

Farm King

OPERATOR AND PARTS MANUAL

BACKSAVER AUGER

Models 1050, 1060, 1070, 1080

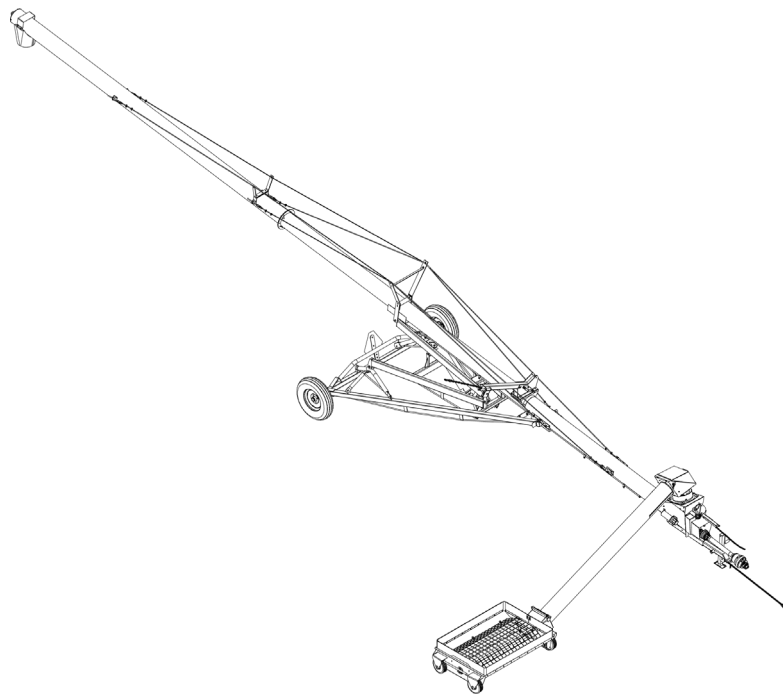


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WARRANTY REGISTRATION FORM

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery. Forms may be faxed to 204-654-2503 ATTN: Farm King Service/Warranty Administrator. Forms may be emailed to warranty@buhlerindustries.com or submitted online at farmkingdealers.com.

Customer Name:	
Customer Address:	
City:	Prov / State:
Postal / Zip Code:	Phone:

Dealer Name:	
Dealer Address:	
City:	Prov / State:
Postal / Zip Code:	Phone:

Equipment Model:	Serial Number:	Delivery Date:
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I have thoroughly instructed the buyer on the above described equipment which included the Operator and Parts Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Dealer Inspection Report:

- Bearings Turn Freely
- Winch Cable Tension Checked
- Bridging Cable Tension Checked
- Check Oil Level In Auger Drive Gear Box
- Fasteners Tight
- Lubricate Machine
- Check Tire Pressure
- Hopper Raises And Lowers Freely

Safety:

- Safety Chain On Hitch (if equipped)
- All Decals Installed
- Guards And Shields Installed And Secure
- Review Operating And Safety Instructions
- Check For Hydraulic Leaks
- Pre-Delivery Inspection Completed

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 Signature:
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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.

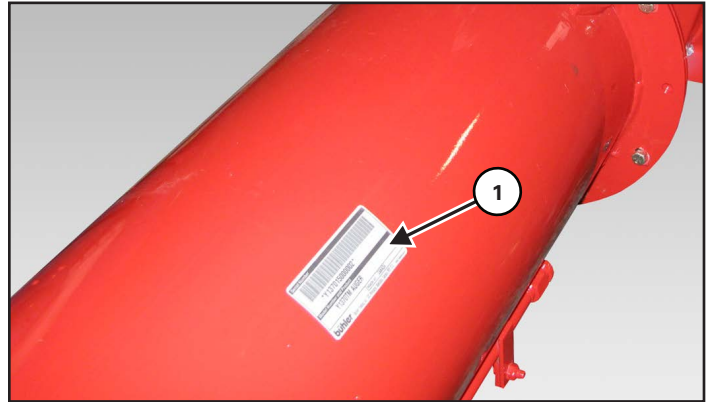
Visit our website at www.farm-king.com for a complete list of dealers in your area.

The directions left, right, front and rear, as mentioned throughout this manual, are as viewed by the operator sitting in the tractor seat while towing the implement.

Serial Number Location

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

Figure 1



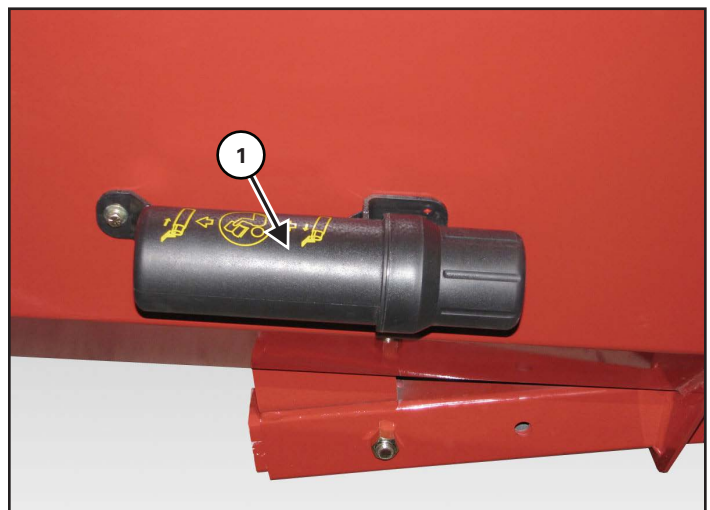
Model Number:
Serial Number:

The serial number plate (Item 1) is located on the intake tube [Figure 1].

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

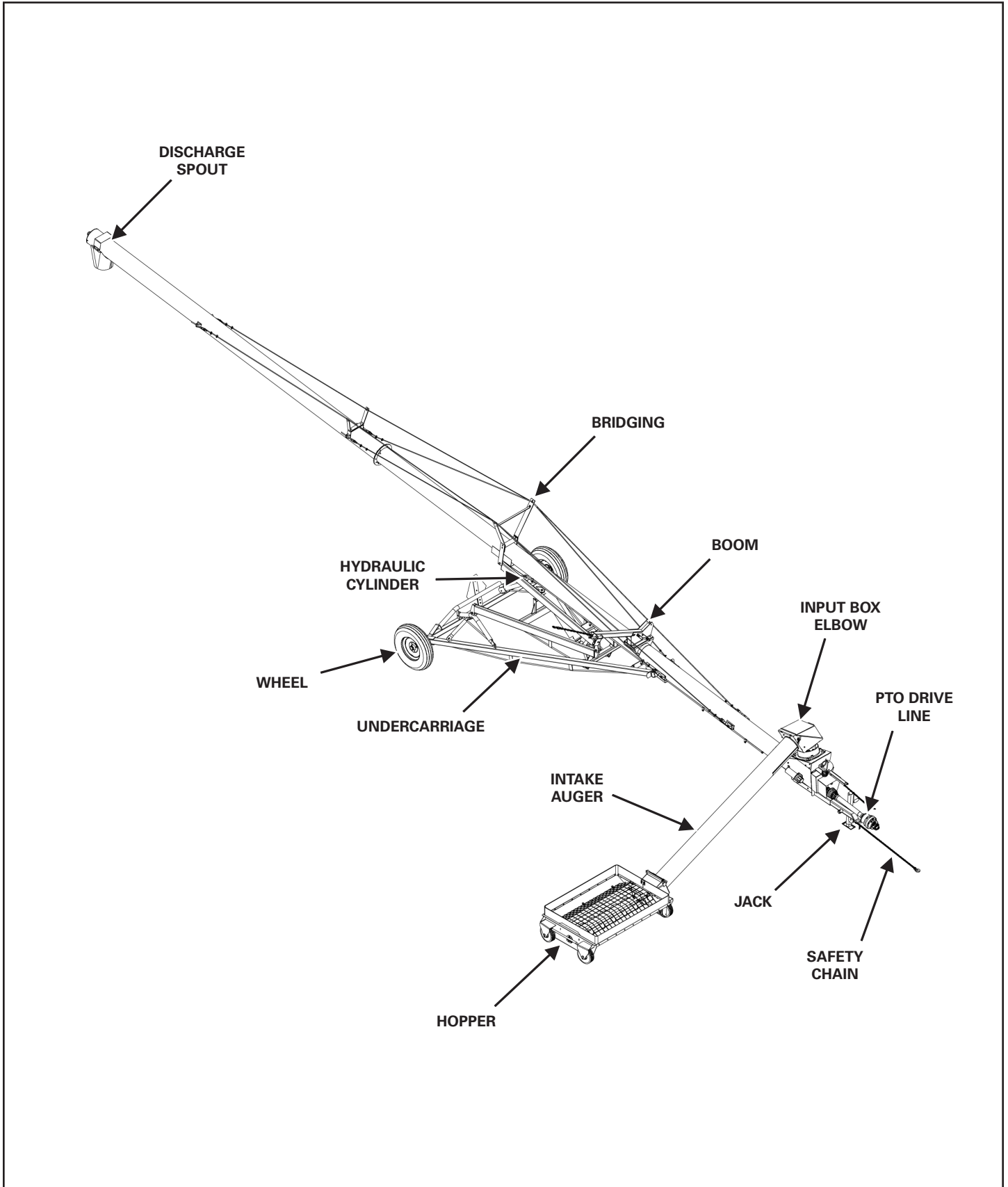
Manual Storage

Figure 2



The operator and parts manual and other documents can be stored in the canister (Item 1) located on the LH undercarriage arm [Figure 2].

EQUIPMENT IDENTIFICATION



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 alcohol 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.

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.

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.

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 raising or lowering the auger. Electrocutation 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.

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.

Machine Requirements And Capabilities

- 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.
- 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. Roll away can occur because the transmission may not prevent machine movement.

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 auger is raised. Electrocutation can occur without direct contact.

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 engine and exhaust system. 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 before operation. (See Maintenance section)
- Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.

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.

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.

Fueling



- Stop the engine and let it cool before adding fuel. No smoking! Do not refuel a machine near open flames or sparks. Fill the fuel tank outdoors.

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.

OPERATING SAFETY ZONES

 **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**

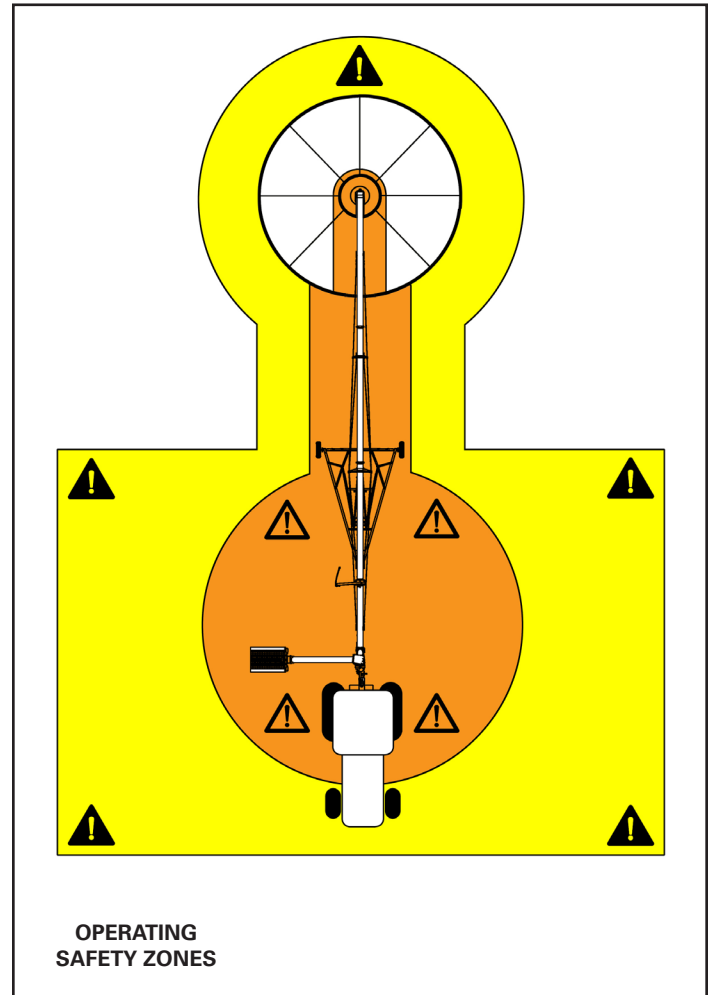
ELECTROCUTION HAZARD

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.

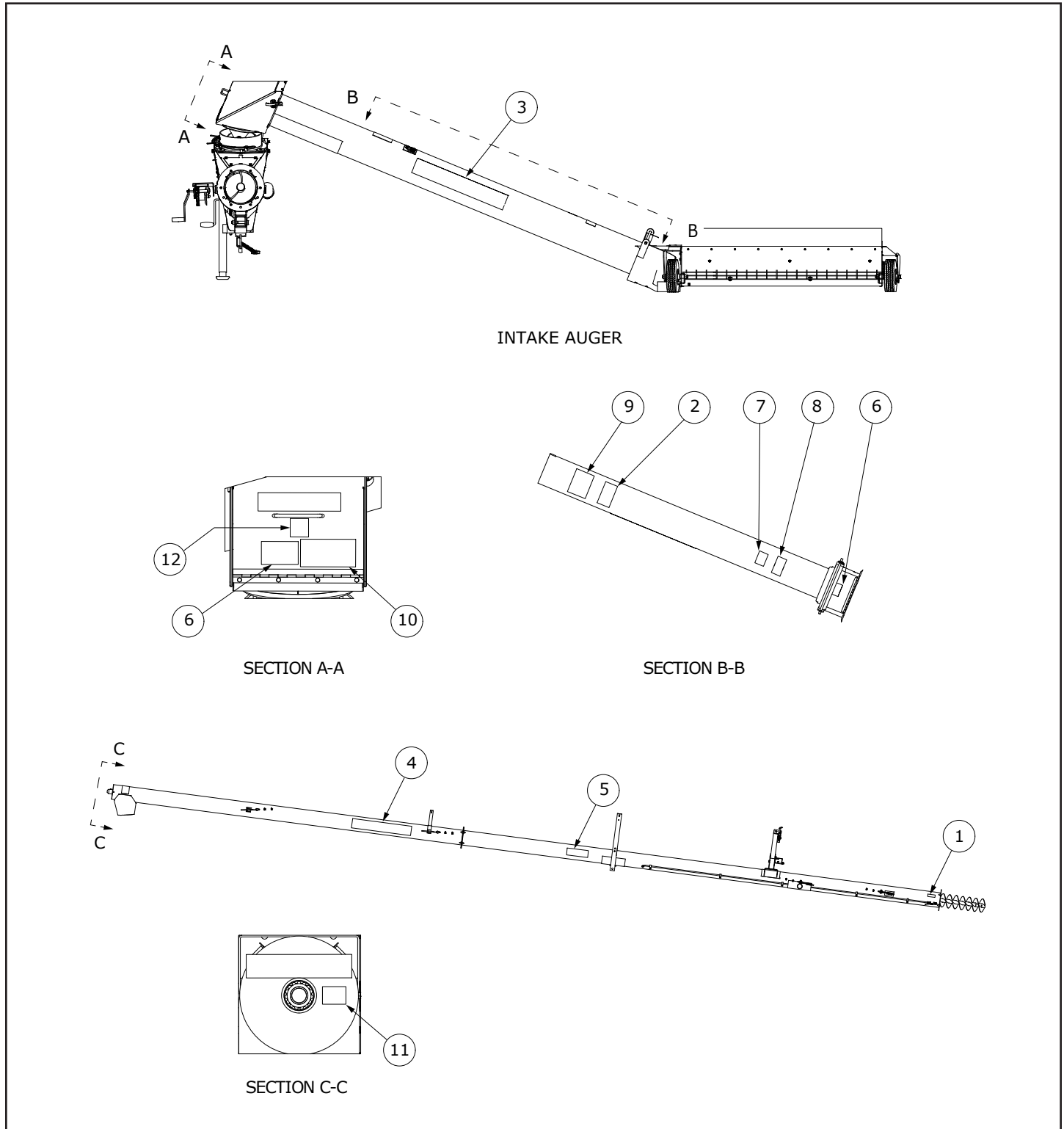
Figure 3

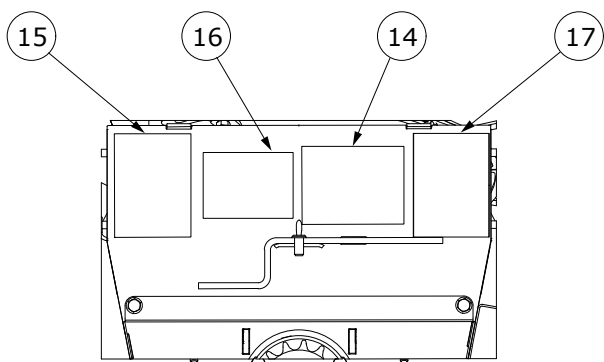
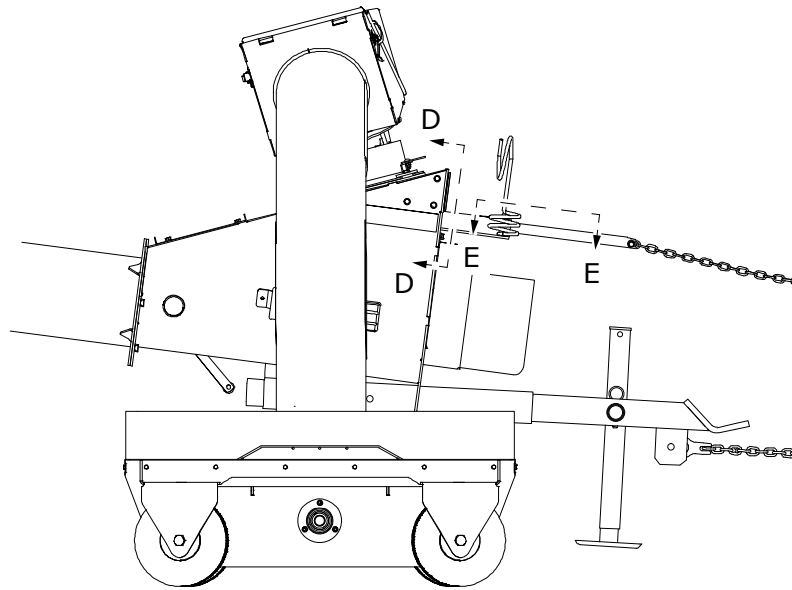


EQUIPMENT & SAFETY SIGNS (DECALS)

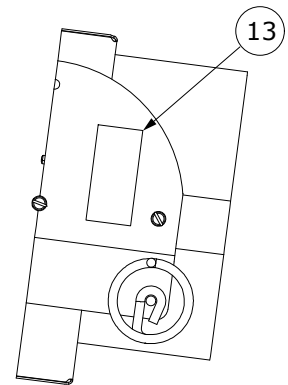
Follow the instructions on all the signs (decals) that are on the equipment. Replace any damaged signs (decals) and be sure they are in the correct locations. Equipment signs are available from your Farm King equipment dealer.

Figure 4





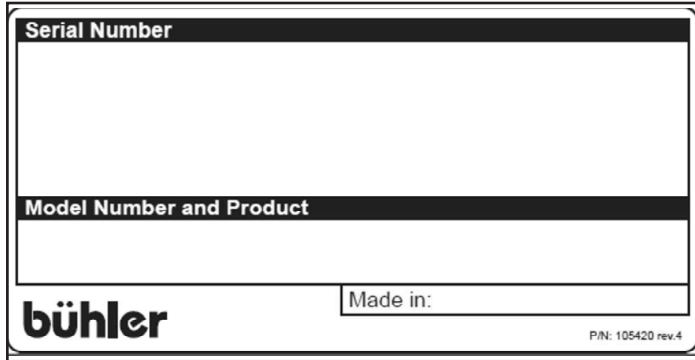
SECTION D-D



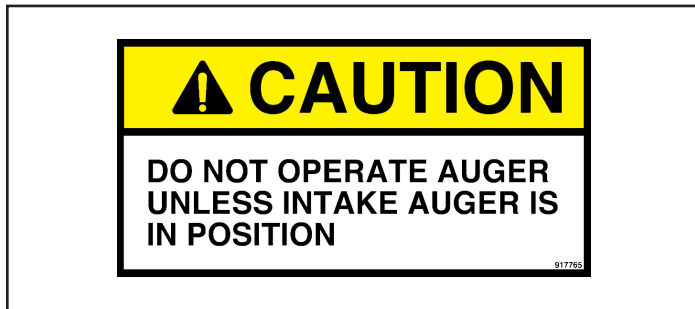
SECTION E-E

Decal Identification [Figure 4]

REFERENCE PLATE, PN 105420 (Item 1)



DECAL - INTAKE AUGER, PN 917765 (Item 2)



DECAL - FARM KING (29.2" X 4.3"), PN 934955 (Item 3)



DECAL - FARM KING (40.4" X 5.9"), PN 934963 (Item 4)

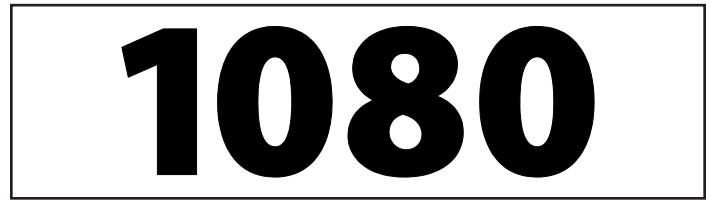


DECAL - 1050 BS - WHITE, PN 939498 (Item 5)

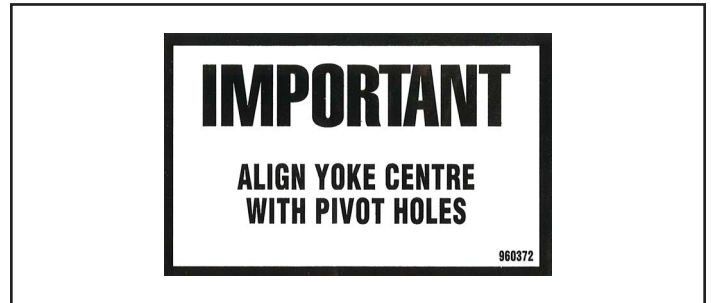
DECAL - 1060 BS - WHITE, PN 939499

DECAL - 1070 BS - WHITE, PN 939500

DECAL - 1080 BS - WHITE, PN 939501



DECAL - IMPORTANT ALIGN YOKE, PN 960372 (Item 6)



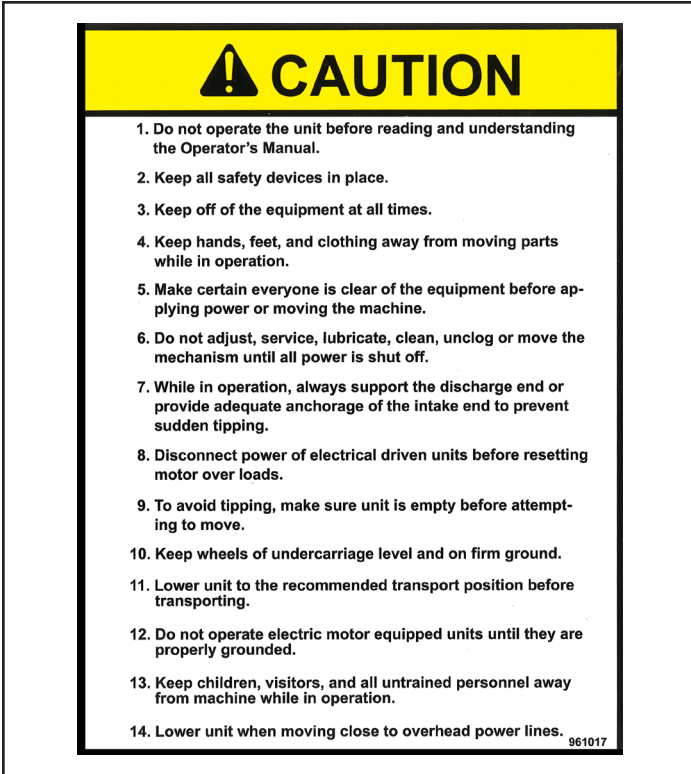
DECAL - IMPORTANT RUN AUGER PARTIALLY, PN 961015 (Item 7)



DECAL - DANGER KEEP HANDS AND FEET, PN 961016 (Item 8)



DECAL - CAUTION 14 POINT LIST RULES, PN 961017 (Item 9)



DECAL - CHECK OIL, PN 967388 (Item 12)



DECAL - WARNING CHECK PTO SHAFT, PN 108431 (Item 13)



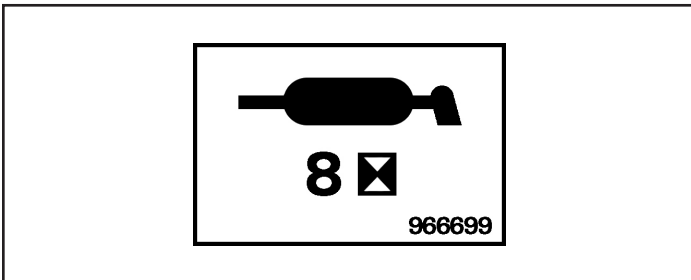
DECAL - DANGER ROTATING DRIVELINE, PN 904585 (Item 14)



DECAL - CAUTION, PN 963206 (Item 10)



DECAL - GREASE, PN 966699 (Item 11)



DECAL - DANGER ELECTROCUTION, PN 909745
(Item 15)



DECAL - LABEL INPUT BOX, PN 960371 (Item 16)



DECAL - DANGER UPENDING, PN 960569 (Item 17)



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ASSEMBLY

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GENERAL ASSEMBLY INFORMATION

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



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 components.

DO NOT work under suspended parts.

Keep away from moving parts.

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



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

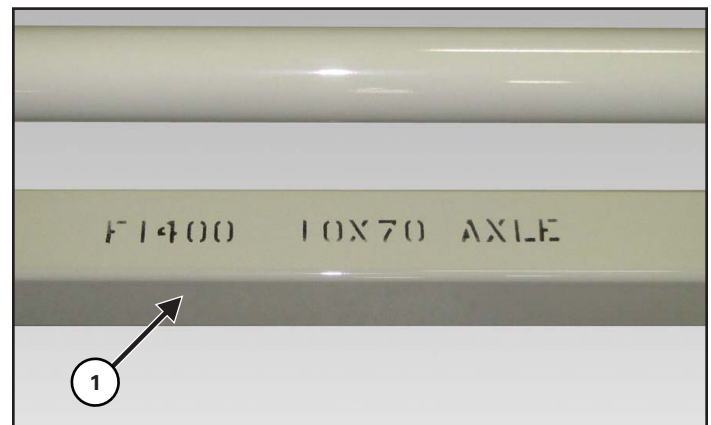
Using the packing list, locate and place all components and hardware in one area. Count the individual components and verify that you have received the correct number of components to fully assemble the auger.

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

Assemble the Auger in the following order:

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

Figure 5



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

UNDERCARRIAGE

Assemble the undercarriage on a flat level surface.

NOTE: The following images throughout the assembly section of this manual may not show your exact auger components as they appear but the procedure is correct for all 10 in. Backsaver Augers.

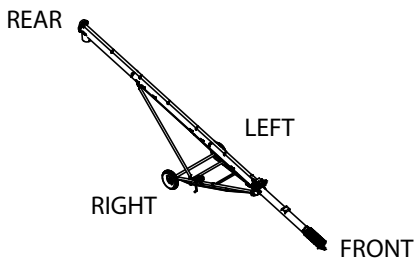


DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

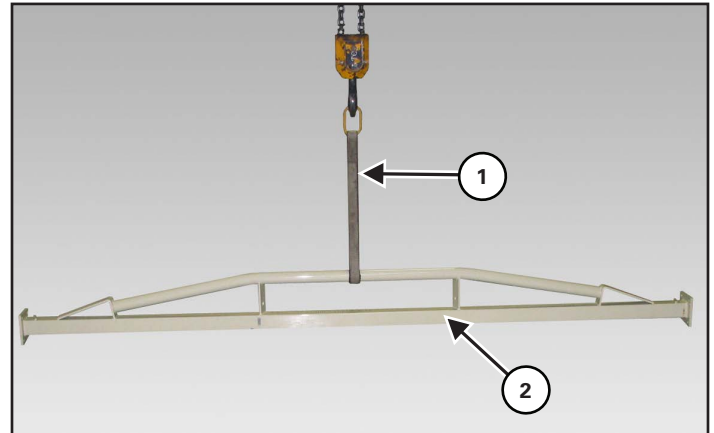
Keep away from moving parts.

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



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

Figure 6



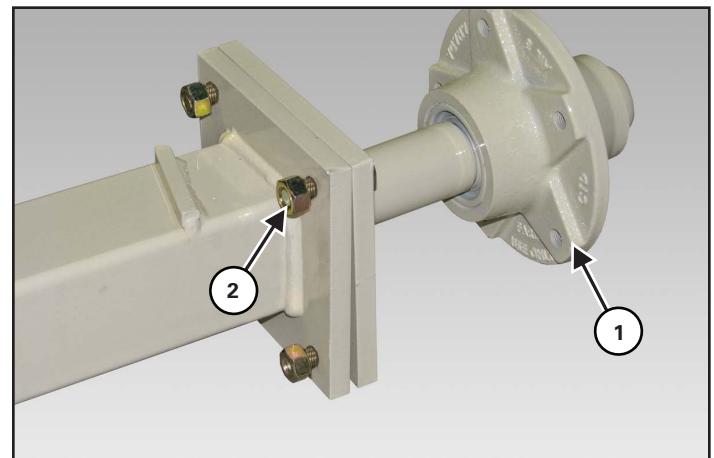
Install a strap (Item 1) around the center of the axle (Item 2) [Figure 6].

Connect the strap to an approved lifting device.

Raise and move the axle to the assembly area.

Lower the axle to the ground and remove strap.

Figure 7

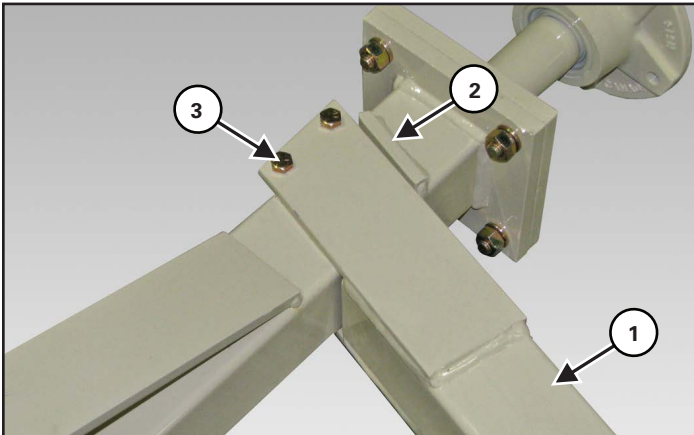


Align the LH hub (Item 1) with the axle [Figure 7].

Install and tighten the four 1/2" x 1-3/4" hex bolts (Item 2) and 1/2" lock nuts [Figure 7].

Repeat procedure and install the opposite hub onto the axle.

Figure 8

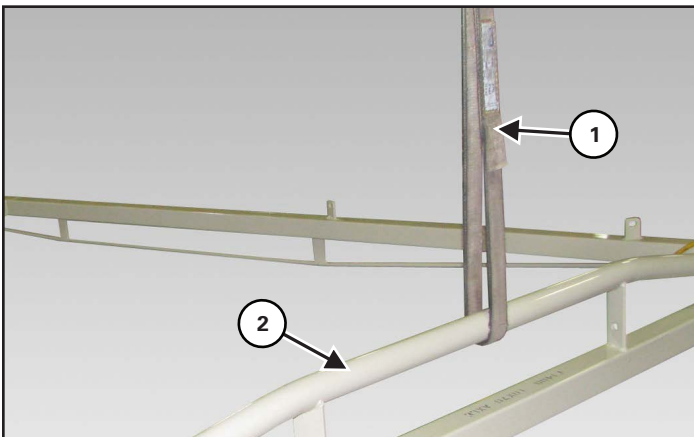


Align the left undercarriage arm (Item 1) with the tab (Item 2) on the axle **[Figure 8]**.

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

Repeat procedure and install the opposite undercarriage arm (opposite side of axle).

Figure 9

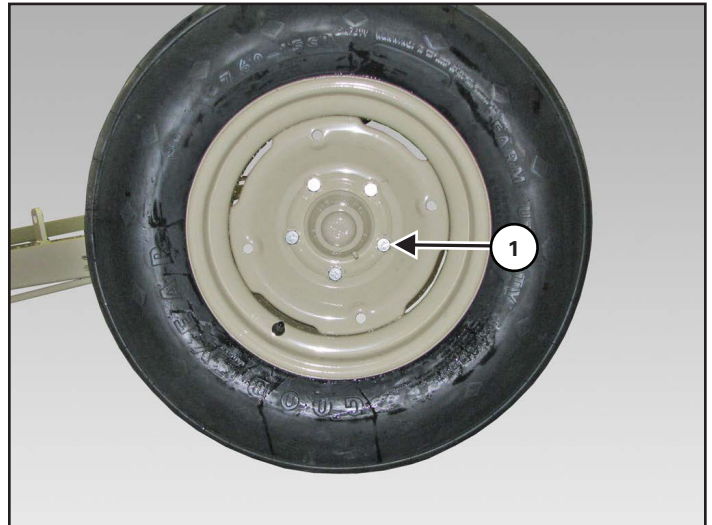


Install a strap (Item 1) around the center of the axle (Item 2) **[Figure 9]**.

Connect the strap to an approved lifting device.

Raise the axle high enough to install tires.

Figure 10



Install the wheel with the valve stem facing out (both sides). Install the five wheel nuts (Item 1) **[Figure 10]**.

Tighten wheel nuts in a criss-cross pattern.

Tighten wheel nuts to 80–100 ft.-lbs. (108–135 N•m) of torque.

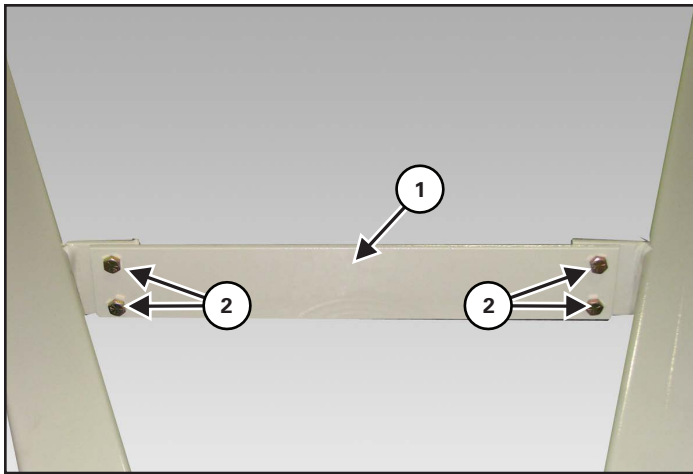
Repeat procedure and install the opposite wheel.

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

Check tire pressure.

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

Figure 11

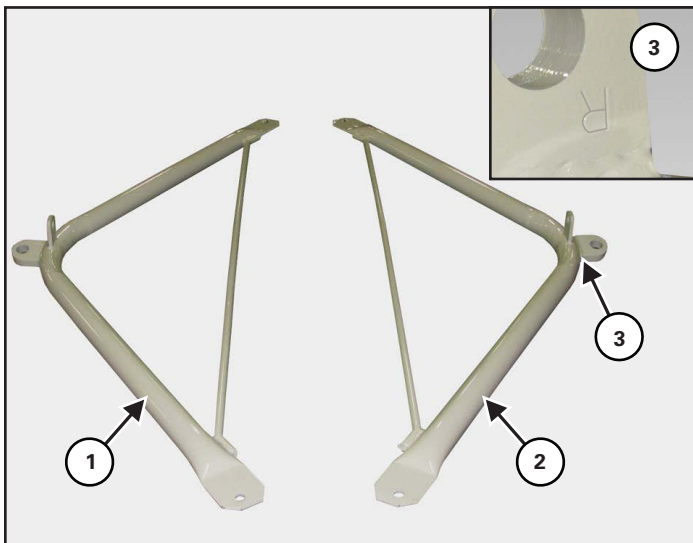


Align the undercarriage tie plate (Item 1) with the mounting plates on the LH & RH undercarriage arms [Figure 11].

Install four 3/8" x 1-1/4" hex bolts (Item 2), 1" x 7/16" flat washers, and 3/8" lock nuts [Figure 11].

Do not tighten at this time.

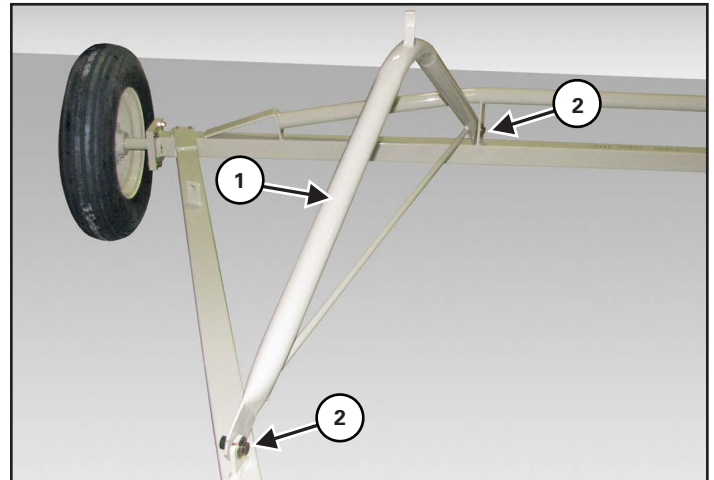
Figure 12



Locate the LH (Item 1) and RH (Item 2) undercarriage arches [Figure 12].

The undercarriage arches are stamped (Item 3) with an L & R for identification [Figure 12].

Figure 13

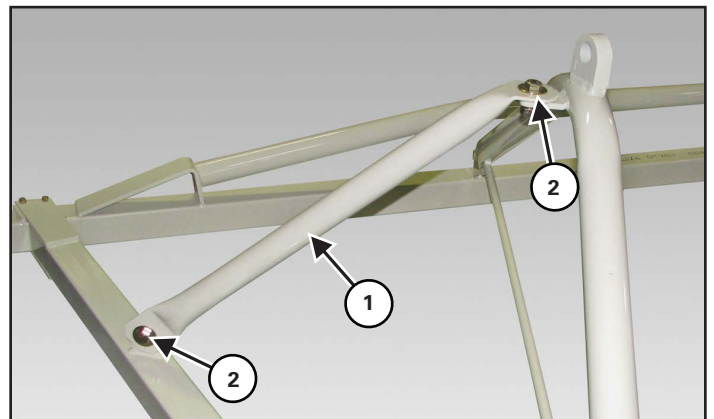


Align the LH and RH undercarriage arches (Item 1), on the outside of the mounts on the undercarriage arm and axle [Figure 13].

Attach each arch using two 5/8" x 1-3/4" hex bolts, 5/8" flat washers, and 5/8" lock nuts (Item 2) [Figure 13].

Do not tighten at this time.

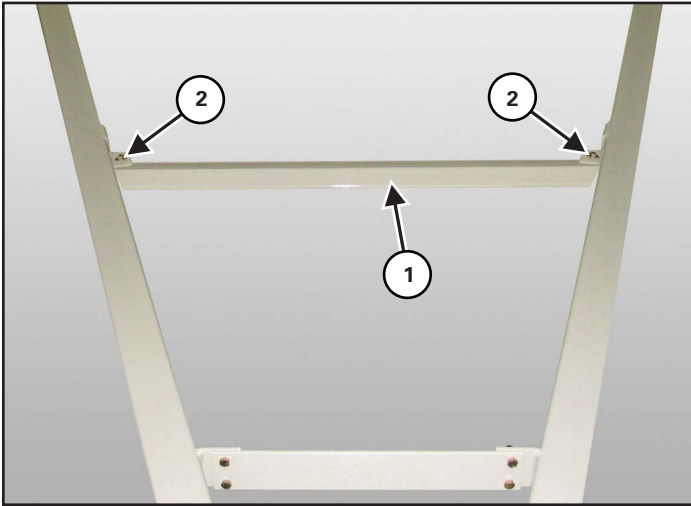
Figure 14



Align one brace (Item 1) to the outside of each LH and RH undercarriage arch [Figure 14].

Attach brace using two 5/8" x 1-3/4" hex bolts (Item 2), 5/8" flat washers, and 5/8" lock nuts [Figure 14].

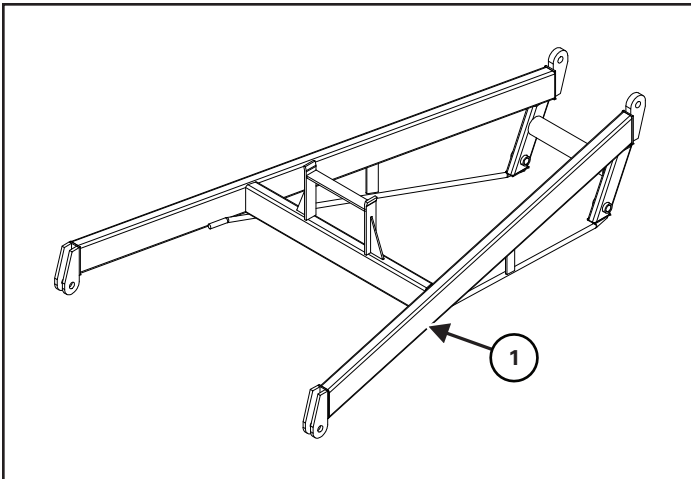
Figure 15



Align the lift arm cradle (Item 1) to the bottom sides of the undercarriage mounts **[Figure 15]**.

Install using two 1/2" x 1-1/4" hex bolts (Item 2), 1/2" flat washers, and 1/2" lock nuts **[Figure 15]**.

Figure 16

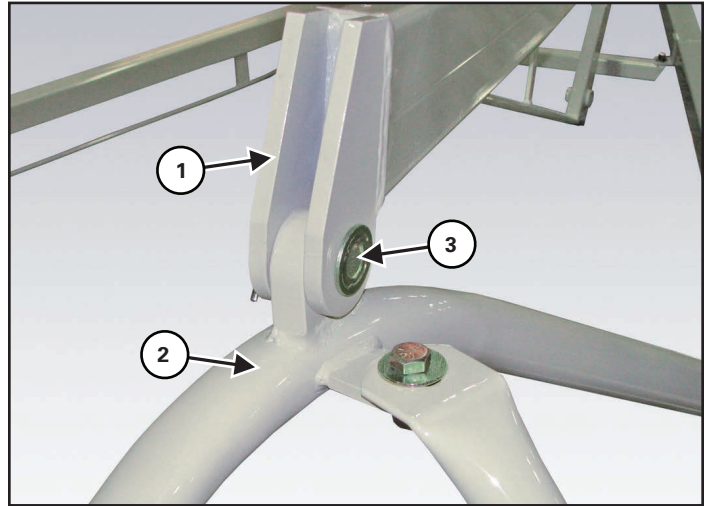


Install straps around the lower lift arm weldment (Item 1). Connect the straps to an approved lifting device **[Figure 16]**.

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

NOTE: Model 1050 lower lift arm weldment is pictured **[Figure 16]**.

Figure 17



Align the lower lift arm mounts (Item 1) to the undercarriage arch mounts (Item 2) **[Figure 17]**.

Attach each mount using one clevis pin (Item 3), washer, and cotter pin (depending on model) **[Figure 17]**.

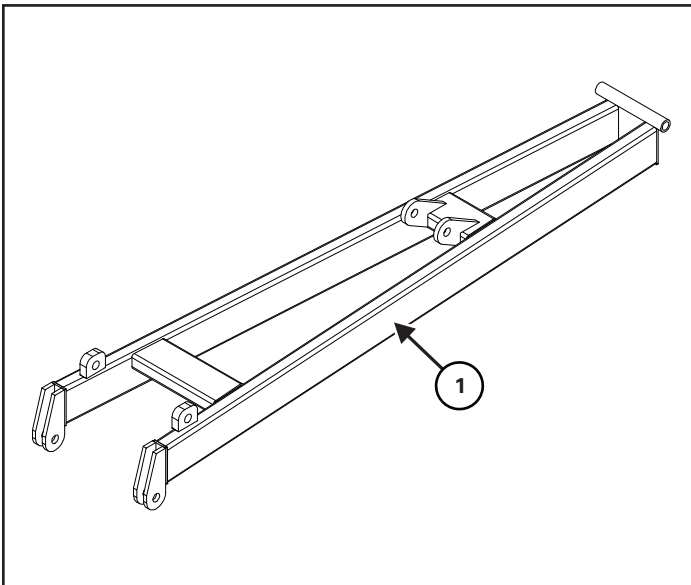
1050 and 1060 Models:

- 1" ID flat washer
- 1" DIA clevis pin
- 3/16" x 1-1/2" cotter pin

1070 and 1080 Models:

- 1-1/4" ID rim washer
- 1-1/4" DIA clevis pin
- 1/4" x 2" cotter pin

Figure 18



Install straps around the upper lift arm weldment (Item 1). Connect the straps to an approved lifting device [Figure 18].

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

NOTE: Model 1050 upper lift arm weldment is pictured [Figure 18].

WARNING



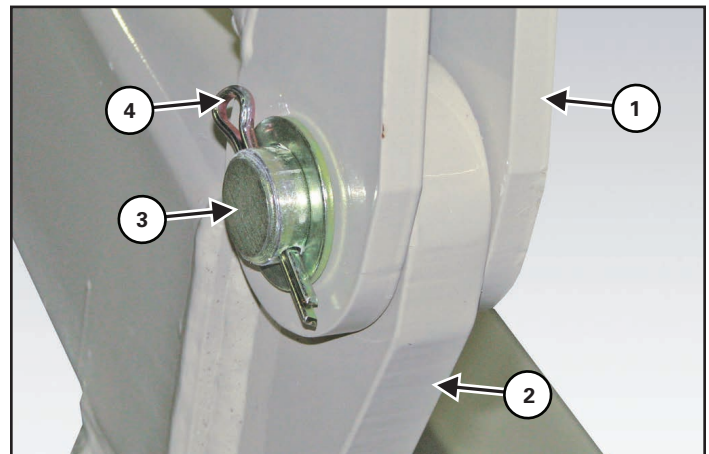
DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

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

Figure 19



Align the upper lift arm mounts (Item 1) to the lower lift arm mounts (Item 2) [Figure 19].

Attach each mount using one clevis pin (Item 3), washer, and cotter pin (Item 4) (depending on model) [Figure 19].

1050 and 1060 Models:

- 1" ID flat washer
- 1" DIA clevis pin
- 3/16" x 1-1/2" cotter pin

1070 and 1080 Models:

- 1-1/4" ID rim washer
- 1-1/4" DIA clevis pin
- 1/4" x 2" cotter pin

Move the lift hydraulic cylinder to the work area.

Hydraulic cylinders depending on model:

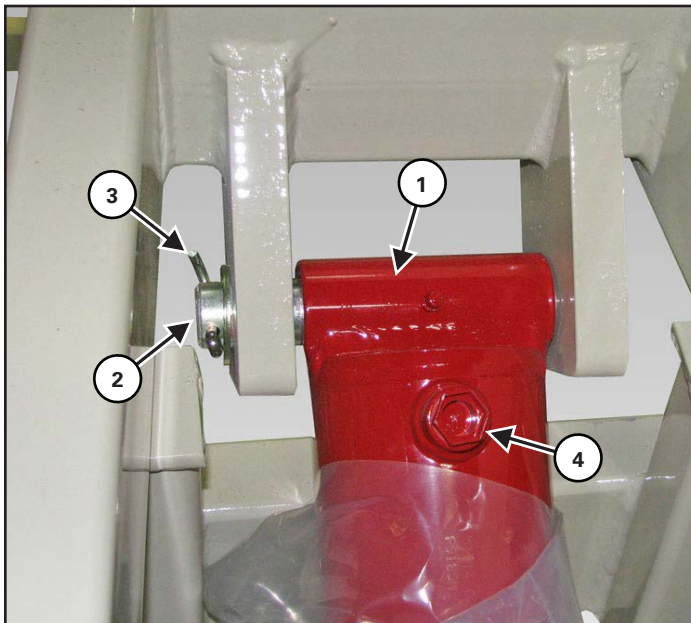
Model	PN	DESC.
1050	F9183	3.5" X 30" HYD. CYL.
1060	F9184	4" X 36" HYD. CYL.
1070, 1080	F9185	4" X 40" HYD. CYL.

! 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.

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

Figure 20



Align the base end of the hydraulic cylinder (Item 1) to the mounts on the upper lift arm [Figure 20].

Attach the cylinder using one clevis pin (Item 2), washer, and cotter pin (Item 3) depending on model [Figure 20].

1050 Models:

- 1" ID flat washer
- 1" x 6-1/2" cylinder pin
- 3/16" x 1-1/2" cotter pin

1060 Models:

- 1" ID flat washer
- 1" x 6-7/8" cylinder pin
- 3/16" x 1-1/2" cotter pin

1070 and 1080 Models:

- 1-1/4" ID rim washer
- 1-1/4" x 8-1/2" cylinder pin
- 1/4" x 2" cotter pin

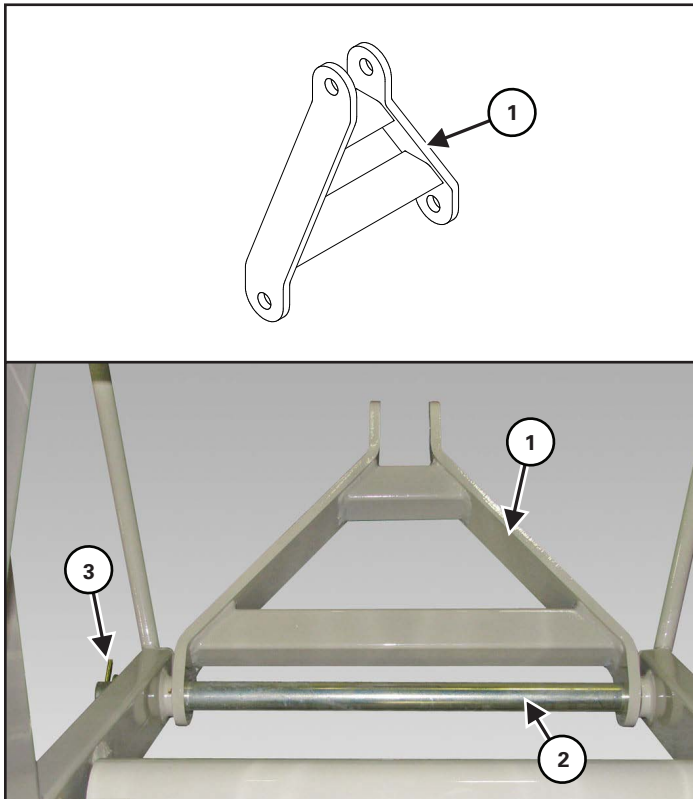
! IMPORTANT

Hydraulic Cylinder Orientation

1070, 1080 Models: Cylinder ports (Item 4) must face UP [Figure 20].

1050, 1060 Models: Cylinder ports must face DOWN (not shown).

Figure 21



Position the connecting link (Item 1) within the mounts of the lower lift arm. Slide the connecting pin (Item 2) through the mounts **[Figure 21]**.

Attach the pin using one washer and cotter pin (Item 3) depending on model **[Figure 21]**.

1050 Models:

- 1" ID flat washer
- 1" x 20" connecting pin
- 3/16" x 1-1/2" cotter pin

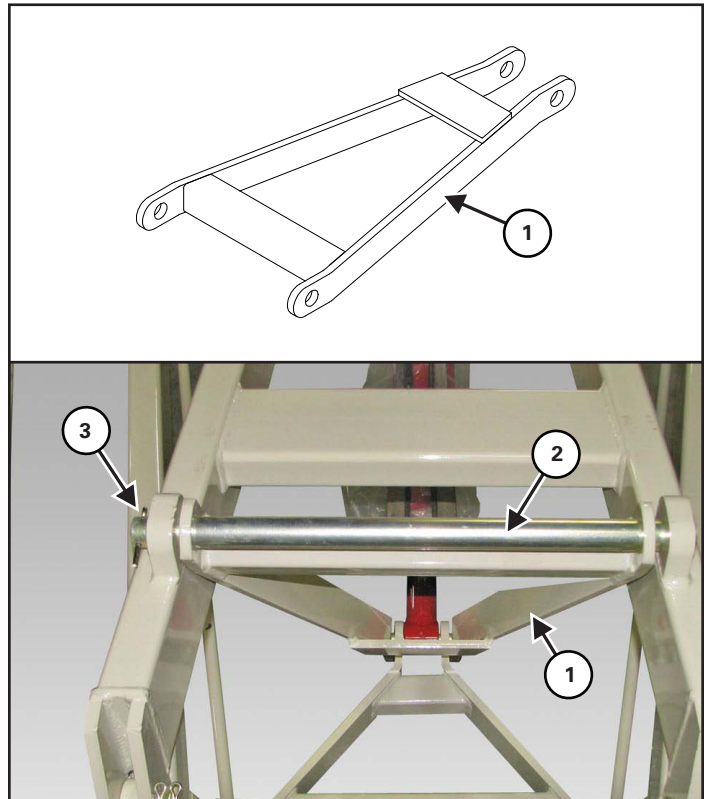
1060 Models:

- 1" ID flat washer
- 1" x 22" connecting pin
- 3/16" x 1-1/2" cotter pin

1070 and 1080 Models:

- 1-1/4" ID rim washer
- 1-1/4" x 26" connecting pin
- 1/4" x 2" cotter pin

Figure 22



Position the pivot yoke (Item 1) within the mounts of the upper lift arm. Slide the connecting pin (Item 2) through the mounts **[Figure 22]**.

Attach the pin using one washer and cotter pin (Item 3) depending on model **[Figure 22]**.

1050 Models:

- 1" ID flat washer
- 1" x 16" connecting pin
- 3/16" x 1-1/2" cotter pin

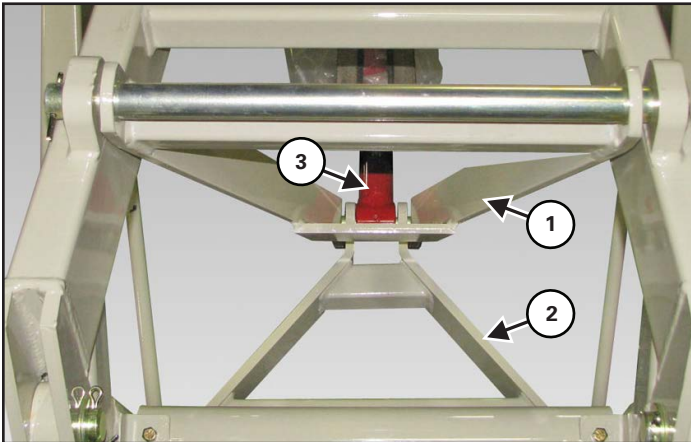
1060 Models:

- 1" ID flat washer
- 1" x 18" connecting pin
- 3/16" x 1-1/2" cotter pin

1070 and 1080 Models:

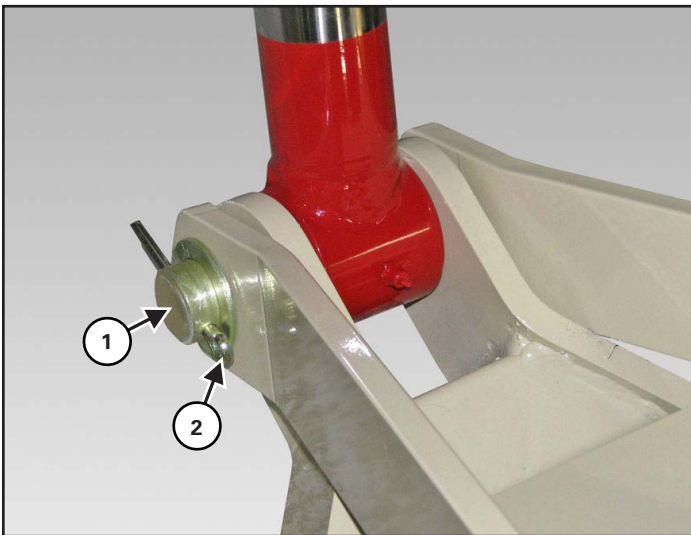
- 1-1/4" ID rim washer
- 1-1/4" x 22" connecting pin
- 1/4" x 2" cotter pin

Figure 23



Align the narrow mounts of the pivot yoke (Item 1) and connecting link (Item 2). Place the rod end of the hydraulic cylinder (Item 3) within the mounts [Figure 23].

Figure 24



Slide one swivel pin (Item 1) through the mounts. Attach using one washer and cotter pin (Item 2) depending on model [Figure 24].

1050 and 1060 Models:

- 1" ID flat washer
- 1" swivel pin
- 3/16" x 1-1/2" cotter pin

1070 and 1080 Models:

- 1-1/4" ID rim washer
- 1-1/4" swivel pin
- 1/4" x 2" cotter pin

TUBES

Assemble the tube on flat level surface.



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

DO NOT work under suspended parts.

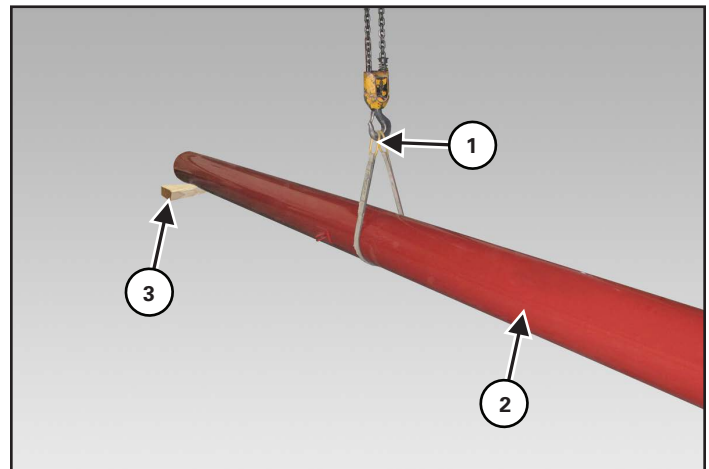
Keep away from moving parts.

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



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

Figure 25

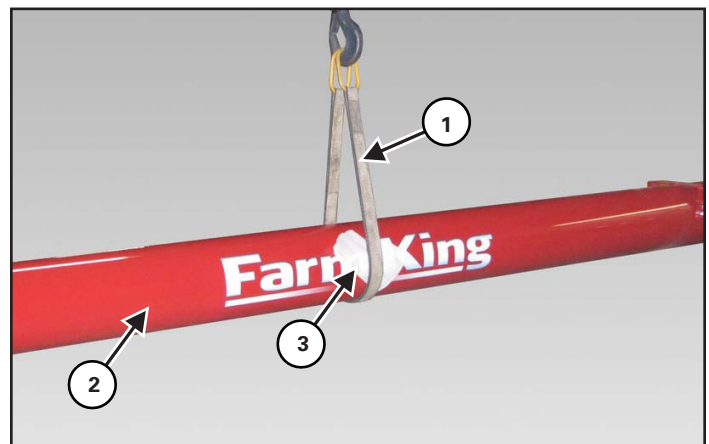


Install a strap (Item 1) around the top tube (Item 2) [Figure 25].

Raise and move the top tube to the assembly area.

Place a block (Item 3) under the discharge spout end of the tube. Lower the tube onto the block. Remove strap [Figure 25].

Figure 26



Install a strap (Item 1) around the center or bottom tube (Item 2) [Figure 26].

NOTE: Place a rag (Item 3) between the strap and decal to prevent decal damage while lifting and moving the center tube section [Figure 26].

Raise and move the center tube to the assembly area.



IMPORTANT

Auger Tubes

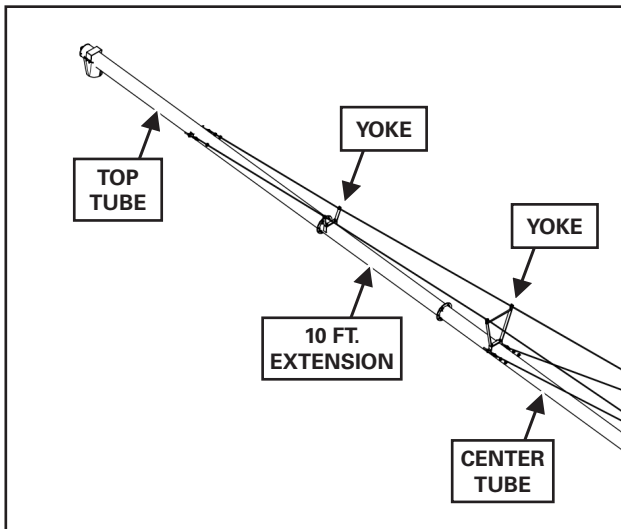
BS1050 models include two tubes (top and bottom).

BS1060 and BS1070 models include three tubes (top, center, and bottom).



IMPORTANT

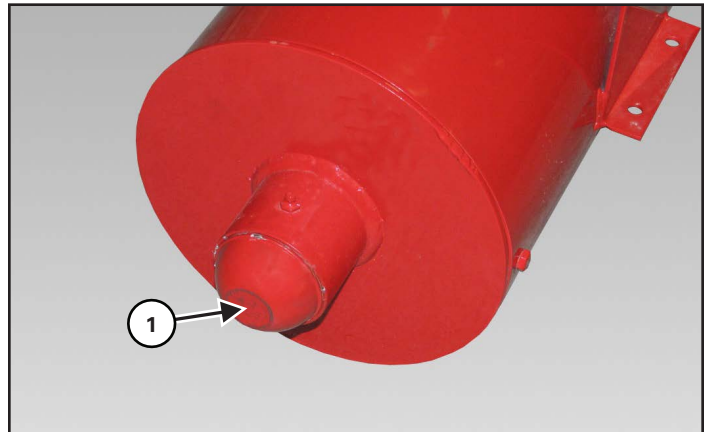
BS1080 Auger Tubes



BS1080 models include three BS1070 tubes (top, center, and bottom) with one 10 ft. extension tube between the top and center tubes.

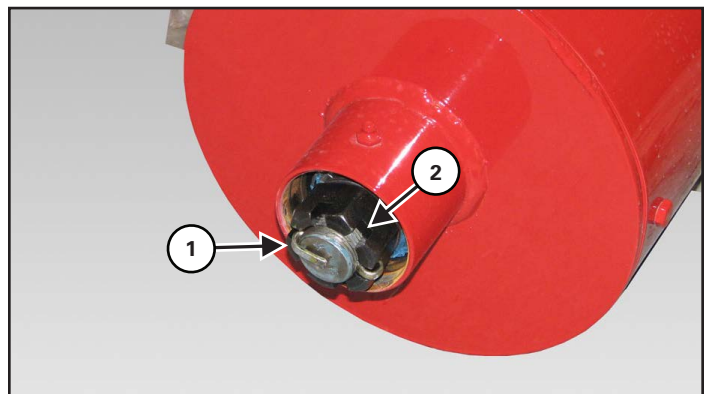
BS1080 models with the 10 ft. extension are equipped with two upper bridging yokes.

Figure 27



Remove the dust cap (Item 1) from the end of the top tube [Figure 27].

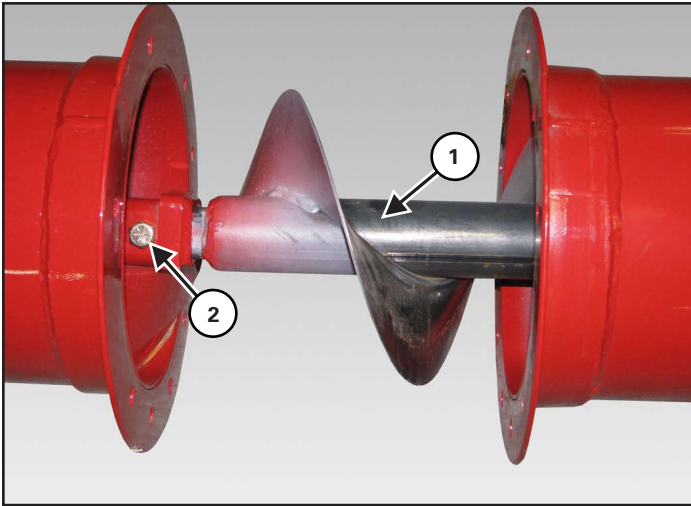
Figure 28



Remove the cotter pin (Item 1) and loosen the castle nut (Item 2). Do not remove the castle nut [Figure 28].

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

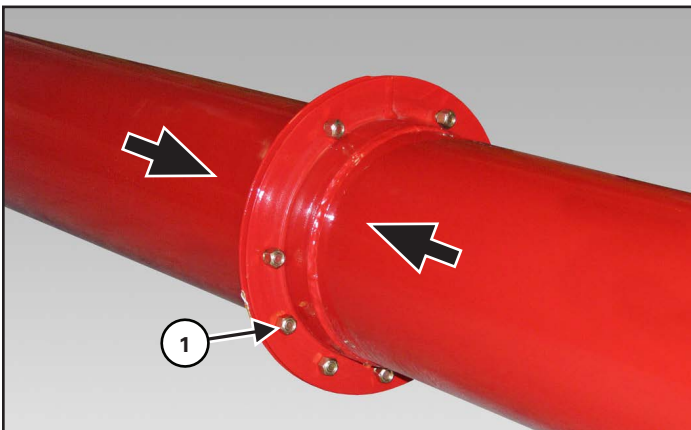
Figure 29



Slide the flanging (Item 1) from the lower tube section forward into the flanging of the top tube section [Figure 29].

Install one 1/2" x 2-3/4" Gr. 8 bolt (Item 2) and 1/2" lock nut. Tighten bolt and lock nut [Figure 29].

Figure 30



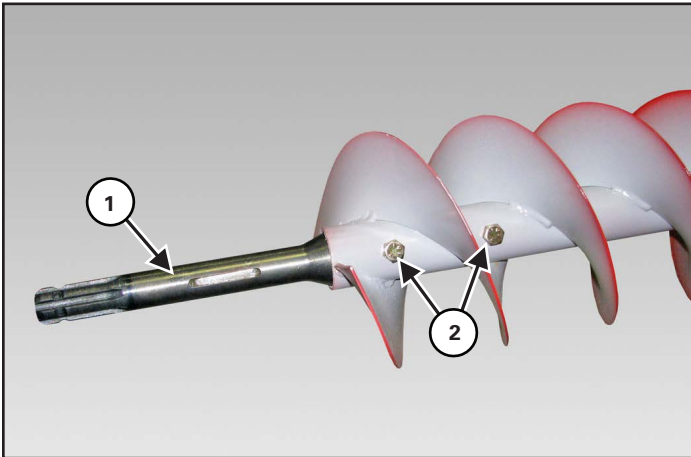
Slide the tube sections together until the mounting flanges contact each other. Attach the flanges using nine 1/2" x 1-1/4" bolts (Item 1) and 1/2" lock nuts [Figure 30].

Tighten the bolts around the flanges. Slightly raise the lower tube and tighten the top two bolts. Slightly lower the tube and tighten the bottom two bolts. Tighten remaining bolts in a criss-cross pattern.

Repeat process to connect all tube sections (top, center, bottom as applicable).

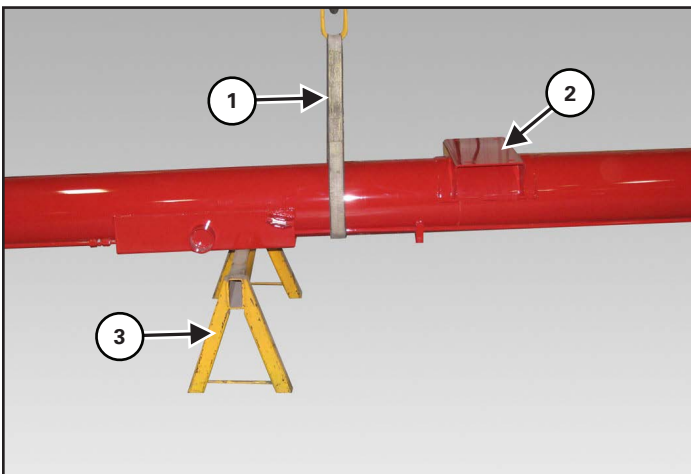
INPUT BOX

Figure 31



Install the splined stub shaft (Item 1) to the flighting of the bottom tube section. Attach using two 1/2" x 3" hex bolts (Item 2) and 1/2" lock nuts [Figure 31].

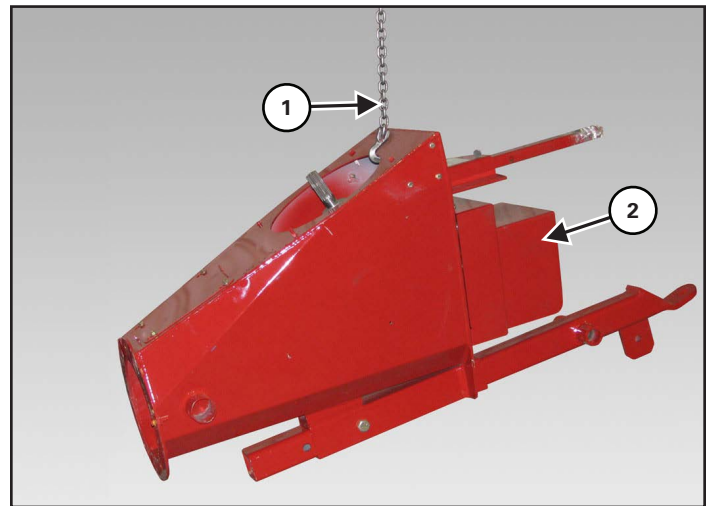
Figure 32



Install a strap (Item 1) around the bottom tube section, just behind the winch mounting plate (Item 2). Connect the strap to an approved lifting device [Figure 32].

Raise the bottom tube section off the ground and support with a stand (Item 3) [Figure 32].

Figure 33

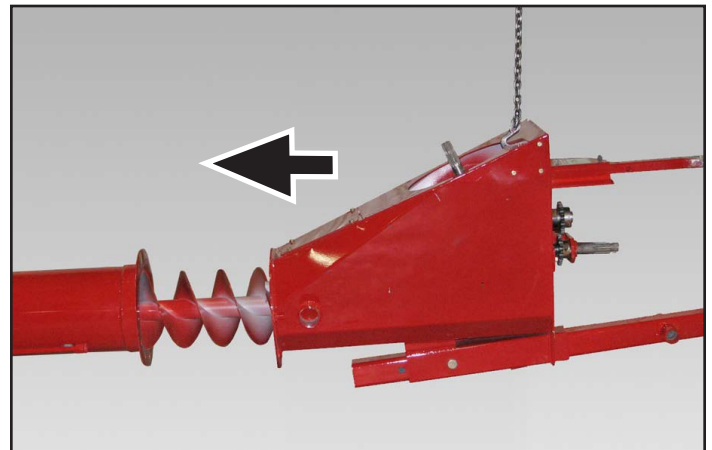


Install a chain (Item 1) to the input box. Connect the strap to an approved lifting device [Figure 33].

Raise and move the input box to the bottom tube section.

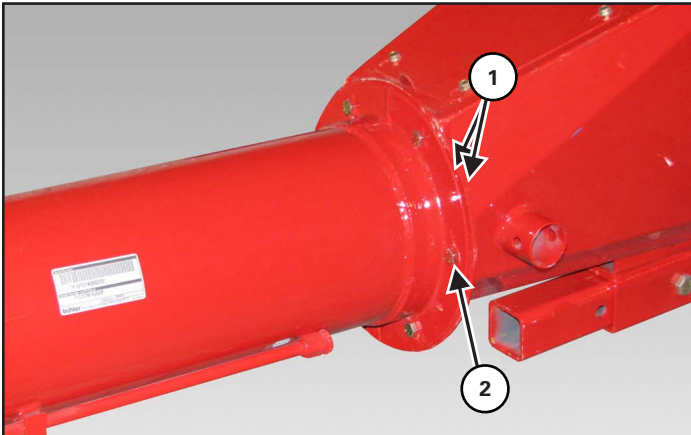
Remove the guard (Item 2) from the input box and set aside [Figure 33].

Figure 34



Guide the input box onto the flighting of the bottom tube section [Figure 34].

Figure 35

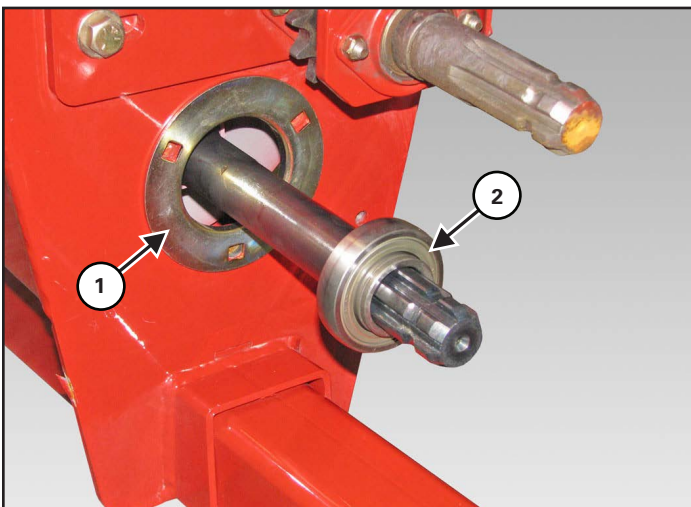


Keep guiding the input box onto the flighting until the flanges (Item 1) make contact [Figure 35].

NOTE: The splined stub shaft will pass through the input box and out of the opening on the opposite side.

Attach the flanges using six 1/2" x 1-1/4" hex bolts (Item 2) [Figure 35].

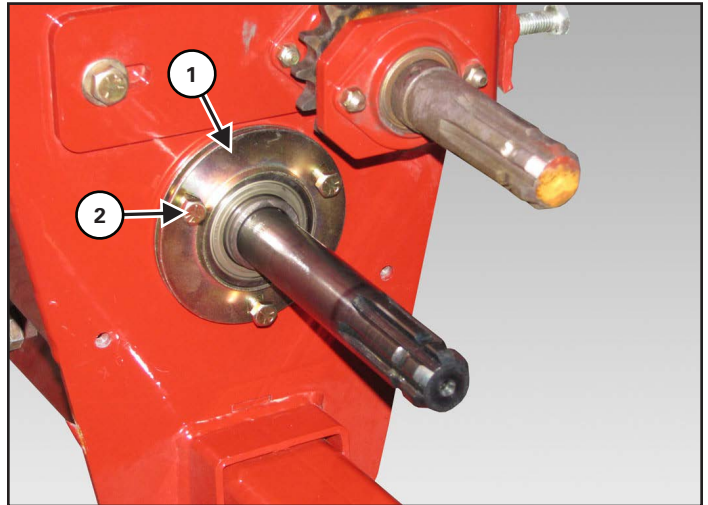
Figure 36



Install one bearing flange (Item 1) onto the splined stub shaft [Figure 36].

Install the 1-3/8" bearing (Item 2) onto the splined stub shaft [Figure 36].

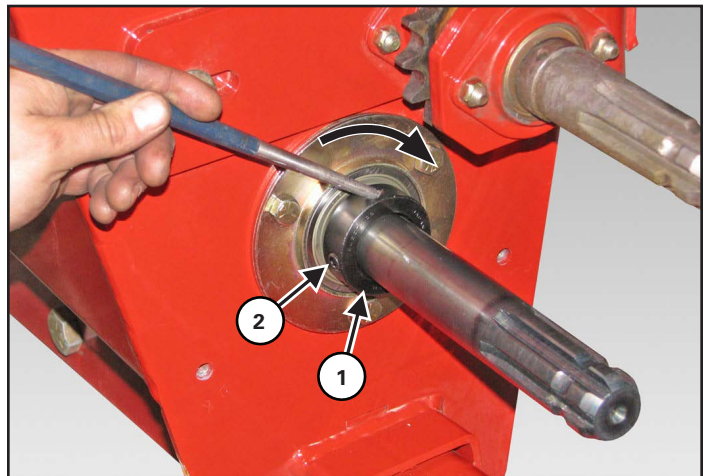
Figure 37



Install a second bearing flange (Item 1) over the splined stub shaft and 1-3/8" bearing [Figure 37].

Align the mounting holes of the two bearing flanges. Attach using three 3/8" x 1" Gr. 5 bolts (Item 2) [Figure 37].

Figure 38

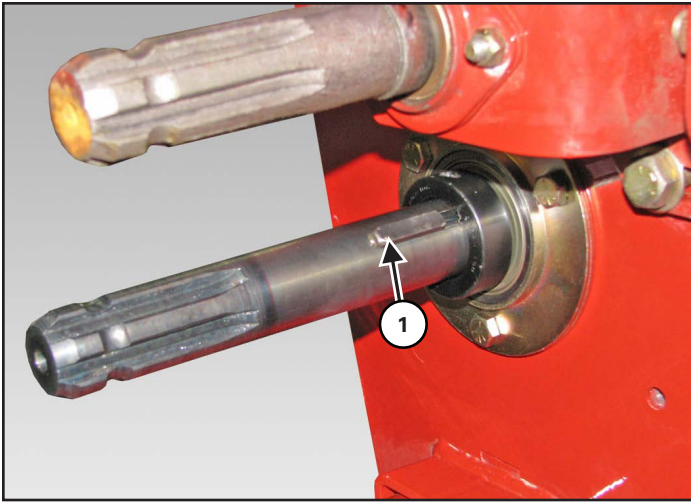


NOTE: Before installing the locking collar, verify the castle nut is set correctly. Back the castle nut off just far enough that the cotter pin hole is covered. Verify that the flighting is pulled all the way down.

Install the locking collar (Item 1). Using a punch, tap / rotate the locking collar clockwise to secure in position [Figure 38].

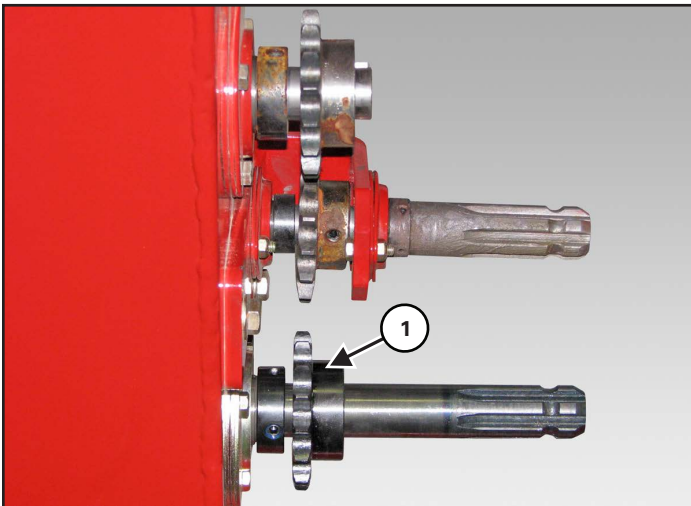
Apply Loctite® to the set screw (Item 2), install and tighten [Figure 38].

Figure 39



Install the 5/16" x 58 mm key (Item 1) to the splined stub shaft [Figure 39].

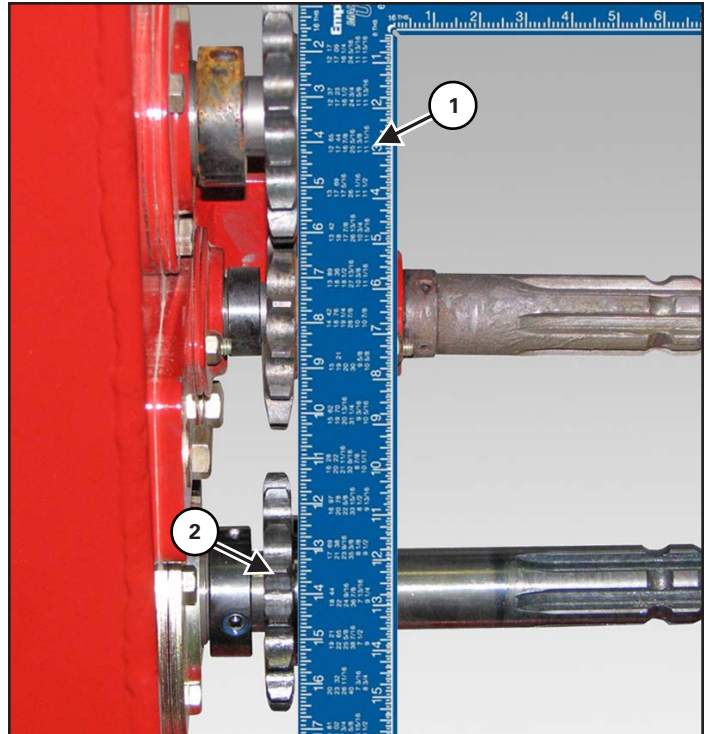
Figure 40



Install sprocket (Item 1) to the splined stub shaft. Align with the key [Figure 40].

Do not tighten set screws.

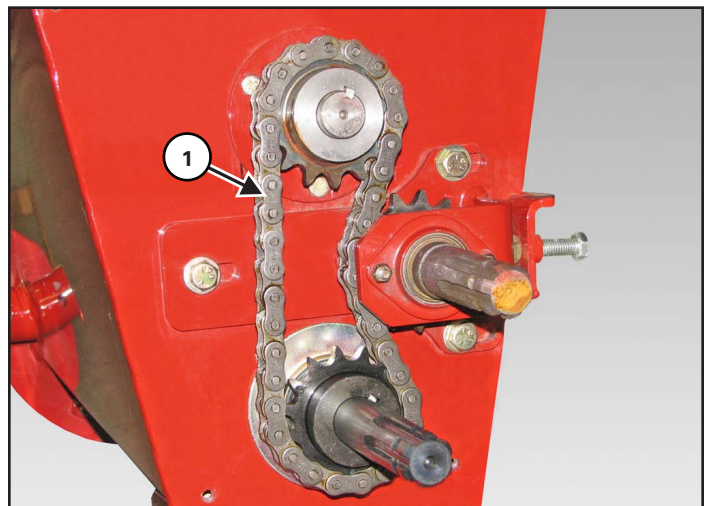
Figure 41



Place a straight edge (Item 1) along side the three sprockets. Align sprocket (Item 2) with the two pre-installed sprockets [Figure 41].

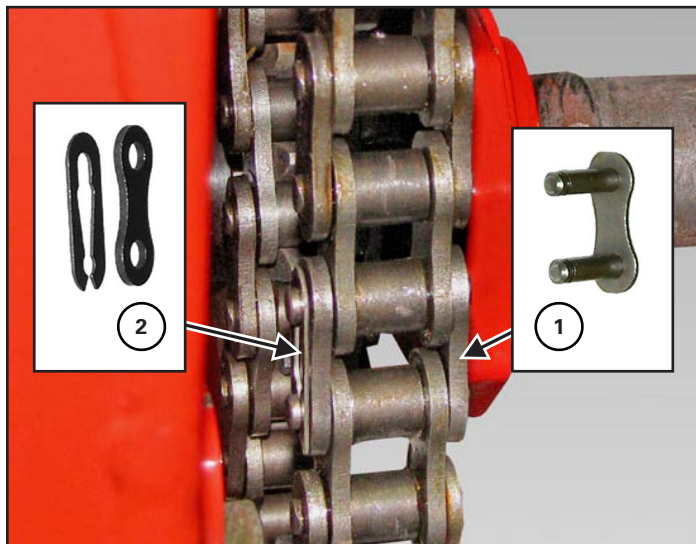
Tighten set screws to secure the sprocket in the set position.

Figure 42



Install the roller chain (Item 1) around the sprockets and idler sprocket as shown [Figure 42].

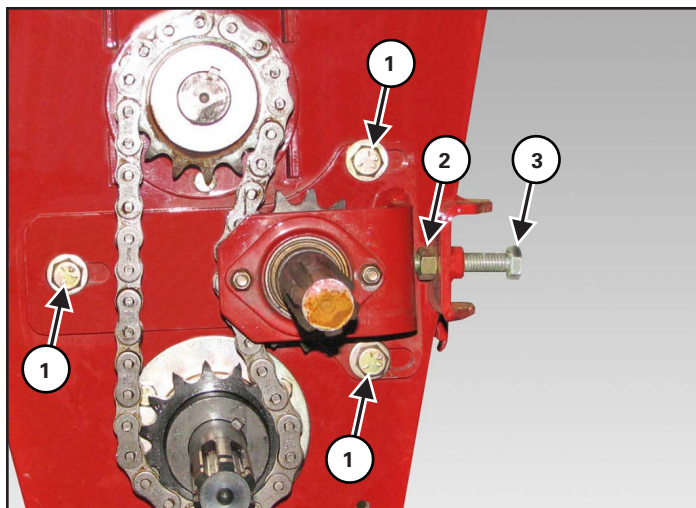
Figure 43



Slide the connecting link (Item 1) through the two end links of the chain. Attach the connecting link using one plate and spring clip (Item 2) on the other side of the chain [Figure 43].

NOTE: The spring clip must be installed with the closed end facing the direction the flighting turns.

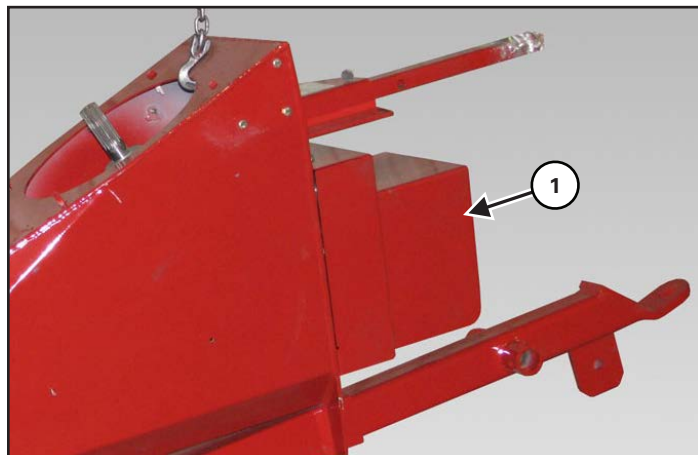
Figure 44



Loosen the three bolts (Item 1) and jam nut (Item 2). Tighten the adjustment bolt (Item 3) until there is approximately 1/4" deflection in the chain [Figure 44].

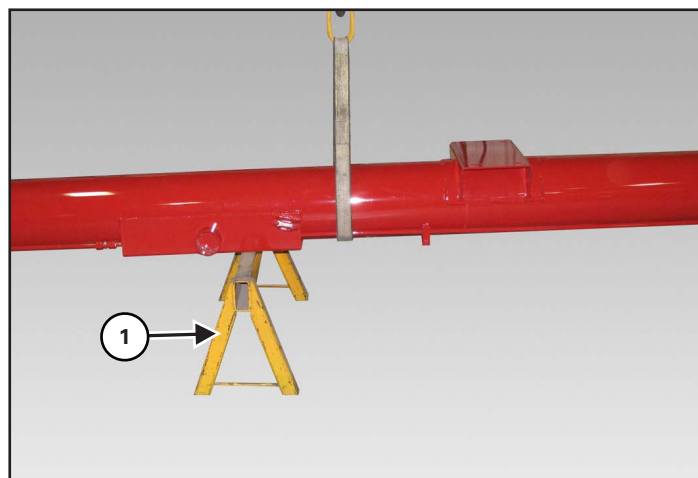
Tighten jam nut and bolts.

Figure 45



Reinstall the guard (Item 1) to the input box [Figure 45].

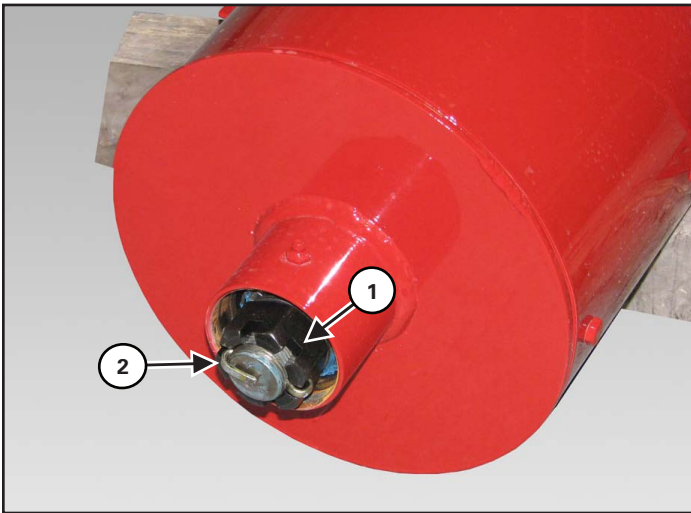
Figure 46



Raise the bottom tube section and remove the support stand (Item 1) [Figure 46].

Lower the tube assembly to the ground. Remove the strap.

Figure 47



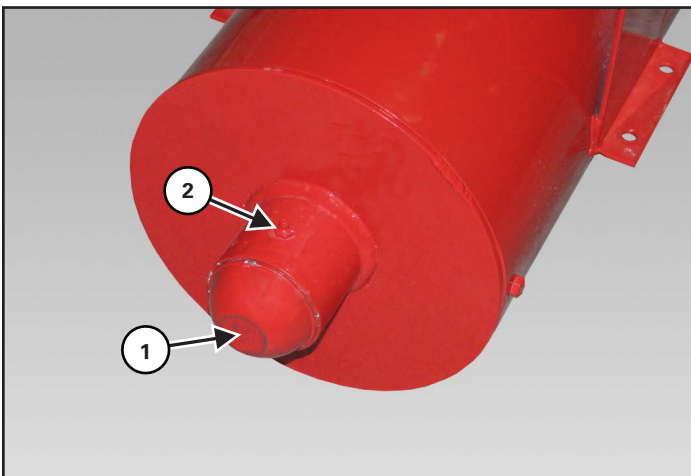
Tighten the castle nut (Item 1) just enough to install the cotter pin. There should be a small amount of tension on the flighting **[Figure 47]**.

NOTE: Bag of hardware for the tube supplies an extra cotter pin to replace the one removed by the castle nut when the tube assembly started.

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

Install the cotter pin (Item 2) **[Figure 47]**.

Figure 48



Install the dust cap (Item 1). Add 10 pumps of grease to top bearing (Item 2) **[Figure 48]**.

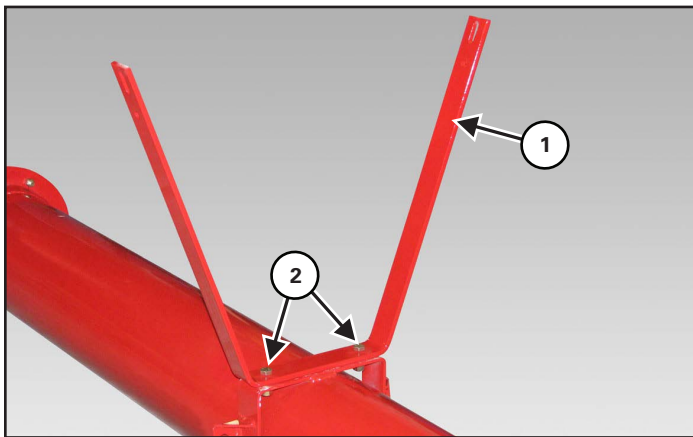
BRIDGING

Uncoil the four bridging cables.

Cable Sizes (Cut Cable Length)

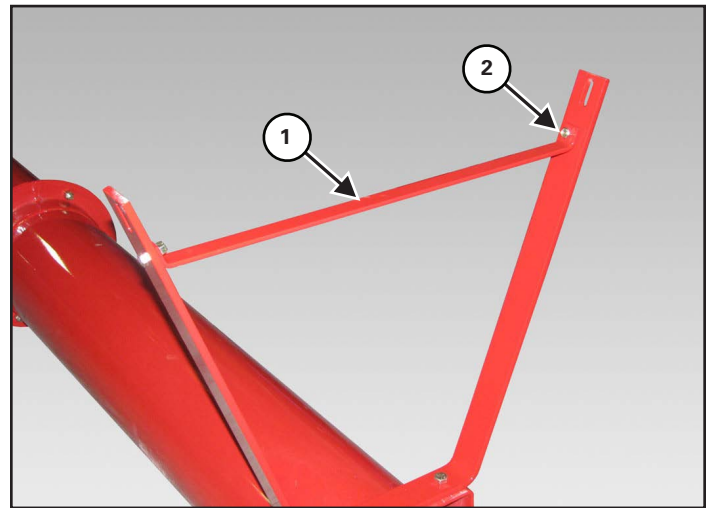
PN	DESC.	LENGTH	QTY.
1050 Models			
903714	LOWER CABLE BUNDLE	Ø3/8" x 23'6"	2
903718	UPPER CABLE BUNDLE	Ø3/8" x 38'4"	2
1060 Models			
903717	LOWER CABLE BUNDLE	Ø3/8" x 29'	2
903719	UPPER CABLE BUNDLE	Ø3/8" x 45'6"	2
1070, 1080 Models			
905525	LOWER CABLE BUNDLE	Ø1/2" x 33'3"	2
905526	UPPER CABLE BUNDLE	Ø1/2" x 56'11"	2

Figure 49



Place the top bridging yoke (Item 1) on the upper tube mount. Attach the yoke using two 1/2" x 1-1/2" hex bolts (Item 2) and 1/2" lock nuts [Figure 49].

Figure 50

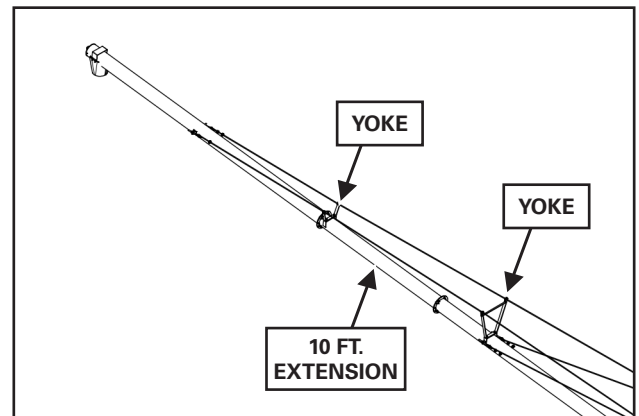


Align the bridging tie (Item 1) to the yoke. Attach using two 3/8" x 1-1/4" hex bolts (Item 2) and 3/8" lock nuts [Figure 50].



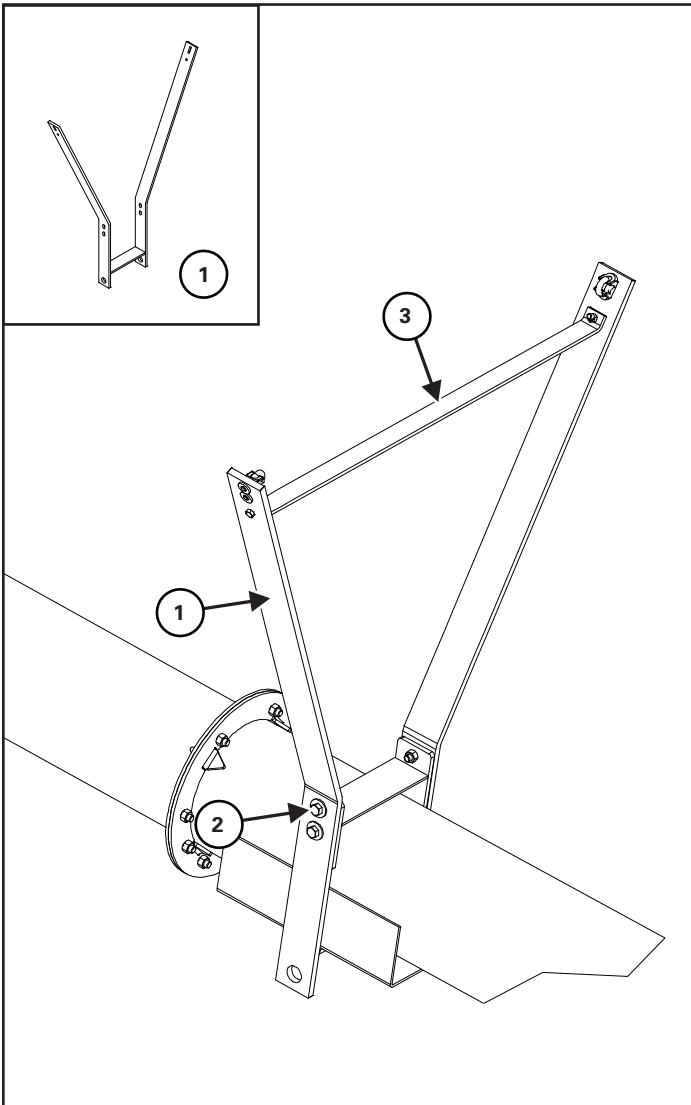
IMPORTANT

BS1080 Auger Upper Bridging Yokes



BS1080 augers with the 10 ft. extension are equipped with two upper bridging yokes.

Figure 51



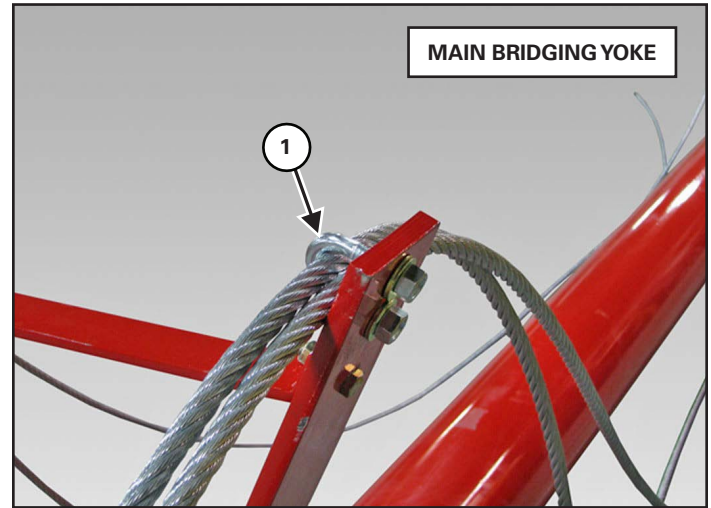
Align the main bridging yoke (Item 1) to the lower mounts on the tube [Figure 51].

NOTE: Slide the yoke underneath the tube to position properly.

Attach the yoke to the mounts using four 1/2" x 1-3/4" hex bolts (Item 2), 1/2" flat washers, and 1/2" lock nuts [Figure 51].

Attach one bridging tie (Item 3) to the yoke using two 3/8" x 1-1/2" hex bolts and 1/2" lock nuts [Figure 51].

Figure 52



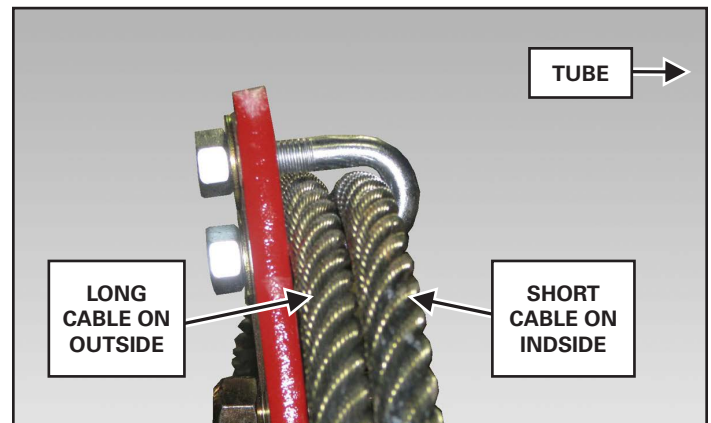
Remove the cable clamps (Item 1) from the main bridging yoke [Figure 52].

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

Pull the cables out to either end of the tube. Attach the mid-point of the cable pair (one long cable, one short cable) to the main bridging yoke using a cable clamp.

Repeat to install cables and clamp to opposite side of the yoke.

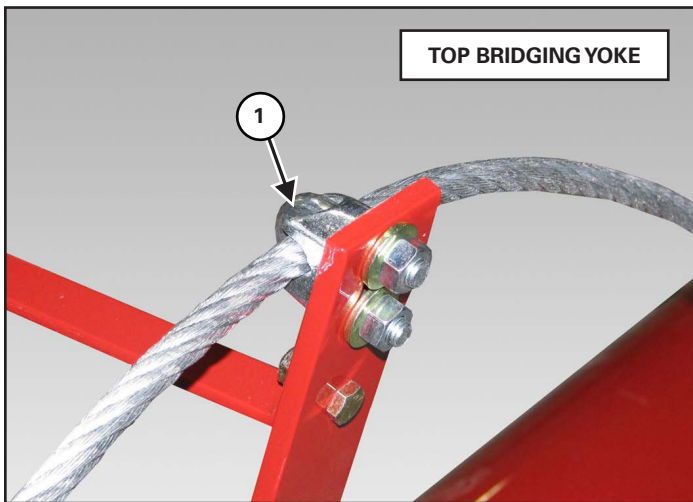
Figure 53



Place the short cable on the inside and long cable on the outside when attaching cable clamp [Figure 53].

Do not tighten clamps at this time.

Figure 54



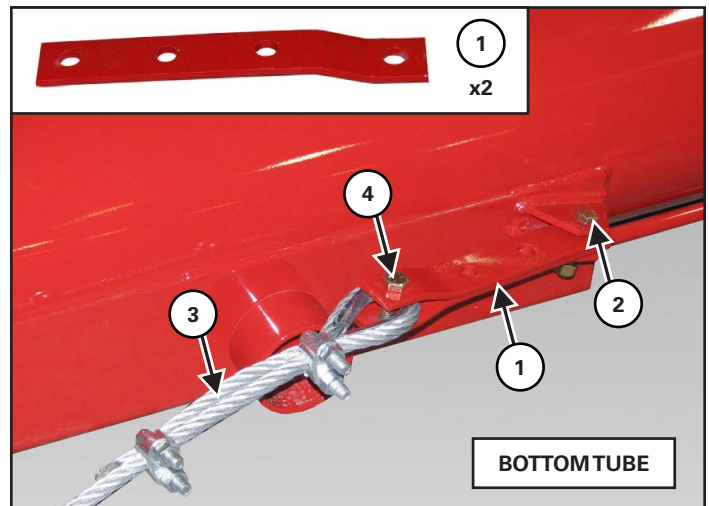
Remove the cable clamps (Item 1) from the top bridging yoke [Figure 54].

Attach the long cable to the top yoke using the cable clamp.

Repeat to install cable and clamp to opposite side of the yoke.

Do not tighten clamps at this time.

Figure 55



Attach cables to bottom tube.

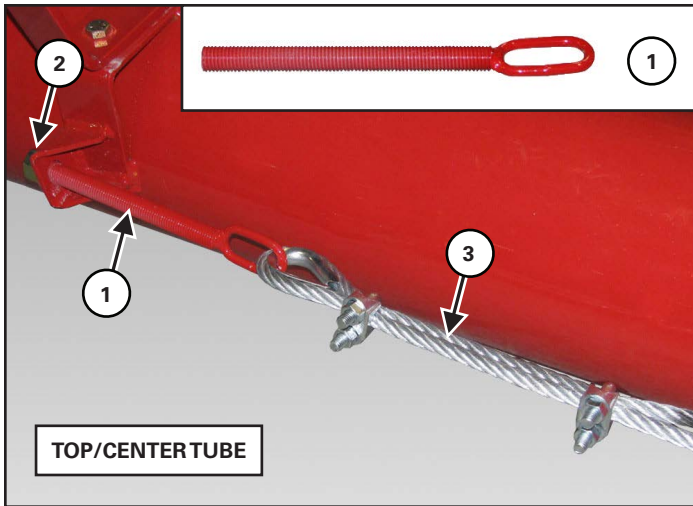
Place two cable yoke brackets (Item 1) back-to-back and place within one of the mounts on the bottom tube. Attach brackets with one 1/2" x 2" hex bolt (Item 2) and 1/2" lock nut [Figure 55].

NOTE: Attach bolt (Item 2) at the end (third) hole of the brackets [Figure 55].

Attach one end of cable (Item 3) to the yoke brackets using one 1/2" x 2" hex bolt (Item 4) and 1/2" lock nut [Figure 55].

Repeat to install the other three cables to the bottom tube.

Figure 56



Attach cables to top/center tube.

Install one 3/4" x 7-7/8" cable tightener (Item 1) to one of the mounts on the top and center tubes. Attach with one 3/4" flat washer and 3/4" hex nut (Item 2) [Figure 56].

Attach one end of cable (Item 3) to the cable tightener. Disassemble / reassemble the cable thimble and clamps to install [Figure 56].

Repeat to install the other three cables to the top / center tubes.

Figure 57



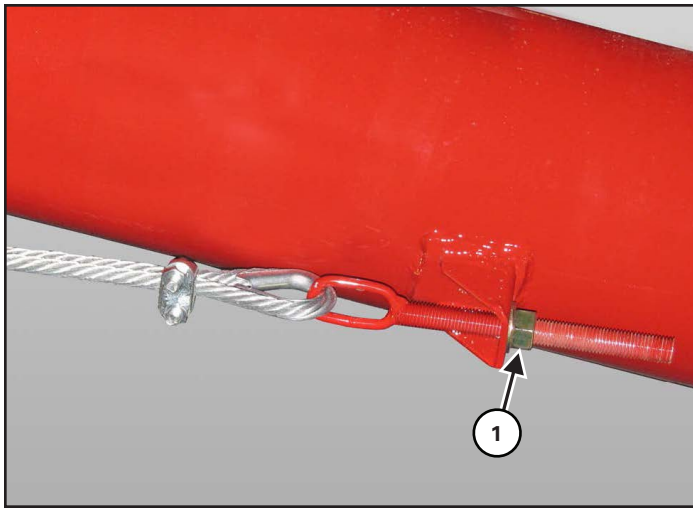
Place a mark (Item 1) on the cable tightening tool. This will help to tighten the cables evenly [Figure 57].

Count the revolutions as the tool is turning while tightening.



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

Figure 58



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

Verify that the input box end of tube is 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 Cables

1050 Model: The discharge end should bow up about 3 to 4" from bottom of tube to the ground.

1060 Model: The discharge end should bow up about 6 to 8" from bottom tube to ground.

1070 & 1080 Models: The discharge end should bow up about 12" to allow adequate space to install the discharge spout.

Tighten long cable tightener (Item 1) first. Once cables are tight, tighten both sides three additional revolutions with the impact wrench and socket [Figure 58].

Tightening The Short Cables

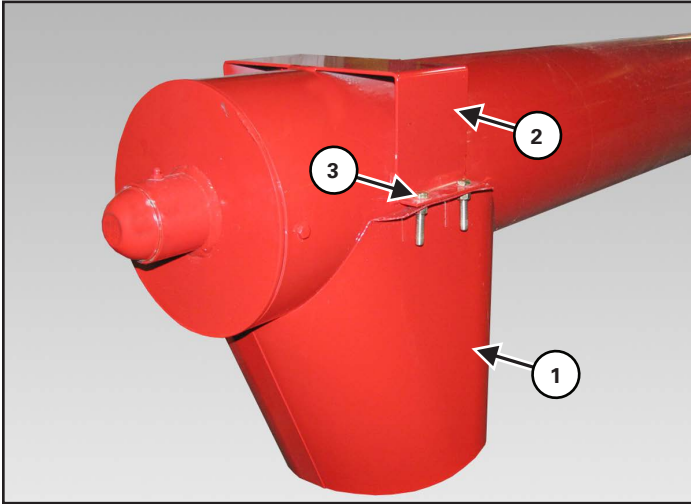
Tighten short cables just enough to take the slack out. Lower the input box end of the tube to the ground.

Stand behind the input box 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).

DISCHARGE SPOUT

Figure 59



Raise the discharge end of the tube assembly.

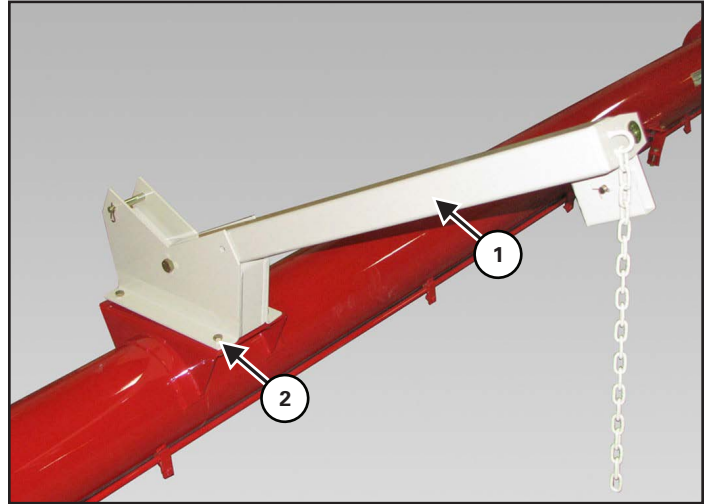
Align the discharge spout (Item 1) with the mounting brackets (Item 2) on both sides of the top tube section [Figure 59].

Install the four 3/8" x 2" (full thread) bolts (Item 3) and 3/8" lock nuts. Tighten bolts and lock nuts evenly until the discharge spout contacts the top tube section [Figure 59].

Lower the tube assembly to the ground.

INTAKE LIFT BOOM

Figure 60



Align the intake lift boom (Item 1) with the mounting plate on the bottom tube section. Attach using four 1/2" x 1-1/2" hex bolts (Item 2), 1/2" flat washers, and 1/2" lock nuts [Figure 60].

NOTE: Boom must face the RH side of auger.

Tighten the bolts and nuts.

TUBE AND UNDERCARRIAGE

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

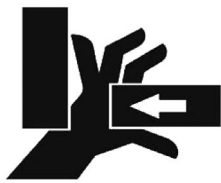


DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

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



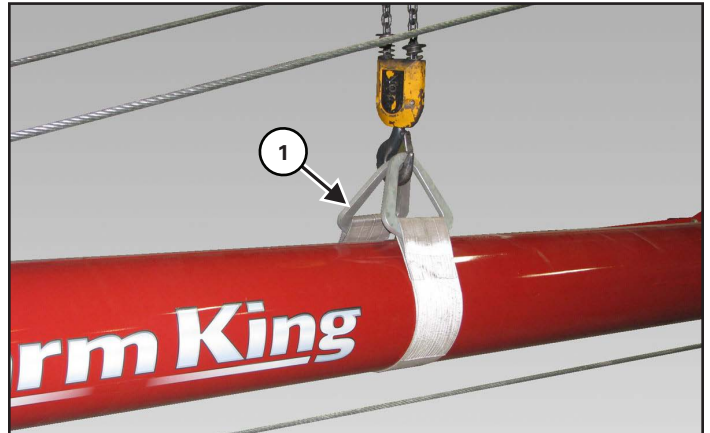
AVOID INJURY OR DEATH

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



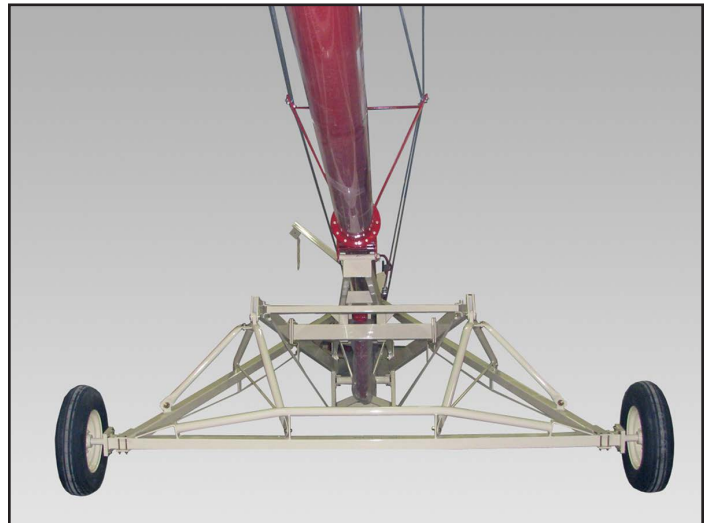
Fully tighten all tube assembly hardware before installing the tube assembly onto the undercarriage.

Figure 61



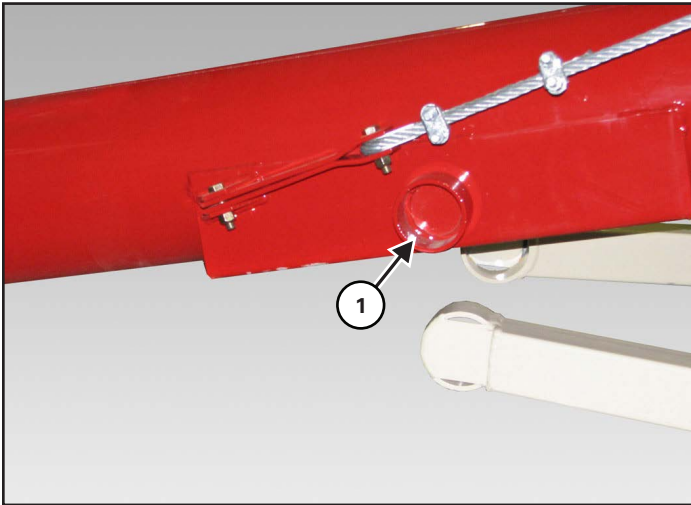
With the strap (Item 1) installed around the center tube and connected to an approved lifting device, raise the tube assembly high enough to allow the undercarriage to be moved under the tube assembly [Figure 61].

Figure 62



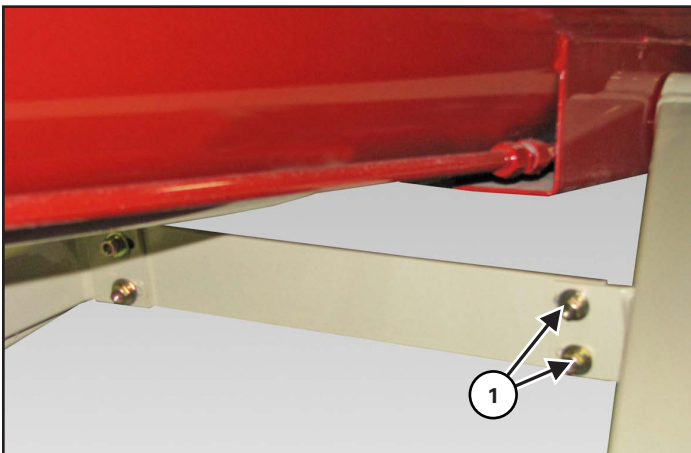
Move the undercarriage into position below the tube assembly [Figure 62].

Figure 63



Align the RH & LH undercarriage arms with the mounts (Item 1) on the bottom tube section [Figure 63].

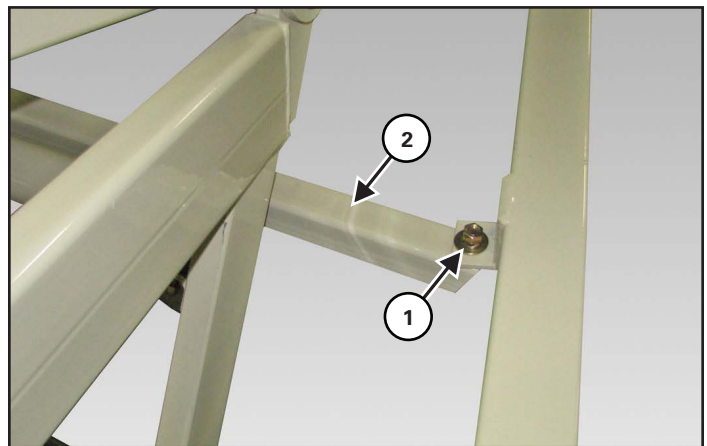
Figure 64



Remove the two 3/8" x 1-1/4" bolts (Item 1), 3/8" lock nuts, and 3/8" flat washers from the undercarriage tie plate [Figure 64].

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

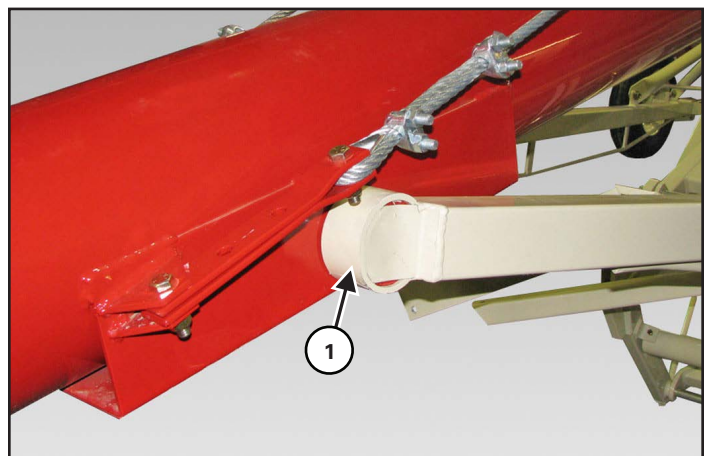
Figure 65



Remove the 1/2" x 1-1/4" bolt (Item 1), 1/2" lock nuts, and 1/2" flat washers from the lift arm cradle (Item 2) [Figure 65].

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

Figure 66

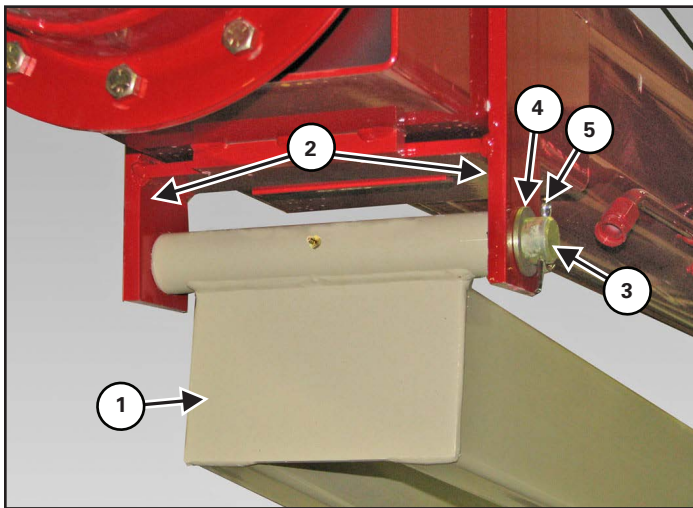


Fully install the RH & LH undercarriage arms (Item 1) onto the mounts of the bottom tube section [Figure 66].

Align the undercarriage tie plate and install the two 3/8" x 1-1/4" bolts (Item 1), 3/8" lock nut and 3/8" flat washers [Figure 64].

Do not tighten bolts at this time.

Figure 67



Raise the upper lift arm (Item 1) and align with the main bridging yoke (Item 2) on the bottom tube section [Figure 67].

Install the lift arm pivot pin (Item 3) through the main bridging yoke and upper lift arm. Attach pin using one washer (Item 4) and cotter pin (Item 5) depending on model [Figure 67].

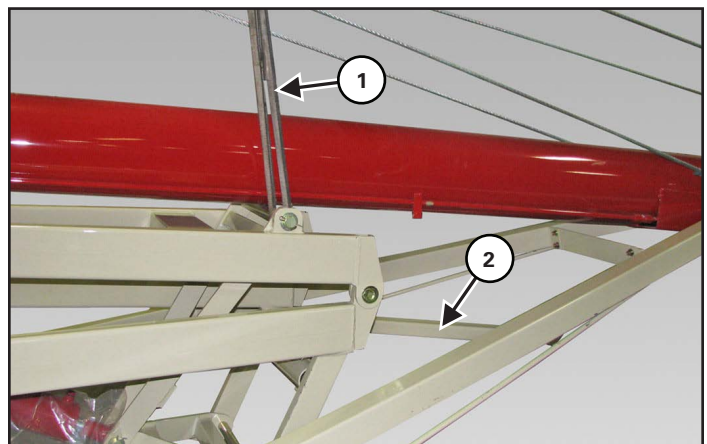
1050 and 1060 models:

- 1" x 11-7/8" pivot pin
- 3/16" x 1-1/2" cotter pin
- 1" flat washer

1070 and 1080 models:

- 1-1/4" x 12-1/4" pivot pin
- 1/4" x 2" cotter pin
- 1-1/4" rim washer

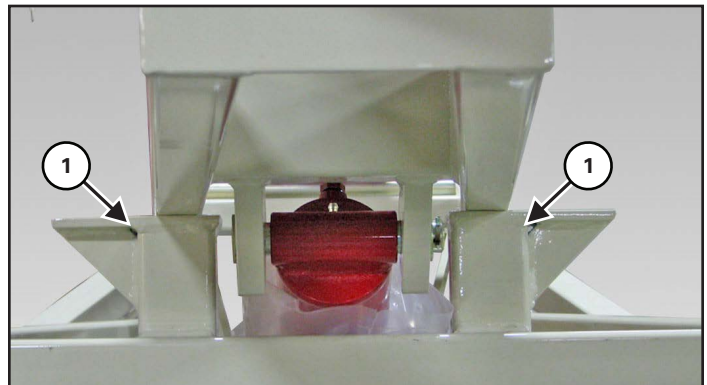
Figure 68



Install a strap (Item 1) around the yoke pin. Attach the strap to an approved lifting device [Figure 68].

Swing the lift arm cradle (Item 2) to the side to allow the lift assembly to be raised above the lift arm cradle. Re-install the lift arm cradle [Figure 68].

Figure 69



Lower the tube / undercarriage assembly down onto the cradle (Item 1). Center the tube / undercarriage assembly on the cradle [Figure 69].

Tighten all remaining undercarriage bolts.

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

!

IMPORTANT

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

INTAKE AUGER



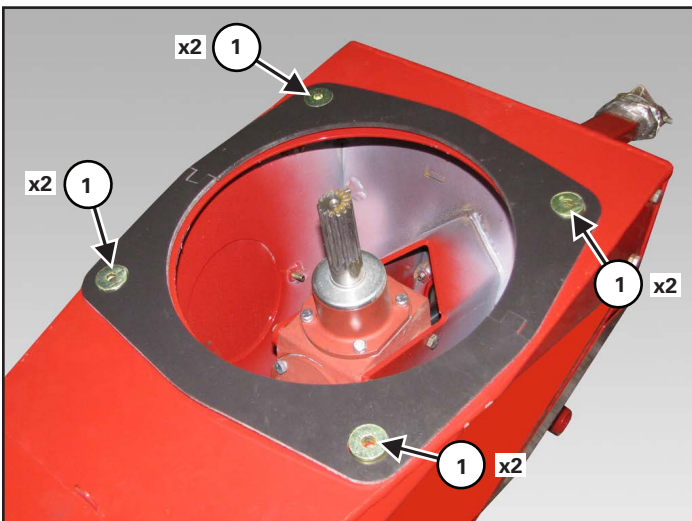
The following images may not show your exact intake auger as it appears but the procedure is correct.

Figure 70



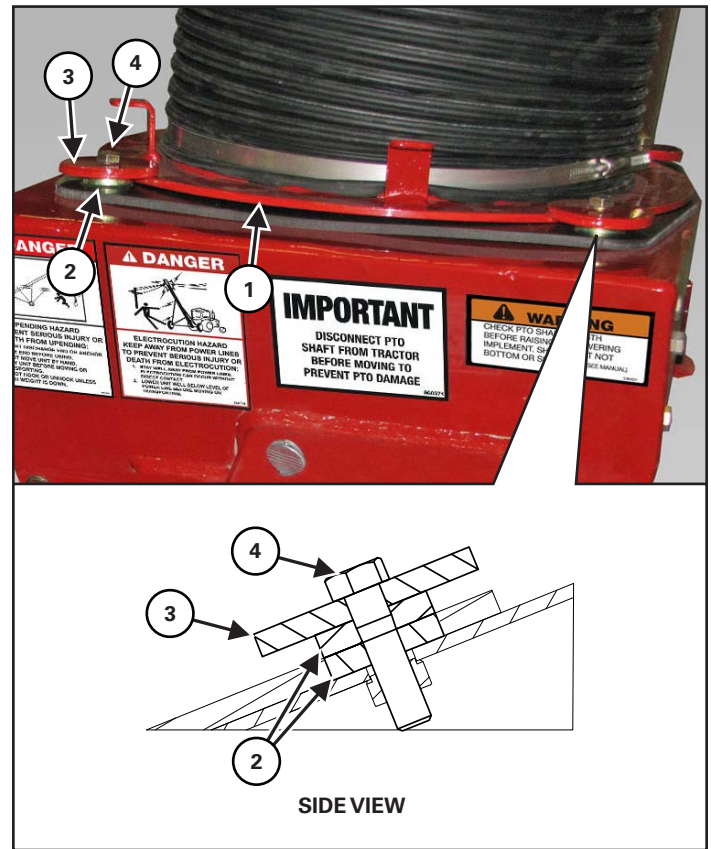
Install the intake spacer (Item 1) on the top of the input box [Figure 70].

Figure 71



Place two 1/4" x 13/32" ID x 1-1/4" OD washers (Item 1) into each of the four corner holes of the spacer [Figure 71].

Figure 72



Place the ring (Item 1) of the pivot assembly within the 1/4" x 13/32" ID x 1-1/4" OD washers (Item 2) [Figure 72].

Place four 13/32" ID x 2-13/32" OD x 1/4" ring clamps (Item 3) over top the washers and pivot assembly ring. Attach through the ring clamps and washers using four 3/8" x 1-1/2" hex bolts (Item 4) [Figure 72].

Tighten bolts to secure the pivot assembly to the input box.

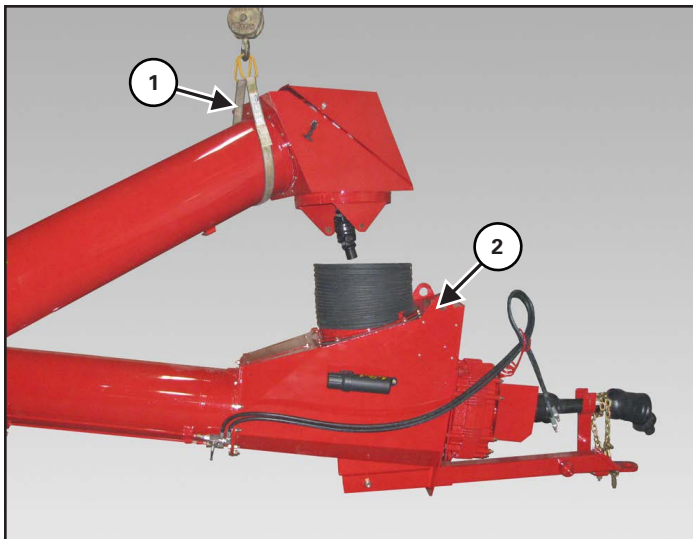
The pivot ring should rotate freely.

Figure 73



Install one plastic sleeve (Item 1) to the pivot assembly. Secure using one clamp (Item 2) at the base of the sleeve [Figure 73].

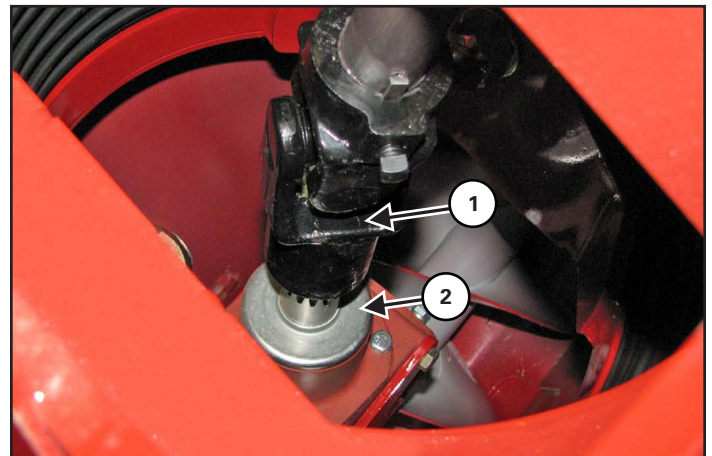
Figure 74



Install a strap (Item 1) around the intake auger. Connect the strap to an approved lifting device [Figure 74].

Raise the intake auger and position over the input box (Item 2) [Figure 74].

Figure 75



Lower the intake auger, align the u-joint (Item 1) with the top gearbox shaft (Item 2) of the input box [Figure 75].

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

Lower the intake auger onto the shaft.



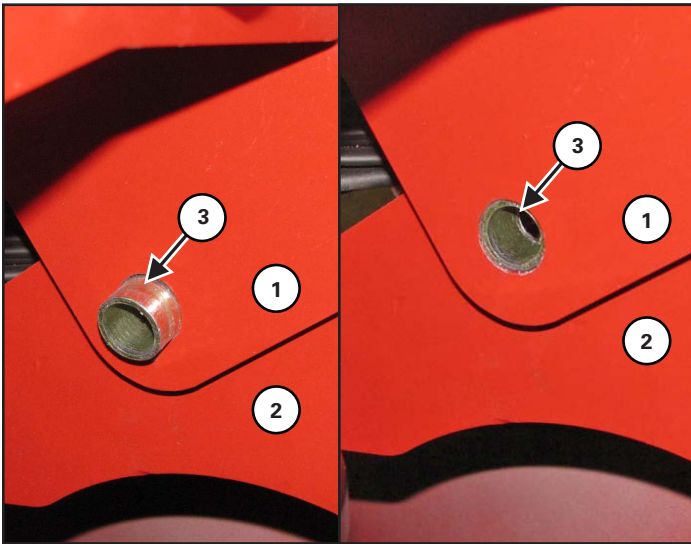
IMPORTANT



Position the u-joint center at the same height as the pivot mounting holes.

NOTE: Exact pivot assembly not shown.

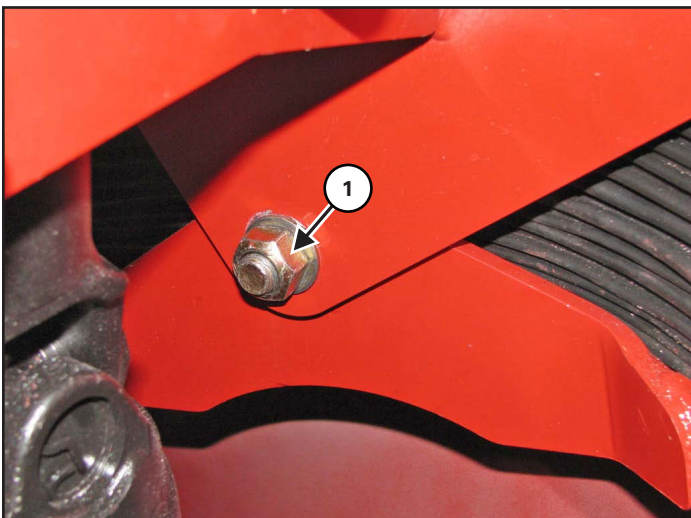
Figure 76



Align the hole of intake auger mounting plate (Item 1) and the hole of intake box mounting plate (Item 2) (both sides) [Figure 76].

Install bushing (Item 3) through the intake auger mounting plate and input box mounting plate until flush with the inside of the intake auger mounting plate (both sides) [Figure 76].

Figure 77



Install one 3/4" x 2" hex bolt, two 3/4" flat washers (both sides of plates), and 3/4" lock nut (Item 1) [Figure 77].

Tighten the bolt and lock nut securely against the bushing.

Repeat for opposite mounting plates.

Figure 78

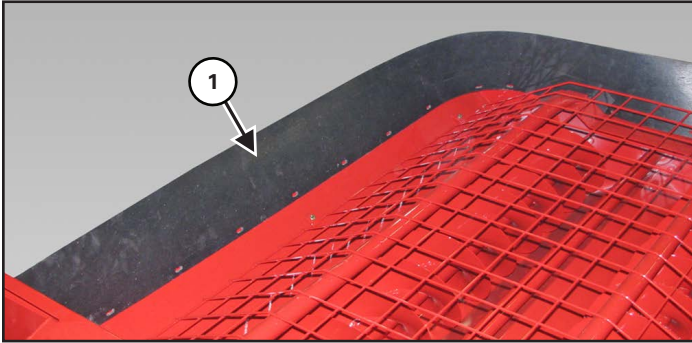


Slide the plastic sleeve (Item 1) up onto the intake auger. Install the clamp (Item 2) and tighten to secure the plastic sleeve to the intake auger [Figure 78].

Remove the strap and lifting device.

HOPPER

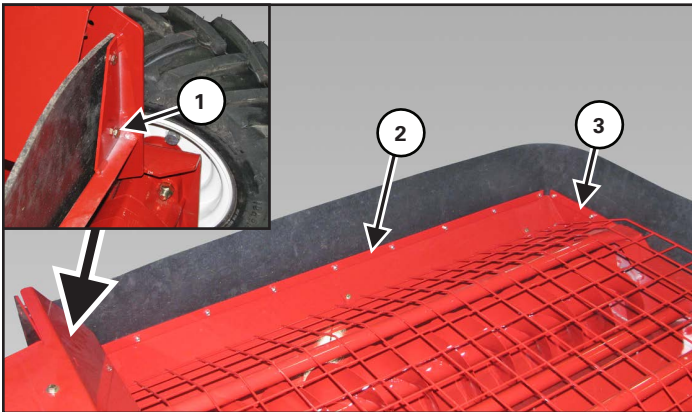
Figure 79



Place the rubber edge (Item 1) within the outer flange of the hopper [Figure 79].

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

Figure 80



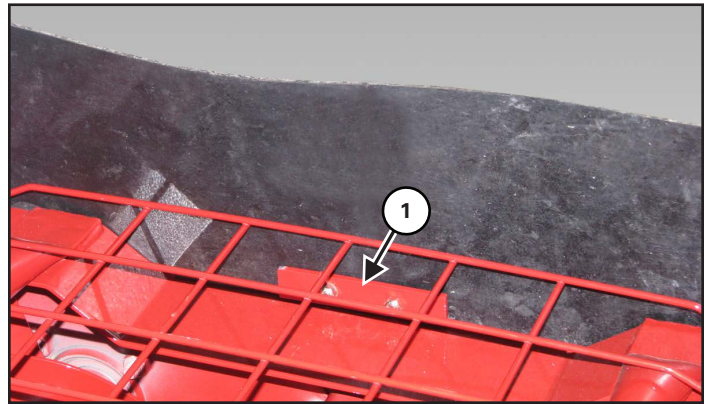
Align one end of the rubber edge with the two holes (Item 1) on the side of the hopper. Install two 1/4" x 1" bolts through the holes and rubber edge. Install one 1/4" flat washer and 1/4" lock nut on each bolt [Figure 80].

Place one long bracket (Item 2) at the side of the rubber edge. Place one short bracket (Item 3) at the back of the rubber edge. Align the brackets with the holes in the rubber edge and outer hopper flange holes [Figure 80].

Install 1/4" x 1" bolts through the hopper, rubber edge, and brackets (install bolts from the outside of the hopper flange). Install one 1/4" flat washer and 1/4" lock nut on each bolt [Figure 80].

Repeat for rubber edge on opposite side of hopper.

Figure 81



Align the two-hole bracket (Item 1) at the back of the hopper. Align with holes in the rubber edge and outer hopper flange. Install two 1/4" x 1" bolts through the hopper, rubber edge, and bracket (install bolts from the outside of the hopper flange). Install a 1/4" flat washer and 1/4" lock nut on each bolt [Figure 81].

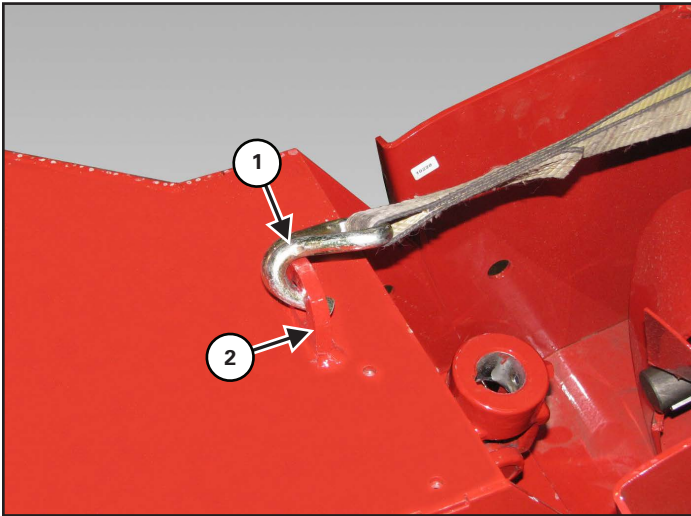


IMPORTANT

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

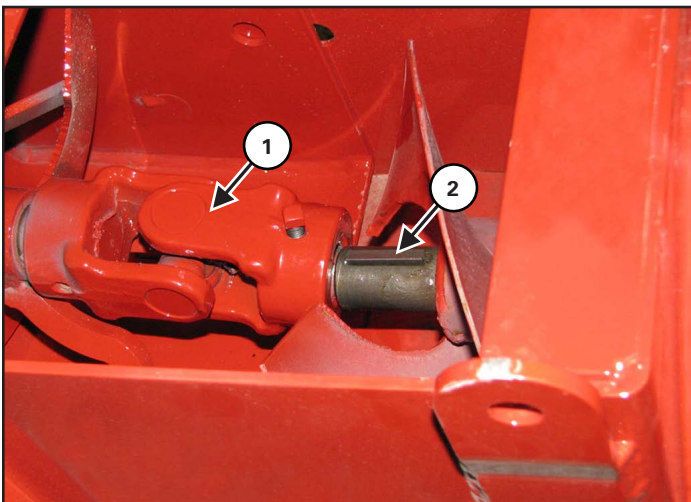
Tighten all bolts and lock nuts to secure the rubber edge to the hopper.

Figure 82



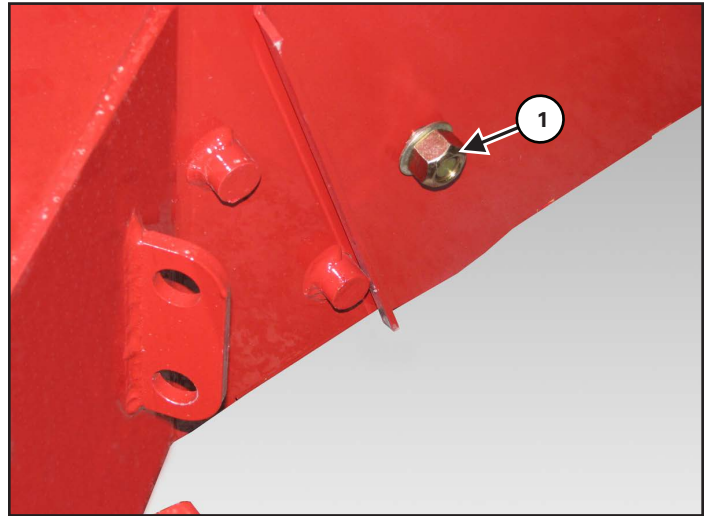
Install a ratchet strap (Item 1) onto the bracket (Item 2) on the top of the hopper (connect the opposite end of the ratchet strap to the mounting bracket on the top of the intake auger) [Figure 82].

Figure 83



Tighten the ratchet strap, align the hopper u-joint (Item 1) with the shaft (Item 2) on the intake auger. Tighten the ratchet strap until the u-joint is all the way on the shaft [Figure 83].

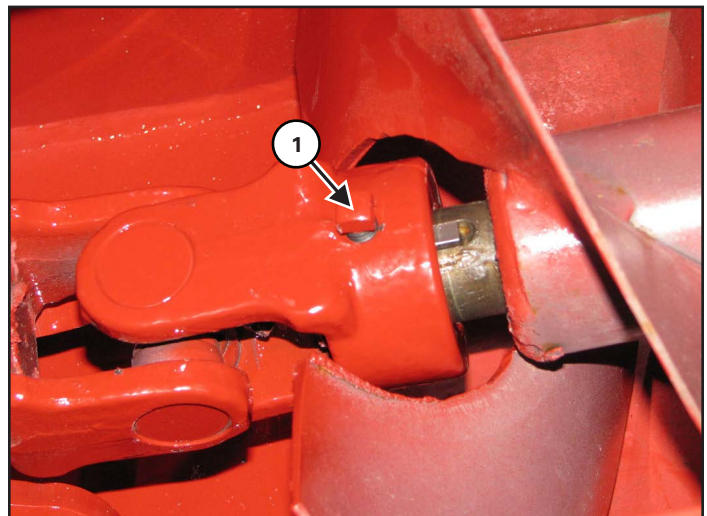
Figure 84



Align the mounting holes on the hopper and intake auger. Install one 3/4" x 1-5/8" bolt (from inside) through the hopper and intake auger. Install one 3/4" flat washer and 3/4" lock nut (Item 1) onto the bolt [Figure 84].

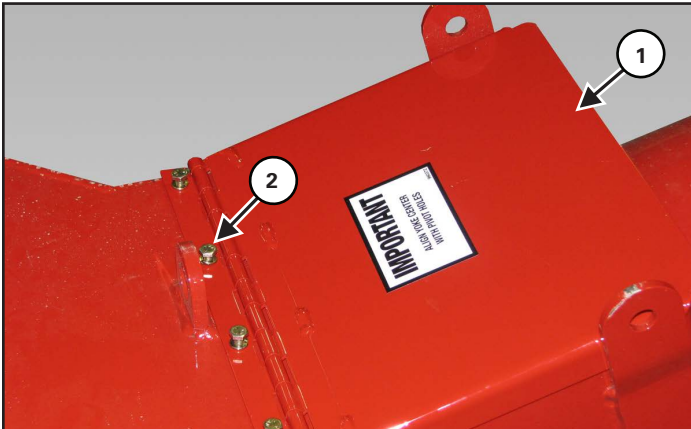
Repeat the procedure on the opposite side of the hopper and intake auger.

Figure 85



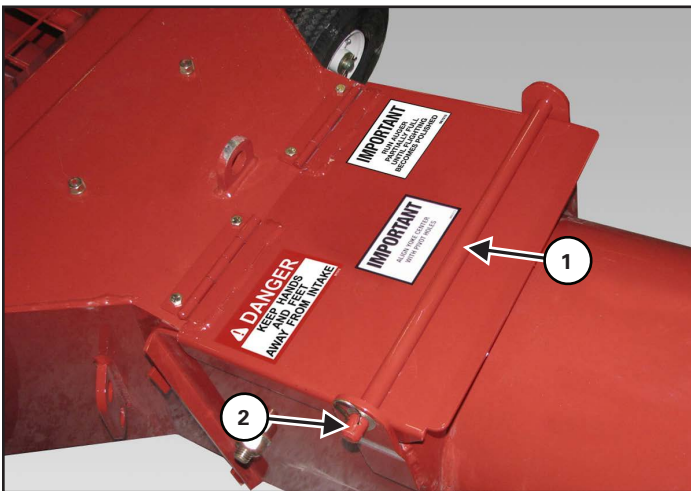
Apply Locktite® to the set screw (Item 1). Install and tighten the set screw [Figure 85].

Figure 86



Align the hinged intake auger cover (Item 1) with the four mounting holes in the hopper. Install four 1/4" x 3/4" bolts (Item 2) and 1/4" lock washers through the hinged intake auger cover and into the hopper. Tighten bolts [Figure 86].

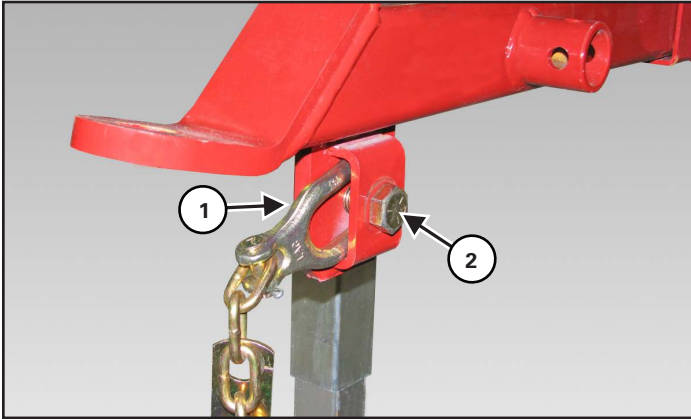
Figure 87



Install the pivot hopper lid rod (Item 1), 5/8" flat washer, and #7 hair pin clip (Item 2) [Figure 87].

SAFETY CHAIN

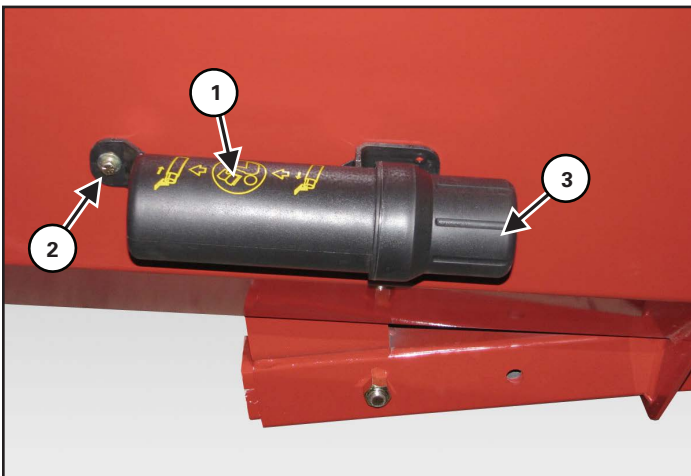
Figure 88



Install the safety chain loop (Item 1) into the opening on the bottom side of the hitch, install one 3/4" x 2-1/2" bolt (Item 2) through the hitch and safety chain loop. Install one 3/4" lock nut and tighten to secure the safety chain to the hitch [Figure 88].

MANUAL HOLDER

Figure 89

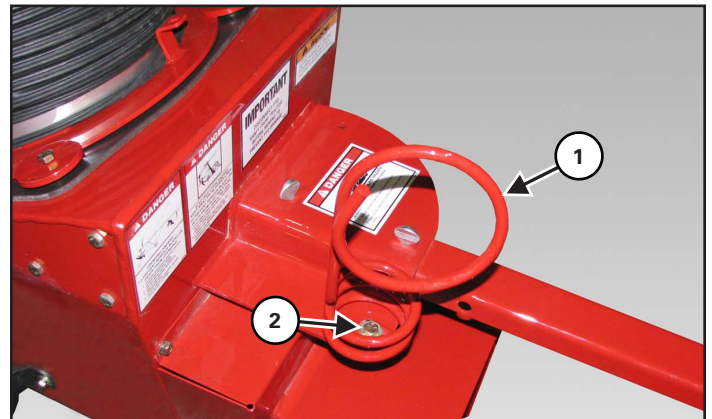


Align the manual holder (Item 1) with mounting holes on the right side of the input box [Figure 89].

Attach using two 5/16" lock washers and two 5/16" x 3/4" bolts (Item 2). Install cap (Item 3) [Figure 89].

HYDRAULIC HOSE HOLDER

Figure 90

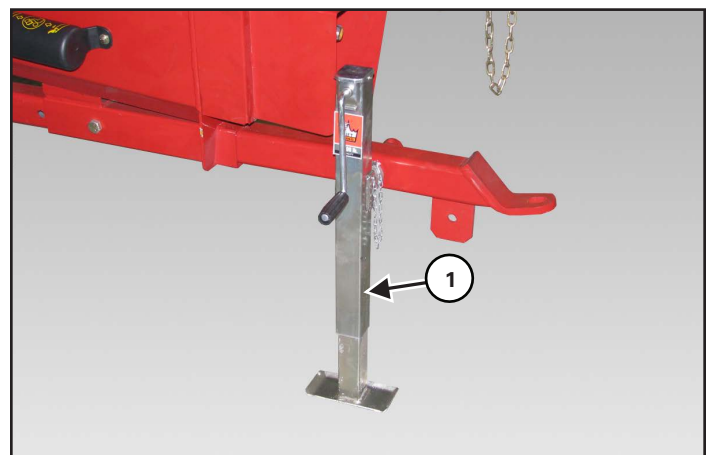


Install the hydraulic hose holder (Item 1) onto the mounting bracket located on the top of the gearbox (above the hitch) [Figure 90].

Install one 3/8" flat washer onto one 3/8" x 1-1/4" bolt (Item 2), install the bolt down through the storage bracket and mounting bracket. Install one 3/8" lock nut on the bolt and tighten to secure the hydraulic hose holder to the gearbox [Figure 90].

JACK STAND

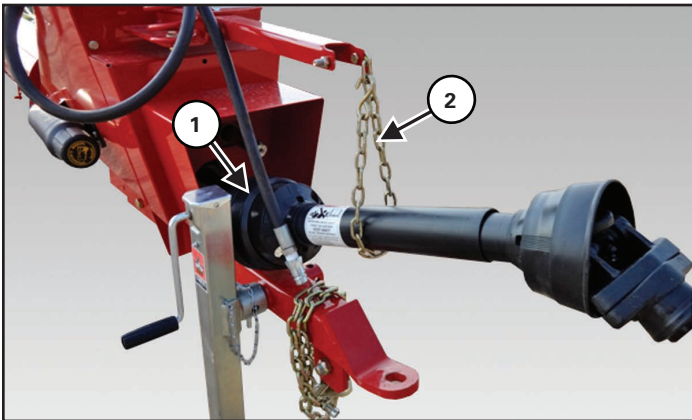
Figure 91



Align and install the jack (Item 1) onto the hitch (hopper side) [Figure 91].

PTO DRIVELINE

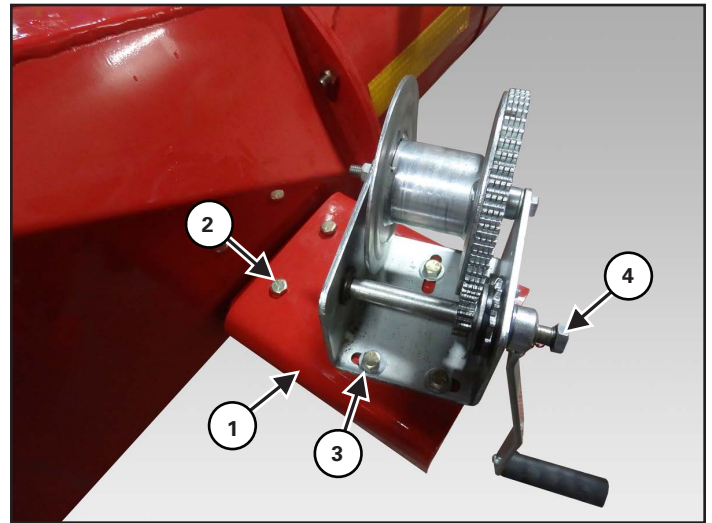
Figure 92



Push back on the collar (Item 1) and install the shaft into the gearbox until the collar slides forward, locking the shaft in the gearbox. Place the PTO holder chain (Item 2) around the PTO driveline and hook chain back to itself [Figure 92].

HAND WINCH AND CABLE

Figure 93



Install the hand winch mounting bracket (Item 1) on the input box (opposite side of the hopper) [Figure 93].

Install two 3/8" x 1" bolts (Item 2) through the hand winch mounting bracket and input box mount. Install one 3/8" lock nut on each bolt. Tighten bolts and lock nuts to secure the hand winch mounting bracket to the input box [Figure 93].

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

Install one 7/16" flat washer onto three 3/8" x 1" (Gr. 5) bolts (Item 3). Install the three bolts and flat washers down through the winch and mounting bracket. Install one 7/16" flat washer and 3/8" lock nut on the three bolts. Tighten bolts and nuts [Figure 93].

Tighten the nut (Item 4) against the handle and torque to 22–25 ft.-lbs. (30–34 N•m) [Figure 93].

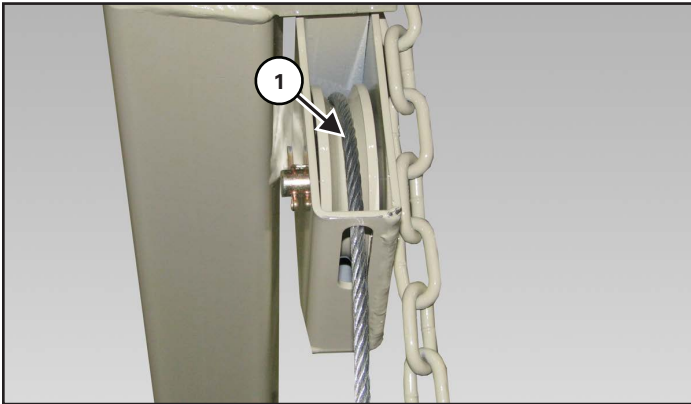


IMPORTANT

Do not over torque the nut against the handle.

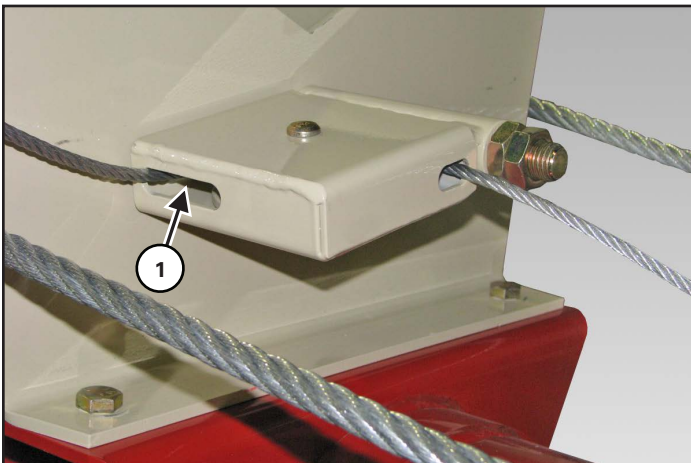
Do not adjust the double lock nuts on the long end of the input shaft.

Figure 94



Locate the winch cable. Install the open end of the cable (Item 1) through the slot and over the pulley on the top of the lift boom [Figure 94].

Figure 95



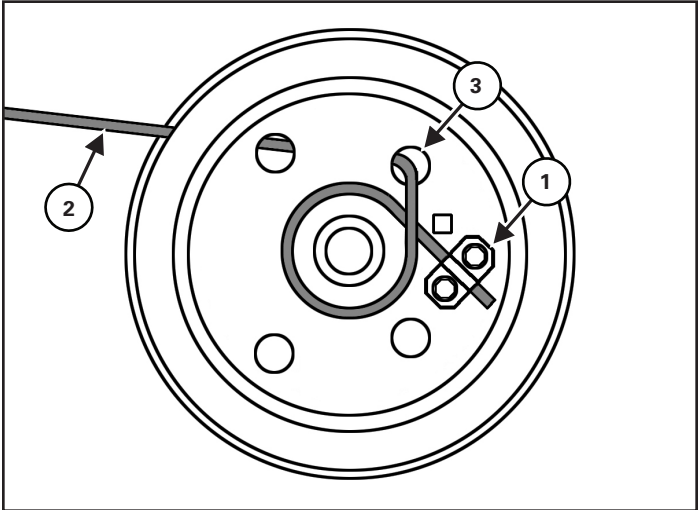
Feed the open end of the cable through the slot (Item 1) and around the lower pulley on the bottom of the lift boom [Figure 95].

Route the cable to the hand winch.

! **IMPORTANT**

Do not remove the drum to install the cable.

Figure 96



Install the cable clamp (Item 1) using the two bolts provided with winch. Leave bolts loose [Figure 96].

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

Install the cable (Item 2) from the inside of the drum through one of the dimpled holes (Item 3) in the outer plate [Figure 96].

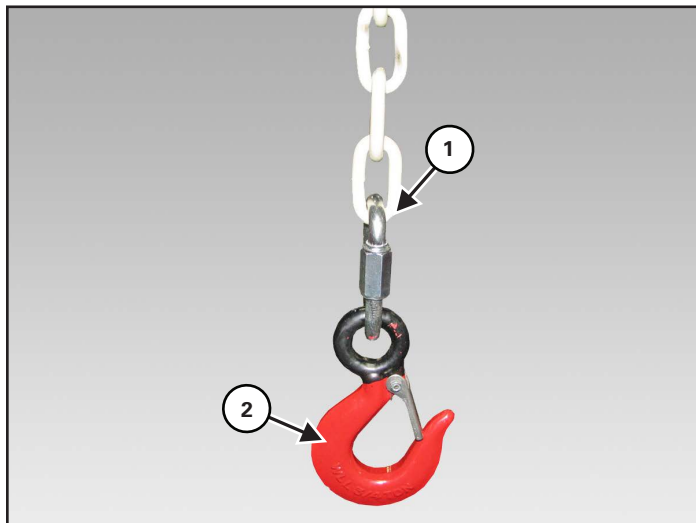
Loop the cable around the drum bearing. Feed the cable between the loop and outer plate, then through the cable clamp.

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

Turn handle to wrap cable around drum.

HOPPER SAFETY HOOK

Figure 97



Install the quick link (Item 1) through the eye of the hook (Item 2). Install the quick link onto the safety chain at the desired location. Tighten the quick link nut to securely fasten the quick link and hook to the safety chain [Figure 97].

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

HYDRAULIC LIFT CYLINDER



IMPORTANT

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

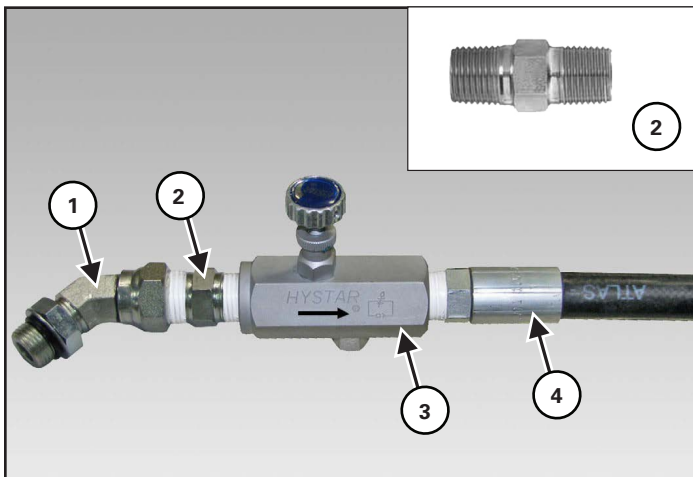


IMPORTANT

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

Flow Control - 1050 Models

Figure 98



Gather one each of the following components [Figure 98]:

- -8 MORB x -8 SWFNPT 45° Elbow (Item 1)
- -8 MNPT x -8 MNPT Straight Adaptor (Item 2)
- -8 FNPT One Way Flow Control Valve (Item 3)
- -8 x -10 MJIC x -8 MNPT Hydraulic Hose (Item 4)

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

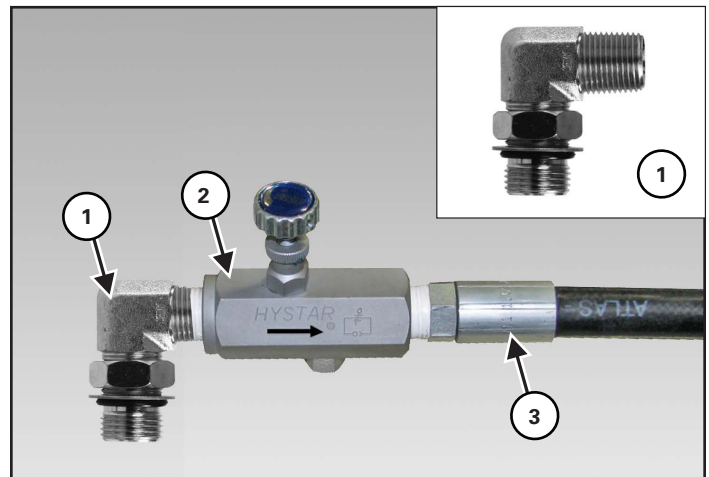
Install the -8 MNPT x -8 MNPT straight adaptor into the flow control valve [Figure 98].

Install the -8 MORB x -8 SWFNPT 45° elbow onto the -8 MNPT x -8 MNPT straight adaptor [Figure 98].

Install the -8 x -10 MJIC x -8 MNPT hydraulic hose into the -8 MORB x -8 SWFNPT 45° elbow [Figure 98].

Flow Control - 1060 Models

Figure 99



Gather one each of the following components [Figure 99]:

- -8 MNPT x -8 MNPT 90° Elbow (Item 1)
- -8 FNPT One Way Flow Control Valve (Item 2)
- -8 x -10 MJIC x -8 MNPT Hydraulic Hose (Item 3)

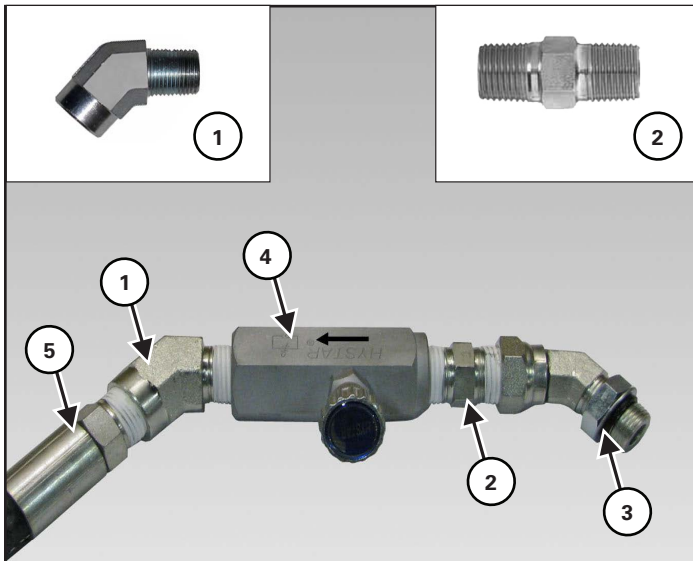
Apply teflon tape to the threads of each fitting.

Install the -8 MNPT x -8 MNPT 90° elbow into the flow control valve [Figure 99].

Install the -8 x -10 MJIC x -8 MNPT hydraulic hose into the -8 FNPT One Way Flow Control Valve [Figure 99].

Flow Control - 1070, 1080 Models

Figure 100



Gather one each of the following components [Figure 100]:

- -8 MNPT x -8 FNPT 45° Elbow (Item 1)
- -8 MNPT x -8 MNPT Straight Adaptor (Item 2)
- -8 MORB x -8 SWFNPT 45° Elbow (Item 3)
- -8 FNPT One Way Flow Control Valve (Item 4)
- -8 x -10 MJIC x -8 MNPT Hydraulic Hose (Item 5)

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

Install the -8 MNPT x -8 FNPT 45° elbow into the flow control valve [Figure 100].

Install the -8 MNPT x -8 MNPT straight adaptor into the flow control valve [Figure 100].

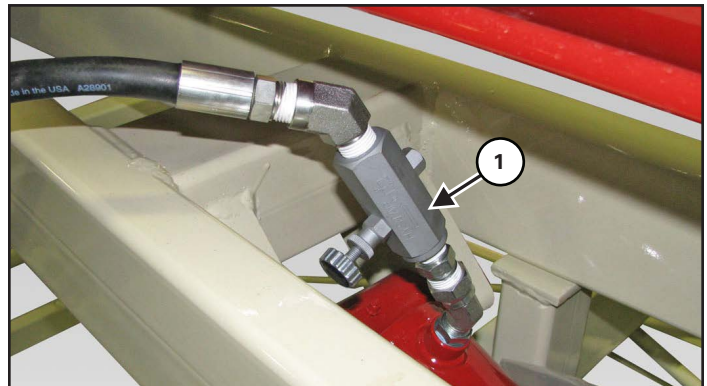
Install the -8 MORB x -8 SWFNPT 45° elbow onto the close nipple [Figure 100].

Install the -8 x -10 MJIC x -8 MNPT hydraulic hose into the -8 MNPT x -8 FNPT 45° elbow [Figure 100].

! IMPORTANT

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

Figure 101



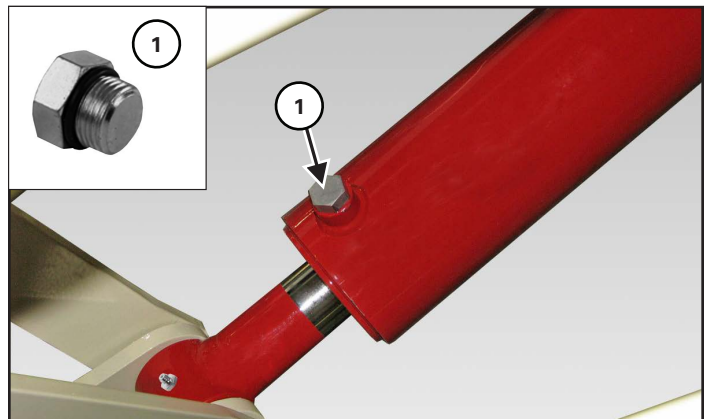
NOTE: Model 1070 Backsaver Auger Flow Control Assembly shown above.

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

Install the flow control valve assembly (Item 1) into the hydraulic cylinder [Figure 101].

Tighten all connections.

Figure 102

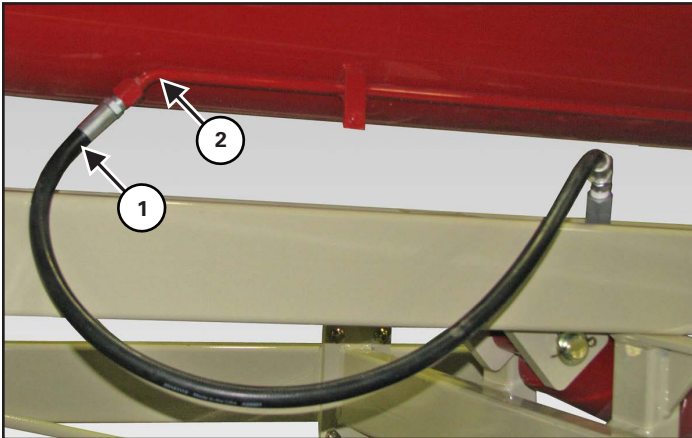


Remove the plastic plug from the rod end (lower) of the hydraulic cylinder.

Locate and install the -8 MORB vent plug (Item 1) into the hydraulic cylinder [Figure 102].

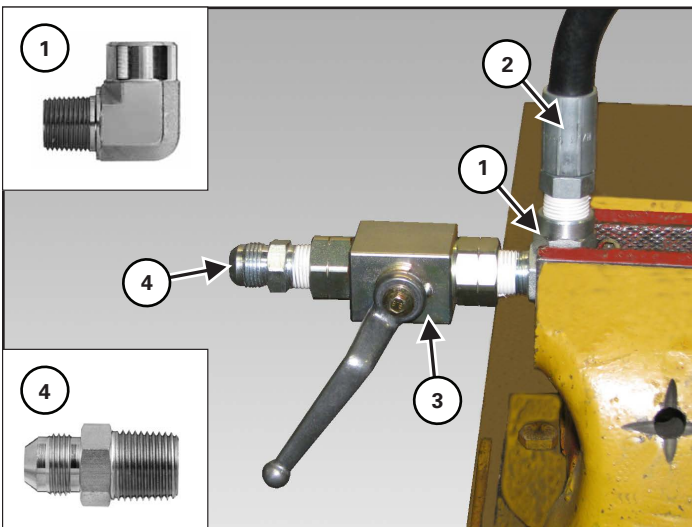
Hydraulic Hoess - All Models (1050, 1060, 1070, 1080)

Figure 103



Apply teflon tape to the threads of the -8 x 10 MJIC x -8 MNPT hydraulic hose (Item 1), then install and tighten into the tube (Item 2) on the bottom tube section [Figure 103].

Figure 104



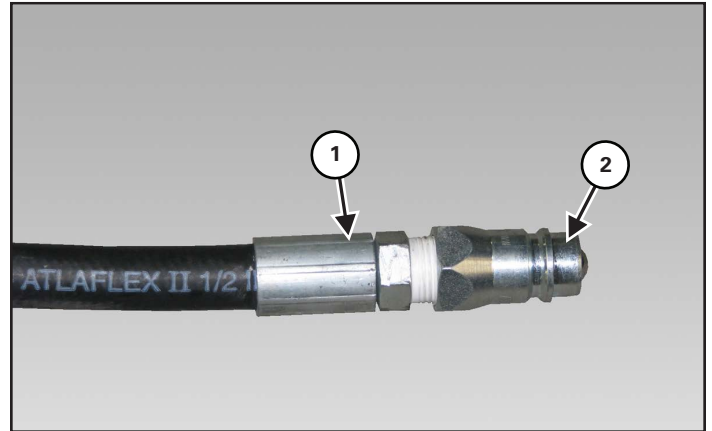
Secure one 90° elbow (Item 1) in a vise [Figure 104].

Apply teflon tape to the threads of the hydraulic hose fitting (Item 2). Install and tighten the quick coupler hose assembly into the 90° elbow (Item 1) [Figure 104].

Apply teflon tape to the threads of the 90° elbow. Install the 1/2" ball valve (Item 3) onto the 90° elbow [Figure 104].

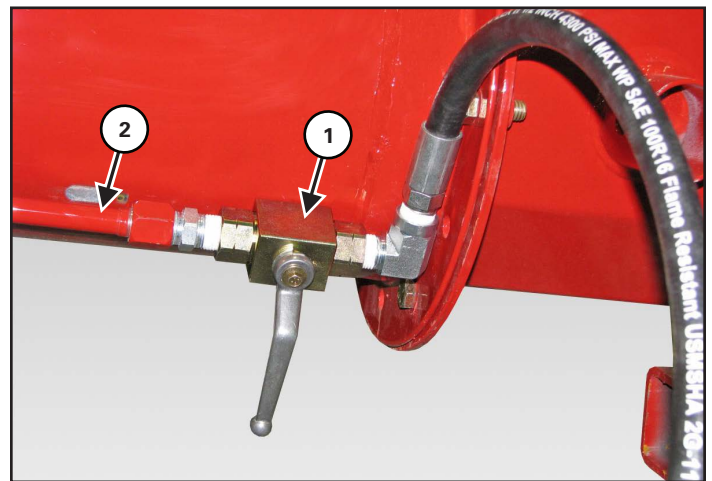
Apply teflon tape to the threads of the adapter fitting (Item 4). Install adapter fitting into the 1/2" ball valve (Item 3) [Figure 104].

Figure 105



Apply teflon tape to the threads of the hydraulic hose fitting (Item 1). Install and tighten the quick coupler fitting (Item 2) [Figure 105].

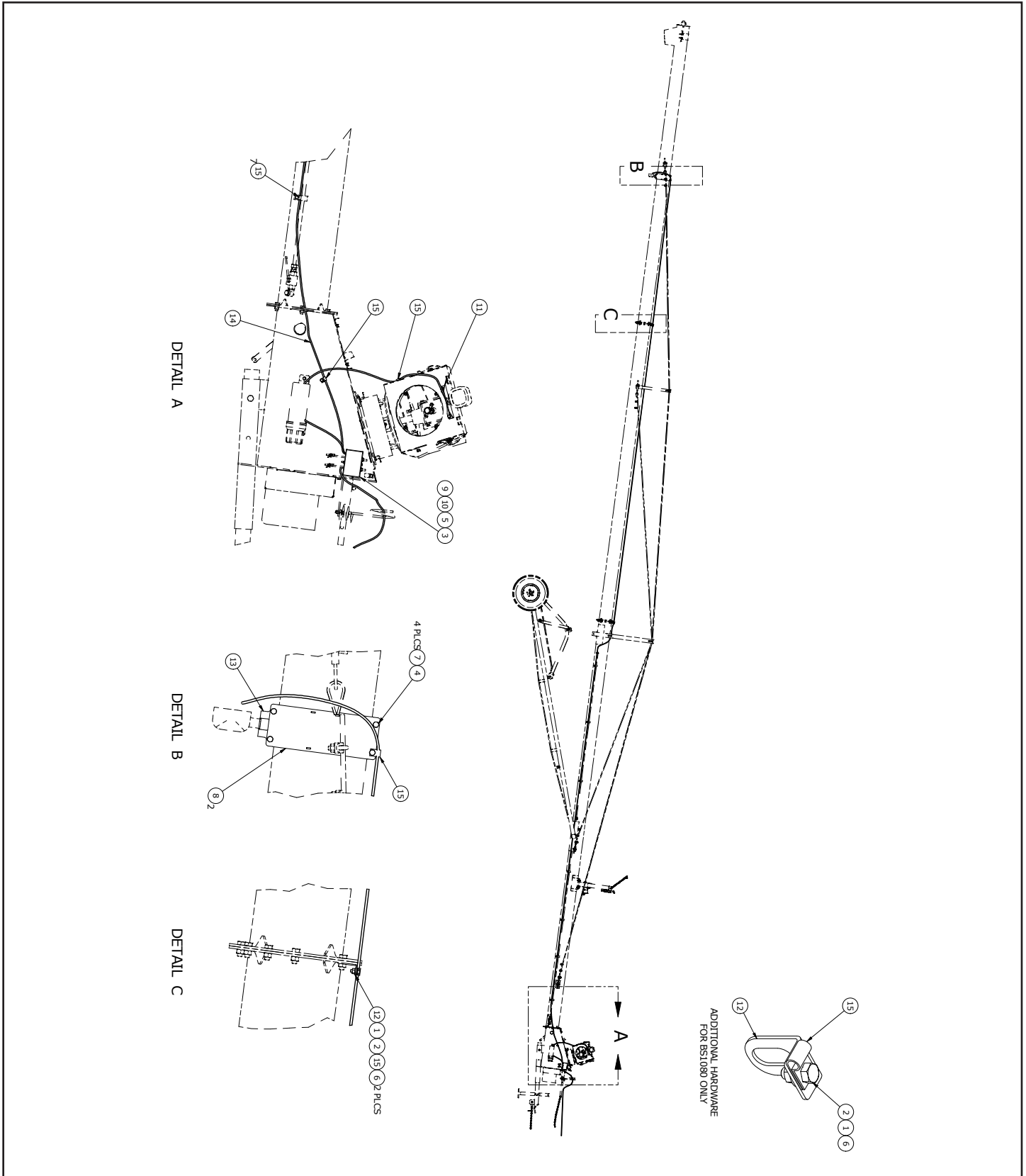
Figure 106



Install hose assembly (Item 1) into the hydraulic tube (Item 2) on the bottom tube section. Route the hose towards the hitch and install into the hydraulic hose holder [Figure 106].

WORK LIGHT WIRING INSTRUCTIONS - F2735

Figure 107

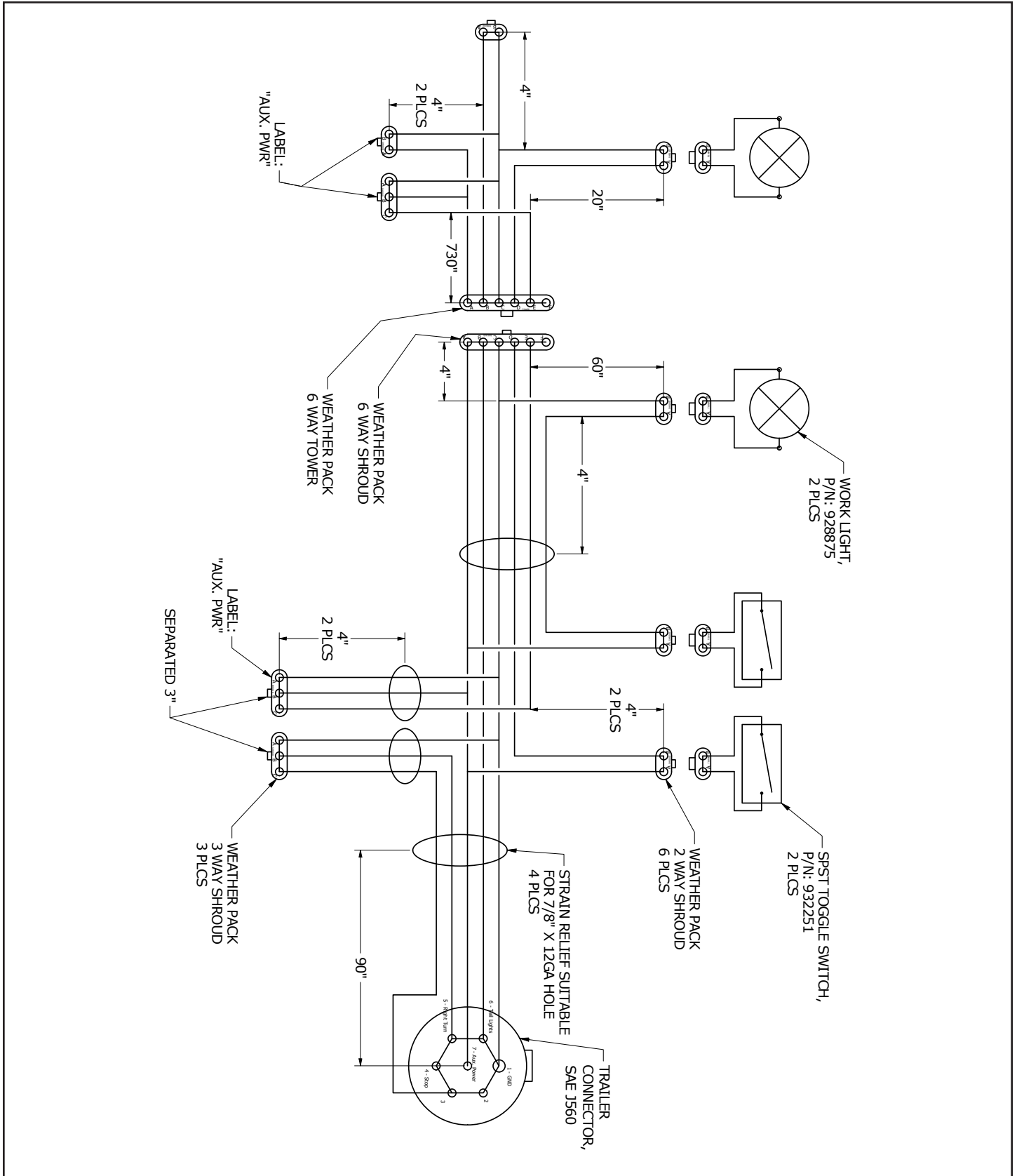


Bill Of Material

ITEM [Figure 107]	PART NUMBER	DESCRIPTION	QTY.
1	81546	5/16" FLAT WASHER (PL)	3
2	81549	5/16" X 3/4" HEX BOLT (PL)	3
3	84498	1/4" LOCK NUT (PL)	1
4	86171	3/8" X 1 1/4" HEX BOLT (PL)	4
5	812025	BOLT HEX 0.250NC X 4.00GR5 PL	1
6	812362	5/16" LOCK NUT (PL)	3
7	812363	3/8" LOCK NUT (PL)	4
8	930602	BRKT-SHIFTERTUBE MOUNT 10"	2
9	938844	BRKT-ELEC SWITCHES	1
10	938845	COVER-ELEC SWITCHES	1
11	938847	BRKT - INTAKE LIGHT MOUNT	1
12	938887	BRKT - CABLE CLIP MOUNT	3
13	938900	BRKT - LIGHT MOUNT	1
14	940587	HARNESS - BS WORKING LIGHT W/ AUX. PWR	1
15	SZ000566	5/16 X 0.406 HOLE VINYL DIP CLAMP	13

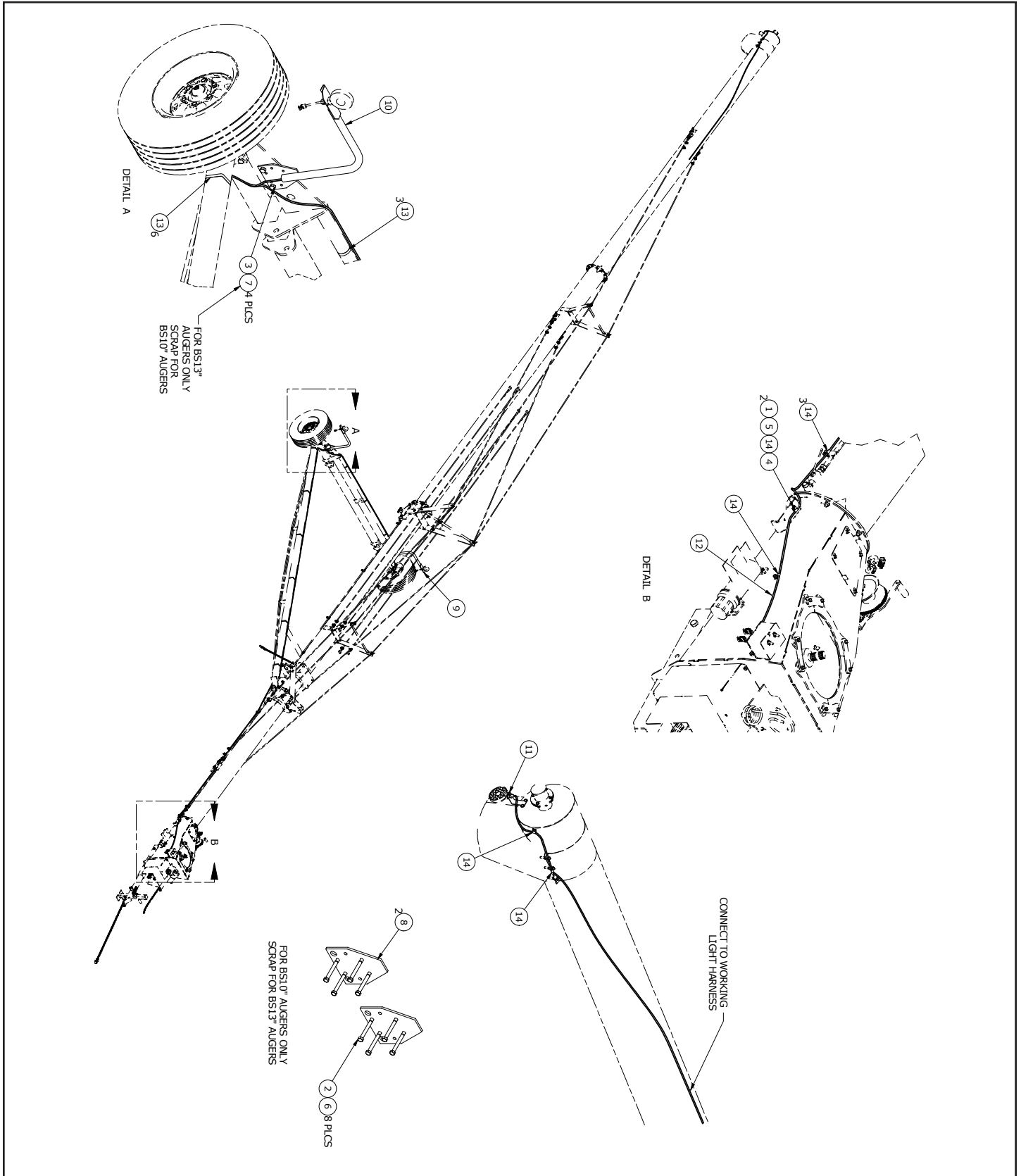
Work Light Harness Schematic

Figure 108



TRANSPORT LIGHT WIRING INSTRUCTIONS - F2739

Figure 109

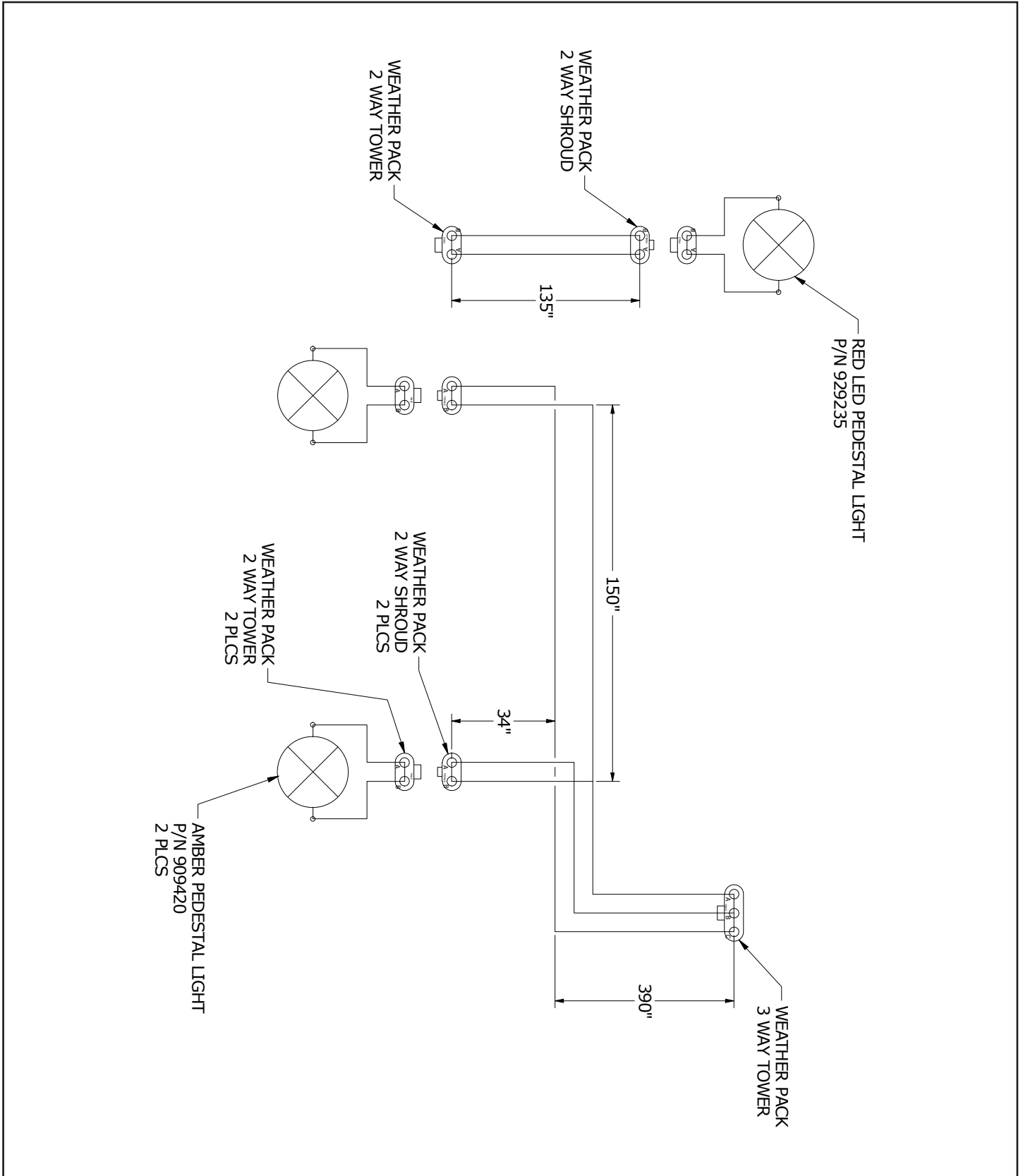


Bill Of Material

ITEM [Figure 109]	PART NUMBER	DESCRIPTION	QTY.
1	81546	5/16" FLAT WASHER (PL)	2
2	81587	3/8" X 4" HEX BOLT (PL)	8
3	84268	5/8" X 1 1/2" HEX BOLT (PL)	4
4	812026	5/16" X 1" HEX BOLT (PL)	1
5	812362	5/16" LOCK NUT (PL)	1
6	812363	3/8" LOCK NUT (PL)	8
7	812482	5/8" LOCK NUT (PL)	4
8	909225L	TURN SIGNAL MT PL 1/4" X 5 7/8" X 7"	2
9	909226	BLINKER MOUNT WELDT - RH	1
10	909227	BLINKER MOUNT WELDMENT - LH	1
11	938898	BRKT-LIGHT HOLDER	1
12	940586	HARNESS - BS TRANSPORT LIGHT KIT	1
13	967103	TIE 30"	9
14	SZ000566	5/16 X 0.406 HOLE VINYL DIP CLAMP	7

Transport Light Harness Schematic

Figure 110



Farm King



OPERATION

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Farm King



GENERAL INFORMATION

Pre-Operation Checklist

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



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.



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.
 2. Check the augers. Remove any material build-up or debris that has become entangled.

3. Make sure that all guards and shields are in place, secured and functioning as designed.



HIGH PRESSURE FLUID HAZARD

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.

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

Note: Do not operate with hydraulic leaks.

5. Check and tighten all wheel bolts to proper torque.
6. Check tire pressure. Inflate per manufacturer’s specification.
7. Check gearbox oil level. Fill as required.
8. Check that the PTO driveline telescope easily and turn freely.
9. Make sure the PTO ends are securely attached to the auger and the tractor.
10. Check the drive belt tension and alignment. Tension or align as required. (See Maintenance section).

Break-In Checklist

NOTE: The break-in period is different from normal operating conditions.

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.



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.

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

1. Re-torque wheel bolts to proper torque and check tire pressure.
2. Check for loose fasteners and hardware. Tighten as required.
3. Check the condition of all hydraulic lines, hoses, fittings and couplers for damage or leaks.
4. Tighten leaking fittings and repair or replace any damaged components.
5. Check the condition of all electrical lines, wires, and connections. Repair or replace any damaged systems or components.
6. Check that all guards and shields are in place, secured and functioning as designed.



ROTATING PART HAZARD

To prevent serious injury or death from rotating parts:

- Place all controls in neutral or off, stop engine or motor, remove ignition key or disable power source and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Install and secure all guards / shields before operating.
- Do not operate with rotating parts exposed.

Tractor Requirements



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

The tractor / tow vehicle must be rated for the listed weight to transport the specified auger model.

Hitch weight and total weight of the auger models:

Auger Model	Hitch Weight	Total Weight
1050	770 lb (349 kg)	2545 lb (1155 kg)
1060	840 lb (381 kg)	2987 lb (1356 kg)
1070	840 lb (381 kg)	3354 lb (1523 kg)
1080	660 lb (299 kg)	3622 lb (1644 kg)

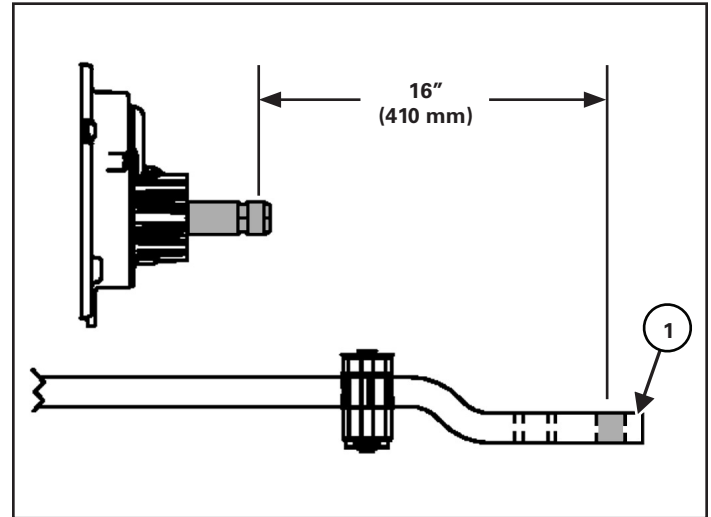
The tractor must be equipped with a 6-spline 1-3/8" (standard) or 21-spline 1-3/8 (optional) PTO.

Minimum HP (540 RPM PTO):

Auger Model	Minimum Tractor HP (540 RPM PTO)	HYP PSI For Lift (Approx.)
1050	40 hp	1000 psi
1060	48 hp	1000 psi
1070	55 hp	1000 psi
1080	65 hp	1000 psi

Drawbar Adjustment

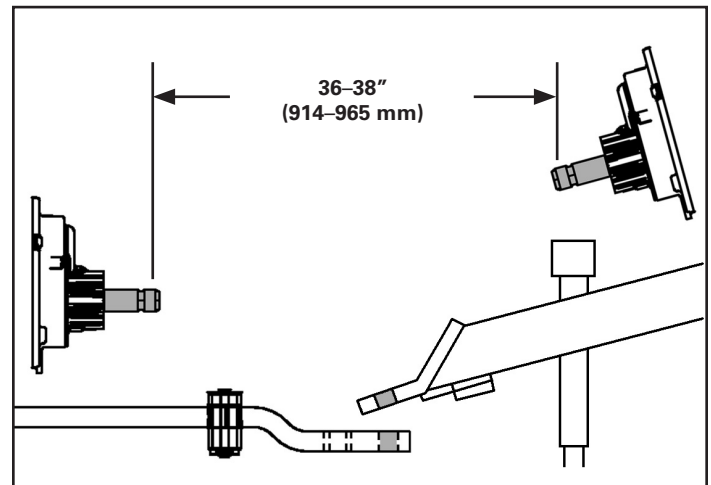
Figure 111



Adjust the tractor's drawbar in / out, until the center of the hitch pin hole (Item 1) is 16 inches (410 mm) from the end of the tractor's PTO shaft. See your tractor's owner's manual for correct adjustment procedures [Figure 111].

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

Figure 112



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, the auger hitch or both [Figure 112].

ENTERING & LEAVING THE OPERATOR’S POSITION

Entering The Operator’s Position

Enter the operator’s position, start the engine, and release the parking brake.



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

Leaving The Operator’s Position

Always perform the following steps when leaving the operator’s position:



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.

CONNECTING TO TRACTOR

Attach the auger to the tractor whenever the equipment is moved around the yard or into working position.

Tow the equipment by truck when traveling long distances (see “Transportation” on page 89).

Hitching The Equipment

Make sure that bystanders, especially small children, are clear of the working area.

Be sure that there is sufficient room and clearance to back up to the machine.



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.

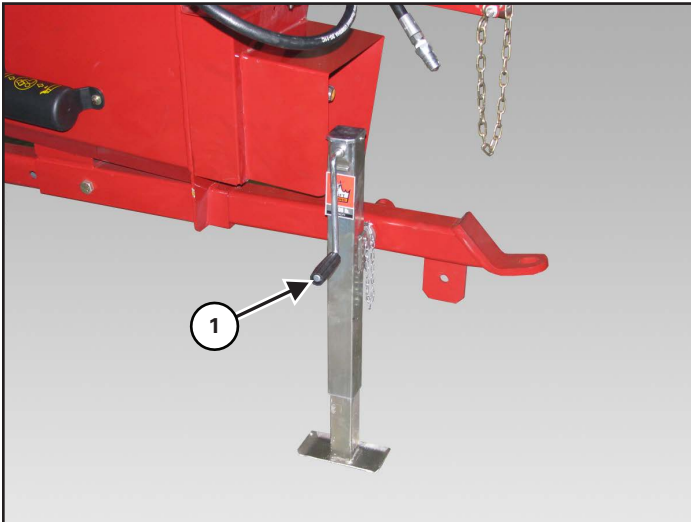
Move the tractor backwards, aligning the drawbar with the Backsaver Auger hitch.

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.

Figure 113



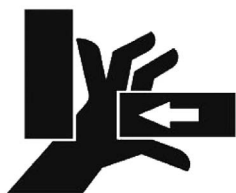
Turn the handle (Item 1) clockwise to raise the hitch or counterclockwise to lower the hitch [Figure 113].

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.

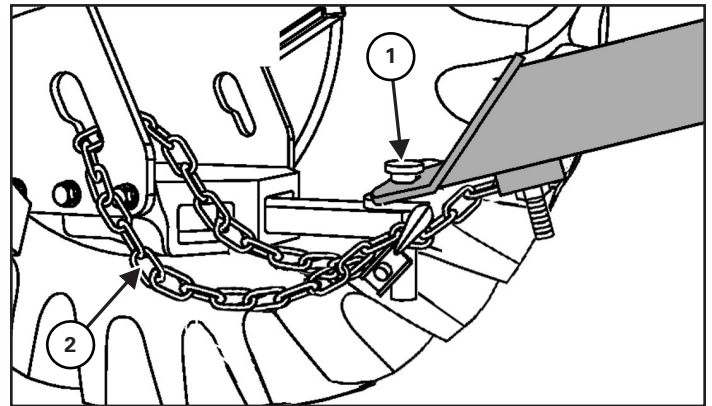


AVOID INJURY OR DEATH

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.

Figure 114



Install the hitch pin (Item 1) and retaining pin to securely fasten the Backsaver Auger hitch to the tractor drawbar [Figure 114].

Attach the safety chain (Item 2) around the drawbar [Figure 114].

Connecting The PTO Driveline



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.

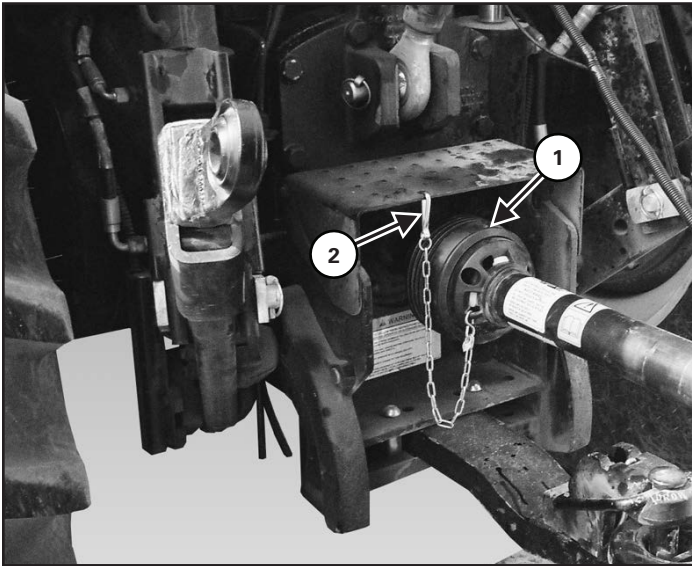
NOTE: Clean and grease tractor’s PTO shaft and PTO driveline coupling each time driveline is connected.

Stop the engine and leave the operator’s position.



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 115

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 115].

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



IMPORTANT

BENZI PTO ORIENTATION

Connect the torque limiting (shear assembly) side of the PTO to the implement.



WARNING



AVOID INJURY OR DEATH

Do NOT exceed 540 RPM PTO.

Keep PTO shields and all guards in place.

Keep away from moving parts.

Keep bystanders away.

PTO Driveline Length Check

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.



AVOID INJURY OR DEATH

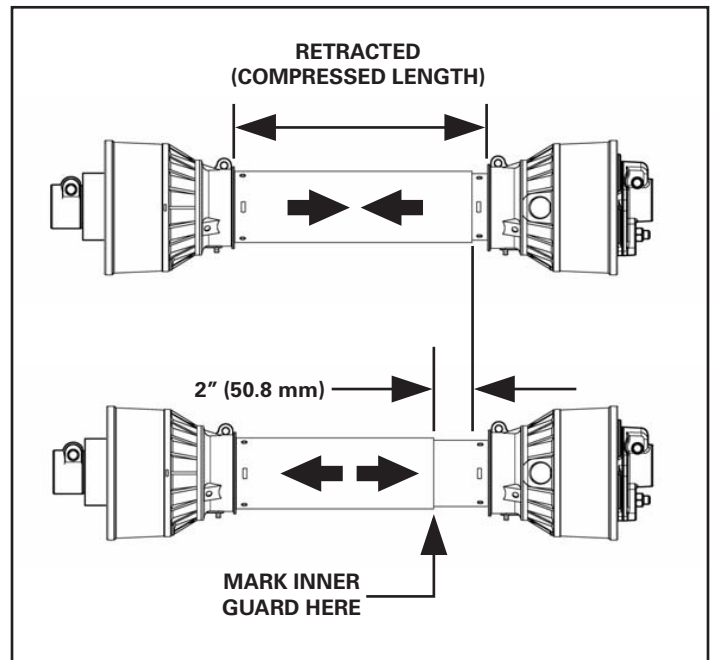
- Do NOT exceed the rated implement PTO speed.
- Stay clear of rotating driveline.
- Keep bystanders away.
- Keep hands, feet, clothing and long hair away.
- Keep PTO shields and all guards in place.
- Disengage PTO, move the tractor controls to the Neutral position, stop the engine and make sure all 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" in Operation section).

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

Figure 116



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 116].
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 116].
4. Reattach the PTO driveline to the tractor PTO shaft.
5. Enter the operator's position. 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” in the Operation section). 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 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.

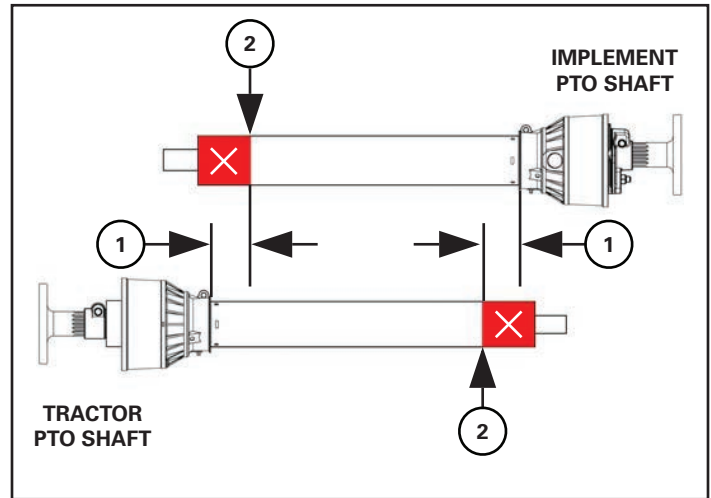
Remove the PTO driveline from the tractor and place in storage position (if equipped).

Enter the operator’s position (See “Entering The Operator’s Position” in the Operation section). Start the engine.

Raise or lower the three-point implement to get the shortest distance between the tractor PTO shaft and three-point implement gearbox PTO shaft. Stop the engine and leave the operator’s position.

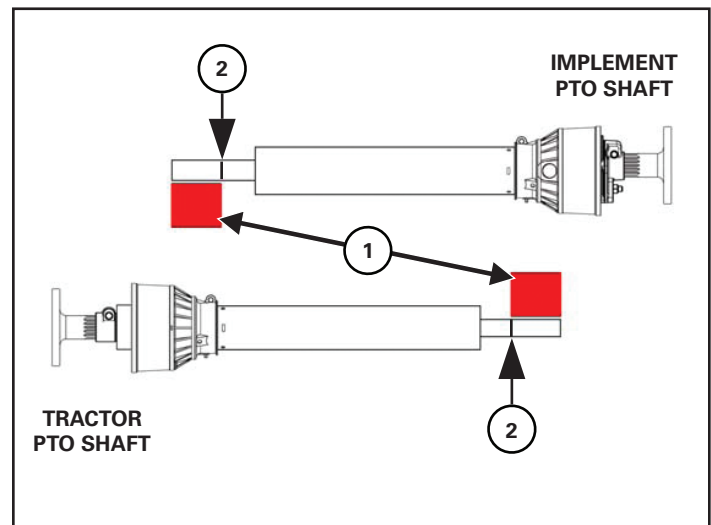
Pull the PTO driveline apart and reinstall each individual section; one half to the tractor PTO shaft and one half to the implement gearbox PTO shaft.

Figure 117



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 117].

Figure 118



2. Using the plastic guard lengths that were cut off in, align the cut off lengths (Item 1) with the end of the inner & outer shafts. Place a mark (Item 2) on the inner & outer shafts and cut the inner & outer shafts off at this length [Figure 118].
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" in the Operation section).

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 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.

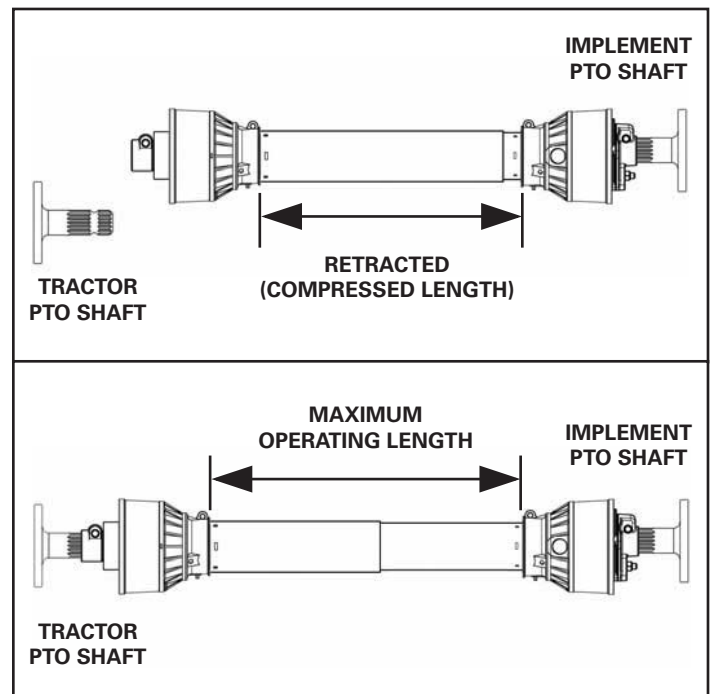
1. Disconnect the PTO driveline from the tractor and fully slide the driveline sections together (retracted).
2. Measure the retracted (compressed) length of the PTO driveline between the bases of the plastic guards.
3. Multiply the retracted driveline length by 1.667 to determine the PTO driveline Maximum 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" in the Operation section).

6. With the PTO driveline attached, position the three-point implement to where the telescoping PTO driveline is at its maximum operating extension.
7. Stop the engine and leave the operator's position. Make sure the PTO driveline and all rotating components have come to a complete stop before leaving the operator's position.
8. Measure the length of the PTO driveline between the bases of the plastic shields to determine the maximum operating length [Figure 119].

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

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.

Figure 119



Connecting Hydraulic Hoses



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.



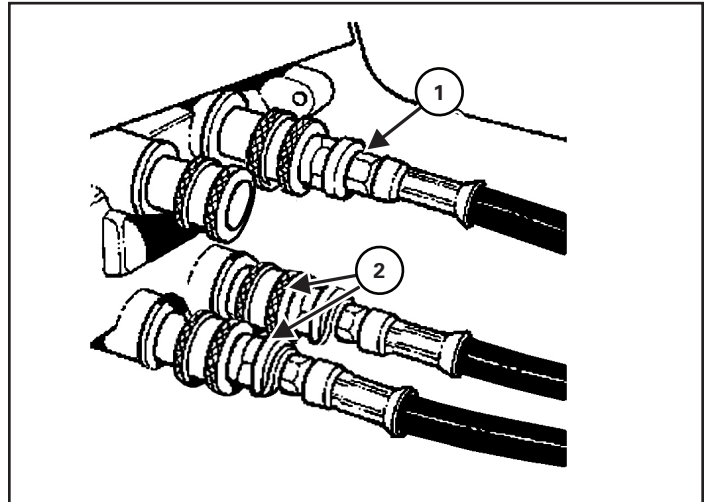
Contain and dispose of any oil leakage in an environmentally safe manner.

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 120



Pull back on the collar of the female coupler, push couplers together, release the collar when the couplers are fully engaged and locked [Figure 120].

Install the lift cylinder quick coupler hose (Item 1) [Figure 120].

Install the two valve block quick coupler hoses (Item 2) [Figure 120].

To Disconnect:

Pull back on the collar and pull the male coupler out to disconnect.

Lower jack until weight of equipment is resting on tractor drawbar. Pull lock pin on jack and remove. Mount jack to storage bracket and secure with lock pin.

AUGER OPERATION

Hopper Operation



ENTANGLEMENT HAZARD

To prevent injury to fingers and hands:

- Keep hands clear of winch during operation

CUT HAZARD

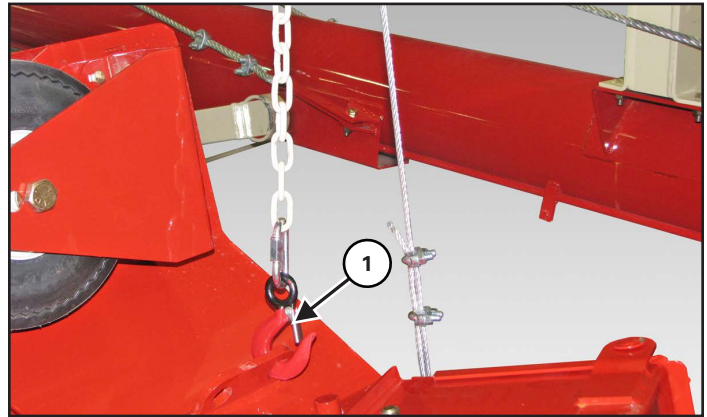
To prevent injury to fingers and hands:

- 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
- Frayed, kinked or damaged wire rope must be replaced immediately.
- 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.



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

Figure 121

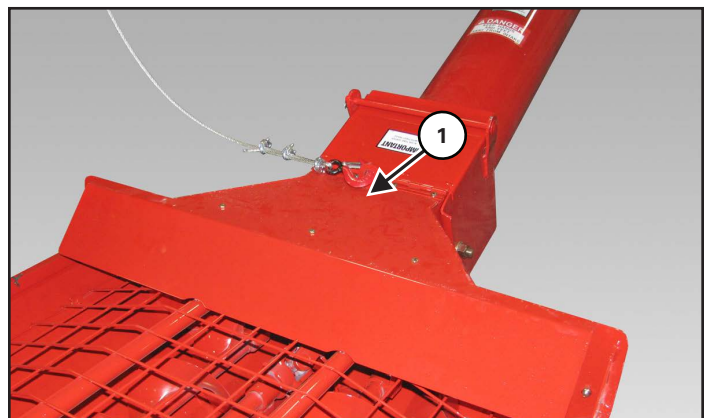


With the hopper in storage position [Figure 121]:

- Raise the hopper slightly to release the safety chain tension
- Remove the safety chain hook (Item 1) from the hopper.
- Slowly lower the hopper to the ground.

Continue turning the winch handle until cable has enough slack to be removed from the hopper.

Figure 122

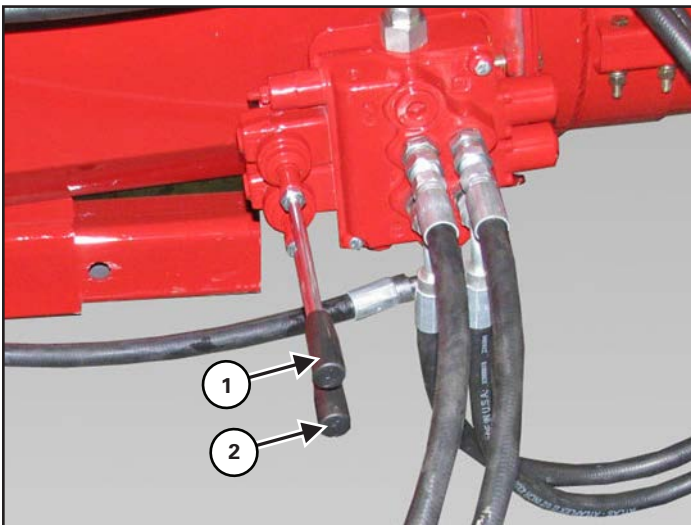


Remove the lift boom / winch cable hook (Item 1) from the hopper [Figure 122].

Move the hopper to the desired location.

NOTE: For mechanical winch, move the winch handle counterclockwise (towards the hitch) to raise the lift boom cable (wind cable). Move the handle clockwise (away from the hitch) to lower the boom cable (unwind cable).

Figure 123

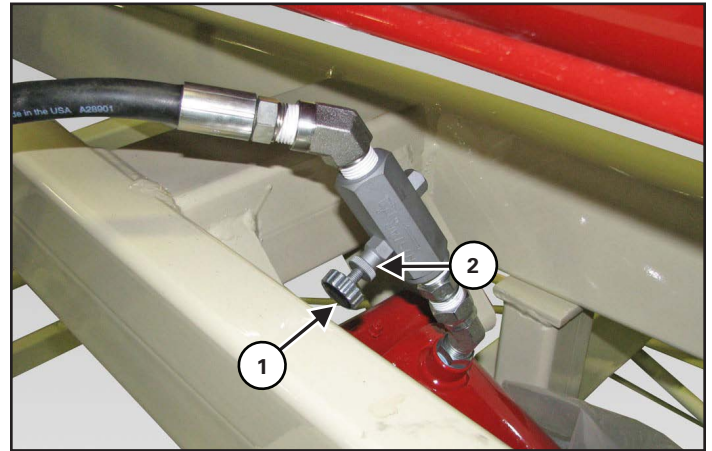


Hydraulic hopper mover / winch operation [Figure 123]:

- Engage the hydraulic circuit for the hopper / winch control valve on the intake box. Run the tractor engine at low idle.
- Move the lever (Item 1) down to move the hopper to the right. Move the lever up to move the hopper to the left.
- Move the lever (Item 2) down to raise the boom cable (wind cable). Move the lever up to lower the boom cable (unwind cable).

Main Lift Cylinder Adjust

Figure 124



Turn the knob (Item 1) on the flow control valve "IN" to decrease the speed the auger lowers. Turn the knob "OUT" to increase the speed the auger lowers [Figure 124].

Loosen the nut (Item 2) and turn the knob all the way in (tight). The approximate initial setting should be 3-1/2 turns out from the tight position. When set, re-tighten nut to set position [Figure 124].

NOTE: Be sure that the valve is slightly open before raising the first time or auger will not lower.

Auger Placement



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 operate the unit before reading and understanding the Operator 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 anchoring of the intake end to prevent sudden tipping.

Disconnect power of electrical driven units before resetting motor overloads.

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.



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.

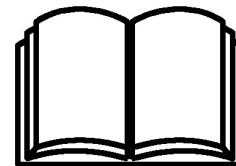
Never attempt to raise or lower the auger during operation.

Verify wheels are free to move.

Operate the auger at a 35° angle. Do not exceed a 42° angle. Angles above 35° decrease auger capacity.

Use of fertilizer can affect warranty.

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



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

With the 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.



Never place blocks under the wheels to increase the elevation of the 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 to the desired height (do not exceed a 42° angle).

Figure 125



Back the auger into position above the bin. Lower the auger until the downspout (Item 1) enters the bin [Figure 125].

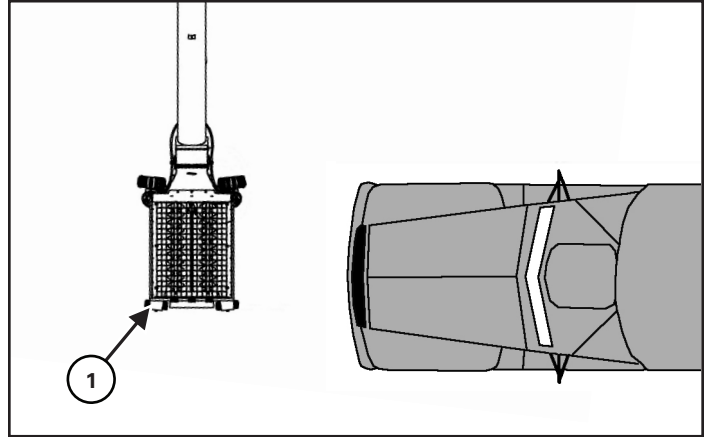
Engage the tractor's parking brake, stop the engine and exit the tractor.



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.

Unloading Belly Dump Units

Figure 126



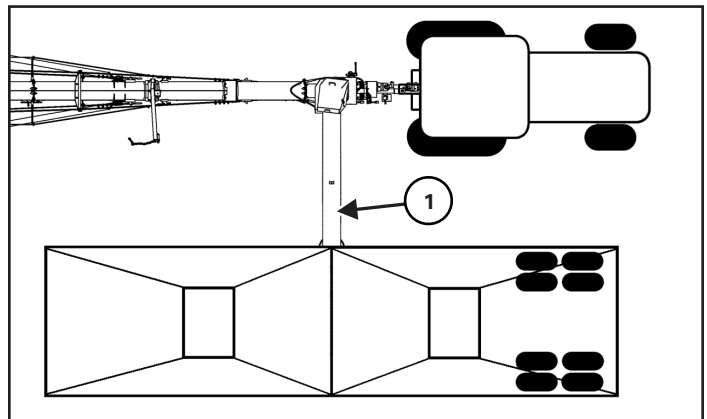
Move the hopper (Item 1) out at a 90° angle from the auger [Figure 126].

Move the belly dump unit into position, centered on the hopper.

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.

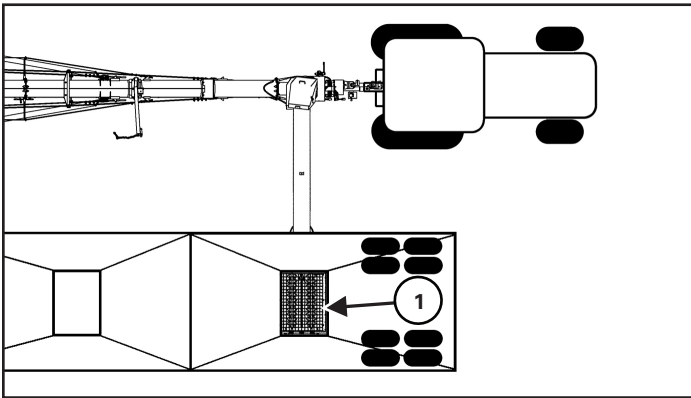
Figure 127



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

Move the hopper (Item 1) under the belly dump unit [Figure 127].

Figure 128



Move the belly dump unit forward until the rear compartment is directly over the hopper (Item 1) [Figure 128].



AVOID INJURY OR DEATH

Do NOT exceed 540 RPM PTO if equipped with chain drive.

Keep PTO shields and all guards in place.

Keep away from moving parts.

Keep bystanders away.

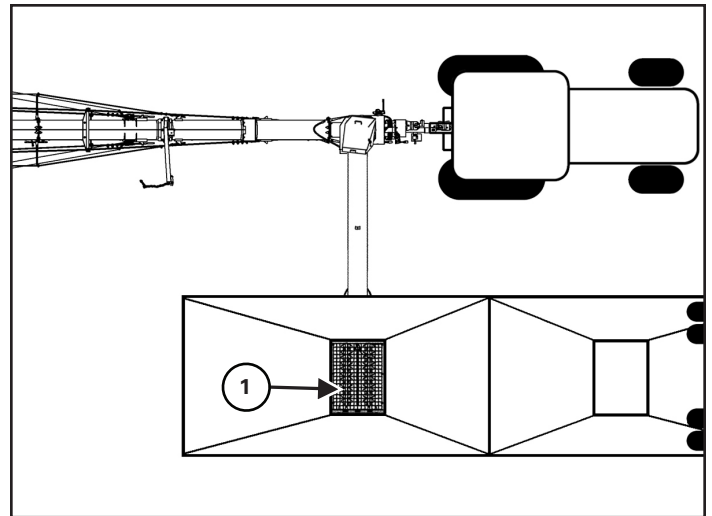
With tractor running at a low idle, engage the tractor PTO slowly to start the auger. Increase engine RPM (do not exceed 540 RPM PTO speed).

Slowly open the 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 129



Move the belly dump unit back until the front compartment is directly over the hopper (Item 1) [Figure 129].

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 compartment gate.

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

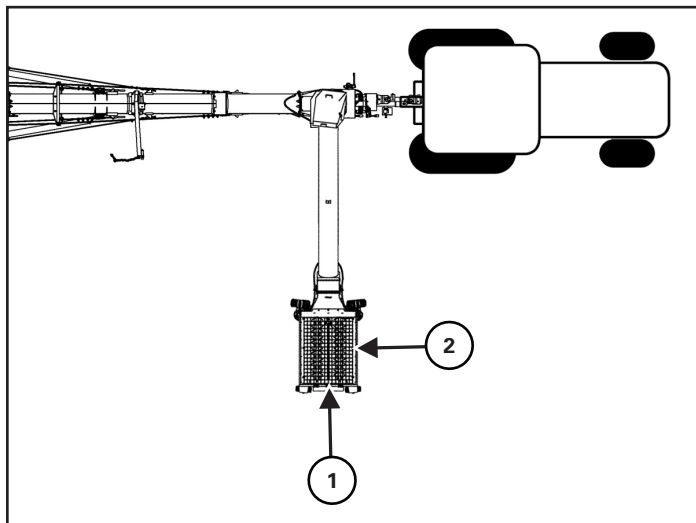
When the front compartment is empty, close the gate, disengage the PTO and lower engine RPM speed.

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

Figure 130



Move the hopper out at a 90° angle from the auger.

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 130]**.

Move the side dump unit into the unloading position at the end of the hopper (Item 1) **[Figure 130]**.

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

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



AVOID INJURY OR DEATH

Do NOT exceed 540 RPM PTO if equipped with chain drive.

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 dumping 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.

TRANSPORTATION

Requirements



ELECTROCUTION HAZARD

To prevent serious injury or death from electrocution:

- Be aware of overhead power lines.
- Keep away from power lines when transporting the 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 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.

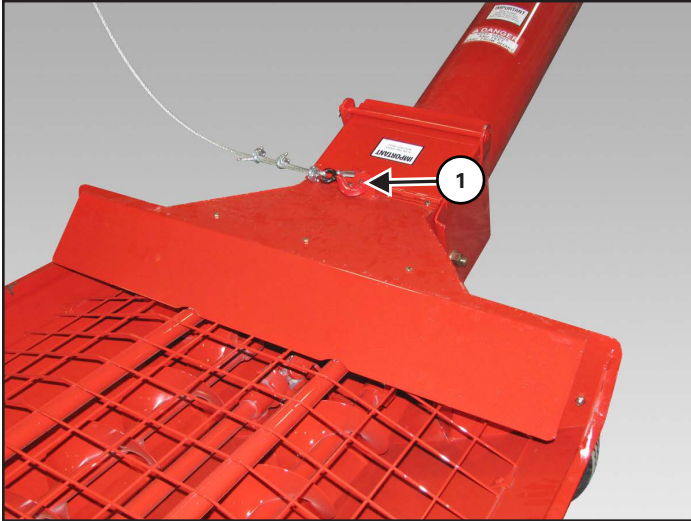
WEIGHT RATIO - Weight of fully equipped or loaded implement(s) relative to weight of tractor / tow vehicle.

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

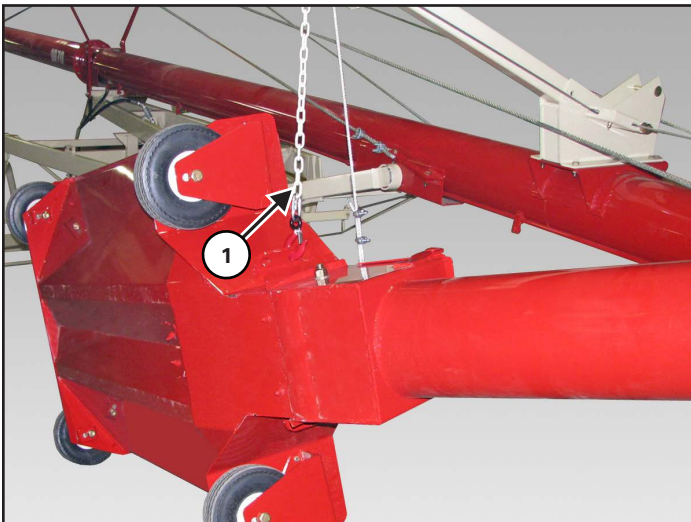
Remove all supports on the discharge end and anchoring from the intake end (if required).

Figure 131



Use the hydraulic controls or mechanical winch to move the hopper toward the auger and install the boom cable (Item 1) [Figure 131].

Figure 132



Use the hydraulic controls or mechanical winch to raise the hopper high enough to install the transport chain (Item 1) [Figure 132].

WARNING

The weight of the hopper and intake auger assembly must be supported by the transport chain whenever the auger is moved. If the weight of the intake auger is on the winch, the winch may be damaged during transport.

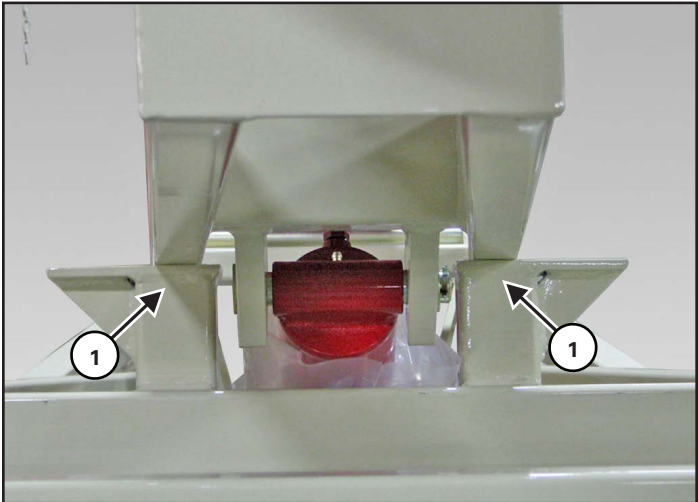
Lower the hopper until the transport chain is supporting the weight of the hopper and intake auger.

Enter the tractor, using the tractor controls, slowly raise the main auger until the discharge spout is clear from the bin.

Release the parking brake and move the tractor and auger forward (away from the bin) until there is adequate space for the auger to be lowered into the transport position.

Stop the tractor and engage the parking brake.

Figure 133



Fully lower the auger until the upper lift arm contacts the cradle rest (Item 1) [Figure 133].



WARNING

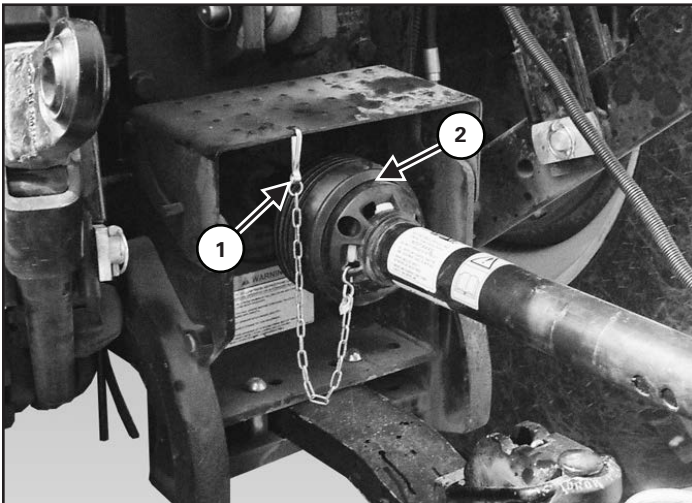
AVOID INJURY OR DEATH

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.

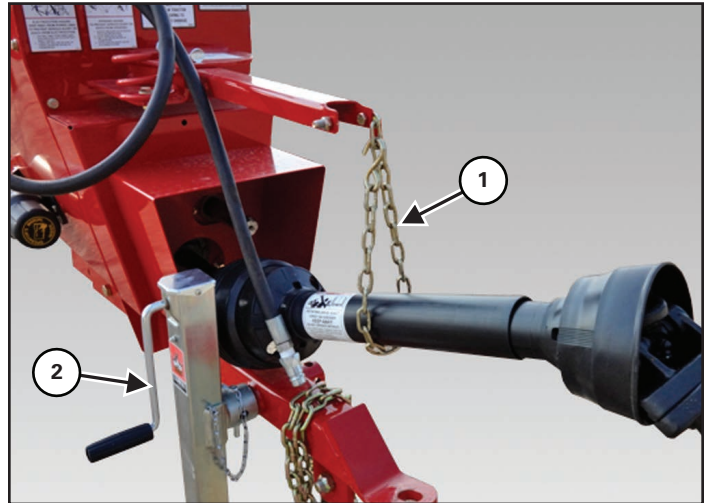
Engage the tractor's parking brake, stop the engine and exit the tractor.

Figure 134



Remove the PTO driveline safety chain (Item 1). Retract the collar (Item 2) and slide the PTO driveline off the tractor PTO shaft [Figure 134].

Figure 135



Place the PTO holder chain (Item 1) around the PTO driveline [Figure 135].

Fully raise the jack (Item 2) and rotate into the transport position (horizontal) [Figure 135].

Verify that the auger is securely fastened to the tractor / tow vehicle and that the hitch safety chain is properly attached to the auger and tractor / tow vehicle.

Verify that the SMV (Slow Moving Vehicle) sign is attached and visible.

Verify that the amber lights are clean and operating correctly.

Farm King



MAINTENANCE

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Farm King



TROUBLESHOOTING



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.

PROBLEM	CAUSE	CORRECTION
Cannot start augers.	Plugged auger or obstruction.	Shutoff tractor and disconnect the PTO. Remove obstruction.
	Bearing failure.	Check bearings and replace if required.
Grain flow is too fast.	Discharge gate(s) open too far.	Close the gate(s) to allow a slower grain flow to the hopper / intake auger.
Grain flow is too slow.	Discharge gate(s) not open enough.	Open the gate(s) to allow a faster grain flow to the hopper intake auger.
	Tractor RPM set to low.	Raise tractor RPM to proper setting.
Excessive auger vibration.	Flighting and/or tube are damaged.	Replace flighting and / or tube.
	Running auger empty.	Replace flighting and / or tube.
	Bent auger flighting.	Remove flighting and inspect for straightness. If a bend is detected, straighten the flight and re-install.
	Improper PTO speed.	Adjust PTO speed.
Plugging the auger.	Improper PTO speed.	Adjust PTO speed.
	Overloading hopper and / or auger.	Reduce the rate of flow into the intake hopper.
	Foreign objects in the auger.	Disconnect PTO driveline and remove foreign objects.
	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 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 equipment.

#	DESCRIPTION	SERVICE PROCEDURES					
		Check	Clean	Lube	Change	Adjust	Drain
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	•					



IMPORTANT

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

LUBRICATION

Recommendations

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

- 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.

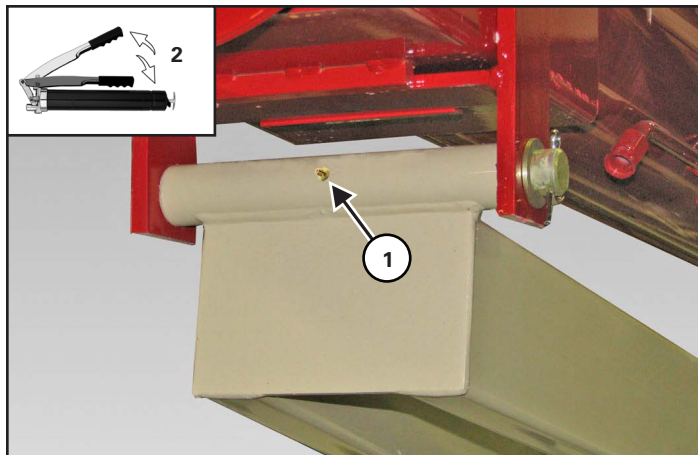


Fluid such as engine oil, hydraulic fluid, coolants, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.

Locations

Lubricate the following grease locations EVERY 8 HOURS:

Figure 136

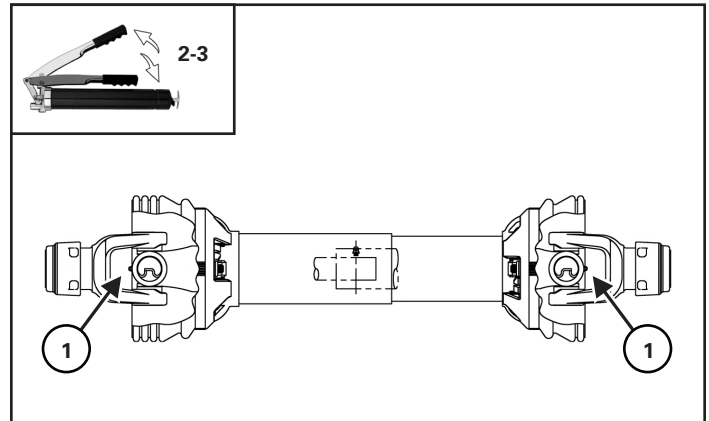


Apply two pumps of grease to the (Item 1) [Figure 136].

Lubricate the following grease locations EVERY 50 HOURS:

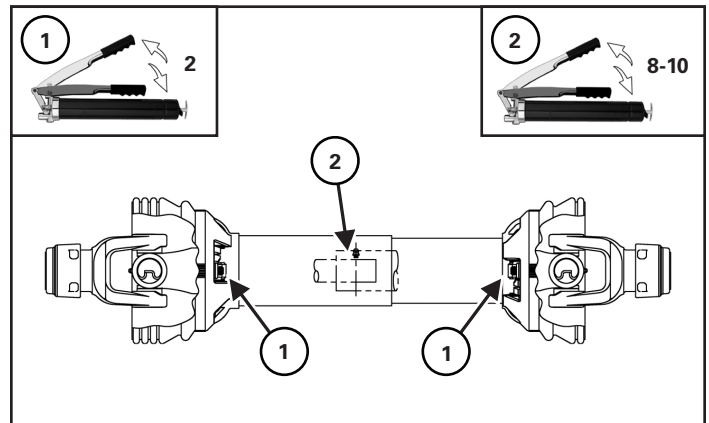
NOTE: The PTO shaft is equipped with extended life bearings. Do not over-grease.

Figure 137



Apply two to three pumps of grease to the cross and bearings (Item 1) on the PTO driveline [Figure 137].

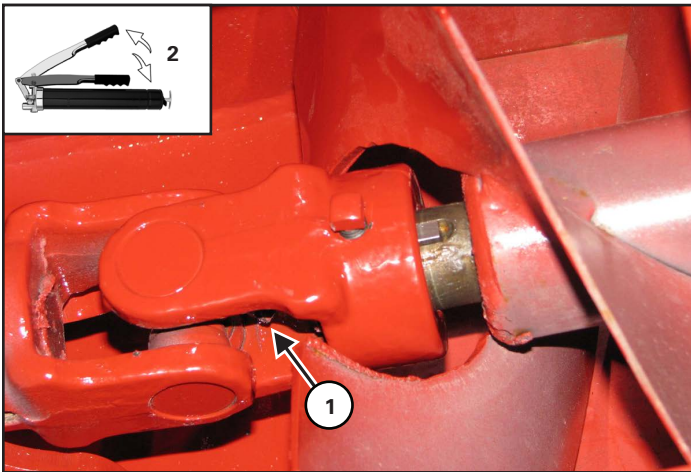
Figure 138



Apply two pumps of grease to the guard bushings (Item 1) [Figure 138].

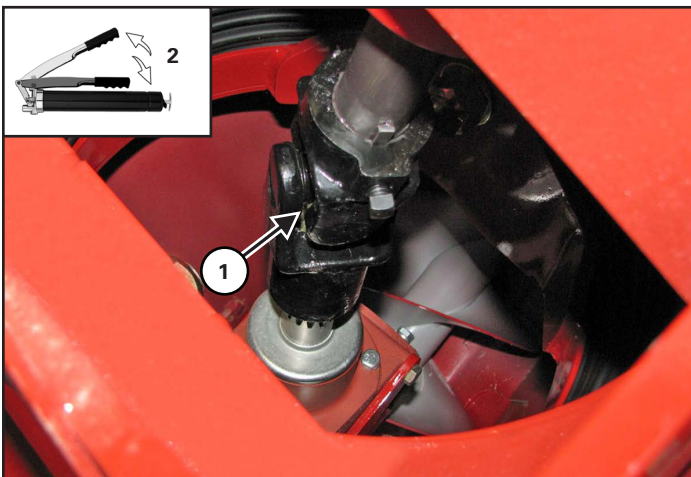
Apply eight to ten pumps of grease to the telescoping member (Item 2) [Figure 138].

Figure 139



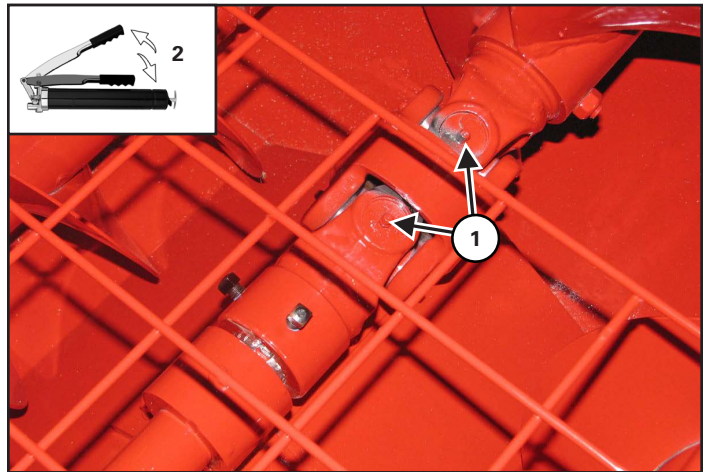
Apply two pumps of grease to the universal joint (Item 1) on the hopper auger drive shaft [Figure 139].

Figure 140



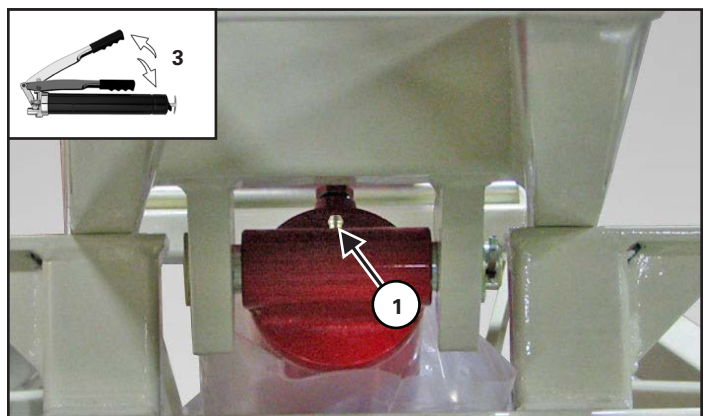
Apply two pumps of grease to the intake drive shaft side (Item 1) [Figure 140].

Figure 141

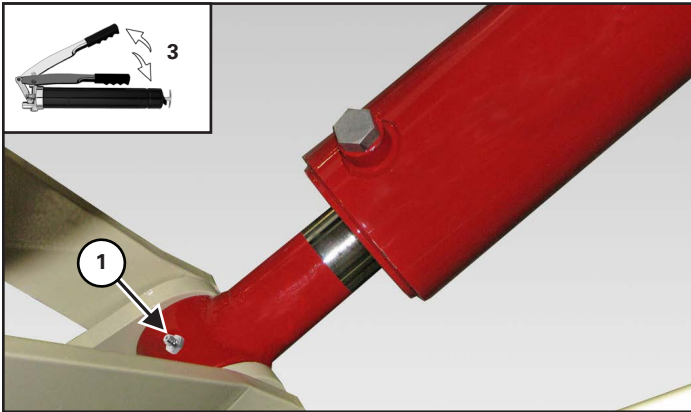


Apply two pumps of grease to the intake hopper drive shaft (Item 1) [Figure 141].

Figure 142

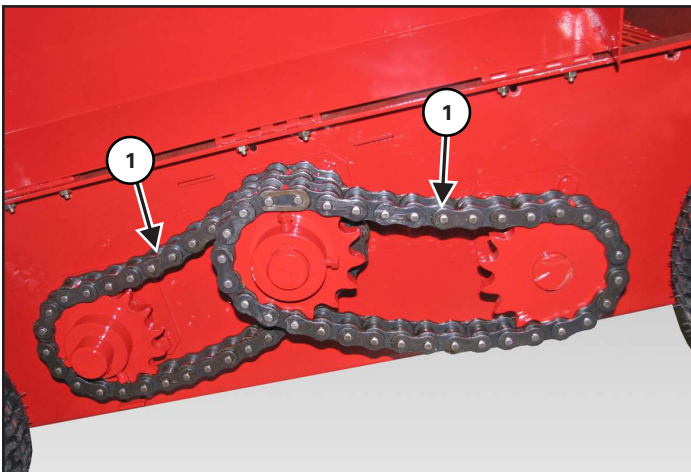


Apply three pumps of grease to the base end of the lift cylinder (Item 1) [Figure 142].

Figure 143

Apply three pumps of grease to the rod end of the lift cylinder (Item 1) **[Figure 143]**.

Lubricate the following grease locations EVERY 8 HOURS:

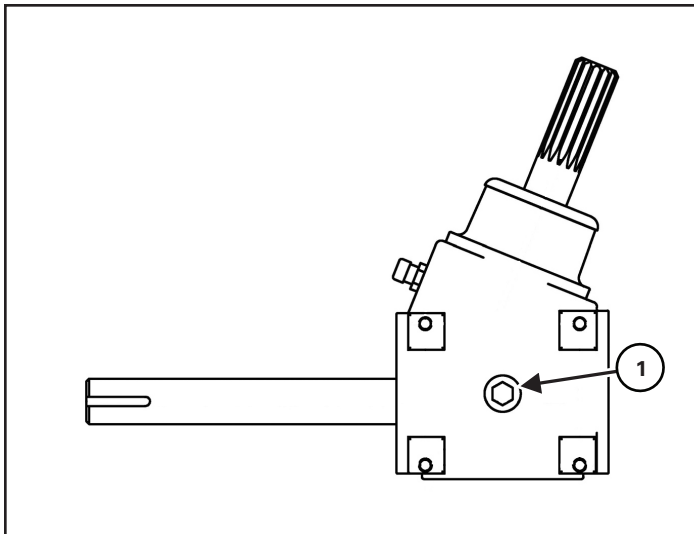
Figure 144

Apply oil to the dual auger drive chains (Item 1) **[Figure 144]**.

GEARBOXES

Lower Gearbox

Figure 145



Check the gearbox oil level every 50 hours or weekly.

Remove the fill / drain plug (Item 1) from the gearbox. Oil level should be at the bottom of the plug hole **[Figure 145]**.

If the oil level is low, add SAE 75W-90 synthetic gear oil until the oil is at the bottom of the hole.

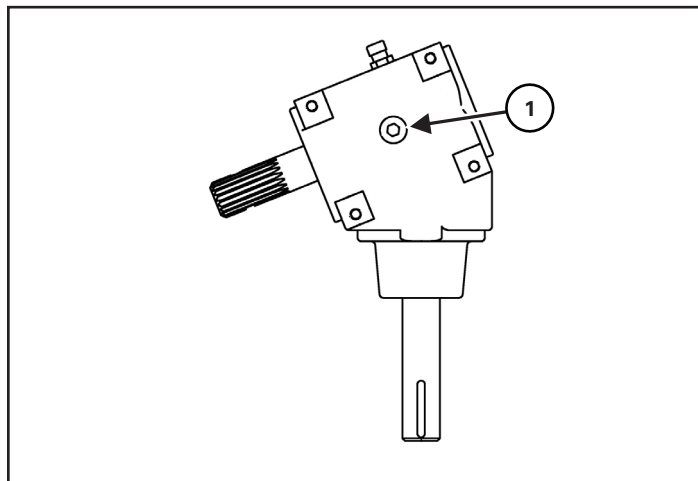
Changing Gear Oil

Remove the fill / drain plug (Item 1) and siphon all the gear oil from the gearbox **[Figure 145]**.

Fill with SAE 75W-90 synthetic gear oil to the bottom of the plug hole. Install fill / drain plug.

Upper Gearbox

Figure 146



Check the gearbox oil level every 50 hours or weekly.

Remove the fill / drain plug (Item 1) from the gearbox. Oil level should be at the bottom of the plug hole **[Figure 146]**.

If the oil level is low, add SAE 75W-90 synthetic gear oil until the oil is at the bottom of the hole.

Changing Gear Oil

Remove the fill / drain plug (Item 1) and siphon all the gear oil from the gearbox **[Figure 146]**.

Fill with SAE 75W-90 synthetic gear oil to the bottom of the plug hole. Install fill / drain plug.

Cleaning And Inspection

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.

AXLES

Wheel Lug Nut Torque

Check the torque on wheel lug nuts daily. Tighten lug nuts to 80–100 ft.-lbs. (108–135 N•m) torque.

Tire / Wheel Replacement

Empty the Backsaver Auger (if required).



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.

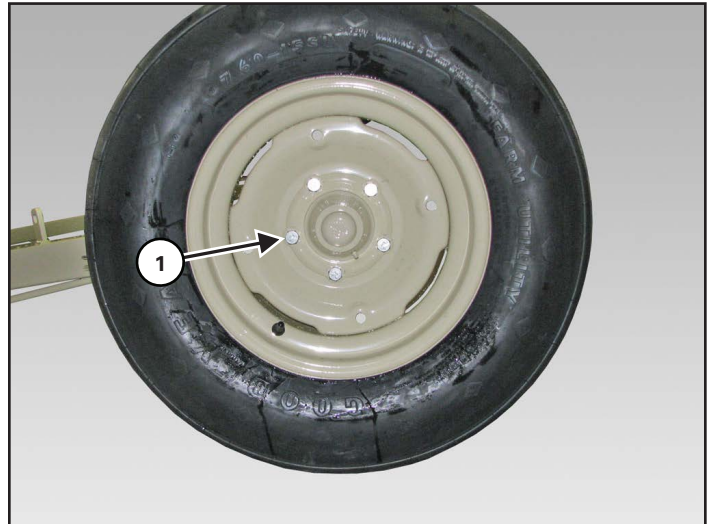
Place all controls in neutral, engage the park brake, stop the engine and wait for all moving parts to stop. Leave the operator’s position.

Place chock blocks behind and in front the auger tire.

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 147



Install the tire with the valve stem facing out (both sides). Install the wheel bolts (Item 1) (both sides) [Figure 147].

Tighten wheel nuts in a criss-cross pattern. Tighten wheel nuts to 80–100 ft.-lbs. (108–135 N•m) of torque.

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

Tire Pressure

Inflate tire to recommended pressure shown on tire. Recommended pressure is 52 PSI (358.5 kPa).



When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly.

BRIDGING CABLES

Cable Inspection



IMPORTANT

Always wear the proper hand and eye protection when serving 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.

Lubrication

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.

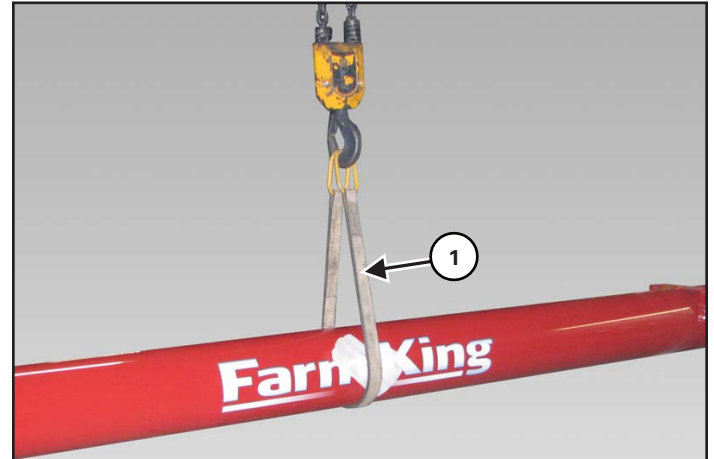
Tension Adjust



IMPORTANT

Completely unload auger before adjusting bridging cables.

Figure 148



Install a strap (Item 1) around the tube [Figure 148].

Connect the strap to an approved lifting device.

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



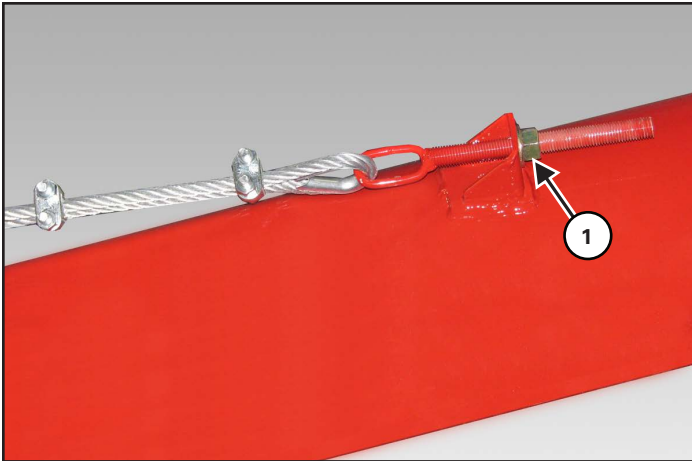
WARNING

AVOID INJURY OR DEATH

Before you leave the operator's position:

- 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.

Figure 149



Loosen all cable clamps along the cable being tightened.

Tighten the nut (Item 1) of the desired bridging cable on tube **[Figure 149]**.

Tighten both left and right cables evenly.

Tighten the upper bridging cable until the discharge end of the tube bows up slightly.

Tighten the lower bridging cable to hold the tube in the slightly raised position.

After tightening the lower and upper cables, check that the auger tube is straight. No bend right or left.

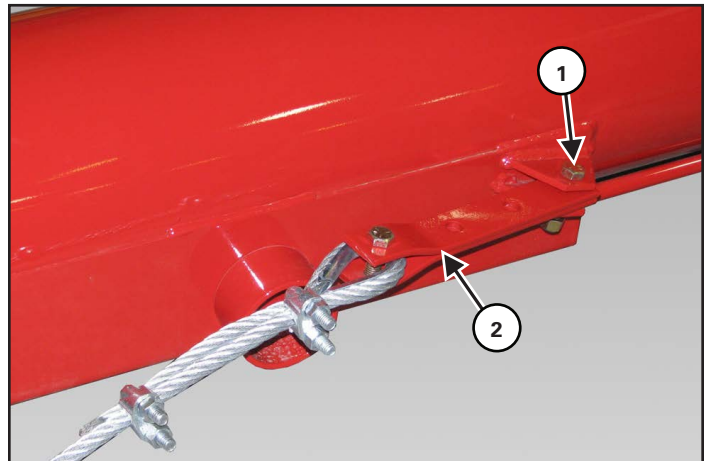
NOTE: If the nut is fully tightened and bottoms out against the eye of the adjustment bolt, the cable will need to be loosened and additional adjustments will be made on the opposite end of the cable.

If the nut bottoms out against the eye of the adjustment bolt, loosen the nut (Item 1) **[Figure 149]**.

NOTE: Do not remove the nut from the adjustment bolt.

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

Figure 150



Remove bolt (Item 1) and lock nut (from mounting bracket on the bottom tube section), move the yoke (Item 2) back, one hole. Re-install the bolt and lock nut. Tighten until the yoke is securely fastened to the tube mount **[Figure 150]**.

Repeat for adjusting remaining bridging cables.

STORAGE AND RETURN TO SERVICE

Storage

Sometimes it may be necessary to store the equipment 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.

- Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud, debris or residue.
- Lubricate all bushings to remove any water residue from washing.
- Remove any material that has become entangled around any moving part.
- 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.
- Place the equipment in a dry protected shelter.

NOTE: If a dry protected shelter is not available, cover with a waterproof tarp and tie down securely.

- Support the jack / frame with planks if required.

Return To Service

After the equipment 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.

SAFETY SIGN (DECAL) INSTALLATION

Procedure



IMPORTANT

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 adhesive remover and glass cleaner. Remove 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.

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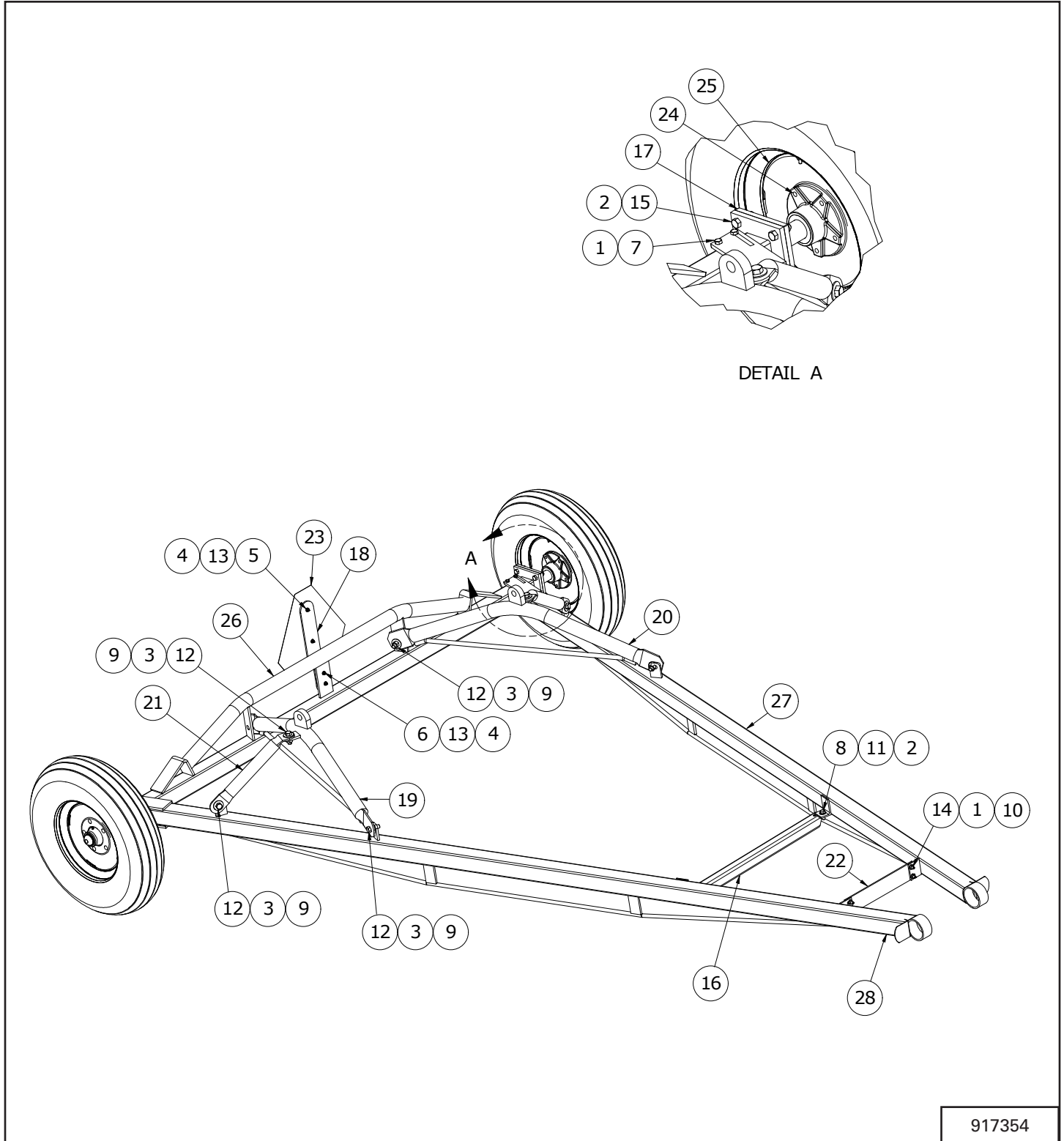
Farm King



GENERAL PARTS INFORMATION

The parts identification section list descriptions, part numbers and quantities for all North America Base Model BS10 Series Augers. Contact your Farm King dealer for additional parts information.

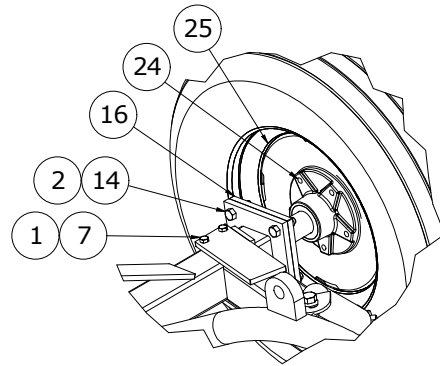
UNDERCARRIAGE - 1050 MODELS



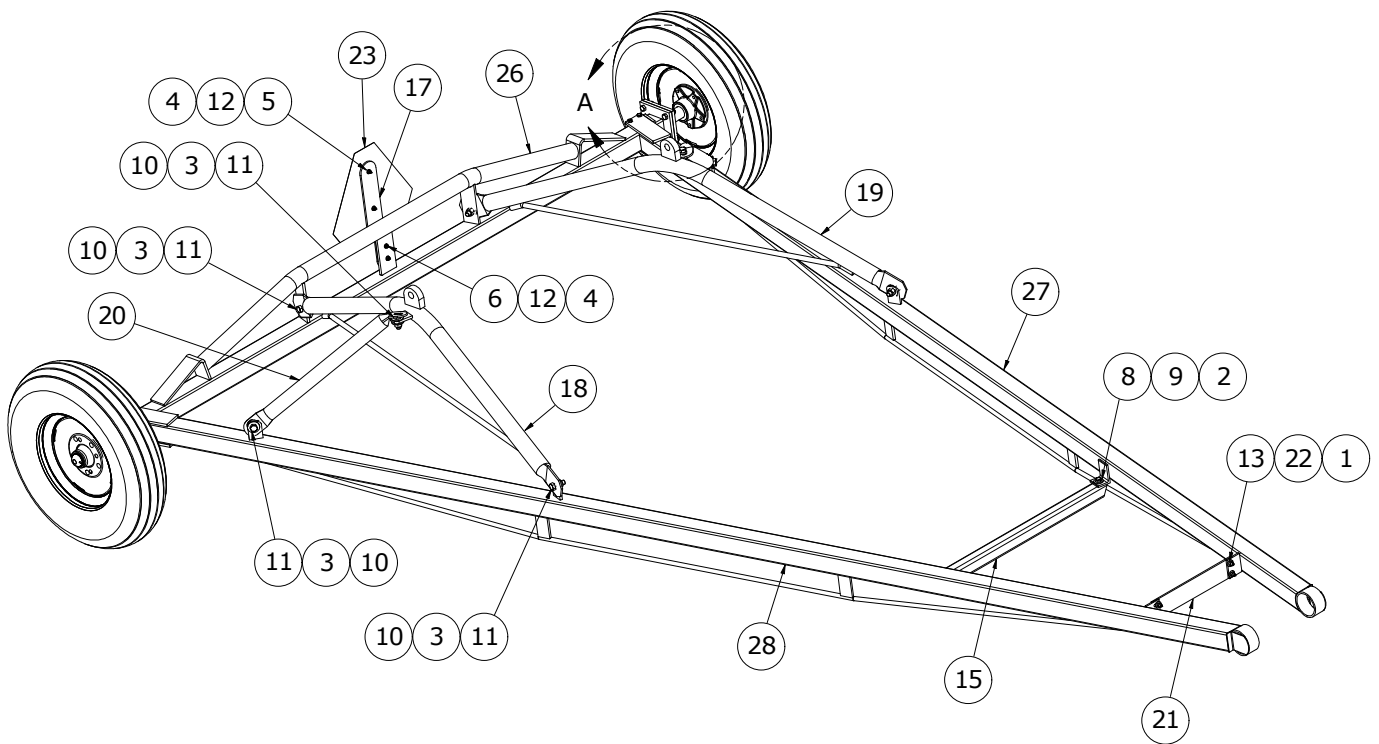
917354

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812363	3/8" LOCK NUT (PL)	8
2	812364	1/2" LOCK NUT (PL)	10
3	812482	5/8" LOCK NUT (PL)	8
4	812624	1/4" FLAT WASHER PL	4
5	81525	1/4" X 3/4" HEX BOLT (PL)	2
6	81527	1/4" X 1" HEX BOLT (PL)	2
7	81588	3/8" X 4 1/2" HEX BOLT (PL)	4
8	81620	1/2" X 1 1/4" HEX BOLT PL	2
9	81678	5/8" FLAT WASHER STD (PL)	12
10	84039	WASHER - 3/8" SAE FLAT (PL)	4
11	84048	1/2" SAE FLAT WASHER (PL)	2
12	84270	5/8" X 1 3/4" HEX BOLT (PL)	8
13	84498	1/4" LOCK NUT (PL)	4
14	86171	3/8" X 1 1/4" HEX BOLT (PL)	4
15	87553	1/2" X 1.75" HEX BOLT UNC GR5 (PL)	8
16	904980	LIFT ARM CRADLE 3/16"W X 2" X 2" X 33 1/4"	1
17	906571	ASSY-STUB AXLE	2
18	934486	BRKT-SMV MOUNT	1
19	960079	UNDERCARR. ARCH WELDT (RH)	1
20	960082	UNDERCARR. ARCH WELDT (LH)	1
21	960085	UNDERCARRIAGE ARCH BRACE	2
22	960088L	UNDERCARR TIE PL	1
23	967066	SLOW MOVING VEHICLE SIGN	1
24	968404	WHEEL BOLT 1/2" X 1 1/4" (PL)	10
25	F0110	WHEEL-15" X 5" X 5 BOLT	2
26	F1468	AXLETUBE WELDMENT (1050)	1
27	F9252	UNDERCARR. ARM WELDT (LH)	1
28	F9253	UNDERCARR. ARM WELDT (RH)	1

UNDERCARRIAGE - 1060 MODELS



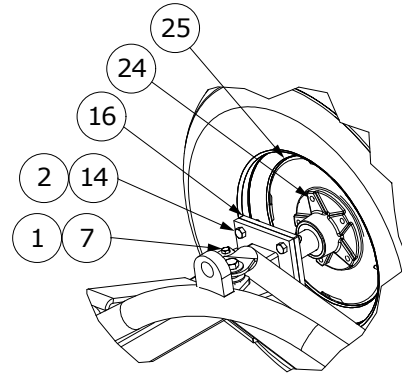
DETAIL A



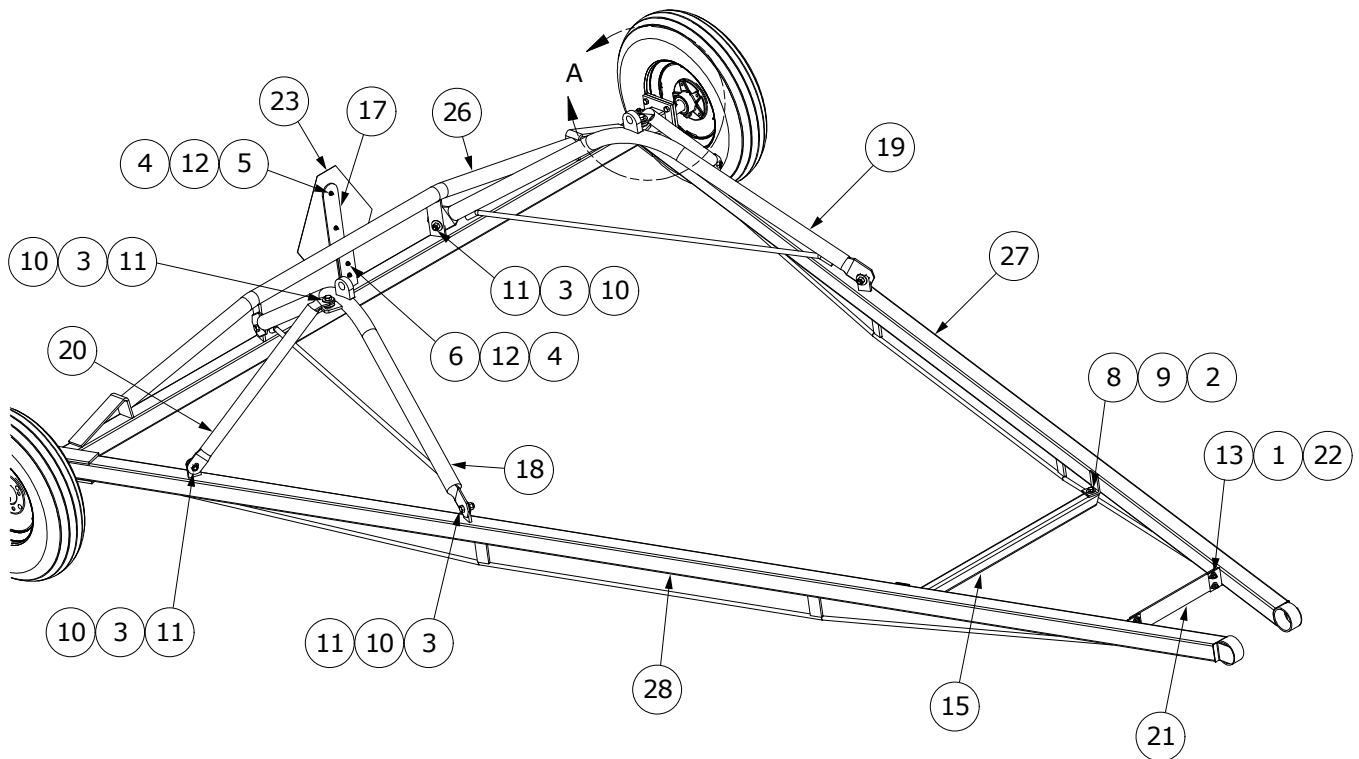
917394

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812363	3/8" LOCK NUT (PL)	8
2	812364	1/2" LOCK NUT (PL)	10
3	812482	5/8" LOCK NUT (PL)	8
4	812624	1/4" FLAT WASHER PL	4
5	81525	1/4" X 3/4" HEX BOLT (PL)	2
6	81527	1/4" X 1" HEX BOLT (PL)	2
7	81588	3/8" X 4 1/2" HEX BOLT (PL)	4
8	81620	1/2" X 1 1/4" HEX BOLT PL	2
9	81638	WASHER 0.563 FLAT STD HS PL	2
10	81678	5/8" FLAT WASHER STD (PL)	12
11	84270	5/8" X 1 3/4" HEX BOLT (PL)	8
12	84498	1/4" LOCK NUT (PL)	4
13	86171	3/8" X 1 1/4" HEX BOLT (PL)	4
14	87553	1/2" X 1.75" HEX BOLT UNC GR5 (PL)	8
15	904981	LIFT ARM CRADLE 3/16"W X 2" X 2" X 36"	1
16	906571	ASSY-STUB AXLE	2
17	934486	BRKT-SMV MOUNT	1
18	960080	UNDERCARR. ARCH WELDT (RH)	1
19	960083	UNDERCARR. ARCH WELDT (LH)	1
20	960086	UNDERCARRIAGE ARCH BRACE	2
21	960088L	UNDERCARR TIE PL	1
22	964001	1" X 7/16" X 10GA FLAT WASHER (PL)	4
23	967066	SLOW MOVING VEHICLE SIGN	1
24	968404	WHEEL BOLT 1/2" X 1 1/4" (PL)	10
25	F0110	WHEEL-15" X 5" X 5 BOLT	2
26	F1467	AXLETUBE WELDMENT (1060)	1
27	F9250	WELDT- UNDERCARRIAGE ARM (LH)	1
28	F9251	WELDT-UNDERCARRIAGE ARM (RH)	1

UNDERCARRIAGE - 1070, 1080 MODELS



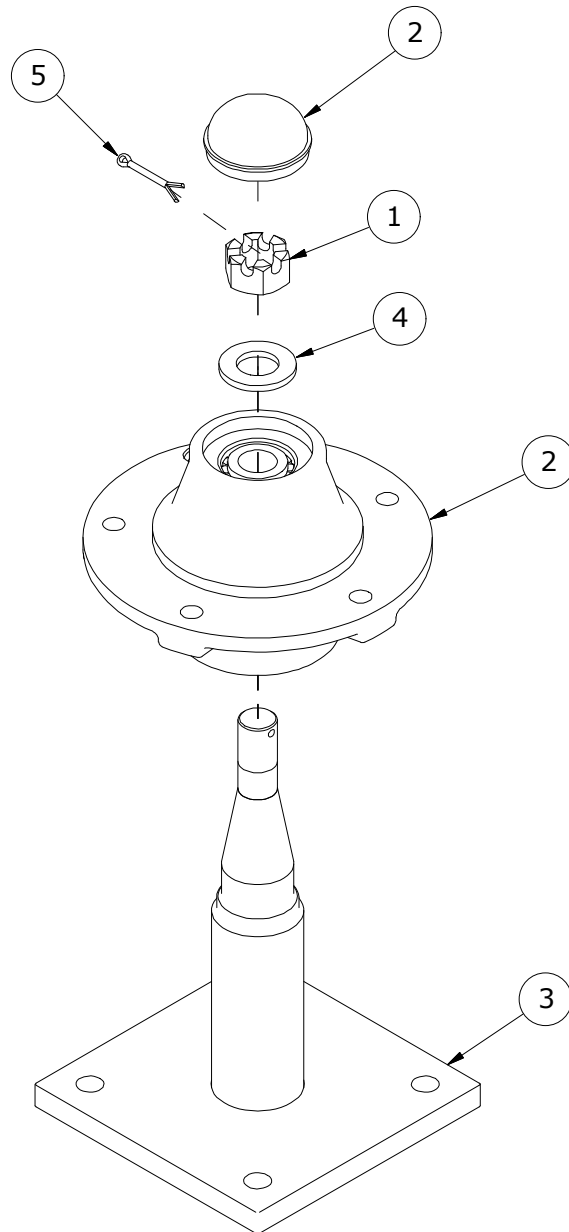
DETAIL A



917680

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812363	3/8" LOCK NUT (PL)	8
2	812364	1/2" LOCK NUT (PL)	10
3	812482	5/8" LOCK NUT (PL)	8
4	812624	1/4" FLAT WASHER PL	4
5	81525	1/4" X 3/4" HEX BOLT (PL)	2
6	81527	1/4" X 1" HEX BOLT (PL)	2
7	81588	3/8" X 4 1/2" HEX BOLT (PL)	4
8	81620	1/2" X 1 1/4" HEX BOLT PL	2
9	81638	WASHER 0.563 FLAT STD HS PL	2
10	81678	5/8" FLAT WASHER STD (PL)	12
11	84270	5/8" X 1 3/4" HEX BOLT (PL)	8
12	84498	1/4" LOCK NUT (PL)	4
13	86171	3/8" X 1 1/4" HEX BOLT (PL)	4
14	87553	1/2" X 1.75" HEX BOLT UNC GR5 (PL)	8
15	904982	LIFT ARM CRADLE 3/16"W X 2" X 2" X 41"	1
16	906571	ASSY-STUB AXLE	2
17	934486	BRKT-SMV MOUNT	1
18	960081	WELDT-UNDERCARRIAGE ARCH RH	1
19	960084	WELDT-UNDERCARRIAGE ARCH LH	1
20	960087	UNDERCARRIAGE ARCH BRACE	2
21	960089L	UNDERCARR TIE PL	1
22	964001	1" X 7/16" X 10GA FLAT WASHER (PL)	4
23	967066	SLOW MOVING VEHICLE SIGN	1
24	968404	WHEEL BOLT 1/2" X 1 1/4" (PL)	10
25	F0110	WHEEL-15" X 5" X 5 BOLT	2
26	F1400	AXLETUBE WELDMENT (1070)	1
27	F9248	WELDT-UNDERCARRIAGE ARM (LH)	1
28	F9249	WELDT-UNDERCARRIAGE ARM (RH)	1

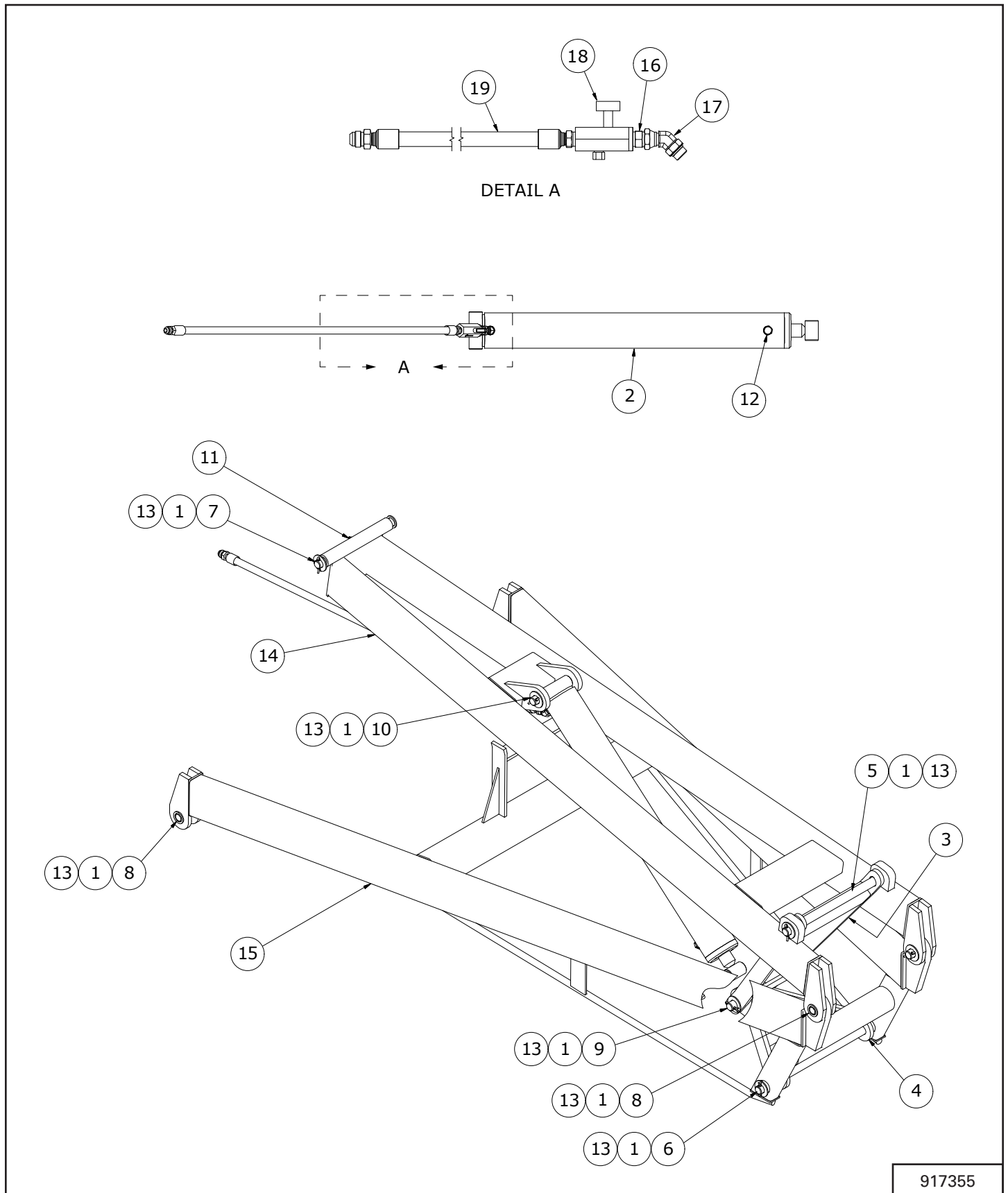
STUB AXLE



906571

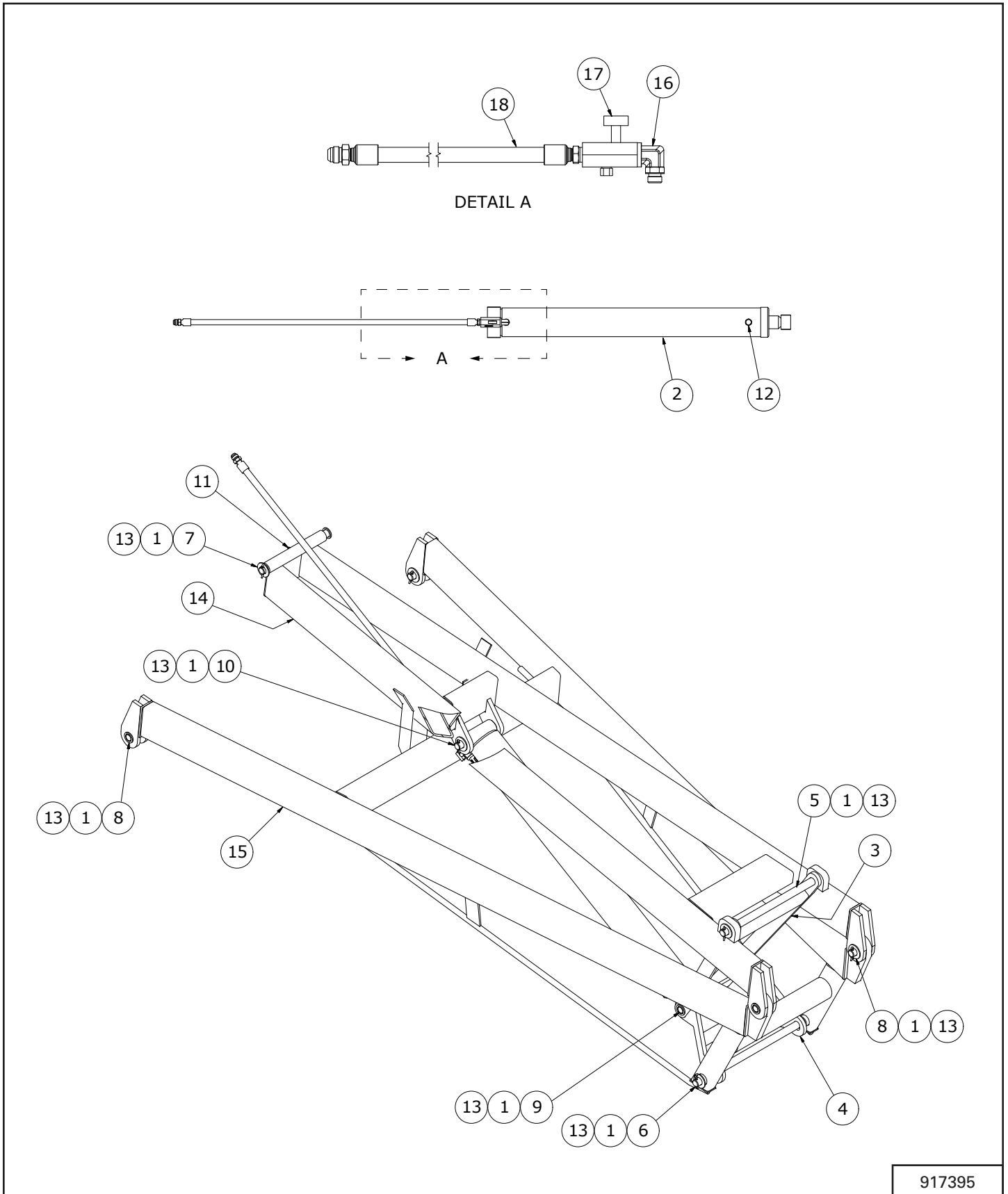
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81834	3/4" SLOTTED HEX NUT	1
2	901427	5-BOLT HUB ASSEMBLY (DUST CAP PN 968409)	1
3	912727	STUB AXLE WELDMENT	1
4	9812416	3/4" SAE FLAT WASHER (BR)	1
5	9812486	1/8" X 1 1/2" COTTER PIN (BR)	1

LIFT ARMS - 1050 MODELS



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	84522	1" ID SAE FLAT WASHER (PL)	9
2	F9183	CYLINDER-3.50" DIA X 30"	1
	X2098	SEAL KIT	1
3	960093	PIVOTYOKE WELDT	1
4	960096	CONNECTING LINK WELDT	1
5	960099	YOKE PIN WELDT 1.000" DIA	1
6	960102	CONNECTING PIN BASE WELDT 1.000" DIA	1
7	960105	LIFT ARM PIVOT PIN WELDT 1.000" DIA	1
8	960107	LIFT ARM CLEVIS PIN WELDT 1.000" DIA	4
9	960109	SWIVEL PIN WELDT 1.000" DIA	1
10	960111	CYLINDER PIN WELDT 1.000" DIA	1
11	967164	DRIVE-IN GREASE ZERK	1
12	967908	PLUG-8 ORB VENT	1
13	9812433	3/16" X 1 1/2" COTTER PIN	9
14	F9021	WELDT-UPPER LIFT ARM (1050)	1
15	F9024	WELDT-LOWER LIFT ARM (1050)	1
16	811469	ADAPTOR STRAIGHT -8 MNPT X -8 MNPT	1
17	812693	ELBOW 45 DEGREE -8 MORB X -8 SWFNPT	1
18	960118	-8 FNPT FLOW CONTROL VALVE (ONE WAY) (STEEL)	1
19	960160	HOSE-8 X -10MJIC X -8MNPT	1

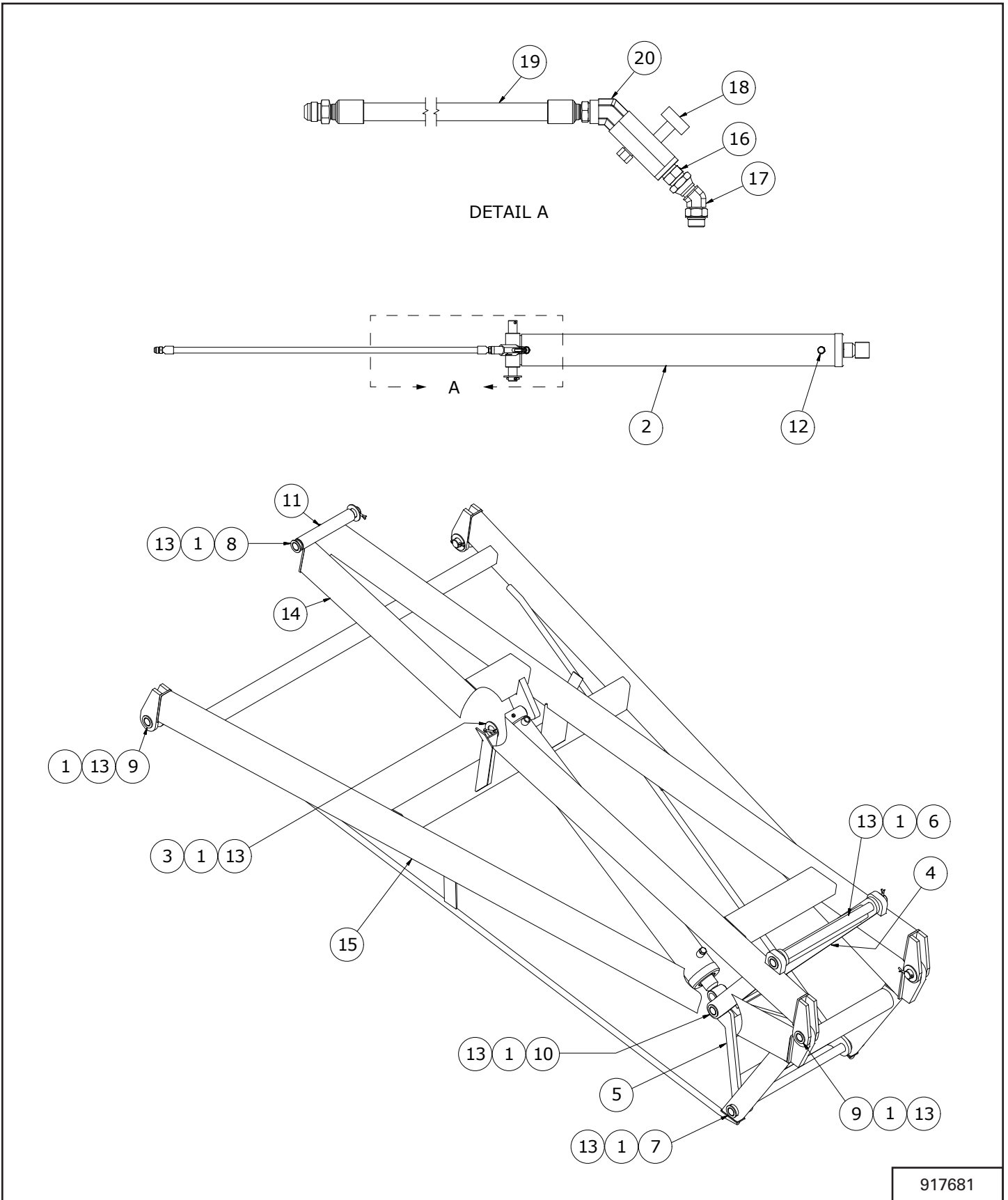
LIFT ARMS - 1060 MODELS



917395

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	84522	1" ID SAE FLAT WASHER (PL)	9
2	F9184	4" X 36" HYDRAULIC CYLINDER	1
	X2318	SEAL KIT	1
3	960094	PIVOTYOKE WELDT	1
4	960097	CONNECTING LINK WELDT	1
5	960100	YOKE PIN WELDT 1.000" DIA	1
6	960103	CONNECTING LINK BASE PIN 1.000" DIA	1
7	960105	LIFT ARM PIVOT PIN WELDT 1.000" DIA	1
8	960107	LIFT ARM CLEVIS PIN WELDT 1.000" DIA	4
9	960109	SWIVEL PIN WELDT 1.000" DIA	1
10	960112	CYLINDER PIN WELDT 1.000" DIA	1
11	967164	DRIVE-IN GREASE ZERK	1
12	967908	PLUG-8 ORB VENT	1
13	9812433	3/16" X 1 1/2" COTTER PIN	9
14	F9022	WELDT-UPPER LIFT ARM (1060)	1
15	F9025	WELDT-LOWER LIFT ARM (1060)	1
16	906541	ELBOW 90 DEGREE -8 MORB X -8 MNPT	1
17	960118	-8 FNPT FLOW CONTROL VALVE (ONE WAY) (STEEL)	1
18	960160	HOSE-8 X -10MJIC X -8MNPT	1

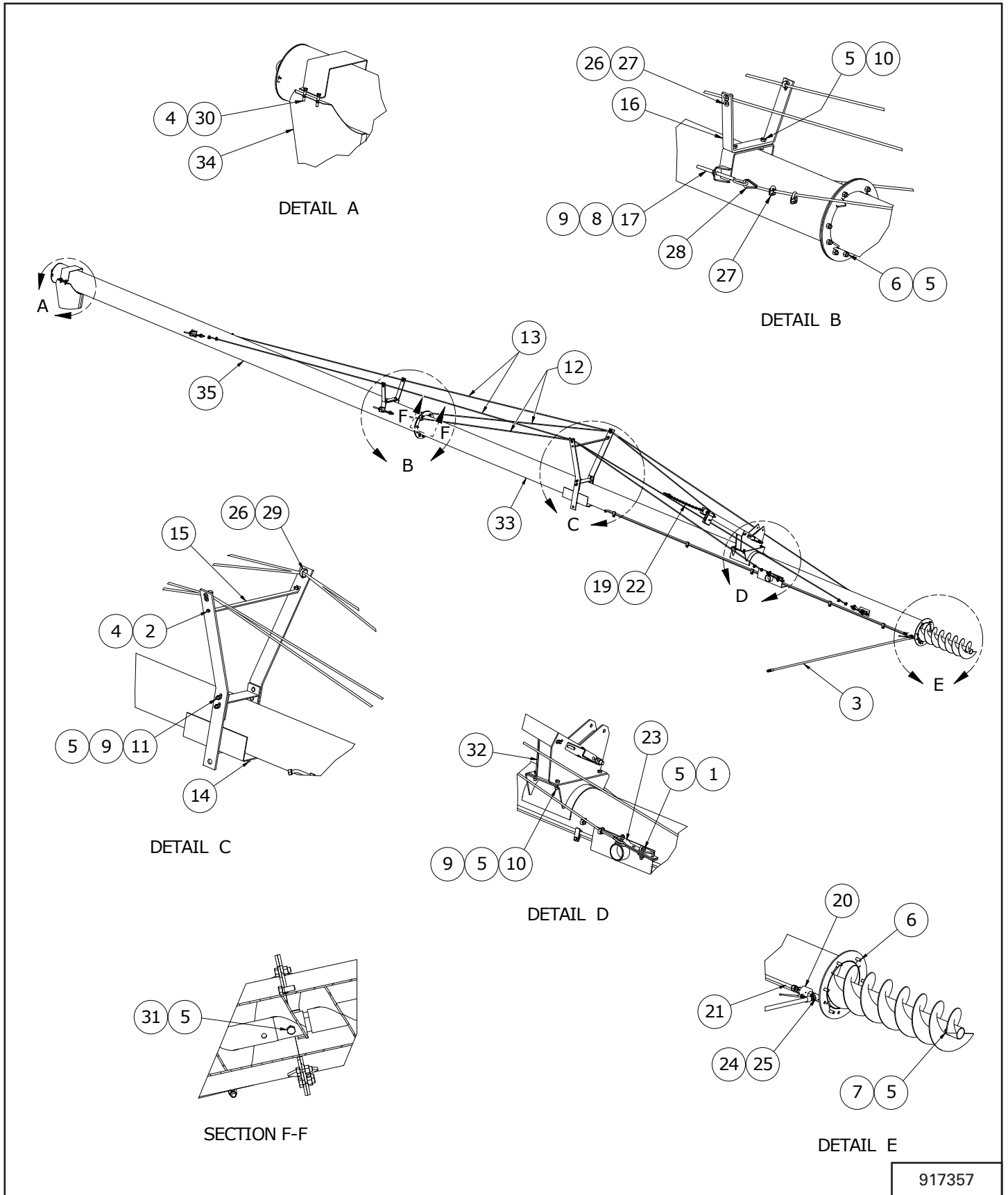
LIFT ARMS - 1070, 1080 MODELS



917681

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81210	1/4" X 2" COTTER PIN (PL)	10
2	F9185	4" X 40" HYDRAULIC CYLINDER	1
	X2318	SEAL KIT	1
3	924030	CYLINDER PIN	1
4	960095	PIVOT YOKE WELDT	1
5	960098	CONNECTING LINK	1
6	960101	YOKE PIN WELDT 1.250" DIA	1
7	960104	BASE PIN WELDT 1.250" DIA	1
8	960106	LIFT ARM PIVOT PIN WELDT 1.250" DIA	1
9	960108	LIFT ARM CLEVIS PIN WELDT 1.250" DIA	4
10	960110	SWIVEL PIN 1.250" DIA	1
11	967164	DRIVE-IN GREASE ZERK	1
12	967908	PLUG-8 ORB VENT	1
13	9812487	1 1/4" X 10GA NARROW RIM WASHER (PL)	10
14	F9023	WELDT-UPPER LIFT ARM (1070)	1
15	F9026	WELDT-LOWER LIFT ARM (1070)	1
16	811469	ADAPTOR STRAIGHT -8 MNPT X -8 MNPT	1
17	812693	ELBOW 45 DEGREE -8 MORB X -8 SWFNPT	1
18	960118	-8 FNPT FLOW CONTROL VALVE (ONE WAY) (STEEL)	1
19	960160	HOSE-8 X -10MJIC X -8MNPT	1
20	960330	ELBOW 45 DEGREE -8 MNPT X -8 FNPT	1

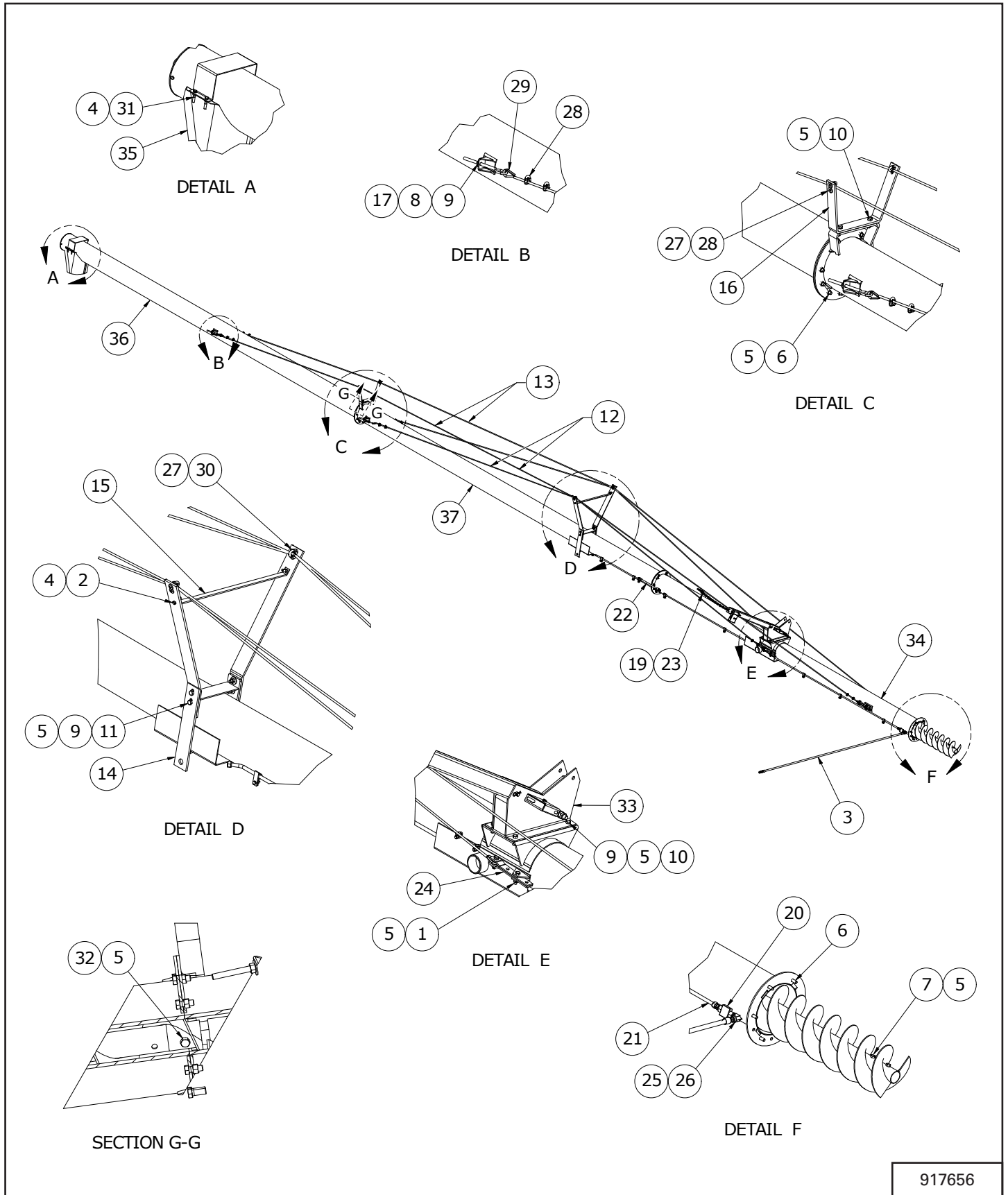
TUBES LAYOUT - 1050 MODELS



917357

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811791	1/2" X 2" HEX BOLT (PL)	8
2	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	2
3	812208	NIPPLE 1/2" BODY 1/2"-14 NPTF QUICK CONNECT	1
4	812363	NUT LOCK (STEEL) 0.375 GRB PL	6
5	812364	1/2" LOCK NUT (PL)	30
6	81620	1/2" X 1 1/4" HEX BOLT PL	15
7	81627	1/2" X 3" HEX BOLT (PL)	2
8	81636	1/2" HEX NUT (PL)	4
9	81638	WASHER 0.563 FLAT STD HS PL	12
10	84277	1/2" X 1 1/2" HEX BOLT (PL)	6
11	87553	1/2" X 1.75" HEX BOLT UNC GR5 (PL)	4
12	903714	LOWER CABLE BUNDLE	1
13	903718	UPPER CABLE BUNDLE	1
14	960014	MAIN BRIDGING YOKE WELDT	1
15	960016	MAIN BRIDGING TIE	1
16	960018	UPPER BRIDGING YOKE	1
17	960031	CBLE TGHTNR WELDT	4
18	960040	INTAKE AUGER CABLE	1
19	960041	HOOK WITH LATCH	1
20	960057	-08 FNPT 2 WAY BALL VALVE	1
21	960152	ADAPTOR STRAIGHT -10 MJIC X -8 MNPT	1
22	960167	QUICK LINK (PL)	1
23	960244	CABLE YOKE	8
24	960466	HOSE-8 X -8 MNPT X -8 MNPT	1
25	960585	1/2" X 90 DEGREE STREET ELBOW (STEEL)	1
26	964001	1" X 7/16" X 10GA FLAT WASHER (PL)	8
27	964264	3/8" CABLE CLAMP	10
28	964267	3/8" CABLE THIMBLES	4
29	964565	1/2" CABLE CLAMP (PL)	2
30	967291	3/8" X 2" FULL THREAD HEX BOLT (PL)	4
31	9812368	1/2" X 2 3/4" GR8 HEX BOLT (PL)	1
32	F0099	ASSY-INTAKE LIFT BOOM	1
33	F1075	BOTTOM SECTION 10" X 50' (AP)	1
34	F9047	DISCHARGE SPOUT	1
35	F9070	ASSY-TOP SECTION BS1050	1

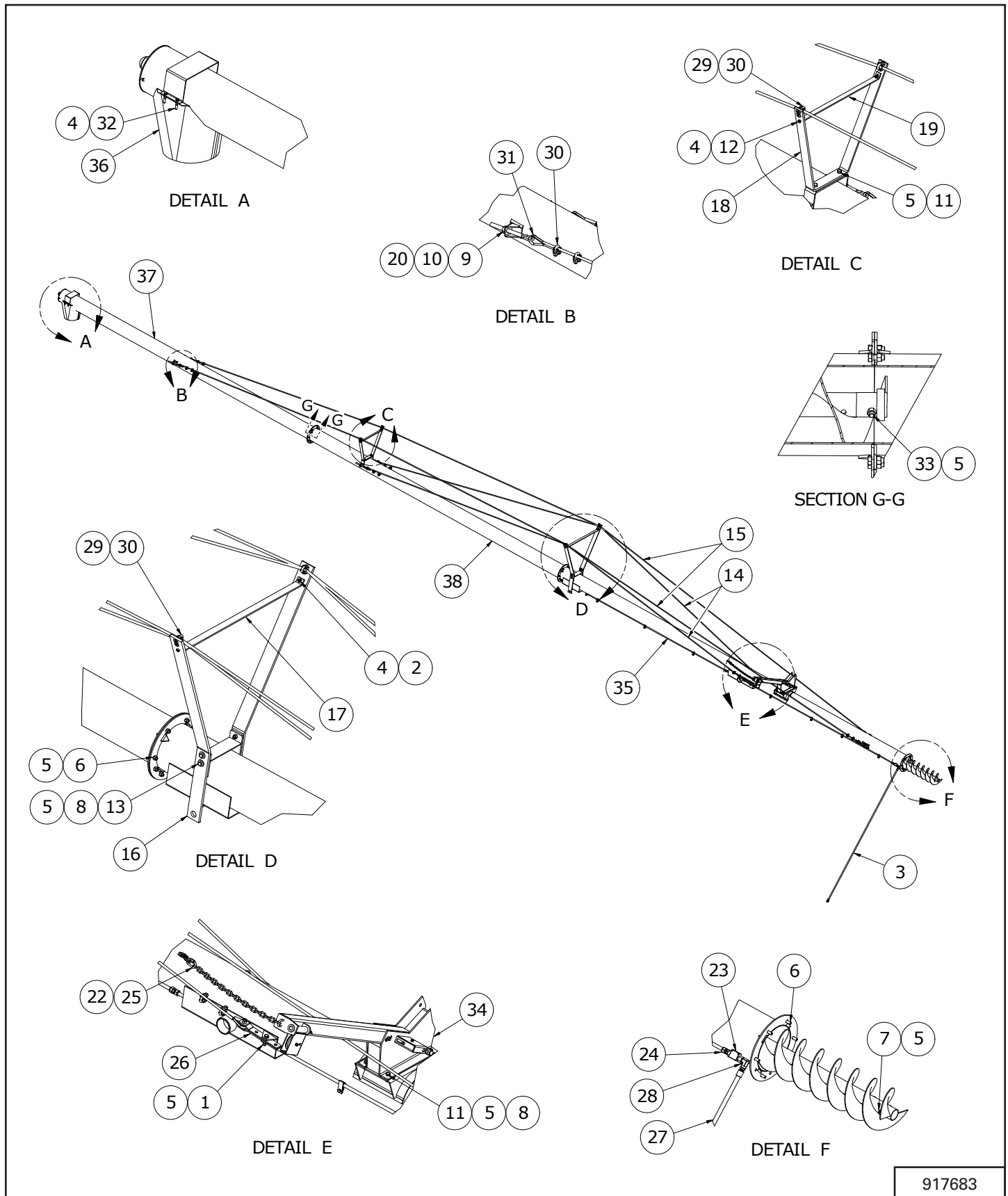
TUBES LAYOUT - 1060 MODELS



917656

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811791	1/2" X 2" HEX BOLT (PL)	8
2	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	2
3	812208	NIPPLE 1/2" BODY 1/2"-14 NPTF QUICK CONNECT	1
4	812363	NUT LOCK (STEEL) 0.375 GRB PL	6
5	812364	1/2" LOCK NUT (PL)	40
6	81620	1/2" X 1 1/4" HEX BOLT PL	24
7	81627	1/2" X 3" HEX BOLT (PL)	2
8	81636	1/2" HEX NUT (PL)	4
9	81638	WASHER 0.563 FLAT STD HS PL	12
10	84277	1/2" X 1 1/2" HEX BOLT (PL)	6
11	87553	1/2" X 1.75" HEX BOLT UNC GR5 (PL)	4
12	903717	LOWER CABLE BUNDLE	1
13	903719	UPPER CABLE BUNDLE	1
14	960014	MAIN BRIDGING YOKE WELDT	1
15	960016	MAIN BRIDGING TIE	1
16	960018	UPPER BRIDGING YOKE	1
17	960031	CBLE TGHTNR WELDT	4
18	960040	INTAKE AUGER CABLE	1
19	960041	HOOK WITH LATCH	1
20	960057	-08 FNPT 2 WAY BALL VALVE	1
21	960152	ADAPTOR STRAIGHT -10 MJIC X -8 MNPT	1
22	960162	HOSE-8 X -10MJIC X -10MJIC	1
23	960167	QUICK LINK (PL)	1
24	960244	CABLE YOKE	8
25	960466	HOSE-8 X -8 MNPT X -8 MNPT	1
26	960585	1/2" X 90 DEGREE STREET ELBOW (STEEL)	1
27	964001	1" X 7/16" X 10GA FLAT WASHER (PL)	8
28	964264	3/8" CABLE CLAMP	10
29	964267	3/8" CABLE THIMBLES	4
30	964565	1/2" CABLE CLAMP (PL)	2
31	967291	3/8" X 2" FULL THREAD HEX BOLT (PL)	4
32	9812368	1/2" X 2 3/4" GR8 HEX BOLT (PL)	2
33	F0099	ASSY-INTAKE LIFT BOOM	1
34	F1077	BOTTOM SECTION 10" X 60' (AP)	1
35	F9047	DISCHARGE SPOUT	1
36	F9071	ASSY-TOP SECTION BS1060	1
37	F9073	CENTER SECTION 10" X 60' (AP)	1

TUBES LAYOUT - 1070, 1080 MODELS



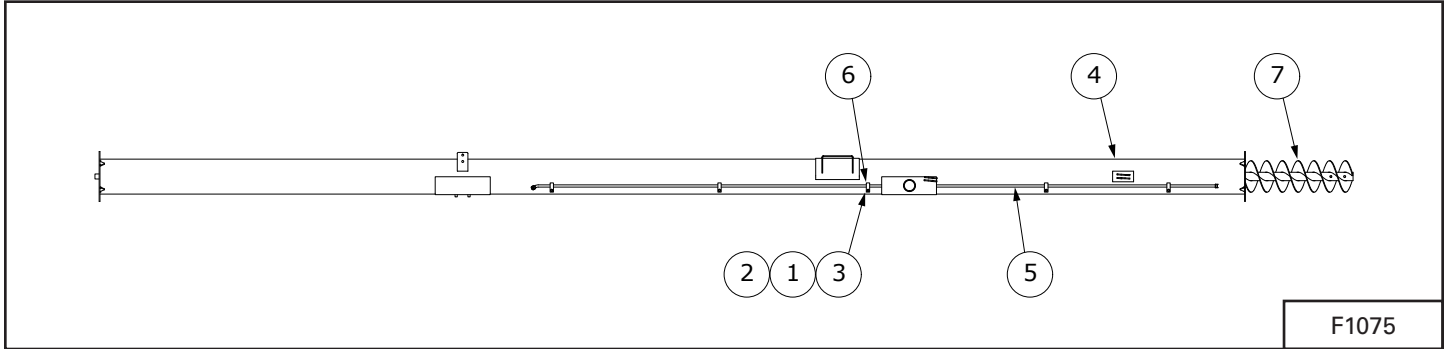
917683

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811791	1/2" X 2" HEX BOLT (PL)	8
2	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	2
3	812208	NIPPLE 1/2" BODY 1/2"-14 NPTF QUICK CONNECT	1
4	812363	NUT LOCK (STEEL) 0.375 GRB PL	8
5	812364	1/2" LOCK NUT (PL)	40
6	81620	1/2" X 1 1/4" HEX BOLT PL	24
7	81627	1/2" X 3" HEX BOLT (PL)	2
8	81638	WASHER 0.563 FLAT STD HS PL	8
9	81700	3/4" HEX NUT (PL)	4
10	84050	3/4" S.A.E. FLAT WASHER (PL)	4
11	84277	1/2" X 1 1/2" HEX BOLT (PL)	6
12	86171	3/8" X 1 1/4" HEX BOLT (PL)	2
13	87553	1/2" X 1.75" HEX BOLT UNC GR5 (PL)	4
14	905525	LOWER CABLE BUNDLE	1
15	905526	UPPER CABLE BUNDLE	1
16	960015	MAIN BRIDGING YOKE WELDT	1
17	960017	MAIN BRIDGING TIE	1
18	960019	CENTER SECTION BRIDGING YOKE	1
19	960020	CENTER SECTION BRIDGING TIE	1
20	960032	CABLE TIGHTENER (7 7/8")	4
21	960040	INTAKE AUGER CABLE	1
22	960041	HOOK WITH LATCH	1
23	960057	-08 FNPT 2 WAY BALL VALVE	1
24	960152	ADAPTOR STRAIGHT -10 MJIC X -8 MNPT	1
25	960167	QUICK LINK (PL)	1
26	960244	CABLE YOKE	8
27	960466	HOSE-8 X -8 MNPT X -8 MNPT	1
28	960585	1/2" X 90 DEGREE STREET ELBOW (STEEL)	1
29	964001	1" X 7/16" X 10GA FLAT WASHER (PL)	8
30	964565	1/2" CABLE CLAMP (PL)	12
31	964587	1/2" CABLE THIMBLE	4
32	967291	3/8" X 2" FULL THREAD HEX BOLT (PL)	4
33	9812368	1/2" X 2 3/4" GR8 HEX BOLT (PL)	2
34	F0099	ASSY-INTAKE LIFT BOOM	1
35	F1076	BOTTOM SECTION 10" X 70' (AP)	1
36	F9047	DISCHARGE SPOUT	1
37	F9072	ASSY-TOP SECTION BS1070	1
38	F9074	CENTER SECTION 10" X 70'	1

NOTE: 10" X 10' TUBE EXTENTION (1080 MODEL OPTION) NOT SHOWN.

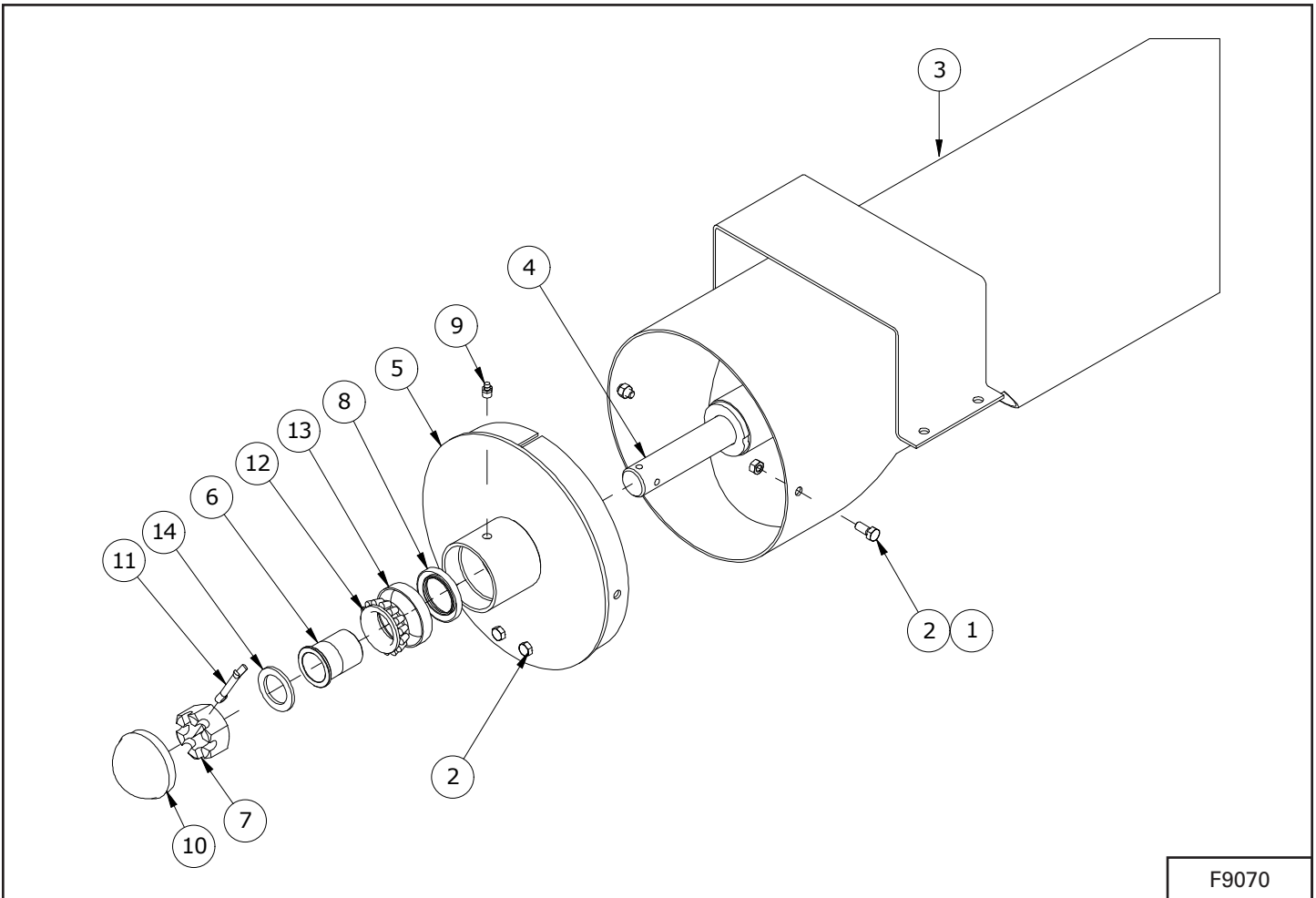
TUBE SECTIONS - 1050 MODELS

Bottom Tube



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81592	3/8" HEX NUT (PL)	5
2	81593	3/8" LOCK WASHER (PL)	5
3	86170	3/8" X 1" HEX BOLT GR.5 (PL)	5
4	905644	BOTTOM SECTION TUBE 27' 4"	1
5	960469	5/8" X 11' HYD LINE (JIC FEMALE ENDS)	1
6	960639L	HYDRAULIC LINE CLAMP	5
7	911117	BOTTOM FLIGHTING WELDT	1

Top Tube

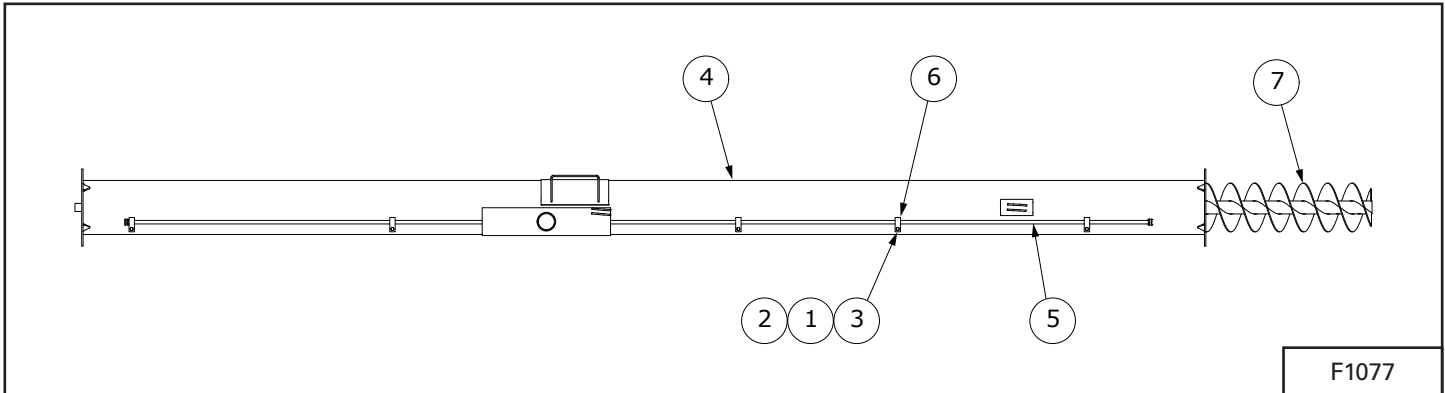


F9070

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812362	5/16" LOCK NUT (PL)	2
2	81549	5/16" X 3/4" HEX BOLT (PL)	4
3	960006	WELDT-TOP SECTION TUBE BS1050	1
4	960012	TOP SECTION FLTG WELDT	1
5	960034	WELDT-TOP END PLATE	1
6	960035	END BEARING SLEEVE	1
7	960037	SLOTTED HEX NUT 1 1/4" UNF	1
8	960125	OIL SEAL (CR14939)	1
9	967164	DRIVE-IN GREASE ZERK	1
10	967209	DUST CAP (DC15)	1
11	967459	COTTER PIN - 1/4" X 1 3/4" (PL)	1
12	967708	BEARING CONE (LM29749)	1
13	967709	BEARING CUP (LM29710)	1
14	9812442	1 1/4" X 10GA FLAT WASHER (BR)	1

TUBE SECTIONS - 1060 MODELS

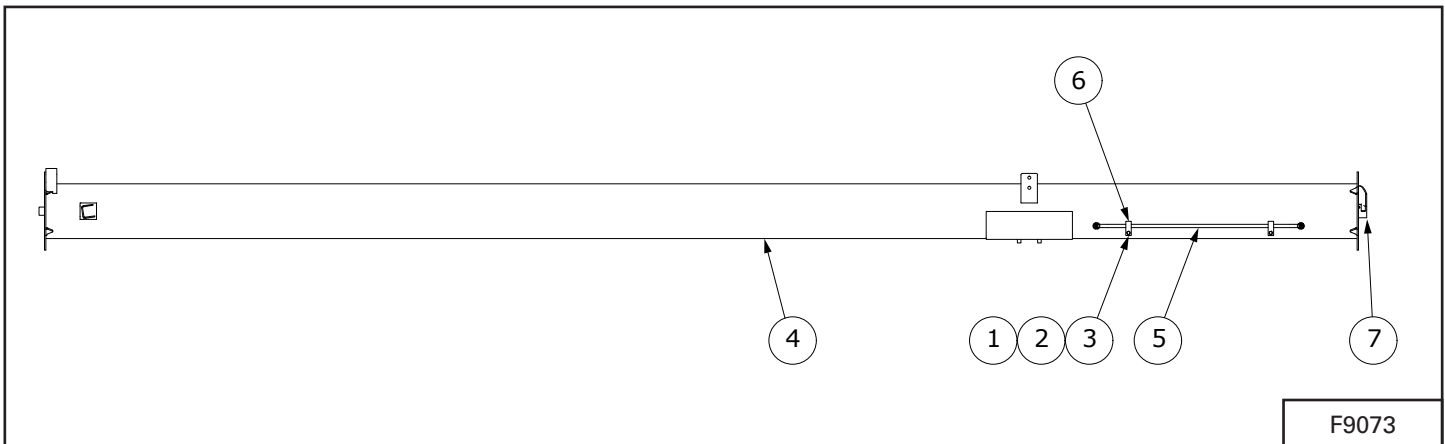
Bottom Tube



F1077

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81592	3/8" HEX NUT (PL)	5
2	81593	3/8" LOCK WASHER (PL)	5
3	86170	3/8" X 1" HEX BOLT GR.5 (PL)	5
4	905645	BOTTOM SECTION TUBE 17' 4"	1
5	960467	HYD LINE 5/8" X 15'-10"	1
6	960639L	HYDRAULIC LINE CLAMP	5
7	911119	BOTTOM FLTG WELDT	1

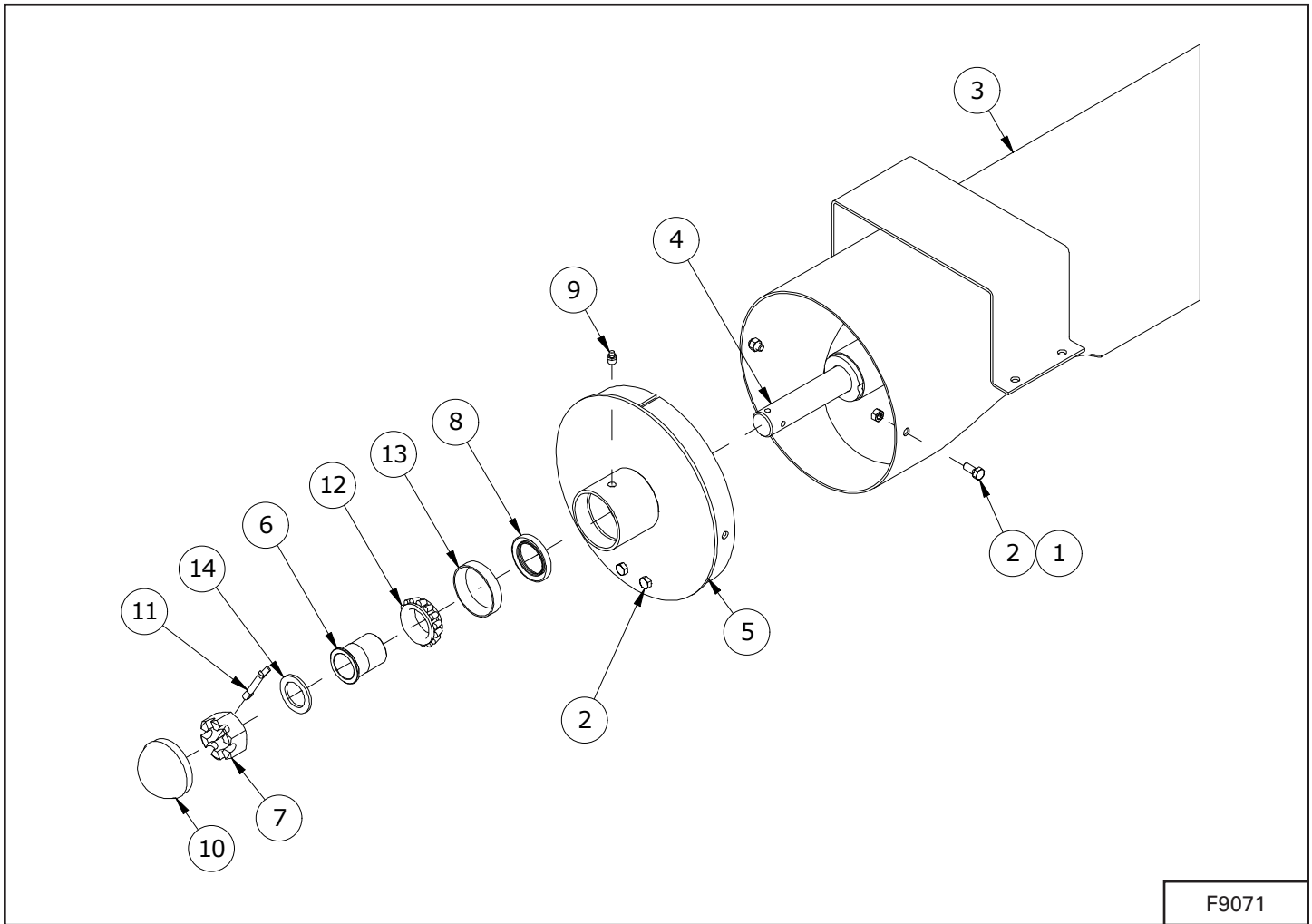
Mid Tube



F9073

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81592	3/8" HEX NUT (PL)	2
2	81593	3/8" LOCK WASHER (PL)	2
3	86170	3/8" X 1" HEX BOLT GR.5 (PL)	2
4	960004	CENTER SECTION TUBING 20'	1
5	960143	HYDRAULIC LINE 5/8" X 36"	1
6	960639	HYDRAULIC LINE CLAMP	2
7	960011	CENTER SECTION FLIGHTING WELDMENT	1

Top Tube

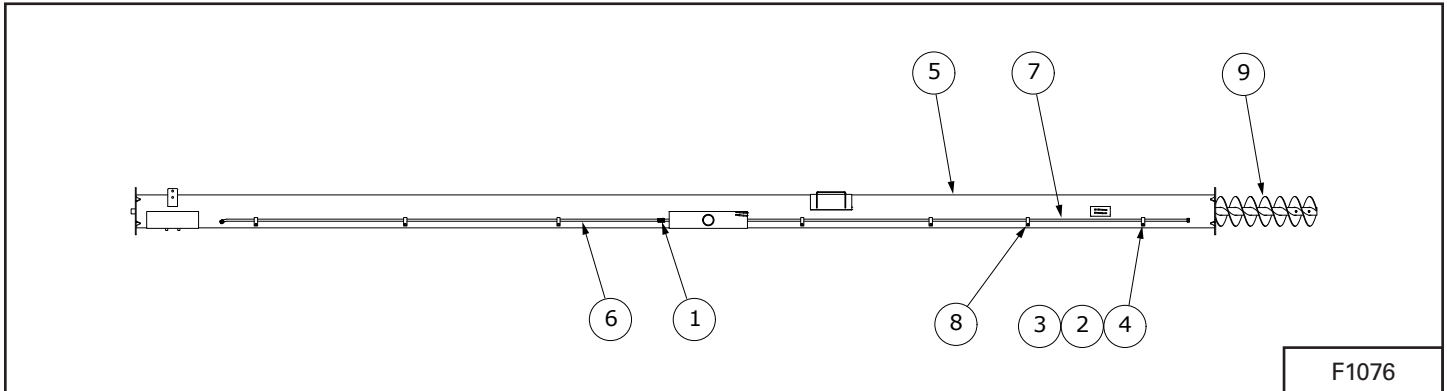


F9071

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812362	5/16" LOCK NUT (PL)	2
2	81549	5/16" X 3/4" HEX BOLT (PL)	4
3	960007	WELDT-TOP SECTION TUBE BS1060	1
4	960012	TOP SECTION FLTG WELDT	1
5	960034	WELDT-TOP END PLATE	1
6	960035	END BEARING SLEEVE	1
7	960037	SLOTTED HEX NUT 1 1/4" UNF	1
8	960125	OIL SEAL (CR14939)	1
9	967164	DRIVE-IN GREASE ZERK	1
10	967209	DUST CAP (DC15)	1
11	967459	COTTER PIN - 1/4" X 1 3/4" (PL)	1
12	967708	BEARING CONE (LM29749)	1
13	967709	BEARING CUP (LM29710)	1
14	9812442	1 1/4" X 10GA FLAT WASHER (BR)	1

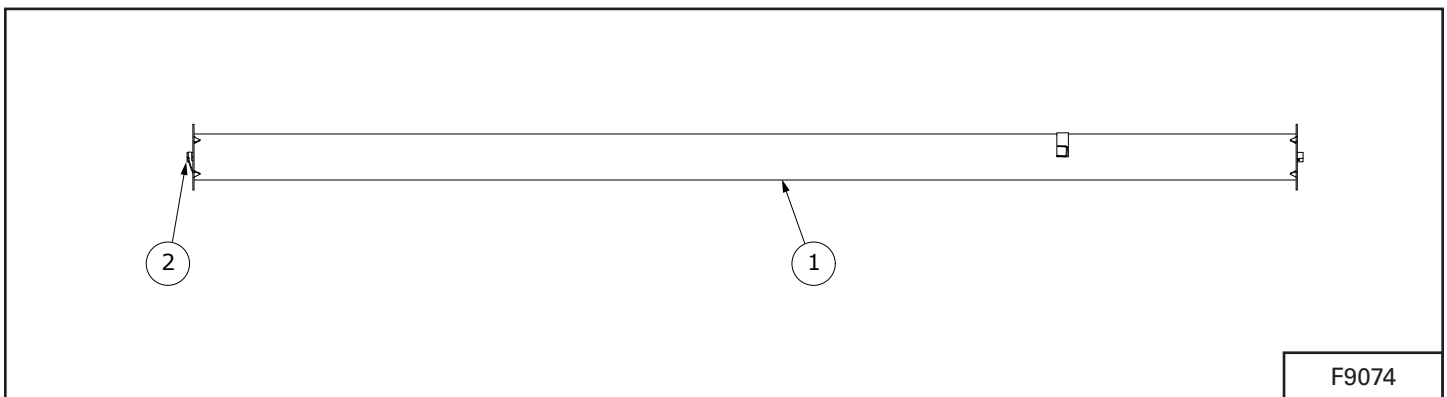
TUBE SECTIONS - 1070, 1080 MODELS

Bottom Tube



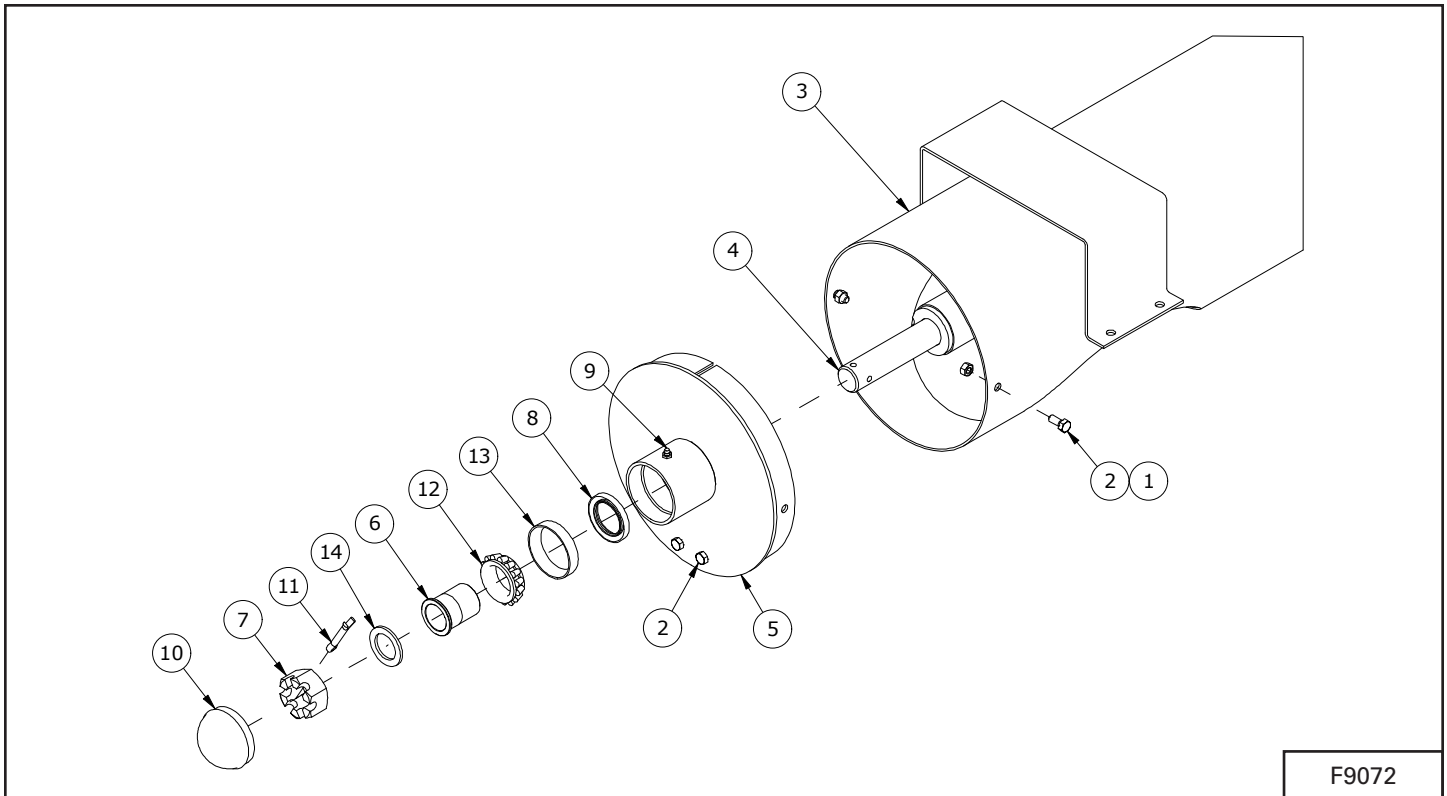
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812711	JIC UNION -10-10	1
2	81592	3/8" HEX NUT (PL)	7
3	81593	3/8" LOCK WASHER (PL)	7
4	86170	3/8" X 1" HEX BOLT GR.5 (PL)	7
5	905646	BOTTOM SECTING TUBE 27' 4"	1
6	960144	5/8" X 11' HYD LINE (JIC FEMALE ENDS)	1
7	960468	5/8" X 13'-4" HYD LINE (JIC FEMALE ENDS)	1
8	960639L	HYDRAULIC LINE CLAMP	7
9	911117	BOTTOM FLIGHTING WELDT	1

Mid Tube



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	960005	20' CENTER SECTION TUBING, 70'	1
2	960011	CENTER SECTION FLIGHTING WELDMENT	1

Top Tube

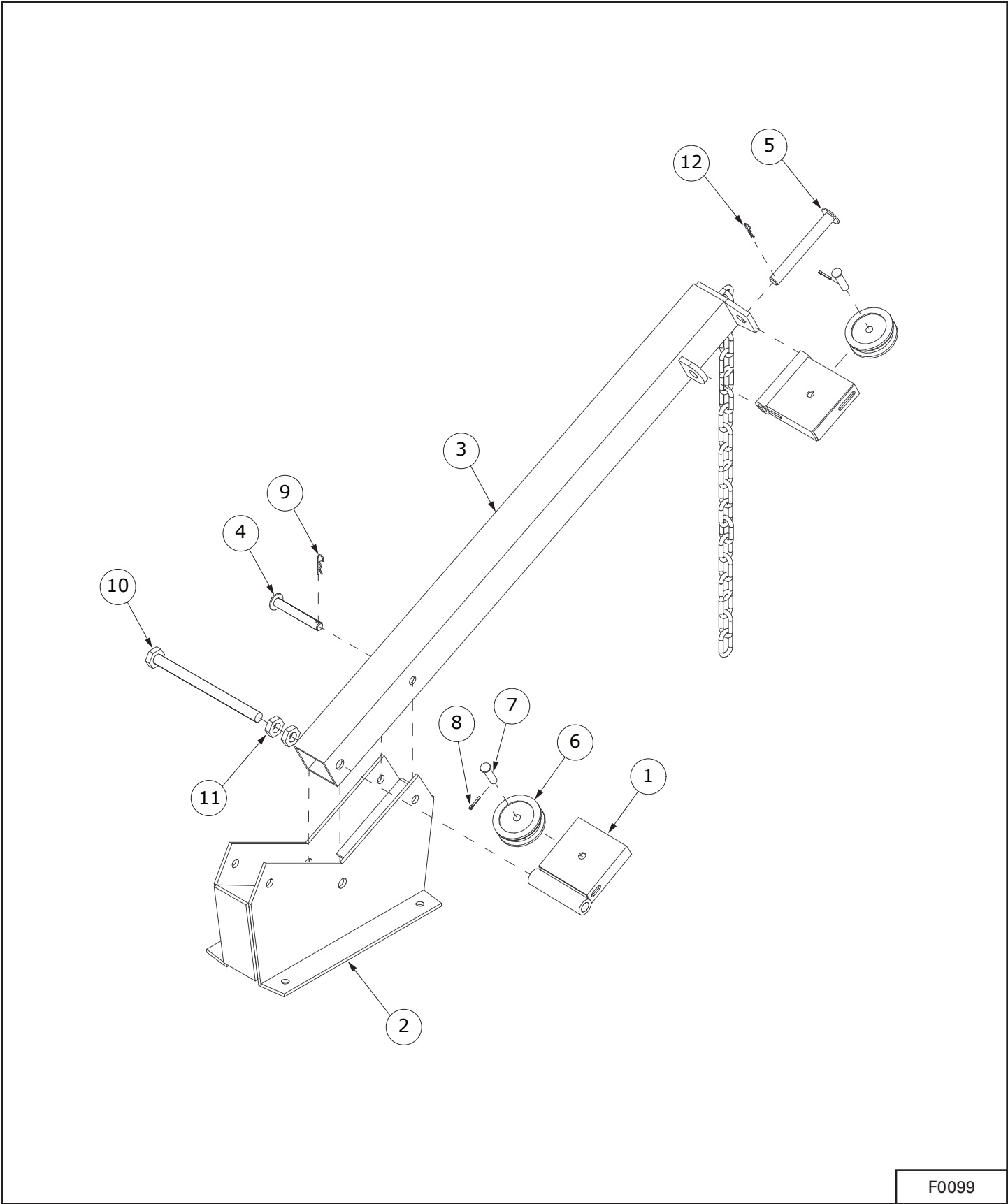


ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812362	5/16" LOCK NUT (PL)	2
2	81549	5/16" X 3/4" HEX BOLT (PL)	4
3	960008	WELDT-TOP SECTION TUBE BS1070	1
4	960012	TOP SECTION FLTG WELDT	1
5	960034	WELDT-TOP END PLATE	1
6	960035	END BEARING SLEEVE	1
7	960037	SLOTTED HEX NUT 1 1/4" UNF	1
8	960125	OIL SEAL (CR14939)	1
9	967164	DRIVE-IN GREASE ZERK	1
10	967209	DUST CAP (DC15)	1
11	967459	COTTER PIN - 1/4" X 1 3/4" (PL)	1
12	967708	BEARING CONE (LM29749)	1
13	967709	BEARING CUP (LM29710)	1
14	9812442	1 1/4" X 10GA FLAT WASHER (BR)	1

10 Ft. Extension (1080 Model Option)

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	Y121	10" X 10' EXTENSION KIT	1

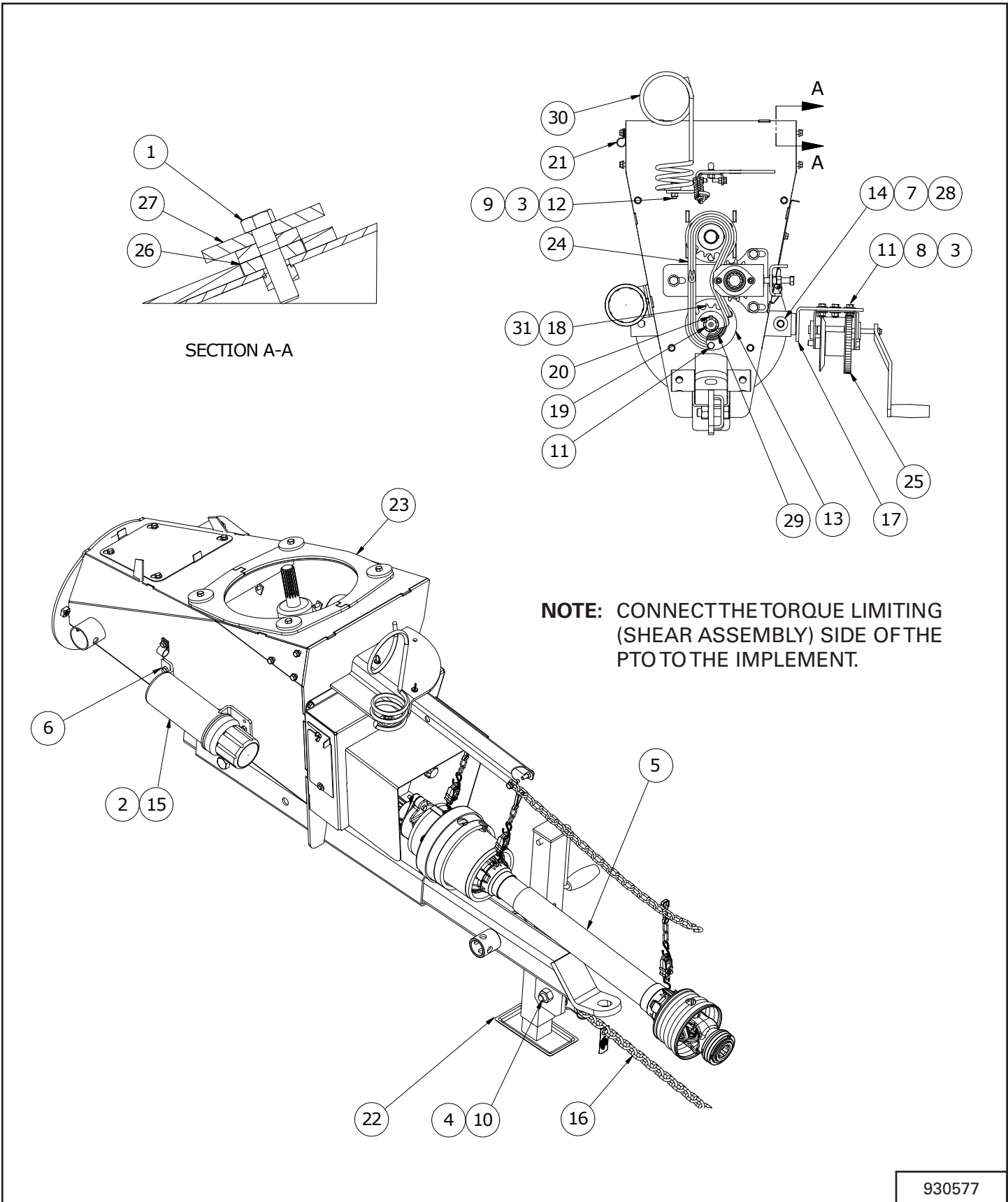
INTAKE LIFT BOOM



F0099

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	905602	PULLEY HOLDER WELDMENT	2
2	905601	SIDE PLATE WELDMENT	1
3	905604	LIFT BOOM ARM WELDMENT	1
4	905568	PIN WELDMENT, 5/8" x 4-1/4" LG	1
5	905570	PIN WELDMENT, 3/4" x 6-3/8" LG	1
6	961846	CABLE PULLEY, 3-1/2" OD x 1-1/8" W	2
7	960913	CLEVIS PIN, 1/2" x 1-13/16" (PL)	2
8	9812430	COTTER PIN, 1/8" x 1" (PL)	2
9	961012	HAIR PIN CLIP, #16	1
10	811803	BOLT, 3/4" x 10" HEX (PL)	1
11	86111	JAM NUT, 3/4" (PL)	2
12	9812433	COTTER PIN, 3/16" x 1-1/2" (PL)	1

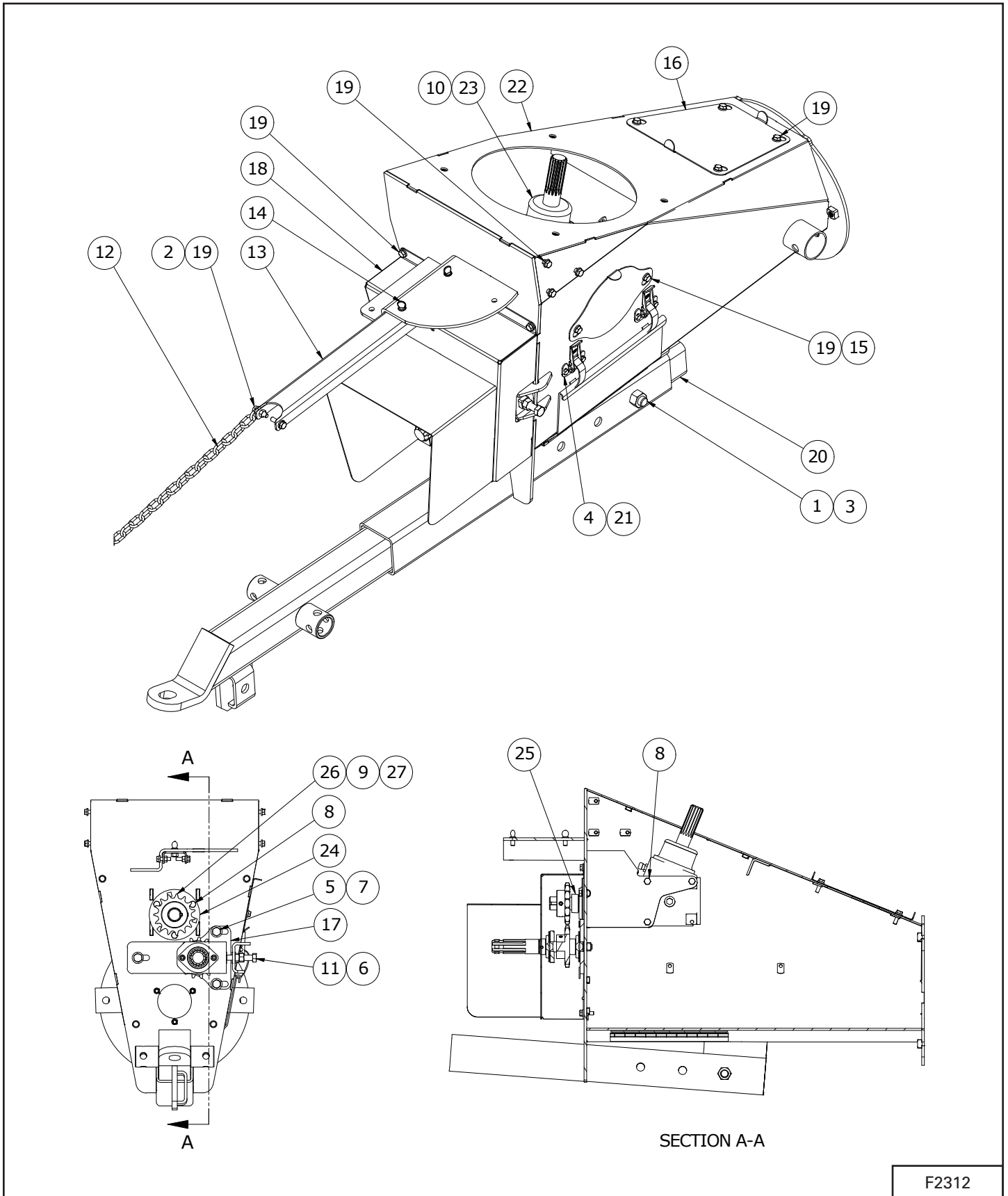
INPUT BOX



930577

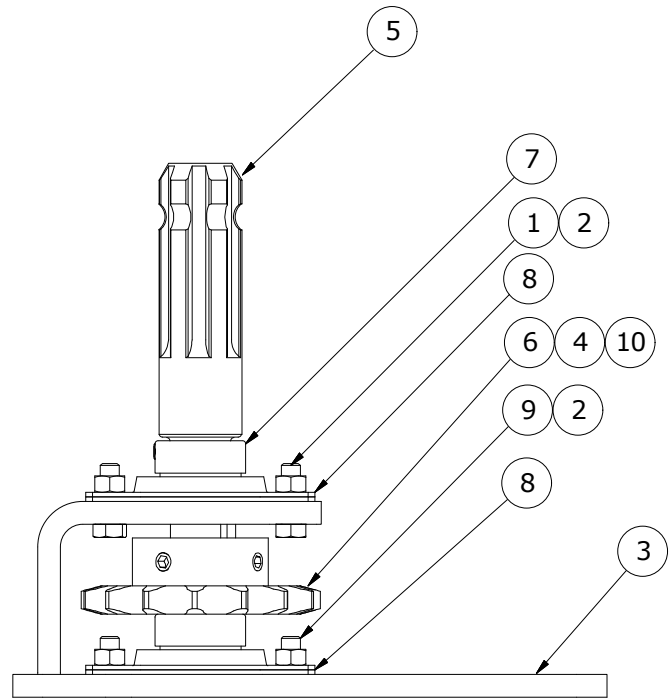
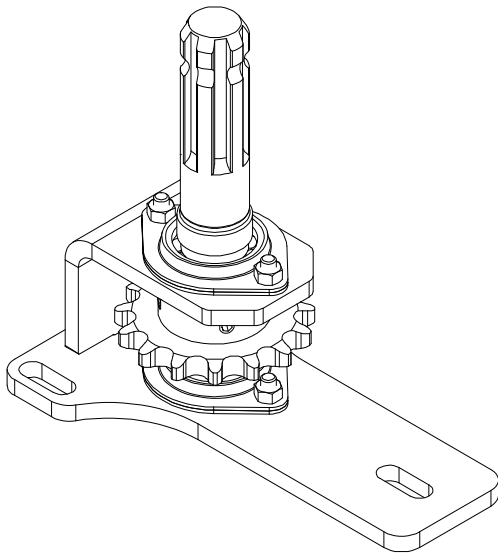
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	4
2	81210	1/4" X 2" COTTER PIN (PL)	1
3	812363	3/8" LOCK NUT (PL)	4
4	812365	3/4" LOCK NUT (PL)	1
5	F2294	PTO-1 3/8 X 6 U-JOINT - 1 3/8 X 6 CV	1
6	81549	5/16" X 3/4" HEX BOLT (PL)	2
7	81678	5/8" FLAT WASHER STD (PL)	1
8	84000	7/16" FLAT WASHER (PL)	6
9	84039	WASHER - 3/8" SAE FLAT (PL)	1
10	84346	3/4" X 2 1/2" HEX BOLT (PL)	1
11	86170	3/8" X 1" HEX BOLT GR.5 (PL)	6
12	86171	3/8" X 1 1/4" HEX BOLT (PL)	1
13	902396	FLANGE BRG (72MS) PL	2
14	902486	SKID PIN WELDT 0.625" DIA	1
15	909277	MANUAL HOLDER 3 1/2" X 12"	1
16	910287	HOOK & SAFETY CHAIN ASSEMBLY	1
17	911000	WINCH MOUNT WELDMENT	1
18	911116	SPROCKET - 60B15 (1.375" BORE)	1
19	911144	DRIVE STUB SHAFT	1
20	911394	KEY 5/16"SQ. X 58MM	1
21	913193	P-CLIP 0.75	1
22	914426	5000 LB JACK	1
23	917437	SPACER-INTAKE	2
24	917474	ROLLER CHAIN - 60H	1
25	960150	WINCH (FULTON - K1051)	1
26	960494	1/4"W X 13/32"ID X 1 1/4"OD WASHER (PL)	8
27	960495	INPUT BOX RING CLAMP 13/32"ID X 2 13/32"OD X 1/4"	4
28	961012	#16 HAIR PIN CLIP	1
29	965917	1 3/8" BEARING	1
30	966314	HYDRAULIC HOSE HOLDER	1
31	988999	3/8"Ø X 3/8" SOCKET SET SCREW (BR)	2

Input Box Continued



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811790	3/4" X 4 1/2" HEX BOLT GR5 (PL)	1
2	812362	5/16" LOCK NUT (PL)	2
3	812365	3/4" LOCK NUT (PL)	1
4	81523	1/4" X 1/2" HEX BOLT (PL)	4
5	81620	1/2" X 1 1/4" HEX BOLT PL	3
6	81636	1/2" HEX NUT (PL)	1
7	84048	1/2" SAE FLAT WASHER (PL)	3
8	86170	3/8" X 1" HEX BOLT GR.5 (PL)	9
9	900930	1/4" X 1/4" X 1-1/2" KEY	1
10	904578	GEAR OIL - SAE 75W-90 SYNTHETIC	0.4L
11	907986	1/2" X 2 1/2" HEX BOLT FULLTHREAD (PL)	1
12	909703	PTO HOLDER CHAIN ASSY	1
13	911111	PTO HOLDER ARM WELDT	1
14	911943	3/8" X 3/4" THUMB SCREW (PL)	2
15	917446	COVER-GEARBOX ACCESS	1
16	917447	COVER-TOP ACCESS	1
17	917449	ASSY-IDLER	1
18	917470	WELDT-PTO SHIELD	1
19	917483	BOLT FL 0.313NC X 1.00 GR5 PL	18
20	930534	HITCH WELDMENT	1
21	931901	LATCH-SLOTTED	2
22	932209	WELDT-INPUT BOX BS10	1
23	960953	2168 GEARBOX-LOWER 68 DEG	1
24	961675	BEARING FLANGE 72MS	2
25	961676	1 1/4" BEARING AEL207-104 (RHP #1230)	1
26	961684	SPROCKET - 60B15 (1.25" BORE)	1
27	988999	3/8"Ø X 3/8" SOCKET SET SCREW (BR)	2

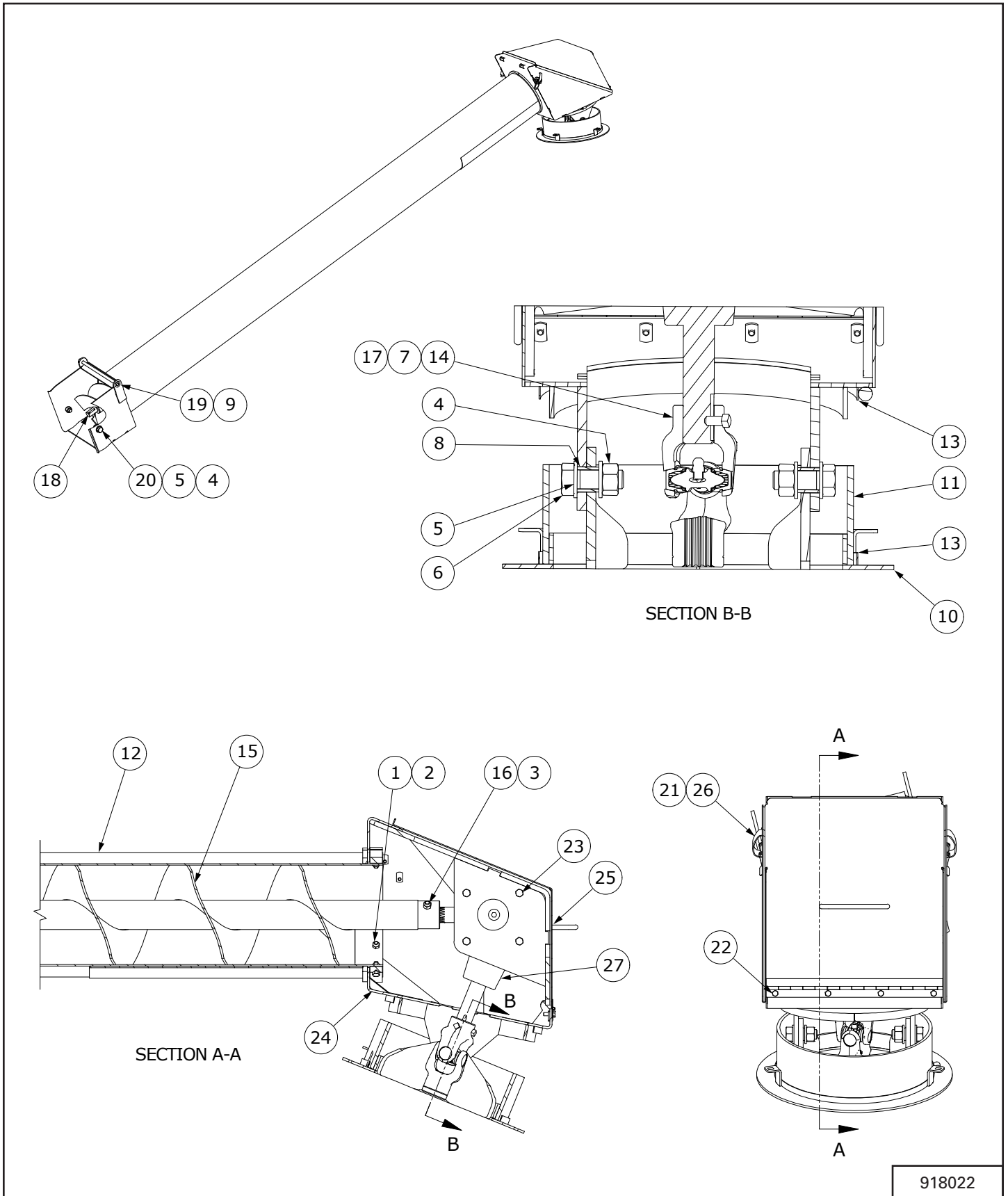
INPUT BOX IDLER



917449

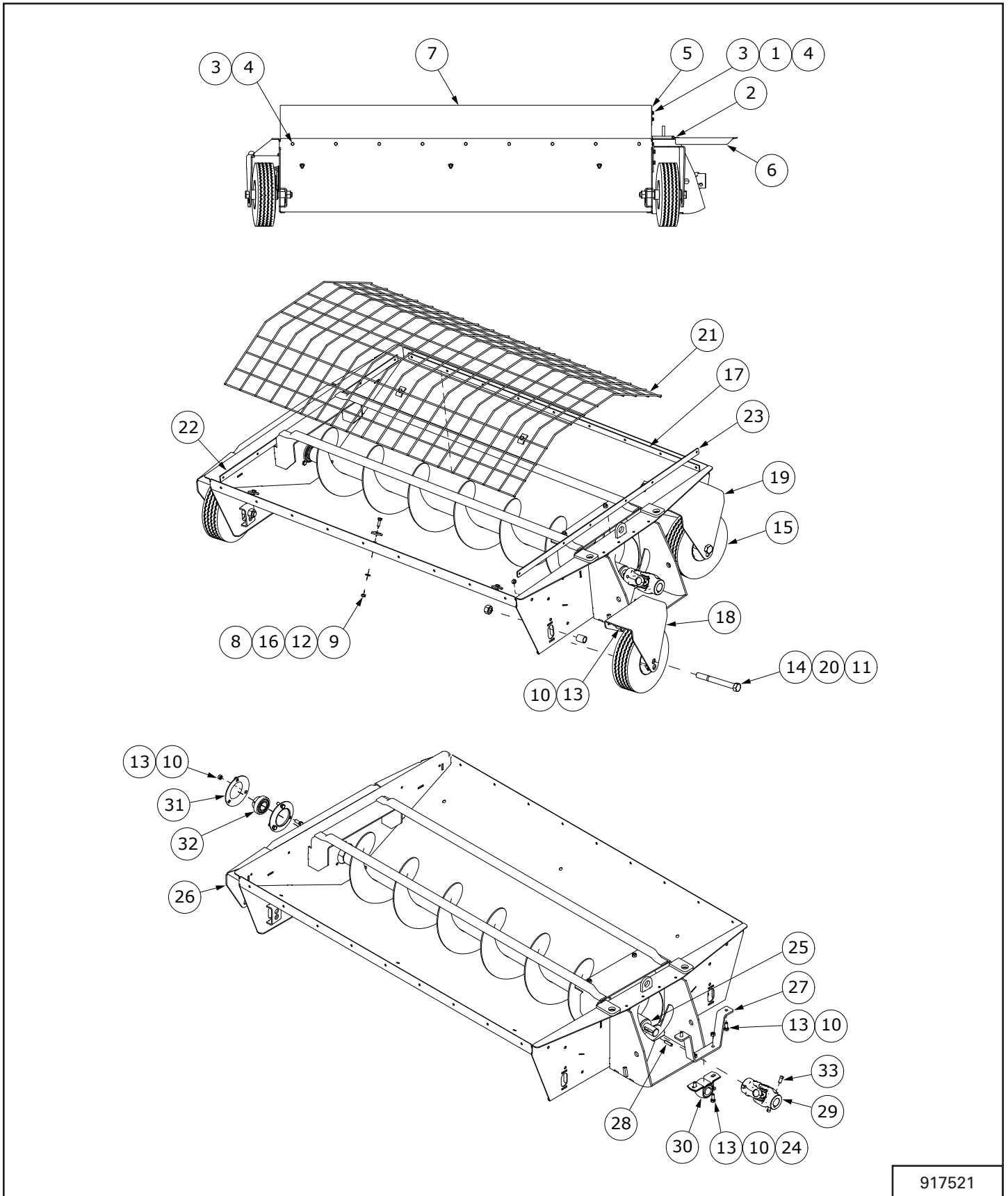
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812026	5/16" X 1" HEX BOLT (PL)	2
2	812362	5/16" LOCK NUT (PL)	4
3	917450	WELDT-IDLER	1
4	960177	1/4" SQ X 1 1/4" KEY	1
5	960182	REVERSE KIT IDLER SHAFT 01 3/8" X 8 3/4"	1
6	960532	60B15 SPROCKET (1" BORE)	1
7	961627	1" BEARING W/COLLAR	2
8	963009	FLANGE BEARING (52 MST)	4
9	967183	5/16" X 1" FLAT HEAD SOCKET BOLT (PL)	2
10	988999	3/8"0 X 3/8" SOCKET SET SCREW (BR)	2

INTAKE AUGER



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812026	5/16" X 1" HEX BOLT (PL)	4
2	812362	5/16" LOCK NUT (PL)	4
3	812363	3/8" LOCK NUT (PL)	1
4	812365	3/4" LOCK NUT (PL)	4
5	84050	3/4" S.A.E. FLAT WASHER (PL)	6
6	84467	3/4" X 2" HEX BOLT (PL)	2
7	900930	1/4" X 1/4" X 1-1/2" KEY	1
8	912503	UNDERCARRIAGE SPACER	2
9	12780	#7 HAIR PIN CLIP	1
10	917438	WELDT-INPUT BOX PIVOT	1
11	917453	COVER-INPUT BOX PIVOT	1
12	917461	INTAKE AUGERTUBE WELDT (10" BS)	1
13	917478	CLAMP HOSE-11.75 TO 13.75	2
14	960751	UNIVERSAL JOINT - 12E	1
15	960941	INT AUGER FLTG WELDT	1
16	967906	3/8" X 2 3/4" HEX BOLT GR8 (PL)	1
17	9812378	3/8" X 3/4" SQ HD SET SCREW SER	2
18	960180	U-JOINT & SPROCKET KEY .313"SQ. X 1.375"	1
19	960349	PIVOT HOPPER LID ROD WELDT	1
20	967437	3/4" X 1 5/8" HEX BOLT (PL)	2
21	81523	1/4" X 1/2" HEX BOLT (PL)	4
22	81525	1/4" X 3/4" HEX BOLT (PL)	4
23	86170	3/8" X 1" HEX BOLT GR.5 (PL)	8
24	917409	WELDT-INPUT BOX ELBOW BS10	1
25	917428	WELDT-ELBOW ACCESS DOOR BS10"	1
26	931901	LATCH-SLOTTED	2
27	960952	2168 GEARBOX-UPPER 68 DEG	1

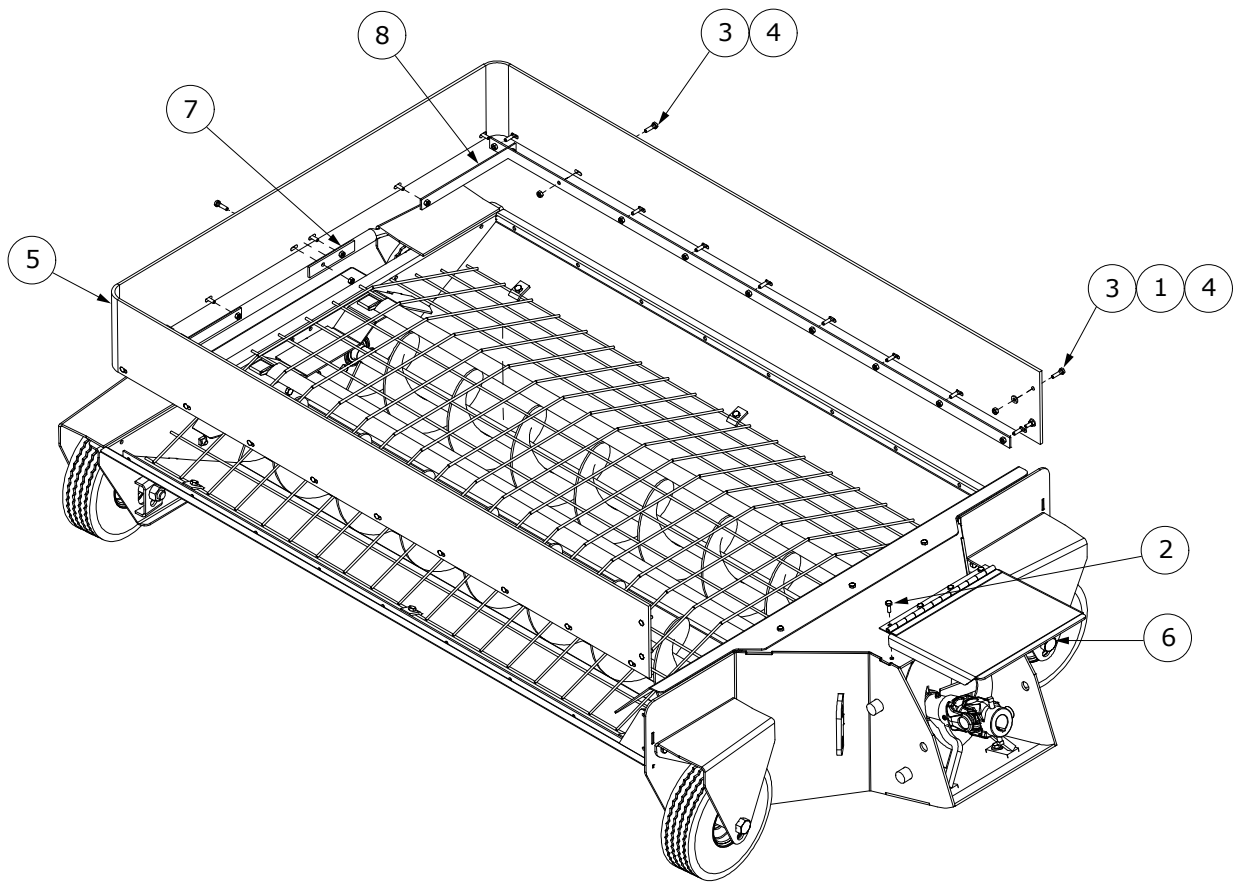
HOPPER SINGLE FLIGHTING



917521

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812624	1/4" FLAT WASHER PL	8
2	81525	1/4" X 3/4" HEX BOLT (PL)	4
3	81527	1/4" X 1" HEX BOLT (PL)	34
4	84498	1/4" LOCK NUT (PL)	34
5	903483L	RUBBER CONN PL 14GA X 3"SQ.	2
6	917575	WELDT-INTAKE ACCESS	1
7	917580	RUBBER-HOPPER SKIRT	1
8	812026	5/16" X 1" HEX BOLT (PL)	6
9	812362	5/16" LOCK NUT (PL)	6
10	812363	3/8" LOCK NUT (PL)	13
11	812365	3/4" LOCK NUT (PL)	4
12	81546	5/16" FLAT WASHER (PL)	6
13	86170	3/8" X 1" HEX BOLT GR.5 (PL)	13
14	902615	HEX BOLT-3/4 X 7" (PL)	4
15	909670	4.10-4/2.25 SOLID WHEEL	4
16	910898	CAGE MOUNTING PL	6
17	914768L	RUBBER REINFORCEMENT	2
18	917536	BRKT-WHEEL MOUNT LH	1
19	917537	BRKT-WHEEL MOUNT RH	1
20	917546	TUBE-WHEEL SPACER 1.000" DIA	4
21	917578	GUARD-HOPPER GRATE	1
22	917579L	PLATE-RUBBER REINFORCEMENT	1
23	940025L	PLATE-RUBBER REINFORCEMENT	1
24	84039	WASHER - 3/8" SAE FLAT (PL)	2
25	909923	WELDT-INTAKE FLIGHTING BS10	1
26	917539	WELDT-SINGLE FLTG HOPPER	1
27	917573	BRKT-BEARING MOUNT	1
28	960180	U-JOINT & SPROCKET KEY .313"SQ. X 1.375"	1
29	960547	UNIVERSAL JOINT - 12E	1
30	960658	WOODEN BEARING (Ø1 1/4")	1
31	961675	BEARING FLANGE 72MS	2
32	961676	1 1/4" BEARING AEL207-104 (RHP #1230)	1
33	9812378	3/8" X 3/4" SQ HD SET SCREW SER	4

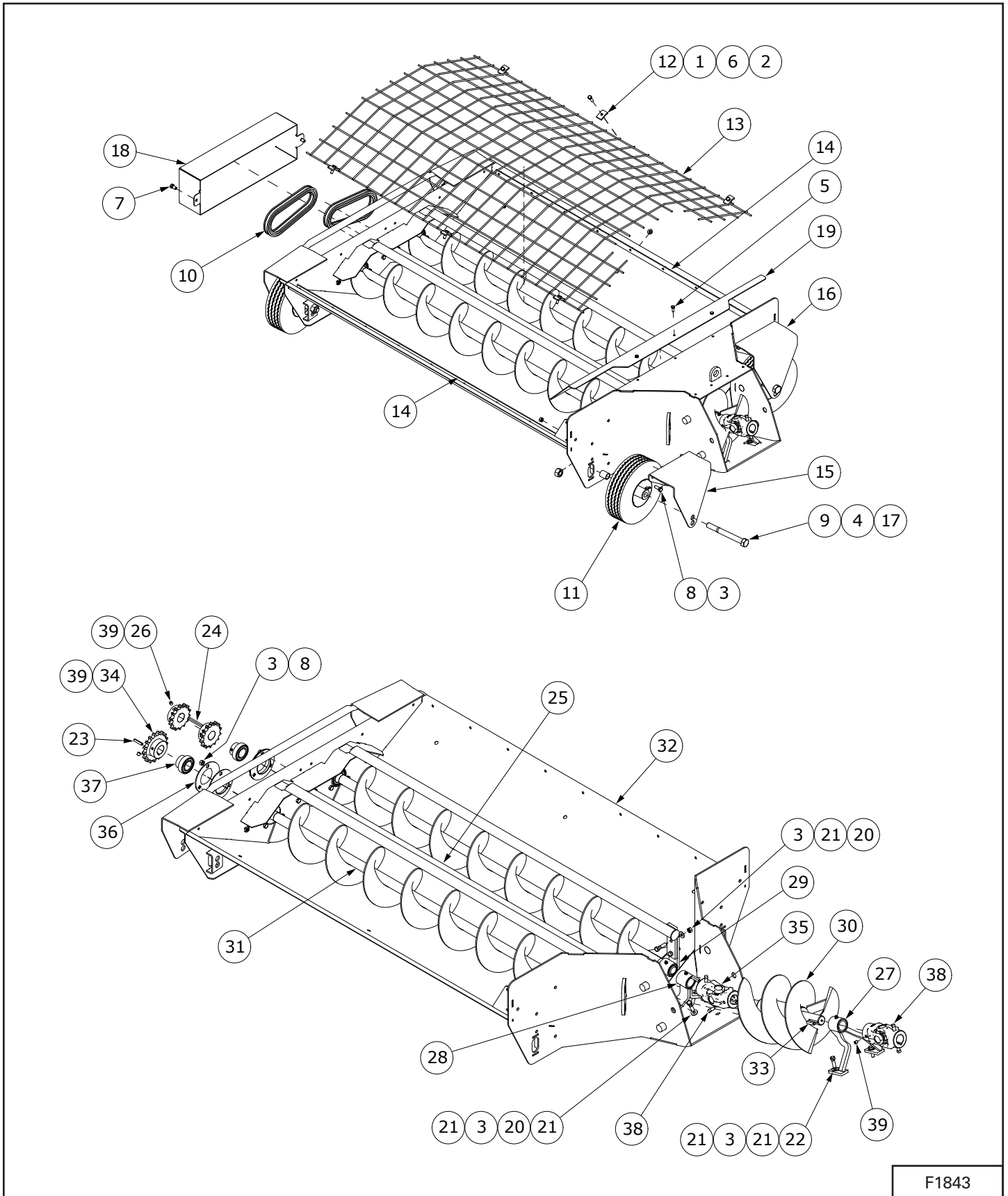
HOPPER MULTI FLIGHTING



917526

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812624	1/4" FLAT WASHER PL	4
2	81525	1/4" X 3/4" HEX BOLT (PL)	4
3	81527	1/4" X 1" HEX BOLT (PL)	28
4	84498	1/4" LOCK NUT (PL)	28
5	911359	RUBBER HOPPER EDGING	1
6	917575	WELDT-INTAKE ACCESS	1
7	960834	RUBBER REINF 3/16" X 1" X 5"	1
8	960837L	PLATE - BACK RUBBER REINF	2

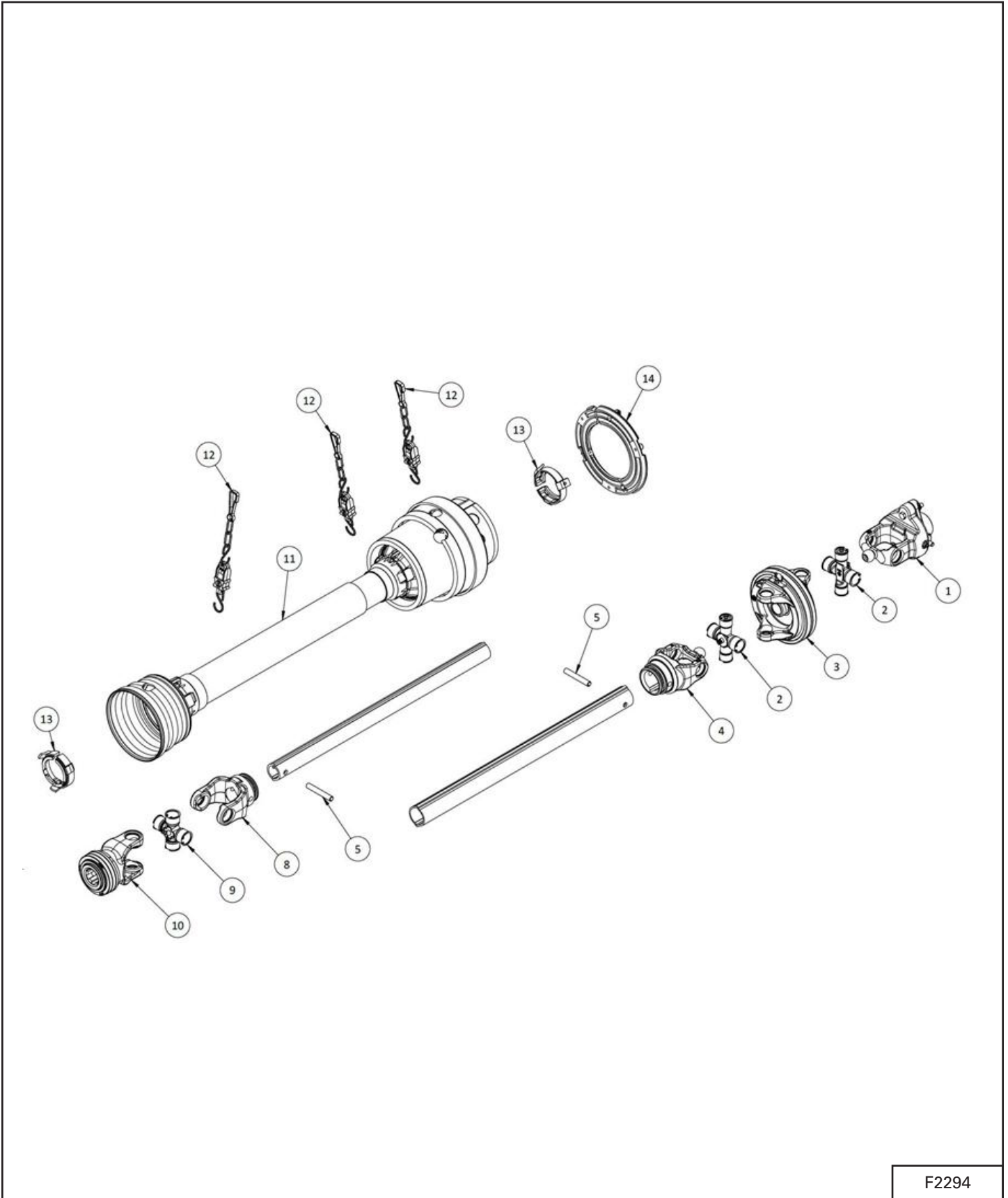
Hopper Multi Flighting Continued



F1843

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812026	5/16" X 1" HEX BOLT (PL)	6
2	812362	5/16" LOCK NUT (PL)	6
3	812363	3/8" LOCK NUT (PL)	23
4	812365	3/4" LOCK NUT (PL)	4
5	81525	1/4" X 3/4" HEX BOLT (PL)	3
6	81546	5/16" FLAT WASHER (PL)	6
7	84072	3/8" X 3/4" HEX BOLT (PL)	2
8	86170	3/8" X 1" HEX BOLT GR.5 (PL)	15
9	902615	HEX BOLT-3/4 X 7" (PL)	4
10	906480	CHAIN ASSY #60 X 32 PITCHES	2
11	909670	4.10-4/2.25 FOAM FILLED WHEEL	4
12	910898	CAGE MOUNTING PL	6
13	911126	HOPPER CAGE	1
14	914768L	RUBBER REINFORCEMENT	2
15	917536	BRKT-WHEEL MOUNT LH	1
16	917537	BRKT-WHEEL MOUNT RH	1
17	917546	TUBE-WHEEL SPACER 1.000" DIA	4
18	917607	GUARD-HOPPER CHAIN	1
19	917642	BRKT-HOPPER ACCESS	1
20	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	6
21	81570	WASHER - 3/8" STD FLAT (PL)	12
22	86171	3/8" X 1 1/4" HEX BOLT (PL)	2
23	900930	1/4" X 1/4" X 1-1/2" KEY	2
24	905369	INSIDE SPRKT KEY 1/4" X 1/4" X 2 1/2"	1
25	905434	CENTER FLTG ROD	1
26	905562	H60B14 SPROCKET (1 1/4" BORE)	2
27	905840	CENTER FLIGHTING HOLDER	1
28	905842	CENTER SHAFT HOLDER	1
29	905844	OUTSIDE FLIGHTING HOLDER	2
30	906446	FINAL CENTER FLTG WELDT	1
31	909908	OUTSIDE FLIGHTING	2
32	917595	WELDT-MULTI FLIGHTING HOPPER	1
33	960180	U-JOINT & SPROCKET KEY .313"SQ. X 1.375"	3
34	960492	H60B17 SPROCKET (1 1/4" BORE)	2
35	960547	UNIVERSAL JOINT - 12E	2
36	961637	BEARING FLANGE 62MS	6
37	965818	1 1/4" BEARING AEL206-104 (RHP #1230)	3
38	9812378	3/8" X 3/4" SQ HD SET SCREW SER	6
39	988999	3/8"Ø X 3/8" SOCKET SET SCREW (BR)	10

PTO



F2294

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	930749	SHEAR BOLT CLUTCH WITH PUSH PIN 1600 Nm ± 10%	1
2	930750	CROSS KIT WITH GREASE NIPPLE ON BEARING CUP	2
3	930751	CV WIDEANGLE DOUBLE YOKE 80°	1
4	930752	CV WIDEANGLE INBOARD YOKE WELDED WITH HUB FOR OUTER LEMON TUBE	1
5	930753	ELASTIC PIN - ISO 8752	2
6	930754	OUTER LEMON TUBE L= 570 WITH PIN HOLE	1
7	930755	RILSAN LEMON TUBE L=575 WITH PIN HOLE	1
8	930756	INBOARD YOKE FOR INNER TUBE	1
9	930757	CROSS KIT WITH GREASE NIPPLE ON BEARING CUP	1
10	930758	YOKE WITH QL BALL TYPE	1
11	930759	SHAFT SHIELD	1
12	925361	PRE-SET DEENGAGEMENT SYSTEM CHAIN	3
13	930760	RETAINER	2
14	930761	WIDEANGLE RETAINER	1
-	X4019	SHEAR BOLT KIT	-

Farm King



SPECIFICATIONS

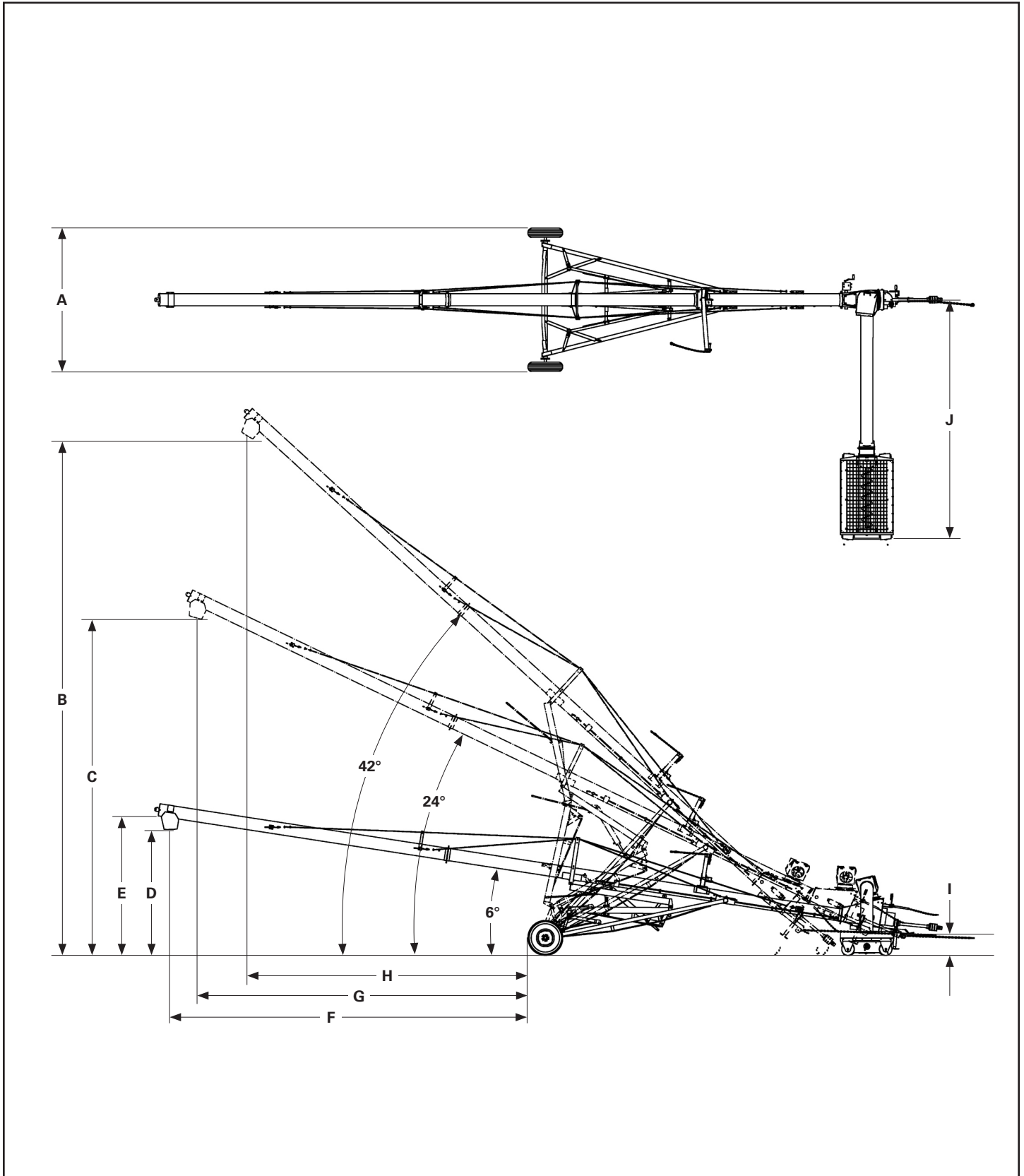
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DIMENSIONS

Figure 151



DESCRIPTION [Figure 151]	1050	1060	1070
Overall Width (A)	118 in.	130 in.	154 in.
Discharge Spout Height @ 42° Angle (B)	425 in.	518 in.	573 in.
Discharge Spout Height @ 24° Angle (C)	277 in.	332 in.	357 in.
Discharge Spout Height @ 6° Angle (D)	104 in.	104 in.	121 in.
Transport Height (E)	115 in.	124 in.	131 in.
Discharge Spout To Wheels @ 6° Angle (F)	295 in.	358 in.	430 in.
Discharge Spout To Wheels @ 24° Angle (G)	274 in.	330 in.	404 in.
Discharge Spout To Wheels @ 42° Angle (H)	232 in.	270 in.	346 in.
Hitch Height (I)	18 in.	18 in.	18 in.
Input Auger / Hopper Length (J)	192 in.	192 in.	192 in.

SPECIFICATIONS

DESCRIPTION	1050	1060	1070	1080
Size	10" x 50'	10" x 60'	10" x 70'	10" x 80'
Tubing	12 Gauge			
Flighting	7 Gauge			
Flighting Shaft	11 Gauge, 2-3/8" Diameter			
Undercarriage	3" x 3" x 1/8" Square Tube			
Lift Arms	2" x 5" x 3/16" Tube			
Bridging	3/8" Cable		1/2" Cable	
Wheels And Hubs	Wheel 15" x 5" x 5 Bolt			
Swing Auger Drive	Two internal gearboxes (PTO driven), sprocket and chain			
Hopper Dimensions	43-1/2" x 60"			
Standard Hopper Height (From Ground)	15-1/4" at heel end, 14-1/4" at other end			
Multi-flighting Hopper Height (From Ground)	11-3/4" at both ends			
Minimum HP (W/540 RPM PTO)	40 HP	48 HP	55 HP	65 HP
Hydraulic Pressure	1000 PSI			
Hitch Weight	-	-	840 lbs.	-
Total Weight	2545 lbs.	2987 lbs.	3354 lbs	3622 lbs.

HARDWARE TORQUE VALUES

Metric Chart

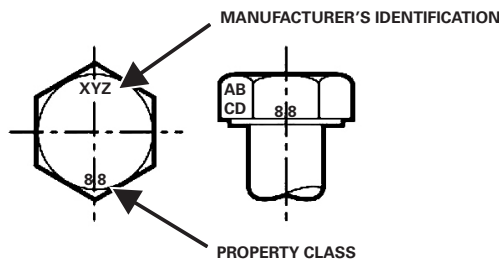
NOTE: Do not use the values listed in the charts if a different torque value or tightening procedure is specified in this manual for a specific application. Torque values listed are for general use only.

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.

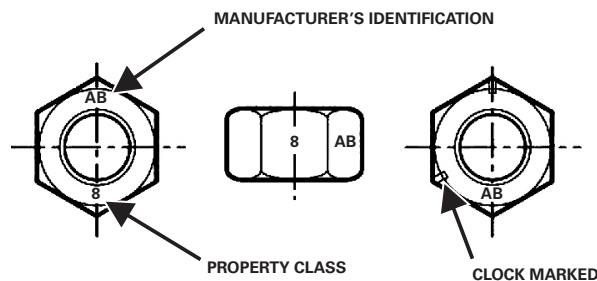
Nominal Size	Class 5.8		Class 8.8		Class 10.9		Lock nuts
	Unplated	Plated W / ZnCr	Unplated	Plated W / ZnCr	Unplated	Plated W / ZnCr	CL.8 W/ CL. 8.8 Bolt
M4	1.7 (15*)	2.2 (19*)	2.6 (23*)	3.4 (30*)	3.7 (33*)	4.8 (42*)	1.8 (16*)
M6	5.8 (51*)	7.6 (67*)	8.9 (79*)	12 (102*)	13 (115*)	17 (150*)	6.3 (56*)
M8	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



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
Identification of Hex Nuts and Lock Nuts**



GRADE 2
SAE BOLT



GRADE 5
SAE BOLTS



GRADE 8
SAE BOLTS



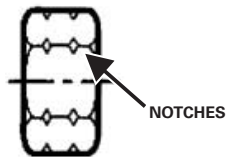
GRADE 2
SAE NUTS



GRADE 5
SAE NUTS



GRADE 8
SAE NUTS



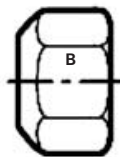
NOTCHES

GRADE IDENTIFICATION

GRADE A: NO NOTCHES

GRADE B: ONE CIRCUMFERENTIAL NOTCH

GRADE C: TWO CIRCUMFERENTIAL NOTCHES



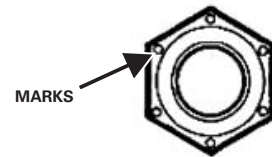
B

GRADE IDENTIFICATION

GRADE A: NO MARK

GRADE B: LETTER B

GRADE C: LETTER C



MARKS

GRADE IDENTIFICATION

GRADE A: NO MARKS

GRADE B: THREE MARKS

GRADE C: SIX MARKS

MARKS NEED NOT BE LOCATED AT CORNERS

HYDRAULIC CONNECTION

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

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

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 57] to find the correct tightness needed.

Port Seal (O-Ring Boss) Fitting

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 [Figure 58].

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 tube lines 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.

WARRANTY

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Farm King



FARM KING 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 after the Returned Material Authorization (RMA) is issued. Parts must be returned through the selling representative 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. Work done by a third party must be pre-approved by Farm King.

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 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.

TO THE EXTENT PERMITTED BY LAW, FARM KING DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ON ITS PRODUCTS COVERED HEREIN, AND DISCLAIMS ANY RELIANCE BY THE PURCHASER ON FARM KING'S SKILL OR JUDGMENT TO SELECT OR FURNISH GOODS FOR ANY PARTICULAR PURPOSE. THE PURCHASER'S ONLY AND EXCLUSIVE REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON FARM KING'S PRODUCTS ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL FARM KING BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BY WAY OF EXAMPLE ONLY AND NOT LIMITATION, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE, OR COST OF REPLACEMENT OF RENTAL EQUIPMENT). IN NO EVENT SHALL FARM KING'S CONTRACT OR WARRANTY LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT. (Note that some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.) This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

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.

www.farm-king.com

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