

Farm King

OPERATOR AND PARTS MANUAL

CX **SERIES** **CONVENTIONAL AUGER MOVER**

Models 841, 851, 1041, 1051, 1061

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

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WARRANTY REGISTRATION FORM

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

Customer Name:	
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 review included the Operator and Parts Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Dealer Inspection Report

- Bearings Turn Freely
- Belt Tension Checked
- Auger Tube Is Straight
- Flighting Turns Freely
- Gear Box Oil Level Checked
- All Fasteners Are Tight
- Machine Is Lubricated
- Check Tire Pressure

Safety

- All Lights And Reflectors Installed
- All Lights And Reflectors Cleaned And Working
- Safety Chain On Hitch
- All Decals Installed
- Guards And Shields Installed And Secure
- Review Operating And Safety Instructions
- Check For Hydraulic Leaks

Date:	Dealer Rep. Signature:
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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 CX2 Conventional Auger Mover. 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.

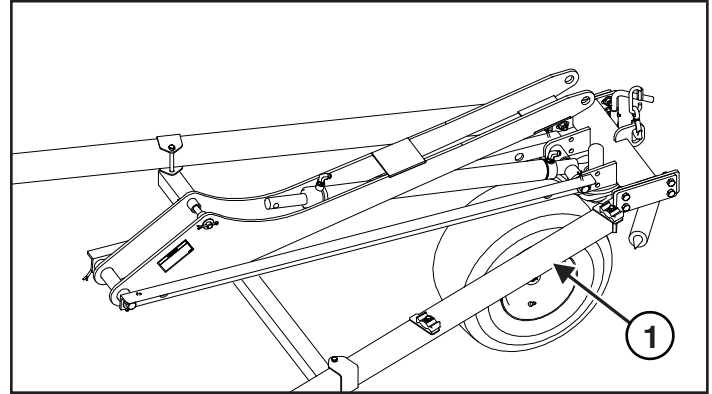
Visit our website at www.farm-king.com for a complete list of dealers in your area.

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

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

Figure 1



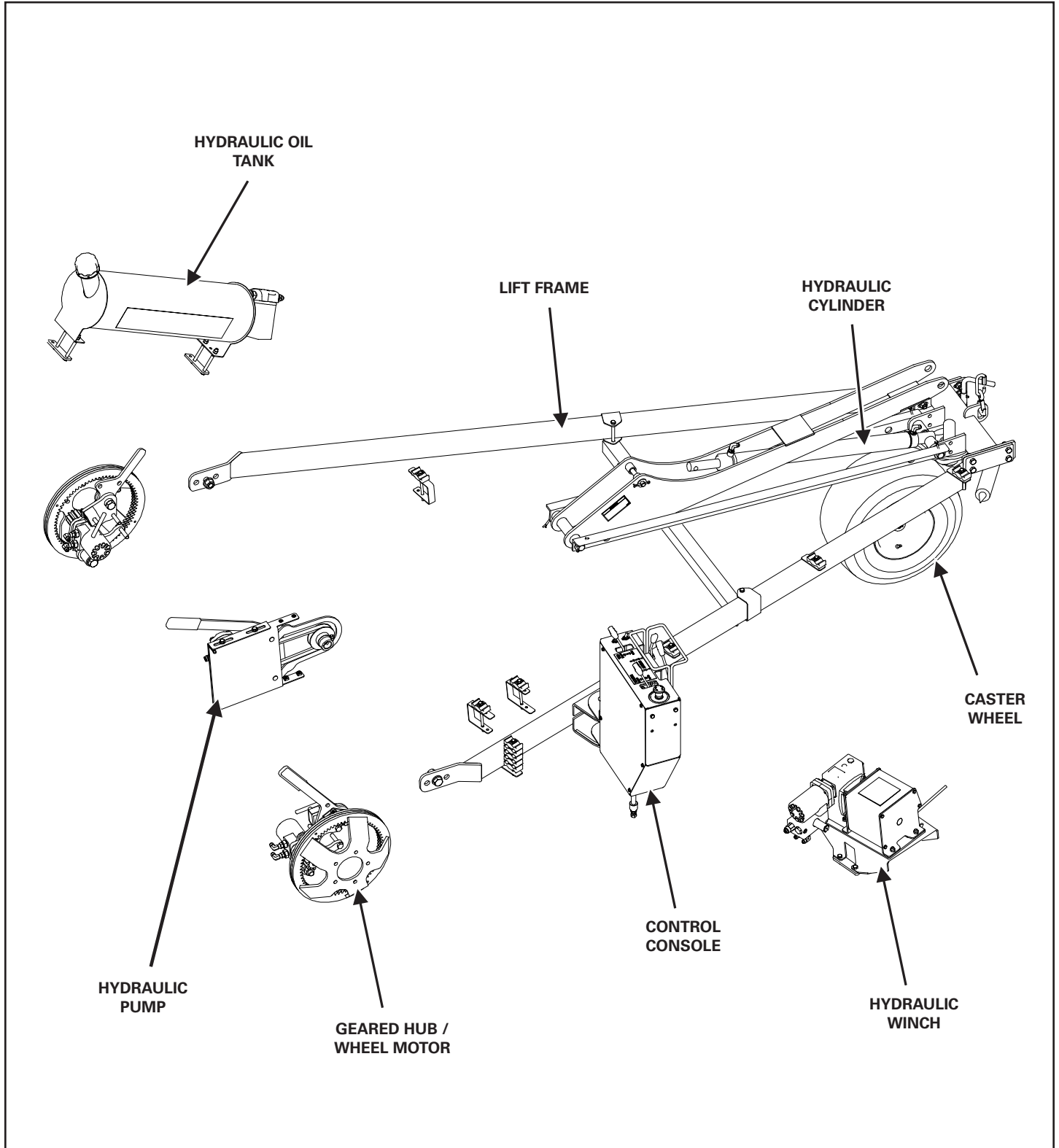
Model Number:
Serial Number:

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

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

EQUIPMENT IDENTIFICATION

Component Location



SAFETY


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SAFETY INSTRUCTIONS

Safe Operation is The Operator's Responsibility

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


	CAUTION
<p>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.</p>	

	DANGER
<p>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.</p>	

	WARNING
<p>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.</p>	

	IMPORTANT
<p>This notice identifies procedures which must be followed to avoid damage to the machine.</p>	

Safe Operation Needs A Qualified Operator

	WARNING
<p>Operators must have instructions before operating the machine. Untrained operators can cause injury or death.</p>	

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 drive line. Stepping over, leaning across or crawling under a turning PTO drive line can cause entanglement.
- Position the machine and equipment hitch correctly to prevent drive line stress and separation.
- Use caution when turning. Turning too sharp can cause drive line damage.
- Use caution when raising PTO driven attachment.
- Excessive drive line angle can cause drive line damage. Use stops if needed.

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.

GAS ENGINE SAFETY


- Before starting engine, read and understand the operating and maintenance instructions that came with your engine.
- DO NOT run engine in an enclosed area. Exhaust gases contain carbon monoxide, an odorless and deadly poison.
- DO NOT place hands or feet near moving or rotating parts.
- DO NOT store, spill, or use gasoline near an open flame, or devices such as a stove, furnace, or water heater which use a pilot light or devices which can create a spark.
- DO NOT refuel indoors where area is not well ventilated. Outdoor refueling is preferred.
- DO NOT refuel while engine is running. Allow engine to cool for 5 minutes before refueling. Store fuel in approved safety containers.
- DO NOT remove fuel tank cap while engine is running.
- DO NOT operate engine if gasoline is spilled. Move machine away from the spill and avoid creating any ignition until gasoline has evaporated.
- DO NOT smoke while filling fuel tank.
- DO NOT choke carburetor to stop engine. Whenever possible, gradually reduce engine speed before stopping.
- DO NOT run engine above rated speeds. This may result in injury.
- DO NOT tamper with governor springs, governor links or other parts which may increase the governed speed.
- DO NOT tamper with the engine speed selected by the original equipment manufacturer.
- DO NOT check for spark with spark plug or spark plug wire removed.
- DO NOT crank engine with spark plug removed. If engine is flooded, crank until engine starts.
- DO NOT strike flywheel with a hard object or metal tool as this may cause flywheel to shatter in operation. Use proper tools to service engine.
- DO NOT operate engine without a muffler. Inspect periodically and replace, if necessary. If engine is equipped with a muffler deflector, inspect periodically and replace, if necessary with correct deflector.
- DO NOT operate engine with an accumulation of grass, leaves, dirt or other combustible materials in the muffler area.
- DO NOT use this engine on any forest covered, brush covered, or grass covered unimproved land unless a spark arrester is installed on the muffler. The arrester must be maintained in effective working order by the operator.
- DO NOT touch hot muffler, cylinder or fins because contact may cause burns.
- DO NOT run engine with air cleaner or air cleaner cover removed.
- Remove the wire from the spark plug when servicing the engine or equipment to prevent accidental starting. Disconnect the negative wire from the battery terminal if equipped with a 12 volt starting system.
- Keep cylinder fins and governor parts free of grass and other debris which can affect engine speed.
- Examine muffler periodically to be sure it is functioning effectively. A worn or leaking muffler should be repaired or replaced as necessary.
- Use fresh gasoline. Stale fuel can gum carburetor and cause leakage.
- Check fuel lines and fittings frequently for cracks or leaks. Replace if necessary.

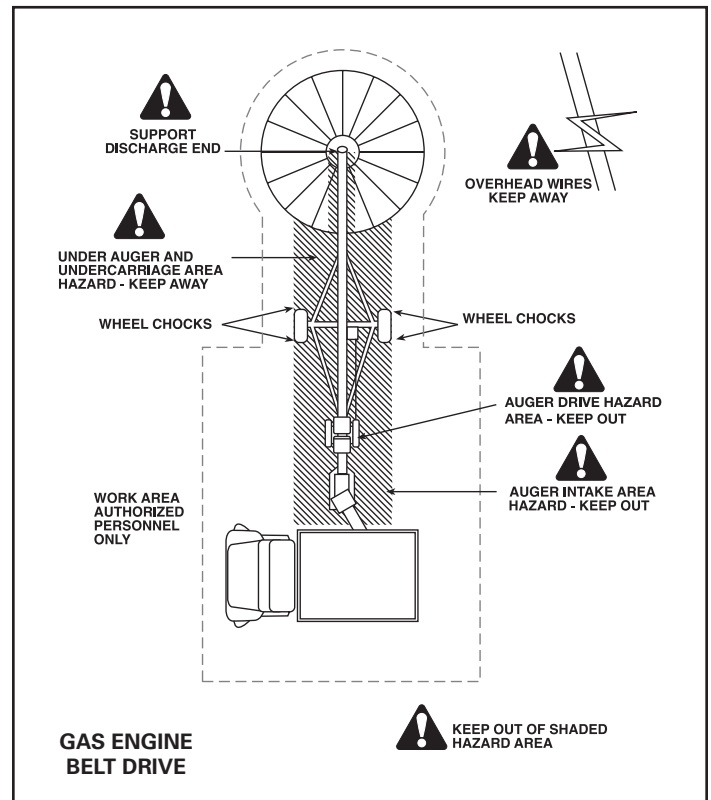
OPERATING SAFETY ZONE

Safety Zone Identification

	<h1>WARNING</h1>
AVOID INJURY OR DEATH	
<ul style="list-style-type: none"> • 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. 	

	<h1>DANGER</h1>
ELECTROCUTION HAZARD	
<p>Keep away from power lines, electrocution can occur without direct contact.</p>	

	<h1>CAUTION</h1>
<ul style="list-style-type: none"> • 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. 	



ASSEMBLY

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GENERAL ASSEMBLY INFORMATION

Component Unloading And Identification

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

DANGER

ELECTROCUTION HAZARD

To prevent serious injury or death from electrocution:

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

WARNING

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

DO NOT work under suspended parts.

Keep away from moving parts.

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

IMPORTANT

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

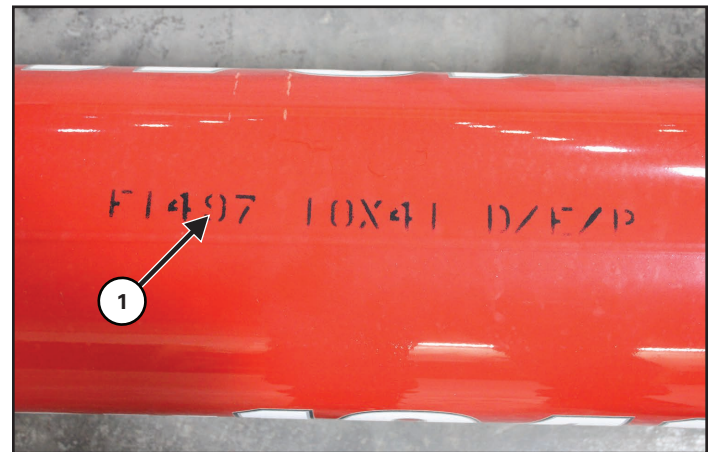
Using the packing list, locate and place all components and hardware in one area. Count the individual components and verify that you have received the correct number of components to fully assemble the auger.

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

Assemble the auger mover in the following order:

1. Undercarriage lift
2. Drive wheels
3. Hydraulic pump
4. Hydraulic hoses

Figure 2




Larger components are marked (Item 1) for identification [Figure 2].

MOVER LIFT ASSEMBLY

Assemble the mover components on a flat level surface.

!

WARNING



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

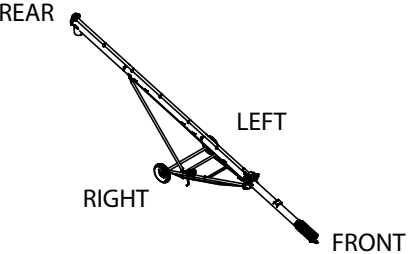
DO NOT work under suspended parts.

Keep away from moving parts.

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

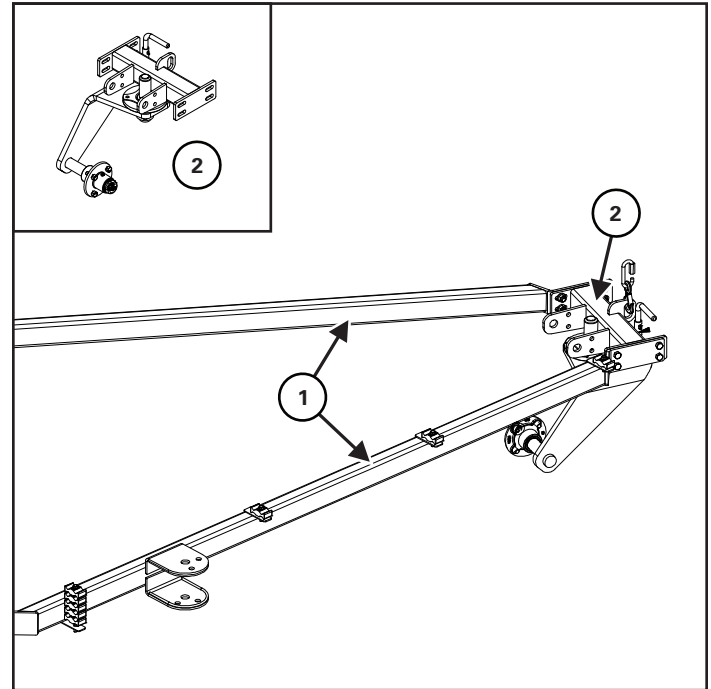
!

IMPORTANT



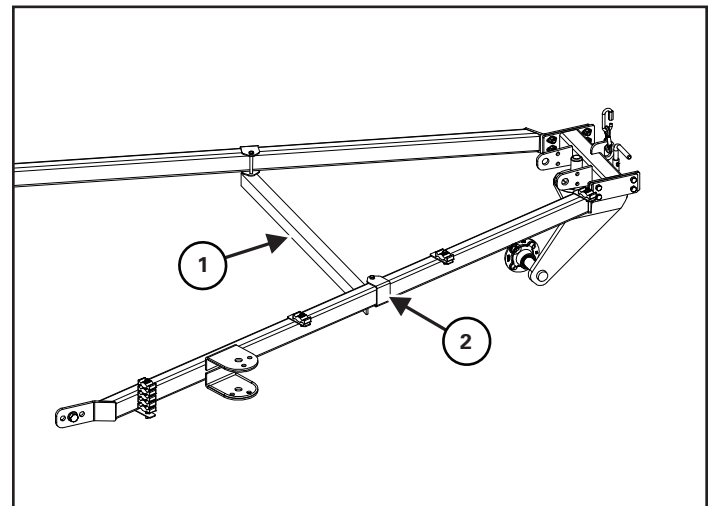
The directions left, right, front and rear, as mentioned throughout this manual, are as viewed as the operator sitting in the tractor's seat with the equipment hitched to the tractor.

Figure 3



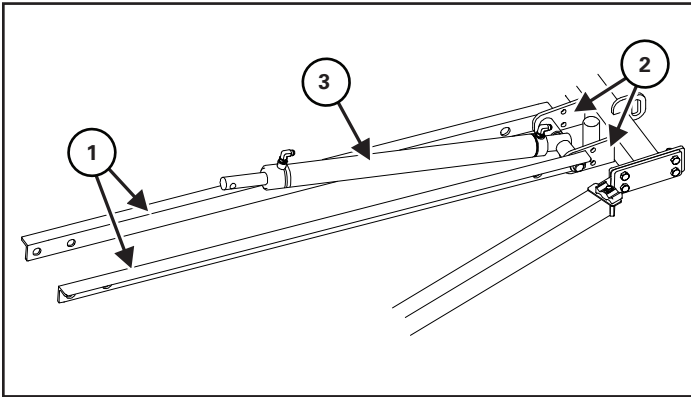
Position left and right arm weldments (Item 1) to the brackets on the caster pivot (Item 2). Attach using eight 1/2" x 1-1/2" hex bolts, eight 1/2" flat washers, and eight 1/2" lock nuts [Figure 3].

Figure 4



Attach the crossbrace (Item 1) between the arm weldments using two clamps (Item 2), two 3/8" x 4-1/2" hex bolts, and two 3/8" lock nuts [Figure 4].

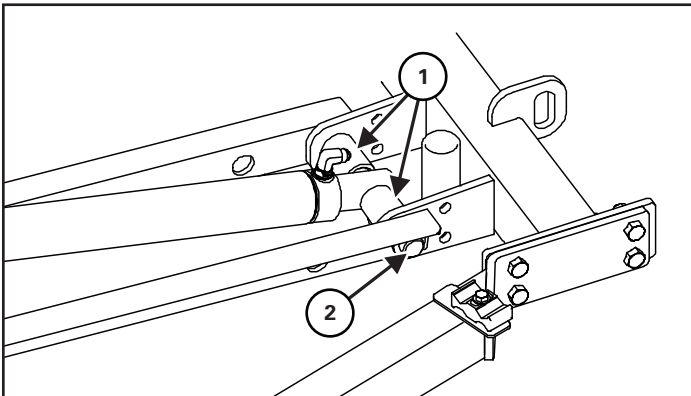
Figure 5



Position the left and right lower lift arms (Item 1) on the caster pivot brackets (Item 2) [Figure 5].

Position the barrel of hydraulic cylinder (Item 3) within the caster pivot brackets [Figure 5].

Figure 6

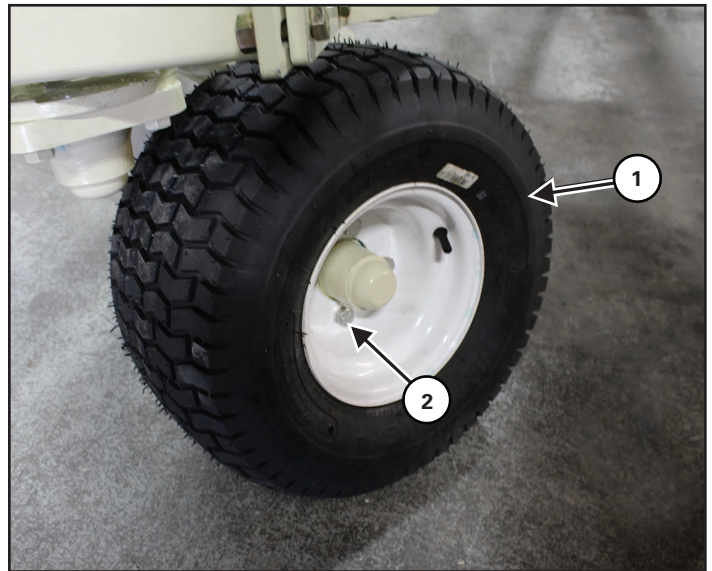


Place two 1-1/2" x 2-1/4" spacers (Item 1) on each side of the cylinder mount [Figure 6].

Insert one 1" x 8" pin (Item 2) through the lift arms, spacers, and hydraulic cylinder mount. Attach using two 1" x 10GA rim washers (both ends of pin), and two cotter pins [Figure 6].

Install two -6 MORB X -6 MJIC elbow fittings to the hydraulic cylinder ports.

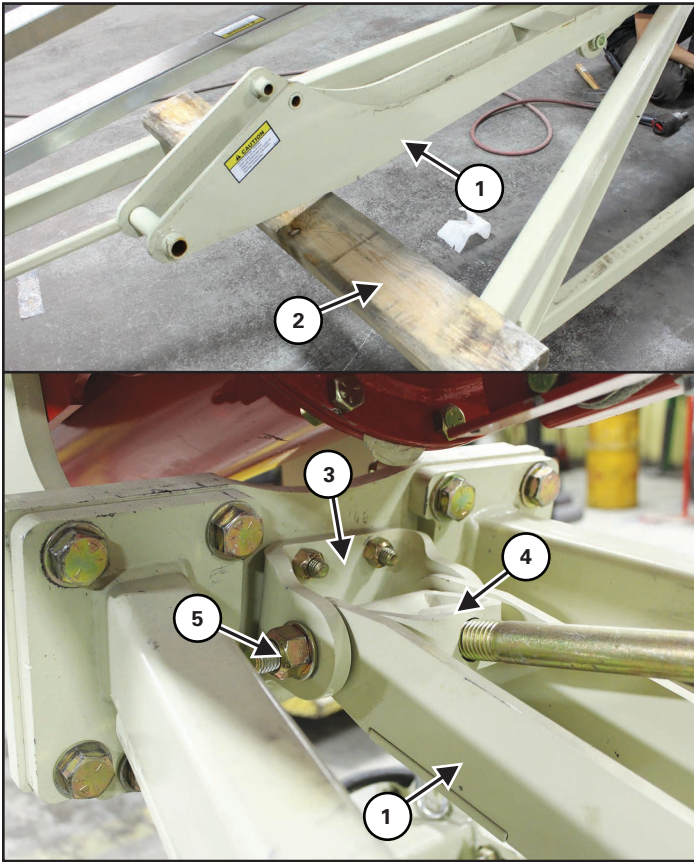
Figure 7



Install the wheel and tire (Item 1) to the caster pivot hub. Attach using four wheel bolts (Item 2) [Figure 7].

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

Figure 8

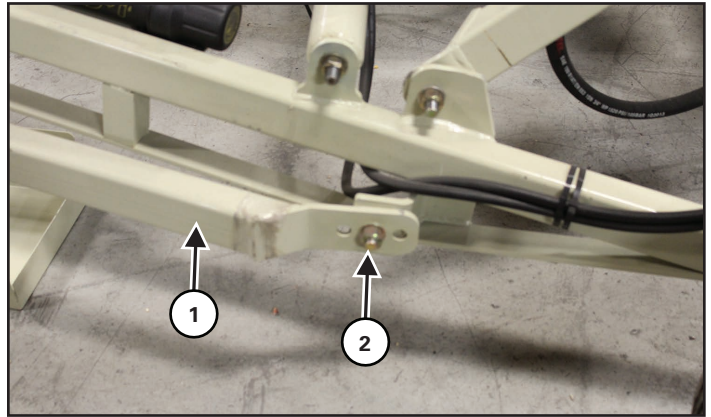


Support the upper lift arm (Item 1) using a board (Item 2) [Figure 8] or other support.

Attach the lift arm (Item 1) to the auger tube mount (Item 3). Remove the pivot pulley (Item 4) and associated hardware (Item 5) [Figure 8].

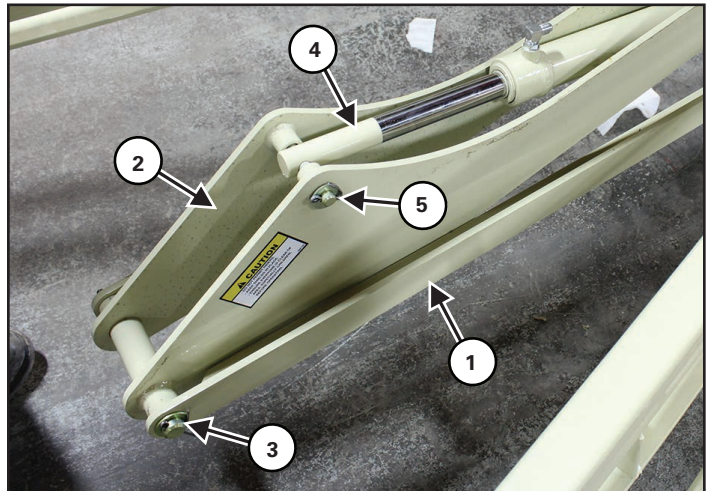
Position the lift arm and reinstall associated hardware including 3/4" x 7-1/2" hex bolt, 1" bushing, 3/4" flat washers, and 3/4" lock nut.

Figure 9



Install the LH and RH lift frames (Item 1) to the undercarriage. Attach using one 3/4" x 2" hex bolt, one 3/4" flat washer, and one 3/4" lock nut (Item 2) [Figure 9].

Figure 10

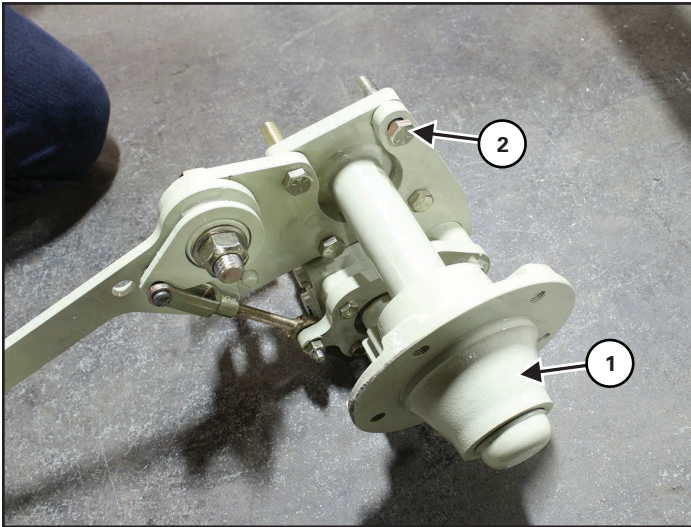


Install the LH and RH lower lift arms (Item 1) to the upper lift arm (Item 2). Attach using one 1" X 8.82" pin, two 1" rim washers, and two 3/16" X 2" cotter pins (Item 3) [Figure 10].

Extend the cylinder rod (Item 4) to the mount on the upper lift arm. Attach using one 5/8" x 5-1/2" pin, two 5/8" flat washer, and one 3/16" X 2" cotter pin (Item 5) [Figure 10].

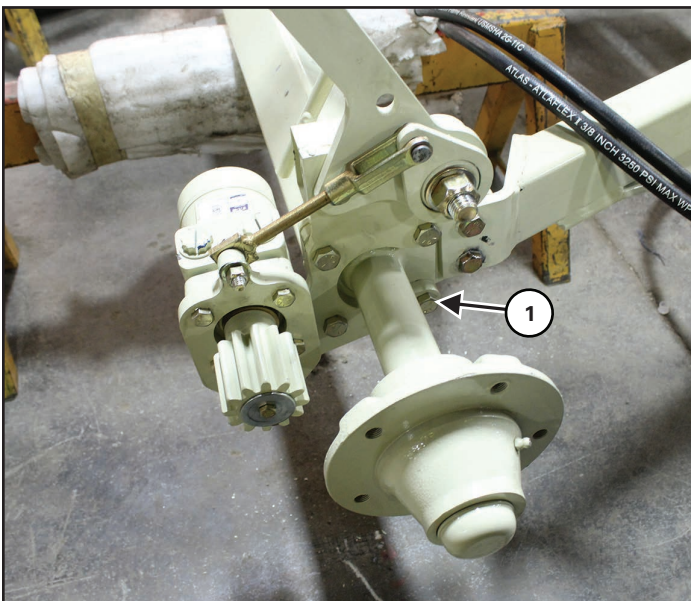
61' Models: Install one cylinder stroke extender to the cylinder rod before attaching to the lift arm (Item 2) [Figure 10].

Figure 11



Position one wheel hub (Item 1) within the base plate of the mover assembly. Align the four holes and secure with four 1/2" X 2 1/2" hex bolts (Item 2) [Figure 11].

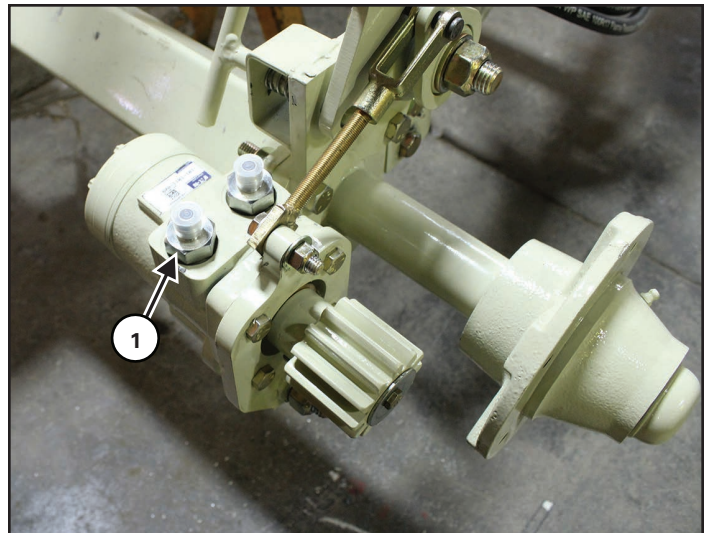
Figure 12



Position the mover wheel assembly on the axle. Align the four 1/2" X 2 1/2" bolts (Item 1) and attach using 1/2" lock nuts [Figure 12].

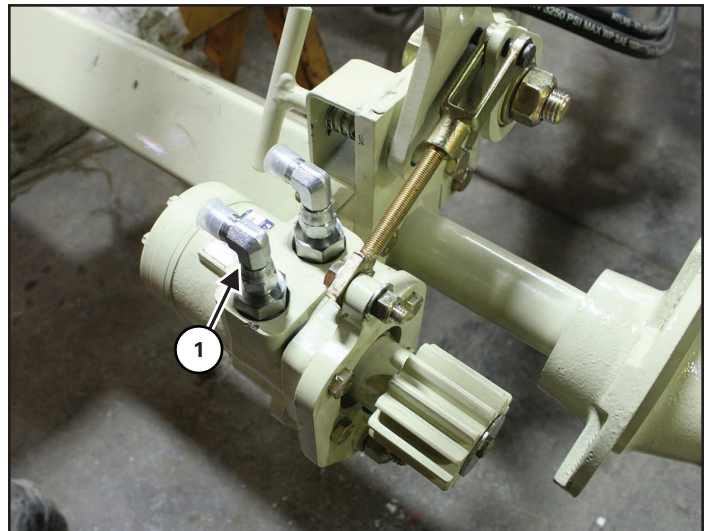
Note: The bolts (Item 1) that attach to the axle may NOT be reused from the existing hub assembly.

Figure 13



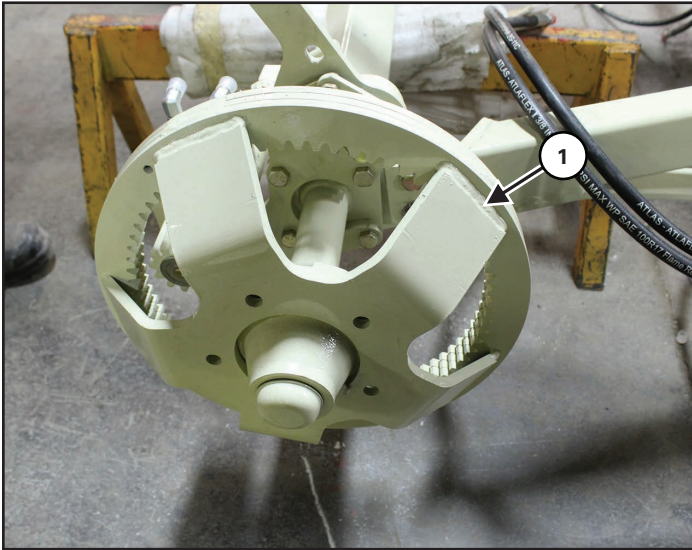
Remove the two plugs from the motor ports. Install two -10 MORB x -6 MJIC adapter fittings (Item 1) [Figure 13].

Figure 14



Install two -6 FJIC X - 6 MJIC elbow fittings (Item 1) to the adapters [Figure 14].

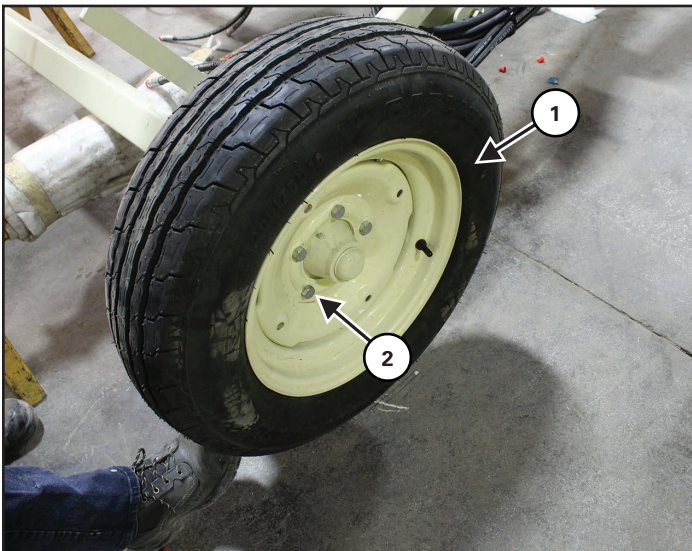
Figure 15



Position the geared hub (Item 1) over the mover wheel assembly [Figure 15].

Align the holes of the geared hub and mover wheel assembly.

Figure 16

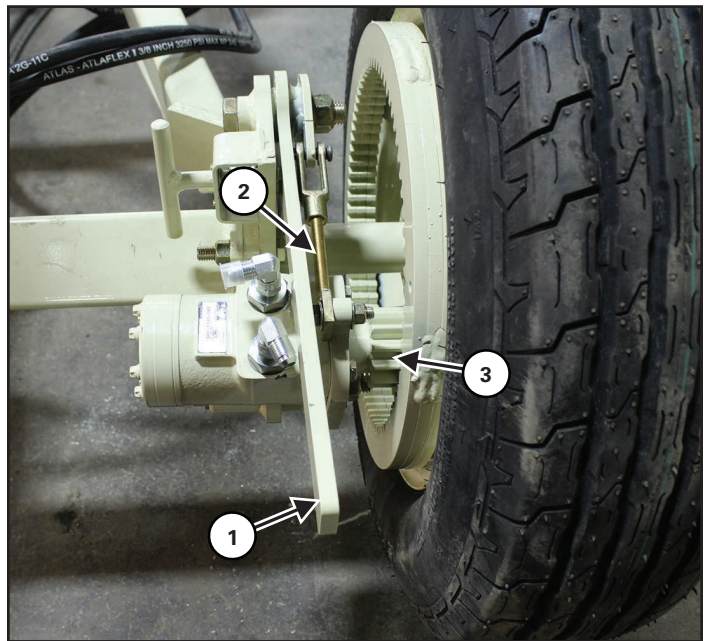


Position the tire (Item 1) over the geared hub [Figure 16].

Align the holes of the tire, geared hub, and mover wheel assembly.

Attach using five wheel bolts (Item 2) [Figure 16].

Figure 17



Lower the lever (Item 1). Adjust the tightener rod (Item 2) [Figure 17].

The gear (Item 3) should be tight against the geared hub [Figure 17].

Make sure there is no movement of the mover wheel assembly when the gear is fully engaged and locked in place.

Figure 18



Fit one plastic grip (Item 1) onto the handle [Figure 18].



IMPORTANT

Tighten all fasteners of the mover wheel assembly to the proper torque.



WARNING

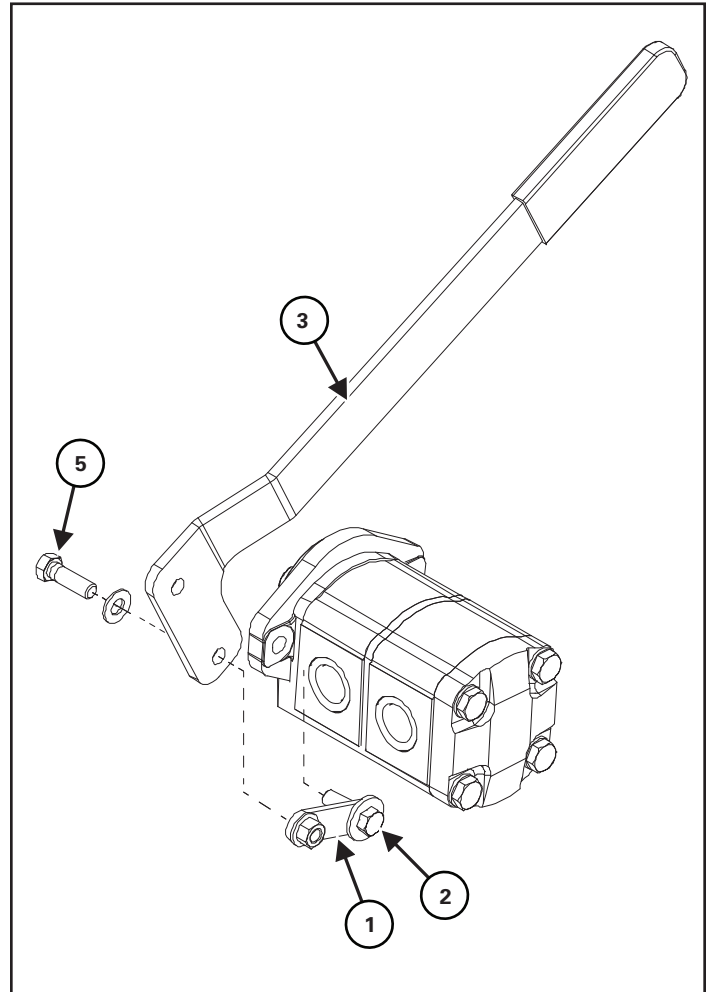


AVOID INJURY OR DEATH

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

HYDRAULIC PUMP BELT DRIVE ASSEMBLY

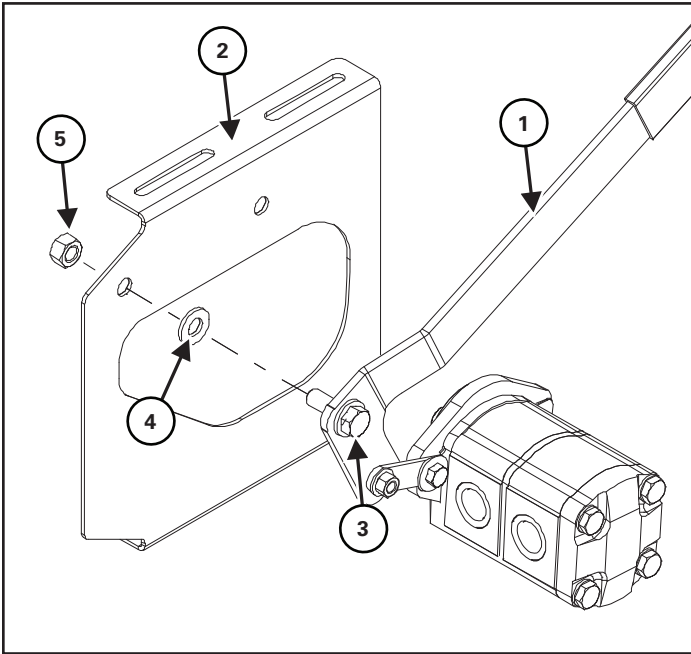
Figure 19



Attach one link plate (Item 1) to the motor mount using one 3/8" x 1-1/4" hex bolt (Item 2) and one 1/2" flat washer [Figure 19].

Attach one handle (Item 3) to the link plate using one 3/8" x 1-1/4" hex bolt (Item 4), two 3/8" flat washers (both sides), and one 3/8" lock nut [Figure 19].

Figure 20



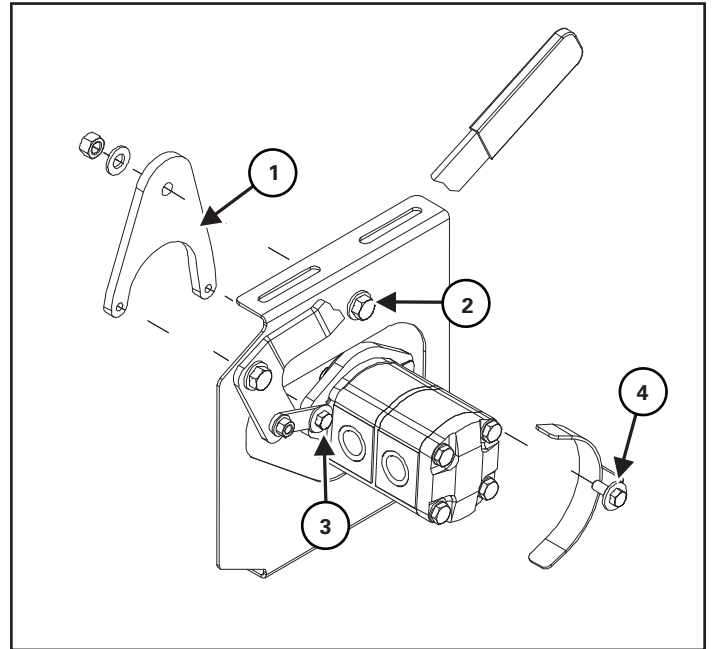
Attach the handle (Item 1) to the pump mount plate (Item 2) using:

- One 1/2" X 1-1/2" hex bolt and one 1/2" flat washer (before the handle) (Item 3)
- One 1/2" flat washer (between handle and plate) (Item 4)
- One 1/2" lock nut (Item 5) **[Figure 20]**

The contoured portion of the plate must be on the same side as the handle.

The slotted brackets of the plate must face away from the motor.

Figure 21



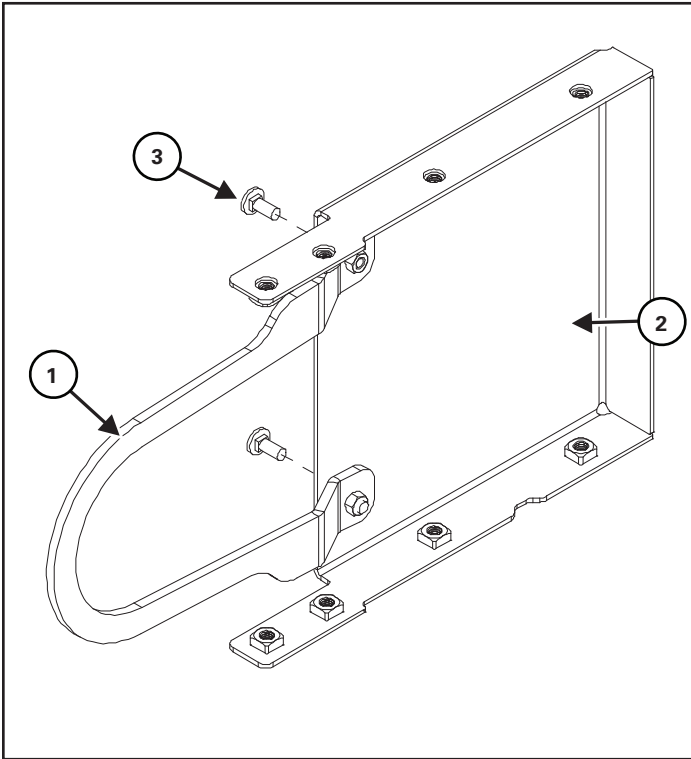
Position the pump arm (Item 1) on the inside of the mount plate.

Attach the top hole of the pump arm to the mount plate using one 1/2" X 1-1/2" hex bolt (Item 2), two 1/2" flat washers (both sides), and one 1/2" lock nut **[Figure 21]**.

Attach the bottom holes of the pump arm to the motor mounts using:

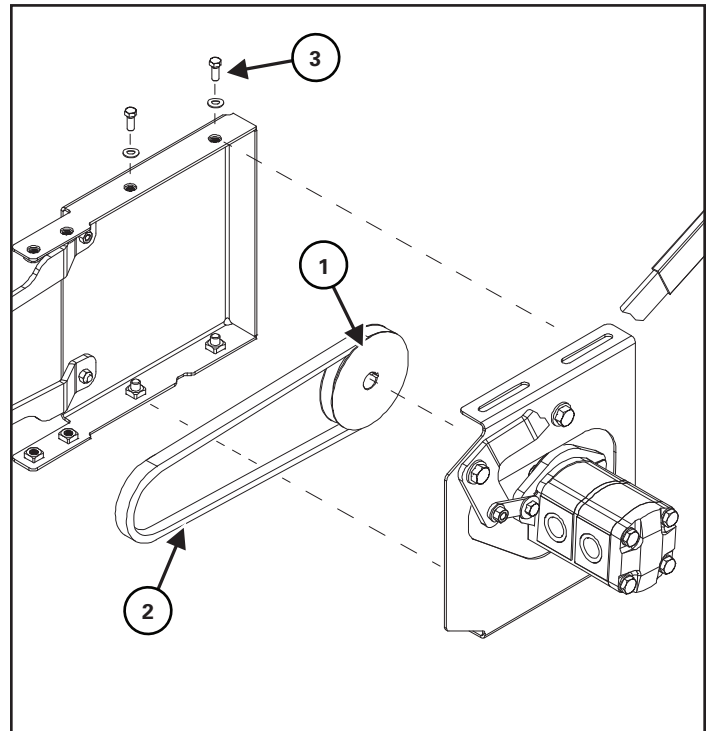
- One 3/8" x 1-1/4" hex bolt and one 1/2" flat washer (already in place) (Item 3)
- One 3/8" x 1" hex bolt, one 1/2" flat washer, and one belt guide (position around the motor shaft) (Item 4) **[Figure 21]**

Figure 22



Attach one belt guide (Item 1) to the inside of the pump cover plate (Item 2) using two 5/16" x 1" carriage bolts (Item 3), and two 5/16" lock nuts [Figure 22].

Figure 23

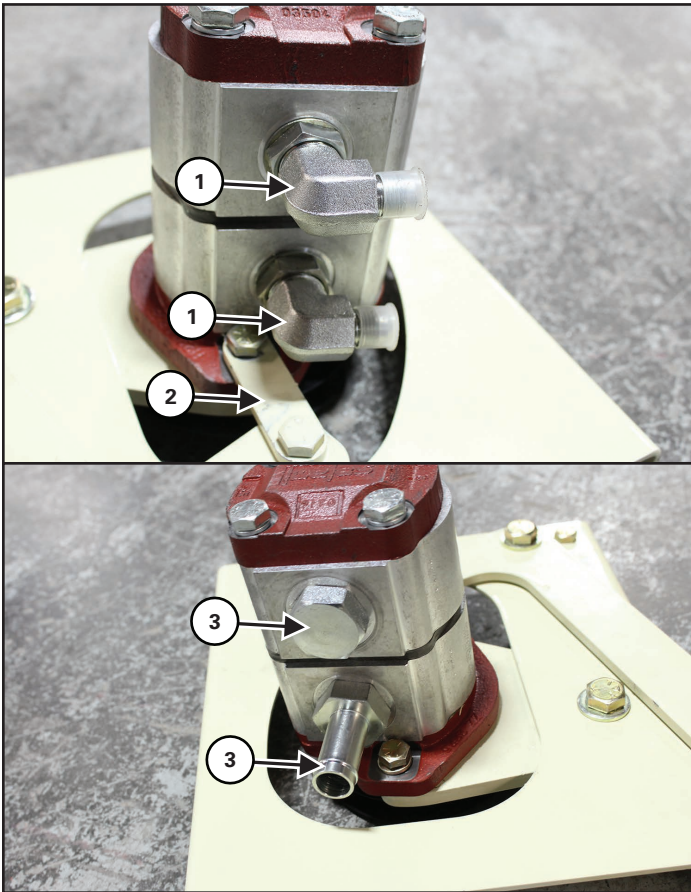


Install one single sheave 4-1/2" pulley (Item 1) and key to the motor shaft [Figure 23].

Route one B-35 belt (Item 2) around the pulley [Figure 23].

Attach the slotted holes of the motor assembly to the belt guide using four 3/8" X 1" hex bolts (Item 3), and four 3/8" flat washers [Figure 23].

Figure 24



Install two -10 MORB x -6 MJIC elbows (Item 1) to the hydraulic pump ports on the same side as the link (Item 2) [Figure 21].

Install one -12 MORB hex head plug (Item 3) and one -12 MORB x -12 barb adapter (Item 4) to the opposite side ports [Figure 21].


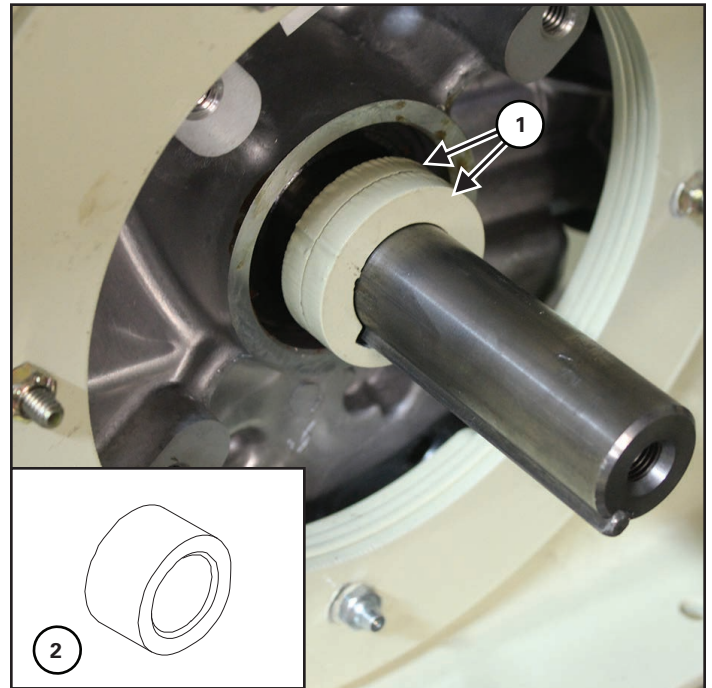
	<h1 style="margin: 0;">IMPORTANT</h1>
<p>Portions of the auger engine may need to be disassembled in order to access the engine drive shaft.</p> <p>There are specific pump drive components that must be installed to engine shaft.</p>	

Figure 25



Install spacers to the engine shaft of the auger:

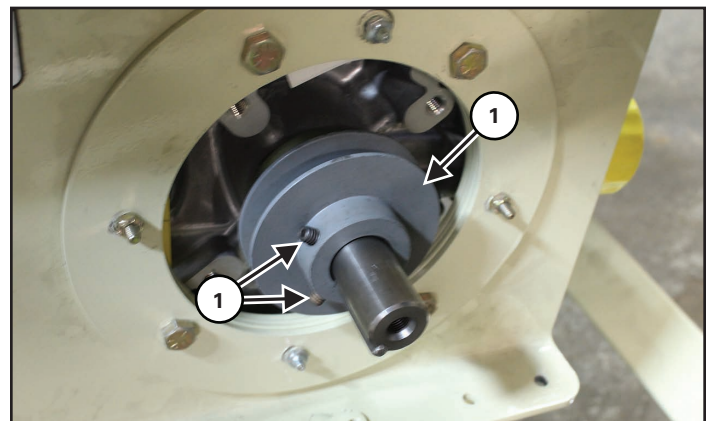
8" Auger:

- Two slotted narrow spacers (Item 1) (PN: 929045L)

10" Auger:

- One 1-3/4" x 1" spacer (Item 2) (PN: 924738)
- One narrow spacer (PN: 929045L) [Figure 25].

Figure 26



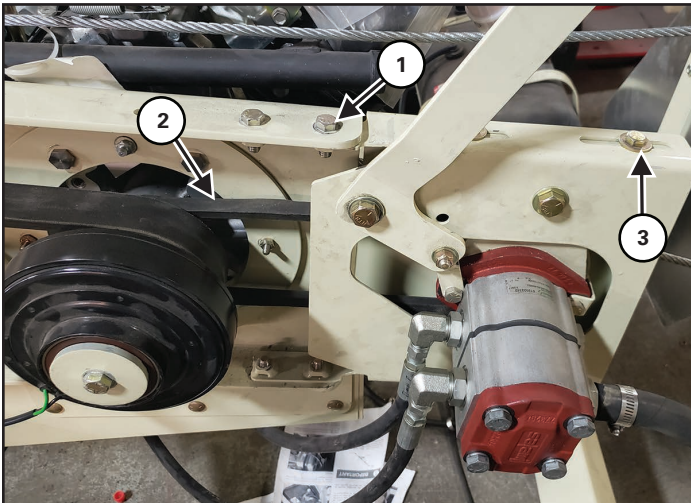
Install one single sheave 3-3/4" pulley (Item 1) to the engine shaft. Attach using two 5/16" X 1/4" socket set screws (Item 2) [Figure 26].



IMPORTANT

Continue assembling the standard auger components once the pump drive spacers and pulley are installed.

Figure 27



Position the pump motor assembly to the auger belt cover. Attach using four $3/8'' \times 1''$ hex bolts to the holes at the edge of the cover (Item 1) [Figure 27].

Route the pump belt around the single sheave pulley (Item 2) [Figure 27].

Adjust the motor assembly in the slotted holes (Item 3) to tighten the belt [Figure 27].

Lower the handle on the motor assembly to fully engage the pulleys and test the belt tension. The belt should be tight, and motor assembly should not move.

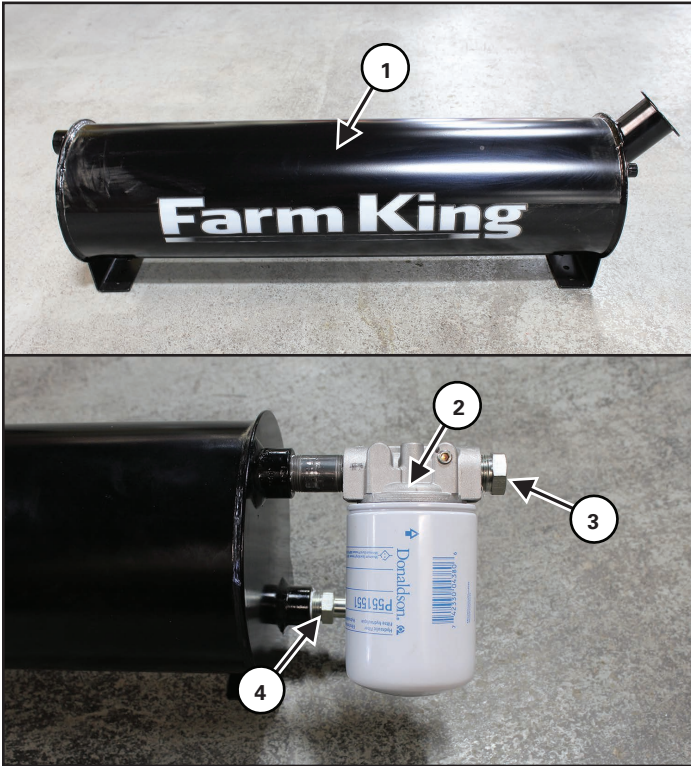


IMPORTANT

Tighten all fasteners on the pump motor assembly to the proper torque.

OIL TANK ASSEMBLY

Figure 28



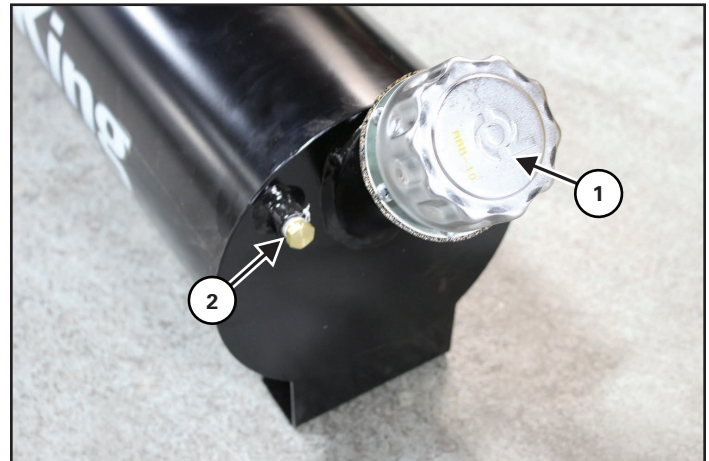
Bring the oil tank (Item 1) [Figure 28] to the assembly area.

Install one 10 micron oil filter (Item 2) to the top port of the tank. Install one plug (Item 3) [Figure 28] to the filter.

Install one -12 MPT x -12 hose barb (Item 4) [Figure 28] to the bottom port of the tank.

Apply Teflon tape to threads.

Figure 29

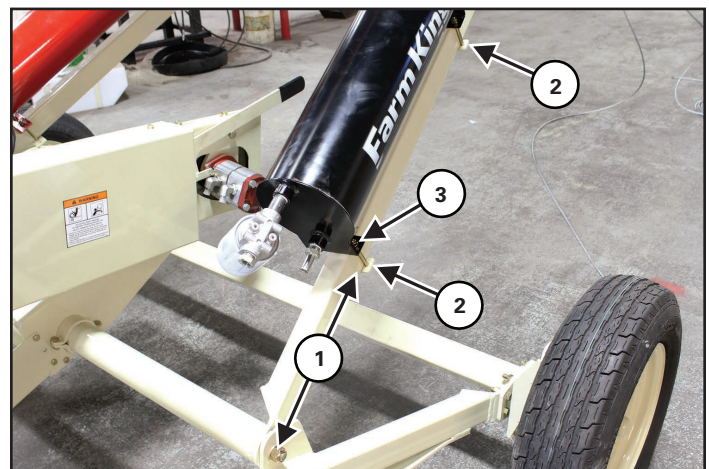


Install one fill cap (Item 1) [Figure 29] to the tank.

Install one -4 MPT plug (Item 2) [Figure 29] to the front port.

Apply Teflon tape to threads.

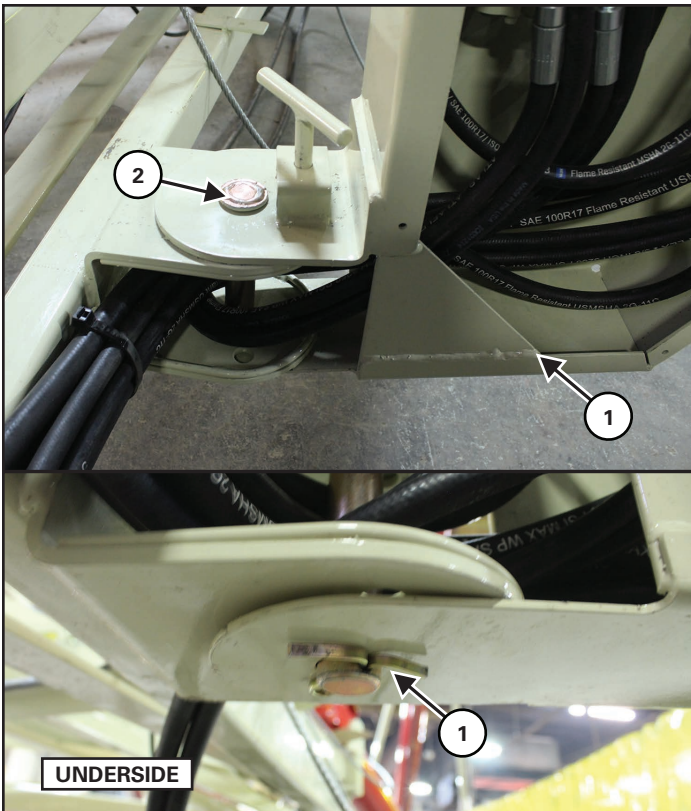
Figure 30



Position the oil tank on the LH lift arm 20" (Item 1) [Figure 30] from the arm pivot bolt.

Position two mounting plates (Item 2) beneath the lift arm and tank mounts. Attach each mount plate using two 3/8" x 4" hex bolts and two 3/8" lock nuts (Item 3) [Figure 30].

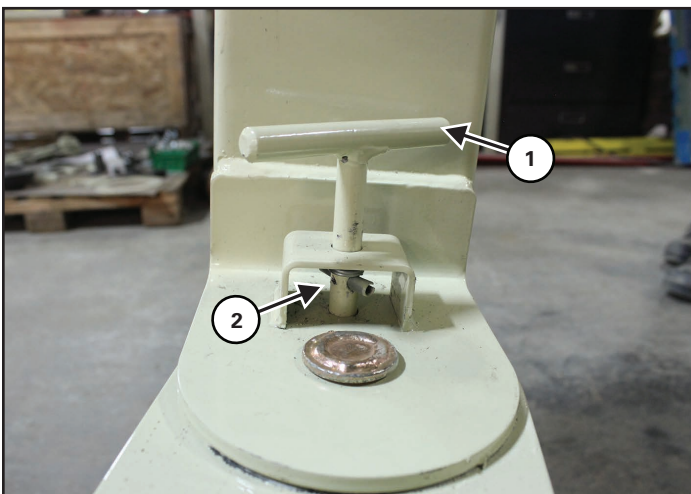
Figure 31



Position the mover console (Item 1) on the undercarriage mount. Attach using one clevis pin (Item 2) and cotter pin (Item 3) [Figure 31].

Mover Console PN: 931624

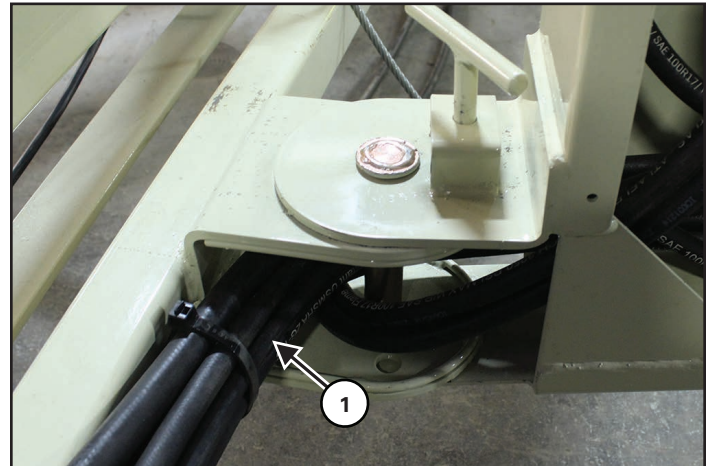
Figure 32



Insert one locking pin (Item 1) into the bracket of the mover console. Attach using one spring and roll pin (Item 2) [Figure 32].

HYDRAULIC HOSES ASSEMBLY

Figure 33



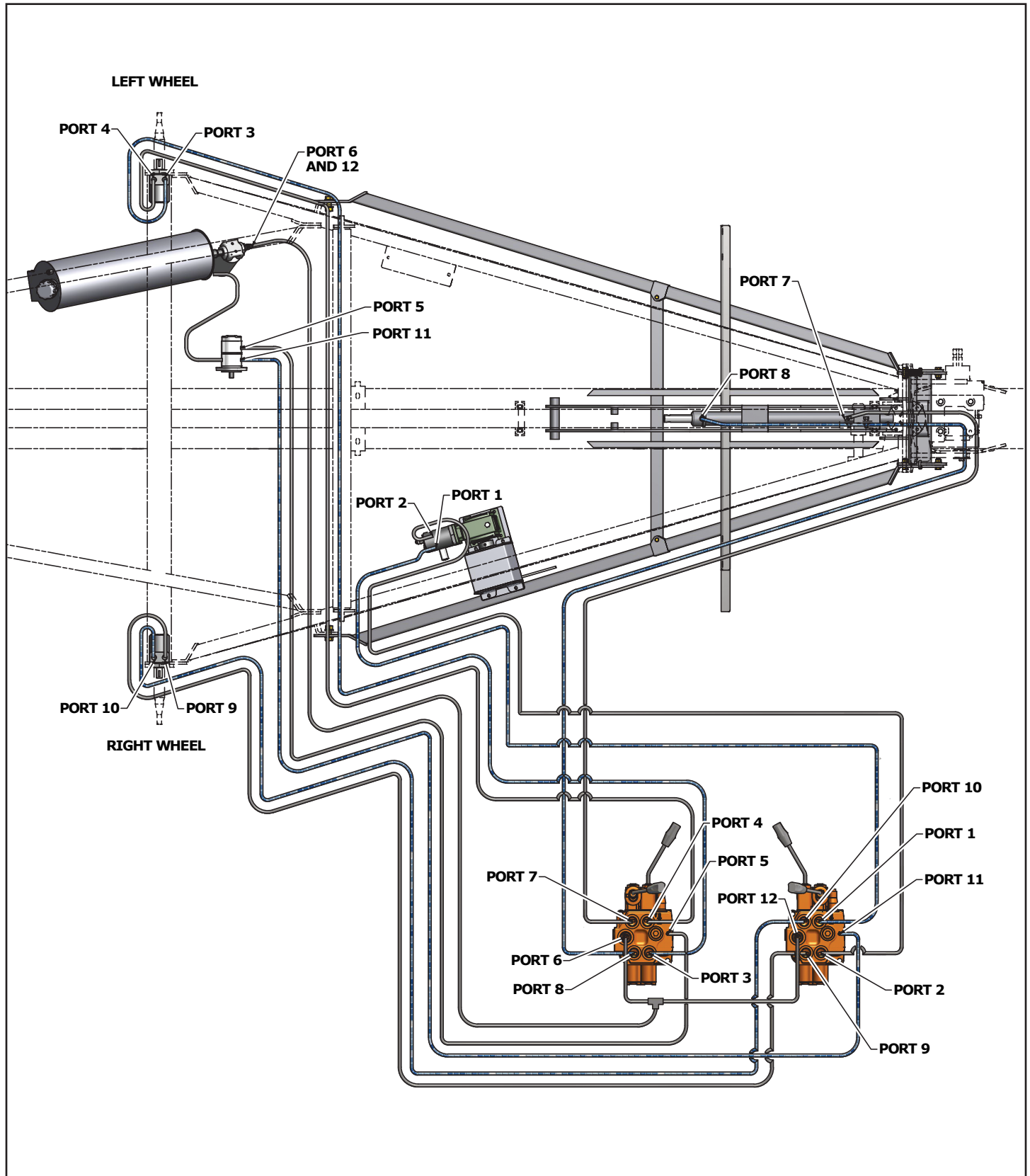
Connect hydraulic hoses to the correct valves on the control console (see Hose Routing Schematic on page 32).

Route hoses (Item 1) from the control console through the mounting bracket [Figure 33].

Group hoses together and attach to frame using zip ties [Figure 33].

HOSE ROUTING SCHEMATIC

Figure 34



Hose Routing [Figure 34].

PORT	HOSE DESCRIPTION	ROUTE	LENGTH (IN.)
41 FT. MODELS			
1	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO HYD WINCH	117
2	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO HYD WINCH	117
3	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO LH WHEEL MOTOR	159
4	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO LH WHEEL MOTOR	159
5	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO HYD PUMP	123
6	HOSE-8 X -8JIC X -8JIC	CONTROL VALVE TO OIL FILTER	139.5
7	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO LOWER HYD CYL PORT	134
8	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO UPPER HYD CYL PORT	163
9	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO RH HYD WHEEL MOTOR	83
10	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO RH HYD WHEEL MOTOR	83
11	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO PUMP	123
12	HOSE-8 X -8JIC X -8JIC	CONTROL VALVE TO OIL FILTER	139.5
51 FT. MODELS			
1	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO HYD WINCH	115
2	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO HYD WINCH	115
3	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO LH HYD WHEEL MOTOR	195
4	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO LH HYD WHEEL MOTOR	195
5	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO HYD PUMP	139
6	HOSE-8 X -8JIC X -8JIC	CONTROL VALVE TO OIL FILTER	161.25
7	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO LOWER HYD CYL PORT	156
8	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO UPPER HYD CYL PORT	189
9	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO RH HYD WHEEL MOTOR	93
10	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO RH HYD WHEEL MOTOR	93
11	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO HYD PUMP	139
12	HOSE-8 X -8JIC X -6JIC	CONTROL VALVE TO OIL FILTER	161.25
61 FT. MODELS			
1	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE HYD WINCH	127
2	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE HYD WINCH	127
3	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO LH HYD WHEEL MOTOR	220
4	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO LH HYD WHEEL MOTOR	220
5	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO HYD PUMP	161
6	HOSE-8 X -8JIC X -8JIC	CONTROL VALVE TO OIL FILTER	200
7	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO LOWER HYD CYL PORT	185
8	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO UPPER HYD CYL PORT	217
9	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO RH HYD WHEEL MOTOR	102
10	HOSE-6 X -6JIC X -6JIC 90 ELBOW	CONTROL VALVE TO RH HYD WHEEL MOTOR	102
11	HOSE-6 X -6JIC X -6JIC	CONTROL VALVE TO HYD PUMP	161
12	HOSE-8 X -8JIC X -8JIC	CONTROL VALVE TO OIL FILTER	200

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OPERATION

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GENERAL INFORMATION

Pre - Operation Checklist

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

	WARNING
AVOID INJURY OR DEATH	
<p>Wear safety glasses to prevent eye injury when any of the following conditions exist:</p> <ul style="list-style-type: none"> • When fluids are under pressure. • Flying debris or loose material is present. • Engine is running. • Tools are being used. 	


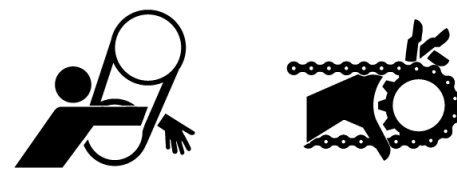
1. Lubricate the equipment per the schedule outline in the Maintenance Section.
2. Check the augers. Remove any material build-up or debris that has become entangled.
3. Make sure that all guards and shields are in place, secured and functioning as designed.

	WARNING
	
HIGH PRESSURE FLUID HAZARD	
<p>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.</p>	

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. (See Maintenance section).
8. Check the drive belt tension and alignment. Tension or align as required. (See Maintenance section).
9. Use only an engine of adequate power to operate the machine.

	WARNING
	
ROTATING PART HAZARD	
<p>To prevent serious injury or death from rotating parts:</p> <ul style="list-style-type: none"> • 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. 	

Break - In Checklist

There are no operational restrictions on the auger or auger mover when used for the first time. It is recommended that the following mechanical items be checked:

Before starting work:

1. Review the operator’s manual of the auger mover and power unit.

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 belt tension and alignment. Tension or align as required (See Maintenance section).
4. Check the condition of all hydraulic lines, hoses, fittings and couplers for damage or leaks.
5. Tighten leaking fittings and repair or replace any damaged components.
6. Check the condition of all electrical lines, wires, and connections. Repair or replace any damaged systems or components.
7. Check that all guards and shields are in place, secured and functioning as designed.


Gas Engine Requirements

The CX2 Series Conventional Auger Mover is designed to be used with an engine of appropriate power. The following horsepower specifications must be maintained when selecting an engine.

Figure 35

Auger	Minimum Horsepower Requirement	
	8" Tube	10" Tube
41'	16 hp	28 hp
51'	20 hp	32 hp
61'	24 hp	38 hp


WARNING




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.

ENTERING & LEAVING THE OPERATOR'S POSITION

Entering The Operator's Position

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

	<h1 style="margin: 0;">IMPORTANT</h1>
<p>Follow the instructions in your tractor's operation manual for the correct procedure.</p>	

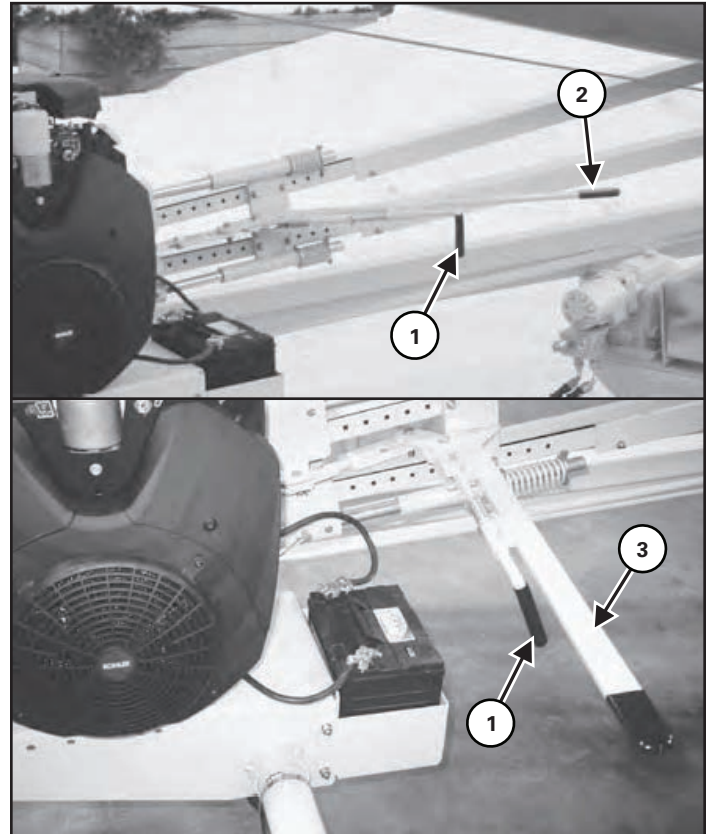
Leaving The Operator's Position

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

	<h1 style="margin: 0;">WARNING</h1>
<h2 style="margin: 0;">AVOID INJURY OR DEATH</h2>	
<p>Before you leave the operator's position:</p> <ul style="list-style-type: none"> 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. 	

GAS ENGINE BELT DRIVE

Figure 36



Release the lever lock (Item 1) [Figure 36].

Act on the lever to move the engine mounting platform to engage / disengage the drive system.

Move the lever (Item 2) towards the engine to engage the drive system [Figure 36].

Move the lever (Item 3) away from the engine to disengage the drive system [Figure 36].

Always lock the lever in either engaged or disengaged position.

	<h1 style="margin: 0;">IMPORTANT</h1>
<p>Review the engine manufacturer's operator manual for proper engine operation procedure.</p>	

MOVING AUGER

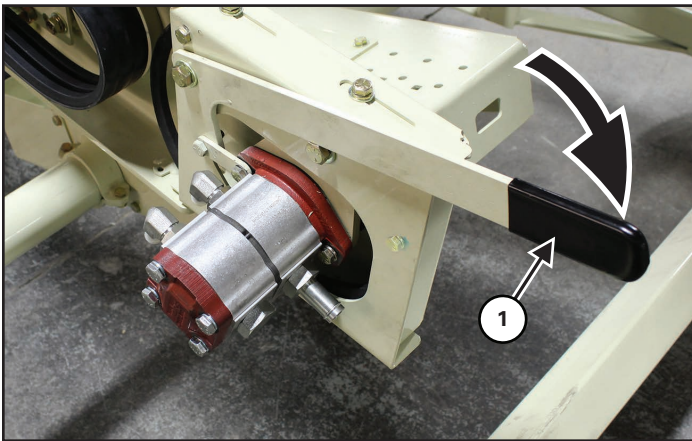
Clear the area of bystanders, especially small children, before starting.

Be sure there is enough clearance from overhead obstructions and power lines or other equipment.

Make sure all hydraulic connections are fully engaged.

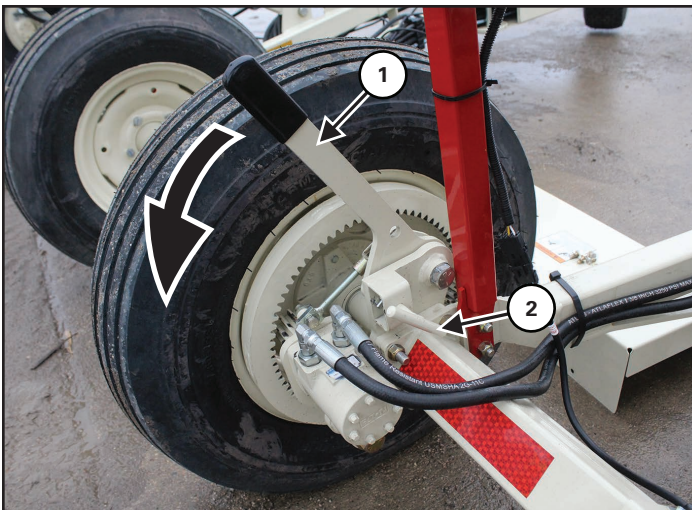
Start engine on auger mover.

Figure 37



Lower the lever (Item 1) to engage pump drive [Figure 37].

Figure 38



Act on the levers (Item 1) at each drive wheel. Lower the levers to engage the wheel motors [Figure 38].


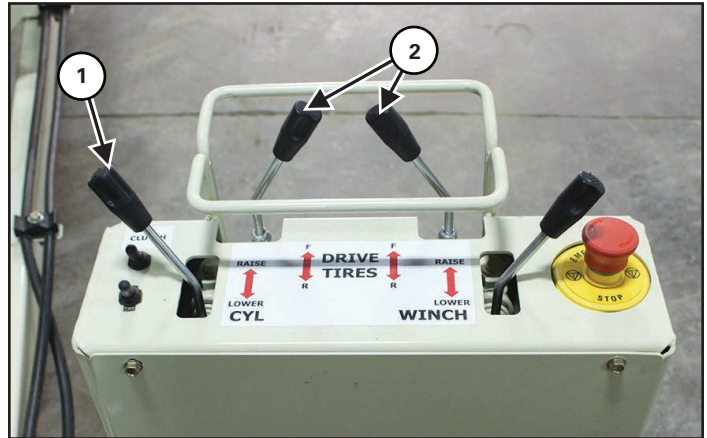
	<h1 style="margin: 0;">IMPORTANT</h1>
<p>The locking pin (Item 2) must always be in place, whether wheel motors are engaged or disengaged [Figure 38].</p>	

Figure 40



Act on the raise / lower cylinder lever (Item 1) at the control console. Use the control console to raise the auger intake off the ground [Figure 40].

Act on the forward / reverse drive tire levers (Item 2) at the control console. Use the control console to move the wheels [Figure 40].

	<h1 style="margin: 0;">IMPORTANT</h1>
<p>Do not move the auger while in the fully raised position.</p>	


	<h1 style="margin: 0;">WARNING</h1>
<p>Keep wheels of undercarriage level and on firm ground while moving the auger.</p> <p>Be aware of any obstructions in the line of travel of the auger.</p>	

Figure 41



Lock the caster wheel using the locking pin (Item 1) when traveling in a straight direction [Figure 41].

Unlock the caster wheel to allow for turning.

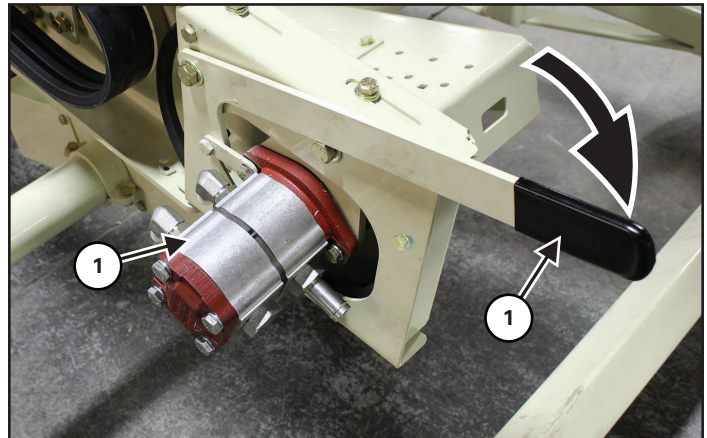
RAISING / LOWERING AUGER

Clear the area of bystanders, especially small children, before starting.

Be sure there is enough clearance from overhead obstructions and power lines or other equipment.

Start engine on auger mover.

Figure 42



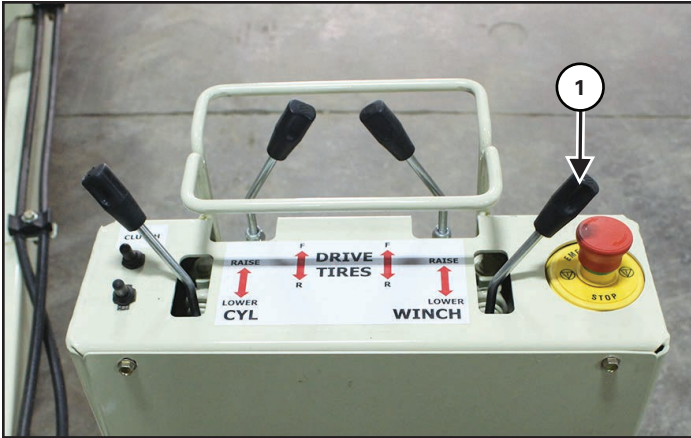
Lower the lever (Item 1) to engage pump drive [Figure 42].

Place chocks in the front and rear of each wheel.

	<p>IMPORTANT</p>
<p>Do not move the auger while in the fully raised position.</p>	


Hydraulic Winch


Figure 44



Make sure all hydraulic connections are fully engaged.


Act on the raise / lower winch lever (Item 1) at the control console. Use the control console to raise the auger discharge [Figure 44].

	<h2 style="margin: 0;">WARNING</h2>
<p>Never attempt to raise or lower the auger during operation.</p> <p>Never place blocks under the wheels to increase the elevation of auger.</p> <p>Keep wheels of undercarriage level and on firm ground.</p>	

	<h2 style="margin: 0;">DANGER</h2>
<p style="text-align: center;">ELECTROCUTION HAZARD</p> <p>To prevent serious injury or death from electrocution:</p> <ul style="list-style-type: none"> • Be aware of overhead power lines. • Electrocution can occur without direct contact. 	

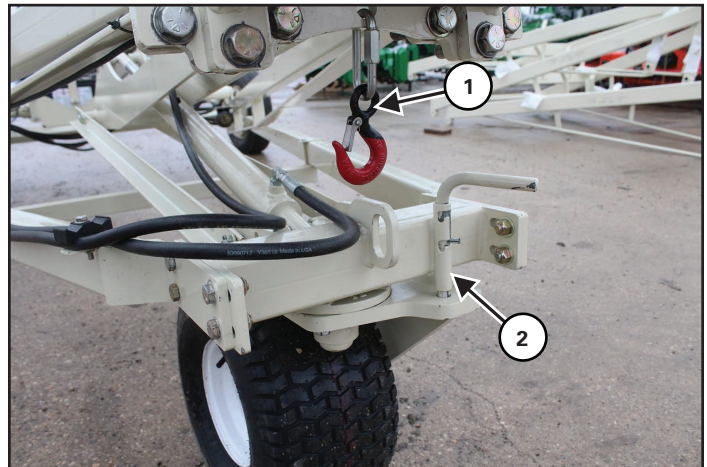
TRANSPORTING

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

	<h2 style="margin: 0;">IMPORTANT</h2>
<p>Never exceed 20 mph (32 kph).</p>	

	<h2 style="margin: 0;">WARNING</h2>
<p>Use of an unapproved hitch or tractor / tow vehicle can result in loss of control, leading to serious injury or death.</p> <p>Tractor / tow vehicle and hitch must have the rated capacity to tow equipment.</p>	

Figure 43

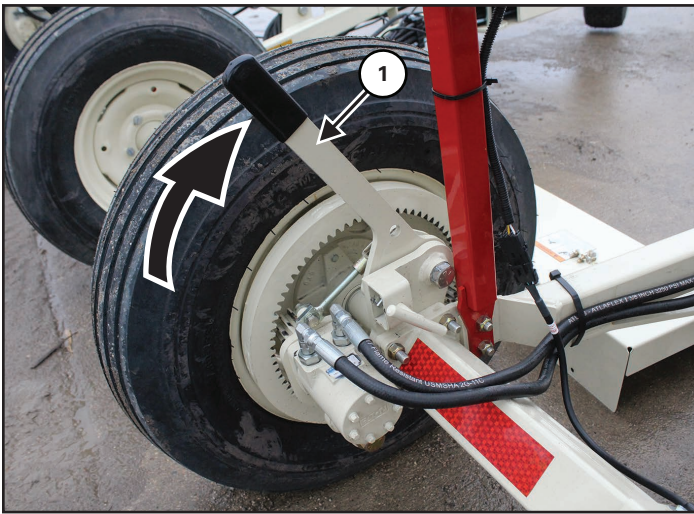


Fully raise the caster wheel off the ground (see Raising / Lowering Auger on page 41).

Secure the caster wheel to the lift frame using the transport chain (Item 1) [Figure 43].

Secure the locking pin (Item 2) to keep the caster wheel stationary during transport.

Figure 45



Raise both levers (Item 1) for each drive wheel to disengage the motors [Figure 45].

	WARNING
<p>Make sure both drive wheels are disengaged before transporting the equipment or risk damage to hydraulic system.</p>	

Verify that the tractor / tow vehicle is 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.

	WARNING
<p>AVOID SERIOUS INJURY OR DEATH DO NOT transport loaded equipment on public roadways. Excess weight will greatly increase tractor stopping distance and may cause the operator to lose control of the tractor or tow vehicle.</p>	

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.

Maximum Travel Speed	Weight Ratio
20 mph (32 kph)	Less than 1 to 1
10 mph (16 kph)	Less than 2 to 1
DO NOT TOW	More than 2 to 1

Farm King



MAINTENANCE


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TROUBLESHOOTING

Chart

	<h1>WARNING</h1>
<p>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.</p>	

NOTE: 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.

PROBLEM	CAUSE	CORRECTION
No mover functions can be used.	No power.	Start engine and engage pump.
	Drive belt slipping.	Adjust drive belt tension.
	Plugged filter.	Change oil filter.
	Low oil level.	Add oil to reservoir.
Wheel(s) don't move.	Wheel drive linkage not engaged.	Engage wheel drive.
	Drive gears don't mesh.	Adjust linkage to allow gears to mesh.
Intake digs into ground.	Front wheel does not lower.	Anchor chain still in place.

SERVICE SCHEDULE

Maintenance Intervals

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

	WARNING
---	---------

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

#	DESCRIPTION	SERVICE PROCEDURES					
		Check	Clean	Lube	Change	Cover	Repack
Weekly (or every 50 hours)							
1	Pump Drive Belt Tension	•					
Every 100 hours							
2	Hydraulic Winch Gearbox	•					
Annually (or every 400 hours)							
3	Wheel Bearings						•
4	Machine		•				
Two Years (or every 400 hours)							
5	Gearbox Oil (Hydraulic Winch)				•		
6	Hydraulic System Oil Filter				•		

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.

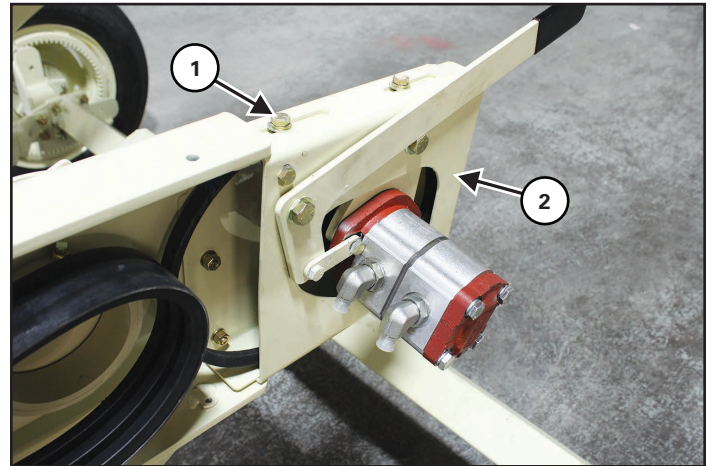


IMPORTANT

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

HYDRAULIC PUMP BELT TENSION / ALIGNMENT

Figure 46



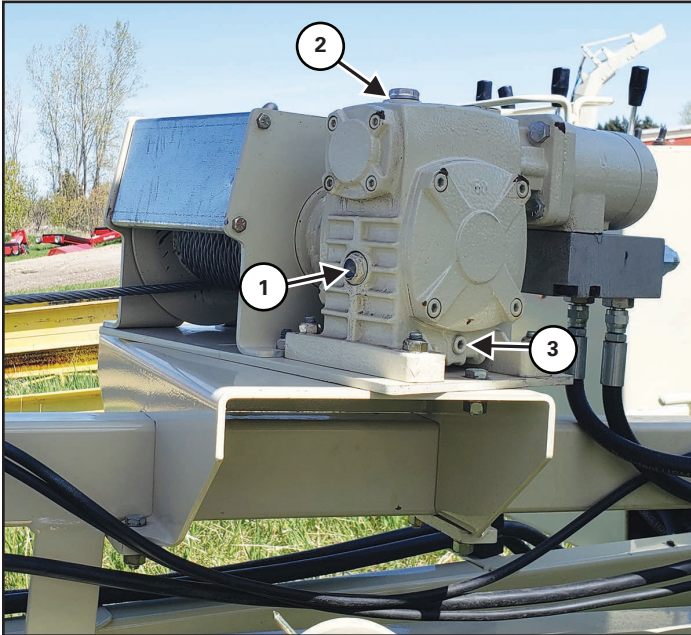
Loosen the four 3/8" x 1" hex bolts (Item 1) from the hydraulic pump mounting bracket [Figure 46].

Move the bracket (Item 2) forward or backward to slightly adjust tension on the belt [Figure 46].

Tighten the bracket hardware.

HYDRAULIC WINCH GEARBOX

Figure 47



Check the oil level by removing the level plug (Item 1). The oil should just fill the threads of level plug [Figure 47].

Fill the gearbox by removing the fill plug (Item 2). Add oil as required [Figure 47].

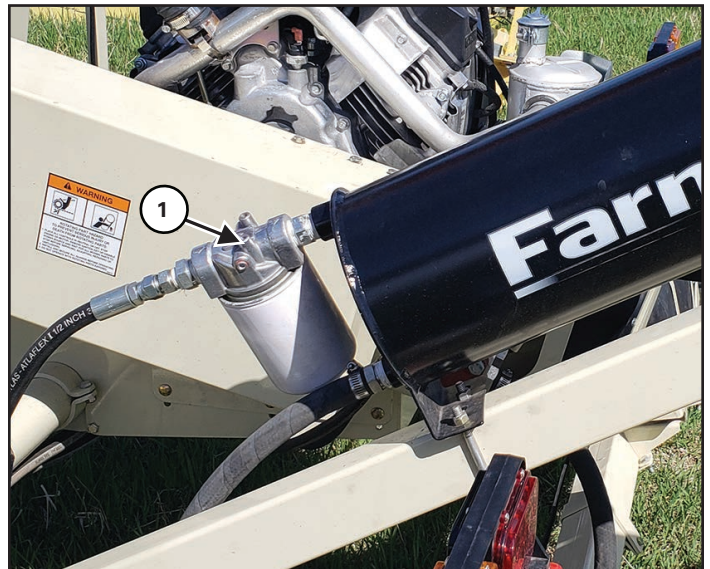
Use SAE 85W140 gear oil or equivalent.

Drain oil from the gearbox by removing the drain plug (Item 3). Make sure the breather is open [Figure 47].

Reinstall and tighten all plugs when finished.

HYDRAULIC OIL FILTER

Figure 48



Replace the oil filter (Item 1) [Figure 48].

Apply a light film of oil to the o-ring on the new filter. Hand tighten the new filter.

Run the hydraulic system for 1- 2 minutes and check for leaks around the filter.

Tighten the filter slightly to stop any leaks.

Check hydraulic system oil level. Top up as required.



IMPORTANT

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

AXLES

Wheel Nut Torque

!	IMPORTANT
<p>Check Wheel Nuts After:</p> <ol style="list-style-type: none"> 1. First 3 (three) hours of field operation. 2. First 10 (ten) hours of field operation. 3. First 50 (fifty) hours of field operation. 4. Every 200 (two hundred) hours of operation. <p>REPEAT PROCEDURE IF A WHEEL IS REMOVED OR REINSTALLED</p>	

Tighten wheel bolts to proper torque.

Tire / Wheel Replacement

Periodically check tires for cuts, bulges and damaged rims.

!	WARNING
<p>AVOID INJURY OR DEATH</p> <p>Before you leave the operator's position:</p> <ul style="list-style-type: none"> • Always park on a flat level surface. • Place all controls in NEUTRAL. • Engage the park brake. • Stop the engine and remove the key. • Wait for all moving parts to stop. 	

Park the tractor / equipment on a flat level surface.

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

!	WARNING
<p>AVOID INJURY OR DEATH</p> <p>Always chock tires before performing any maintenance or service.</p>	

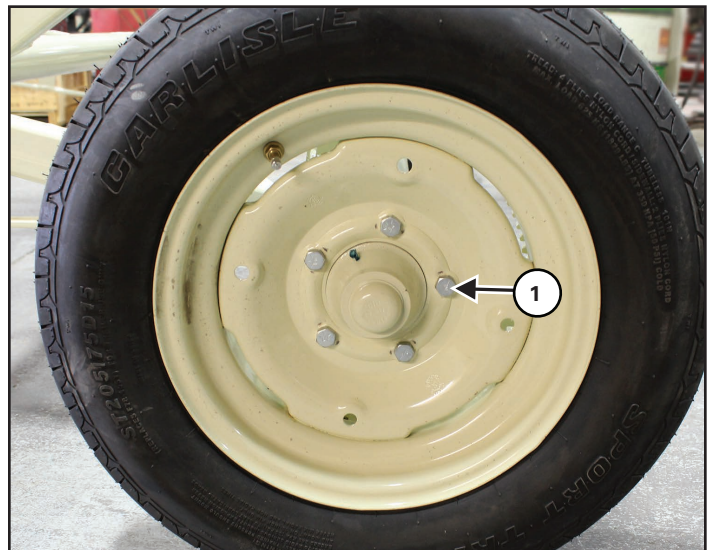
Place chock blocks behind and in front of the opposite tire to be removed.

Raise axle frame with jack until the tire / wheel is slightly off the ground.

NOTE: Place blocks / stands under the frame to secure the equipment when tire / wheel is raised off the ground.

Remove the five wheel nuts and tire assembly.

Figure 49



Install the new tire with the valve stem facing out. Reinstall five wheel bolts (Items 1) [Figure 49]. Tighten wheel bolts in a criss-cross pattern.

Torque wheel bolts to 72 ft-lbs.

Lower tire / wheel assembly to the ground.

After tightening the wheel bolts, pull the equipment approximately one (1) mile and re-tighten the wheel bolts to proper torque.

Tire Pressure

	CAUTION
	
<p>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.</p>	

Check tire pressure daily. Fill tires per tire manufacturer's recommendation. See side wall of tire for inflation requirements.

SAFETY SIGN (DECAL) INSTALLATION

	IMPORTANT
<p>When replacing safety signs (decals), the temperature must be above 10° C (50° F).</p>	

- 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.

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.



- Connect to a tractor and operate equipment, verify all functions operate correctly.
- Check for leaks. Repair as needed.

- 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.

- Place the equipment flat on the ground.

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.

Farm King



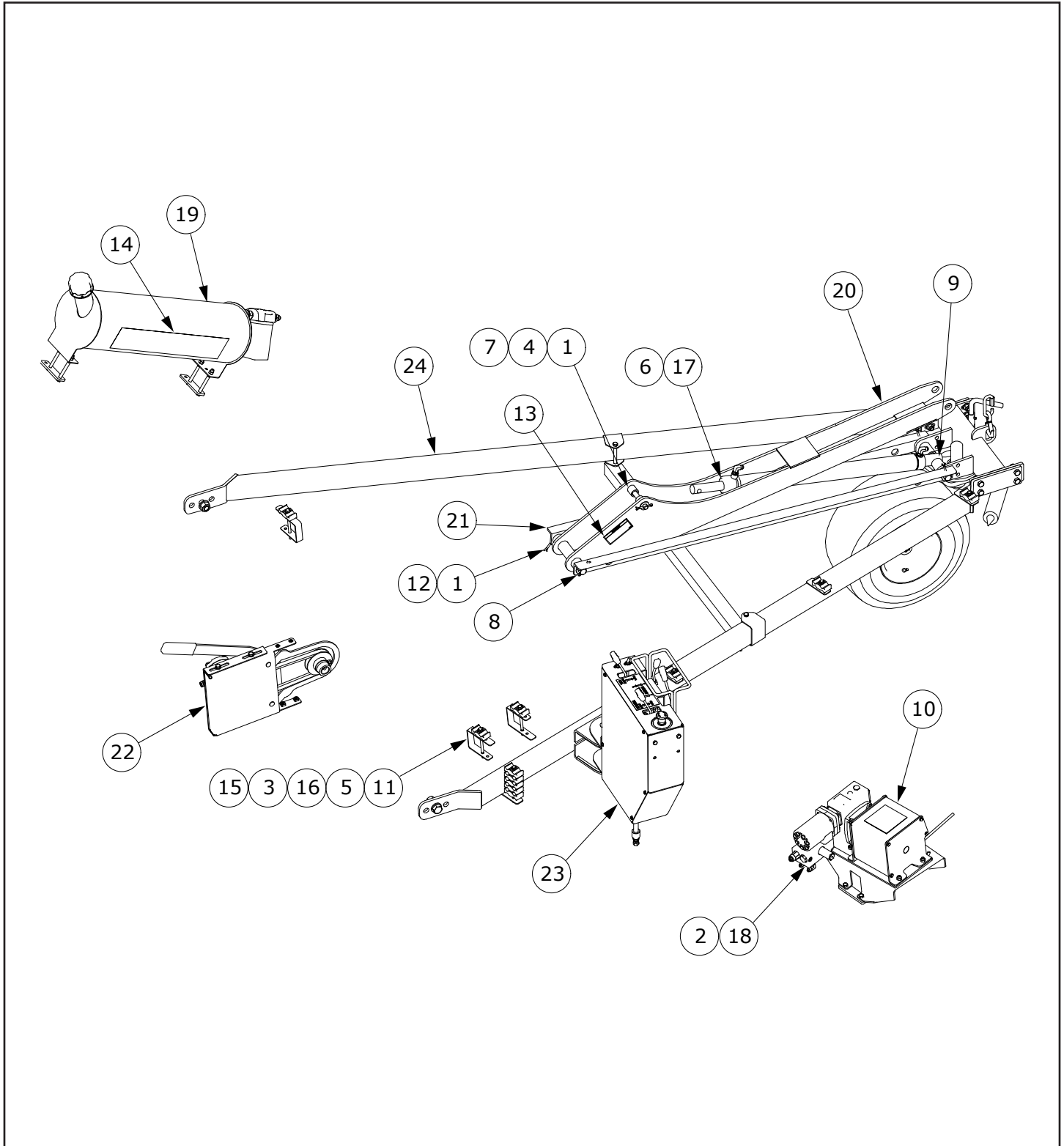
PARTS IDENTIFICATION

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GENERAL PARTS INFORMATION

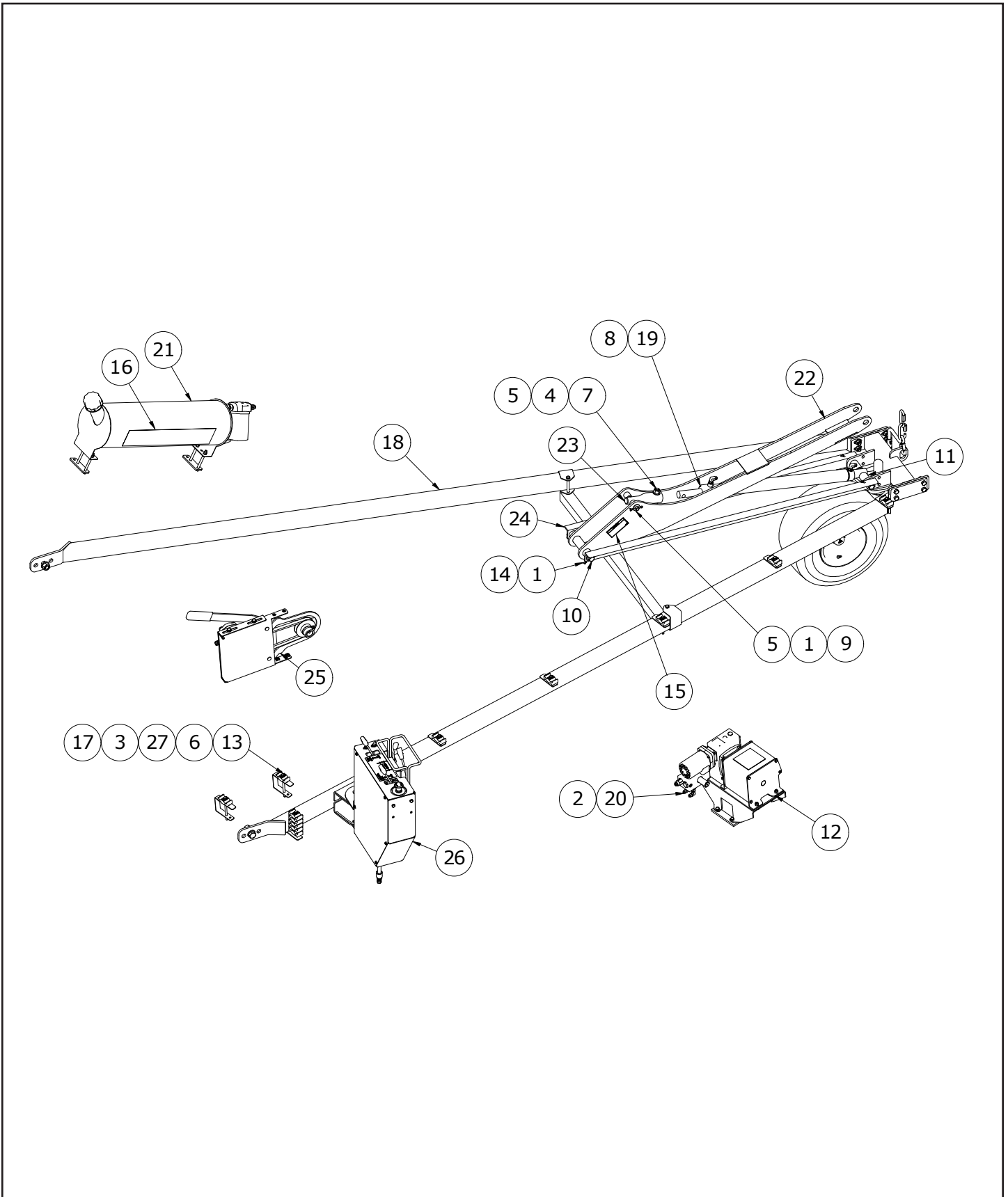
The parts identification section list descriptions, part numbers and quantities for all North America Base Model CX2 series augers. Contact your Farm King dealer for additional parts information.

MOVER MAIN ASSEMBLY - 41 FT., 51 FT.



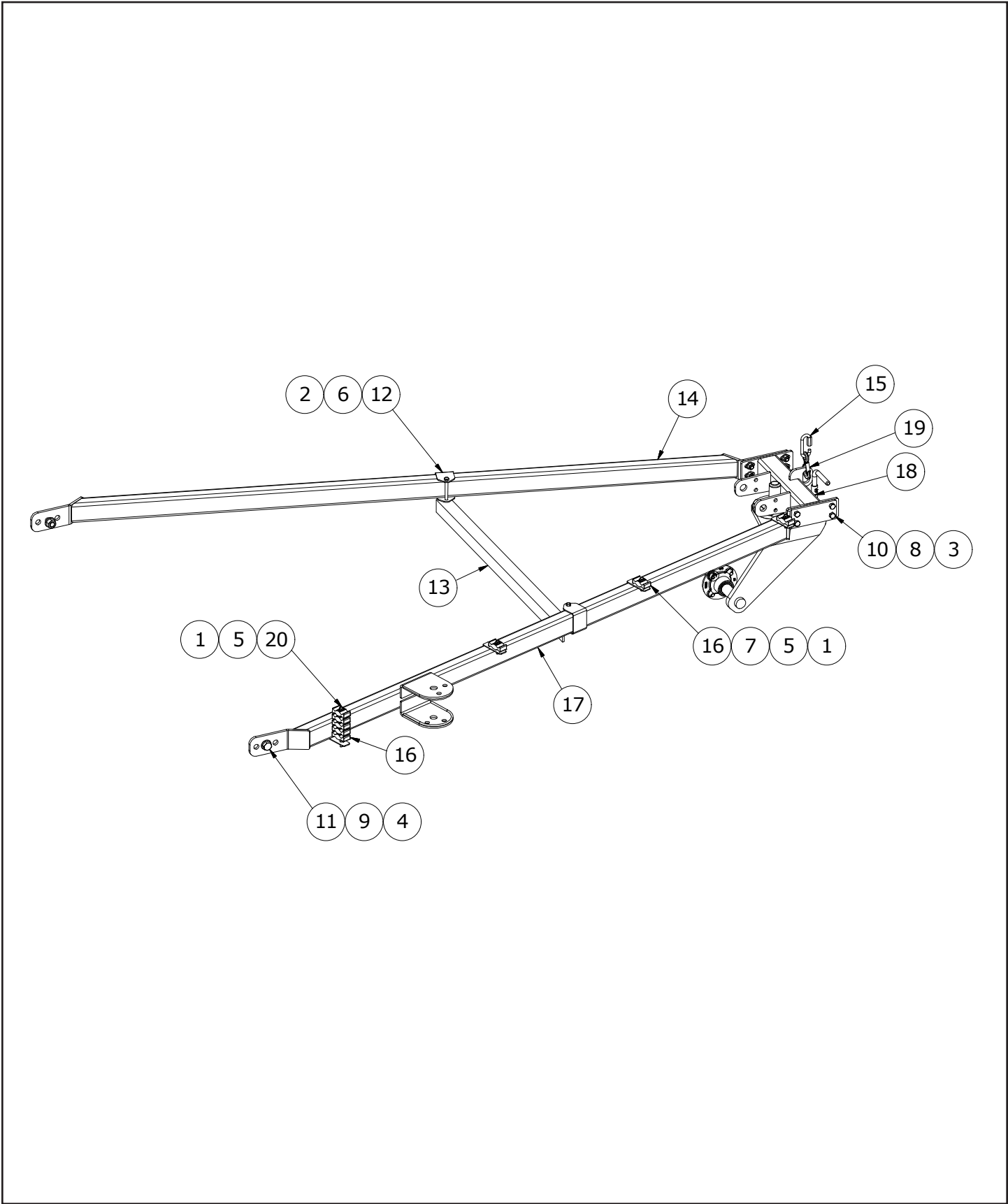
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81207	3/16" X 2" COTTER PIN (BR)	6
2	812107	ADAPTOR STR 3/4MORB X 9/16MJI	2
3	812362	5/16" LOCK NUT (PL)	3
4	812639	WASHER 0.625 SAE FLAT BS PL	2
5	81546	5/16" FLAT WASHER (PL)	3
6	910262	FTG-6MORBX-6MJIC 90 DEG ELBOW	2
7	913300	PIN-0.625X5.51	1
8	913312	PIN-1.00X8.82	2
9	913313	SPACER-1.02	2
10	F2593	HYDRAULIC WINCH, 2" TUBE BRACKET	1
11	967198	5/16" X 5" HEX BOLT (PL)	3
12	967140	1" X 10GA NARROW RIM WASH (PL)	4
13	966700	DECAL CAUTION, NO RIDERS	2
14	934957	DECAL - FARM KING	2
15	933429	BRKT - CLAMP MOUNT	3
16	931881	CLAMP-TWIN	3
17	916438	CYLINDER-2.00" DIA, 36.75 TO 63.25	1
18	919398	ELBOW-6 FJIC X - 6 MJIC, 90°	2
19	924094	ASSY-OIL TANK	1
20	927228	WELDT-LIFTING ARM CX MOVER	1
21	928777	MOVER LOWER LIFT ARM	2
22	930867	ASSY-MOVER PUMP	1
23	931624	ASSY-CONTROL CONSOLE	1
24	932234	ASSY-41 MOVER ARMS	1
	931625	ASSY-51 MOVER ARMS	1
*	967103	TIE 30"	16

MOVER MAIN ASSEMBLY - 61 FT.



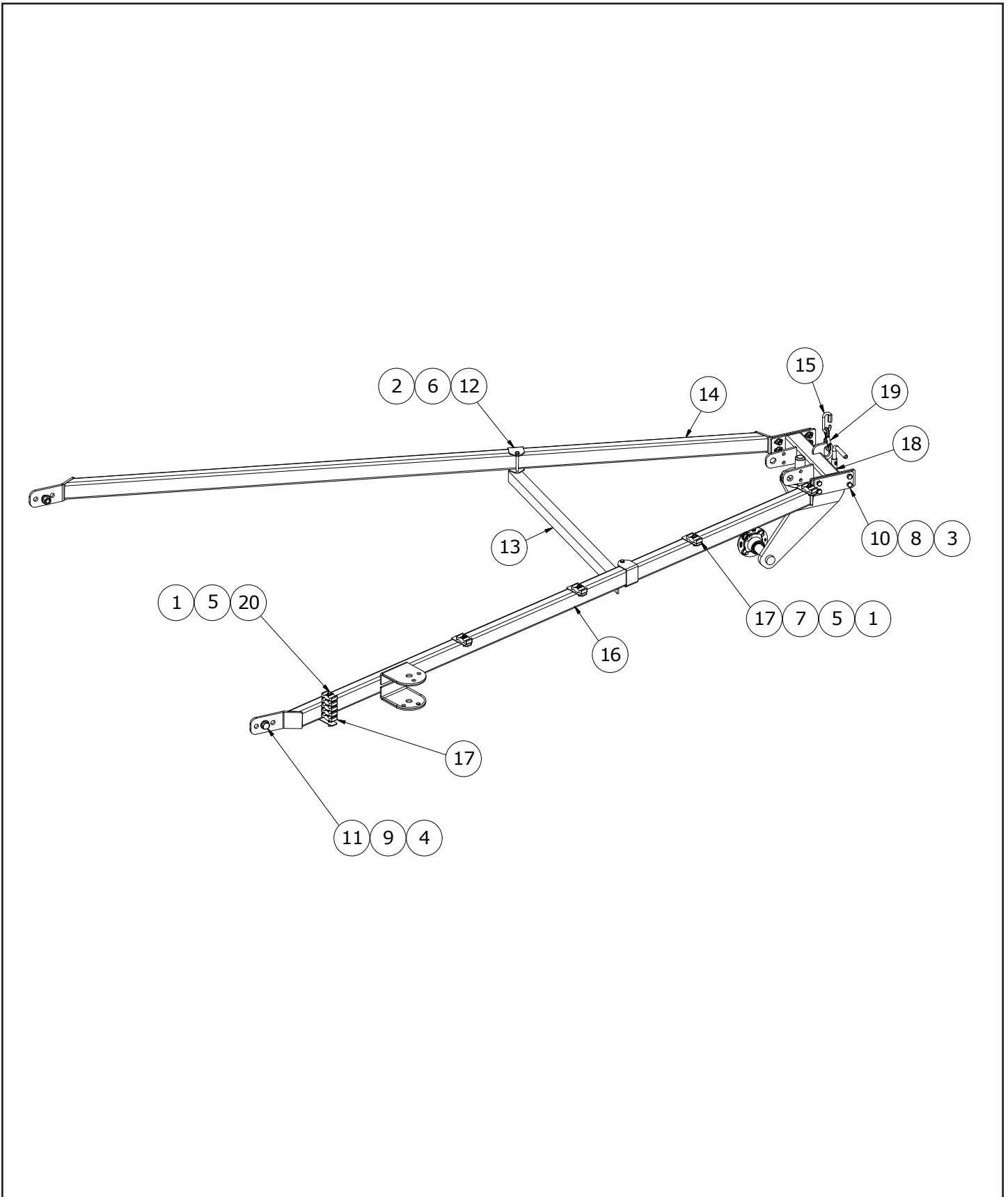
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81207	3/16" X 2" COTTER PIN (BR)	6
2	812107	ADAPTOR STR 3/4MORB X 9/16MJI	2
3	812362	5/16" LOCK NUT (PL)	3
4	812482	5/8" LOCK NUT (PL)	1
5	812639	WASHER 0.625 SAE FLAT BS PL	4
6	81546	5/16" FLAT WASHER (PL)	3
7	84289	5/8" X 3" HEX BOLT GR.5 (PL)	1
8	910262	FTG-6MORBX-6MJIC 90 DEG ELBOW	2
9	913300	PIN-0.625X5.51	1
10	913312	PIN-1.00X8.82	2
11	913313	SPACER-1.02	2
12	F1491	HYDRAULIC WINCH, 3" TUBE BRACKET	1
13	967198	5/16" X 5" HEX BOLT (PL)	3
14	967140	1" X 10GA NARROW RIM WASH (PL)	4
15	966700	DECAL CAUTION, NO RIDERS	2
16	934957	DECAL - FARM KING	2
17	933429	BRKT - CLAMP MOUNT	3
18	932231	ASSY-1061 MOVER ARMS	1
19	916438	CYLINDER-2.00" DIA, 36.75 TO 63.25	1
20	919398	ELBOW-6 FJIC X - 6 MJIC, 90°	2
21	924094	ASSY-OIL TANK	1
22	927228	WELDT-LIFTING ARM CX MOVER	1
23	927283	CYLINDER STROKE EXTENDER	1
24	928883	MOVER LOWER LIFT ARM	2
25	930867	ASSY-MOVER PUMP	1
26	931624	ASSY-CONTROL CONSOLE	1
27	931881	CLAMP-TWIN	3
*	967103	TIE 30"	16

MOVER ARMS - 41 FT.



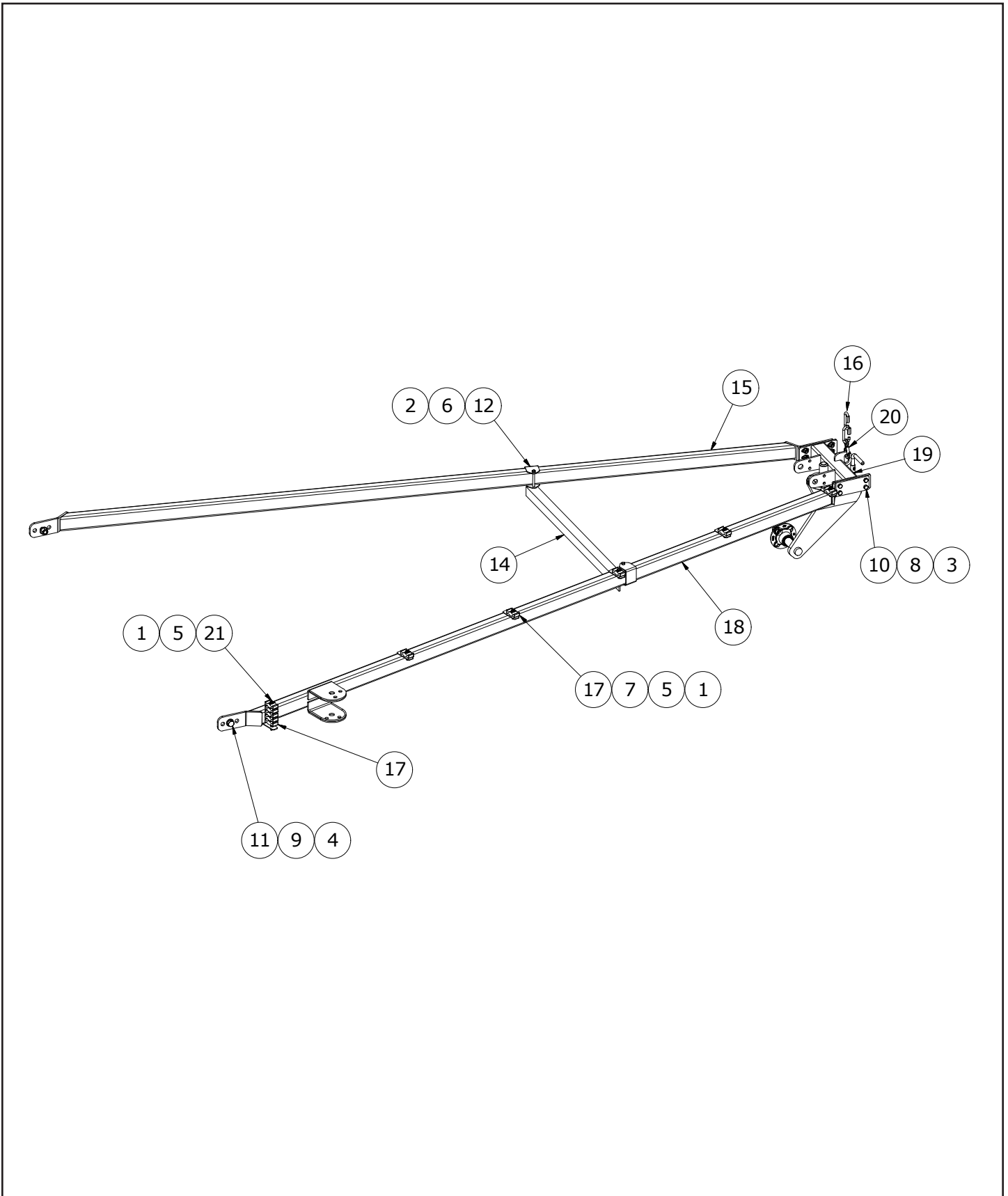
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812362	5/16" LOCK NUT (PL)	4
2	812363	3/8" LOCK NUT (PL)	2
3	812364	1/2" LOCK NUT (PL)	8
4	812365	3/4" LOCK NUT (PL)	2
5	81546	5/16" FLAT WASHER (PL)	4
6	81588	3/8" X 4 1/2" HEX BOLT (PL)	2
7	81925	HEX BOLT 5/16" X 1 3/4" (PL)	3
8	84048	1/2" SAE FLAT WASHER (PL)	8
9	84050	3/4" S.A.E. FLAT WASHER (PL)	4
10	84277	1/2" X 1 1/2" HEX BOLT (PL)	8
11	84467	3/4" X 2" HEX BOLT (PL)	2
12	912443	CROSS BRACE CLAMP	2
13	913275	ANGLE-MOVER ARM REST	1
14	913598	WELDT-MOVER 41 FT	1
15	930966	THREADED CONNECTING LINK	1
16	931881	CLAMP-TWIN	8
17	932235	WELDT-MOVER 41 FT	1
18	932688	ASSY-MOVER PIVOT CASTOR	1
19	960041	HOOK WITH LATCH	1
20	967199	5/16" X 6" HEX BOLT (PL)	1

MOVER ARMS - 51 FT.



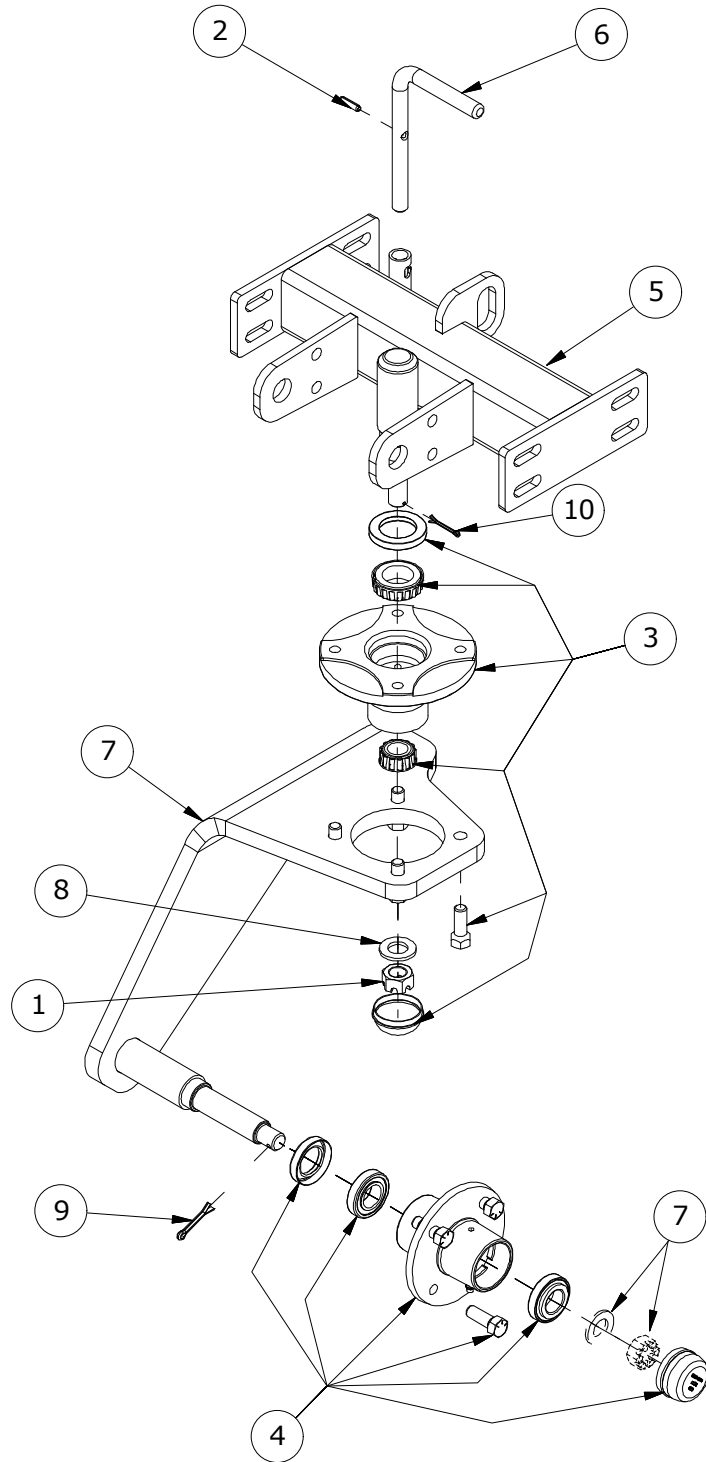
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812362	5/16" LOCK NUT (PL)	5
2	812363	3/8" LOCK NUT (PL)	2
3	812364	1/2" LOCK NUT (PL)	8
4	812365	3/4" LOCK NUT (PL)	2
5	81546	5/16" FLAT WASHER (PL)	5
6	81588	3/8" X 4 1/2" HEX BOLT (PL)	2
7	81925	HEX BOLT 5/16" X 1 3/4" (PL)	4
8	84048	1/2" SAE FLAT WASHER (PL)	8
9	84050	3/4" S.A.E. FLAT WASHER (PL)	4
10	84277	1/2" X 1 1/2" HEX BOLT (PL)	8
11	84467	3/4" X 2" HEX BOLT (PL)	2
12	912443	CROSS BRACE CLAMP	2
13	913275	ANGLE-MOVER ARM REST	1
14	913498	WELDT-MOVER 51 FT	1
15	930966	THREADED CONNECTING LINK	1
16	931626	WELDT-MOVER 51 FT	1
17	931881	CLAMP-TWIN	9
18	932688	ASSY-MOVER PIVOT CASTOR	1
19	960041	HOOK WITH LATCH	1
20	967199	5/16" X 6" HEX BOLT (PL)	1

MOVER ARMS - 61 FT.



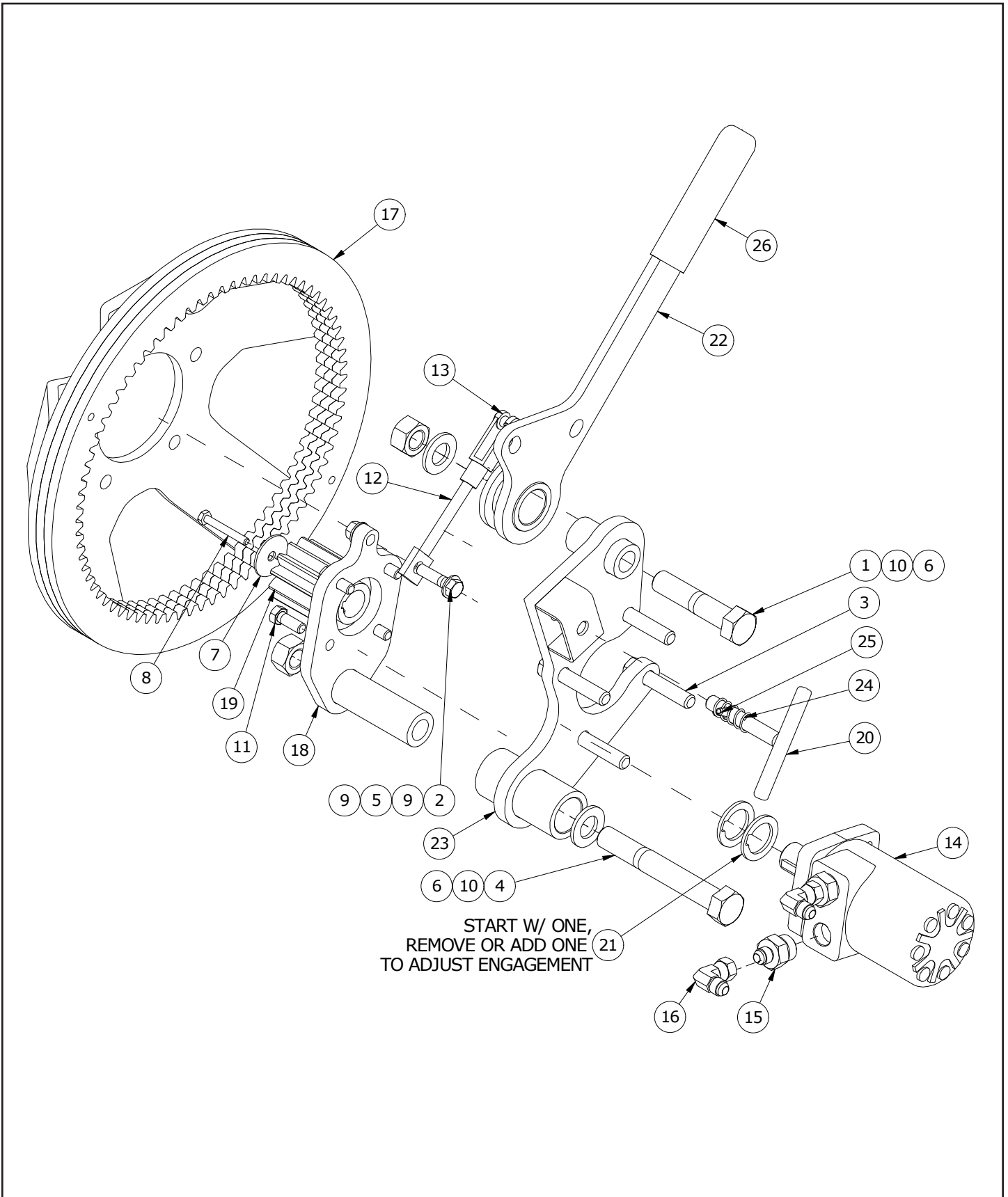
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812362	5/16" LOCK NUT (PL)	6
2	812363	3/8" LOCK NUT (PL)	2
3	812364	1/2" LOCK NUT (PL)	8
4	812365	3/4" LOCK NUT (PL)	2
5	81546	5/16" FLAT WASHER (PL)	6
6	81588	3/8" X 4 1/2" HEX BOLT (PL)	2
7	81925	HEX BOLT 5/16" X 1 3/4" (PL)	5
8	84048	1/2" SAE FLAT WASHER (PL)	8
9	84050	3/4" S.A.E. FLAT WASHER (PL)	4
10	84277	1/2" X 1 1/2" HEX BOLT (PL)	8
11	84467	3/4" X 2" HEX BOLT (PL)	2
12	912443	CROSS BRACE CLAMP	2
14	913275	ANGLE-MOVER ARM REST	1
15	913643	WELDT-MOVER 61 FT	1
16	930966	THREADED CONNECTING LINK	2
17	931881	CLAMP-TWIN	10
18	932232	WELDT-MOVER 61 FT	1
19	932688	ASSY-MOVER PIVOT CASTOR	1
20	960041	HOOK WITH LATCH	1
21	967199	5/16" X 6" HEX BOLT (PL)	1

MOVER PIVOT CASTOR



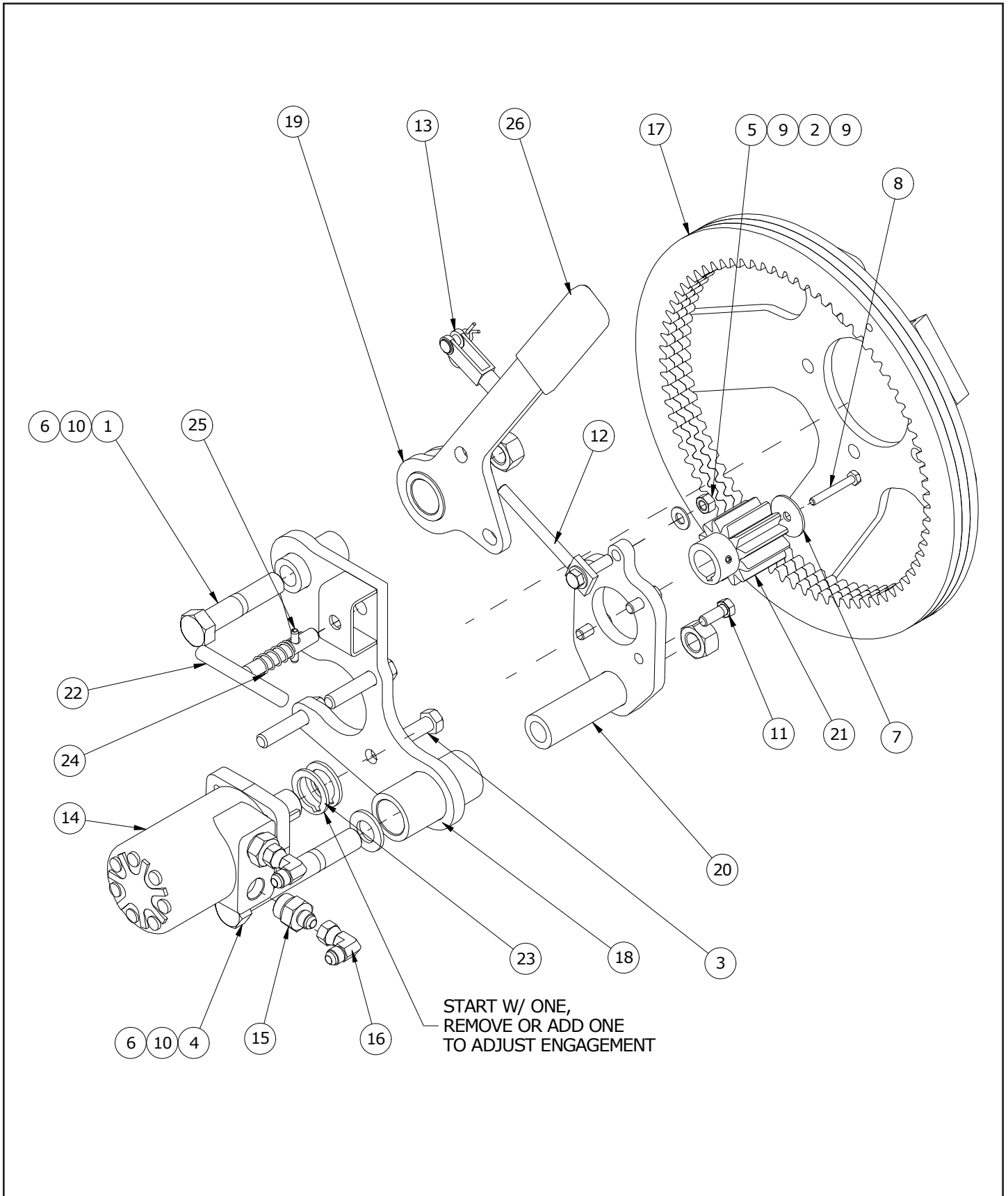
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81834	3/4" SLOTTED HEX NUT	1
2	84030	1/4 SLOTTED SPRING PIN X 1" LG	1
3	9105173	HUB CTD H411 COMPLETE ASSY	1
4	913148	HUB-4 ON 4	1
5	932687	WELDT-MOVER FRONT	1
6	933872	ROD - LOCKING PIN	1
7	933875	WELDT-CASTOR	1
8	9812416	3/4" FLAT WASHER (BR)	1
9	9812433	3/16" X 1 1/2" COTTER PIN	1
10	9812486	1/8" X 1 1/2" COTTER PIN (BR)	1

MOVER WHEEL - LEFT



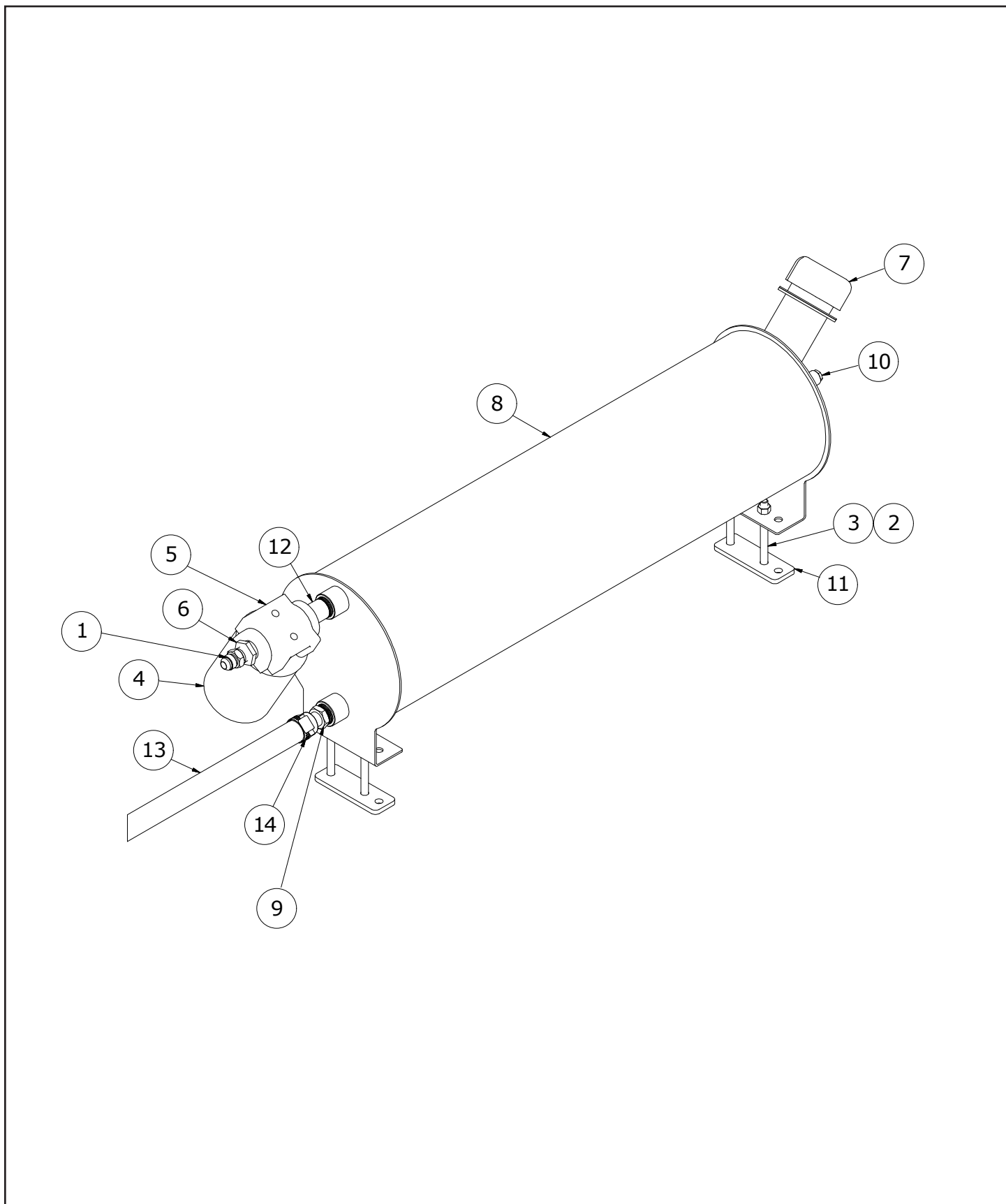
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	810149	3/4" X 3 1/2" HEX BOLT (PL)	1
2	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	1
3	811796	1/2" X 2 1/2" HEX BOLT GR5 (PL)	4
4	812114	3/4" X 5 1/2" HEX BOLT (PL)	1
5	812363	3/8" LOCK NUT (PL)	1
6	812365	3/4" LOCK NUT (PL)	2
7	813748	WASHER, FENDER, 1 1/2"OD X 5/16"ID (PL)	1
8	81531	BOLT HEX 0.25NC X 2.00 GR5 PL	1
9	84039	WASHER - 3/8" SAE FLAT (PL)	2
10	84050	3/4" S.A.E. FLAT WASHER (PL)	2
11	86170	3/8" X 1" HEX BOLT GR.5 (PL)	4
12	903590	CHAIN TIGHTENER ROD WELDMENT	1
13	905043	CLEVIS YOKE W/ PIN & COT PIN	1
14	910245	HYD MOTOR EATON 101-1011-009	1
15	913557	ADAPTER-10 MORB X -6 MJIC	2
16	919398	ELBOW-6 FJIC X - 6 MJIC, 90°	2
17	933793	WELDT-RING GEAR	1
18	933811	WELDT-MOTOR MOUNT	1
19	934645	GEAR-12 TH, 20 DEG, 6 DP	1
20	933821	T-HANDLE PIN	1
21	933823L	SPACER-MOVER DRIVE	2
22	934647	WELDT- LEFT HANDLE	1
23	934648	WELDT-LH DRIVE BASE	1
24	973280	SPRING - 0.062"T X 0.310"P X 1.380"L	1
25	9812425	1/4" X 1 1/4" SPRING PIN (PL)	1
26	JDCW25634	RUBBER GRIP	1

MOVER WHEEL - RIGHT



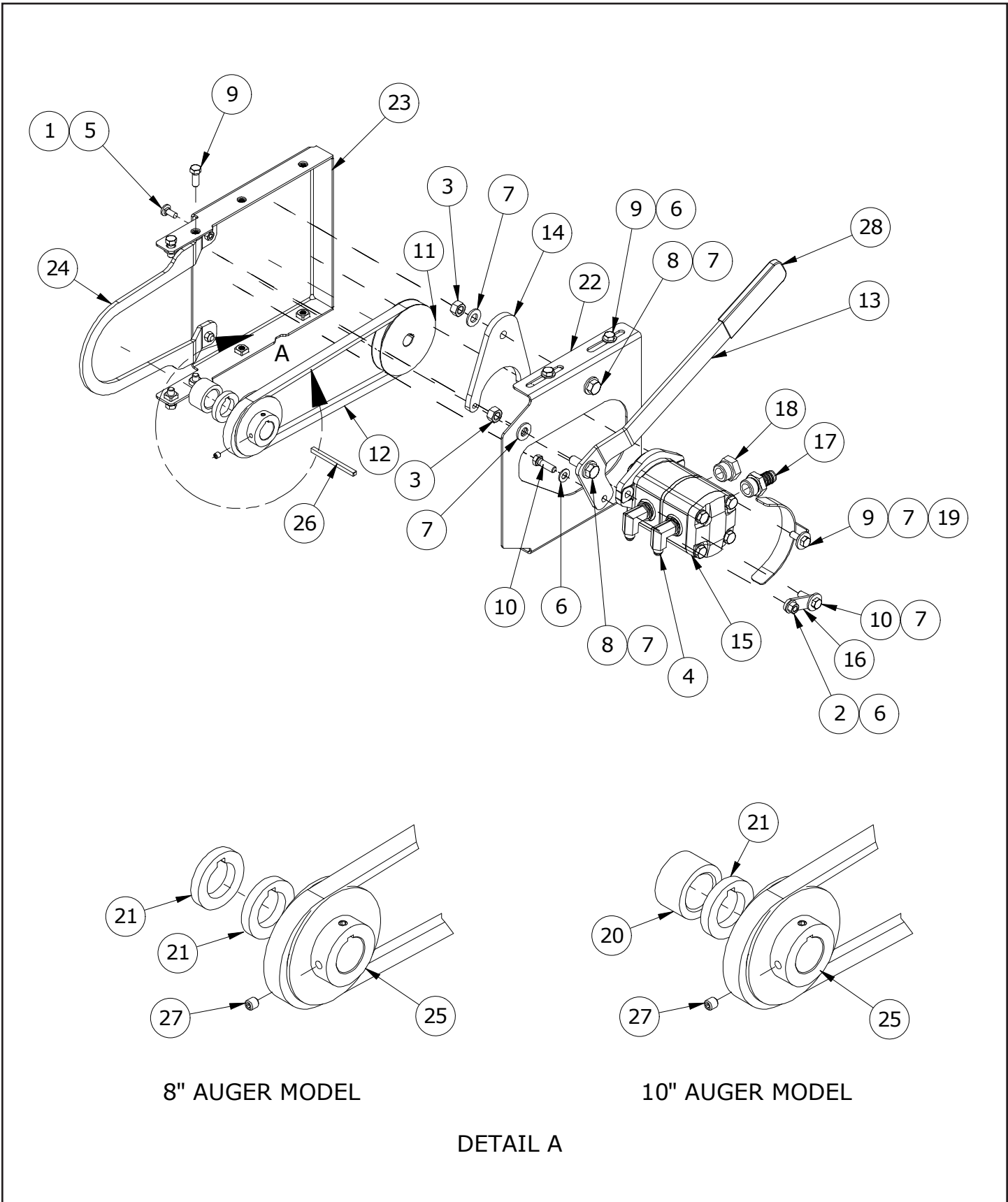
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	810149	3/4" X 3 1/2" HEX BOLT (PL)	1
2	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	1
3	811796	1/2" X 2 1/2" HEX BOLT GR5 (PL)	4
4	812114	3/4" X 5 1/2" HEX BOLT (PL)	1
5	812363	3/8" LOCK NUT (PL)	1
6	812365	3/4" LOCK NUT (PL)	2
7	813748	WASHER, FENDER, 1 1/2"OD X 5/16"ID (PL)	1
8	81531	BOLT HEX 0.25NC X 2.00 GR5 PL	1
9	84039	WASHER - 3/8" SAE FLAT (PL)	2
10	84050	3/4" S.A.E. FLAT WASHER (PL)	2
11	86170	3/8" X 1" HEX BOLT GR.5 (PL)	4
12	903590	CHAIN TIGHTENER ROD WELDMENT	1
13	905043	CLEVIS YOKE W/ PIN & COT PIN	1
14	910245	HYD MOTOR EATON 101-1011-009	1
15	913557	ADAPTER-10 MORB X -6 MJIC	2
16	919398	ELBOW-6 FJIC X - 6 MJIC, 90°	2
17	933793	WELDT-RING GEAR	1
18	933801	WELDT-RH DRIVE BASE	1
19	933803	WELDT-RIGHT HANDLE	1
20	933811	WELDT-MOTOR MOUNT	1
21	934645	GEAR-12 TH, 20 DEG, 6 DP	1
22	933821	T-HANDLE PIN	1
23	933823L	SPACER-MOVER DRIVE	2
24	973280	SPRING - 0.062"T X 0.310"P X 1.380"L	1
25	9812425	1/4" X 1 1/4" SPRING PIN (PL)	1
26	JDCW25634	RUBBER GRIP	1

OIL TANK



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811422	ADAPTER - 1/2 MNPT X 3/4 MJIC	1
2	812363	3/8" LOCK NUT (PL)	4
3	81587	3/8" X 4" HEX BOLT (PL)	4
4	910202	10 MICRON OIL FILTER	1
5	910212	FILTER HEAD	1
6	910442	REDUCER, 3/4"MNPT X 1/2"FNPT	1
7	913565	FILL CAP-3.14", TANK	1
8	913568	WELDT-TANK CA	1
9	913571	ADAPTER-12 MPT X -12 HOSE BARB	1
10	913582	PLUG-4 MPT HEX	1
11	913590L	PLATE-TANK MOUNT	2
12	913695	NIPPLE-12 MPT X 2.5"	1
13	913758	HOSE-12 SUCTION	1
14	914220	CLAMP-BAND HOSE, .563" - 1.25"	2

MOVER PUMP

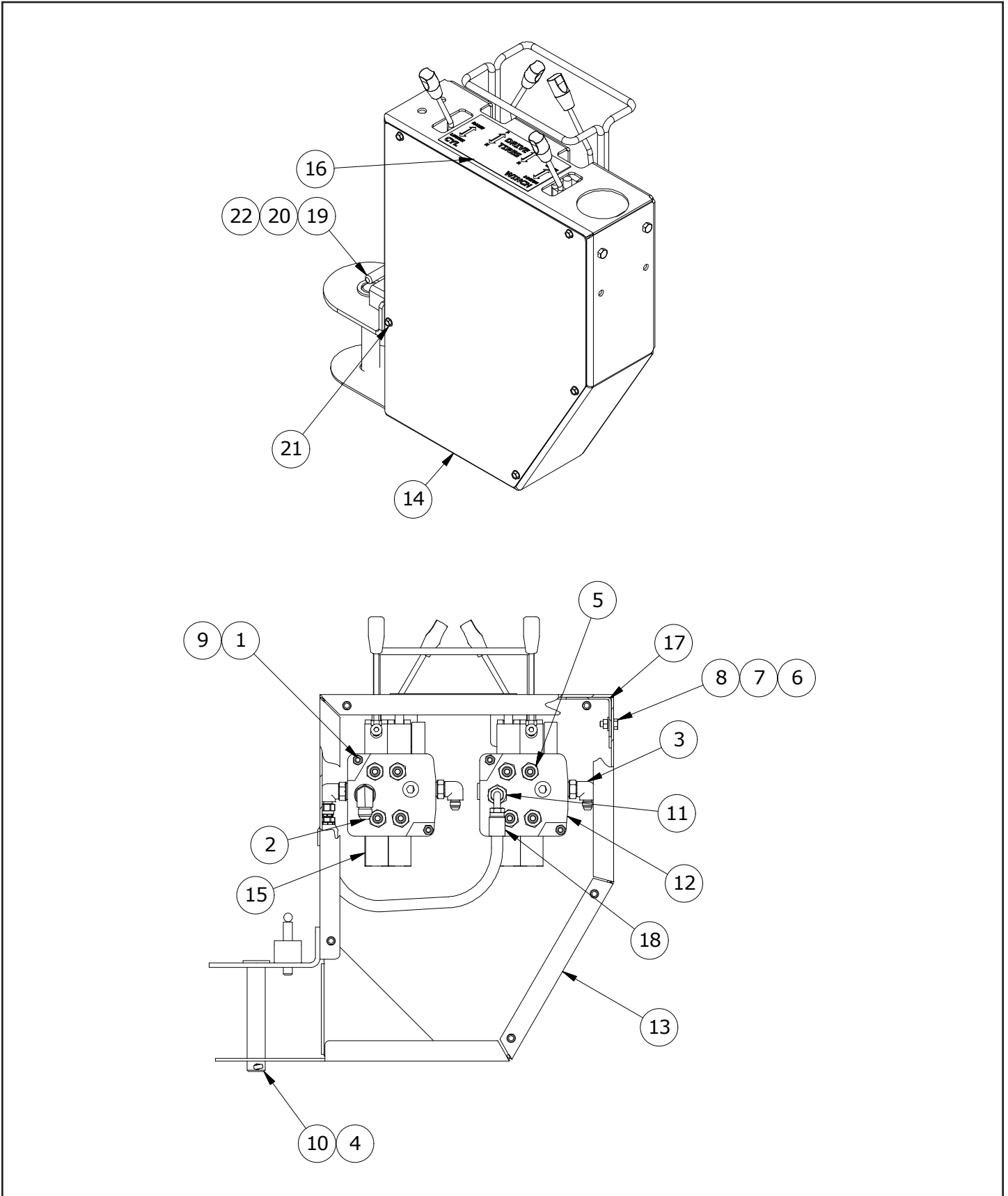


ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812362	5/16" LOCK NUT (PL)	2
2	812363	3/8" LOCK NUT (PL)	1
3	812364	1/2" LOCK NUT (PL)	2
4	812457	ELBOW-10 MORB X -6 MJIC, 90 DEG	2
5	812626	BOLT CARR 0.313NC X 1.00GR5PL	2
6	84039	WASHER - 3/8" SAE FLAT (PL)	6
7	84048	1/2" SAE FLAT WASHER (PL)	6
8	84277	1/2" X 1 1/2" HEX BOLT (PL)	2
9	86170	3/8" X 1" HEX BOLT GR.5 (PL)	9
10	86171	3/8" X 1 1/4" HEX BOLT (PL)	2
11	910199	SGL GRV 4 1/2" SHEAVE C/W HUB	1
12	910263	BELT B-35	1
13	913184	PLATE-HYD PUMP HANDLE	1
14	913186	PLATE-HYD PUMP ARM	1
15	913444	PUMP-GEARTANDEM SALAMI	1
16	913520L	PLATE-HYD LINK CA MOVER	1
17	913547	ADAPTER-12 MORB X -12 BARB	1
18	914759	PLUG-12 MORB HEX HEAD	1
19	924394	WELDT-MOVER BELT GUIDE	1
20	924738	SPACER-ENGINE CLUTCH	*
21	929045L	SPACER-ENGINE CLUTCH	*
22	930870	BRKT-HYD PUMP MOUNT	1
23	930871	WELDT-MOVER HYD MOUNT	1
24	930888	GUIDE-BELT MOVER	1
25	931984	SHEAVE-SINGLE 3.75"	1
26	961155	1/4" X 1/4" X 3 1/2" CPLGTUBE KEY	1
27	967141	5/16" X 1/4" SOCKET SET SCREW (BR)	2
28	JDCW25634	RUBBER GRIP	1

* 8" AUGER: ITEM 21 (QTY. 2)

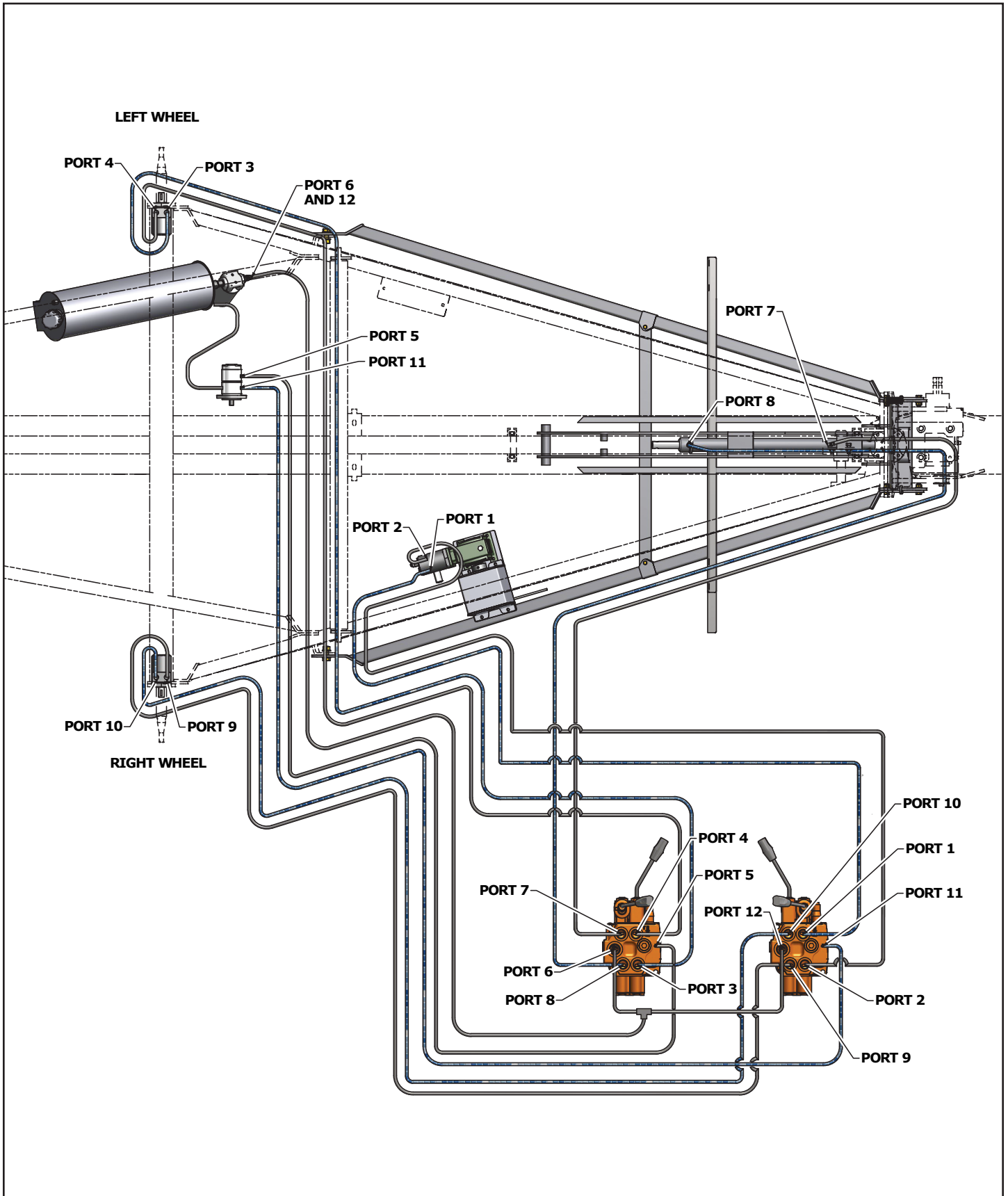
* 10" AUGER: ITEM 20 (QTY. 1), ITEM 21 (QTY. 1)

CONTROL CONSOLE



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	810761	5/16" X 2 1/2" HEX BOLT (PL)	4
2	811416	ELBOW-10 MORB X -8 MJIC, 90 DEG	1
3	811916	ELBOW-8MORB X -6MJIC 90DEG	3
4	81210	1/4" X 2" COTTER PIN (PL)	1
5	812107	ADAPTOR STR 3/4MORB X 9/16MJI	8
6	812362	5/16" LOCK NUT (PL)	2
7	81546	5/16" FLAT WASHER (PL)	2
8	81549	5/16" X 3/4" HEX BOLT (PL)	2
9	81568	5/16" HEX NUT (PL)	4
10	900709	PIN WELDMENT 1.000" DIA	1
11	913557	ADAPTER-10 MORB X -6 MJIC	1
12	931646	VALVE-2 SPOOL, WINCH AND MOTOR	1
13	931666	WELDT-CONTROL CONSOLE	1
14	931669L	PLATE-CONSOLE COVER	1
15	931717	VALVE-2 SPOOL, MOTOR AND CYLINDER	1
16	931963	DECAL-CONSOLE MOVER	1
17	932485	BRKT-E-STOP MOUNT	1
18	932727	HOSE-6 X -6JIC X -6JIC 90 ELBOW	1
19	933369	T-HANDLE PIN	1
20	973280	COMPRESSION SPRING 1/2 X 1 3/8"	1
21	9812392	SCREW SELFTAP 0.25UNC X 0.75(F)	5
22	9812425	1/4" X 1 1/4" SPRING PIN (PL)	1

HYDRAULIC HOSES



PORT	PART NUMBER	DESCRIPTION	QTY.
41 FT. MODELS			
1	913654	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 117"	1
2	913654	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 117"	1
3	913651	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 159"	1
4	913651	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 159"	1
5	913655	HOSE-6 X -6JIC X -6JIC - 123"	1
6	913656	HOSE-8 X -8JIC X -8JIC - 139.5"	1
7	913852	HOSE-6 X -6JIC X -6JIC - 134"	1
8	913853	HOSE-6 X -6JIC X -6JIC - 163"	1
9	913650	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 83"	1
10	913650	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 83"	1
11	913655	HOSE-6 X -6JIC X -6JIC - 123"	1
12	913656	HOSE-8 X -8JIC X -8JIC - 139.5"	1
51 FT. MODELS			
1	913554	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 115"	1
2	913554	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 115"	1
3	913551	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 195"	1
4	913551	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 195"	1
5	913555	HOSE-6 X -6JIC X -6JIC - 139"	1
6	913556	HOSE-8 X -8JIC X -8JIC - 161.25"	1
7	913552	HOSE-6 X -6JIC X -6JIC - 156"	1
8	913553	HOSE-6 X -6JIC X -6JIC - 189"	1
9	913550	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 93"	1
10	913550	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 93"	1
11	913555	HOSE-6 X -6JIC X -6JIC - 139"	1
12	913556	HOSE-8 X -8JIC X -6JIC - 161.25"	1
61 FT. MODELS			
1	913754	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 127"	1
2	913754	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 127"	1
3	913751	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 220"	1
4	913751	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 220"	1
5	913755	HOSE-6 X -6JIC X -6JIC - 161"	1
6	913756	HOSE-8 X -8JIC X -8JIC - 200"	1
7	913752	HOSE-6 X -6JIC X -6JIC - 185"	1
8	913753	HOSE-6 X -6JIC X -6JIC - 217"	1
9	913750	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 102"	1
10	913750	HOSE-6 X -6JIC X -6JIC 90 ELBOW - 102"	1
11	913755	HOSE-6 X -6JIC X -6JIC - 161"	1
12	913756	HOSE-8 X -8JIC X -8JIC - 200"	1

Farm King



SPECIFICATIONS

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Farm King



PERFORMANCE

Model	CX841	CX851	CX861	CX1041	CX1051	CX1061
Recommended HP	16	20	24	28	32	38
Capacity (bu/hr)	-	-	-	4400	4400	4400
Rim Size	15"	15"	15"	15"	15"	15"
Hub Type	5 bolt	5 bolt	5 bolt	5 bolt	5 bolt	5 bolt
Fuel Tank Capacity	6.5 US gal	6.5 US gal	6.5 US gal	6.5 US gal	6.5 US gal	6.5 US gal

Capacity will vary with field conditions. Tested on wheat, - 12.5% moisture using CX1041 model.

Fuel/Oil tanks are supplied with gas engine configuration only.

DIMENSIONS

Model	CX841	CX851	CX861	CX1041	CX1051	CX1061
Max Field Height	27.7'	31.7'	39.5'	27.2'	31.2'	39'
Field Width	8.8'	10.1'	10.1'	8.8'	10.1'	10.1'
Transport Width	8.8'	10.1'	10.1'	8.8'	10.1'	10.1'
Transport Height	12.8'	14.6'	14.3'	13'	14.8'	14.4'
Transport Length	40.2'	50.1'	60.4'	40.1'	50'	60.3'

Note: Dimensions are approximate measurements.

HARDWARE TORQUE VALUES

Metric Chart

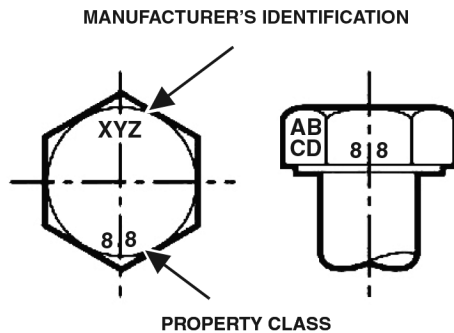
NOTE: Do not use the values listed in the charts if a different torque value or tightening procedure is specified in this manual for a specific application. Torque values listed are for general use only.

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.**

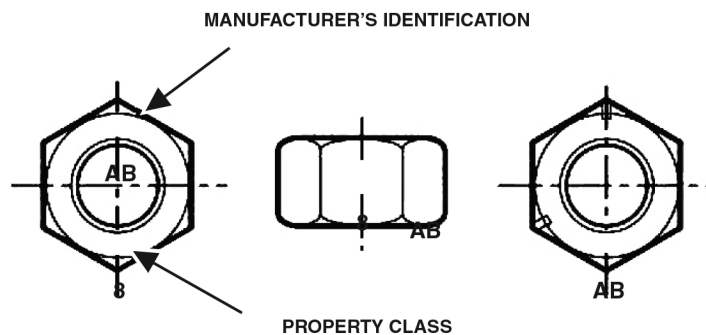
Nominal Size	Class 5.8		Class 8.8		Class 10.9		Lock nuts
	Unplated	Plated W / ZnCr	Unplated	Plated W / ZnCr	Unplated	Plated W / ZnCr	CL.8 w/ CL. 8.8 Bolt
M4	1.7 (15*)	2.2 (19*)	2.6 (23*)	3.4 (30*)	3.7 (33*)	4.8 (42*)	1.8 (16*)
M6	5.8 (51*)	7.6 (67*)	8.9 (79*)	12 (102*)	13 (115*)	17 (150*)	6.3 (56*)
M8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



SAE GRADE 2 BOLTS



SAE GRADE 5 BOLTS



SAE GRADE 8 BOLTS



SAE GRADE 2 NUTS

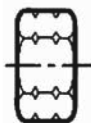


SAE GRADE 2 NUTS



SAE GRADE 2 NUTS

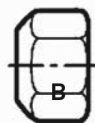
Identification of Hex Nuts and Lock Nuts



Grade A - No Notches

Grade B - One Circumferential Notch

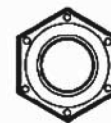
Grade C - One Circumferential Notches



Grade A - No Mark

Grade B - Letter B

Grade C - Letter C



Grade A - No Marks

Grade B - Three Marks

Grade C - Six Marks

(Marks not always located at corners)

HYDRAULIC CONNECTION SPECIFICATIONS

O-Ring Fitting (Straight Thread)

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

O-Ring Face Seal Connection

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

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

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

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 of the date that such defect or improper workmanship is, or should have been, discovered. 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. Farm King will not approve or pay invoices sent for repairs that Farm King has not previously approved. Warranty service does not extend the original term of this limited warranty. Payment of labor costs will only be considered on repairs made to manufactured parts and components that have been found defective during a period of one (1) year following delivery to the original retail purchaser.

Warranty Requirements

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

EXCLUSIVE EFFECT OF WARRANTY AND LIMITATION OF LIABILITY

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

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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