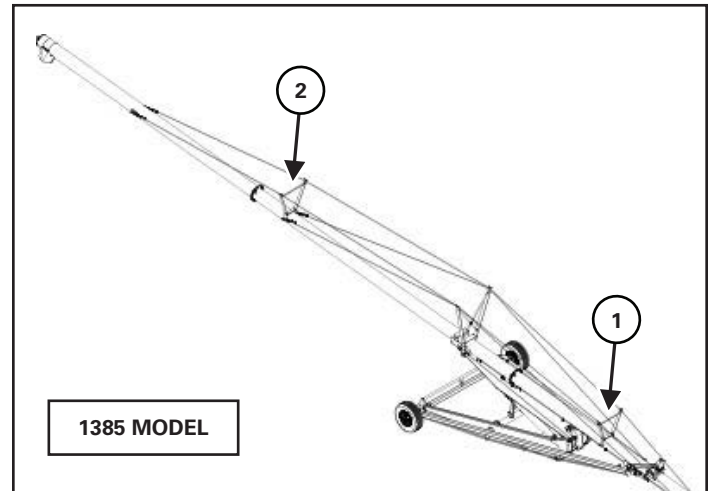
Figure 80



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 80]

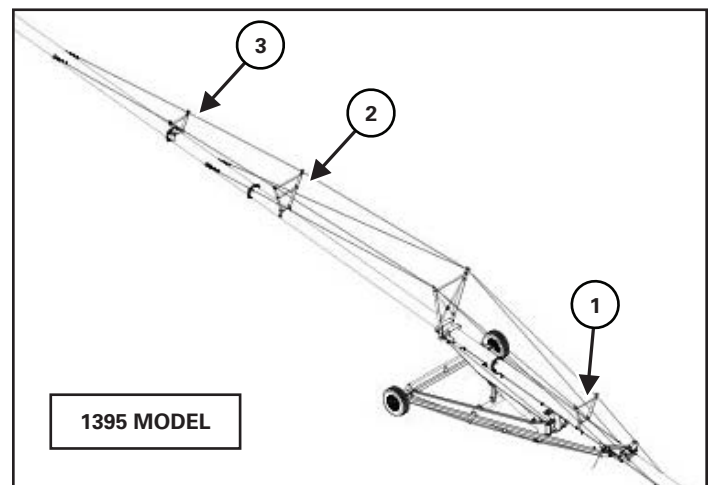
Figure 81



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 80]

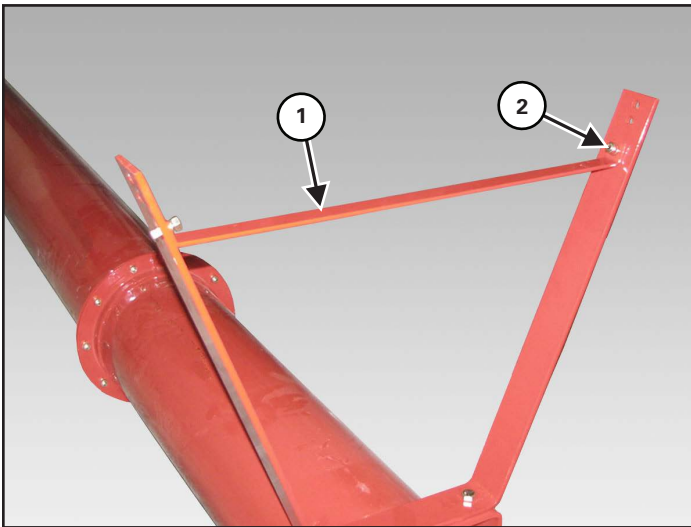
Figure 82



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 82]

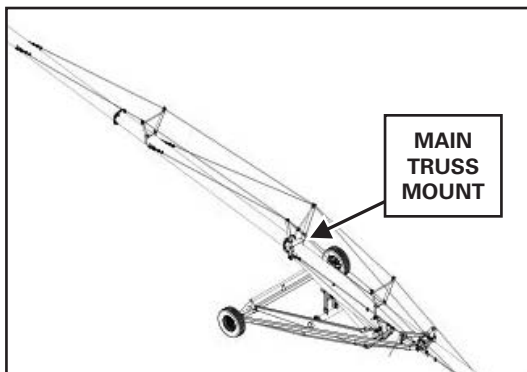
Figure 83



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 83].



IMPORTANT

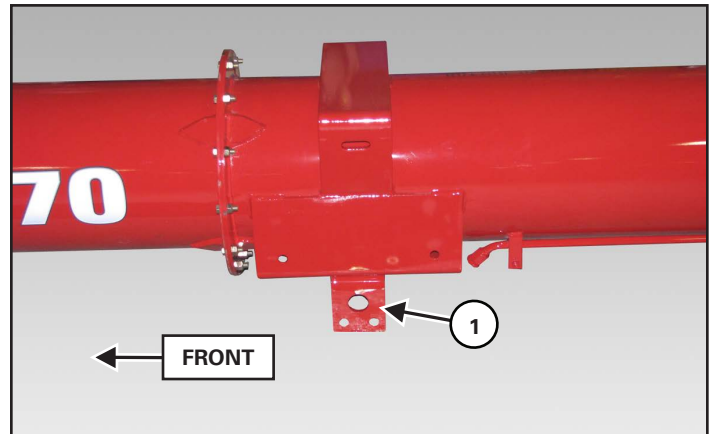


Install a strap around the intake end of the tube assembly.

Connect the strap to an approved lifting device.

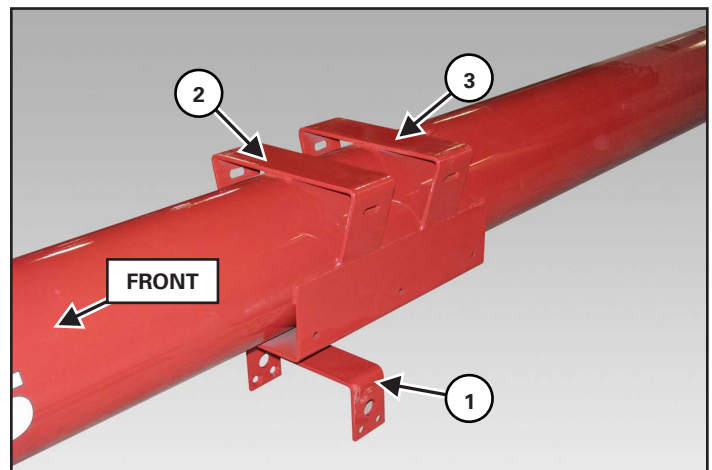
Raise the tube assembly to allow adequate space under the main truss mount.

Figure 84



1370 Models: Position the truss mount bracket (Item 1) below the main tube mount [Figure 84].

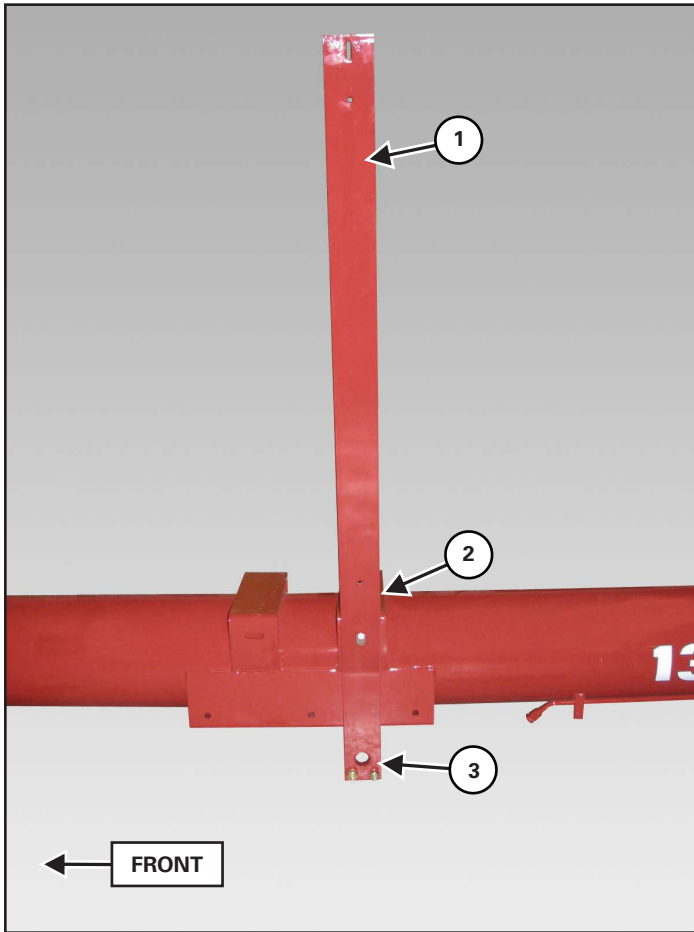
Figure 85



1385 Models: Position the truss mount bracket (Item 1) below the forward tube mount (Item 2) [Figure 85].

1395 Models: Position the truss mount bracket below the rearward tube mount (Item 3) [Figure 85].

Figure 86



Align the truss (Item 1) with the tube mount (Item 2) and mount bracket (Item 3) **[Figure 86]**.

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 86]**.

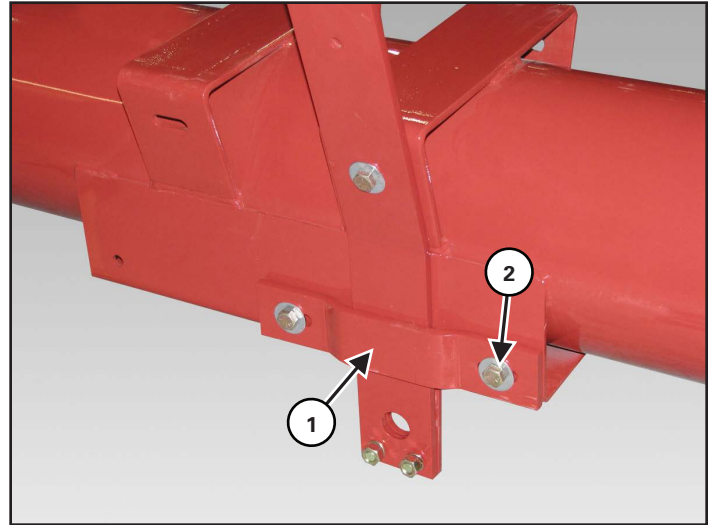
Attach the truss to the mount bracket (Item 3) using two 5/8" x 1-3/4" flat head socket bolts and two 5/8" lock nuts **[Figure 86]**.

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 87

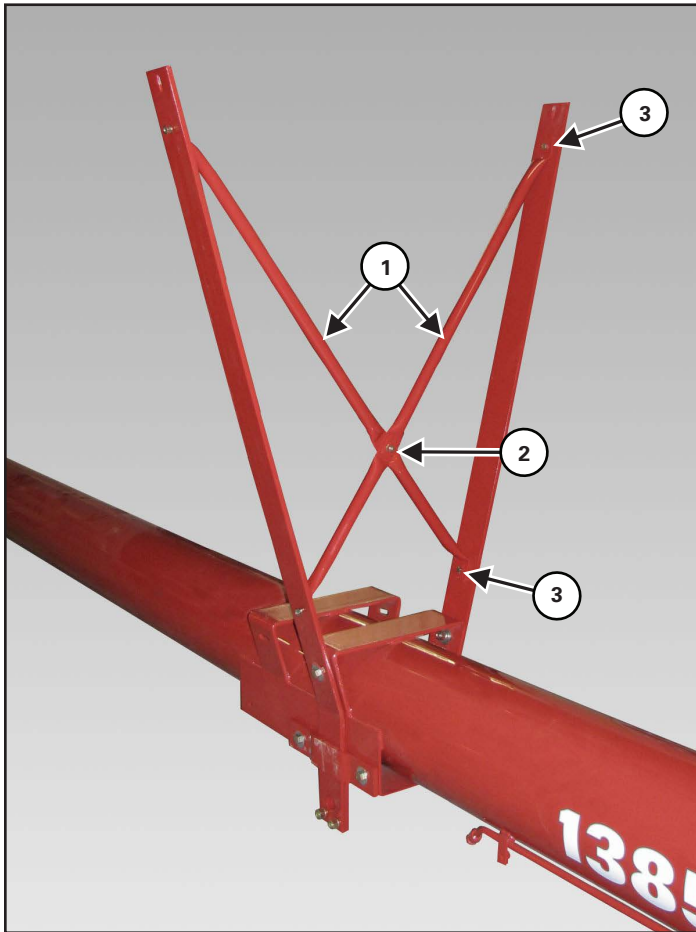


Install one truss clamp (Item 1) over the truss. Attach using two 5/8" x 2" hex bolts, two 5/8" flat washers, and two 5/8" lock nuts **[Figure 87]**.

Repeat to install clamp on the opposite side.

Tighten bolts and nuts.

Figure 88



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 88].

Do not tighten at this time.

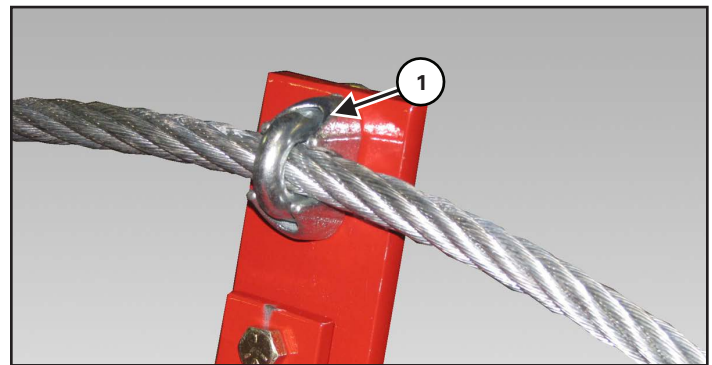
Align and install the two braces onto the main trusses using four 7/16" x 1-1/4" bolts (Item 3) and four 7/16" lock nuts [Figure 88].

Tighten center cross brace bolt (Item 2) and lock nut first. Next, tighten the bottom cross brace bolts (Item 3) and lock nuts [Figure 88].

Tighten upper cross brace bolts (Item 3) and lock nuts [Figure 88].

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

Figure 89



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 89].

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 90



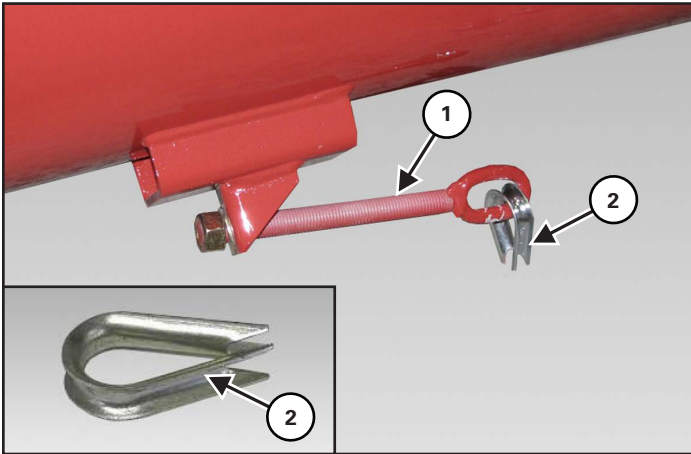
NOTE: Remove clamp section of two 1/2" cable clamps. Use only the u-bolts and nuts.

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 90].

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 90].

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.

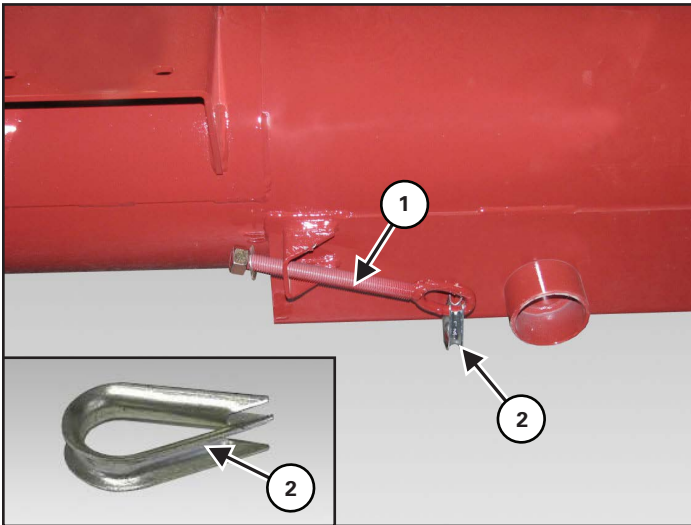
Figure 91



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 91]**.

Install one 1/2" cable thimble (Item 2) onto the eyebolt (both sides) **[Figure 91]**.

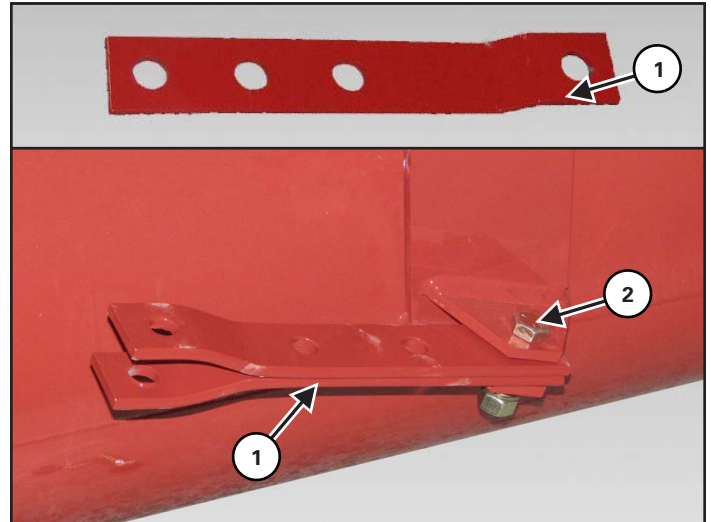
Figure 92



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 92]**.

Install one 1/2" cable thimble (Item 2) onto the eyebolt (both sides) **[Figure 92]**.

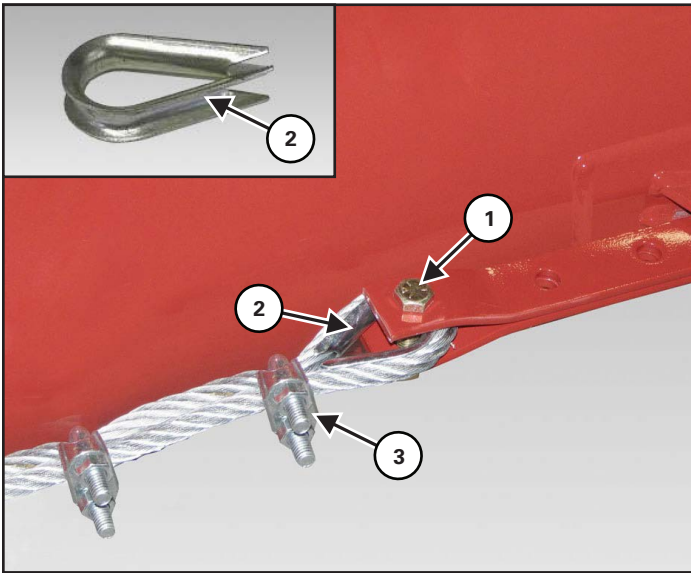
Figure 93



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 93]**.

Repeat above procedure for three remaining locations.

Figure 94



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 94]**.

Thread the cable through the cable thimble.



IMPORTANT

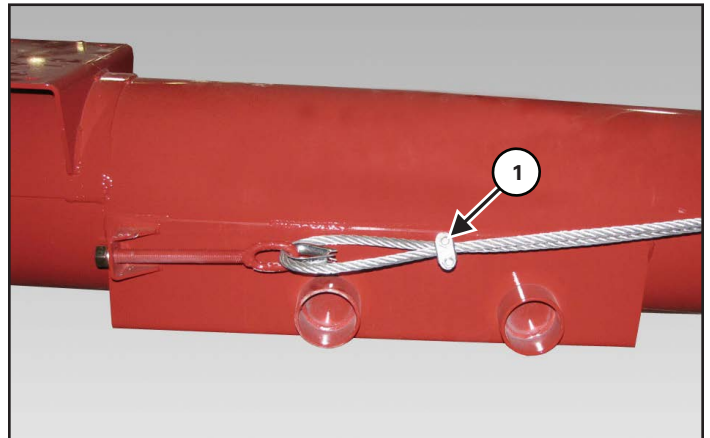
Always insert the tail of the cable into the thimble first when forming a loop in a cable.

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 94]**.

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 95

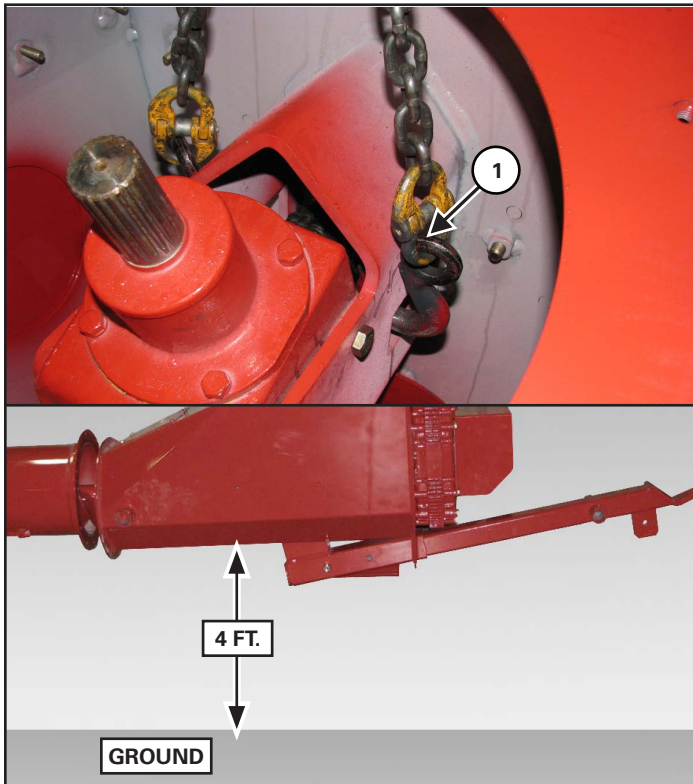


Thread the cable through the eyebolt and around the thimble (both sides). Pull cable as tight as possible.

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 95]**.

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

Figure 96



Install chains (Item 1) onto the input box gearbox mounting bracket **[Figure 96]**.

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

Remove support stand from under the tube assembly.

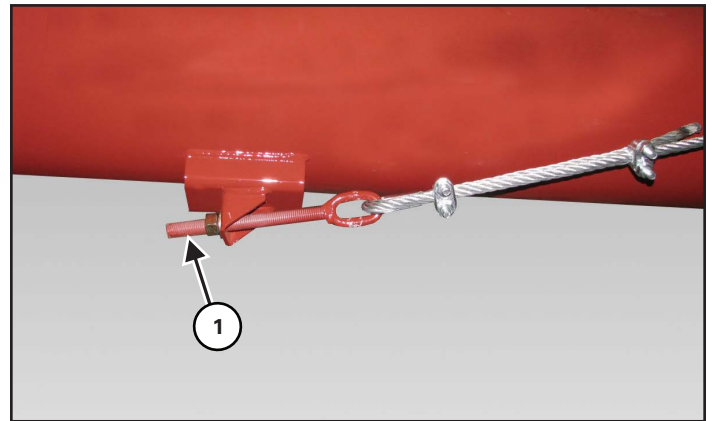
Figure 97



Place a mark (Item 1) on the cable tightening tool. This will help to tighten the cables evenly **[Figure 97]**.

Count the revolutions as the tool is turning while tightening.

Figure 98



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 98]**.

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.

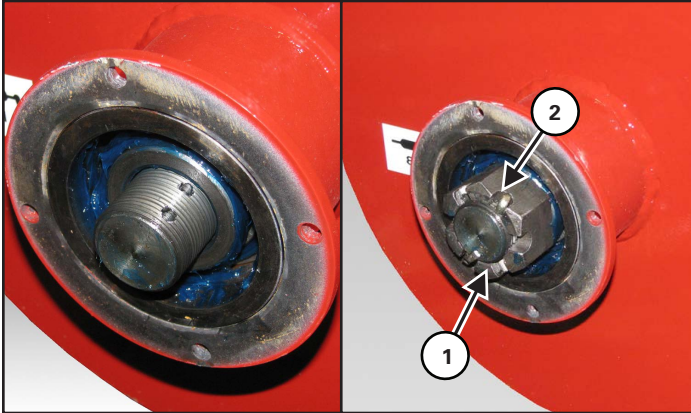
With the input box / tube assembly on the ground, the discharge spout end of the tube assembly should be bowed up (enough to install the discharge spout).

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 99



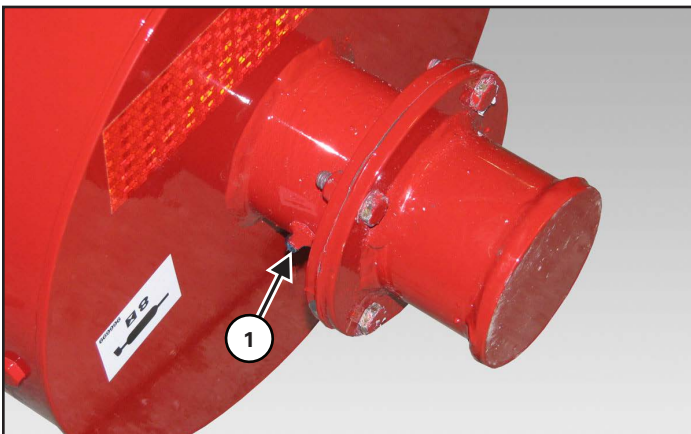
NOTE: The castle nut has been removed in the left picture to show cotter pin hole options.

With the tube assembly complete, tighten the castle nut (Item 1) until the castle nut contacts the washer / flighting shaft **[Figure 99]**.

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.

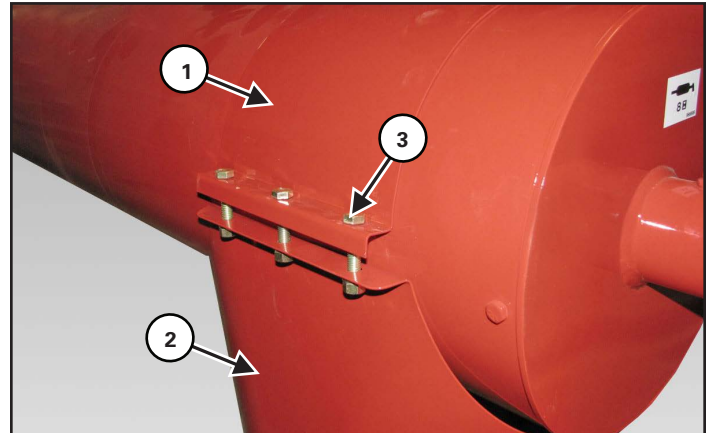
Install the cotter pin (Item 3) **[Figure 99]**.

Figure 100



Apply eight pumps of grease to the flighting bearing assembly (Item 1) **[Figure 100]**.

Figure 101

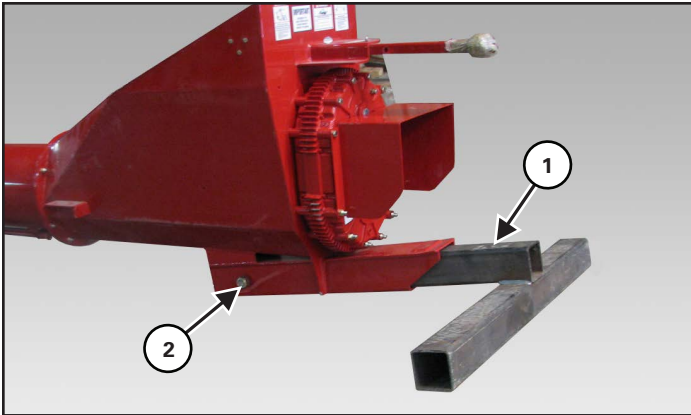


Align the spout clamp (Item 1) and discharge spout (Item 2) with discharge opening in the top tube **[Figure 101]**.

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 101]**.

Truss Beams - 13114 Models

Figure 102



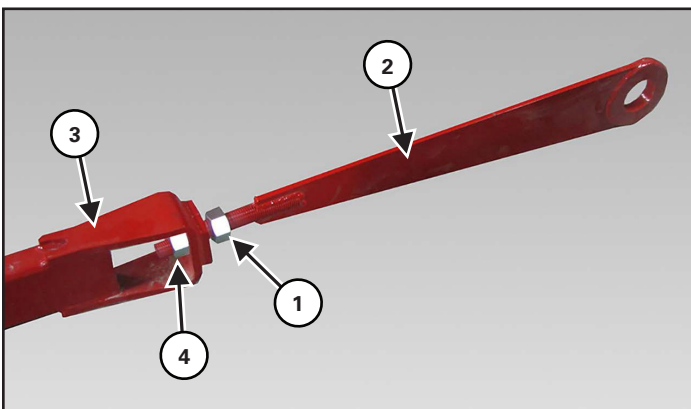
Install the T-bar (Item 1) as shown, install a bolt and nut (Item 2) through the hitch mount and T-bar [Figure 102].

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

See "Truss 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.

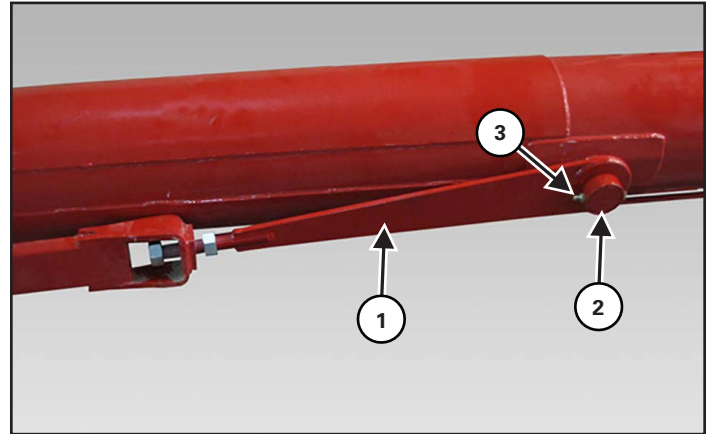
Figure 103



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 103].

Repeat procedure for the opposite side.

Figure 104

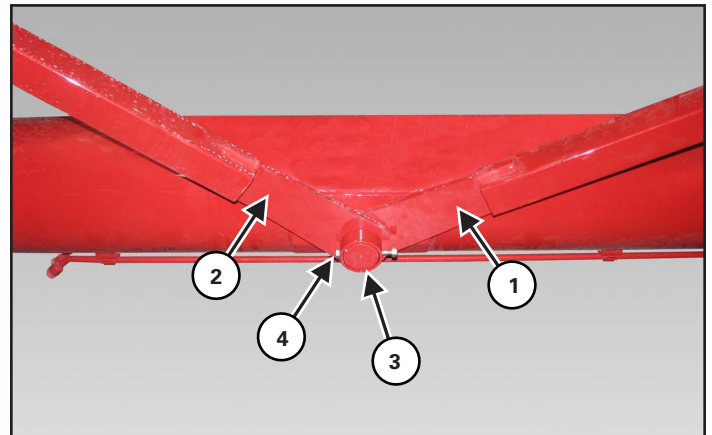


Install the truss fastener / beam assembly (Item 1) onto the lower tube #1 truss beam mount (Item 2) [Figure 104].

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 104].

Repeat procedure on opposite side of lower tube #1.

Figure 105



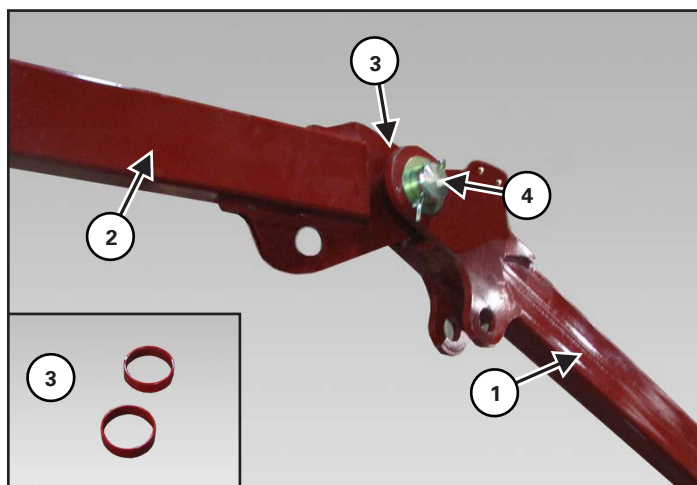
Install the truss beams (Items 1 & 2) onto the tube #1 truss beam mount [Figure 105].

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 105].

Repeat procedure on the opposite side.

Figure 106

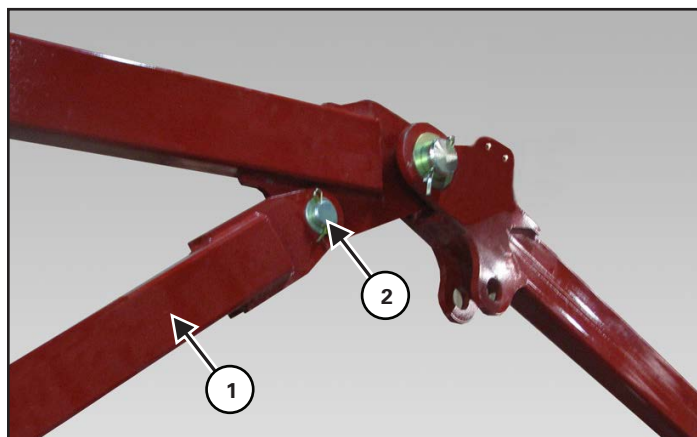


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) **[Figure 106]**.

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 106]**.

Repeat procedure on the opposite side.

Figure 107



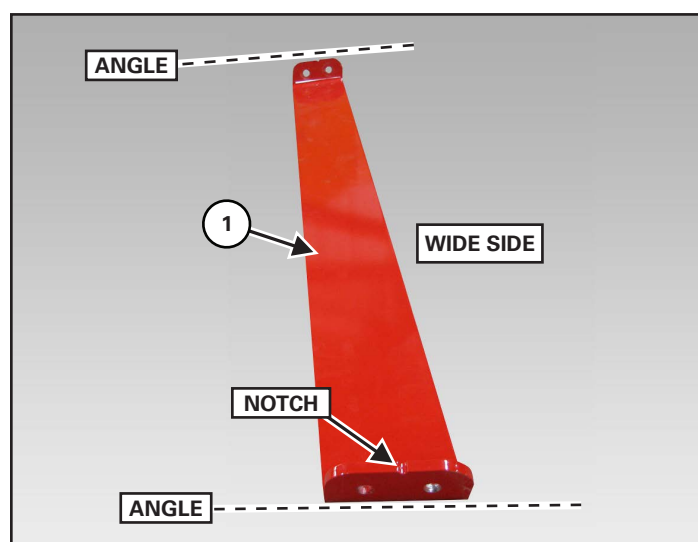
Raise and align truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin **[Figure 107]**.

Repeat procedure on the opposite side.

Truss Support Bracket Assembly

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

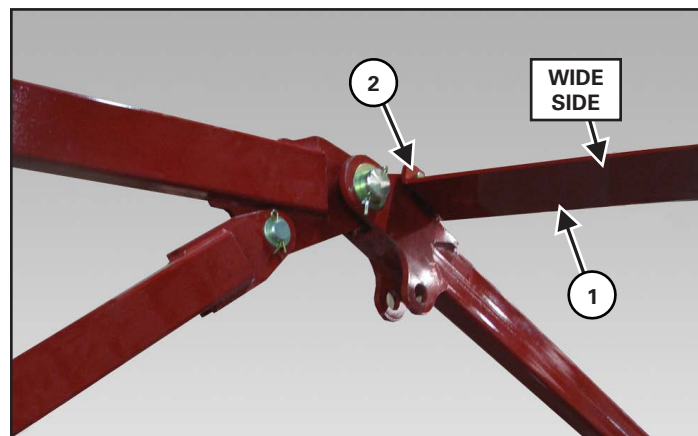
Figure 108



The truss support brackets (Item 1) have one, two, three or four notches and are different lengths **[Figure 108]**.

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

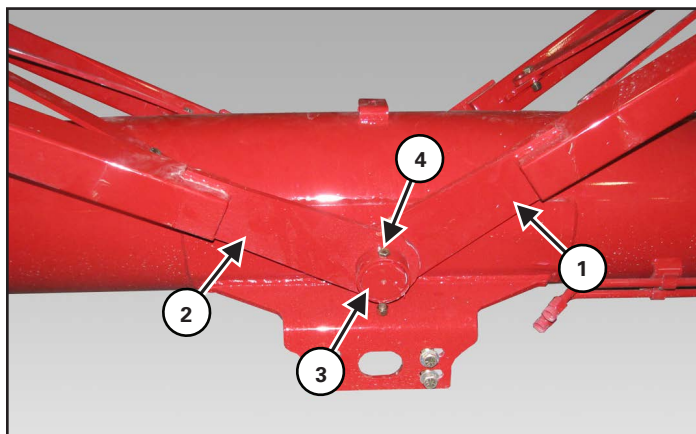
Figure 109



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 109]**.

Install two 1/2" x 1-3/4" bolts (Item 2) and lock nut on each side. Do not tighten at this time **[Figure 109]**.

Figure 110



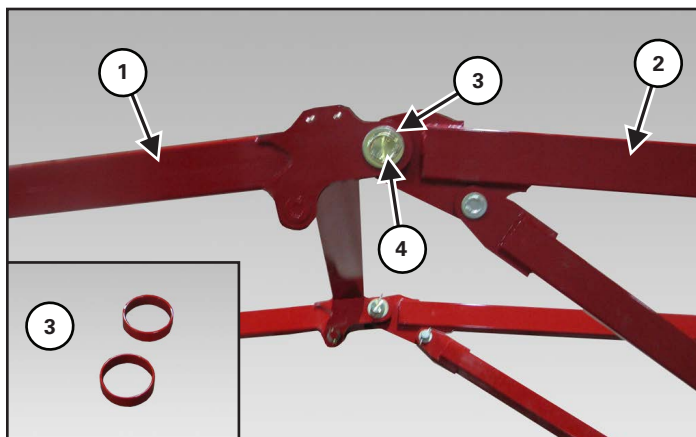
Install the truss beam (Items 1 & 2) onto the tube #2 truss beam mount **[Figure 110]**.

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 110]**.

Repeat procedure on the opposite side.

Figure 111

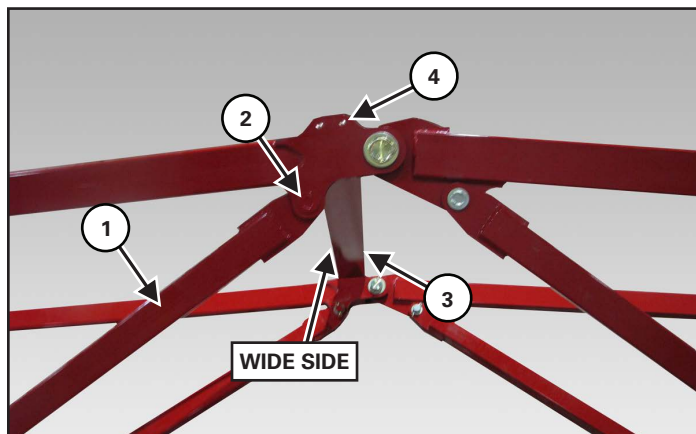


Raise the truss beams (Items 1 & 2) **[Figure 111]**.

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 111]**.

Repeat procedure on the opposite side.

Figure 112



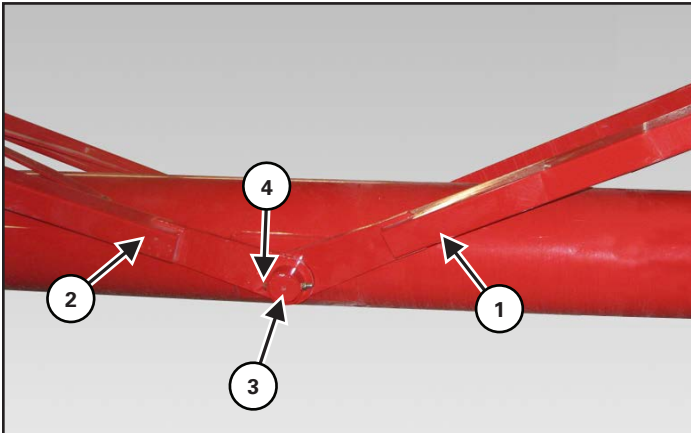
Raise and align the truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin **[Figure 112]**.

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 112]**.

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

Figure 113



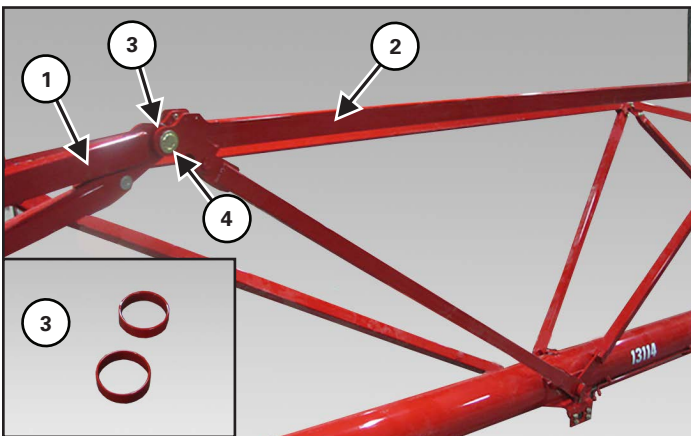
Install the truss beam (Items 1 & 2) onto the tube #3 truss beam mount **[Figure 113]**.

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 113]**.

Repeat procedure on the opposite side.

Figure 114

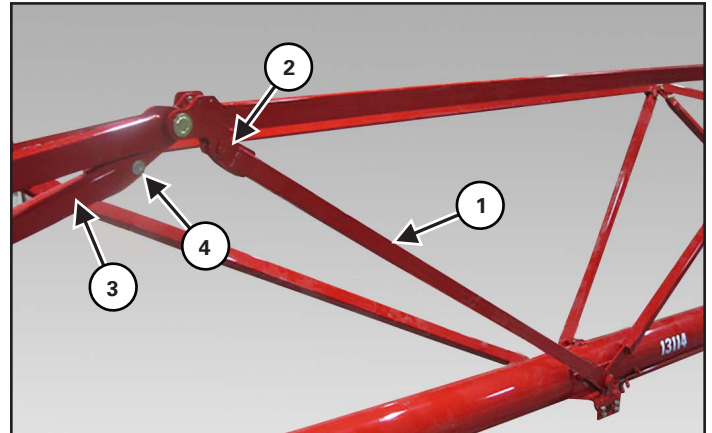


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) **[Figure 114]**.

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 114]**.

Repeat procedure on the opposite side.

Figure 115



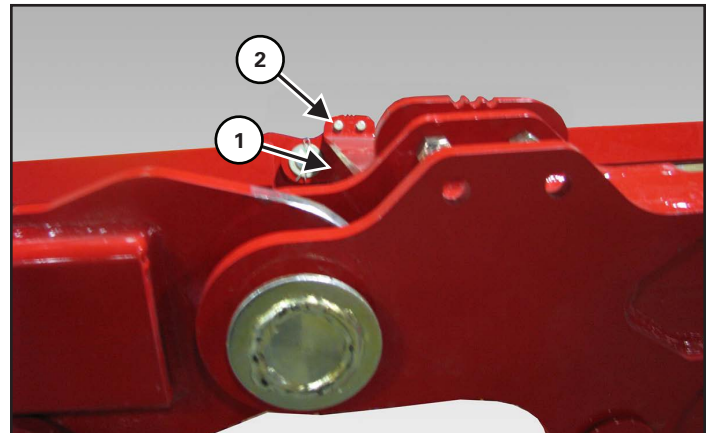
Raise and align truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin **[Figure 115]**.

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 115]**.

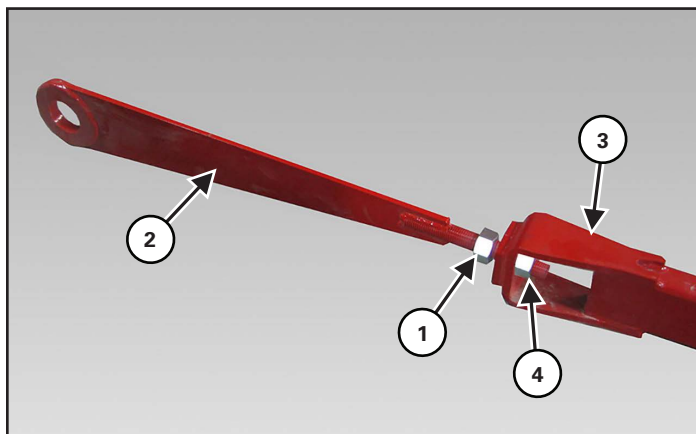
Repeat procedure on the opposite side.

Figure 116



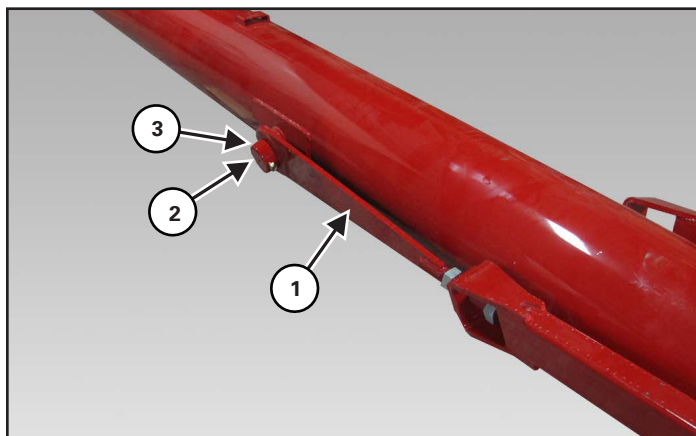
Place the truss support bracket (three notches) (Item 1) between the left side and right side truss beams (wide side of support bracket toward the lower tube) **[Figure 116]**.

Install two 1/2" x 1-3/4" bolts (Item 2) and lock nut on each side. Do not tighten at this time **[Figure 116]**.

Figure 117


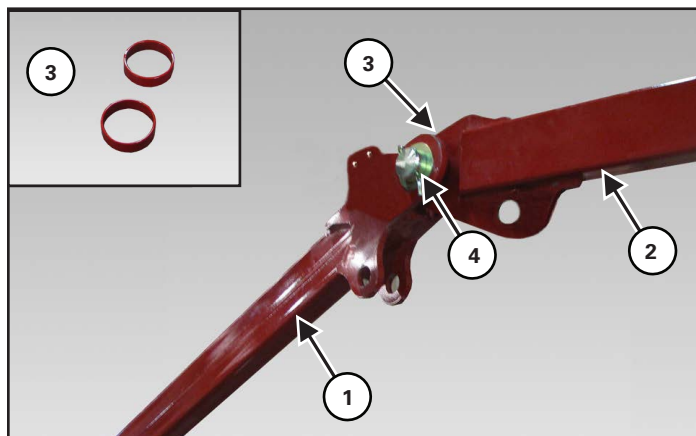
Install the 1-1/4" nut (Item 1) onto the truss fastener (Item 2). Install the truss fastener into the truss beam (Item 3). Install the 1-1/4" nut (Item 4) onto the truss fastener **[Figure 117]**.

Repeat procedure for the opposite side.

Figure 118


Install the truss fastener / beam assembly (Item 1) onto the upper tube #4 truss beam mount (Item 2) **[Figure 118]**.

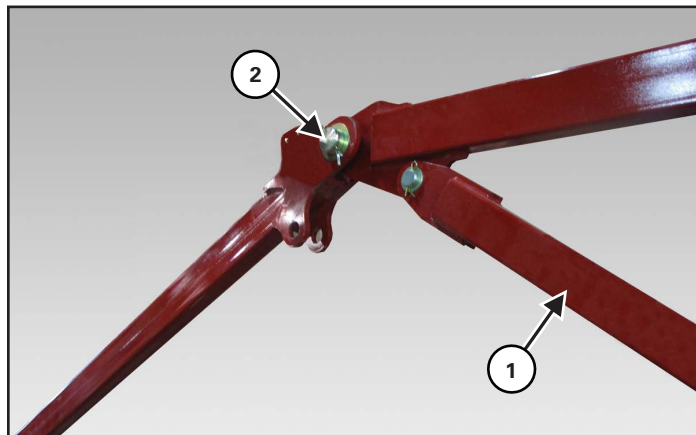
Install the undercarriage pin sleeve (Item 3) and 1/2" x 4-1/2" bolt and 1/2" lock nut. Tighten the bolt and lock nut **[Figure 118]**.

Figure 119


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) **[Figure 119]**.

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 119]**.

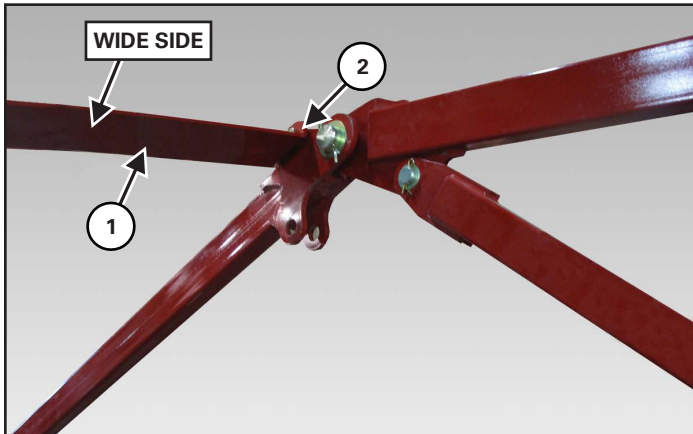
Repeat procedure on the opposite side.

Figure 120


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 120]**.

Repeat procedure on the opposite side.

Figure 121



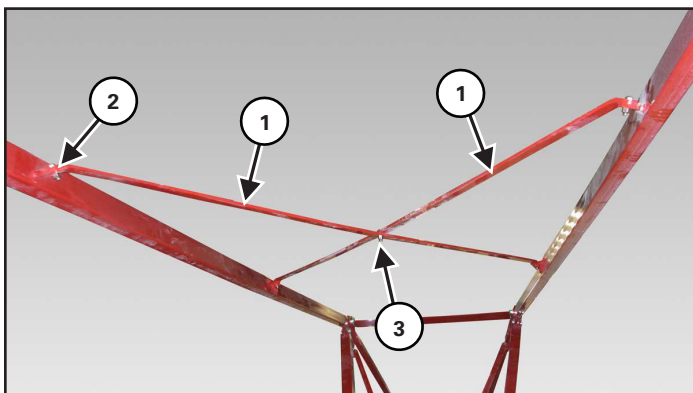
Place the truss support bracket (four notches) (Item 1) between the left side and right side truss beams (wide side of support bracket toward the lower tube) **[Figure 121]**.

Install two 1/2" x 1-3/4" bolts (Item 2) and lock nut on each side. Do not tighten at this time **[Figure 121]**.

Cross Brace Plate Assembly

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

Figure 122

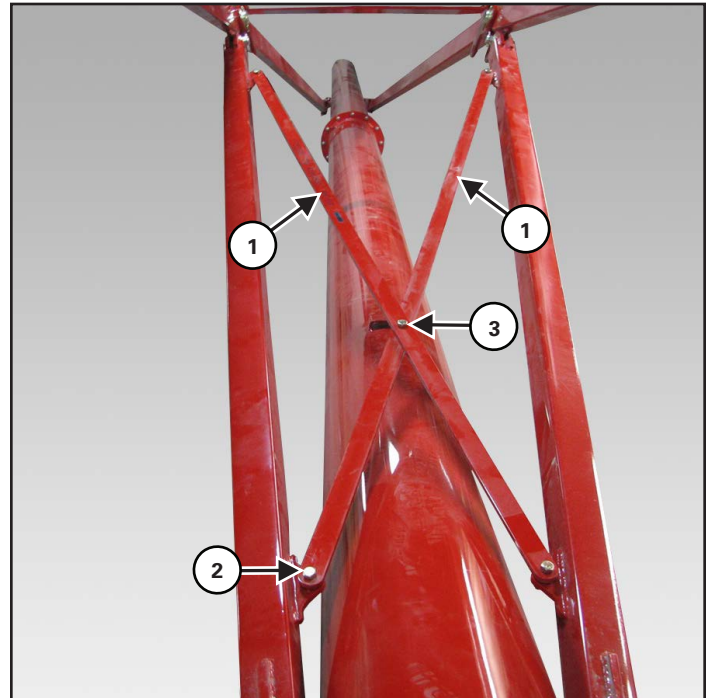


Align the cross brace plates (Item 1) diagonally with the tabs on the left side and right side truss beams **[Figure 122]**.

Install one 1/2" x 1-1/2" bolt (Item 2) and lock nut in each end of the cross brace plates **[Figure 122]**.

Install one 1/2" x 1-1/2" bolt (Item 3) through intersecting holes in cross plate braces **[Figure 122]**.

Figure 123



Align the cross brace plates (Item 1) diagonally with the tabs on the left side and right side truss beams **[Figure 123]**.

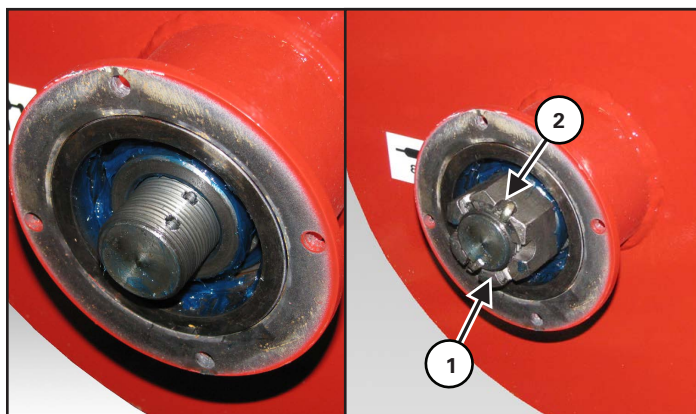
Install one 1/2" x 1-1/2" bolt (Item 2) and lock nut in each end of cross brace plate **[Figure 123]**.

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 123]**.

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.

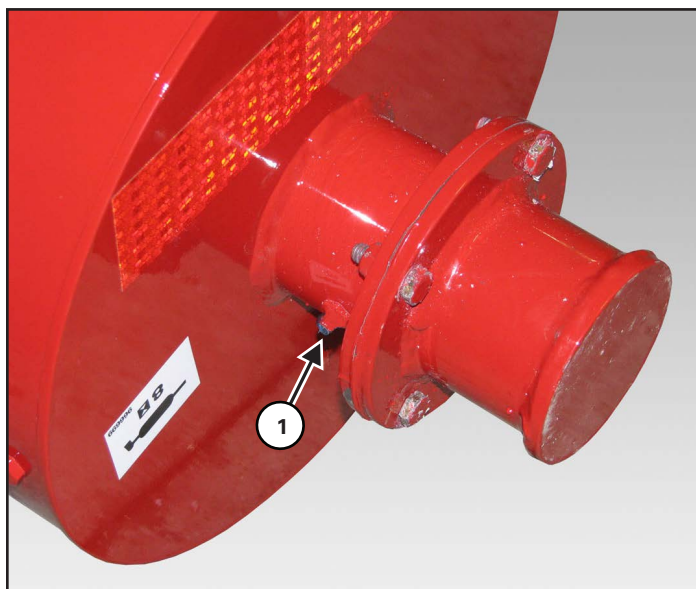
Figure 124


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

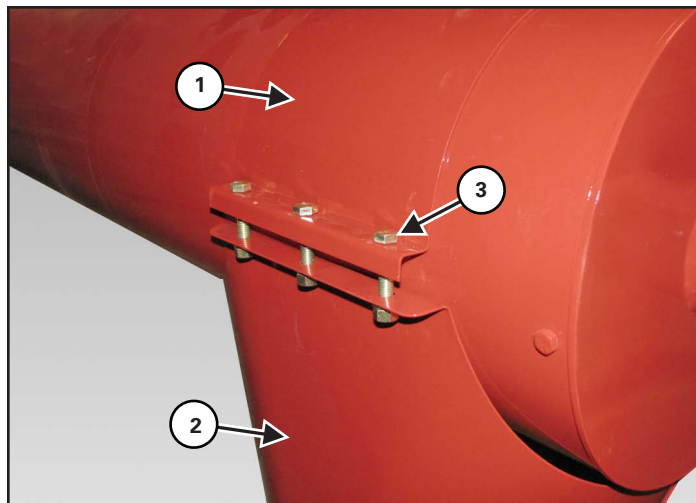
With the tube assembly complete, tighten the castle nut (Item 1) until the castle nut contacts the washer / flighting shaft (Item 2) **[Figure 124]**.

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 125


Apply eight pumps of grease to the flighting bearing assembly (Item 1) **[Figure 125]**.

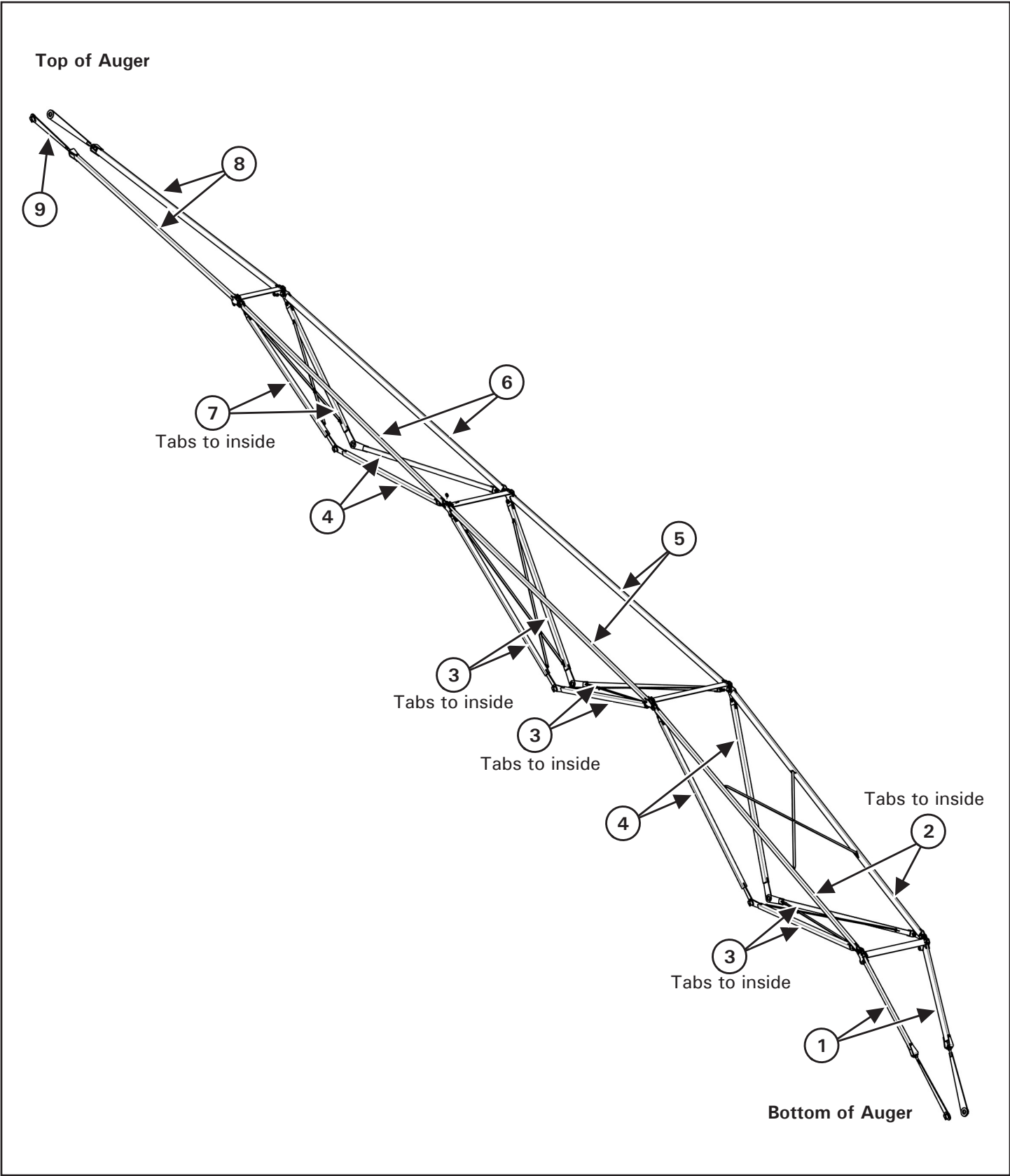
Figure 126


Align the spout clamp (Item 1) and discharge spout (Item 2) with discharge opening in the top tube **[Figure 126]**.

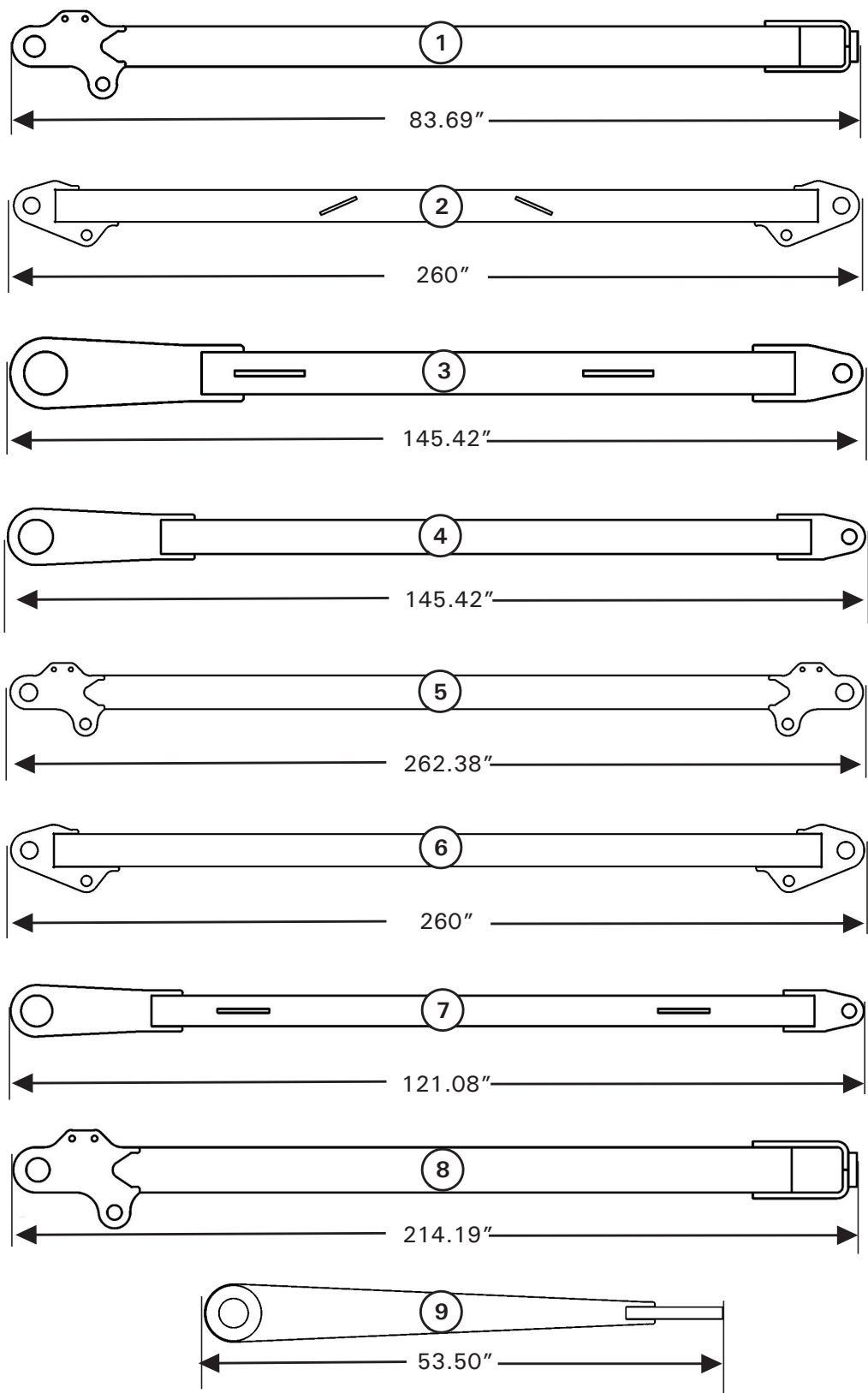
Install the six 3/8" x 2" bolts (Item 3) and 3/8" lock nuts. Tighten bolts and lock nuts evenly until the discharge spout contacts the top tube **[Figure 126]**.

Trusss Beam Identification - 13114 Models

Figure 127

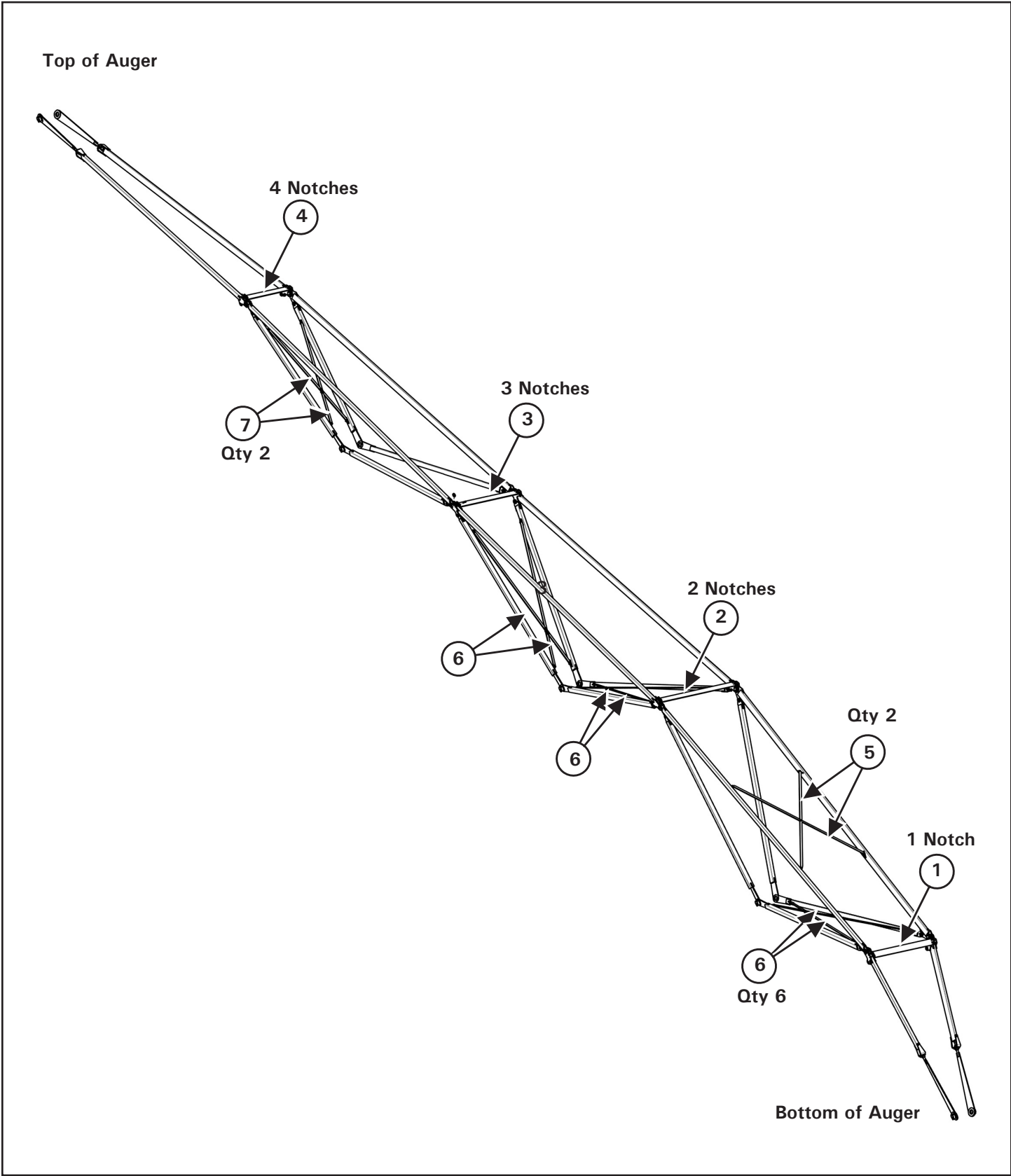


Truss Beams [Figure 127]

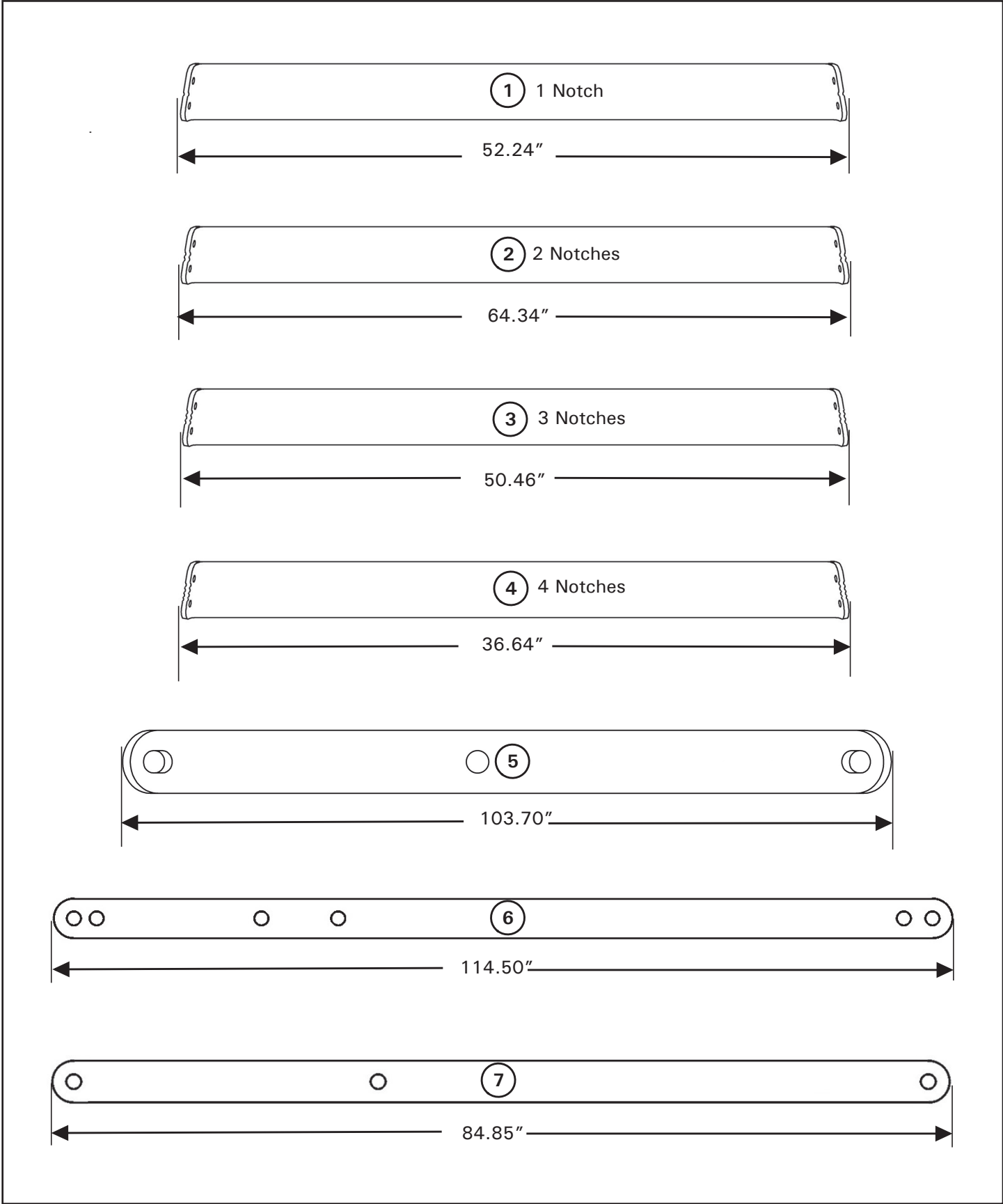


Trusss Brace Identification - 13114 Models

Figure 128



Truss Braces [Figure 128]



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

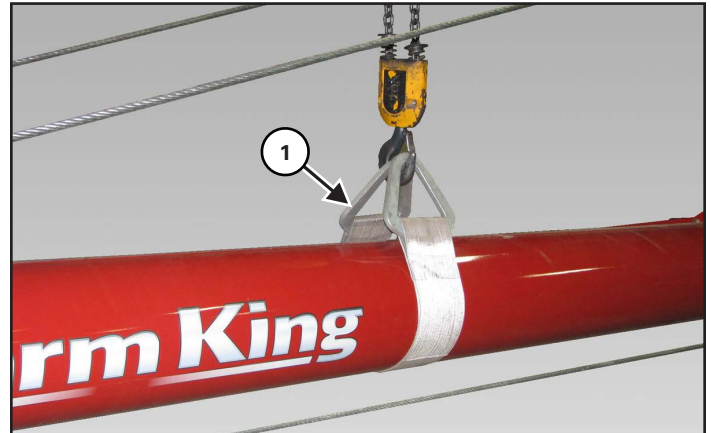
Keep fingers and hands out of pinch points when assembling the equipment.



IMPORTANT

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

Figure 129



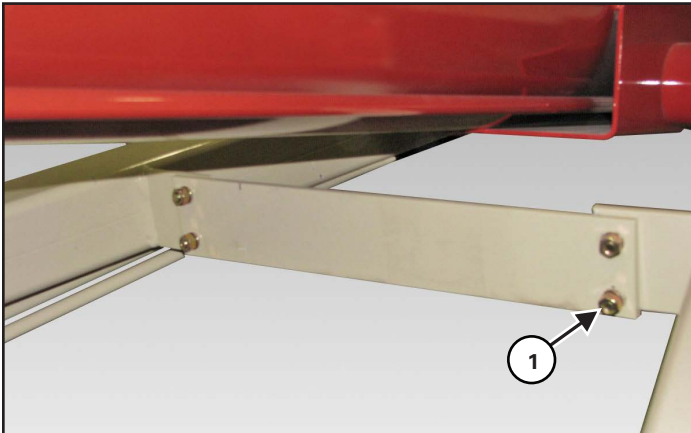
With the strap (Item 1) installed around the center tube and connected to an approved lifting device, raise the tube assembly high enough to allow the undercarriage to be moved under the tube assembly [Figure 129].

Figure 130



Move the undercarriage into position below the tube assembly [Figure 130].

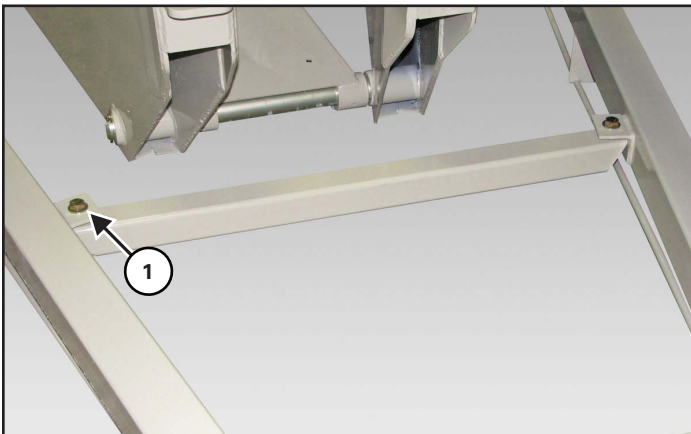
Figure 131



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.

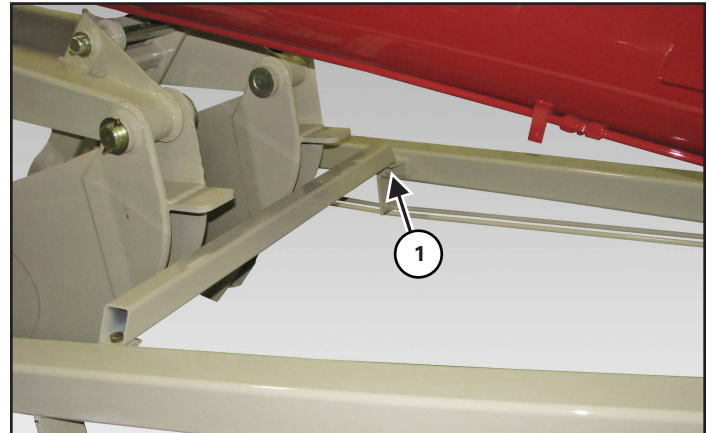
Figure 132



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 132].

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

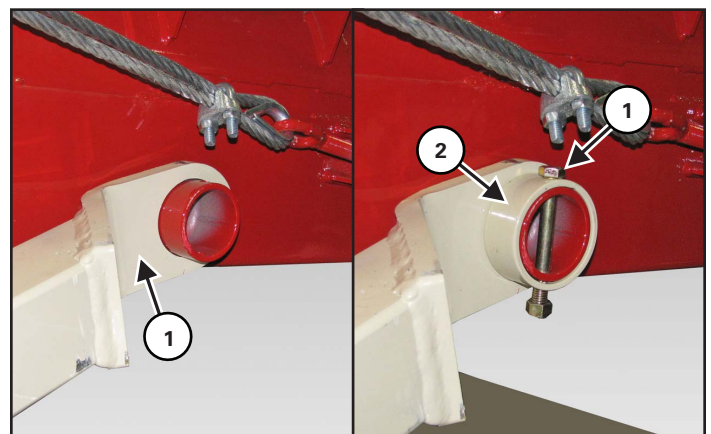
Figure 133



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 133].

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

Figure 134

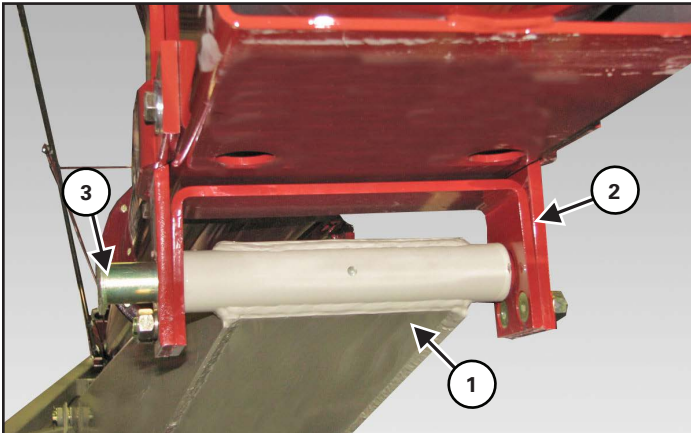


Fully install the RH & LH undercarriage arms (Item 1) onto the mounts of the bottom tube section [Figure 134].

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 134].

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 134].

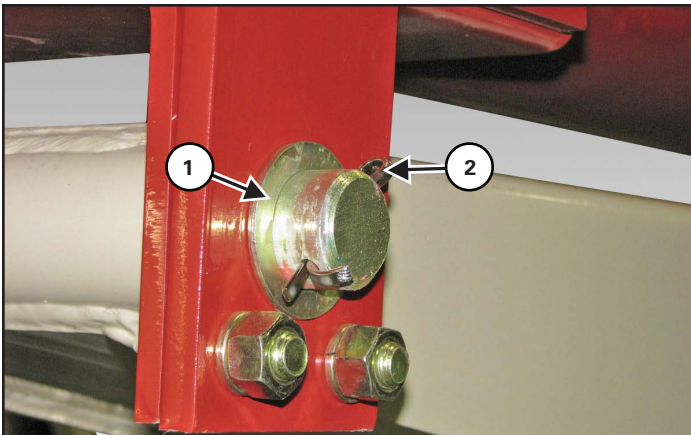
Figure 135



Align upper lift arm (Item 1) with the main bridging yoke (Item 2) on the center tube section **[Figure 135]**.

Install the lift arm pivot pin (Item 3) **[Figure 130]** through the main bridging yoke and upper lift arm **[Figure 135]**.

Figure 136



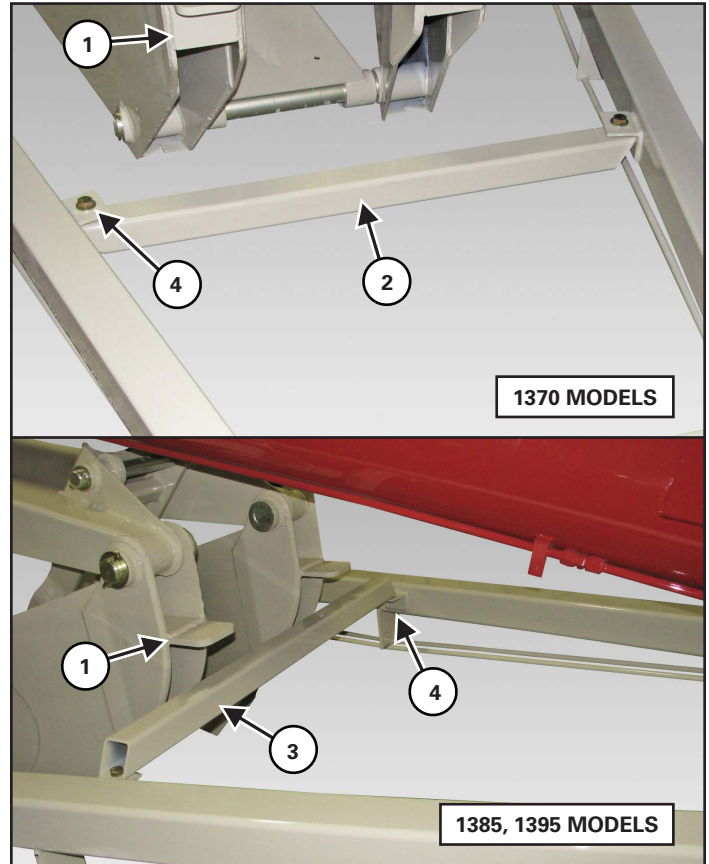
Install one 1-1/2" x 10 ga. narrow rim washer (Item 1) and one 1/4" x 2" cotter pin (Item 2) through the lift arm pivot pin **[Figure 136]**.



IMPORTANT

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

Figure 137



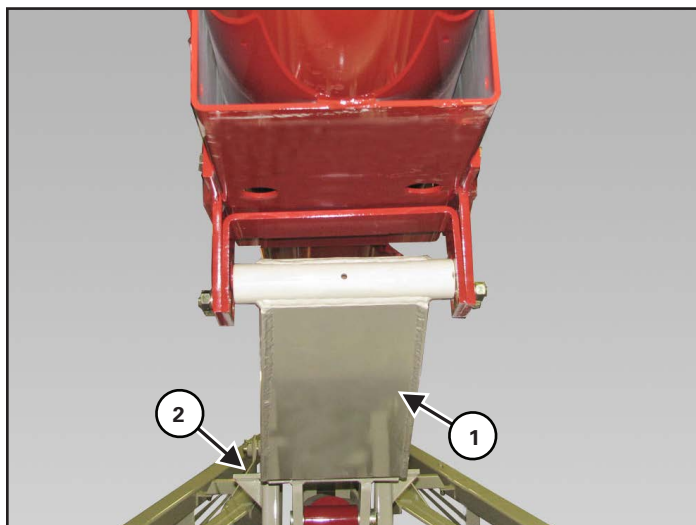
Install a strap around the lower lift arm (Item 1). Connect the strap to an approved lifting device and raise the lower lift arm assembly **[Figure 137]**.

1370 Models: Position the lift arm cradle (Item 2) under the undercarriage arm mount. Install bolt (Item 3) and lock nut **[Figure 137]**.

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 137]**.

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

Figure 138



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 138].

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.

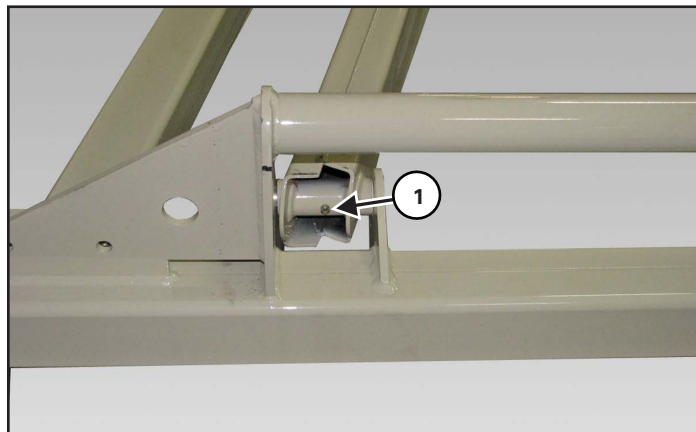


IMPORTANT

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

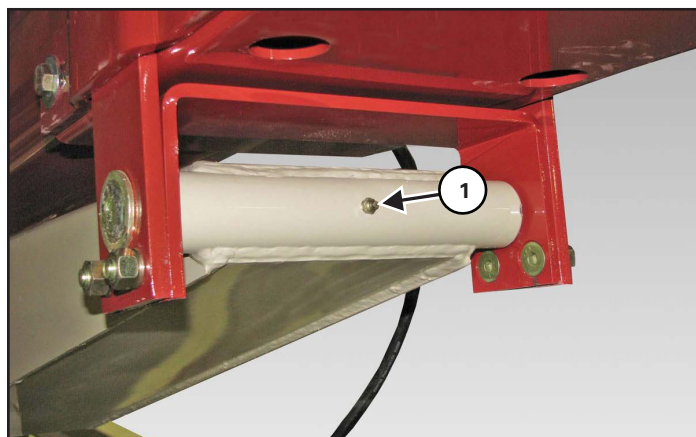
Lower tube assembly onto the undercarriage and remove the strap from tube assembly.

Figure 139



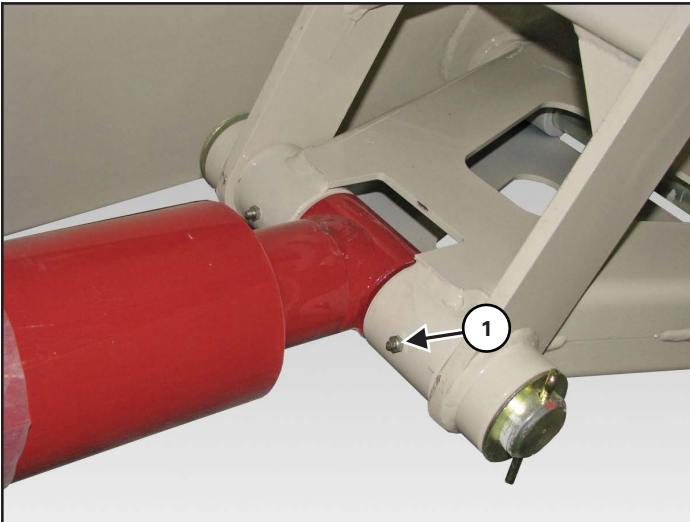
Install two grease zerks (Item 1) to the axle end of the LH & RH lower lift arms [Figure 139].

Figure 140



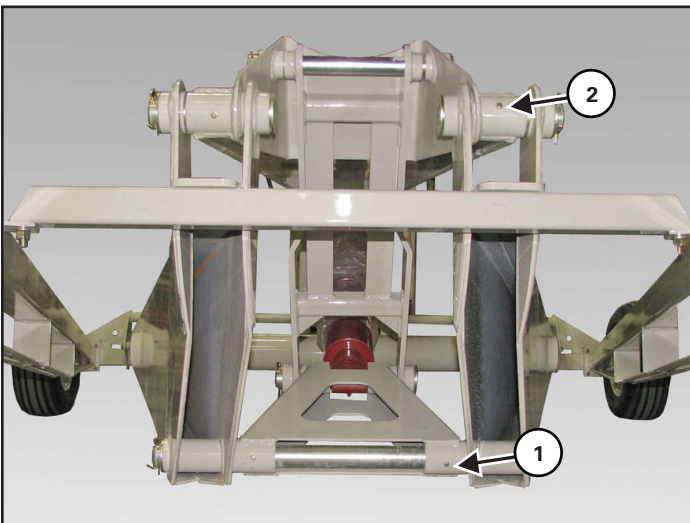
Install one grease zerk (Item 1) into the upper lift arm [Figure 140].

Figure 141



Install two grease zerks (Item 1) into the connecting link [Figure 141].

Figure 142



Install two grease zerks (Item 1) into the connecting link [Figure 142].

Install two grease zerks (Item 2) into the upper lift arm [Figure 142].

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 143



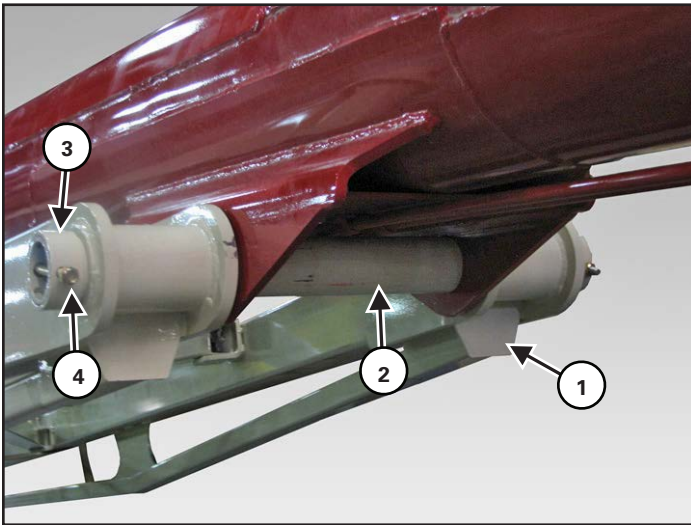
With the strap (Item 1) installed around the #3 tube and connected to an approved lifting device and a strap connected at the front of the #1 tube and connected to an approved lifting device, raise the tube assembly high enough to allow the undercarriage to be moved under the tube assembly [Figure 143].

Figure 144



Move the undercarriage into position below the tube assembly [Figure 144].

Figure 145

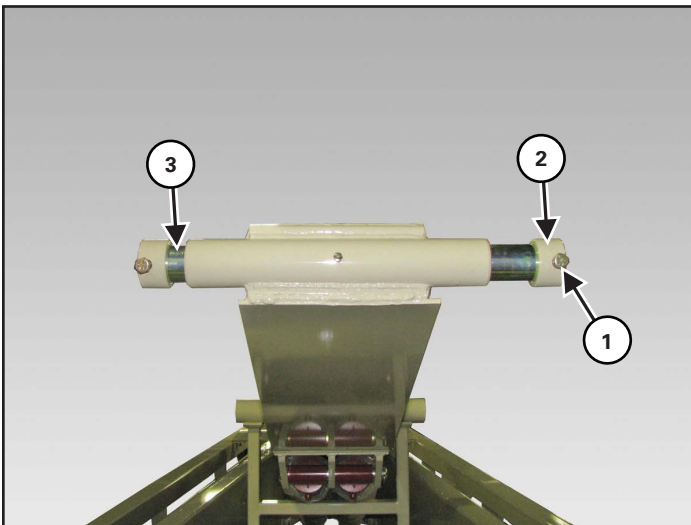


Raise the front of the undercarriage (Item 1) and align the holes of the undercarriage with the mount holes on the tube **[Figure 145]**.

Install the undercarriage lift arm pin (Item 2) through the left undercarriage arm, tube mount holes, and right undercarriage arm **[Figure 145]**.

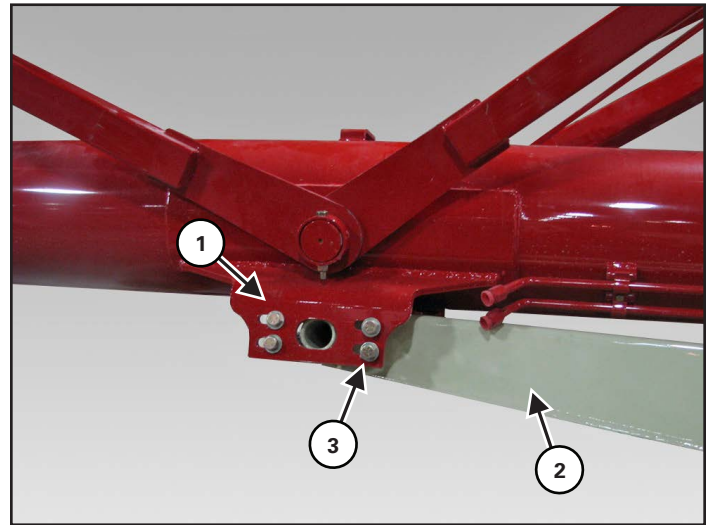
Install the collar (Item 3), 1/2" x 4-1/2" bolt and 1/2" lock nut (Item 4). Tighten the bolt and lock nut until the lock nut contacts the collar (both sides) **[Figure 145]**.

Figure 146



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 146]**.

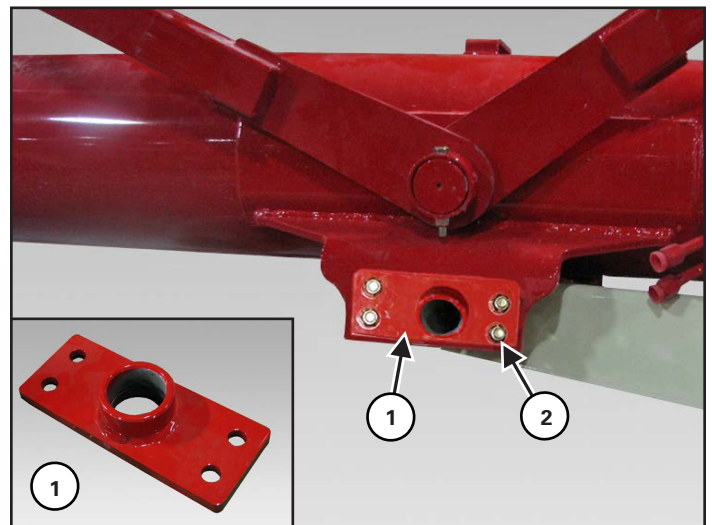
Figure 147



Lower the tube assembly and align the holes of the tube undercarriage mounting plate (Item 1) and upper lift arm (Item 2) **[Figure 147]**.

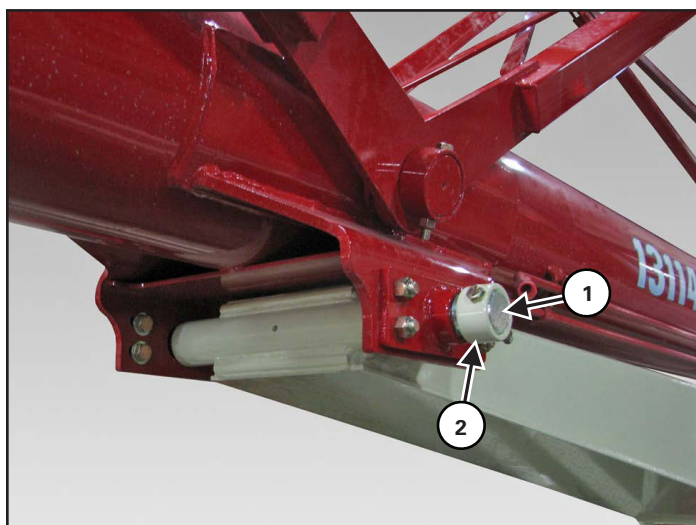
Remove the four nuts, bolts and washers (Item 3) (both sides) **[Figure 147]**.

Figure 148



Install the plate (Item 1) using the bolts, washers and nuts just removed (both sides) **[Figure 148]**.

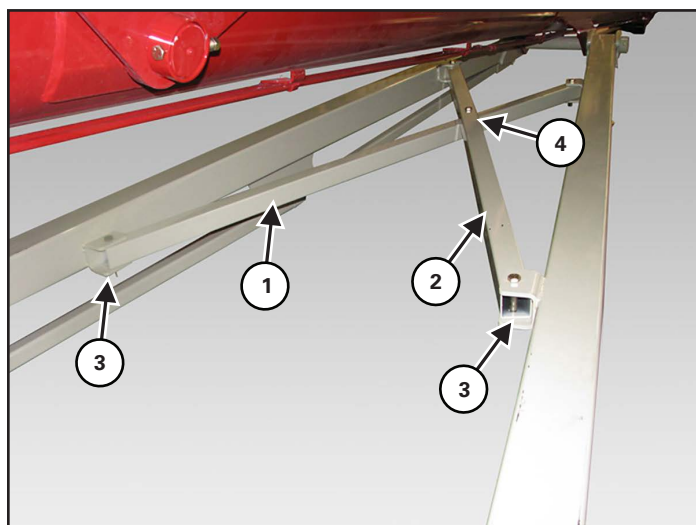
Install the bolts and flat washers into the slotted holes on the undercarriage mounting plate. Install lock nuts (Item 2) onto the bolts. Do not tighten at this time **[Figure 148]**.

Figure 149


Install the upper lift arm pin (Item 1) through the bridging plate and upper lift arm **[Figure 149]**.

Install collar (Item 2), 1/2" x 3-1/2" bolt and 1/2" lock nut **[Figure 149]**.

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

Figure 150


Align the cross brace tube (Item 1) with the lower cross brace mounts on the left and right undercarriage arms **[Figure 150]**.

Install a 5/8" x 4-1/2" bolt (Item 3) and lock nut. Do not tighten at this time **[Figure 150]**.

Align the cross brace tube (Item 2) with the upper cross brace mounts on the left and right undercarriage arms **[Figure 150]**.

Install a 5/8" x 4-1/2" (Item 3) bolt and lock nut at each end. Do not tighten at this time **[Figure 150]**.

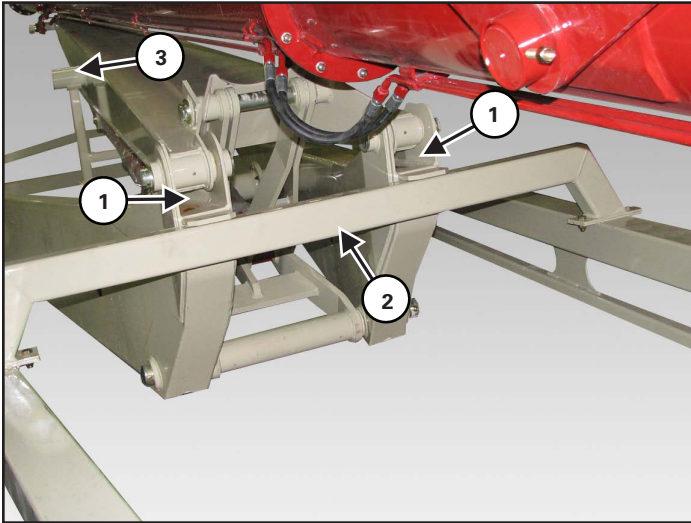
Install one 5-8" x 6" bolt (Item 4) through both cross braces and install a lock nut. Do not tighten at this time **[Figure 150]**.



IMPORTANT

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

Figure 151



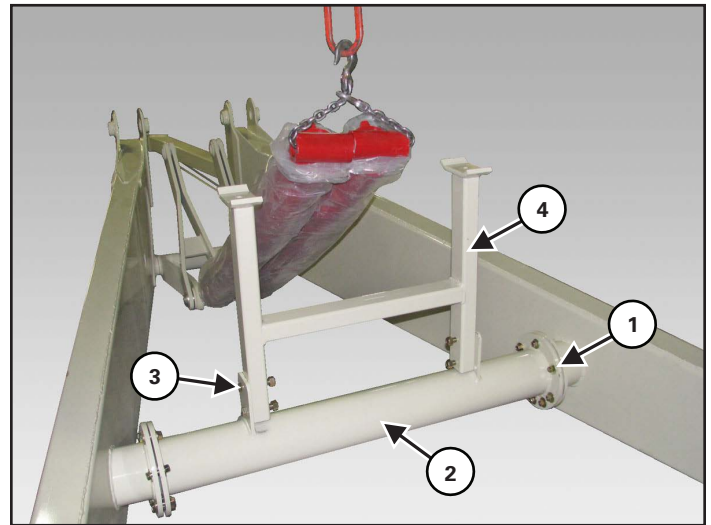
Lower the tube assembly until the upper lift arm (Item 1) is resting on the lift arm rest (Item 2) and cradle rest (Item 3) [Figure 151].

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 152



Tighten the sixteen 1/2" bolts (Item 1) and nuts on the torque tube (Item 2) [Figure 152].

Tighten the four 1/2" bolts (Item 3) and nuts on the cradle rest (Item 4) [Figure 152].

Tighten all remaining undercarriage bolts.

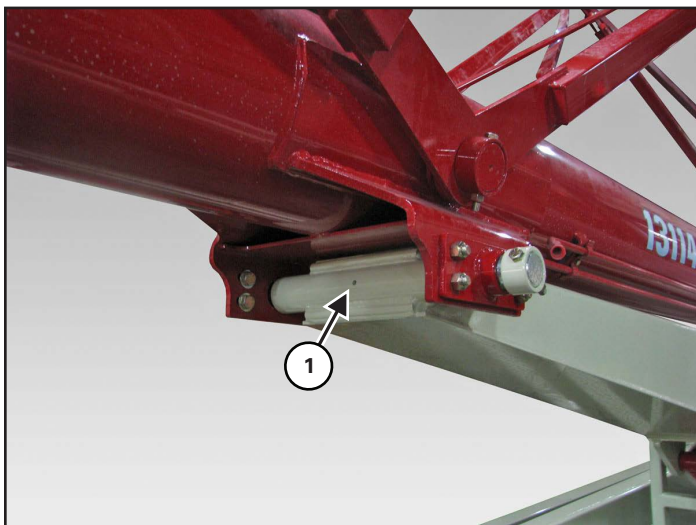


IMPORTANT

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

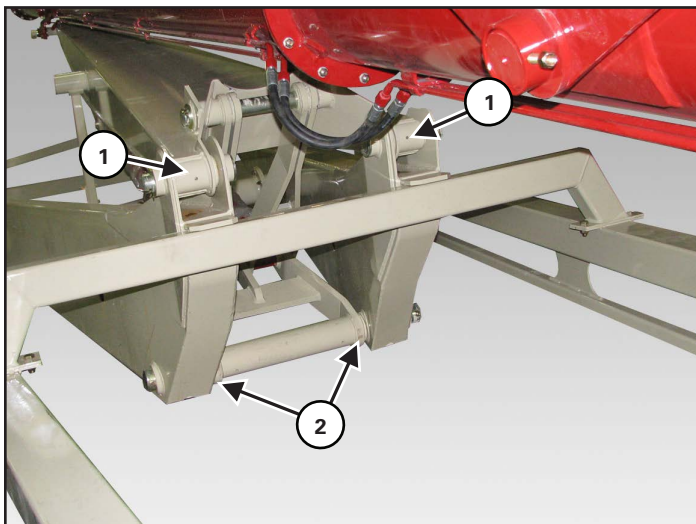
Lower tube assembly onto the undercarriage and remove the strap and lifting device from tube #3 and tube #1.

Figure 153



Install one grease zerker (Item 1) into the upper lift arm **[Figure 153]**.

Figure 154



Install two grease zerks (Item 1) into the upper lift arm **[Figure 154]**.

Install two grease zerks (Item 2) into the lower link pivot **[Figure 154]**.

Grease all zerks on undercarriage.

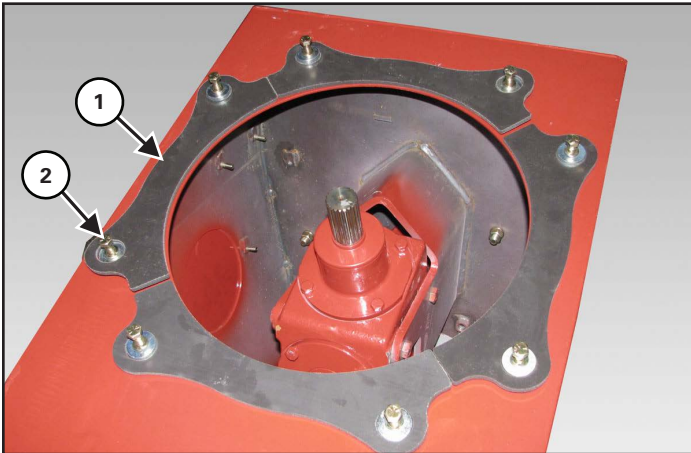


IMPORTANT

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

INTAKE AUGER

Figure 155

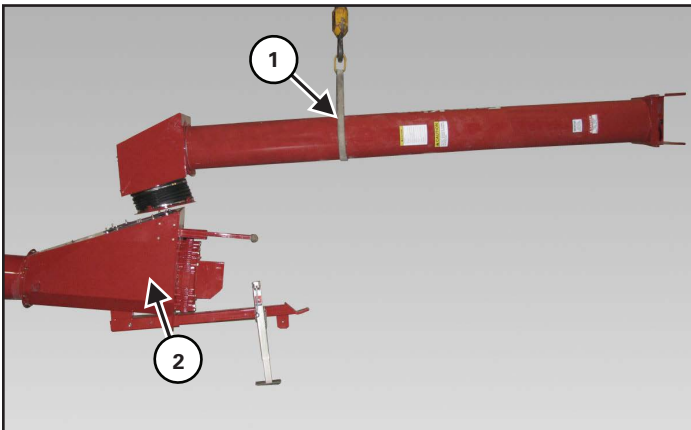


Install the intake spacers (Item 1) on the top of the input box **[Figure 155]**.

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 155]**.

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

Figure 156

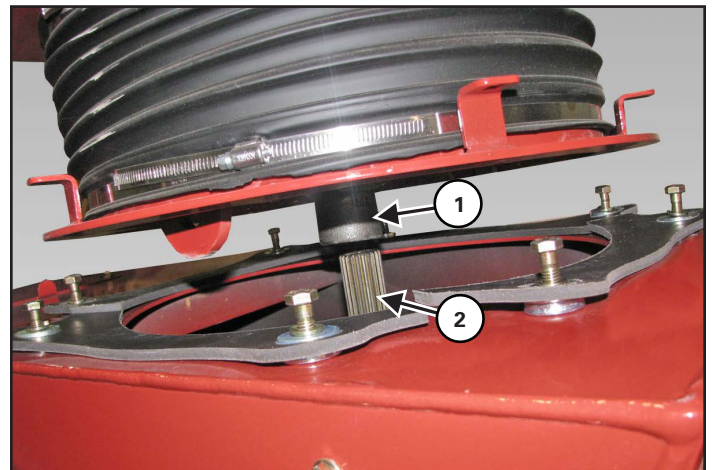


Install a strap (Item 1) around the intake auger **[Figure 156]**.

Connect the strap to an approved lifting device.

Raise the intake auger and position over the input box (Item 2) **[Figure 156]**.

Figure 157

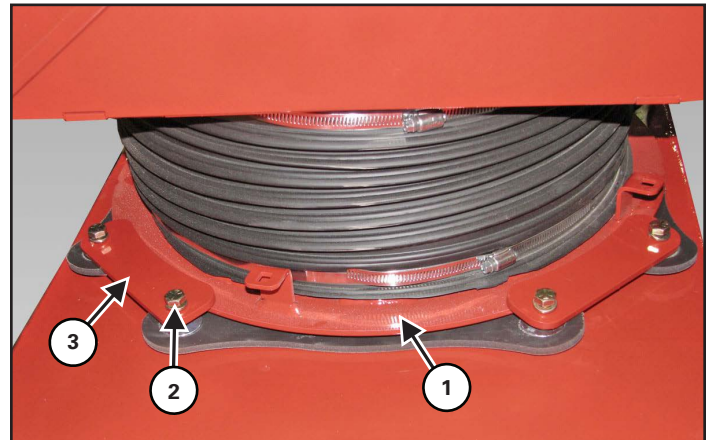


Lower the intake auger, align the u-joint (Item 1) with the top gearbox shaft (Item 2) of the input box **[Figure 157]**.

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

Lower the intake auger onto the shaft.

Figure 158



Position the intake auger mounting plate (Item 1) on top of the spacers **[Figure 158]**.

Remove the bolts (Item 2) **[Figure 158]**.

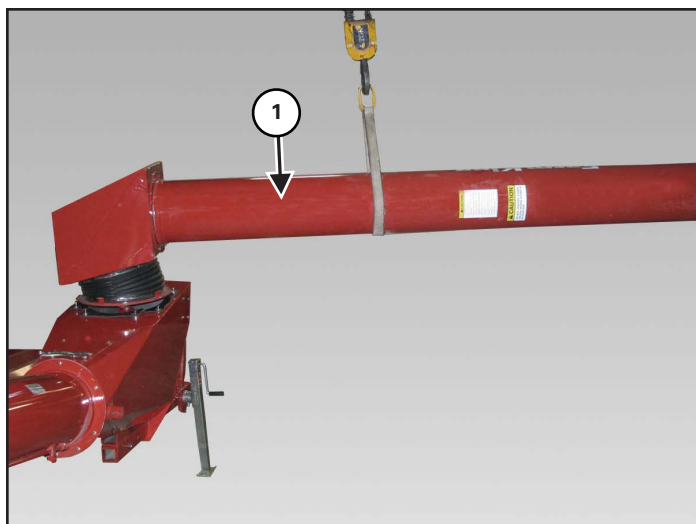
Align one ring clamp (Item 3) with two corner bolt holes. Reinstall the bolts (Item 2) **[Figure 158]**.

Repeat to install the remaining ring clamps.

Tighten the eight bolts.

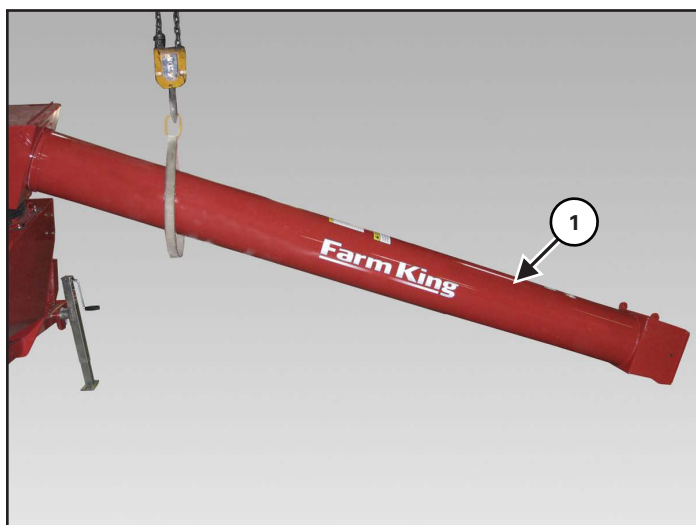
NOTE: The intake auger should rotate freely.

Figure 159



Rotate the intake auger (Item 1) 90° towards the right side of the auger [Figure 159].

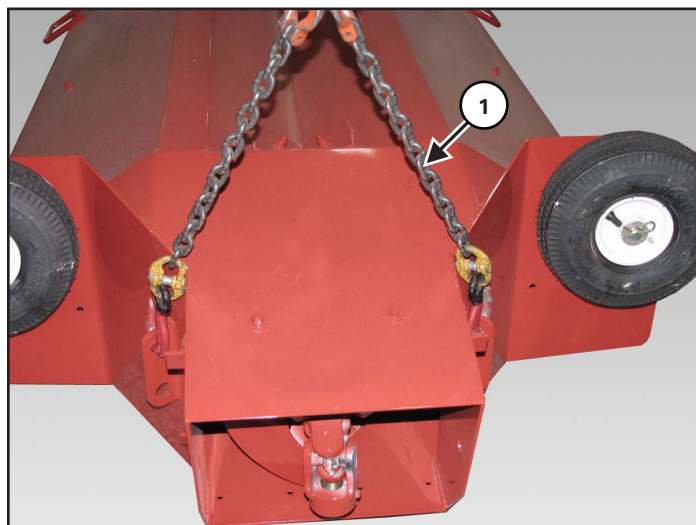
Figure 160



Lower the intake auger (Item 1) [Figure 160].

HOPPER

Figure 161



Install chains (Item 1) onto the hopper (Item 2) [Figure 161].

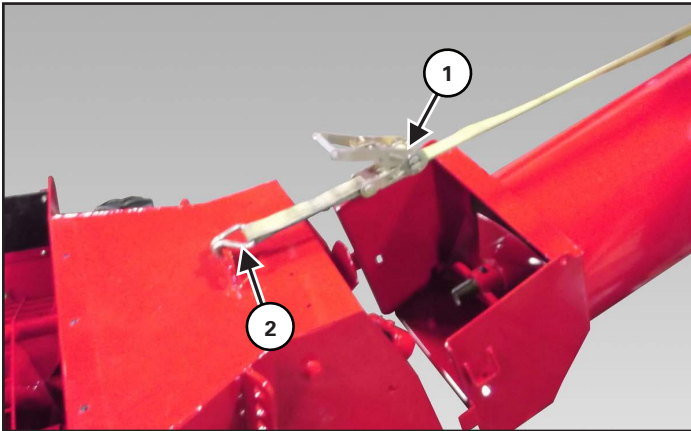
Figure 162



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 162].

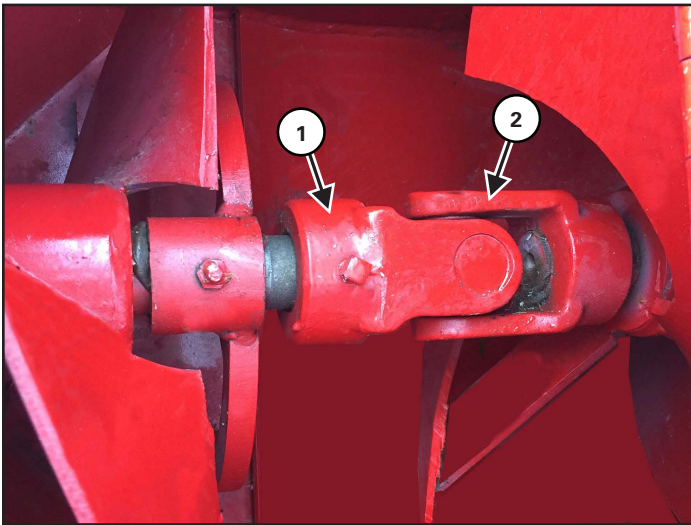
Adjust chains and move the hopper in front of the intake auger.

Figure 163



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 163].

Figure 164



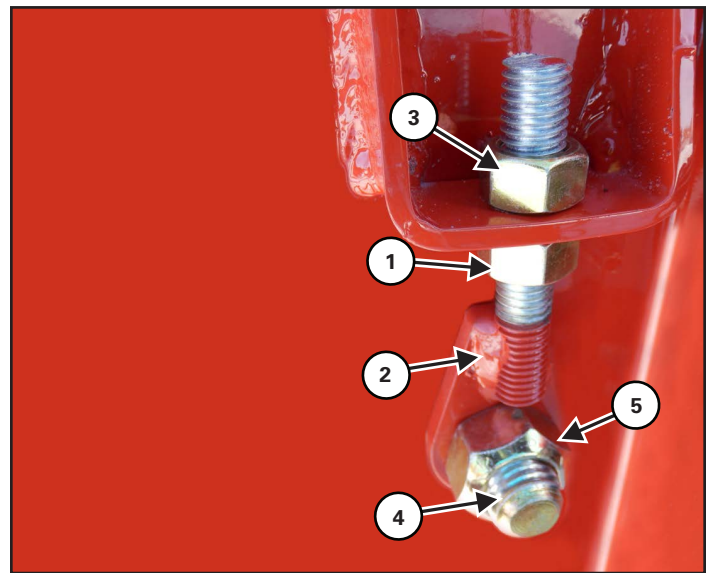
Install 0.313" square x 1.375" key onto the intake auger shaft.

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 164].

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

Figure 165



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 165].

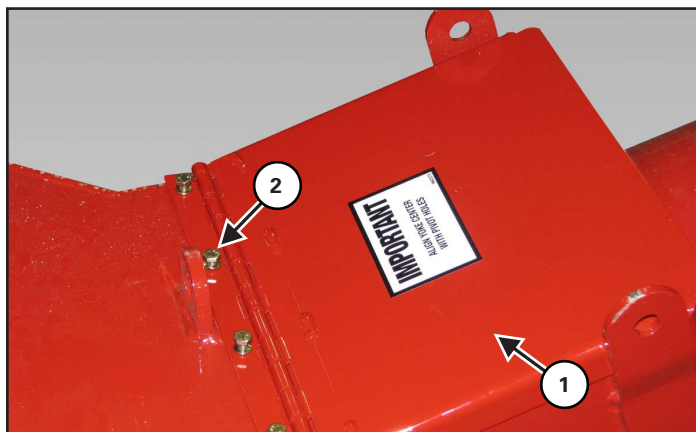
Install one 3/4" x 1-5/8" bolt (Item 4) (from inside) through the hopper, adjustment bolt and intake auger. Install one 3/4" lock nut (Item 5) onto the bolt [Figure 165].

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 165].

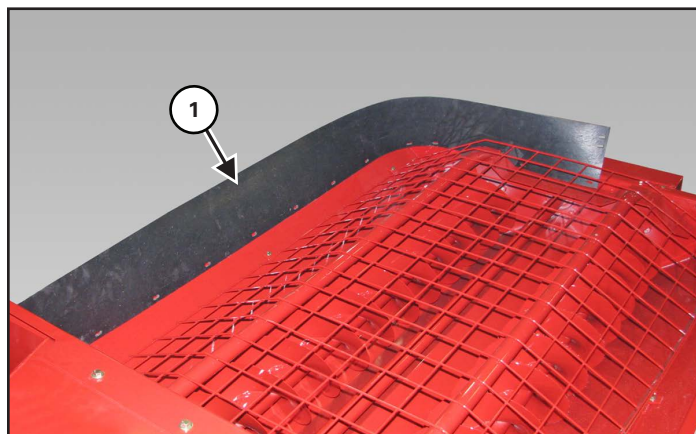
Tighten both adjustment bolts (Item 2) evenly [Figure 165].

Figure 166



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 166].

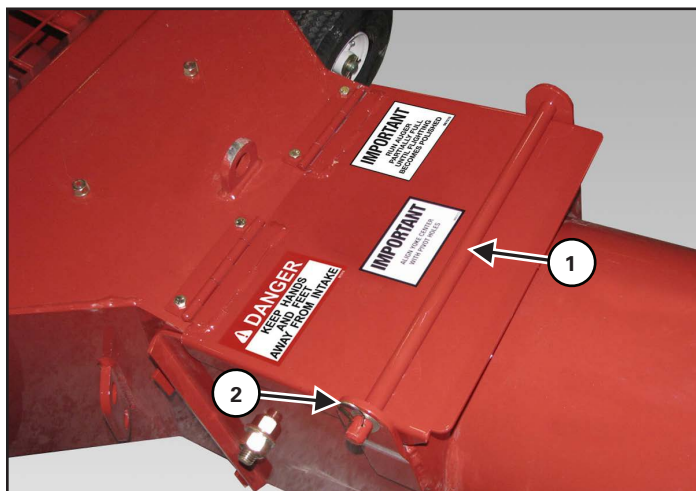
Figure 168



Place the rubber edge (Item 1) inside the outer flange of the hopper [Figure 168].

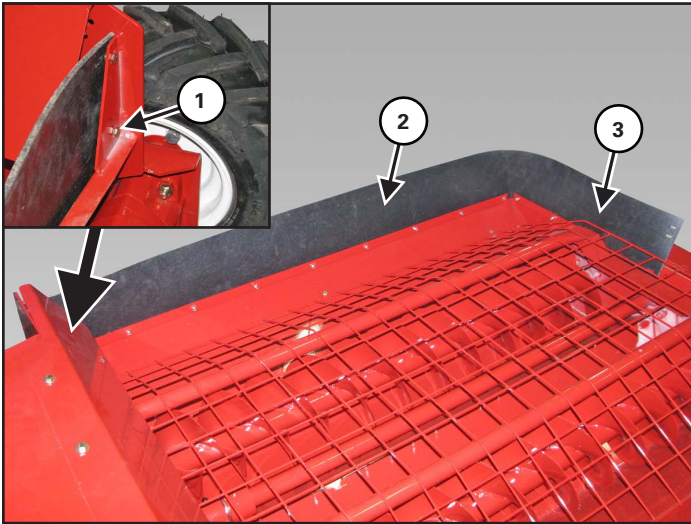
NOTE: Install the rubber edge with the smooth side facing IN.

Figure 167



Install the pivot hopper lid rod (Item 1) 5/8" flat washer and #7 hair pin clip (Item 2) [Figure 167].

Figure 169



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 169].

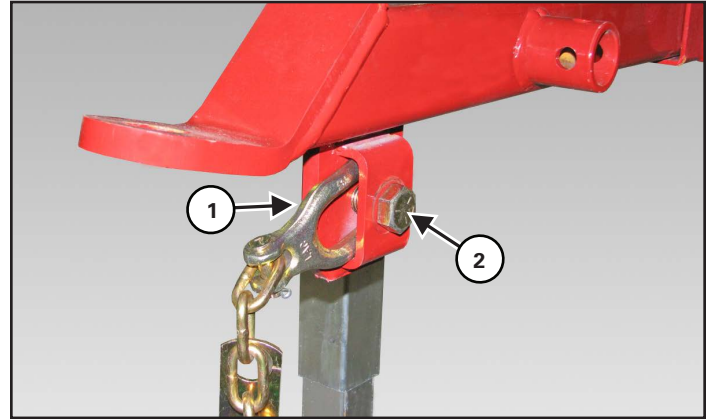
Align one long rubber reinforcement (Item 2) and one short rubber reinforcement (Item 3) with holes in the rubber edge and outer hopper flange (both sides). Install 1/4" x 1" bolts through the hopper, rubber edge and rubber reinforcements (install bolts from the outside of the hopper flange). Install a 1/4" lock nut on each bolt. Do not tighten bolts and lock nuts at this time [Figure 169].

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

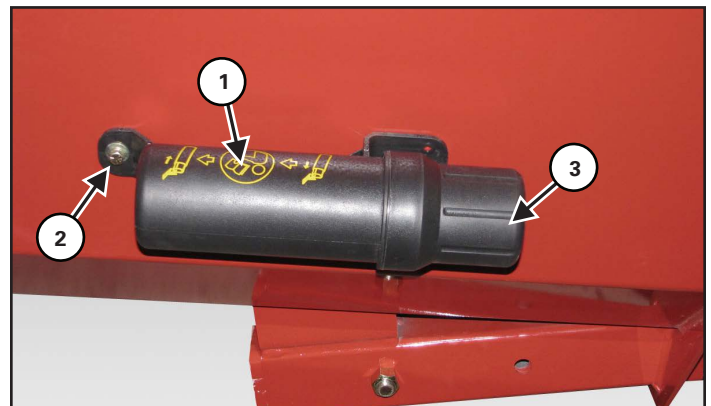
Figure 170



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 170].

MANUAL HOLDER

Figure 171

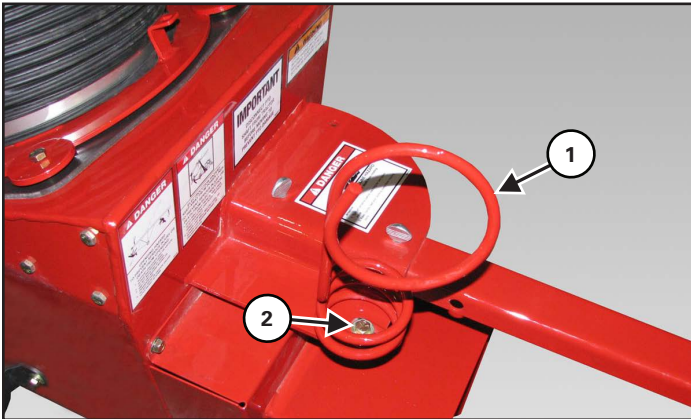


Align the manual holder (Item 1) with mounting holes on the right side of the input box [Figure 171].

Attach using two 5/16" lock washers and two 5/16" x 3/4" bolts (Item 2). Install cap (Item 3) [Figure 171].

HYDRAULIC HOSE HOLDER

Figure 172

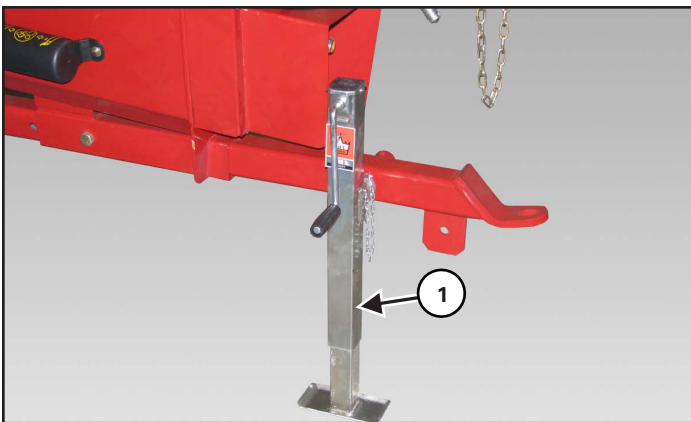


Install the hydraulic hose holder (Item 1) onto the mounting bracket located on the top of the gearbox (above the hitch) **[Figure 172]**.

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 172]**.

Jack Installation

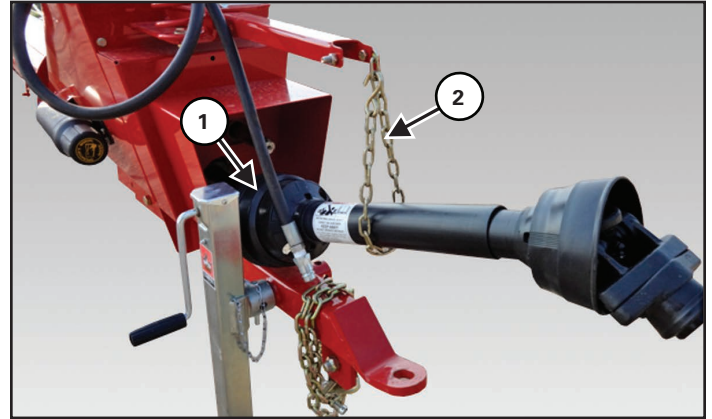
Figure 173



Align and install the jack (Item 1) onto the hitch (hopper side) **[Figure 173]**.

PTO DRIVELINE

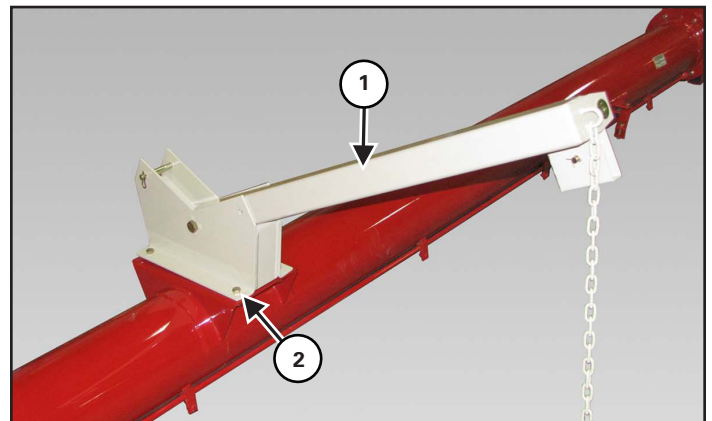
Figure 174



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 174]**.

LIFT BOOM ARM

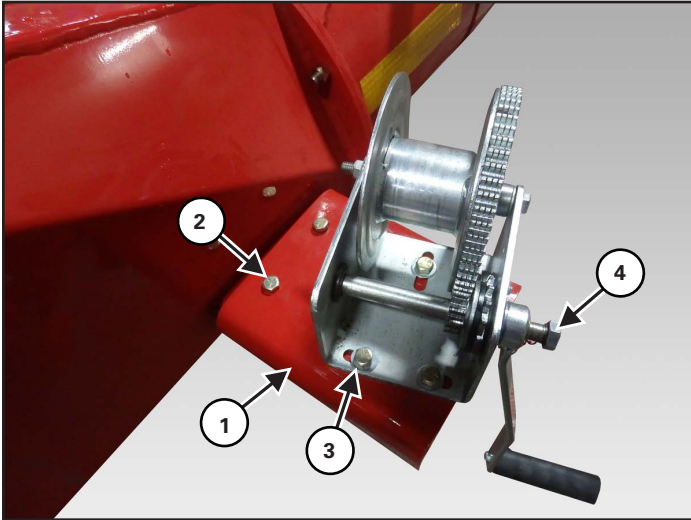
Figure 175



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 175]**.

HAND WINCH AND CABLE

Figure 176



Install the hand winch mounting bracket (Item 1) on the input box (opposite side of the hopper) **[Figure 176]**.

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 176]**.

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 176]**.

Tighten the nut (Item 4) against the handle and torque to 22 - 25 ft.-lb. (30 - 34 N•m) **[Figure 176]**.

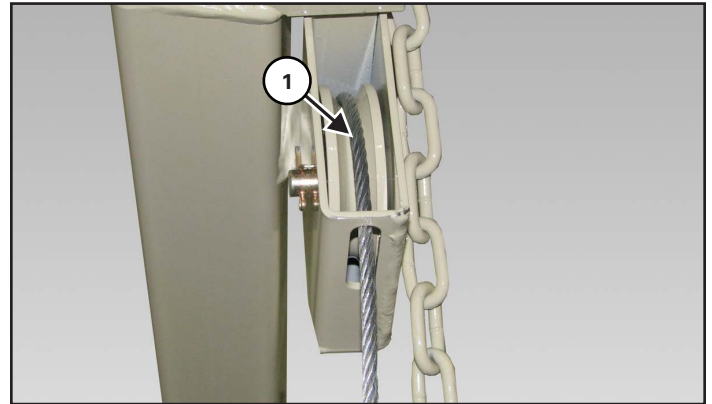


IMPORTANT

Do not over torque the nut against the handle.

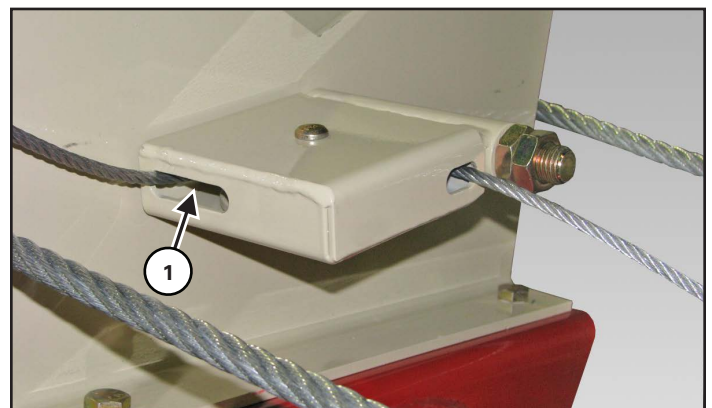
Do not adjust the double lock nuts on the long end of the input shaft.

Figure 177



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 177]**.

Figure 178



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 178]**.

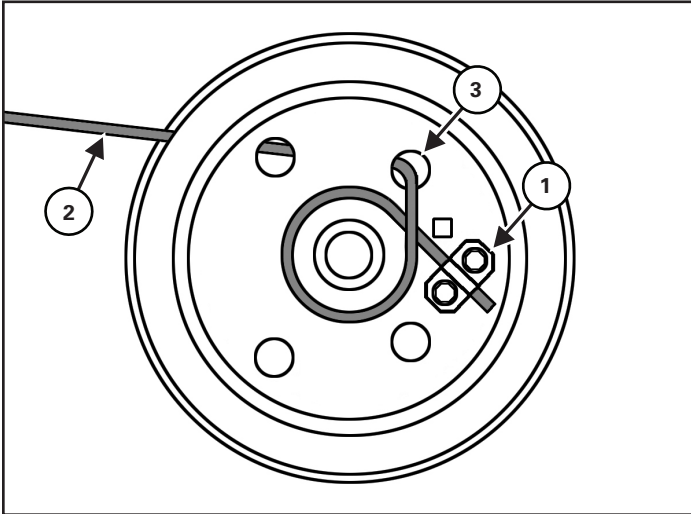
Route the cable to the hand winch.



IMPORTANT

Do not remove the drum to install the cable.

Figure 179



Install the cable clamp (Item 1) using the two bolts provided with winch. Leave bolts loose **[Figure 179]**.

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 179]**.

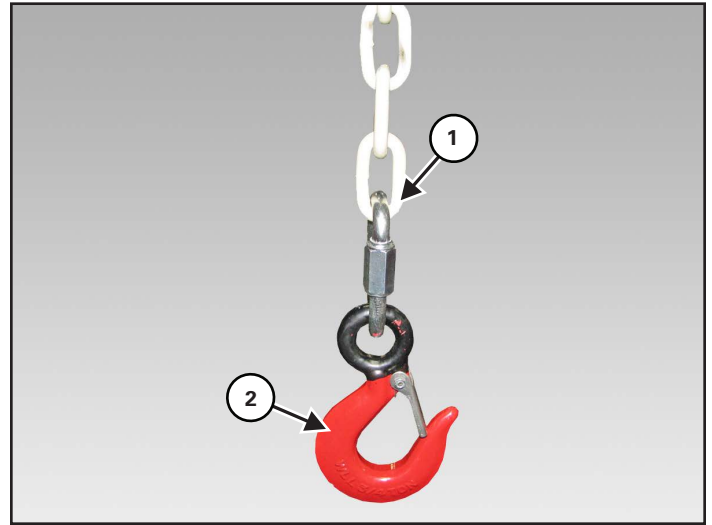
Loop the cable around the drum bearing. Feed the cable between the loop and outer plate, then through the cable clamp.

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 180



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 180]**.

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

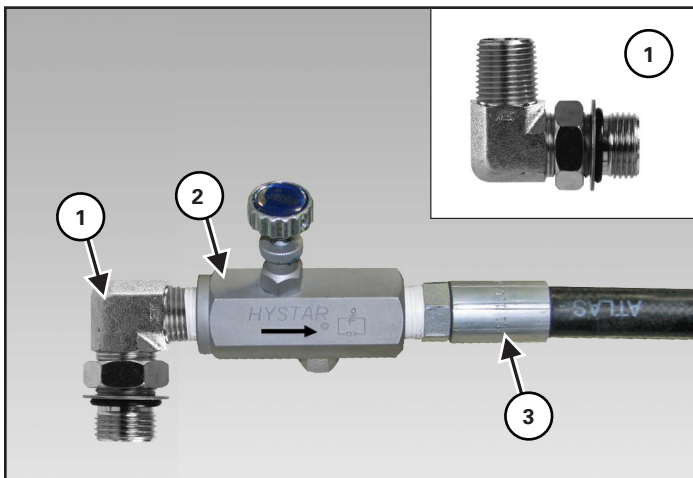
! IMPORTANT

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 181



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 181]

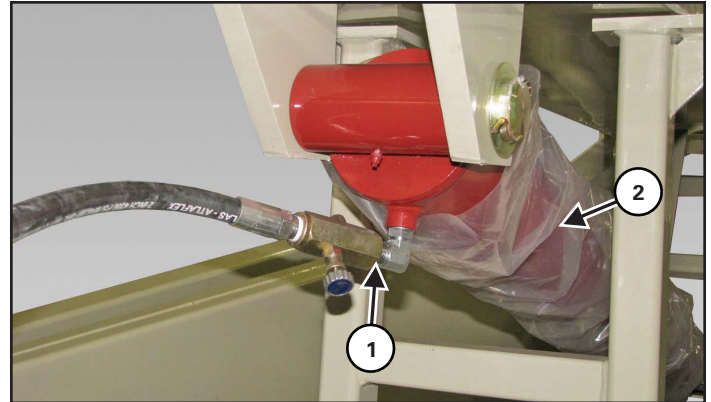
Apply teflon tape to the male threads of each fitting.

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.

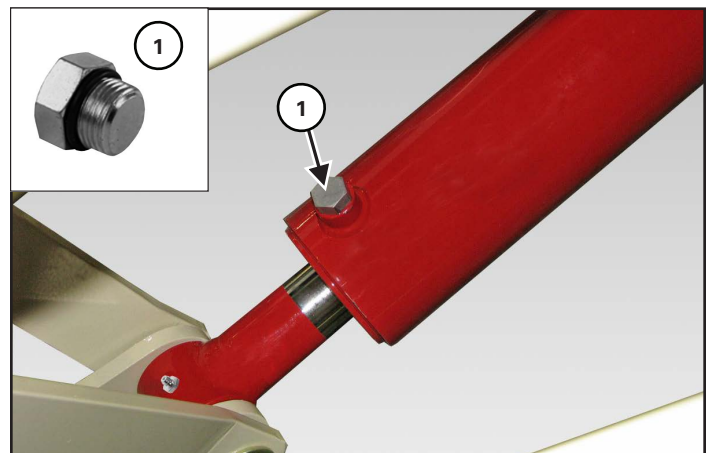
Figure 182



Remove the plastic 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 182].

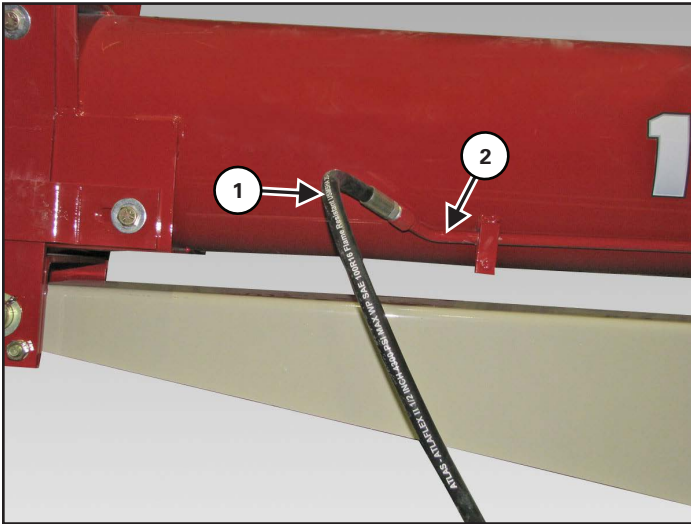
Figure 183



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

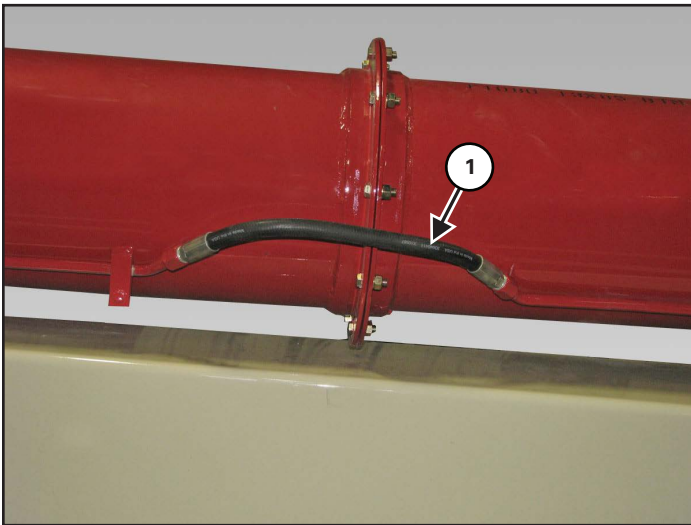
Locate and install the 08 MORB vent plug (Item 1) into the hydraulic cylinder [Figure 183].

Figure 184



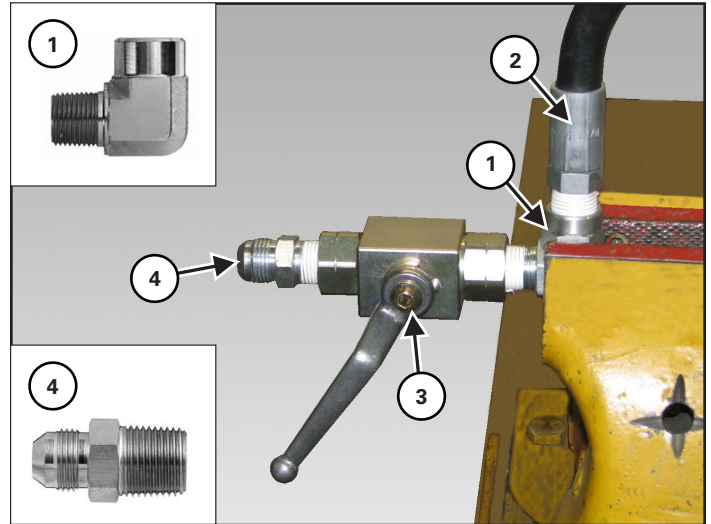
Install and tighten the 08 x 010 MJIC x 08 MNPT hydraulic hose (Item 1) into the tube (Item 2) on the center tube section **[Figure 184]**.

Figure 185



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 185]**.

Figure 186



Locate one 90° elbow (Item 1) and place in a vise **[Figure 186]**.

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 186]**.

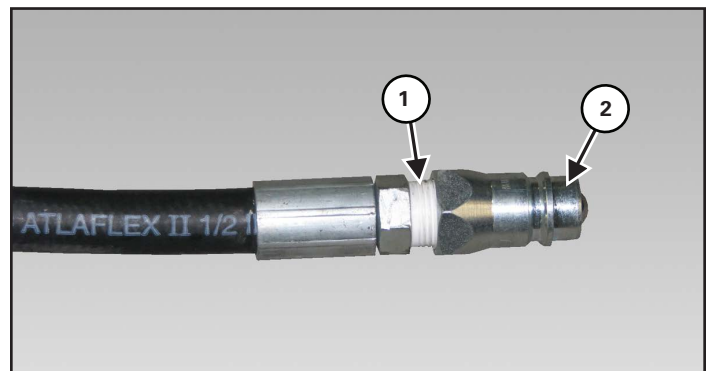
Apply teflon tape to the threads of the 90° elbow.

Locate, install and tighten the 1/2" ball valve (Item 3) onto the 90° elbow **[Figure 186]**.

Locate one adapter fitting (Item 4) **[Figure 186]**.

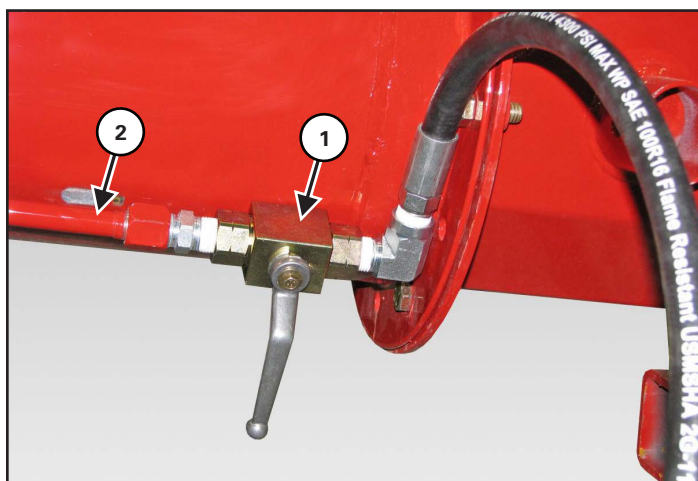
Apply teflon tape to the threads of the adapter fitting, then install and tighten adapter fitting into the 1/2" ball valve (Item 3) **[Figure 186]**.

Figure 187



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 187]**.

Figure 188



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 188].

HYDRAULICS - 13114 MODELS

Hydraulic Cylinder Hose Installation



IMPORTANT

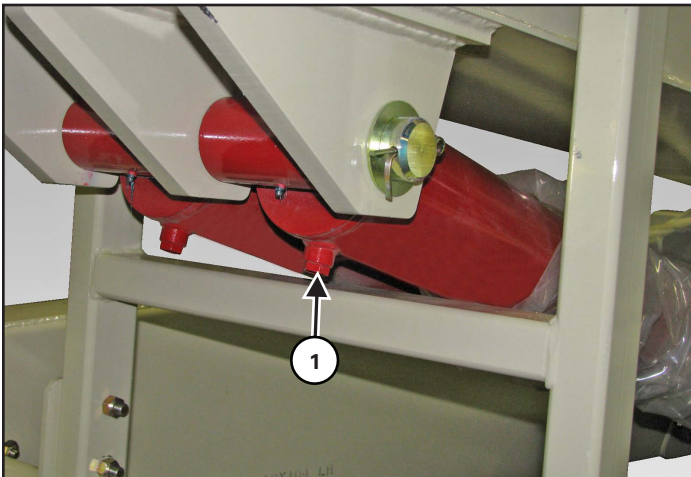
When installing and servicing hydraulic systems, clean the work area before assembly or disassembly and keep all parts clean. Always use caps and plugs on hoses, hydraulic tubes and ports to keep dirt out. Dirt can quickly damage the system.



IMPORTANT

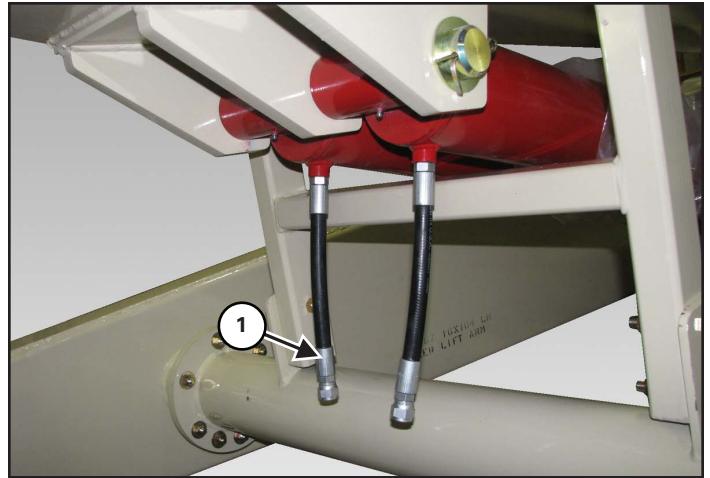
Contain and dispose of any oil leakage in an environmentally safe manner. See local, state and federal regulations for the correct disposal.

Figure 189



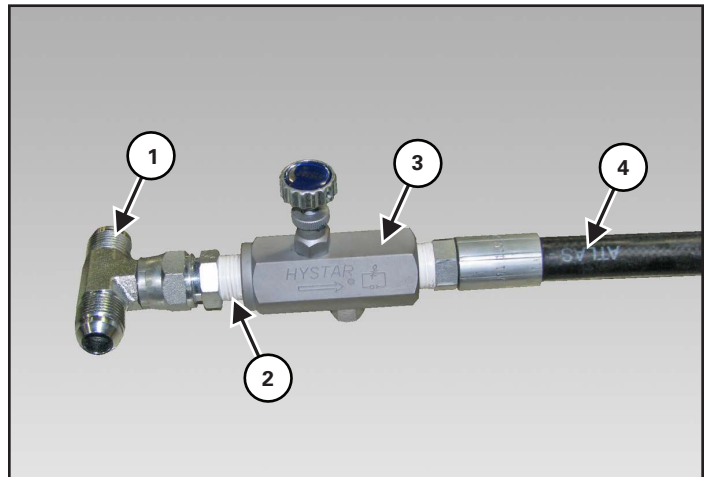
Remove the plugs (Item 1) from the base end of the hydraulic cylinders [Figure 189].

Figure 190



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

Figure 191



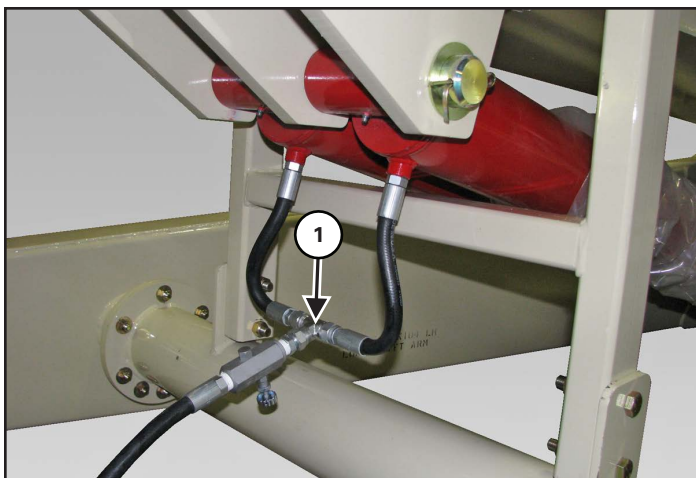
Locate one tee fitting (Item 1), adapter fitting (Item 2), flow control valve (Item 3) and hydraulic hose (Item 4). Apply teflon tape to the threads of the adapter fitting and hydraulic hose fitting [Figure 191].

Install and tighten the hose into the flow control valve.

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

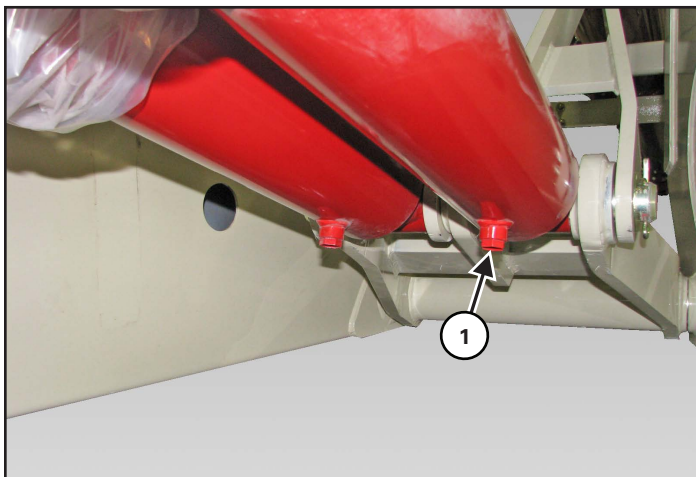
Install and tighten the tee fitting onto the adapter fitting.

Figure 192



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

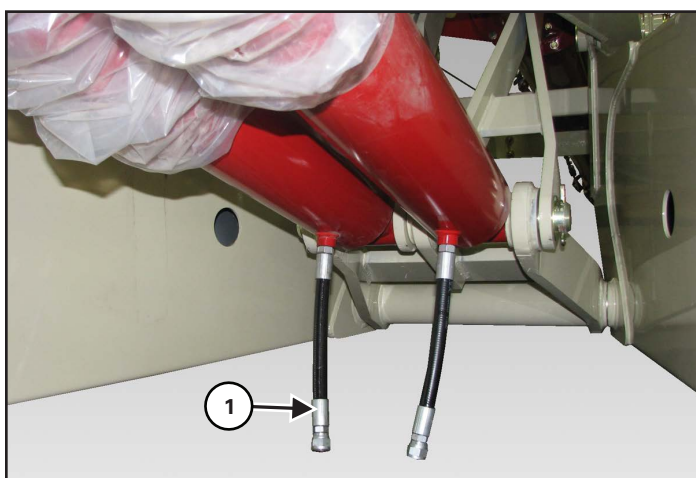
Figure 193



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

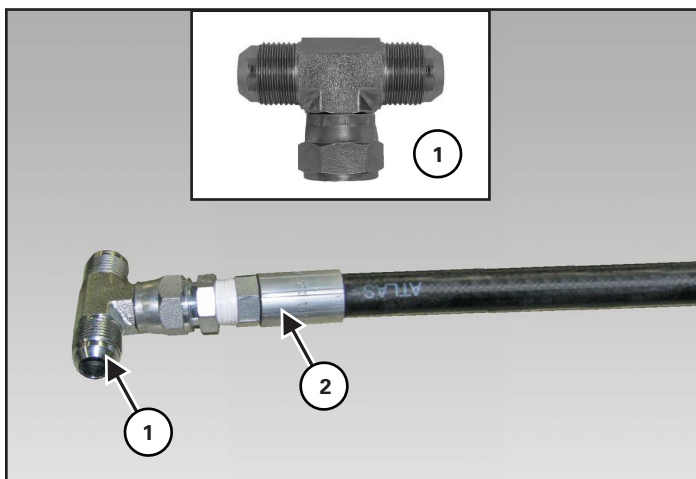
Remove the two plugs (Item 1) from the rod end of the hydraulic cylinders [Figure 193].

Figure 194



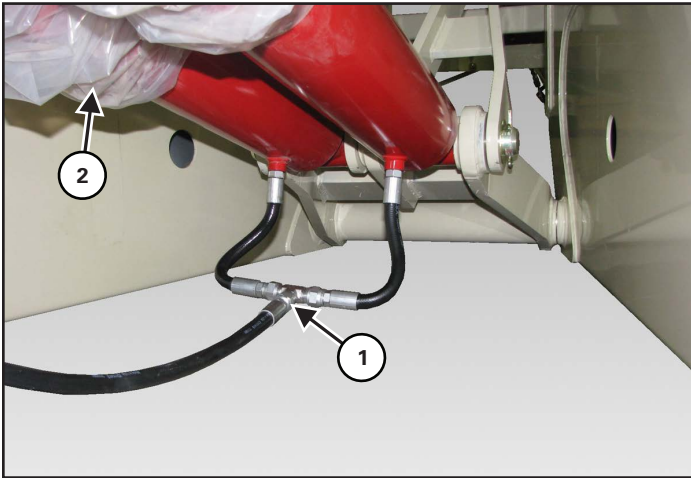
Locate and install the two hydraulic hoses (Item 1) on the rod end of the cylinders [Figure 194].

Figure 195



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 195].

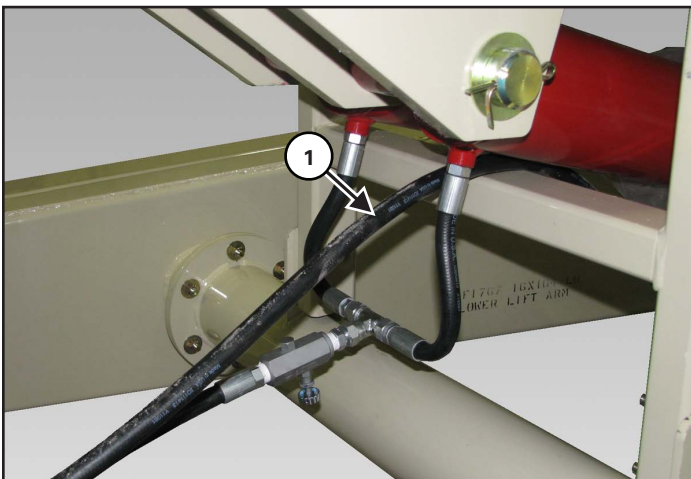
Figure 196



Install and tighten the two hoses from the rod ends of the cylinders onto the tee fitting (Item 1) **[Figure 196]**.

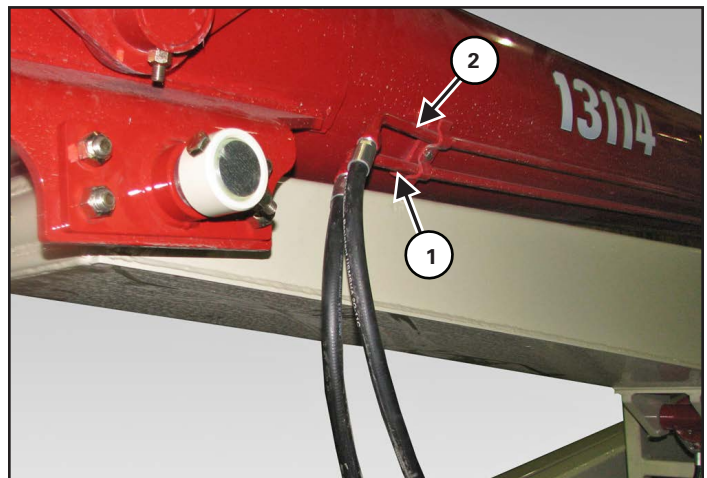
Remove the protective plastic (Item 2) from the hydraulic cylinders **[Figure 196]**.

Figure 197



Route the hydraulic hose (Item 1) over the top of one of the cylinders **[Figure 197]**.

Figure 198

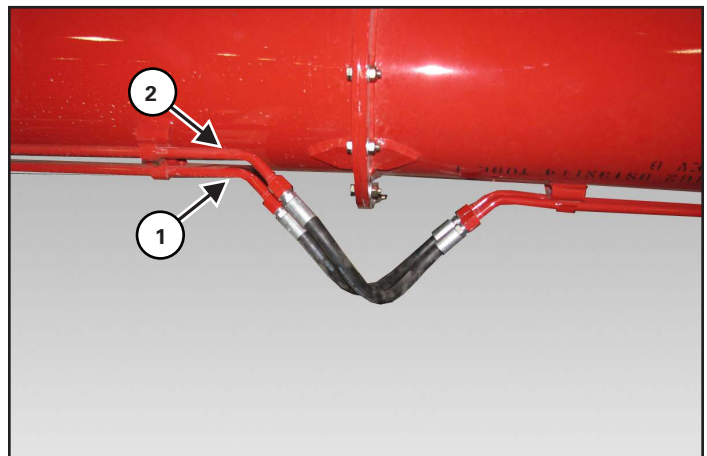


Route the rod end and base end hydraulic hoses up to the hydraulic tubes on the #2 tube (on the right side, just in front of the upper lift arm pin).

Install and tighten the base end hydraulic hose to the bottom hydraulic tube (Item 1) **[Figure 198]**.

Install and tighten the rod end hydraulic hose to the top hydraulic tube (Item 2) **[Figure 198]**.

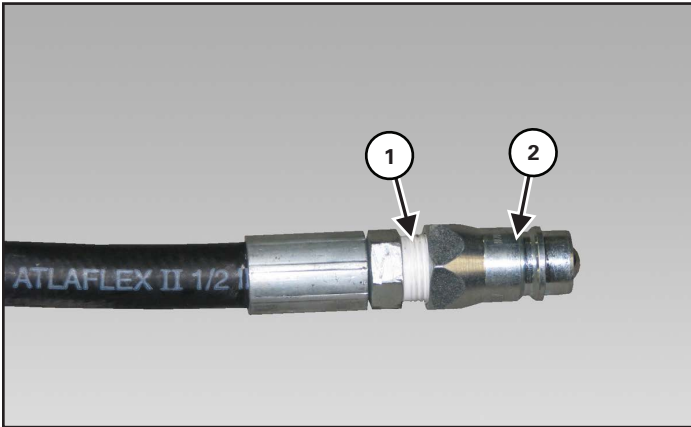
Figure 199



Install one hydraulic hose to connect the two bottom tubes (Item 1) **[Figure 199]**.

Install one hydraulic hose to connect the two top tubes (Item 2) **[Figure 199]**.

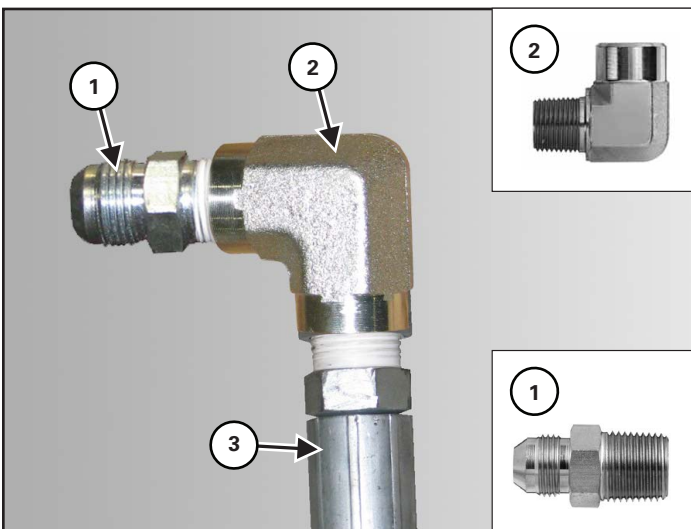
Figure 200



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 200]**.

Repeat for second quick coupler hose.

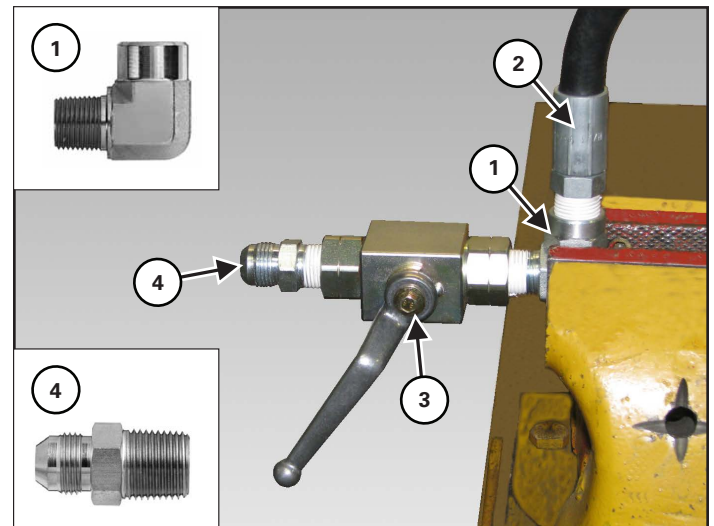
Figure 201



Locate one adapter fitting (Item 1) and 90° elbow fitting (Item 2) **[Figure 201]**.

Install one hydraulic quick coupler hose assembly (Item 3) into the 90° elbow **[Figure 201]**.

Figure 202



Locate one 90° elbow (Item 1) and place in a vise **[Figure 202]**.

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 202]**.

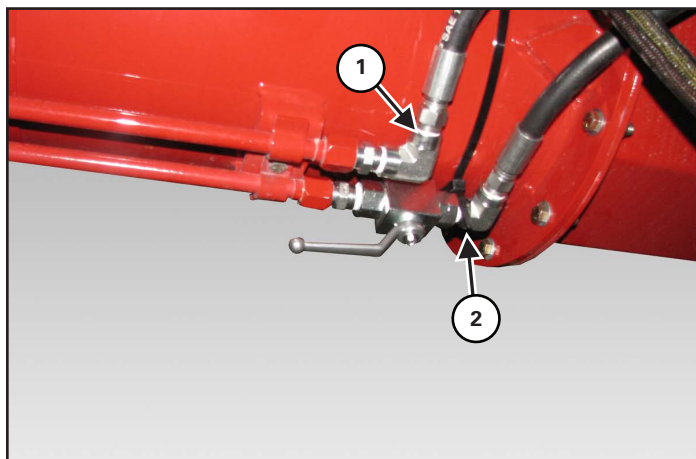
Apply teflon tape to the threads of the 90° elbow.

Locate, install and tighten the 1/2" ball valve (Item 3) onto the 90° elbow **[Figure 202]**.

Locate one adapter fitting (Item 4) **[Figure 202]**.

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 202]**.

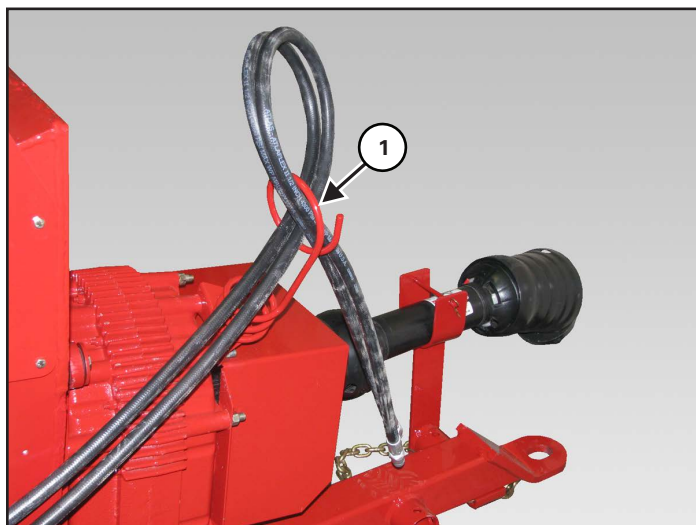
Figure 203



Install hose assembly (Item 1) onto the right side hydraulic tube **[Figure 203]**.

Install hose / valve assembly (Item 2) onto the left side hydraulic tube **[Figure 203]**.

Figure 204

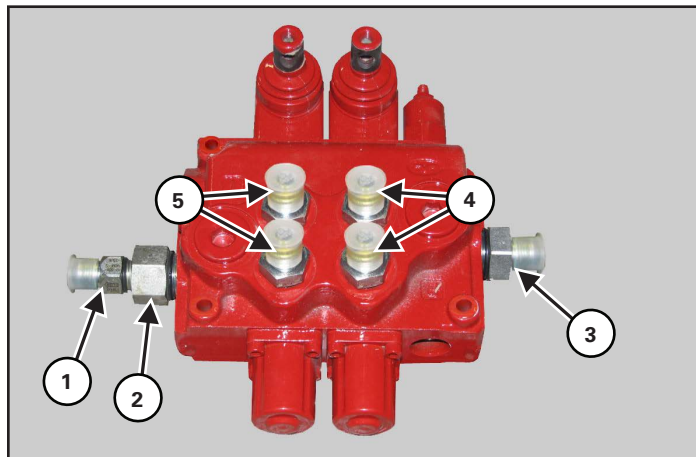


Route the quick coupler hoses along the input box and install into the storage bracket (Item 1) **[Figure 204]**.

HYDRAULIC HOPPER MOVER AND WINCH

Hydraulic Control Valve Installation

Figure 205



Install fitting (Item 1) into the valve block. Install fitting (Item 2) **[Figure 205]**.

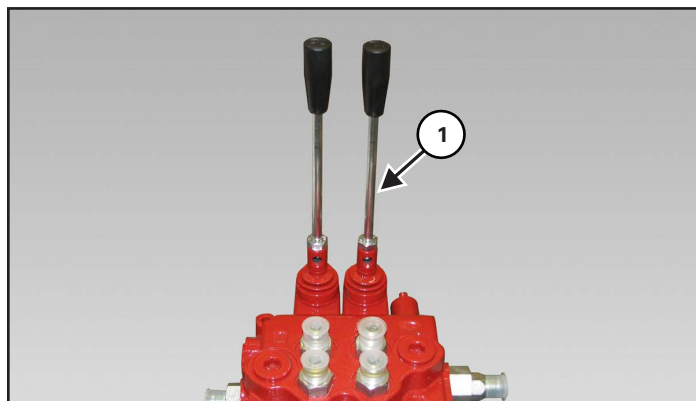
Install fitting (Item 3) into the valve block **[Figure 205]**.

Install the two restrictor fittings (Item 4) into the valve block **[Figure 205]**.

Install the two fittings (Item 5) into the valve block **[Figure 205]**.

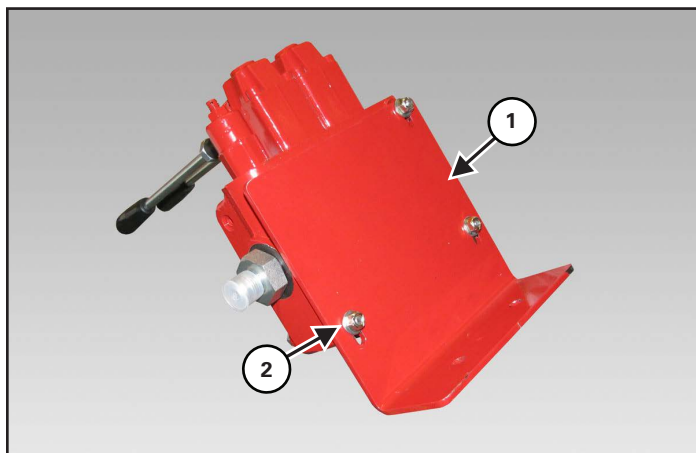
Tighten all fittings.

Figure 206



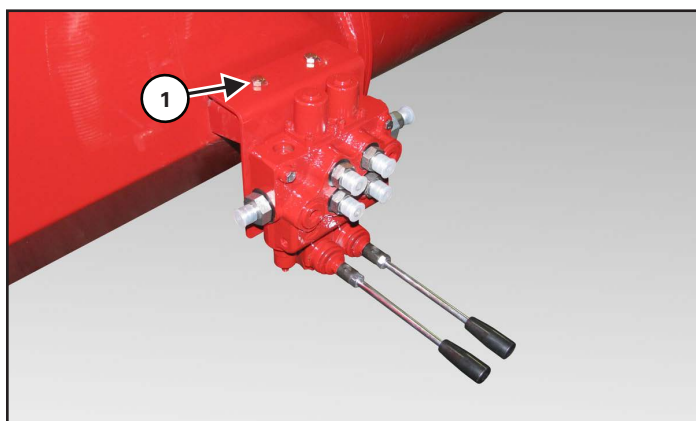
Install the two levers (Item 1) into the valve block **[Figure 206]**.

Figure 207



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 207].

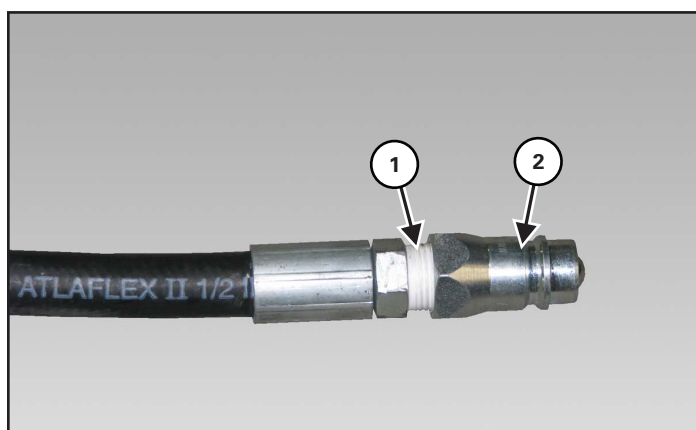
Figure 208



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 208].

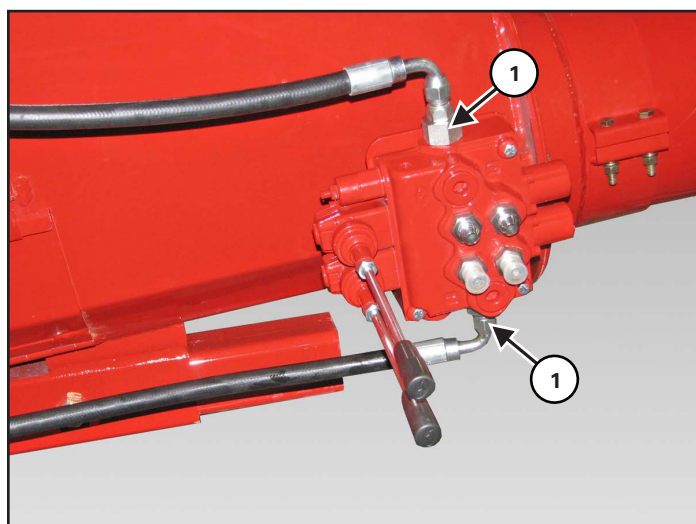
Figure 209



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 209].

Repeat for second quick coupler hose.

Figure 210



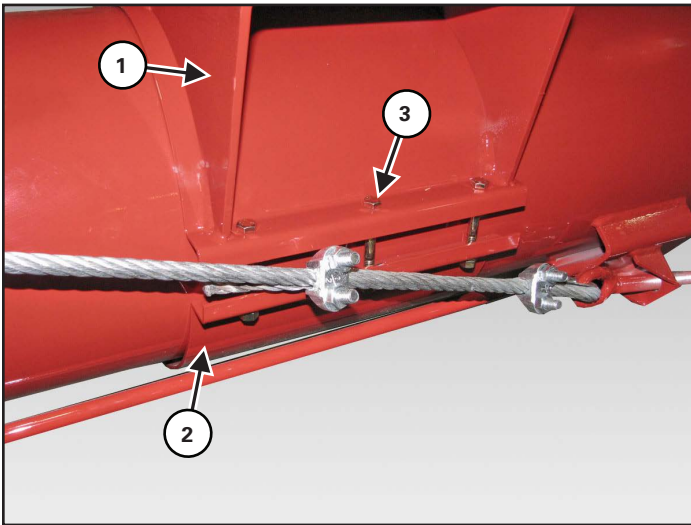
Install the quick coupler hoses (Item 1) onto the control valve [Figure 210].

Hydraulic Winch Installation

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

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

Figure 211



Position the upper winch mount (Item 1) on top of the bottom tube (approximately 32" from the lift arm boom) [Figure 211].

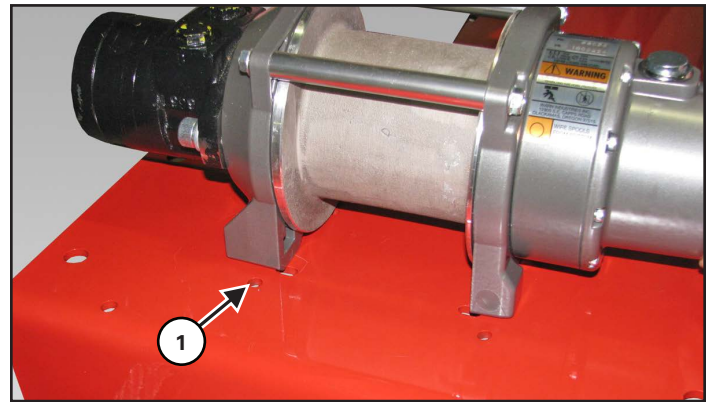
NOTE: Loosen the hydraulic tube clamps to allow the lower winch mount to be installed.

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 211].

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

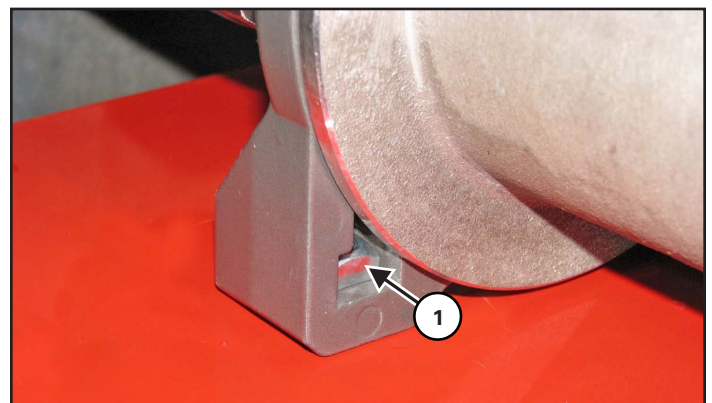
Tighten bolts and lock nuts until the two mounts are securely fastened around the bottom tube.

Figure 212



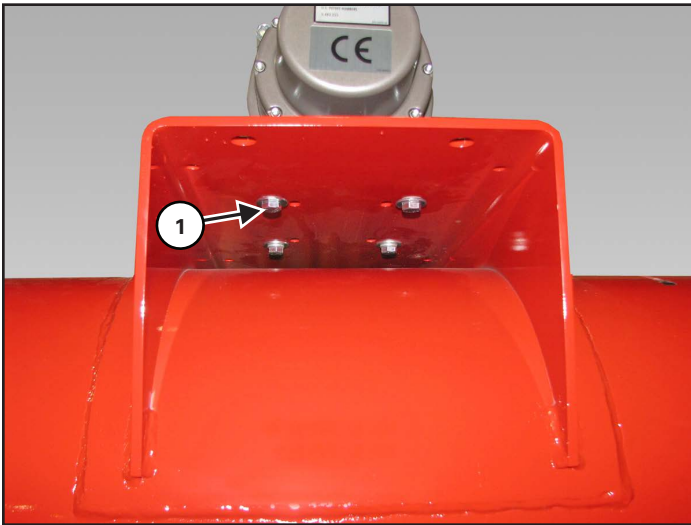
Align the winch with four holes (Item 1) in the winch mounting plate on the top of the bottom tube [Figure 212].

Figure 213



Install one square head nut (Item 1) into each foot of the winch (hardware supplied with winch) [Figure 213].

Figure 214



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 214].

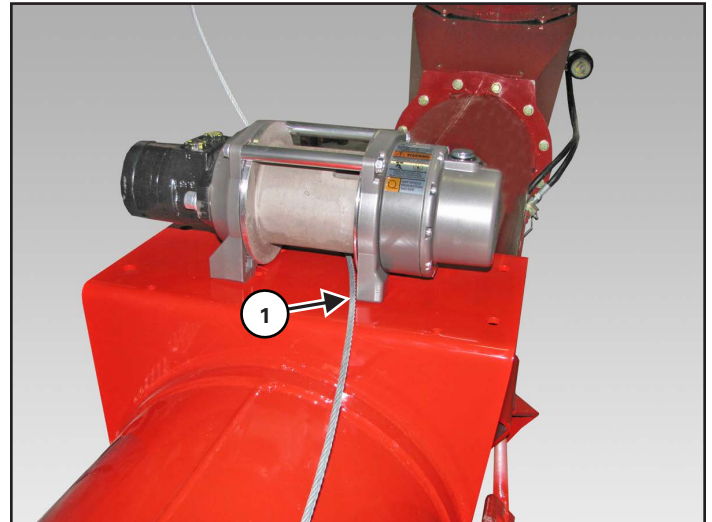


CUT HAZARD

To prevent injury to fingers and hands:

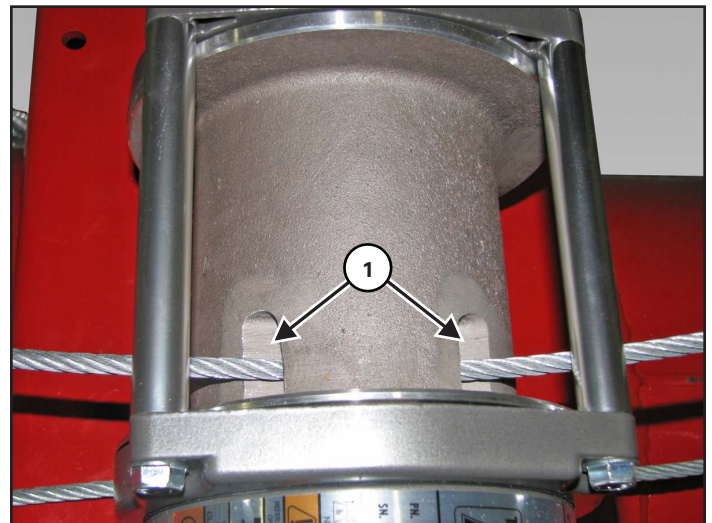
- Always wear heavy leather gloves when handling a wire rope.
- Never let wire rope slip through your hands.

Figure 215



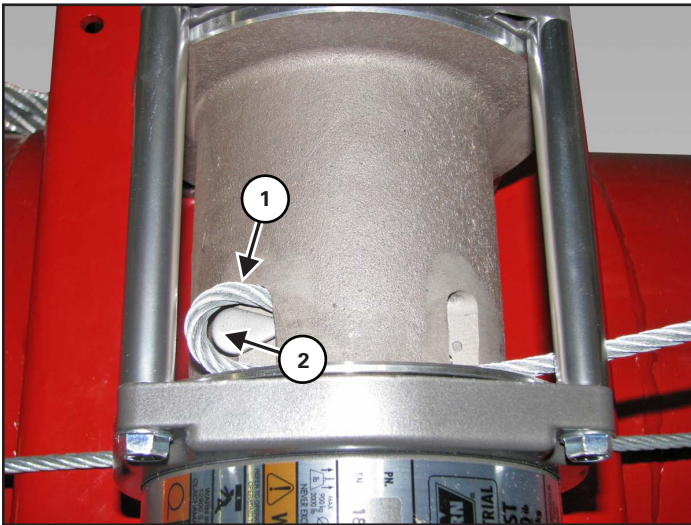
Route the winch cable (Item 1) through the end pulley of the lift boom, down through the bottom pulley of the lift boom, across the top of the bottom tube and between the winch and winch mounting plate [Figure 215].

Figure 216



With the winch cable routed under the winch, feed the cable back through the two slots (Item 1) of the winch [Figure 216].

Figure 217



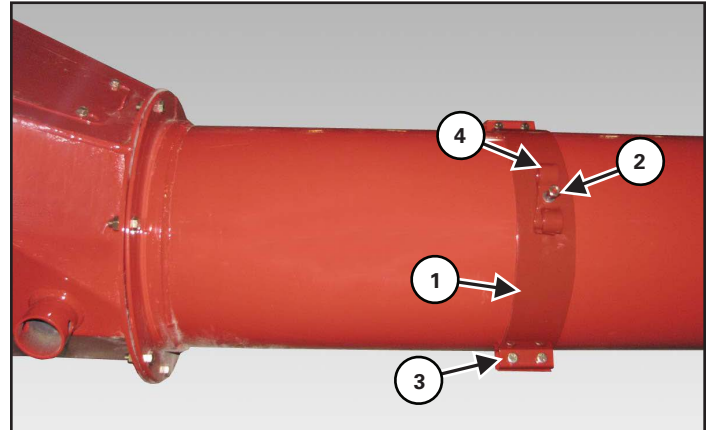
Loop the tail end (Item 1) of the cable and feed back into the slot, install the wedge (Item 2) inside the loop [Figure 217].

Figure 218



Pull back on the cable (Item 1) until the loop and wedge are inside the slot [Figure 218].

Figure 219



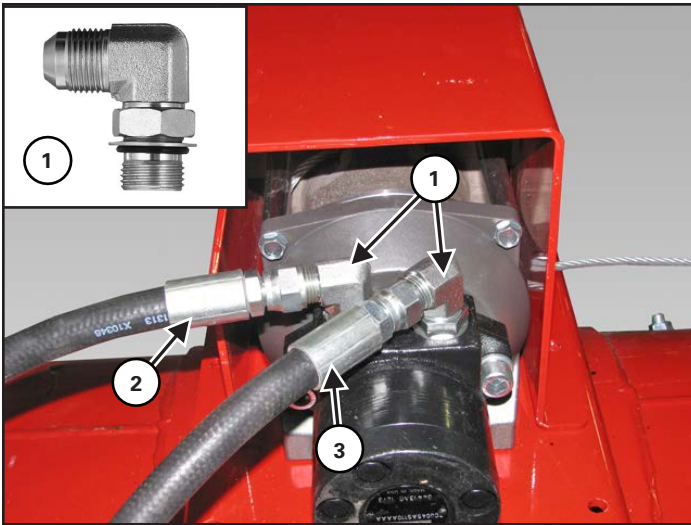
Position one bracket half (Item 1) on the tube, approximately 36" from the input box. Position the bolt (Item 2) angled away from the top center of the tube [Figure 219].

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 219].

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 half bolts (Item 2). Attach each clamp using one 3/8" lock nut [Figure 219].

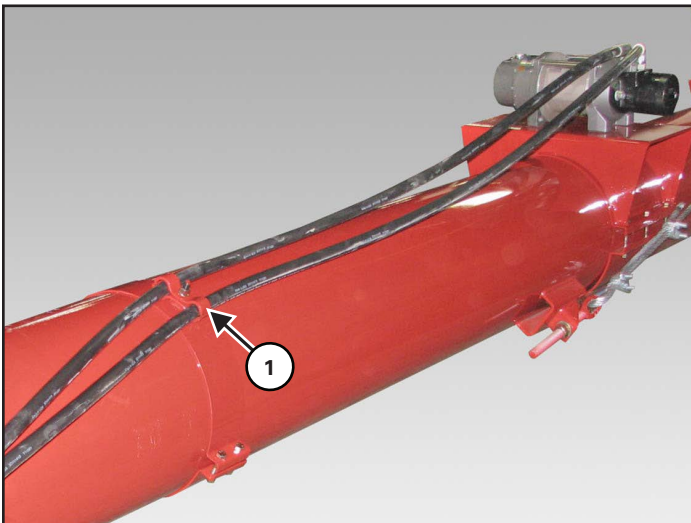
Figure 220



Install and tighten two 90° elbow fittings (Item 1) into the winch [Figure 220].

Install and tighten the hydraulic hoses (Items 2 & 3) onto the 90° elbow fittings [Figure 220].

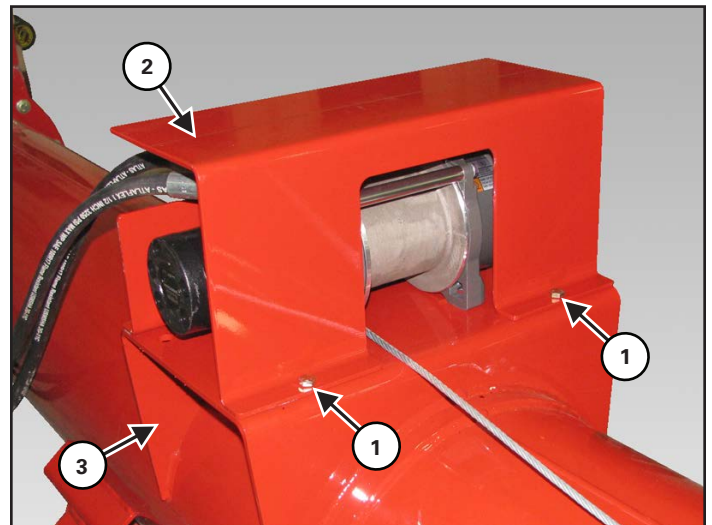
Figure 221



Route the two winch hydraulic hoses along the bottom tube and towards the input box / control valve [Figure 221].

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 221].

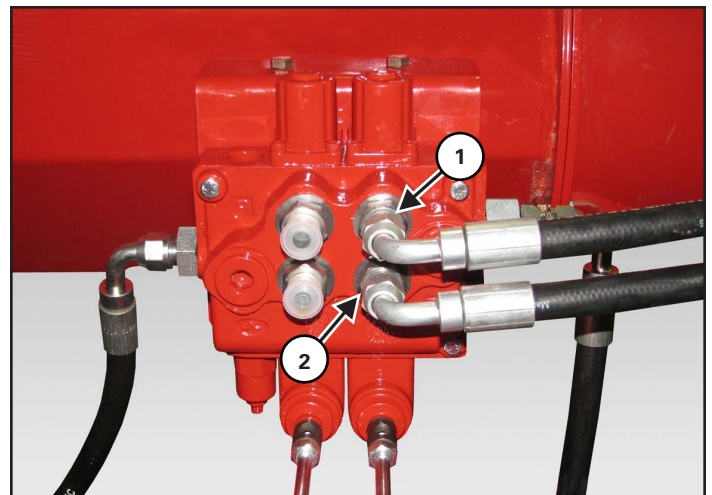
Figure 222



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 222].

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

Figure 223



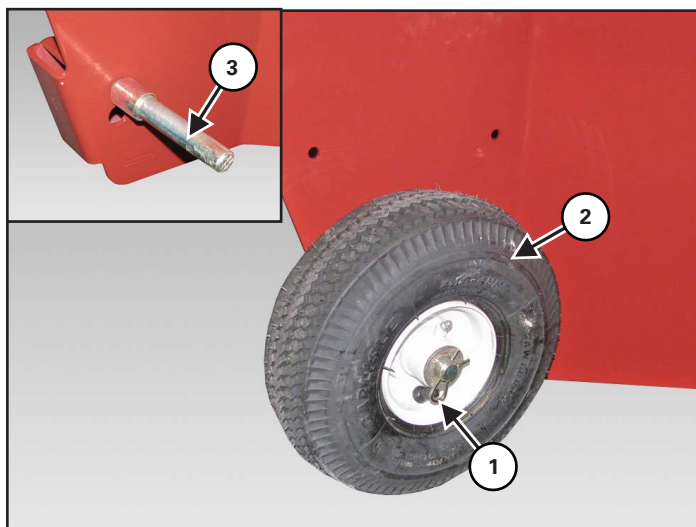
Install and tighten the inside winch hydraulic hose (Item 1) onto the bottom right fitting on the valve block [Figure 223].

Install and tighten the outside winch hydraulic hose onto the bottom left fitting (Item 2) on the valve block [Figure 223].

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

Hydraulic Wheel Motor And Wheel Installation

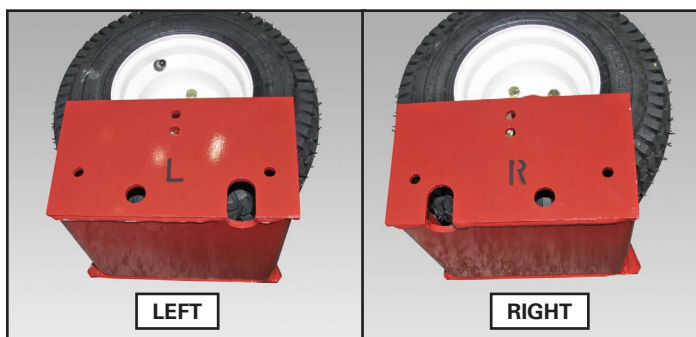
Figure 224



Remove the retaining clip (Item 1), washer and tire (Item 2) (intake auger end of the hopper). Remove the shaft (Item 3) [Figure 224].

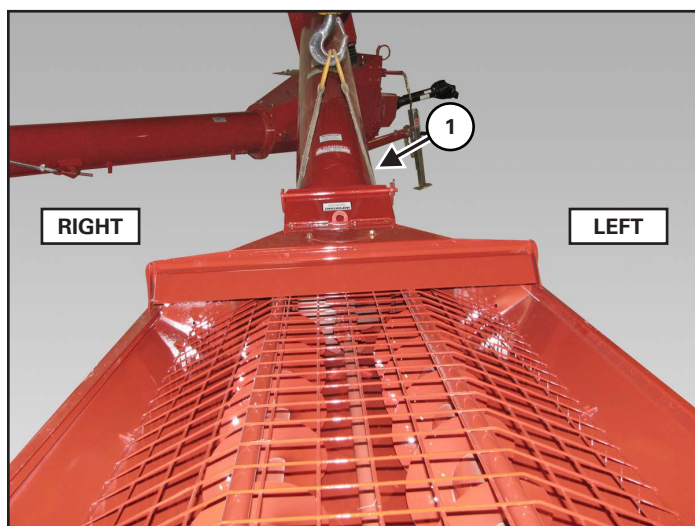
Repeat to remove opposite wheel and shaft.

Figure 225



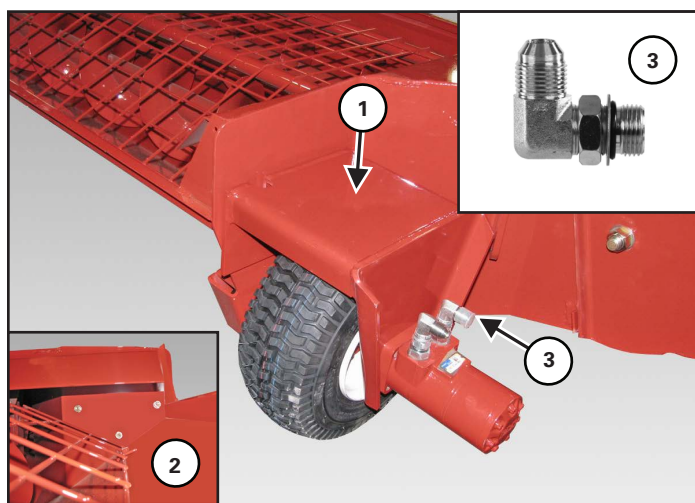
Locate the left hand (L) & right hand (R) hydraulic motor / wheel assemblies [Figure 225].

Figure 226



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 226].

Figure 227

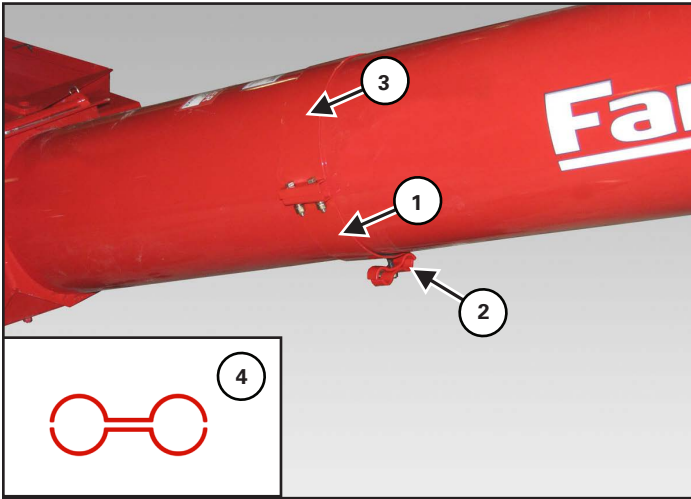


Install the left hand (L) hydraulic motor / wheel assembly (Item 1) onto the hopper using three 3/8" x 1" bolts and 3/8" lock nuts (Item 2). Tighten bolts and nuts [Figure 227].

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 227].

Figure 228



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 228]**.

NOTE: Do not cover decals.

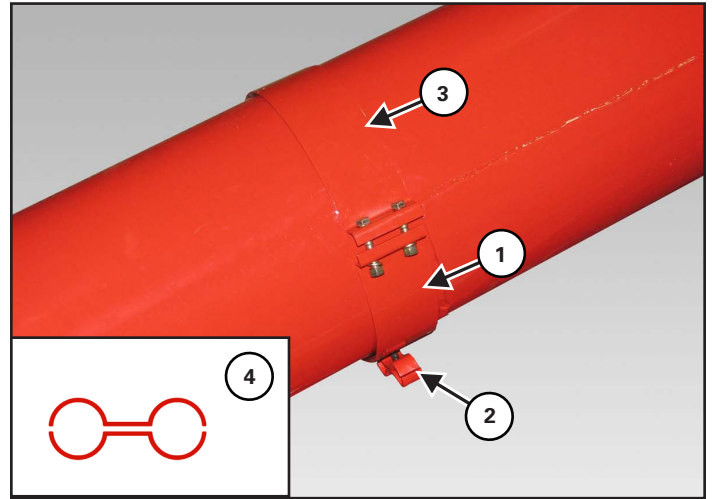
Align another half clamp (Item 3) and attach using four 3/8" x 1-1/2" bolts and four 3/8" lock nuts **[Figure 228]**.

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 228]**.

Do not tighten at this time.

Figure 229



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 229]**.

NOTE: Do not cover decals.

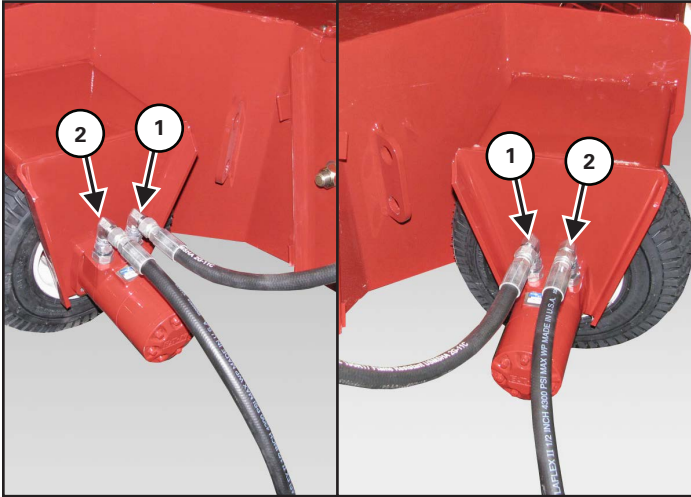
Align another half clamp (Item 3) and attach using four 3/8" x 1-1/2" bolts and four 3/8" lock nuts **[Figure 229]**.

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 229]**.

Do not tighten at this time.

Figure 230



Locate one 60" hydraulic hose (Item 1) and two 84" hydraulic hoses (Item 2) [Figure 230].

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 230].

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

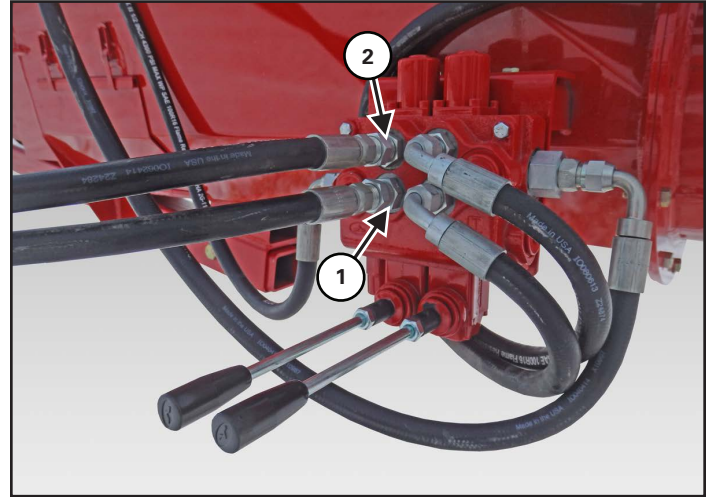
Figure 231



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 231].

Figure 232



Install the left wheel motor hydraulic hose (Item 1) onto the upper left fitting on the valve block [Figure 232].

Install the right wheel motor hydraulic hose (Item 2) onto the upper right fitting on the valve block [Figure 232].

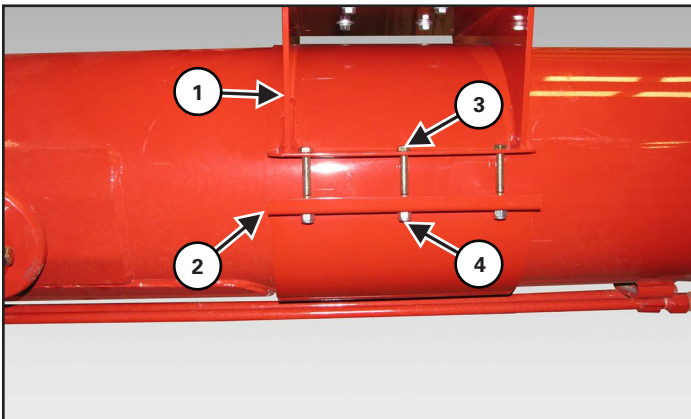
ELECTRIC MOVER AND WINCH

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 233



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 233].

Position the upper winch mount (Item 1) on top of the bottom tube (approximately 32" from the lift arm boom) [Figure 233].

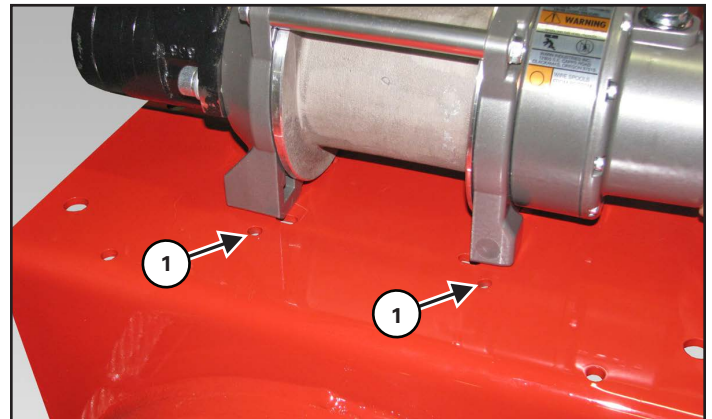
NOTE: Loosen the hydraulic tube clamps to allow the lower winch mount to be installed.

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 233].

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

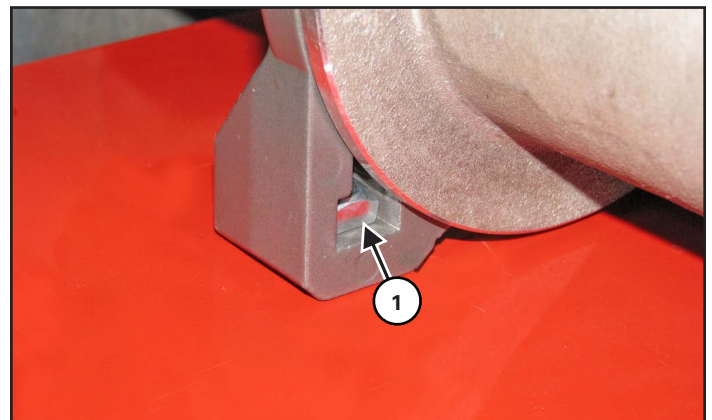
Tighten bolts and lock nuts until the two mounts are securely fastened around the bottom tube.

Figure 234



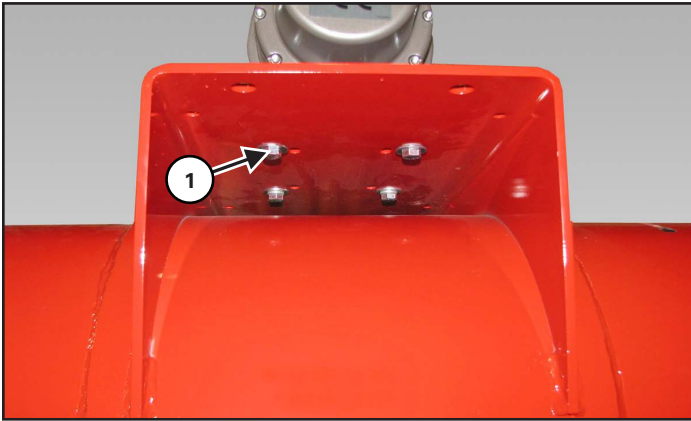
Align the winch with four holes (Item 1) in the winch mounting plate on the top of the bottom tube [Figure 234].

Figure 235



Install one square head nut (Item 1) into each foot of the winch (hardware supplied with winch) [Figure 235].

Figure 236



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 236].

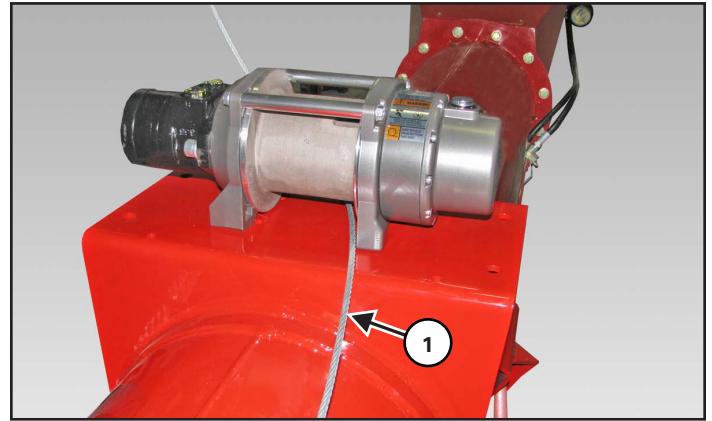


CUT HAZARD

To prevent injury to fingers and hands:

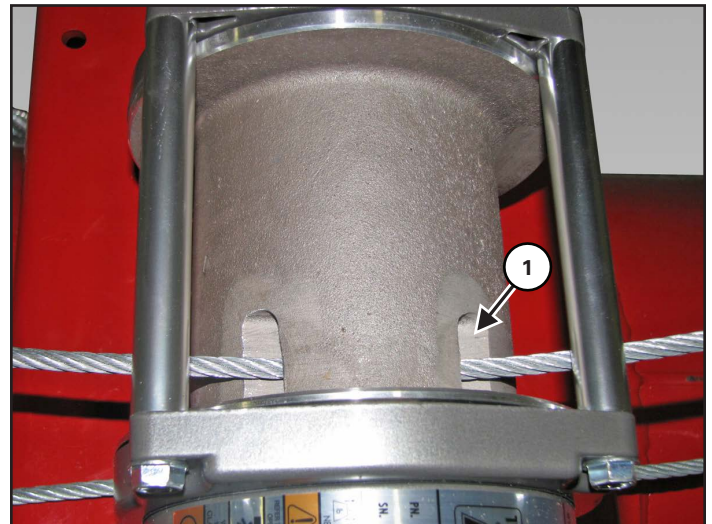
- Always wear heavy leather gloves when handling a wire rope.
- Never let wire rope slip through your hands.

Figure 237



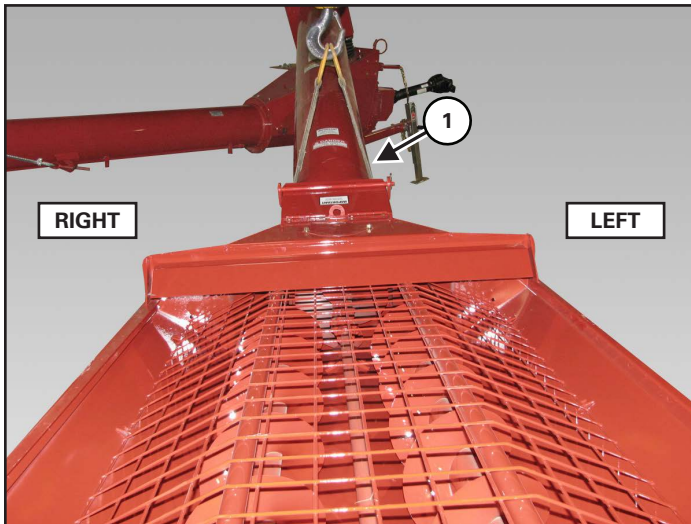
Route the winch cable (Item 1) through the end pulley of the lift boom, down through the bottom pulley of the lift boom, across the top of the bottom tube and between the winch and winch mounting plate [Figure 237].

Figure 238



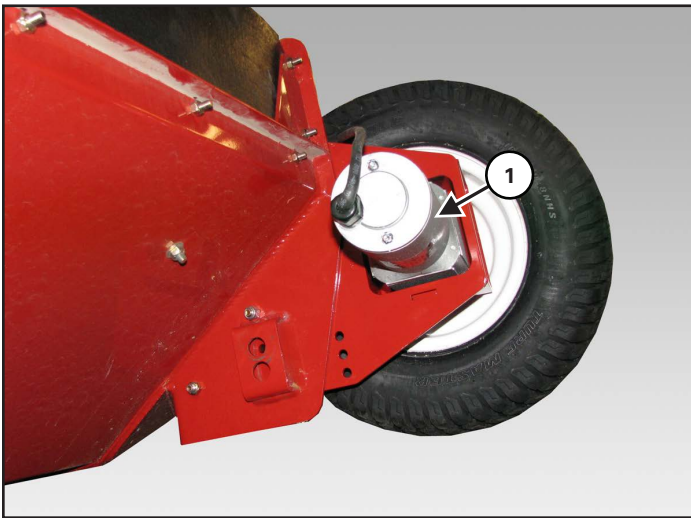
With the winch cable routed under the winch, feed the cable back through the two slots (Item 1) of the winch [Figure 238].

Figure 239



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 239].

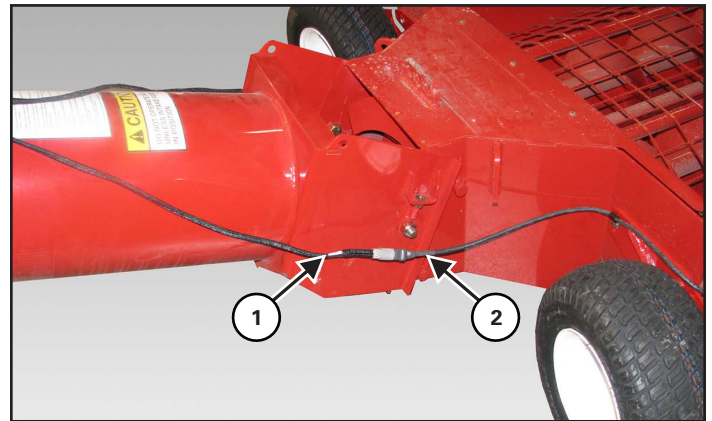
Figure 240



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 240].

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

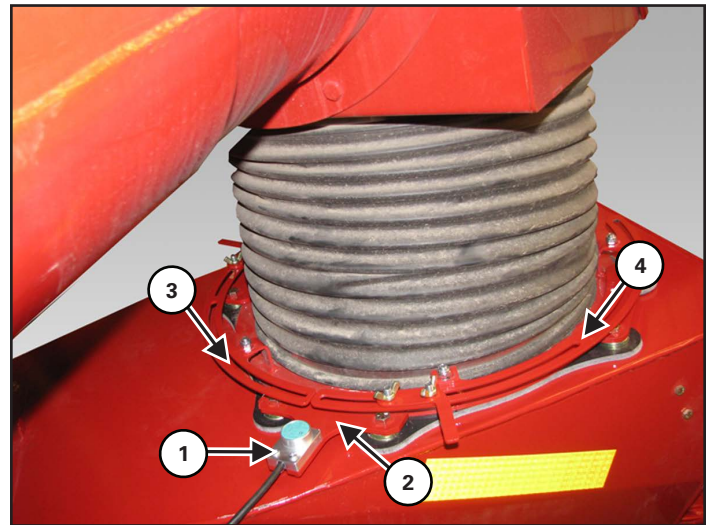
Figure 241



Install wiring harness connector (Item 1) to right hand (R) electric motor wheel harness connector (Item 2) as shown [Figure 241].

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

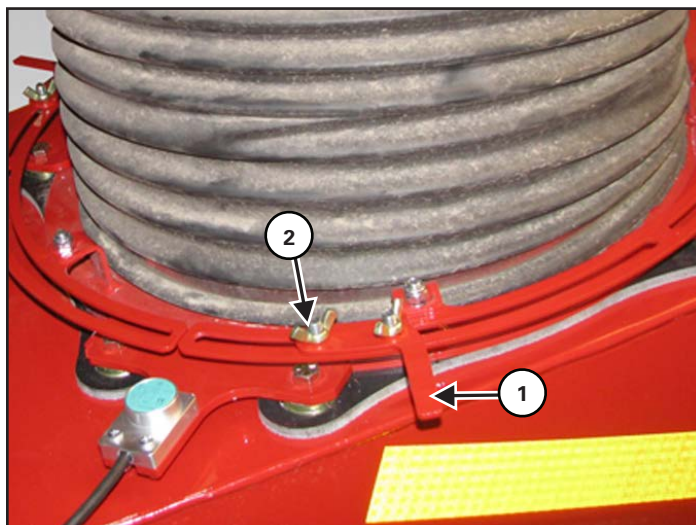
Figure 242



Install proximity sensor (Item 1) onto the ring clamp (Item 2) [Figure 242].

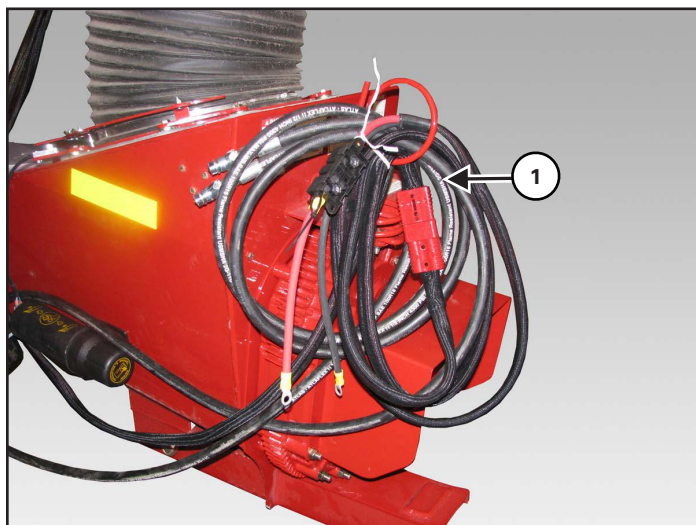
Align the proximity rails (Items 3 & 4) with the tabs and install four bolts and lock nuts [Figure 242].

Figure 243



Install the two proximity indicators (Item 1) with the four bolts and wing nuts (Item 2) [Figure 243].

Figure 244



Route the electrical harnesses (Item 1) from the control box along the input box and install into the storage bracket. Secure all harnesses [Figure 244].

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.



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.



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.

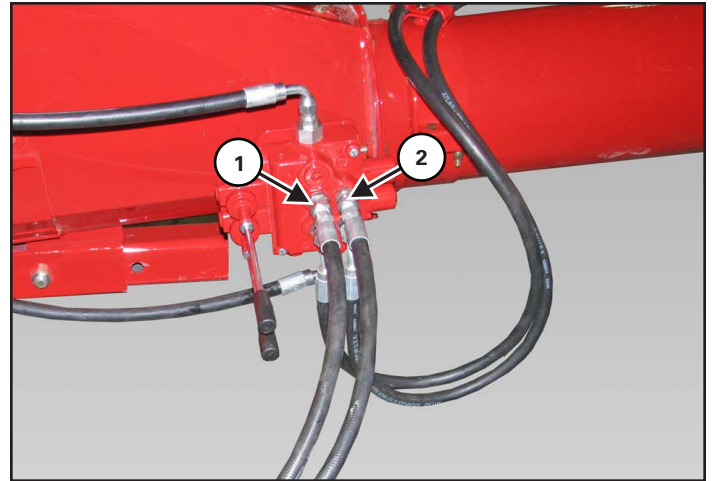
Lower the hopper to the ground.

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 245



Disconnect the left and right wheel motor hydraulic hoses (Items 1 & 2) from the valve block [Figure 245].

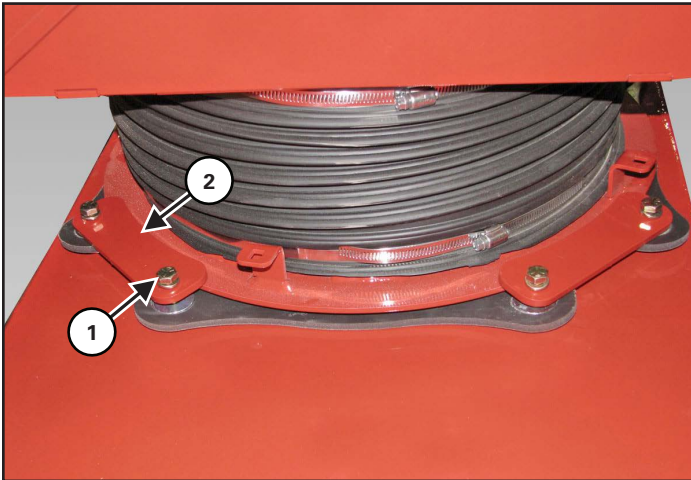
Figure 246



Install a strap (Item 1) around the top of the intake auger [Figure 246].

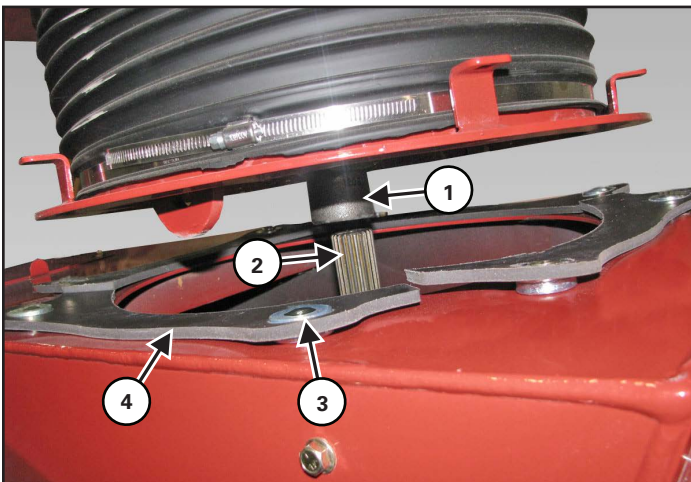
Connect the strap to an approved lifting device.

Figure 247



Remove the two bolts (Item 1) and ring clamp (Item 2). Repeat to remove the three remaining ring clamps [Figure 247].

Figure 248



Raise the lifting device to remove the intake auger u-joint (Item 1) from the upper box shaft (Item 2) [Figure 248].

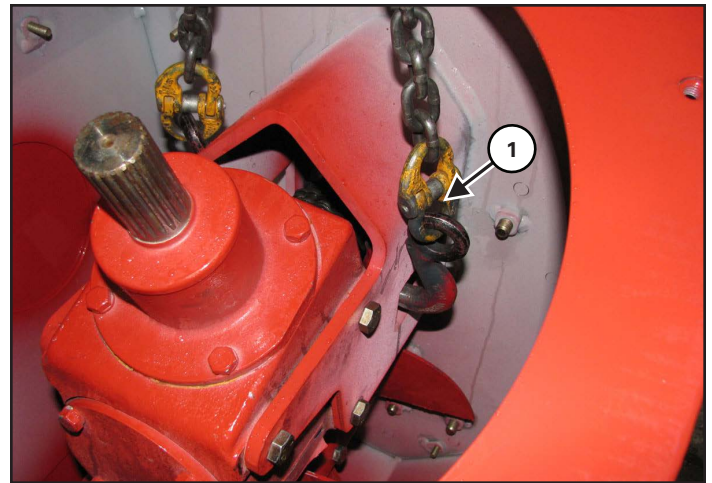
Remove the 1/4" x 13/32" ID x 1-1/4" OD washers (Item 3) and intake spacers (Item 4) [Figure 248].

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 249



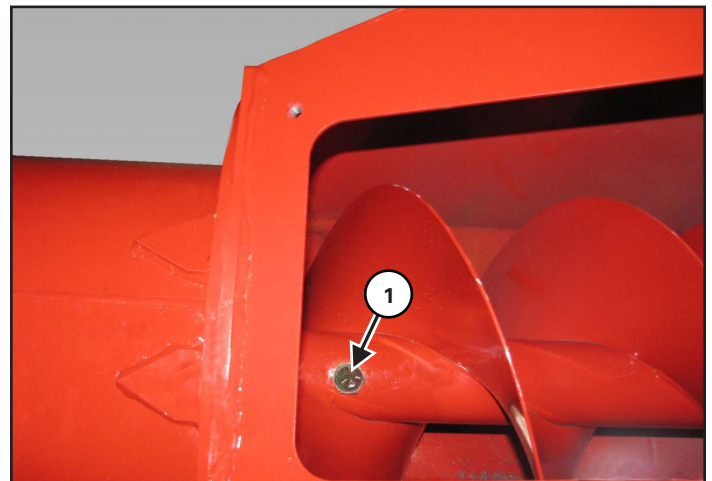
Install chains (Item 1) inside the input box [Figure 249].

Connect the chain to an approved lifting device.

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

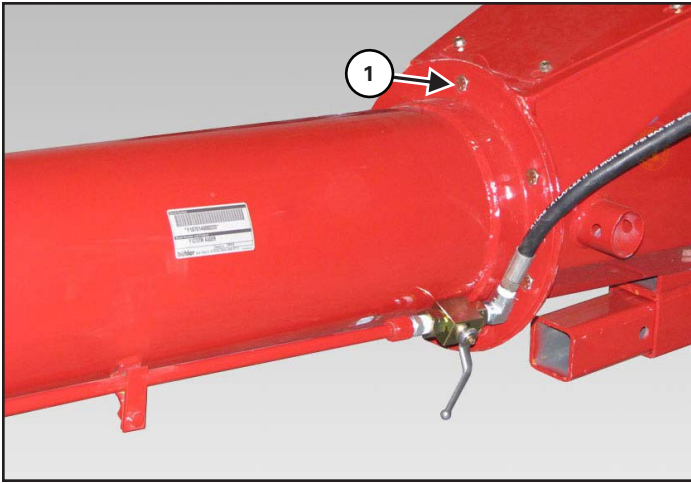
Lower input box until the tube is resting on the support stand.

Figure 250



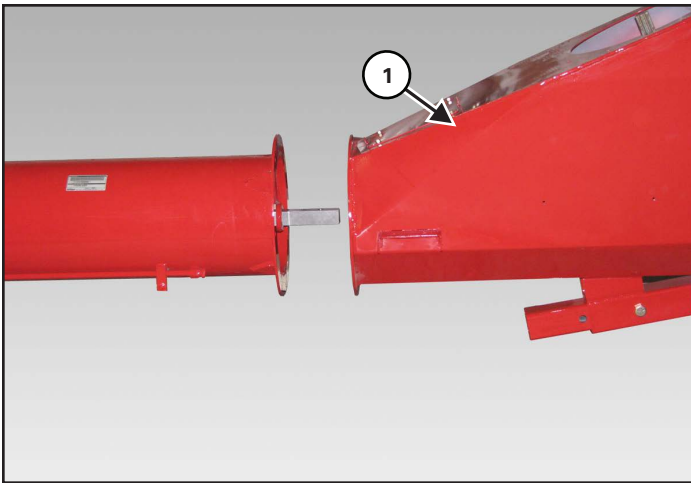
Remove the 1/2" x 3-1/4" bolt (Item 1) and lock nut from the bottom tube flighting and input box [Figure 250].

Figure 251



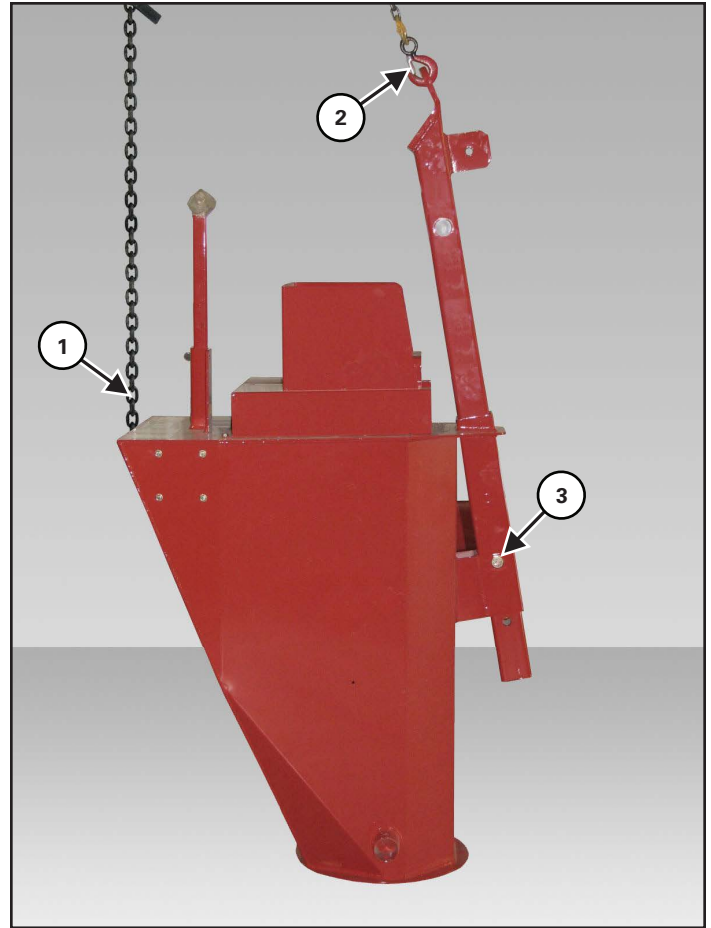
Remove the eight 7/16" x 1-1/4 bolts (Item 1) and 7/16" lock nuts around the mounting flanges of the bottom tube and input box [Figure 251].

Figure 252



Move the input box (Item 1) away from the tube assembly [Figure 252].

Figure 253



Lower the input box to the ground with the tube mounting flange flat on the ground [Figure 253].



IMPORTANT

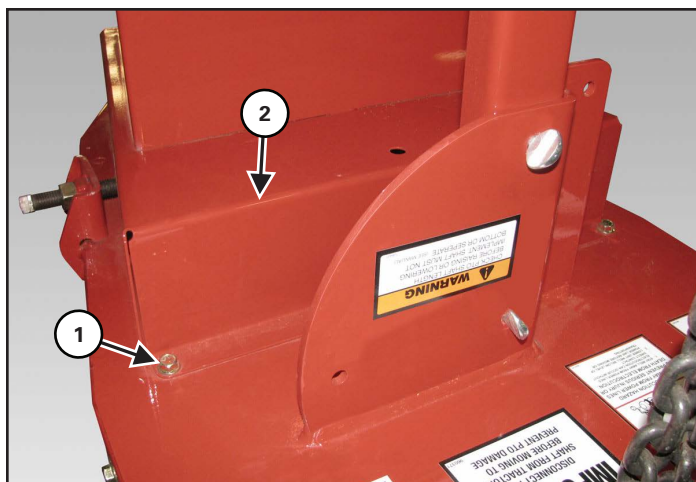
Do not remove chain (Item 1) used to remove the input box from the tube assembly. This chain will help support the input box during 1000 RPM retro kit installation [Figure 253].

Install a second chain (Item 2) onto the hitch and connect second chain to an approved lifting device [Figure 253].

Remove the bolt (Item 3) and lock nut [Figure 253].

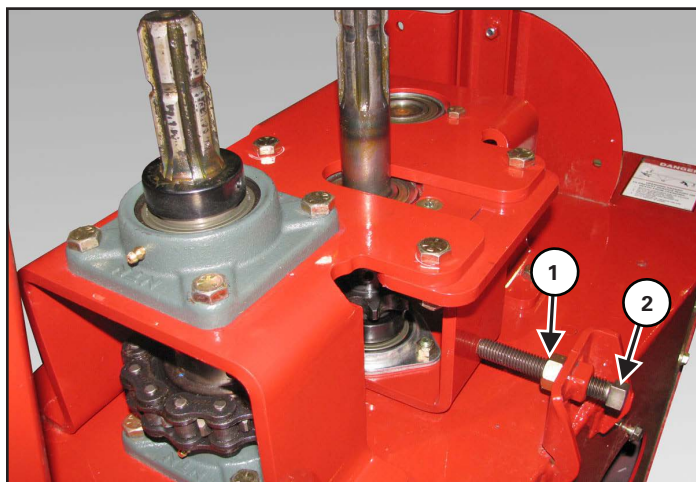
Raise the lifting device until the hitch is free from the input box.

Figure 254



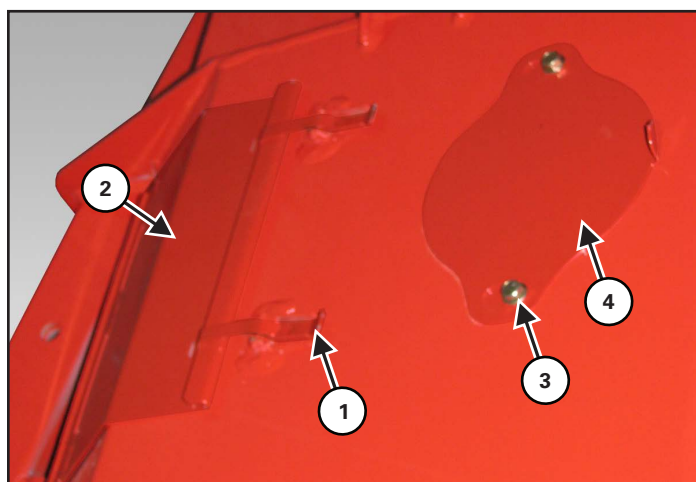
Remove the four bolts (Item 1), then remove guard (Item 2) [Figure 254].

Figure 255



Loosen jam nut (Item 1) and remove tension bolt (Item 2) [Figure 255].

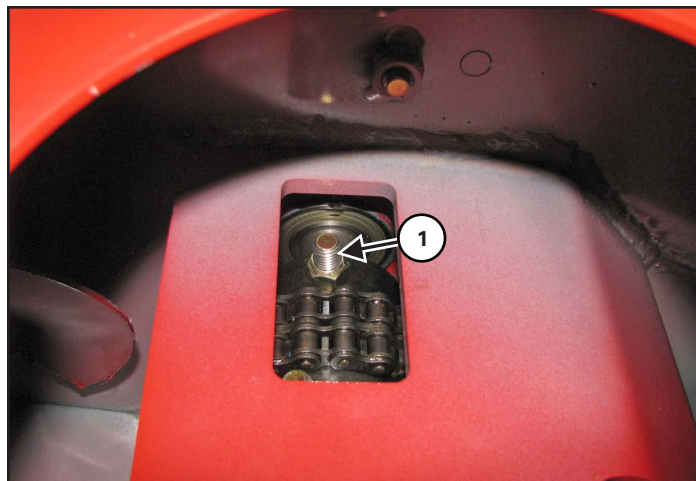
Figure 256



Release the two latches (Item 1) and open clean out cover (Item 2) [Figure 256].

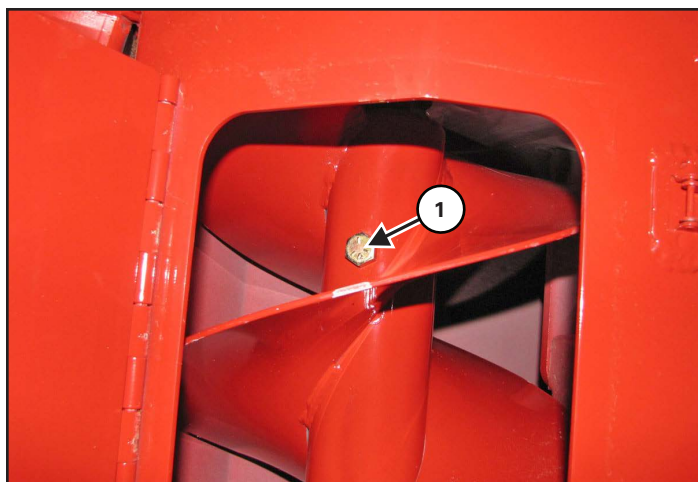
Loosen the two bolts (Item 3) and remove gearbox access cover (Item 4) [Figure 256].

Figure 257



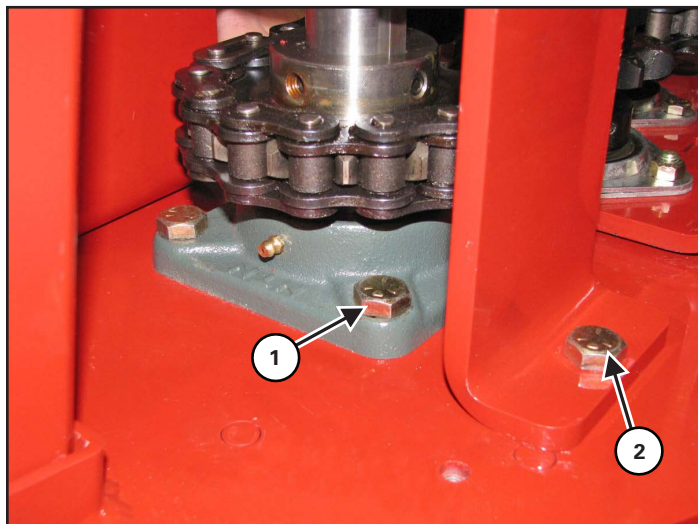
Remove bolt (Item 1) [Figure 257].

Figure 258



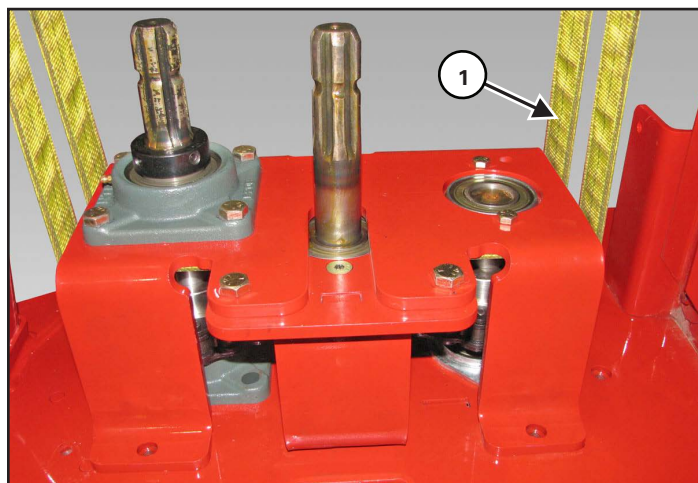
Remove the bolt (Item 1) from input box flighting [Figure 258].

Figure 259



Remove the four bolts (Item 1) from the collar. Remove the four bolts from the weldment (Item 2) [Figure 259].

Figure 260



Install straps (Item 1) through the drive assembly [Figure 260].

Connect the straps to an approved lifting device.

Raise and remove the drive assembly from the input box.

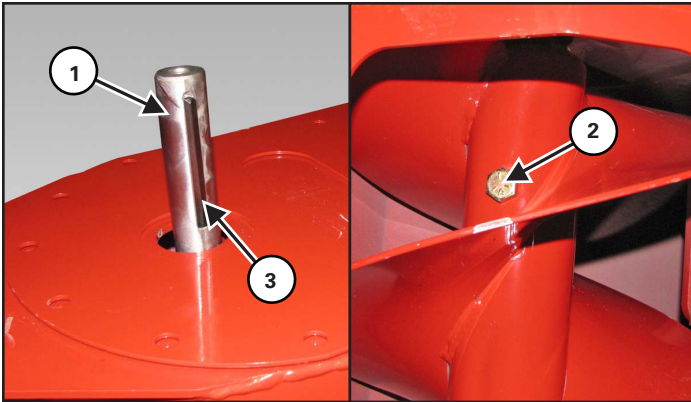
Figure 261



Locate the ten knock-outs (Item 1) on top of intake box [Figure 261].

Using a punch, remove all ten knock-outs.

Figure 262



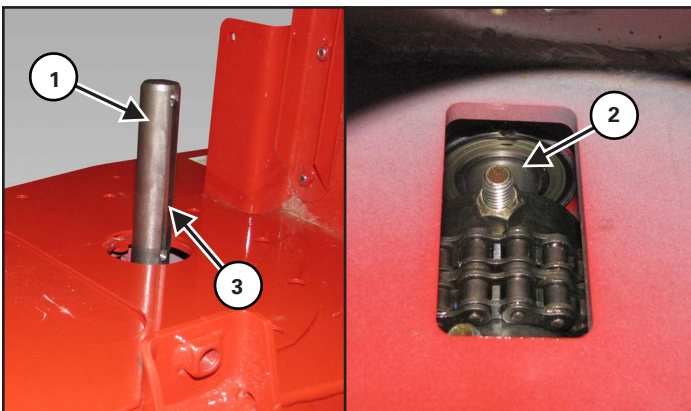
Install the square end of the bar shaft (Item 1) into the input box flighting **[Figure 262]**.

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 262]**.

Install key (Item 3) **[Figure 262]**.

Figure 263

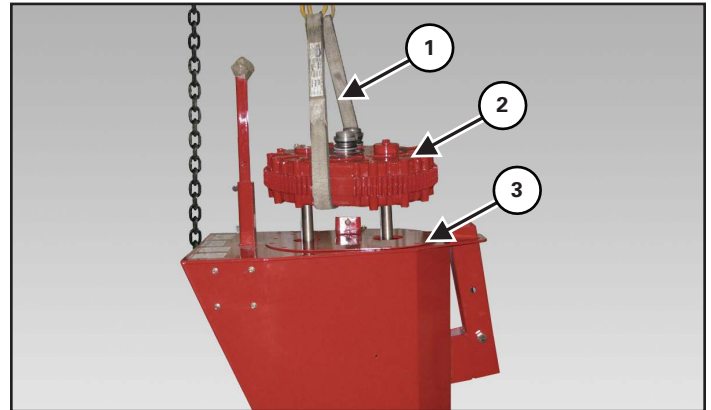


Install the gearbox shaft (Item 1) into the input box gearbox cv joint **[Figure 263]**.

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 263]**.

Install key (Item 3) **[Figure 263]**.

Figure 264



Install a strap (Item 1) around the 1000 RPM gearbox (Item 2). Connect the strap to an approved lifting device **[Figure 264]**.

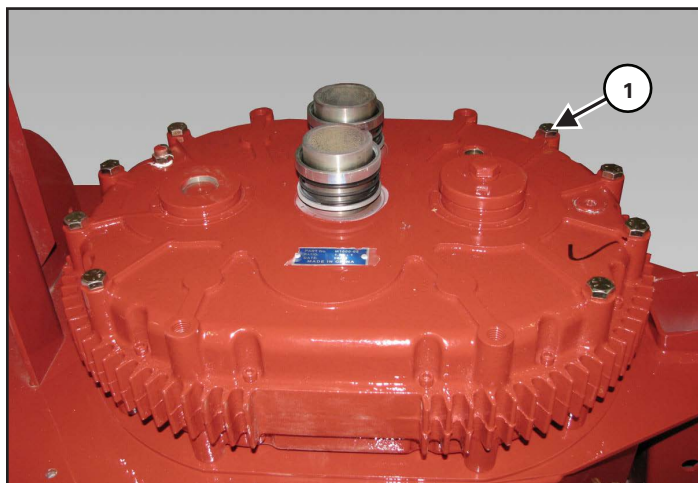
Align the spacer plate (Item 3) with punched out holes input box (only fits one way) **[Figure 264]**.

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.

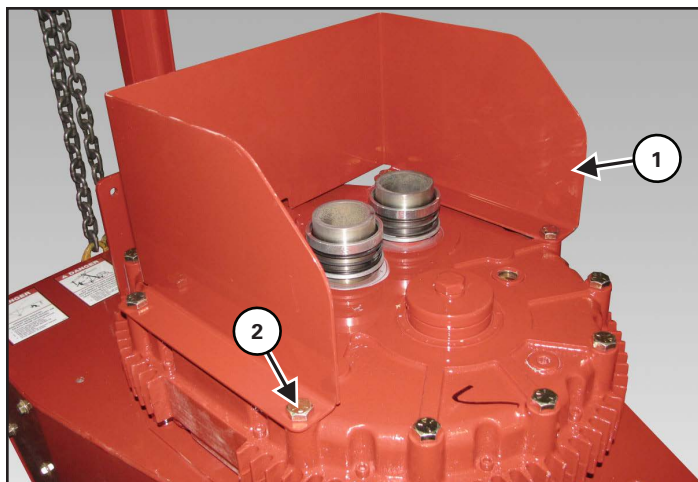
Align and lower the 1000 RPM gearbox onto the upper two shafts **[Figure 264]**.

Figure 265



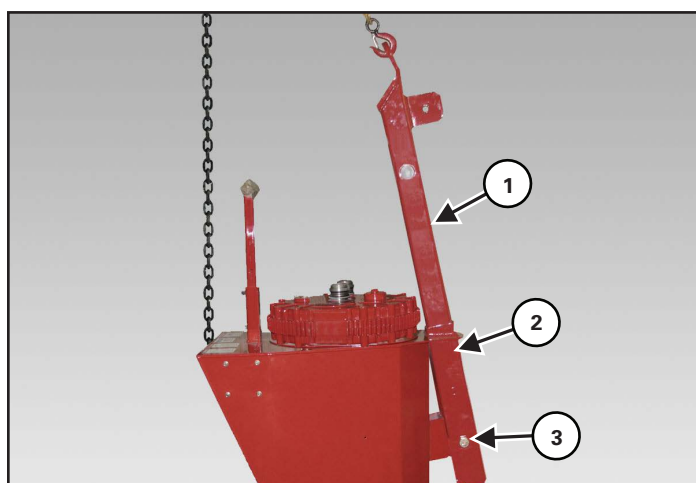
Install the eight bolts (Item 1) through the 1000 RPM gearbox, spacer plate and input box. Install one lock nut on each bolt and tighten **[Figure 265]**.

Figure 266



Place the guard (Item 1) on top of the input box and install the four bolts (Item 2) into the 1000 RPM gearbox **[Figure 266]**.

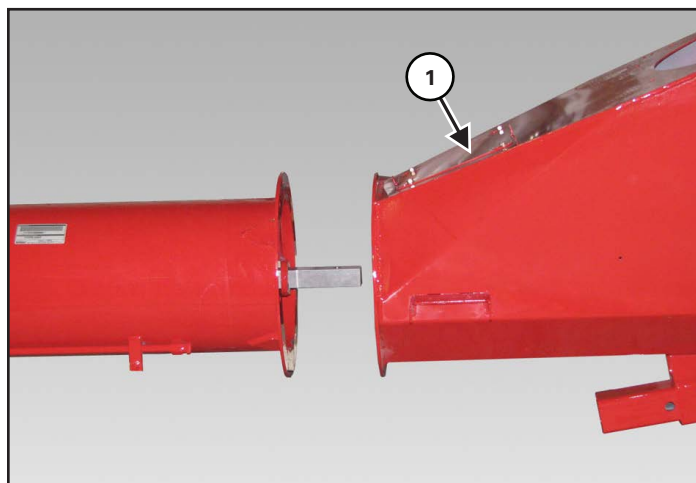
Figure 267



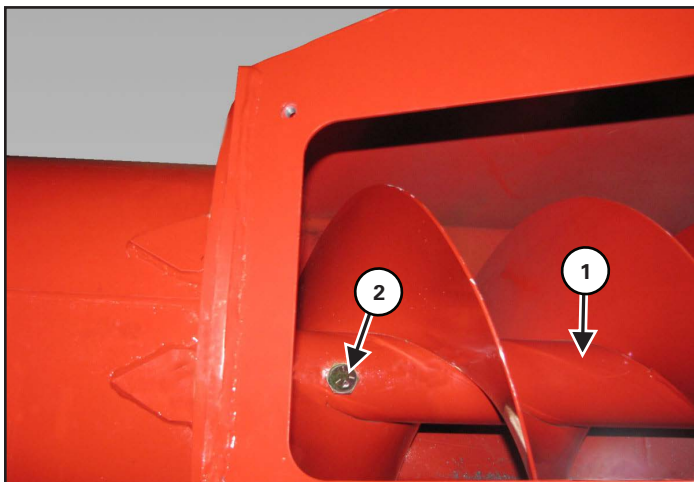
Raise the hitch (Item 1) and align with the mounting tube (Item 2) **[Figure 267]**.

Align mounting holes, install bolt (Item 3) and lock nut. Tighten bolt and lock nut **[Figure 267]**.

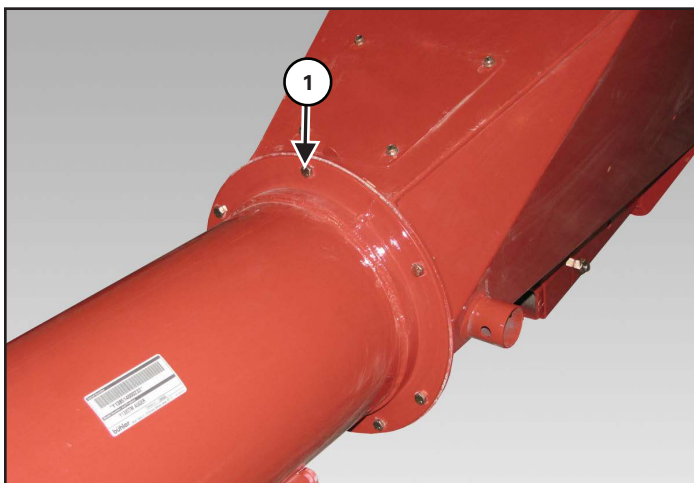
Figure 268



Raise the input box (Item 1). Move the input box in front of the tube assembly **[Figure 268]**.

Figure 269


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 269]**.

Figure 270


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 270]**.

Install intake auger / hopper.

Farm King



www.farm-king.com

Farm King

301 Mountain Street South
Morden, MB R6M 1X7
E-mail: info@buhler.com
www.farm-king.com

Equipment shown is subject to change without notice.
©2019 Buhler Trading Inc. Printed in Canada TSX:BUI