

Farm King

OPERATOR AND PARTS MANUAL

Backsaver Auger

Model 1262, 1272, 1282 and 1292



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

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WARRANTY REGISTRATION FORM

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery.

Customer Name:

Dealer Name:

Customer Address:

Dealer Address:

City:

Prov / State:

City:

Prov / State:

Postal / Zip Code:

Phone:

Postal / Zip Code:

Phone:

Backsaver Auger Model:

Serial Number:

Delivery Date:

I have thoroughly instructed the buyer on the above described equipment which review included the Operator's Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Dealer Inspection Report

☐	Bearings Turn Freely
☐	Belt Tension Checked
☐	Check Oil Level In Auger Drive Gear Box
☐	Pulleys Aligned
☐	Fasteners Tight
☐	Lubricate Machine
☐	Check Tire Pressure
☐	Unloading Auger Folds / Extends Freely

Safety

☐	Safety Chain On Hitch
☐	All Decals Installed
☐	Guards And Shields Installed And Secure
☐	Review Operating And Safety Instructions
☐	Check For Hydraulic Leaks

Date:

Dealer Rep. Signature:

The above equipment and Operator And Parts Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date:

Customer / Owner's Signature:

Remove this Warranty Registration Form from the Operator And Parts Manual. Make two copies of the form. Send original Warranty Registration Form to Farm King. Give one copy to the customer and the dealer will keep one copy.

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INTRODUCTION

This Operator And Parts Manual was written to give the owner / operator instructions on the safe operation, maintenance and part identification of the Farm King equipment. READ AND UNDERSTAND THIS OPERATOR AND PARTS MANUAL BEFORE OPERATING YOUR FARM KING EQUIPMENT. If you have any questions, see your Farm King dealer. This manual may illustrate options and accessories not installed on your Farm King equipment.

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OWNER'S INFORMATION

Thank you for your decision to purchase a Farm King Backsaver Auger. To ensure maximum performance of your equipment, it is mandatory that you thoroughly study the Operator And Parts Manual and follow the recommendations. Proper operation and maintenance are essential to maximize equipment life and prevent personal injury.

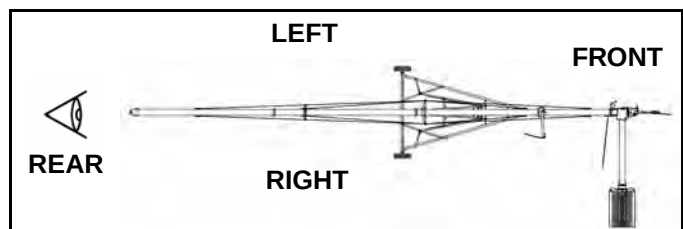
Operate and maintain this equipment in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and / or laws. Follow all on-product labeling and instructions.

Make sure that all personnel have read this Operator And Parts Manual and thoroughly understand safe and correct operating, installation and maintenance procedures.

Farm King is continually working to improve its products. Farm King reserves the right to make any improvements or changes as deemed practical and possible without incurring any responsibility or obligation to make any changes or additions to equipment sold previously.

Although great care has been taken to ensure the accuracy of this publication, Farm King makes no warranty or guarantee of any kind, written or expressed, implied or otherwise with regard to the information contained within this manual. Farm King assumes no responsibility for any errors that may appear in this manual and shall not be liable under any circumstances for incidental, consequential or punitive damages in connection with, or arising from the use of this manual.

Keep this manual available for frequent reference. All new operators or owners must review the manual before using the equipment and annually thereafter. Contact your Farm King Dealer if you need assistance, information, or additional copies of the manual. Visit our website at www.farm-king.com for a complete list of dealers in your area.

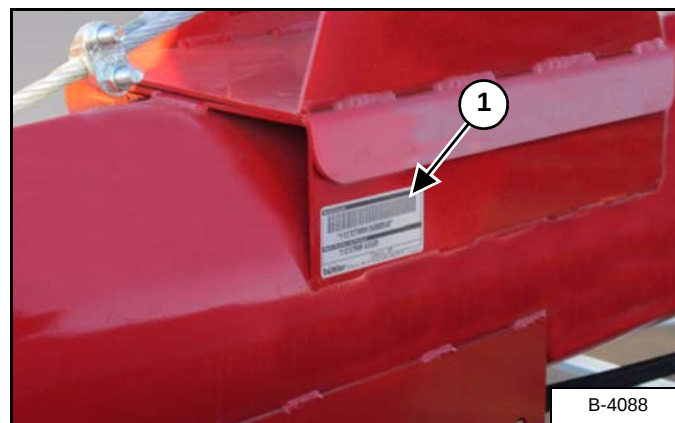


The directions left, right, front and rear, as mentioned throughout this manual, are as viewed from the rear of the equipment.

Serial Number Location

Please enter the model and serial number in the space provided for easy reference.

Figure 1



Model Number: _____

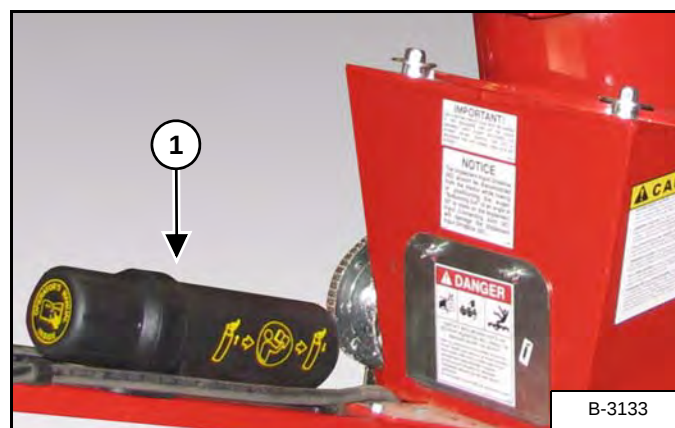
Serial Number: _____

The serial number plate (Item 1) **[Figure 1]** is located on the input box end of the bottom tube assembly.

Always use your serial number when requesting information or when ordering parts.

Manual Storage

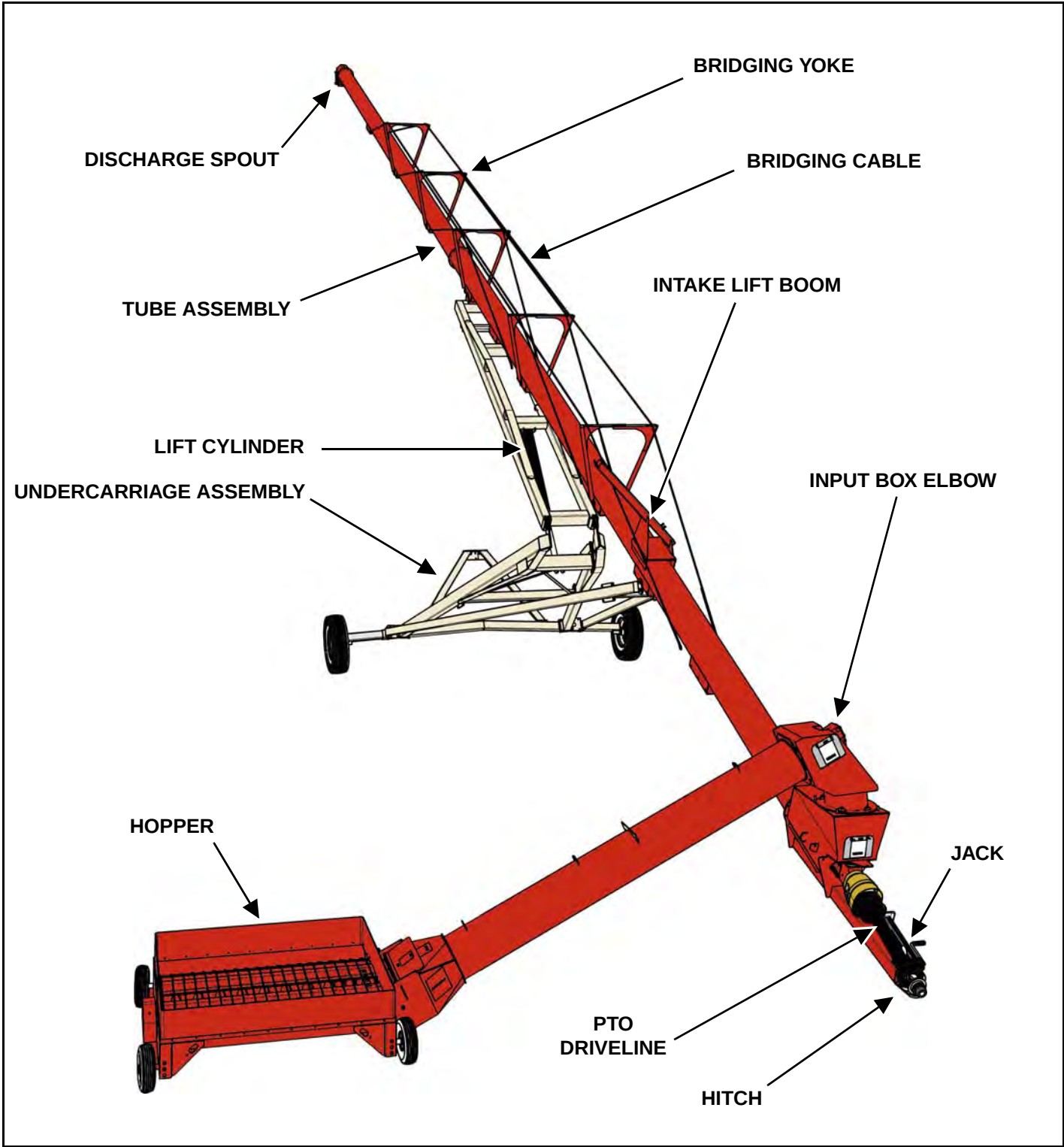
Figure 2



The Operator And Parts Manual and other documents can be stored in the canister (Item 1) **[Figure 2]** located on the side of the input box.

EQUIPMENT IDENTIFICATION

Component Location



SAFETY

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SAFETY INSTRUCTIONS

Safe Operation Is The Operator's Responsibility

	Safety Alert Symbol
This symbol with a warning statement means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.	



The signal word **CAUTION** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



The signal word **DANGER** on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.



The signal word **WARNING** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



This notice identifies procedures which must be followed to avoid damage to the machine.

Safe Operation Needs A Qualified Operator



Operators must have instructions before operating the machine. Untrained operators can cause injury or death.

For an operator to be qualified, he or she must not use drugs or alcoholic drinks which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine and the equipment.

A Qualified Operator Must Do The Following:

Understand the Written Instructions, Rules and Regulations

- The written instructions from Farm King include the Warranty Registration, Dealer Inspection Report, Operator And Parts Manual and machine signs (decals).
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem. Regulations may identify a hazard such as a utility line.

Have Training with Actual Operation

- Operator training must consist of a demonstration and verbal instruction. This training is given by the machine owner prior to operation.
- The new operator must start in an area without bystanders and use all the controls until he or she can operate the machine safely under all conditions of the work area. Always fasten seat belt before operating.

Know the Work Conditions

- Clear working area of all bystanders, especially small children and all obstacles that might be hooked or snagged, causing injury or damage.
- Know the location of any overhead or underground power lines. Call local utilities and have all underground power lines marked prior to operation.
- Wear tight fitting clothing. Always wear safety glasses when doing maintenance or service.

SAFETY INSTRUCTIONS (CONT'D)**Use Safety Rules**

- Read and follow instructions in this manual and the tractor's Operators Manual before operating.
- Under no circumstances should young children be allowed to work with this equipment.
- This equipment is dangerous to children and persons unfamiliar with its operation.
- If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.
- Stay clear of overhead power lines when unloading auger is extended. Electrocution can occur without direct contact.
- Check for overhead and / or underground lines before operating equipment (if applicable).
- In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.
- Check that the equipment is securely fastened to the tractor / towing vehicle.
- Make sure all the machine controls are in the NEUTRAL position before starting the machine.
- Operate the equipment only from the operator's position.
- Operate the equipment according to the Operator And Parts Manual.
- When learning to operate the equipment, do it at a slow rate in an area clear of bystanders, especially small children.
- DO NOT permit personnel to be in the work area when operating the equipment.
- The equipment must be used ONLY on approved tractors / transport vehicles.
- DO NOT modify the equipment in any way. Unauthorized modification may impair the function and / or safety and could affect the life of the equipment.
- DO NOT make any adjustments or repairs on the equipment while the machine is running.
- Keep shields and guards in place. Replace if damaged.

Transport Safety

- Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
- Comply with state and local laws governing highway safety and movement of machinery on public roads.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
- Always install transport locks, pins or brackets before transporting.
- Always yield to oncoming traffic in all situations and move to the side of the road so any following traffic may pass.
- Always enter curves or drive up or down hills at a low speed and at a gradual steering angle.
- Never allow riders on either tractor or equipment.
- Keep tractor / towing vehicle in a lower gear at all times when traveling down steep grades.
- Maintain proper brake settings at all times (if equipped).
- Stay away from overhead power lines when unloading auger is extended. Electrocution can occur without direct contact.

Safety Rules For Power Take-Off (PTO) Driven Equipment

- Keep PTO shields and all guards in place. Replace damaged or missing shields and guards before operating.
- Follow warnings and instructions on machine signs (decals). Replace damaged or missing decals.
- Do not wear loose or bulky clothing around the PTO or other moving parts.
- Keep bystanders away from PTO driven equipment, and never allow children near machines.
- Read and understand the manuals for the PTO driven equipment and be aware of safe operating procedures and hazards that may not be readily apparent.
- Always walk around equipment to avoid coming near a turning PTO driveline. Stepping over, leaning across or crawling under a turning PTO driveline can cause entanglement.
- Position the machine and equipment hitch correctly to prevent driveline stress and separation.
- Use caution when turning. Turning too sharp can cause driveline damage.
- Use caution when raising PTO driven attachment. Excessive driveline angle can cause driveline damage. Use stops if needed.
- Use increased caution on slopes and near banks and ditches to prevent overturn.
- Make certain that the Slow Moving Vehicle (SMV) emblem is installed so that it is visible and legible. When transporting the equipment, use the flashing warning lights (if equipped) and follow all local regulations.
- Operate this equipment with a machine equipped with an approved Roll-Over Protective Structure (ROPS). Always wear seat belt when the ROPS is up. Serious injury or death could result from falling off the machine.
- Before leaving the operator's position:
 1. Always park on a flat level surface.
 2. Place all controls in neutral.
 3. Engage the parking brake.
 4. Stop engine.
 5. Wait for all moving parts to stop.
- Carry passengers only in designated seating areas. Never allow riders on the machine or equipment. Falling off can result in serious injury or death.
- Start the equipment only when properly seated in the operator's seat. Starting a machine in gear can result in serious injury or death.
- Operate the machine and equipment from the operator's position only.
- The parking brake must be engaged before leaving the operator's seat. Rollaway can occur because the transmission may not prevent machine movement.

Machine Requirements And Capabilities

- Fasten seat belt securely. If equipped with a foldable Roll-Over Protective Structure (ROPS), only fasten seat belt when ROPS is up and locked. DO NOT wear seat belt if ROPS is down.
- Machine's three-point hitch must be equipped with sway bars or chains.
- Stop the machine and engage the parking brake. Install blocks in front of and behind the rear tires of the machine. Install blocks underneath and support the equipment securely before working under raised equipment.
- Keep bystanders clear of moving parts and the work area. Keep children away.

FIRE PREVENTION**Maintenance**

The machine and some equipment have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the lower and upper gearboxes. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.

Flammable debris (leaves, straw, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard.

All fuels, most lubricants and some coolant mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

Operation

The Farm King machine must be in good operating condition before use.

Check all of the items listed on the service schedule under the 8 hour column. (See "SERVICE SCHEDULE" on page 102.)

Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.

Electrical

Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.

Battery gas can explode and cause serious injury. Do not jump start or charge a frozen or damaged battery. Keep any open flames or sparks away from batteries. Do not smoke in battery charging area.

Hydraulic System

Check hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. Tighten or replace any parts that show leakage.

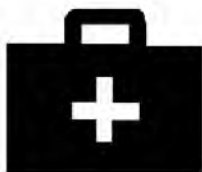
Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.

FIRE PREVENTION (CONT'D)**Welding And Grinding**

Always clean the machine and equipment, disconnect the battery, and disconnect the wiring from the machine controls before welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the machine when welding.

Have good ventilation when grinding or welding painted parts. Wear dust mask when grinding painted parts. Toxic dust or gas can be produced.

Dust generated from repairing nonmetallic parts such as hoods, fenders or covers can be flammable or explosive. Repair such components in a well ventilated area away from open flames or sparks.

Fire Extinguishers

Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.

OPERATING SAFETY ZONE

Safety Zone Identification

⚠ WARNING

AVOID INJURY OR DEATH

- Do not allow small children, bystanders or unauthorized persons in the work area during operation.
- Never stand or work under the auger and undercarriage when in the raised position or during operation.
- Always keep PTO shields and all guards in place during operation.
- Keep away from moving parts.
- Keep everyone clear when operating the hopper mover.

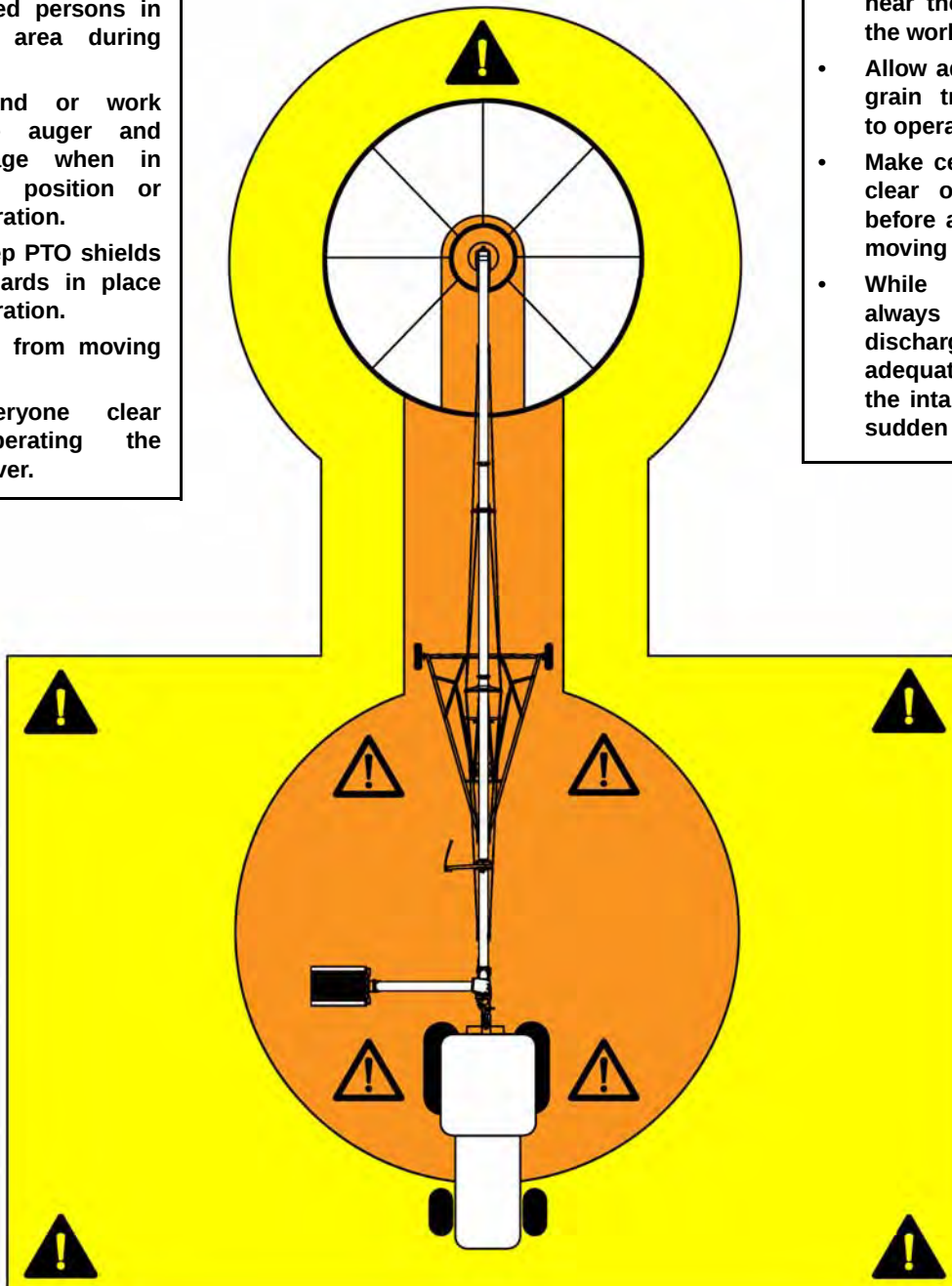
⚠ DANGER

ELECTROCUTION HAZARD

Keep away from power lines, electrocution can occur without direct contact.

⚠ CAUTION

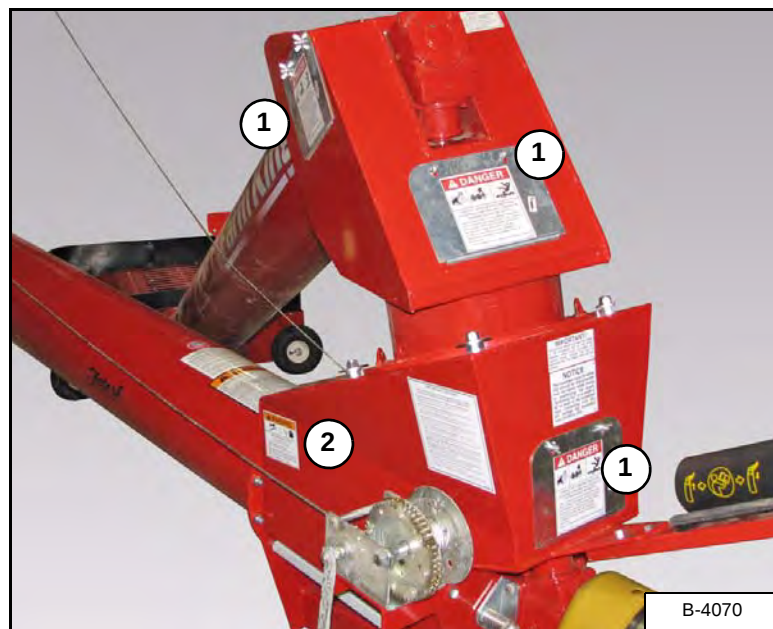
- Owners and operators should allow only authorized personnel and grain transport vehicles near the auger or inside the work area.
- Allow adequate space for grain transport vehicles to operate safely.
- Make certain everyone is clear of the equipment before applying power or moving the machine.
- While in operation, always support the discharge end or provide adequate anchorage of the intake end to prevent sudden tipping.



SAFETY SIGNS (DECALS)

Follow the instructions on all the Signs (Decals) that are on the equipment. Replace any damaged signs (decals) and be sure they are in the correct locations. Equipment signs are available from your Farm King equipment dealer.

Intake Elbow / Drive Section (Right Side)



p/n SZ06136



p/n SZ06049

SAFETY SIGNS (DECALS) (CONT'D)

Intake Auger



1



p/n SZ06023

Auger Hitch



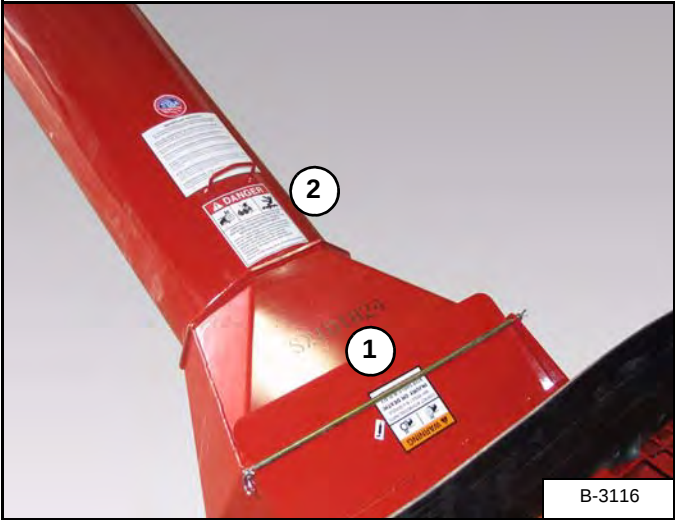
1



p/n SZ06527

SAFETY SIGNS (DECALS) (CONT'D)

Intake Auger



2



p/n SZ06136

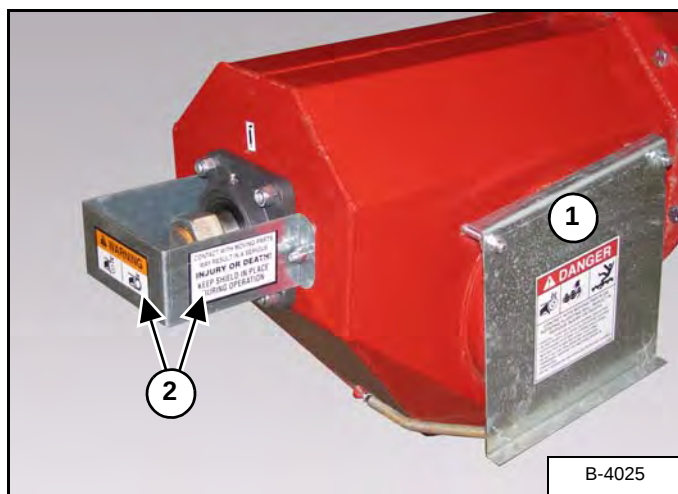
1



p/n SZ06011

SAFETY SIGNS (DECALS) (CONT'D)

Drop Spout



p/n SZ06136



p/n SZ06023

SAFETY SIGNS (DECALS) (CONT'D)

Lower Tube



1

WARNING

AN OPERATOR'S MANUAL IS FURNISHED WITH EACH GRAIN AUGER. ADDITIONAL OR REPLACEMENT MANUALS ARE AVAILABLE. DO NOT OPERATE THE UNIT BEFORE READING AND UNDERSTANDING THE OPERATOR'S MANUAL. UNDERSTAND THE OPERATING PROCEDURES BELOW TO AVOID PERSONAL INJURY OR DEATH.

Intentional or accidental contact with moving parts may result in a **SERIOUS INJURY OR DEATH**. Observe the following operating procedures:

⚠ **KEEP ALL SAFETY DEVICES IN PLACE!** ⚠ **DO NOT ADJUST, SERVICE, LUBRICATE, CLEAN, UNCLOG OR MOVE THE MECHANISM UNTIL ALL POWER IS SHUT OFF!** ⚠ **KEEP HANDS, FEET AND CLOTHING AWAY FROM MOVING PARTS WHILE IN OPERATION!** ⚠ **KEEP OFF THE EQUIPMENT AT ALL TIMES!** ⚠ **MAKE CERTAIN THAT EVERYONE IS CLEAR OF THE EQUIPMENT BEFORE APPLYING POWER!** ⚠ **KEEP CHILDREN, VISITORS AND ALL UNTRAINED PERSONNEL AWAY FROM MACHINE WHILE IN OPERATION!**

Care must be used when moving or transporting the auger. Accidental tipping or upending of an auger can occur and may cause **SERIOUS INJURY OR DEATH** to the operator or bystanders.

⚠ **NEVER MOVE THE AUGER MANUALLY!** ⚠ **BE SURE AUGER IS EMPTY BEFORE ATTEMPTING TO MOVE!** ⚠ **NEVER PUSH ON THE UNDERCARRIAGE OF THE AUGER!** ⚠ **TOW THE AUGER AT SLOW SPEED AND IN THE DOWN POSITION!** ⚠ **ALWAYS TEST THE INTAKE END OF THE AUGER FOR DOWNWARD WEIGHT WHEN ATTACHING OR RELEASING!** ⚠ **NEVER RAISE THE HITCHPOINT HIGHER THAN THE VEHICLE'S TOW BAR.**

An auger can collapse and fall on the operator or bystanders causing a **SERIOUS INJURY OR DEATH**. Always support the discharge end when the following conditions occur:

⚠ **WHILE UNIT IS IN OPERATION!** ⚠ **WHEN DISMOUNTING THE UNDERCARRIAGE!**

The accidental tipping or upending of an auger may cause **SERIOUS INJURY OR DEATH** to the operator or bystanders. When the grain flow is shut off to the auger an overbalance situation can occur, suddenly raising the intake of the auger. Adequate anchorage of the intake end or support from the bin is required at all times, especially in the following conditions:

⚠ **WHILE UNIT IS IN OPERATION!** ⚠ **WHEN MOVING THE AUGER!** ⚠ **WHEN RAISING OR LOWERING THE AUGER!**

⚠ **Maximum elevation is determined by interference between track car and auger structure. The operator MUST STOP RAISING the auger BEFORE track car reaches the end of the track. Continued lift will cause failure of the winch, lift cable or auger supports, causing auger to collapse, resulting in SERIOUS INJURY OR DEATH!**

Contact with overhead wires may cause **ELECTROCUTION** of the operator or bystanders. Contact with overhead obstructions can cause collapse or tipping of the auger or may cause the overhead obstruction to fall. In both cases the operator or bystander can be **SERIOUSLY INJURED OR KILLED!** Observe the following: ⚠ **TOW THE AUGER AT SLOW SPEED AND IN THE DOWN POSITION!** ⚠ **RAISE OR LOWER THE AUGER SLOWLY!**

Electrical malfunction can cause **ELECTROCUTION** of the operator or bystanders. Observe the following rules:

⚠ **DISCONNECT POWER AND ELECTRICAL DRIVEN UNITS BEFORE RESETTING MOTOR OVERLOADS!**
⚠ **DO NOT OPERATE ELECTRIC MOTOR EQUIPPED UNITS UNTIL UNIT IS PROPERLY GROUNDED!**

Contact with rotating flighting will cause **SERIOUS INJURY OR DEATH!** ⚠ **DO NOT STAND ON INTAKE CAGE!**
⚠ **KEEP HANDS, FEET AND CLOTHING AWAY FROM THE INTAKE AND DISCHARGE FLIGHTING!**

06010

p/n SZ06010

EQUIPMENT DECALS AND SIGNS

NOTE: All safety related decals are shown in the Safety Signs Section. (See "SAFETY SIGNS (DECALS)" on page 19.)

Check and replace any worn, torn, hard to read or missing decals on your equipment.

Part Number SZ000339

1262

Part Number SZ000340

1272

Part Number SZ000203

1282

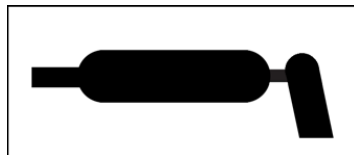
Part Number SZ000341

1292

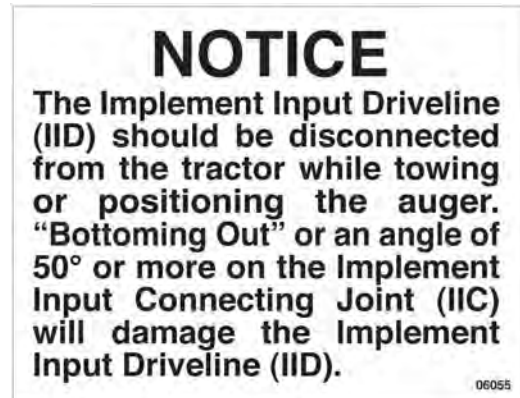
Part Number SZ000113

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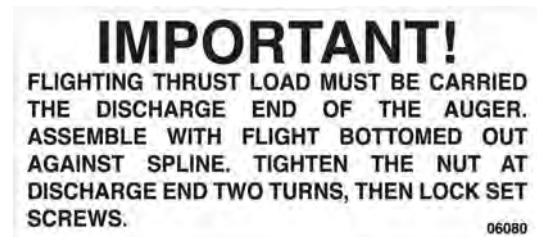
Part Number SZ06057



Part Number SZ06055



Part Number SZ06080



Part Number SZ06137



EQUIPMENT DECALS AND SIGNS (CONT'D)

Part Number SZ06094



Part Number SZ06001



Part Number SZ000116 Black Feterl



SAFETY SIGN-OFF FORM



Instructions are necessary before operating or servicing equipment. Read and understand the Operator And Parts Manual and safety signs (decals) on equipment. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

Farm King follows the general Safety Standards specified by the American Society of Agricultural and Biological Engineers (ASABE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and / or maintaining the Backsaver Auger must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Annually review this information before the season start-up and make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. An untrained operator is unqualified to operate this machine.

The following sign-off sheet is provided for your record and to show that all personnel who will be working with the equipment have read and understand the information in this Operator and Parts Manual and have been instructed in the operation of the equipment.

SIGN-OFF SHEET		
Date	Employee's Signature	Employer's Signature

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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 12" Backsaver Auger.



Unload crate(s) and auger components carefully to avoid 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 12" Backsaver Auger in the following order:

1. Undercarriage (See "Undercarriage Assembly" on page 32.)

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 "Tube Assembly" on page 41.)

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.

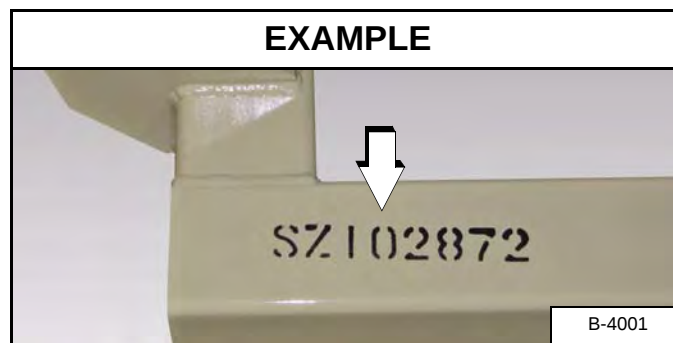
3. Hopper Assembly (See "Hopper Assembly And Installation" on page 63.)

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

4. Hydraulic (See "HYDRAULIC ASSEMBLY" on page 68.)

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 3



Larger components are marked for identification [Figure 3].

BASE GROUP

Undercarriage Assembly

Assemble 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.



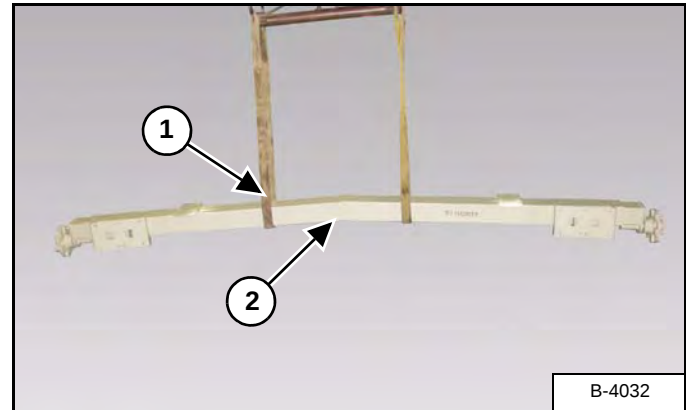
WARNING



AVOID INJURY OR DEATH

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

Figure 4



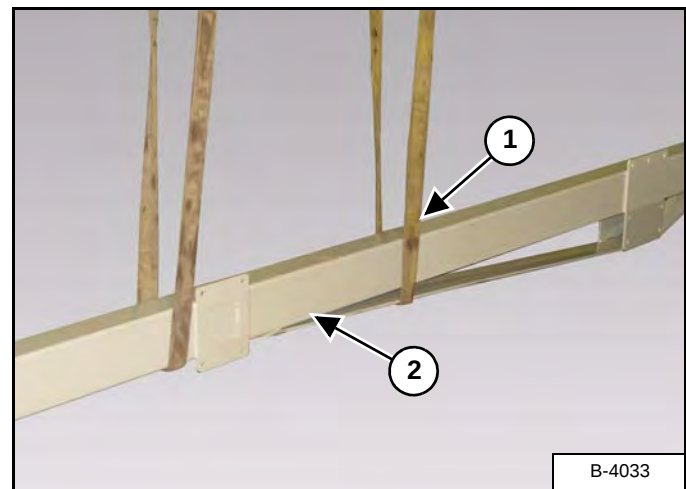
Install a strap (Item 1) around the center of the axle (Item 2) [Figure 4].

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 5

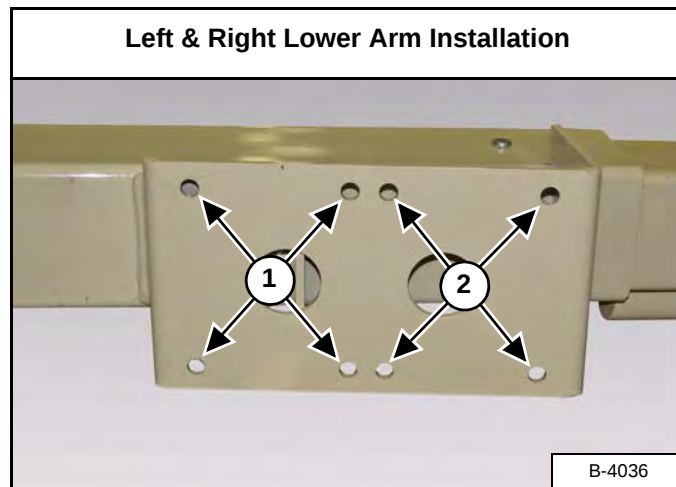


Install a strap (Item 1) around the center of the left / right undercarriage arms (Item 2) [Figure 5].

Connect the strap to an approved lifting device.

Raise and move the left / right undercarriage arms towards the axle.

Figure 6



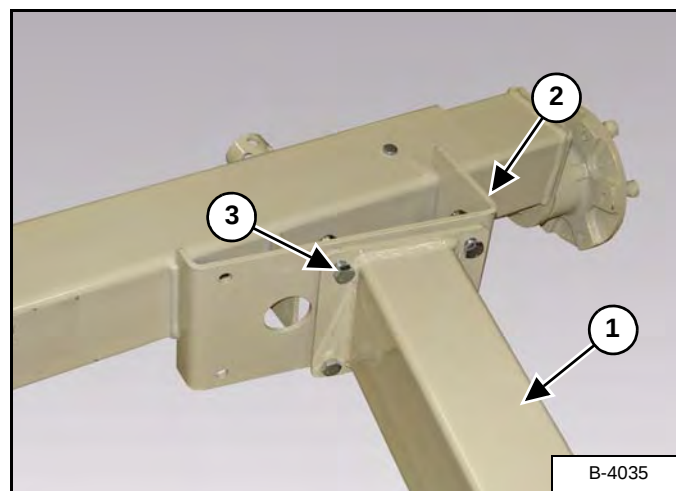
Models 1262 And 1282

Align the left / right undercarriage arms with the inner four mounting holes (Item 1) **[Figure 6]** on the axle.

Models 1272 And 1292

Align the left / right lower arms with the outer four mounting holes (Item 2) **[Figure 6]** on the axle.

Figure 7

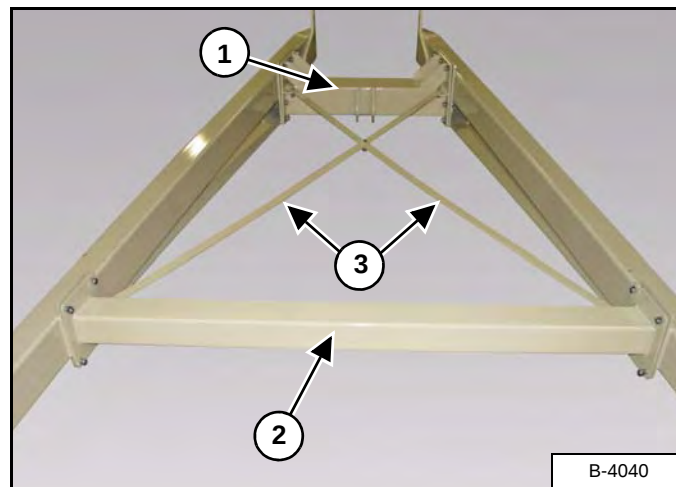


Align the right lower arm (Item 1) with the mount (Item 2) **[Figure 7]** on the axle.

Install four 1/2" x 1-1/2" bolts and 1/2" lock nuts (Item 3) **[Figure 7]**. Do not tighten bolts and nuts at this time.

Align and install the left lower arm (opposite side of axle).

Figure 8

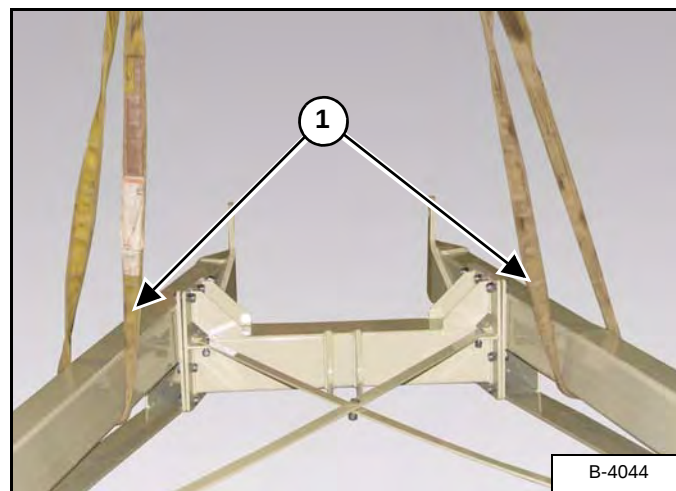


Install cross member (Item 1) **[Figure 8]** onto the left and right lower arms using seven 5/8"-11 UNC x 1-1/2" Grade 5 bolts and seven 5/8" lock nuts (both sides).

Install hoist cross bar (Item 2) **[Figure 8]** onto the left and right lower arms using four 1/2"- 13 UNC x 1-1/2" bolts and seven 1/2" lock nuts (both sides).

Install x-brace bars (Item 3) **[Figure 8]** onto the left and right lower arms using five 1/2"- 13 UNC x 1-1/2" bolts and seven 1/2" lock nuts (both sides).

Figure 9

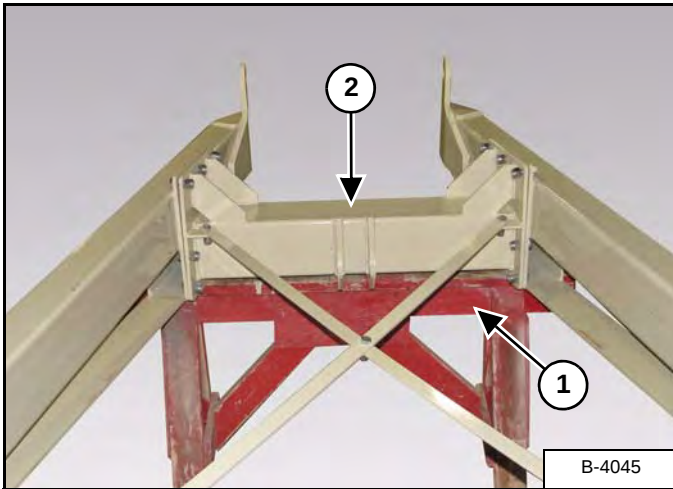


Install a strap (Item 1) **[Figure 9]** around the left and right lower arms.

Connect the strap to an approved lifting device.

Raise the undercarriage assembly.

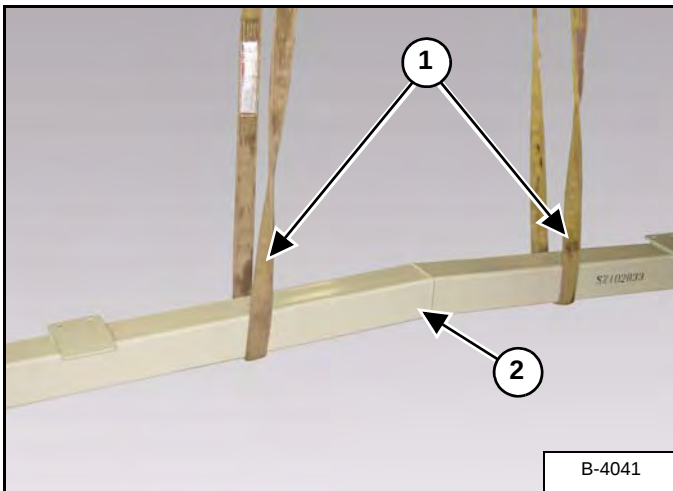
Figure 10



Place a support stand (Item 1) under the cross member (Item 2) **[Figure 10]**. Lower the undercarriage assembly onto the support stand.

Remove straps.

Figure 11

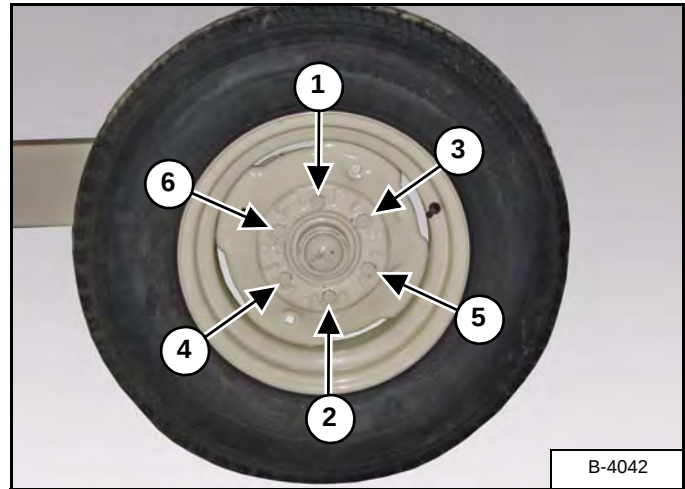


Install a strap (Item 1) around the center of the axle (Item 2) **[Figure 11]**.

Connect the strap to an approved lifting device.

Raise the axle high enough to install tires.

Figure 12



Install the tire with the valve stem facing out (both sides). Install the six wheel bolts (both sides) **[Figure 12]**.

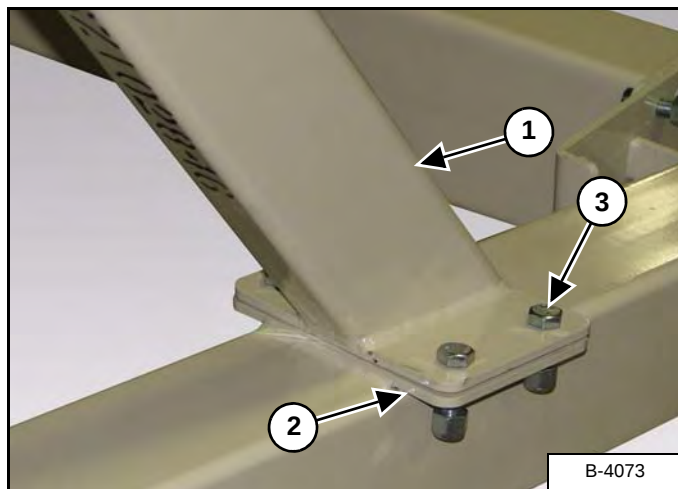
Tighten wheel bolts in a criss-cross pattern **[Figure 12]**. Tighten wheel bolts to 80 - 100 ft•lb (108 - 135 N•m) of torque.

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

Check tire pressure.

NOTE: Recommended tire pressure is 35 PSI (241 kpa) maximum.

Figure 13

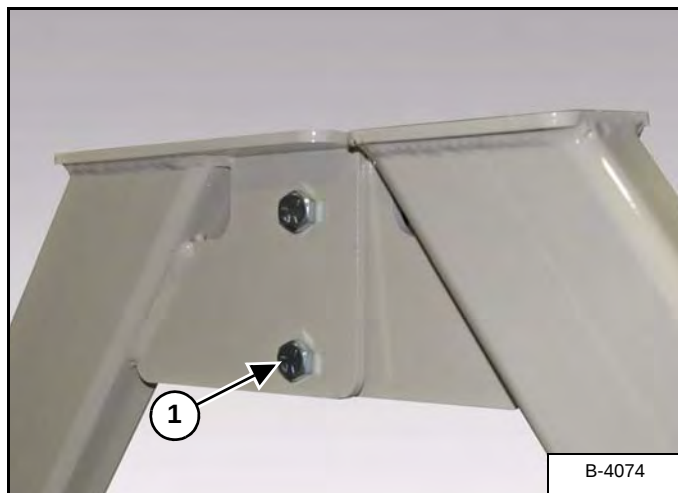


Align one hoist rest half (Item 1) with the mounting plates (Item 2) **[Figure 13]** on the axle.

Install four 1/2" x 1-1/2" bolts (Item 3) **[Figure 13]** through the two rest halves and axle mounting plates. Install 1/2" lock nuts on each bolt. Do not tighten at this time.

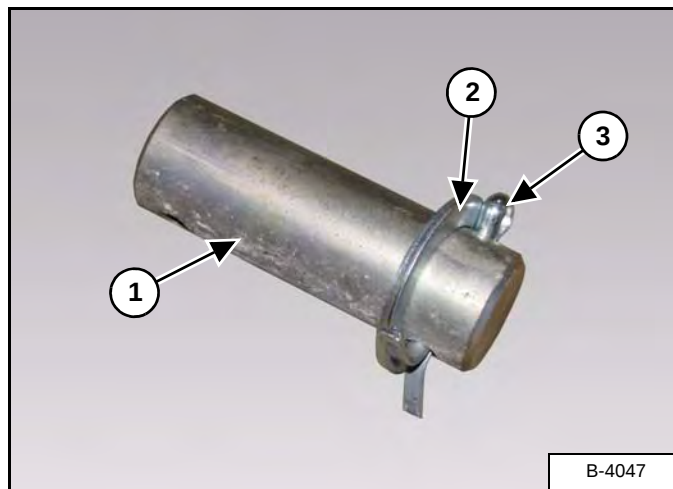
Repeat for remaining hoist rest half.

Figure 14



Align the top mounting holes of the two hoist rest halves. Install two 1/2" x 1-1/2" bolts (Item 1) **[Figure 14]** through the two halves and install one 1/2" lock nut on each bolt.

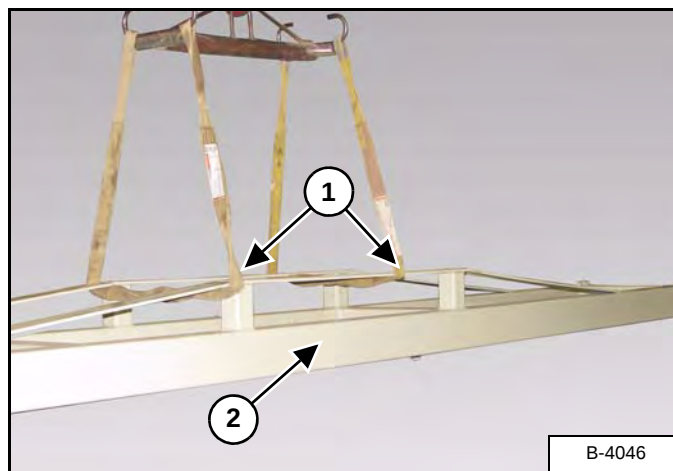
Figure 15



Locate two 1-1/4" x 3-3/4" hoist pivot pins (Item 1), four 1-1/4" x 1-7/8" 10 ga. washers (Item 2) and four 1/4" x 2" cotter pins (Item 3) **[Figure 15]**.

Install one 1/4" x 2" cotter pin and one 1-1/4" x 1-7/8" 10 ga. washer onto each hoist pivot pin.

Figure 16

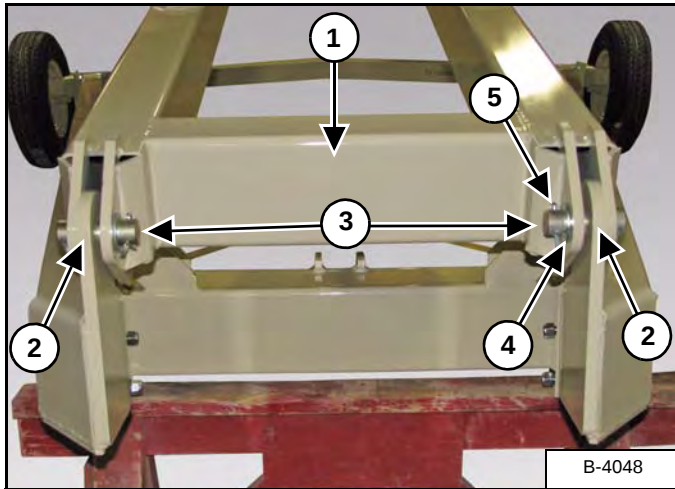


Install a strap (Item 1) around the top arm (Item 2) **[Figure 16]**.

Connect the strap to an approved lifting device.

Raise and move the top arm to the assembly area.

Figure 17

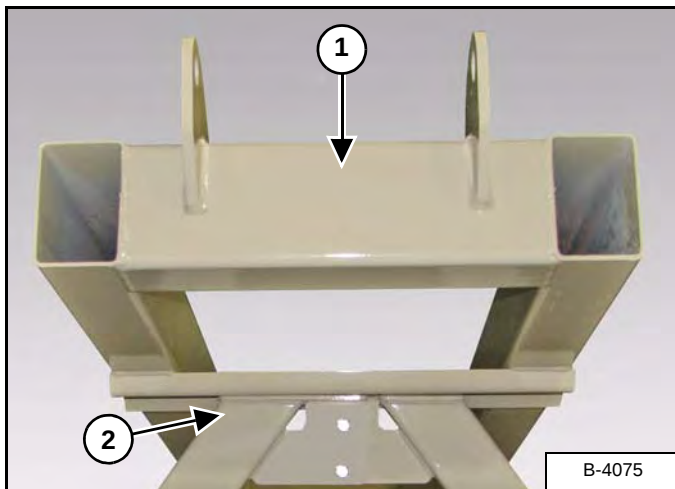


Lower the top arm (Item 1) onto the lower arm mounts (Item 2) **[Figure 17]**.

Align the mounting holes, install the two 1-1/4" x 3-3/4" hoist pivot pins (Item 3) **[Figure 17]** through the top arm and lower arm mounts.

Install one 1-1/4" x 1-7/8" 10 ga. washer (Item 4) and one 1/4" x 2" cotter pin (Item 5) **[Figure 17]** onto each hoist pivot pin.

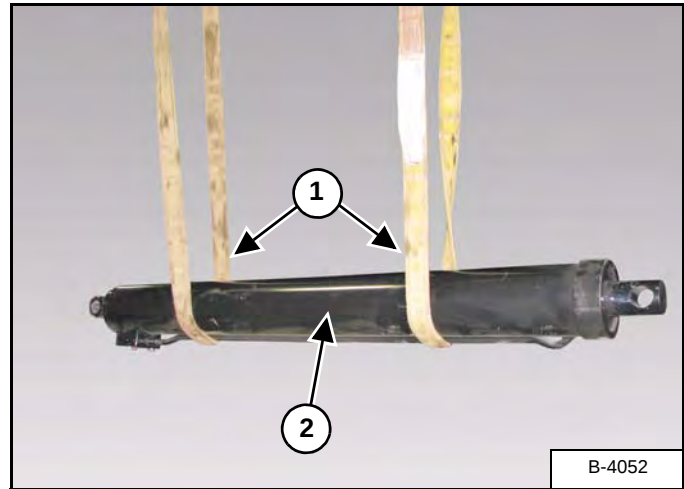
Figure 18



Center and lower the top arm (Item 1) onto the hoist rest assembly (Item 2) **[Figure 18]**.

Remove straps from the top arm.

Figure 19

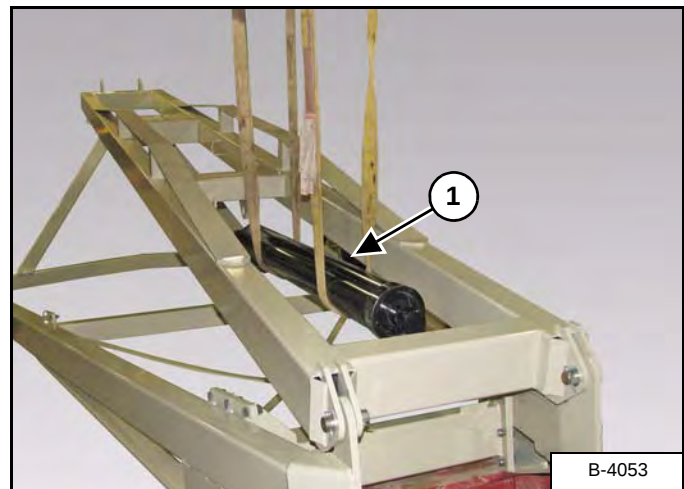


Install a strap (Item 1) around the lift cylinder (Item 2) **[Figure 19]**.

Connect the strap to an approved lifting device.

Raise and move the lift cylinder to the assembly area.

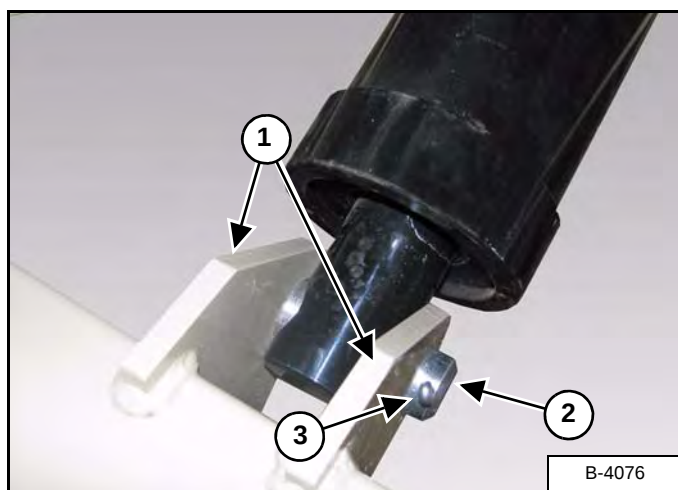
Figure 20



Lower the lift cylinder (Item 1) **[Figure 20]** down into the top arm and undercarriage assembly.

! IMPORTANT

Installing the hydraulic cylinder will require two people. One person to hold the hydraulic cylinder in position and the second person to install the cylinder pin.

Figure 21


Align and install the rod end of the lift cylinder between the two mounts (Item 1) **[Figure 21]** on the cross member.

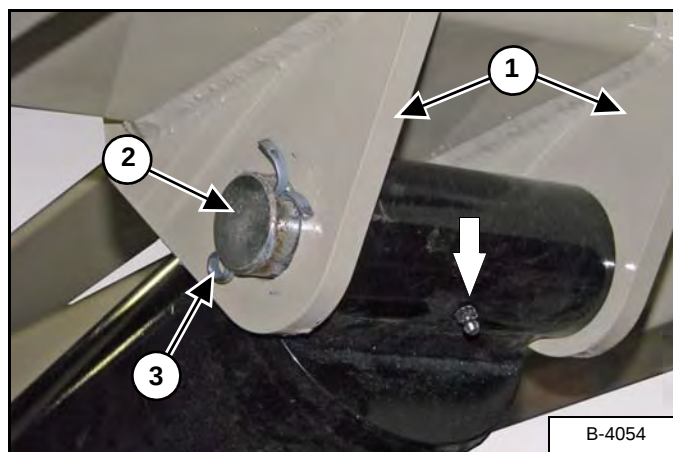
Rod End Cylinder Pin Sizes

1-1/4" x 4-7/8" - 1262 & 1272 Models

1-1/2" x 4-3/4" - 1282 & 1292 Models

Install the rod end cylinder pin (Item 2) **[Figure 21]** through the two mounts and lift cylinder.

Install one 1/4" x 2" cotter pin (Item 3) **[Figure 21]** on each side of the pin.

Figure 22


NOTE: Rotate the base end of the lift cylinder so that the grease zerk is pointing down.

Align and install the base end of the lift cylinder between the two mounts (Item 1) **[Figure 22]** on the top arm.

Base End Cylinder Pin Sizes

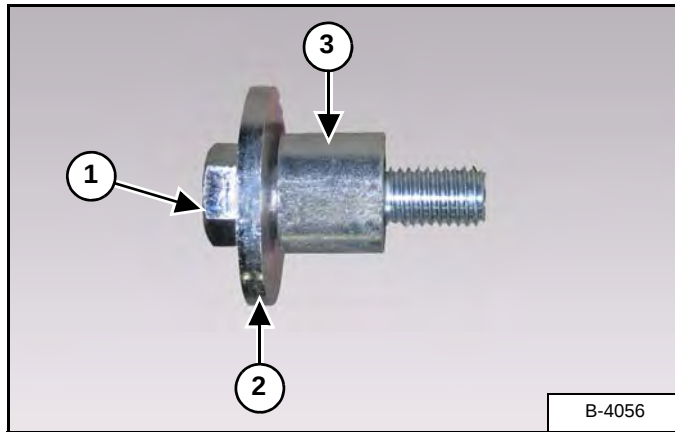
1-1/4" x 6-1/2" - 1262 & 1272 Models

1-1/2" x 7-1/2" - 1282 & 1292 Models

Install the rod end cylinder pin (Item 2) **[Figure 22]** through the two mounts and lift cylinder.

Install one 1/4" x 2" cotter pin (Item 3) **[Figure 22]** on each side of the pin.

Figure 23



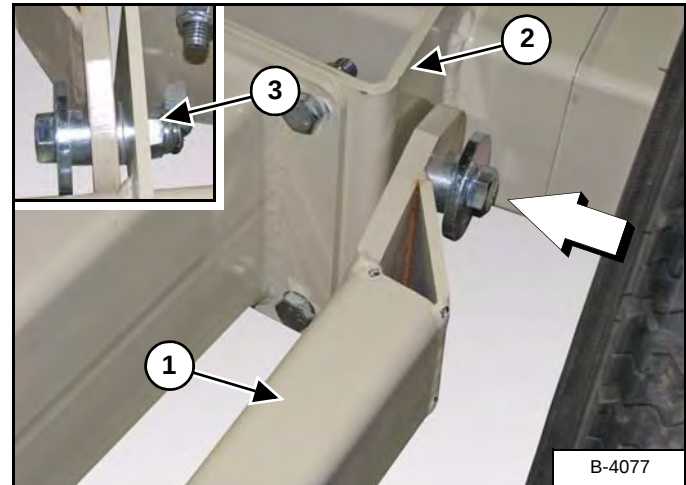
Locate four 5/8" x 2-1/2" bolts (Item 1), four 0.635" ID x 2-1/4" OD x 1/4" flat washers (Item 2), four pivot bushings (Item 3) **[Figure 23]** and four 5/8" lock nuts (not shown).

Install a strap around one of the lower front arms (the two lower front arms are the same).

Connect the strap to an approved lifting device.

Raise and move the lower front arm to the assembly area.

Figure 24



Place one front undercarriage arm weldment (Item 1) between the wheel and mounting bracket (Item 2) **[Figure 24]** on the axle.

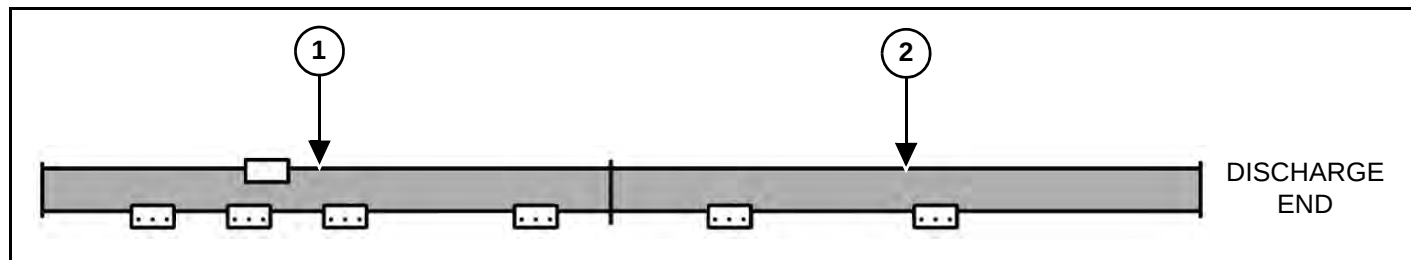
Install one 5/8" x 2-1/2" bolt with flat washer and bushing through the front undercarriage arm weldment and into the mounting bracket.

Install one 5/8" lock nut (Item 3) **[Figure 24]** on the bolt and tighten.

Repeat for opposite front undercarriage arm weldment.

1262 Tube Identification

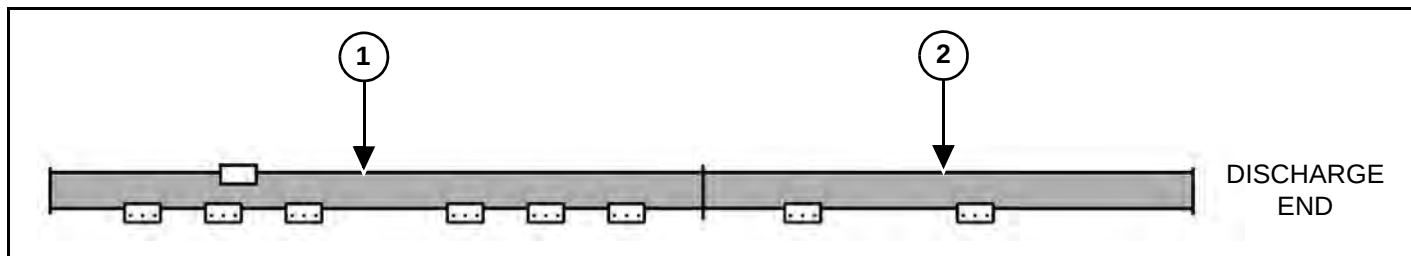
NOTE: Use the following diagram and table to identify individual tube sections when connecting flighting and tube sections.



ITEM	DESCRIPTION	QTY
1	30' LOWER TUBE	1
	30' FLIGHTING	1
2	30' DISCHARGE TUBE	1
	30' FLIGHTING	1

1272 Tube Identification

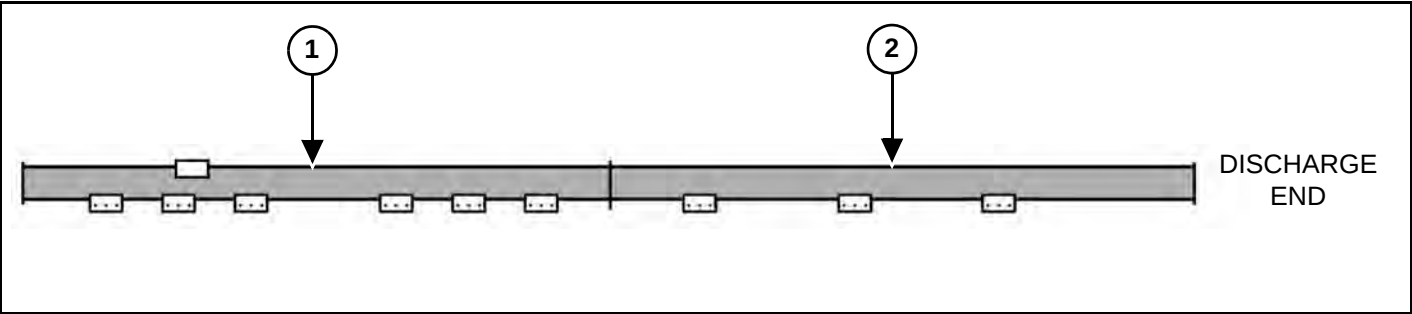
NOTE: Use the following diagram and table to identify individual tube sections when connecting flighting and tube sections.



ITEM	DESCRIPTION	QTY
1	40' LOWER TUBE	1
	20' FLIGHTING	2
2	30' DISCHARGE TUBE	1
	30' FLIGHTING	1

1282 Tube Identification

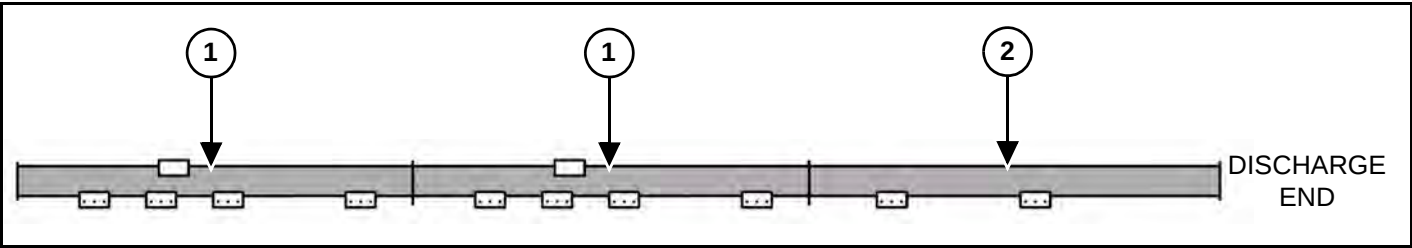
NOTE: Use the following diagram and table to identify individual tube sections when connecting flighting and tube sections.



ITEM	DESCRIPTION	QTY
1	40' LOWER TUBE	1
	20' FLIGHTING	3
2	40' DISCHARGE TUBE	1
	20' FLIGHTING	1

1292 Tube Identification

NOTE: Use the following diagram and table to identify individual tube sections when connecting flighting and tube sections.



ITEM	DESCRIPTION	QTY
1	30' LOWER TUBE	2
	30' FLIGHTING	2
2	30' DISCHARGE TUBE	1
	30' FLIGHTING	1

Tube Assembly

Assemble the tube on a flat level surface.



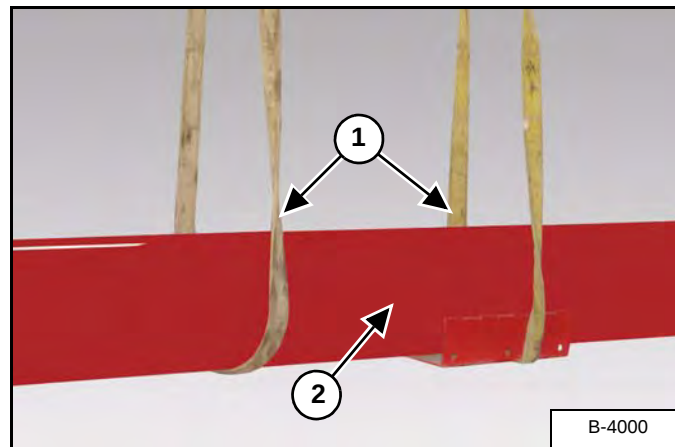
- **DO NOT** permit bystanders to be in the work area when unloading and assembling the auger components.
- **DO NOT** work under suspended parts.
- **Keep away from moving parts.**
- **Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling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



AVOID INJURY OR DEATH

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

Figure 25



Install straps (Item 1) around discharge tube weldment (Item 2) **[Figure 25]**.

Connect the strap to an approved lifting device.

Raise and move the discharge tube weldment to the assembly area.

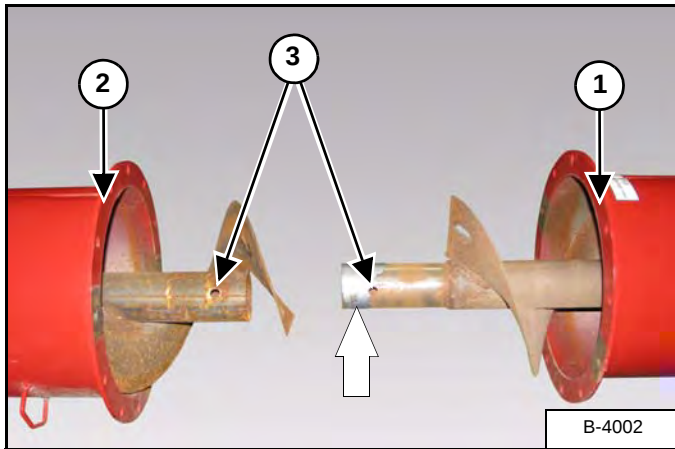
Place a block under the discharge spout end of the discharge tube weldment. Lower the discharge tube weldment onto the block. Remove straps.

NOTE: To identify the next tube weldment to be installed see pages 39 and 40.

Install a strap around the next tube weldment.

Raise and move the next tube weldment to the assembly area.

Figure 26

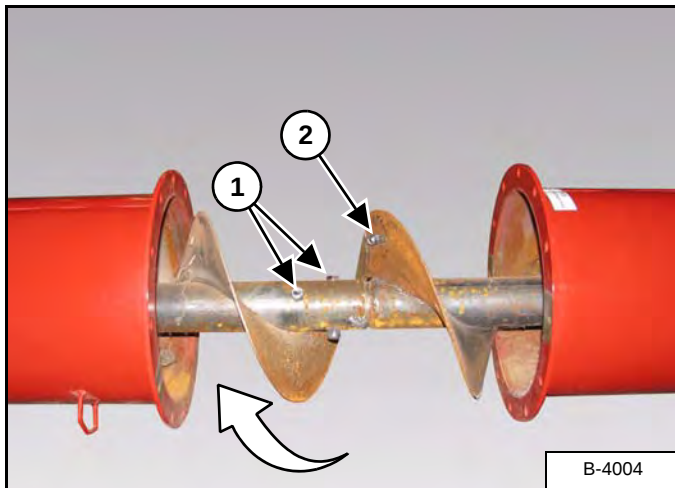


Align the mounting flanges of the discharge tube weldment (Item 1) and next tube weldment (Item 2) [Figure 26].

NOTE: Apply anti-seize compound to the male shaft.

Align the flighting shaft connecting holes (Item 3) [Figure 26] and slide the flighting sections together.

Figure 27

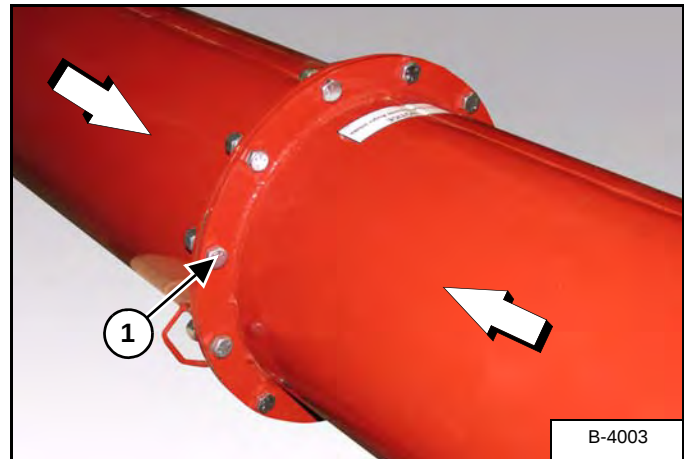


Rotate the flighting sections to align the mounting holes in the flighting [Figure 27].

Install two 1/2"-20 UNF x 3-1/2" bolts through the flighting shaft connecting holes (Item 1) [Figure 27]. Install 1/2" lock nuts on the bolts and tighten.

Then install one 3/8" x 7/8" bolt through the flighting (Item 2) [Figure 27]. Install a 3/8" lock nut on the bolt and tighten.

Figure 28



Slide the tube weldments together until the mounting flanges contact each other [Figure 28].

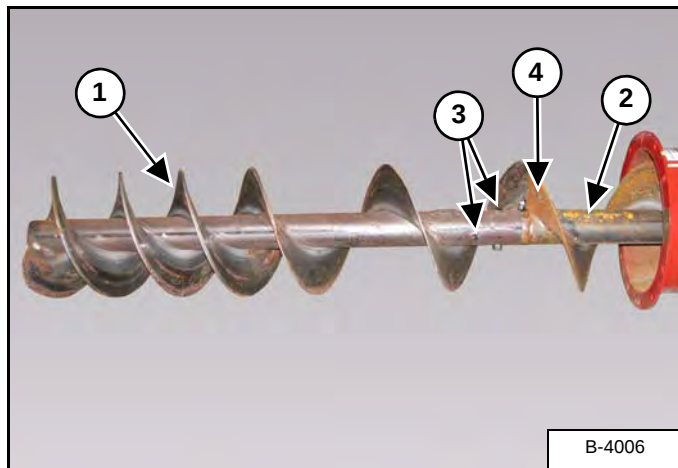
Install 1/2" x 1-1/2" bolts (Item 1) [Figure 28] through the tube flanges. Install one 1/2" lock nut on each bolt.

NOTE: Do not fully tighten bolts the first time. Work around the flange at least twice to gradually pull the flanges together. Check tube alignment after first tightening. Fully tighten bolts and lock nuts.

Repeat [Figure 26], [Figure 27] & [Figure 28] to connect remaining tube sections (if required).

Remove flighting from drive section.

Figure 29



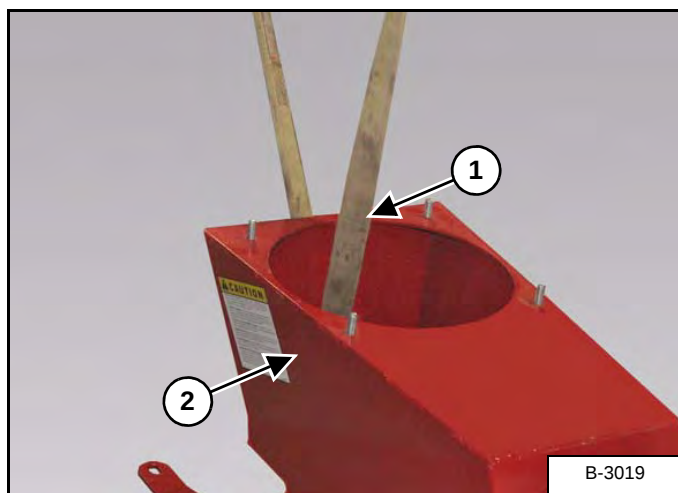
NOTE: Apply anti-seize compound to the male shaft.

Align the flighting shaft connecting holes and slide the flighting sections together [Figure 29].

Install two 1/2"-20 UNF x 3-1/2" bolts through the flighting shaft connecting holes (Item 3) [Figure 29]. Install 1/2" lock nuts on the bolts and tighten.

Then install one 3/8" x 7/8" bolt through the flighting (Item 4) [Figure 29]. Install a 3/8" lock nut on the bolt and tighten.

Figure 30

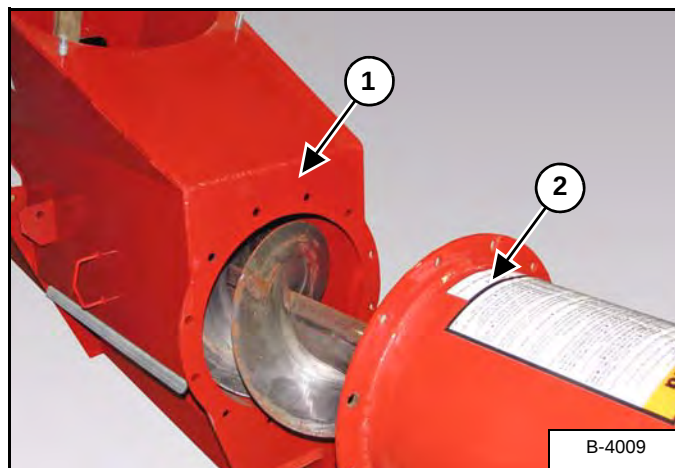


Install straps (Item 1) through the drive section (Item 2) [Figure 30] as shown.

Connect the straps to an approved lifting device.

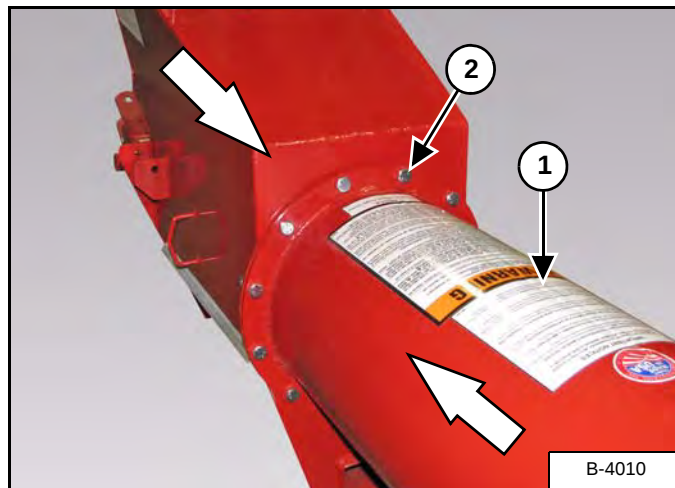
Raise and move the drive section to the assembly area.

Figure 31



Align the drive section (Item 1) with the lower tube (Item 2) [Figure 31].

Figure 32



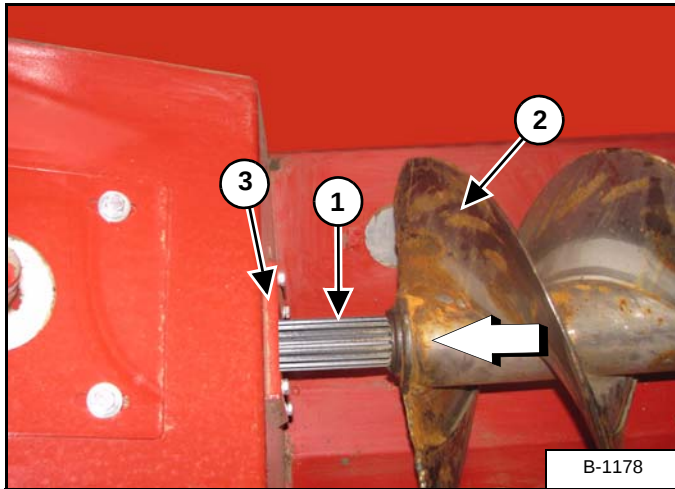
Move the drive section towards the lower tube (Item 1) [Figure 32].

Align and install 1/2" x 1-1/2" bolts (Item 2) [Figure 32] through the drive section and lower tube flanges.

Install 1/2" lock nuts onto the bolts.

NOTE: Do not fully tighten bolts the first time. Work around the flange at least twice to gradually pull the flanges together. Check tube alignment after first tightening. Fully tighten bolts and lock nuts.

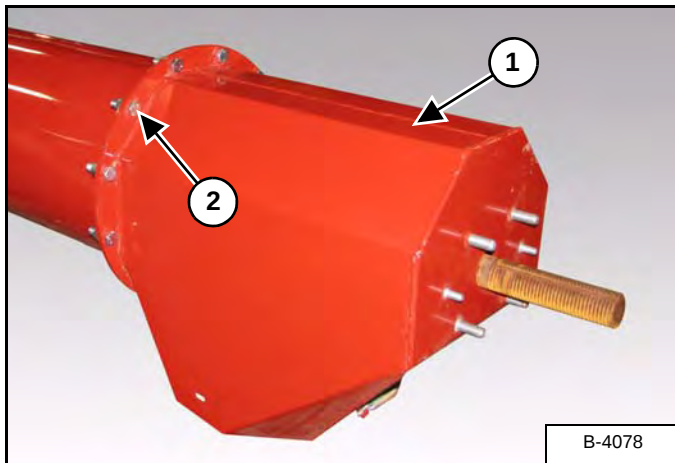
Figure 33



Apply an anti-seize lubricant to the lower drive shaft (Item 1) [Figure 33].

Push the flighting (Item 2) (from discharge end) onto the lower drive shaft until there is approximately 1/4" - 3/8" gap between the flighting and bearing mount (Item 3) [Figure 33].

Figure 34

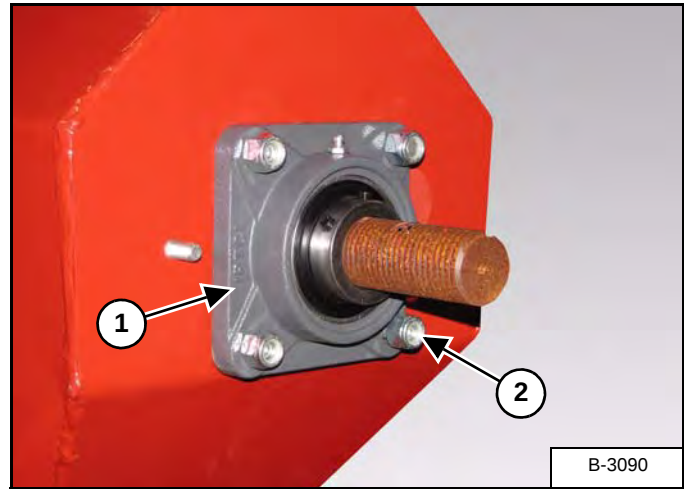


Install the drop spout (Item 1) [Figure 34] over the flighting shaft.

Install ten 1/2" x 1-1/2" bolts (Item 2) [Figure 34] through the drop spout and discharge tube flange.

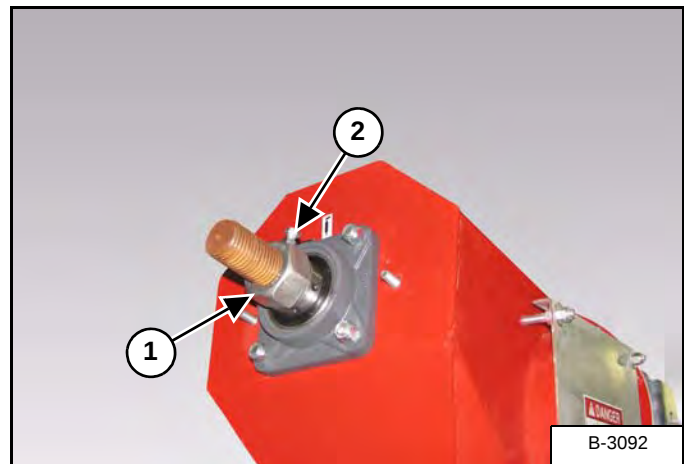
Install 1/2" lock nuts on the bolts and tighten.

Figure 35



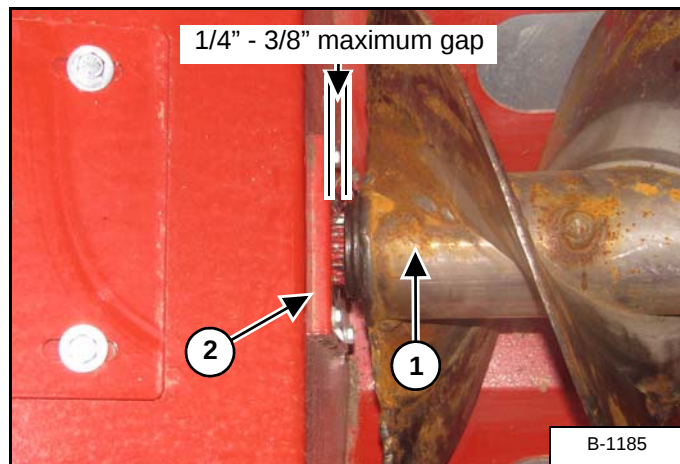
Install the bearing flange (Item 1) onto the four 5/8" studs. Install four 5/8" lock nuts (Item 2) [Figure 35] on the studs and tighten.

Figure 36



Thread the 2" nut (Item 1) onto the flighting shaft until it contacts the bearing collar. Turn 2" nut until the set screw (Item 2) [Figure 36] lines up with the keyway in the flighting shaft. Tighten the 2" nut one additional turn until it lines up with the keyway in the flighting shaft.

Figure 37



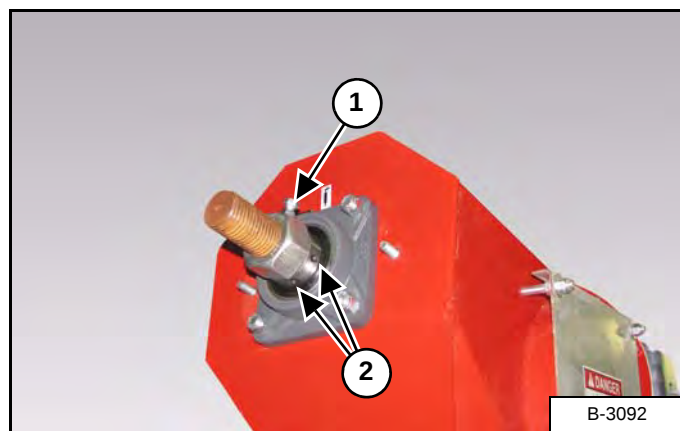
Check the gap between the flighting and bearing mount.

NOTE: The gap must be between 1/4" - 3/8" maximum.

! IMPORTANT

Do not allow the flighting to bottom out on the spline shaft at the intake end after adjustment. The thrust load must be carried at the discharge end of the auger.

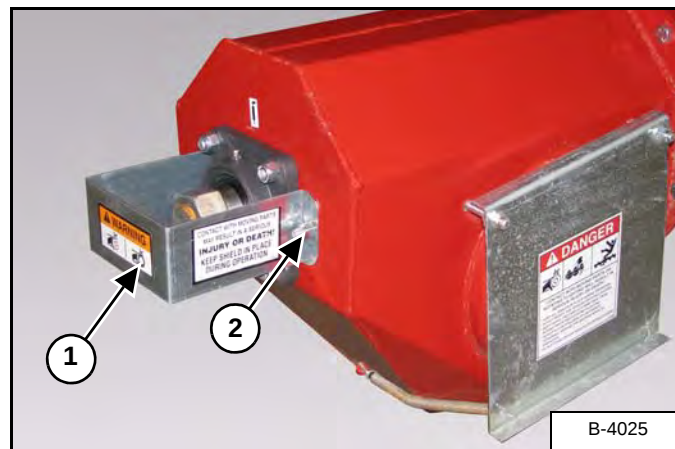
Figure 38



When the correct gap between the flighting and bearing mount is achieved, tighten the set screw (Item 1) [Figure 38] into the keyway in the flighting shaft.

Tighten the two set screws (Item 2) [Figure 38] on the bearing collar.

Figure 39



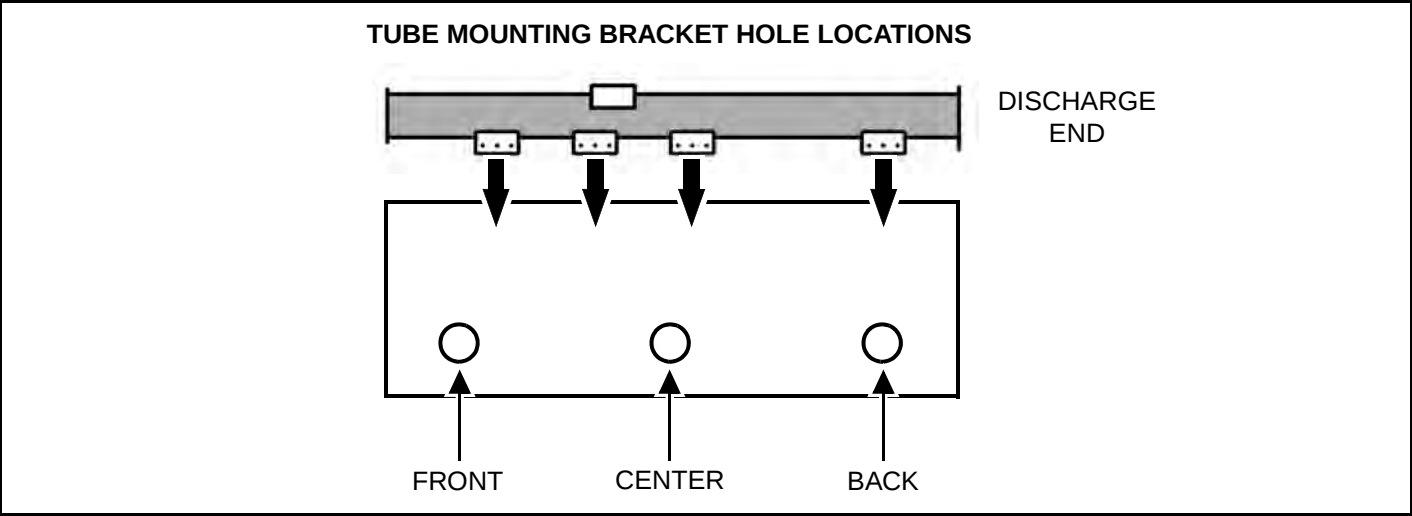
Install the bearing shield (Item 1), then install one 3/8" lock nut (Item 2) [Figure 39] onto the 3/8" studs and tighten.

Apply grease to the bearing until grease shows.

! IMPORTANT

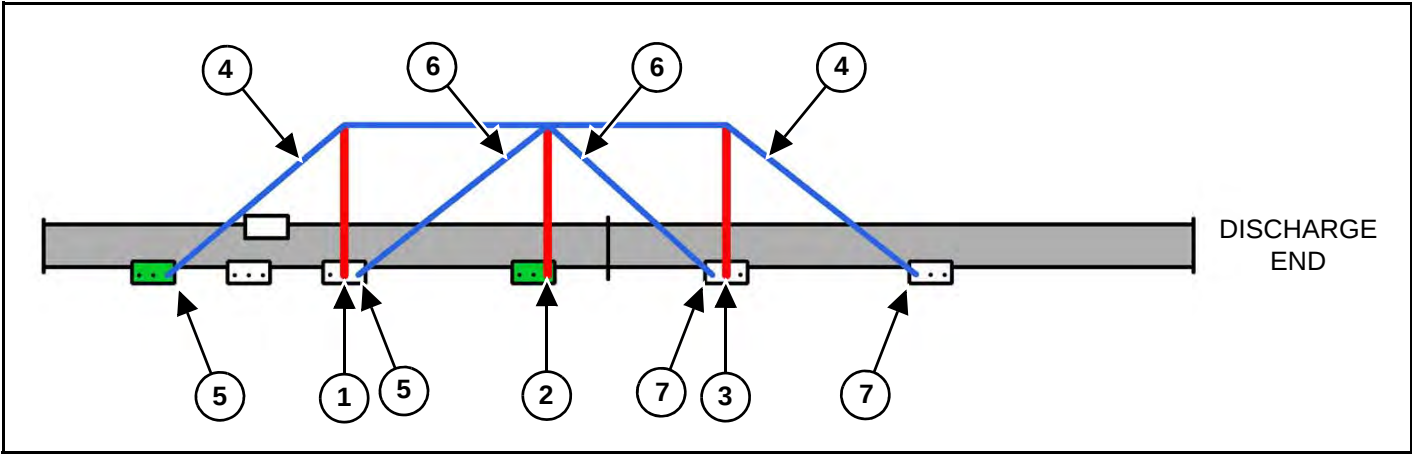
Make sure gearbox case is approximately filled 1" from top with 75-90 synthetic oil.

Tube Component Mounting



1262 Tube Component Mounting Locations

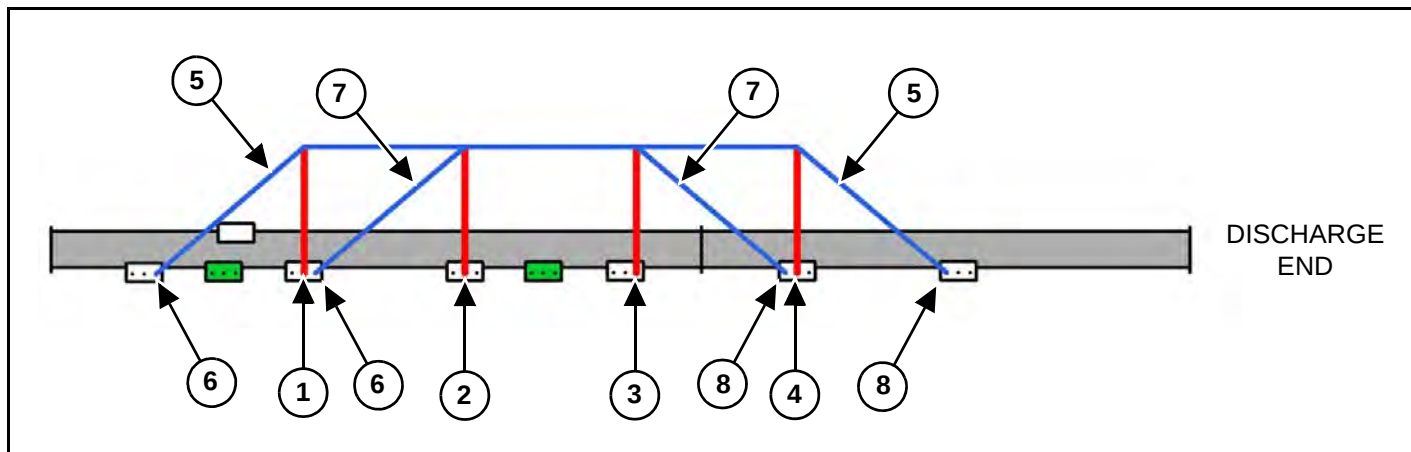
NOTE: Use the following diagram and table to identify the correct tube mounting bracket holes to use when installing cable trusses, cables and cable hardware.



ITEM	DESCRIPTION	QTY	TUBE MOUNTING BRACKET HOLE USAGE
1	TRUSS RISER HALF	2	CENTER
2	TRUSS RISER HALF	2	BACK
3	TRUSS RISER HALF	2	CENTER
4	CABLE, 3/8" x 384"	2	-
5	TRUSS CABLE ANCHOR BAR (W/Eyebolt & Thimble)	4	BACK
6	CABLE, 3/8" x 264"	2	-
7	TRUSS CABLE ANCHOR BAR (W/Thimble)	4	FRONT

1272 Tube Component Mounting Locations

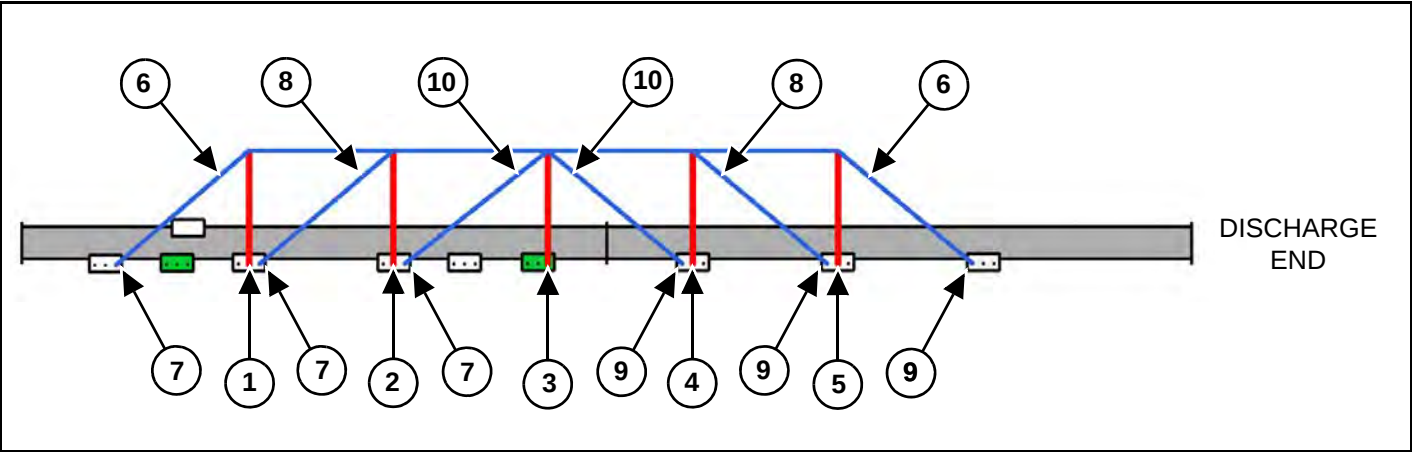
NOTE: Use the following diagram and table to identify the correct tube mounting bracket holes to use when installing cable trusses, cables and cable hardware.



ITEM	DESCRIPTION	QTY	TUBE MOUNTING BRACKET HOLE USAGE
1	TRUSS RISER HALF	2	CENTER
2	TRUSS RISER HALF	2	CENTER
3	TRUSS RISER HALF	2	BACK
4	TRUSS RISER HALF	2	CENTER
5	CABLE, 3/8" x 624"	2	-
6	TRUSS CABLE ANCHOR BAR (W/Eyebolt & Thimble)	4	BACK
7	CABLE, 3/8" x 384"	2	-
8	TRUSS CABLE ANCHOR BAR (W/Thimble)	4	FRONT

1282 Tube Component Mounting Locations

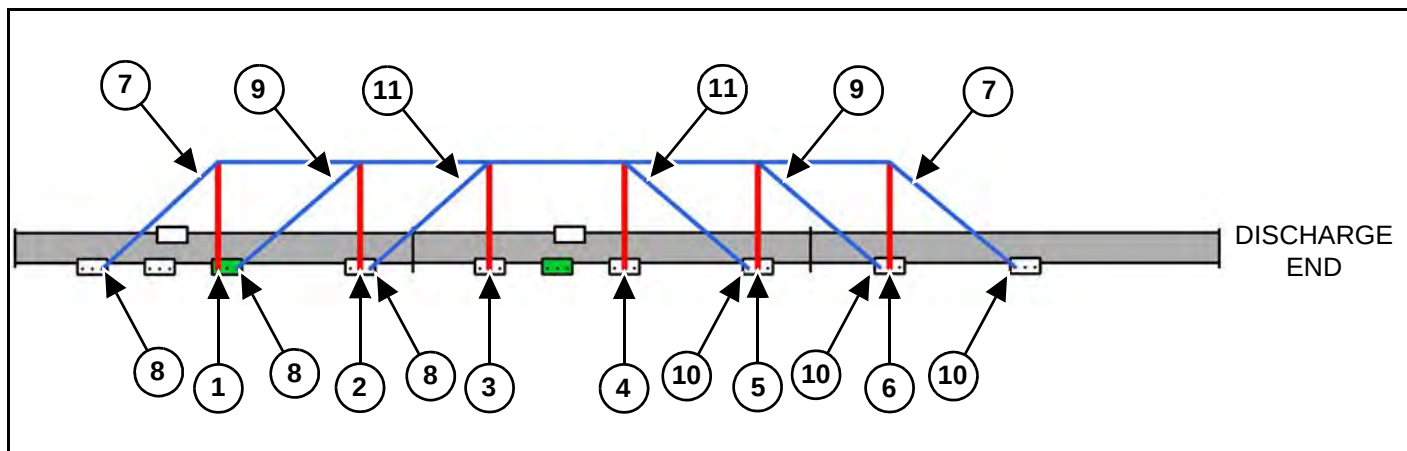
NOTE: Use the following diagram and table to identify individual components when connecting flighting and tube sections, installing cable trusses and cables. The diagram and table also identifies the correct tube mounting bracket holes to use when installing cable trusses and cables.



ITEM	DESCRIPTION	QTY	TUBE MOUNTING BRACKET HOLE USAGE
1	TRUSS RISER HALF	2	CENTER
2	TRUSS RISER HALF	2	CENTER
3	TRUSS RISER HALF	2	BACK
4	TRUSS RISER HALF	2	CENTER
5	TRUSS RISER HALF	2	CENTER
6	CABLE, 3/8" x 744"	2	-
7	TRUSS CABLE ANCHOR BAR (W/Eyebolt & Thimble)	6	BACK
8	CABLE, 3/8" x 504"	2	-
9	TRUSS CABLE ANCHOR BAR (W/Thimble)	6	FRONT
10	CABLE, 3/8" x 264"	2	-

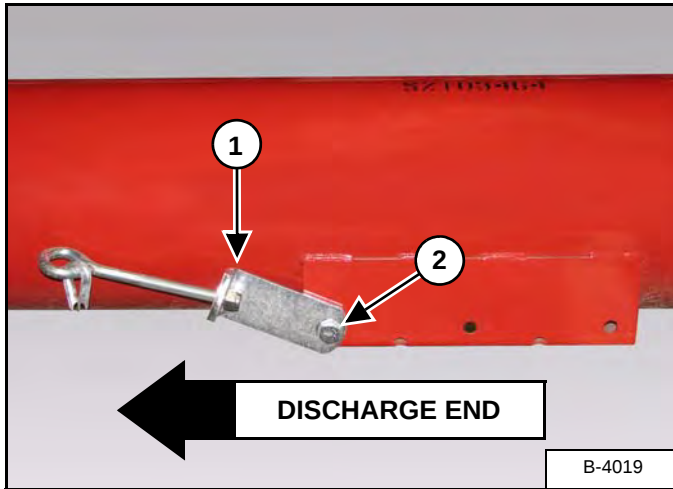
1292 Tube Component Mounting Locations

NOTE: Use the following diagram and table to identify individual components when connecting flighting and tube sections, installing cable trusses and cables. The diagram and table also identifies the correct tube mounting bracket holes to use when installing cable trusses and cables.



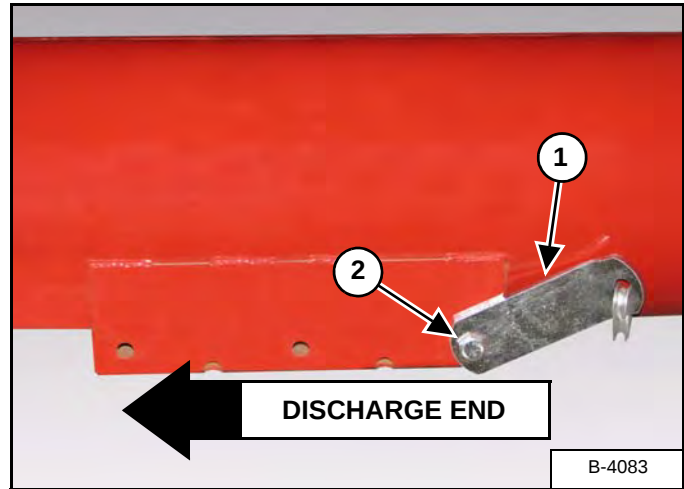
ITEM	DESCRIPTION	QTY	TUBE MOUNTING BRACKET HOLE USAGE
1	TRUSS RISER HALF	2	FRONT
2	TRUSS RISER HALF	2	CENTER
3	TRUSS RISER HALF	2	CENTER
4	TRUSS RISER HALF	2	CENTER
5	TRUSS RISER HALF	2	CENTER
6	TRUSS RISER HALF	2	CENTER
7	CABLE, 3/8" x 864"	2	-
8	TRUSS CABLE ANCHOR BAR (W/Eyebolt & Thimble)	6	BACK
9	CABLE, 3/8" x 624"	2	-
10	TRUSS CABLE ANCHOR BAR (W/Thimble)	6	FRONT
11	CABLE, 3/8" x 384"	2	-

Figure 40



Locate the eyebolt truss cable anchor bars (Item 1) [Figure 40] (with thimble). Locate one 5/8" x 1-1/2" bolt and 5/8" lock nut for each eyebolt truss cable anchor bar.

Figure 41



Locate the truss cable anchor bars (Item 1) [Figure 41] (with thimble). Locate one 5/8" x 1-1/2" bolt and 5/8" lock nut for each truss cable anchor bar.

! IMPORTANT

Install all eyebolt truss cable anchor bars in the back hole of the tube mounting brackets. (See "Tube Component Mounting" on page 46.)

Install one 5/8" x 1-1/2" bolt (Item 2) [Figure 40] through the eyebolt truss cable anchor bar and tube mounting brackets. Install one 5/8" lock nut on each bolt. Do not tighten at this time.

Angle the eyebolt truss cable anchor bar (Item 1) [Figure 40] up, towards the top of the closest cable truss riser half weldment.

Snug bolt and lock nut. Do not fully tighten.

NOTE: The eyebolt truss cable anchor bar will need to rotate during cable installation and tightening.

Repeat for remaining eyebolt truss cable anchor bars.

! IMPORTANT

Install all truss cable anchor bars in the front hole of the tube mounting brackets. (See "Tube Component Mounting" on page 46.)

Install one 5/8" x 1-1/2" bolt (Item 2) [Figure 41] through the truss cable anchor bar and tube mounting brackets. Install one 5/8" lock nut on each bolt. Do not tighten at this time.

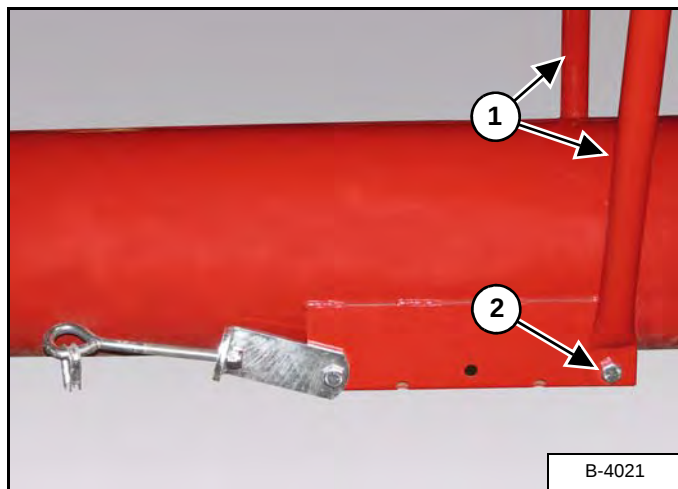
Angle the truss cable anchor bar (Item 1) [Figure 41] up, towards the top of the closest cable truss riser half weldment.

Snug bolt and lock nut. Do not fully tighten.

NOTE: The truss cable anchor bar will need to rotate during cable installation and tightening.

Repeat for remaining truss cable anchor bars.

Figure 42



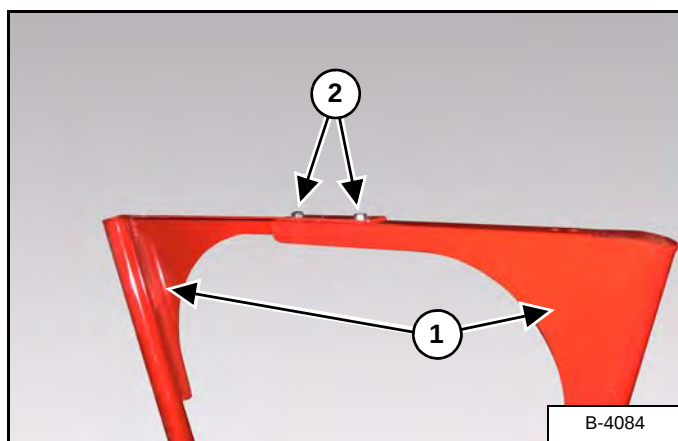
Locate the truss cable riser half weldments (Item 1) [Figure 42], 5/8" x 1-1/2" bolts and 5/8" lock nuts.



Install all truss cable riser half weldments in the designated hole of the tube mounting brackets. (See "Tube Component Mounting" on page 46.)

Install one 5/8" bolt (Item 2) [Figure 42] through the truss cable riser half weldment and tube mounting bracket (both sides). Install one 5/8" lock nut on each bolt. Do not tighten at this time.

Figure 43



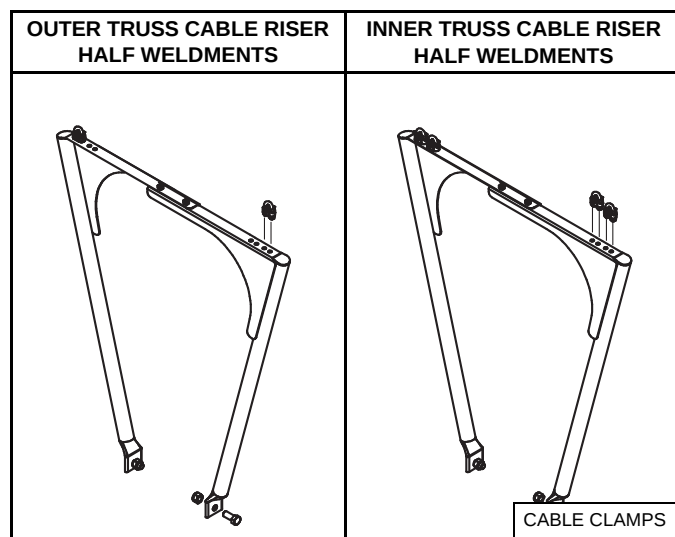
Align top mounting holes of the two cable truss riser half weldments (Item 1). Install two 3/8" bolts (Item 2) [Figure 43] through the two cable truss riser half weldments.

Install one 3/8" lock nut on each bolt. Tighten 3/8" bolts and lock nuts.

Tighten the 5/8" bolts (Item 2) [Figure 42] and lock nuts.

Repeat for remaining truss cable riser half weldments.

Figure 44



Outer Truss Cable Riser Half Weldments

Install two 3/8" cable clamps into the outside mounting holes of the outer truss cable riser half weldments [Figure 44].

Inner Truss Cable Riser Half Weldments

Install four 3/8" cable clamps into the mounting holes of the inner truss cable riser half weldments [Figure 44].

Locate the 3/8" cables. Unroll the cables alongside the complete tube assembly (Longest 3/8" cable to the outside).

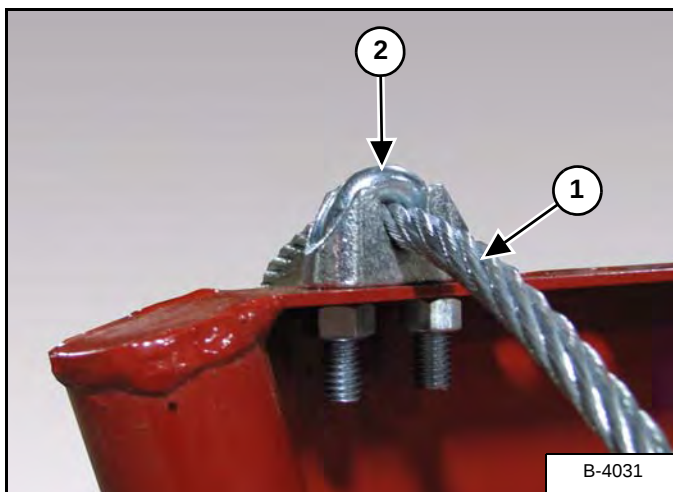


CUT HAZARD

To prevent injury to fingers and hands:

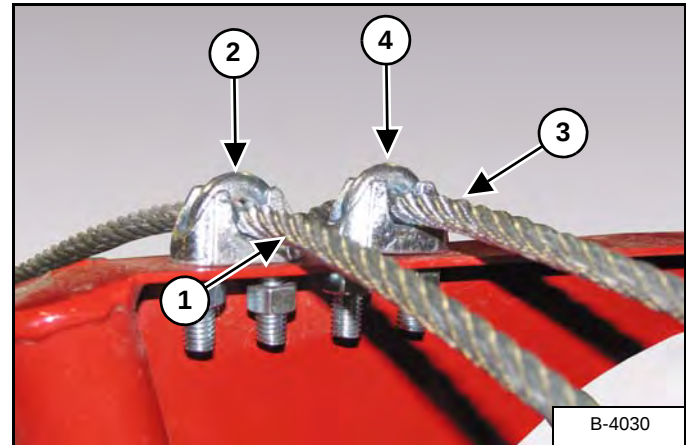
- Always wear heavy leather gloves when handling a wire rope.
- Never let wire rope slip through your hands.

Figure 45



Feed the longest 3/8" cable (Item 1) through the cable clamp (Item 2) [Figure 45] on the outer truss cable riser half weldment (both sides).

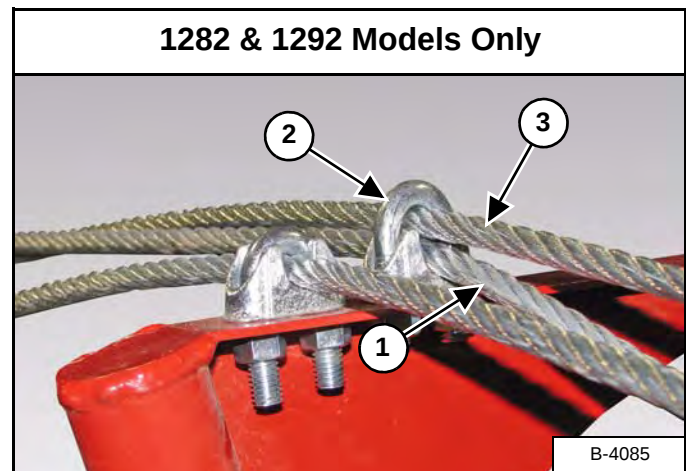
Figure 46



Feed the longest 3/8" cable (Item 1) through the cable clamp (Item 2) [Figure 46] on the inner truss cable riser half weldment(s).

Feed the next longest 3/8" cable (Item 3) through the cable clamp (Item 4) [Figure 46] on the inner truss cable riser half weldment(s). Continue feeding cables through the cable clamps until cables can be connected to the designated eyebolt truss cable anchor bar and truss cable anchor bar.

Figure 47

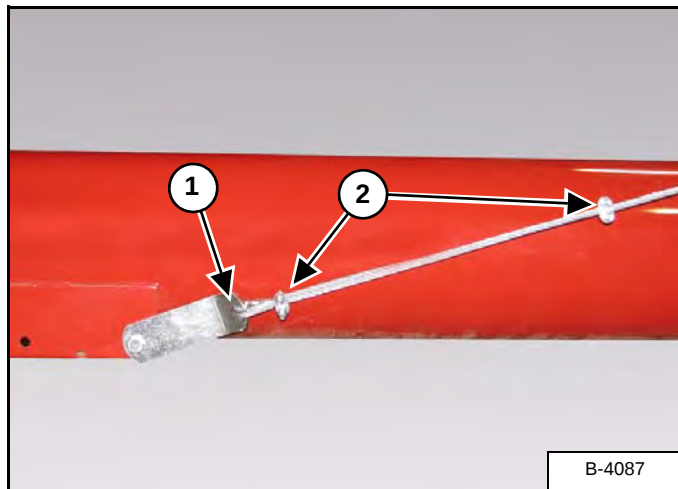


On 1282 & 1292 model Backsaver augers, feed the shortest 3/8" cable (Item 1) through the cable clamp (Item 2) [Figure 47] on the inner truss cable riser half weldment(s) first.

Feed the next longest 3/8" cable (Item 3) through the same cable clamp (Item 2) [Figure 47], over the shortest cable. Continue feeding cables through the cable clamps until cables can be connected to the designated eyebolt truss cable anchor bar and truss cable anchor bar.

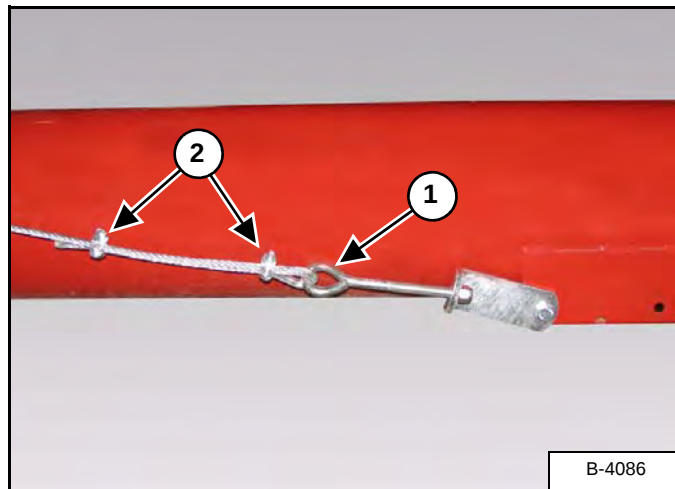
Repeat for opposite side 3/8" cables (as needed).

Figure 48



Thread the cable through the hole (Item 1) **[Figure 48]** and around the thimble (both sides). Pull cable as tight as possible.

Figure 49



Thread the cable through the eyebolt (Item 1) **[Figure 49]** and around the thimble (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 2) **[Figure 48]** 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).

Repeat the above procedure for the remaining three 3/8" cables.

! IMPORTANT



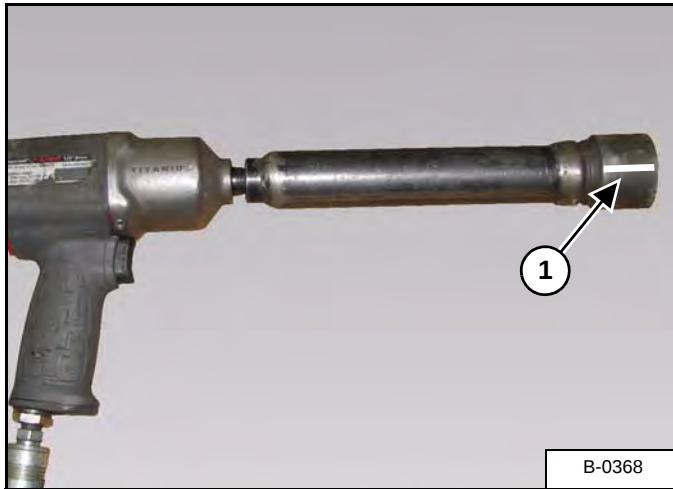
Always insert the tail of the cable into the clamp first when forming a loop in a cable.

Install the two 1/2" cable clamps (Item 2) **[Figure 49]** 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).

Repeat the above procedure for the remaining three 3/8" cables.

Figure 50



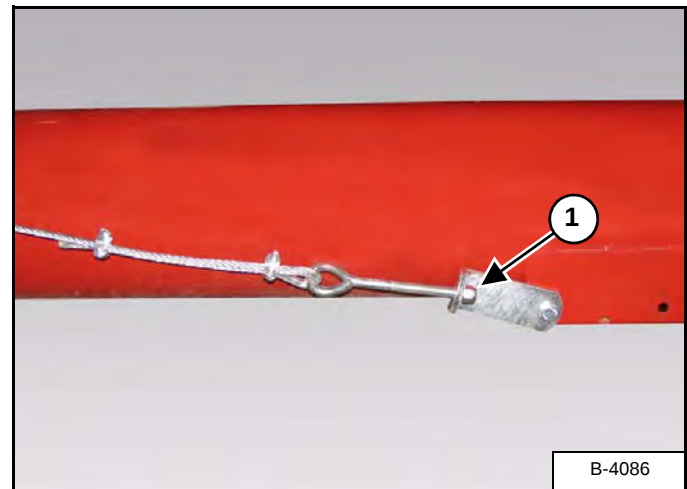
Place a mark (Item 1) **[Figure 50]** on the cable tightening tool. This will help to tighten the cables evenly.

Count the revolutions as the tool is turning while tightening.



All tube and bridging hardware should be tightened before tightening cables.

Figure 51



Raise the intake end of the tube assembly approximately three feet off the ground.

Look down the tube to see how straight the tubes are.

NOTE: Use the cables to bow up the discharge end and straighten tubes.

Tightening The Long Cable

The discharge end should bow up about 3" to 4" from bottom of tube to the ground.

Tighten long cable eyebolts (Item 1) **[Figure 51]** first. Once cables are tight, tighten both sides three additional revolutions with the impact wrench and socket.

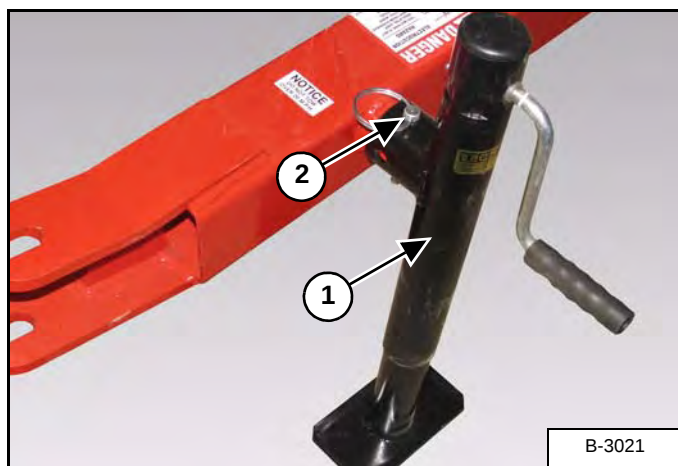
Tightening The Short Cables

Tighten short cables just enough to take the slack out. Lower the intake end of the tube to the ground.

Stand behind the drive section and look down the full length of the tubes and check to see how straight the tubes are and how much the discharge end bows up.

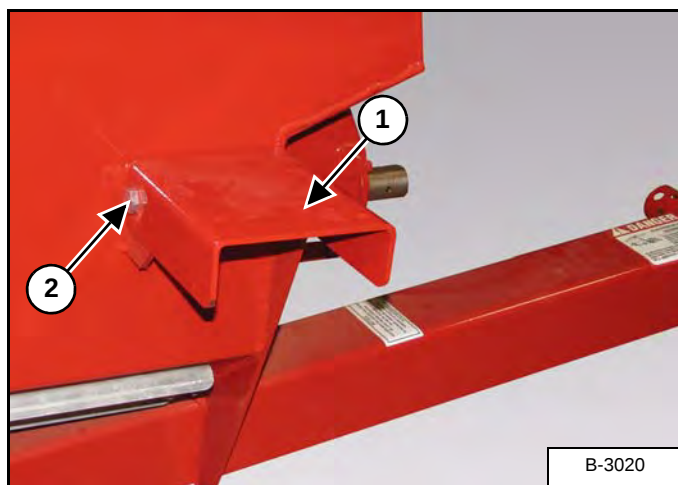
Repeat cable tightening procedure (if needed).

Figure 52



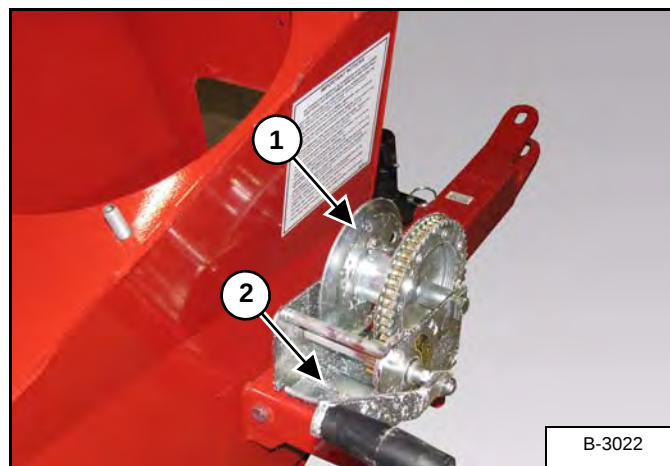
Align and install the jack (Item 1) onto the hitch. Install the retaining pin (Item 2) **[Figure 52]** through the jack and hitch mounting bracket.

Figure 53



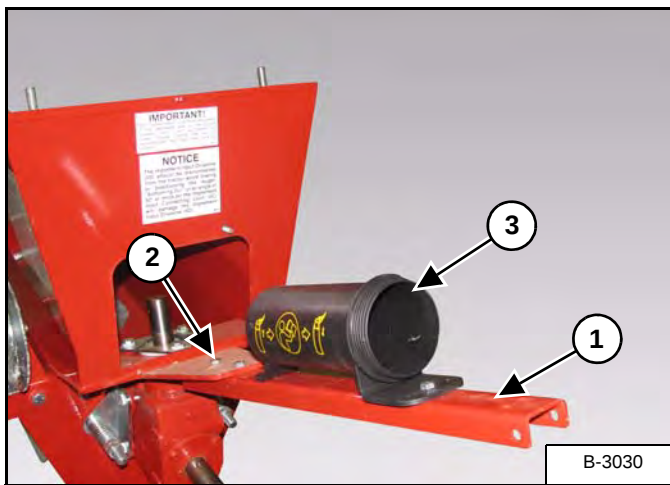
Install the hopper winch plate (Item 1) using two 1/2" x 1" bolts (Item 2) **[Figure 53]** and 1/2" lock nuts.

Figure 54



Install the hopper winch (Item 1) onto the hopper winch plate using three 3/8" x 1" bolts (Item 2) **[Figure 54]** and 3/8" lock nuts.

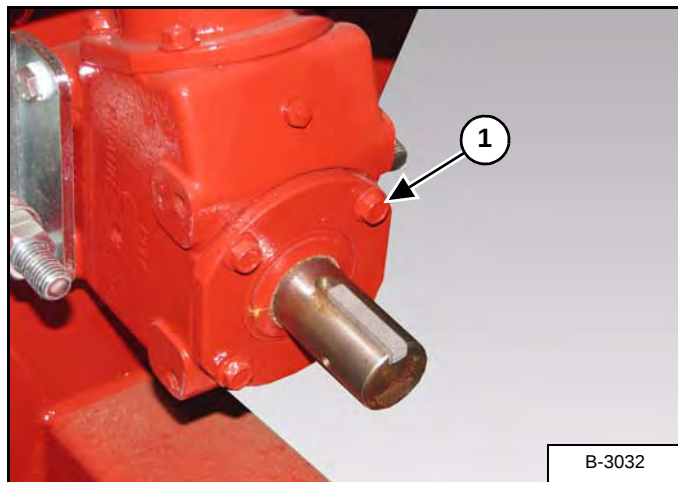
Figure 55



Install the PTO hanger (Item 1) onto the drive section (Item 2) **[Figure 55]** using two 3/8" x 1" bolts and 3/8" lock nuts. Tighten bolts and lock nuts.

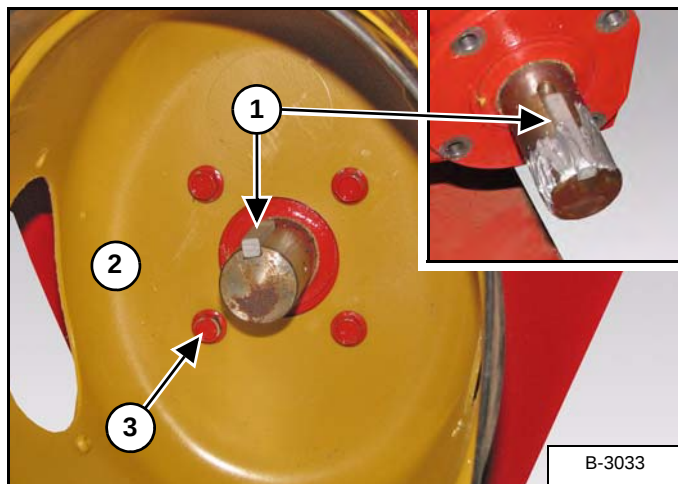
Install the operator and parts manual container (Item 3) onto the PTO hanger (Item 1) **[Figure 55]** using two 5/16" x 1" bolts and 5/16" lock nuts. Tighten bolts and lock nuts. Install parts manual container cover.

Figure 56



Remove the four bolts (Item 1) [Figure 56].

Figure 57

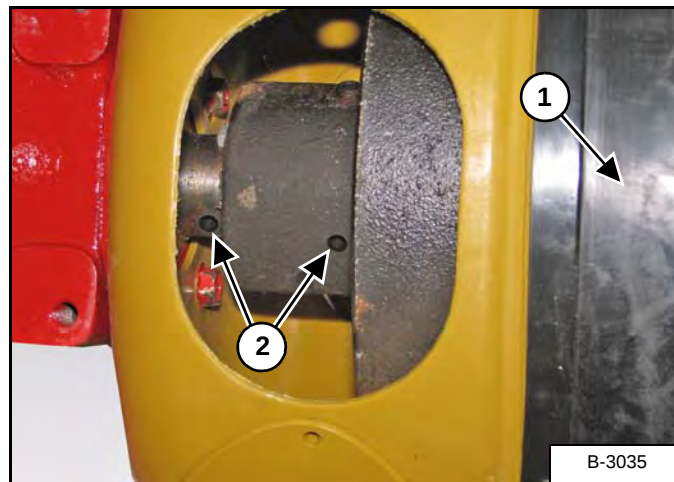


Install the 5/16" x 1-3/4" key (Item 1) [Figure 57] onto the gearbox shaft (PTO drive).

NOTE: Apply an anti-seize lubricant onto the gearbox shaft before installing the PTO driveline.

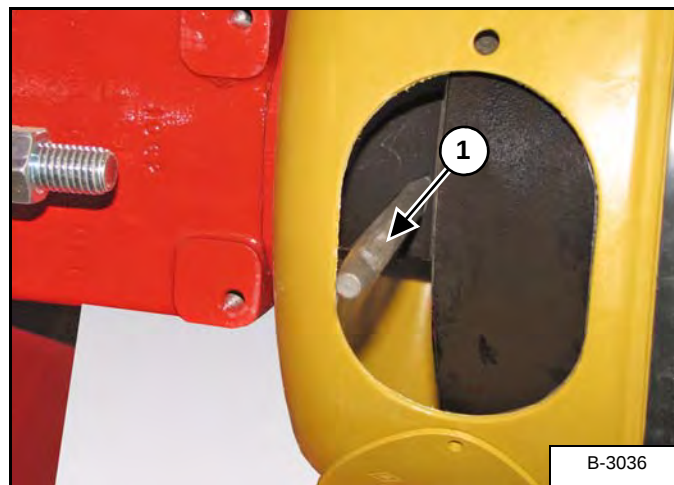
Install the yellow poly implement shield (Item 2). Align the shield with the four holes of the gearbox and re-install the four bolts (Item 3) [Figure 57] removed earlier.

Figure 58



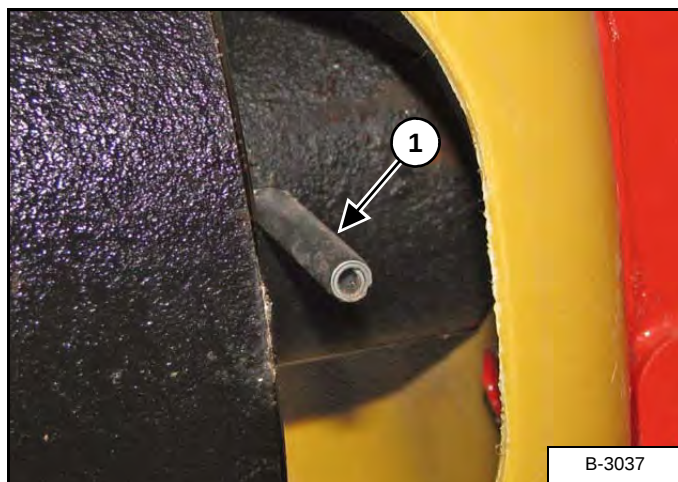
Install the PTO driveline (Item 1) onto the gearbox shaft. Align the mounting holes (Item 2) [Figure 58].

Figure 59



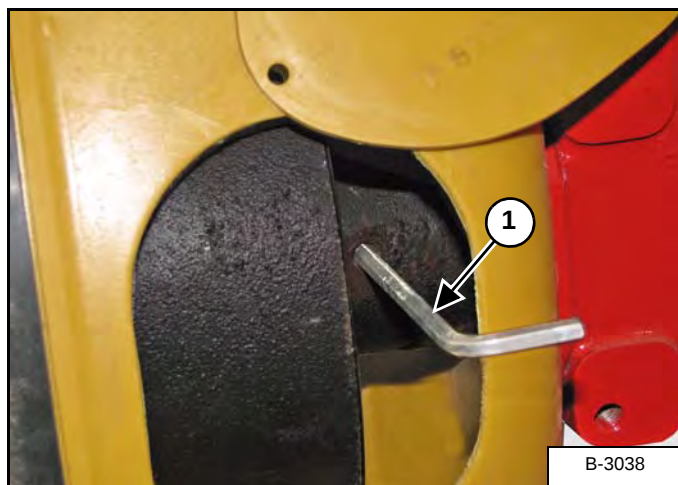
Using a punch (Item 1) [Figure 59], align the two mounting holes.

Figure 60



Install the 1/4" x 2-1/4" roll pin (Item 1) **[Figure 60]** through the PTO driveline and gearbox shaft (opposite side from punch).

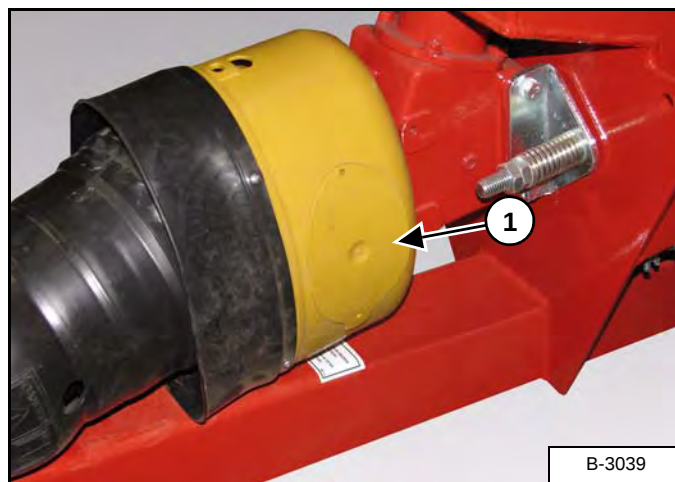
Figure 61



Rotate the PTO driveline 90°.

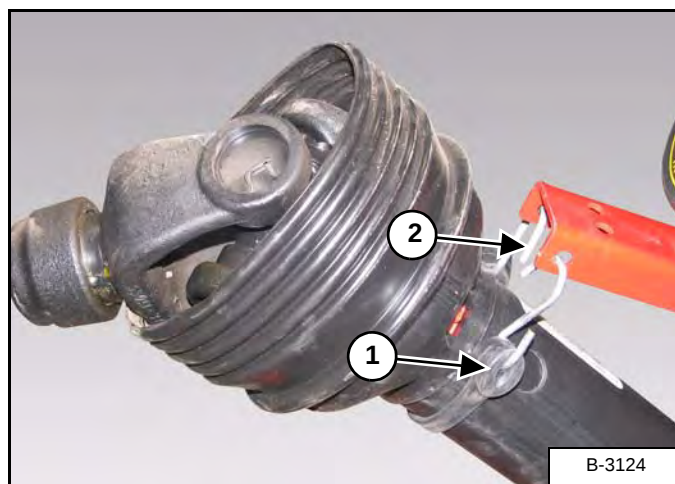
Using a hex wrench (Item 1) **[Figure 61]**, tighten the set screw against the roll pin to secure the PTO driveline to the gearbox shaft.

Figure 62



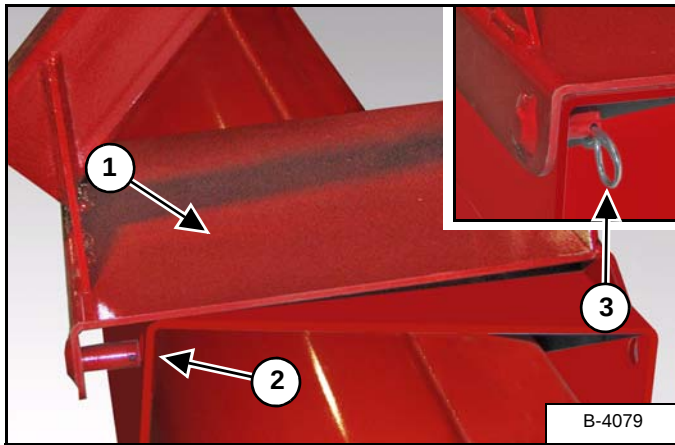
Close and secure the cover (Item 1) **[Figure 62]** (both sides) of the yellow poly implement shield.

Figure 63



Rotate the PTO driveline up. Install the rubber strap (Item 1) around the PTO driveline and hook to the PTO hanger (Item 2) **[Figure 63]**.

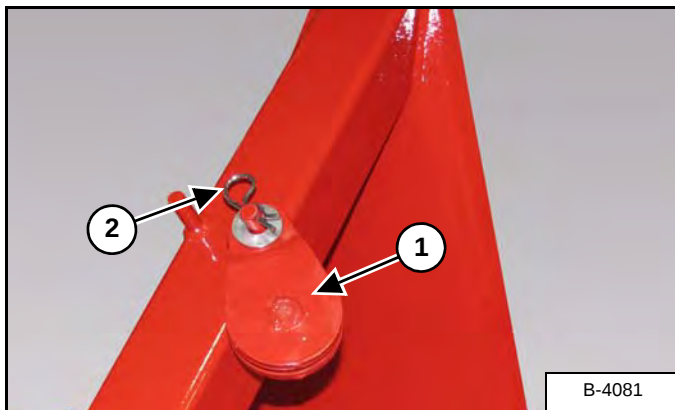
Figure 64



Install the hopper lift (Item 1) onto the mounting plate on the lower tube. Align pegs (Item 2) [Figure 64] with holes in the mounting plate. Slide pegs into holes and lower the hopper lift down flat onto the mounting plate.

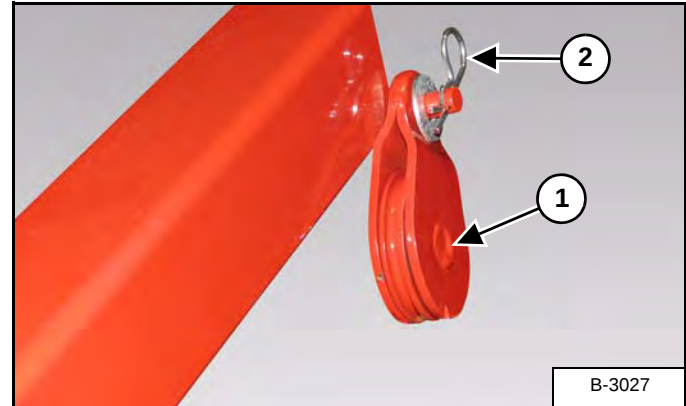
Install one hair pin (Item 3) [Figure 64] through the two pegs.

Figure 65



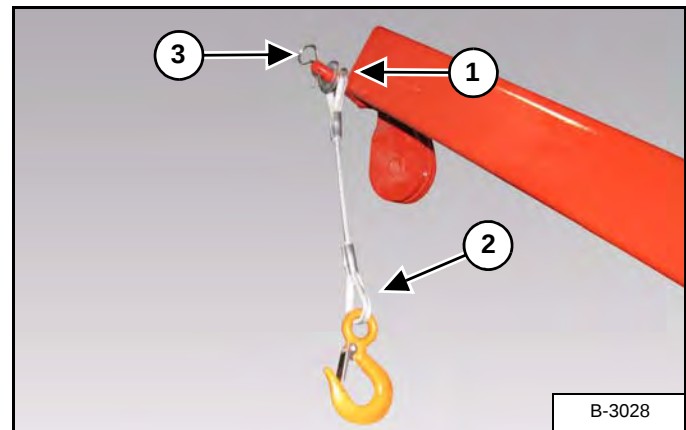
Install one sheave weldment (Item 1) onto the hopper lift. Install one 1/2" flat washer and one 1/8" hair pin (Item 2) [Figure 65] to secure the sheave to the hopper lift.

Figure 66



Install the second sheave weldment (Item 1) onto the hopper lift. Install one 1/2" flat washer and one 1/8" hair pin (Item 2) [Figure 66] to secure the sheave to the hopper lift.

Figure 67



Install one 1/2" flat washer (Item 1) onto the hopper lift. Install the hopper safety cable / hook (Item 2), Then install one 1/2" flat washer and one 1/8" hair pin (Item 3) [Figure 67] to secure the hopper safety cable / hook to the hopper lift.

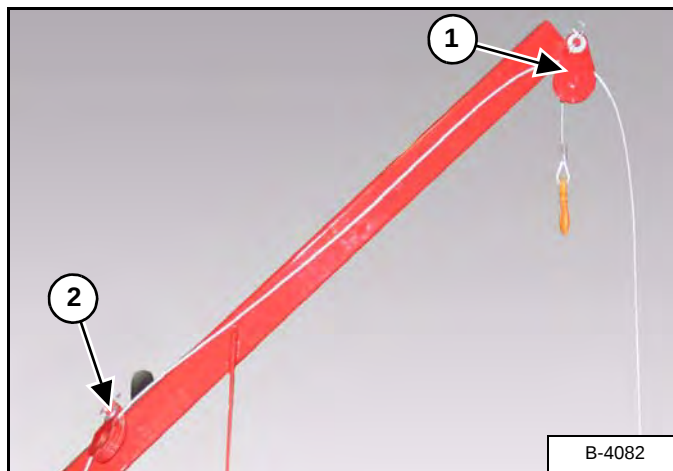


CUT HAZARD

To prevent injury to fingers and hands:

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

Figure 68

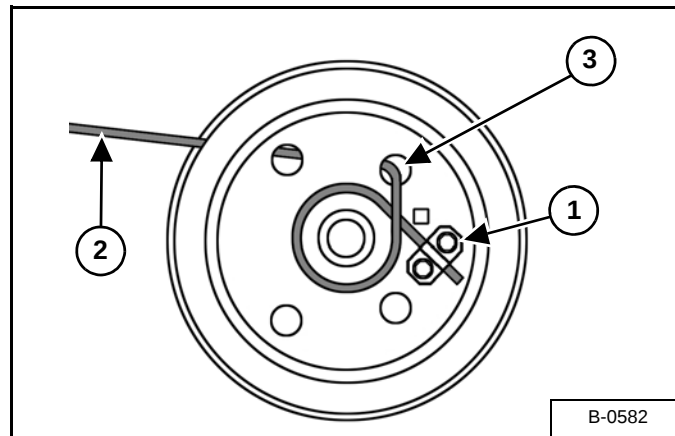


Thread the 3/16" cable through the upper pulley (Item 1) and around the lower pulley (Item 2) [Figure 68]. Route the cable to the hopper winch.



Do not remove the drum to install the cable.

Figure 69



Install the cable clamp (Item 1) [Figure 69] using the two bolts provided with winch. Leave bolts loose.

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

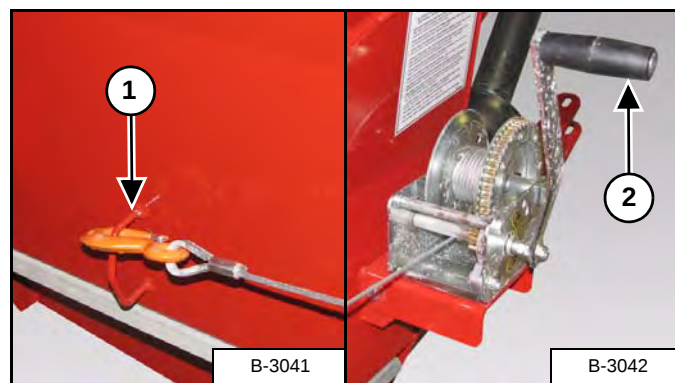
Install the cable (Item 2) from the inside of the drum through one of the dimpled holes (Item 3) [Figure 69] in the outer plate.

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

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

Turn handle to wrap cable around drum.

Figure 70



Attach the hopper winch cable to the bracket (Item 1) on the right side of the drive section. Using the handle (Item 2) [Figure 70], wind the cable onto the drum of the winch.

NOTE: This is for storing cable until hopper is installed.

Installing Tube On Undercarriage

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



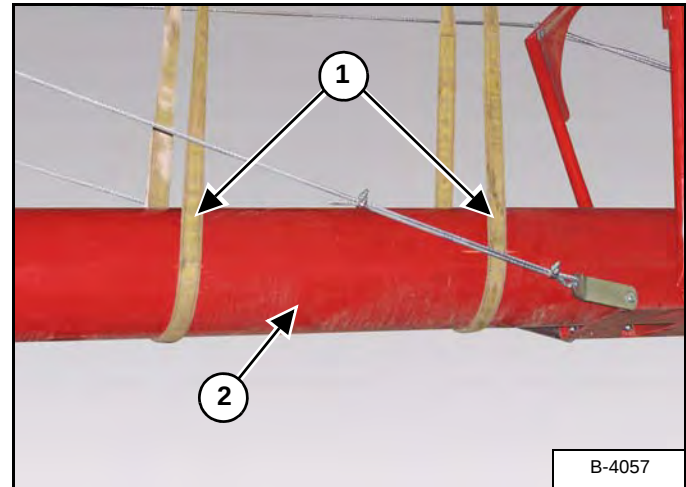
- DO NOT permit bystanders to be in the work area when unloading and assembling the auger components.
- DO NOT work under suspended parts.
- Keep away from moving parts.
- Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling the auger components.



AVOID INJURY OR DEATH

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

Figure 71

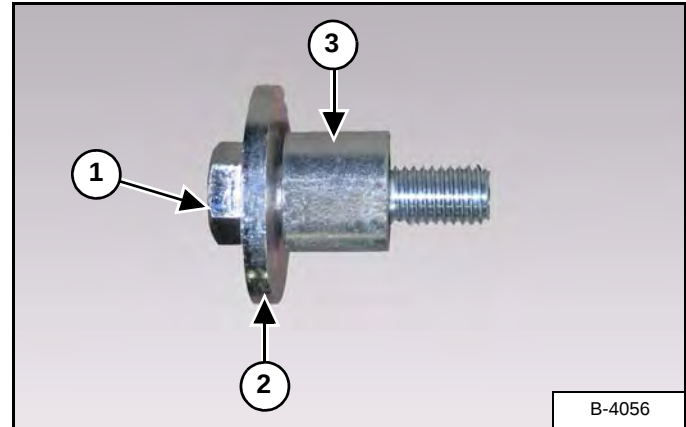


Install straps (Item 1) onto the tube assembly (Item 2) [Figure 71].

Connect the straps to an approved lifting device.

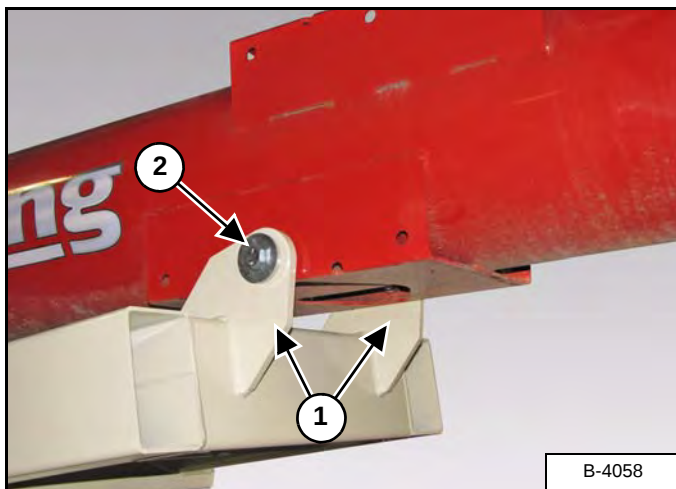
Raise the tube assembly and move into position, over the undercarriage assembly.

Figure 72



Locate two 5/8" x 2-1/2" bolts (Item 1), two 0.635" ID x 2-1/4" OD x 1/4" flat washers (Item 2), two pivot bushings (Item 3) [Figure 72] and two 5/8" lock nuts (not shown).

Figure 73



Align and lower tube assembly into the upper mounting brackets (Item 1) **[Figure 73]** of the undercarriage assembly.

Install one 5/8" x 2-1/2" bolt (Item 2) **[Figure 73]** with flat washer and bushing through the upper mounting bracket of the undercarriage assembly and tube mounting bracket.

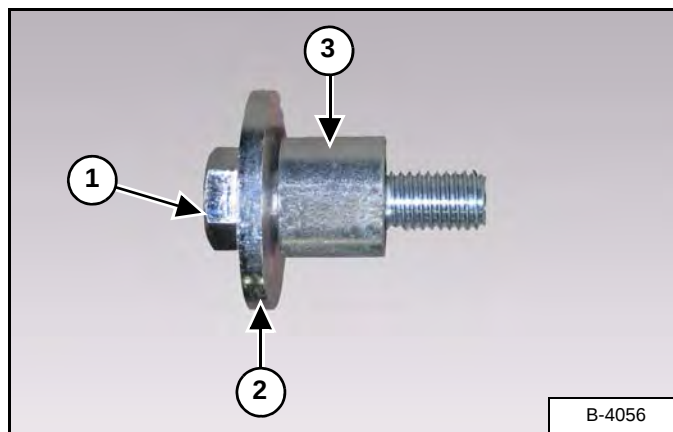
Install one 5/8" lock nut on the bolt and tighten.

Repeat for opposite upper mounting bracket of the undercarriage assembly.

Install a strap around one front undercarriage arm weldment.

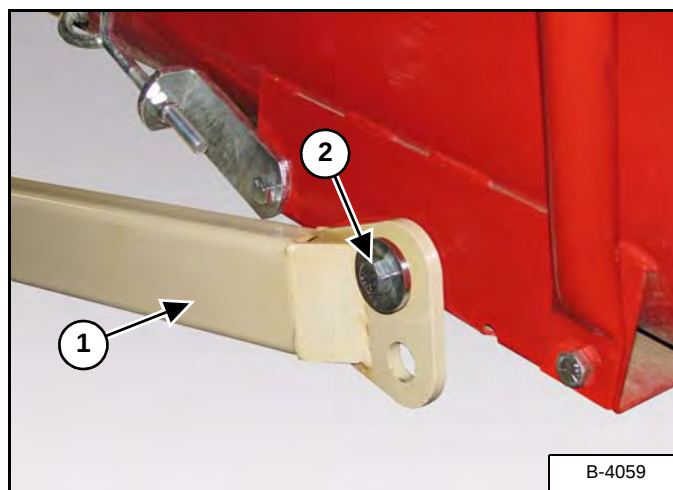
Connect the strap to an approved lifting device.

Figure 74



Locate two 5/8" x 2-1/2" bolts (Item 1), two 0.635" ID x 2-1/4" OD x 1/4" flat washers (Item 2), two pivot bushings (Item 3) **[Figure 74]** and two 5/8" lock nuts (not shown).

Figure 75



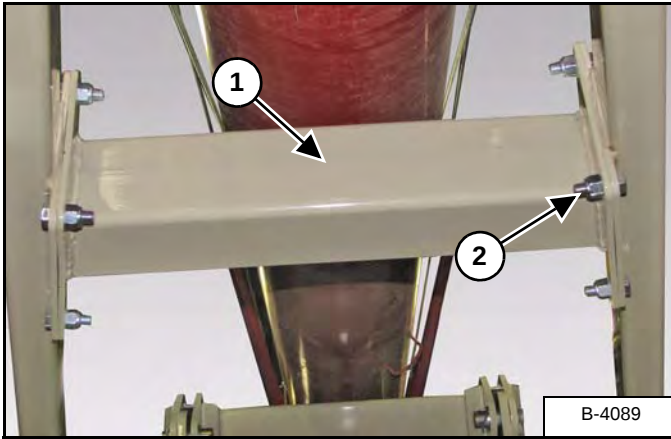
Raise and align the front undercarriage arm weldment (Item 1) **[Figure 75]** with the tube mounting bracket.

Install one 5/8" x 2-1/2" bolt (Item 2) **[Figure 75]** with flat washer and bushing through the front undercarriage arm weldment and tube mounting bracket.

Install one 5/8" lock nut on the bolt and tighten.

Remove strap.

Repeat for opposite upper mounting bracket of the undercarriage assembly.

Figure 76


Align and install the front arm cross bar weldment (Item 1) between the two front undercarriage arm weldments.

Install the four 1/2" x 1-1/2" bolts (Item 2) **[Figure 76]** through the front arm cross bar weldment and mounting brackets of the two front undercarriage arm weldments (both sides).

Install one 1/2" lock nut on each bolt and tighten.

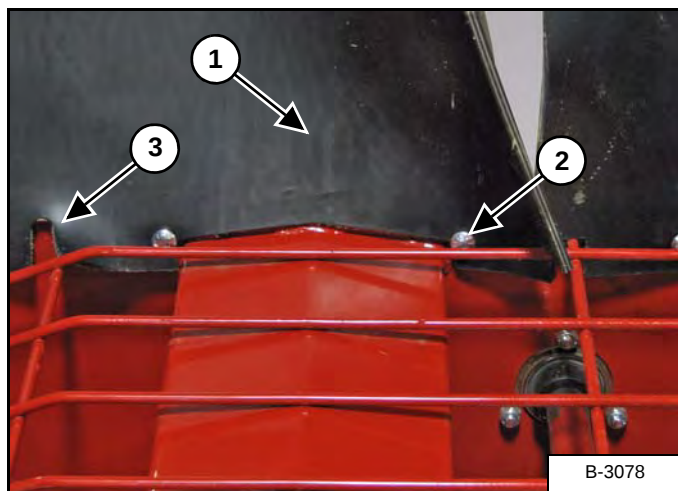
Grease all zerks on undercarriage. (See "LUBRICATION" on page 103.)

IMPORTANT

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

Hopper Assembly And Installation

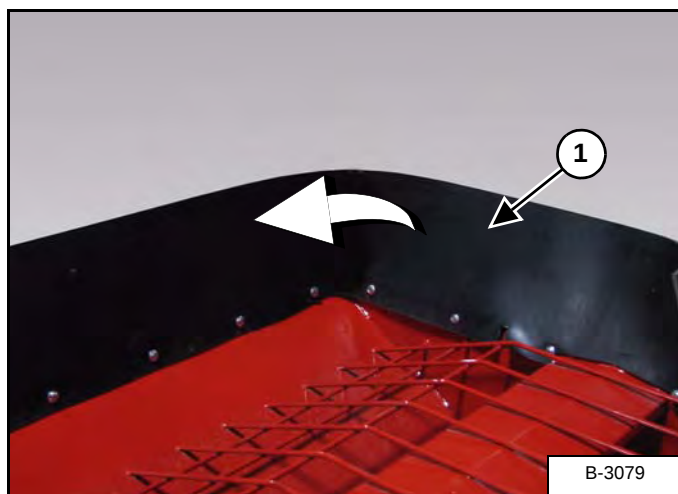
Figure 77



Align the flex extension (rubber flap) (Item 1) holes with the holes in the hopper sides. Install one 1/4" x 3/4" carriage bolt (Item 2) [Figure 77] through flex extension and hopper side. Install one 1/4" lock washer and 1/4" nut on the carriage bolt.

NOTE: Slots (Item 3) [Figure 77] in the flex extension (rubber flap) can be enlarged for installation (if required).

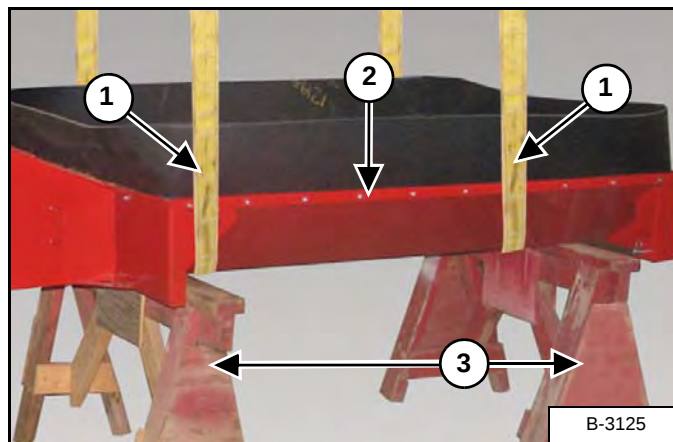
Figure 78



Continue installing 1/4" carriage bolts, 1/4" lock washers and 1/4" nuts around the bottom of the flex extension (rubber flap) (Item 1) [Figure 78].

Tighten all carriage bolts and lock nuts.

Figure 79



Install two straps (Item 1) around the hopper (Item 2) [Figure 79].

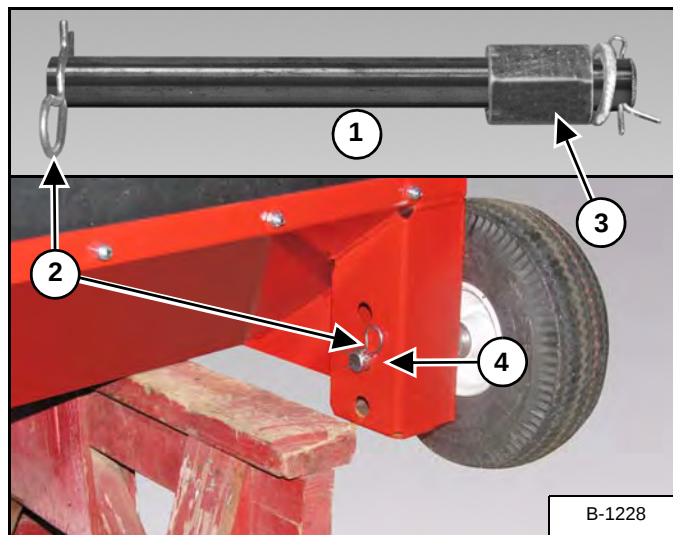
Connect the straps to an approved lifting device.

Raise the hopper and move to the assembly area.

Place support stands (Item 3) [Figure 79] under the hopper.

Lower the hopper onto the support stands.

Figure 80



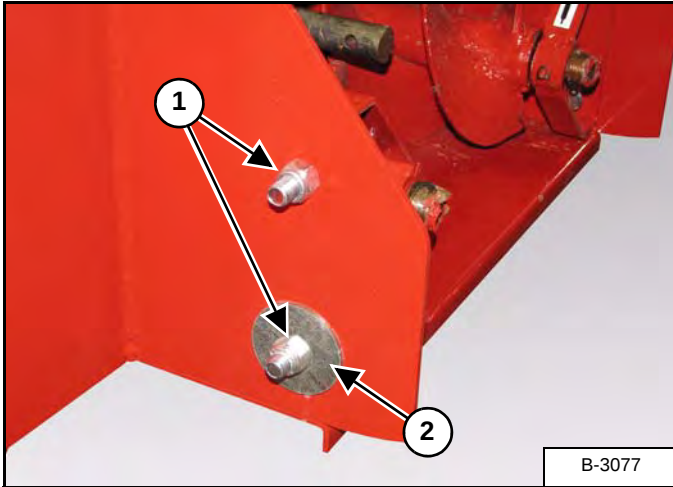
Locate four axle pins (Item 1) [Figure 80].

Remove the retaining clip (Item 2) and slide the bushing (Item 3) [Figure 80] off the pin(s).

Install the axle pin through wheel, slide the bushing back onto the axle pin.

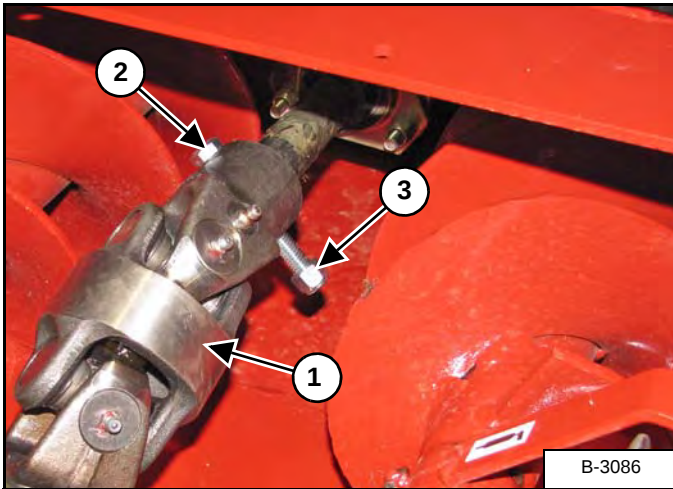
Install the axle pin through the center (Item 4) [Figure 80] (or desired) hole in the hopper frame. Install retaining clip (all tires).

Figure 81



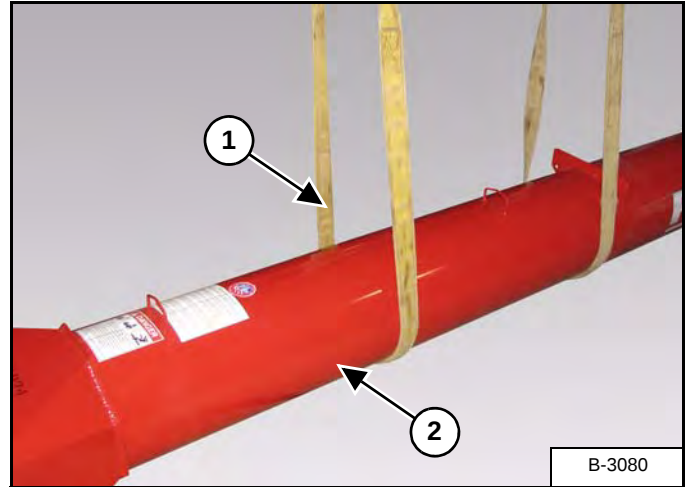
Remove the two nuts (Item 1) and washer (Item 2) [Figure 81] (both sides). Pull bolts in to allow the intake auger to slide over the hopper.

Figure 82



Install the CV joint (Item 1) on the drive shaft (center) of the hopper. Install a 3/8" x 3" bolt (Item 2) through the CV joint and drive shaft. Install a 3/8" lock nut (Item 3) [Figure 82] on the bolt and tighten the nut against the CV joint.

Figure 83

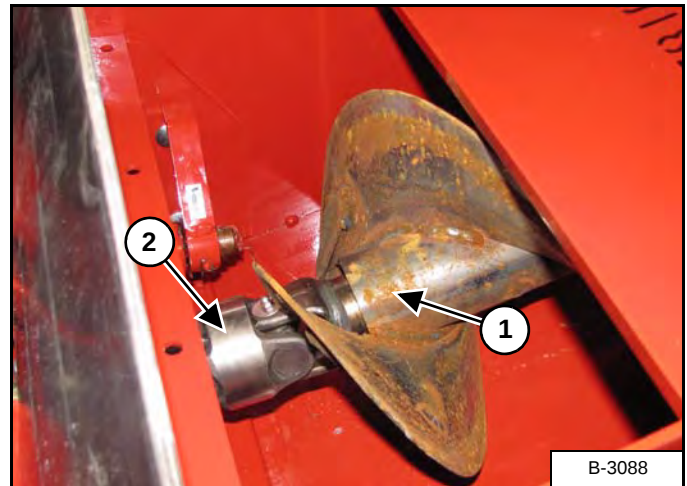


Install straps (Item 1) around the hopper drive tube (Item 2) [Figure 83].

Connect the straps to an approved lifting device.

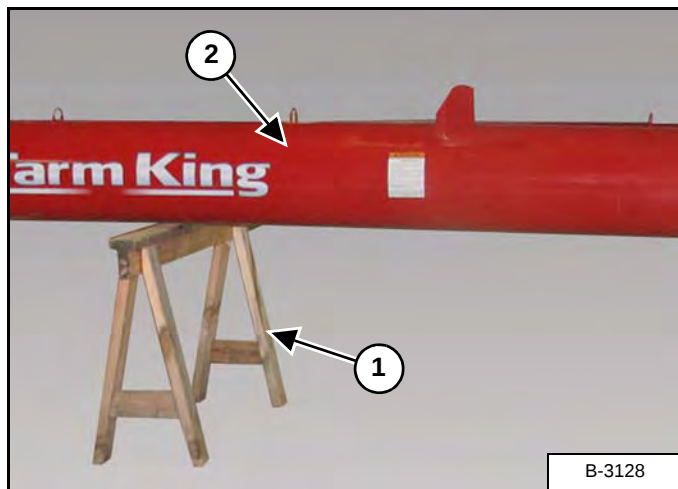
Raise the hopper drive tube and move into position in front of the hopper.

Figure 84



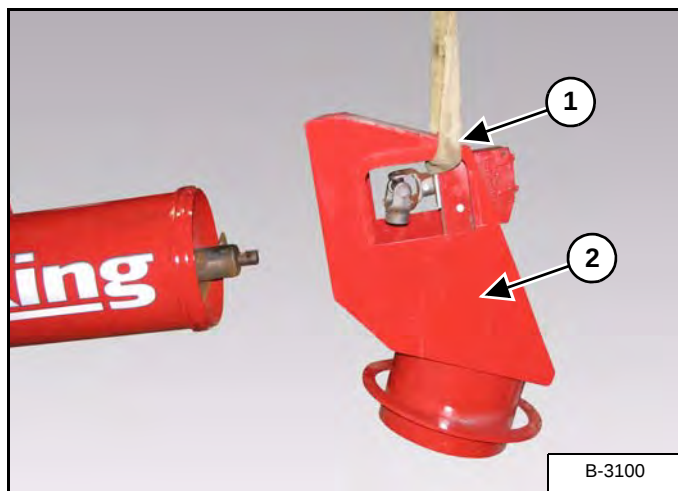
Align the hopper drive tube flighting (Item 1) with the CV joint (Item 2) [Figure 84], move hopper drive tube towards hopper until the flighting fully engages the CV joint.

Figure 85



Place a support stand (Item 1) under the hopper drive tube (Item 2) **[Figure 85]**. Lower the hopper drive tube onto the support stand.

Figure 86

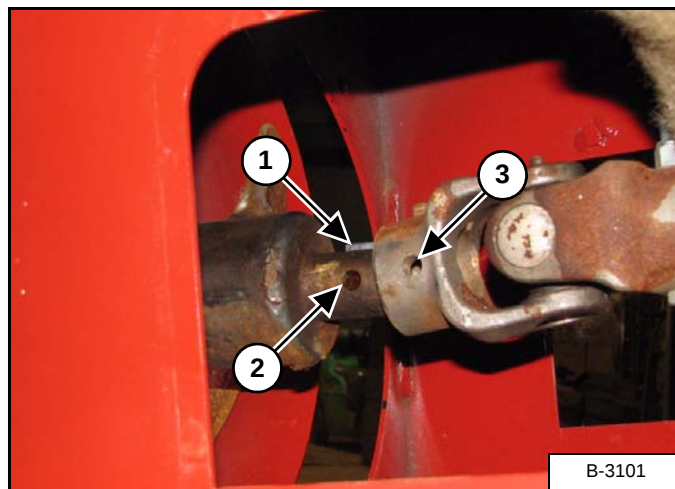


Install a strap (Item 1) onto the hopper head (Item 2) **[Figure 86]**.

Connect the straps to an approved lifting device.

Raise the hopper head and move to the end of the hopper drive tube.

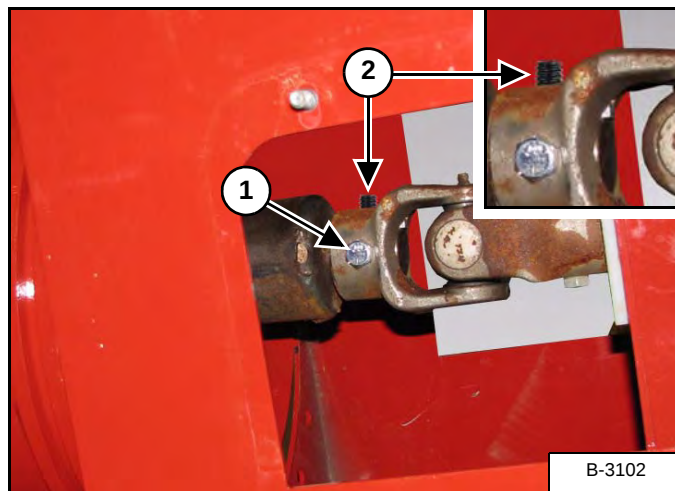
Figure 87



Install a 1/4" x 1.19" key (Item 1) **[Figure 87]**.

Align the mounting holes of the upper hopper drive tube flying shaft (Item 2) and hopper head u-joint (Item 3) **[Figure 87]**.

Figure 88

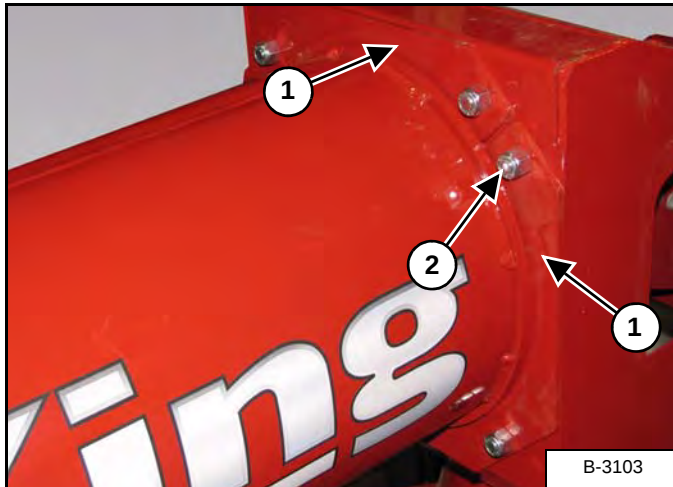


Move the hopper head towards the hopper drive tube until the flying shaft fully engages the u-joint.

Install one 3/8" x 3" bolt (Item 1) **[Figure 88]** through the u-joint and flying shaft. Install one 3/8" lock nut onto the bolt and tighten against the u-joint.

Tighten setscrew (Item 2) **[Figure 88]** against key.

Figure 89

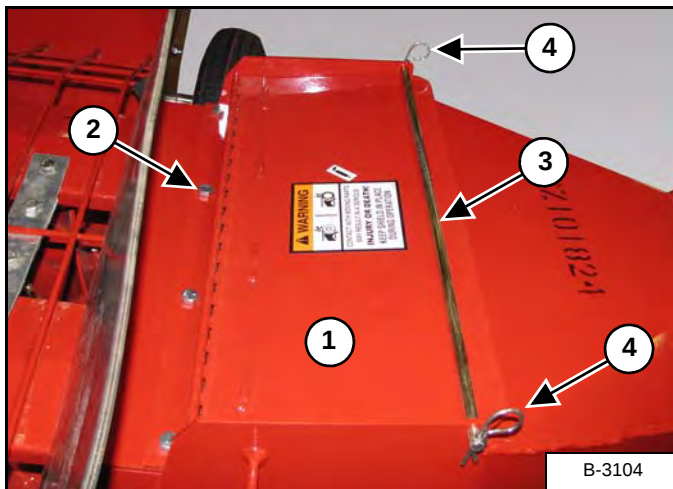


Move the hopper head onto the hopper drive tube.

Install the two swivel plates (Item 1) into the groove around the hopper drive tube. Align mounting holes. Install six 1/2" x 1" bolts through the hopper head (from inside out) and swivel plates. Install one 1/2" lock nut (Item 2) [Figure 89] onto each bolt and tighten.

NOTE: The hopper head should rotate freely on the hopper drive tube.

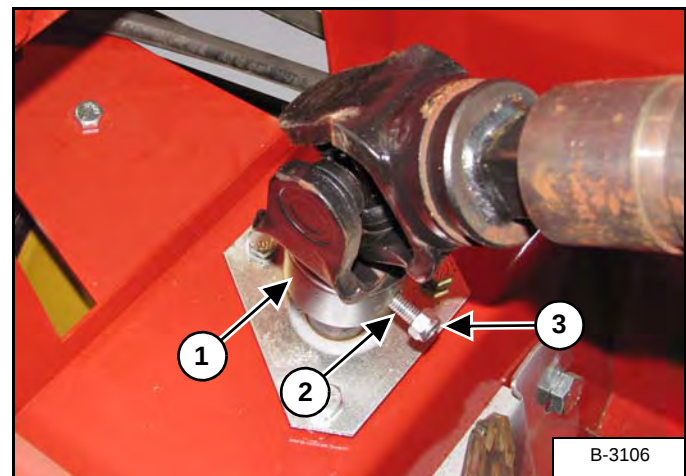
Figure 90



Install the hopper access door (Item 1) onto the hopper. Align mounting holes and install four 3/8" x 1" bolts (Item 2) [Figure 90] and tighten to secure the hopper access door to the hopper.

Install the pivot pin (Item 3), then install one 3/8" flat washer and hair pin (Item 4) [Figure 90] on each end of the pivot pin.

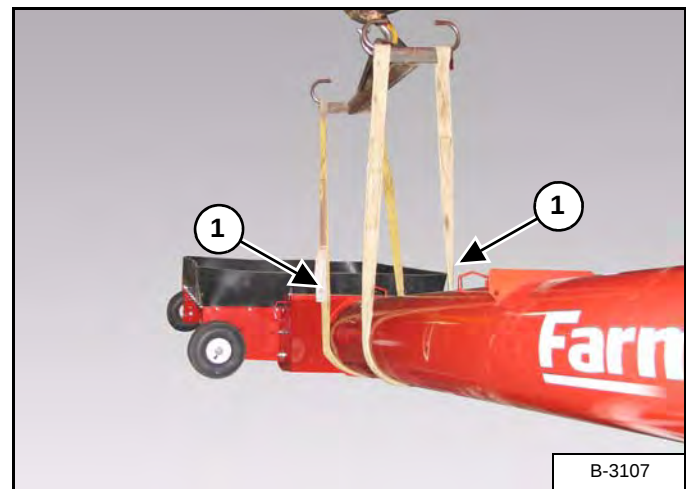
Figure 91



Install the internal power shaft lower u-joint (Item 1) [Figure 91] onto the top shaft of the lower gearbox in the drive section.

Align mounting holes of top shaft of the lower gearbox and internal power shaft u-joint. Install one 5/16" x 3" bolt (Item 2) through the u-joint and lower gearbox shaft. Install one 5/16" lock nut (Item 3) [Figure 91] onto the bolt and tighten against the u-joint.

Figure 92

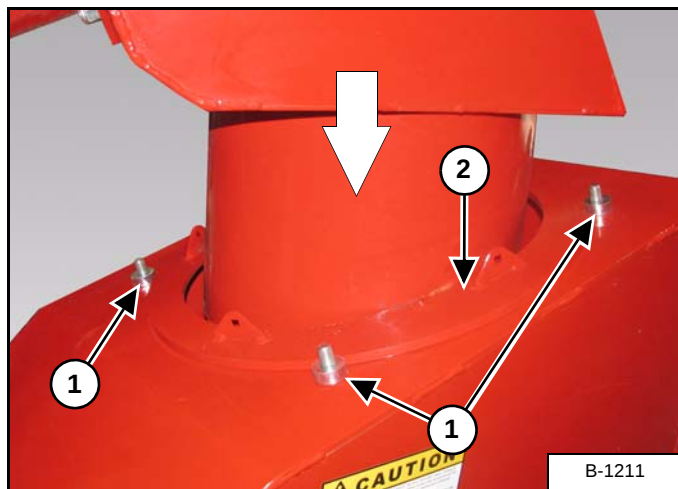


Install two straps (Item 1) [Figure 92] around the hopper drive tube.

Connect the straps to an approved lifting device.

Raise the hopper drive tube assembly and move to the assembly area.

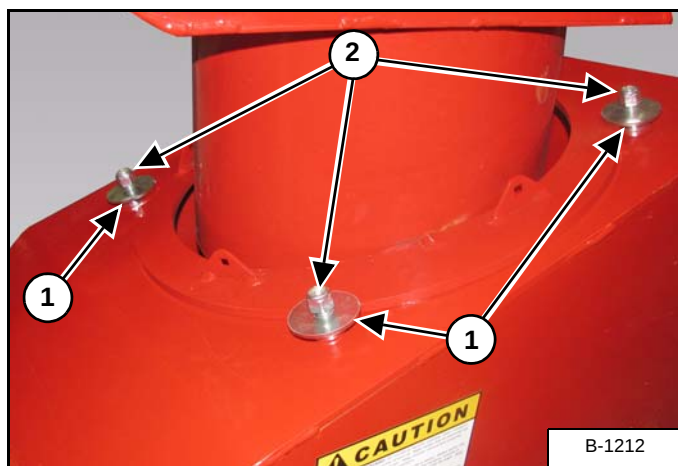
Figure 93



Install bushings (Item 1) [Figure 93] on the four studs on the top of the drive section.

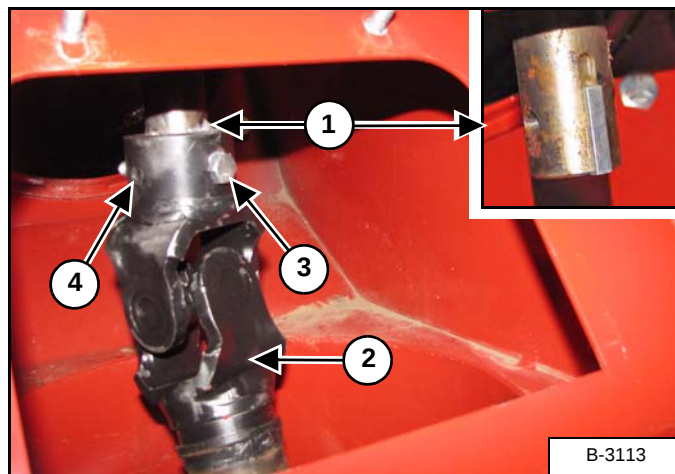
Lower the hopper head until the flange (Item 2) [Figure 93] is inside the bushings and resting on top of the drive section.

Figure 94



Install four retaining washers (Item 1) onto the four studs and over the hopper head flange. Install four 1/2" lock nuts (Item 2) [Figure 94]. Tighten the lock nuts until they contact the retaining washers.

Figure 95



Install the key (Item 1) [Figure 95] onto the bottom shaft of the upper gearbox.

Install the internal power shaft upper u-joint (Item 2) [Figure 95] onto the top shaft of the lower gearbox in the drive section.

Align mounting holes of top shaft of the lower gearbox and internal power shaft u-joint. Install one 3/8" x 3" bolt (Item 3) [Figure 95] through the u-joint and lower gearbox shaft. Install one 3/8" lock nut onto the bolt and tighten against the u-joint.

Tighten set screw (Item 4) [Figure 95] against the key.

Install and secure all shields on the drive section.

Lower the tube assembly to the ground.

! IMPORTANT

Check over all tube and bridging hardware to make sure all hardware is tight before installing tube assembly onto the undercarriage.

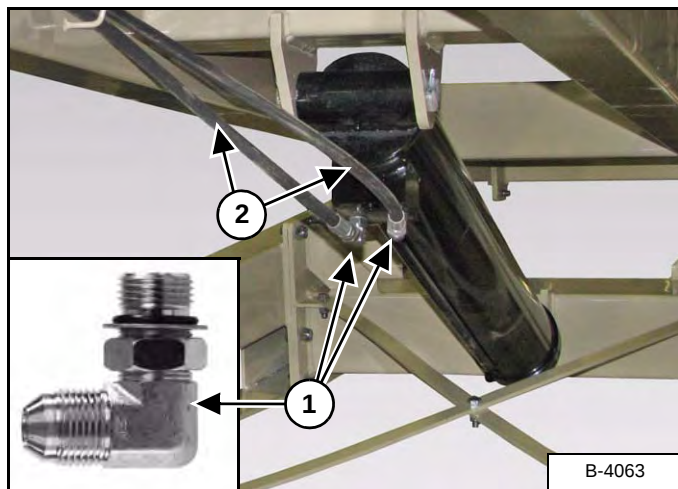
HYDRAULIC ASSEMBLY**Winch Fitting And Hose Installation****IMPORTANT**

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

**IMPORTANT**

Contain and dispose of any oil leakage in an environmentally safe manner. 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 96



Locate two 08MJIC x 08MORB 90° elbow fittings (Item 1) [Figure 96] and install into the hydraulic cylinder.

Hydraulic Hose Sizes

3/8" x 546" - 1262 Model

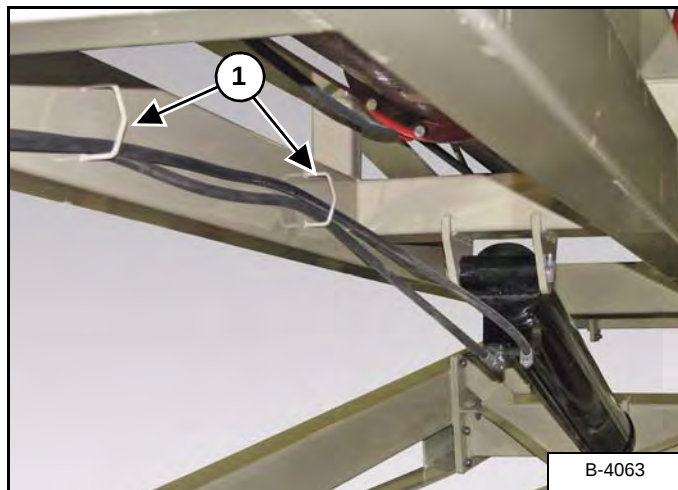
3/8" x 606" - 1272 Model

3/8" x 726" - 1282 Model

3/8" x 786" - 1292 Model

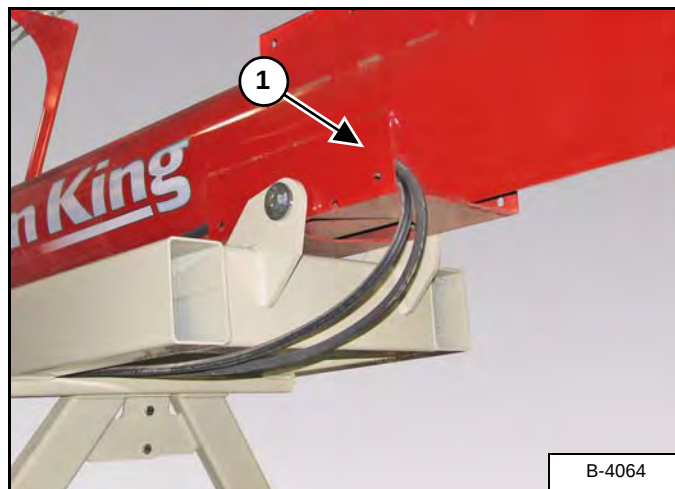
Locate two hydraulic hoses (Item 2) [Figure 96] and install onto the two 08MJIC x 08MORB 90° elbow fittings.

Figure 97



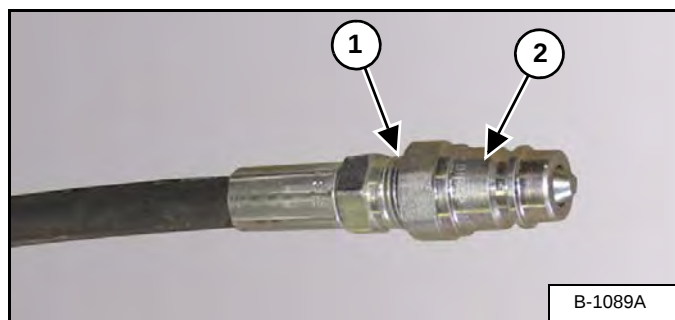
Route the two hydraulic hoses through the hose guides (Item 1) [Figure 97] on the inside of the top undercarriage arm weldment.

Figure 98



Route the two hydraulic hoses through the tube mounting brackets (Item 1) [Figure 98] and hose guides along the RH side of the tube assembly to auger hitch.

Figure 99



Apply thread sealant to the threads (Item 1) of the hydraulic hose fitting, then install and tighten the male quick coupler fitting (Item 2) [Figure 99] on each hydraulic hose.

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OPERATION

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GENERAL OPERATION INFORMATION

Pre - Operation Checklist

Before operating the Backsaver Auger for the first time and each time thereafter, check the following items:

WARNING



AVOID INJURY OR DEATH

- Disengage the PTO, engage the machine's parking brake, stop the engine and make sure all rotating components are completely stopped before connecting, disconnecting, adjusting or cleaning any PTO driven equipment.
- Always keep PTO shields and all guards in place when using PTO driven equipment.
- Disengage PTO for road travel.
- Keep hands, feet and clothing away.

WARNING

AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

1. Lubricate the equipment per the schedule outline in the Maintenance Section. (See "SERVICE SCHEDULE" on page 102.)
2. Check the Backsaver Auger's hitch for damaged, loose or missing parts. Repair as needed before operation.
3. Check tire pressure. Inflate per manufacturer's specification.

4. Check wheel bolts for tightness. Torque as required. (See "AXLE" on page 107.)
5. Check the augers. Remove any material build-up or debris that has become entangled.
6. Check that all bearings turn freely. Replace as required.
7. Make sure that all guards and shields are in place, secured and functioning as designed.

WARNING



Leaking fluids under pressure can enter the skin and cause serious injury or death. Immediate medical attention is required. Wear goggles. Use cardboard to check for leaks.

8. Check condition of all hydraulic components for leaks. Repair as required.

NOTE: Do not operate with hydraulic leaks.

9. Check gearbox oil level. Fill as required. (See "LUBRICATION" on page 103.)
10. Verify that the tractor's drawbar is adjusted correctly for use with the auger. (See "Drawbar Adjustment" on page 75.)
11. Check that the PTO driveline telescope easily and turn freely.
12. Make sure the PTO ends are securely attached to the auger and the tractor.

Break - In Checklist

NOTE: The Backsaver Auger must have a break-in period with different operating conditions than for normal use.

The tube and flighting must get a polished surface through use. Once the new auger has polished it will run smooth at recommended speed.

NOTE: Never operate an empty auger for over one minute, as the flighting and housing will experience excessive wear.

During the break-in-period:

1. Run the tractor at slow idle until grain begins to flow from the discharge. For the first 500 bushels, operate at the slow speed and restrict the flow of grain at the intake.
2. Gradually increase the speed until operating at full PTO speed.

NOTE: Do not run empty during break-in period.

Check the following mechanical items after 1 hour of operation and again after 10 hours of operation:

1. Check the auger hitch for damaged, loose or missing parts. Repair as needed before operation.
2. Check for loose fasteners and hardware. Tighten as required.
3. Make sure that all guards and shields are in place, secured and functioning as designed
4. Check that the PTO driveline telescopes easily and turns freely.
5. Check condition of all hydraulic components for leaks. Tighten fittings to correct leaks or replace components. Do not operate with hydraulic leaks.
6. Check tire pressure. Inflate per manufacturer's specification.
7. Check gearbox oil level. Fill as required. (See "LUBRICATION" on page 103.)
8. Check the augers. Remove any debris.

WARNING



AVOID INJURY OR DEATH

- Disengage the PTO, engage the machine's parking brake, stop the engine and make sure all rotating components are completely stopped before connecting, disconnecting, adjusting or cleaning any PTO driven equipment.
- Always keep PTO shields and all guards in place when using PTO driven equipment.
- Disengage PTO for road travel.
- Keep hands, feet and clothing away.

Tractor Requirements



- Do NOT exceed 540 RPM PTO.
- Keep PTO shields and all guards in place.
- Keep away from moving parts.
- Keep bystanders away.

Figure 100

AUGER MODEL	HITCH WEIGHT	TOTAL WEIGHT
1262	750 lb (346 kg)	5389 lb (2447 kg)
1272	800 lb (363 kg)	5830 lb (2647 kg)
1282	1050 lb (477 kg)	6844 lb (3107 kg)
1292	1000 lb (454 kg)	7288 lb (3309 kg)

The chart [Figure 100] lists the hitch weight and total weight of the 12" Backsaver Auger models. The tractor / tow vehicle must be rated for listed weight to transport the specified auger model.

Figure 101

AUGER MODEL	MINIMUM PTO HP (with 540 RPM PTO)	HYD PSI FOR LIFT (approximate)
1262	85 hp	1800 psi
1272	95 hp	1950 psi
1282	105 hp	2100 psi
1292	115 hp	2300 psi

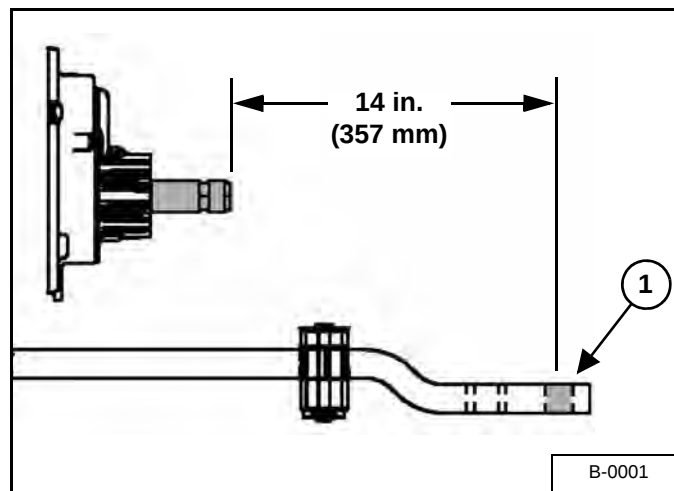
The chart [Figure 101] lists the minimum tractor PTO hp (with 540 rpm PTO) and approximate hydraulic pressure for lift.

The 12" Backsaver Auger will require a tractor, three auxiliary hydraulic functions, Category IV rated drawbar.

The tractor must be equipped with a 6 spline, 1-3/8 inch PTO shaft when used with the 12" Backsaver Auger.

Drawbar Adjustment

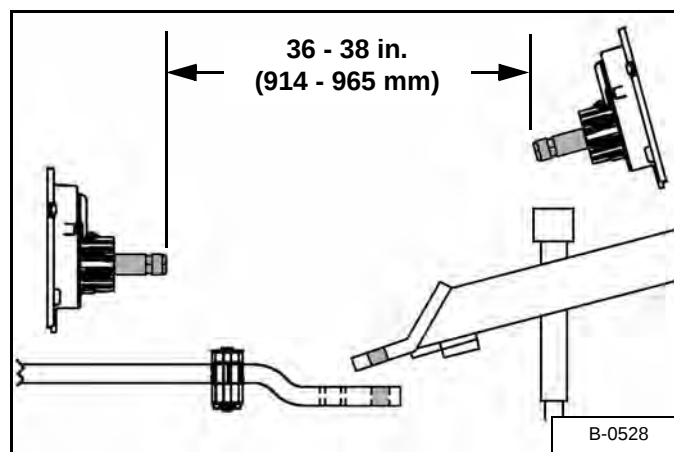
Figure 102



Adjust the tractor's drawbar in / out, until the center of the hitch pin hole (Item 1) [Figure 102] is 14 inches (357 mm) from the end of the tractor's PTO shaft. See your tractor's owner's manual for correct adjustment procedures.

NOTE: A tractor hitch of less than 16" minimum will result in PTO bottoming out, when operating auger at maximum height.

Figure 103

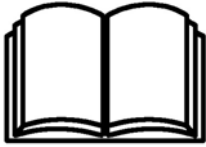


The distance between the tractor and the auger PTO shaft should be between 36 - 38 in. (914 - 965 mm) with the tractor and auger on level ground and the auger in full down position. This distance is obtained by either adjusting the tractor hitch [Figure 103].

For checking PTO driveline see "PTO Driveline" on page 79.

Entering And Leaving The Operator's Position

IMPORTANT



Follow the instructions in your tractor's operation manual for the correct procedure.

Entering The Operator's Position

Move to the operator's position, start the engine and release the parking brake.

Leaving The Operator's Position

WARNING

AVOID INJURY OR DEATH

Before you leave the operator's position:

- Always park on a flat level surface.
- Place all controls in NEUTRAL.
- Engage the park brake.
- Stop the engine and remove the key.
- Wait for all moving parts to stop.

Park the tractor / equipment on a flat level surface.

Place all controls in neutral, engage the park brake, stop the engine and wait for all moving parts to stop. Leave the operator's position.

INITIAL SET-UP

Connecting The Backsaver Auger To The Tractor

Always inspect the tractor's drawbar and Backsaver Auger's hitch before connecting. See the tractor's owner's manual.

Verify that the tractor's drawbar is adjusted correctly for use with the Backsaver Auger. (See "Drawbar Adjustment" on page 75.)

Enter the operator's position. (See "Entering The Operator's Position" on page 76.)

Move the tractor into position in front of the Backsaver Auger.

WARNING



AVOID INJURY OR DEATH

Before moving the tractor, look in all directions and make sure no bystanders, especially small children are in the work area. Do not allow anyone between the tractor and the equipment when backing up to the equipment for connecting.

Move the tractor backwards, aligning the drawbar with the Backsaver Auger hitch.

NOTE: The jack may need to be lowered or raised for proper alignment of the drawbar and hitch.

If the Backsaver Auger hitch needs to be adjusted, stop the tractor when drawbar is just in front of the Backsaver Auger hitch.

Leave the operator's position. (See "Leaving The Operator's Position" on page 76.)

Figure 104



Turn the handle (Item 1) **[Figure 104]** clockwise to raise the hitch or counterclockwise to lower the hitch.

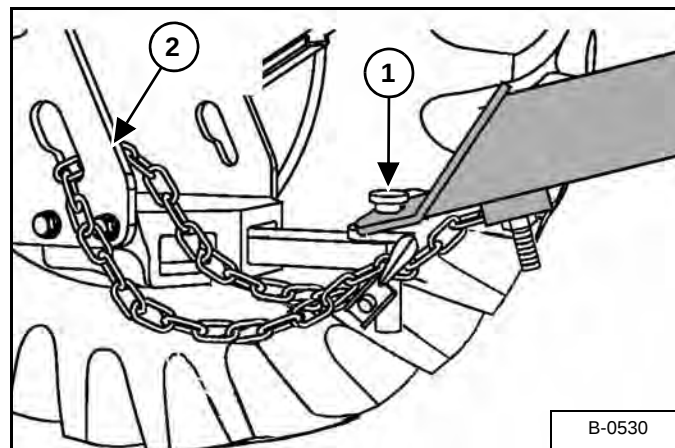
Lower or raise the Backsaver Auger hitch until aligned with the tractor's drawbar.

Move to the operator's seat, start the engine and release the parking brake.

Move the tractor backwards, aligning the drawbar hitch pin hole with the Backsaver Auger hitch pin hole(s).

Stop the tractor and leave operator's position. (See "Leaving The Operator's Position" on page 76.)

Figure 105



Install the hitch pin (Item 1) **[Figure 105]** and retaining pin to securely fasten the Backsaver Auger hitch to the tractor drawbar.

Attach the safety chain (Item 2) **[Figure 105]** around the drawbar.

WARNING



AVOID INJURY OR DEATH

Keep fingers and hands out of pinch points when connecting and disconnecting equipment.

NOTE: Always use a hitch pin of adequate size and strength and a retaining pin with a locking device.

Connecting The PTO Driveline



WARNING

AVOID INJURY OR DEATH

Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause serious injury or death.

NOTE: Clean and grease tractor's PTO shaft and PTO driveline coupling each time driveline is connected.

Stop the engine and leave the operator's position. (See "Leaving The Operator's Position" on page 76.)



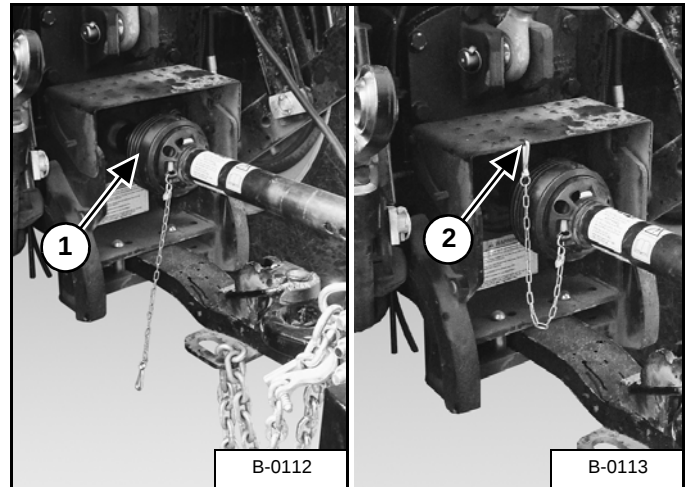
IMPORTANT

Improper hitch installation can cause PTO driveline damage.

- Do not modify the hitch or use an unapproved hitch.
- Make sure the PTO driveline is of adequate length and that u-joints are in the correct phase.

Remove the PTO driveline from the storage position (if applicable).

Figure 106



Retract the collar and slide the PTO driveline (Item 1) onto the tractor PTO shaft until it locks onto the shaft. Push and pull on the PTO driveline to verify it is securely attached to the PTO shaft. Install PTO driveline safety chain (Item 2) [Figure 106].

NOTE: The PTO driveline must have a means to retain it to the PTO shaft on the tractor.



WARNING



- Do NOT exceed 540 RPM PTO.
- Keep PTO shields and all guards in place.
- Keep away from moving parts.
- Keep bystanders away.

PTO Driveline

PTO Driveline Length Check

NOTE: Due to variations in distances between tractor PTO shafts and implement input shafts, drivelines may need to be shortened or a longer shaft may be required. When fitting the implement to the tractor, the PTO driveline, with telescoping sections, must be inspected. When the sections are at the most compressed operating position, the sections must not “bottom out”. At its shortest length, there must be at least 2 in. (50,8 mm) of clearance between each section end and opposite section end at the most compressed operating position. When the sections are at the most extended position, there must be sufficient engagement between the sections. At its farthest operating extension, a minimum section engagement of 33% of shaft length must be maintained.



WARNING

AVOID INJURY OR DEATH

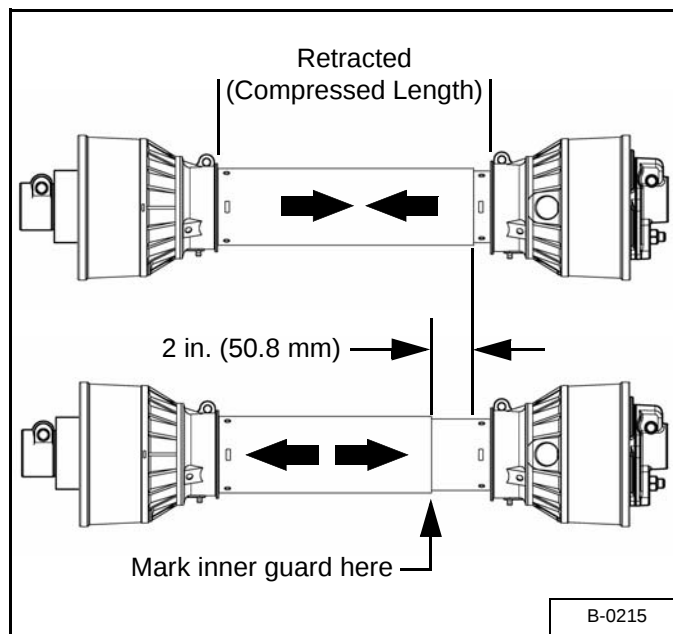
- Do NOT exceed the rated implement PTO speed.
- Stay clear of rotating driveline.
- Keep bystanders away.
- Keep hands, feet, clothing and long hair away.
- Keep PTO shields and all guards in place.
- Disengage PTO, move the tractor controls to the Neutral position, stop the engine, engage parking brake and make sure all rotating components are stopped before leaving the operator's position.
- Do NOT service the tractor or implement with the PTO engaged.
- Do NOT service the implement in a raised position unless properly blocked and with all rotating components stopped.
- Disengage PTO for road travel.

PTO Driveline Bottoming Out Check

Stop the engine and leave the operator's position. (See “Leaving The Operator's Position” on page 76.)

Make sure the PTO driveline and all rotating components have come to a complete stop before leaving the operator's position (if applicable).

Figure 107



1. Disconnect the PTO driveline from the tractor and slide the PTO driveline together until fully retracted (compressed).
2. Measure the retracted (compressed) length of PTO driveline [Figure 107].
3. Extend the PTO driveline 2 in. (50,8 mm) from the retracted length and place a mark on the inner guard at the end of the outer guard [Figure 107].
4. Reattach the PTO driveline to the tractor PTO shaft.
5. Enter the operator's position. (See “Entering The Operator's Position” on page 76.) Start the engine.
6. With the rear PTO DISENGAGED, raise and lower the implement and watch the PTO driveline extend and retract.
7. If the outer PTO driveline guard slides in (retracts) over the mark at any point of travel, the PTO driveline needs to be shortened.

Reducing The PTO Driveline Length

Stop the engine and leave the operator's position. (See "Leaving The Operator's Position" on page 76.)

Make sure the PTO driveline and all rotating components have come to a complete stop before leaving the operator's position.



AVOID INJURY OR DEATH

- Do NOT exceed the rated implement PTO speed.
- Stay clear of rotating driveline.
- Keep bystanders away.
- Keep hands, feet, clothing and long hair away.
- Keep PTO shields and all guards in place.
- Disengage PTO, move the tractor controls to the Neutral position, stop the engine, engage parking brake and make sure all rotating components are stopped before leaving the operator's position.
- Do NOT service the tractor or implement with the PTO engaged.
- Do NOT service the implement in a raised position unless properly blocked and with all rotating components stopped.
- Disengage PTO for road travel.

Remove the PTO driveline from the tractor and place in storage position (if equipped).

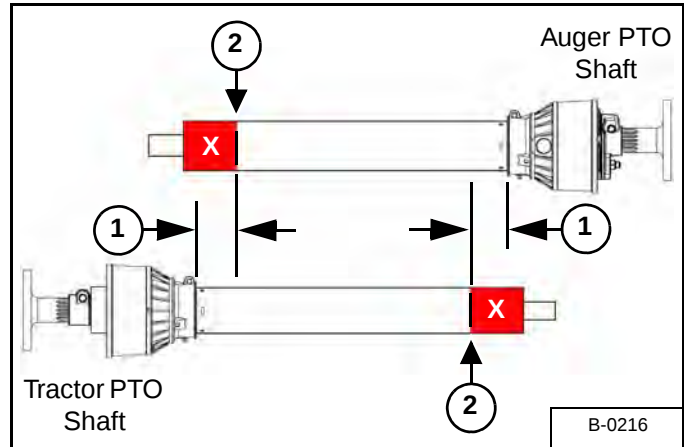
Enter the operator's position. (See "Entering The Operator's Position" on page 76.) Start the engine.

Raise or lower the auger to get the shortest distance between the tractor PTO shaft and auger gearbox PTO shaft.

Stop the engine and leave the operator's position. (See "Leaving The Operator's Position" on page 76.)

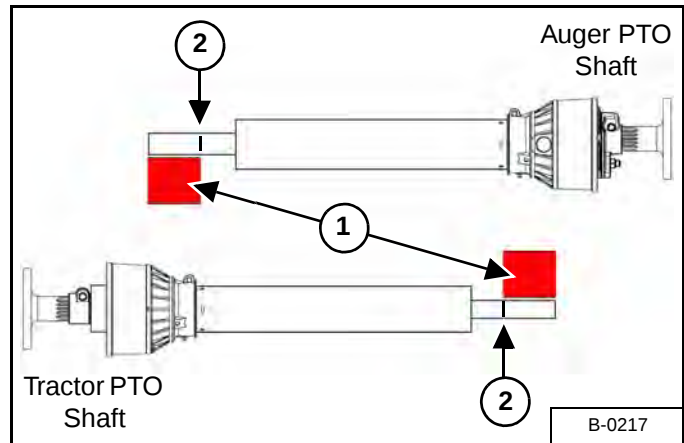
Pull the PTO driveline apart and reinstall each individual section; one half to the tractor PTO shaft and one half to the implement gearbox PTO shaft.

Figure 108



1. Hold PTO driveline sections parallel to one another and measure back 2 in. (50,8 mm) (Item 1) from the yoke of each section and place mark on opposite section. Cut the plastic shield at this length (Item 2) [Figure 108].

Figure 109



2. Using the plastic guard lengths that were cut off in [Figure 108], align the cut off lengths (Item 1) with the end of the inner & outer shafts. Place a mark (Item 2) [Figure 109] on the inner & outer shafts and cut the inner & outer shafts off at this length.
3. Round off all sharp edges and debur.
4. Thoroughly grease and install the PTO driveline halves together.
5. Recheck for proper operation.

PTO Driveline Engagement Check

Stop the engine and leave the operator's position. (See "Leaving The Operator's Position" on page 76.)

Make sure the PTO driveline and all rotating components have come to a complete stop before exiting the tractor.

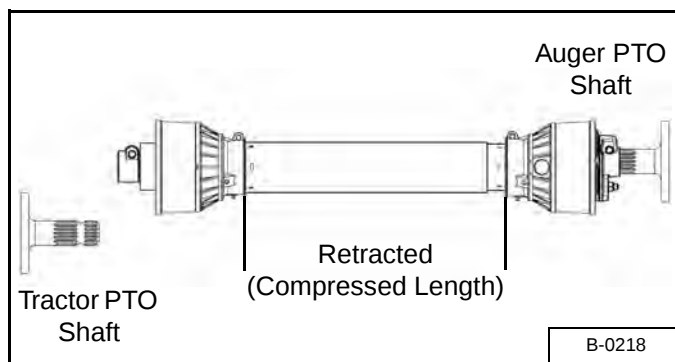


AVOID INJURY OR DEATH

- Do NOT exceed the rated implement PTO speed.
- Stay clear of rotating driveline.
- Keep bystanders away.
- Keep hands, feet, clothing and long hair away.
- Keep PTO shields and all guards in place.
- Disengage PTO, move the tractor controls to the Neutral position, stop the engine, engage parking brake and make sure all rotating components are stopped before leaving the operator's position.
- Do NOT service the tractor or implement with the PTO engaged.
- Do NOT service the implement in a raised position unless properly blocked and with all rotating components stopped.
- Disengage PTO for road travel.

1. Disconnect the PTO driveline from the tractor and fully slide the driveline sections together (retracted).

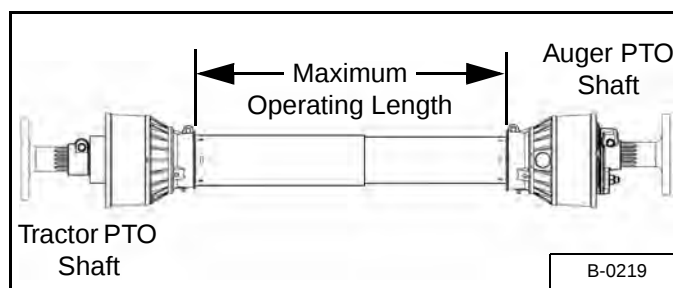
Figure 110



2. Measure the retracted (compressed) length of the PTO driveline between the bases of the plastic guards [Figure 110].

3. Multiply the retracted driveline length by 1.667 to determine the PTO driveline Maximum Operating Length. (i.e.: 25.5 in. (647,7 mm) x 1.667= 42.5 in. (1079,7 mm) Maximum Operating Length).
4. Attach the PTO driveline to the tractor PTO output shaft.
5. Enter the operator's position. (See "Entering The Operator's Position" on page 76.)
6. With the PTO driveline attached, position the auger to where the telescoping PTO driveline is at its maximum operating extension.
7. Stop the engine and leave the operator's position. (See "Leaving The Operator's Position" on page 76.) Make sure the PTO driveline and all rotating components have come to a complete stop before leaving the operator's position.

Figure 111



8. Measure the length of the PTO driveline between the bases of the plastic shields [Figure 111] to determine the maximum operating length.

A. If the measured maximum operating length is less than the Maximum Operating Length calculation (from Step 3), the PTO driveline has adequate engagement

B. If the measured maximum operating length is equal to or more than the Maximum Operating Length calculation (from Step 3), the PTO driveline does not have adequate engagement and should be replaced with a longer driveline. See your Farm King dealer for available PTO drivelines.

Connecting Hydraulic Hoses

WARNING



HIGH PRESSURE FLUID HAZARD

To prevent serious injury or death from high pressure fluid:

- Relieve pressure on system before repairing or adjusting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

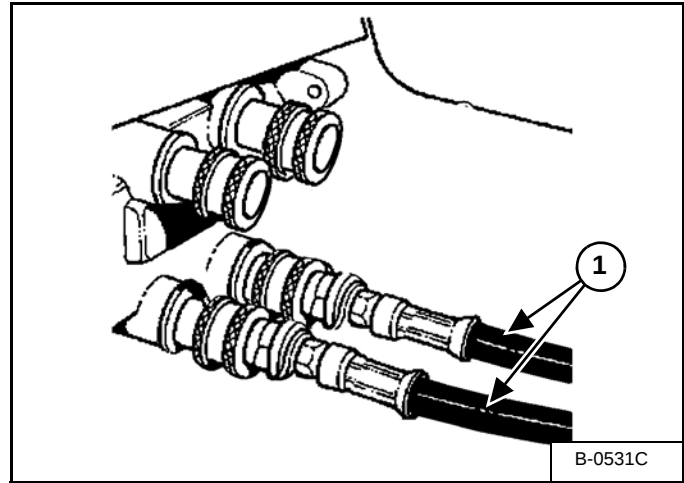
IMPORTANT

- Contain and dispose of any oil leakage in an environmentally safe manner.
- Thoroughly clean the quick couplers before making connections. Dirt can quickly damage the system.

NOTE: Make sure the quick couplers are fully engaged. If the quick couplers do not fully engage, check to see that the couplers are the same size and type.

To Connect:

Figure 112



Push male couplers into the female couplers.

Install the two lift cylinder hoses (Item 1) [Figure 112].

To Disconnect:

WARNING

AVOID BURNS

Hydraulic fluid, tubes, fittings and quick couplers can get hot when running equipment. Be careful when connecting and disconnecting quick couplers.

Pull back on the male coupler to disconnect.

AUGER OPERATION

Adjusting Axle Extension (1282 & 1292 Models Only)

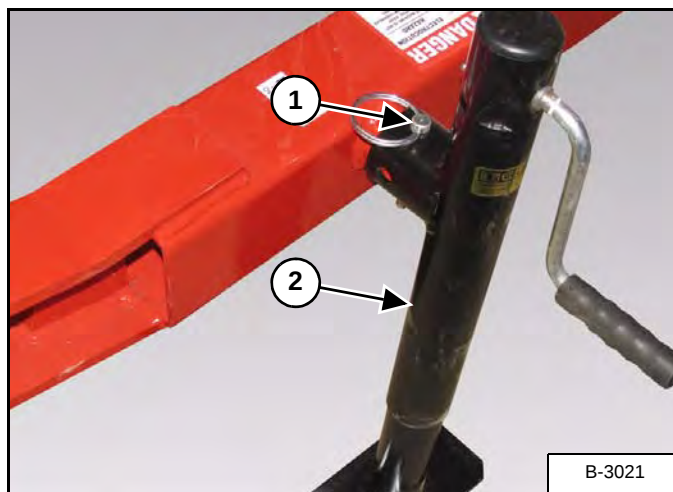


CRUSHING HAZARD

- Park the equipment on a solid level surface before raising any part of the equipment.
- Always support the load after raised.
- Do not work under a load supported by a jack or blocked parts.

Stop the engine and leave the operator's position. (See "Leaving The Operator's Position" on page 76.)

Figure 113



Remove retaining pin (Item 1) and remove jack (Item 2) [Figure 113] from the auger hitch.

Figure 114



Install the jack (Item 1) onto the axle weldment. Install retaining pin (Item 2) [Figure 114].

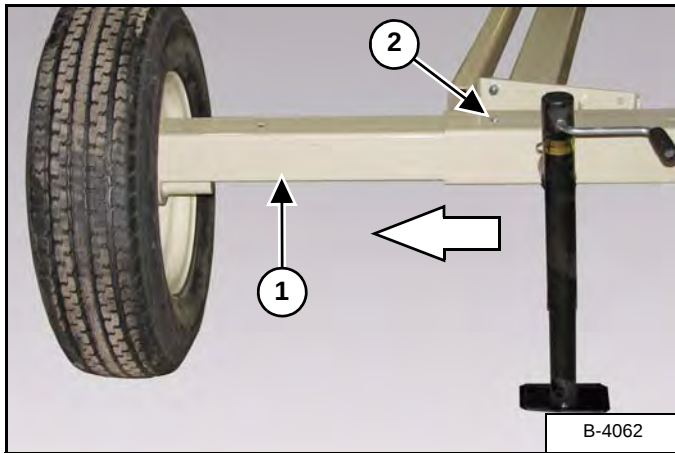
Remove axle extension pin (Item 3) [Figure 114].



The base of the jack should be fully supported and on a solid level surface. When working on soft surfaces, put a sturdy metal plate under the base of the jack for stability.

Using the handle of the jack, raise the axle until the tire is off the ground.

Figure 115



Slide the axle extension (Item 1) [Figure 115] out of the axle weldment.

Align holes of the axle extension and axle weldment. Install axle extension pin (Item 2) [Figure 115].

Lower the jack / axle until the tire is on the ground.

Remove jack and install on the opposite side of the axle weldment. Repeat procedure for opposite axle extension.

Remove jack and re-install on the auger hitch.

Lowering And Raising The Hopper

WARNING



ENTANGLEMENT HAZARD

To prevent injury to fingers and hands:

- Keep hands clear of winch during operation.

CAUTION



CUT HAZARD

To prevent injury to fingers and hands:

- Always wear heavy leather gloves when handling a wire rope and operating the winch.
- Never guide the cable with your hands.
- Never let wire rope slip through your hands.

CAUTION

- Frayed, kinked or damaged wire rope must be replaced immediately.
- Always stand clear of wire rope and hopper during operation.
- Always stand clear and keep others away during operation.
- Never touch wire rope or hook while in tension or under load.
- Never touch wire rope or hook during winching operation.

IMPORTANT

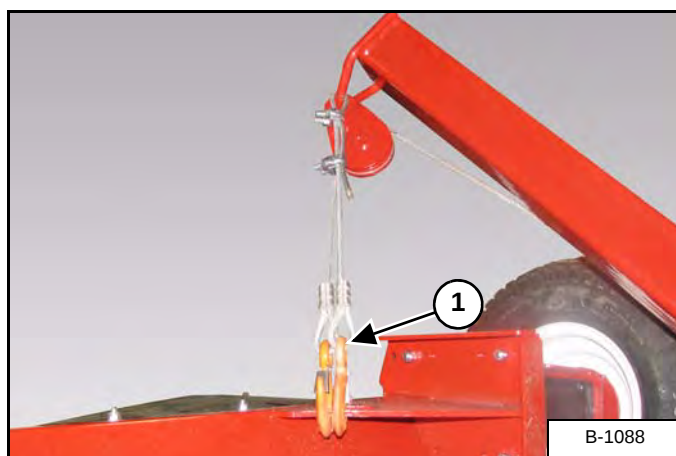
Always maintain a minimum of three wraps of cable on the drum of the winch.

Lowering The Hopper

Park the tractor / equipment on a flat level surface.

Stop the engine and leave the operator's position. (See "Leaving The Operator's Position" on page 76.)

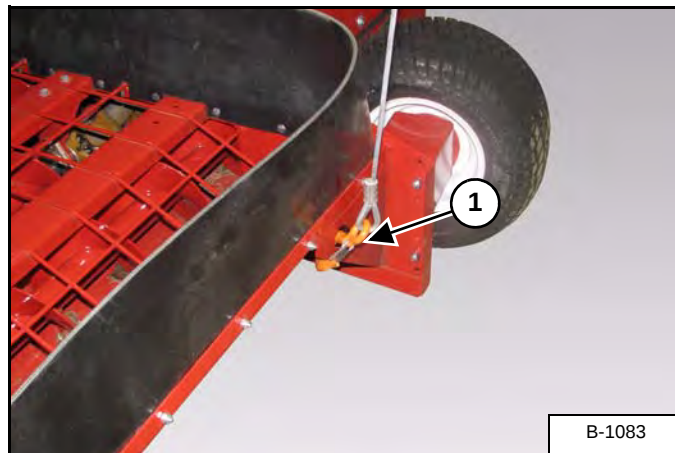
Figure 116



Using the hand winch, raise the hopper to release tension on the safety chain hook (Item 1) **[Figure 116]**. Remove the safety chain hook.

Using the hand winch, lower the hopper to the ground.

Figure 117



Remove the hopper lift cable hook (Item 1) **[Figure 117]** from the hopper.

Raising The Hopper

Install the hopper lift cable hook (Item 1) **[Figure 117]**.

Using the hand winch, raise the hopper to the transport position.

Install the safety chain hook (Item 1) **[Figure 116]**.

Using the hand winch, lower the hopper until the safety chain hook is supporting the weight of the hopper.

Hydraulic Hopper Mover Operation (If Equipped)



Never operate the hydraulic hopper mover or hydraulic hopper lift when the PTO is engaged.



The hopper powered wheels are not designed to push grain, rocks, dirt etc. when in use. Always keep the area that the hopper moves over clear of all obstructions.

Lower the hopper. (See “Lowering And Raising The Hopper” on page 84.)

Enter the tractor and start the engine.

Engage the hydraulic circuit for the hopper mover control valve. Run the tractor engine at low idle.

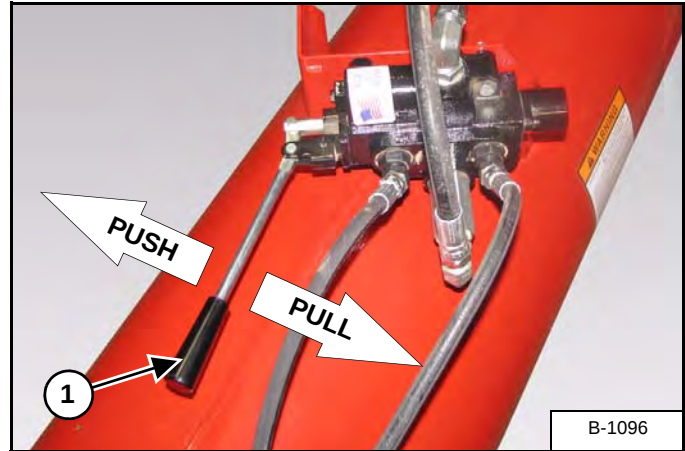
Leave the operator’s position. (See “Entering And Leaving The Operator’s Position” on page 76.)



AVOID INJURY OR DEATH

Before moving the hydraulic hopper, look in all directions and make sure no bystanders, especially small children are in the swing area of the hopper.

Figure 118



Pull / push the lever (Item 1) [Figure 118] to move the hopper to the desired location.

Move the hopper to the desired location. (See “Unloading Belly Dump Units” on page 92.) or (See “Unloading Rear And Side Dump Units” on page 94.) for additional information.

Raising The Auger



DANGER

ELECTROCUTION HAZARD

To prevent serious injury or death from electrocution:

- Be aware of overhead power lines.
- Keep away from power lines when transporting or raising auger.
- Electrocution can occur without direct contact.



DANGER

AVOID PERSONAL INJURY AND / OR EQUIPMENT DAMAGE

Always disconnect the winch hydraulic lines from the tractor after raising or lowering the auger. Accidental movement of the tractor hydraulic control valve may cause personal injury and / or equipment damage.



CAUTION

- Do not operate the unit before reading and understanding the Operator's Manual.
- Keep all safety devices in place.
- Keep off the equipment at all times.
- Keep hands, feet and clothing away from moving parts while in operation.
- Make certain everyone is clear of the equipment before applying power or moving the machine.
- Do not adjust, service, lubricate, clean, unclog or move the mechanism until all power is shut off.
- While in operation, always support the discharge end or provide adequate anchorage of the intake end to prevent sudden tipping.
- Disconnect power of electrical driven units before resetting motor over loads.
- To avoid tipping, make sure auger is empty before attempting to move.
- Keep wheels of undercarriage level and on firm ground.
- Lower unit to the recommended transport position before transporting.



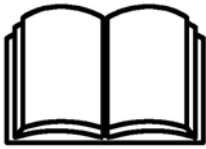
IMPORTANT

- Do not raise the main auger higher than 35° before lowering the intake auger or interference between the intake auger and the intake box will occur.
- Never attempt to raise or lower the auger during operation.
- Verify wheels are free to move.

! IMPORTANT

- Some types of fertilizer may cause accelerated wear and corrosion as well as added stress on lift components due to additional load.
- Use of fertilizer can affect warranty.

! IMPORTANT



Follow the instructions in your tractor's operation manual for the correct operating instructions.

! CAUTION

Disconnect The IID (PTO) from the tractor. Failure to follow this step EVERY time BEFORE maneuvering OR changing the auger elevation may cause damage to the tractor and / or auger IID.

Disconnect the PTO driveline from the tractor. (See "Connecting The PTO Driveline" on page 78.)

Enter the tractor, start the engine and release the parking brake.

Move the auger and tractor to the work area and park the auger and tractor on solid level surface.

Engage the tractor's parking brake, stop the engine and exit the tractor.

Extend the axle extensions (if required). (See "Adjusting Axle Extension (1282 & 1292 Models Only)" on page 83.)

Enter the tractor, start the engine and release the parking brake.

With the axle extensions installed and main auger in the fully down position, move the auger towards the bin or barn. Position the auger as close as possible to the bin or barn with the tractor as close to in-line with the auger as possible.

! CAUTION

Keep wheels of undercarriage level and on firm ground. Raise the auger to the desired height and back the auger into position. Do not support the auger on the bin. As the auger becomes full, the weight may cause damage to the underside of the auger or to the bin.

! CAUTION

Do not place blocks under the wheels to increase the elevation of auger.

Stop the tractor and engage the parking brake. Engage the tractor's hydraulics. Run the tractor engine at low idle.

Using the tractor controls, slowly raise the main auger.

Auger Placement



DANGER

ELECTROCUTION HAZARD

To prevent serious injury or death from electrocution:

- Be aware of overhead power lines.
- Keep away from power lines when transporting or raising auger.
- Electrocution can occur without direct contact.



CAUTION

- Do not operate the unit before reading and understanding the Operator's Manual.
- Keep all safety devices in place.
- Keep off the equipment at all times.
- Keep hands, feet and clothing away from moving parts while in operation.
- Make certain everyone is clear of the equipment before applying power or moving the machine.
- Do not adjust, service, lubricate, clean, unclog or move the mechanism until all power is shut off.
- While in operation, always support the discharge end or provide adequate anchorage of the intake end to prevent sudden tipping.
- Disconnect power of electrical driven units before resetting motor over loads.
- To avoid tipping, make sure auger is empty before attempting to move.
- Keep wheels of undercarriage level and on firm ground.
- Lower unit to the recommended transport position before transporting.



CAUTION

Disconnect The IID (PTO) from the tractor. Failure to follow this step EVERY time BEFORE maneuvering OR changing the auger elevation may cause damage to the tractor and / or auger IID.

Disconnect the PTO driveline from the tractor. (See "Connecting The PTO Driveline" on page 78.)

Enter the tractor, start the engine and release the parking brake.

Move the auger and tractor to the work area and park the auger and tractor on solid level surface.

Engage the tractor's parking brake, stop the engine and exit the tractor.

Install the axle extensions (if required). (See "Adjusting Axle Extension (1282 & 1292 Models Only)" on page 83.)

Enter the tractor, start the engine and release the parking brake.

With the axle extensions installed and main auger in the fully down position, move the auger towards the bin or barn. Position the auger as close as possible to the bin or barn with the tractor as close to in-line with the auger as possible.



CAUTION

Keep wheels of undercarriage level and on firm ground. Raise the auger to the desired height and back the auger into position. Do not support the auger on the bin. As the auger becomes full, the weight may cause damage to the underside of the auger or to the bin.



CAUTION

Verify that the auger wheels are free to move. Because of the scissors action of the auger undercarriage assembly, damage will occur to the auger if the wheels are not free to move.

CAUTION

Do not place blocks under the wheels to increase the elevation of auger.

Stop the tractor and engage the parking brake. Engage the tractor's hydraulics. Run the tractor engine at low idle.

Raise the auger. (See "Raising The Auger" on page 87.)

Figure 119



Back the auger into position above the bin until the downspout (Item 1) [Figure 119] is centered on / over the opening on the bin. Lower the auger to the desired height above the bin.

Disengage the tractor hydraulics.

Engage the tractor's parking brake, stop the engine and exit the tractor. (See "Entering And Leaving The Operator's Position" on page 76.)

IMPORTANT

Disconnect the main auger winch hoses from the tractor to prevent accidental raising or lowering of the auger.

Disconnect the lift cylinder hoses from the tractor.

Connect the PTO driveline. (See "Connecting The PTO Driveline" on page 78.)

Lower the hopper. (See "Lowering And Raising The Hopper" on page 84.)

Lowering The Auger



DANGER

ELECTROCUTION HAZARD

To prevent serious injury or death from electrocution:

- Be aware of overhead power lines.
- Keep away from power lines when transporting or lowering the auger.
- Electrocution can occur without direct contact.



DANGER

AVOID PERSONAL INJURY AND / OR EQUIPMENT DAMAGE

Always disconnect the winch hydraulic lines from the tractor after raising or lowering the auger. Accidental movement of the tractor hydraulic control valve may cause personal injury and / or equipment damage.



CAUTION

Disconnect The IID (PTO) from the tractor. Failure to follow this step EVERY time BEFORE maneuvering OR changing the auger elevation may cause damage to the tractor and / or auger IID.



CAUTION

- Do not operate the unit before reading and understanding the Operator's Manual.
- Keep all safety devices in place.
- Keep off the equipment at all times.
- Keep hands, feet and clothing away from moving parts while in operation.
- Make certain everyone is clear of the equipment before applying power or moving the machine.
- Do not adjust, service, lubricate, clean, unclog or move the mechanism until all power is shut off.
- While in operation, always support the discharge end or provide adequate anchorage of the intake end to prevent sudden tipping.
- Disconnect power of electrical driven units before resetting motor over loads.
- To avoid tipping, make sure auger is empty before attempting to move.
- Keep wheels of undercarriage level and on firm ground.
- Lower unit to the recommended transport position before transporting.

Disconnect the PTO driveline from the tractor. (See "Connecting The PTO Driveline" on page 78.)

Connect hydraulic hoses. (See "Connecting Hydraulic Hoses" on page 82.)

Raise the hopper. (See "Lowering And Raising The Hopper" on page 84.)

Enter the tractor, start the engine and release the parking brake.

Engage the tractor hydraulics.

NOTE: Verify that the discharge spout will clear the top of the bin (raise auger if needed).

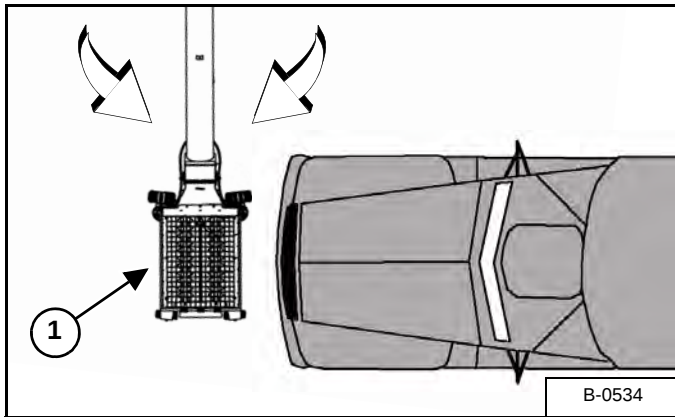
Move the auger and tractor away from the bin until there is adequate space to fully lower the auger.

Engage the tractor's parking brake, stop the engine and exit the tractor.

LOADING GRAIN INTO THE HOPPER

Unloading Belly Dump Units

Figure 120



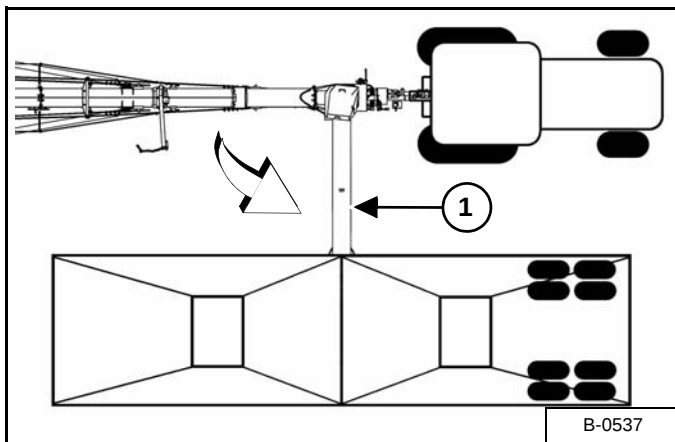
Move the hopper (Item 1) **[Figure 120]** out, at a 90° angle from the auger.

Move the belly dump unit into position, centered on the hopper **[Figure 120]**.

Mark the path of the belly dump unit for future units to unload and maintain the proper distance from the auger to allow adequate space for the hopper to be moved in and out without interference.

Move the hopper mover lever left or right to move the hopper in towards the auger, away from vehicle traffic.

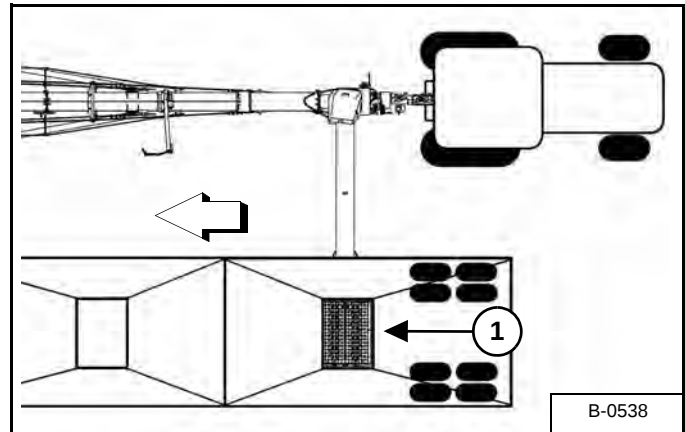
Figure 121



Move the belly dump unit straight forward until centered on the intake auger pivot. Stop the belly dump unit.

Move the hopper (Item 1) **[Figure 121]** under the belly dump unit.

Figure 122



Move the belly dump unit forward until the rear compartment is directly over the hopper (Item 1) **[Figure 122]**.

WARNING



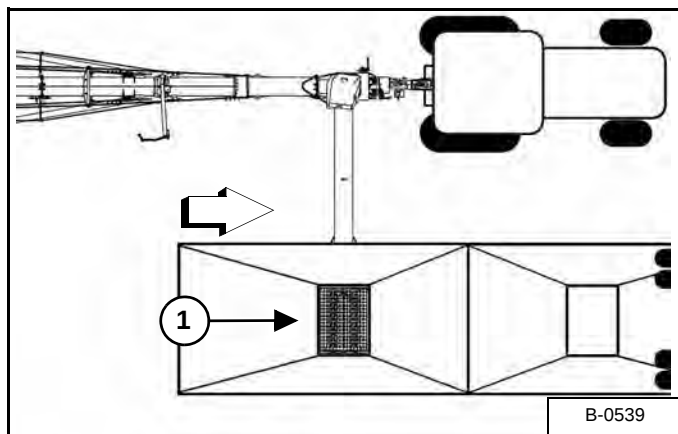
- **Do NOT exceed 540 RPM PTO.**
- **Keep PTO shields and all guards in place.**
- **Keep away from moving parts.**
- **Keep bystanders away.**

With tractor running at a low idle, engage the tractor PTO slowly to start the auger. Increase engine RPM (do not exceed 540 RPM PTO speed).

Slowly open the rear compartment gate.

Adjust gate until the hopper augers and intake auger can move grain to the main auger without overflowing the hopper.

When the rear compartment is empty, close the gate, disengage the PTO and lower engine RPM speed.

Figure 123


Move the belly dump unit back until the front compartment is directly over the hopper (Item 1) **[Figure 123]**.

WARNING



- **Do NOT exceed 540 RPM PTO.**
- **Keep PTO shields and all guards in place.**
- **Keep away from moving parts.**
- **Keep bystanders away.**

With tractor running at a low idle, engage the tractor PTO slowly to start the auger. Increase engine RPM (do not exceed 540 RPM PTO speed).

Slowly open the front compartment gate.

Adjust gate until the hopper augers and intake auger can move grain to the main auger without overflowing the hopper.

When the front compartment is empty, close the gate, disengage the PTO and lower engine RPM speed.

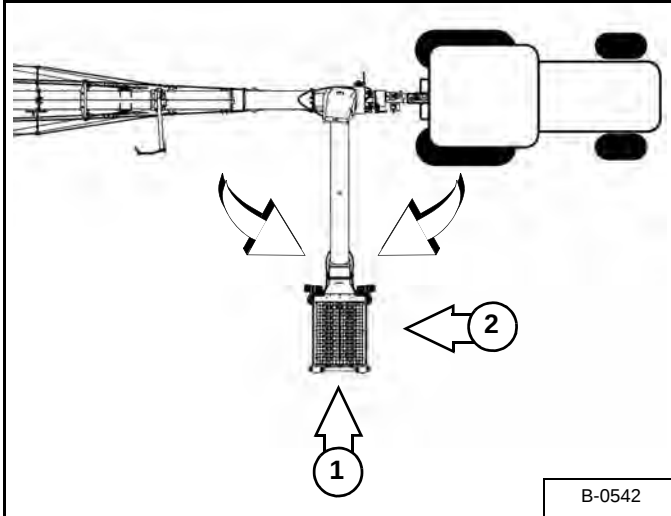
Move the hopper in the desired position away from vehicle traffic.

Disengage the tractor hydraulics and exit the tractor.

Unloading Rear And Side Dump Units

Rear Dump Units

Figure 124



Move the hopper out at a 90° angle from the auger [Figure 124].

Move the rear dump unit into the unloading position at the end of the hopper (Item 1) or on the tractor side of the hopper (Item 2) [Figure 124].

Position the gate of the rear dump unit over the hopper (as close to the center of the hopper as possible).

Stop the rear dump unit and engage the parking brake (if equipped).

With tractor running at a low idle, engage the tractor PTO slowly to start the auger. Increase engine RPM (do not exceed 540 RPM PTO speed).

Slowly open the gate on the rear dump unit.

Adjust gate until the hopper augers and intake auger can move grain to the main auger without overflowing the hopper.

When the unit is empty, close the gate, disengage the PTO and lower engine RPM speed.

Disengage the tractor hydraulics and exit the tractor.

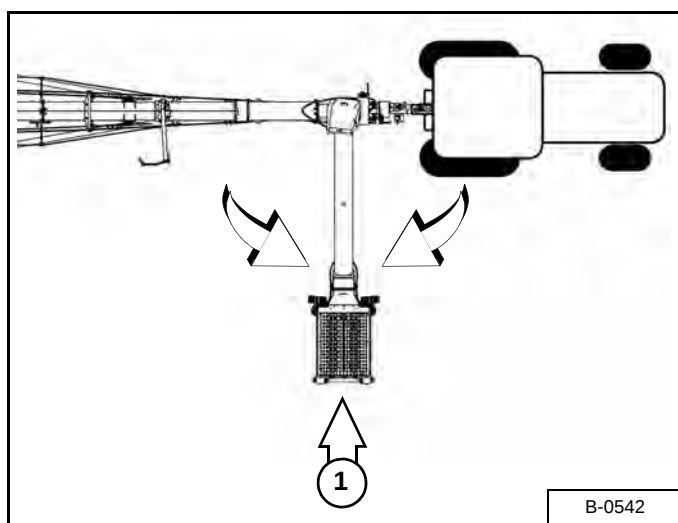
WARNING



- Do NOT exceed 540 RPM PTO.
- Keep PTO shields and all guards in place.
- Keep away from moving parts.
- Keep bystanders away.

Side Dump Units

Figure 125



Move the hopper out at a 90° angle from the auger [Figure 125].

Move the side dump unit into the unloading position at the end of the hopper (Item 1) [Figure 125].

Position the gate of the side dump unit over the hopper (as close to the center of the hopper as possible).

Stop the side dump unit and engage the parking brake (if equipped).

WARNING



- Do NOT exceed 540 RPM PTO.
- Keep PTO shields and all guards in place.
- Keep away from moving parts.
- Keep bystanders away.

With tractor running at a low idle, engage the tractor PTO slowly to start the auger. Increase engine RPM (do not exceed 540 RPM PTO speed).

Slowly open the gate on the side dump unit.

Adjust gate until the hopper augers and intake auger can move grain to the main auger without overflowing the hopper.

When the unit is empty, close the gate, disengage the PTO and lower engine RPM speed.

Disengage the tractor hydraulics and exit the tractor.

**TRANSPORTING
Requirements**



ELECTROCUTION HAZARD

To prevent serious injury or death from electrocution:

- Be aware of overhead power lines.
- Keep away from power lines when transporting or raising auger.
- Electrocution can occur without direct contact.



Use of an unapproved hitch or tractor / tow vehicle can result in loss of control, leading to serious injury or death.

Tractor / tow vehicle and hitch must have the rated capacity to tow equipment.



- Do not operate the unit before reading and understanding the Operator's Manual.
- Make certain everyone is clear of the equipment before applying power or moving the machine.
- To avoid tipping, make sure auger is empty before attempting to move.
- Keep wheels of undercarriage level and on firm ground.
- Lower unit to the recommended transport position before transporting.
- Disconnect PTO driveline from the tractor before moving or transporting.



Never exceed 20 mph (32 kph).



Do not move or transport the auger unless the hopper and intake auger are in the raised / transport position and securely fastened before transporting.

Comply with federal, state, local and provincial laws regarding the transport of farm equipment on public roadways.

Verify that the tractor / tow vehicle are approved for transporting the equipment and that the equipment is securely attached to the tractor / tow vehicle.

Verify safety chain is installed and properly connected before transporting equipment.

Verify that the SMV (Slow Moving Vehicle) emblem, all lights and reflectors are clean and visible.

Always attach a red flag to the end of the auger when transporting on roads.

Disconnect the PTO driveline from the tractor before transporting.

Transporting Guidelines

The ratio of the tractor / tow vehicle weight to the loaded equipment weight plays an important role in defining acceptable travel speed.

TRAVEL SPEED - Acceptable travel speed.

WEIGHT RATIO - Weight of fully equipped or loaded implement(s) relative to weight of tractor / tow vehicle.

TRAVEL SPEED	WEIGHT RATIO
Up to 20 mph (32 kph)	1 to 1 (or less)
Up to 10 mph (16 kph)	2 to 1 (or less)
DO NOT TOW	More than 2 to 1

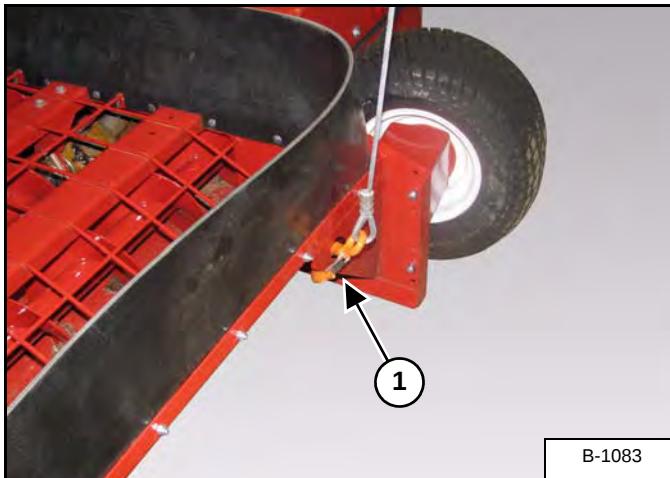
Transporting Procedure

Remove all supports on the discharge end and anchoring from the intake end (if required).

Disconnect the PTO driveline from the tractor. (See "Connecting The PTO Driveline" on page 78.)

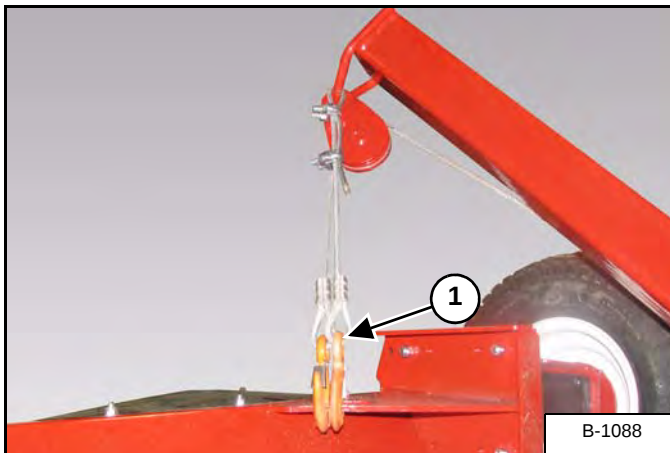
Lower the auger. (See "Lowering The Auger" on page 91.)

Figure 126



Install the hopper lift cable hook (Item 1) [Figure 126].

Figure 127



Using the hand winch, raise the hopper to the transport position.

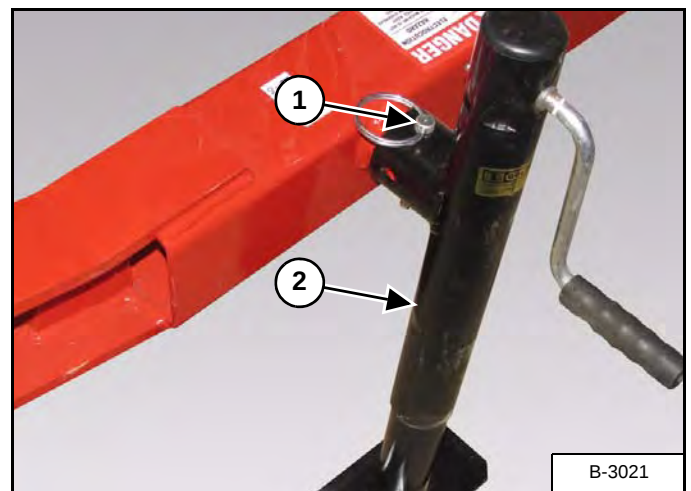
Install the safety chain hook (Item 1) [Figure 127].

Using the hand winch, lower the hopper until the safety chain hook is supporting the weight of the hopper.



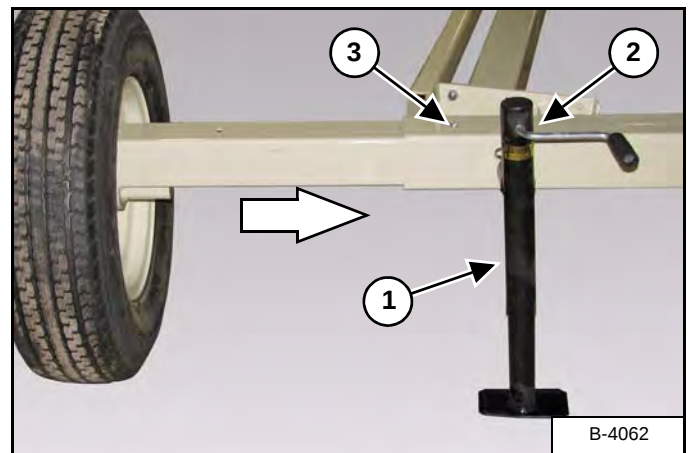
The weight of the hopper and intake auger assembly must be supported by the transport cable, whenever the auger is moved.

Figure 128



Remove retaining pin (Item 1) and remove jack (Item 2) [Figure 128] from the auger hitch.

Figure 129



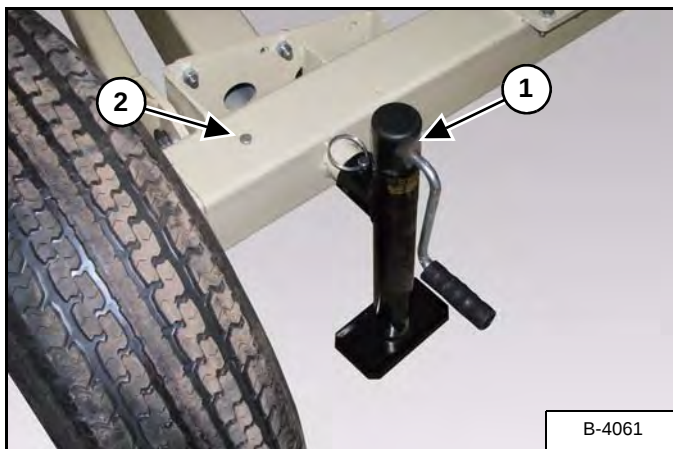
Install the jack (Item 1) onto the axle weldment. Install retaining pin (Item 2) [Figure 129].

Remove axle extension pin (Item 3) [Figure 129].

! IMPORTANT

The base of the jack should be fully supported and on a solid level surface. When working on soft surfaces, put a sturdy metal plate under the base of the jack for stability.

Figure 130



Using the handle of the jack (Item 1) **[Figure 130]**, raise the axle until the tire is off the ground.

Slide the axle extension **[Figure 130]** into the axle weldment.

Align holes of the axle extension and axle weldment. Install axle extension pin (Item 2) **[Figure 130]**.

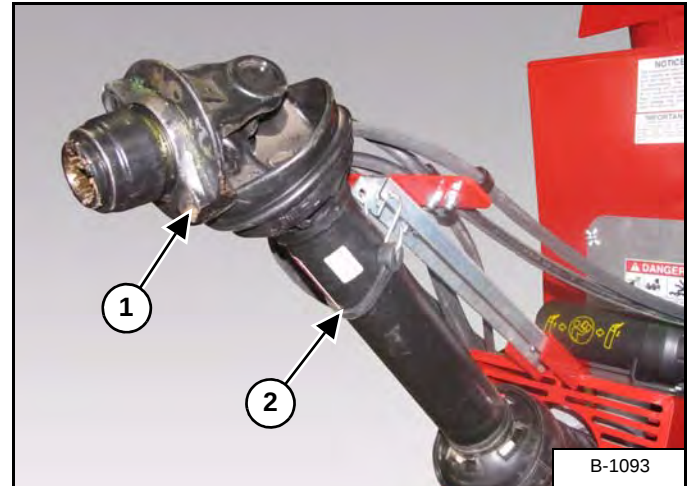
Lower the jack / axle until the tire is on the ground.

Remove jack and install on the opposite side of the axle weldment. Repeat procedure for opposite axle extension.

Remove jack and re-install on the auger hitch.

Disconnect all hydraulic lines from the tractor. (See "To Disconnect:" on page 82.)

Figure 131



Verify the PTO driveline (Item 1) is secured in the transport position with the rubber strap (Item 2) **[Figure 131]**.

MAINTENANCE

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Farm King



TROUBLESHOOTING

Chart



Instructions are necessary before operating or servicing equipment. Read and understand the Operator And Parts Manual and safety signs (decals) on equipment. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

NOTE: If a problem is encountered that is difficult to solve, even after having read through this troubleshooting section, please call your local distributor, dealer or factory. Before you call, please have this Operator And Parts Manual and the serial number of your machine at hand.

PROBLEM	CAUSE	CORRECTION
Excessive auger vibration.	Improper break-in of the auger.	Inspect flighting and / or tube. Replace flighting and / or tube if damaged.
	Running auger empty.	Inspect flighting and / or tube. Replace flighting and / or tube if damaged.
	Bent auger flighting.	Remove the flighting from the tube and inspect for straightness. Straighten the flighting and re-install.
	Improper PTO speed.	Operate the auger at 540 RPM PTO speed. Adjust speed as required.
Excessive shear bolt failure.	Starting or stopping the auger at maximum PTO speed.	Start and stop the auger at reduced PTO speed (approximately 270 RPM).
	Reduced PTO speed when full feeding the intake hopper.	Increase the PTO speed or reduce feed rate.
	Overloading the intake hopper.	Avoid overloading and force-feeding of the hopper.
	Starting the auger under load.	Empty auger completely before stopping.
	Wet grain.	Reduce the rate of flow into the intake hopper.
Plugging the auger.	Reduced PTO speed when full feeding the intake hopper.	Avoid overloading and force-feeding of the hopper.
	Overloading the intake hopper.	Avoid overloading and force-feeding of the hopper.
	Foreign objects in the auger.	Remove foreign objects from flighting and tube.
	Wet grain.	Reduce the rate of flow into the intake hopper.
	Snow or ice in grain.	Reduce the rate of flow into the intake hopper.

SERVICE SCHEDULE

Maintenance Intervals

Maintenance work must be done at regular intervals. Failure to do so will result in excessive wear and early failures. The service schedule is a guide for correct maintenance of the Backsaver Auger.



WARNING

Instructions are necessary before operating or servicing equipment. Read and understand the Operator and Parts Manual and safety signs (decals) on equipment. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

#	DESCRIPTION	SERVICE PROCEDURES						
		Check	Clean	Lube	Change	Adjust	Drain	Locations
Daily Maintenance (or every 8 hours)								
1	CV Joints, U-Joints and Bearings			•				
2	PTO Driveline			•				
3	Universal Joint (Front)			•				
4	Lower & Upper Lift Arm Pivots			•				
5	Hopper Drive Shaft & U-Joints			•				
6	Intake Auger Shaft & U-Joints			•				
7	Dual Auger Hopper Drive Chains			•				
Weekly (or every 50 hours)								
8	Lower Intake Auger Gearbox Oil Level	•						
9	Upper Intake Auger Gearbox Oil Level	•						
10	Main Gearbox	•						
11	Wheel Lug Nut Torque	•						
12	Winch Cable	•						
13	Bridging Cable Tension	•						
Semi-Annually (or every 250 hours)								
14	Bridging Cables	•	•			•		
15	Backsaver Auger		•					
Annually (or every 500 hours)								
16	Lower Intake Auger Gearbox Oil				•			
17	Upper Intake Auger Gearbox Oil				•			
18	Main Gearbox				•			
19	Main Tubes	•						

LUBRICATION

Recommendations

Always use a good quality multi-purpose / lithium base grease when lubricating the equipment.

! IMPORTANT

Do not over-grease bearings. Greasing too often can damage seals and lead to premature bearing failure.

- Always use a hand-held grease gun.
- Clean fitting before greasing, to avoid injecting dirt and grit.
- Replace and repair broken fittings immediately.
- If fittings will not take grease, remove and clean thoroughly. Replace fitting if necessary.

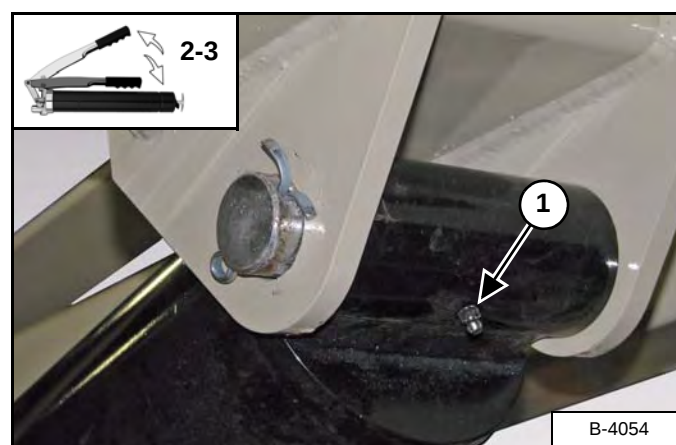
Locations

! IMPORTANT

Fluid such as engine oil, hydraulic fluid, coolants, grease, etc. must be disposed of 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.

Lubricate the following grease locations EVERY 8 HOURS:

Figure 132

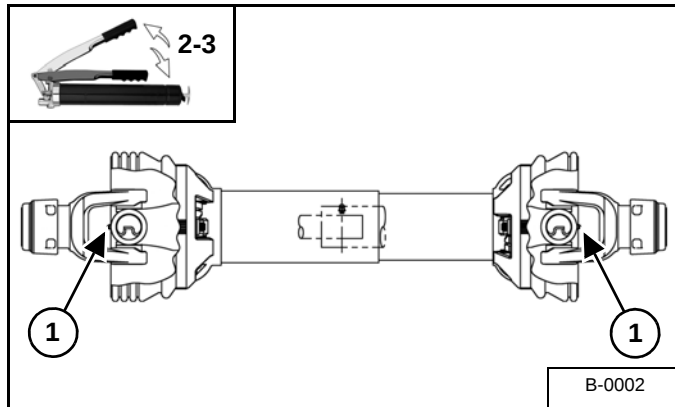


Apply two - three pumps of grease to the base end of the lift cylinder (Item 1) **[Figure 132]**.

Lubricate the following grease locations EVERY 50 HOURS:

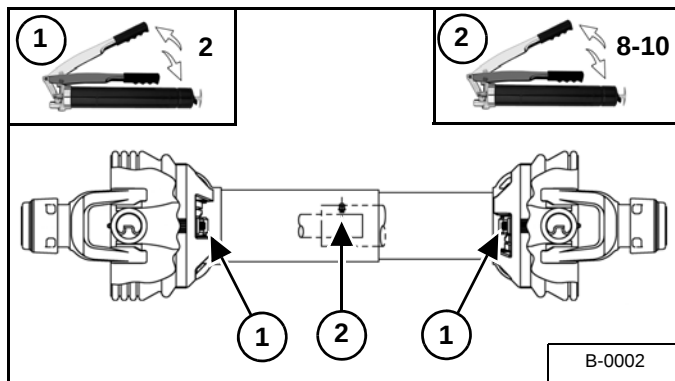
NOTE: The PTO shaft is equipped with extended life bearings. Do not over-grease.

Figure 133



Apply two - three pumps of grease to the cross and bearings (Item 1) [Figure 133] on the PTO driveline.

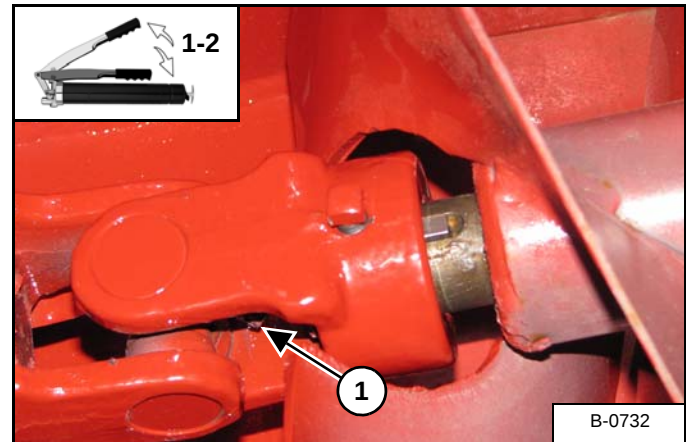
Figure 134



Apply two pumps of grease to the guard bushings (Item 1) [Figure 134].

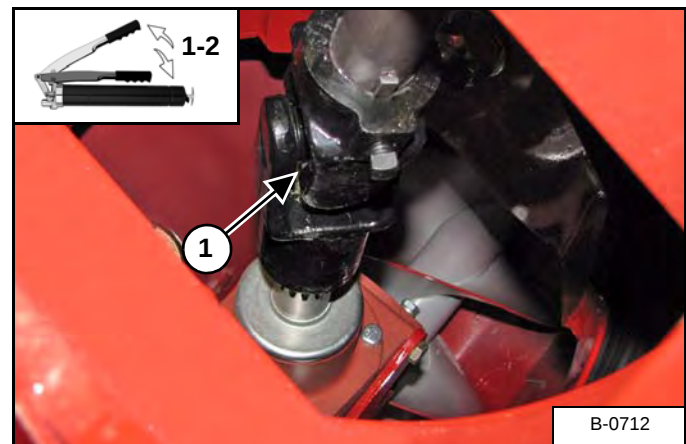
Apply eight - ten pumps of grease to the telescoping member (Item 2) [Figure 134].

Figure 135

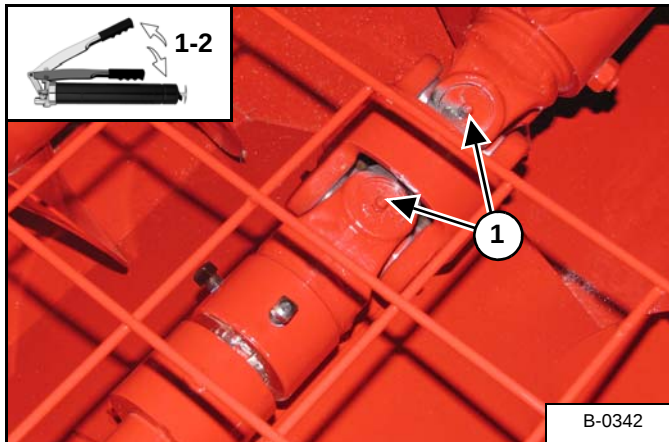


Apply 1-2 pumps of grease to the universal joint (Item 1) [Figure 135] on the hopper auger drive shaft.

Figure 136

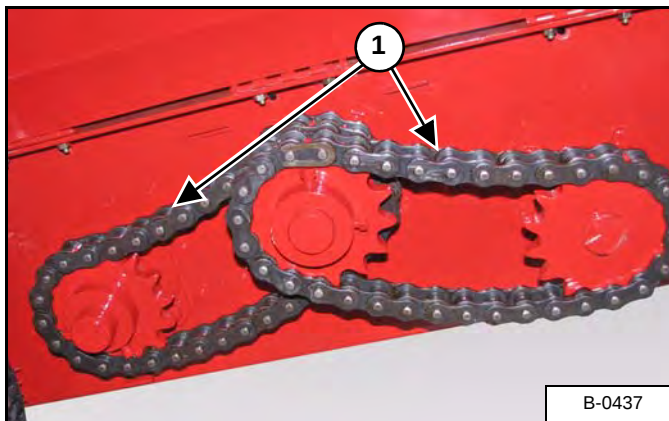


Apply 1-2 pumps of grease to the intake drive shaft side (Item 1) [Figure 136].

Figure 137


Apply 1-2 pumps of grease to the intake hopper drive shaft (Item 1) **[Figure 137]**.

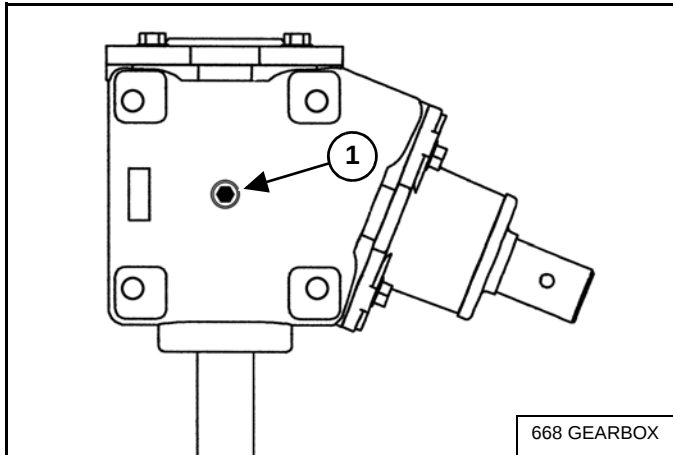
Hopper Dual Auger Drive Chains

Figure 138


Apply oil to the dual auger drive chains (Item 1) **[Figure 138]** daily or every eight hours.

Upper Gearbox (SZ0160100)

Figure 139



Check the gearbox oil level every 50 hours or weekly.

Remove the fill / drain plug (Item 1) **[Figure 139]** from the gearbox. Oil level should be at the bottom of the plug hole.

If the oil level is low, add SAE 80W-90 gear oil until the oil is at the bottom of the hole.

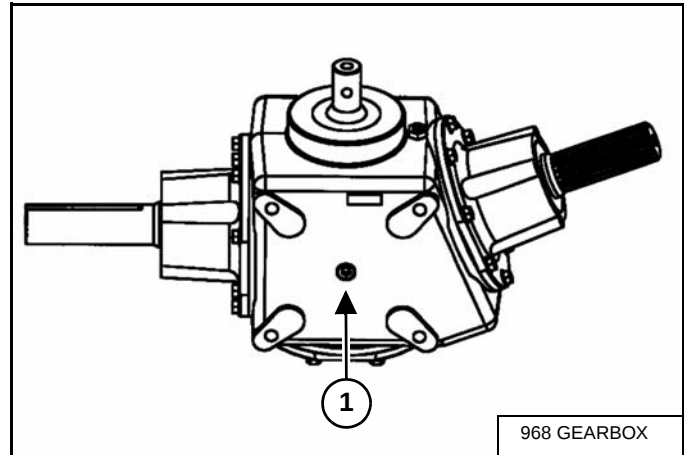
Changing Gear Oil

Remove the fill / drain plug (Item 1) **[Figure 139]** and siphon all the gear oil from the gearbox.

Fill with SAE 90 gear oil (18 oz. capacity) to the bottom of the plug hole. Install fill / side plug.

Lower Gearbox (SZ0160112)

Figure 140



Check the gearbox oil level every 50 hours or weekly.

Remove the fill / drain plug (Item 1) **[Figure 140]** from the gearbox. Oil level should be at the bottom of the plug hole.

If the oil level is low, add SAE 80W-90 synthetic gear oil until the oil is at the bottom of the hole.

Changing Gear Oil

Remove the fill / drain plug (Item 1) **[Figure 140]** and siphon all the gear oil from the gearbox.

Fill with SAE 80W-90 synthetic gear oil (192 oz. capacity) to the bottom of the plug hole. Install fill / side plug.

Cleaning And Inspection

NOTE: Inspect the driveline components, replace all damaged or worn components.

Use solvent to clean the shaft and tube. Use compressed air to dry and remove excess solvent from the parts.

Apply a light coat of grease to the shaft and the tube end.

Use solvent to clean the slide collars, yokes, crosses and bearings. Use compressed air to dry the parts.

Apply a light coat of grease to the inside of the slide collars.

AXLE

Wheel Bolt Torque

Check the torque on wheel bolts daily. Tighten wheel bolts to 80 - 100 ft•lb (108 - 135 N•m) torque.

Tire / Wheel Replacement

Empty the Backsaver Auger (if required).



WARNING

AVOID INJURY OR DEATH

Before you leave the operator's position:

- Always park on a flat level surface.
- Place all controls in NEUTRAL.
- Engage the park brake.
- Stop the engine and remove the key.
- Wait for all moving parts to stop.

Park the tractor / equipment on a flat level surface.

Place all controls in neutral, engage the park brake, stop the engine and wait for all moving parts to stop. Leave the operator's position.



WARNING

AVOID INJURY OR DEATH

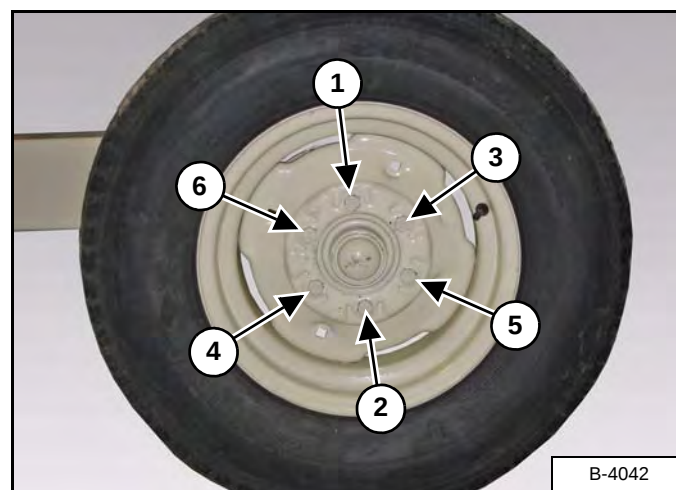
- The parking brake must be engaged before leaving the operator's position. Rollaway can occur because the transmission may not prevent machine movement.
- Always chock tires before performing any maintenance or service.

Place chock blocks behind and in front of the auger tire(s).

Place a jack under the axle frame on the side the wheel is to be replaced. Raise the jack until the wheel is slightly off the ground.

NOTE: Place blocks under the frame to help secure the auger when wheel is raised off the ground.

Figure 141



Remove the wheel bolts and tire from the hub.

Install the new tire with the valve stem facing out (both sides). Install the six wheel bolts (both sides) [Figure 141].

Tighten wheel bolts in a criss-cross pattern [Figure 141]. Tighten wheel bolts to 80 - 100 ft•lb (108 - 135 N•m) of torque.

BRIDGING CABLES

Cable Inspection

! IMPORTANT

Always wear the proper hand and eye protection when servicing the equipment.

Regularly check the tightness of all cable clamps to avoid slipping. Inspect cables regularly for damage, wear or corrosion.

Cable inspections should be done at the beginning of operation and directly after the auger has been towed or transported.

Use a piece of cloth or rag to slide across the cables to locate broken or frayed wires. Replace cables as needed.

Lubricating

To prevent damage by corrosion, the cables should be kept well lubricated.

Cleaning

Periodic cleaning of cables by using a stiff brush and kerosene or with compressed air or live steam and re-lubricating will help to lengthen cable life and reduce abrasion and wear on sheaves and drums.

Bridging Cables

! WARNING



AVOID INJURY OR DEATH

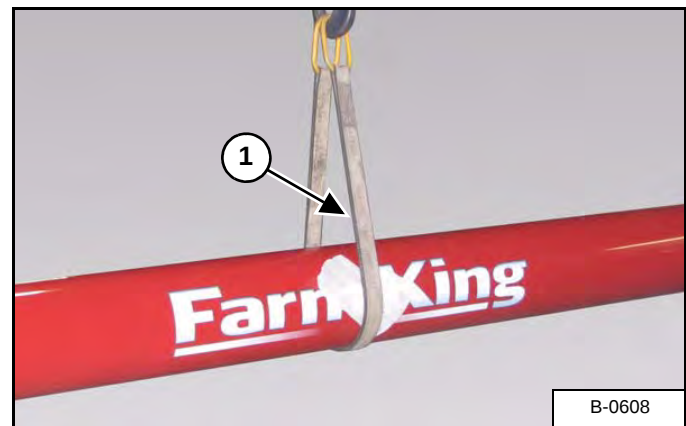
Before servicing bridging cables:

- Always park on a flat level surface.
- Fully lower the main auger into the transport position.
- Disconnect the PTO driveline.
- Support the main auger tube with an approved lifting device.
- Chock tires.

! IMPORTANT

Completely unload auger before adjusting bridging cables.

Figure 142

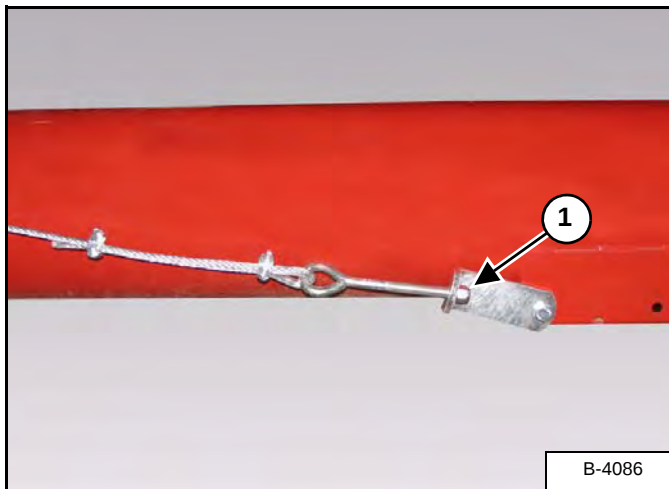


Install a strap (Item 1) [Figure 142] around the tube.

Connect the strap to an approved lifting device.

Raise the lifting device, until tight, to support the auger tube(s).

Figure 143



Loosen all cable clamps along the cable being tightened.
Raise the intake end of the tube assembly approximately three feet off the ground.

NOTE: If the nut is fully tightened and bottoms out against the eye of the adjustment bolt, the cable will need to be loosened and additional adjustments will be made on the opposite end of the cable.

Look down the tube to see how straight the tubes are.

Tightening The Long Cable

The discharge end should bow up about 3" to 4" from bottom of tube to the ground.

Tighten long cable eyebolts (Item 1) [Figure 143] first. Once cables are tight, tighten both sides three additional revolutions with the impact wrench and socket.

After adjusting the cable(s), tighten all cable clamps along the cable(s).

Tightening The Short Cables

Tighten short cables just enough to take the slack out. Lower the intake end of the tube to the ground.

Stand behind the drive section and look down the full length of the tubes and check to see how straight the tubes are and how much the discharge end bows up.

Repeat cable tightening procedure (if needed).

After adjusting the cable(s), tighten all cable clamps along the cable(s).

SAFETY SIGN (DECAL) INSTALLATION

Procedure



When replacing safety signs (decals), the temperature must be above 10° C (50° F).

- Remove all portions of the damaged safety sign (decal).
- Thoroughly clean the area with glass cleaner. Removing all adhesive residue.
- Allow the area to dry completely before installing the new safety sign (decal).
- Position the safety sign (decal) in the correct location. Remove a small portion of the backing paper on the safety sign (decal).
- Press on the safety sign (decal) where the backing paper has been removed.
- Slowly remove the remaining backing paper, pressing on the safety sign (decal) as the backing paper is removed.
- Using the backing paper, pressing firmly, move the backing paper over the entire safety sign (decal) area.

NOTE: Small air pockets can be pierced with a pin and smoothed out using the piece of the backing paper.

STORAGE AND RETURN TO SERVICE**Storage**

Sometimes it may be necessary to store your Farm King Backsaver Auger for an extended period of time. Below is a list of items to perform before storage.

**IMPORTANT**

DO NOT permit children to play on or around the stored machine.

Return To Service

After the Farm King Backsaver Auger has been in storage, it is necessary to follow a list of items to return the equipment to service.

- Be sure all shields and guards are in place.
- Lubricate the equipment.
- Connect to a tractor and operate equipment, verify all functions operate correctly.
- Check for leaks. Repair as needed.

- Thoroughly clean the equipment.
- Lubricate the equipment.
- Inspect the hitch and all welds on the equipment for wear and damage.
- Check for loose hardware, missing guards, or damaged parts.
- Check for damaged or missing safety signs (decals). Replace if necessary.
- Replace worn or damaged parts.
- Touch up all paint nicks and scratches to prevent rusting.
- Check the tightness of all cable clamps to avoid slipping.
- Inspect the cables for wear or corrosion. Replace if worn.
- Lubricate the cables.
- If stored outside, lower the auger to its lowest position and block the wheels so the auger will not move.
- Place the equipment flat on the ground.

PARTS IDENTIFICATION

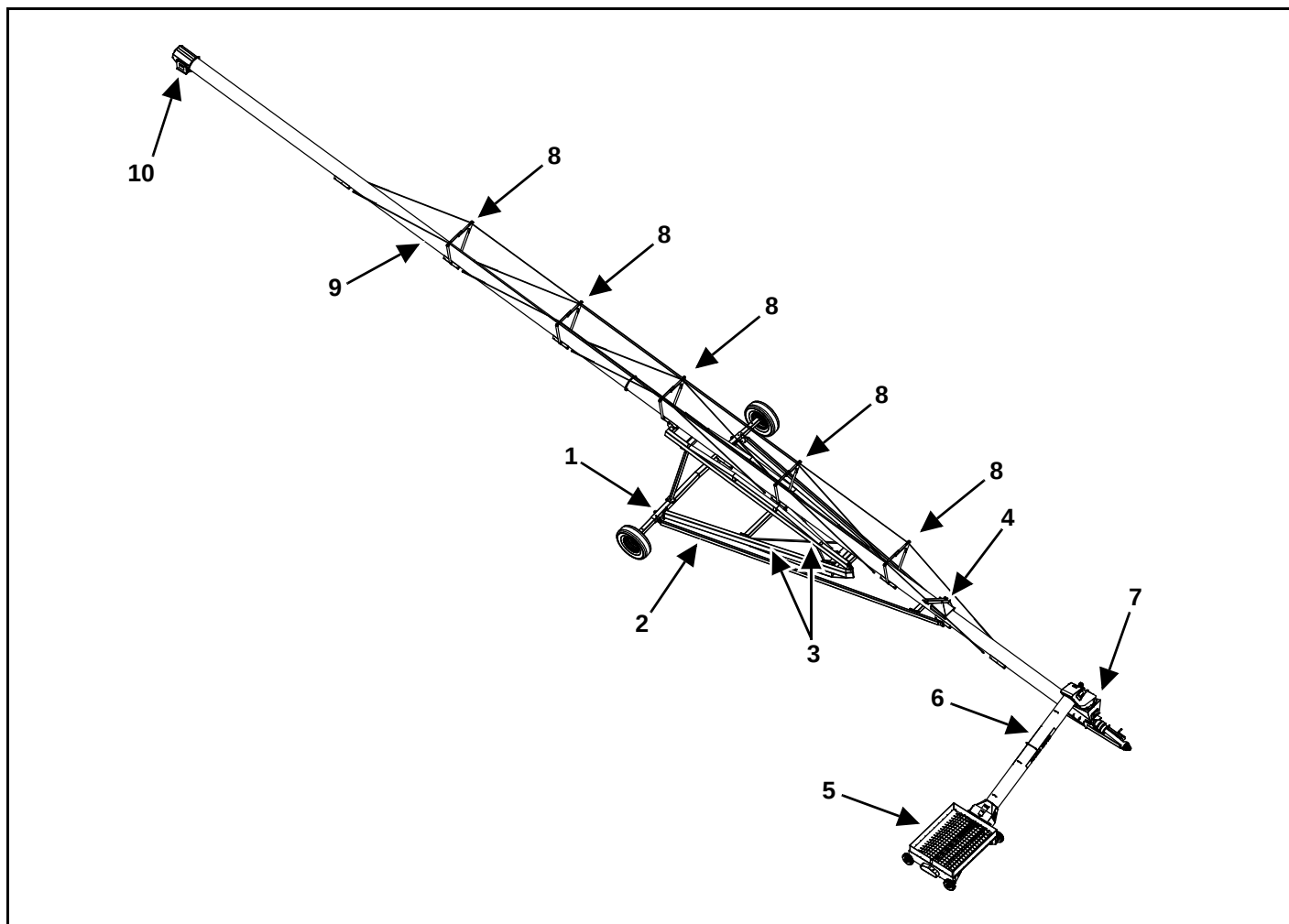
GENERAL PARTS IDENTIFICATION INFORMATION	113
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UPPER GEARBOX SZ160100	116
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1282 & 1292 PTO DRIVELINE (SZ0165541)	139
12" AXLE SPINDLE ASSEMBLY	140

Farm King



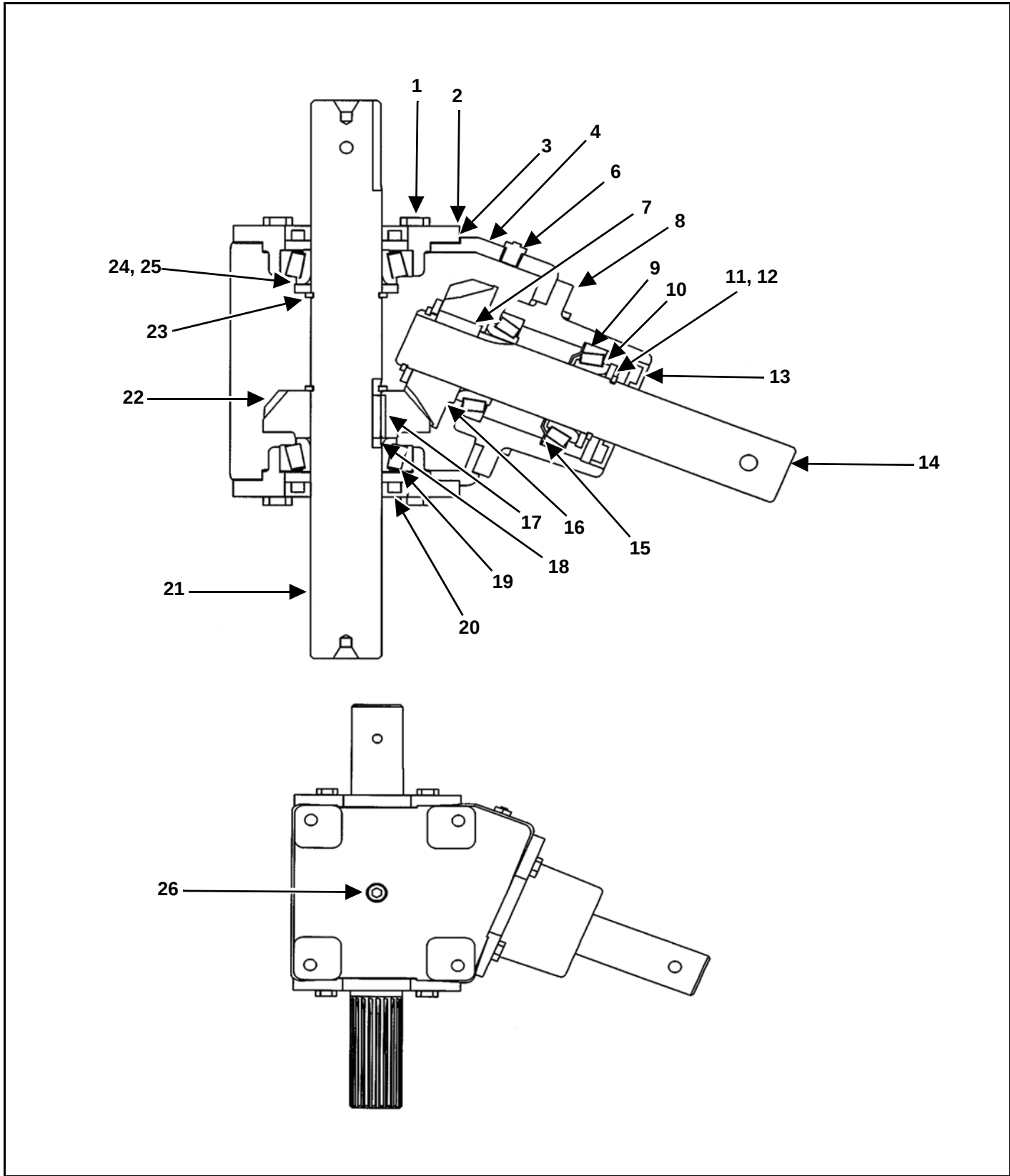
GENERAL PARTS IDENTIFICATION INFORMATION

The parts identification section list descriptions, part numbers and quantities for all 12" Backsaver Augers. Contact your Farm King dealer for additional 12" Backsaver Auger parts information.

12" BACKSAVER AUGER
Components


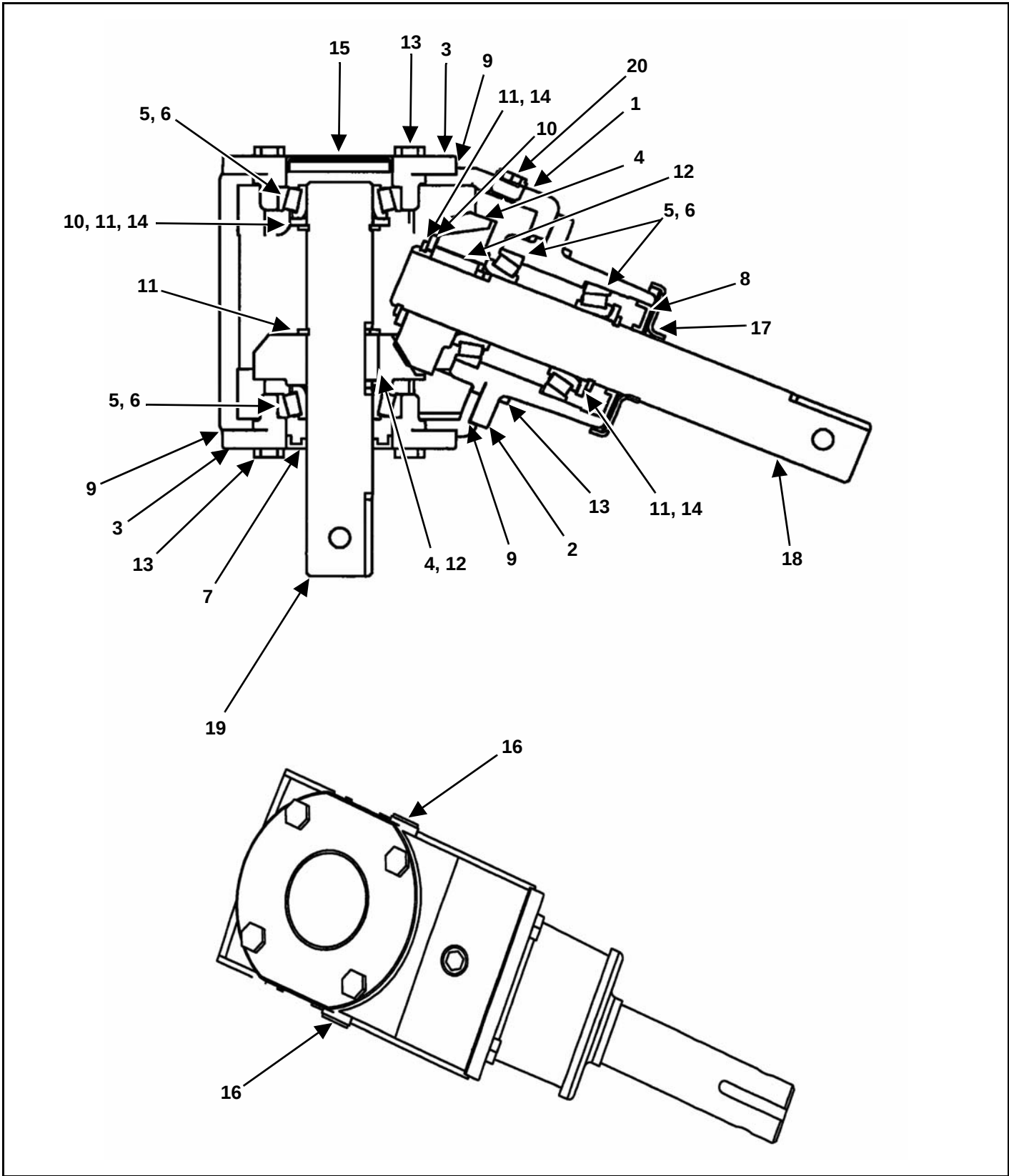
ITEM	DESCRIPTION
1	AXLE
2	UNDERCARRIAGE
3	LIFT ARMS
4	BOOM
5	HOPPER
6	INTAKE AUGER
7	INPUT BOX
8	BRIDGING
9	MAIN AUGER
10	DISCHARGE SPOUT

LOWER GEARBOX SZ0160112



ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ126046	5/16-18UNC x 3/4" HHCS, G5	12
2	SZPG-4110	COVER	2
3	SZPG-1503	SHIM, 0.010	2
	SZPG-1502	SHIM, 0.0075	2
	SZPG-1501	SHIM, 0.005	2
4	N/A	CASE, 68 DEGREE	1
5	SZPG-1537	SHIM, 0.007 x 1.25 I.D.	1
6	SZPG-1853	VENT, 1/8 NPT, 5 PSI	1
7	SZPG-1650	KEY, 1/4 SQ x 7/8"	1
8	SZPG-1192	QUILL	1
9	SZ100126	BEARING CUP, (LM67010)	2
10	SZ100125	BEARING CONE, (LM67048)	2
11	SZPG-1805	WASHER, 1-1/4"	2
12	SZPG-1600	SNAP RING, 1-1/4"	2
13	SZ8742128904	SEAL	1
14	SZPG-5258	QUILL SHAFT	1
15	SZPG-2816	GREASE WASHER	1
16	SZPG-1246	GEAR, 68 DEGREE, 1-1/4"	1
17	SZPG-1665	KEY, 5/16 SQ x 7/8	1
18	SZ100151	BEARING CONE, (LM48548)	2
19	SZ100152	BEARING CUP, (LM48510)	2
20	SZPG-1480	SEAL	2
21	SZPG-5263	THRU SHAFT	1
22	SZPG-1296	GEAR, 68 DEGREE, 1-3/8"	1
23	SZPG-1614	SNAP RING, 1-3/8"	2
24	SZPG-1824	WASHER, 1-3/8"	1
25	SZPG-1534	SHIM, 0.007 x 1.375 I.D.	1
26	SZPG-1850	PLUG, 1/4 NPT	2

UPPER GEARBOX SZ160100



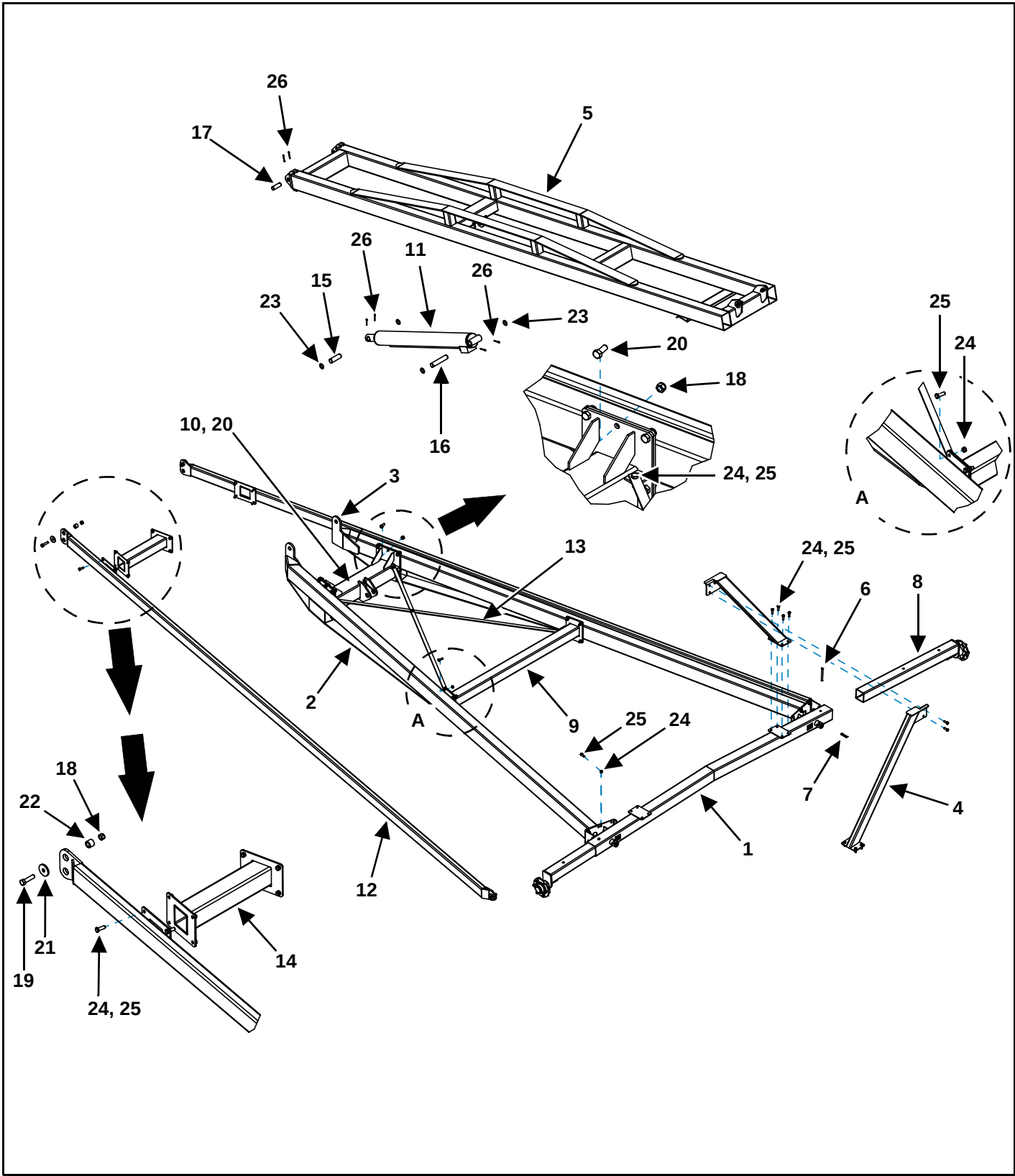
ITEM	PART NUMBER	DESCRIPTION	QTY
1	N/A	CASE, 68 DEGREE	1
2	SZPG-1192	QUILL	1
3	SZPG-1193	COVER, OPEN	2
4	SZPG-1246	GEAR, 19T, 1-1/4"	2
5	SZ100125	BEARING CONE, (LM67048)	4
6	SZ100126	BEARING CUP, (LM67010)	4
7	SZPG-1471	SEAL, 1.25 - 2.00	1
8	SZ8742128904	SEAL, 1.25 - 2.375	1
9	SZPG-1502	SHIM, COVER	3
10	SZPG-1537	SHIM, 1.25 - 0.007	2
11	SZPG-1600	SNAP RING, SH-125	4
12	SZPG-1650	KEY, 1/4" SQ	2
13	SZ126046	5/16-18 UNC x 3/4" HHCS	12
14	SZPG-1805	WASHER, 1.250 - 0.134	3
15	SZPG-1855	END CAP PLUG, 2.00	1
16	SZPG-1872	PIPE PLUG, 3/8" NPT	2
17	SZPG-2809-1	SHIELD, 1.25	1
18	SZPG-5161	QUILL SHAFT	1
19	SZPG-5162	CROSS SHAFT	1
20	N/A	PIPE PLUG, 1/8" NPT	1

This diagram is an exploded perspective view of a mechanical assembly. The main components are labeled with numbers 1 through 23. The assembly includes a main frame (1) with a handle (5) and a lever (2). A bracket (3) is attached to the frame. A dashed circle 'A' highlights a specific joint area. The diagram shows the assembly sequence with arrows indicating the direction of movement for each part. The parts are labeled as follows:

- 1: Main frame
- 2: Lever
- 3: Bracket
- 4: Support arm
- 5: Handle
- 6: Base plate
- 7, 22: Fasteners
- 8: Rod
- 9: Joint
- 10: Base plate
- 11: Fasteners
- 12: Fastener
- 13: Fastener
- 14: Fastener
- 15: Fasteners
- 16: Fastener
- 17: Fastener
- 18: Fastener
- 19: Fastener
- 20, 22: Fasteners
- 21, 23: Fasteners

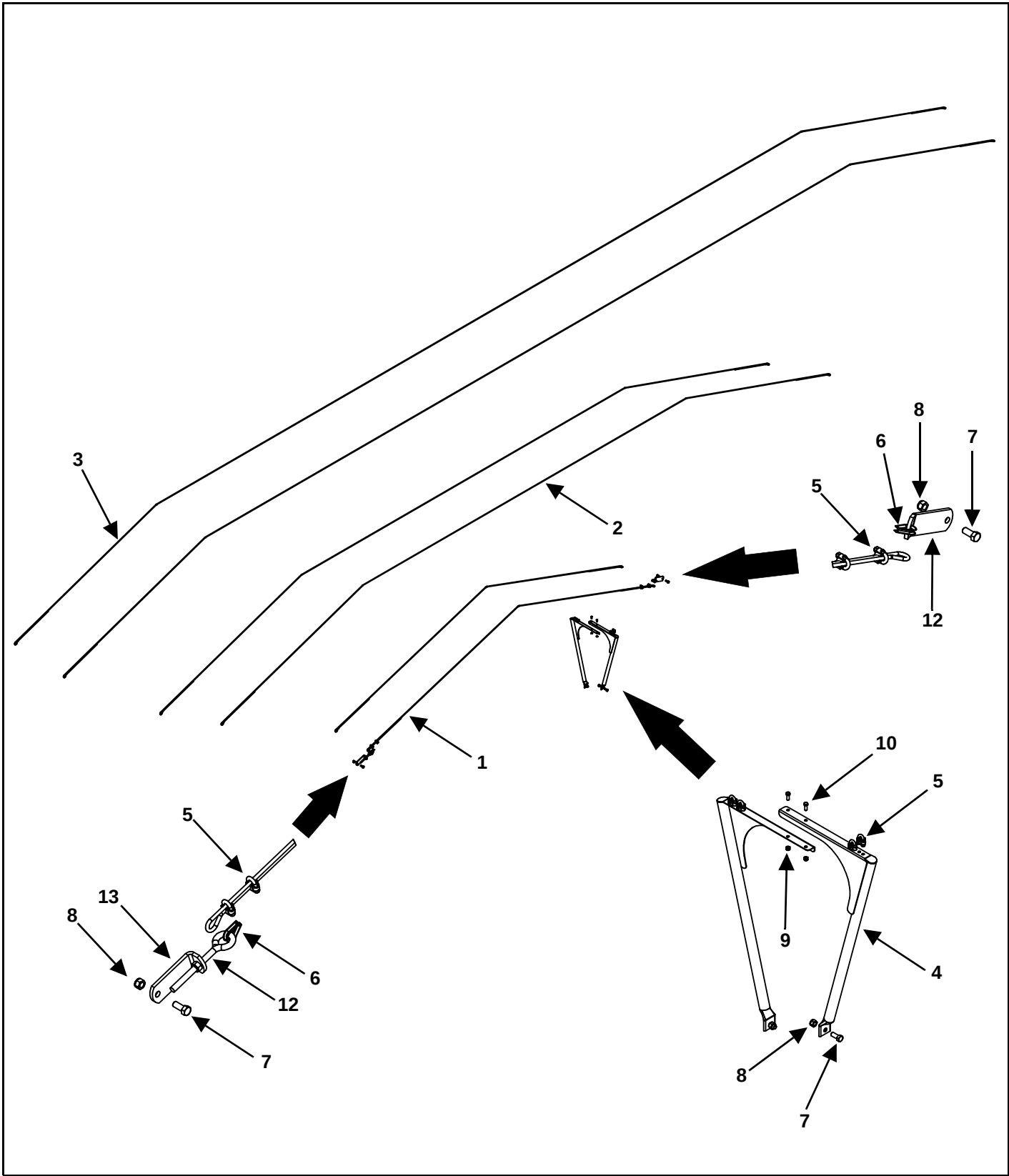
ITEM	PART NUMBER	DESCRIPTION	QUANTITIES	
			1262	1272
1	SZ102851	62' & 72' AXLE, SW, WELDMENT	1	1
2	SZ102846	HOIST HALF REST, WELDMENT,	2	2
3	SZ102859	62' RH LOWER ARM, WELDMENT	1	-
	SZ102855	72' RH LOWER ARM, WELDMENT	-	1
4	SZ102860	62' LH LOWER ARM, WELDMENT	1	-
	SZ102856	72' LH LOWER ARM, WELDMENT	-	1
5	SZ102873	62' TOP ARM, WELDMENT	1	-
	SZ102874	72' TOP ARM, WELDMENT	-	1
6	SZ9902563	62' & 72' HOIST CROSS BAR, WELDMENT	1	1
7	SZ102850	WELDMENT, BRACE, CROSS MEMBER	1	1
8	SZ2122148	4 x 48 CYL W/CHECK VALVE	1	1
9	SZ9902564	62' & 72' X-BRACE BAR	2	2
10	SZ102886	FRONT ARM, WELDMENT	2	2
11	SZ9902562	62' & 72' FRONT ARM CROSS BAR, WELDMENT	1	1
12	SZ9901881	HYD HOIST PIVOT PIN, 3-3/4"	2	2
13	SZ9901883	HYD HOIST CYLINDER PIN, 4-7/8"	1	1
14	SZ9901882	PIN, LIFT, CYL, PIVOT	1	1
15	SZ6001420	PIN COTTER, 1/4" x 2"	8	8
16	SZ0231250	WASHER FLAT, 1-1/4 1-7/8 10GA	4	4
17	SZ9902558	PIVOT BUSHING	6	6
18	SZ9902505	WASHER FLAT, 0.635 ID 2.25 OD 0.25" PLATED	6	6
19	SZ126115	BOLT, HHCS, 5/8-11UNC x 2-1/2" G5	6	6
20	SZ125036	LOCK NUT, 5/8"-11UNC	20	20
21	SZ125032	LOCK NUT, 1/2"-13UNC NYLOCK	39	39
22	SZ126113	BOLT, HHCS, 5/8-11UNC x 1-1/2" G5	14	14
23	SZ126092	BOLT, HHCS, 1/2-13UNC x 1-1/2" G5	31	31

1282 & 1292 UNDERCARRIAGE ASSEMBLY



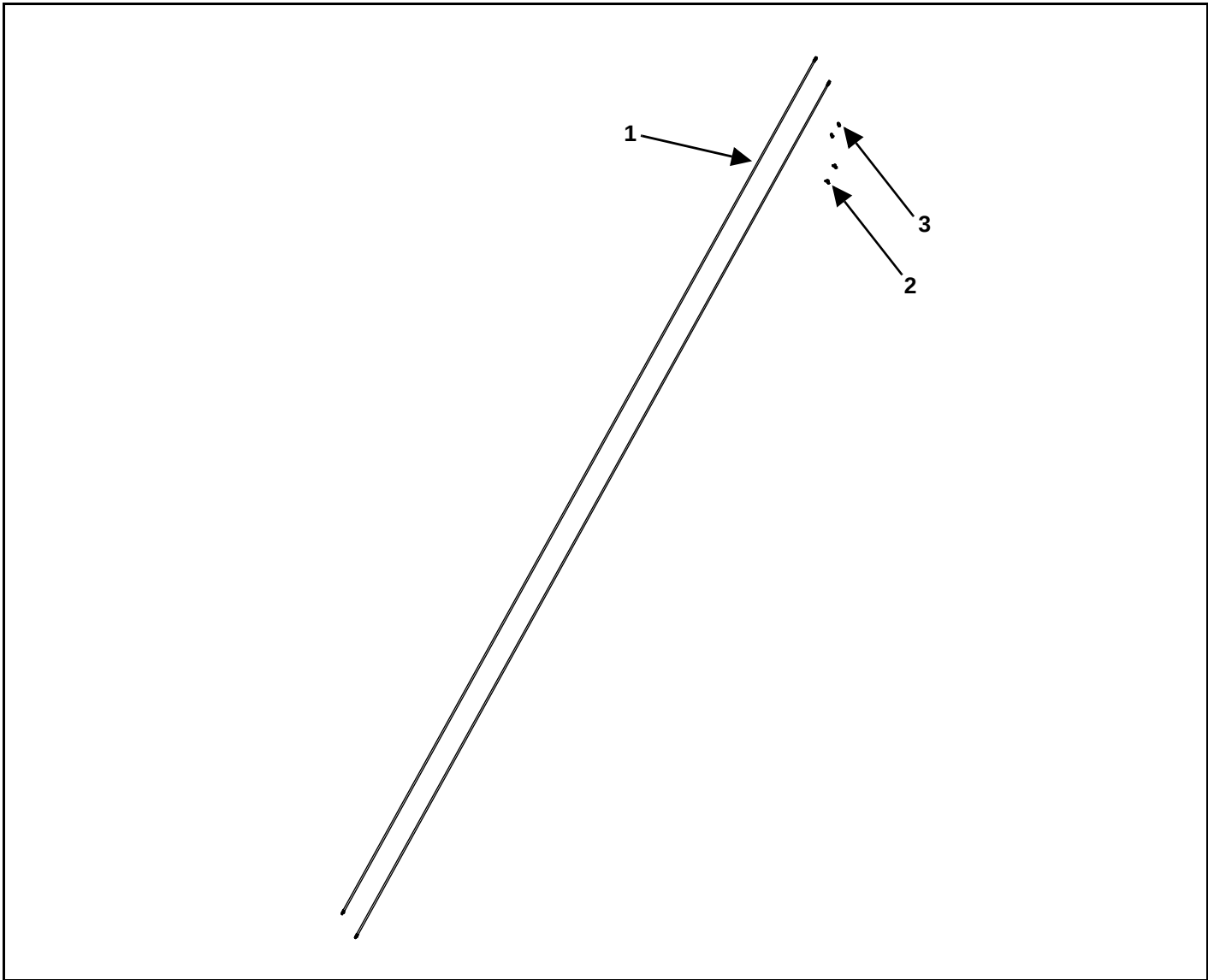
ITEM	PART NUMBER	DESCRIPTION	QUANTITIES	
			1282	1292
1	SZ102829	82' & 92' AXLE, SW, WELDMENT	1	1
2	SZ102836	82' RH LOWER ARM, WELDMENT	1	-
	SZ102830	92' RH LOWER ARM, WELDMENT	-	1
3	SZ102837	82' LH LOWER ARM, WELDMENT	1	-
	SZ102831	92' LH LOWER ARM, WELDMENT	-	1
4	SZ102846	HOIST HALF REST, WELDMENT	2	2
5	SZ102875	82' TOP ARM, WELDMENT	1	-
	SZ102872	92' TOP ARM, WELDMENT	-	1
6	SZ128011	PIN CLEVIS, 1/2" x 5"	2	2
7	SZ128018	PIN HAIR, 1/8"	2	2
8	SZ9901949	82' & 92' EXTENDABLE AXLE	2	2
9	SZ9902552	82' & 92' HOIST CROSS BAR, WELDMENT	1	1
10	SZ9901959	82' & 92' CROSS MEMBER, WELDMENT	1	1
11	SZ102398	CYLINDER 2.5" X 58.75"	1	1
12	SZ102871	82' & 92' LOWER FRONT ARM, WELDMENT	2	2
13	SZ9902557	X-BRACE BAR	2	2
14	SZ102880	82' & 92' UNDERCARRIAGE X-BRACE, WELDMENT	1	1
15	SZ100003	PIN, CYLINDER, ROD END	1	1
16	SZ100002	PIN, CYLINDER	1	1
17	SZ9901881	HYD HOIST PIVOT PIN, 3-3/4"	2	2
18	SZ125036	LOCK NUT, 5/8"-11UNC	20	20
19	SZ126115	BOLT, HHCS, 5/8-11UNC x 2-1/2" G5	6	6
20	SZ126113	BOLT, HHCS, 5/8-11UNC x 1-1/2" G5	14	14
21	SZ9902505	WASHER FLAT, 0.635 ID 2.25 OD 0.25" PLATED	6	6
22	SZ9902558	PIVOT BUSHING	6	6
23	SZ0231250	WASHER FLAT, 1-1/4 1-7/8 10GA	4	4
24	SZ125032	LOCK NUT, 1/2"-13UNC NYLOCK	39	39
25	SZ126092	BOLT, HHCS, 1/2-13UNC x 1-1/2" G5	39	39
26	SZ6001420	PIN COTTER 1/4" x 2"	8	8

CABLE TRUSSING ASSEMBLY

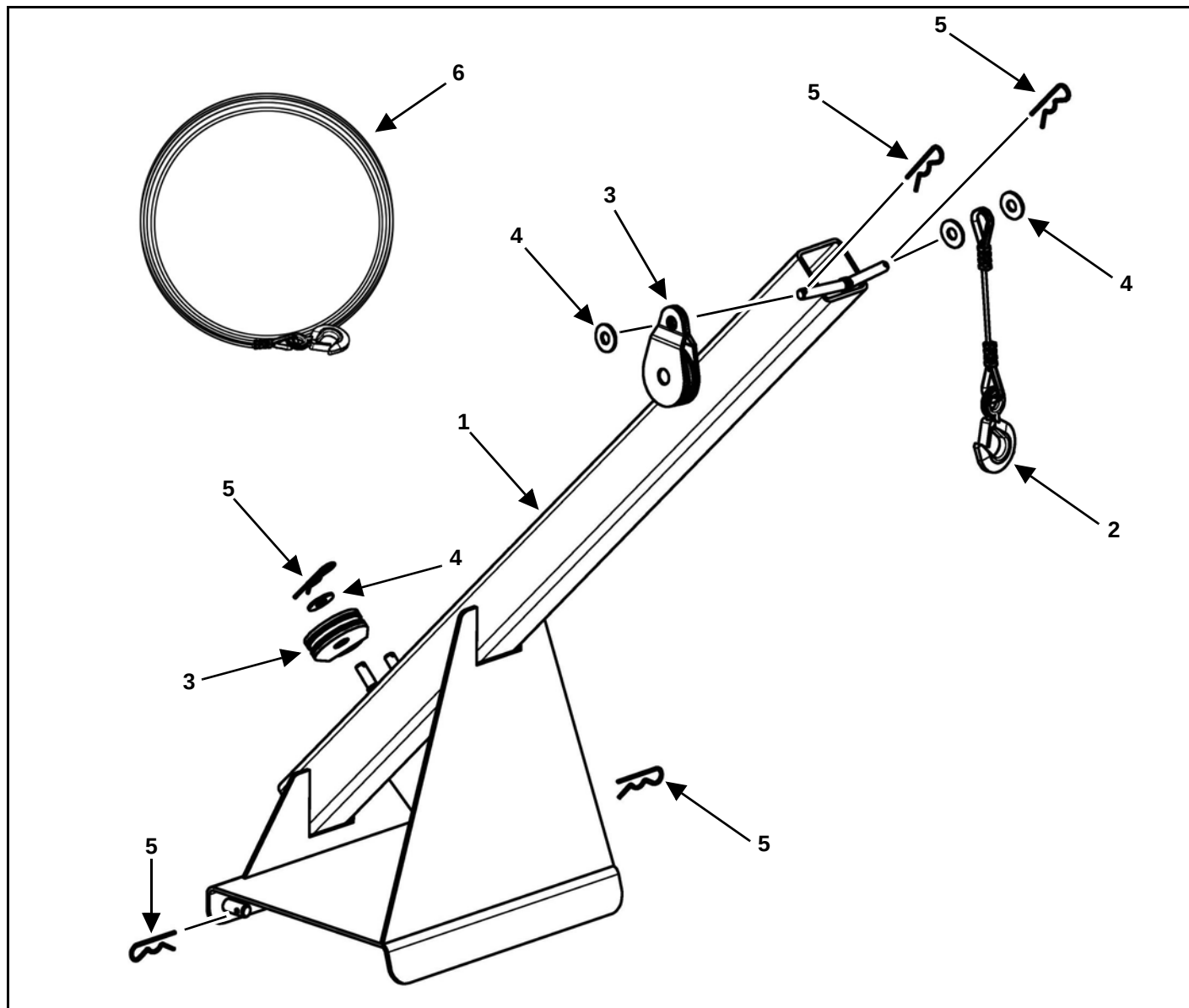


ITEM	PART NUMBER	DESCRIPTION	QUANTITIES			
			1262	1272	1282	1292
1	SZ9901950	CABLE, 3/8", 7 x 19 264"	2	-	2	-
	SZ9901951	CABLE, 3/8" 7 x 19 384"	-	2	-	2
2	SZ9901952	CABLE, 3/8" 7 x 19 504"	2	-	2	-
	SZ9901953	CABLE, 3/8" 7 x 19 624"	-	2	-	2
3	SZ9901954	CABLE, 3/8" 7 x 19 744"	-	-	2	-
	SZ9901955	CABLE, 3/8" 7 x 19 864"	-	-	-	2
4	SZ9901873	TRUSS CABLE RISER HALF, WELDMENT	6	8	10	12
5	SZ6003375	CLAMP, CABLE 3/8"	16	20	28	32
6	SZ6009375	TIMBLE, CABLE 3/8"	8	8	12	12
7	SZ126113	BOLT, HHCS, 5/8"-11UNC x 1-1/2" G5	14	16	22	24
8	SZ125036	LOCK NUT, 5/8"-11UNC	18	20	28	30
9	SZ125030	LOCK NUT, 3/8"-16UNC NYLOCK	6	8	10	12
10	SZ126065	BOLT, HHCS, 3/8"-16 UNC x 1" G5	6	8	10	12
11	SZ126017	BOLT, EYE 5/8"-11UNC x 6-1/2"	4	4	6	6
12	SZ9901944	TRUSS CABLE, ANCHOR BAR	4	4	6	6
13	SZ9901897	TRUSS CABLE, EYEBOLT ANCHOR BAR	4	4	6	6

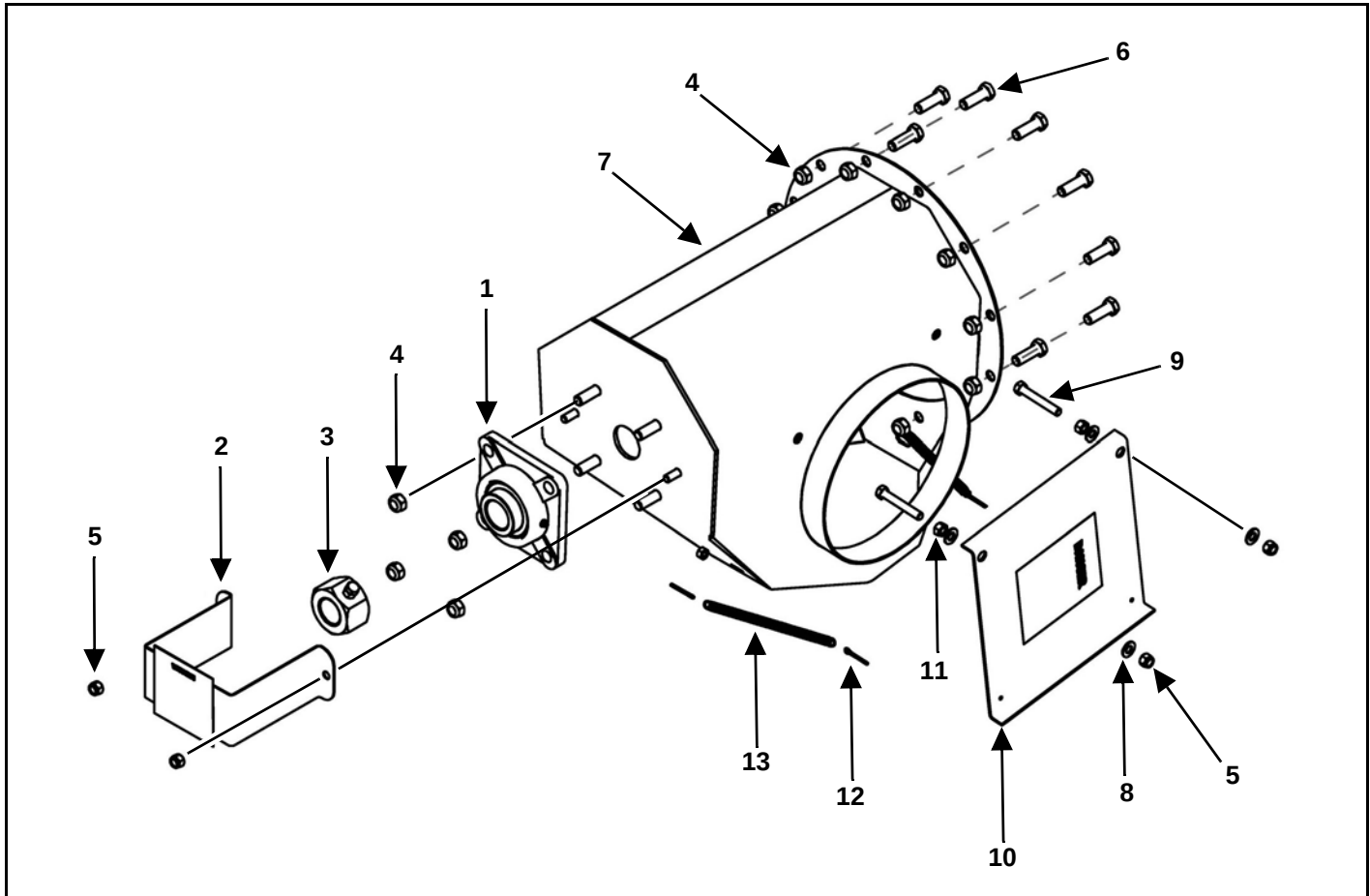
HYDRAULIC PARTS



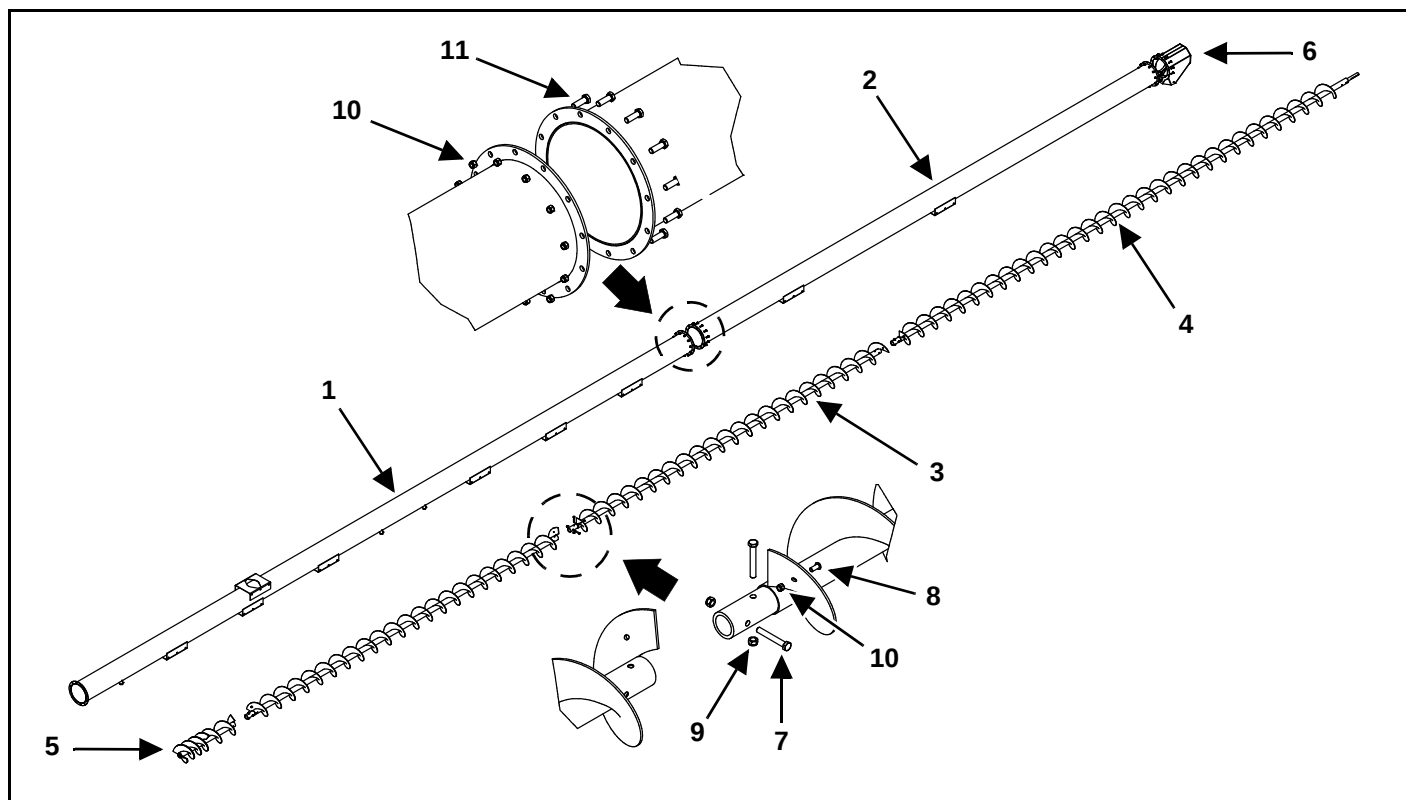
ITEM	PART NUMBER	DESCRIPTION	QUANTITIES			
			1262	1272	1282	1292
1	SZ106492	ASSEMBLY, HOSE HYDRAULIC, 3/8" 546	2	-	-	-
	SZ106491	ASSEMBLY, HOSE HYDRAULIC, 3/8" 606	-	2	-	-
	SZ000473	ASSEMBLY, HOSE HYDRAULIC, 3/8" 726	-	-	2	-
	SZ105179	ASSEMBLY, HOSE HYDRAULIC, 3/8" 786	-	-	-	2
2	SZ384132	FITTING, 90 08MJ - 0MB	2	2	2	2
3	812208	NIPPLE, 1/2" BODY, 1/2"-14 NPTF, QUICK CONNECT	2	2	2	2

HOPPER LIFT ASSEMBLY


ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ9901880	WELDMENT, ARM, SWING OVER	1
2	SZ9902509	ASSEMBLY, CABLE, 3/16" 7 x 19 14" THIMBLE GRAB	1
3	SZ02165035	WELDMENT, SHEAVE	2
4	SZ127003	WASHER, FLAT, 1/2"	4
5	SZ128018	PIN, HAIR, 1/8"	5
6	SZ0213235	CABLE, 3/16" x 35' W / GRABHOOK	1

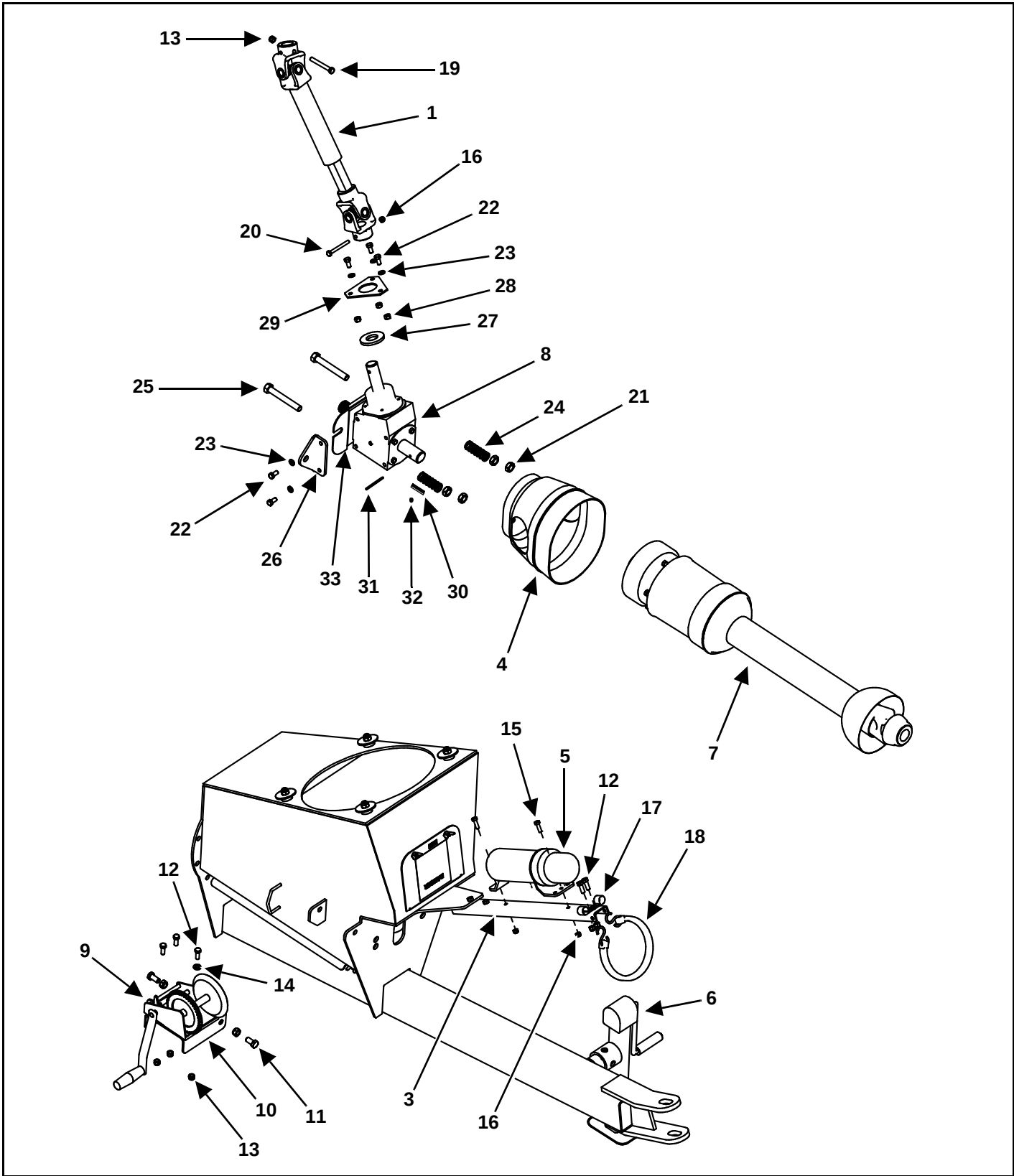
DISCHARGE SPOUT


ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ2011053	BEARING, 1-1/2" 4-BOLT CAST FI	1
2	SZ2127212	ASSEMBLY, SHIELD, CAP, HEAD	1
3	SZ6001050	NUT, 1-1/2" NC HEX W 3/8" SETSCREW	1
4	SZ125032	LOCK NUT, 1/2"-13UNC NYLOCK	14
5	SZ125030	LOCK NUT, 3/8-16UNC NYLOCK	4
6	SZ126092	BOLT, HHCS, 1/2-13 UNC x 1-1/2" G5	10
7	SZ105658	WELDMENT DROP SPOUT 12" W/ RELIEF	1
8	SZ127002	WASHER, FLAT 3/8	4
9	SZ126072	BOLT, HHCS, 3/8-16UNC x 2-1/2" G5	2
10	SZ9900697	DOOR, RELIEF 12"	1
11	SZ125007	NUT, HEX 3/8-16UNC	2
12	SZ128016	PIN, COTTER, 1/8 x 1"	4
13	SZ80.500X5.7	EXTENSION SPRING, 1/2" x 5-3/4"	2

12" FLIGHTING AND TUBE ASSEMBLY


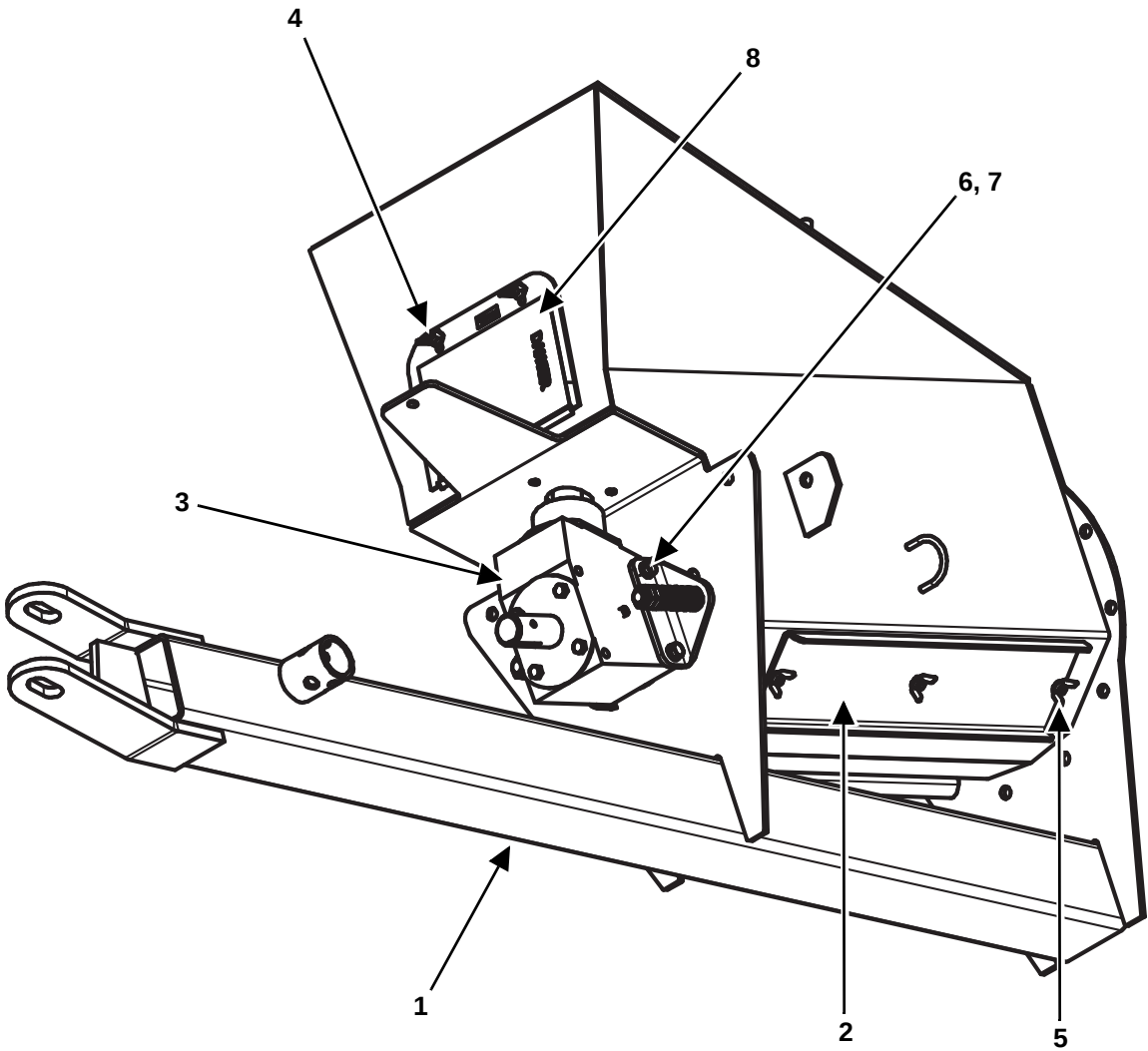
ITEM	PART NUMBER	DESCRIPTION	QUANTITIES			
			1262	1272	1282	1292
1	SZ103464	WELDMENT, TUBING, 12" CSW 30' LOWER	1	-	-	2
	SZ103507	WELDMENT, TUBING, 12" CSW 40' LOWER	-	1	1	-
2	SZ103508	WELDMENT, TUBING, 12" CSW 30' DISCHARGE	1	1	-	1
	SZ103509	WELDMENT, TUBING, 12" CSW 40' DISCHARGE	-	-	1	-
3	SZ9902382	FLIGHTING, 12" DIA - 30' LOWER	1	-	-	2
	SZ9902381	FLIGHTING, 12" DIA - 20' LOWER	-	2	3	-
4	SZ9902383	FLIGHTING, 12" DIA - 30' DISCHARGE	1	1	-	1
	SZ9902370	FLIGHTING, 12" DIA - 20' DISCHARGE	-	-	1	-
5	SZ9902384	FLIGHTING, 12" DIA - DRIVE SECTION	1	1	1	1
6	SZ105657	DROP SPOUT ASSEMBLY, 12" W/RELIEF	1	1	1	1
7	SZ126106	BOLT, HHCS, 1/2"-20UNF x 3-1/2" G5	4	6	8	6
8	SZ126000	BOLT, HHCS, 3/8"-16UNC x 7/8"	2	3	4	3
9	SZ125033	LOCK NUT, 1/2"-20UNF	4	6	8	6
10	SZ125030	LOCK NUT, 3/8"-16UNC NYLOCK	24	25	26	37
11	SZ126092	BOLT, HHCS, 1/2"-13UNC x 1-1/2" G5	22	22	22	34

DRIVE SECTION



ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ0166020	INTERNAL POWER SHAFT	1
2	SZ02137190	CABLE, 3/8" - 7 x 19 2280	1
3	SZ103260	CHANNEL, FORMED, HANGER PTO, CSW	1
4	SZ103268	IMPLEMENT POLY SHIELD	1
5	SZ103296	OWNER'S MAUAL CONTAINER	1
6	SZ103298	2000 LB JACK DI 6620	1
7	SZ0163541	WEASLER 35R 50° CV x 40" Separable PTO (1262 & 1272 Models)	1
	SZ0165541	WEASLER 55R 50° CV x 40" Separable PTO (1282 & 1292 Models)	1
8	SZ104493	ASSEMBLY DRIVE SECTION 12"	1
9	SZ2038221	BOLT-ON BRAKE WINCH - K1550	1
10	SZ9901480	HOPPER WINCH PLATE	1
11	SZ126089	BOLT, HHCS, 1/2"-13UNC x 1"	2
12	SZ126065	BOLT, HHCS, 3/8"-16UNC x 1"	7
13	SZ125030	LOCK NUT, 3/8"-16UNC NYLOCK	8
14	SZ127002	WASHER, FLAT 3/8"	1
15	SZ126047	BOLT, HHCS, 5/16"-18UNC x 1" G5	2
16	SZ125035	LOCK NUT, 5/16"-18UNC, NYLOCK G5	3
17	SZ103259	CLAMP, HOSE TIE-DOWN	2
18	SZ91230	STRAP, RUBBER #509-S W/S-HOOK	1
19	SZ126076	BOLT, HHCS, 3/8"-16UNC x 3"	1
20	SZ126059	BOLT, HHCS, 5/16"-18UNC x 3" G5	1
21	SZ125023	NUT, JAM 5/8"-11UNC	4
22	SZ126063	BOLT, HHCS, 3/8"-16UNC x 3/4" G5	7
23	SZ127009	WASHER, LOCK 3/8"	7
24	SZ4910190	SPRING, PLATED 1" x 3-1/2"	2
25	SZ126118	BOLT, HHCS, 5/8"-11UNC x 4-1/2" G5	2
26	SZ9902333	GEARBOX, MOUNT BRACKET	2
27	SZ9901481	WASHER, FLAT 1.28" x 3.25" NYL	1
28	SZ125007	NUT, HEX 3/8"-16UNC	3
29	SZ9902601	SHIELD, DRIVE SECTION GRAIN	1
30	SZ105165	KEY, SQ 5/16" x 1.75" 4140	1
31	SZ60025111	PIN, SPL 1/4" x 2-1/4"	1
32	SZ128041	SET SCREW, 3/8"-16UNC 3/8" CP KNRL	1
33	SZ9902600	SHIELD, GRAIN, SECT, DRV, 12GA	1

DRIVE SECTION CONTINUED



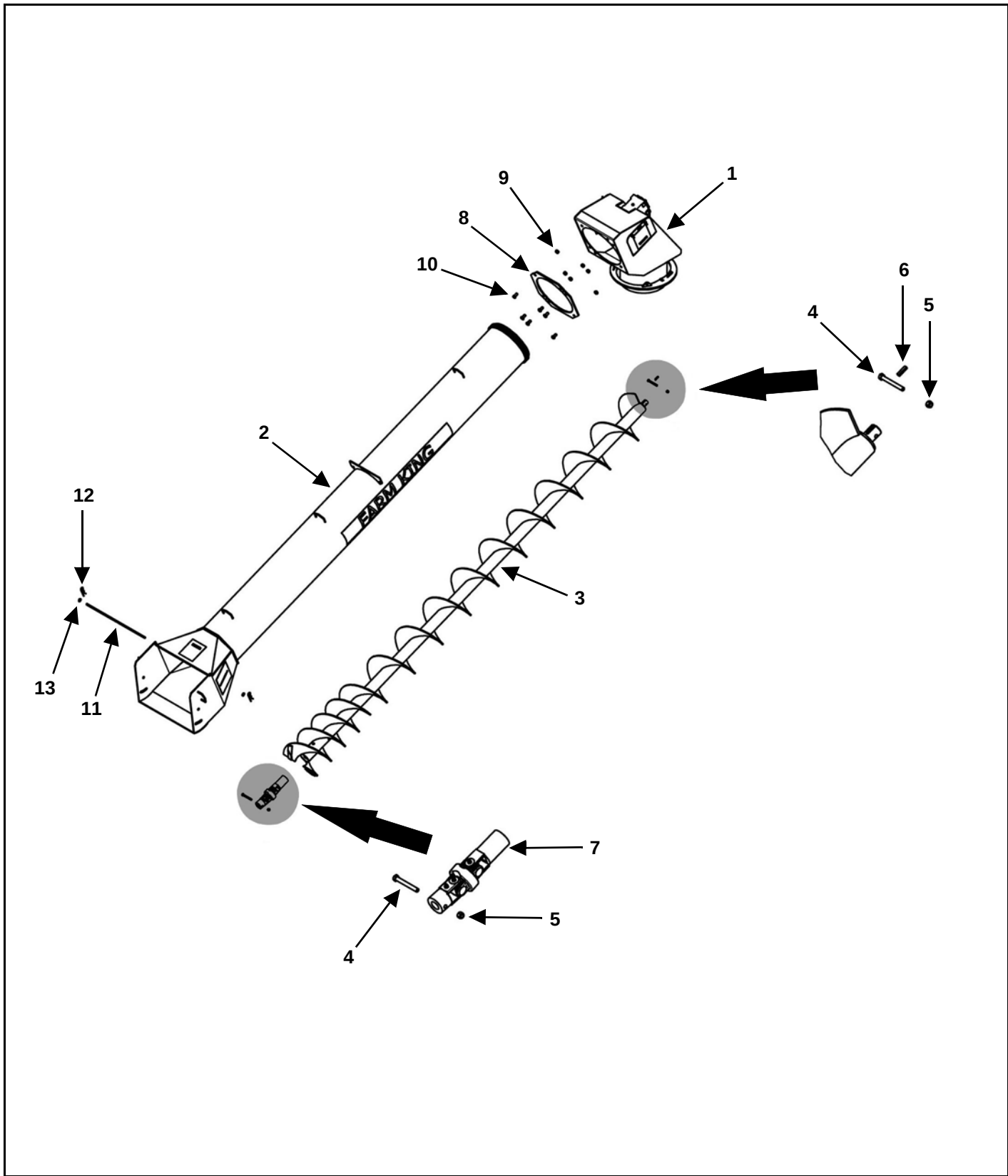
ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ104492	12" DRIVE SECTION WELDMENT	1
2	SZ104489	LOWER DRIVE SECTION CHANNEL COVER	2
3	SZ0160112	GEAR BOX DRIVE SECTION - 2001	1
4	SZ125040	WING NUT, 5/16"-18 UNC	2
5	SZ125041	WING NUT, 3/8"-16 UNC	6
6	SZ126063	BOLT, HHCS 3/8" - 16 UNC x 3/4" G5	7
7	SZ127009	LOCK WASHER, 3/8"	7
8	SZ9902289	DRIVE SECTION ACCESS DOOR	1
9	SZ9902334	GEAR BOX LOWER SEAL PLATE (not shown)	1

This exploded view diagram illustrates the assembly of a metal utility cart. The main components are labeled with numbers 1 through 36. The cart features a rectangular metal frame (34) with a grid floor (35). It is equipped with four wheels (32) and a handle (22). The diagram shows the relationship between various parts, including the front and rear panels (33, 19), the side rails (36), and the internal structural components (2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 16, 17, 20, 21, 23, 24, 25, 27, 28, 30, 31). The exploded view shows how these parts fit together to form the complete cart structure.

ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ101817	WELDMENT, HOPPER BODY, 12" GROUND HUGGER	1
2	SZ101820	WELDMENT, HOPPER, HANGER BEARING, 12" GROUND HUGGER	2
3	SZ00405153	INTERNAL DRIVE, HOPPER SIDE SPROCKET, 12"	2
4	SZ00425151	INTERNAL DRIVE, HOPPER CENTER SPROCKET, 12"	1

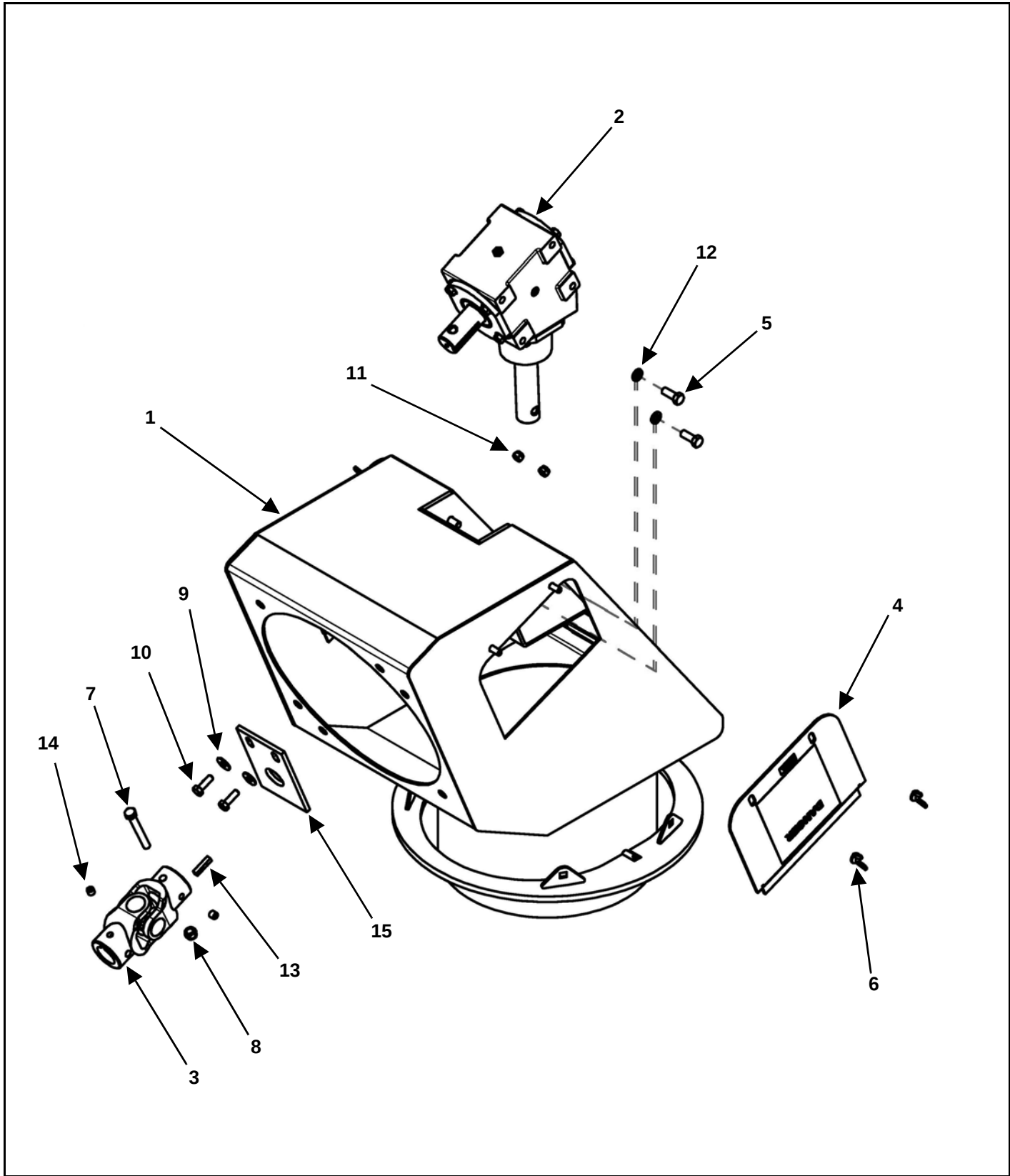
5	SZ0043534	ASSEMBLY, CHAIN ROLLER, #50 34P	2
6	SZ0231110	BUSHING, MACH, 1" 10GA	3
7	SZ0231140	BUSHING, MACH, 1" ID, 14GA	3
8	SZ0237510	BUSHING, MACH, 3/4"	4
9	SZ102638	PLATE, FORMED, MOUNT, BEARING HOPPER, 12 TOP	1
10	SZ103292	PLATE, FORMED, MOUNT, BEARING HOPPER, 12 BOTTOM	1
11	SZ125028	LOCK NUT, 1/4"-20UNC NYLOCK	38
12	SZ125030	LOCK NUT, 3/8-16UNC NYLOCK	8
13	SZ125032	LOCK NUT, 1/2"-13UNC NYLOCK	4
14	SZ125035	LOCK NUT, 5/16"-18UNC, NYLOCK G5	14
15	SZ126007	BOLT, CARRIAGE, 5/16-18UNC x 1"	3
16	SZ126013	BOLT, CARRIAGE, 1/2-13UNC NYLOCK	4
17	SZ126043	BOLT, HHCS, 1/4-20UNC x 4" G5	2
18	SZ126046	BOLT, HHCS, 5/16-18UNC x 3/4" G5	9
19	SZ126065	BOLT, HHCS, 3/8-16UNC x 1" G5	8
20	SZ128018	PIN, HAIR, 1/8"	4
21	SZ2017043	BEARING, 1" W/LOOSE LOCK COLLAR	4
22	SZ6001602	PIN, SPL, 5/16" x 2"	3
23	SZ6003531	PIN, COTTER, 5/32" x 1-1/4"	4
24	SZ65052MSCI000	FLANGE, BEARING, 52MM 3 BOLT	4
25	SZ68RUB0CHL0SL	RUBBER, SEAL, E-3559	1
26	SZ9860013	FLIGHT, 12" GROUND HUGGER	2
27	SZ9901747	TUBING, ROUND, 1-3/16 x 3/16 x 1.5	2
28	SZ9901748	HOPPER, WHEEL, AXLE	4
29	SZ9902434	SHAFT ROUND, 1 x 64.5	1
30	SZ9902466	WELDMENT, SHIELD, 12" HOPPER CHAIN	1
31	SZ9941718	WASHER, FLAT, 0.53 x 2.25, 10GA GALVANIZED	2
32	960714	WHEEL, W/TIRE 4.10/3.50	4
33	SZ9902449	HOPPER, ACCESS DOOR WELDMENT, 12"	1
34	SZ102637	EXTENSION, FLEX, 12" HOPPER 8.00 x 214.00	1
35	SZ000882	BOLT, CARRIAGE, 1/4-20UNC 3/4	36
36	SZ126047	BOLT, HHCS, 5/16"-18UNC x 1" G5	2
37	SZ127002	WASHER, FLAT, 3/8	4

HOPPER DRIVE TUBE

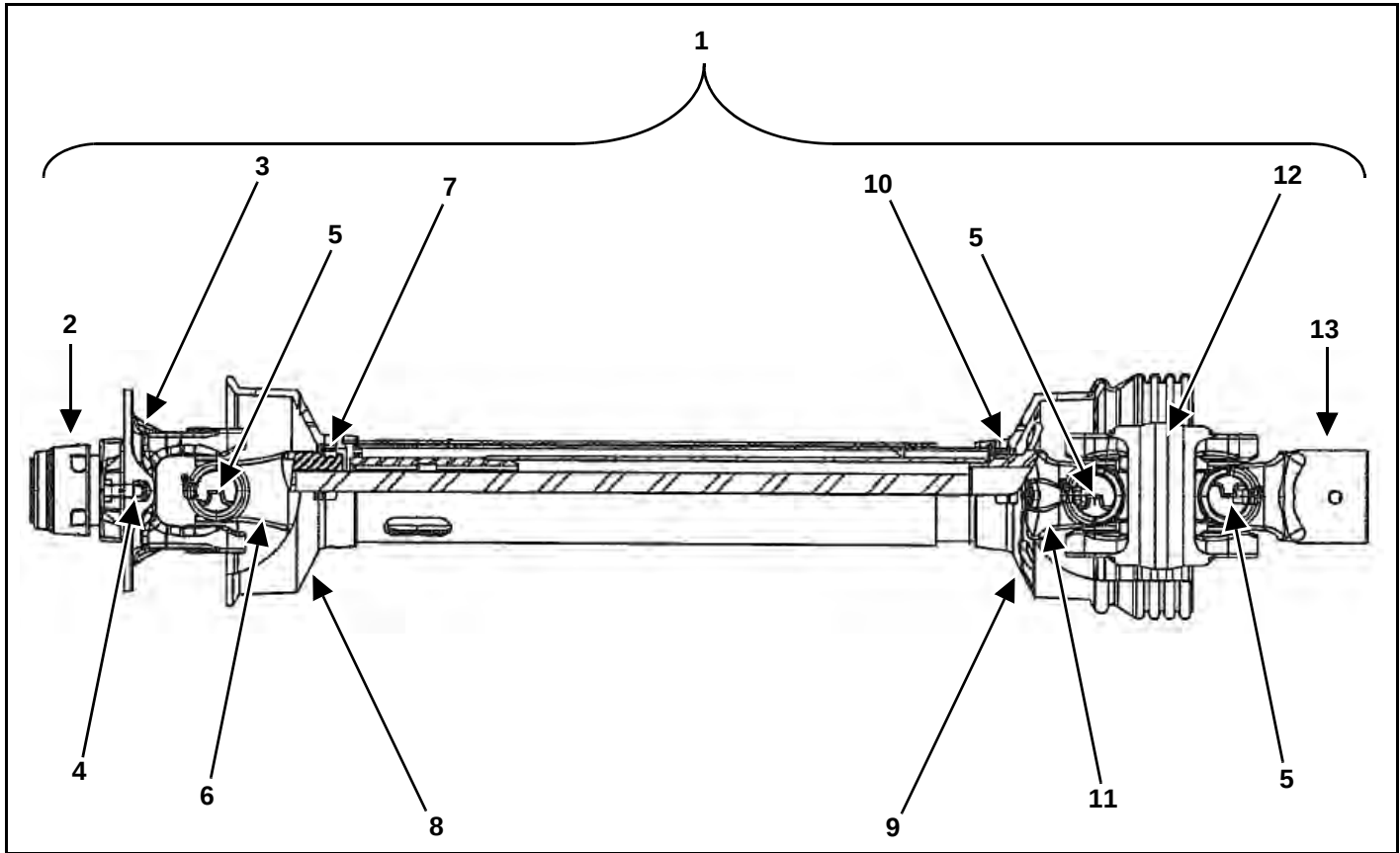


ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ9902531	HOPPER, HEAD ASSEMBLY	1
2	SZ101824	WELDMENT, TUBING, DISCHARGE, 12"	1
3	SZ9902393	WELDMENT, FLIGHT, 12" DISCHARGE	1
4	SZ126076	BOLT HHCS, 3/8"-16UNC x 3" G5	2
5	SZ125030	LOCK NUT, 3/8-16UNC NYLOCK	2
6	SZ01125118	KEY, SQ, 1/4" x 1.19"	1
7	SZ0165547	6E 50 DEG CV W/ 15/16" SQUARE	1
8	SZ9901981	PLATE, HOPPER HEAD SWIVEL, 12"	2
9	SZ125032	LOCK NUT, 1/2"-13UNC NYLOCK	6
10	SZ126089	BOLT, HHCS, 1/2-13UNC x 1" G5	6
11	SZ9902475	PIVOT, HOPPER LID PIN, 12"	1
12	SZ128018	PIN, HAIR, 1/8"	2
13	SZ127002	WASHER, FLAT, 3/8"	2

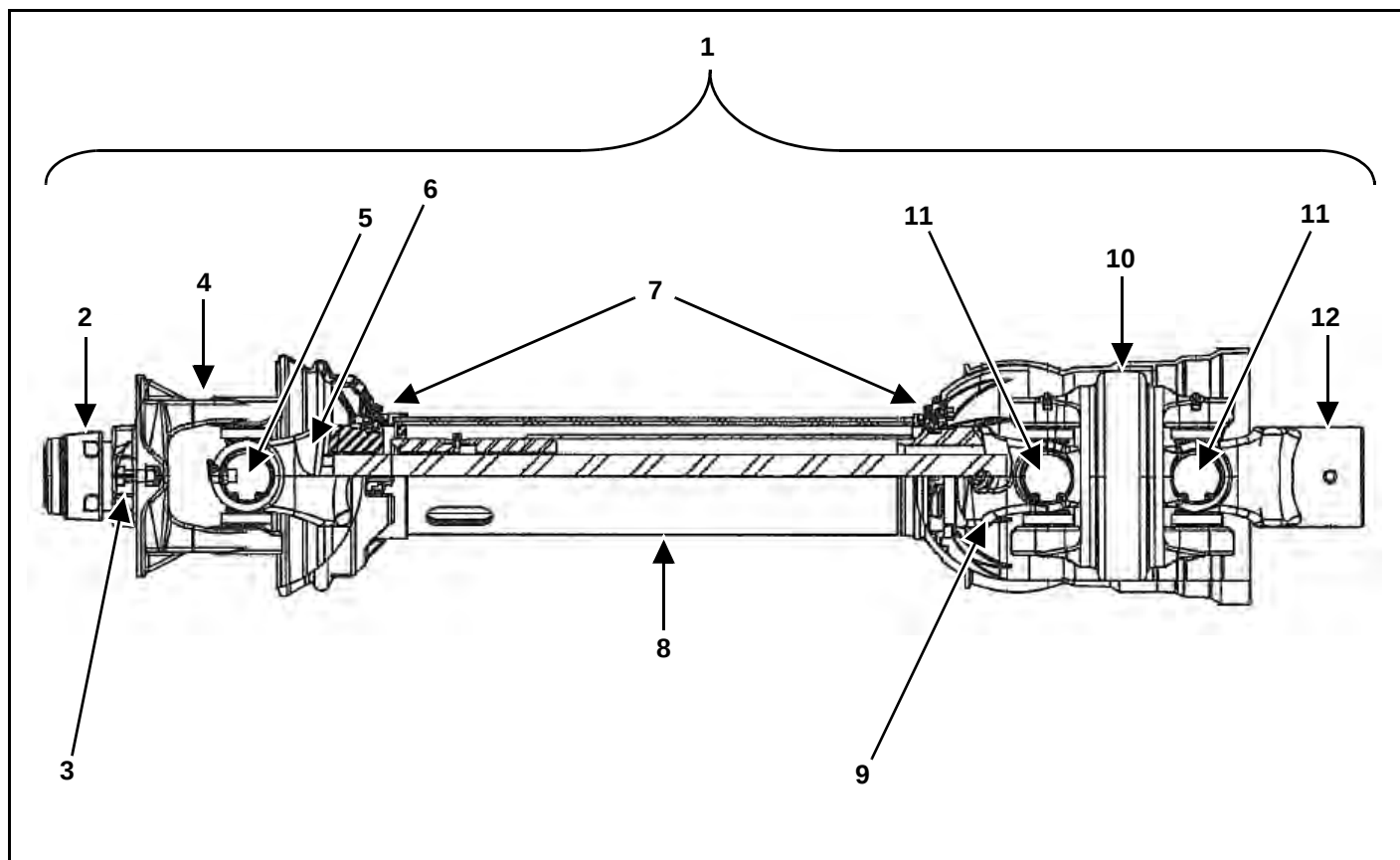
SWIVEL SPOUT



ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ9901979	HOPPER HEAD	1
2	SZ0160100	GEARBOX, HOPPER DRIVE, 2001	1
3	SZ1001604	12N U-JOINT, 1-1/4" x 1-1/4"	1
4	SZ9902289	DRIVE SECTION ACCESS DOOR	3
5	SZ126065	BOLT, HHCS, 3/8-16UNC x 1" G5	4
6	SZ125040	NUT WING, 5/16-18UNC	6
7	SZ126076	BOLT, HHCS, 3/8"-16UNC x 3" G5	1
8	SZ125030	LOCK NUT, 3/8-16UNC NYLOCK	1
9	SZ127001	WASHER, FLAT, 5/16"	2
10	SZ126047	BOLT, HHCS, 5/16"-18UNC, x 1" G5	2
11	SZ125035	LOCK NUT, 5/16"-18UNC, NYLOCK G5	2
12	SZ127009	LOCK WASHER, 3/8"	4
13	SZ01125118	KEY, SQ, 1/4" x 1.19"	1
14	SZ128041	SSCR 3/8-16UNC 3/8, CP KNRL	2
15	SZ9902534	HOPPER GEARBOX SEAL	1

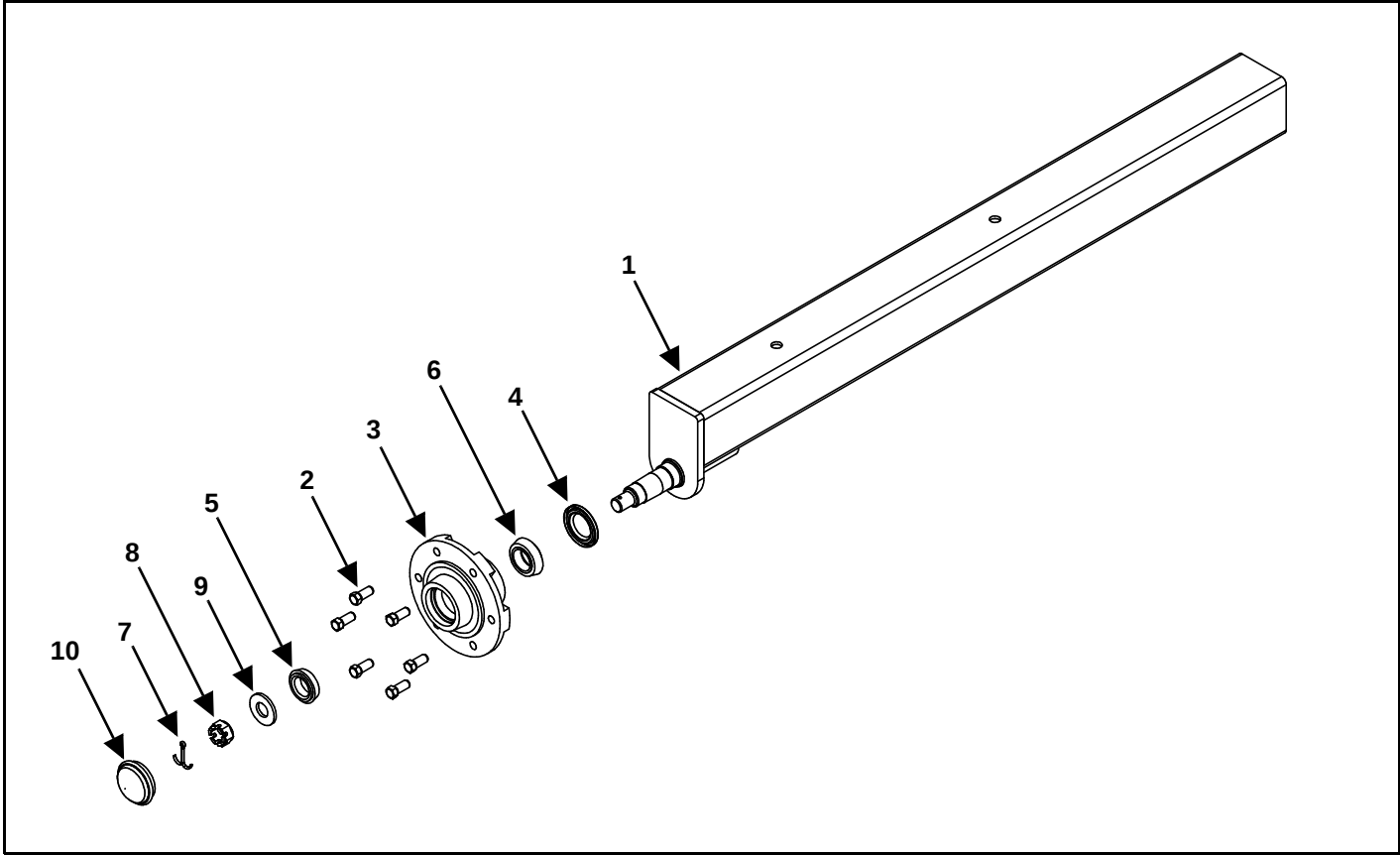
1262 & 1272 PTO DRIVELINE (SZ0163541)


ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ0163541	COMPLETE PTO W / 1-3/8" ROUND END YOKE	1
	SZ01635411	TRACTOR HALF W / SHIELD & SHEAR CLUTCH	1
	SZ016354115	AUGER HALF W / SHIELD & CV JOINT W / 1-3/8" ROUND END YOKE	1
2	SZ26-10015	SPRING LOCK REPAIR KIT	1
3	SZ40-30011	35R 1-3/8" 6-SPLINE SNAP HITCH SHEAR YOKE	1
4	SZ126065	3/8" x 1" GRADE 5 SHEAR BOLT	1
	SZ125029	OVAL LOCKNUT	1
5	SZ101812	35R CROSS AND BEARING KIT	3
6	SZ99-17028	1-3/16" SQUARE SHAFT W / 35R YOKE	1
7	SZ19-11104	OUTER SHIELD BEARING KIT	1
8	SZ97-17028	OUTER SHIELD	1
9	SZ96-17028	INNER SHIELD	1
10	SZ19-11105	INNER SHIELD BEARING KIT	1
11	SZ98-17028	TORQUE TUBE W / SLIP SLEEVE & 35R CV YOKE	1
12	SZ35271-1880	35R CV CENTER BODY	1
13	SZ35261-1953	1-3/8" ROUND 35R CV END YOKE	1

1282 & 1292 PTO DRIVELINE (SZ0165541)


ITEM	PART NUMBER	DESCRIPTION	QTY
1	SZ0165541	COMPLETE PTO W / 1-3/8" ROUND END YOKE	1
	SZ01635411	TRACTOR HALF W / SHIELD & SHEAR CLUTCH	1
	SZ016354115	AUGER HALF W / SHIELD & CV JOINT W / 1-1/4" ROUND END YOKE	1
2	SZ26-15120	SPRING LOCK REPAIR KIT	1
3	SZ126065	3/8" x 1" GRADE 5 SHEAR BOLT	1
	SZ125029	OVAL LOCKNUT	1
4	SZ40-10030	55R 1-3/8" 6-SPLINE SNAP HITCH SHEAR YOKE	1
5	SZ03-10050	55R CROSS AND BEARING KIT	1
6	SZ99-20427	1-3/16" SQUARE SHAFT W / 355R YOKE	1
7	SZ19-11106	SHIELD BEARING KIT	2
8	SZ90-22085	COMPLETE SHIELD SET	1
9	SZ98-19537	TORQUE TUBE W / SLIP SLEEVE & 55R CV YOKE	1
10	SZ55251-1599	55R CV CENTER BODY	1
11	SZ03-14298	55R CROSS AND BEARING KIT W / GREASE ZERK IN CAP	1
12	SZ55261-1826	1-3/8" ROUND 55R CV END YOKE	1

12" AXLE SPINDLE ASSEMBLY



ITEM	PART NUMBER	DESCRIPTION	QTY
1	N/A	1282 & 1292 EXTENDABLE AXLE TUBE	1
2	SZWB10000	LUG BOLT, 1/2" x 1"	6
3	SZ0116021	6-BOLT HUB W / CUPS	1
4	SZ0203549	GREASE SEAL, 6-BOLT HUB (In Gkn Kit)	1
5	SZ100125	BEARING CONE LM67048	1
6	SZ100151	Bearing Cone LM48548	1
7	SZ128042	Pin, Cotter, 5/32" x 2"	1
8	SZ600NUT0SLOT0	Spindle Nut - 6-Bolt Hubs (In Gkn Kit)	1
9	SZ6002X15016WA	WASHER, SPINDLE 2" OD x 0.947" ID x 0.179"	1
10	SZDC13	DUST CAP	1

PART NUMBER	DESCRIPTION	QTY
SZ103996	6-BOLT RIM W / ST235/85R16 TIRE (Not Shown)	2

SPECIFICATIONS

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Farm King

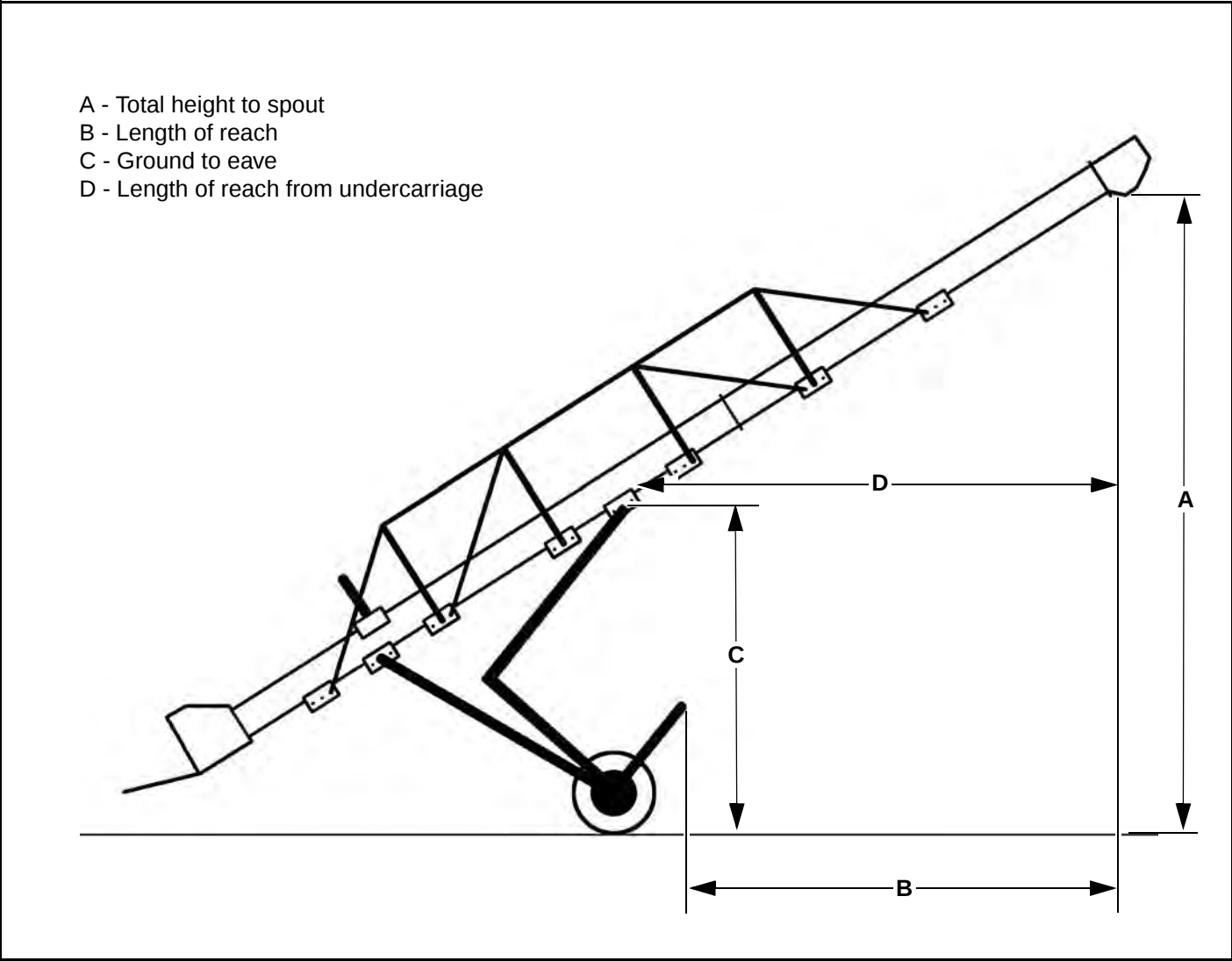


SPECIFICATIONS



SPECIFICATIONS

Dimensions



1262 AUGER				
Angle	A	B	C	D
8 (min)	11' (3.4 m)	33' 6" (10.2 m)	6' (1.8 m)	33' 6" (10.2 m)
15	15' 6" (4.7 m)	33' (10.1 m)	8' 6" (2.6 m)	33' (10.1 m)
20	21' 6" (6.6 m)	32' (9.8 m)	11' 6" (3.5 m)	32' (9.8 m)
25	27' (8.2 m)	30' 6" (9.3 m)	14' (4.3 m)	30' 6" (9.3 m)
30	32' (9.8 m)	29' (8.8 m)	16' 6" (5 m)	29' 6" (9 m)
35	37' (11.3 m)	25' 6" (7.8 m)	19' (5.8 m)	27' (8.2 m)
40	42' (12.8 m)	23' 6" (7.2 m)	21' (6.4 m)	26' (8 m)
42 (max)	45' (13.7 m)	21' (6.4 m)	23' (7 m)	24' (7.3 m)

1272 AUGER				
Angle	B	C	D	E
8 (min)	11' 6" (3.5 m)	39' (11.9 m)	6' (1.8 m)	39' (11.9 m)
15	19' 6" (5.9 m)	37' 6" (11.4 m)	10' (3.1 m)	37'-6" (11.4 m)
20	26' 6" (8.1 m)	37' (11.7 m)	13' 6" (4.1 m)	37' (11.3 m)
25	30' (9.1 m)	36' (11 m)	15' 6" (4.7 m)	36' (11 m)
30	37' 6" (11.4 m)	33' (10.1 m)	19' (5.8 m)	33' (10.1 m)
35	43' 6" (13.3 m)	31' 6" (9.6 m)	22' (6.7 m)	32' (9.8 m)
40	49' (15 m)	28' 6" (8.7 m)	24' 6" (7.5 m)	29'- 6" (9 m)
42 (max)	52' (15.9 m)	26' 6" (8.1 m)	26' (8 m)	28' (8.5 m)

1282 AUGER				
Angle	B	C	D	E
8 (min)	12' (3.7 m)	43' (13.1 m)	6' (1.8 m)	43' (13.1 m)
15	22' 6" (6.9 m)	42' 6" (13 m)	12' (3.7 m)	42' 6" (13 m)
20	30' (9.1 m)	41' (12.5 m)	15' 6" (4.7 m)	41' (12.5 m)
25	37' (11.3 m)	40' (12.2 m)	19' (5.8 m)	40' (12.2 m)
30	44' 6" (13.6 m)	38' (11.6 m)	22' 6" (6.9 m)	39' (11.9 m)
35	50' 6" (15.4 m)	35' 6" (10.8 m)	25' 6" (7.8 m)	38' (11.6 m)
40	55' (16.8 m)	33' (10.1 m)	27' 6" (8.4 m)	36' (11 m)
42 (max)	56' 6" (17.2 m)	32' (9.8 m)	28' 6" (8.7 m)	35'-6" (10.6 m)

1292 AUGER				
Angle	B	C	D	E
8 (min)	13' 5" (4.1 m)	48' (14.6 m)	6' (1.8 m)	48' (14.6 m)
15	23' 6" (7.2 m)	47' 6" (14.5 m)	12' 6" (3.8 m)	47'-6" (14.5 m)
20	31' 6" (9.6 m)	46' 6" (14.2 m)	16' 6" (5.03 m)	46'-6" (14.2 m)
25	40' (12.2 m)	43' (13.1 m)	20' 6" (6.3 m)	43' (13.1 m)
30	46' 6" (14.2 m)	41' (12.5 m)	24' (7.3 m)	42' (12.8 m)
35	54' (16.5 m)	39' (11.9 m)	27' 6" (8.4 m)	40'-6" (12.3 m)
40	61' (18.6 m)	35' (10.7 m)	31' (9.5 m)	37'-6" (11.4 m)
42 (max)	62' (19 m)	34' 6" (10.5 m)	31' 6" (9.6 m)	37' (11.3 m)

Performance

DESCRIPTION	1262	1272	1282	1292
Length	62'	72'	82'	92'
Tubing	12 gauge	12 gauge	12 gauge	12 gauge
Flighting	1/4" flighting in main auger, 5/16" flighting in swing away auger			
Flighting Shaft	11 gauge, 2-7/8" diameter			
Undercarriage Tubing	2" x 4" x 3/16"		2" x 4" x 1/4"	
Lift Arms, Upper and Lower	4" x 6" x 3/16"			
Bridging Cable	3/8"	3/8"	3/8"	3/8"
Wheels and Hubs	15" w/6 bolt automotive type hubs and bearings			
Swing Auger Drive, w/extended life bearings	540 rpm 35 series CV PTO		540 rpm 55 series CV PTO	
Wheel Track	108"	125.5"	133.5"	133.5"
Maximum Discharge Height	45'	52'	56' 6"	62'
Transport Height	12' 6"	11' 6"	12'	13' 6"
Hopper Dimensions	48" x 60"	48" x 60"	48" x 60"	48" x 60"
*Hopper Height from ground	10-3/4"	10-3/4"	10-3/4"	10-3/4"

* standard hopper

Tractor Requirements

DESCRIPTION	1262	1272	1282	1292
PTO Drive	Category 4, 540 rpm (1-3/8" 6 spline)		Category 6, 540 rpm (1-3/8" 6 spline)	
PTO HP (Minimum)	85 HP	95 HP	105 HP	115 HP
Hydraulic PSI for Lift (approx)	2000 PSI	2150 PSI	1600 PSI	1900 PSI

Options

DESCRIPTION
1 remote outlet
Optional hopper lift system requires 1 remote outlet
Optional powered wheel system requires 1 remote outlet. (closed center, conversion kit to open center available, part number SZ384937)

HARDWARE TORQUE VALUES

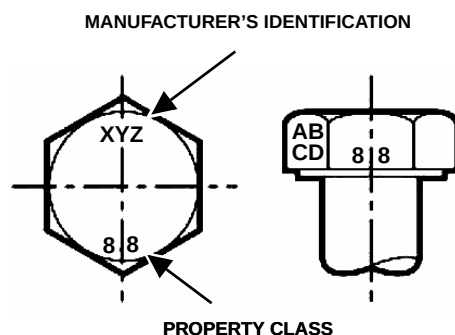
Metric Chart

NOTE: Do not use the values listed in the charts if a different torque value or tightening procedure is specified in this manual for a specific application. Torque values listed are for general use only.

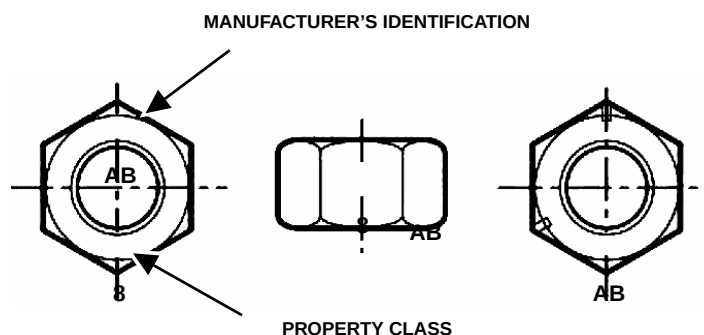
Use the following charts to determine the correct torque when checking, adjusting or replacing hardware. **Torque values are listed in newton-meters (inch* or foot pounds) for normal assembly applications.**

Nominal Size	Class 5.8		Class 8.8		Class 10.9		Lock nuts
	Unplated	Plated W / ZnCr	Unplated	Plated W / ZnCr	Unplated	Plated W / ZnCr	CL.8 w/ CL. 8.8 Bolt
M4	1.7 (15*)	2.2 (19*)	2.6 (23*)	3.4 (30*)	3.7 (33*)	4.8 (42*)	1.8 (16*)
M6	5.8 (51*)	7.6 (67*)	8.9 (79*)	12 (102*)	13 (115*)	17 (150*)	6.3 (56*)
M8	14 (124*)	18 (159*)	22 (195*)	28 (248*)	31 (274*)	40 (354*)	15 (133*)
M10	28 (21)	36 (27)	43 (32)	56 (41)	61 (45)	79 (58)	30 (22)
M12	49 (36)	63 (46)	75 (55)	97 (72)	107 (79)	138 (102)	53 (39)
M16	121 (89)	158 (117)	186 (137)	240 (177)	266 (196)	344 (254)	131 (97)
M20	237 (175)	307 (226)	375 (277)	485 (358)	519 (383)	671 (495)	265 (195)
M24	411 (303)	531 (392)	648 (478)	839 (619)	897 (662)	1160 (855)	458 (338)
NOTE: Torque values shown with * are inch pounds.							

Identification of Hex Cap Screws and Carriage Bolts - Classes 5 and up



Identification of Hex Nuts and Lock Nuts - Classes 5 and up



HARDWARE TORQUE VALUES (CONT'D)

Imperial Chart

NOTE: Do not use the values listed in the charts if a different torque value or tightening procedure is specified in this manual for a specific application. Torque values listed are for general use only.

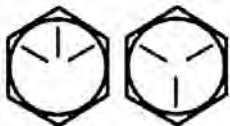
Use the following charts to determine the correct torque when checking, adjusting or replacing hardware. **Torque values are listed in newton-meters (inch* or foot pounds) for normal assembly applications.**

Nominal Size	SAE Grade 5		SAE Grade 8		LOCK NUTS			
	Unplated or Plated Silver	Plated W / ZnCr Gold	Unplated or Plated Silver	Plated W / ZnCr Gold	Unplated or Plated Silver	Plated W / ZnCr Gold	Grade W / Gr. 5 Bolt	Grade W / Gr. 8 Bolt
1/4	6.2 (55*)	8.1 (72*)	9.7 (86*)	12.6 (112*)	13.6 (121*)	17.7 (157*)	6.9 (61*)	9.8 (86*)
5/16	13 (115*)	17 (149*)	20 (178*)	26 (229*)	28 (250*)	37 (324*)	14 (125*)	20 (176*)
3/8	23 (17)	30 (22)	35 (26)	46 (34)	50 (37)	65 (48)	26 (19)	35 (26)
7/16	37 (27)	47 (35)	57 (42)	73 (54)	80 (59)	104 (77)	41 (30)	57 (42)
1/2	57 (42)	73 (54)	87 (64)	113 (83)	123 (91)	159 (117)	61 (45)	88 (64)
9/16	81 (60)	104 (77)	125 (92)	163 (120)	176 (130)	229 (169)	88 (65)	125 (92)
5/8	112 (83)	145 (107)	174 (128)	224 (165)	244 (180)	316 (233)	122 (90)	172 (127)
3/4	198 (146)	256 (189)	306 (226)	397 (293)	432 (319)	560 (413)	217 (160)	306 (226)
7/8	193 (142)	248 (183)	495 (365)	641 (473)	698 (515)	904 (667)	350 (258)	494 (364)
1	289 (213)	373 (275)	742 (547)	960 (708)	1048 (773)	1356 (1000)	523 (386)	739 (545)
NOTE: Torque values shown with * are inch pounds.								

Identification of Hex Cap Screws and Carriage Bolts



SAE GRADE
2 BOLTS



SAE GRADE
5 BOLTS



SAE GRADE
8 BOLTS



SAE GRADE
2 NUTS

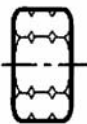


SAE GRADE
2 NUTS



SAE GRADE
2 NUTS

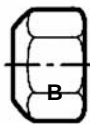
Identification of Hex Nuts and Lock Nuts



Grade A - No Notches

Grade B - One Circumferential Notch

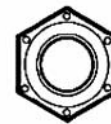
Grade C - Two Circumferential Notches



Grade A - No Mark

Grade B - Letter B

Grade C - Letter C



Grade A - No Marks

Grade B - Three Marks

Grade C - Six Marks

(Marks not always located at corners)

HYDRAULIC CONNECTION SPECIFICATIONS

O-Ring Fitting (Straight Thread)

Lubricate the O-ring before installing the fitting. Loosen the jam nut and install the fitting. Tighten the jam nut until the washer is tight against the surface.

O-ring Face Seal Connection

Figure 144

O-ring Face Seal Tightening Torque		
Tubeline O.D.	Thread Size	N•m (ft-lb)
1/4"	9/16" - 18	13 (18)
3/8"	11/16" - 16	22 (30)
1/2"	13/16" - 16	40 (54)
5/8"	1" - 14	60 (81)
3/4"	1-3/16" - 12	84 (114)
7/8"	1-3/16" - 12	98 (133)
1"	1-7/16" - 12	118 (160)
1-1/4"	1-11/16" - 12	154 (209)
1-1/2"	2" - 12	163 (221)

When the fitting is tightened, you can feel when the fitting is tight to eliminate leakage caused by under or over torqued fittings. Use petroleum jelly to hold the O-ring in position until the fittings are assembled.

Flare Fitting

Figure 145

Flare Fitting Tightening Torque		
Tubeline O.D.	Thread Size	N•m (ft-lb)
1/4"	7/16" - 20	13 (18)
5/16"	1/2" - 20	17 (23)
3/8"	9/16" - 18	22 (30)
1/2"	3/4" - 16	40 (54)
5/8"	7/8" - 14	60 (81)
3/4"	1-1/16" - 12	84 (114)
7/8"	1-3/16" - 12	98 (133)
1"	1-5/16" - 12	118 (160)
1-1/4"	1-5/8" - 12	154 (209)
1-1/2"	1-7/8" - 12	163 (221)
2"	2-1/2" - 12	252 (342)

Tighten until the nut makes contact with the seat. Use the chart [Figure 145] to find the correct tightness needed.

NOTE: If the fitting leaks, disconnect and inspect the seat area for damage.

Port Seal (O-ring Boss) Fitting

Figure 146

Port Seal And O-ring Boss Tightening Torque		
Tubeline O.D.	Thread Size	N•m (ft-lb)
1/4"	7/16" - 20	13 (18)
3/8"	9/16" - 18	22 (30)
1/2"	3/4" - 16	40 (54)
5/8"	7/8" - 14	60 (81)
3/4"	1-1/16" - 12	84 (114)
7/8"	1-3/16" - 12	98 (133)
1"	1-5/16" - 12	118 (160)
1-1/8"	1-7/16" - 12	154 (209)
1-1/4"	1-5/8" - 12	163 (221)

NOTE: Port seal and nut, washer and O-ring (O-ring Boss) fittings use the same tightening torque valve chart.

If a torque wrench cannot be used, use the following method.

Tighten the nut until it just makes metal to metal contact, you can feel the resistance.

Tighten the nut with a wrench no more than one hex flat maximum.

Do not over tighten the port seal fitting.

NOTE: If a torque wrench cannot be used, use the hex flat tightening method as an approximate guideline.

NOTE: Port seal fittings are not recommended in all applications. Use O-ring boss fittings in these applications.

Tubelines And Hoses

Replace any tubelines that are bent or flattened. They will restrict flow, which will slow hydraulic action and cause heat.

Replace hoses which show signs of wear, damage or weather cracked rubber.

Always use two wrenches when loosening and tightening hose or tubeline fittings.

Farm King



WARRANTY

WARRANTY153

Farm King



WARRANTY

Farm King

Limited Warranty

BASE LIMITED WARRANTY

Farm King provides this warranty only to original retail purchasers of its products. Farm King warrants to such purchasers that all Farm King manufactured parts and components used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for a period following delivery to the original retail purchaser of two (2) years. This limited warranty applies only to those parts and components manufactured by Farm King. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

Farm King will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Farm King within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Parts must be returned through the selling Farm King Dealer and the buyer must prepay transportation charges.

Farm King will not be responsible for repairs or replacements that are necessitated, in whole or part, by the use of parts not manufactured by or obtained from Farm King. Under no circumstances are component parts warranted against normal wear and tear. There is no warranty on product pump seals, product pump bearings, rubber product hoses, pressure gauges, or other components that require replacement as part of normal maintenance.

REPAIR PARTS LIMITED WARRANTY

Farm King warrants genuine Farm King replacement parts purchased after the expiration of the Farm King Limited Warranty, and used and serviced as provided for in the Operator's Manual, to be free from defects in materials or workmanship for a period of thirty (30) days from the invoice date for the parts. Farm King will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Farm King within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Such parts must be shipped to the Farm King factory at the purchaser's expense.

WHAT IS NOT COVERED

Under no circumstances does this limited warranty cover any components or parts that have been subject to the following: negligence; alteration or modification not approved by Farm King; misuse; improper storage; lack of reasonable and proper maintenance, service, or repair; normal wear; damage from failure to follow operating instructions; accident; and/or repairs that have been made with parts other than those manufactured, supplied, and or authorized by Farm King.

AUTHORIZED DEALER AND LABOR COSTS

Repairs eligible for labor under this limited warranty must be made by Farm King or an authorized Farm King dealer. Farm King retains the exclusive discretion to determine whether it will pay labor costs for warranty repairs or replacements, and the amount of such costs that it will pay and the time in which the repairs will be made. If Farm King determines that it will pay labor costs for warranty work, it will do so by issuing a credit to the dealer's or distributor's account. Farm King will not approve or pay invoices sent for repairs that Farm King has not previously approved. Warranty service does not extend the original term of this limited warranty. Payment of labor costs will only be considered on repairs made to manufactured parts and components that have been found defective during a period of one (1) year following delivery to the original retail purchaser.

Farm King

Limited Warranty

WARRANTY REQUIREMENTS

To be covered by warranty, each new product must be registered with Farm King within thirty (30) days of delivery to original retail purchaser. If the customer decides to purchase replacement components before the warranty disposition of such components is determined, Farm King will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not to be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

EXCLUSIVE EFFECT OF WARRANTY AND LIMITATION OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, FARM KING DISCLAIMS ANY WARRANTIES, REPRESENTATIONS, OR PROMISES, EXPRESS OR IMPLIED, AS TO THE QUALITY, PERFORMANCE, OR FREEDOM FROM DEFECT OF THE COMPONENTS AND PARTS COVERED BY THIS WARRANTY AND NOT SPECIFICALLY PROVIDED FOR HEREIN.

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Farm King neither assumes nor authorizes any person or entity, including its selling representatives, to assume any other obligations or liability in connections with the sale of covered equipment, or to make any other warranties, representations, or promises, express or implied, as to the quality, performance, or freedom from defect of the components and parts covered herein. No one is authorized to alter, modify, or enlarge this limited warranty, or its exclusions, limitations and reservations.

Corrections of defects and improper workmanship in the manner, and for the applicable time periods, provided for herein shall constitute fulfillment of all responsibilities of Farm King to the purchaser, and Farm King shall not be liable in negligence, contract, or on any other basis with respect to the subject equipment.

This limited warranty is subject to any existing conditions of supply which may directly affect Farm King's ability to obtain materials or manufacturer replacement parts.

Buhler Industries Inc. reserves the right to make improvements in design or changes in specifications to its products at anytime, without incurring any obligation to owners of units previously sold.

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Farm King



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