

Farm King

ASSEMBLY MANUAL

16" BACKSAVER AUGER

Models 1684, 16104, 16124



ASSEMBLY

GENERAL ASSEMBLY INFORMATION	3
Component Unloading And Identification	3
1684, 16104 & 16124 BASE GROUP	4
1684 Undercarriage Assembly	4
16104 Undercarriage Assembly	14
16124 Undercarriage Assembly	26
1684 & 16104 Tube Assembly	37
16124 Tube Assembly	51
16124 Bridging Assembly	56
16124 Bridging Identification	66
16124 Cross Brace Plate /Truss Support Bracket Identification	68
1684 Installing Tube On Undercarriage	70
16104 Installing Tube On Undercarriage	74
16124 Installing Tube On Undercarriage	78
1684, 16104 & 16124 Installing The Intake Auger	81
1684 & 16104 Hopper Assembly And Installation	82
1684 & 16104 Installing The Winch	86
16124 Hydraulic Hitch Installation	88
16124 Hydraulic Hitch Cylinder Installation	88
16124 Auger Stand Installation	89
1684, 16104 & 16124 Hydraulic Hose Holder Installation	89
1684 & 16104 Hitch Adjustment	89
1684 & 16104 Safety Chain Installation	90
16124 Safety Chain Installation	90
1684 & 16104 Jack Installation	90
1684, 16104 & 16124 PTO Driveline Installation	90
1684 & 16104 PTO Holder Installation	91
16124 PTO Holder Installation	91
HYDRAULIC ASSEMBLY	92
1684 Hydraulic Cylinder Hose Assembly	92
16104 & 16124 Hydraulic Cylinder Hose Assembly	94
1684, 16104 & 16124 Hydraulic Control Valve Assembly And Installation	99
1684, 16104 & 16124 Hydraulic Winch Hose Installation And Routing	100
1684, 16104 & 16124 Hydraulic Motor Hose Installation And Routing	101
1684, 16104 & 16124 Control Valve Return And Supply Hose Installation	103
1684, 16104 & 16124 ELECTRICAL ASSEMBLY	103
Intake Auger Work Light Installation	103
Amber Light Installation And Harness Routing	103
Light Switch Box Installation	105

Farm King



GENERAL ASSEMBLY INFORMATION

Component Unloading And Identification



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.



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

Unload the crate(s) and components in flat level area of adequate size to assemble the 1684 and 16104 Backsaver Auger.



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

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

Assemble the 1684, 16104 & 16124 Backsaver Augers in the following order:

1. Undercarriage (See "1684 Undercarriage Assembly" on page 4.) or (See "16104 Undercarriage Assembly" on page 14.)

Using the packing list, locate and place all undercarriage 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 undercarriage.

2. Tube (See "1684 & 16104 Tube Assembly" on page 37.) or (See "16124 Tube Assembly" on page 51.)

Using the packing list, locate and place all tube 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 tube.

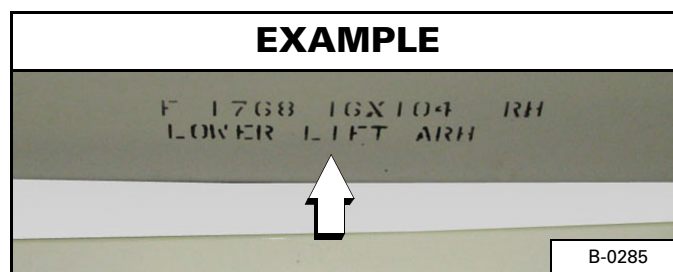
3. Intake Auger (See "1684, 16104 & 16124 Installing The Intake Auger" on page 81.)

Using the packing list, locate and place all intake auger 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 intake auger.

4. Hydraulic (See "HYDRAULIC ASSEMBLY" on page 92.)

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

Figure 1



Larger components are marked for identification [Figure 1].

1684, 16104 & 16124 BASE GROUP

1684 Undercarriage Assembly

Assemble the undercarriage on flat level surface.

⚠ WARNING



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

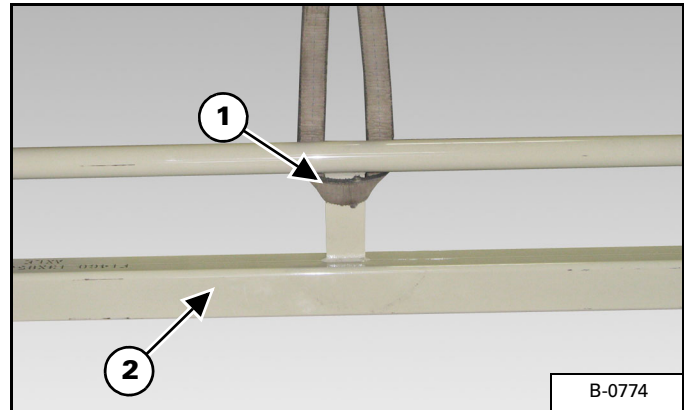
⚠ WARNING



AVOID INJURY OR DEATH

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

Figure 2



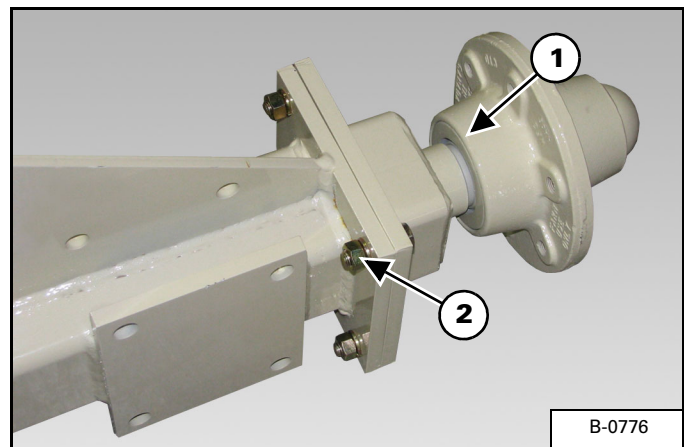
Install a strap (Item 1) around the center of the axle (Item 2) **[Figure 2]**.

Connect the strap to an approved lifting device.

Raise and move the axle to the assembly area.

Lower the axle to the ground and remove strap.

Figure 3



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

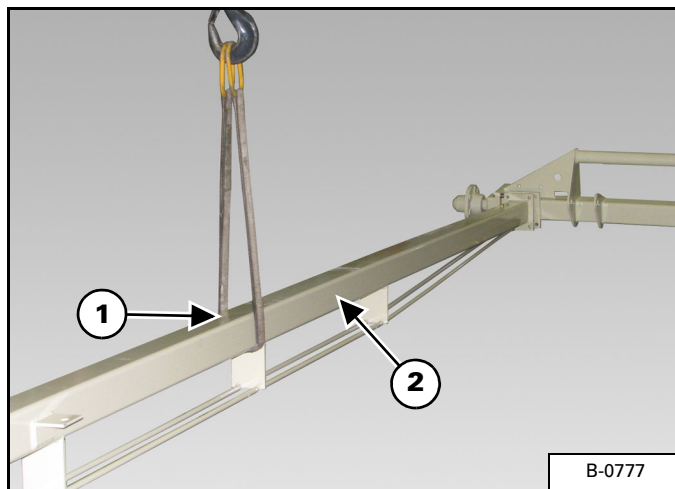
Stub Axle Mounting Bolt Size

1/2" x 1-3/4"

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

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

Figure 4

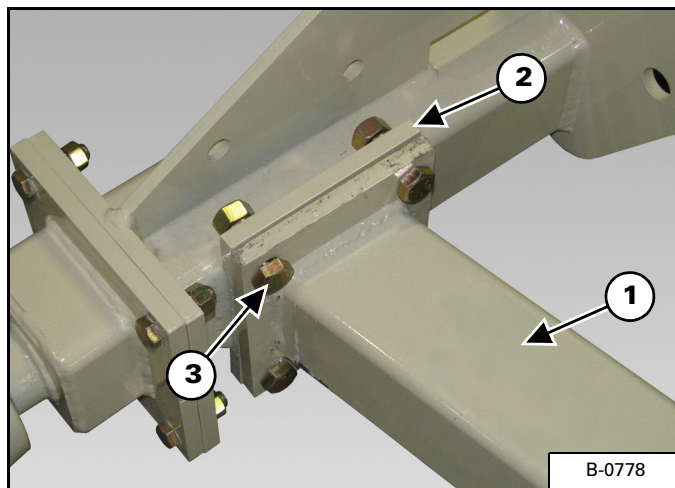


Install a strap (Item 1) around the center of the right undercarriage arm (Item 2) **[Figure 4]**.

Connect the strap to an approved lifting device.

Raise and move the right undercarriage arm towards the axle.

Figure 5



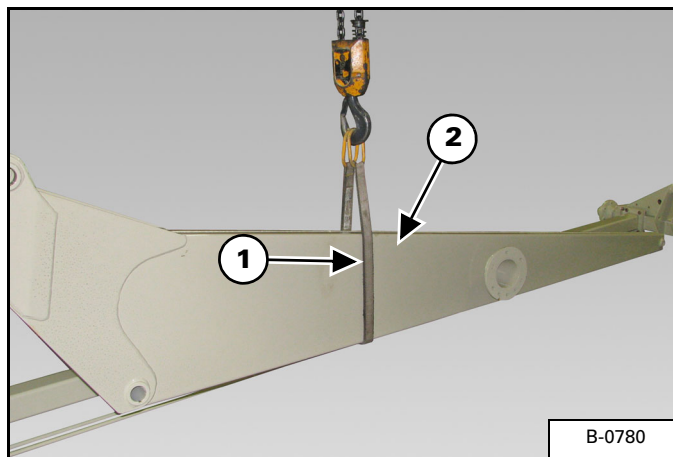
Align the right undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 5]**.

Undercarriage Arm Mounting Bolt Size

5/8" x 2"

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

Figure 6

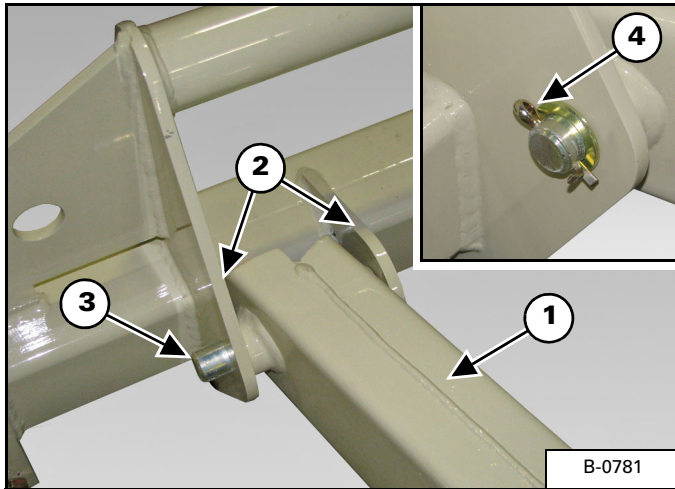


Install a strap (Item 1) around the RH lower lift arm (Item 2) **[Figure 6]**. Connect the strap to an approved lifting device.

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

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

Figure 7



Locate the two lift arm axle pins.

Lift Arm Axle Pin Size

1" x 6.38"

Align the RH lower lift arm (Item 1) with the two mounts (Item 2) **[Figure 7]** on the axle.

Install one axle pin (Item 3) **[Figure 7]** through the axle mounts and RH lower lift arm.

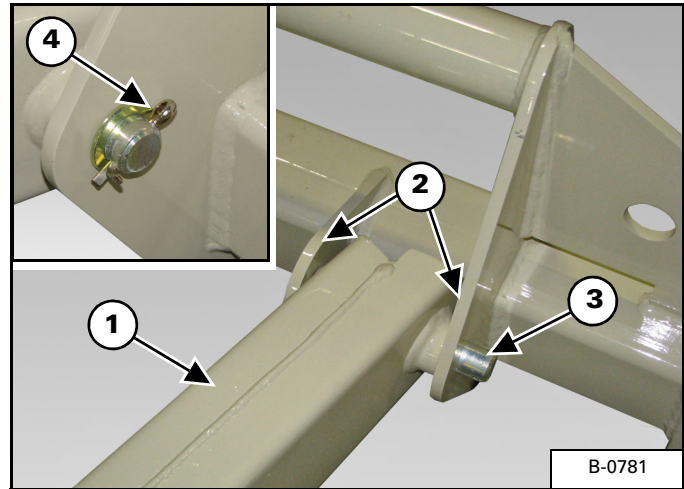
Install one 1-1/4" narrow rim washer and 1/4" x 2" cotter pin (Item 4) **[Figure 7]** onto the axle pin, securing the RH lower lift arm to the axle.

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 8

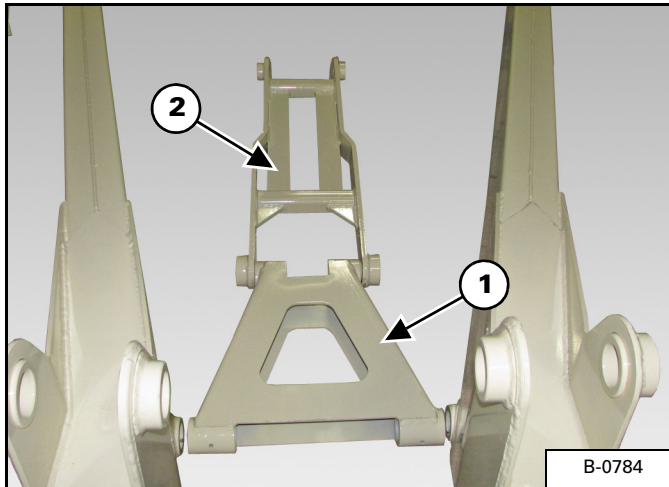


Align the LH lower lift arm (Item 1) with the two mounts (Item 2) **[Figure 8]** on the axle.

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

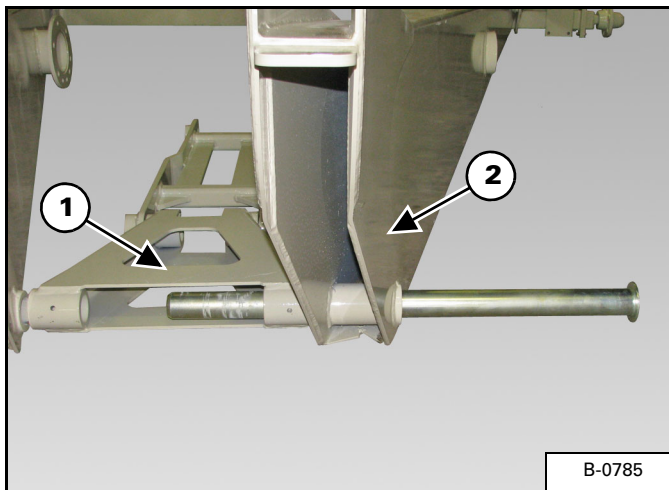
Install one 1-1/4" narrow rim washer and 1/4" x 2" cotter pin (Item 4) **[Figure 8]** onto the axle pin, securing the LH lower lift arm to the axle.

Figure 9



Place the connecting link (Item 1) and pivot yoke (Item 2) **[Figure 9]** on the ground, between the LH & RH lower lift arms.

Figure 10



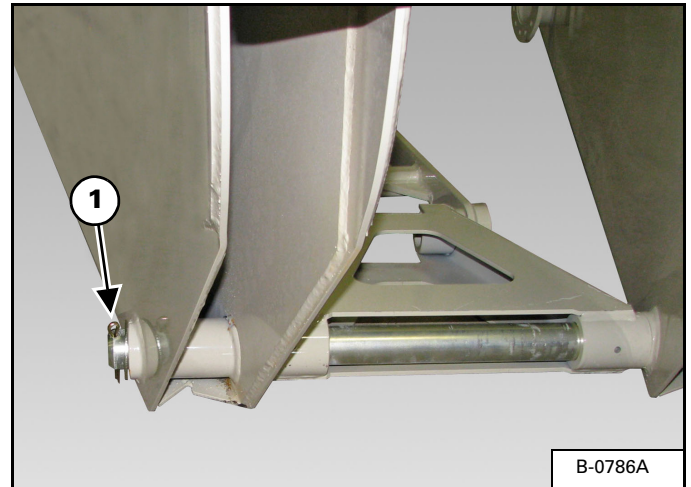
Align the connecting link (Item 1) with LH lower lift arm (Item 2) **[Figure 10]**.

Connecting Link Pin Size

2" x 34 - 3/16"

Install the connecting link pin through the LH lower lift arm and connecting link.

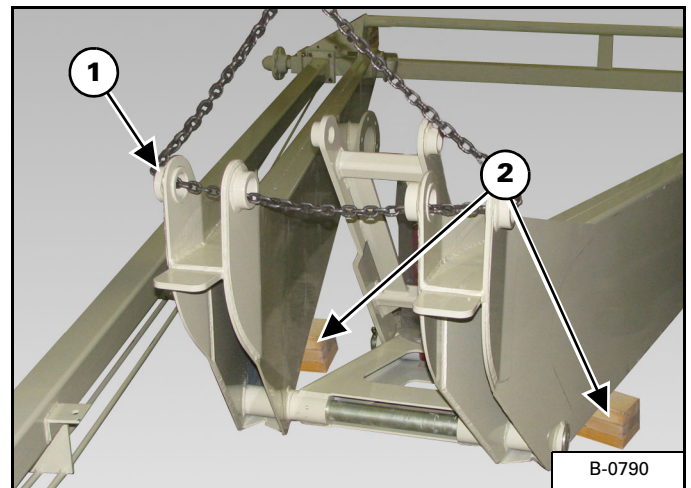
Figure 11



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) **[Figure 11]** onto the connecting link pin and secure.

Figure 12



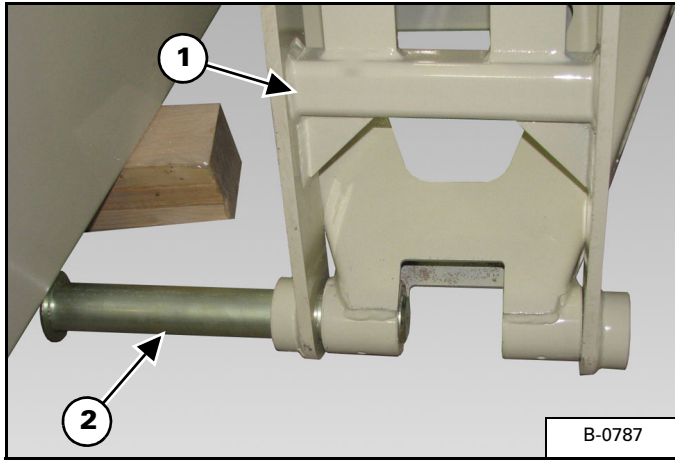
Install a chain (Item 1) **[Figure 12]** through the upper LH & RH lower lift arm mounts. Connect the chain to an approved lifting device.

Lift the LH & RH lower lift arms. Install blocks (Item 2) **[Figure 12]** under the LH & RH lower lift arms.

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 13



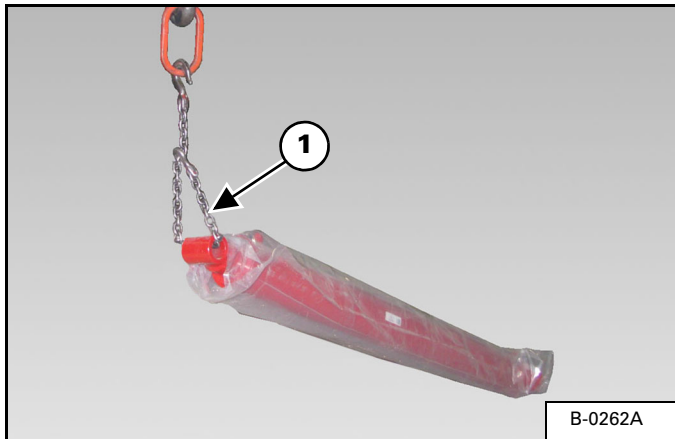
Rotate the pivot yoke (Item 1) **[Figure 13]** up.

Bottom Cylinder Pin Size

2" x 14-13/16"

Align the pivot yoke and connecting link. Install the bottom cylinder pin (Item 2) **[Figure 13]** through the connecting link and first side of the pivot yoke.

Figure 14

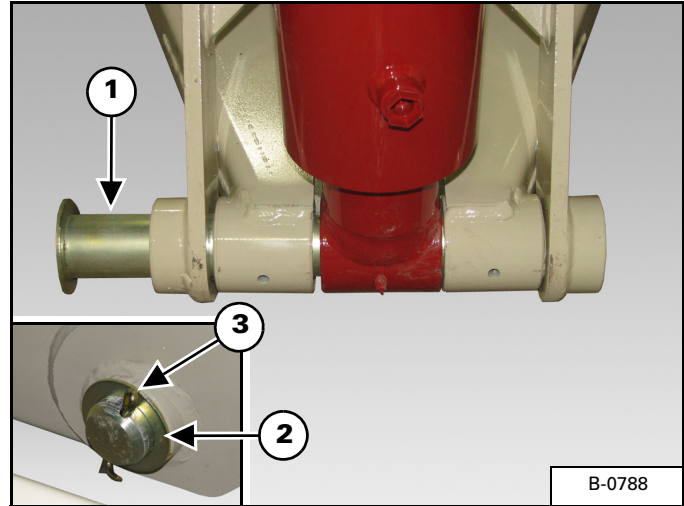


NOTE: It is recommended to leave the plastic on the hydraulic cylinders during assembly. This will help to prevent damage to the paint and minimize touch-up painting.

Install a chain or strap (Item 1) **[Figure 14]** through the base end of the hydraulic cylinder. Connect the chain or strap to an approved lifting device.

Raise and move the hydraulic cylinder to the assembly area.

Figure 15



Lower the hydraulic cylinder and align the rod end of the cylinder with the pivot yoke **[Figure 15]** (with grease zerks facing as shown).

Continue installing the bottom cylinder pin (Item 1) **[Figure 15]** through the connecting link and opposite side of the pivot yoke.

Narrow Rim Washer Size

2" x 10 Ga.

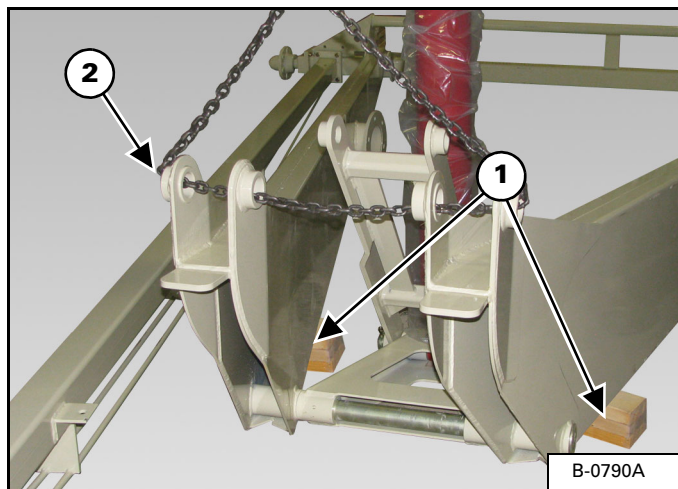
Cotter Pin Size

5/16" x 3"

Install one 2" narrow rim washer (Item 2) and one cotter pin (Item 3) **[Figure 15]** onto the bottom cylinder pin.

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

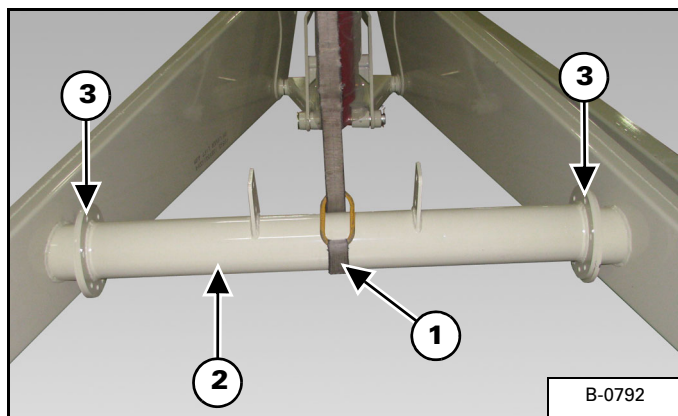
Figure 16



Lift the LH & RH lower lift arms. Remove blocks (Item 1) **[Figure 16]**. Lower LH & RH lower lift arms to the ground.

Remove chain (Item 2) **[Figure 16]**.

Figure 17

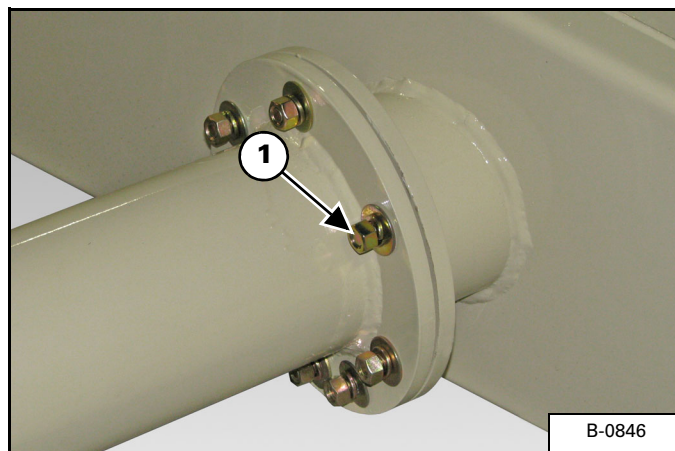


Install a strap (Item 1) around the lift arm torque tube (Item 2) **[Figure 17]**. Connect the strap to a second approved lifting device.

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) **[Figure 17]**, install the two bolts through the top holes (both ends). Install one 1/2" flat washer and 1/2" lock nut on the bolts.

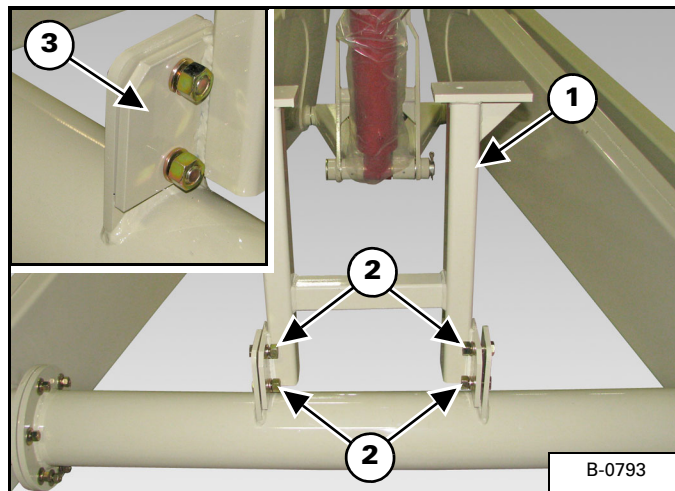
Figure 18



Install one 1/2" flat washer on the remaining 1/2" x 2" bolts (Item 1) **[Figure 18]**, 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.

Remove the strap.

Figure 19

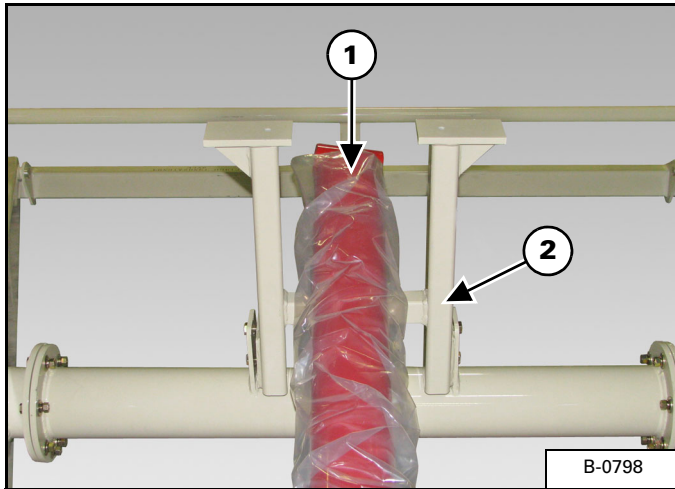


Align the cradle rest (Item 1) **[Figure 19]** with the two mounting plates on the lift arm torque tube.

Install the four 5/8" x 3-1/2" bolts (Item 2) **[Figure 19]** and 5/8" lock nuts.

NOTE: Install the cradle rest with the tabs (Item 3) **[Figure 19] towards the axle.**

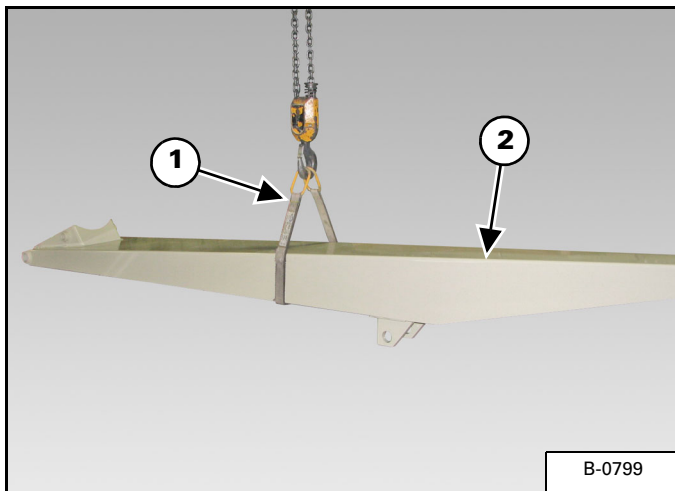
Figure 20



Lower the hydraulic cylinder (Item 1) onto the cradle rest (Item 2) **[Figure 20]**.

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

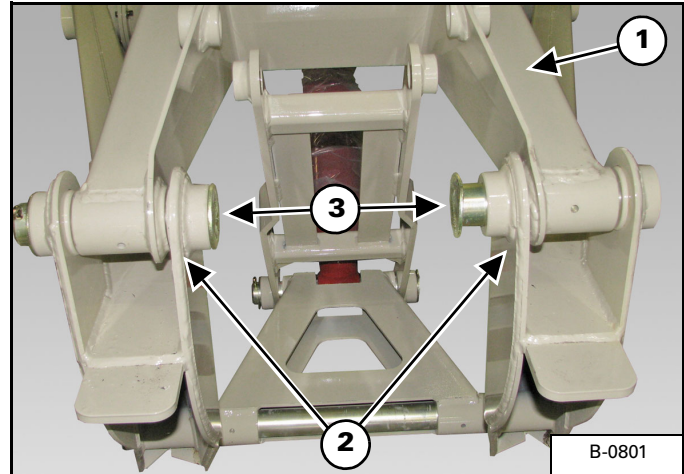
Figure 21



Install a strap (Item 1) around the upper lift arm (Item 2) **[Figure 21]**. Connect the strap to an approved lifting device.

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

Figure 22



Align and lower the upper lift arm (Item 1) until the upper lift arm is inside the two mounts (Item 2) **[Figure 22]** on the lower lift arms.

Lower Lift Arm Pin Size

2" x 9-1/16"

Narrow Rim Washer Size

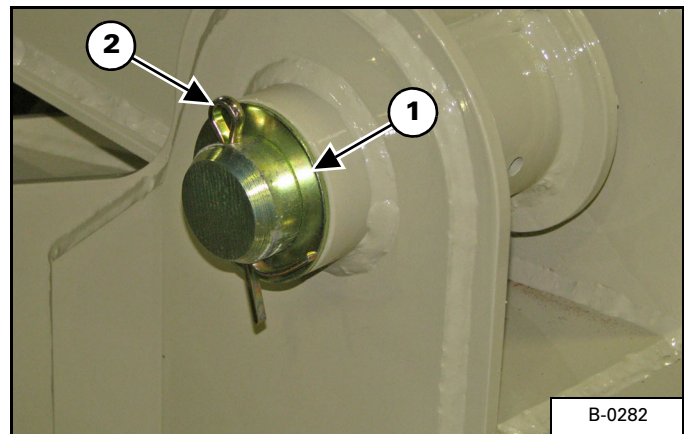
2" x 10 Ga.

Cotter Pin Size

5/16" - 3"

Install the two lift arm pins (Item 3) **[Figure 22]** (from the inside).

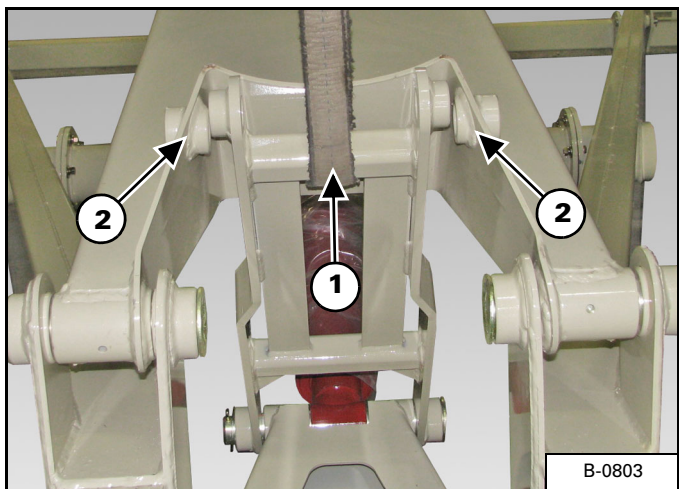
Figure 23



Install one 2" narrow rim washer (Item 1) and cotter pin (Item 2) **[Figure 23]** on the lift arm pin (both pins).

Lower the upper lift arm onto the cradle rest.

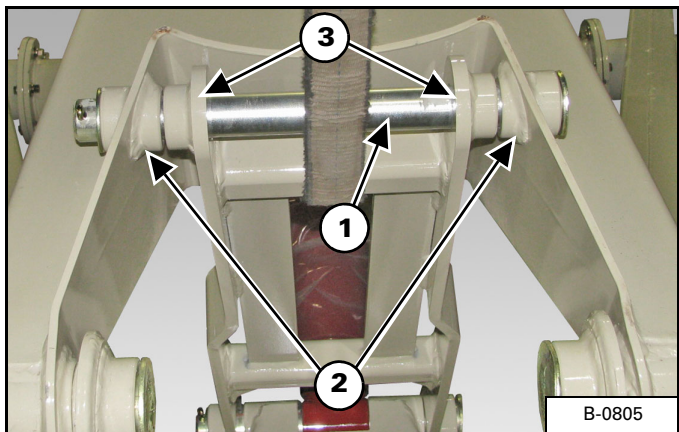
Figure 24



Install a strap (Item 1) **[Figure 24]** on the upper cross member of the connecting link.

Lift and align the connecting link with the mounts (Item 2) **[Figure 24]** on the upper lift arm.

Figure 25



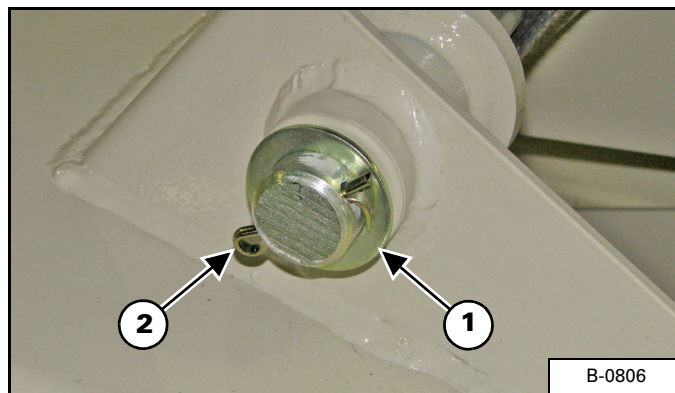
Install the top yoke pin (Item 1) through the upper lift arm mounting holes (Item 2) and pivot yoke mounting holes (Item 3) **[Figure 25]**.

Top Yoke Pin Size

1-1/2" x 16-11/16"

Remove the strap from the pivot yoke.

Figure 26



Install one narrow rim washer (Item 1) and cotter pin (Item 2) **[Figure 26]** onto the top yoke pin.

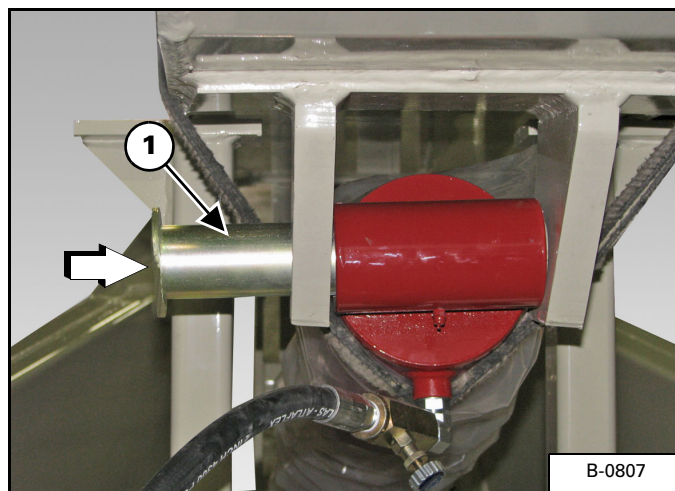
Narrow Rim Washer Size

1-1/2" x 10 Ga.

Cotter Pin Size

1/4" x 2"

Figure 27



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

Top Cylinder Pin Size

2" x 9"

Install the cylinder pin (Item 1) **[Figure 27]** through the upper lift arm and cylinder.

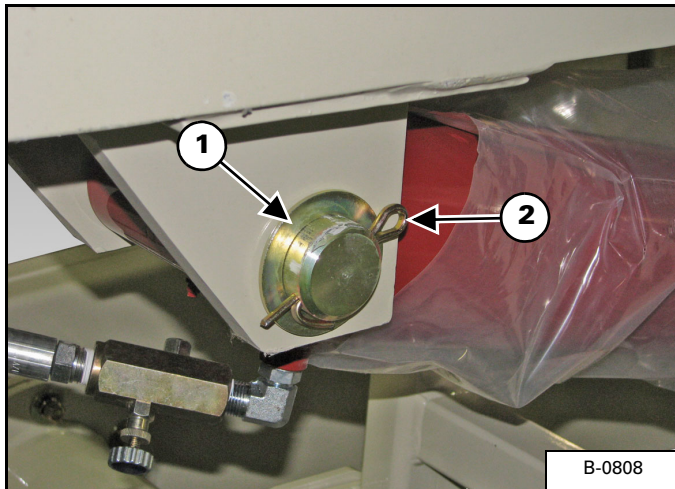
Narrow Rim Washer Size

2" x 10 Ga.

Cotter Pin Size

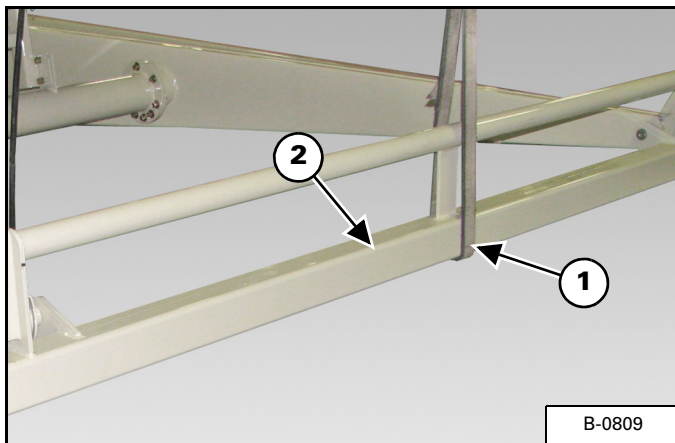
5/16" x 3"

Figure 28



Install one narrow rim washer (Item 1) and cotter pin (Item 2) **[Figure 28]** onto the cylinder pin, securing the cylinder to the upper lift arm.

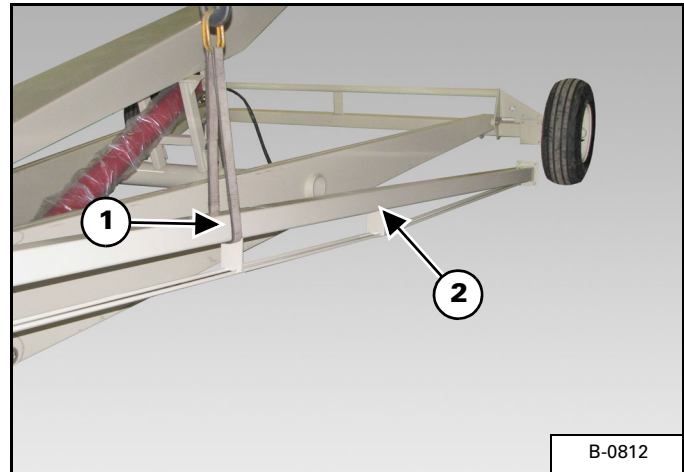
Figure 29



Install a strap (Item 1) around the center brace (Item 2) **[Figure 29]** on the axle. Connect the strap to an approved lifting device. Raise the axle high enough to install the wheels.

Install the wheels. See page 27.

Figure 30

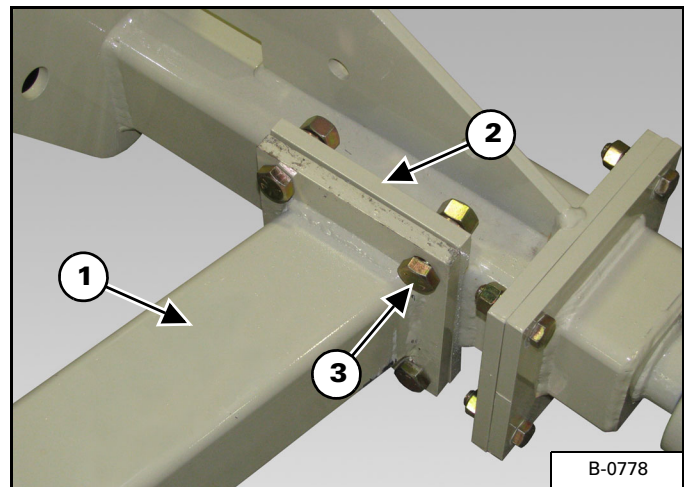


Install a strap (Item 1) around the center of the left undercarriage arm (Item 2) **[Figure 30]**.

Connect the strap to an approved lifting device.

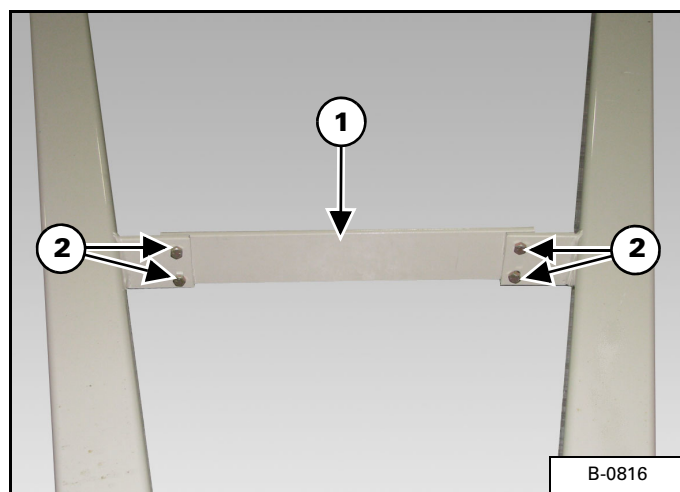
Raise and move the left undercarriage arm towards the axle.

Figure 31



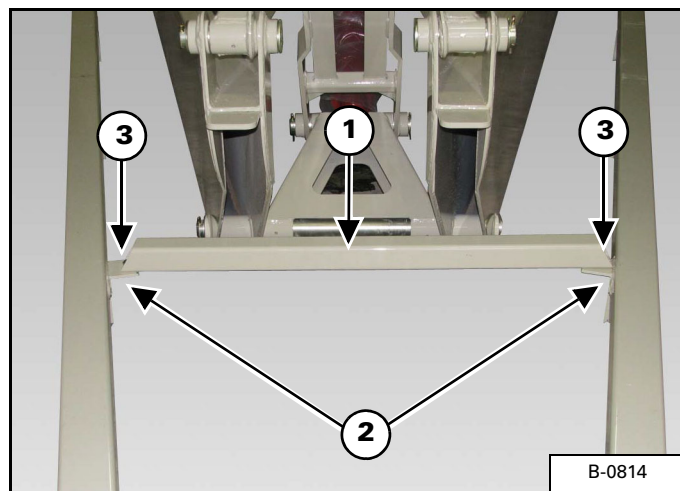
Align the left undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 31]**.

Install four 5/8" x 2" bolts (Item 3) **[Figure 31]** and 5/8" lock nuts. Do not tighten bolts and nuts at this time.

Figure 32


Align the brace plate (Item 1) **[Figure 32]** with the mounting plates on the LH & RH undercarriage arms.

Install four 7/16" flat washers onto four 7/16" x 1-1/2" bolts (Item 2) **[Figure 32]**. Install the bolts, then install 7/16" lock nuts on each bolt. Do not tighten at this time.

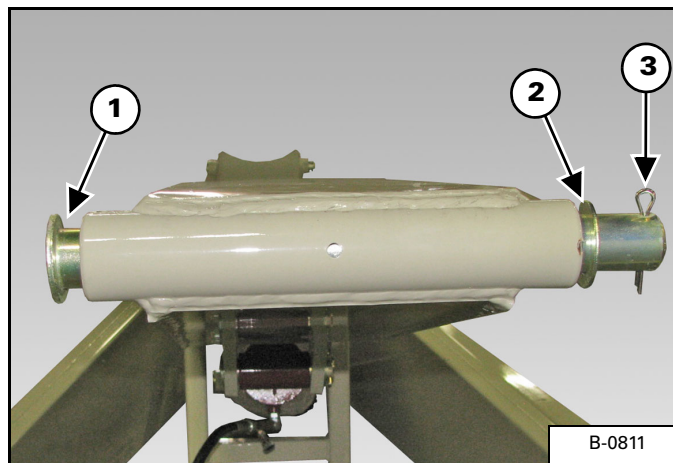
Figure 33


NOTE: Lift arm rest tube mounts on top of the tabs on the LH & RH undercarriage arms.

Place the lift arm rest tube (Item 1) on top of the mounts (Item 2) **[Figure 33]** on the LH & RH undercarriage arms.

Install one 5/8" x 1-3/4" bolt (Item 3) **[Figure 33]** down through the lift arm rest tube and undercarriage arm mount. Install one 5/8" flat washer

and 5/8" lock nut on the bolt (both sides). Do not tighten at this time.

Figure 34


Locate and install the 1-1/2" x 15-5/16" lift arm pivot pin (Item 1), one 1-1/2" x 10 Ga. narrow rim washer (Item 2) and one 1/4" x 2" cotter pin (Item 3) **[Figure 34]**.

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.

16104 Undercarriage Assembly

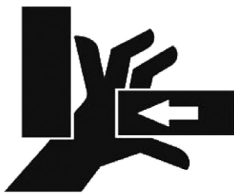
Assemble the undercarriage on flat level surface.

WARNING



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

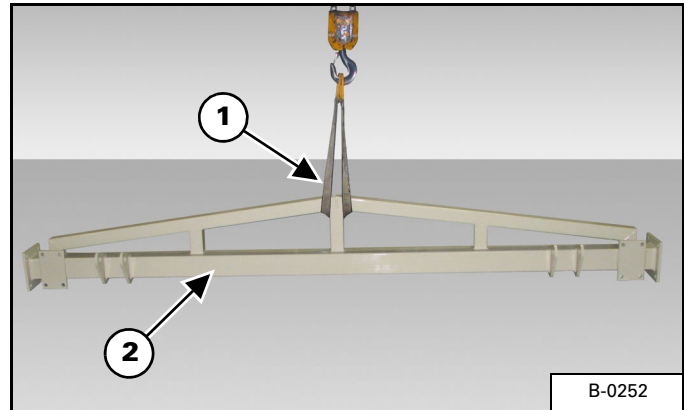
WARNING



AVOID INJURY OR DEATH

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

Figure 35



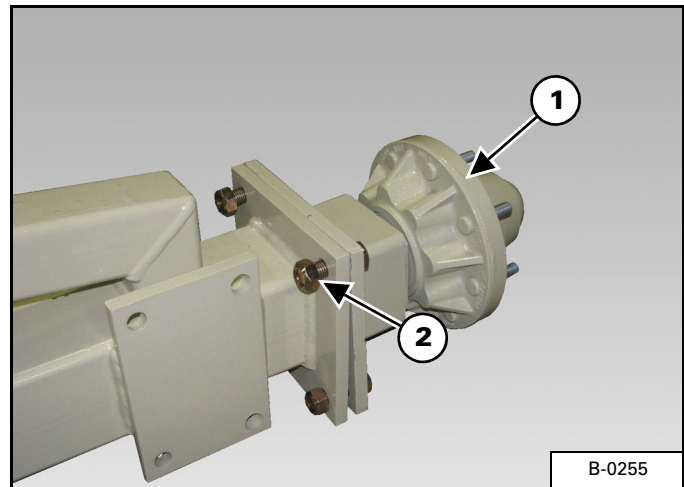
Install a strap (Item 1) around the center of the axle (Item 2) [Figure 35].

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.

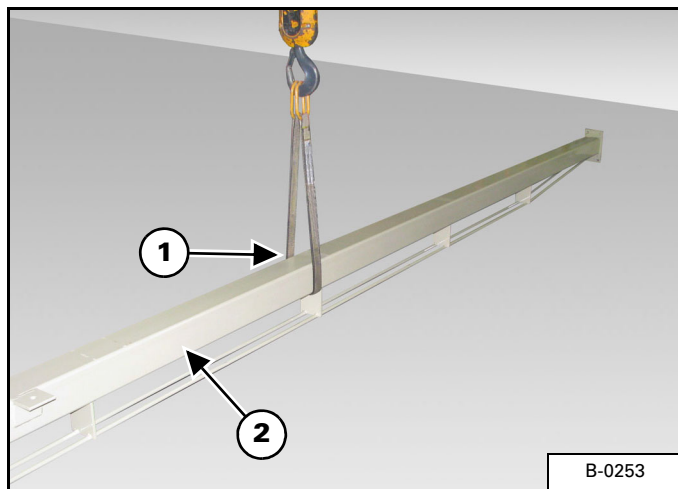
Figure 36



Align the hub (Item 1) [Figure 36] with the axle.

Install the four 3/4" x 2-1/2" bolts (Item 2) [Figure 36] and 3/4" lock nuts. Do not tighten bolts and nuts at this time.

Figure 37

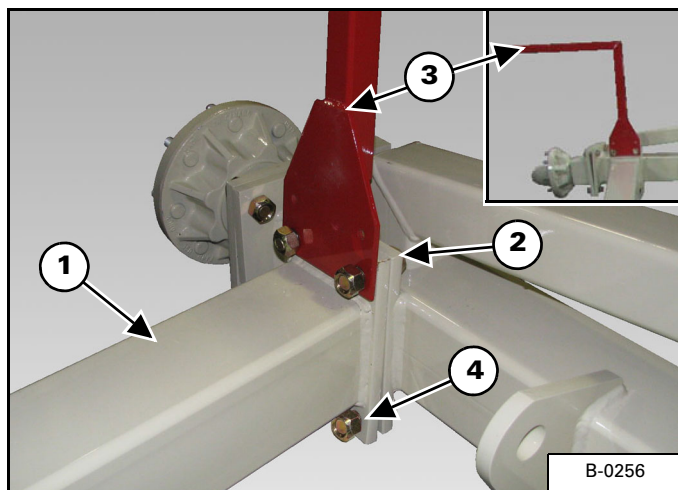


Install a strap (Item 1) around the center of the right undercarriage arm (Item 2) **[Figure 37]**.

Connect the strap to an approved lifting device.

Raise and move the right undercarriage arm towards the axle.

Figure 38

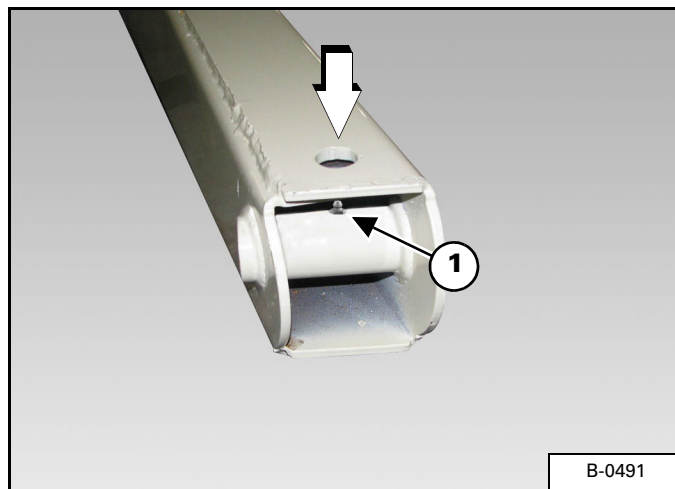


Align the right undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 38]**.

Place the RH blinker mount (Item 3) **[Figure 38]** onto the right undercarriage arm mounting plate (with the blinker mount facing to the outside).

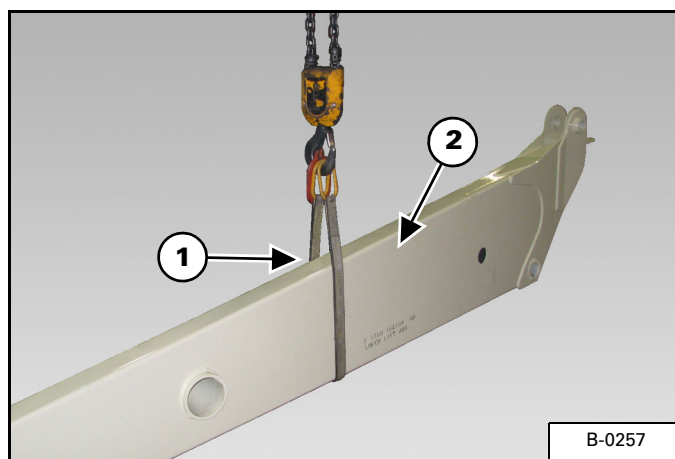
Install four 3/4" x 2-1/2" bolts (Item 4) **[Figure 38]** and 3/4" lock nuts. Do not tighten bolts and nuts at this time.

Figure 39



Install the grease zerk (Item 1) **[Figure 39]** into the right and left lower lift arms.

Figure 40

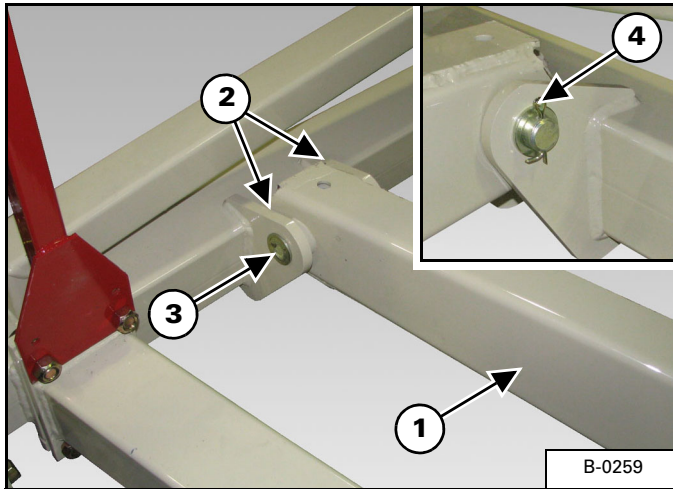


Install a strap (Item 1) around the RH lower lift arm (Item 2) **[Figure 40]**. Connect the strap to an approved lifting device.

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

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

Figure 41

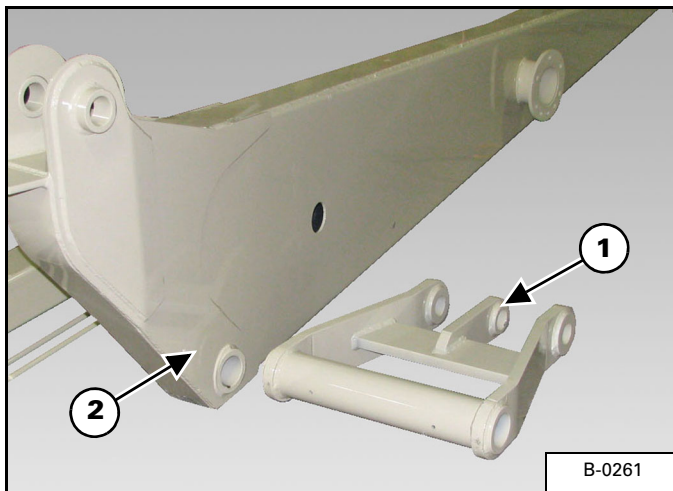


Align the RH lower lift arm (Item 1) with the two mounts (Item 2) **[Figure 41]** on the axle.

Install one 1-1/4" x 7-1/8" axle pin (Item 3) **[Figure 41]** through the axle mounts and RH lower lift arm.

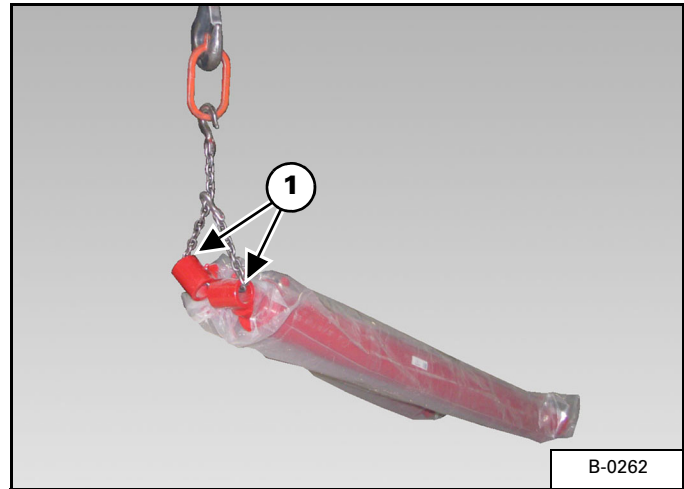
Install one 1-1/4" narrow rim washer and 1/4" x 2" cotter pin (Item 4) **[Figure 41]** onto the axle pin, securing the RH lower lift arm to the axle.

Figure 42



Place the link (Item 1) on the ground, at the front of the RH lower lift arm (Item 2) **[Figure 42]**.

Figure 43

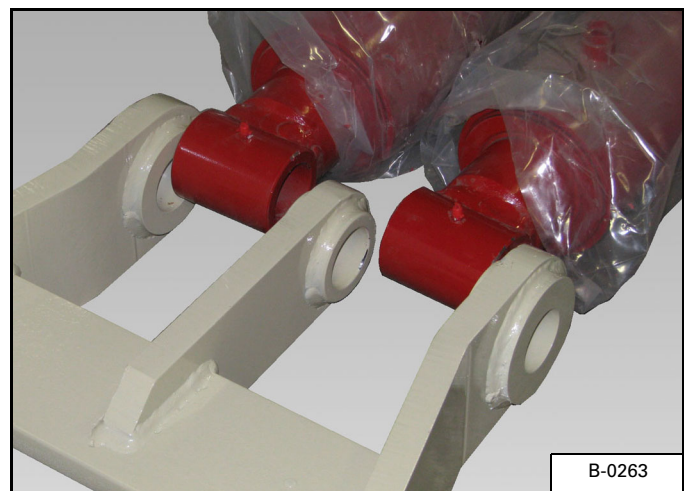


NOTE: It is recommended to leave the plastic on the hydraulic cylinders during assembly. This will help to prevent damage to the paint and minimize touch-up painting.

Install a chain or strap (Item 1) **[Figure 43]** through the rod end of the two hydraulic cylinders. Connect the strap to an approved lifting device.

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

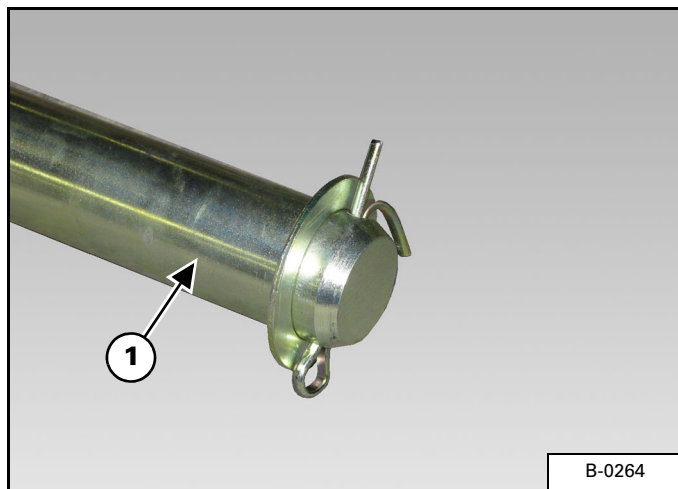
Figure 44



Raise the hydraulic cylinders and move the two cylinders on the back side of the link. Lower the cylinders to the ground and remove the chain or strap.

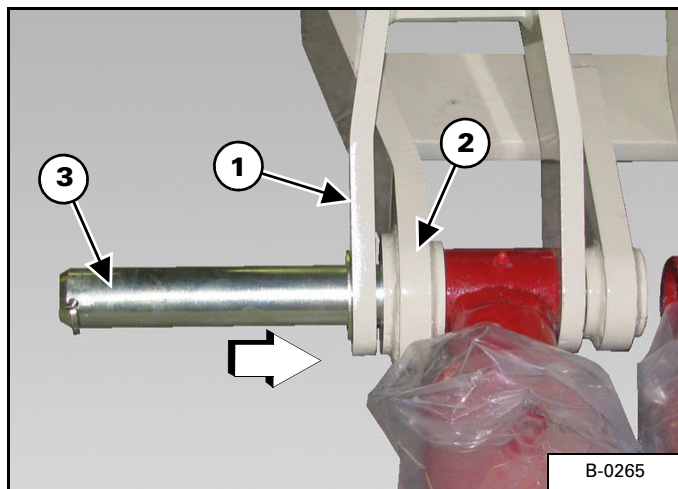
Align the two rod ends of the cylinders with the link **[Figure 44]** (with grease zerks facing up).

Figure 45



Install one 2" narrow rim washer and one 5/16" x 3" cotter pin onto the 2" x 18-7/8" lift pin rod (Item 1) [Figure 45].

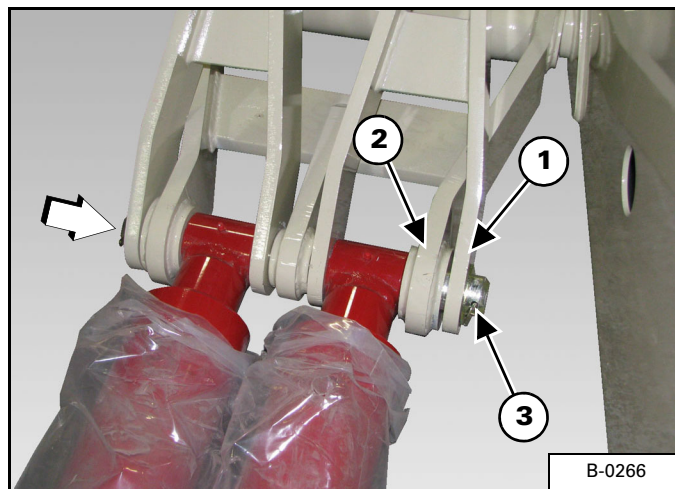
Figure 46



Place the left yoke arm (Item 1) on the outside of the link (Item 2) [Figure 46]. Position cylinder inside the link and opposite side of the yoke arm.

Install the lift pin rod (Item 3) [Figure 46] through the left yoke arm, link and cylinder (stop when the pin enters the center mount of the link).

Figure 47

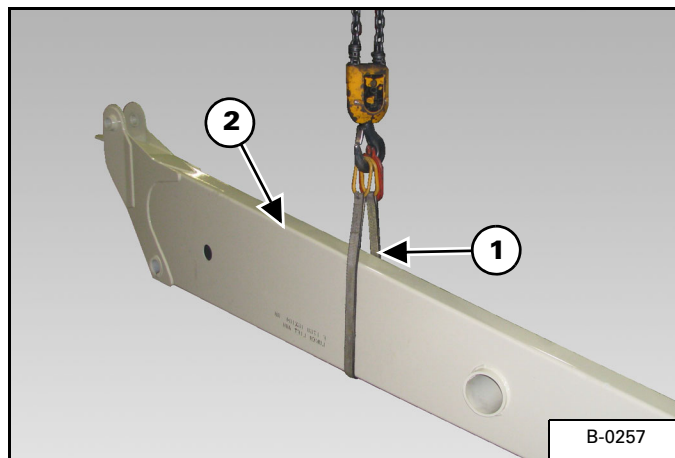


Place the right yoke arm (Item 1) on the outside of the link (Item 2) [Figure 47]. Position cylinder inside the link and opposite side of the yoke arm.

Continue installing the lift pin rod through the right yoke arm, cylinder and link [Figure 47].

Install one 2" narrow rim washer and one 5/16" x 3" cotter pin (Item 3) [Figure 47] to secure the yoke arms, cylinders and link together.

Figure 48

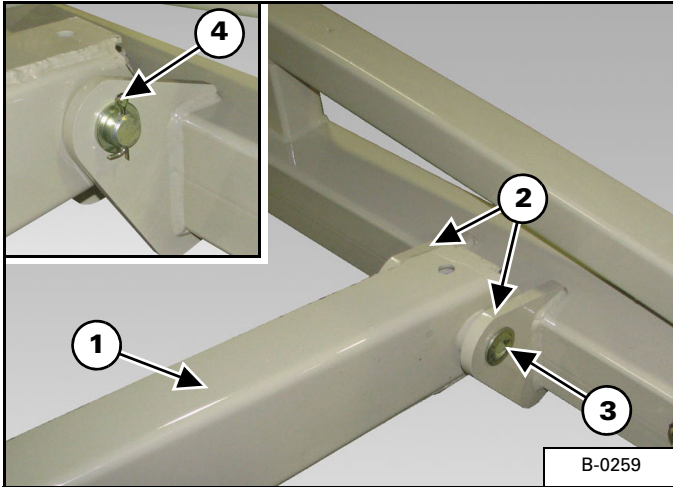


Install a strap (Item 1) around the LH lower lift arm (Item 2) [Figure 48]. Connect the strap to an approved lifting device.

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 49

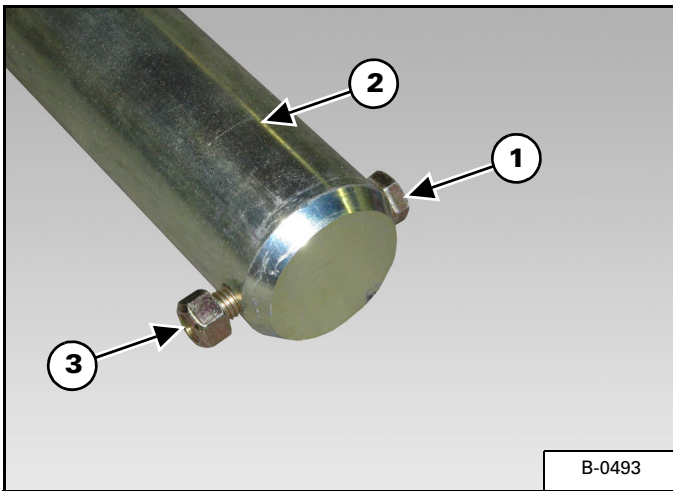


Align the LH lower lift arm (Item 1) with the two mounts (Item 2) **[Figure 49]** on the axle.

Install one 1-1/4" x 7-1/8" axle pin (Item 3) **[Figure 49]** through the axle mounts and LH lower lift arm.

Install one 1-1/4" narrow rim washer and 1/4" x 2" cotter pin (Item 4) **[Figure 49]** onto the axle pin, securing the LH lower lift arm to the axle.

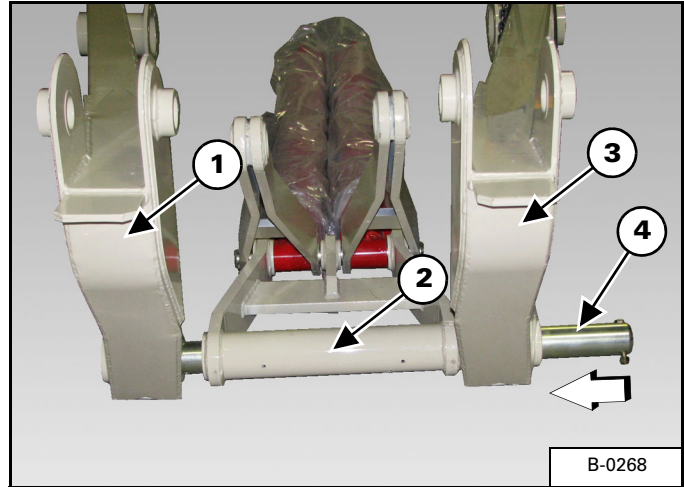
Figure 50



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 (Item 3) **[Figure 50]** onto the bolt.

Slide a flat washer (not shown) onto the connecting link pin before installing.

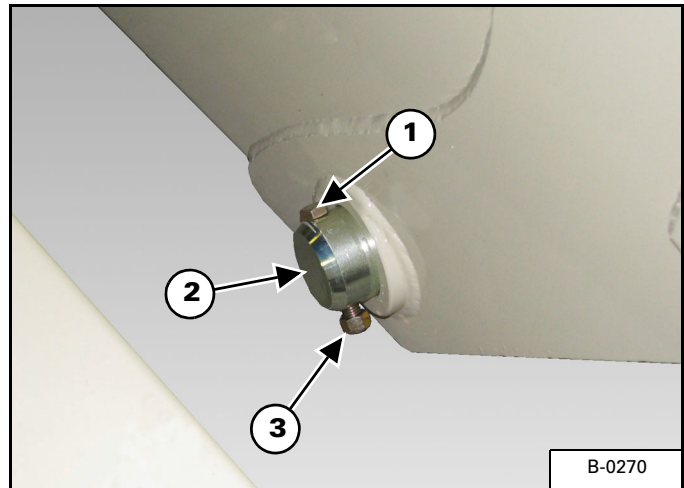
Figure 51



Align the RH lower lift arm (Item 1), link (Item 2) and LH lower lift arm (Item 3) **[Figure 51]**.

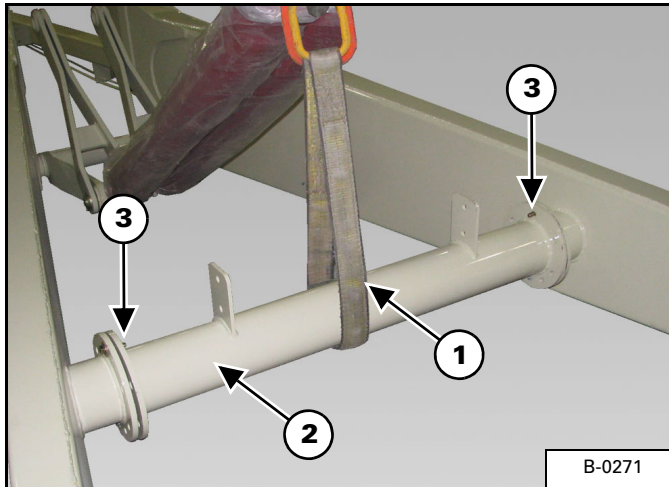
Install the 2-3/4" x 39" connecting yoke pin (Item 4) **[Figure 51]** through the LH lower lift arm, link and RH lower lift arm.

Figure 52



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 (Item 3) **[Figure 52]** onto the bolt.

Figure 53



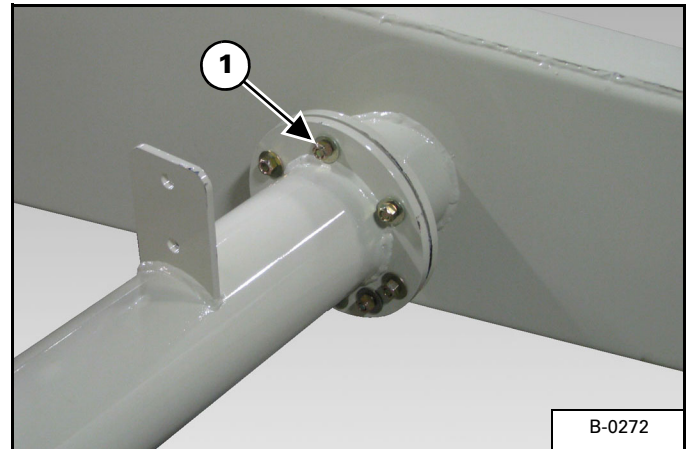
NOTE: Install a chain or strap through the base ends of the hydraulic cylinders. Connect the chain or strap to an approved lifting device. Raise the hydraulic cylinders above the RH & LH lower lift arms before installing the lift arm torque tube.

Install a strap (Item 1) around the lift arm torque tube (Item 2) **[Figure 53]**. Connect the strap to a second approved lifting device.

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) **[Figure 53]** through the top holes (both ends). Install one 1/2" flat washer and 1/2" lock nut on the bolts.

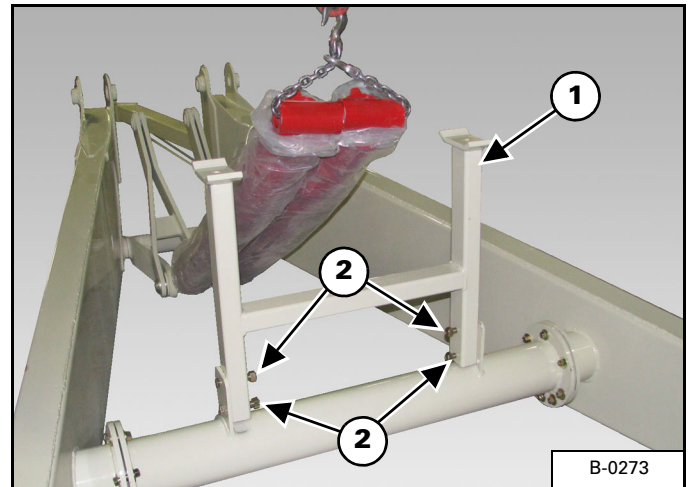
Figure 54



Install the remaining 1/2" x 2" bolts (Item 1) **[Figure 54]**, 1/2" flat washers and 1/2" lock nuts (both sides). Do not tighten bolts and lock nuts at this time.

Remove the strap.

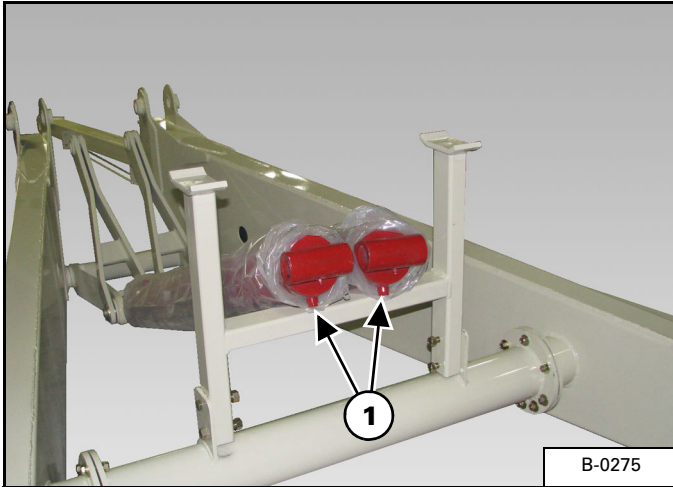
Figure 55



Align the cradle rest (Item 1) **[Figure 55]** with the two mounting plates on the lift arm torque tube.

Install the four 5/8" x 3-1/2" bolts (Item 2) **[Figure 55]** and 5/8" lock nuts.

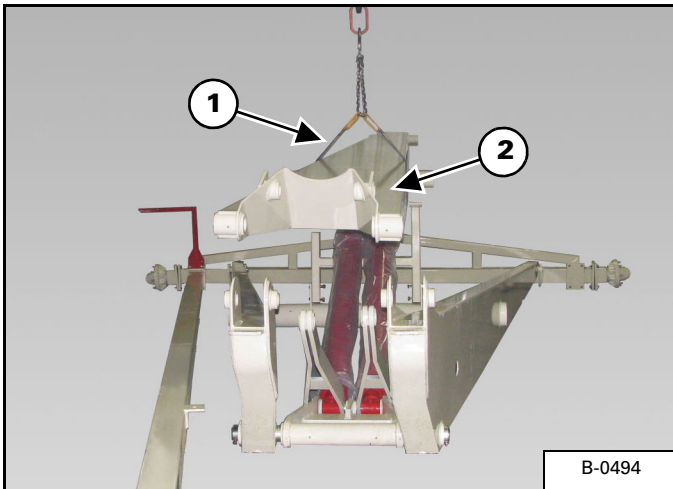
Figure 56



Lower the two hydraulic cylinders onto the cradle rest **[Figure 56]**.

Rotate each cylinder 180° or until the hydraulic fitting ports (Item 1) **[Figure 56]** are facing down.

Figure 57

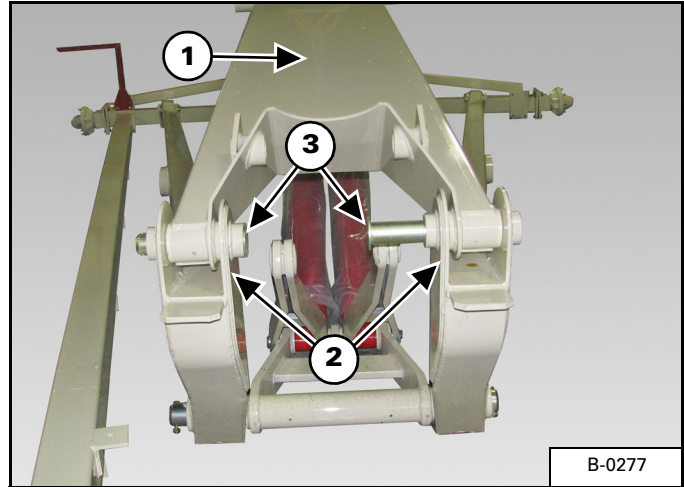


Install a strap (Item 1) around the upper lift arm (Item 2) **[Figure 57]**. Connect the strap to an approved lifting device.

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

Move the upper lift arm over the lower lift arms **[Figure 57]**.

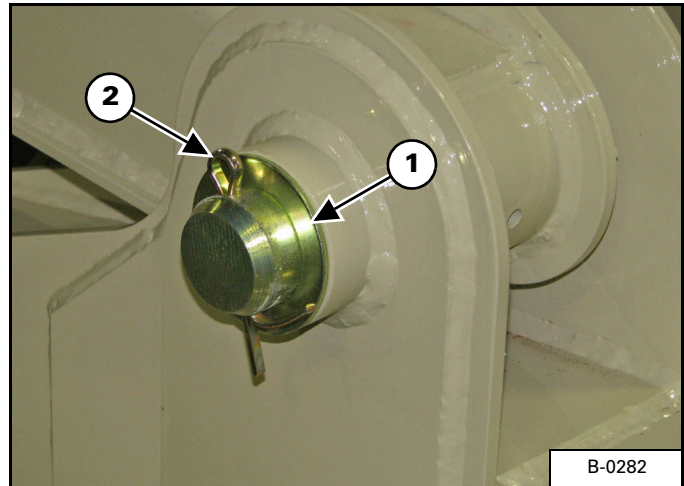
Figure 58



Align and lower the upper lift arm (Item 1) until the upper lift arm is inside the two mounts (Item 2) **[Figure 58]** on the lower lift arms.

Install the two 2" x 9-1/16" lift arm pins (Item 3) **[Figure 58]** (from the inside).

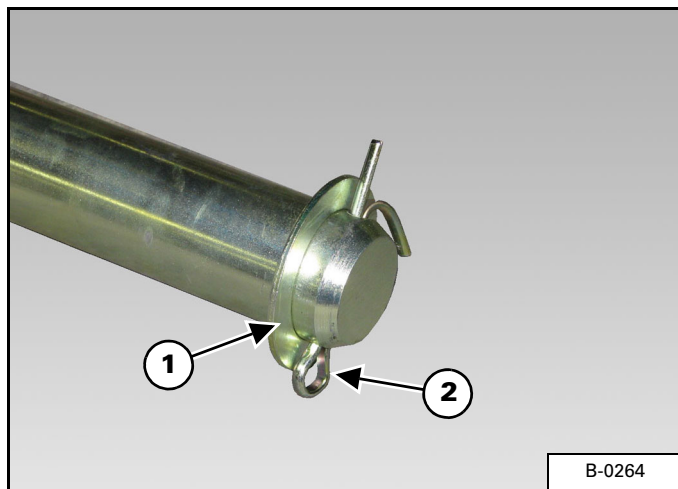
Figure 59



Install one 2" narrow rim washer (Item 1) and 5/16" x 3" cotter pin (Item 2) **[Figure 59]** on the lift arm pin (both pins).

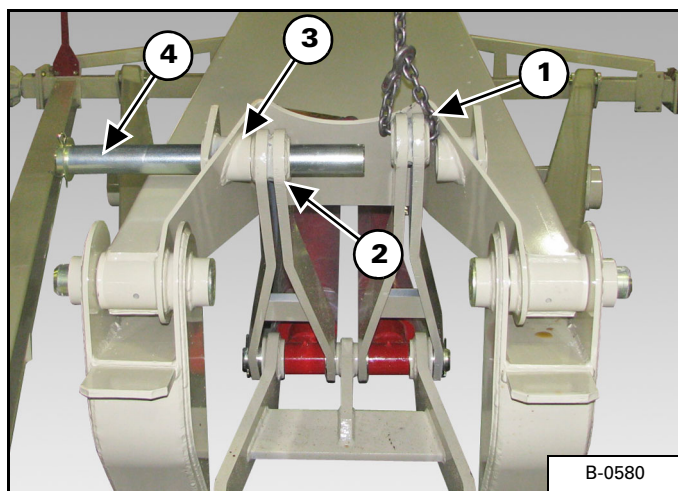
Lower the upper lift arm onto the cradle rest.

Figure 60



Install one 2" narrow rim washer (Item 1) and 5/16 x 3" cotter pin (Item 2) **[Figure 60]** onto the 2" x 20-1/2" upper lift arm pin rod.

Figure 61

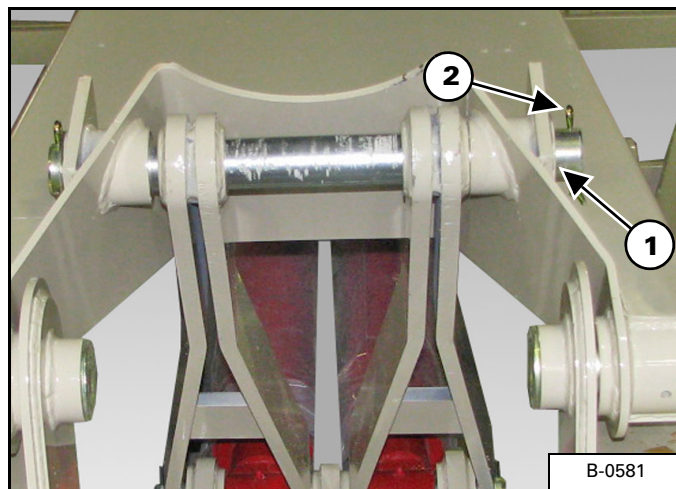


Install a chain through the mounting hole of the left yoke arm (Item 1). Lift the left yoke arm until the right yoke arm (Item 2) (lift right yoke arm by hand) is aligned with the upper lift arm mounting hole (Item 3) **[Figure 61]**.

Install the upper lift arm pin rod (Item 4) **[Figure 61]** through the upper lift arm mounting hole and right yoke arm.

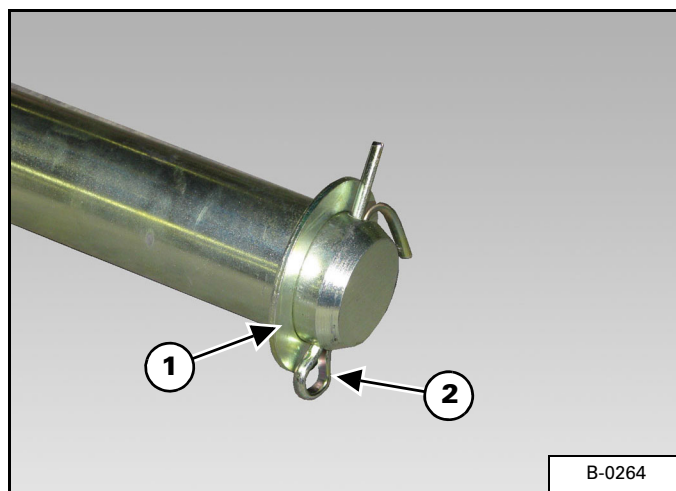
Remove the chain from the left yoke arm. Lift the left yoke arm and install the upper lift arm pin rod through the left yoke arm and upper lift arm mounting hole.

Figure 62



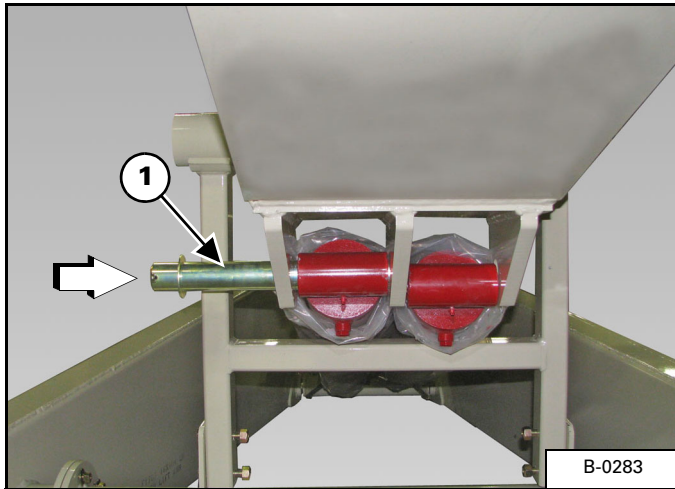
Install one 2" narrow rim washer (Item 1) and 5/16 x 3" cotter pin (Item 2) **[Figure 62]** onto the 2" x 20-1/2" upper lift arm pin rod.

Figure 63



Install one 2" narrow rim washer (Item 1) and 5/16 x 3" cotter pin (Item 2) **[Figure 63]** onto the 2" x 17-1/4" cylinder pin rod.

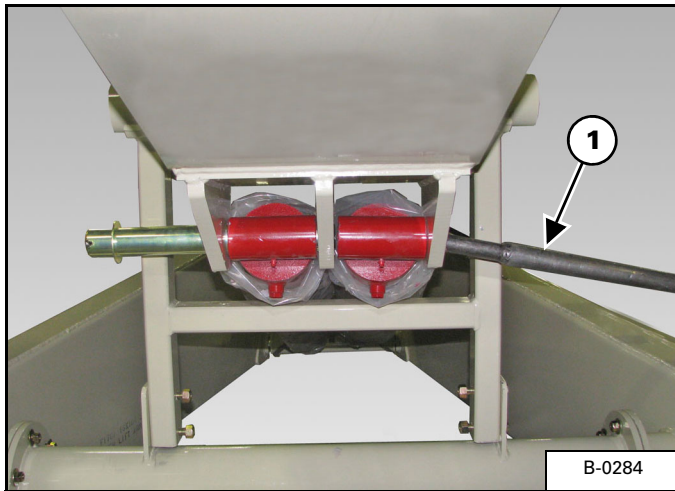
Figure 64



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

Install the cylinder pin rod (Item 1) **[Figure 64]** through the upper lift arm and left cylinder (stop when the pin enters the center mount of the upper lift arm).

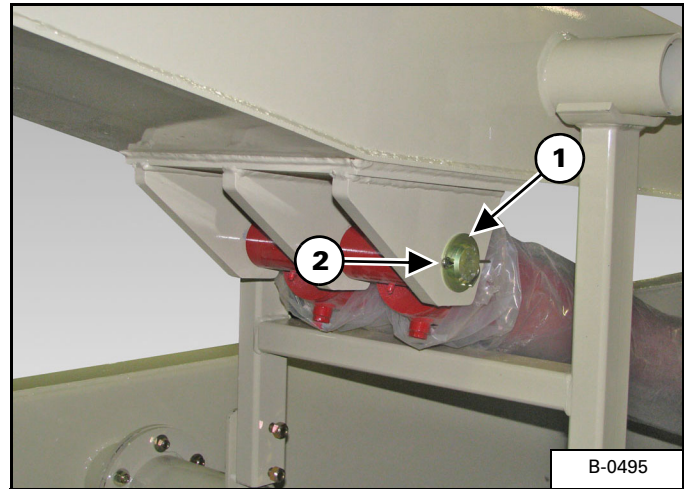
Figure 65



Using a bar (Item 1) **[Figure 65]**, align the right cylinder with the mounting holes of the upper lift arm.

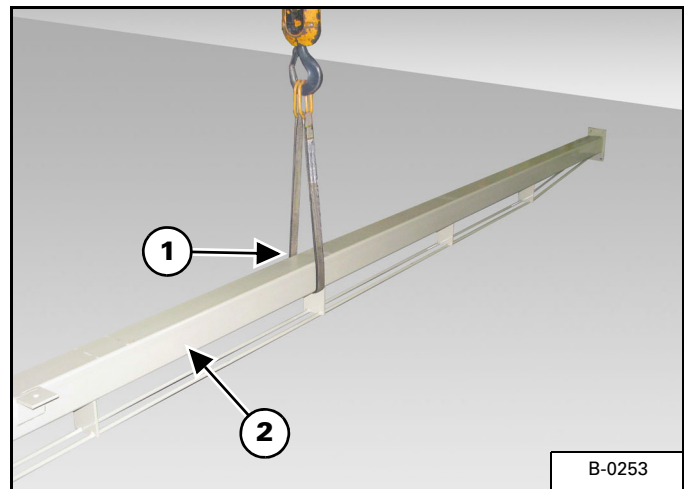
Continue installing the cylinder pin rod through the upper lift arm and right cylinder.

Figure 66



Install one 2" narrow rim washer (Item 1) and 5/16" x 3" cotter pin (Item 2) **[Figure 66]** onto the cylinder pin rod, securing the cylinders to the upper lift arm.

Figure 67

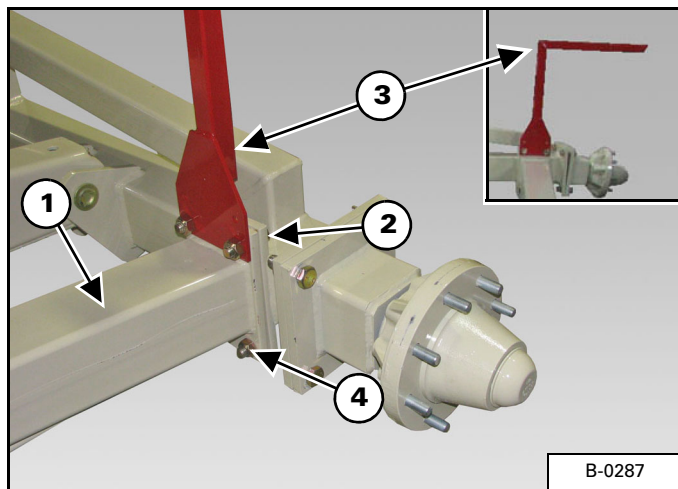


Install a strap (Item 1) around the center of the left undercarriage arm (Item 2) **[Figure 67]**.

Connect the strap to an approved lifting device.

Raise and move the left undercarriage arm towards the axle.

Figure 68

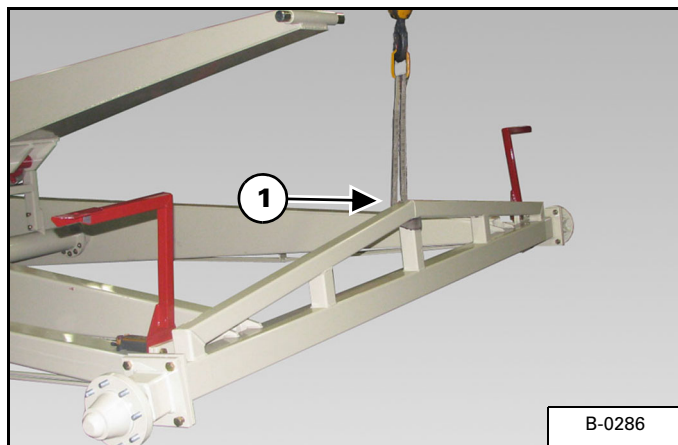


Align the left undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 68]**.

Place the LH blinker mount (Item 3) **[Figure 68]** onto the left undercarriage arm mounting plate (with the blinker mount facing to the outside).

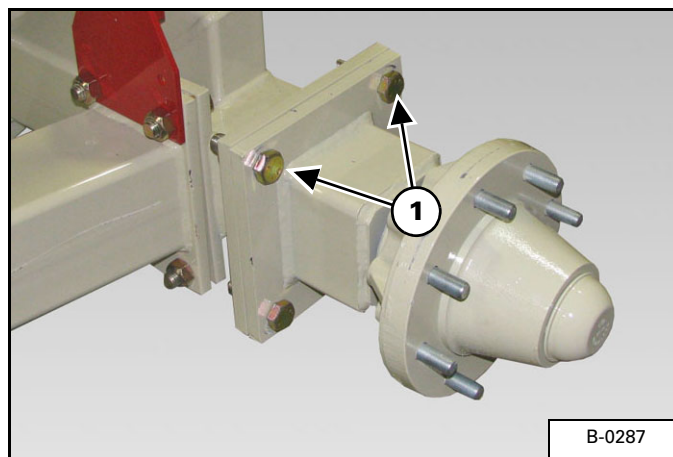
Install the four 3/4" x 2-1/2" bolts (Item 4) **[Figure 68]** and 3/4" lock nuts. Tighten the bolts until snug, do not fully tighten bolts and nuts at this time.

Figure 69



Install a strap (Item 1) around the center brace (Item 2) **[Figure 69]** on the axle. Connect the strap to an approved lifting device. Raise the axle high enough to install the tires.

Figure 70



Tighten the bottom two bolts (Item 1) **[Figure 70]** first. Tighten the bottom bolts until the two mounting plates are touching (no gap).

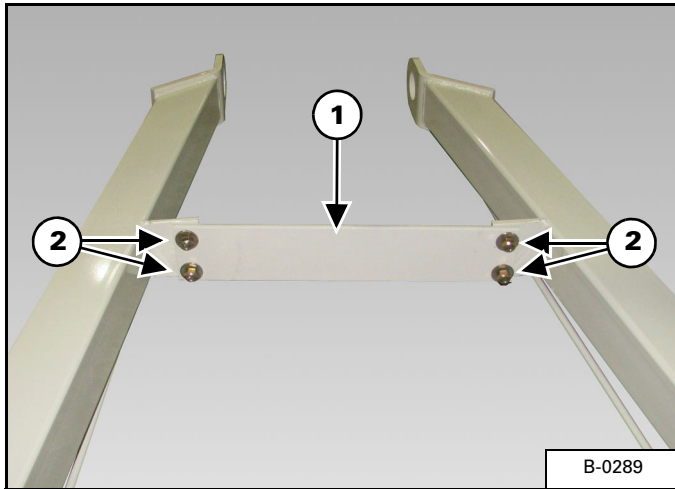
NOTE: If the top bolts cannot be tightened to close the gap between the two mounting plates, tighten the bolts as much as possible, then after the tube has been installed (adding additional weight and down pressure), finish tightening the top bolts until the two mounting plates are touching (no gap).

Tighten the top two bolts. Tighten the bolts until the two mounting plates are touching (no gap).

Repeat the procedure for tightening the opposite hub assembly.

Install the wheels. See page 27.

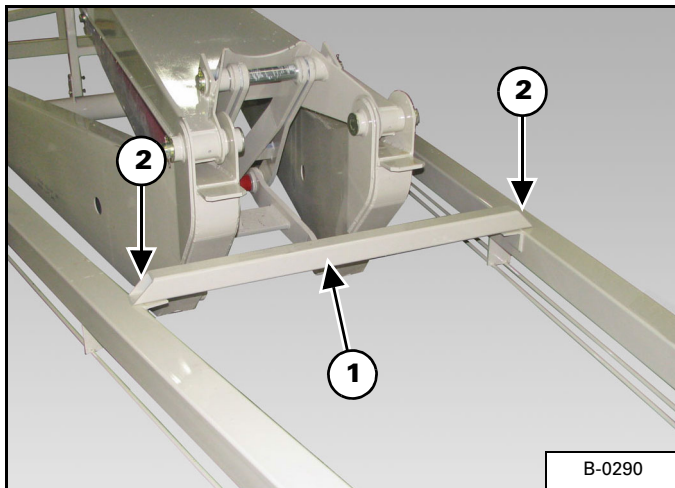
Figure 71



Align the brace plate (Item 1) **[Figure 71]** with the mounting plates on the LH & RH undercarriage arms.

Install four 5/8" flat washers onto four 5/8" x 2" bolts (Item 2) **[Figure 71]**. Install the bolts, then install 5/8" lock nuts on each bolt. Do not tighten at this time.

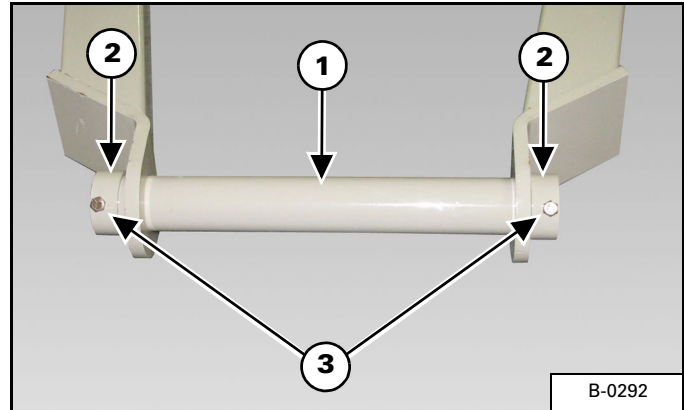
Figure 72



Align the lift arm rest tube (Item 1) **[Figure 72]** with the mounts on the LH & RH undercarriage arms.

Install two 5/8" x 2" bolts (Item 2) **[Figure 72]** and 5/8" lock nuts. Do not tighten at this time.

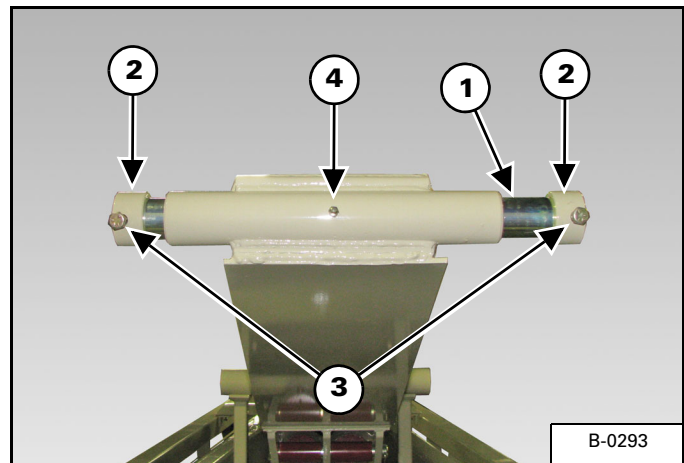
Figure 73



Locate and install the undercarriage lift arm pin (Item 1), undercarriage lift arm pin collars (Item 2), 1/2" x 3-1/2" bolts (Item 3) **[Figure 73]** and 1/2" lock nuts. Do not tighten bolts and nuts at this time.

NOTE: The undercarriage lift arm pin, collars, bolts and lock nuts are installed at this time, so these components are available when connecting to the tube.

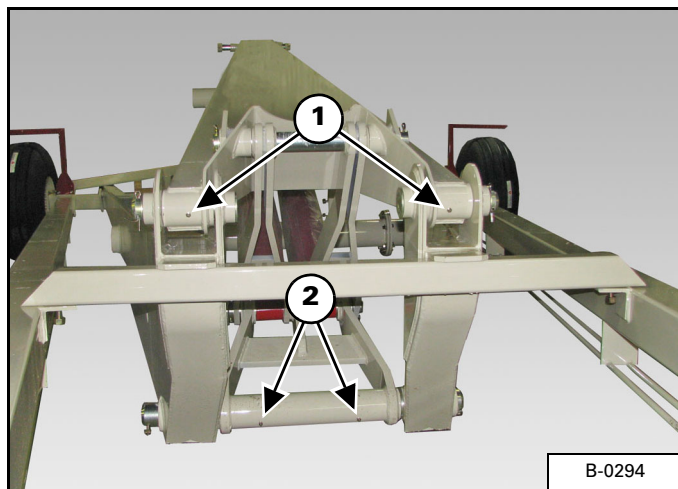
Figure 74



Locate and install the upper lift arm pin (Item 1), upper lift arm pin collars (Item 2), 1/2" x 3-1/2" bolts (Item 3) **[Figure 74]** and 1/2" lock nuts. Do not tighten bolts and nuts at this time.

NOTE: The upper lift arm pin, collars, bolts and lock nuts are installed at this time, so these components are available when connecting to the tube.

Install grease zerk (Item 4) **[Figure 74]**.

Figure 75


Install the two grease zerks (Item 1) into the upper lift arm. Install the two grease zerks (Item 2) **[Figure 75]** into the link.

16124 Undercarriage Assembly

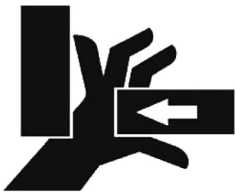
Assemble the undercarriage on flat level surface.

WARNING



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

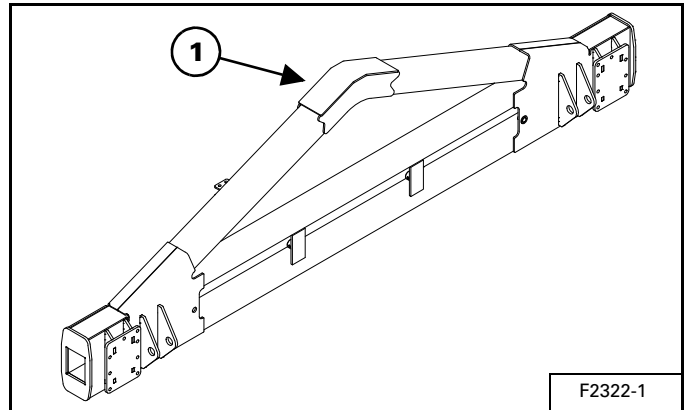
WARNING



AVOID INJURY OR DEATH

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

Figure 76



Install a strap around the center of the axle (Item 1) [Figure 76].

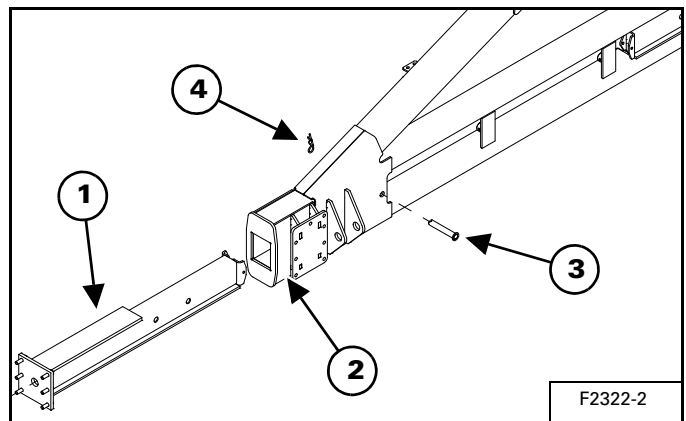
Connect the strap to an approved lifting device.

Raise and move the axle to the assembly area.

Place blocks under the axle on each side and lower the axle unto the blocks.

Keep the axle supported with strap and lifting device.

Figure 77



Apply a light coat of grease to the axle extension (Item 1) [Figure 77].

Position the axle extension as shown and slide the axle extension into the axle (Item 2) [Figure 77].

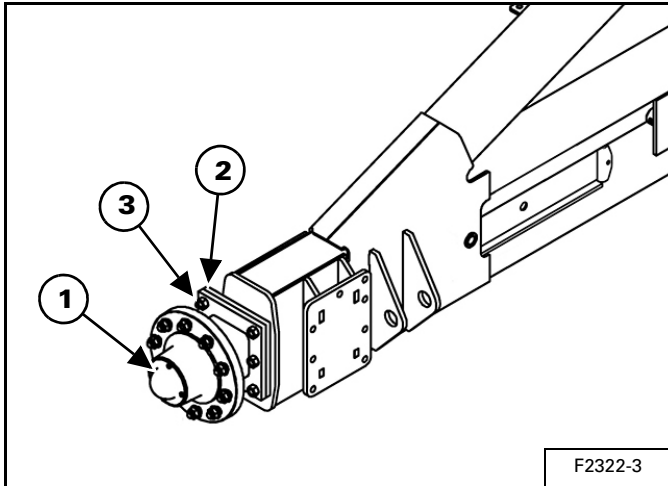
Align the desired hole in the axle extension with the hole in the axle.

Install the 1-1/4" x 7-3/4" pin (Item 3) through the axle and axle extension and secure with hair pin clip (Item 4) [Figure 77].

Repeat procedure for the opposite side.

NOTE: Align axle extensions evenly on both sides.

Figure 78

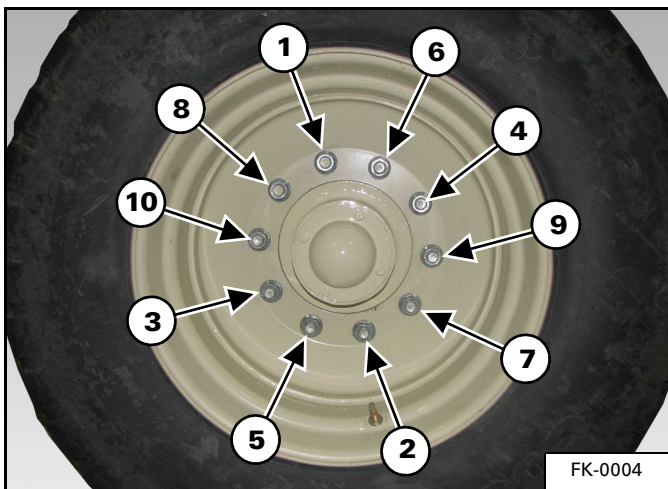


Align the hub (Item 1) [Figure 78] with the axle.

Install the six 3/4" x 2-1/2" bolts (Item 2) [Figure 78] and 3/4" lock nuts. Tighten bolts and nuts.

Repeat procedure on the opposite side.

Figure 79



NOTE: Ten bolt hub shown.

Install the tire with the valve stem facing out (both sides). Install the wheel nuts (both sides) [Figure 79].

Tighten wheel nuts in a criss-cross pattern.

Ten Bolt Hub - Tighten wheel nuts to 462 lb. ft. (626 N•m) of torque.

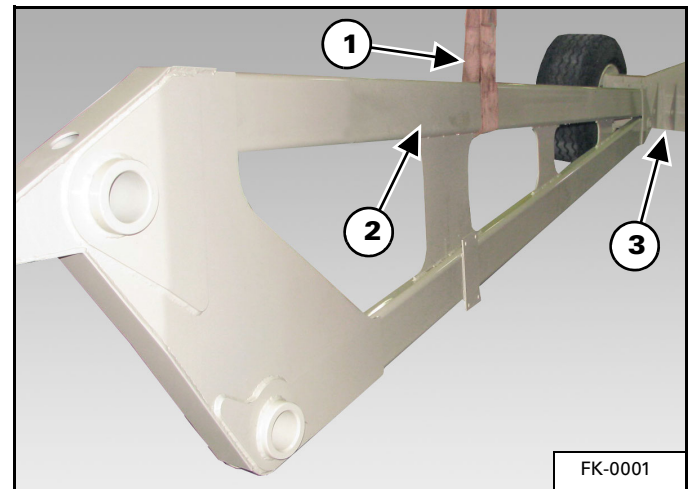
Eight Bolt Hub - Tighten wheel nuts to 264 lb. ft. (358 N•m) of torque.

Six Bolt Hub - Tighten wheel nuts to 133 lb. ft. (180 N•m) of torque.

Lower the axle and tires to the ground.

Check tire pressure.

Figure 80

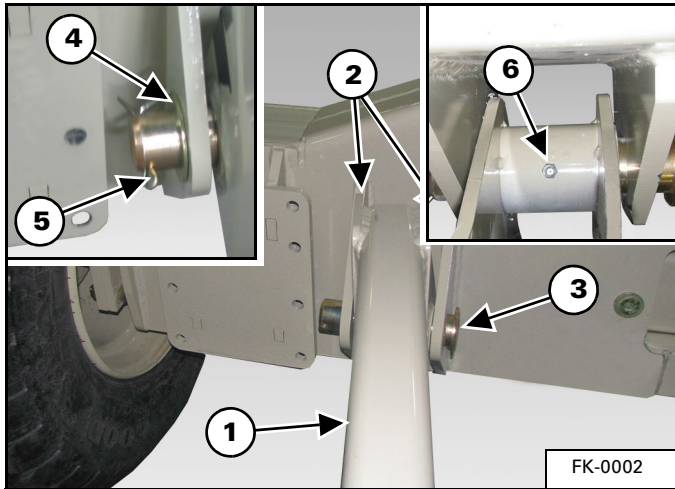


Install a strap (Item 1) around the RH lower lift arm (Item 2) [Figure 80]. Connect the strap to an approved lifting device.

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

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

Figure 81



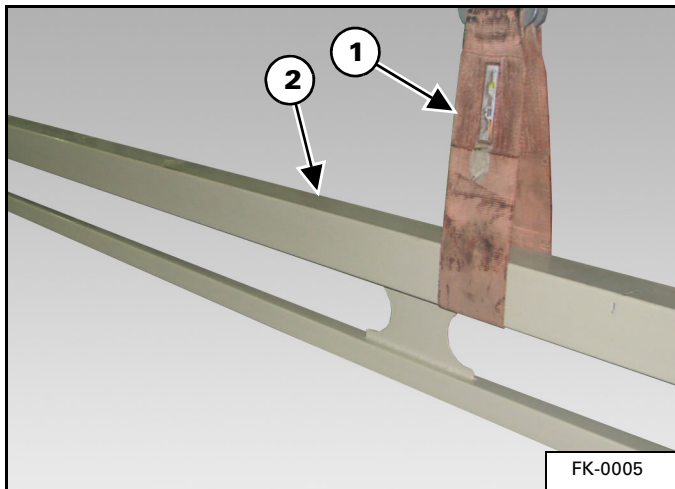
Align the RH lower lift arm (Item 1) with the two mounts (Item 2) **[Figure 81]** on the axle.

Install one 2 x 9" pin (Item 3) **[Figure 81]** through the axle mounts and RH lower lift arm.

Install one 2" narrow rim washer (Item 4) onto the pin and 5/16" x 3" cotter pin (Item 5) **[Figure 81]**.

Install the grease zerk (Item 6) **[Figure 81]**.

Figure 82



Install a strap (Item 1) around the center of the LH undercarriage arm (Item 2) **[Figure 82]**.

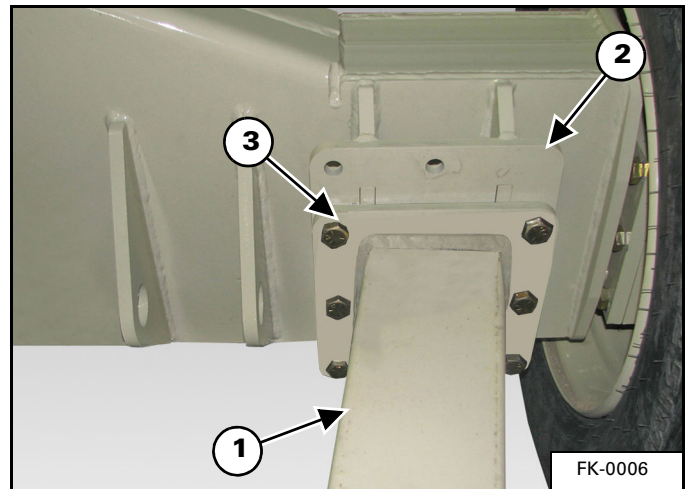
Connect the strap to an approved lifting device.

Raise and move the LH undercarriage arm towards the axle.

NOTE: The RH undercarriage arm will be installed later, this allows room for pin installation into lower and upper lift link

assembly.

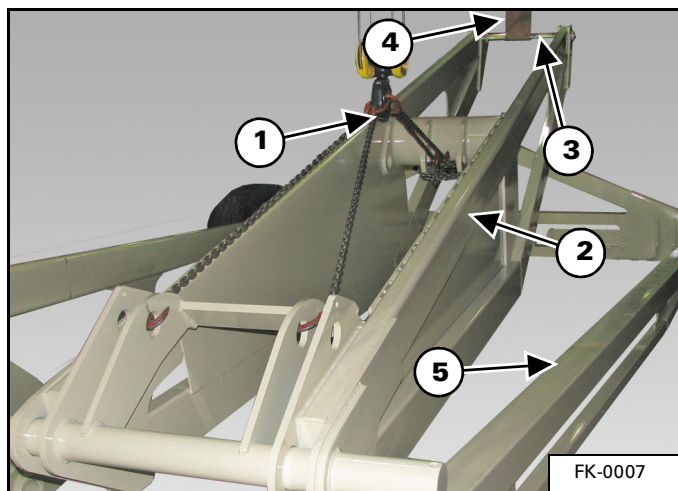
Figure 83



Align the LH undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 83]**.

Install the six 3/4" x 2-1/2" bolts (Item 3) **[Figure 83]** and 3/4" lock nuts. Do not tighten bolts and nuts at this time.

Figure 84



Install straps or chains (Item 1) around the upper lift link (Item 2) [Figure 84]. Connect to an approved lifting device.

Install the 2" diameter upper lift arm pin (Item 3) through the LH and RH upper link, install the collar and 1/2" x 3-1/2" bolt, 1/2" lock nut (both sides). Do not tighten.

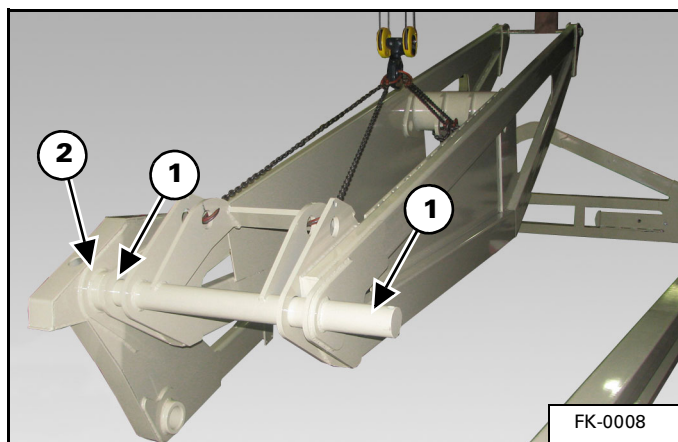
Install a strap (Item 4) onto the 2" diameter pin and connect the strap to a second lifting device. [Figure 84].

NOTE: The 2" diameter pin is installed temporarily for lifting purposes.

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

Move the upper lift link over the LH undercarriage arm (Item 5) [Figure 84].

Figure 85

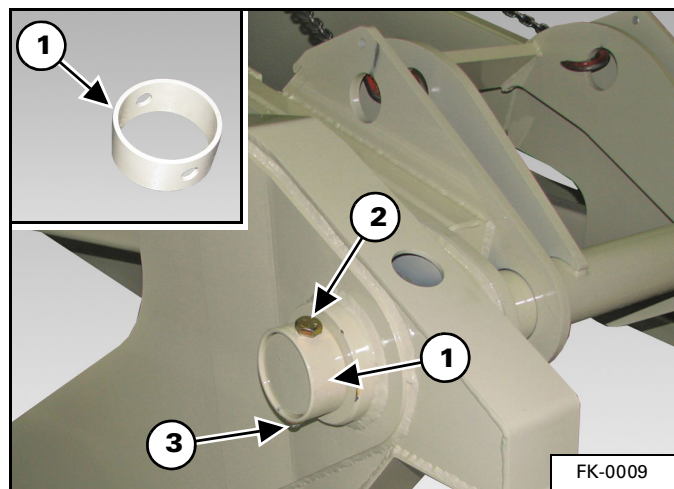


Apply a light coat of grease to the upper link shaft (Item 1) [Figure 85] (both sides).

Align the upper lift link to the RH lower lift arm (Item 2) [Figure 85].

Slide the upper lift link shaft into the top hole on the RH lower lift arm until the shaft is fully installed.

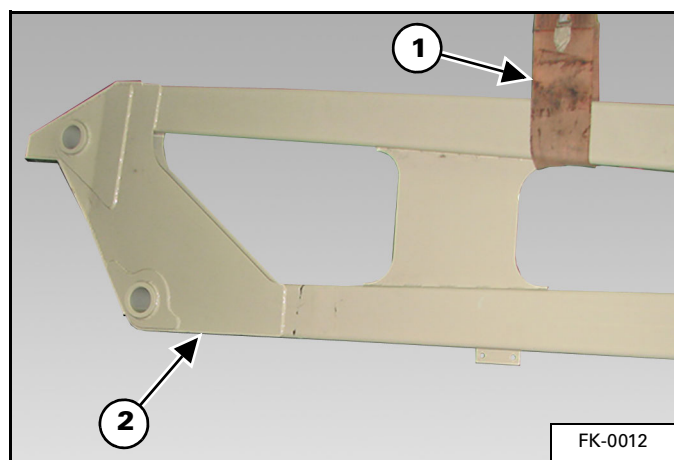
Figure 86



Install the pin sleeve (Item 1) [Figure 86] onto the upper lift link shaft.

Install the 3/4" x 5-1/2" bolt (Item 2) and 3/4" lock nut (Item 3) [Figure 86] and tighten.

Figure 87

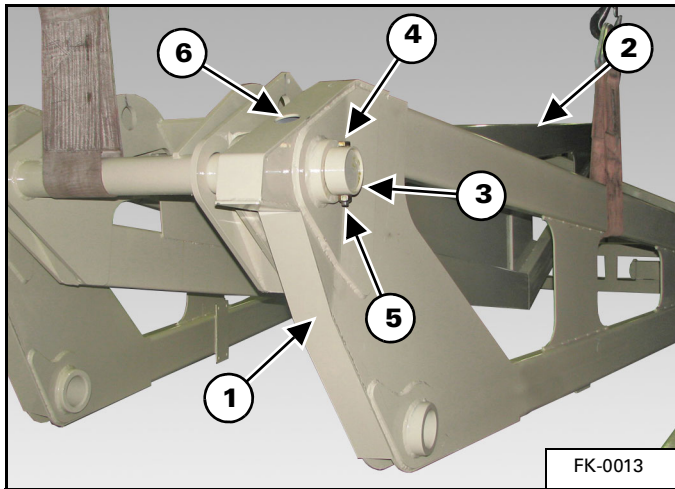


Install a strap (Item 1) around the LH lower lift arm (Item 2) [Figure 87]. Connect the strap to an approved lifting device.

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 88



Align the LH lower lift arm (Item 1) to the upper lift link (Item 2) **[Figure 88]**.

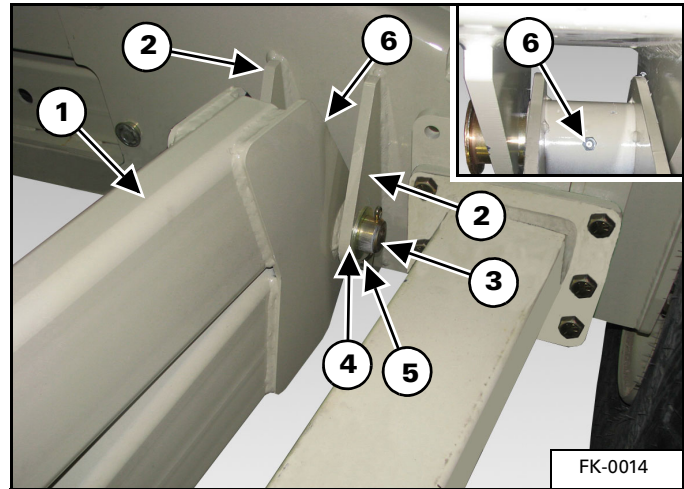
Slide the LH lower lift arm onto the upper lift link shaft until it is fully installed on the shaft.

Install the pin sleeve (Item 3) **[Figure 88]** onto the upper link arm shaft.

Install the 3/4" x 5-1/2" bolt (Item 4) and 3/4" lock nut (Item 5) **[Figure 88]** and tighten.

Install the grease zerk (Item 6) **[Figure 88]** (both sides).

Figure 89



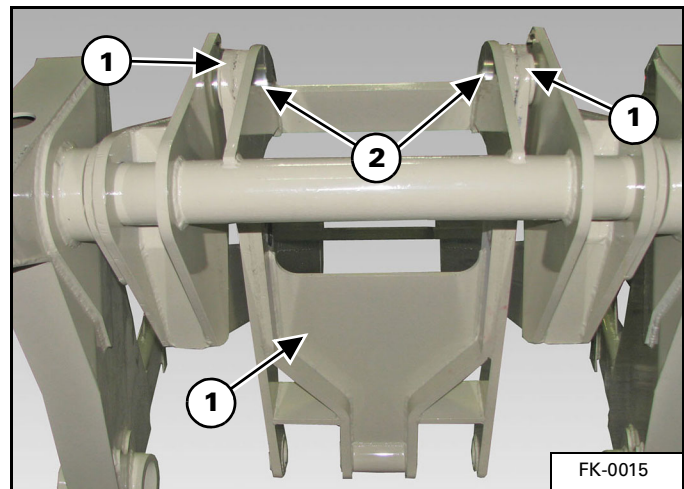
Align the LH lower lift arm (Item 1) with the two mounts (Item 2) **[Figure 89]** on the axle.

Install one 2" diameter pin (Item 3) **[Figure 89]** through the axle mounts and LH lower lift arm.

Install one 2" narrow rim washer (Item 4) onto the pin and 5/16" x 3" cotter pin (Item 5) **[Figure 89]**.

Install the grease zerk (Item 6) **[Figure 89]**.

Figure 90

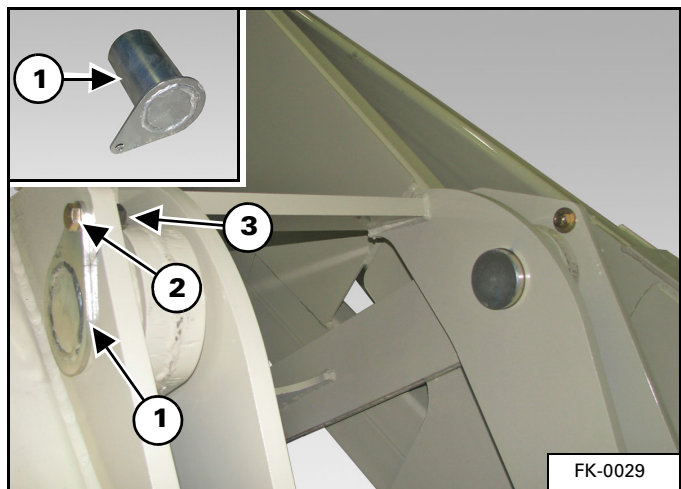


Install straps to the upper pivot yoke (Item 1) **[Figure 90]**.

Connect the straps to an approved lifting device.

Raise and position the upper pivot yoke as shown. Align the upper pivot yoke with the upper lift link holes (Item 2) **[Figure 90]**.

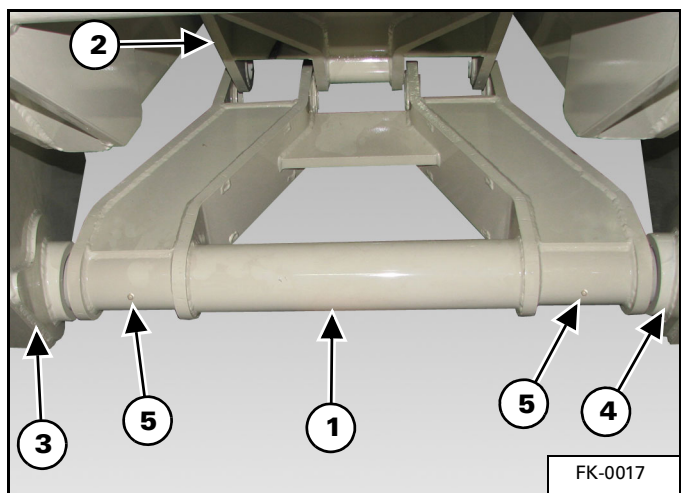
Figure 91



Apply a light coat of grease to the 3" diameter pin (Item 1) **[Figure 91]** and install the 3" diameter pin through the upper lift link and upper pivot yoke (both sides).

Align the 3" diameter pin bolt hole and install the 1/2" x 2" bolt (Item 2), 1/2" washer and 1/2" lock nut (Item 3) (both sides) **[Figure 91]**. Tighten bolts.

Figure 92



Install straps to the lower pivot yoke (Item 1) **[Figure 92]**.

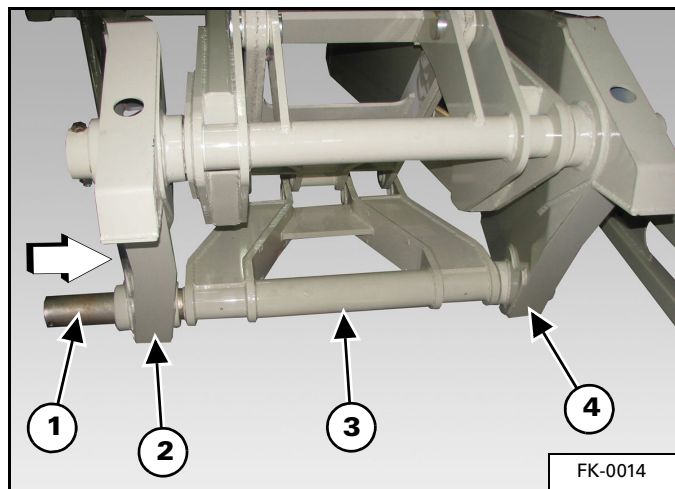
Connect the straps to an approved lifting device.

Position the lower pivot yoke as shown onto the upper pivot yoke (Item 2) **[Figure 92]**.

Align the lower pivot yoke with the RH lower lift arm (Item 3) and LH lower lift arm (Item 4) **[Figure 92]**.

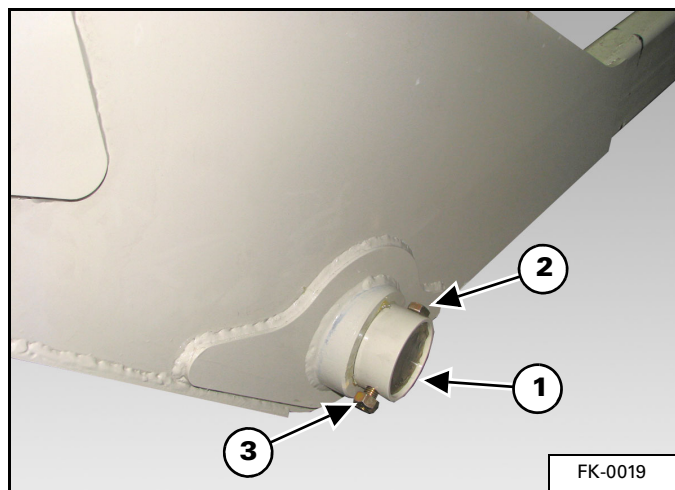
Install the two grease zerks (Item 5) **[Figure 92]**.

Figure 93



Apply a light coat of grease to the 4" diameter pin (Item 1) and install the 4" diameter pin into the RH lower lift arm (Item 2) through the lower pivot yoke (Item 3) and LH lower lift arm (Item 4) **[Figure 93]**.

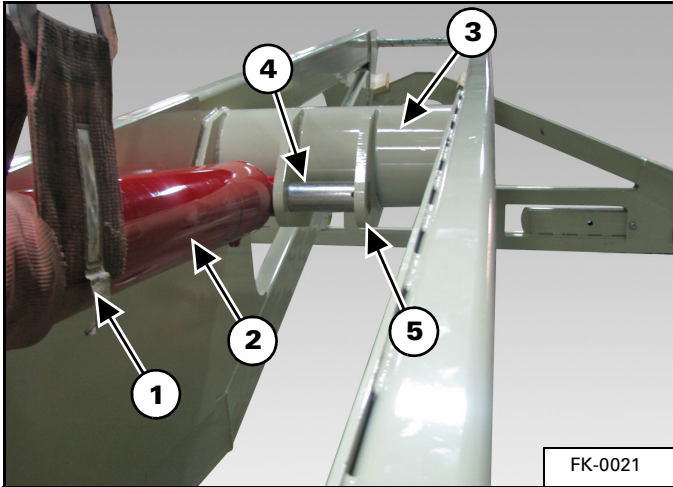
Figure 94



Install the pin sleeve (Item 1) **[Figure 94]** onto the 4" pin.

Install the 3/4" x 5-1/2" bolt (Item 2) and 3/4" lock nut (Item 3) **[Figure 94]** and tighten.

Figure 95



Install a strap (Item 1) around the hydraulic cylinder (Item 2) **[Figure 95]**.

NOTE: The hydraulic cylinder ports must face down when installed.

Connect the strap to an approved lifting device.

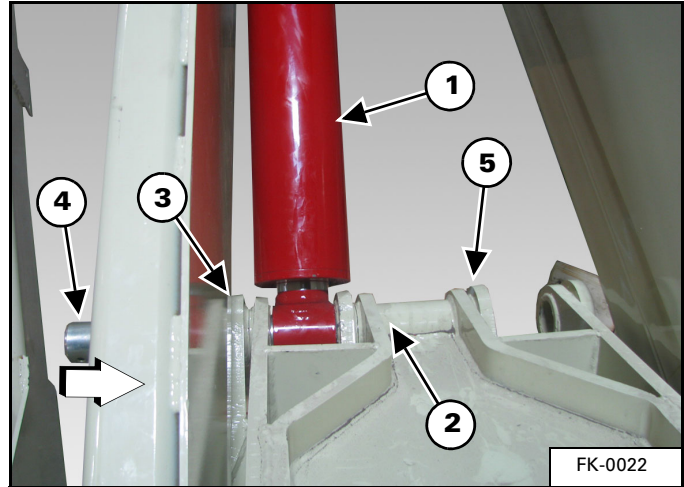
Raise and move the hydraulic cylinder (base end) toward the upper lift link cylinder mount (Item 3) **[Figure 95]**.

Align the hydraulic cylinder in the mount.

Apply a light coat of grease to the 3" diameter pin (Item 4) **[Figure 95]**.

Install the pin through the mount holes and hydraulic cylinder until the 3" diameter pin is in the other cylinder mount (Item 5) **[Figure 95]**.

Figure 96



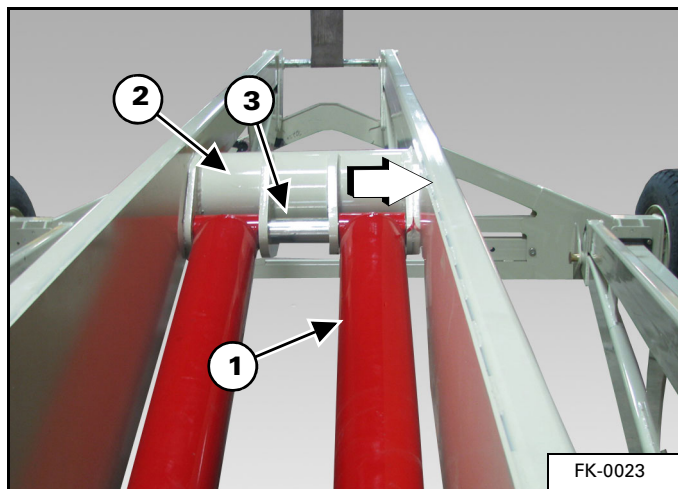
NOTE: The hydraulic cylinder rod ends must be installed with grease zerks face down.

Lower the hydraulic cylinder (Item 1) and align the hydraulic cylinder (rod end) with the upper pivot yoke (Item 2) and lower pivot yoke (Item 3) **[Figure 96]**.

Apply a light coat of grease to the 3" diameter pin (Item 4) **[Figure 96]**.

Install the pin through the hydraulic cylinder until the pin is at the next hydraulic cylinder location (Item 5) **[Figure 96]**.

Figure 97



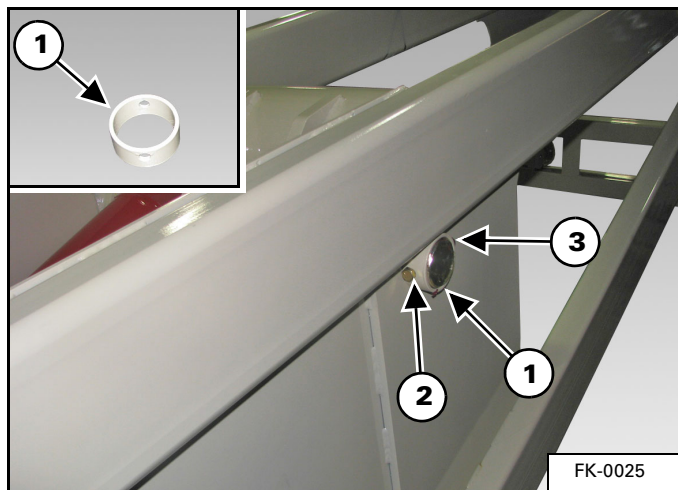
Install a strap around the hydraulic cylinder (Item 1) **[Figure 97]**.

Connect the strap to an approved lifting device.

Raise and move the hydraulic cylinder (base end) toward the upper lift link cylinder mount (Item 2) **[Figure 97]**.

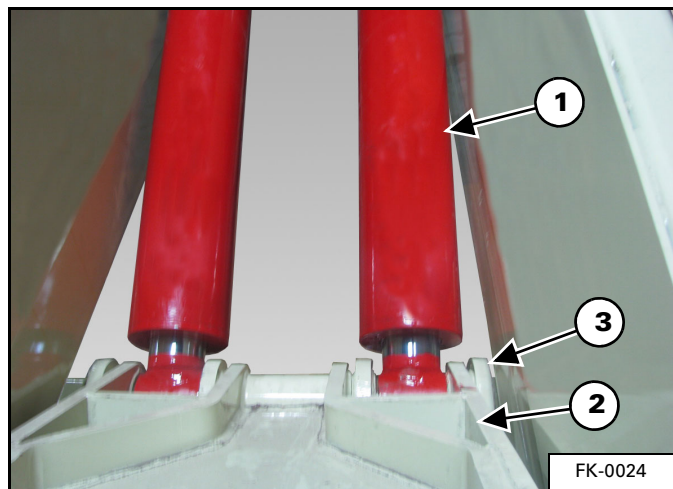
Align the hydraulic cylinder in the mount and install the 3" diameter pin (Item 3) **[Figure 97]** through the hydraulic cylinder and mount holes.

Figure 98



Install the pin sleeve (Item 1), 1/2" x 4-1/2" bolt (Item 2) and 1/2" lock nut (Item 3) **[Figure 98]** (both sides).

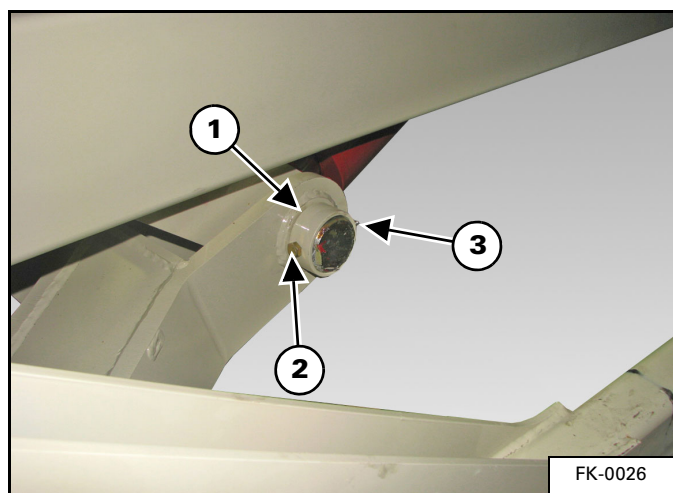
Figure 99



Lower the hydraulic cylinder (Item 1) and align the hydraulic cylinder (rod end) with the upper pivot yoke (Item 2) and lower pivot yoke (Item 3) **[Figure 99]**.

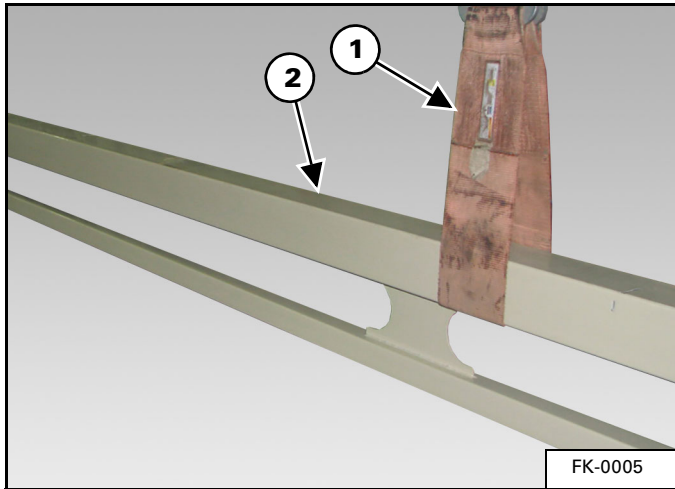
Install the 3" diameter pin.

Figure 100



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

Figure 101

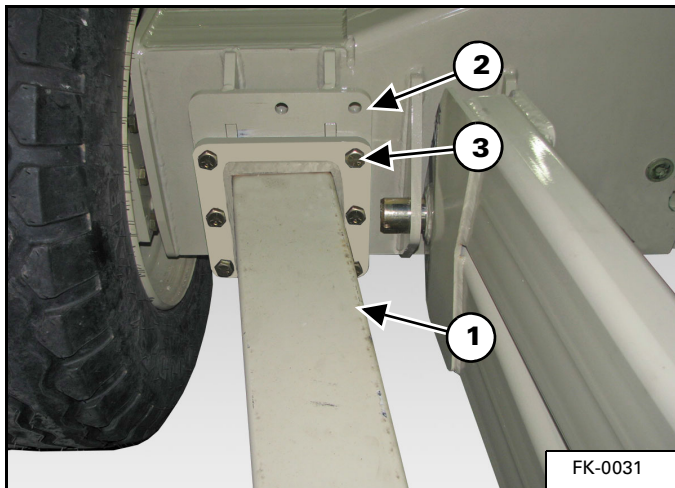


Install a strap (Item 1) around the center of the RH undercarriage arm (Item 2) **[Figure 101]**.

Connect the strap to an approved lifting device.

Raise and move the RH undercarriage arm towards the axle.

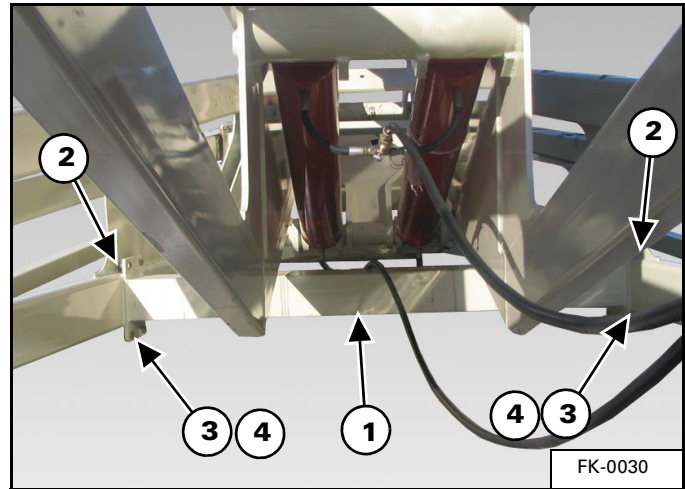
Figure 102



Align the RH undercarriage arm (Item 1) with the mounting flange (Item 2) on the axle **[Figure 102]**.

Install the six 3/4" x 2-1/2" bolts (Item 3) **[Figure 102]** and 3/4" lock nuts. Do not tighten bolts and nuts at this time.

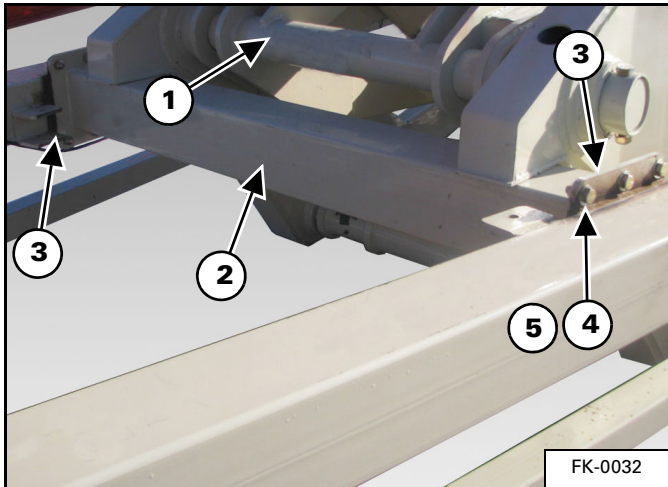
Figure 103



Install the support brace (Item 1) between the support arm mounts (Item 2) **[Figure 103]** located on the RH lower lift arm and LH lower lift arm.

Align the support brace to the mounts and install four 5/8 x 1-1/2" bolts (Item 3) and 5/8" lock nuts (Item 4) **[Figure 103]** (both sides). Do not tighten bolts and nuts at this time.

Figure 104



Using a strap and proper lifting device, raise the upper link arm (Item 1) **[Figure 104]**.

Install a strap(s) around the cross brace support (Item 2) **[Figure 104]**.

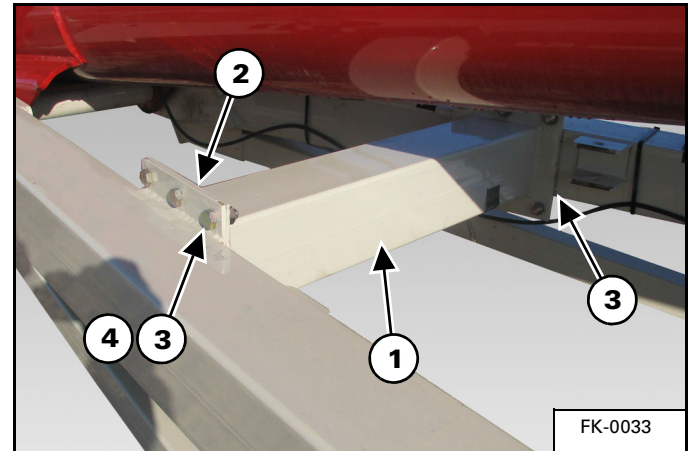
Connect the strap to an approved lifting device.

Raise and move the cross brace support between the RH and LH undercarriage arms cross brace mounts (Item 3) **[Figure 104]**.

Install the six 5/8" x 1-1/2" bolts (Item 4) and 5/8" lock nuts (Item 5) **[Figure 104]** (both sides). Do not tighten bolts at this time.

Remove strap and lifting device from the cross brace support, lower the upper link arm onto the cross brace support. Remove strap and lifting device.

Figure 105



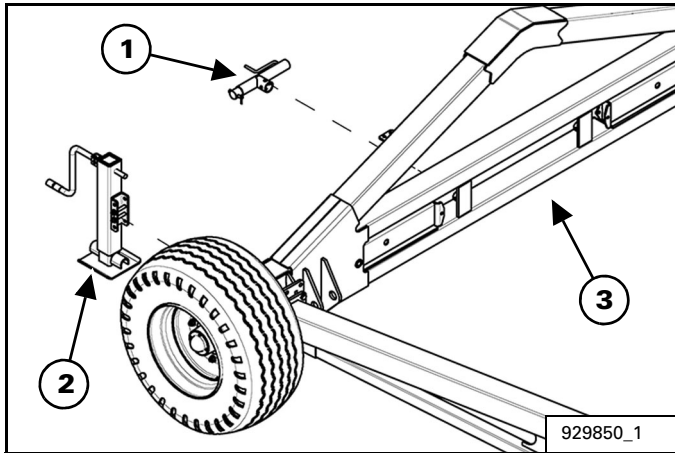
Install a strap(s) around the cross brace support (Item 1) **[Figure 105]**.

Connect the strap to an approved lifting device.

Raise and move the cross brace support (Item 1) between the RH and LH undercarriage arms cross brace mounts (Item 2) **[Figure 105]**.

Install the six 5/8" x 1-1/2" bolts (Item 3) and 5/8" lock nuts (Item 4) **[Figure 105]** (both sides). Do not tighten bolts at this time.

Figure 106



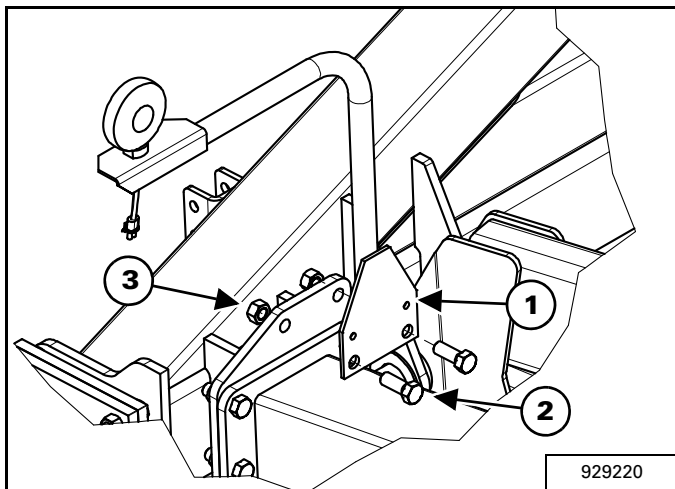
Install the axle adjust jack (Item 1) **[Figure 106]** as shown to the mount on the axle and secure with the 1/2" x 3-1/2" clevis pin and hair pin clip.

Repeat procedure for opposite side.

Place the jack stand (Item 2) **[Figure 106]** into mount on the axle, install two bolts and lock nuts. Tighten bolts.

Repeat procedure for opposite side.

Figure 107



Install the RH blinker mount (Item 1), on the RH side of the axle.

Install the two 3/4" x 2" bolts (Item 2) and two 3/4" lock nuts (Item 3) **[Figure 107]**.

Repeat procedure for the LH blinker mount.

1684 & 16104 Tube Assembly

Assemble the tube on flat level surface.

WARNING



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

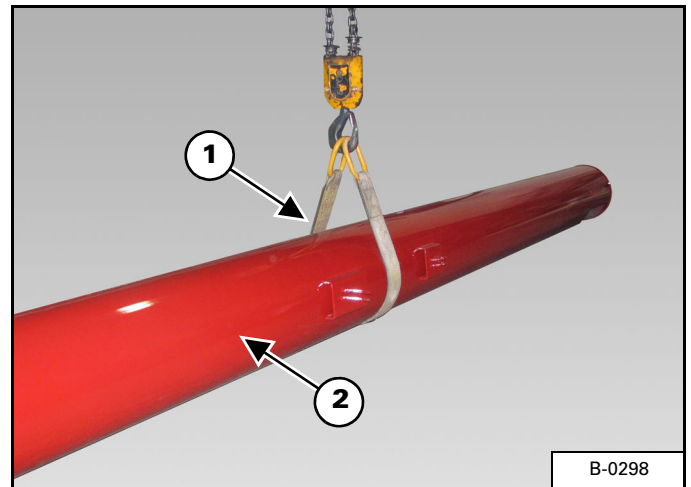
WARNING



AVOID INJURY OR DEATH

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

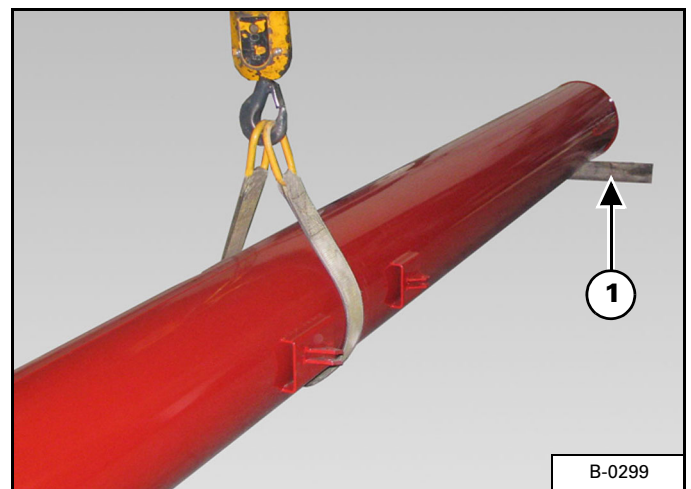
Figure 108



Install a strap (Item 1) around #4 tube (1684) or #5 tube (16104) (Item 2) **[Figure 108]**.

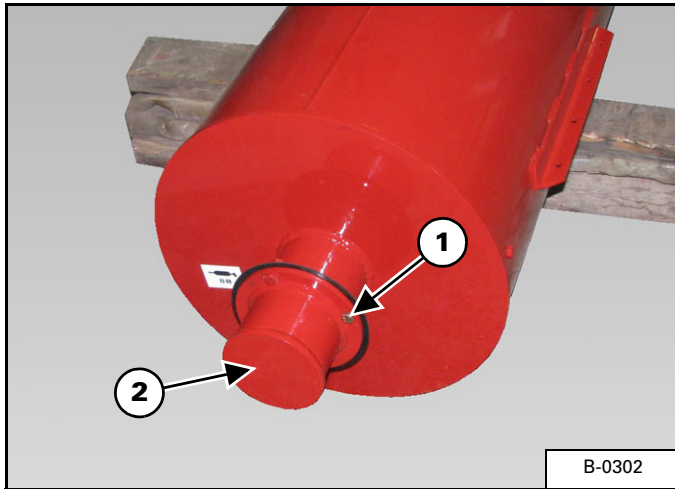
Raise and move the #4 tube (1684) or #5 tube (16104) to the assembly area.

Figure 109



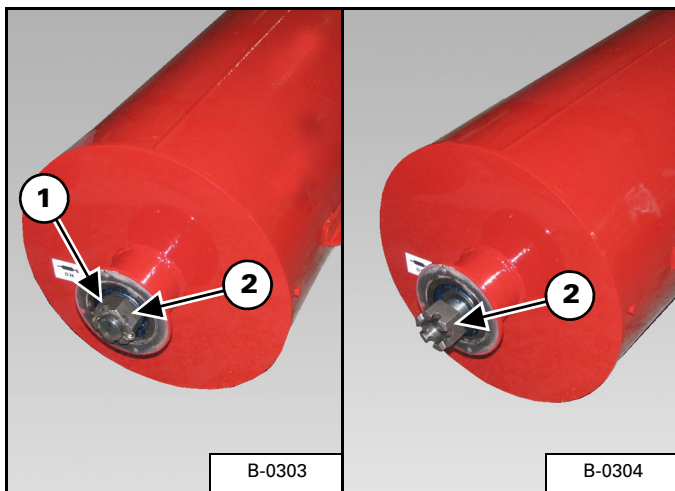
Place a block (Item 1) **[Figure 109]** under the discharge spout end of the tube. Lower the tube onto the block. Remove strap.

Figure 110



Remove the four bolts (Item 1) and remove the dust cap (Item 2) **[Figure 110]**.

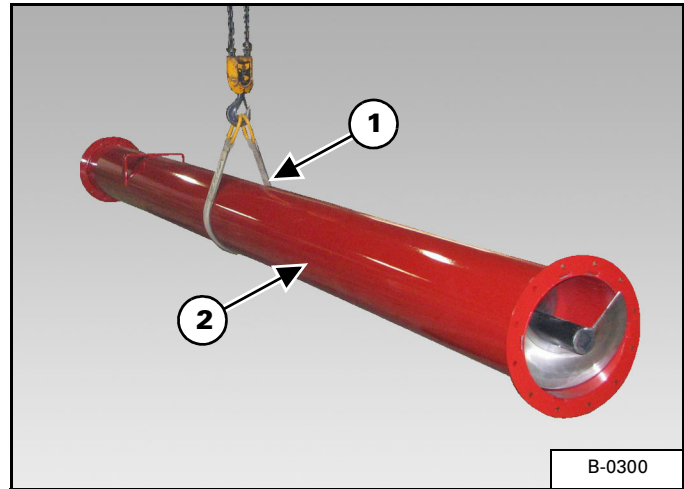
Figure 111



Remove the cotter pin (Item 1) and loosen the castle nut (Item 2) **[Figure 111]**. Do not remove the castle nut.

NOTE: Loosening the castle nut will allow the flighting to move in the tube for connecting additional tubes.

Figure 112



Model 1684

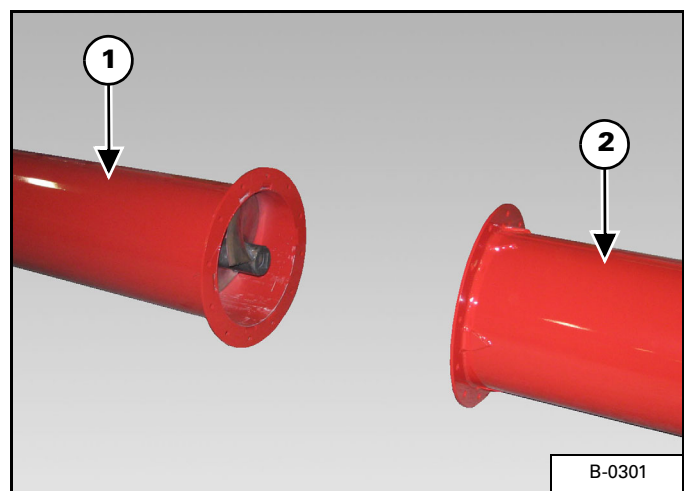
Install a strap (Item 1) around #3 tube (Item 2) **[Figure 112]**.

Model 16104

Install a strap (Item 1) around #4 tube (Item 2) **[Figure 112]**.

Raise and move the #3 tube (1684) or #4 tube (16104) tube to the assembly area.

Figure 113



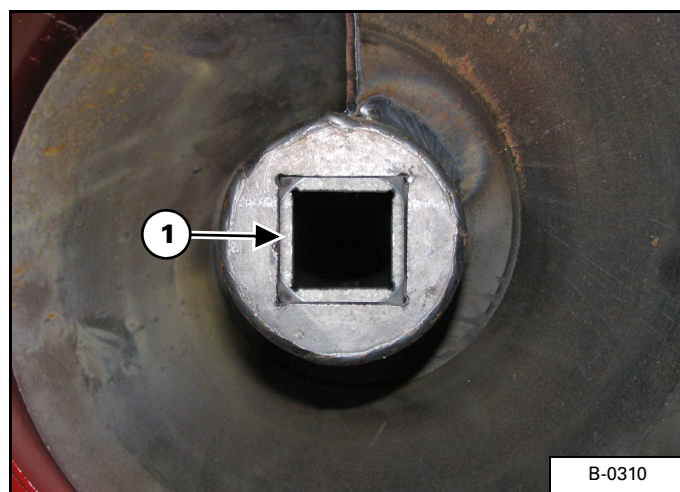
Model 1684

Align the mounting flanges of the #4 tube (Item 1) and #3 tube (Item 2) **[Figure 113]**.

Model 16104

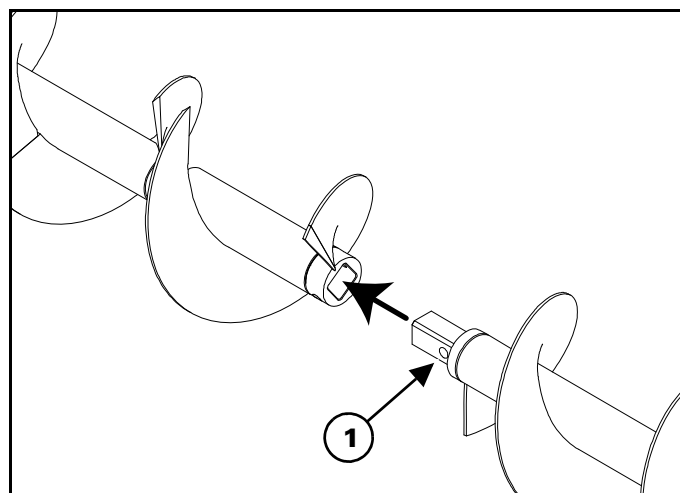
Align the mounting flanges of the #5 tube (Item 1) and #4 tube (Item 2) **[Figure 113]**.

Figure 114



The shaft will need to be aligned with and inserted into the inner collar (Item 1) [Figure 114] of flighting tube.

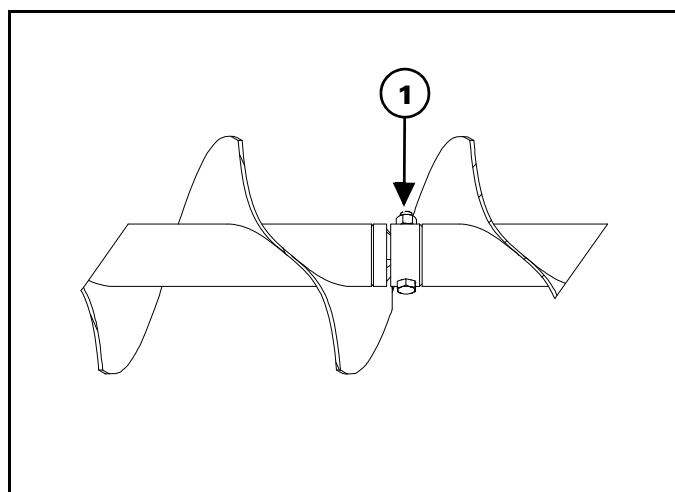
Figure 115



Slide the flighting out of the #4 tube (1684) or #5 tube (16104) until the bolt hole (Item 1) [Figure 115] is clear of the mounting flange.

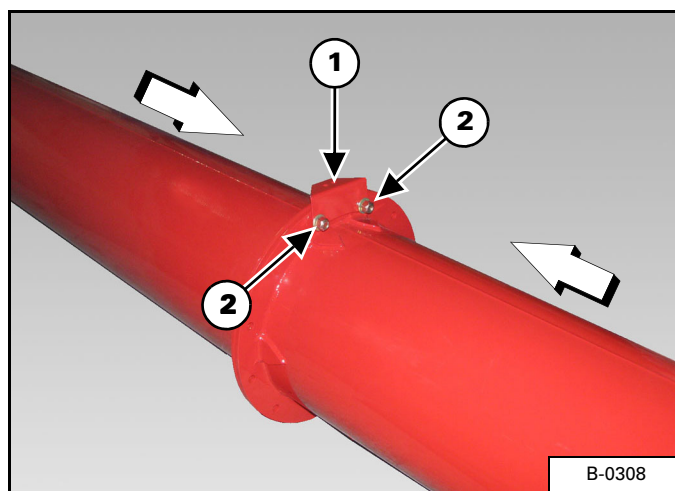
Align the bolt holes [Figure 115].

Figure 116



Slide the flighting from the #3 tube (1684) or #4 tube (16104) forward onto the connecting shaft and install one 3/4" x 6" bolt (Item 1) [Figure 116] and 3/4" lock nut. Tighten bolt and lock nut.

Figure 117



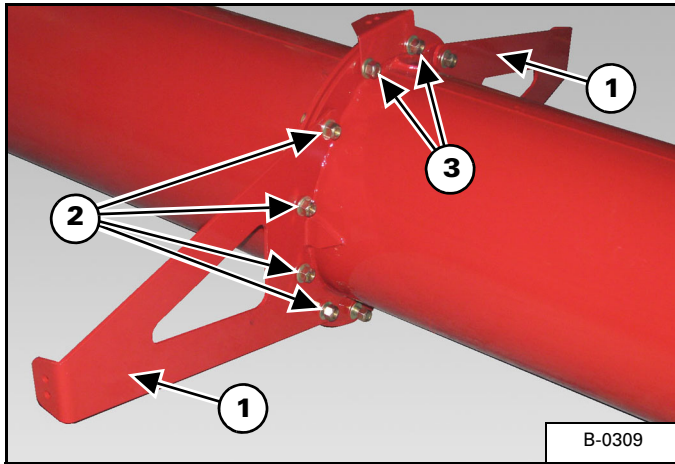
Slide the #4 tube and #3 tube (1684) or #5 tube and #4 tube (16104) together until the mounting flanges contact each other [Figure 117].

Align and install the mounting bracket (Item 1) (with the angled flange (top) towards the discharge spout).

NOTE: Place one 5/8" flat washer on each (Grade 8) 5/8" x 2" bolt before installing.

Install two (Grade 8) 5/8" x 2" bolts (Item 2) [Figure 117] (with flat washers) through the tube flanges and mounting bracket. Install one 5/8" flat washer and 5/8" lock nut on each bolt. Do not tighten bolts and lock nuts at this time.

Figure 118



Align and install two side bridging brackets (Item 1) [Figure 118].

NOTE: Place one 5/8" flat washer on each (Grade 8) 5/8" x 2" bolt before installing.

Install four (Grade 8) 5/8" x 2" bolts (Item 2) [Figure 118] (with flat washers) through the tube flanges and side bridging brackets (both sides). Install one 5/8" flat washer and 5/8" lock nut on each bolt.

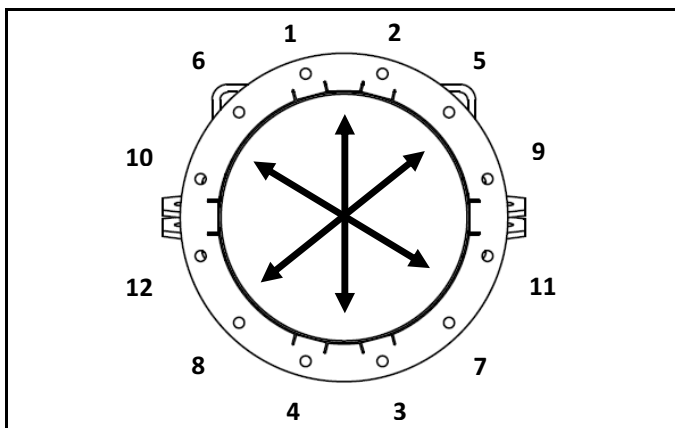
Install the bottom two (Grade 8) 5/8" x 2" bolts (with flat washers) through the tube mounting flanges. Install one 5/8" flat washer and 5/8" lock nut on each bolt.

Raise the opposite end of #3 tube (1684) or #4 tube (16104) until the mounting flanges make contact.

Tighten the top two bolts (Item 3) [Figure 118] and lock nuts first.

Lower #3 tube (1684) or #4 tube (16104) and tighten bottom two bolts and lock nuts.

Figure 119



Install remaining bolts and tighten bolts in a criss-cross pattern [Figure 119], working around the mounting flanges.

Repeat [Figure 115] thru [Figure 119] for the remaining tubes.

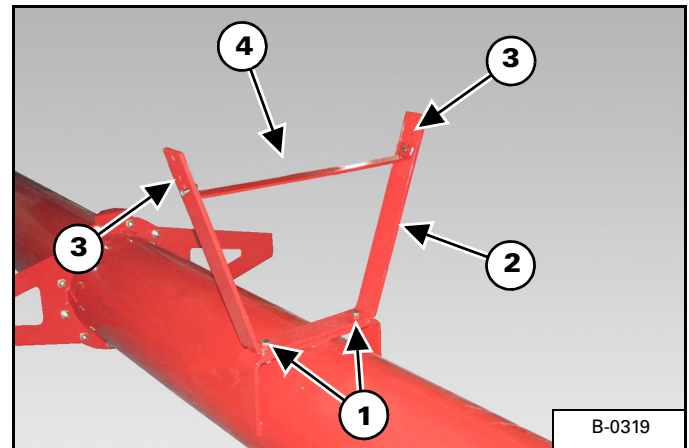
Locate and uncoil the four 3/4" cables.

Locate and uncoil the two 1/2" cables.

Place one long and one short 3/4" cable on each side of the tube assembly (longest 3/4" cable towards the outside).

Place one 1/2" cable outside of the 3/4" cables.

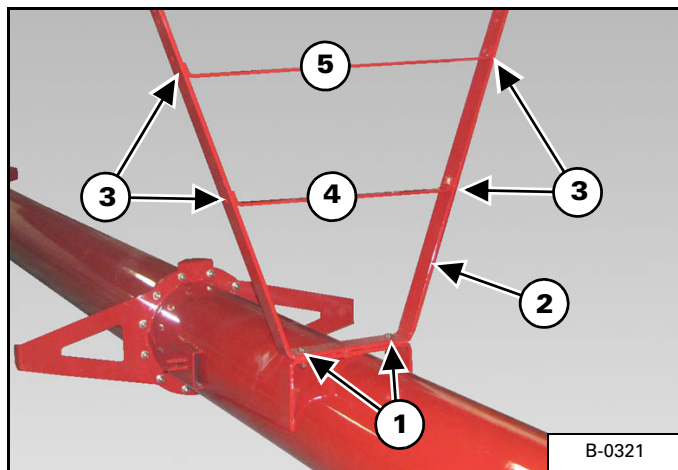
Figure 120



Using two 5/8" x 2" bolts (Item 1) and 5/8" lock nuts, align and install the 1/2" x 3" x 60" #3 tube (1684) or #4 tube (16104) bridging yoke (Item 2) [Figure 120] (onto the #3 tube (1684) or #4 tube (16104)). Tighten bolts and lock nuts.

Using two 1/2" x 1-3/4" bolts (Item 3) and 1/2" lock nuts, install the 3/8" x 2" x 27-3/4" bridging brace (Item 4) [Figure 120] (use bottom holes). Tighten bolts and lock nuts.

Figure 121

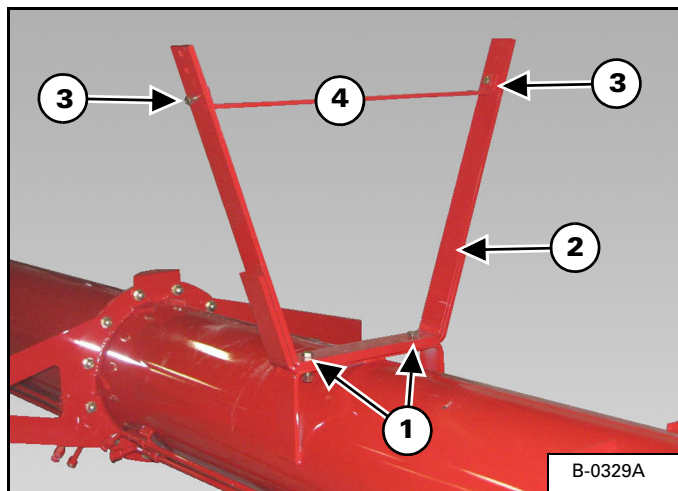


Model 16104 Only

Using two 5/8" x 2" bolts (Item 1) and 5/8" lock nuts, align and install the 1/2" x 3" x 103" #3 tube bridging yoke (Item 2) **[Figure 121]** (onto the #3 tube). Tighten bolts and lock nuts.

Using four 1/2" x 1-3/4" bolts (Item 3) and 1/2" lock nuts, install the 3/8" x 2" x 31-5/8" lower bridging brace (Item 4) and 3/8" x 2" x 43" upper bridging brace (Item 5) **[Figure 121]** (use bottom holes for upper brace). Tighten bolts and lock nuts.

Figure 122

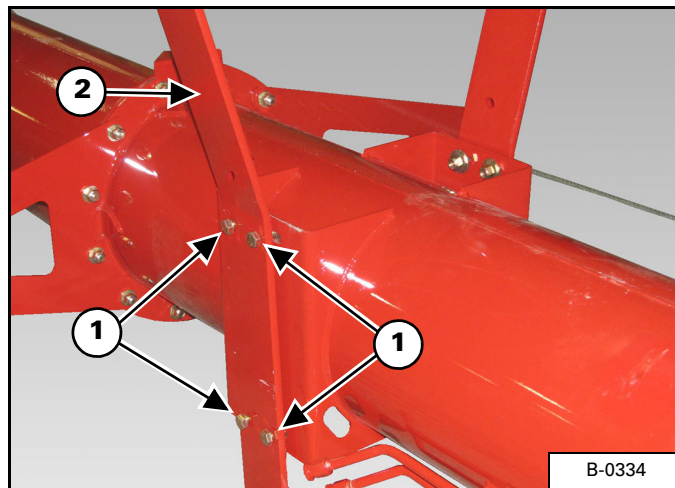


Using two 5/8" x 2-1/2" bolts (Item 1) and 5/8" lock nuts, align and install the 3" x 35-5/8" x 28-1/4" bridging yoke (Item 2) **[Figure 122]** (onto the #1 tube). Tighten bolts and lock nuts.

Using two 1/2" x 1-3/4" bolts (Item 3) and 1/2" lock nuts, install the 3/8" x 34" bridging brace (Item 4)

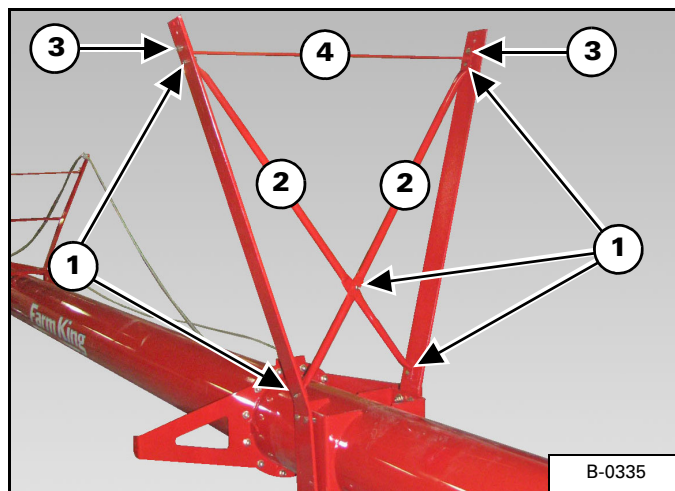
[Figure 122] (use bottom holes). Tighten bolts and lock nuts.

Figure 123



Using four 5/8" x 2" bolts (Item 1), four 11/16" flat washers and 5/8" lock nuts, align and install one bridging plate (Item 2) **[Figure 123]** (onto the #2 tube) (both sides). Snug up bolts so bridging and tube plate are together but not tight.

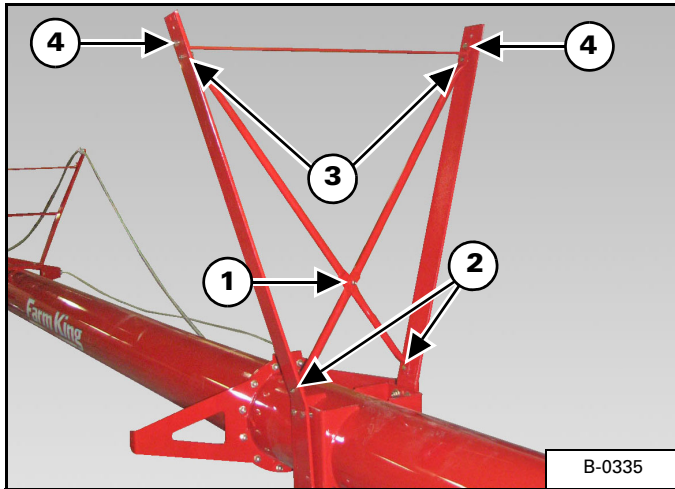
Figure 124



Using five 1/2" x 1-3/4" bolts (Item 1) and 1/2" lock nuts, align and install the two bridging cross braces (Item 2) **[Figure 124]**.

Using two 5/8" x 2" bolts (Item 3) and 5/8" lock nuts, align and install the upper bridging brace (Item 4) **[Figure 124]**. Tighten bolts and lock nuts.

Figure 125

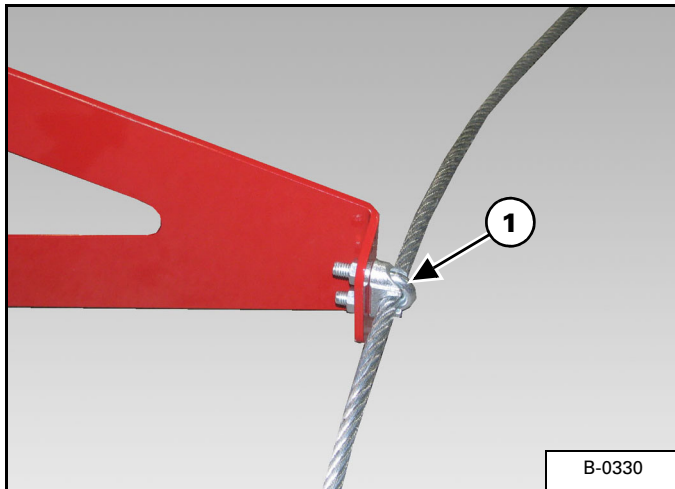


Tighten center cross brace bolt (Item 1) **[Figure 125]** and lock nut first.

Tighten the bottom cross brace bolts (Item 2) and lock nuts, then tighten upper cross brace bolts (Item 3) **[Figure 125]** and lock nuts.

Tighten the two upper bridging brace bolts (Item 4) **[Figure 125]** and lock nuts

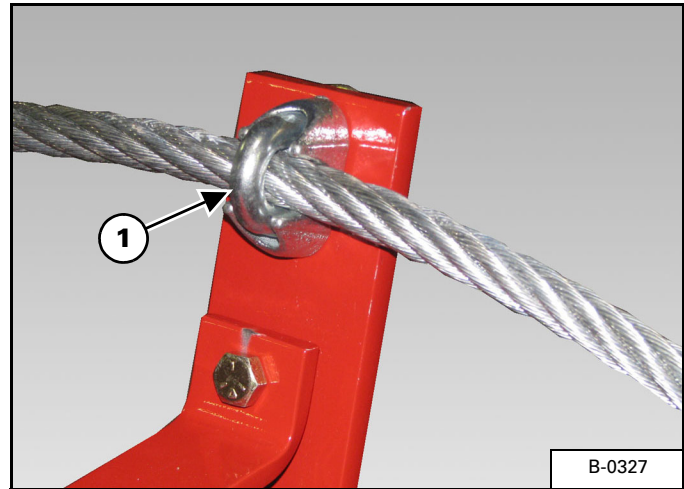
Figure 126



Install one 1/2" cable clamp (Item 1) **[Figure 126]** around the 1/2" cable, then install into the side bridging bracket. Do not tighten cable clamp at this time.

Install one 1/2" cable clamp on each side bridging bracket (both sides). Do not tighten the 1/2" cable clamps at this time.

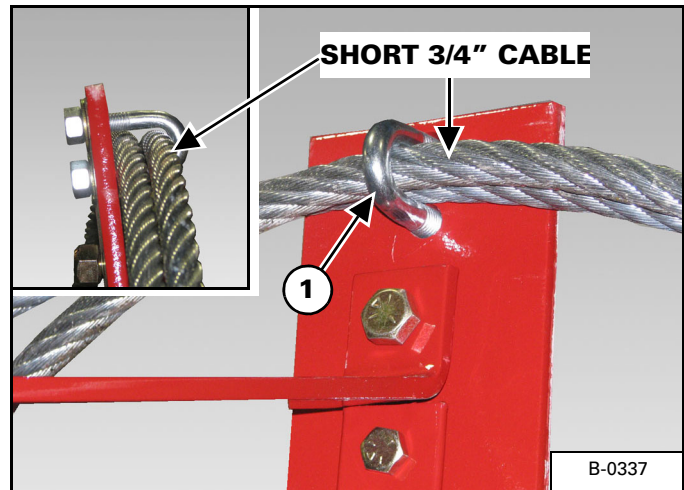
Figure 127



Install one 3/4" cable clamp (Item 1) **[Figure 127]** around the long 3/4" cable, then install into the upper bridging yoke (on the #3 & #1 tubes). Do not tighten cable clamp at this time.

Install one 3/4" cable clamp on two shorter bridging yokes (on the #4 tube) side bridging bracket (both sides). Do not tighten the 3/4" cable clamps at this time.

Figure 128

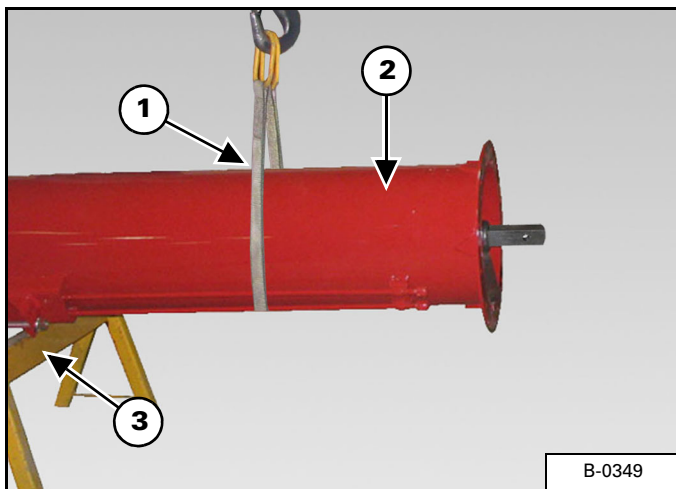


NOTE: Remove clamp section of two 3/4" cable clamps. Use only the u-bolts and nuts.

NOTE: When installing the u-bolt around the two 3/4" cables, place the short 3/4" cable into the u-bolt first (both sides).

Install one 3/4" cable clamp (Item 1) **[Figure 128]** around both the long and short 3/4" cables, then install into the bridging plate (on the #2 tube) (both sides). Do not tighten cable clamp at this time.

Figure 129

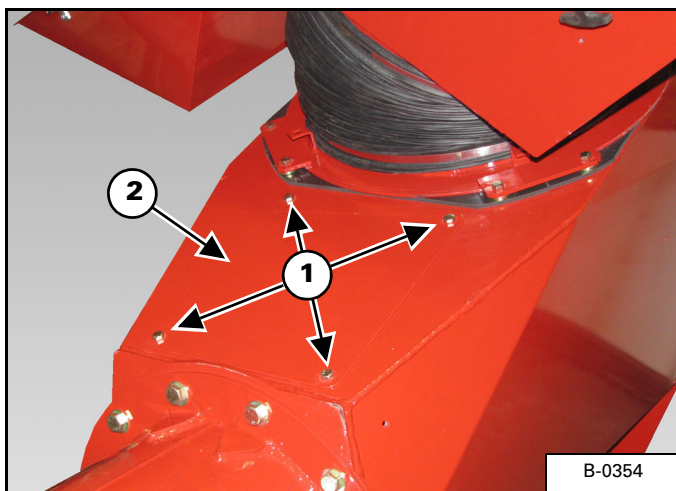


Install a strap (Item 1) around the end of #1 tube (Item 2) **[Figure 129]**.

Raise and place a support stand (Item 3) **[Figure 129]** under the tube, lower the tube onto the support stand.

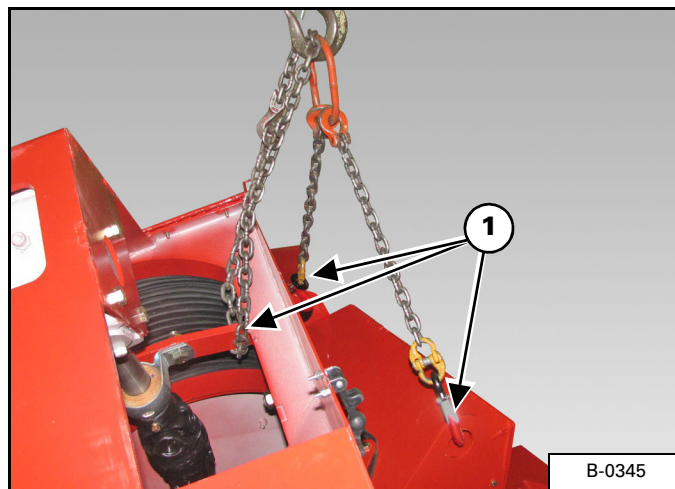
Remove strap.

Figure 130



Remove the four bolts (Item 1) and cover (Item 2) **[Figure 130]** from the intake auger.

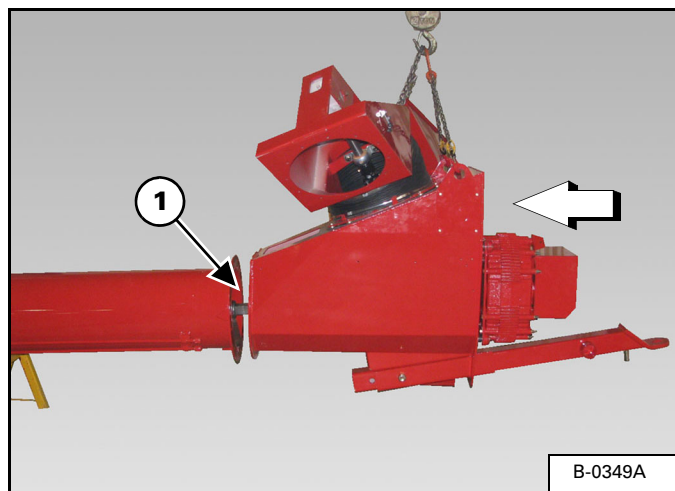
Figure 131



Install chains on the intake auger in the positions (Item 1) **[Figure 131]** shown.

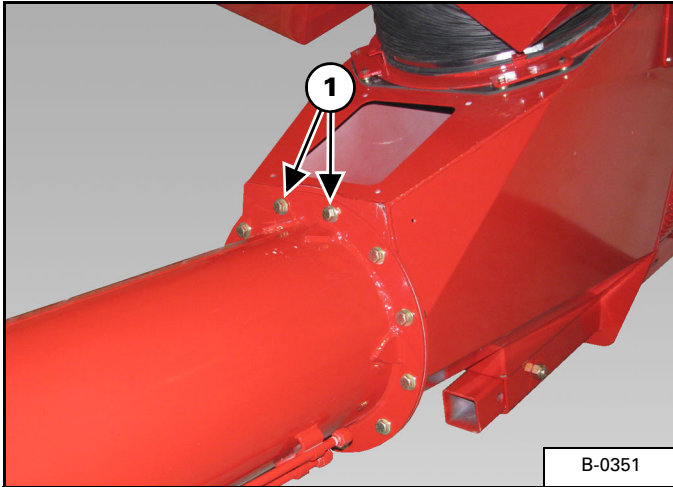
Raise the intake auger and move to the end of the #1 tube.

Figure 132



Align and install the intake auger onto the connecting shaft (Item 1) **[Figure 132]** of the #1 tube.

Figure 133

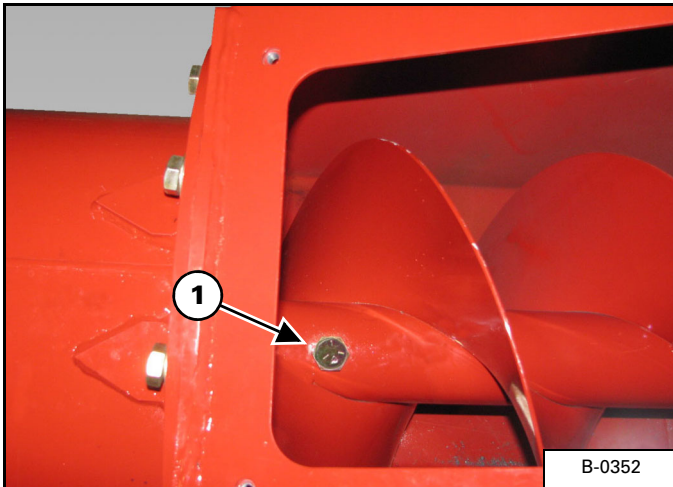


Install the 12 (Grade 8) 5/8" x 2" bolts and 5/8" lock nuts around the mounting flanges of the #1 tube and intake auger.

Tighten the top two bolts (Item 1) **[Figure 133]** and lock nuts first.

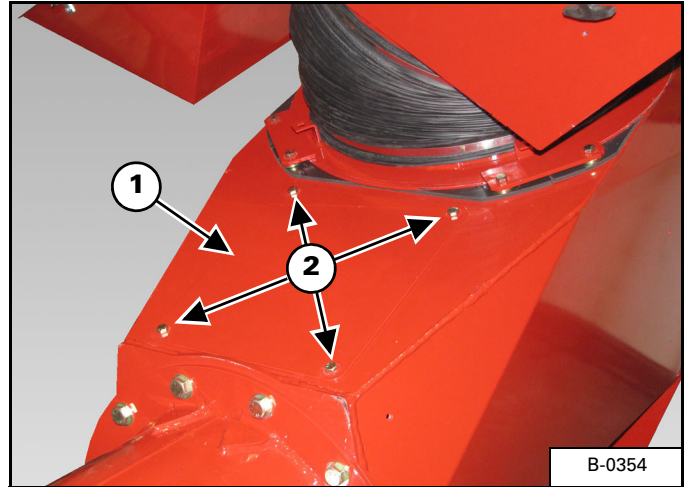
Starting at the left or right of the top two bolts, tighten bolts and lock nuts across from each other, while working around the mounting flanges.

Figure 134



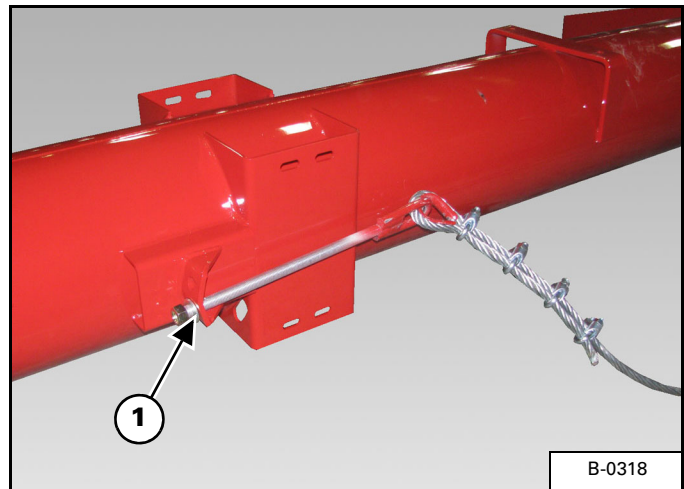
Install one 3/4" x 4-1/2" bolt (Item 1) **[Figure 134]** and 3/4" lock nut.

Figure 135



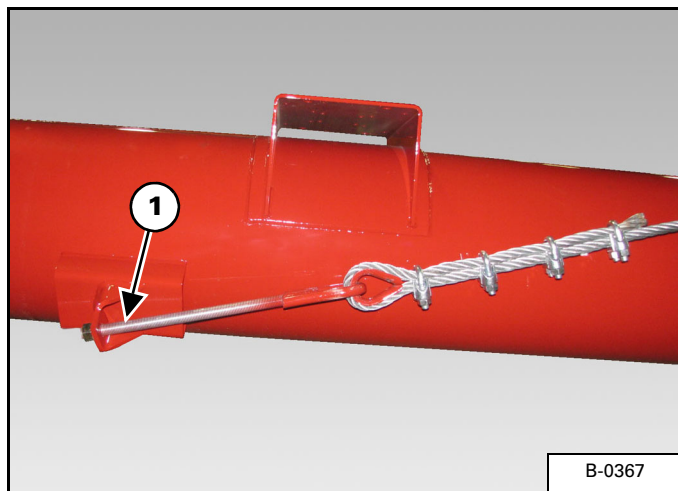
Install the cover (Item 1) and four bolts (Item 2) **[Figure 135]** on the intake auger.

Figure 136



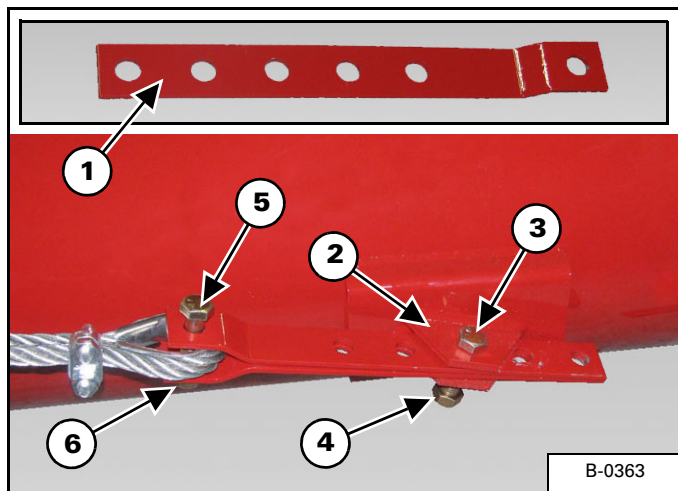
Install the eyebolt (Item 1) **[Figure 136]** of the short 3/4" cable into the center hole of the mounting bracket on the #1 tube (both sides).

Figure 137



Install the eyebolt (Item 1) [Figure 137] of the long 3/4" cable into the forward mounting bracket on the #1 tube (both sides).

Figure 138



Locate two cable yoke brackets (Item 1) [Figure 138] (3/4" cables).

Install the 3/4" cable loop into the end of the cable yoke bracket.

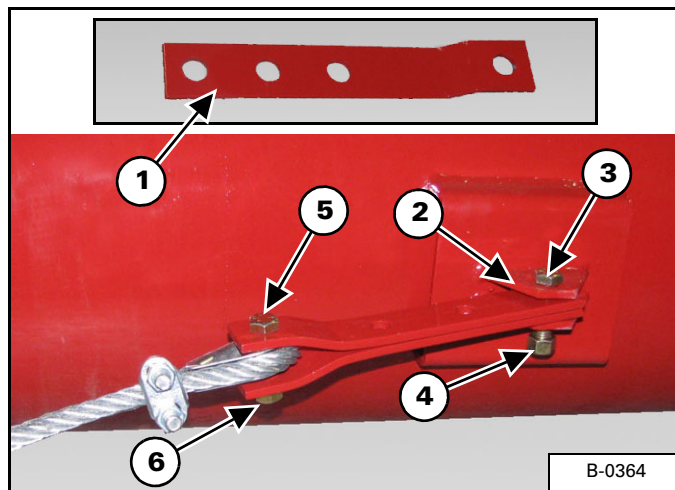
Install one 3/4" x 3" bolt (Item 3) through the mounting bracket and cable yoke bracket. Install one 3/4" lock nut (Item 4) [Figure 138] on the bolt. Do not tighten at this time.

Pull the 3/4" cable assembly as tight as possible. Align the closest hole of the cable yoke bracket with the mounting bracket (Item 2) [Figure 138] (angled up) on the #5 tube.

Install one 3/4" x 3" bolt (Item 5) through the cable yoke bracket and cable loop (long 3/4" cable). Install one 3/4" lock nut (Item 6) [Figure 138]. Do not tighten at this time.

Repeat the above procedure for the remaining three 3/4" cable connections.

Figure 139



Locate two cable yoke brackets (Item 1) [Figure 139] (1/2" cables).

Install the 1/2" cable loop into the end of the cable yoke bracket.

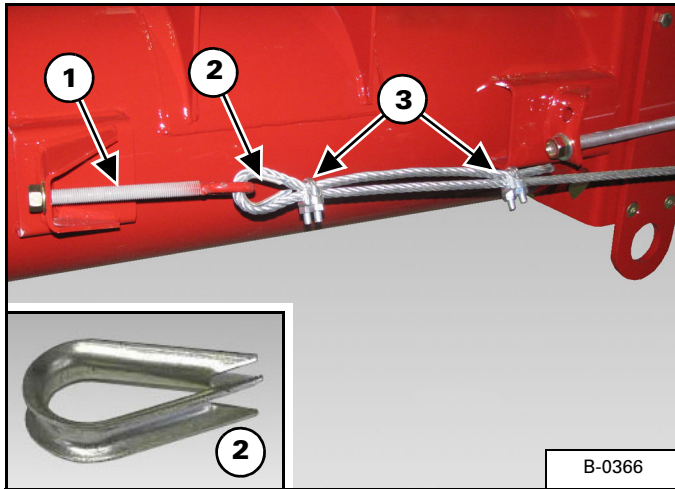
Install one 1/2" x 2" bolt (Item 3) through the mounting bracket and cable yoke bracket. Install one 1/2" lock nut (Item 4) [Figure 139] on the bolt. Do not tighten at this time.

Align the end hole of the cable yoke bracket with the mounting bracket (Item 2) [Figure 139] (parallel with tube) on the #5 tube.

Install one 1/2" x 2" bolt (Item 5) through the cable yoke bracket and cable loop (1/2" cable). Install one 1/2" lock nut (Item 6) [Figure 139]. Do not tighten at this time.

Repeat the above procedure for the second 1/2" cable.

Figure 140



Install the eyebolt of the 1/2" cable into the mounting bracket (Item 1) **[Figure 140]** on the #1 tube (both sides).

Install the thimble (Item 2) onto the eyebolt (both sides).

Thread the 1/2" cable through the eyebolt (both sides). Pull cable as tight as possible.

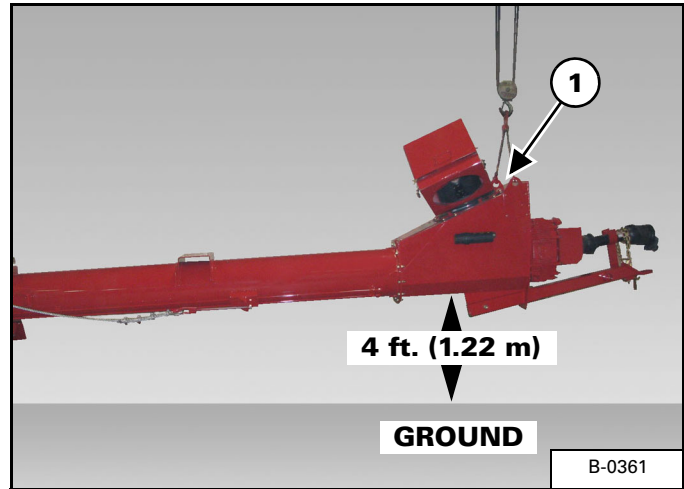
! IMPORTANT

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

Install the two 1/2" cable clamps (Item 3) **[Figure 140]** onto the cable. Slide the first cable clamp (loop end) as close to the thimble as possible and tighten (both sides).

Slide the second cable clamp approximately 2 inches (51 mm) from the end of the tail and tighten (both sides).

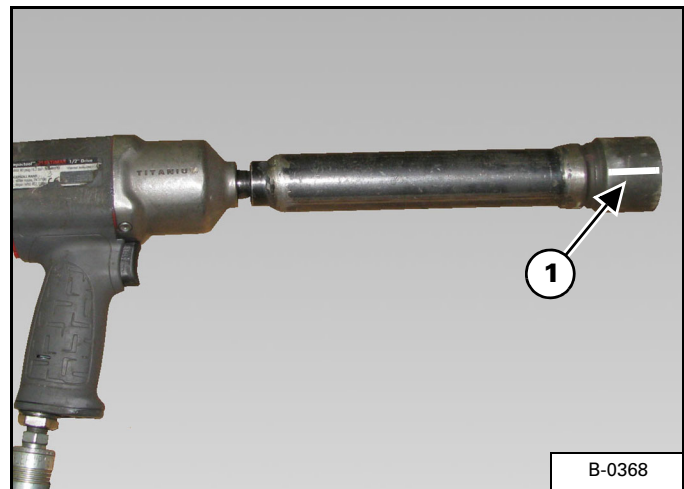
Figure 141



Install chains onto the two lifting hooks (Item 1) **[Figure 141]** on the intake auger.

Raise the intake auger / tube assembly approximately 4 ft. (1.22 m) off the ground **[Figure 141]**.

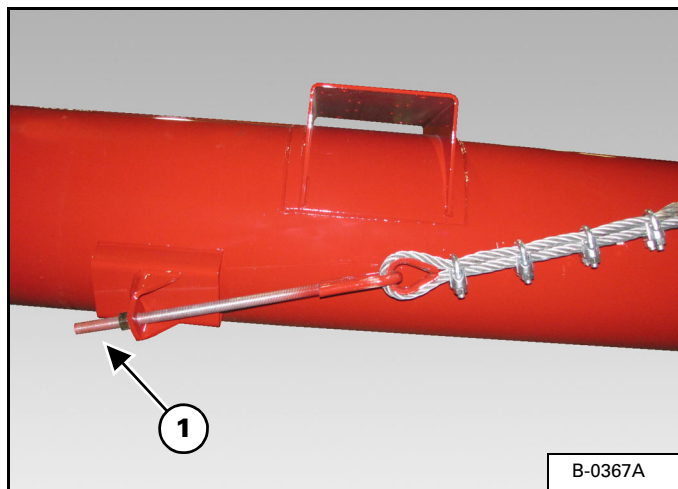
Figure 142



Place a mark (Item 1) **[Figure 142]** on the cable tightening tool. This will help to tighten the cables evenly.

Count the revolutions as the tool is turning while tightening.

Figure 143



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 3/4" cable until there is approximately 3 - 4 inches (76 - 102 mm) of exposed threads (Item 1) [Figure 143] on the eyebolt.

Repeat tightening procedure for the remaining cables.

NOTE: Tighten short 3/4" cables less than the longer 3/4" cables.

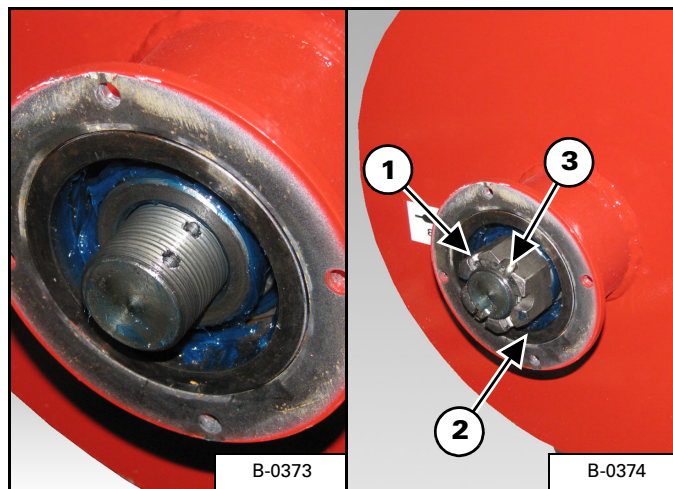
Lower the intake auger / tube assembly to the ground.

With the intake auger / 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 auger and look down the full length of the tube assembly to verify the tube is straight. Adjust 1/2" 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.

Figure 144



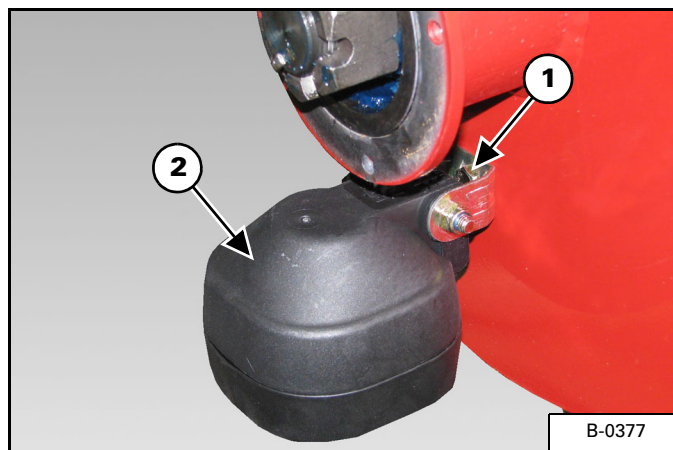
NOTE: The castle nut has been removed in the left picture to show cotter pin hole options.

With the tube assembly complete, tighten the castle nut (Item 1) until the castle nut contacts the washer / flighting shaft (Item 2) [Figure 144].

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.

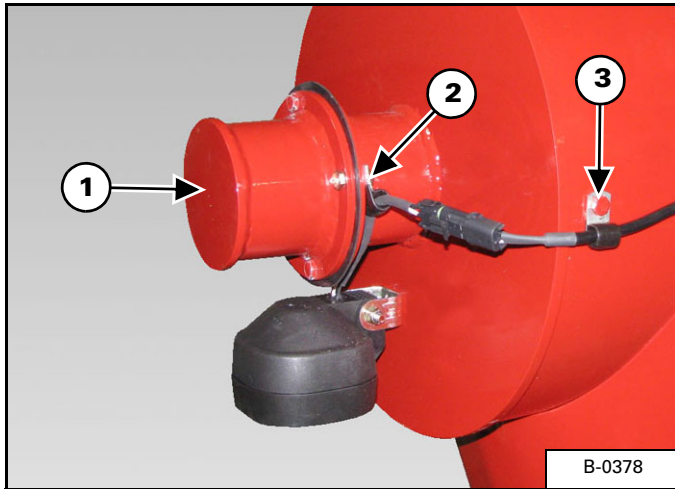
Install the cotter pin (Item 3) [Figure 144].

Figure 145



Using one bolt (Item 1) and lock nut (included with light), install the light (Item 2) [Figure 145].

Figure 146



Install the dust cap (Item 1) [Figure 146] using the four bolts and lock nuts removed at the start of the tube assembly.

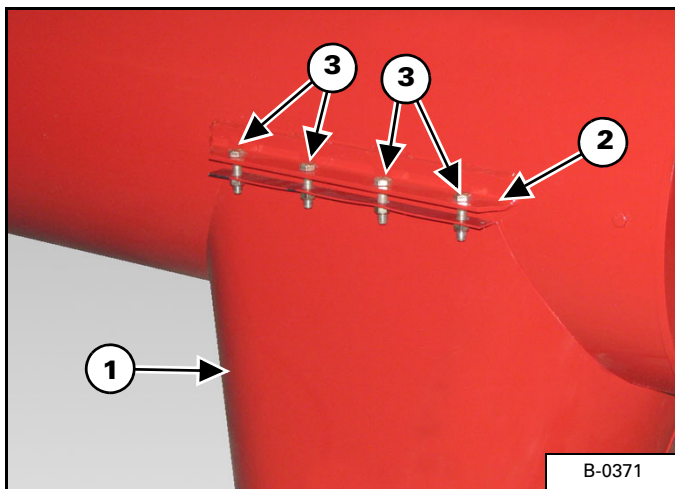
Install a cable clamp around the light pigtail.

When installing the dust cap bolts, install one cable clamp (Item 2) [Figure 146] on the bolt shown and secure in place with the lock nut.

Connect the light harness to the pigtail. Install a cable clamp around the light harness.

Using a bolt and lock nut, install a second cable clamp (Item 3) [Figure 146] in the #5 tube.

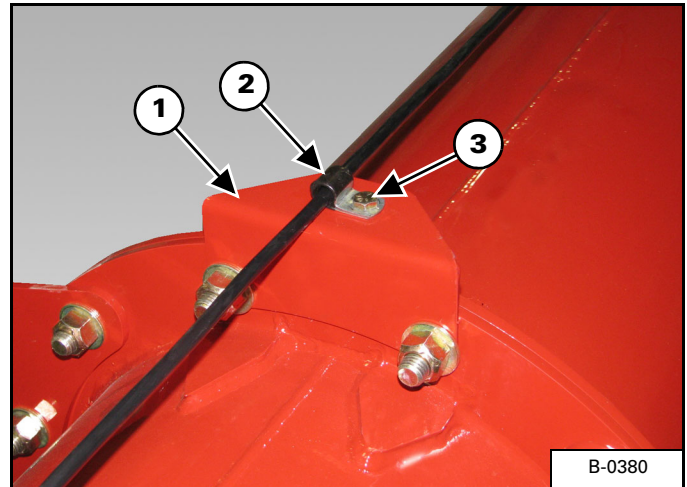
Figure 147



Align the discharge spout (Item 1) with the mounting brackets (Item 2) [Figure 147] on both sides of the #5 tube.

Install the eight 3/8" x 1-1/2" bolts (Item 3) [Figure 147] and 3/8" lock nuts. Tighten bolts and lock nuts evenly until the discharge spout contacts the #4 tube (1684) #5 tube (16104).

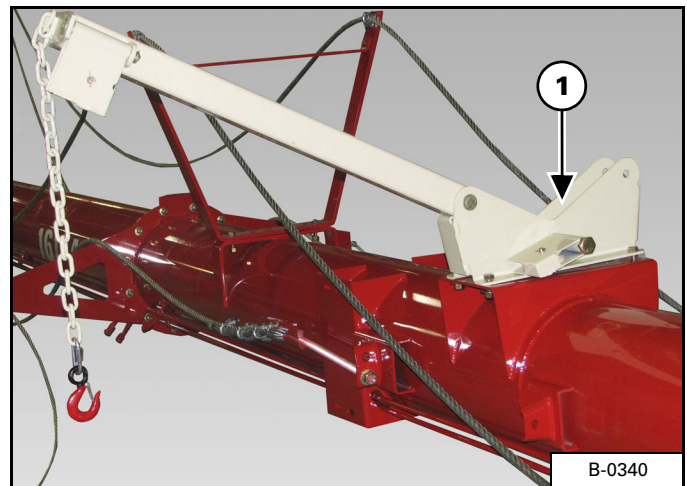
Figure 148



Route the light harness along the top of tube assembly.

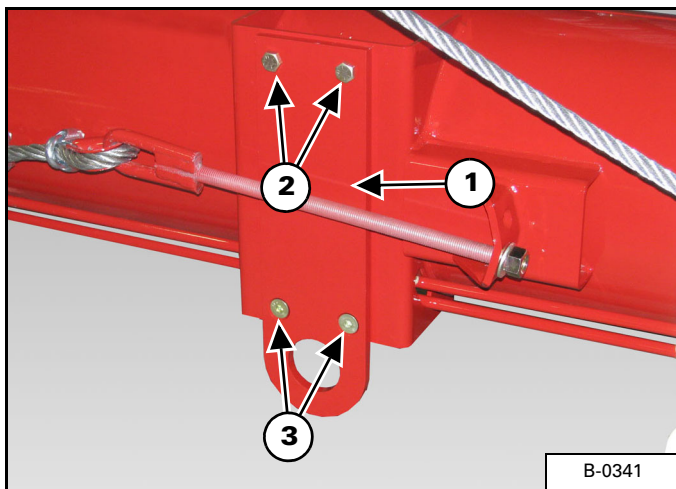
Secure the light harness to the top bracket (Item 1) at each tube connection using one cable clamp (Item 2), one 5/16" x 3/4" bolt (Item 3) [Figure 148] and 5/16" lock nut at each location.

Figure 149



Using four 5/8" x 1-3/4" bolts, four 5/8" flat washers and four 5/8" lock nuts, install the lift boom assembly (Item 1) [Figure 149]. Tighten bolts and lock nuts.

Figure 150



Align the undercarriage connector plate (Item 1) **[Figure 150]** with the mounting bracket on the #1 tube.

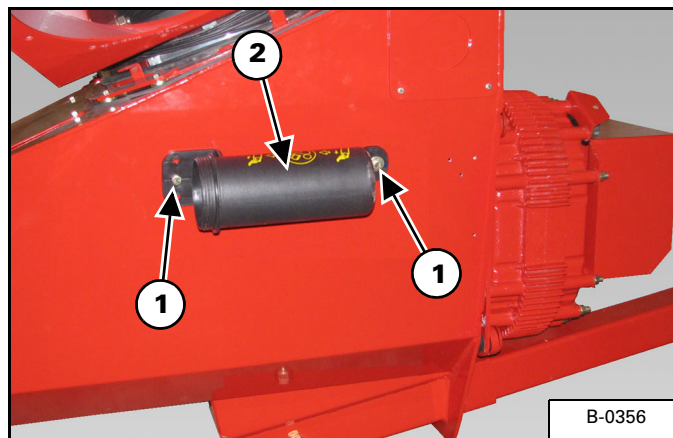
Install two 5/8" x 2" bolts (Item 2) **[Figure 150]** through the top two holes of the undercarriage connector plate and mounting bracket. Install one 5/8" flat washer and 5/8" lock nut on each bolt.

Install two 5/8" x 1-3/4" flat head bolts (Item 3) **[Figure 150]** through the bottom two holes of the undercarriage connector plate and mounting bracket. Install one 5/8" flat washer and 5/8" lock nut on each bolt.

Do not tighten bolts and lock nuts at this time.

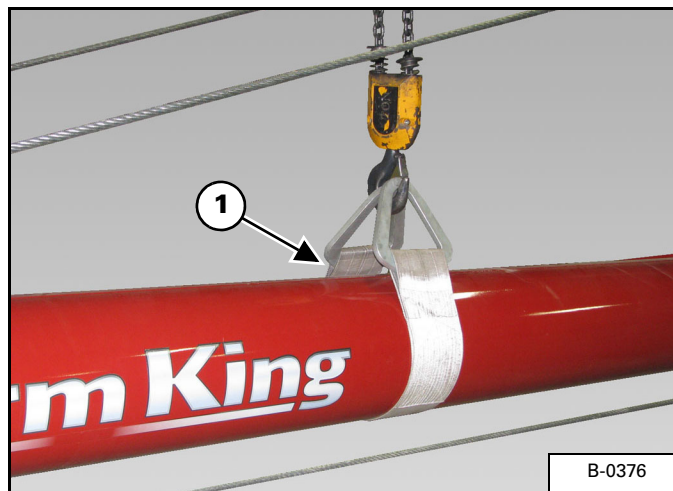
Repeat above procedure for second undercarriage connector plate.

Figure 151



Using two 5/16" x 3/4" bolts (Item 1) and two 5/16" lock washers, align and install the manual holder (Item 2) **[Figure 151]** on the right side of the input box. Do not over-tighten the bolts and damage mounting flanges.

Figure 152

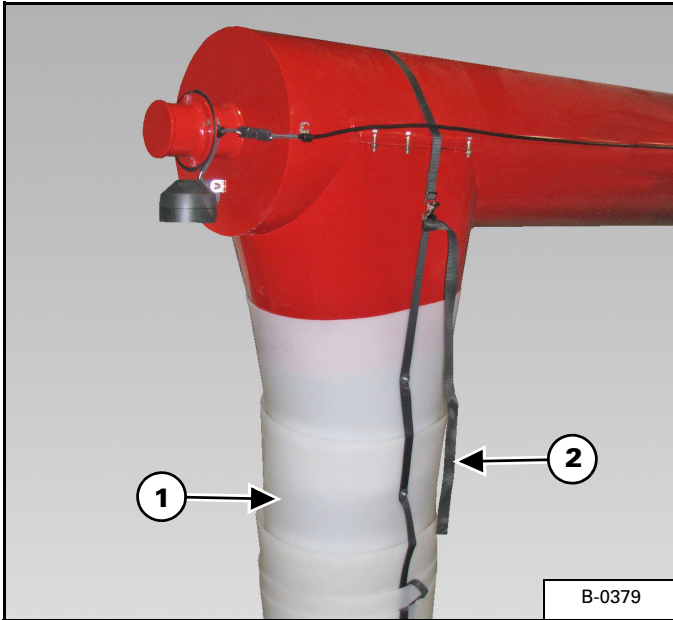


Install a strap (Item 1) **[Figure 152]** around the #4 tube.

Connect the strap to an approved lifting device.

Raise the tube assembly high enough to install the flex spout.

Figure 153



Slide the flex spout (Item 1) **[Figure 153]** onto the discharge spout.

Pull strap (Item 2) **[Figure 153]** up and over the #5 tube and connect the two ends of the strap together. Pull the strap tight to secure the flex spout to the #5 tube and discharge spout.

Lower the tube assembly to the ground.



IMPORTANT

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

16124 Tube Assembly

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

Assemble the tube on flat level surface.



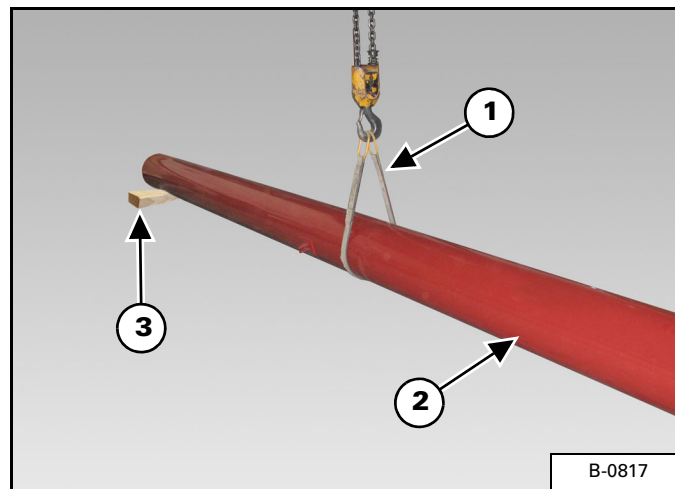
- **DO NOT** permit bystanders to be in the work area when unloading and assembling the auger components.
- **DO NOT** work under suspended parts.
- **Keep away from moving parts.**
- **Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling the auger components.**



AVOID INJURY OR DEATH

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

Figure 154

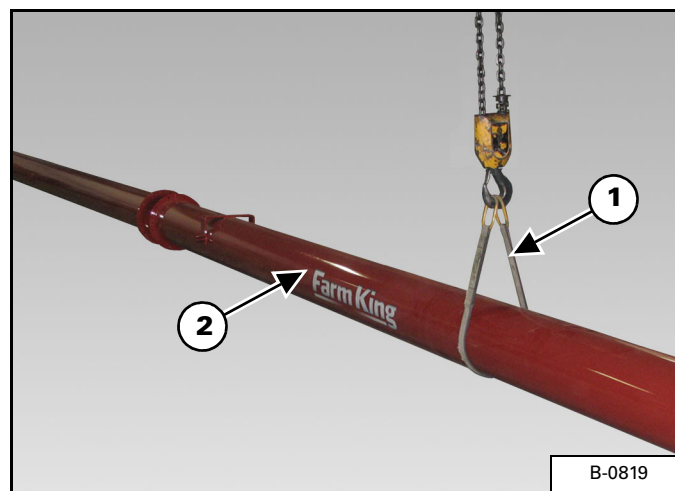


Install a strap (Item 1) around the #4 tube (Item 2) [Figure 154].

Raise and move the top tube to the assembly area.

Place a block (Item 3) [Figure 154] under the discharge spout end of the tube. Lower the tube onto the block. Remove strap.

Figure 155

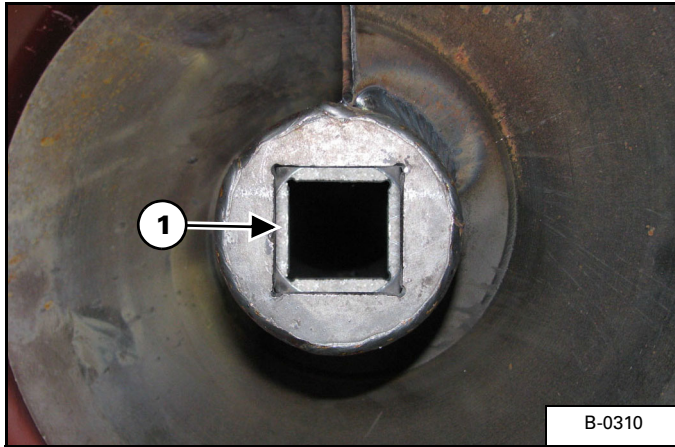


Install a strap (Item 1) around the #3 tube (Item 2) [Figure 155].

Raise and move the #3 tube to the assembly area. Lower the tube onto the block. Remove strap.

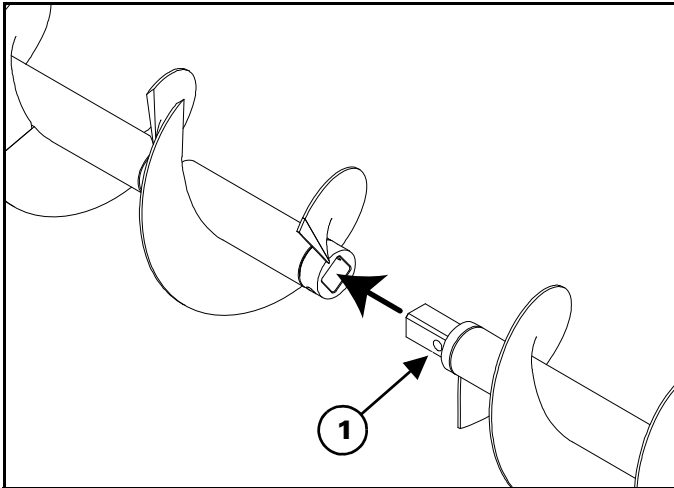
Repeat the above procedure for #2 tube.

Figure 156



When installing the connecting shaft, the shaft will need to be aligned with and inserted into the inner collar (Item 1) **[Figure 156]** of flighting tube.

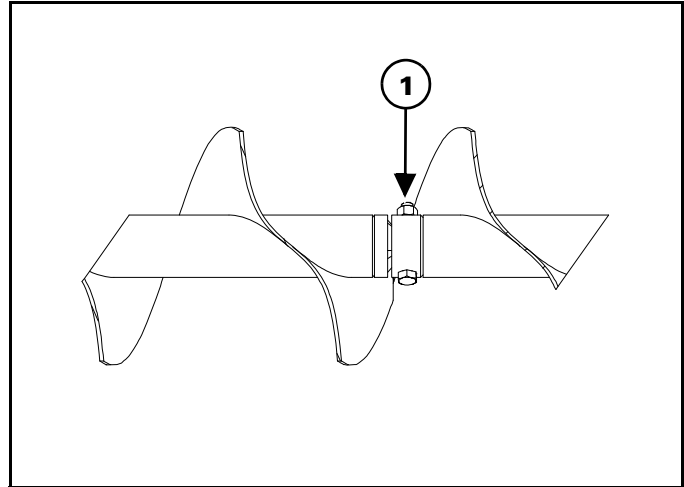
Figure 157



Slide the flighting out of the #4 tube (1684) or #5 tube (16104) until the bolt hole (Item 1) **[Figure 115]** is clear of the mounting flange.

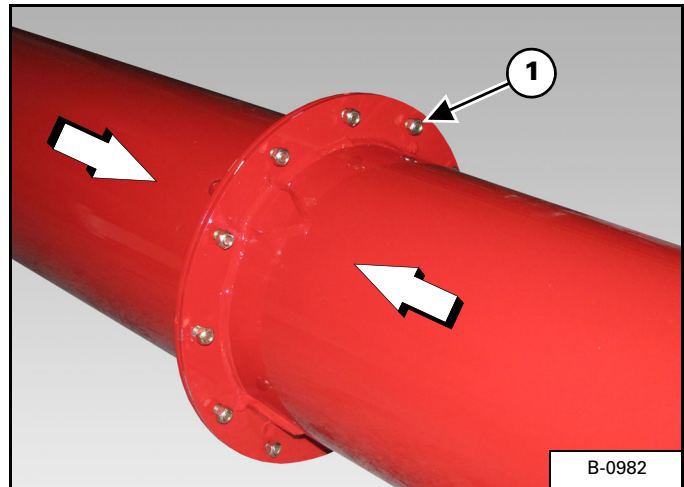
Align the bolt holes **[Figure 157]**.

Figure 158



Slide the flighting from the #3 tube (1684) or #4 tube (16104) forward onto the connecting shaft and install one 3/4" x 6" bolt (Item 1) **[Figure 158]** and 3/4" lock nut. Tighten bolt and lock nut.

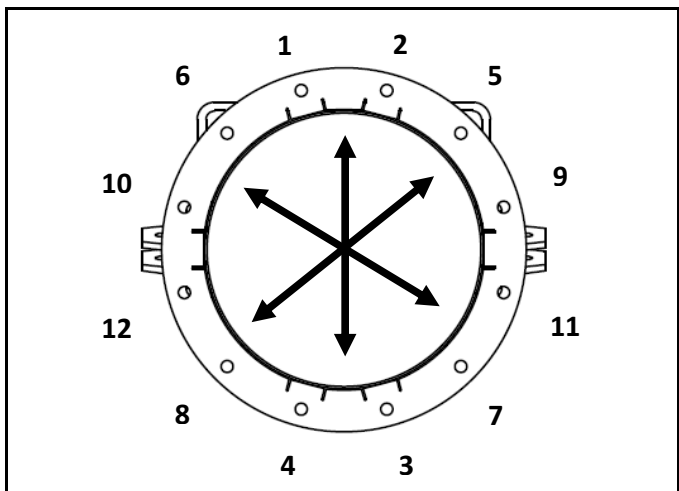
Figure 159



Slide the top #4 tube and #3 tube together until the mounting flanges contact each other **[Figure 159]**.

Install 7/16" x 1-1/4" bolts (Item 1) **[Figure 159]** through the tube flanges. Install one 7/16" lock nut on each bolt. Tighten bolts and lock nuts (top bolts first, then bottom bolts).

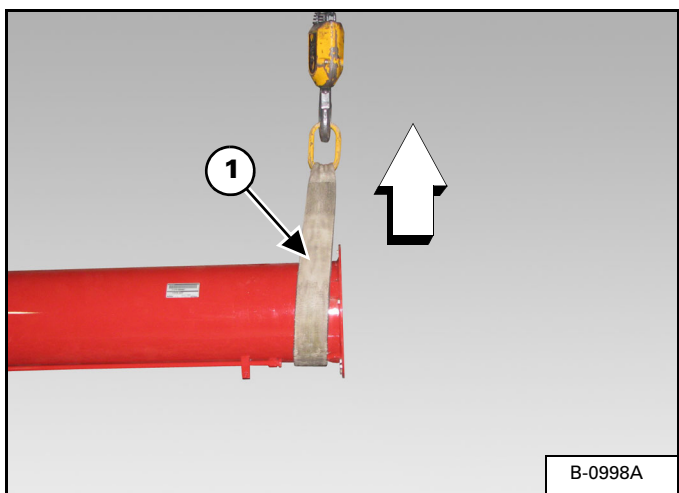
Figure 160



Tighten remaining bolts in a criss-cross pattern **[Figure 161]**, working around the mounting flanges.

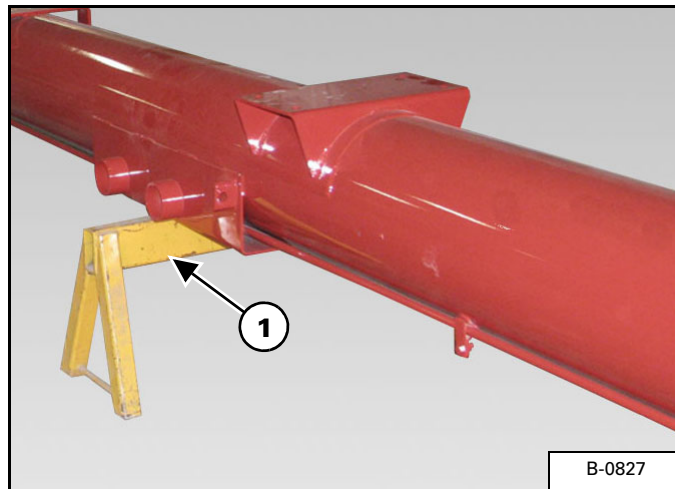
Repeat the procedure for connecting remaining tube sections.

Figure 161



Install a strap (Item 1) **[Figure 161]** around the end of the #1 tube.

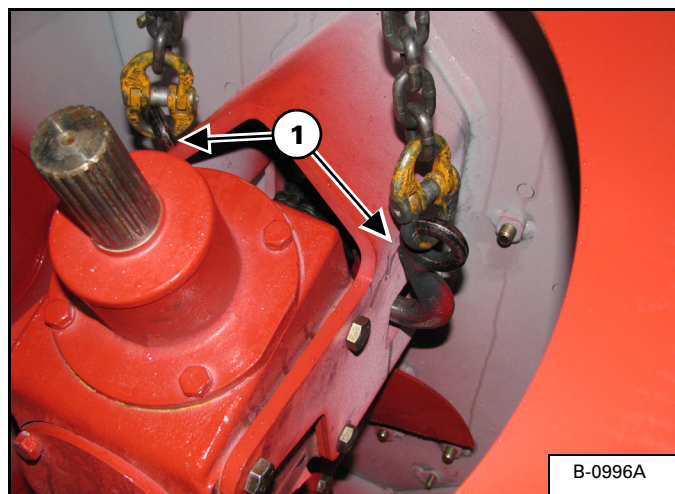
Figure 162



Raise the tube assembly and place a support stand (Item 1) **[Figure 162]** under the tube, lower the tube onto the support stand.

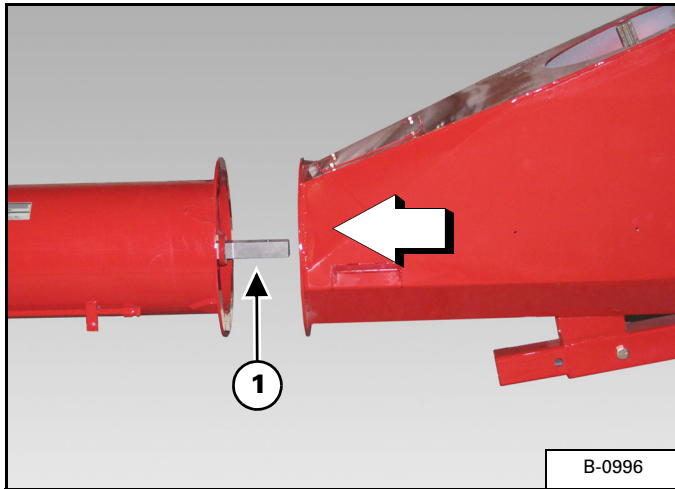
Remove strap.

Figure 163



Install the chains (Item 1) **[Figure 163]** onto the input box gearbox mounting bracket. Raise and move the input box to the end of the bottom tube.

Figure 164

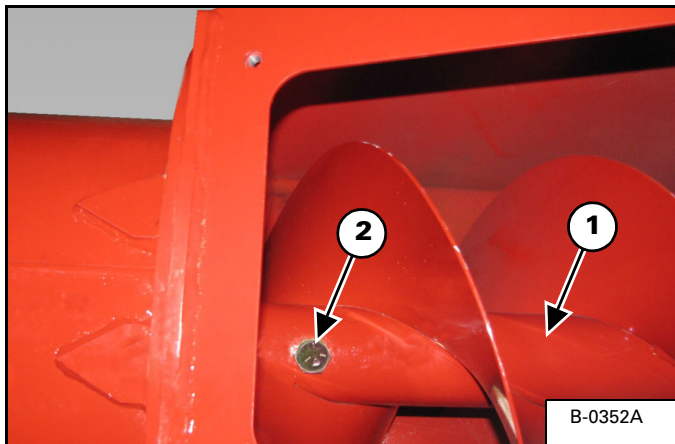


Align the bolt holes and install the connecting shaft (Item 1) **[Figure 164]**.

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

Align the input box flighting with the flighting shaft (Item 1) **[Figure 164]** of the bottom tube.

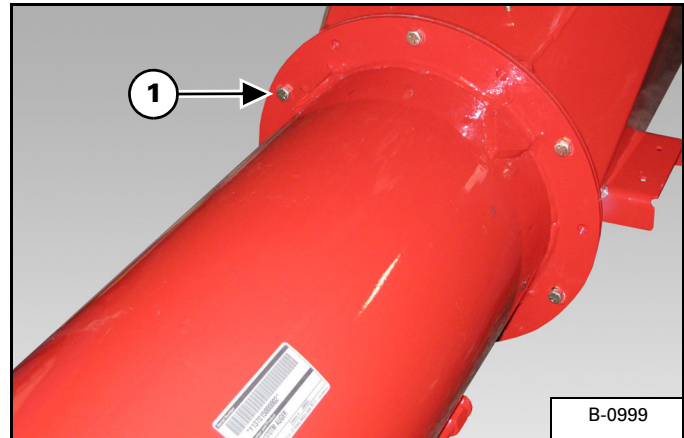
Figure 165



Align the input box flighting (Item 1) with the hole in the bottom tube flighting.

Apply thread locker to the bolt threads, install and tighten one 1/2" x 4" Gr. 8 bolt (Item 2) **[Figure 165]** and 1/2" lock nut. Tighten bolt and lock nut.

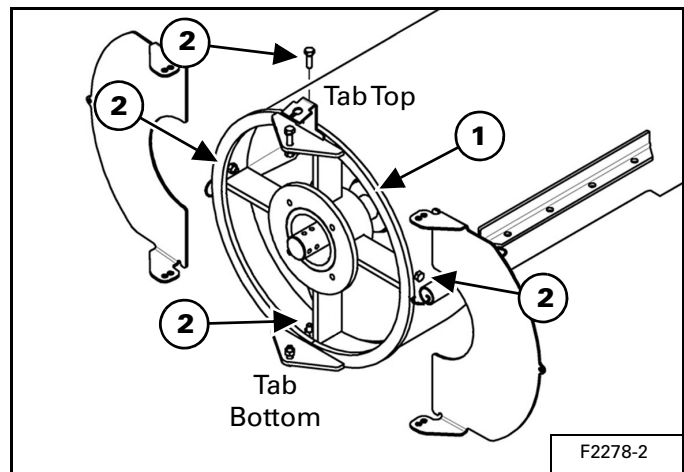
Figure 166



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) **[Figure 166]** and 7/16" lock nuts around the mounting flanges of the bottom tube and input box. Tighten bolts and lock nuts.

Figure 167

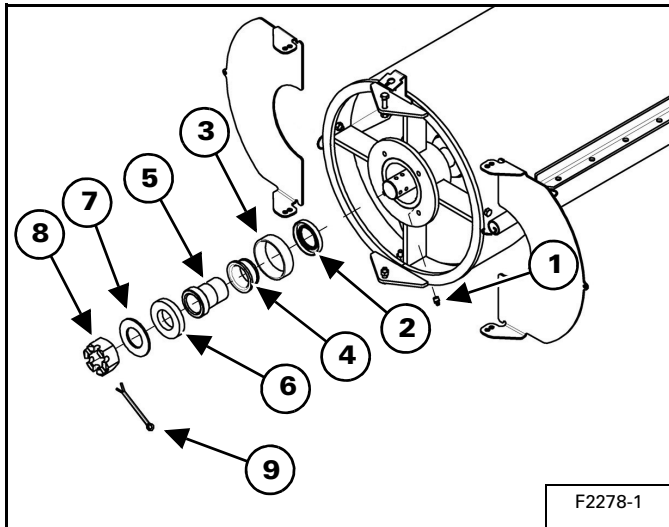


Install the overflow end cap (Item 1) **[Figure 167]** as shown onto the end of the #4 tube.

NOTE: The tabs must be aligned to the top and bottom of auger tube.

Align the holes and install the four 5/16" x 1" bolts and 5/16" lock nuts (Item 2) **[Figure 167]**. Tighten bolts.

Figure 168



Install the grease zerk (Item 1) **[Figure 168]**.

Install the oil seal (Item 2), inner bearing cup (Item 3), inner bearing cone (Item 4), end bearing sleeve (Item 5), spacer (Item 6), narrow rim washer (Item 7), slotted nut (Item 8), 1/4" x 2" cotter pin (Item 9) **[Figure 168]** as shown onto the end of the #4 tube.

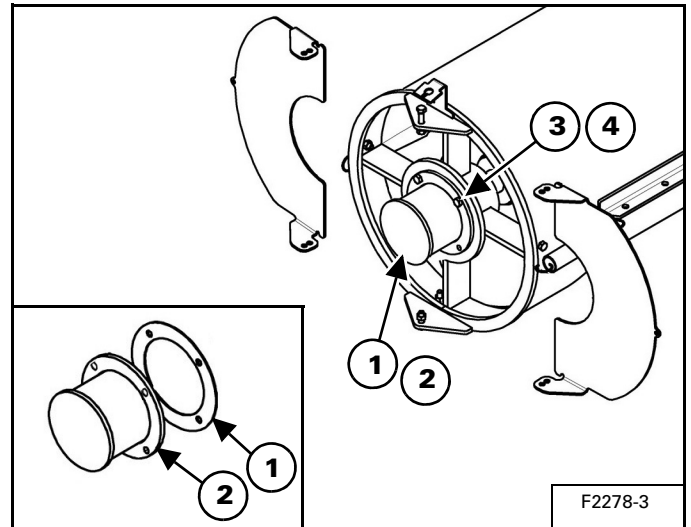
Apply 2-3 pumps of grease to the grease zerk.

With the tube assembly complete, tighten the castle nut (Item 7) **[Figure 168]** until the castle nut contacts the washer / flighting shaft.

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.

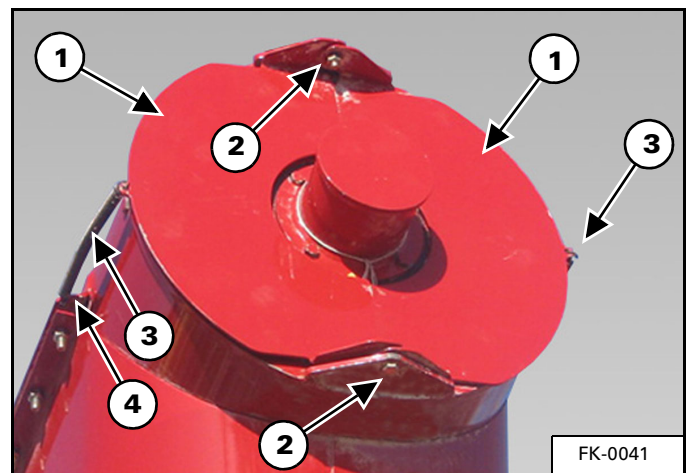
Install the cotter pin (Item 8) **[Figure 168]**.

Figure 169



Install the rubber gasket (Item 1), flange cap (Item 2), and secure with the four 5/16" x 3/4" bolts and 5/16" lock nuts (Items 3 & 4) **[Figure 169]**.

Figure 170



Install the overflow doors (Item 1) **[Figure 170]** as shown.

Install the two 5/16" x 1" bolts and lock nut (Item 2) **[Figure 170]**. Do not over tighten bolts.

Install the springs (Item 3). Attach the springs to the overflow doors and nearest hole on the spout mounts (Item 4) **[Figure 170]** located on the tube.

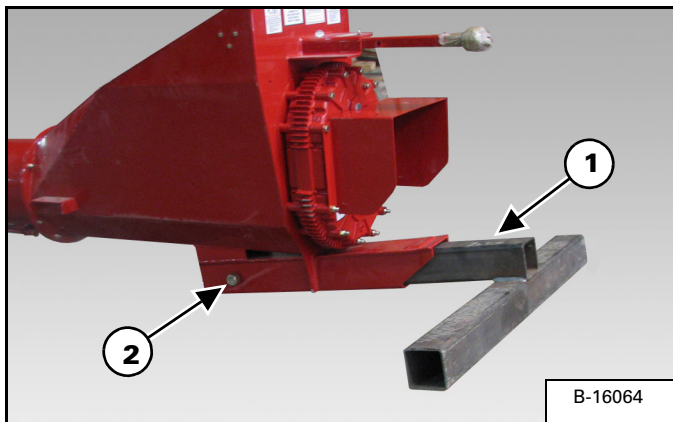
NOTE: **[Figure 170]** shows discharge spout installed. Discharge spout will be installed later.

16124 Bridging Assembly

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

Assemble trusses when tubes are on the ground and supported at the discharge spout end, at mid point on each tube section, at each flange connection, and supported at input box flange (9 support points). Tube assembly must be straight (angle 0 degrees) when tubes are fully supported.

Figure 171



The T-bar (Item 1) is not shipped with unit. Install a bolt and nut (Item 2) [Figure 171] through the hitch mount and T-bar.

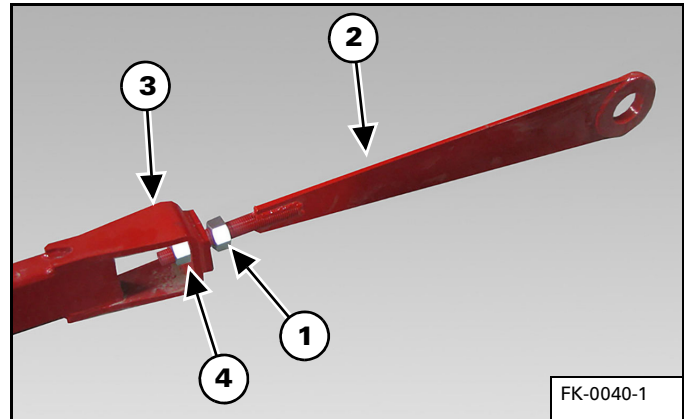
NOTE: If a T-bar is not available, secure the input box so as to prevent the tube assembly from rolling during truss beam installation.

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

NOTE: See Page 66 for truss beam identification.

NOTE: The 16124 tube assembly consists of four tubes. When referring to the tubes, the lower tube will be #1 tube, #2 tube, #3 tube and #4 tube.

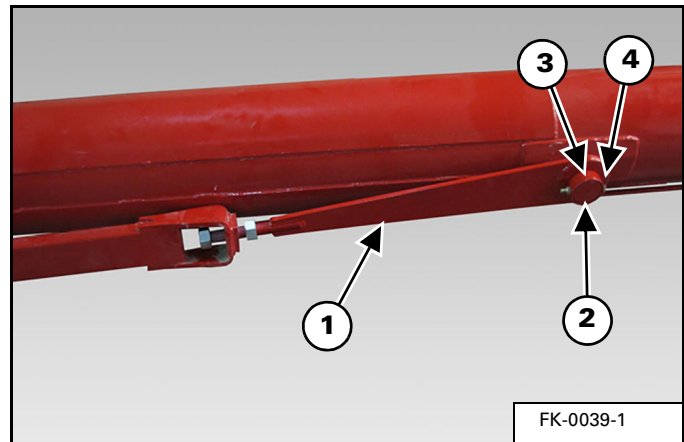
Figure 172



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) [Figure 172] onto the truss fastener.

Repeat procedure for the opposite side.

Figure 173

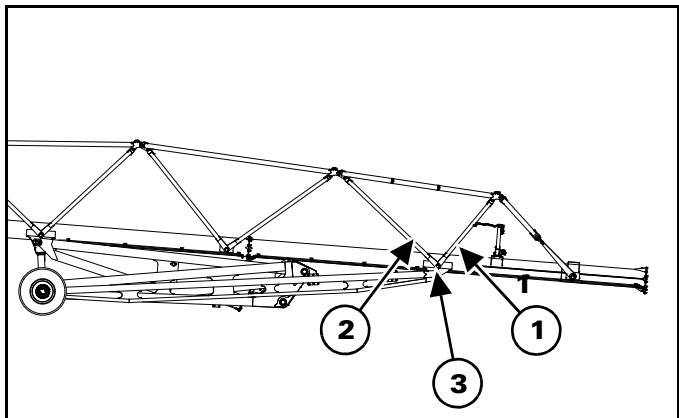


Install the truss fastener / beam assembly (Item 1) onto the #1 tube lower truss beam mount (Item 2) [Figure 173].

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.

Repeat procedure on opposite side.

Figure 174



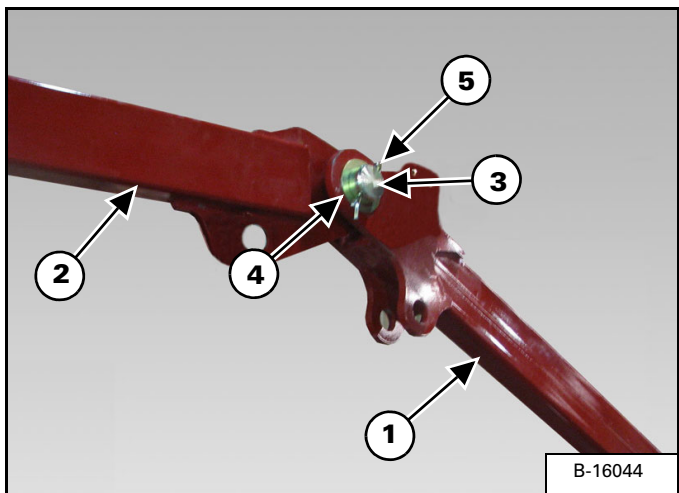
Install the truss beams (Items 1 & 2) onto the #1 tube upper truss beam mount (Item 3) [Figure 174].

NOTE: The upper truss beam (Item 1) [Figure 174] must be installed onto the truss beam mount first (both sides).

Install the undercarriage pin sleeve, 1/2" x 4-1/2" bolt and 1/2" lock nut. Tighten lock nut and bolt.

Repeat procedure on the opposite side.

Figure 175

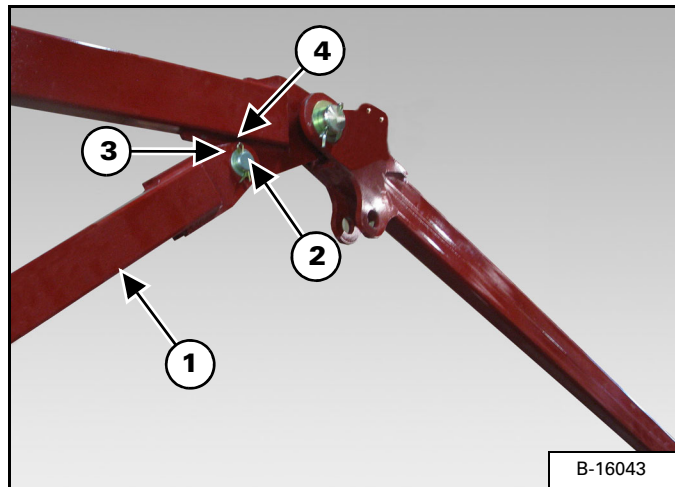


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) [Figure 175].

Install the truss pin (Item 3), 2" x 10 ga. narrow rim washer (Item 4) and 5/16" x 3" cotter pin (Item 5) [Figure 175].

Repeat procedure on the opposite side.

Figure 176



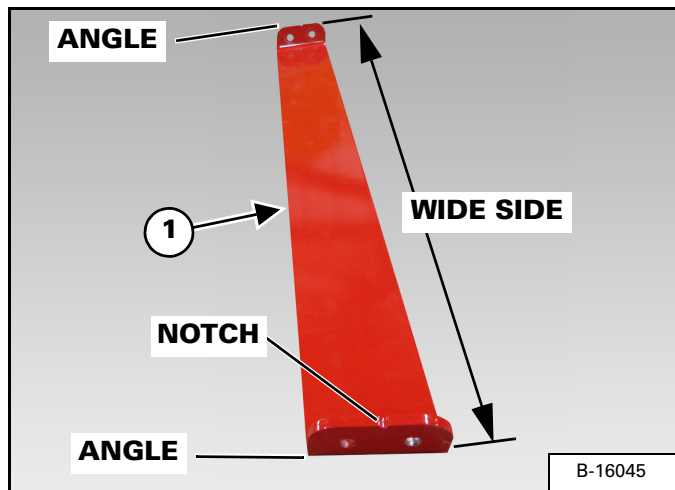
Raise and align truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer (Item 3) and 1/4" x 2" cotter pin (Item 4) [Figure 176].

Repeat procedure on the opposite side.

Truss Support Bracket Assembly

NOTE: See Page 68 for truss support bracket identification.

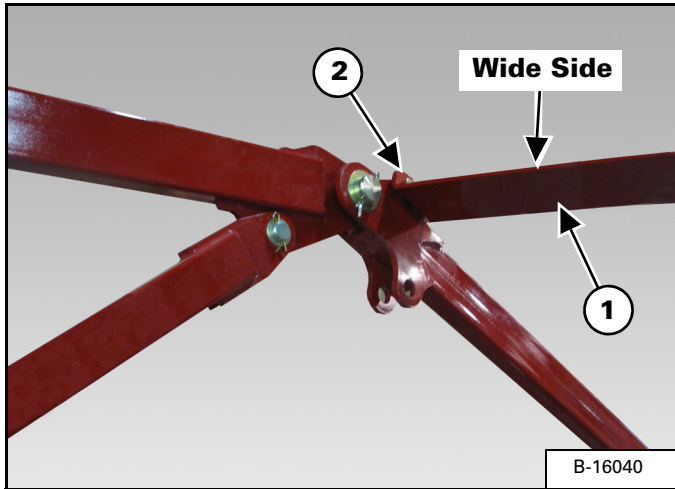
Figure 177



The truss support brackets (Item 1) [Figure 177] have none, one, two or three notches and are different lengths.

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

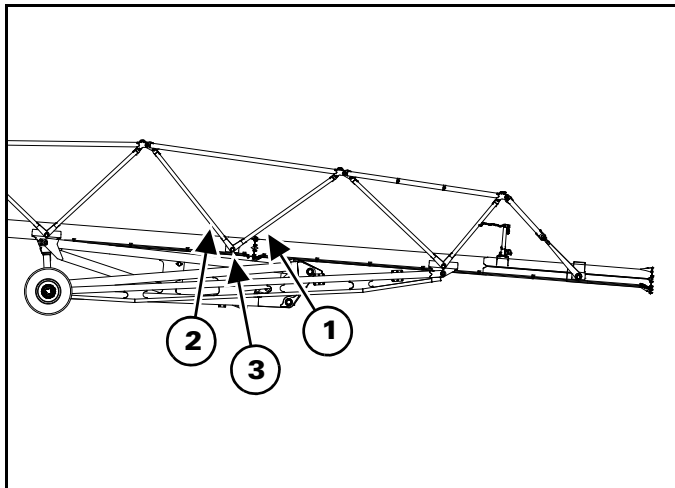
Figure 178



Place the truss support bracket (one notch) (Item 1) [Figure 178] between the left side and right side truss beams (wide side of support bracket toward the top tube).

Install two 1/2" x 1-3/4" bolts (Item 2) [Figure 178] and lock nut on each side. Do not tighten at this time.

Figure 179



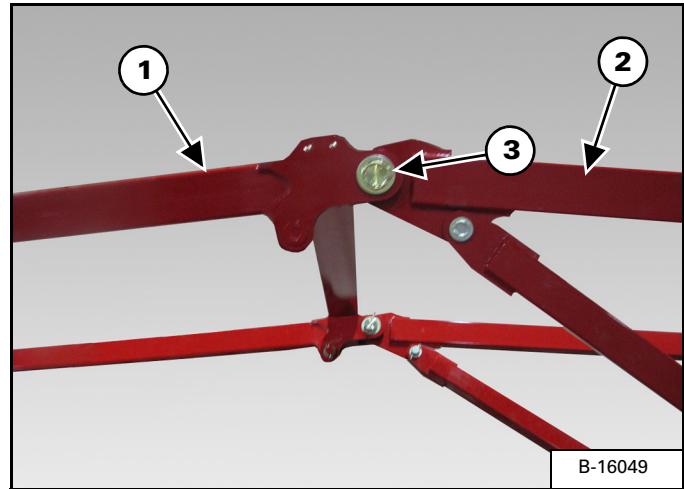
Install the truss beam (Items 1 & 2) onto the #2 tube lower truss beam mount (Item 3) [Figure 179].

NOTE: The upper truss beam (Item 2) [Figure 179] must be installed onto the truss beam mount first (both sides).

Install the undercarriage pin sleeve, 1/2" x 4-1/2" bolt and 1/2" lock nut. Tighten lock nut and bolt.

Repeat procedure on the opposite side.

Figure 180

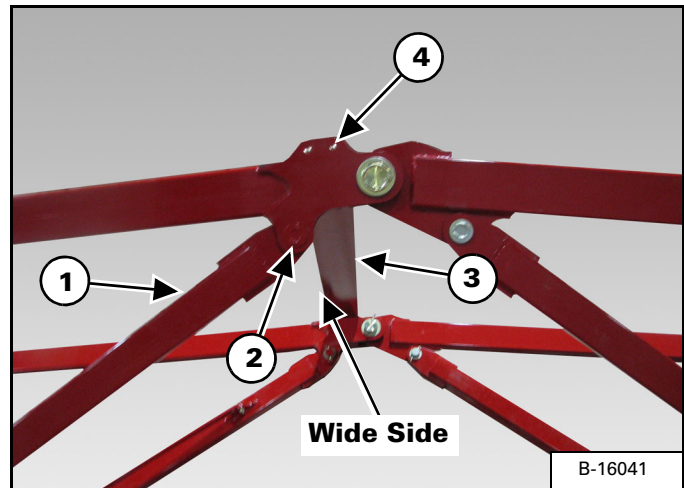


Raise the truss beams (Items 1 & 2) [Figure 180].

Align the truss beams and install the truss pin (Item 3) [Figure 180], 2" x 10 ga. narrow rim washer and 5/16" x 3" cotter pin.

Repeat procedure on the opposite side.

Figure 181



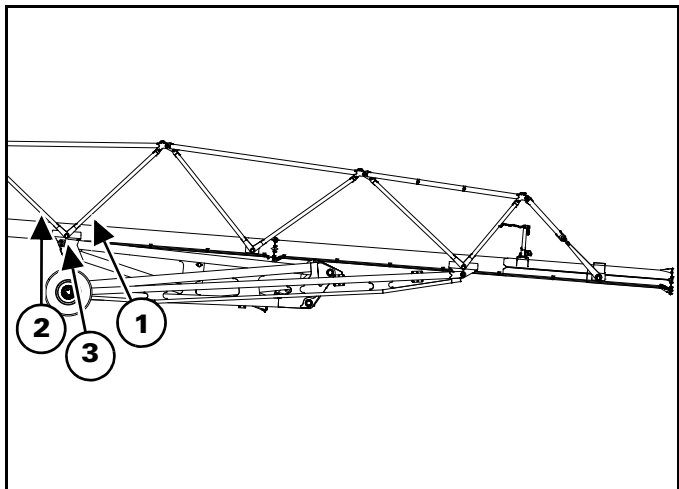
Raise and align the truss beam (Item 1), install the 1-1/4" pin (Item 2) [Figure 181], 1-1/4" narrow rim washer and 1/4" x 2" cotter pin.

Repeat procedure on the opposite side.

Place the truss support bracket (two notches) (Item 3) [Figure 181] between the left side and right side truss beams (wide side of support bracket toward the top tube).

Install two 1/2" x 1-3/4" bolts (Item 4) [Figure 181] and lock nut on each side. Do not tighten at this time.

Figure 182



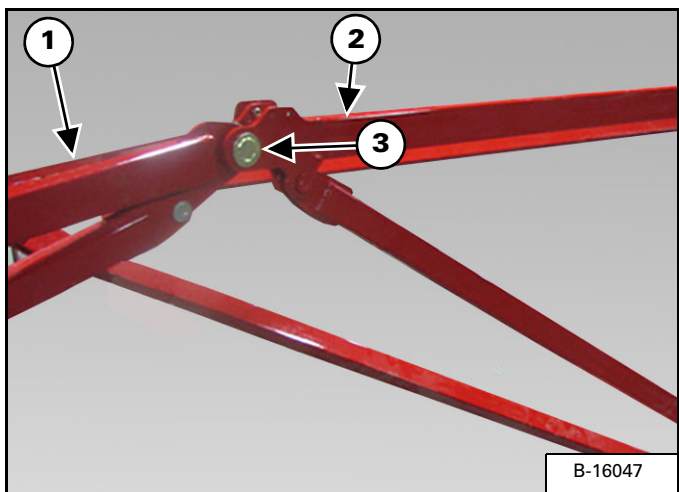
Install the truss beam (Items 1 & 2) onto the #2 tube upper truss beam mount (Item 3) [Figure 182].

NOTE: The upper truss beam (Item 2) [Figure 182] must be installed onto the truss beam mount first (both sides).

Install the undercarriage pin sleeve, 1/2" x 4-1/2" bolt and 1/2" lock nut. Tighten lock nut and bolt.

Repeat procedure on the opposite side.

Figure 183

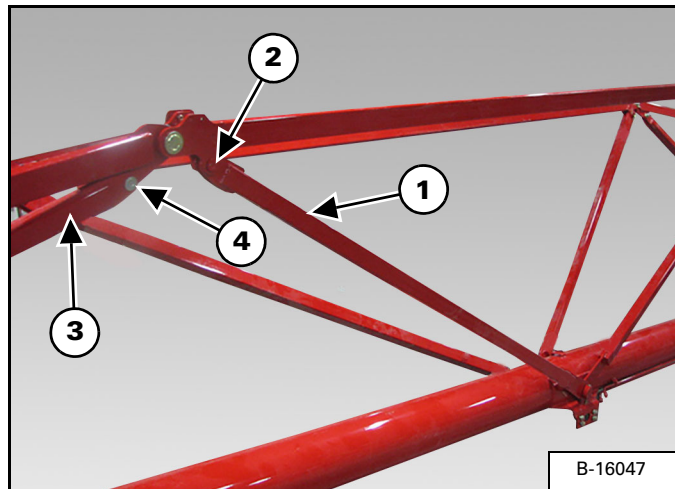


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) [Figure 183].

Align the truss beams and install the truss pin (Item 3) [Figure 183], 2" x 10 ga. narrow rim washer and 5/16" x 3" cotter pin.

Repeat procedure on the opposite side.

Figure 184



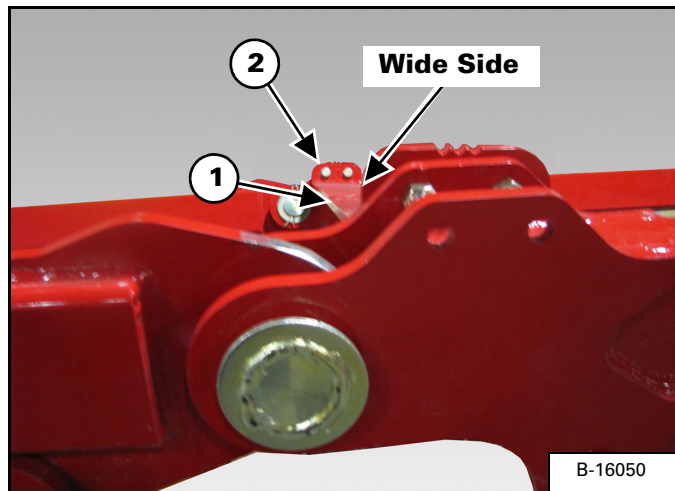
Raise and align truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin [Figure 184].

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 184].

Repeat procedure on the opposite side.

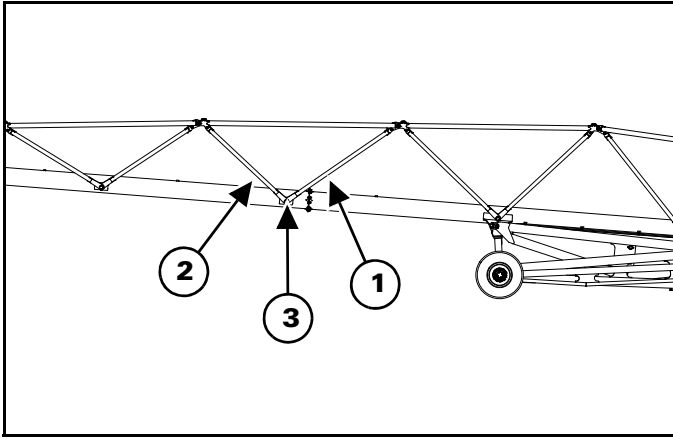
Figure 185



Place the truss support bracket (three notches) (Item 1) [Figure 185] between the left side and right side truss beams (wide side of support bracket toward the lower tube).

Install two 1/2" x 1-3/4" bolts (Item 2) [Figure 185] and lock nut on each side. Do not tighten at this time.

Figure 186



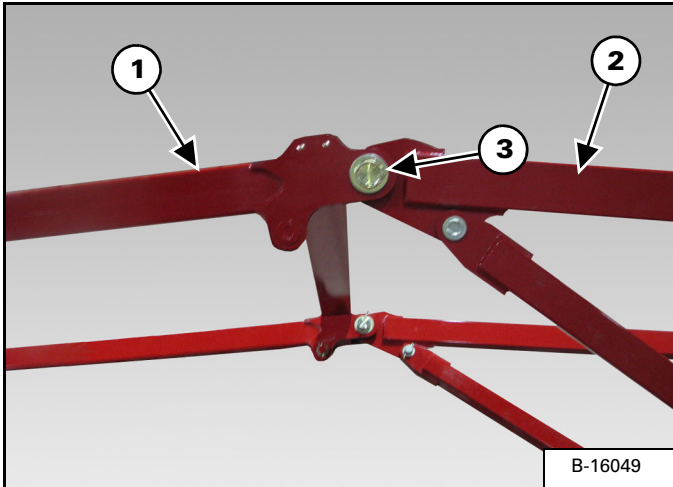
Install the truss beam (Items 1 & 2) onto the #3 tube lower truss beam mount (Item 3) **[Figure 186]**.

NOTE: The upper truss beam (Item 2) [Figure 186] must be installed onto the truss beam mount first (both sides).

Install the undercarriage pin sleeve, 1/2" x 4-1/2" bolt and 1/2" lock nut. Tighten lock nut and bolt.

Repeat procedure on the opposite side.

Figure 187

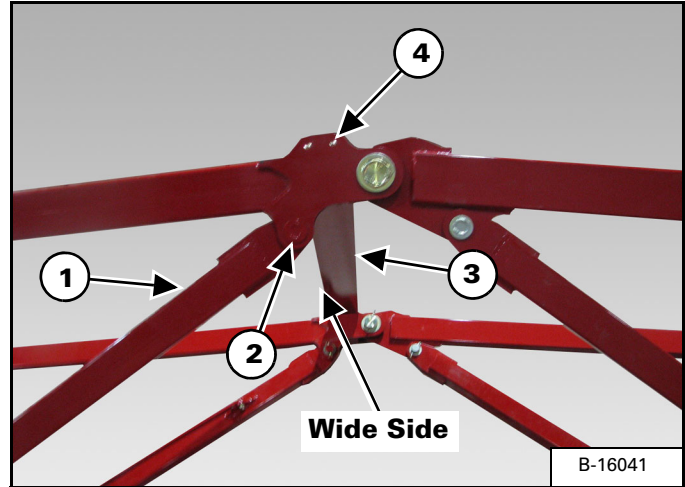


Raise the truss beams (Items 1 & 2) **[Figure 187]**.

Align the truss beams and install the truss pin (Item 3) **[Figure 187]**, 2" x 10 ga. narrow rim washer and 5/16" x 3" cotter pin.

Repeat procedure on the opposite side.

Figure 188



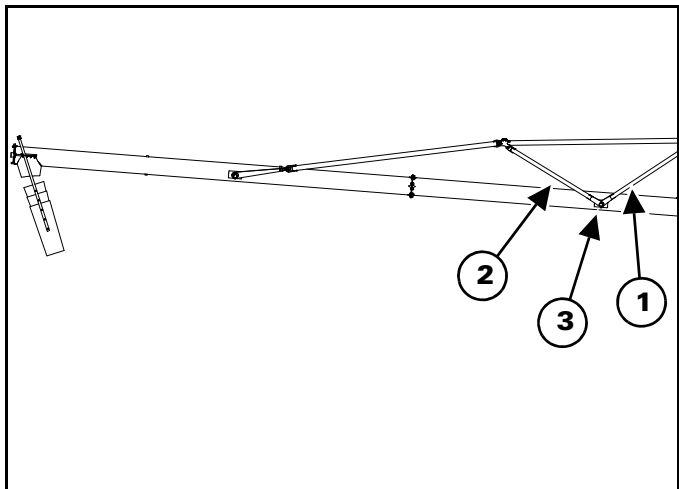
Raise and align the truss beam (Item 1), install the 1-1/4" pin (Item 2) **[Figure 188]**, 1-1/4" narrow rim washer and 1/4" x 2" cotter pin.

Repeat procedure on the opposite side.

Place the truss support bracket (two notches) (Item 3) **[Figure 188]** between the left side and right side truss beams (wide side of support bracket toward the top tube).

Install two 1/2" x 1-3/4" bolts (Item 4) **[Figure 188]** and lock nut on each side. Do not tighten at this time.

Figure 189



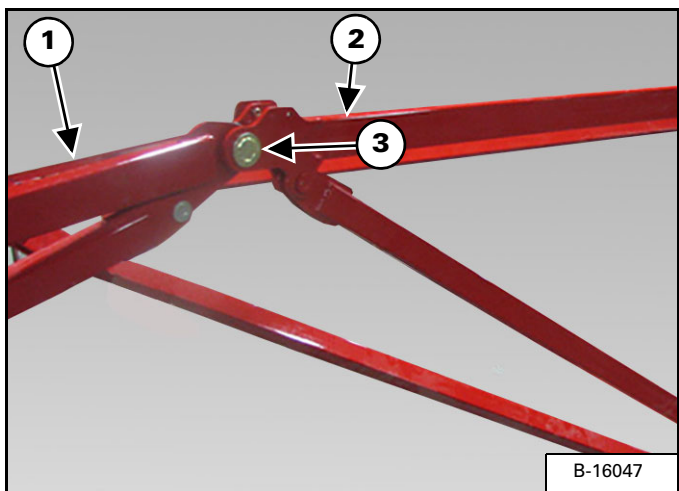
Install the truss beam (Items 1 & 2) onto the #3 tube upper truss beam mount (Item 3) [Figure 189].

NOTE: The upper truss beam (Item 2) [Figure 189] must be installed onto the truss beam mount first (both sides).

Install the undercarriage pin sleeve, 1/2" x 4-1/2" bolt and 1/2" lock nut. Tighten lock nut and bolt.

Repeat procedure on the opposite side.

Figure 190

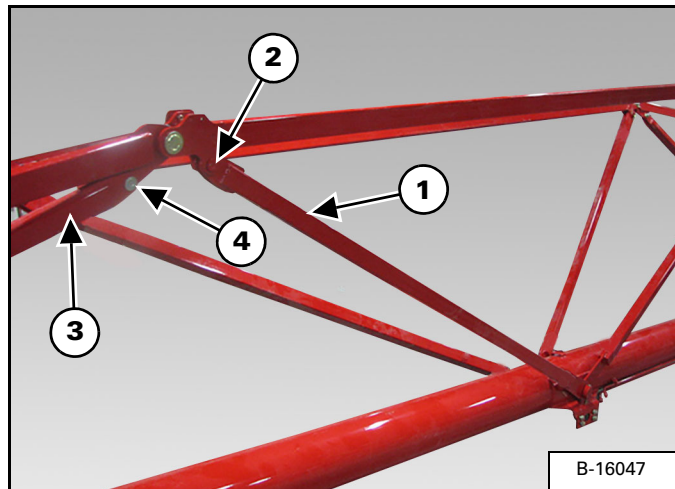


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) [Figure 190].

Align the truss beams and install the truss pin (Item 3) [Figure 190], 2" x 10 ga. narrow rim washer and 5/16" x 3" cotter pin.

Repeat procedure on the opposite side.

Figure 191



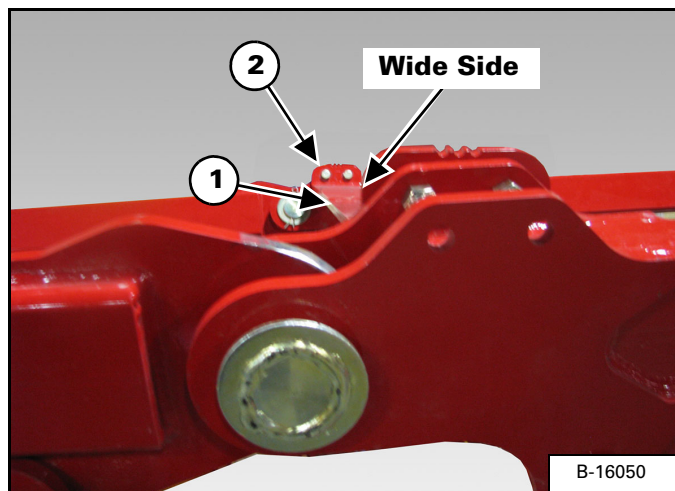
Raise and align truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer and 1/4" x 2" cotter pin [Figure 191].

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 191].

Repeat procedure on the opposite side.

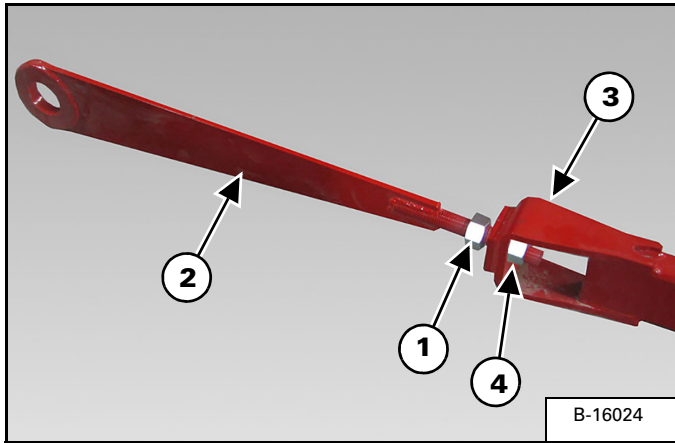
Figure 192



Place the truss support bracket (three notches) (Item 1) [Figure 192] between the left side and right side truss beams (wide side of support bracket toward the lower tube).

Install two 1/2" x 1-3/4" bolts (Item 2) [Figure 192] and lock nut on each side. Do not tighten at this time.

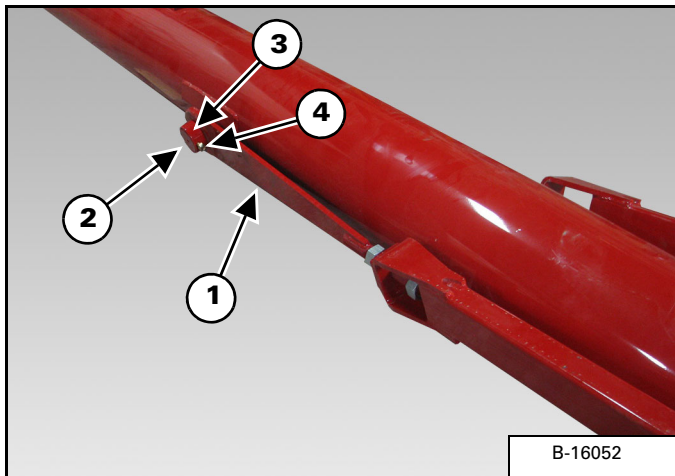
Figure 193



Install the 1-1/4" nut (Item 1) onto the truss fastener (Item 2). Install the truss fastener into the truss beam (Item 3) **[Figure 193]**. Install the 1-1/4" nut (Item 4) onto the truss fastener.

Repeat procedure for the opposite side.

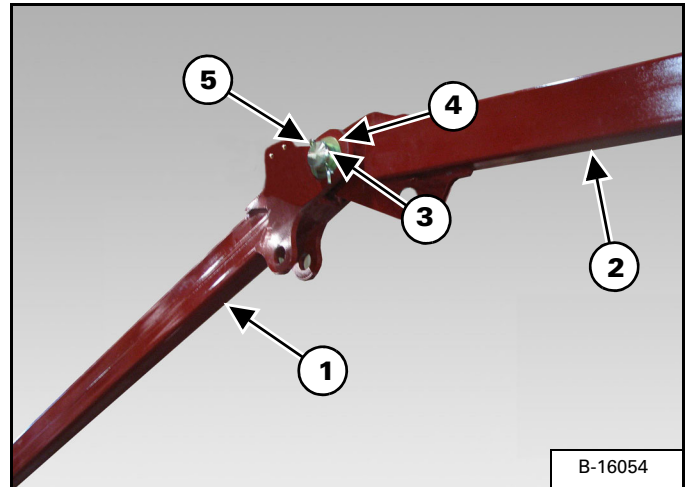
Figure 194



Install the truss fastener / beam assembly (Item 1) onto the #4 tube upper truss beam mount (Item 2) **[Figure 194]**.

Install the undercarriage pin sleeve (Item 3) and 1/2" x 4-1/2" bolt and 1/2" lock nut (Item 4) **[Figure 194]**. Tighten the bolt and lock nut.

Figure 195

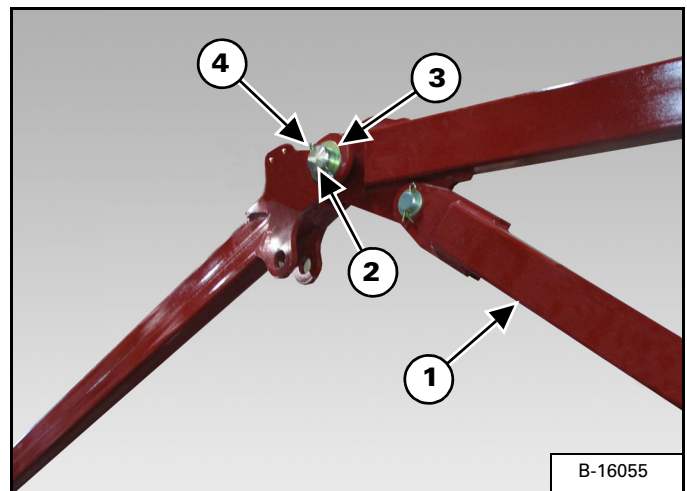


Raise the truss beam assembly (Item 1) and the truss beam (Item 2) **[Figure 195]**.

Align truss beams and install the truss pin (Item 3), 2" x 10 ga. narrow rim washer (Item 4) and 5/16" x 3" cotter pin (Item 5) **[Figure 195]**.

Repeat procedure on the opposite side.

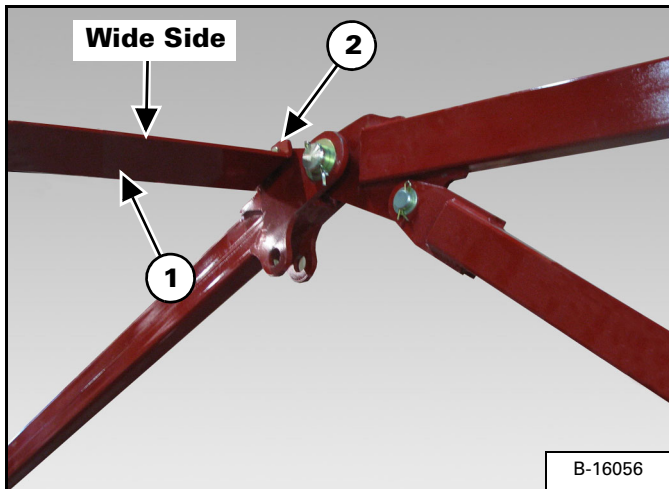
Figure 196



Raise and align truss beam (Item 1), install the 1-1/4" pin (Item 2), 1-1/4" narrow rim washer (Item 3) and 1/4" x 2" cotter pin (Item 4) **[Figure 196]**.

Repeat procedure on the opposite side.

Figure 197



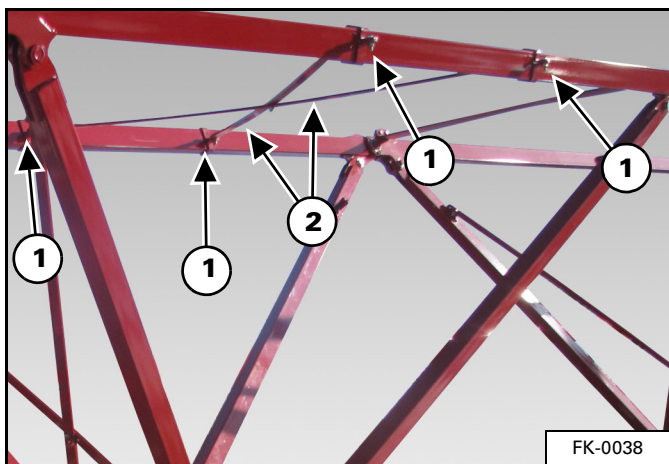
Place the truss support bracket (four notches) (Item 1) **[Figure 197]** between the left side and right side truss beams (wide side of support bracket toward the lower tube).

Install two 1/2" x 1-3/4" bolts (Item 2) **[Figure 197]** and lock nut on each side. Do not tighten at this time.

Cross Brace Plate Assembly

NOTE: See Page 68 for cross brace identification.

Figure 198



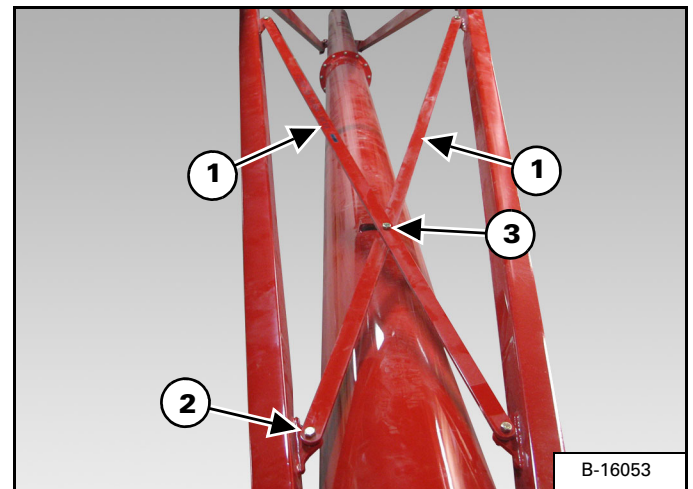
Place the cross brace holders (Item 1) on the truss beams as shown, install 1/2" x 1-1/2" bolts (Item 2) **[Figure 198]** through the truss brace holders (on the outside of truss beams) and install 1/2" lock nuts. Do not tighten.

NOTE: Center the cross brace plates evenly on the truss beams.

Align the cross brace plates (Item 2) **[Figure 198]** diagonally to the cross brace holders (on the inside of the truss beams).

Install 1/2" x 1-1/2" bolts through the cross brace plates and cross brace holders. Tighten all bolts.

Figure 199



Align the cross brace plates (Item 1) **[Figure 199]** diagonally with the tabs on the left side and right side truss beams.

Install one 1/2" x 1-1/2" bolt (Item 2) **[Figure 199]** and lock nut in each end of cross brace plate.

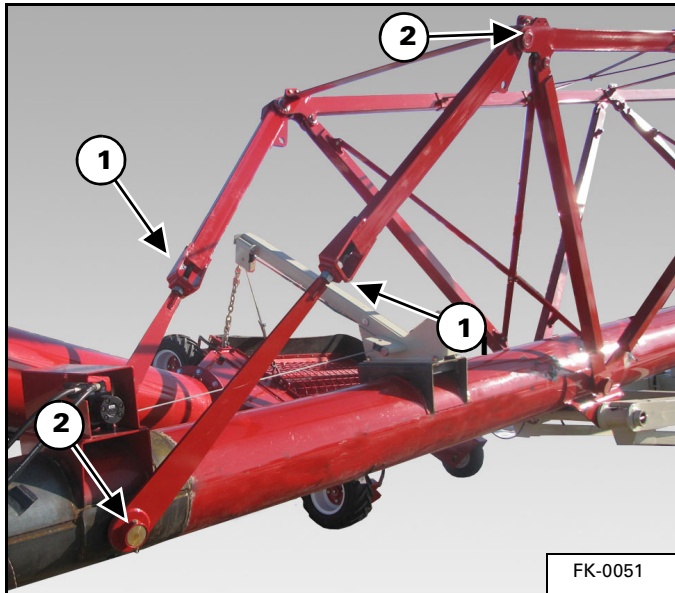
Install one 1/2" x 1-1/2" bolt (Item 3) **[Figure 199]** through intersecting holes in cross plate braces. Do not tighten at this time.

Repeat procedure for all cross brace plates.

Tighten all cross brace bolts.

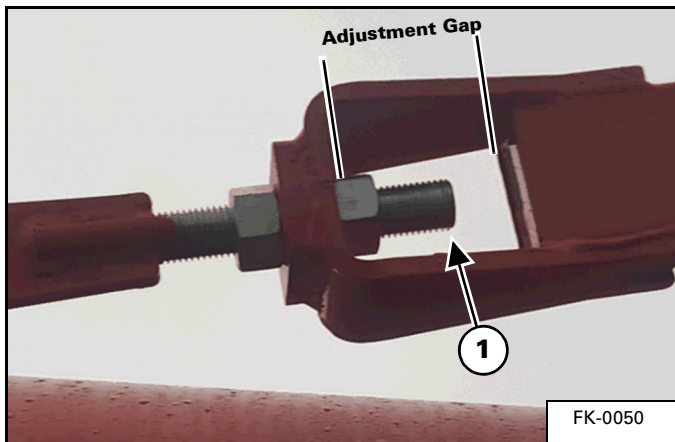
Lower and Upper Truss Adjustment

Figure 200



Adjust lower trusses (Item 1) so that both lower trusses are the same length, measuring from pin to pin (Item 2) **[Figure 200]** on each truss.

Figure 201



NOTE: Threaded rod end (Item 1) [Figure 201] should be near the middle of the adjustment gap.

Tighten both nuts on each of the lower trusses.

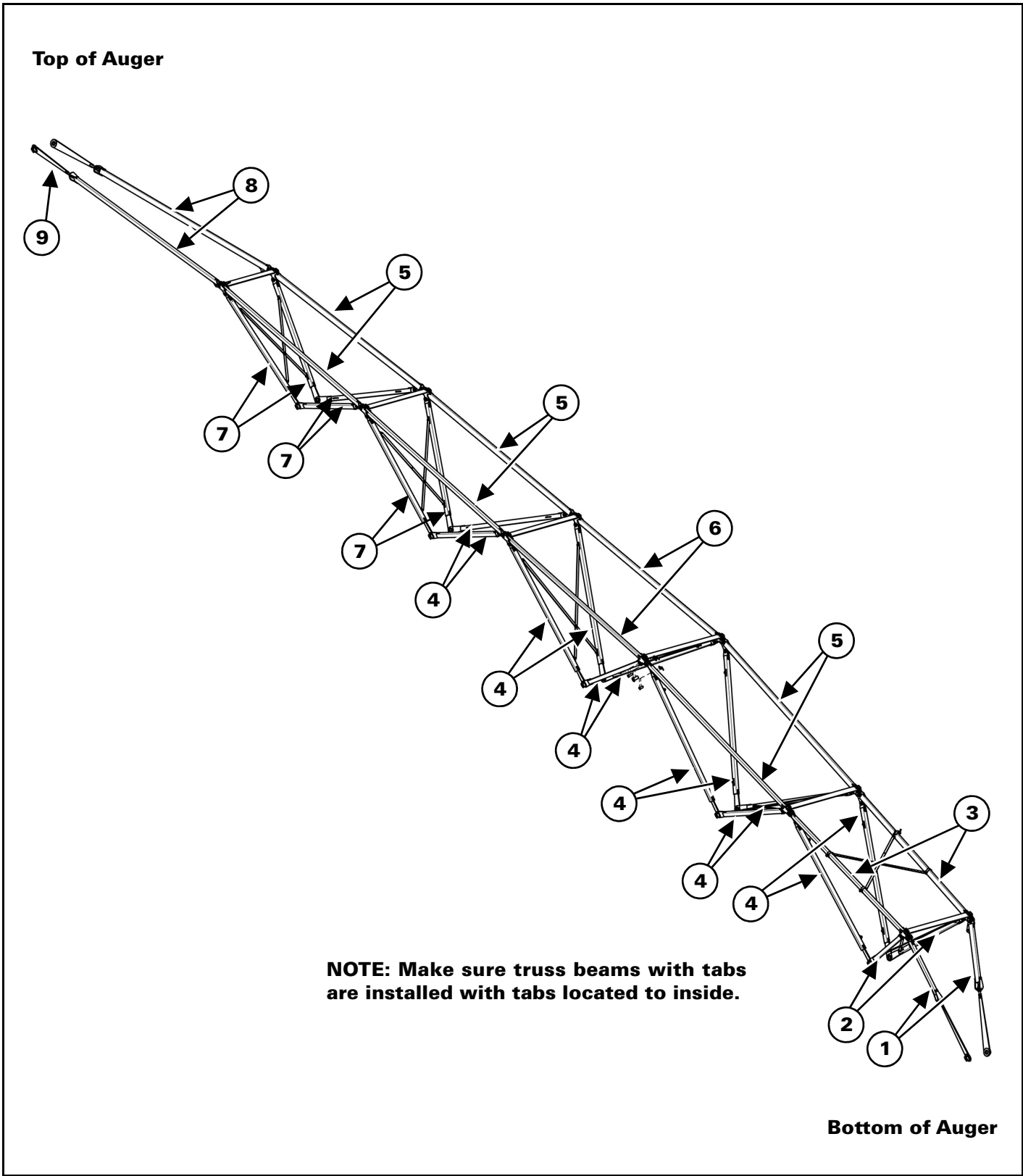
Repeat procedure for the upper truss adjustments.

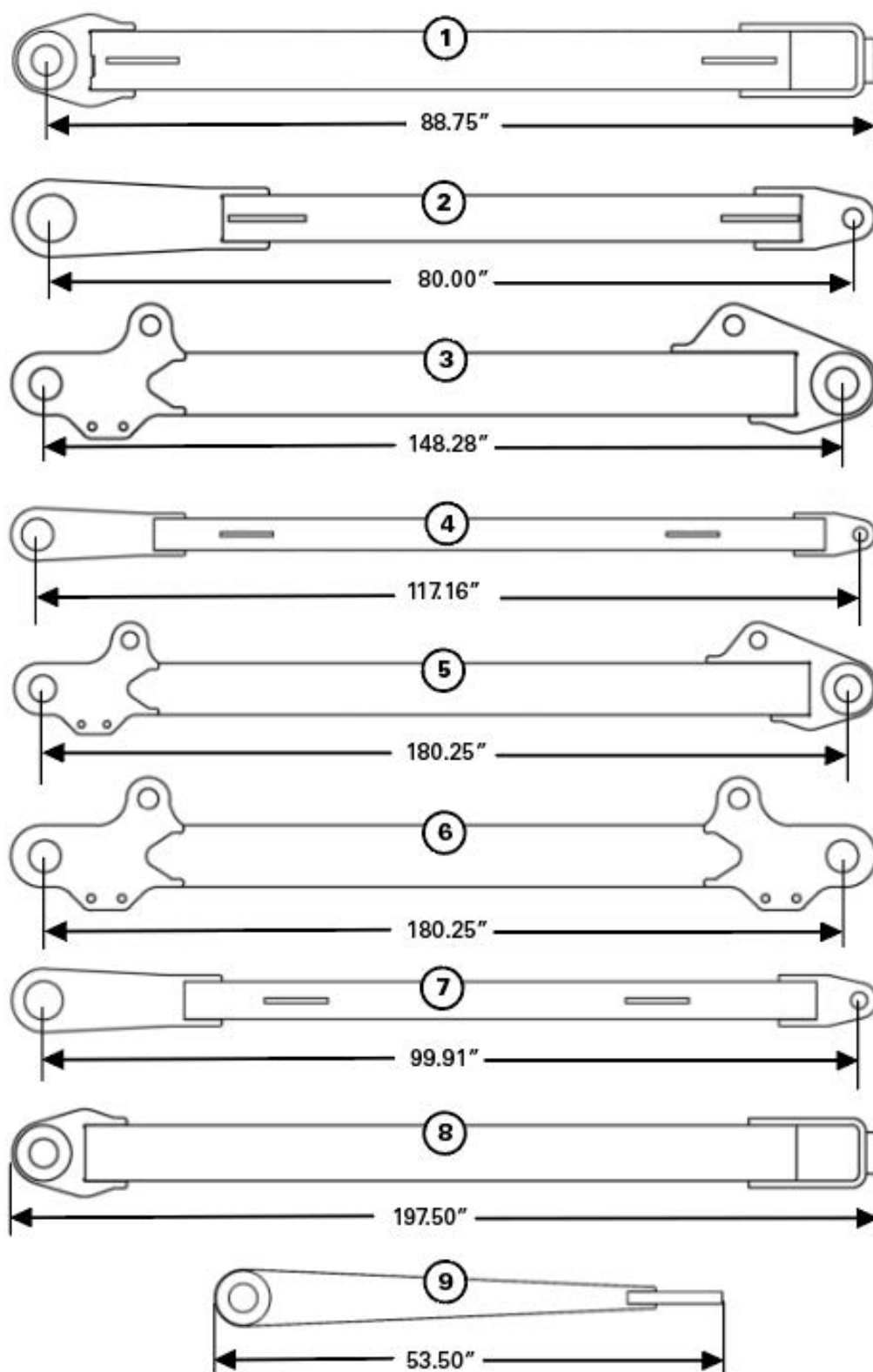
Install the tube and bridging assembly onto the undercarriage and lift arms. See "16124 Installing Tube On Undercarriage" on page 78.

Farm King

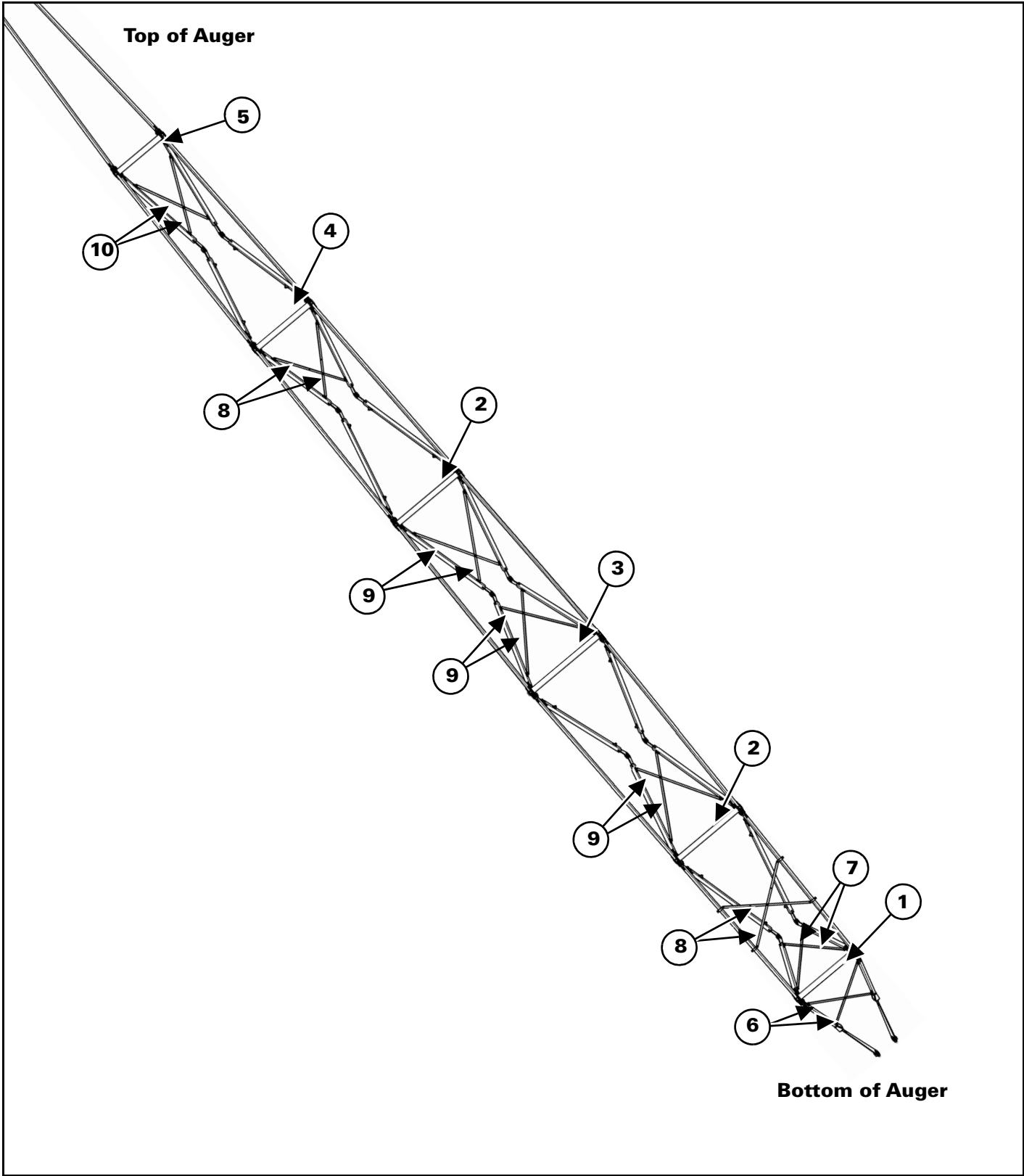


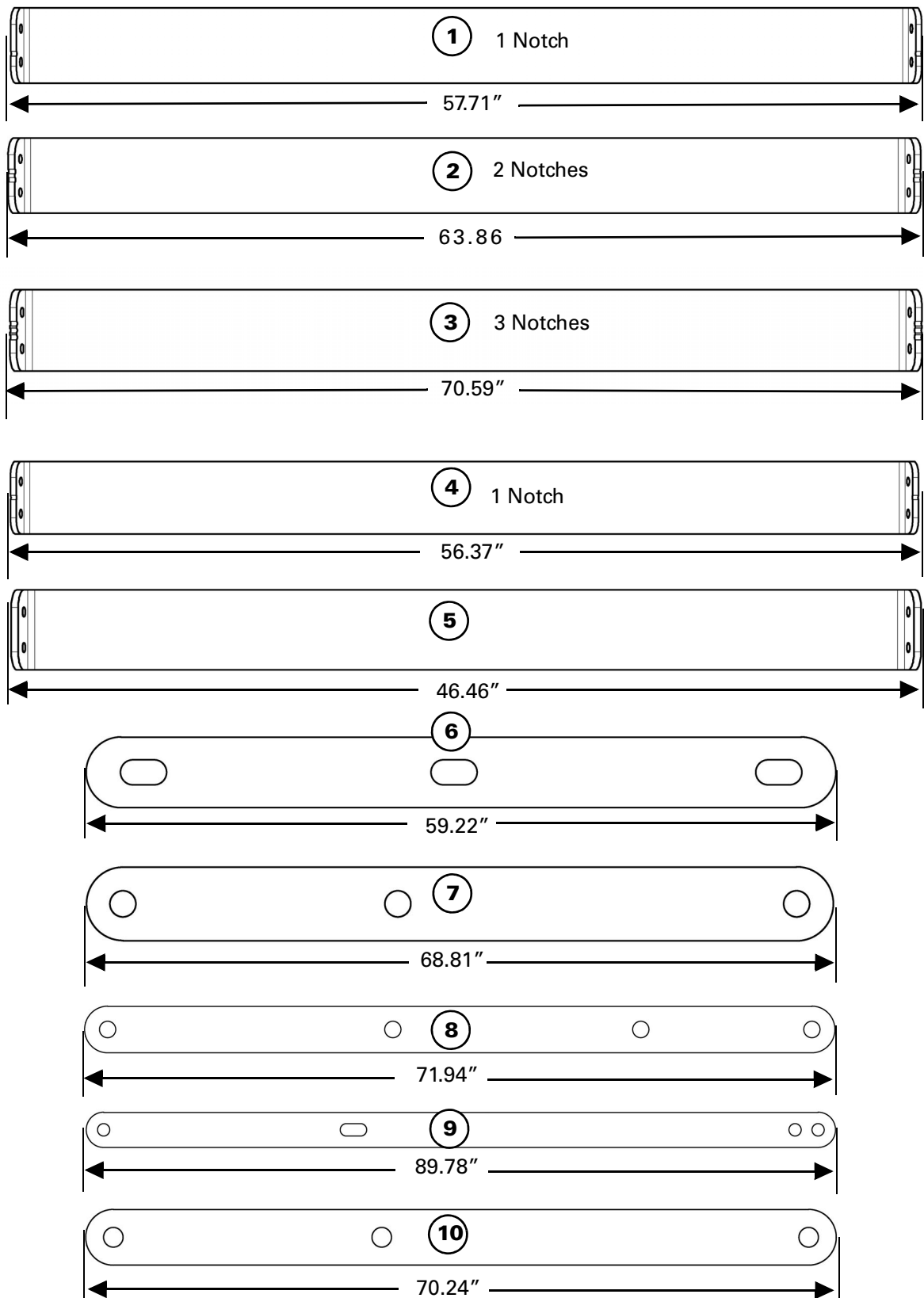
16124 Bridging Identification





16124 Cross Brace Plate /Truss Support Bracket Identification





1684 Installing Tube On Undercarriage

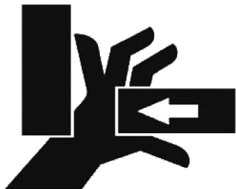
Install the tube on the undercarriage on a flat level surface.

⚠ WARNING



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

⚠ WARNING



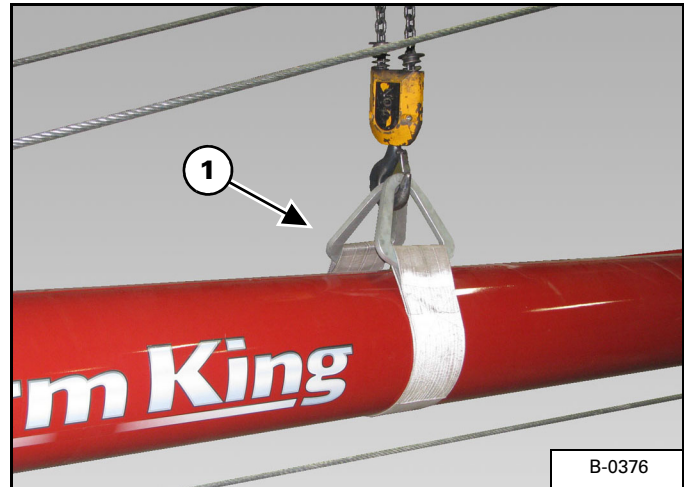
AVOID INJURY OR DEATH

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

⚠ IMPORTANT

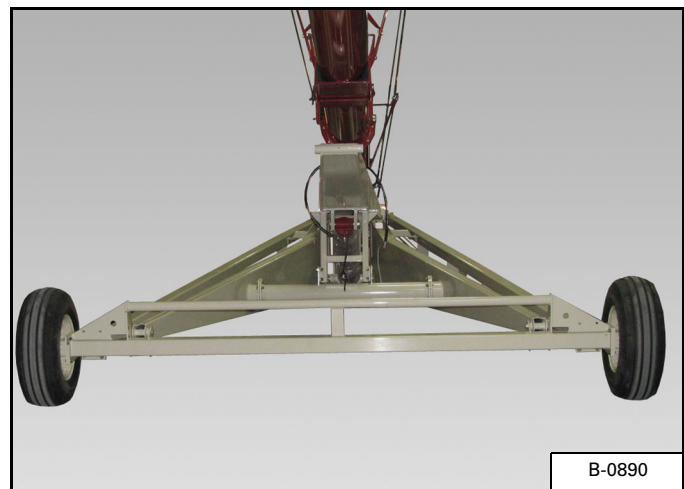
Fully tighten all tube assembly hardware before installing the tube assembly onto the

Figure 202



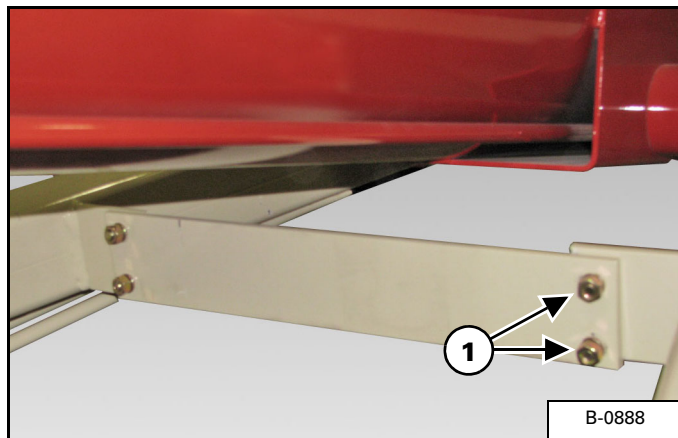
With the strap (Item 1) [Figure 202] installed around the center tube and connected to an approved lifting device, raise the tube assembly high enough to allow the undercarriage to be moved under the tube assembly.

Figure 203



Move the undercarriage into position below the tube assembly [Figure 203].

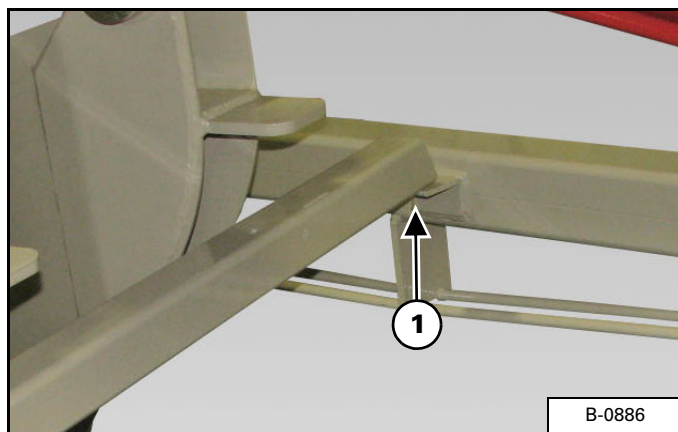
Figure 204



Remove the two 7/16" x 1-1/2" bolts (Item 1) [Figure 204], 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.

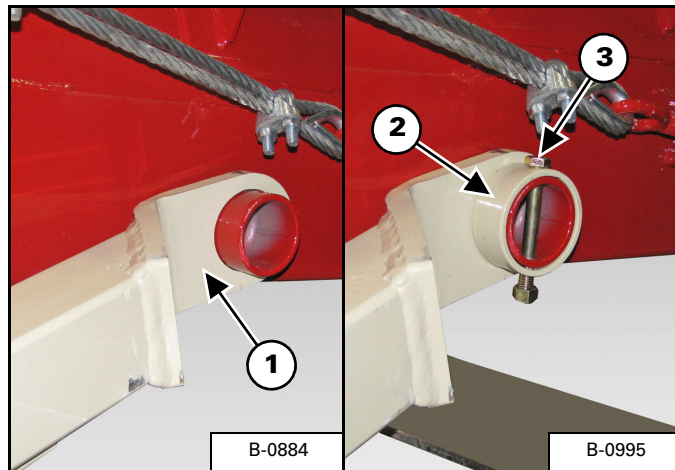
Figure 205



Remove the 5/8" x 1-3/4" bolt (Item 1) [Figure 205], 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.

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

Figure 206

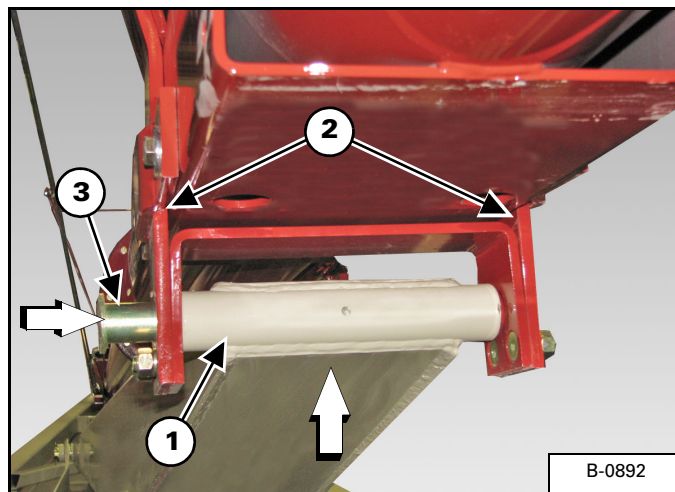


Fully install the RH & LH undercarriage arms (Item 1) [Figure 206] onto the mounts of the bottom tube section.

Install the undercarriage pin sleeve (Item 2), align holes and install one 1/2" X 4-1/2" bolt (Item 3) [Figure 206] through the sleeve and mount of the bottom tube section. Install one 1/2" lock nut on the bolt and tighten (both sides)

Reinstall the two 7/16" x 1-1/2" bolts (Item 1) [Figure 206], 7/16" lock nuts and 7/16" flat washers. Do not tighten bolts and lock nuts at this time.

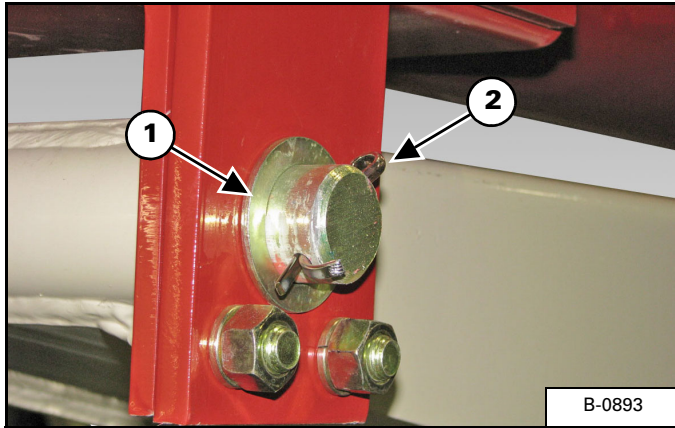
Figure 207



Align upper lift arm (Item 1) with the main bridging yoke (Item 2) [Figure 207] on the center tube section.

Install the lift arm pivot pin (Item 3) [Figure 207] through the main bridging yoke and upper lift arm.

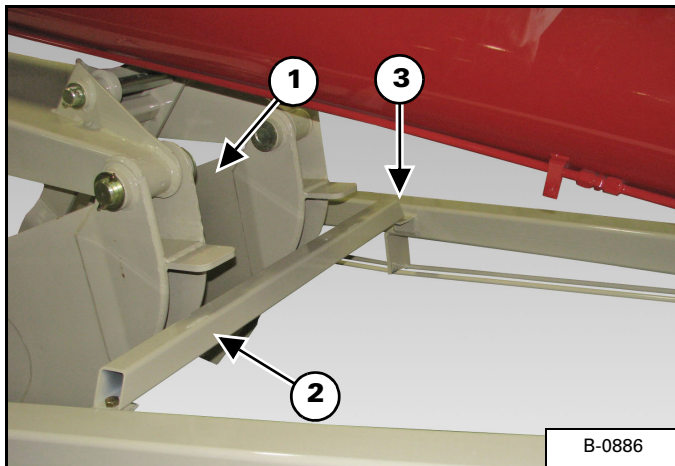
Figure 208



Install one 1-1/2" x 10 ga. narrow rim washer (Item 1) and one 1/4" x 2" cotter pin (Item 2) [Figure 208] through the lift arm pivot pin.

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

Figure 209

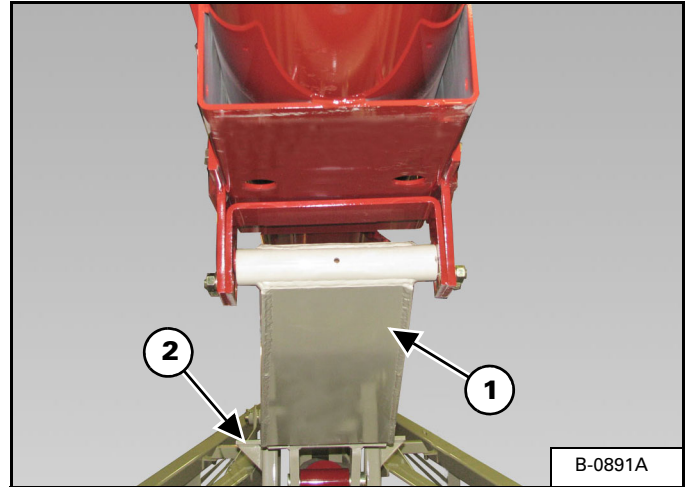


Install a strap around the LH or RH lower lift arm. Connect the strap to an approved lifting device and raise the lower lift arm assembly (Item 1) above the lift arm cradle (Item 2) [Figure 209].

Position the lift arm cradle on top of the undercarriage arm mount. Install bolt (Item 3) [Figure 209] and lock nut.

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

Figure 210



With the upper lift arm (Item 1) resting on the lift arm rest (Item 2) [Figure 210] 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.

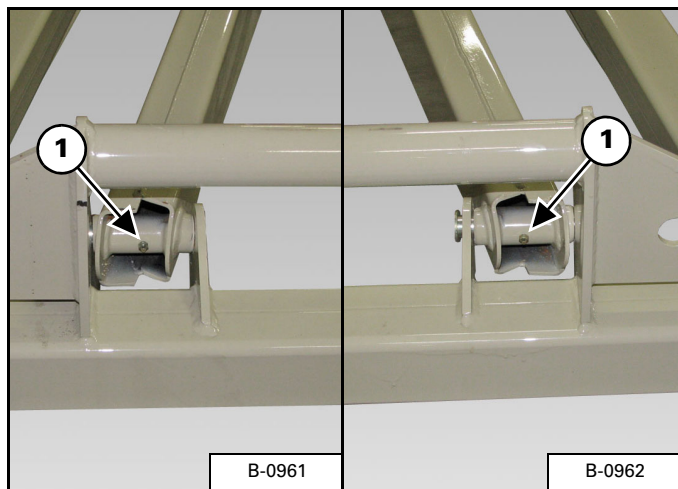
Tighten all remaining undercarriage bolts.

! IMPORTANT

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

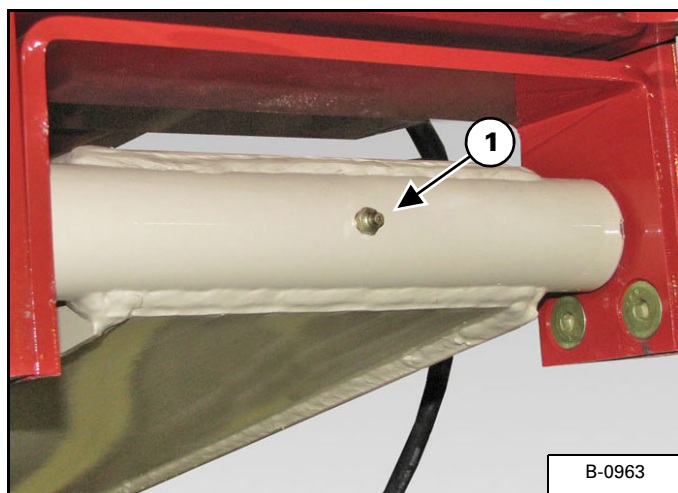
Lower tube assembly onto the undercarriage and remove the strap from tube assembly.

Figure 211



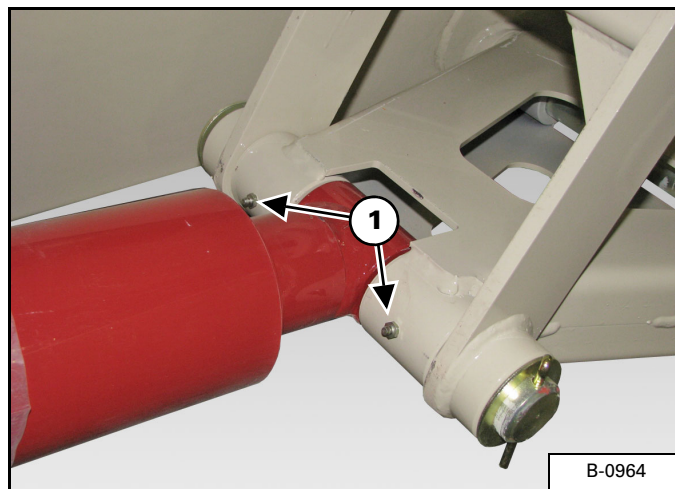
Install grease zerks (Item 1) **[Figure 211]** in the axle end of the LH & RH lower lift arms.

Figure 212



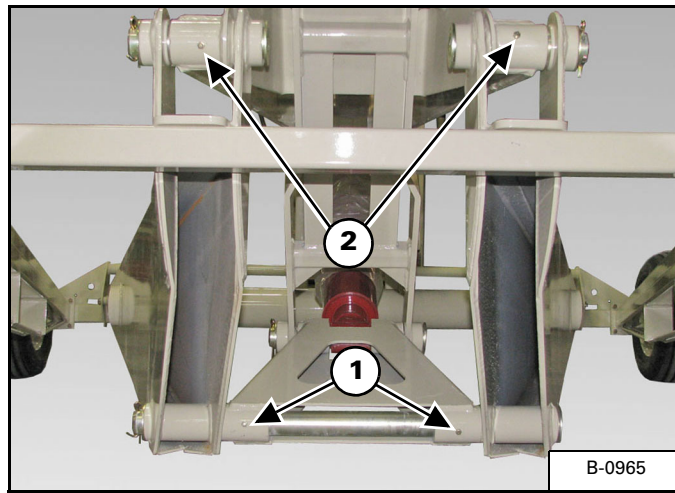
Install one grease zerk (Item 1) **[Figure 212]** into the upper lift arm.

Figure 213



Install two grease zerks (Item 1) **[Figure 213]** into the connecting link.

Figure 214



Install two grease zerks (Item 1) **[Figure 214]** into the connecting link.

Install two grease zerks (Item 2) **[Figure 214]** into the upper lift arm.

Grease all zerks on undercarriage. (See "LUBRICATION" on page 163.)



IMPORTANT

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

16104 Installing Tube On Undercarriage

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 the auger 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 the auger components.**

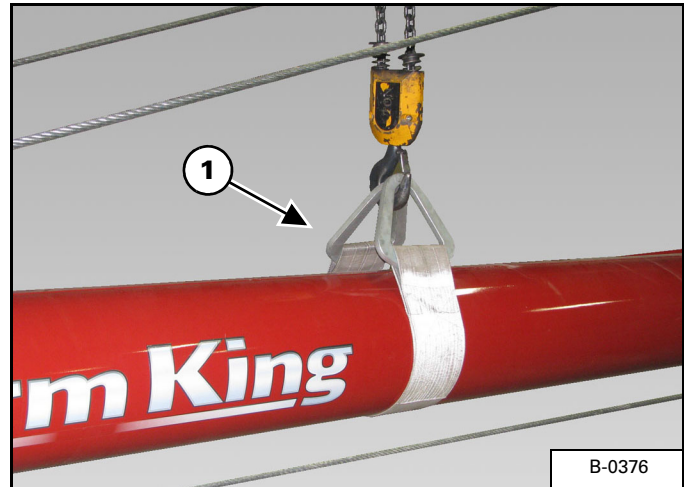
WARNING



AVOID INJURY OR DEATH

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

Figure 215



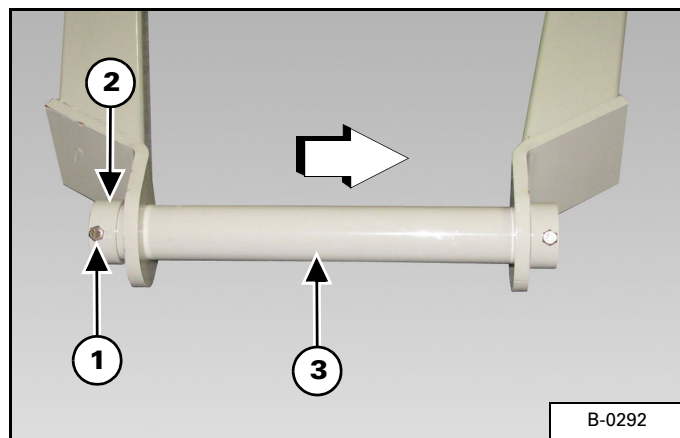
With the strap (Item 1) [Figure 215] installed around the #3 tube and connected to an approved lifting device, raise the tube assembly high enough to allow the undercarriage to be moved under the tube assembly.

Figure 216



Move the undercarriage into position below the tube assembly [Figure 216].

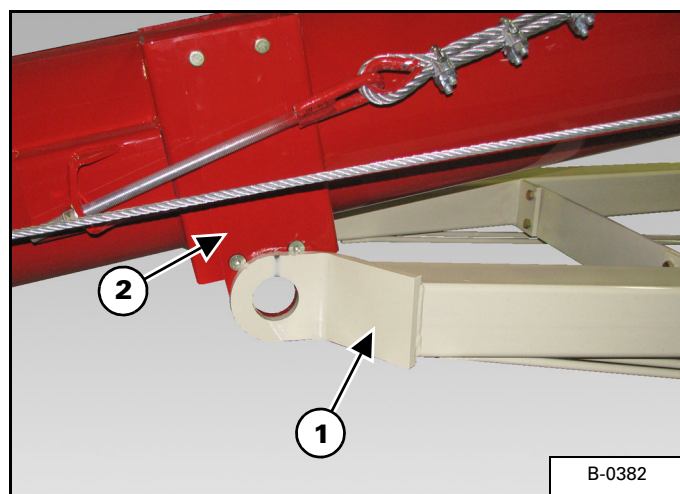
Figure 217



Remove the 1/2" x 4-1/2" bolt (Item 1), 1/2" lock nut and collar (Item 2) [Figure 217].

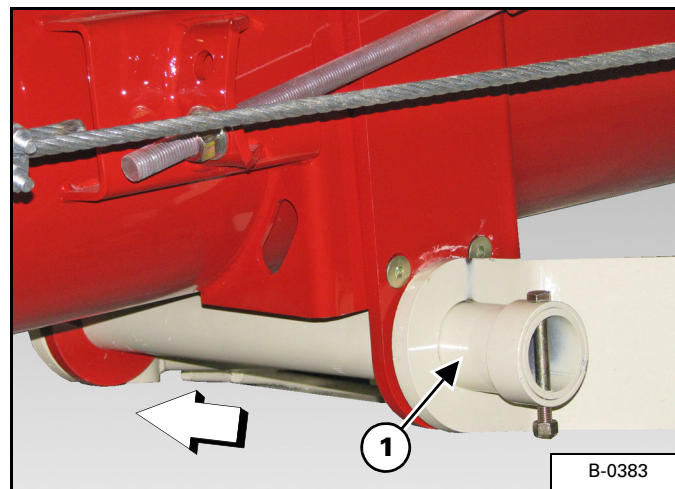
Remove the undercarriage lift arm pin (Item 3) [Figure 217].

Figure 218



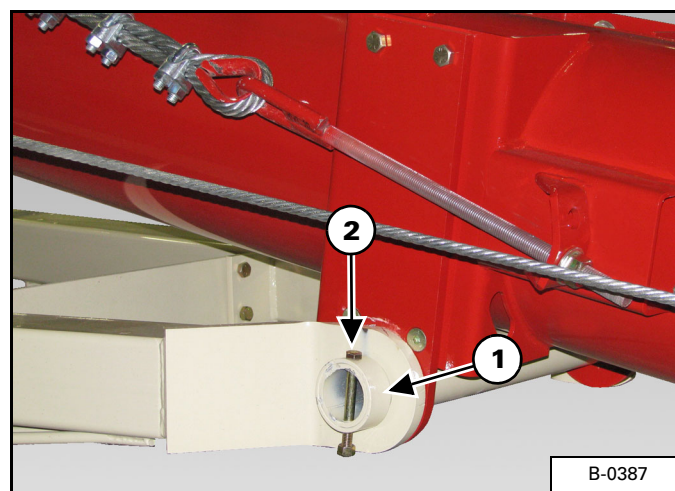
Raise the front of the undercarriage (Item 1) and align the holes of the undercarriage and the undercarriage connector plate(s) (Item 2) [Figure 218].

Figure 219



Install the undercarriage lift arm pin (Item 1) [Figure 219] through the left undercarriage arm, undercarriage connector plates and right undercarriage arm.

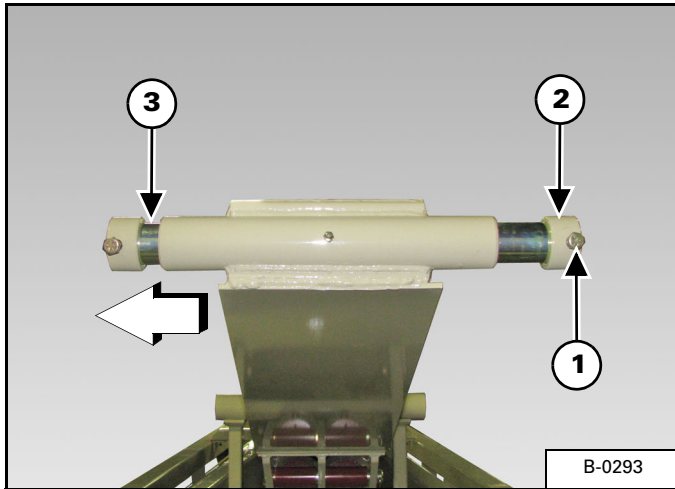
Figure 220



Install the collar (Item 1), 1/2" x 4-1/2" bolt (Item 2) [Figure 220] and 1/2" lock nut.

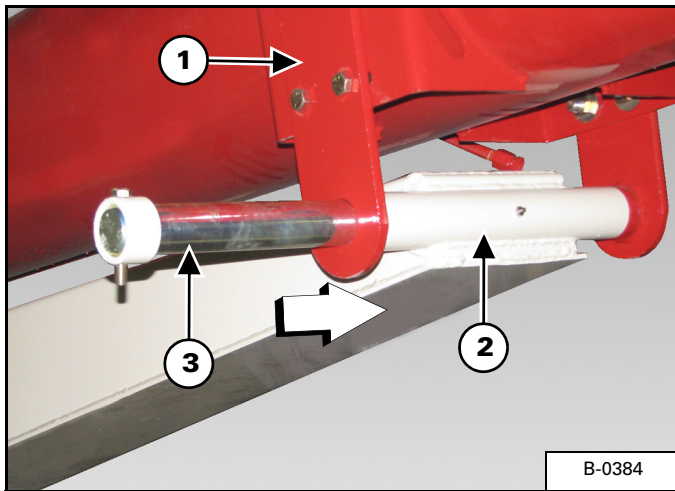
Tighten the bolt and lock nut until the lock nut contacts the collar (both sides).

Figure 221



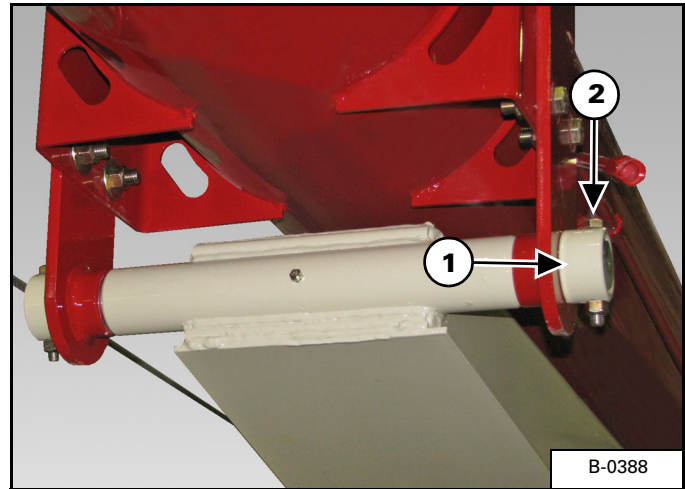
Remove the 1/2" x 3-1/2" bolt (Item 1), 1/2" lock nut, collar (Item 2) and upper lift arm pin (Item 3) **[Figure 221]**.

Figure 222



Lower the tube assembly and align the holes of the bridging plate (Item 1) and upper lift arm (Item 2). Install the upper lift arm pin (Item 3) **[Figure 222]** through the bridging plate and upper lift arm.

Figure 223

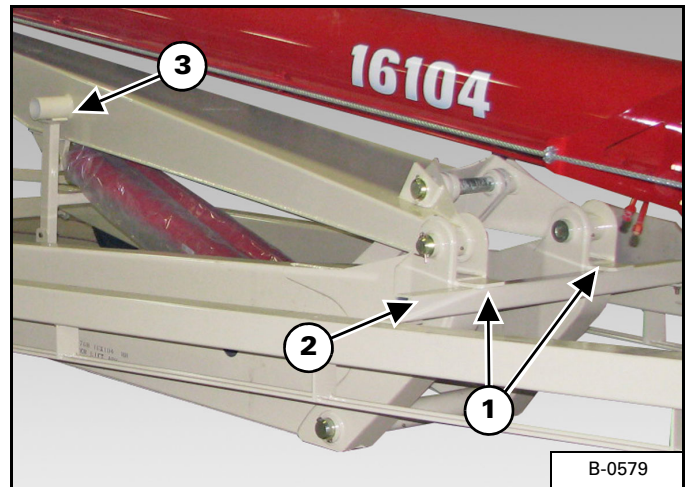


Install collar (Item 1), 1/2" x 3-1/2" bolt (Item 2) **[Figure 223]** and 1/2" lock nut.

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

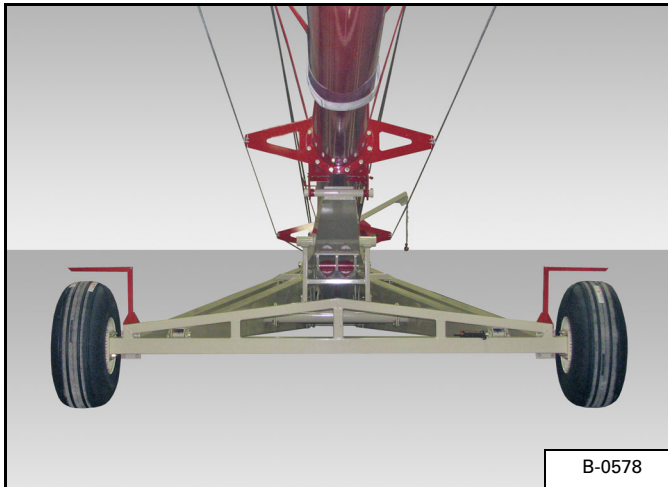
Place chock blocks in front and behind the tires of the undercarriage to prevent the auger assembly from moving.

Figure 224



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 224]**.

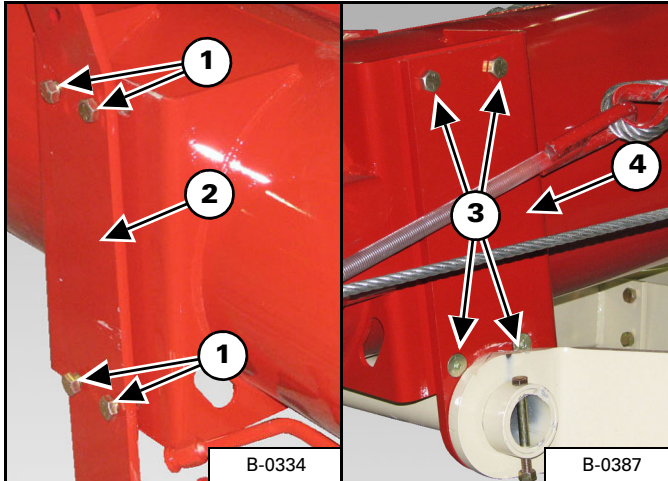
Figure 225



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 **[Figure 225]**.

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

Figure 226

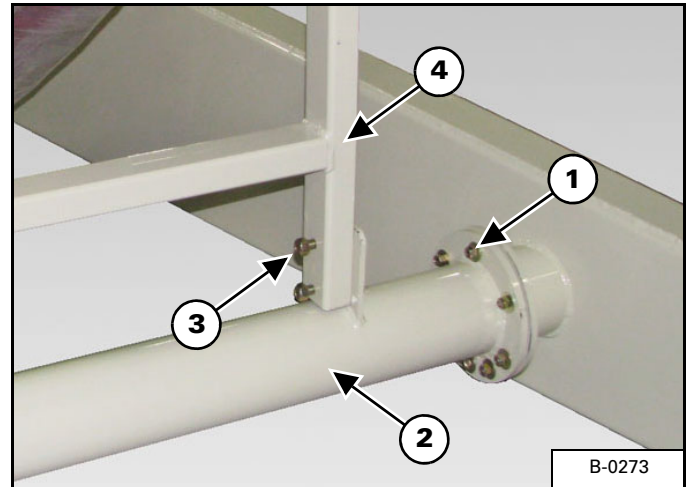


Slightly raise the tube assembly above the undercarriage lift arm rest and cradle rest.

Tighten the four bolts (Item 1) and lock nuts on the bridging plate (Item 2) **[Figure 226]** (connected to the upper lift arm).

Tighten the four bolts (Item 3) and lock nuts on the undercarriage connector plates (Item 4) **[Figure 226]** (connected to the front of the undercarriage).

Figure 227



Tighten up the sixteen 1/2" bolts (Item 1) and nuts on the torque tube (Item 2) **[Figure 227]**.

Tighten up the four 1/2" bolts (Item 3) and nuts on the cradle rest (Item 4) **[Figure 227]**.

Tighten all remaining undercarriage bolts.

! IMPORTANT

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

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

Grease all zerks on undercarriage. (See "LUBRICATION" on page 163.)

! IMPORTANT

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

16124 Installing Tube On Undercarriage

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

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 the auger 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 the auger components.

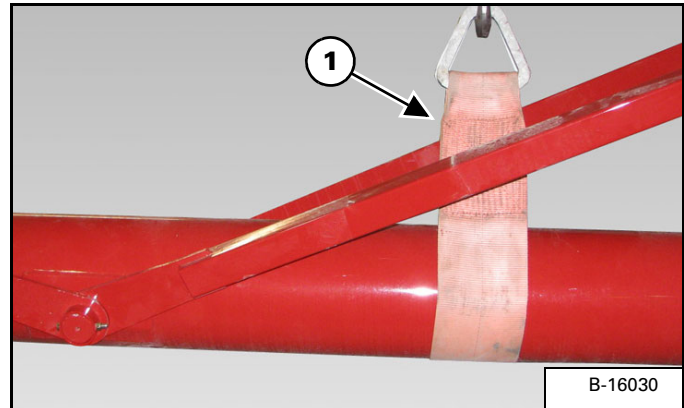
WARNING



AVOID INJURY OR DEATH

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

Figure 228

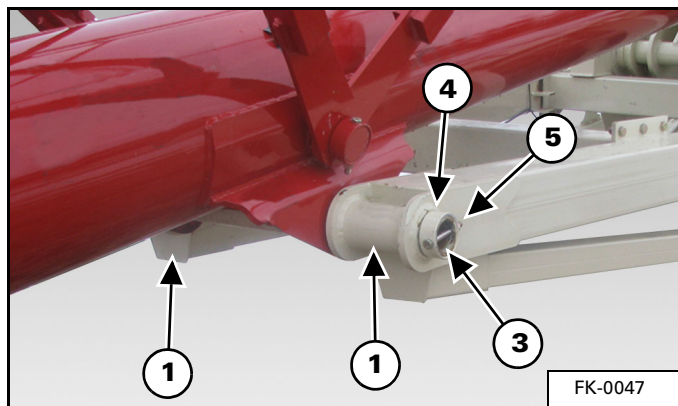


With the strap (Item 1) [Figure 228] installed around the #4 tube and connected to an approved lifting device, and a strap connected at the front of the #1 tube and connected to an approved lifting device, raise the tube assembly high enough to allow the undercarriage to be moved under the tube assembly.

NOTE: The tube/truss assembly must be prevented from rotating as it is top heavy, this can be done by placing straps around the upper middle horizontal truss members, do not lift the assembly by the trusses, just prevent rotation.

Move the undercarriage into position below the tube assembly [Figure 228].

Figure 229

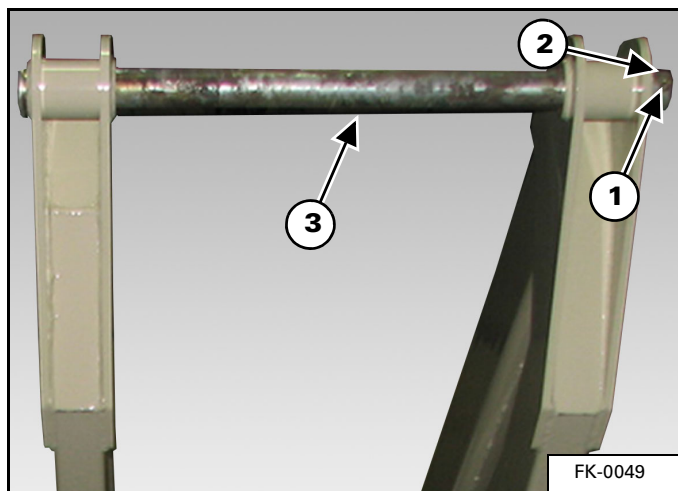


Raise the front of the undercarriage (Item 1) **[Figure 229]** and align the holes of the undercarriage with the mount holes on the tube.

Install the undercarriage 2" diameter lift arm pin (Item 3) **[Figure 229]** through the left undercarriage arm, tube mount holes and right undercarriage arm.

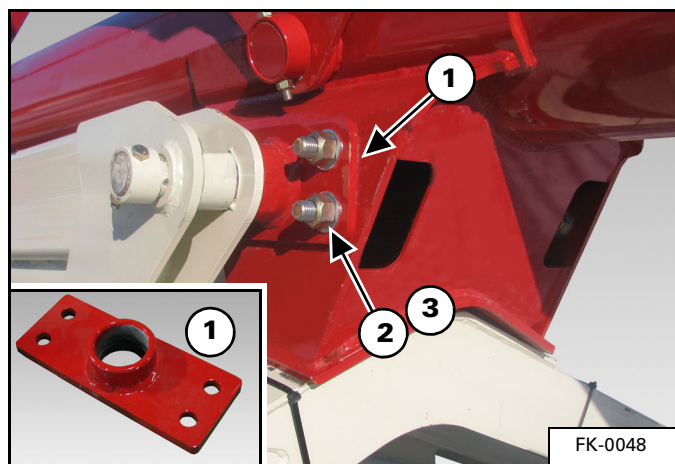
Install the collar (Item 4), 1/2" x 3-1/2" bolt and 1/2" lock nut (Item 5) **[Figure 229]** (both sides). Tighten the bolts and lock nuts until the lock nuts contact the collar.

Figure 230



Remove the 1/2" x 3-1/2" bolt, 1/2" lock nut (Item 1), collar (Item 2) and the 2" diameter upper lift arm pin (Item 3) that was previously installed for lifting purposes. **[Figure 230]**.

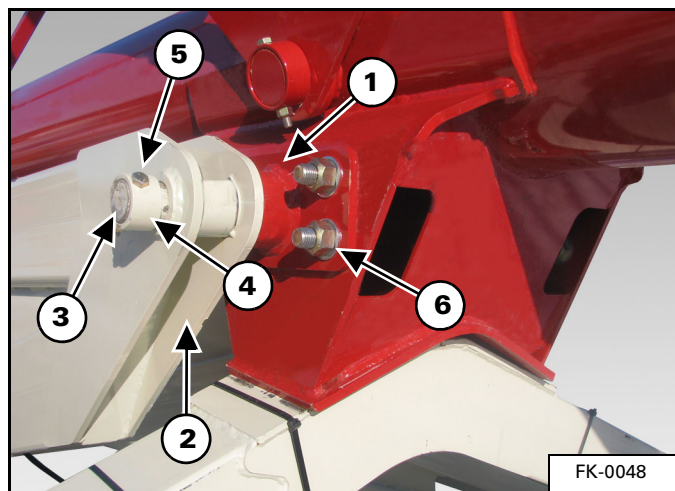
Figure 231



Place the plate (Item 1) as shown **[Figure 231]**, install four 1" x 3" bolts, flat washers (Item 2) and lock nuts (Item 3) onto the bolts. Do not tighten at this time.

Repeat procedure for the opposite side.

Figure 232



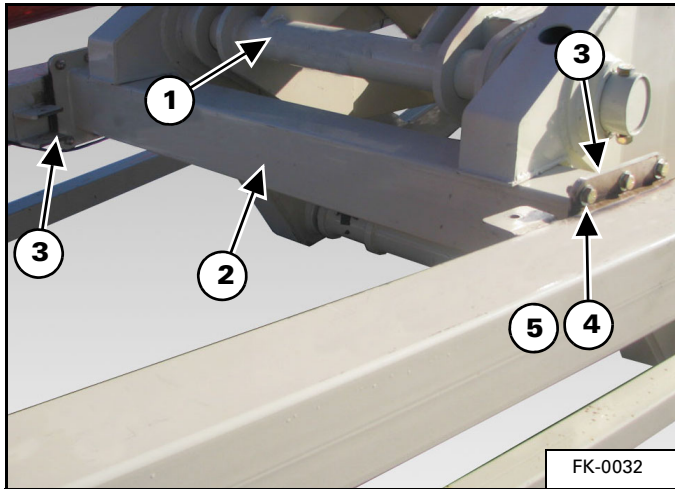
Lower the tube assembly and align the holes of the tube undercarriage mounting plate (Item 1) and upper lift arm (Item 2) **[Figure 232]**.

Install the 2" upper lift arm pin (Item 3) **[Figure 232]** through the upper lift arms and plates.

Install collar (Item 4), 1/2" x 3-1/2" bolt (Item 5) **[Figure 232]** and 1/2" lock nut (both sides). Tighten the bolt and lock nut until the lock nut contacts the collar (both sides).

Tighten the bolts (Item 6) **[Figure 232]** (both sides).

Figure 233

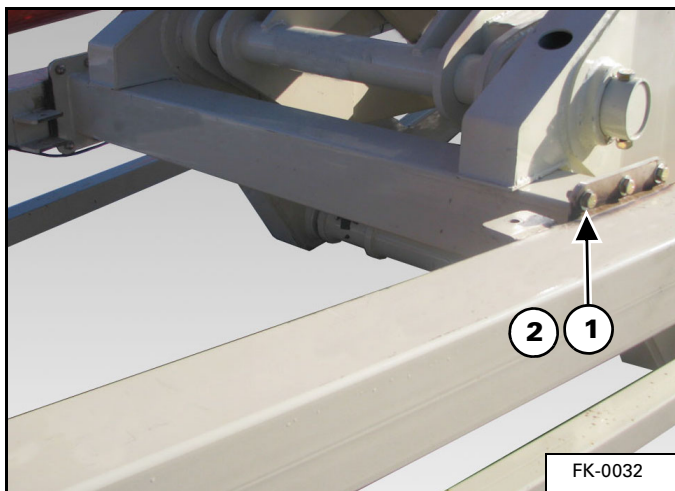


Place chock blocks in front and behind the tires of the undercarriage to prevent the auger assembly from moving.

Lower the tube assembly until the upper lift arm (Item 1) is resting on the cross brace support (Item 2) [Figure 233].

Slightly raise the tube assembly above the cross brace support.

Figure 234



Tighten the six 5/8" x 1-1/2" bolts (Item 1) and 5/8" lock nuts (Item 2) [Figure 234] on the cross brace support (both sides).

Tighten all remaining undercarriage bolts and cross support braces.

! IMPORTANT

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

Lower tube assembly onto the undercarriage until the pressure is released from the straps and lifting device from #4 tube and #1 tube.

Measure the tube angle at the midpoint and flange connection of each section of tube.

Ensure the top two tube (#4 & #3 tube) sections are at the same angle, the tube is straight (+/- 1 degree) and the spout end is not dipping down or tipping up.

NOTE: If the spout end is dipping down or tipping up, lift the end tube (#4 tube) at the discharge spout and adjust the lengths of the upper trusses. See truss adjustment on page 64.

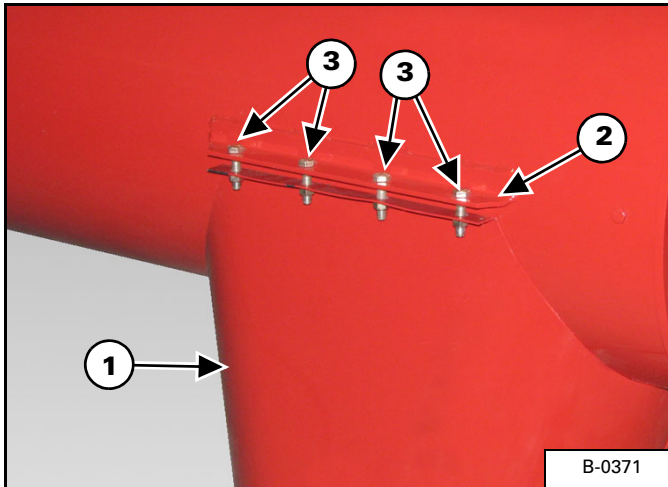
The angle of the #4 tube must be the same as the angle of the #3 tube when the lifting device and straps are removed. The tube is self supported and straight (+/- 1 degree).

Grease all zerks on undercarriage. (See "LUBRICATION" on page 163.)

! IMPORTANT

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

Figure 235



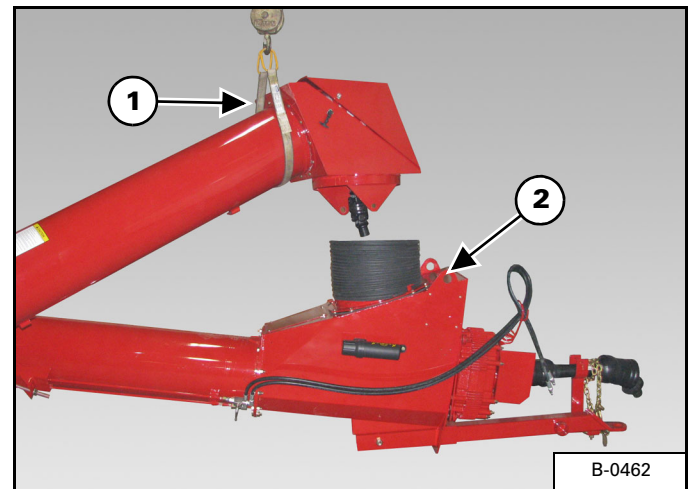
Align the discharge spout (Item 1) with the mounting brackets (Item 2) **[Figure 235]** on both sides of the #4 tube.

Install the eight 3/8" x 1-1/2" bolts (Item 3) **[Figure 235]** and 3/8" lock nuts. Tighten bolts and lock nuts evenly until the discharge spout contacts the #4 tube.

1684, 16104 & 16124 Installing The Intake Auger

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

Figure 236

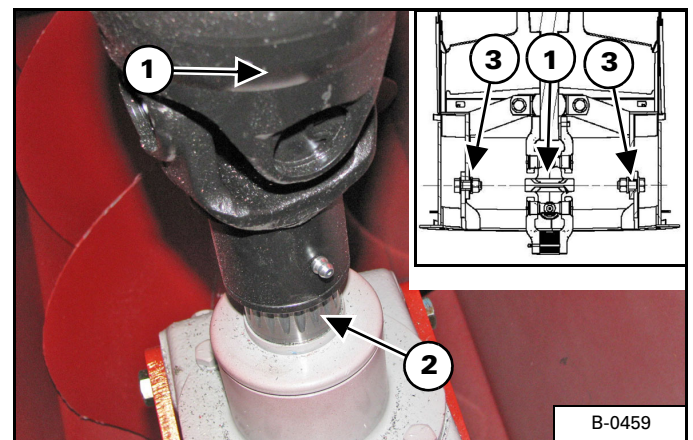


Install a strap (Item 1) **[Figure 236]** around the intake auger.

Connect the strap to an approved lifting device.

Raise the intake auger and position over the input box (Item 2) **[Figure 236]**.

Figure 237

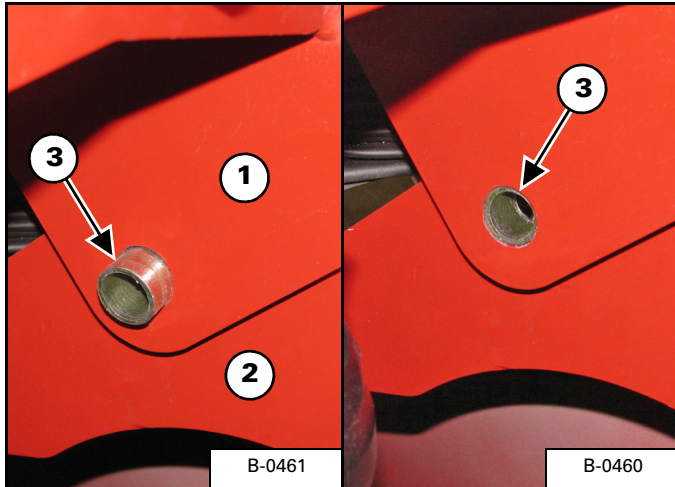


Lower the intake auger, align the u-joint (Item 1) with the top gearbox shaft (Item 2) **[Figure 237]** of the input box.

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

Lower the intake auger onto the shaft. Align the center of the u-joint (Item 1) with the pivot holes (Item 3) **[Figure 237]**.

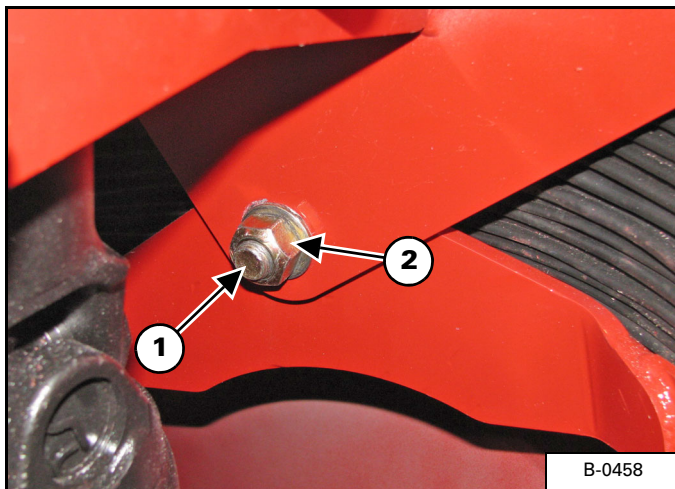
Figure 238



Align the hole of intake auger mounting plate (Item 1) and the hole of intake box mounting plate (Item 2) **[Figure 238]** (both sides).

Install bushing (Item 3) **[Figure 238]** through the intake auger mounting plate and input box mounting plate until flush with the inside of the intake auger mounting plate (both sides).

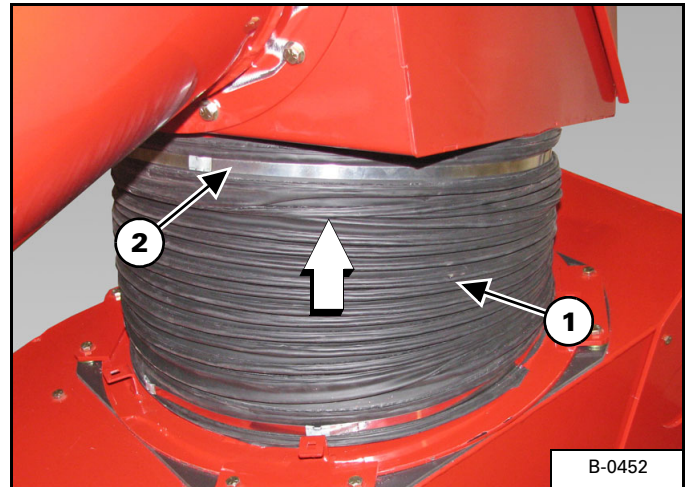
Figure 239



Install one bolt (Item 1) and lock nut (Item 2) **[Figure 239]** (both sides).

Tighten the bolt and lock nut securely against the bushing.

Figure 240

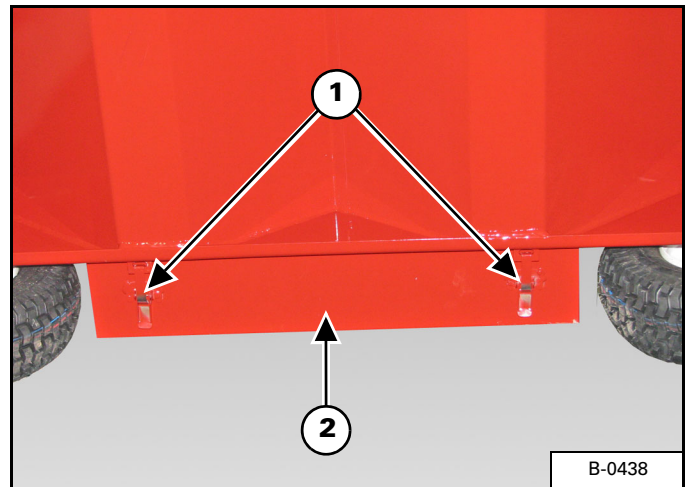


Slide the plastic sleeve (Item 1) up onto the intake auger. Install the clamp (Item 2) **[Figure 240]** and tighten to secure the plastic sleeve to the intake auger.

Remove the strap and lifting device.

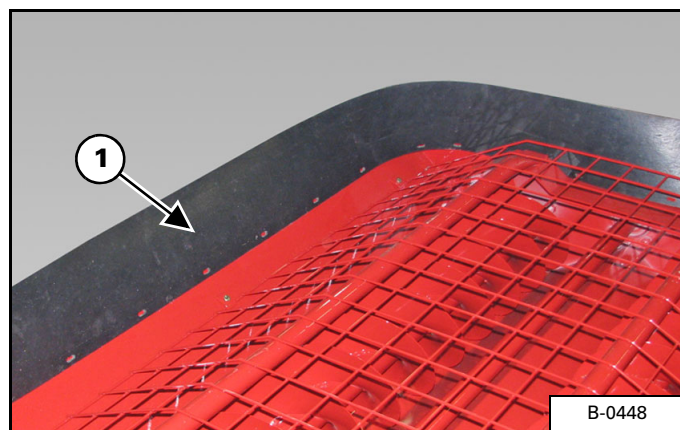
1684 & 16104 Hopper Assembly And Installation

Figure 241



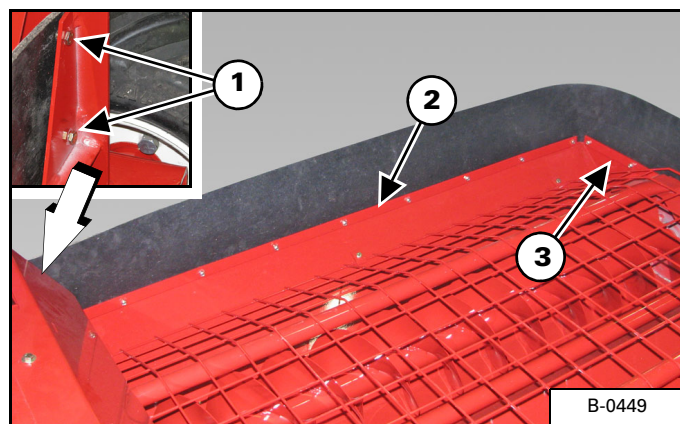
Release the two latches (Item 1) and raise the hopper chain guard cover (Item 2) **[Figure 241]** to access the rubber edge bolt hole locations on the end of the hopper.

Figure 242



Place the rubber edge (Item 1) **[Figure 242]** inside the outer flange of the hopper.

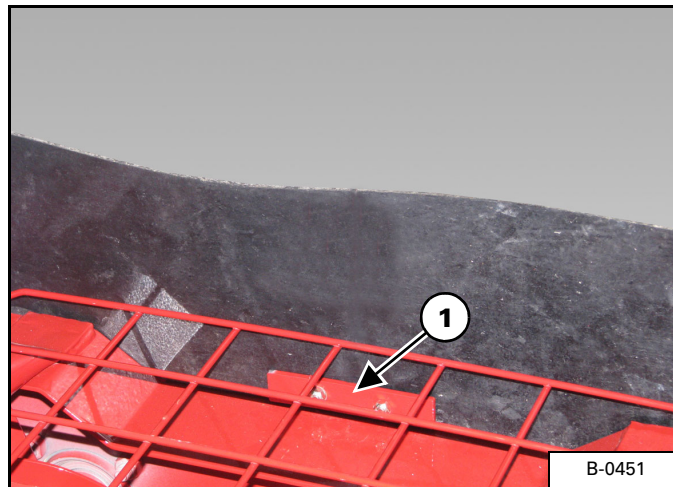
Figure 243



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) **[Figure 243]** through the hopper and rubber edge. Install a 1/4" lock nut on each bolt.

Align one long rubber reinforcement (Item 2) and one short rubber reinforcement (Item 3) **[Figure 243]** 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 244

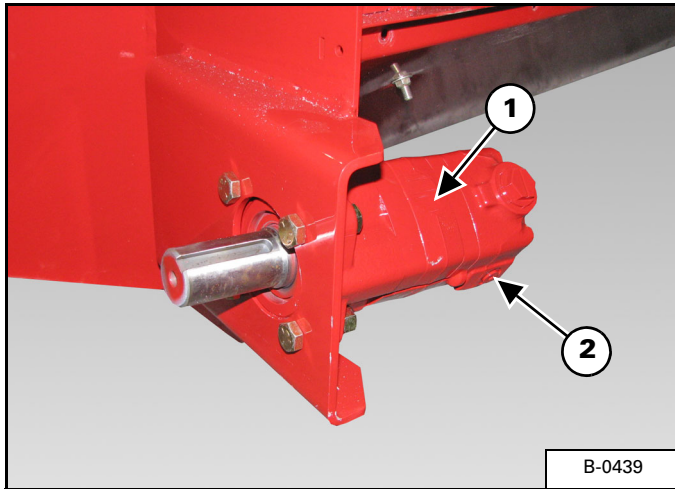


Align the two hole rubber reinforcement (Item 1) **[Figure 244]** with holes in the rubber edge and outer hopper flange. Install two 1/4" x 1" bolts through the hopper, rubber edge and rubber reinforcement (install bolts from the outside of the hopper flange). Install a 1/4" lock nut on each bolt. Do not tighten bolts and lock nuts at this time.

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.

Figure 245



Align and install one hydraulic wheel motor (Item 1) [Figure 245] through the mounting bracket on the side of the hopper.

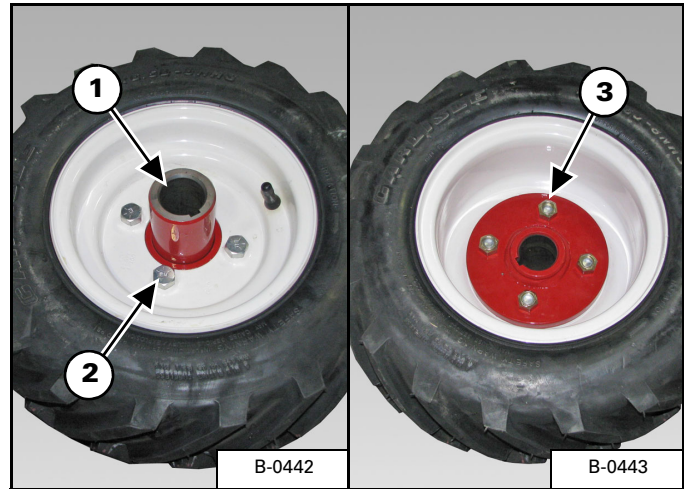
NOTE: Install the left hydraulic wheel motor (Item 1) with the small port (Item 2) [Figure 245] facing down and towards the outside.

NOTE: Rotate the right hydraulic wheel motor 180° and install with the small port facing up and towards the outside.

Install four 1/2" x 1-3/4" bolts through the mounting bracket and hydraulic wheel motor. Install 1/2" lock nuts on each bolt and tighten to secure the hydraulic wheel motor to the hopper.

Repeat for the right hydraulic wheel motor (with the small port facing up and towards the outside).

Figure 246



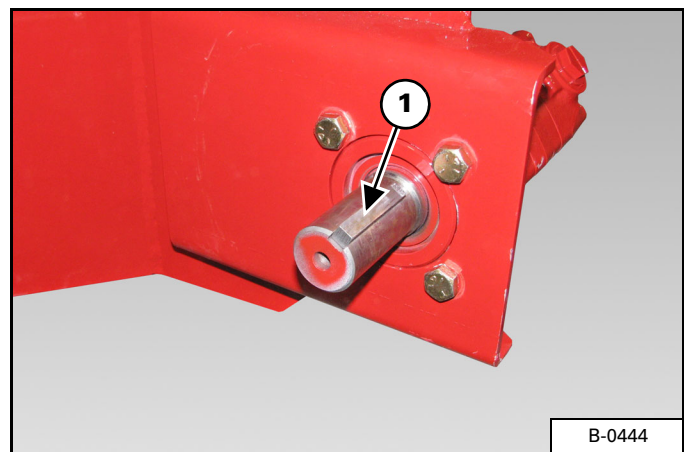
Install the hub (Item 1) [Figure 246] through the rim of the wheel (from the back side of the rim, with the valve stem facing up).

Install four 1/2" x 1-3/4" wheel bolts (Item 2) [Figure 246] through the rim and hub.

Install four 1/2" wheel nuts (Item 3) [Figure 246] on to the bolts. Tighten bolts and nuts to secure the hub to the rim.

Repeat [Figure 246] procedure for second rim / wheel assembly.

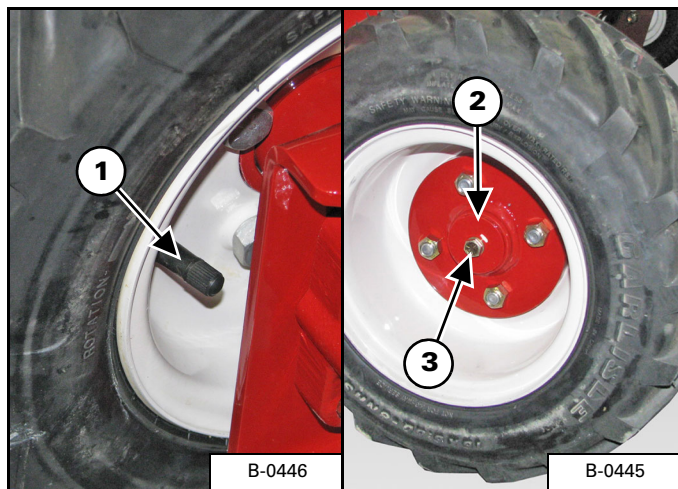
Figure 247



Install the key (Item 1) [Figure 247] into groove on the hydraulic wheel motor shaft (both sides).

NOTE: Lubricate shaft before installing wheel assembly.

Figure 248

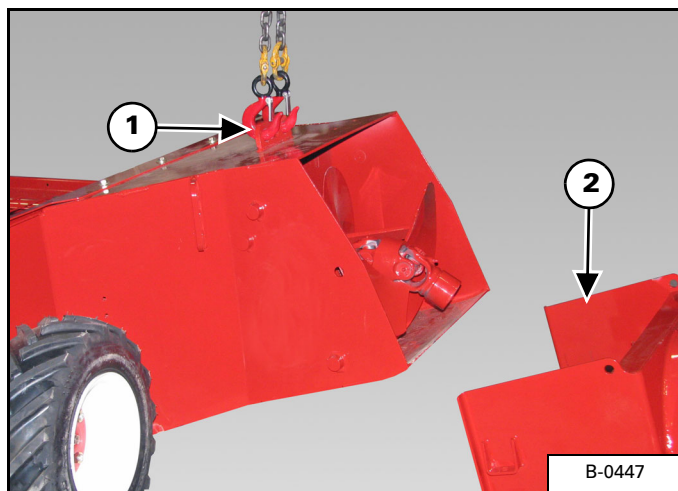


Install the hub onto the hydraulic wheel motor shaft with the valve stem (Item 1) **[Figure 248]** on the inside.

Install one 3/8" lock washer and one 13/32" ID x 2" OD flat washer (Item 2) onto one 3/8" x 2-1/4" bolt (Item 3) **[Figure 248]**. Install bolt through the hub and into the hydraulic wheel motor shaft. Tighten the bolt to securely fasten the hub to the hydraulic wheel motor shaft.

Repeat **[Figure 248]** procedure for second hub / wheel assembly.

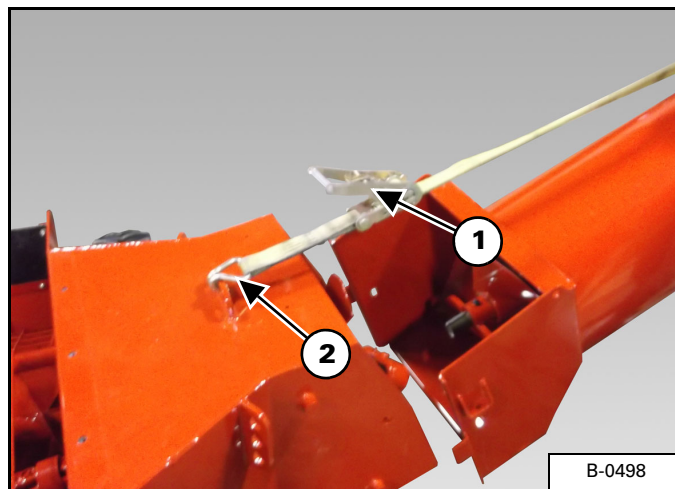
Figure 249



Install chains (Item 1) **[Figure 249]** into the holes on the top of the hopper.

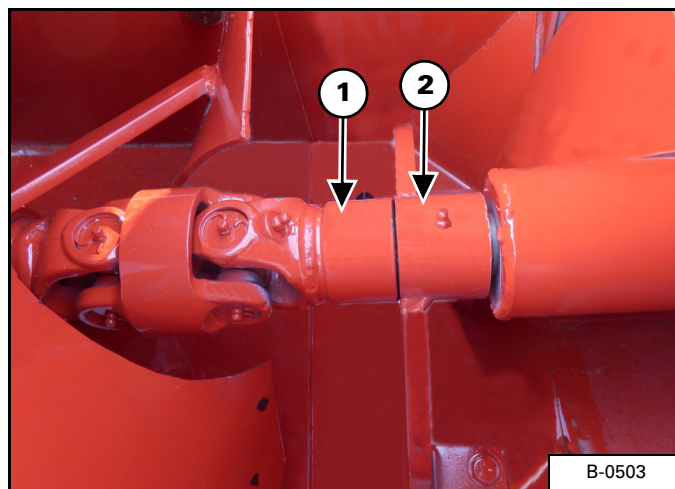
Raise and move the hopper in front of the intake auger (Item 2) **[Figure 249]**.

Figure 250



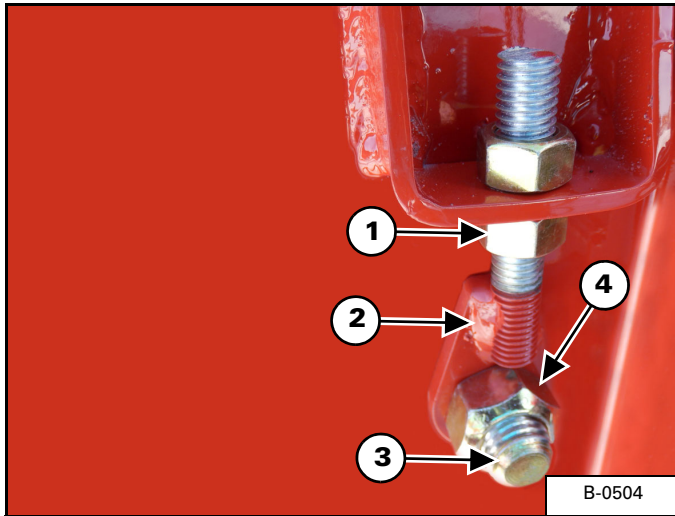
Install a ratchet strap (Item 1) onto the bracket (Item 2) **[Figure 250]** on the top of the hopper (connect the opposite end of the ratchet strap to the mounting bracket on the top of the intake auger).

Figure 251



Tighten the ratchet strap, align the hopper u-joint (Item 1) with the shaft (Item 2) **[Figure 251]** on the intake auger. Tighten the ratchet strap until the u-joint is all the way on the shaft.

Figure 252



Align the mounting holes on the hopper and intake auger.

Thread one 1/2" nut (Item 1) onto the hopper adjustment bolt (Item 2) **[Figure 252]**, install the adjustment bolt up, into the bracket on the intake auger. Install a second 1/2" nut to hold the adjustment bolt in position.

Install one 3/4" x 1-5/8" bolt (Item 3) (from inside) through the hopper, adjustment bolt and intake auger. Install one 3/4" lock nut (Item 4) **[Figure 252]** onto the bolt.

Repeat the **[Figure 252]** procedure on the opposite side of the hopper and intake auger.

Tighten the bolt (Item 3) and lock nut (Item 4) **[Figure 252]** (both sides), do not overtighten, bolts must be able to rotate with a wrench.

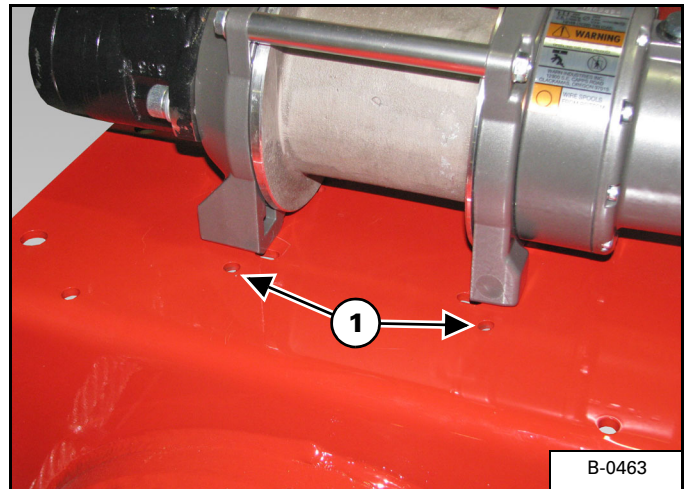
Extend the adjustment bolt (Item 2) **[Figure 252]** (both sides) until the gap on the bottom is closed.

Secure adjustment with nut (Item 1) **[Figure 252]** (both sides).

1684 & 16104 Installing The Winch

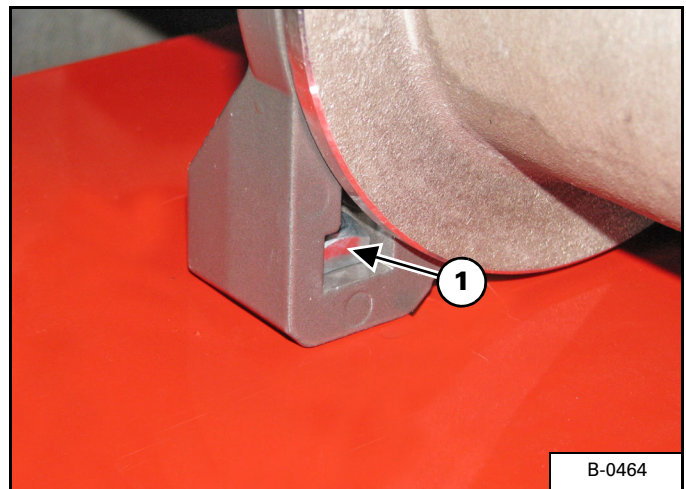
NOTE: The following images may not show your winch exactly as it appears but the procedure is correct for both the electrical and hydraulic winches.

Figure 253



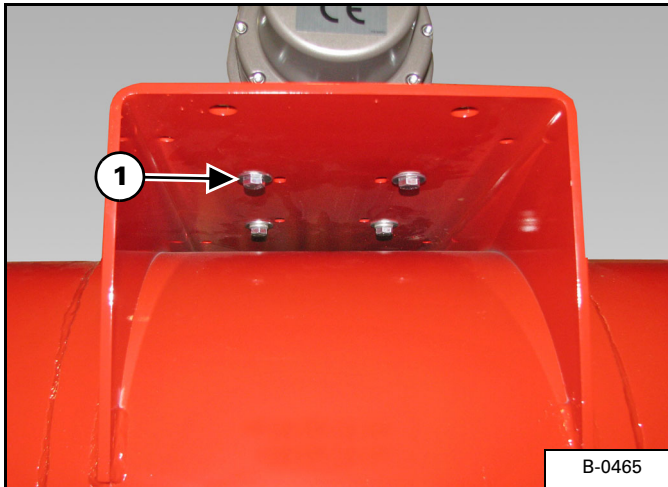
Align the winch with four holes (Item 1) **[Figure 253]** in the winch mounting plate on the top of the #1 tube.

Figure 254



Install one square head nut (Item 1) **[Figure 254]** into each foot of the winch.

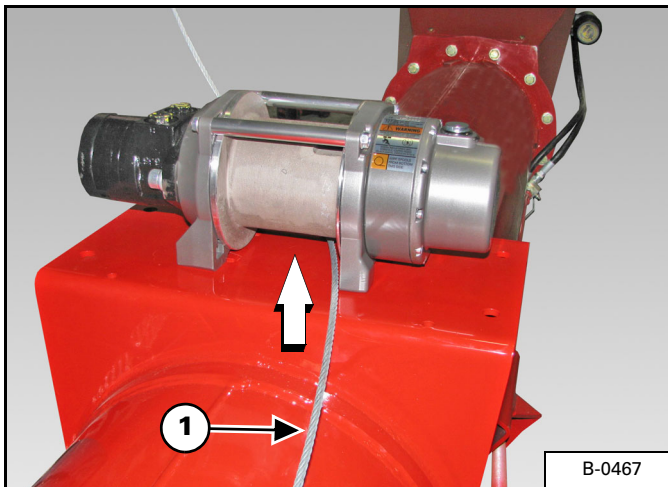
Figure 255



Install one lock washer and flat washer onto the four bolts

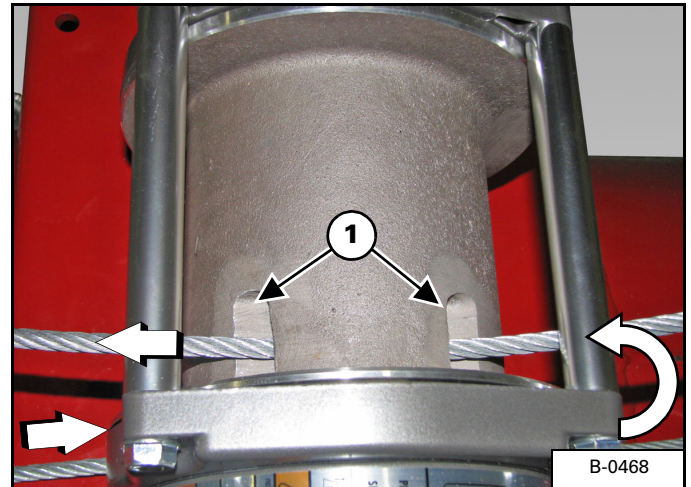
While holding down on the square nut (Item 1) [Figure 254], install one bolt, lock washer and flat washer (Item 1) [Figure 255] up through the winch mounting plate and into the square head nut. Repeat for the remaining three bolts, lock washers and flat washers. Tighten all four bolts.

Figure 256



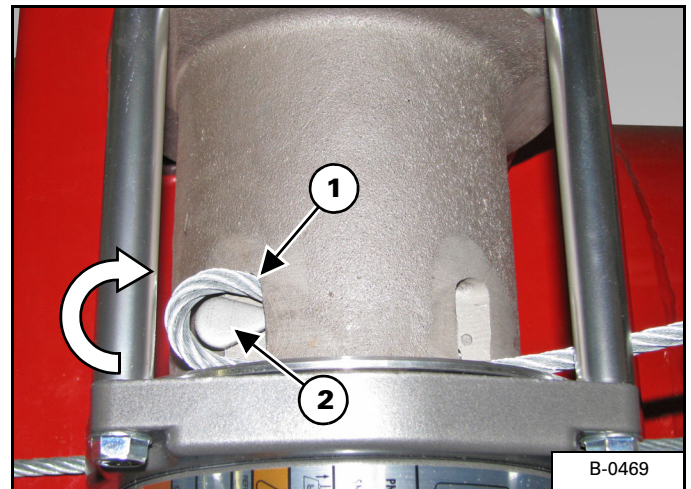
Route the winch cable (Item 1) [Figure 256] through the end pulley of the lift boom, down through the bottom pulley of the lift boom, across the top of the #1 tube and between the winch and winch mounting plate.

Figure 257



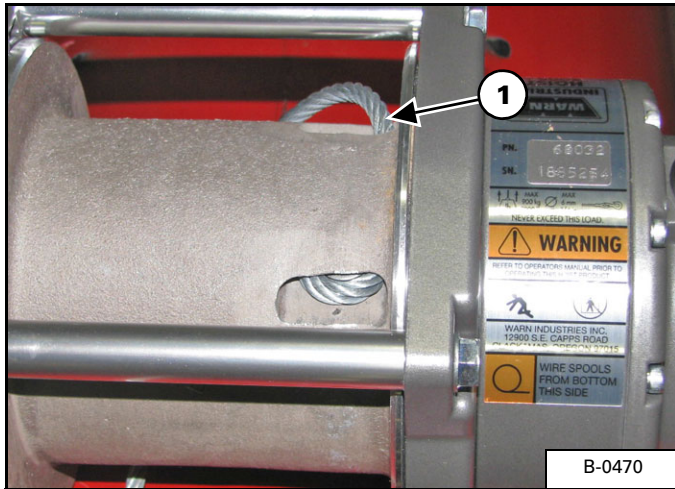
With the winch cable routed under the winch, feed the cable back through the two slots (Item 1) [Figure 257] of the winch.

Figure 258



Loop the tail end (Item 1) of the cable and feed back into the slot, install the wedge (Item 2) [Figure 258] inside the loop.

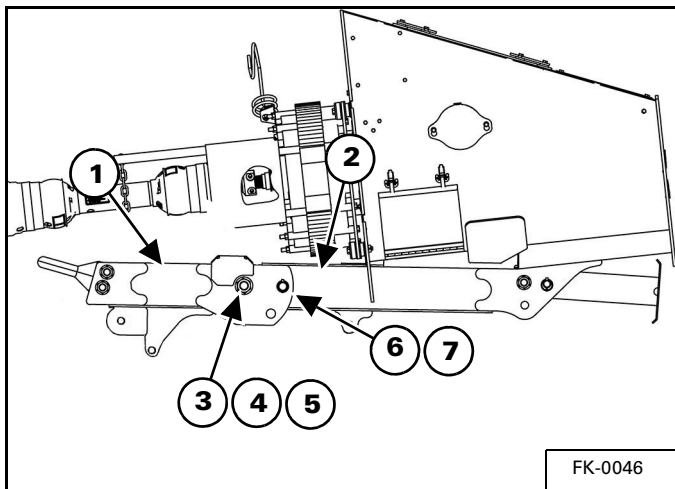
Figure 259



Pull back on the cable (Item 1) [Figure 259] until the loop and wedge are inside the slot.

16124 Hydraulic Hitch Installation

Figure 260



Place the hitch tube (Item 1) [Figure 260] as shown.

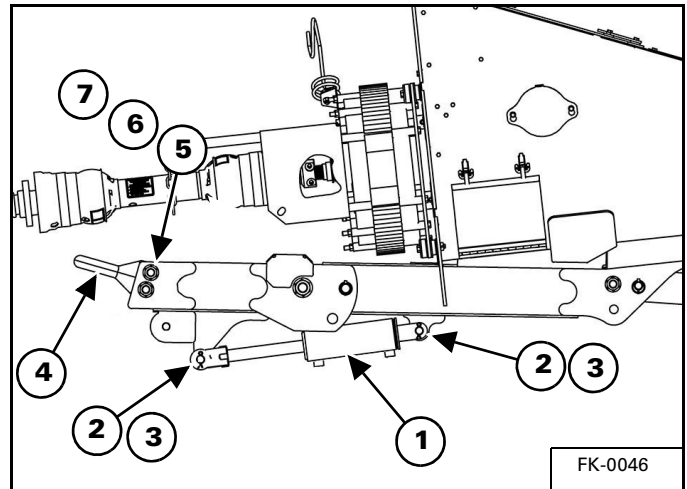
Align the hitch tube with the intake auger mount (Item 2) [Figure 260].

Install the 1-1/4" x 6-1/2" bolt (Item 3), 1-1/4 x 10 ga narrow rim washer (Item 4) and 1-1/4" lock nut (Item 5) [Figure 260]. Do not over tighten bolt, hitch tube must be free to pivot.

Install the 1-1/4" pin (Item 6) and secure with 3/16" lynch pin (Item 7) [Figure 260].

16124 Hydraulic Hitch Cylinder Installation

Figure 261



Place the hydraulic cylinder (Item 1) [Figure 261] as shown.

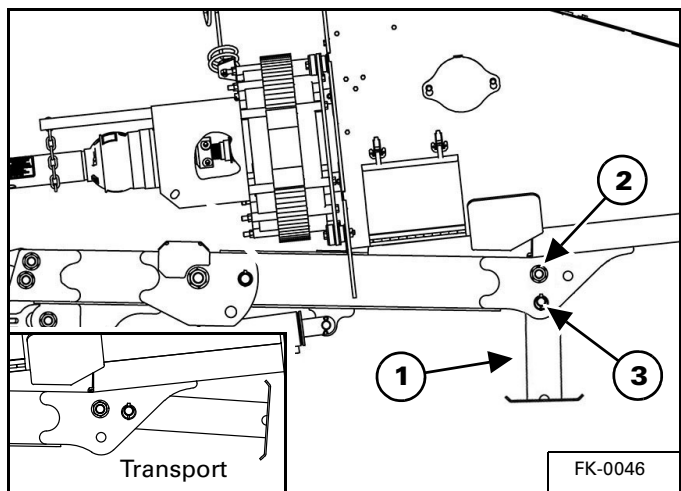
Install the 1" diameter pins (Item 2) and secure with 1/4" x 1-1/2" cotter pins (Item 3) [Figure 261].

Align the pintle hitch (Item 4) [Figure 261] with the two holes on the hitch tube.

Install the two 1" bolts (Item 5), four 1" flat washers (Item 6) and two 1" lock nuts (Item 7) [Figure 261]. Tighten bolts.

16124 Auger Stand Installation

Figure 262



Raise the intake auger and place the auger stand (Item 1) **[Figure 262]** as shown.

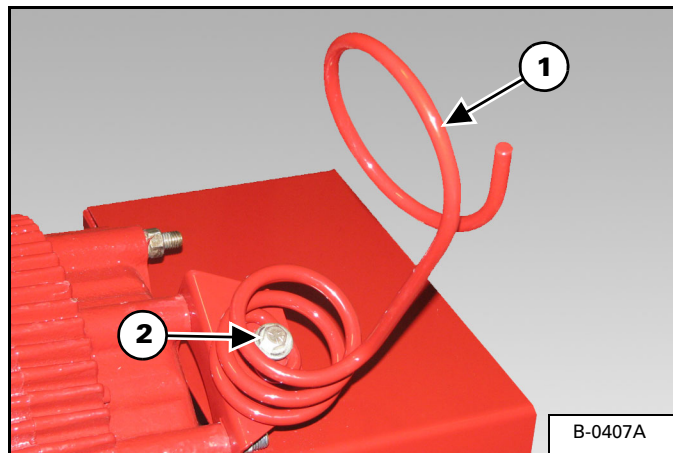
Align holes and install the 1" x 6" bolt and 1" lock nut (Item 2) in the upper hole. Install the 1" diameter pin and lynch pin (Item 3) **[Figure 262]**. Do not overtighten the 1" bolt.

Lower the intake auger until the auger stand contacts the ground.

Install the auger stand horizontally for transport.

1684, 16104 & 16124 Hydraulic Hose Holder Installation

Figure 263

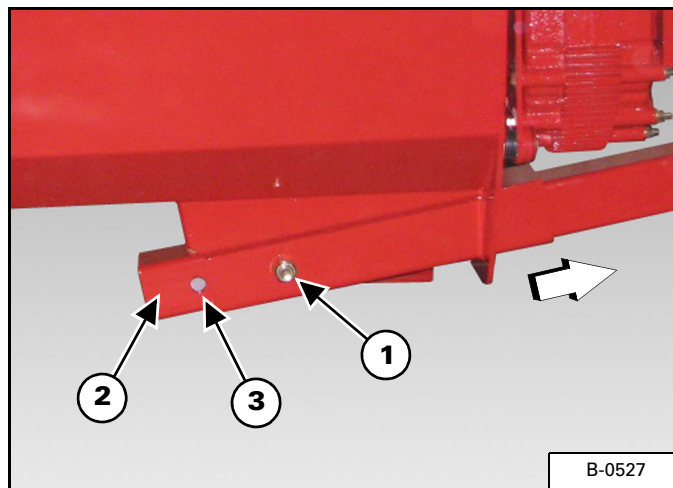


Install the hydraulic hose holder (Item 1) **[Figure 263]** onto the mounting bracket located on the top of the gearbox (above the hitch).

Install one 3/8" flat washer onto one 3/8" x 1" bolt (Item 2) **[Figure 263]**, install the bolt down through the storage bracket and mounting bracket. Install one 3/8" lock washer on the bolt and tighten to secure the storage bracket gearbox.

1684 & 16104 Hitch Adjustment

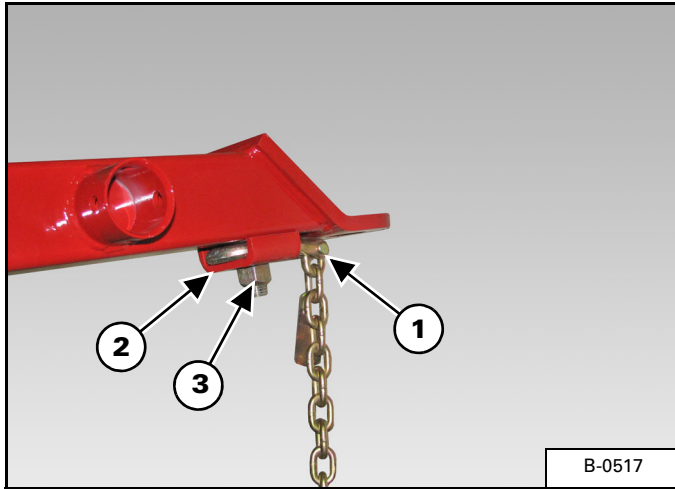
Figure 264



Remove bolt (Item 1) and lock nut. Move the hitch (Item 2) forward and align the back hole (Item 3) **[Figure 264]** of the hitch with the hitch mount. Re-install and tighten the bolt and lock nut.

1684 & 16104 Safety Chain Installation

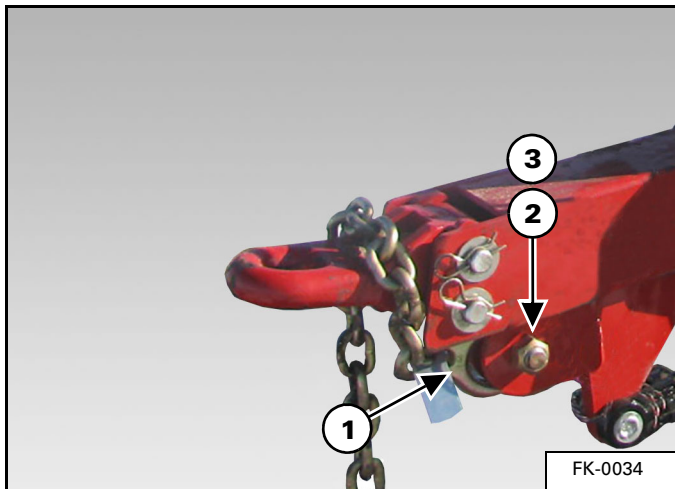
Figure 265



Install the safety chain loop (Item 1) over the bolt on the bottom side of the hitch, install the safety chain bracket (Item 2) on the bolt and over the safety chain loop. Install one 1" lock nut (Item 3) **[Figure 265]** and tighten to secure the safety chain to the hitch.

16124 Safety Chain Installation

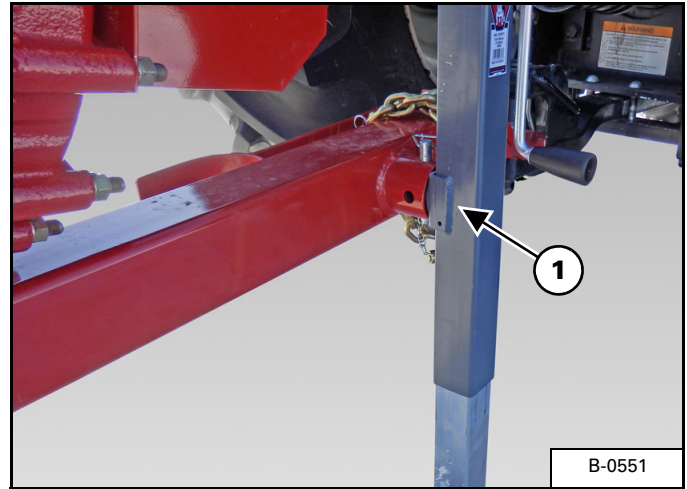
Figure 266



Install the safety chain loop (Item 1) as shown. Install the 1" x 3" bolt (Item 2) and 1" lock nut (Item 3) **[Figure 266]**. Tighten to secure the safety chain to the hitch.

1684 & 16104 Jack Installation

Figure 267

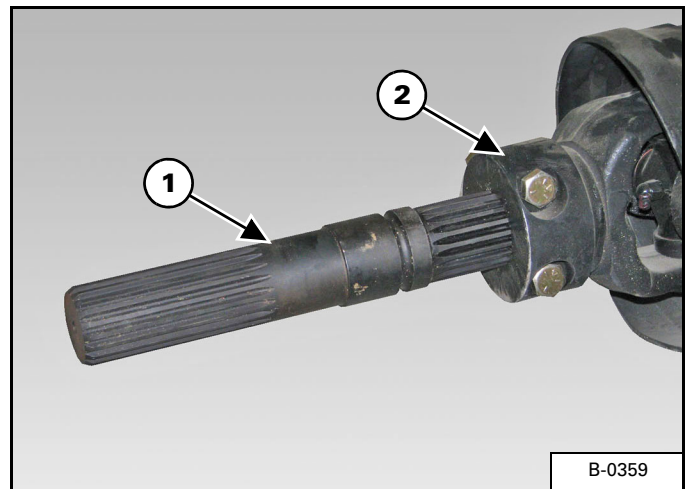


Align and install the jack (Item 1) **[Figure 267]** onto the hitch.

1684, 16104 & 16124 PTO Driveline Installation

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

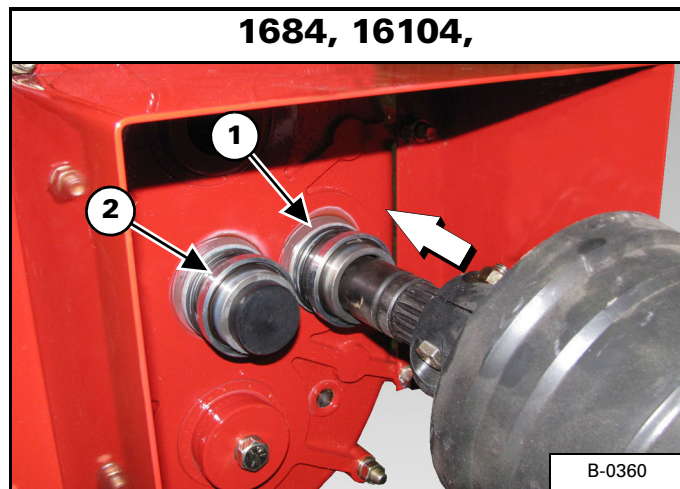
Figure 268



NOTE: Grease spline shaft before assembly.

Install the shaft (Item 1) into the PTO driveline (Item 2) **[Figure 268]**. Tighten the two 1/2" bolts and lock nuts.

Figure 269

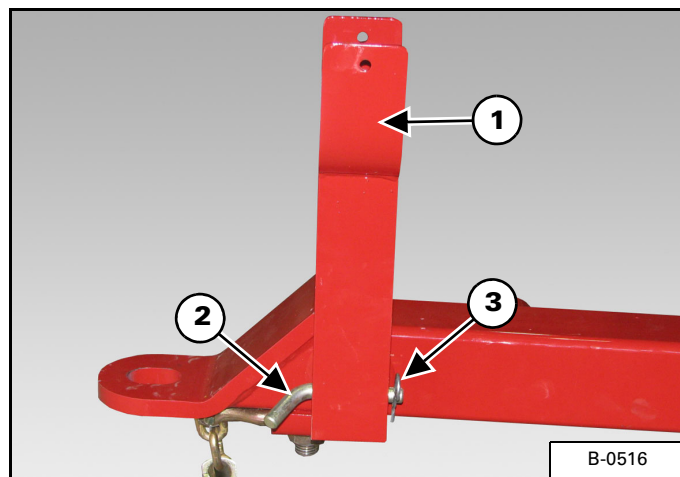


Push back on the collar (Item 1) **[Figure 269]** and install the shaft into the gearbox until the collar slides forward, locking the shaft in the gearbox.

NOTE: The 16124 connects to different port (use center port) (Item 2) **[Figure 269]**.

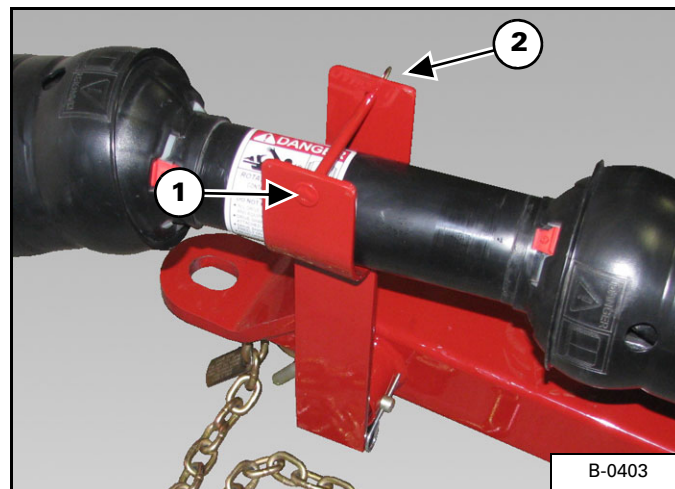
1684 & 16104 PTO Holder Installation

Figure 270



Install the PTO holder (Item 1) onto the left side of the side of the hitch assembly. Install pin (Item 2) through the PTO holder and hitch mount, then secure in position with the hair pin clip (Item 3) **[Figure 270]**.

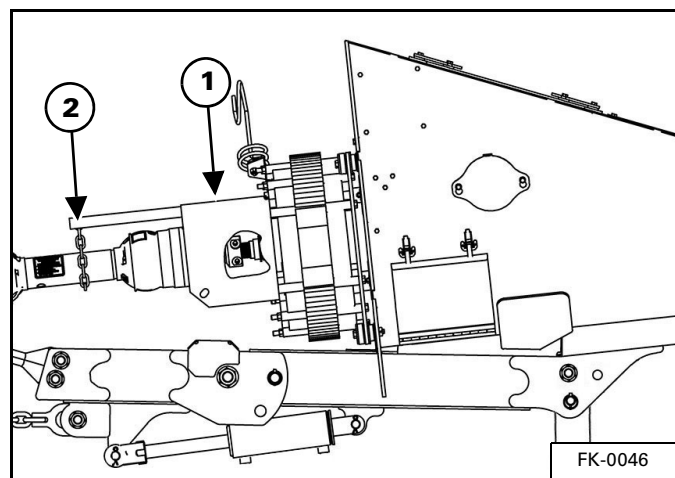
Figure 271



Install the pin (Item 1) through the storage bracket and install hair pin clip (Item 2) **[Figure 271]**, securing the PTO driveline in the bracket.

16124 PTO Holder Installation

Figure 272



Install the PTO holder (Item 1) as shown. Place the PTO holder chain (Item 2) around the PTO driveline and hook chain back to itself. **[Figure 272]**.

HYDRAULIC ASSEMBLY

1684 Hydraulic Cylinder Hose Assembly

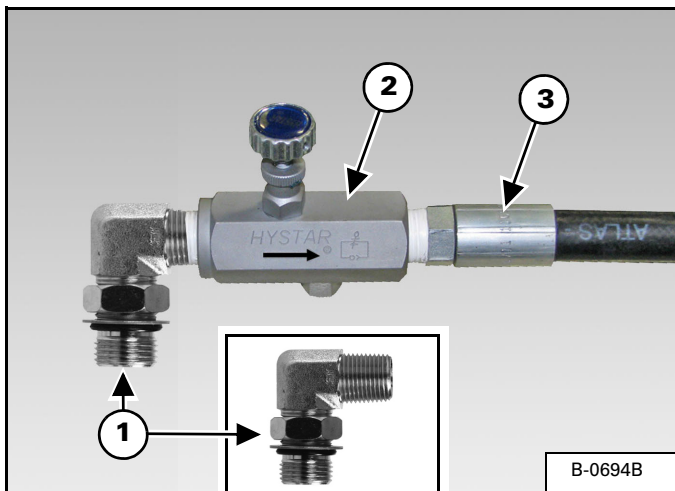
! IMPORTANT

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

! IMPORTANT

Contain and dispose of any oil leakage in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.

Figure 273



Locate one of the following components [Figure 273]:

1. 08 MNPT x 08 MNPT 90° Elbow (Item 1)
2. 08 FNPT One Way Flow Control Valve (Item 2)
3. 08 x 10 MJIC x 08 MNPT Hydraulic Hose (Item 3)

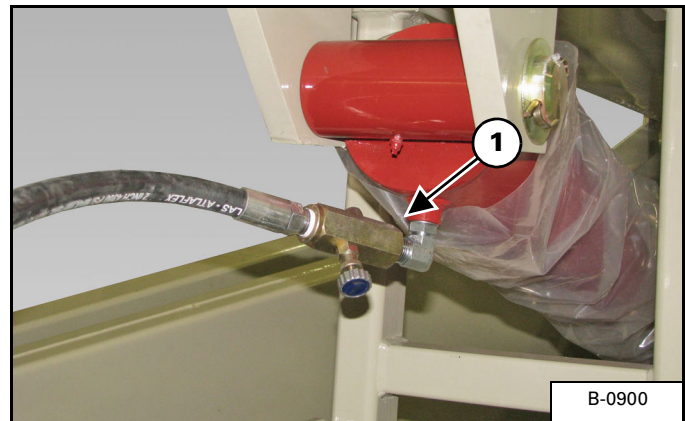
NOTE: Apply teflon tape to the male threads of each fitting.

Install the 08 MNPT x 08 MNPT 90° elbow into the flow control valve [Figure 273].

Install the 08 x 00 MJIC x 08 MNPT hydraulic hose into the 08 FNPT One Way Flow Control Valve [Figure 273].

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

Figure 274

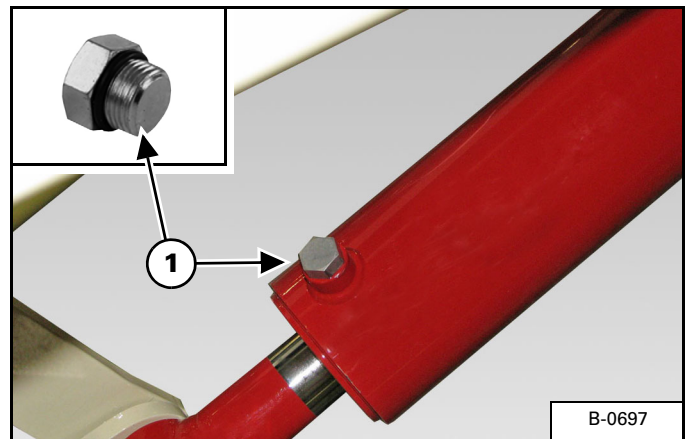


Remove the plastic plug from the base end (upper) of the hydraulic cylinder.

Install the flow control valve assembly (Item 1) [Figure 274] into the hydraulic cylinder.

Tighten all connections.

Figure 275



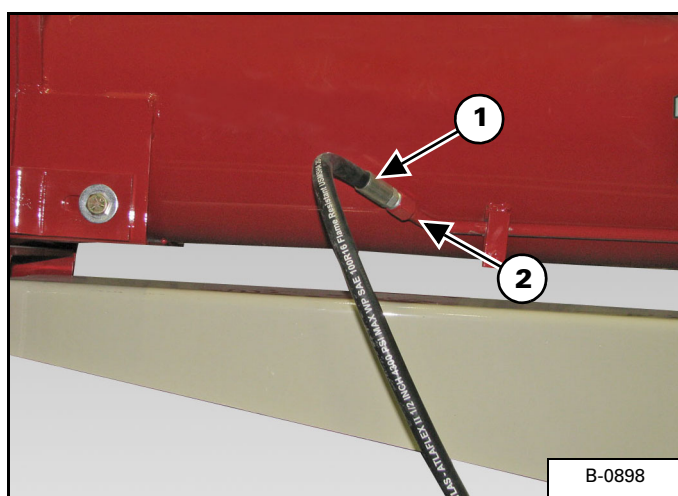
Remove the plastic plug from the rod end (lower) of the hydraulic cylinder.

Locate and install the 08 MORB vent plug (Item 1) [Figure 275] into the hydraulic cylinder.

! IMPORTANT

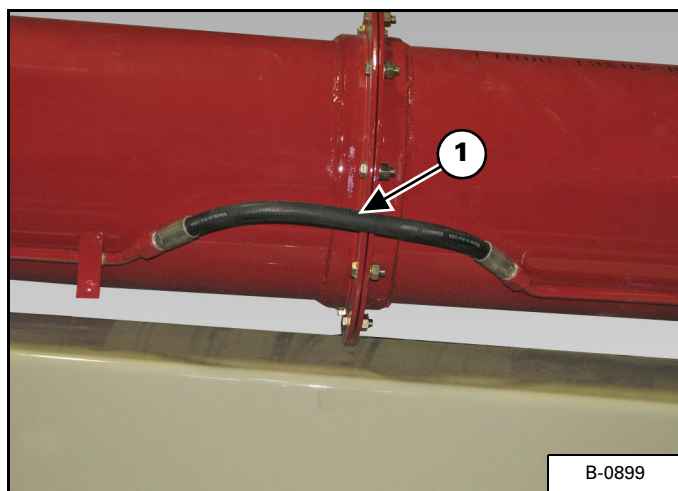
CHECK FOR POSSIBLE EXCESS OF OIL
Hydraulic cylinder might contain residual oil in the rod side of the cylinder. Before installation: Remove the rod end cap/plug, tilt the cylinder, and drain excess oil out of the rod end port. Drain for up to 15 mins.

Figure 276



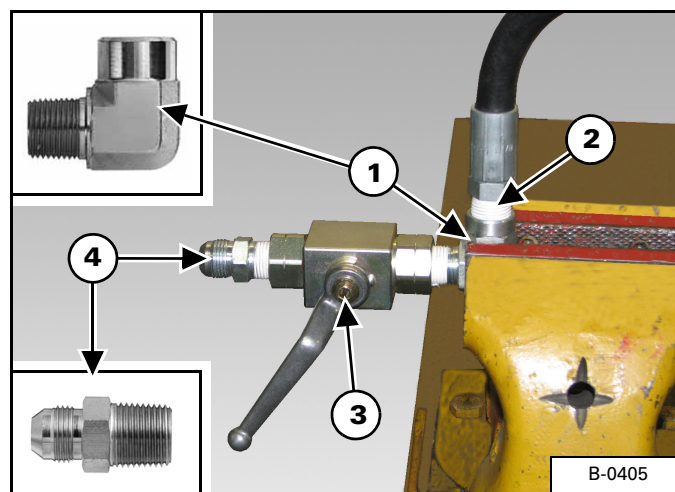
Install and tighten the 08 x 010 MJIC x 08 MNPT hydraulic hose (Item 1) into the tube (Item 2) [Figure 276] on the center tube section.

Figure 277



Install and tighten the 08 x 010 MJIC x 08 MNPT hydraulic hose (Item 1) [Figure 277] into the tubes on the center and bottom tube sections.

Figure 278



Locate one 90° elbow (Item 1) [Figure 278] and place in a vise.

Apply teflon tape to the threads of the hydraulic hose fitting, then install and tighten quick coupler hose (Item 2) [Figure 278] assembly into the 90° elbow.

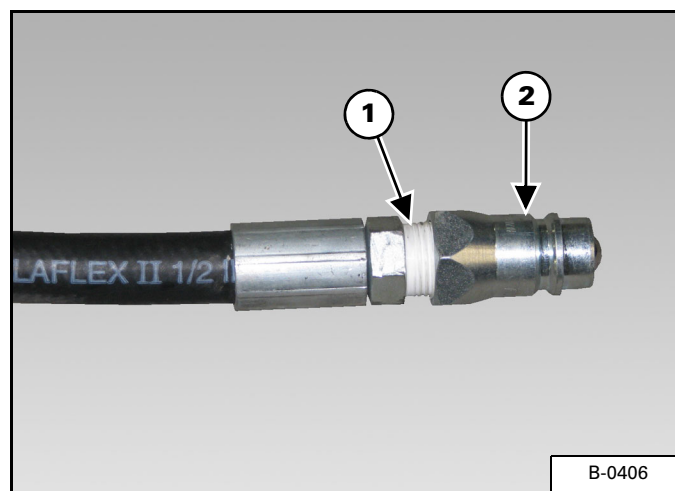
Apply teflon tape to the threads of the 90° elbow.

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

Locate one adapter fitting (Item 4) [Figure 278].

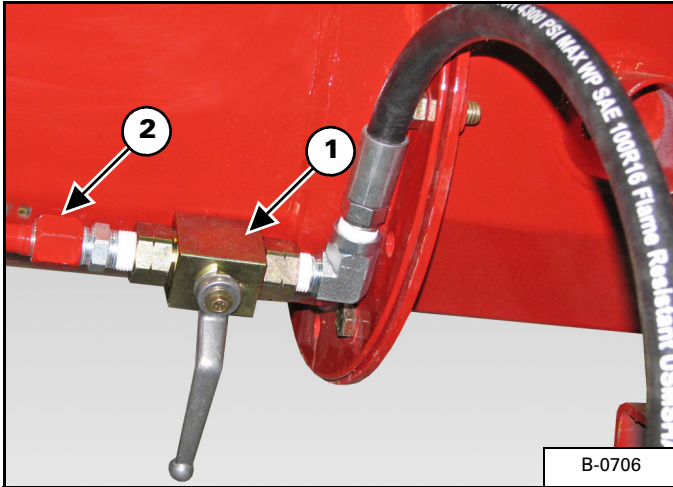
Apply teflon tape to the threads of the adapter fitting, then install and tighten adapter fitting into the 1/2" ball valve (Item 3) [Figure 278].

Figure 279



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 279].

Figure 280



Install hose assembly (Item 1) into the hydraulic tube (Item 2) [Figure 280] on the bottom tube section. Route the hose towards the hitch and install into the hydraulic hose holder.

16104 & 16124 Hydraulic Cylinder Hose Assembly

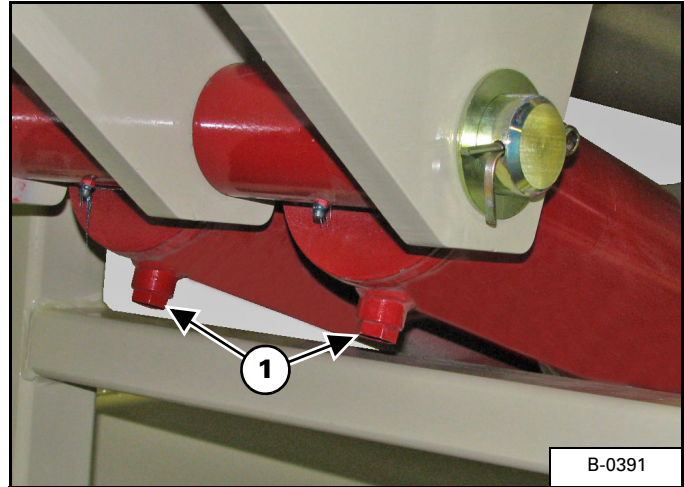
! IMPORTANT

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

! IMPORTANT

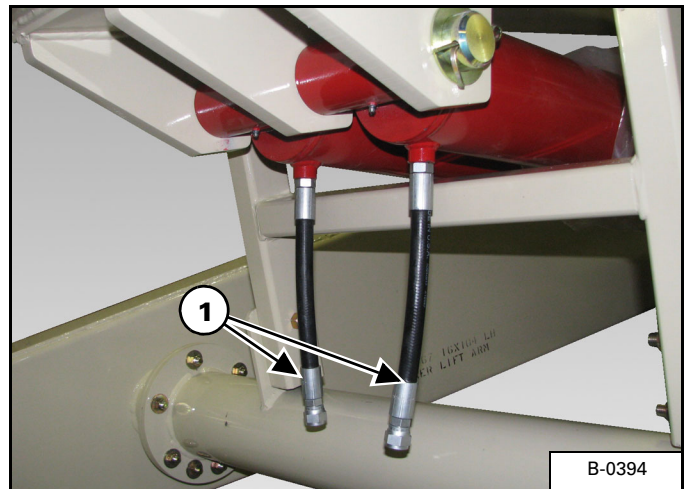
Contain and dispose of any oil leakage in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.

Figure 281



Remove the plugs (Item 1) [Figure 281] from the base end of the hydraulic cylinders.

Figure 282

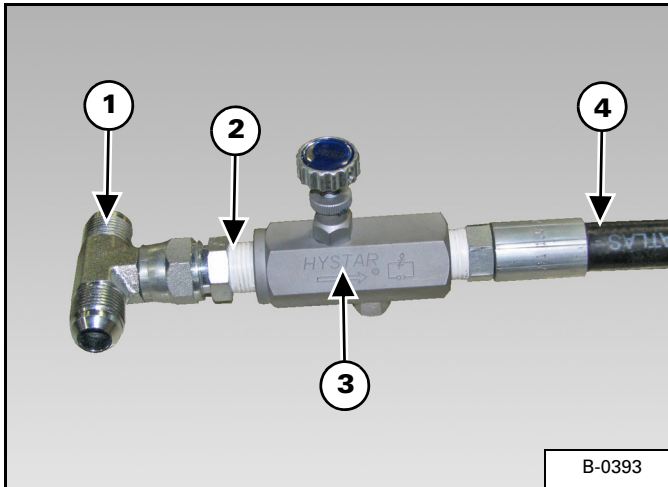


Locate and install the two hydraulic hoses (Item 1) [Figure 282].

! IMPORTANT

CHECK FOR POSSIBLE EXCESS OF OIL
Hydraulic cylinder might contain residual oil in the rod side of the cylinder. Before installation: Remove the rod end cap/plug, tilt the cylinder, and drain excess oil out of the rod end port. Drain for up to 15 mins.

Figure 283



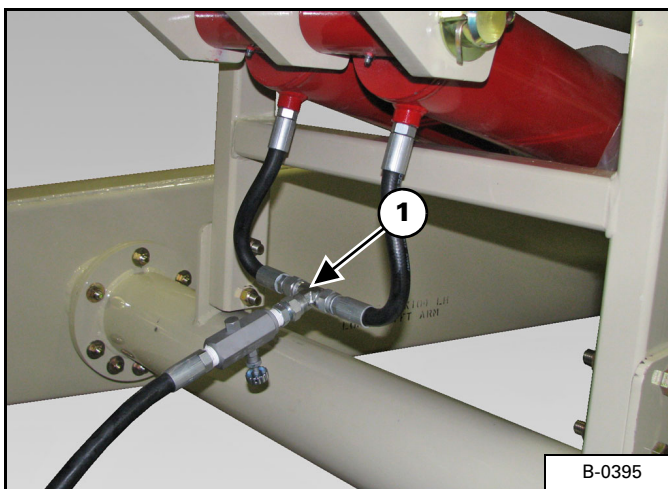
Locate one tee fitting (Item 1), adapter fitting (Item 2), flow control valve (Item 3) and hydraulic hose (Item 4) [Figure 283]. Apply teflon tape to the threads of the adapter fitting and hydraulic hose fitting.

Install and tighten the hose into the flow control valve.

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

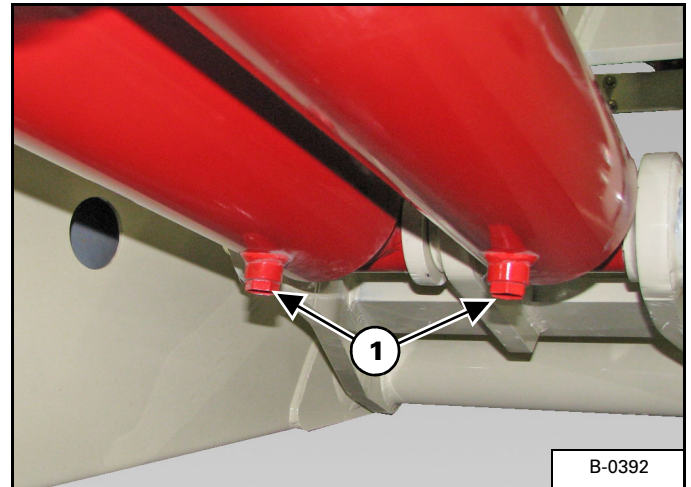
Install and tighten the tee fitting onto the adapter fitting.

Figure 284



Install and tighten the two hoses from the base ends of the cylinders onto the tee fitting (Item 1) [Figure 284].

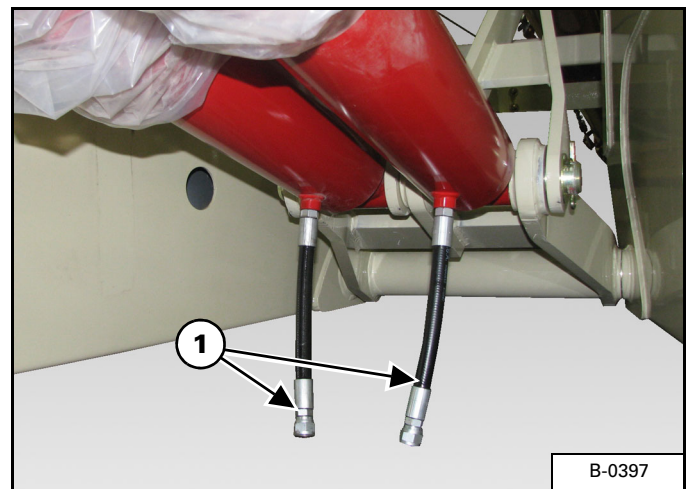
Figure 285



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

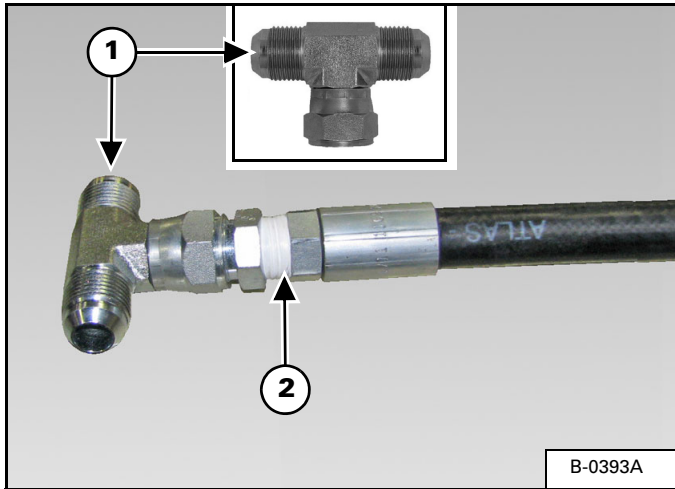
Remove the two plugs (Item 1) [Figure 285] from the rod end of the hydraulic cylinders.

Figure 286



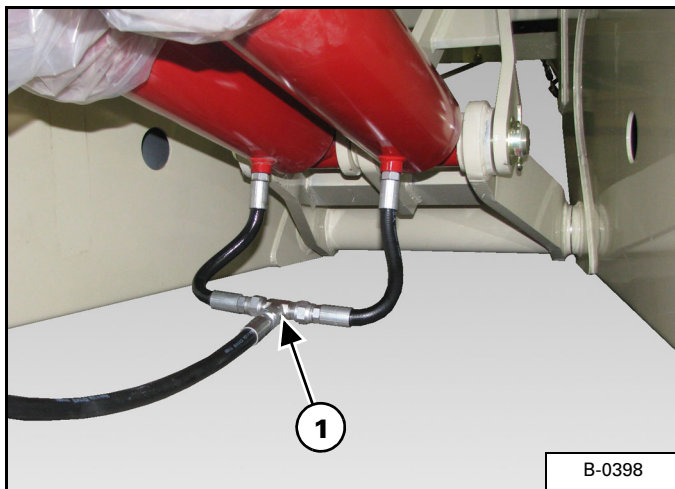
Locate and install the two hydraulic hoses (Item 1) [Figure 286].

Figure 287



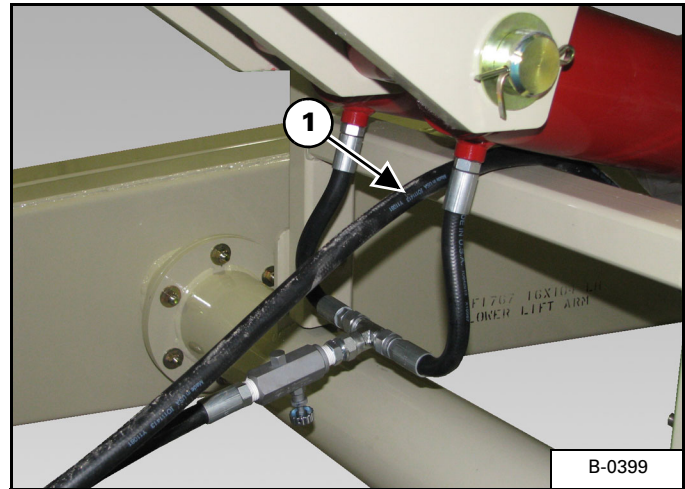
Locate one tee fitting (Item 1) and hydraulic hose (Item 2) **[Figure 287]**. Apply teflon tape to the threads of the hydraulic hose fitting. Install the hose into the tee fitting and tighten.

Figure 288



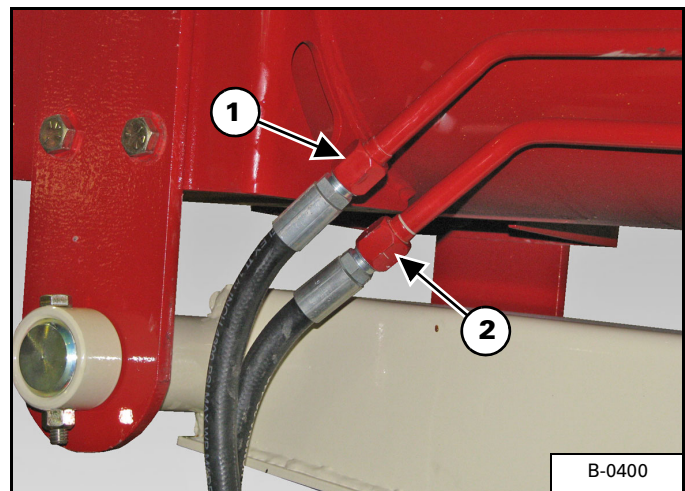
Install and tighten the two hoses from the rod ends of the cylinders onto the tee fitting (Item 1) **[Figure 288]**.

Figure 289



Route the hydraulic hose (Item 1) **[Figure 289]** over the top of one of the cylinders.

Figure 290

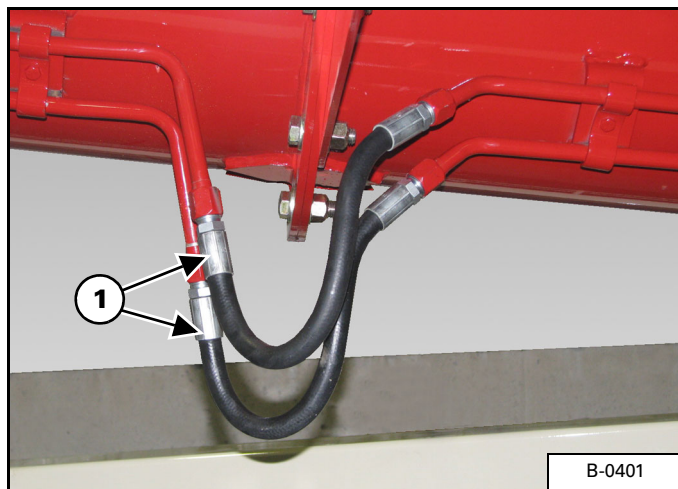


Route the rod end and base end hydraulic hoses up to the hydraulic tube on the #3 tube (on the right side, just in front of the upper lift arm pin).

Install and tighten the based end hydraulic hose to the top hydraulic tube (Item 1) **[Figure 290]**.

Install and tighten the rod end hydraulic hose to the bottom hydraulic tube (Item 2) **[Figure 290]**.

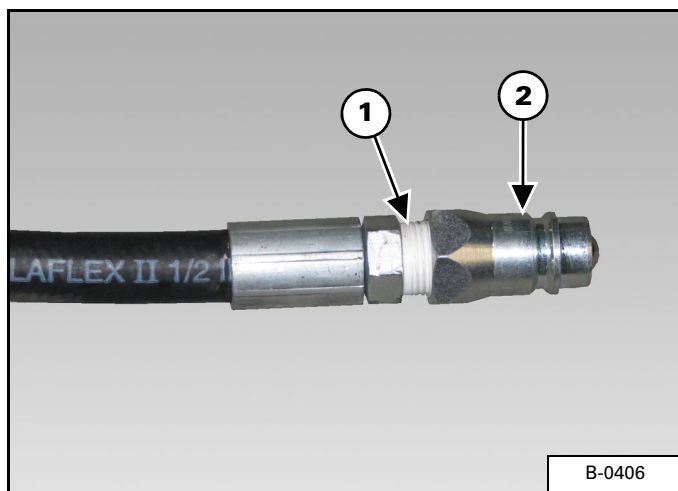
Figure 291



Locate, install and tighten the two hydraulic hoses (Item 1) **[Figure 291]** onto the hydraulic tubes. Connecting the #3 and #2 hydraulic tubes.

Repeat **[Figure 291]** procedure to connect the #2 and #1 hydraulic tubes.

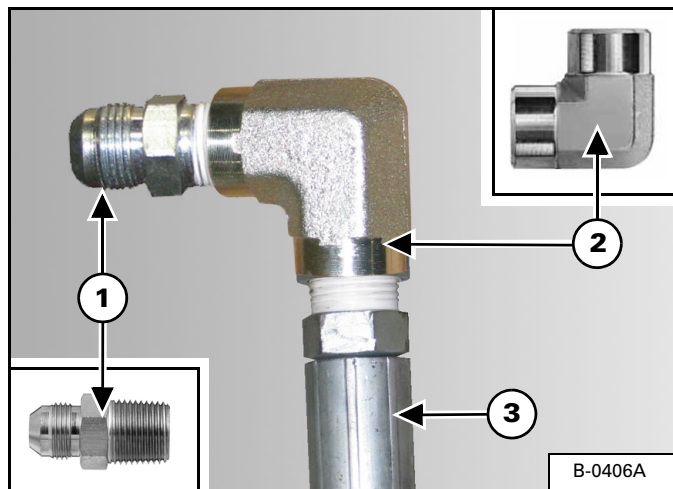
Figure 292



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 292]**.

Repeat for second quick coupler hose.

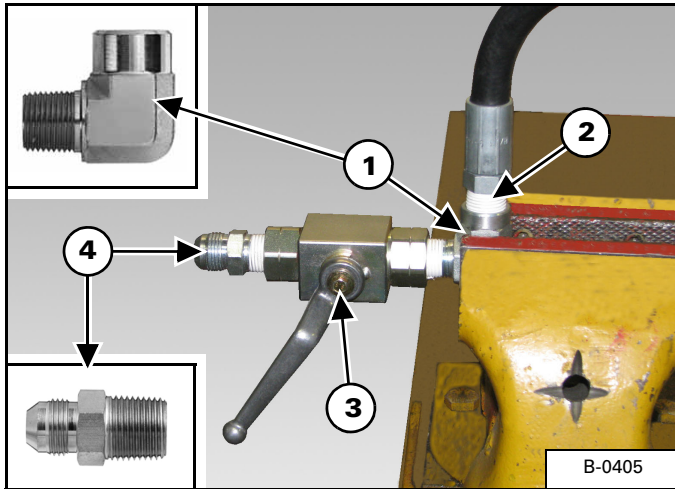
Figure 293



Locate one adapter fitting (Item 1) and 90° elbow fitting (Item 2) **[Figure 293]**.

Install one hydraulic quick coupler hose assembly (Item 3) **[Figure 293]** into the 90° elbow.

Figure 294



Locate one 90° elbow (Item 1) [Figure 294] and place in a vise.

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 294].

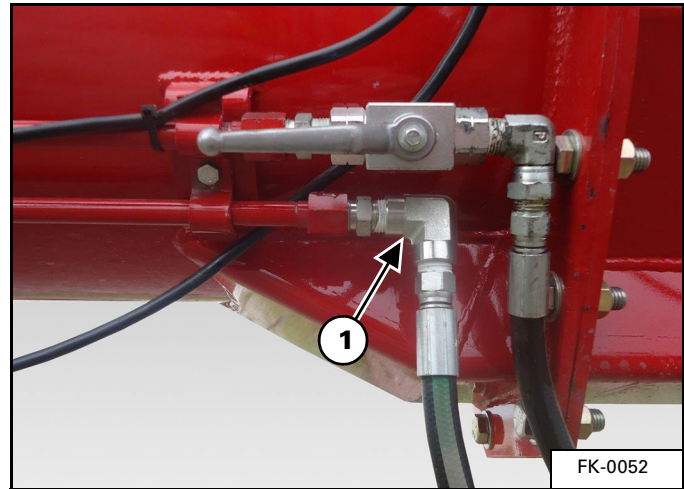
Apply teflon tape to the threads of the 90° elbow.

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

Locate one adapter fitting (Item 4) [Figure 294].

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 294].

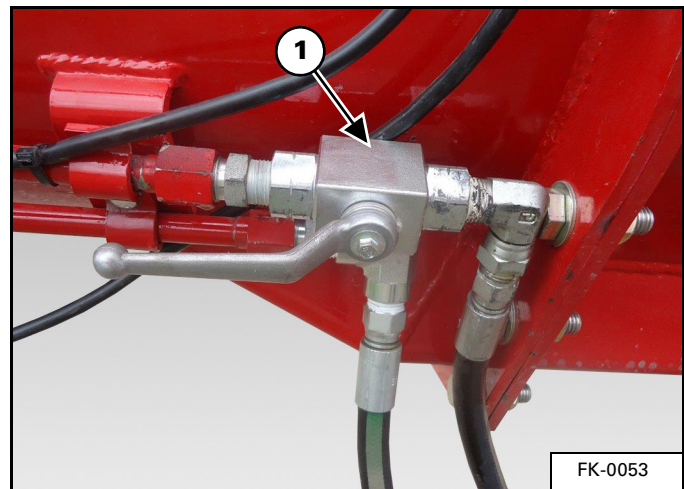
Figure 295



Install hose assembly (Item 1) [Figure 295] into the bottom hydraulic tube on the #1 tube.

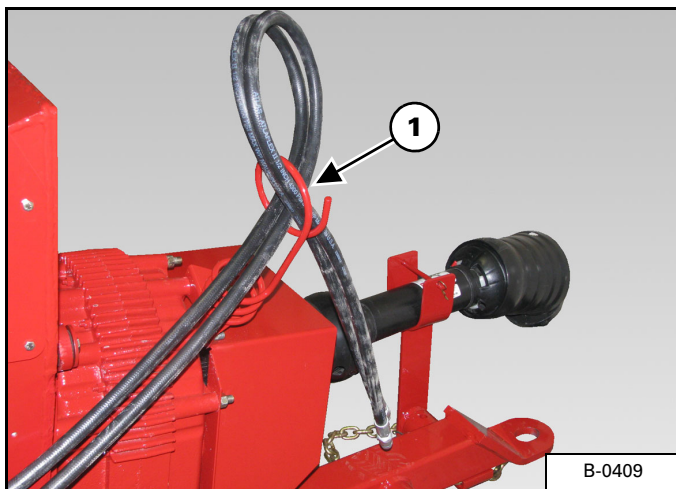
NOTE: Hydraulic hoses must be facing down.

Figure 296



Install hose / valve assembly (Item 1) [Figure 296] into the top hydraulic tube on the #1 tube.

Figure 297

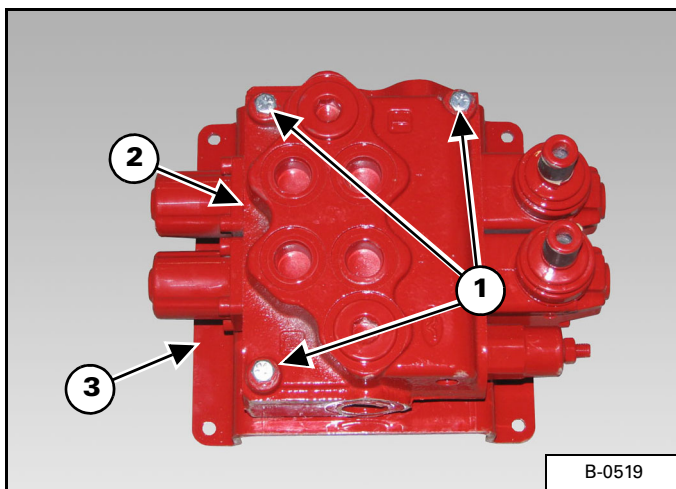


Route the quick coupler hoses along the input box and install into the storage bracket (Item 1) **[Figure 297]**.

1684, 16104 & 16124 Hydraulic Control Valve Assembly And Installation

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

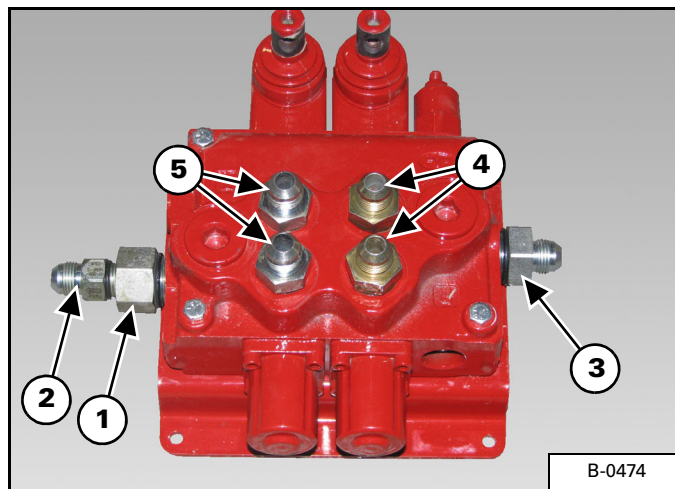
Figure 298



Using three bolts (Item 1) and lock nuts, install the valve block (Item 2) to the mounting bracket (Item 3) **[Figure 298]**. Tighten the three bolts and lock nuts.

Remove plastic plugs from the valve block.

Figure 299



Install fitting (Item 1) into the valve block. Install fitting (Item 2) **[Figure 299]**.

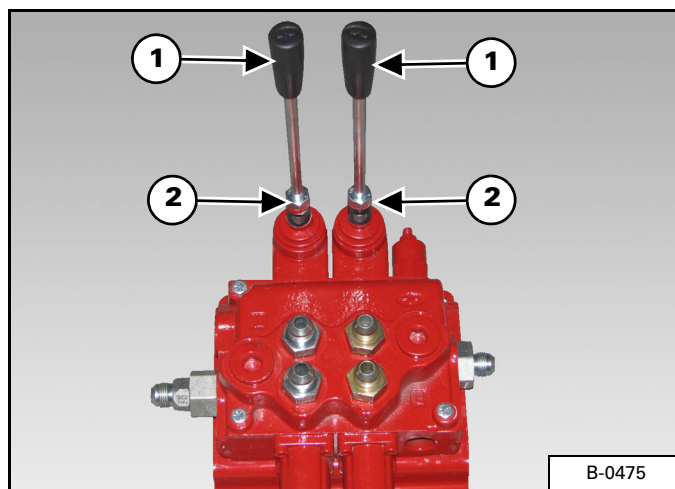
Install fitting (Item 3) **[Figure 299]** into the valve block.

Install the two restrictor fittings (Item 4) **[Figure 299]** into the valve block.

Install the two fittings (Item 5) **[Figure 299]** into the valve block.

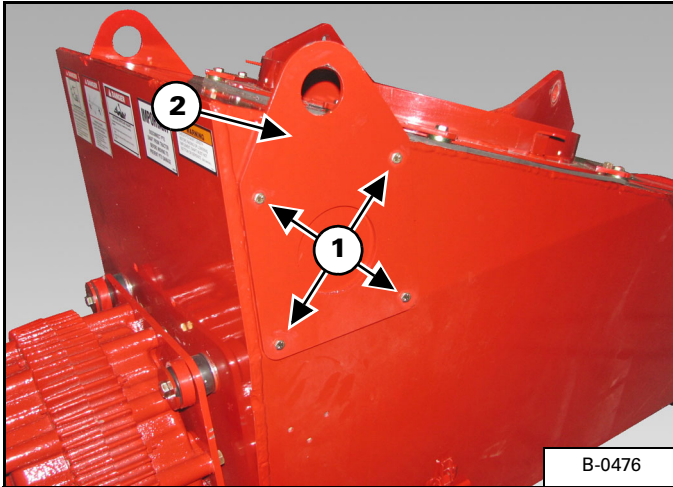
Tighten all fittings.

Figure 300



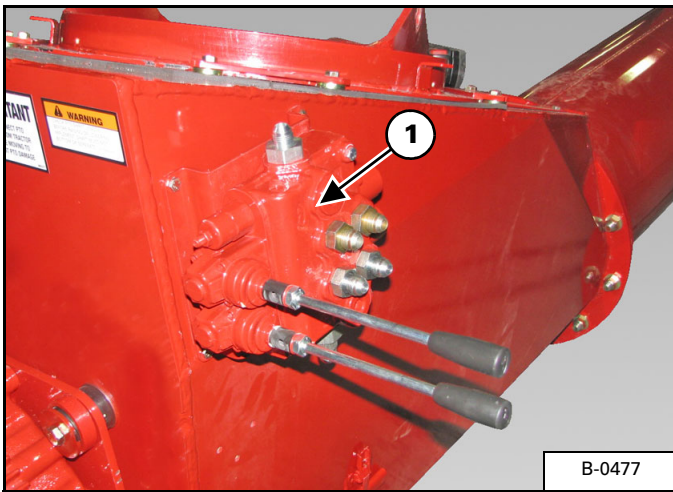
Install the two handles (Item 1) into the control valve. Tighten the two jam nuts (Item 2) **[Figure 300]** to secure the handles to the control valve.

Figure 301



Remove the four bolts (Item 1) and lifting bracket (Item 2) **[Figure 301]** (both sides).

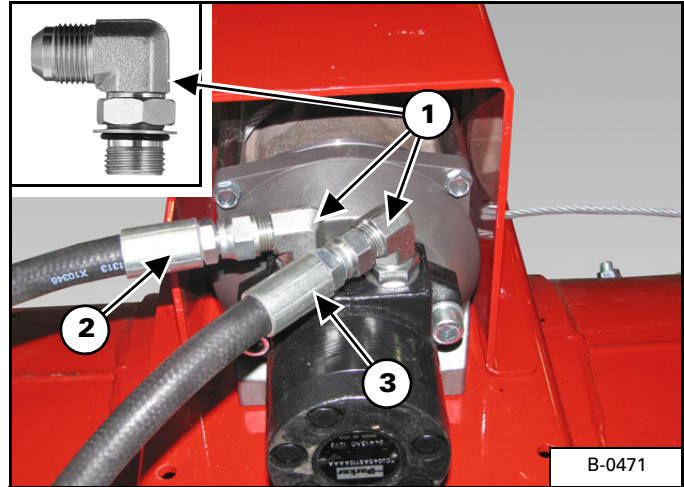
Figure 302



Using the four bolts from the lifting bracket, install the valve block assembly (Item 1) **[Figure 302]** onto the opposite side of the intake auger.

1684, 16104 & 16124 Hydraulic Winch Hose Installation And Routing

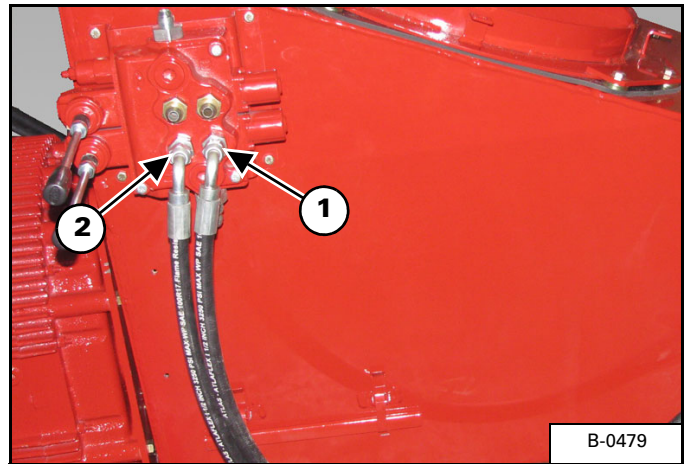
Figure 303



Install and tighten two 90° elbow fittings (Item 1) **[Figure 303]** into the winch.

Install and tighten the hydraulic hoses (Items 2 & 3) **[Figure 303]** onto the 90° elbow fittings.

Figure 304

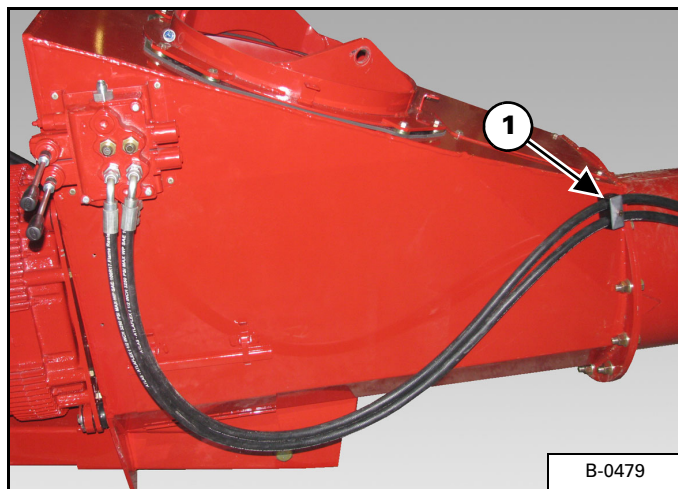


Route the two winch hydraulic hoses towards the input box **[Figure 304]**.

Install and tighten winch hydraulic hose (Item 2) **[Figure 303]** onto the bottom right fitting (Item 1) **[Figure 304]** on the valve block.

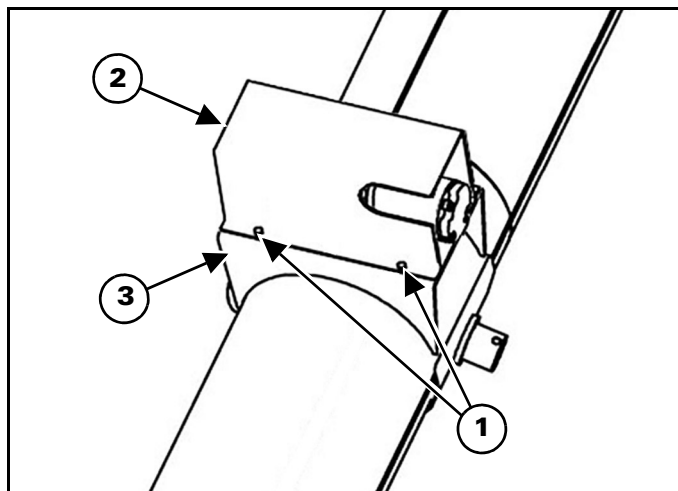
Install and tighten winch hydraulic hose (Item 3) **[Figure 303]** onto the bottom left fitting (Item 2) **[Figure 304]** on the valve block.

Figure 305



Place the two winch hydraulic hoses into a clamp (Item 1) **[Figure 305]** and install the clamp to the side of the input box.

Figure 306



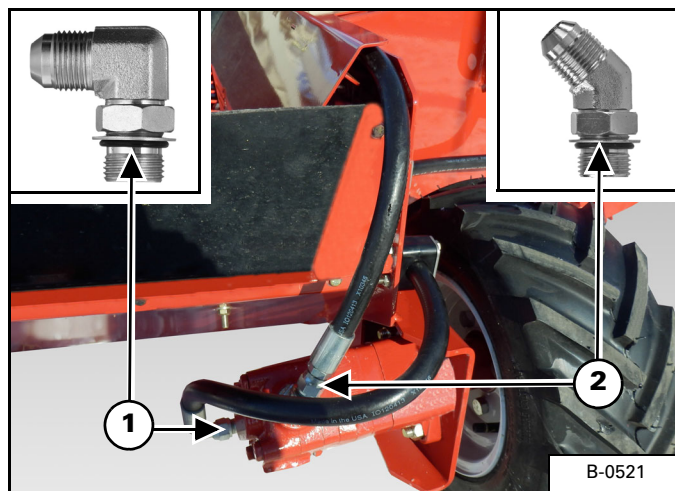
Using four bolts (Item 1) (two each side) and lock nuts, install the winch shield (Item 2) onto the winch mounting plate (Item 3) **[Figure 306]**.

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

1684, 16104 & 16124 Hydraulic Motor Hose Installation And Routing

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

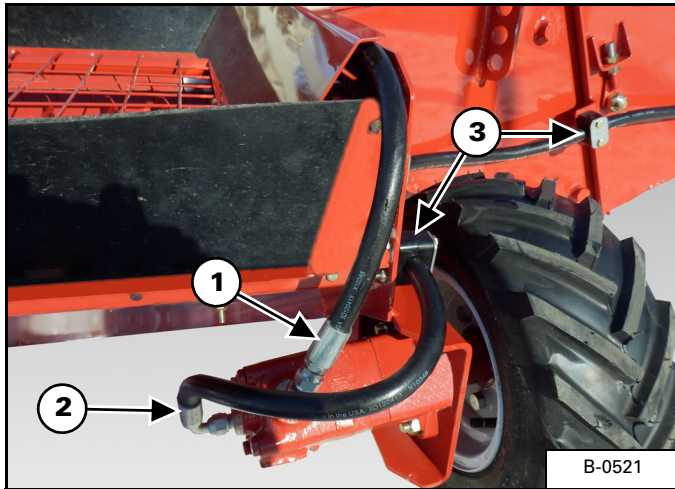
Figure 307



Install one 90° elbow fitting (Item 1) **[Figure 307]** into the bottom port of the wheel hydraulic motor (both sides).

Install one 45° elbow fitting (Item 2) **[Figure 307]** into the top port of the wheel hydraulic motor (both sides).

Figure 308

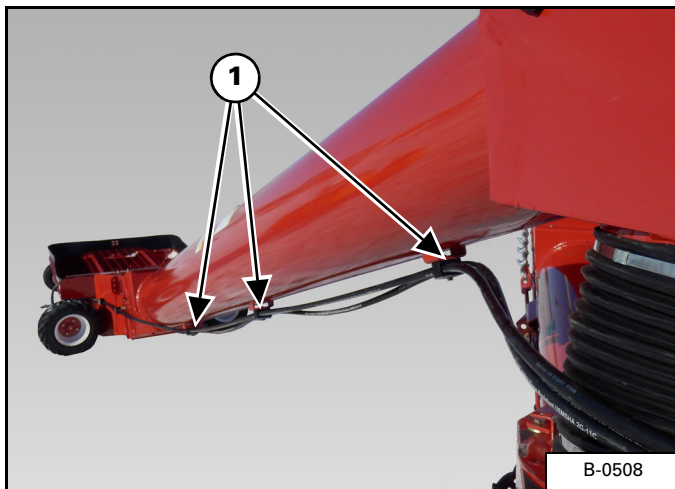


Route hydraulic hose (Item 1) **[Figure 308]** under the shield on the hopper. Install the hose onto the 45° fitting on both wheel hydraulic motors.

Install hydraulic hose (Item 2) **[Figure 308]** onto the 90° fitting on wheel hydraulic motor (both sides).

Place two clamps (Item 3) around hydraulic hose (Item 2) **[Figure 308]**, using 5/16" x 2-1/4" bolts, install the two clamps onto the hopper (both sides) and intake auger.

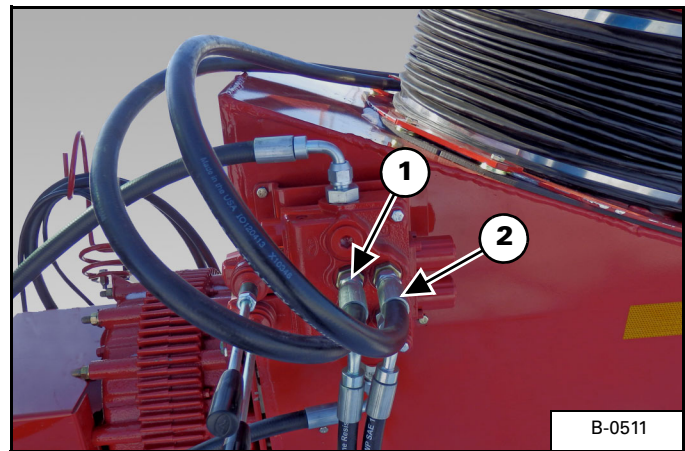
Figure 309



Route wheel hydraulic hoses under the intake auger towards the hitch **[Figure 309]**.

Place three clamps (Item 1) **[Figure 309]** around hydraulic hoses, using 5/16" x 2-1/4" bolts, install the three clamps onto the brackets on the bottom of the intake auger.

Figure 310



Route the two wheel hydraulic hoses around the base of the intake auger and towards the valve block **[Figure 310]**.

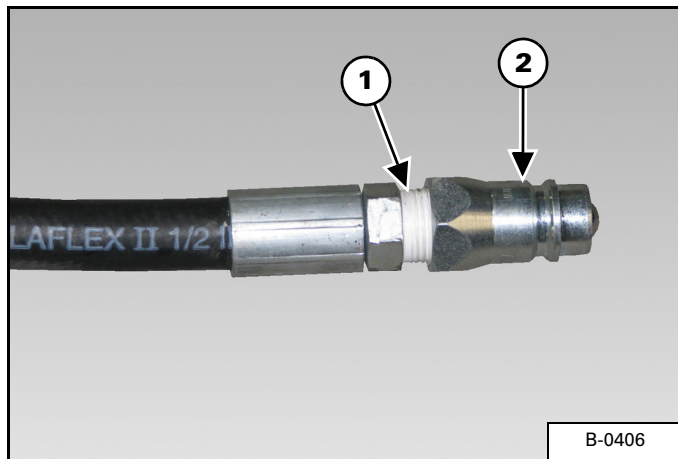
Install the left wheel motor hydraulic hose (Item 1) **[Figure 310]** onto the upper left fitting on the valve block.

Install the right wheel motor hydraulic hose (Item 2) **[Figure 310]** onto the upper right fitting on the valve block.

1684, 6104 & 16124 Control Valve Return And Supply Hose Installation

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

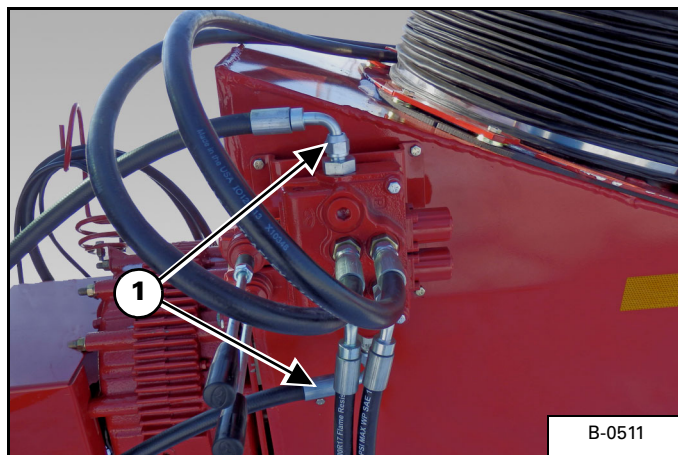
Figure 311



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 311].

Repeat for second quick coupler hose.

Figure 312



Install the two quick coupler hoses (Item 1) [Figure 312] to the top and bottom fittings on the valve block.

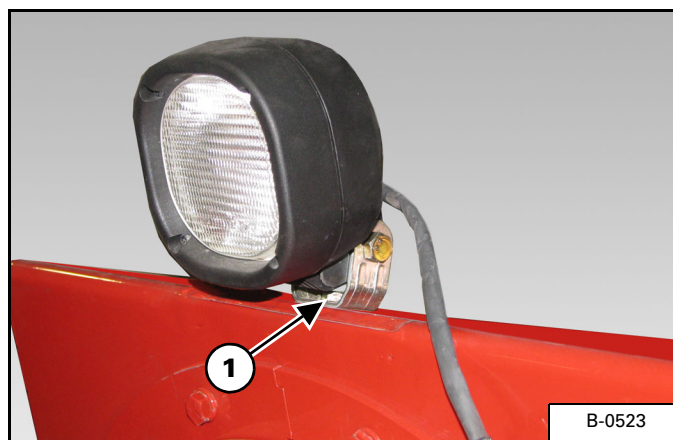
Place the two quick coupler hoses into the storage bracket.

NOTE: After all required components have been installed onto the input box, install bolts into all remaining open holes of the input box.

1684, 16104 & 16124 ELECTRICAL ASSEMBLY

Intake Auger Work Light Installation

Figure 313



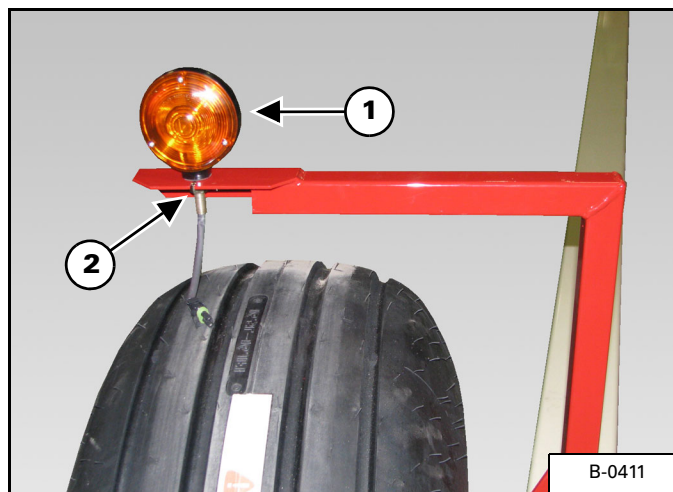
Using one bolt (Item 1) [Figure 313] and lock nut (included with light), install the work light on top of the intake auger.

Connect the wire harness to the work light and route down towards the front of the input box.

Amber Light Installation And Harness Routing

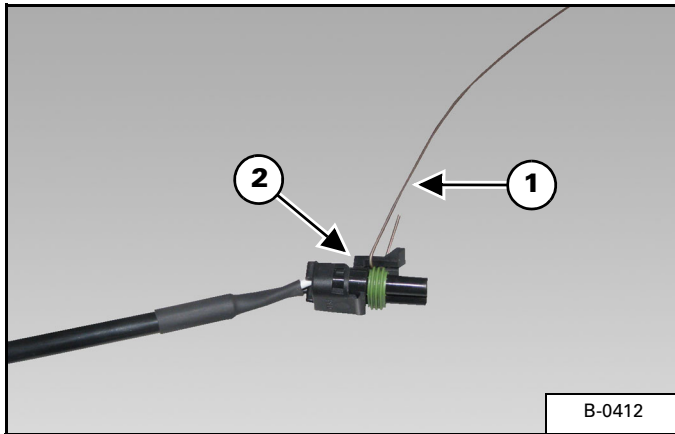
NOTE: The following images may not show your exact model as it appears but the procedure is correct.

Figure 314



Install the amber light assembly (Item 1) into the blinker mount. Hold the amber light parallel with the blinker mount and tighten nut (Item 2) [Figure 314] (both sides).

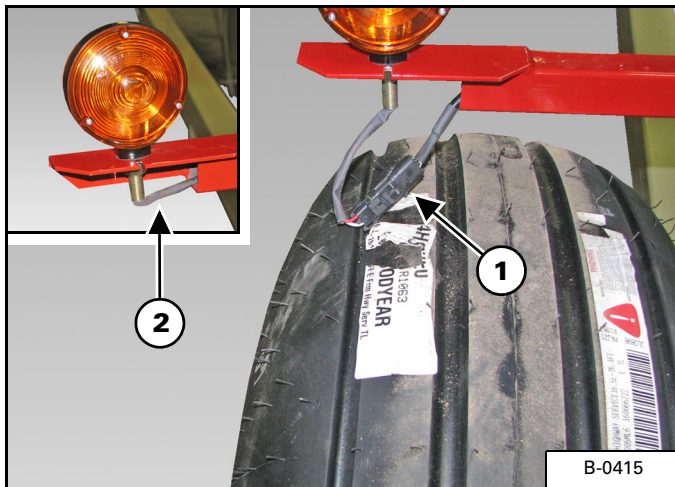
Figure 315



Install a 48 in. (1219 mm) length of wire (Item 1) to the male connector (Item 2) **[Figure 315]** on the extension harness.

Repeat **[Figure 315]** procedure for second amber light extension harness.

Figure 316



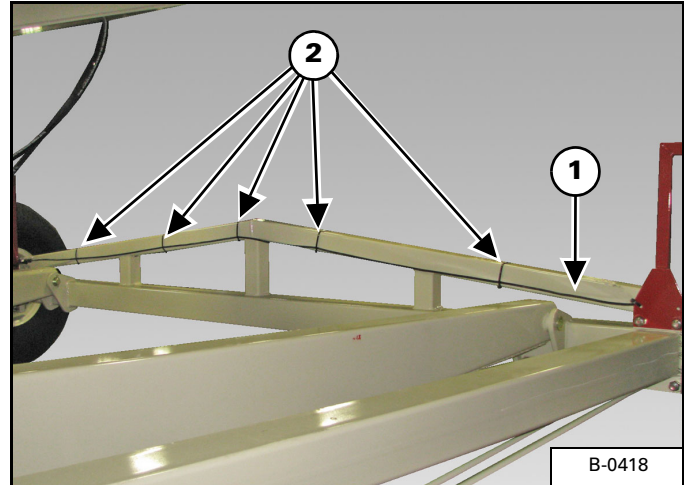
Feed the wire inside the blinker mount until the wire exits the blinker mount by the axle. Pull the wire while carefully feeding the extension harness into the blinker mount.

Connect the extension harness (Item 1) **[Figure 316]** to the amber light. Pull on the extension harness while carefully feeding the harness connection inside the blinker mount.

Leave a small amount of slack (Item 2) **[Figure 316]** where the wire harness enters the blinker mount.

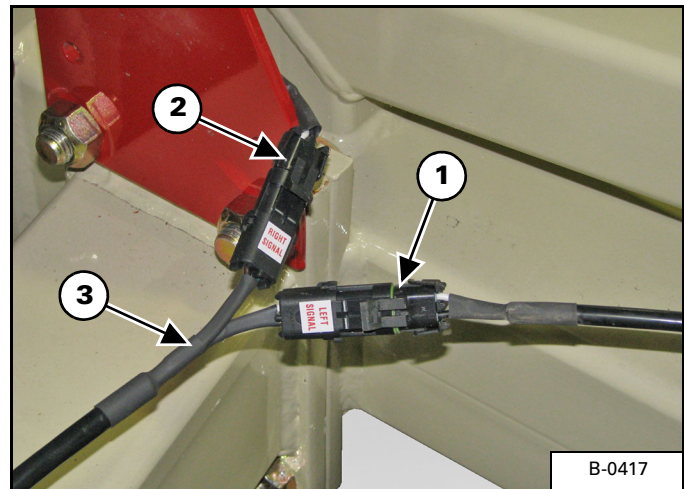
Repeat **[Figure 316]** procedure for second amber light extension harness.

Figure 317



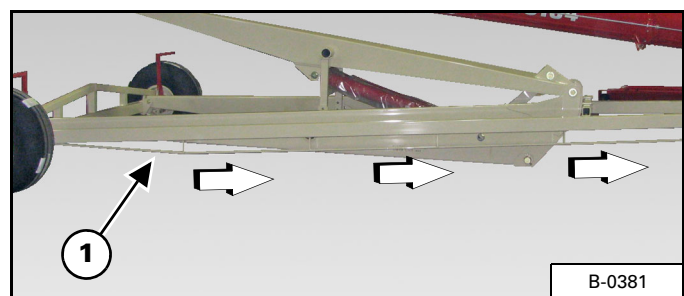
Route the left amber light extension harness (Item 1) along the axle (towards the right side) and secure with cable ties (Item 2) **[Figure 317]**.

Figure 318



Connect the left amber light extension harness (Item 1) and right amber light extension harness (Item 2) to the extension cable (Item 3) **[Figure 318]**.

Figure 319

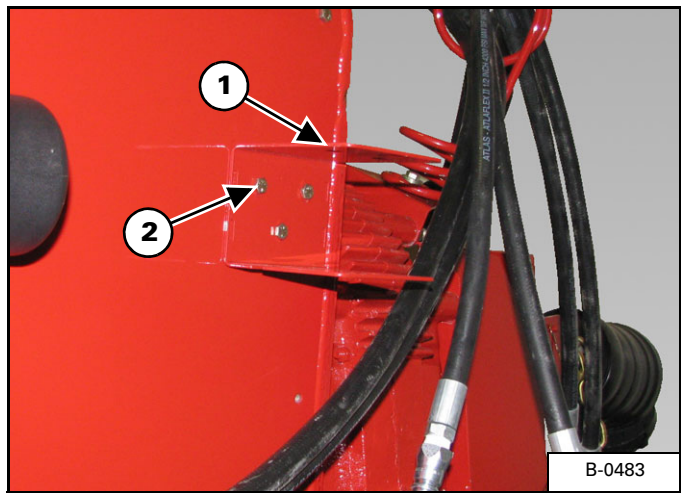


Route the extension harness along the bottom of the right undercarriage arm (Item 1) **[Figure 319]**.

Continue to route the extension harness along the hydraulic tubes of the #1 tube (towards the input box). Secure with cable ties.

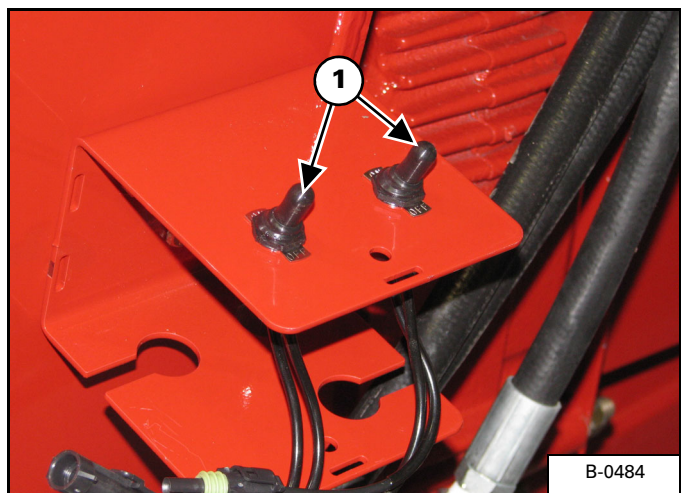
Light Switch Box Installation

Figure 320



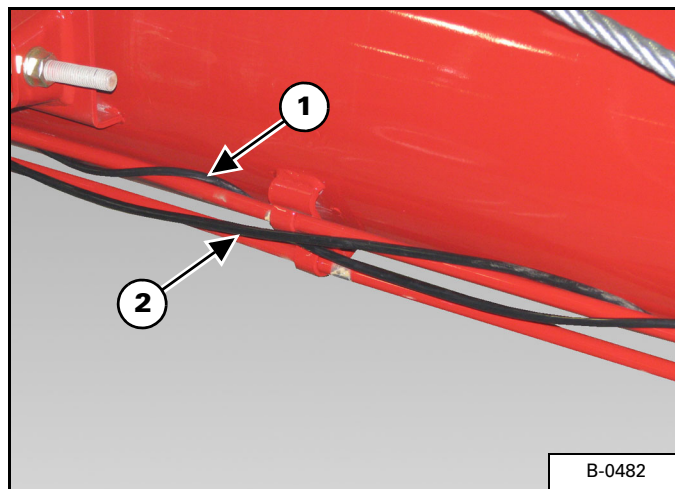
Align the light switch mounting bracket (Item 1) with the holes in the input box. Install three bolts (Item 2) **[Figure 320]** and tighten to secure the light switch mounting bracket to the intake auger.

Figure 321



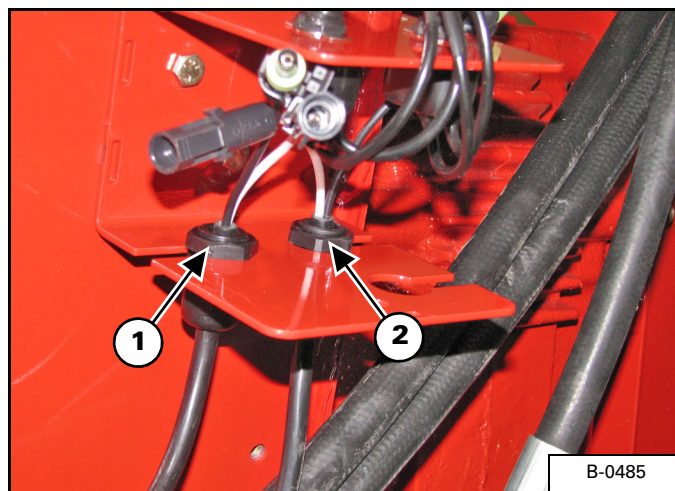
Install the two light switches (Item 1) **[Figure 321]**.

Figure 322



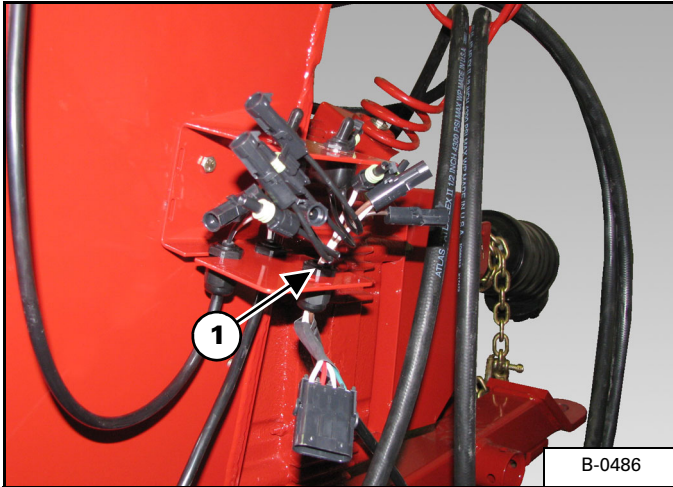
Wrap the discharge spout work light harness (Item 1) and the amber lights extension harness (Item 2) **[Figure 322]** around the hydraulic tubes on the #1 tube. Route the harnesses towards the input box.

Figure 323



Install the discharge spout work light harness (Item 1) and intake auger harness (Item 2) **[Figure 323]** into the light switch mounting bracket.

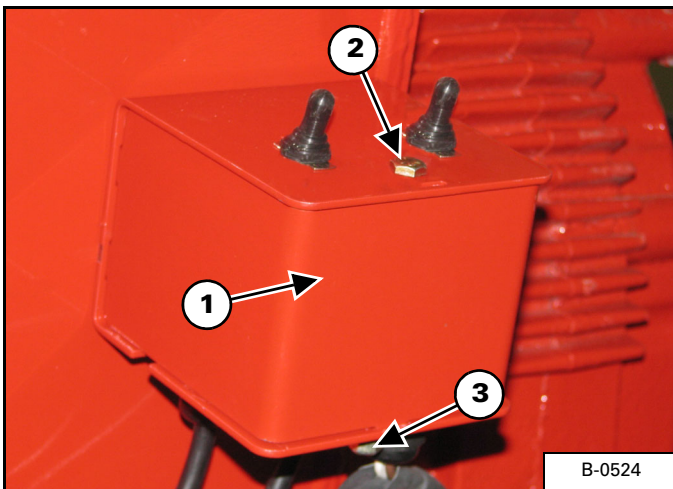
Figure 324



Install the main wire harness (Item 1) **[Figure 324]** into the light switch mounting bracket.

See 1684, 16104 ELECTRICAL DIAGRAM on page 273 to connect the wire harnesses.

Figure 325



Install the light switch cover (Item 1) **[Figure 325]**.

Install a bolt (Item 2) down through the mounting bracket and install a lock nut (Item 3) **[Figure 325]** on the bolt.

Tighten bolt and lock nut to secure the cover to the bracket.

www.farm-king.com

Farm King

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

Equipment shown is subject to change without notice.
©2018 Buhler Trading Inc. Printed in Canada TSX:BUI

bühler | *a division of Buhler Industries Inc.*