

Farm King

OPERATOR AND PARTS MANUAL

Post Driver

Model 2400

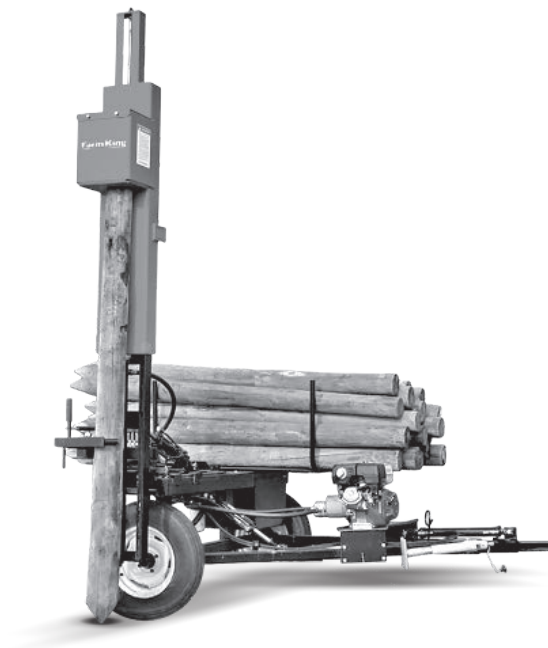


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Manufacturer's Statement: For technical reasons, Buhler Industries Inc. reserves the right to modify machinery design and specifications provided herein without any preliminary notice. Information provided herein is of descriptive nature. Performance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

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Warranty Registration Form

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

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

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

☐	Fasteners Tight
☐	Machine Lubricated
☐	Oil Reservoir Level Checked
☐	Mast And Rubber Hammer Stops Checked
☐	Tire Pressure Checked
☐	Ballast Weight Checked

Safety

☐	Safety Chain On Hitch
☐	All Decals Installed
☐	Guards And Shields Installed And Secure
☐	Operating And Safety Instructions Reviewed
☐	Hydraulics Checked For 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:
-------	-----------------------------

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 Post Driver. To ensure maximum performance of your equipment, it is mandatory that you thoroughly study the Operator and Parts Manual and follow the recommendations. Proper operation and maintenance are essential to maximize equipment life and prevent personal injury.

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

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

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

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

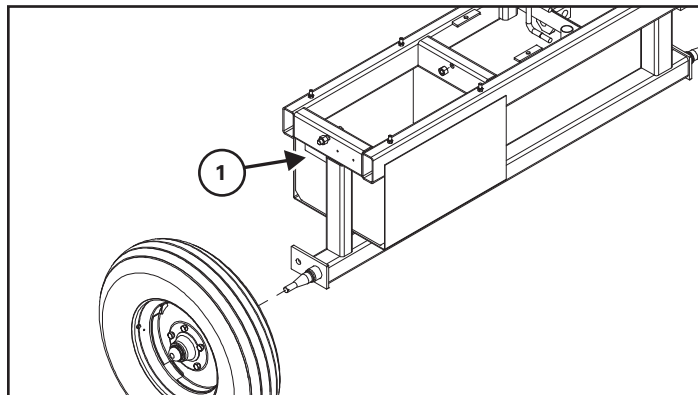
Keep this manual available for frequent reference. All new operators or owners must review the manual before using the equipment and annually thereafter. Contact your Farm King Dealer if you need assistance, information, or additional copies of the manual. Visit our website at **www.farm-king.com** for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

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

Serial Number Location

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

Figure 1



Model Number: _____

Serial Number: _____

The serial number plate (Item 1) is located on the RH side of the ballast compartment **[Figure 1]**.

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

Manual Storage

The operator and parts manual and other documents can be stored in the canister.

Equipment Identification

Figure 2

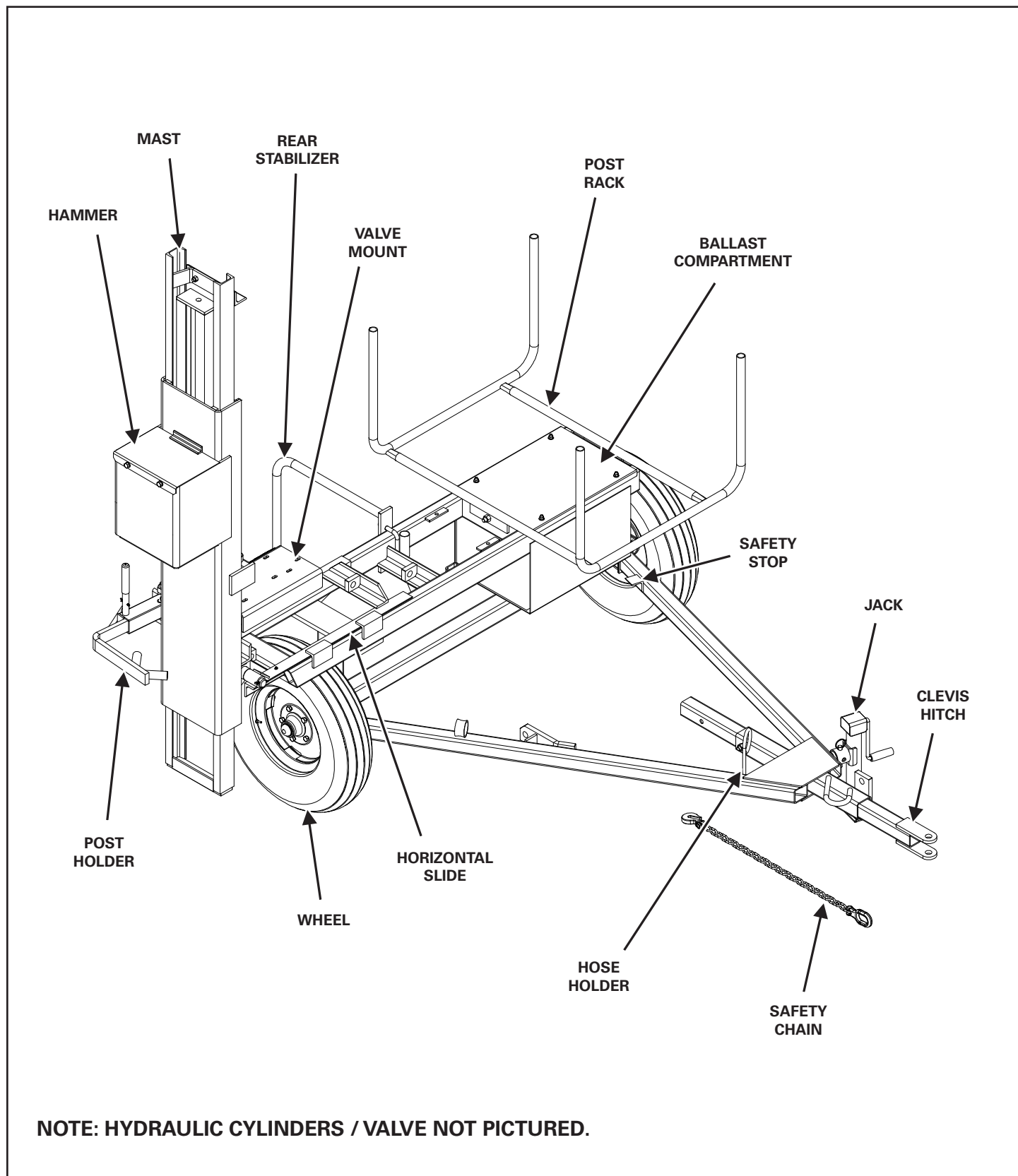
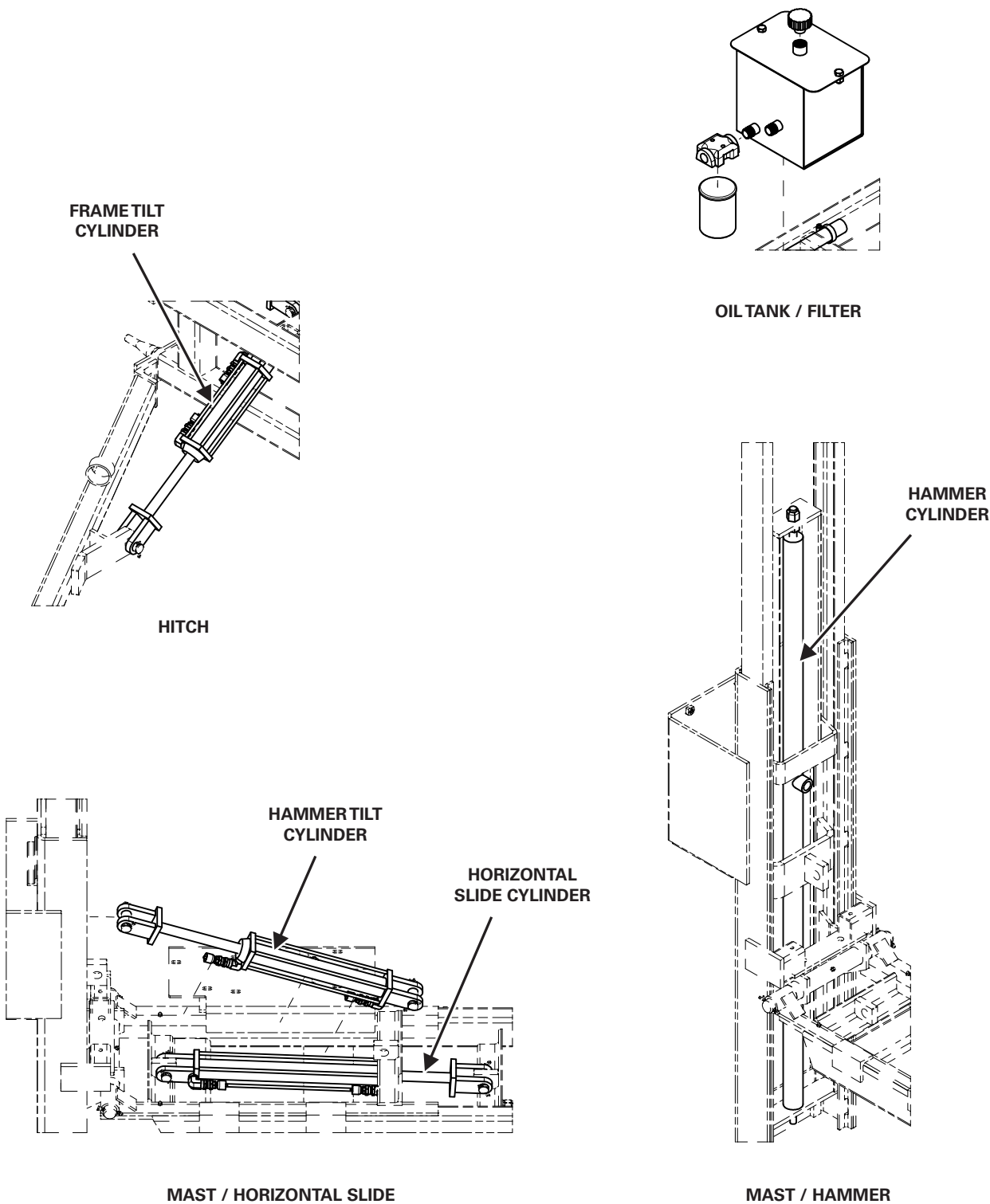


Figure 3



Farm King



Safety

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Safety Instructions

Safety Symbols

	Safety Alert Symbol
This symbol with a warning statement means your safety is involved. Carefully read the message that follows.	



CAUTION

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.



DANGER

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.



WARNING

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.



IMPORTANT

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

Operator Safety

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. Always fasten seat belt before operating.

Know the Work Conditions:

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

Safety Rules

- Read and follow instructions in this manual and the tractor Operators Manual before operating.
- Under no circumstances should young children be allowed to work with this equipment.
- 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.
- When learning to operate the equipment, do so 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.
- Stop tractor engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, unplugging or filling.
- DO NOT make any adjustments or repairs on the equipment while the machine is running.
- Keep shields and guards in place. Replace if damaged.
- Keep hands, feet, hair and clothing away from all moving parts.

Machine Requirements And Capabilities

- Fasten seat belt securely. If equipped with a folding Roll-Over Protective Structure (ROPS), only fasten seat belt when ROPS is up and locked. DO NOT wear seat belt if ROPS is down.
- 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.
- 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.
- Operate the machine and equipment from the operator's position only.
- When tilting, raising or lowering the hammer, keep all persons away from the post driver.
- Wear safety glasses and hand wear to protect against splinters.
- Always have a minimum ballast of 250 lb (113 kg) in weight box of the trailer for stability.
- The trailer ballast compartment must always have sufficient weight to maintain safe and stable operation.

- Contact local utility companies for underground services before installing posts.
- Always make sure the hitch of the post driver has a downward weight.
- Never place your hand on top of the post at any time during operation. Serious injury may occur.
- Always use the post guide when securing a post under the hammer when driving posts.
- Know the functions of each operating lever of hydraulic controls before proceeding with operations. Never use the valve to stop hammer except in extreme emergency. The resulting extreme pressure may seriously damage hydraulic system.
- Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks. If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.
- If the torque arm chain of PTO pump is not properly secured, severe damage to the pump and hydraulic circuitry could occur.
- Do not operate Post Driver when it is disconnected from transport vehicle.
- Always stay clear of PTO or engine drive shaft when they are in operation. Serious injury or death will result if clothing, hair or limbs are caught in these drive shafts.
- Before connecting (or disconnecting) hydraulic pump to (or from) tractor's PTO shaft, disengage PTO and shut off tractor engine.
- When driving posts, always watch for over head power lines. If post driver makes contact with power lines, operator or those nearby could be seriously injured.
- Always ensure tractor's PTO safety shield is installed.
- Always stand clear when positioning post driver with hydraulic extendable hitch. The RH tire may roll over the feet of operator or person(s) nearby causing serious injury.
- Never allow any other person or persons to stand near hammer when post driver is being operated. This post driver is designed to be operated by one person only. Serious injury or death will result if a person is struck by a falling or tilting hammer.
- Never allow another person to hold the post under hammer when post driver is being operated. Serious injury or death will result if a person is struck by a falling or tilting hammer.
- Always lower hammer and shut off power when post driver is left unattended or is not in operation. Serious injury or death may result if hammer fell unexpectedly and struck person(s) nearby.

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 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).

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. The operator's area, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.
- 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.

Starting

- Do not use ether or starting fluids on any engine that has glow plugs. These starting aids can cause explosion and injure you or bystanders.
- Use the procedure in the tractor's operator's manual for connecting the battery and for jump starting.

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.

Fire Extinguishers

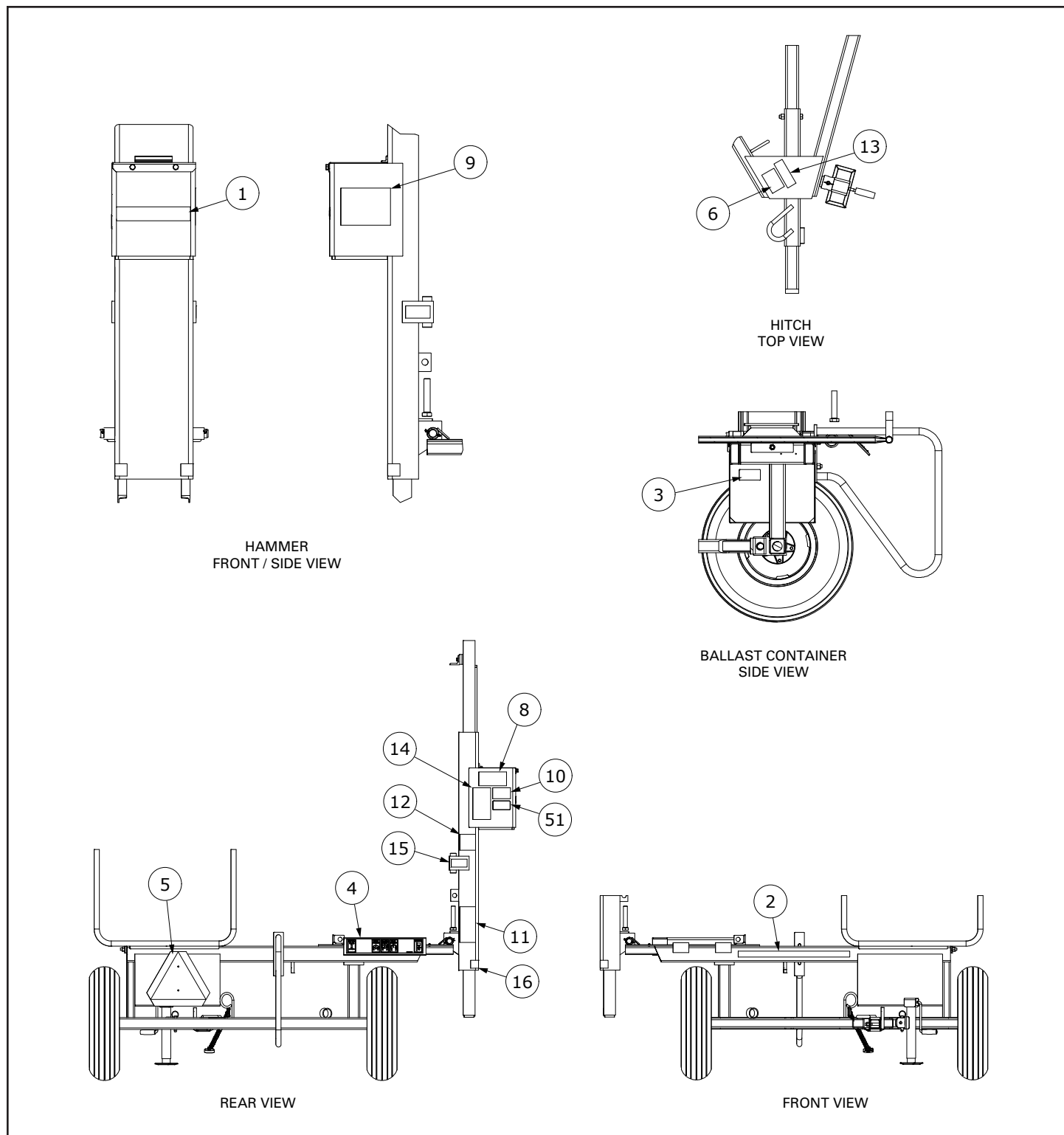


- Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.

Safety And Equipment Signs

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

Figure 4



Safety Signs And Equipment Decals [Figure 4]

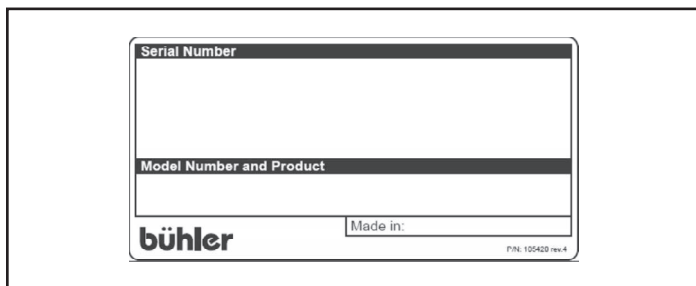
FARM KING (1.85" X 12") - 910625 (Item 1)



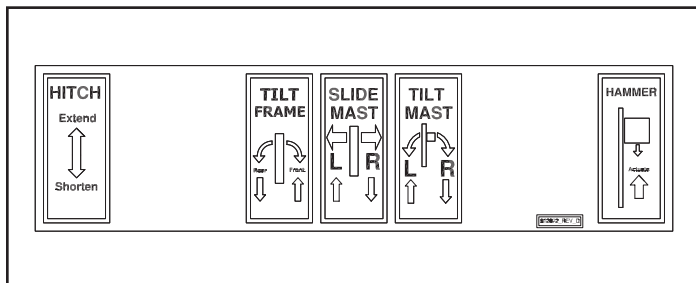
MODEL / LOGO (1.5" X 28.25") - EZP80536 (Item 2)



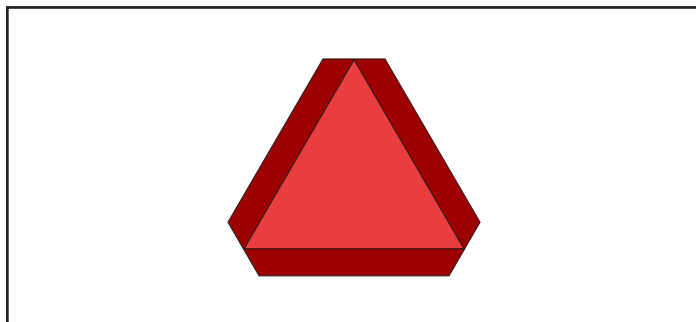
SERIAL NUMBER PLATE - 105420 (Item 3)



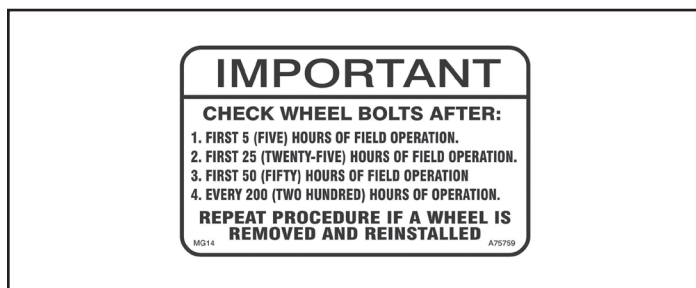
DRIVER CONTROLS - 912872 (Item 4)



SMV SIGN - 967066 (Item 5)



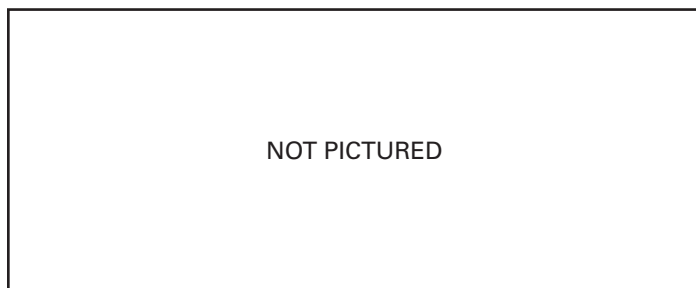
WHEEL BOLTS - EZA75759 (Item 6)



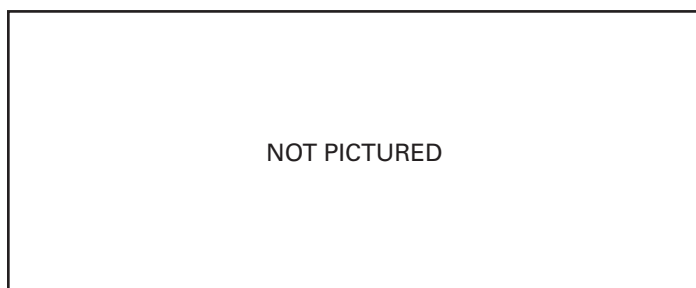
WARNING OPERATION - EZA75764 (Item 7)



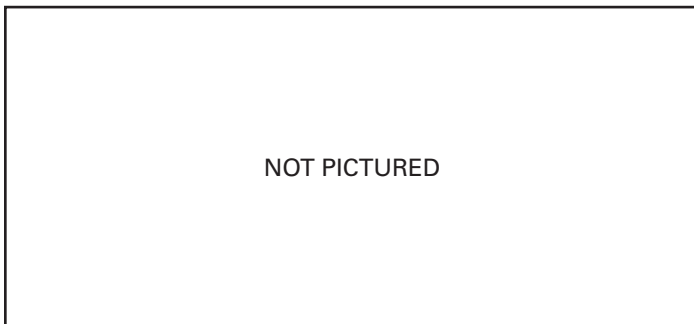
DANGER - EZP80500 (Item 8)



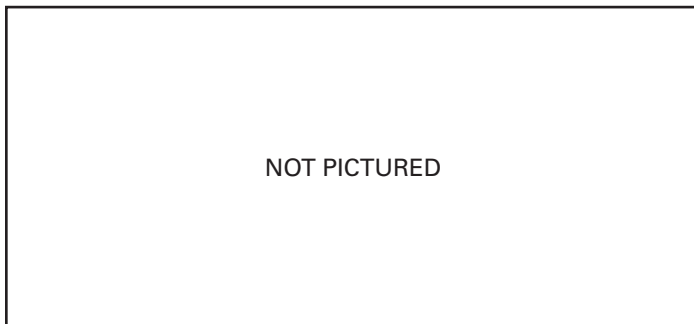
DANGER - EZP80501 (Item 9)



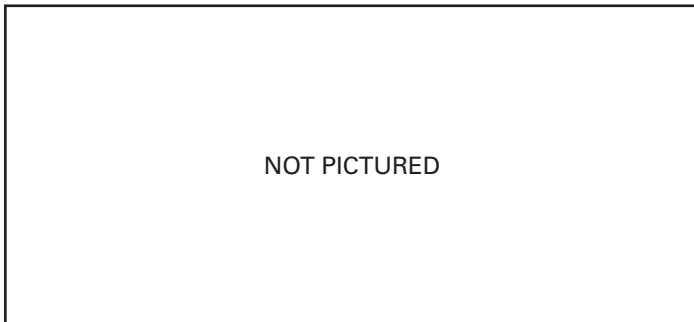
DANGER - EZP80502 (Item 10)



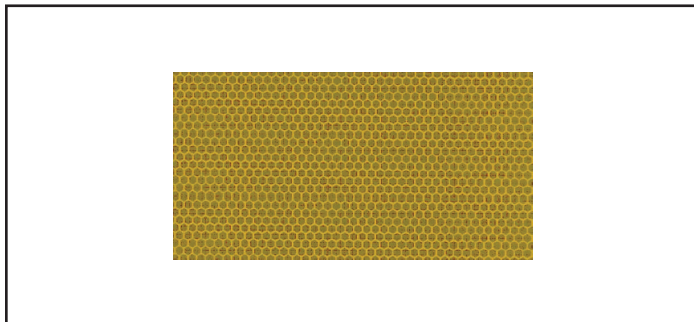
DANGER - EZP80532 (Item 14)



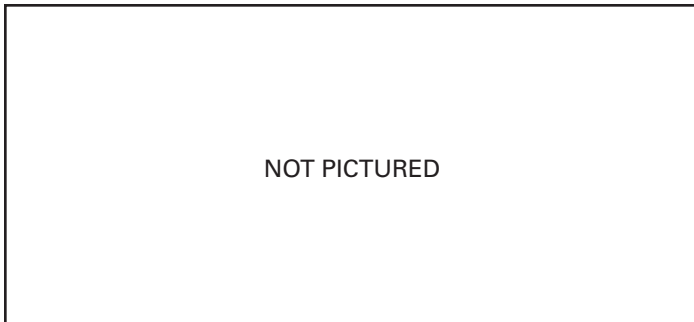
DANGER - EZP80503 (Item 11)



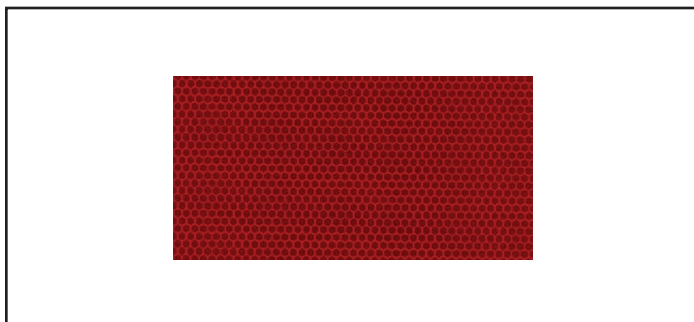
SAFETY YELLOW - 52773-000 (Item 15)



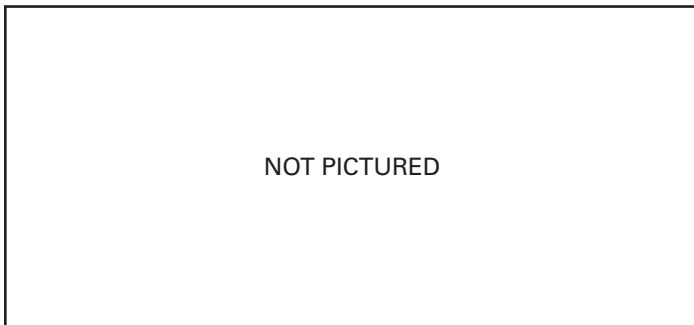
DANGER - EZP80504 (Item 12)



SAFETY RED - 52774-000 (Item 16)



DANGER - EZP80505 (Item 13)



Safety Sign-Off Form



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.

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

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

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

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

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Pre-Operation Checklist

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

1. Lubricate the equipment per the Maintenance Section schedule.
2. Check the oil level reservoir per the Maintenance Section. Fill as needed.
3. Check tire pressure per the Maintenance Section.
4. Check the equipment hitch for damaged, loose or missing parts. Repair as needed before operation.
5. Check fasteners for tightness.
6. Check that the rubber bumpers on upper and lower hammer stops are in place and in good condition.
7. Inspect all safety reflective decals, slow moving vehicle decals and lights where applicable.
8. Check that ballast box on trailer is in place and of sufficient weight.



IMPORTANT

TRAILER BALLAST

Always have a minimum ballast of 250 lb (113 kg) in weight in trailer ballast compartment.

The trailer ballast compartment must always have sufficient weight to maintain safe and stable operation.

Tractor Requirements

Tractors must satisfy the following requirements.

2400 Models:

- Clevis type hitch
- 1.375" DIA 6-spline PTO (option)
- 2" ball type hitch (option)



WARNING

AVOID INJURY OR DEATH

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



IMPORTANT

Transport vehicle / tractor must have adequate braking capacity to safely control trailing load during road travel. Do not exceed 20 mph (32 km/h) during transport.

Entering The Operator's Position

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



IMPORTANT

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

Leaving The Operator's Position

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



WARNING

AVOID INJURY OR DEATH

Before you leave the operator's position:

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

Connecting To Tractor

Always inspect the tractor hitch and implement hitch before connecting. See the tractor owner's manual.

Move the tractor into position in front of the equipment.



WARNING



AVOID INJURY OR DEATH

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



WARNING

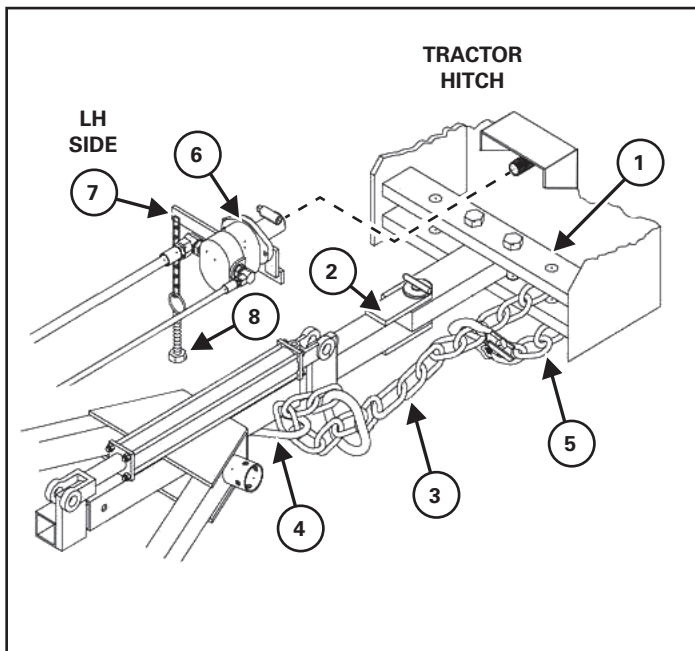


AVOID INJURY OR DEATH

Before moving the tractor, look in all directions and make sure no bystanders, especially small children are in the work area.

Do not allow anyone between the tractor and the equipment when backing up to the equipment for connecting.

Figure 5



Pin the tractor draw bar (Item 1) in a fixed, center position before hitching [Figure 5].

Back tractor into position and attach the equipment hitch (Item 2) to tractor draw bar [Figure 5].



WARNING

Lift the equipment hitch slowly when connecting to tractor. Keep equipment hitch no higher than the tow bar when attaching or releasing from tractor.

Install the safety chain (Item 3). Loop the chain through the tractor link (Item 4) and through the large chain link. Loop the opposite end of the chain (Item 5) around the tractor draw bar and secure [Figure 5].

NOTE: Always use a safety chain with a minimum tensile strength equal to or greater than the gross weight of the equipment.

PTO Drive Models: Connect the spline adapter of the pump (Item 6) onto the tractor PTO shaft. Make sure the torque arm (Item 7) is positioned on the left side of the hitch. Attach the eye-bolt/chain (Item 8) of the torque arm to the draw bar using flat washer and lock nut [Figure 5].



WARNING

Severe damage to the pump and hydraulics may occur if the torque arm chain of PTO is not properly secured.



WARNING

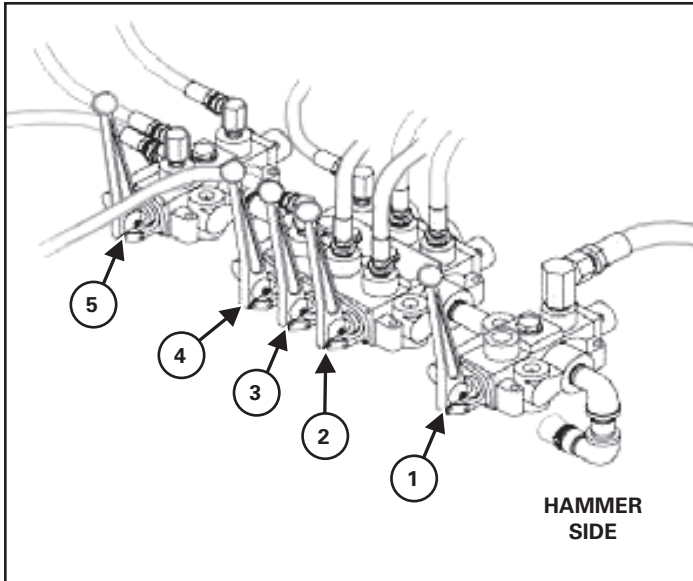
AVOID INJURY OR DEATH

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

Operation

Hydraulic Controls

Figure 6



The control levers used to operate the post driver are as follows:

- Hammer raise / lower (Item 1)
- Hammer tilt angle (Item 2)
- Hammer forward / backward (Item 3)
- Frame tilt angle (Item 4)
- Hitch forward / backward (Item 5) (optional hydraulic hitch)



CAUTION

Always stand clear when positioning post driver with hydraulic extendable hitch. The RH tire may roll over the feet of operator or person(s) nearby causing serious injury.

Know the functions of each operating lever before proceeding with operations.

When tilting, extending, retracting, raising or lowering the hammer, keep all persons away from post driver.



WARNING

Fluid escaping from a very small hole can be almost invisible.

Use a piece of cardboard or wood, rather than hands, to search for suspected leaks. If injured by escaped fluid, see a doctor at once.

Serious infection or reaction can develop if proper medical treatment is not administered immediately.

Post Driving



CAUTION

Read operator and parts manual before operating the implement.

Do not permit riders.

Remove bystanders, especially children, before starting or while operating.

Clear the working area of obstacles.

Review safety instructions annually.



IMPORTANT

CYCLE TILT CYLINDERS BEFORE OPERATION

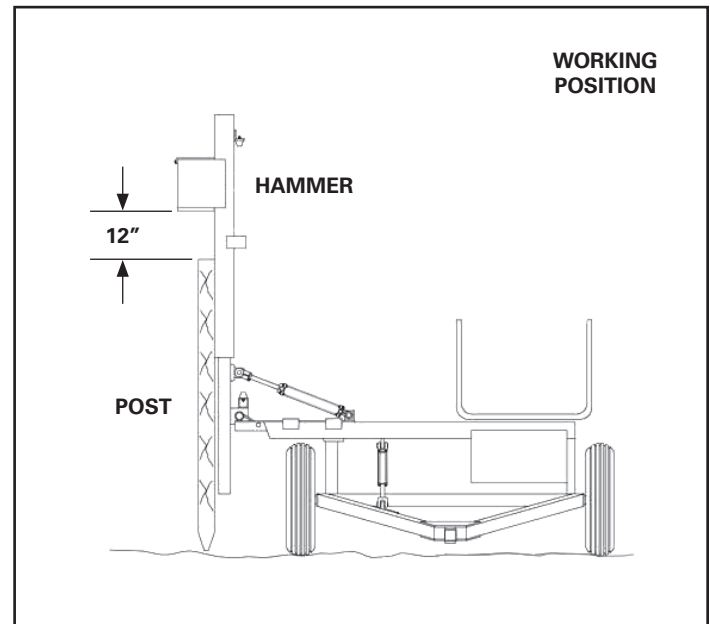
When cycling or operating tilt cylinder, push or pull valve levers to maximum position. **DO NOT FEATHER.** Feathering or holding valve levers in a partially open position will cause a void in tilt cylinders.

When post driver has been idle for a period of time, the tilt cylinder may creep causing a void in cylinders.

The cylinder movement is caused by a lack of oil pressure in cylinder. For piston seals to hold oil there must be enough hydraulic pressure in the cylinder to deform seal. This seal deformation pushes the seal against wall of cylinder and piston block giving a tight oil seal.

Cycling tilt cylinders will fill void in cylinders which will prevent cylinder movement when driving posts.

Figure 7



Post driver operation is as follows:

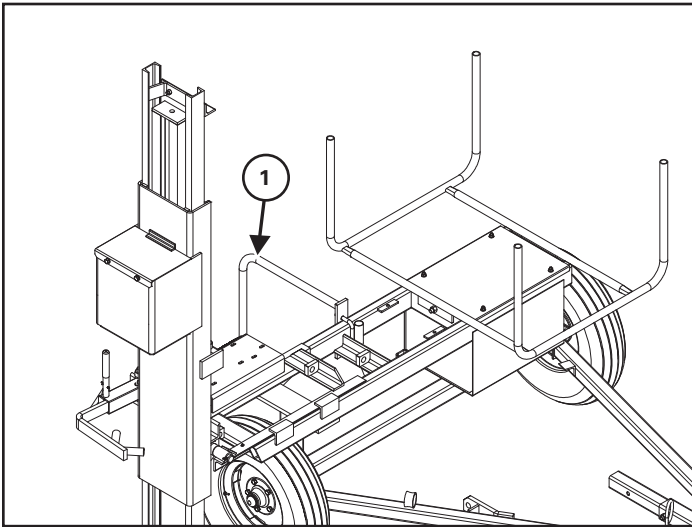
1. Transport the post driver trailer to work area.
2. Turn on PTO or start POST DRIVER ENGINE.



WARNING

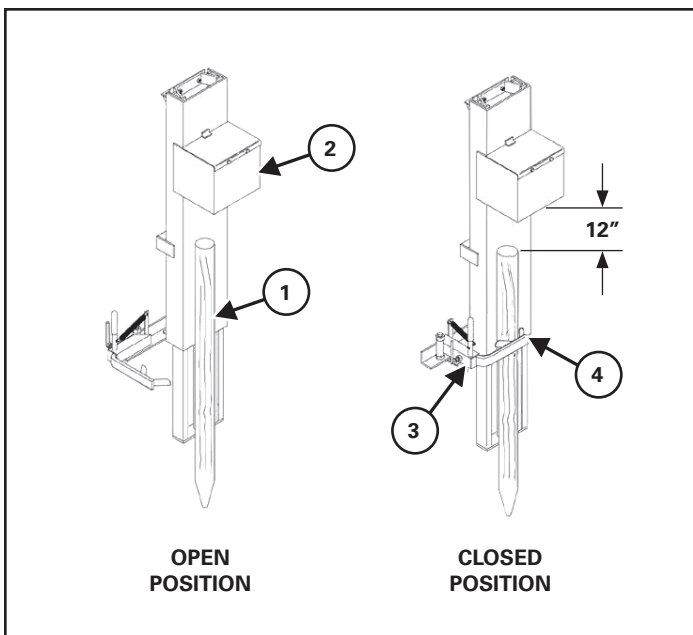
AVOID INJURY OR DEATH

- Do NOT exceed 540 RPM PTO speed.
 - Keep PTO shields and all guards in place.
 - Keep away from moving parts.
 - Keep bystanders away.
3. Act on the hydraulic controls to position the hammer into working position [Figure 7].
 4. Raise hammer approximately 12 inches above the post [Figure 7].

Figure 8**WARNING**

Make sure rear stabilizer bar (Item 1) is installed to the rear of post driver frame [Figure 8].

DO NOT operate post driver when it is disconnected from transport vehicle.

Figure 9

5. Position the post (Item 1) under the hammer (Item 2) [Figure 9].

6. Act on the handle and close the post guide (Item 3) over the post [Figure 9].
7. Loosen the lock bolt of the post guide. Adjust the post guide in/out so pins (Item 4) securely hold the post. Tighten lock bolt [Figure 9].
8. Begin driving the post. Act on the hydraulic controls to drop the hammer on the post. Use 12" strokes to start driving. Increase the stroke as required.

**IMPORTANT**

DO NOT use excessive force when operating hammer control lever. Handle mount will be damaged if lever is pushed too hard to drop hammer.

**DANGER****AVOID INJURY OR DEATH**

Never allow any other person or persons to stand near hammer when post driver is being operated. This post driver is designated to be operated by one person only. Serious injury or death will result if a person is struck by a falling or tilting hammer.

Contact local utility companies for underground services before installing posts

When driving posts, always watch for over head power lines. If post driver makes contact with power lines, operator or those nearby could be seriously injured.

Never place your hand on top of the post.



IMPORTANT

TRAILER BALLAST

Always have a minimum ballast of 250 lb (113 kg) in weight in trailer ballast compartment.

The trailer ballast compartment must always have sufficient weight to maintain safe and stable operation.

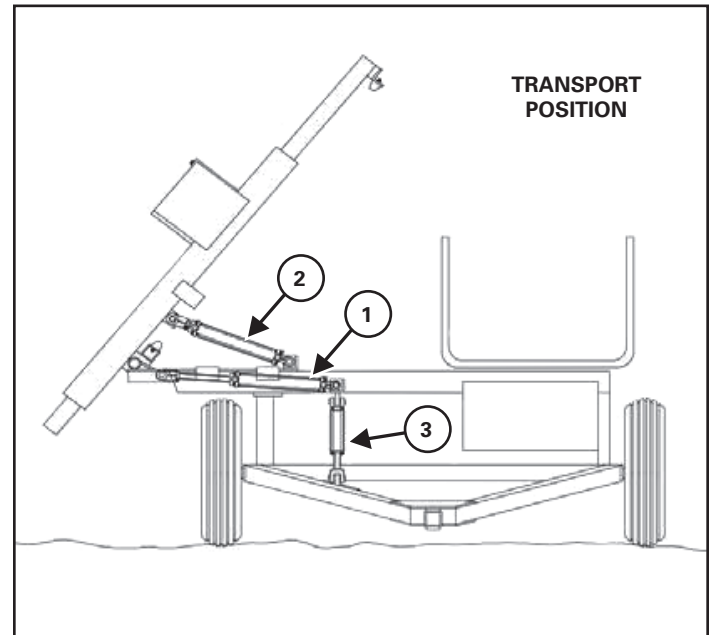


WARNING

Never use the valve to stop the hammer unless in extreme emergency. The resulting extreme hydraulic pressure could damage hydraulic system.

Finishing Operation

Figure 10

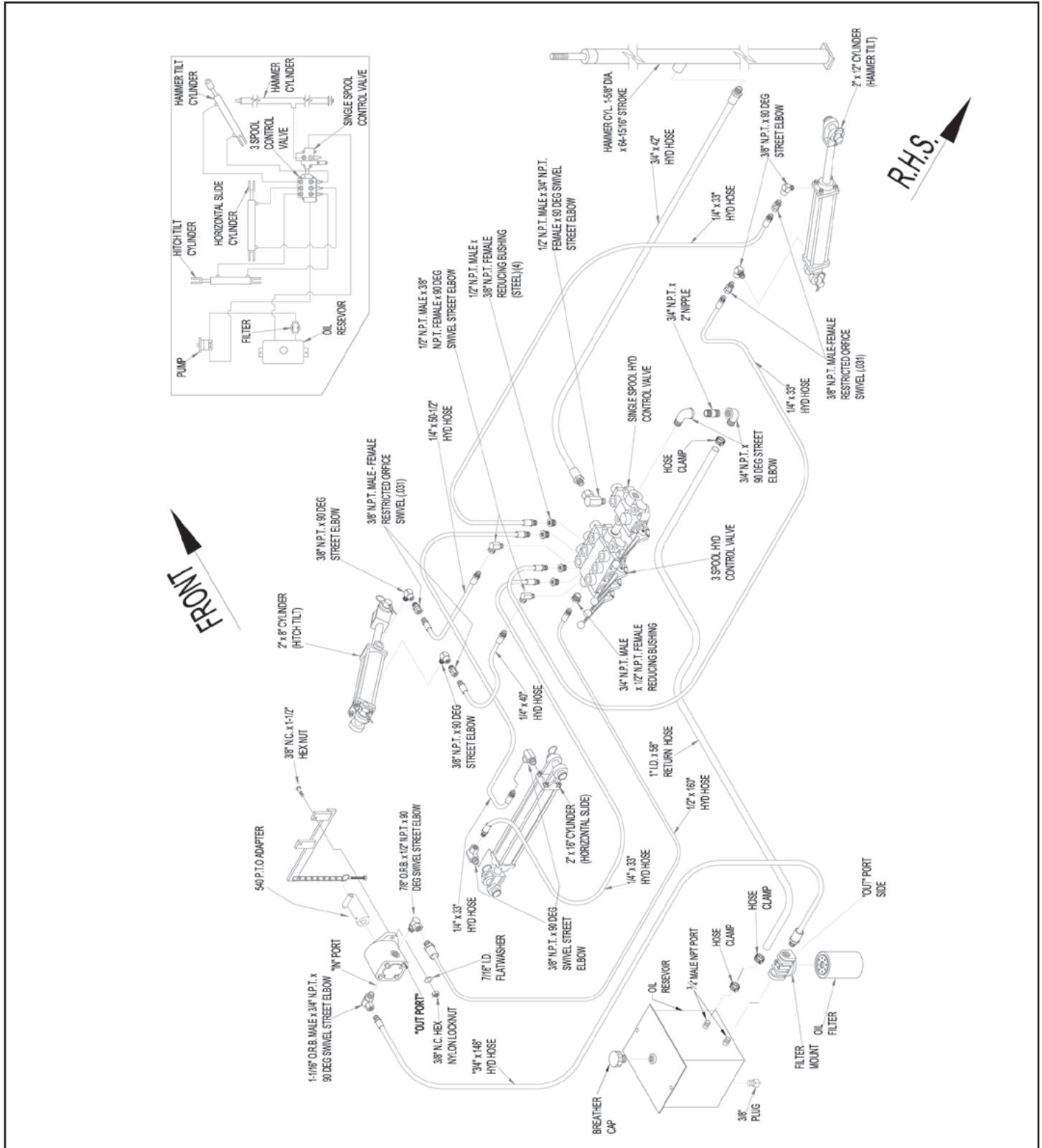


When the desired work has been completed, perform the following **[Figure 10]**:

- Lower hammer cylinder to bottom of mast.
- Move hammer "IN" by contracting horizontal slide cylinder (Item 1).
- Tilt hammer "IN" by contracting hammer tilt cylinder (Item 2).
- Tilt trailer frame all the way forward by contracting hitch cylinder (Item 3).
- Contract hitch extension cylinder (optional, if equipped).
- Disengage PTO or POST DRIVER ENGINE.
- Ensure that safety chain is installed between tractor vehicle and post driver hitch.

Hydraulic Diagrams

PTO Drive

Figure 11

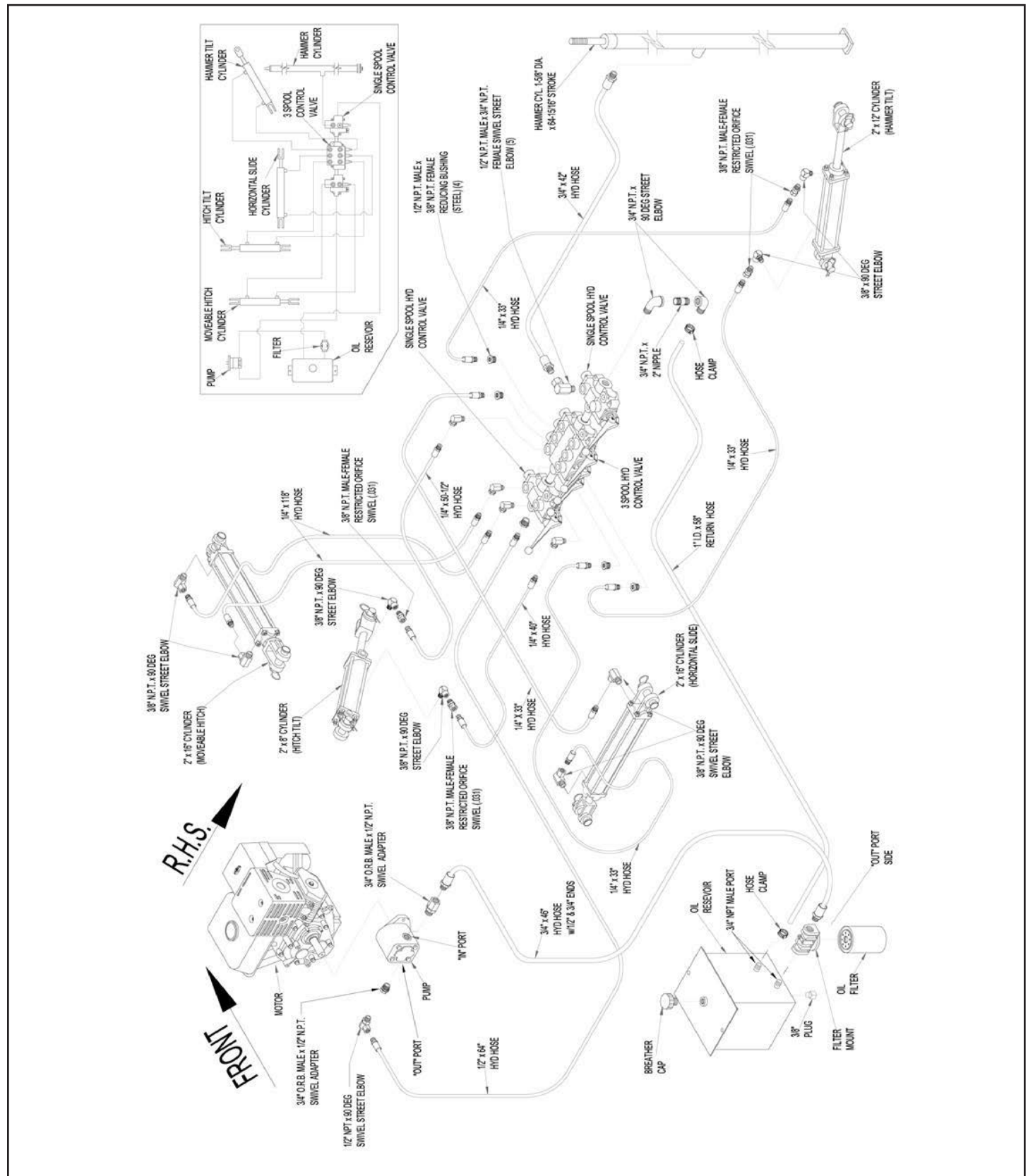
Engine Drive

Figure 13



Engine Drive With Hitch Extension

Figure 14



Transportation

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



WARNING

AVOID INJURY OR DEATH

- Disengage PTO for road travel.
- Keep PTO shields and all guards in place
- Keep bystanders away.
- Do not allow riders.
- Always use hazard flashers on the tractor when transporting unless prohibited by law.
- Always follow local regulations when transporting on public roadways. Check with your local authorities.



IMPORTANT

Never exceed 20 mph (32 kph) during transport.



WARNING

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

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

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.

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

TRAVEL SPEED - Acceptable travel speed.

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

Travel Speed	Weight Ratio
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

Maintenance

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Service Schedule Chart

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

#	DESCRIPTION	SERVICE PROCEDURES				
		CHECK	CLEAN	LUBE	CHANGE	DRAIN
DAILY MAINTENANCE (EVERY 10 HOURS OF USE)						
1	TIRE PRESSURE	✓				
2	HAMMER SLIDE SIDES			✓		
3	WHEEL HUBS			✓		
WEEKLY (EVERY 50 HOURS OF USE OF USE)						
4	HAMMER PIVOT GREASE ZERK			✓		
5	HORIZONTAL SLIDE GREASE ZERKS			✓		
6	HYDRAULIC OIL TANK	✓				
7	WHEEL BOLT TORQUE	✓				
ANNUALLY (EVERY 200 HOURS OF USE)						
8	WHEEL HUB BEARINGS / SEALS	✓			✓	
9	HYDRAULIC OIL FILTER	✓			✓	

Recommendations

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



IMPORTANT

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

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



WARNING

AVOID INJURY OR DEATH

Stop engine, set brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.

Support the equipment with blocks or safety stands before working beneath it.

Follow good shop practices:

- **Keep service area clean and dry**
- **Be sure electrical outlets and tools are properly grounded**
- **Use adequate light for the job.**

Use only tools, jacks, and hoists of sufficient capacity for the job. Replace and secure all shields removed during servicing before operating.

Use heavy leather gloves to handle sharp objects.



CAUTION

DO NOT work on post driver when it is being operated or while it is in motion.

Always retract all cylinders, shut off tractor engine, disengage PTO, and shut off post driver engine (if equipped) before working on post driver.

DO NOT work on post driver when the hammer is raised or partially raised.



WARNING

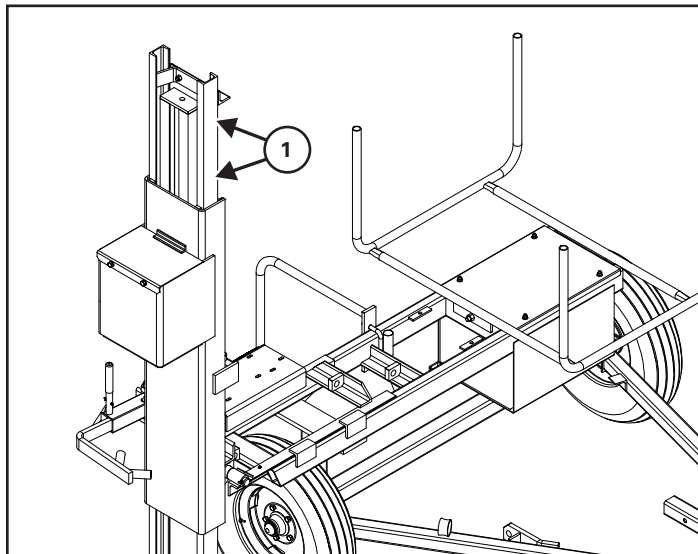
AVOID INJURY OR DEATH

Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and that lines, pipes, and hoses are not worn or damaged.

Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks. If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatments is not administered immediately.

Lubrication

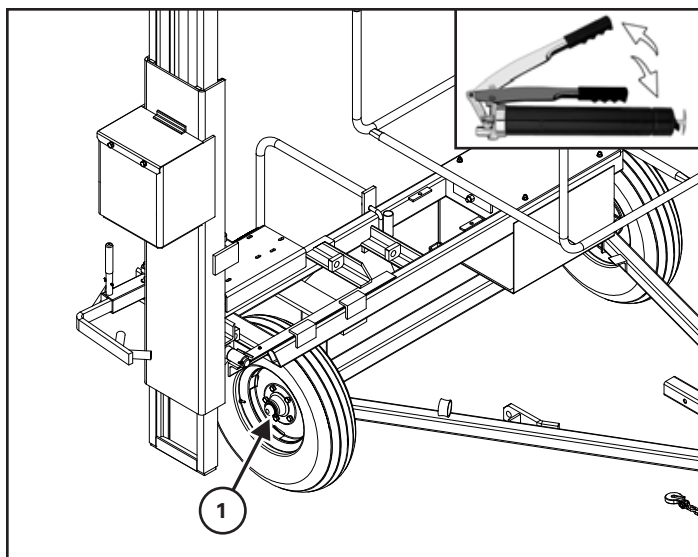
Figure 15



Apply grease to the sides of the hammer slide (Item 1) [Figure 15].

Grease every **10 hours**.

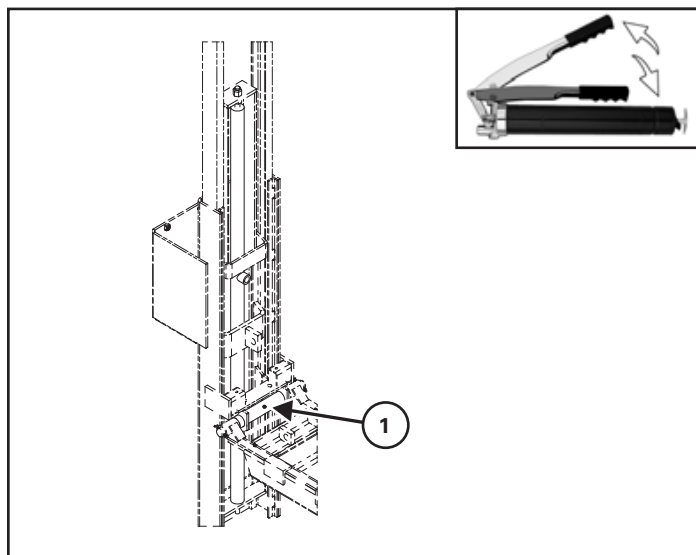
Figure 16



Apply grease to the wheel hubs grease zerk (Item 1) [Figure 16].

Grease every **10 hours**.

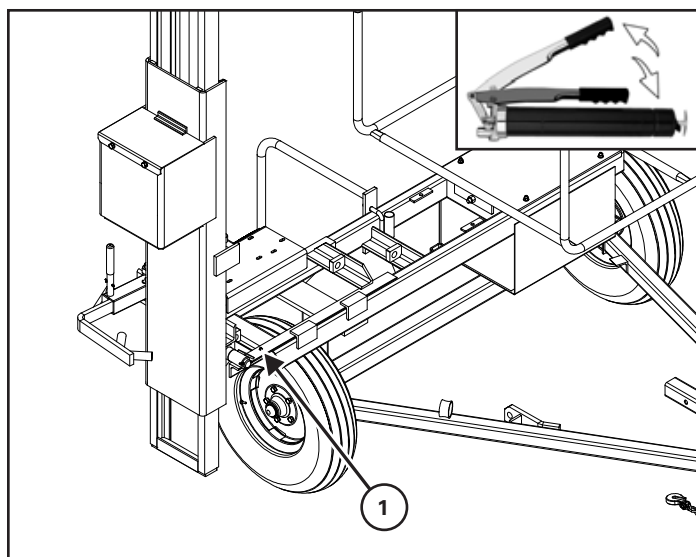
Figure 17



Apply grease to the hammer pivot grease zerk (Item 1) [Figure 17].

Grease every **50 hours**.

Figure 18

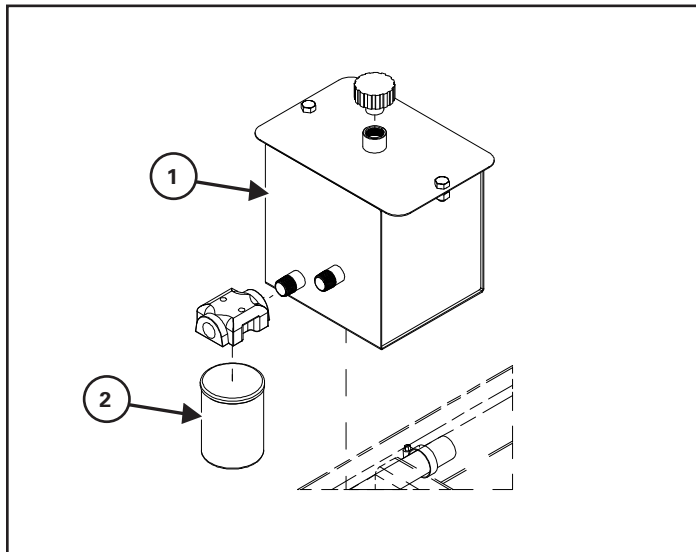


Apply grease to the horizontal slide grease zerks (Item 1) [Figure 18].

Grease every **50 hours**.

Hydraulics

Figure 19



Check the oil level of the hydraulic oil tank (Item 1). Oil should be within 1" of the top of the tank . Use ESSO HYDRO 56 or equivalent **[Figure 19]**.

Check every **50 hours**.

Check the oil filter (Item 2) **[Figure 19]**.

Check every **200 hours**.

Tire Pressure

Tire pressure must be 28 PSI.

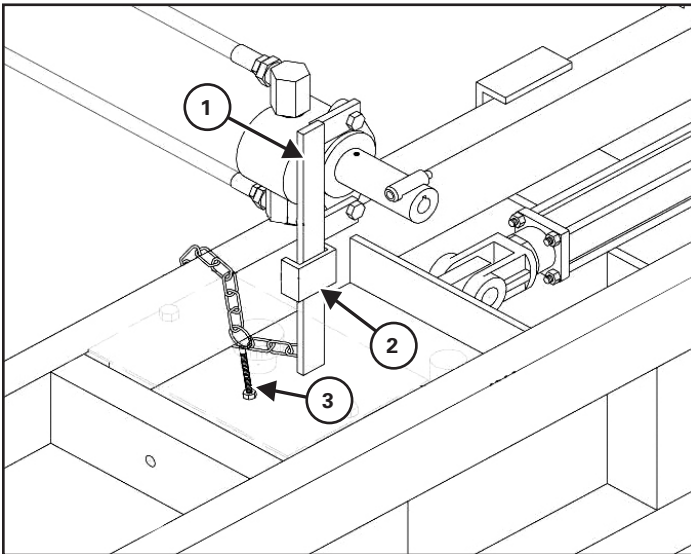
Check every **10 hours**.

Storage

Perform the following when storing the equipment:

- Fully contract all cylinders. Be sure hammer is lowered to bottom position.
- Clean and lubricate all grease points and hammer slide when storing post driver for extended period of time.
- Inspect the post driver for any missing, worn, or damaged parts. Replace parts as required.
- Check for any loose bolts and tighten if required.
- Be sure all pins have cotter pins or hair pin cotters installed.
- Disconnect the post driver from the transport vehicle.

Figure 20



PTO Drive Models: After removing pump from tractor's PTO, the pump assembly can be stored on the trailer frame by inserting torque arm (Item 1) into a retainer clip (Item 2) welded to frame. Secure pump in place by wrapping the torque arm chain around frame and inserting I-bolt (Item 3) through a link. Install nut and washer on I-bolt **[Figure 20]**.

Beginning Season Service

Clean off any dirt or grease that may have accumulated on moving parts. This will prevent abrasive action that could cause excessive wear.

Thoroughly inspect the post driver for any loose or missing parts and adjust as necessary. Replace any worn or damaged parts.

Replace any safety decals that are damage or are illegible.

End Season Service

Coat all sliding parts with a layer of grease to prevent rust.

This should also be done if the machine is going to sit for long periods of time. Clean the post driver thoroughly to remove dirt and trash which hold moisture and cause rusting.

Replace worn or damaged parts. Replace any safety decals that are damaged or are illegible.

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Parts Identification

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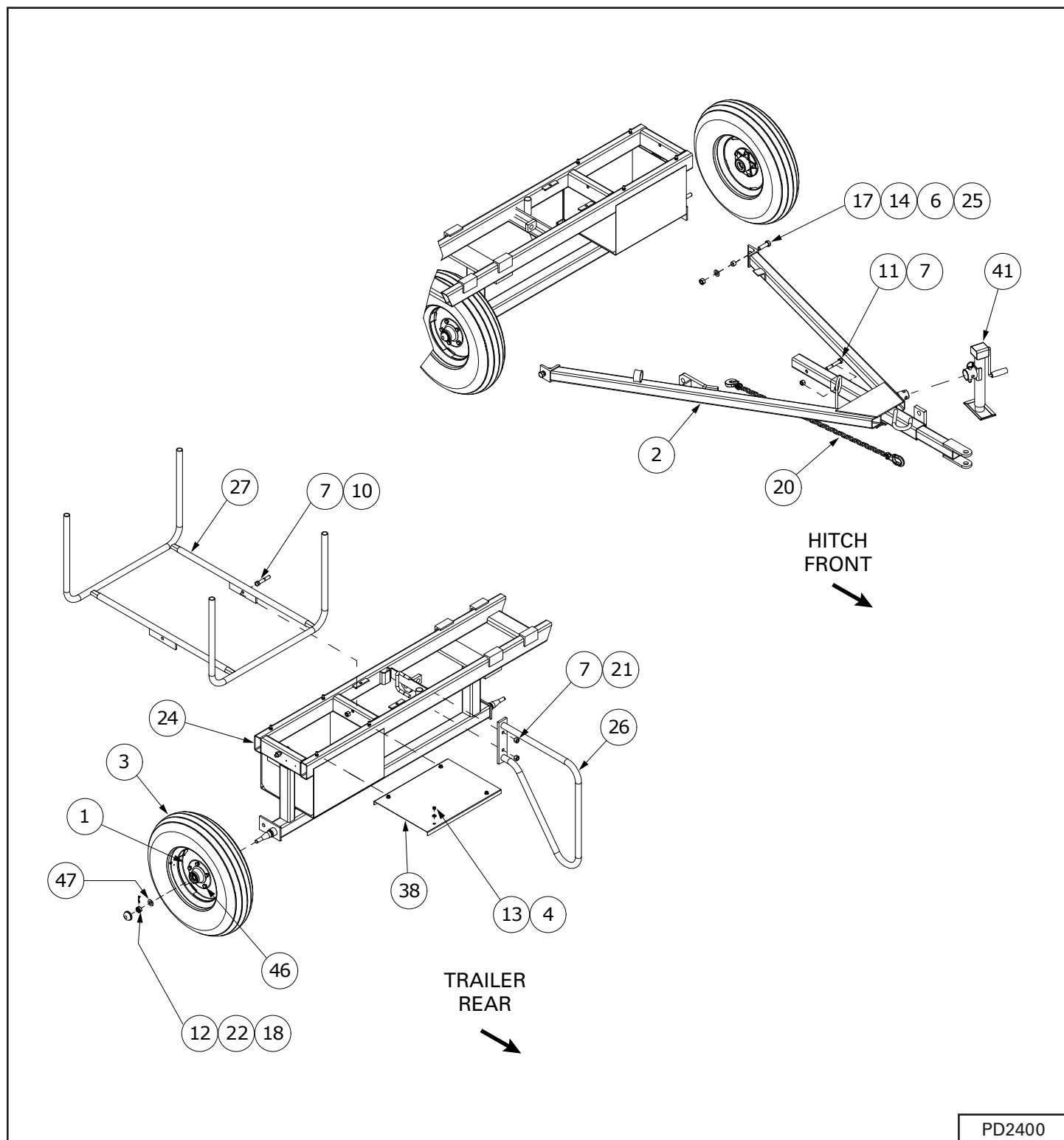
Farm King



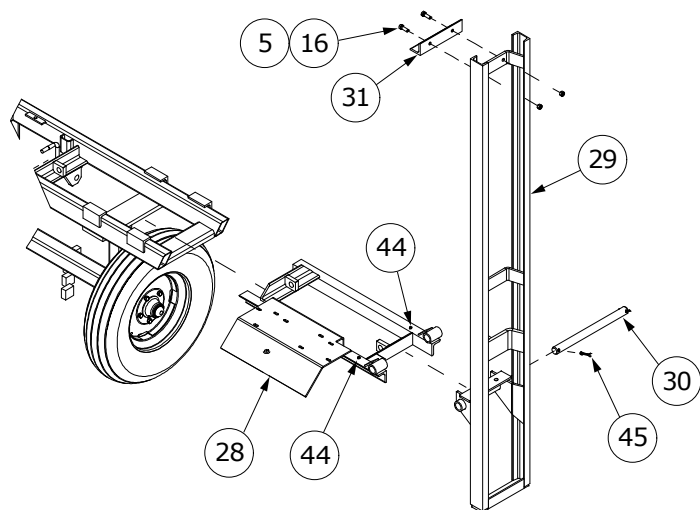
General Parts Information

The parts identification section lists the descriptions, part numbers, and quantities for all North American base model 2400 Post Pounder. Contact your Farm King dealer for additional parts information.

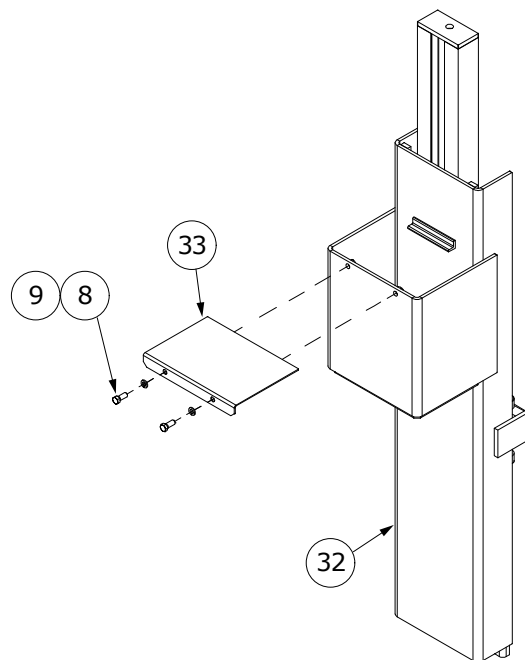
Frame



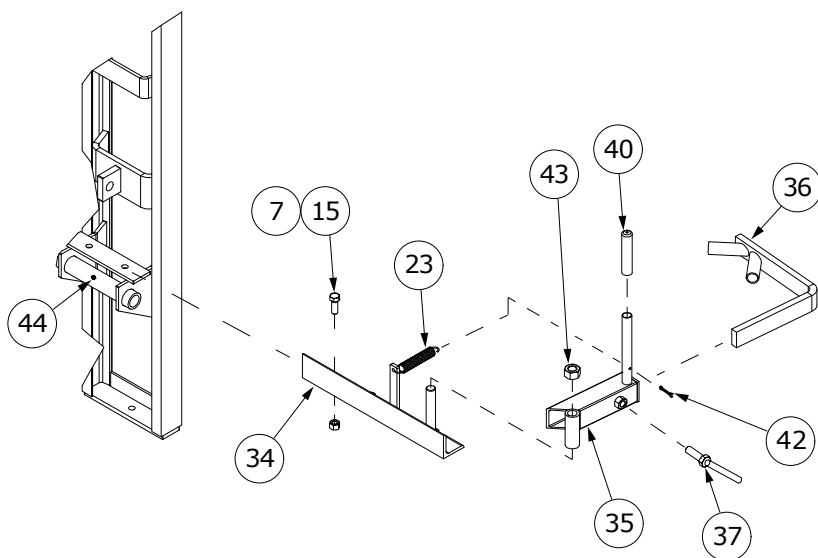
PD2400



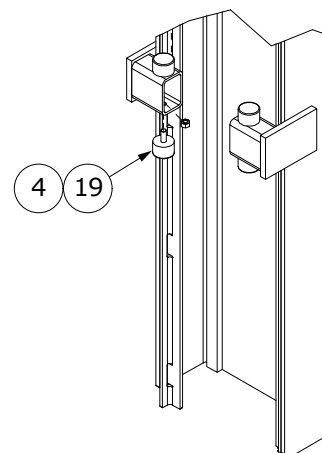
MAST, SLIDE



HAMMER



POST HOLDER



HAMMER - REVERSE SIDE

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	F0110	WHEEL-15" X 5" X 5 BOLT	2
2	F1752	WELDT - HITCH	1
3	F252	TIRE MOUNTED 7.60	2
4	812363	3/8" LOCK NUT (PL)	8
5	812364	1/2" LOCK NUT (PL)	2
6	812365	3/4" LOCK NUT (PL)	2
7	812482	5/8" LOCK NUT (PL)	7
8	81620	1/2" X 1 1/4" HEX BOLT PL	2
9	81637	1/2" LOCK WASHER (PL)	2
10	81669	5/8" X 3 1/2" HEX BOLT (PL)	2
11	81671	5/8" X 4" HEX BOLT (PL)	1
12	81834	3/4" SLOTTED HEX NUT	2
13	84039	3/8" FLAT WASHER (PL)	4
14	84050	3/4" S.A.E. FLAT WASHER (PL)	2
15	84270	5/8" X 1 3/4" HEX BOLT (PL)	2
16	84277	1/2" X 1 1/2" HEX BOLT (PL)	2
17	84346	3/4" X 2 1/2" HEX BOLT (PL)	2
18	901427	5-BOLT HUB ASSEMBLY	2
19	902248	1.5" X 1.0" RUBBER STOP BLOCK	4
20	910287	HOOK & SAFETY CHAIN ASSEMBLY	1
21	EZC50541	UBOLT-5/8X3.5X4X1.5 GR5 PL	1
22	9812486	1/8" X 1 1/2" COTTER PIN (BR)	2
23	913050	EXTENSION SPRING	1
24	913779	WELDT-POST DRIVER FRAME	1
25	913819	TUBE-HITCH BUSHING 1.000" DIA	2
26	913840	WELDT - REAR STABILIZER	1
27	913844	WELDT - POST RACK	1
28	913851	WELDT-HORIZONTAL SLIDE	1
29	913882	WELDT - MAST	1
30	913893	ROD-MAST PIVOT PIN 1.375" DIA	1
31	913894	ANGLE-MAST STOP	1
32	913896	WELDT - HAMMER	1
33	913908	BRKT-HAMMER LID	1
34	913941	WELDT-MOUNT POST HLDR	1
35	913946	WELDT-HANDLE POST HOLDER	1
36	913949	WELDT-GUIDE POST HOLDER	1
37	913954	WELDT-HANDLE TGHTNR GUIDE POST HLDR	1
38	914176	BRKT-COVER BALLAST	1
39	914241	BALLAST-50LBS*	5
40	914388	CAP-END HANDLE	1
41	921284	JACK-5000 LB CAP, SIDE CRANK	1

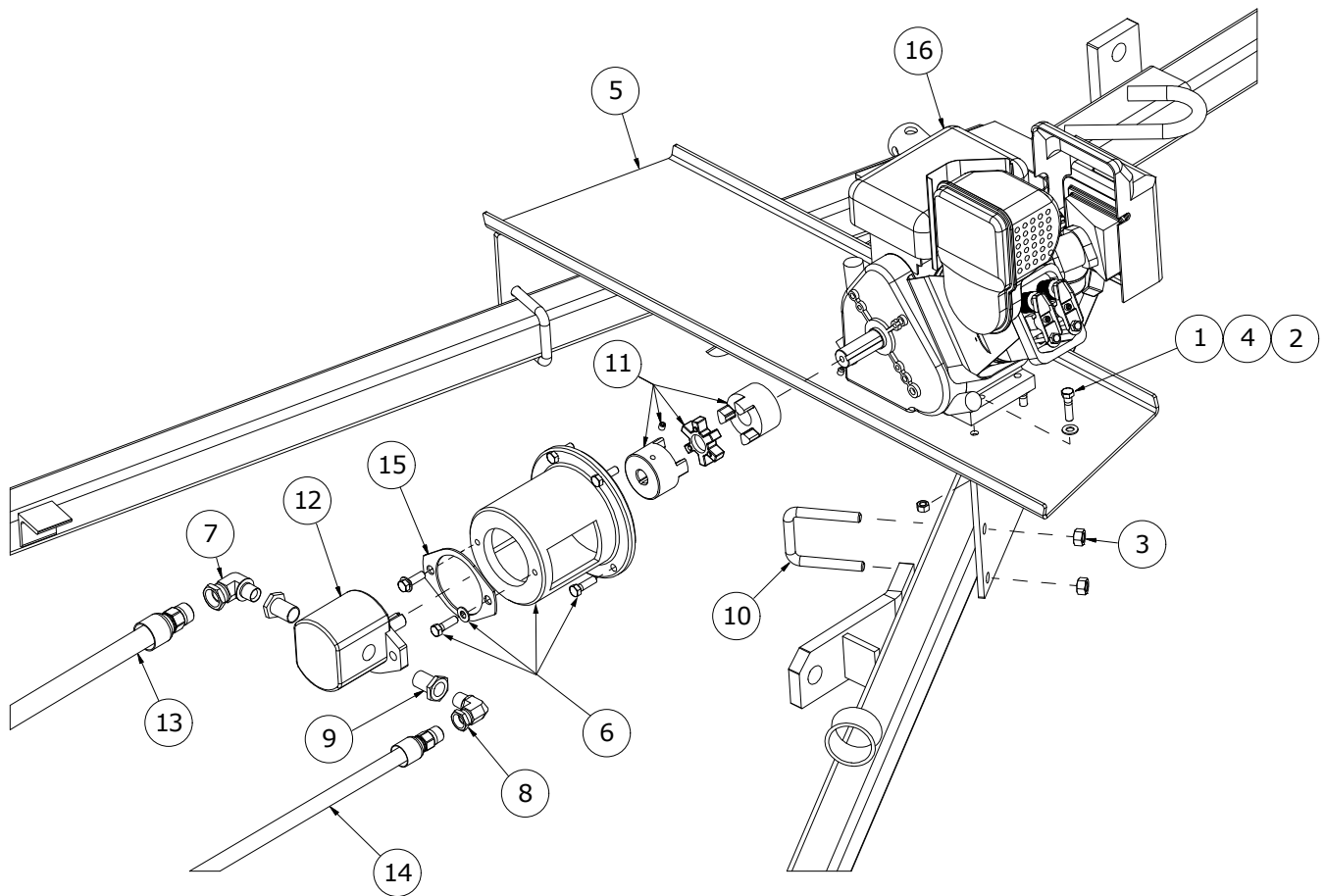
ITEM	PART NUMBER	DESCRIPTION	QTY.
42	9812433	3/16" X 1 1/2" COTTER PIN	1
43	967148	1" LOCK NUT (PL)	1
44	967164	DRIVE-IN GREASE ZERK	3
45	967913	5/16" X 2 1/4" COTTER PIN (PL)	2
46	968404	WHEEL BOLT 1/2" X 1 1/4" (PL)	10
47	9812416	3/4" FLAT WASHER (BR)	2

* 914241-BALLAST-50LBS NOT SHOWN, LOCATED INSIDE FRAME BALLAST COMPARTMENT

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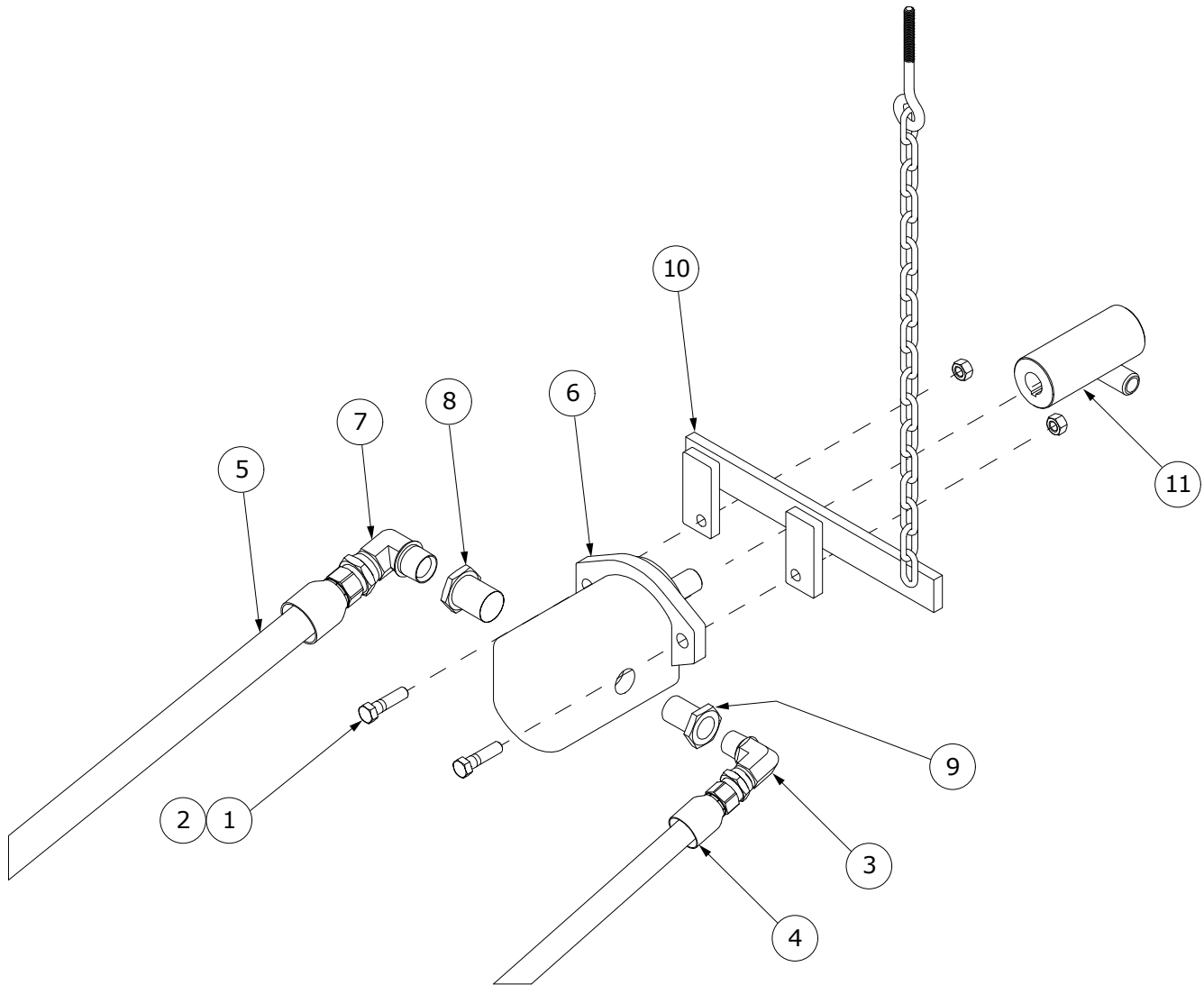
Hydraulic Pump, Engine Drive



914252

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	4
2	812363	3/8" LOCK NUT (PL)	4
3	812364	1/2" LOCK NUT (PL)	8
4	84039	3/8" FLAT WASHER (PL)	4
5	913964	WELDT-ENGINE MOUNT	1
6	913965	MOUNT-PUMP HYDRAULIC	1
7	913971	ELBOW-8 MPT X -12 FPT SWIVEL 90	1
8	913973	ELBOW-8 MPT X -8 FPT SWIVEL 90	1
9	914068	ADAPTER-10MORB X -8 FPT	2
10	914107	1/2 X 2 1/2 X 3 9/16 U-BOLT (PL)	4
11	914251	COUPLING-JAW	1
12	914263	PUMP-HYDRAULIC ENGINE CASAPPA	1
13	914274	HOSE-12 MPT X -12 MPT SAE100R16	1
14	914312	HOSE-8 MPT X -8 MPT SAE100R16	1
15	924776L	PLATE - PUMP	1
16	F1753	ENGINE-KOHLER CH395	1

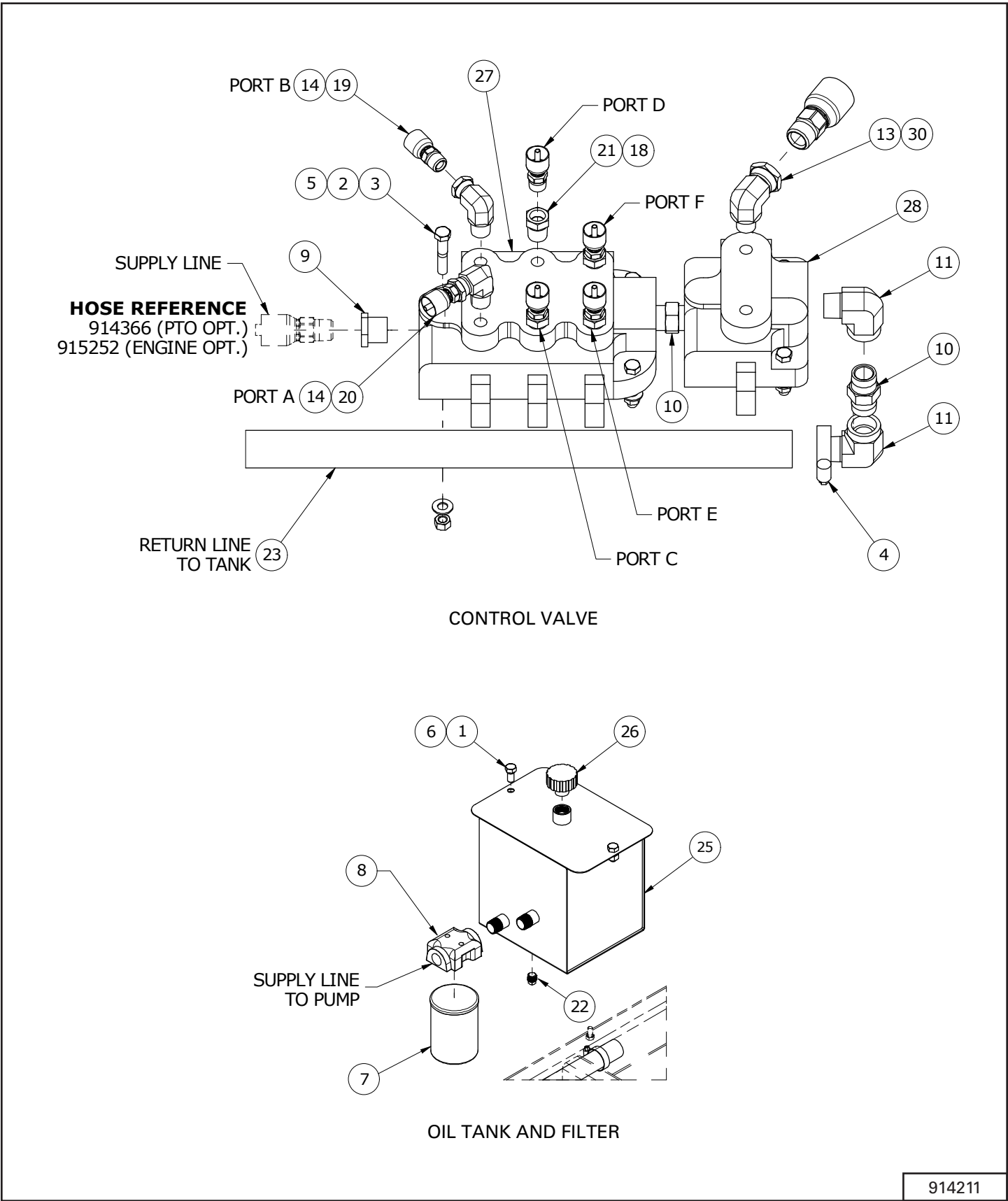
Hydraulic Pump, PTO Drive

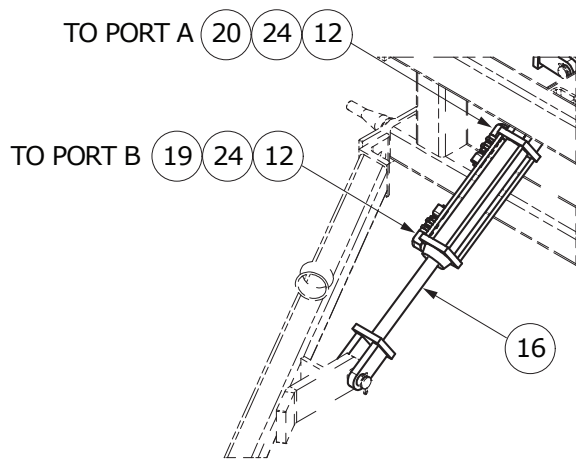


914366

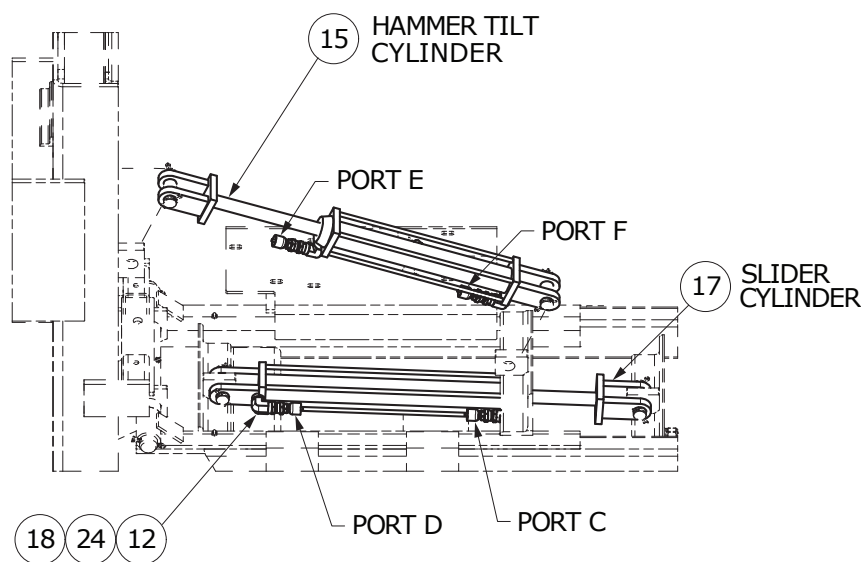
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811792	3/8" X 1 1/2" HEX BOLT GR.5 (PL)	2
2	812363	3/8" LOCK NUT (PL)	2
3	913973	ELBOW-8 MPT X -8 FPT SWIVEL 90	1
4	914027	HOSE-8 MPT X -8 MPT SAE100R16	1
5	914035	HOSE-12 MPT X -12 MPT SAE100R16	1
6	914055	PUMP-HYDRAULIC PTO CASAPPA	1
7	914060	ELBOW-12 MPT X -12 FPT SWIVEL 90	1
8	914061	ADAPTER-12MORB X -12 FPT	1
9	914068	ADAPTER-10MORB X -8 FPT	1
10	914103	WELDT-PTO PUMP STABILIZER	1
11	914221	ADAPTER-1.75" 6 SPLINE X .75"	1

Hydraulic Components

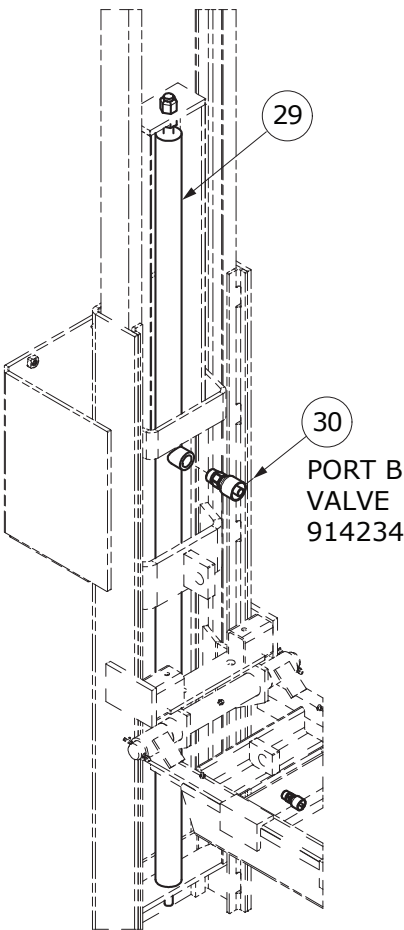




FRAME TILT CYLINDER



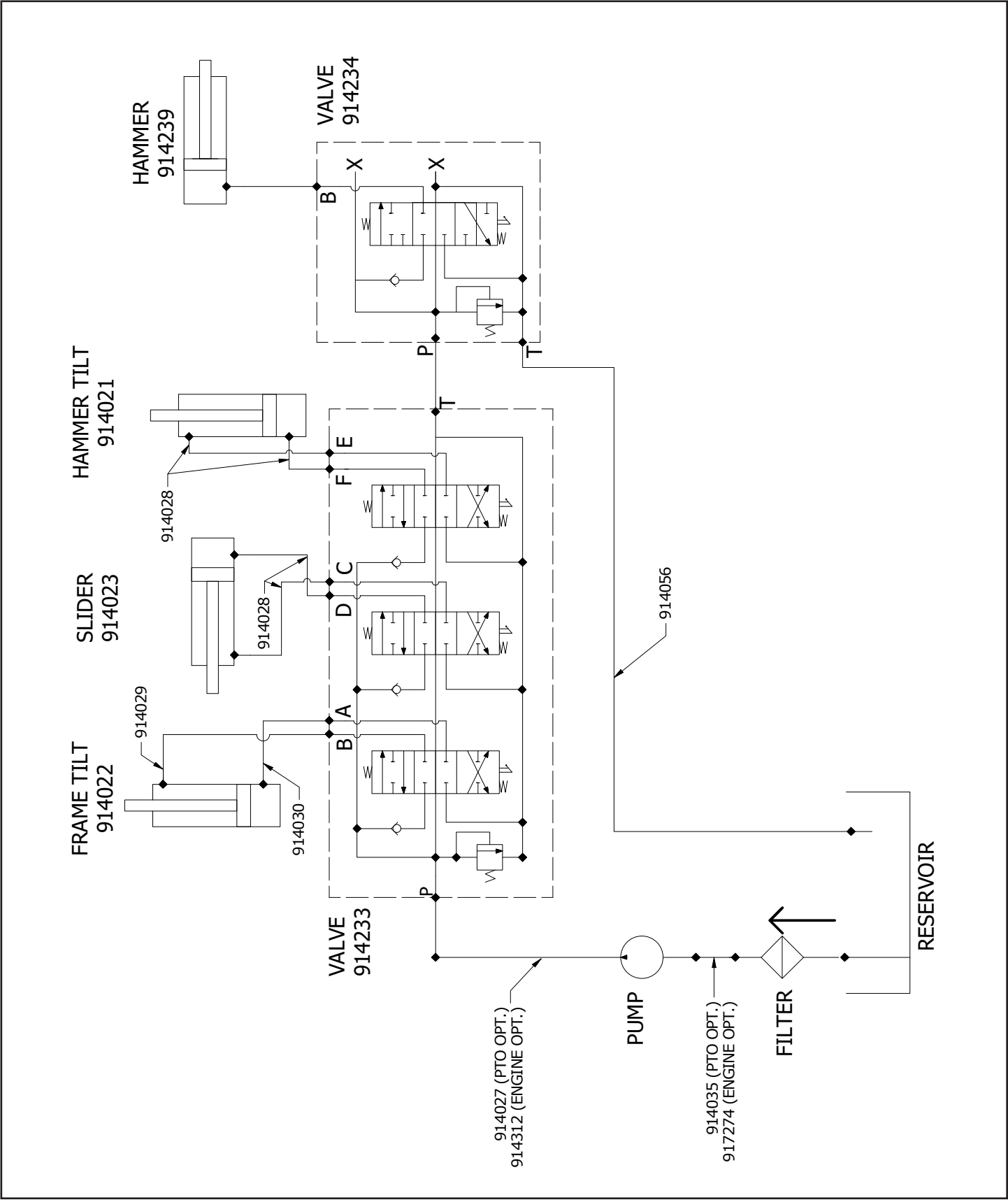
HAMMER TILT & SLIDER CYLINDER



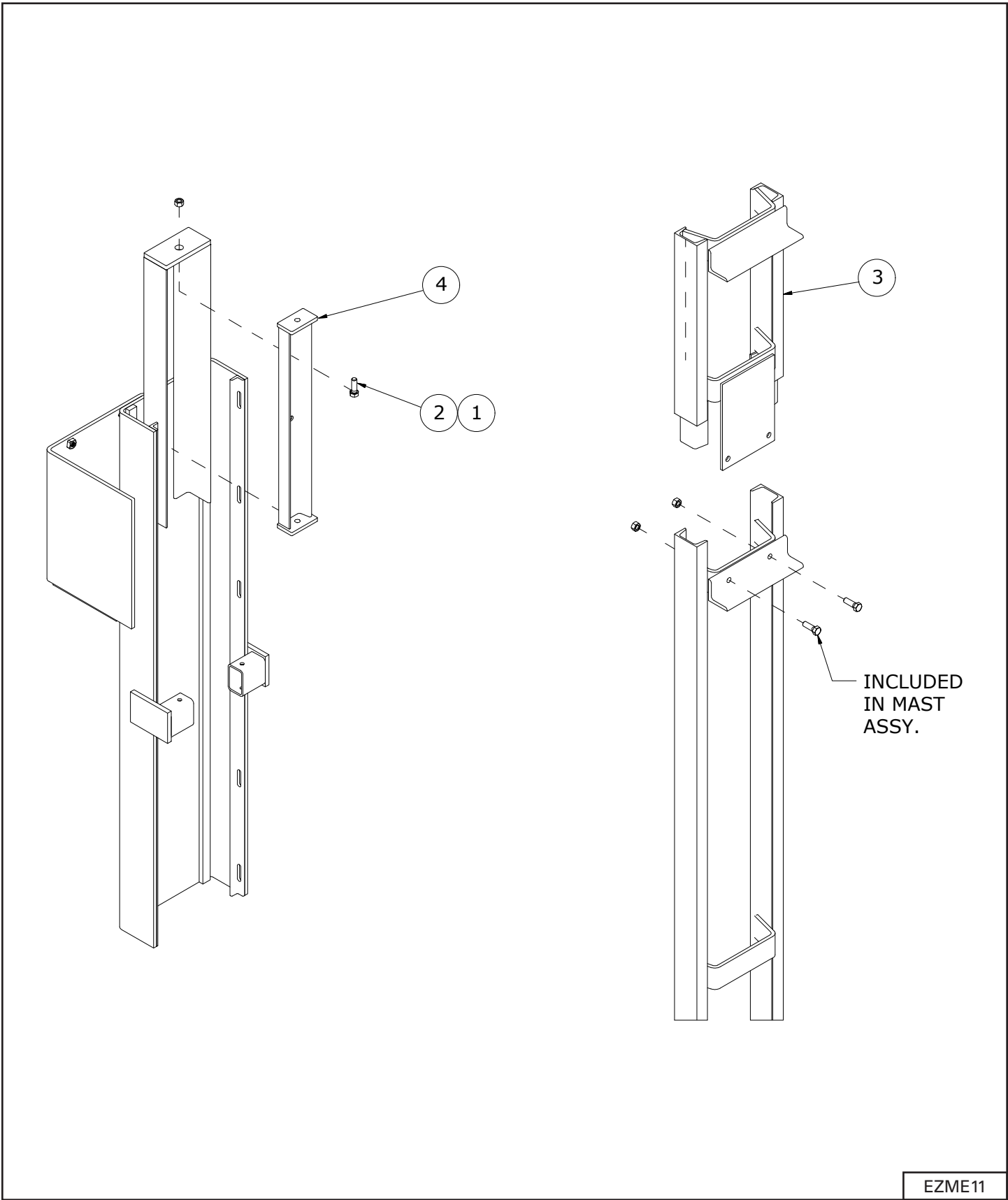
HAMMER CYLINDER

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	81619	1/2" X 1" HEX BOLT (PL)	2
2	84039	WASHER - 3/8" SAE FLAT (PL)	6
3	811795	3/8" X 2" HEX BOLT (PL)	6
4	811864	CLAMP HOSE-0.75 TO 1.75	2
5	812363	3/8" LOCK NUT (PL)	6
6	812364	NUT-HEX-GR5-(ZT)-1/2_13	2
7	910202	10 MICRON OIL FILTER	1
8	910212	FILTER HEAD	1
9	910442	REDUCER, 3/4"MNPT X 1/2"FNPT	1
10	913966	NIPPLE-12 NPT X 2.00"	2
11	913968	ELBOW-12 NPT STREET 90	2
12	913969	ELBOW-6 MPT X -6 FPT 90	6
13	913971	ELBOW-8 MPT X -12 FPT SWIVEL 90	1
14	913972	ELBOW-8 MPT X -6 FPT SWIVEL 90	2
15	914021	CYLINDER-2" BORE X 12" STROKE	1
16	914022	CYLINDER-2" BORE X 8" STROKE	1
17	914023	CYLINDER-2" BORE X 16" STROKE	1
18	914028	HOSE-6 MPT X -6 MPT SAE100R16	4
19	914029	HOSE-6 MPT X -6 MPT SAE100R16	1
20	914030	HOSE-6 MPT X -6 MPT SAE100R16	1
21	914049	REDUCER-8 MPT X -6 FPT	4
22	914050	PLUG-6 MPT SQUARE HEAD	1
23	914056	HOSE-RETURN 1.00 DIA	1
24	914062	ORIFICE-6 MPT X -6 FPT SWIVEL .031	6
25	914073	WELDT-TANK HYDRAULIC	1
26	914108	CAP-BREATHING HYDRAULIC RSRVR	1
27	914233	VALVE-CTRL 4 WAY 3 SPOOL 3 POS	1
28	914234	VALVE-CTRL 3 WAY 1 SPOOL	1
29	914239	CYL-HAMMER	1
30	914274	HOSE-12 MPT X -12 MPT SAE100R16	1

Hydraulic Schematic



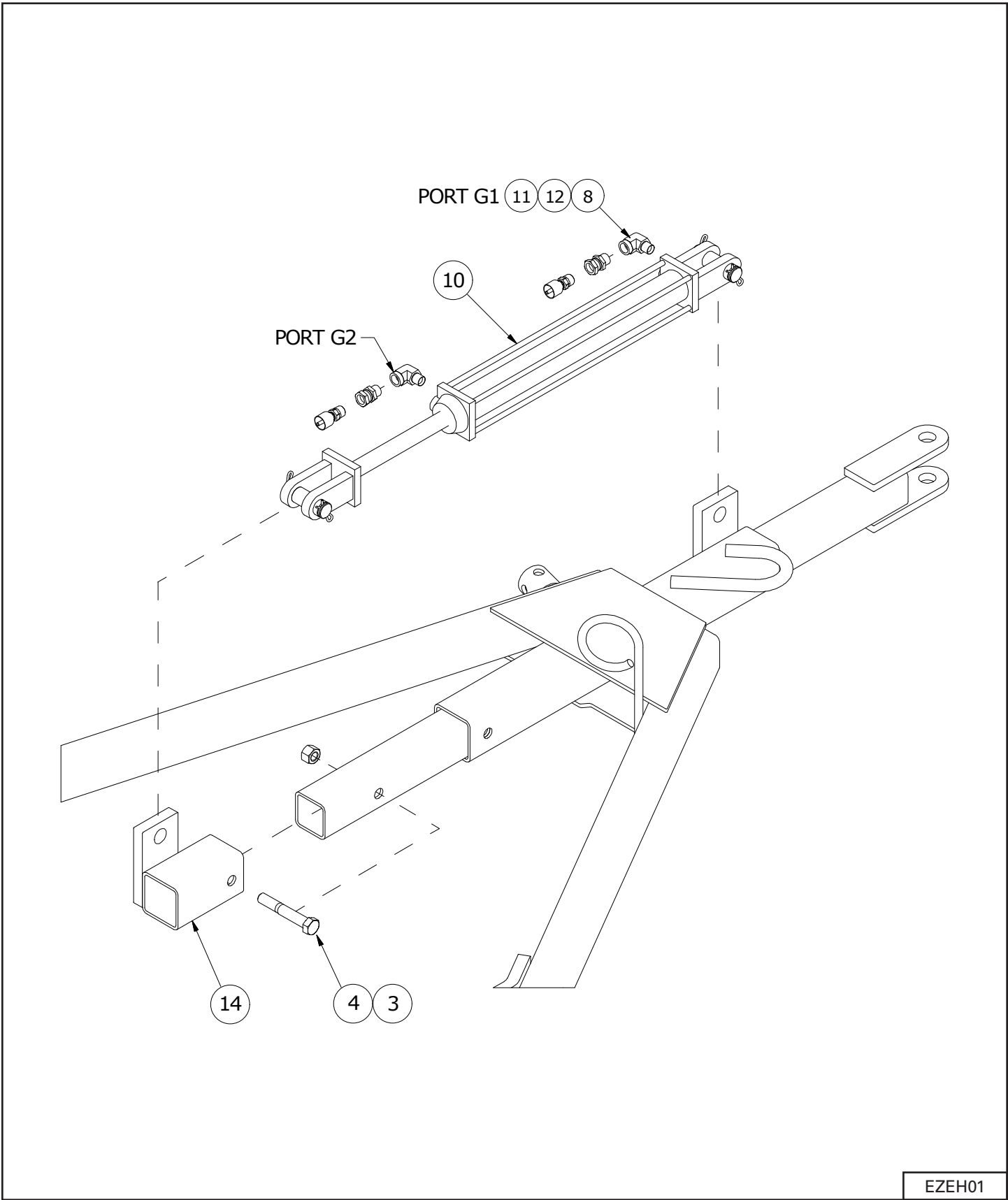
Mast And Hammer Extension Option



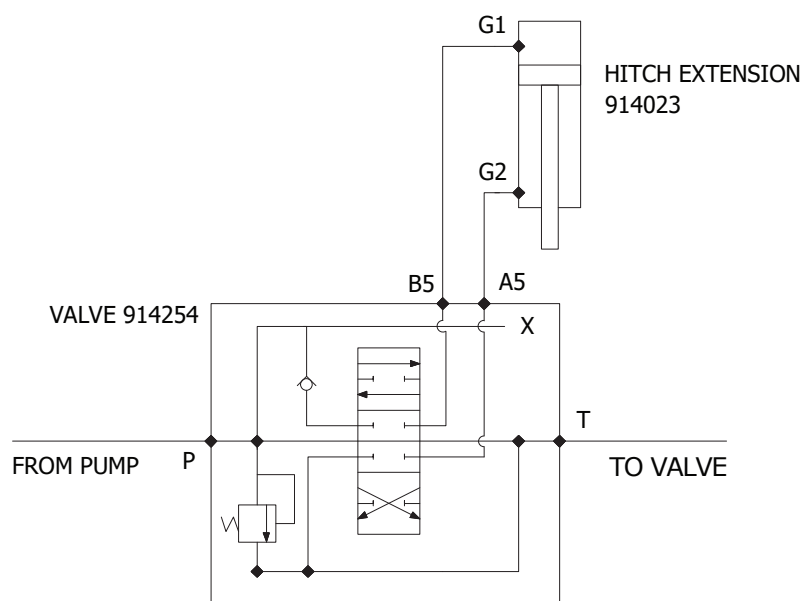
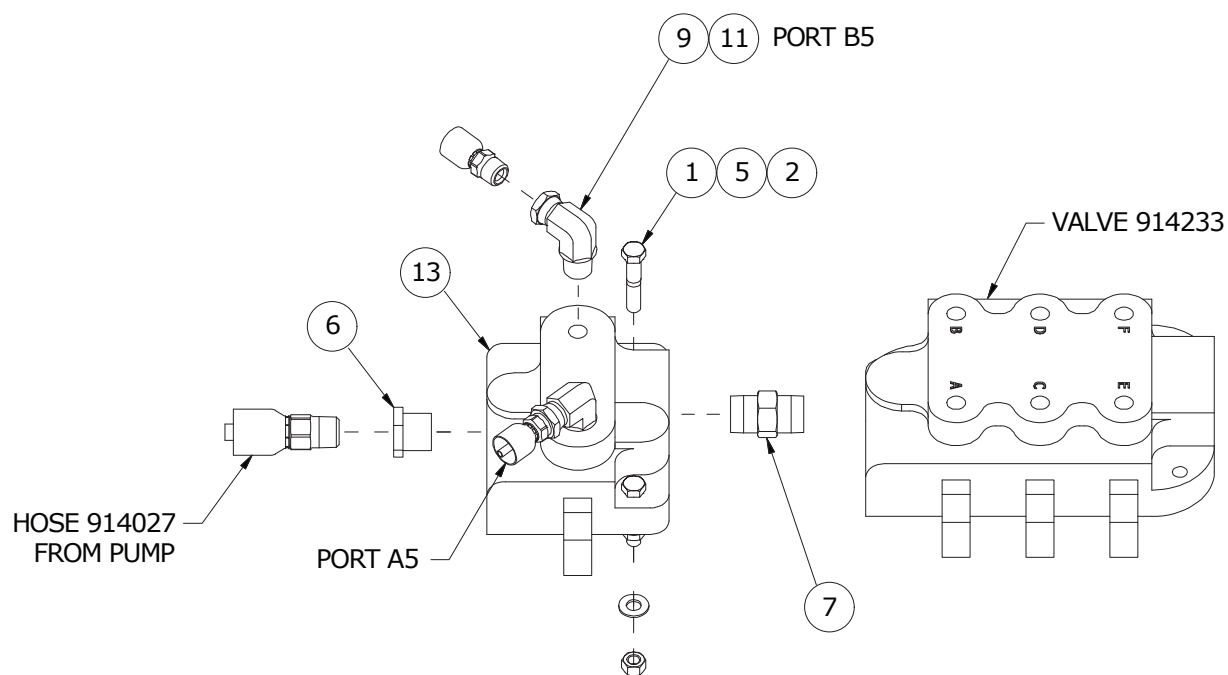
EZME11

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	812364	1/2" LOCK NUT (PL)	1
2	84277	1/2" X 1 1/2" HEX BOLT (PL)	1
3	913869	WELDT - MAST EXTENSION	1
4	913876	WELDT-EXTENSION HYDRAULIC HAMMER	1

Hitch Hydraulic Option



EZEH01

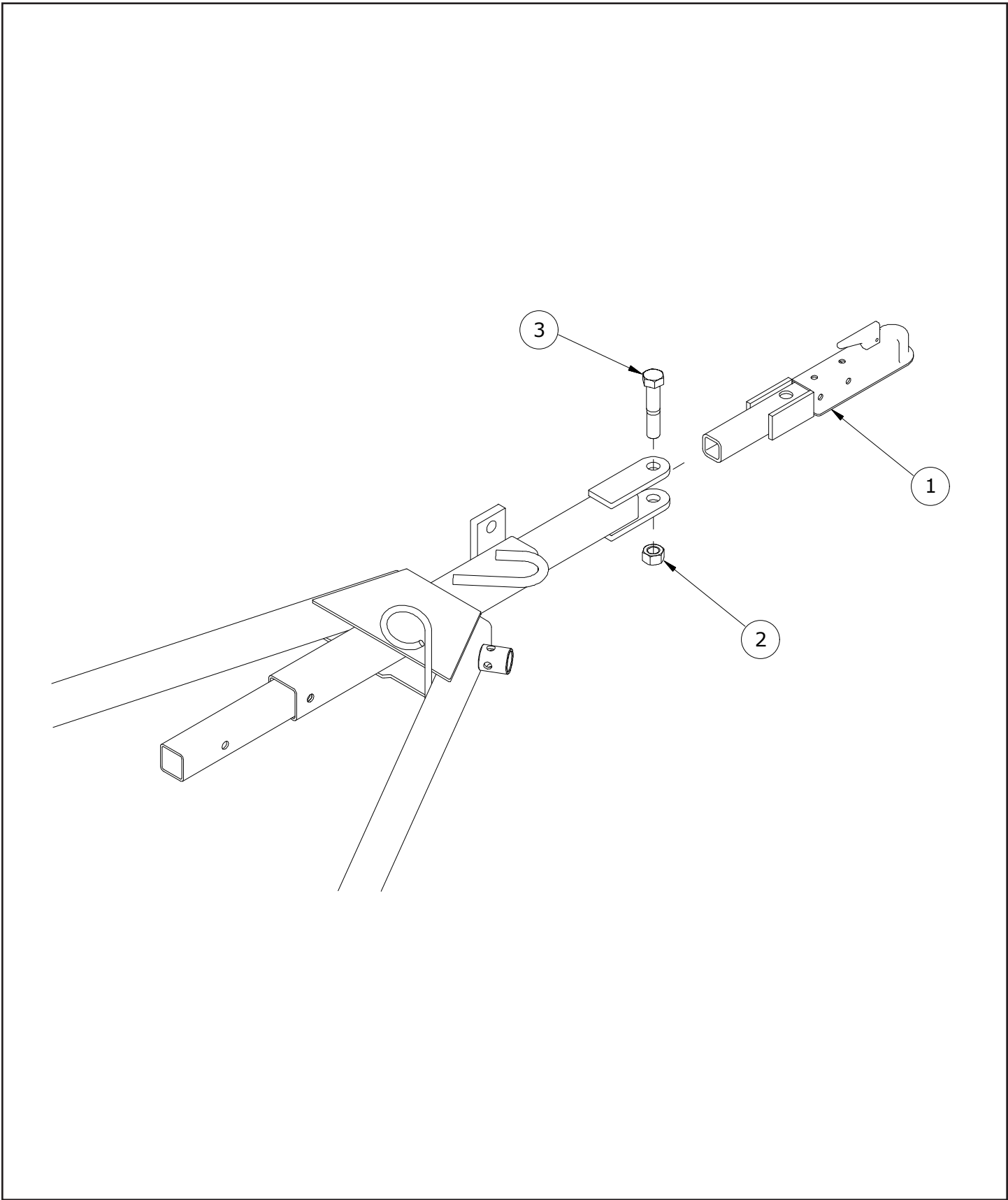


ITEM	PART NUMBER	DESCRIPTION	QTY.
1	811795	3/8" X 2" HEX BOLT (PL)	3
2	812363	3/8" LOCK NUT (PL)	3
3	812482	5/8" LOCK NUT (PL)	1
4	81671	5/8" X 4" HEX BOLT (PL)	1
5	84039	3/8" FLAT WASHER (PL)	3
6	910442	REDUCER, 3/4"MNPT X 1/2"FNPT	1
7	913966	NIPPLE-12 NPT X 2.00"	1
8	913969	ELBOW-6 MPT X -6 FPT 90	2
9	913972	ELBOW-8 MPT X -6 FPT SWIVEL 90	2
10	914023	CYLINDER-2" BORE X 16" STROKE	1
11	914031	HOSE-6 MPT X -6 MPT SAE100R16	2
12	914062	ORIFICE-6 MPT X -6 FPT SWIVEL .031	2
13	914254	VALVE-CTRL 4 WAY 1 SPOOL 3 POS	1
14	914329	WELDT-SLEEVE MOUNT CYL HITCH EXT	1
15	973658	CARTON, 8" X 8" X 37"	1

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Hitch 2" Ball Option



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	914090	WELDT-2" BALL COUPLER	1
2	967148	1" LOCK NUT (PL)	1
3	967527	1" X 5" HEX BOLT (PL)	1

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Specifications And Shipping Kit Numbers

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Specifications

MODEL	2400
FRAME	ALL WELDED TUBULAR STEEL CONSTRUCTION
IN FRAME COUNTERWEIGHT BOX	15" X 15" X 25" – 3.2 CU. FT. (92L)
WHEEL TRACK WIDTH	69" (1750 MM)
WHEEL RIMS	15" (381 MM) (6.70 X 15 4-PLY BIASTIRES OPTIONAL)
WHEEL BEARINGS	TAPERED ROLLER
MAST	12" (305 MM) WIDE TRACK
HAMMER WEIGHT	310 LB (141 KG) EMPTY, UP TO 700 LB (318 KG) BALLASTED
IMPACT AT FULL STROKE	100,000 LB (45,360 KG)*
MAXIMUM HAMMER HEIGHT	STANDARD LIFT 105" (2.67 M), 128" (3.25 M) WITH OPTIONAL MAST EXTENSION
MINIMUM HAMMER HEIGHT	43" (1090 MM), 66" (1676 MM) WITH OPTIONAL MAST EXTENSION
MAXIMUM HAMMER STROKE	62" (1570 MM)
IN & OUT HAMMER SLIDE	16" (410 MM)
HAMMER TILT, FROM VERTICAL	FORE 20° / AFT 15°, SIDE TILT: LEFT 40° / RIGHT 22°
BASIC SHIPPING WEIGHT	PTO: 1190 LB (540 KG), ENGINE: 1300 LB (590 KG)

*Impact lb are based on an 8" diameter post driven into packed clay soil with non ballasted hammer. Impact increases proportionally with ballast in hammer.

Shipping Kit And Bundle Numbers

The following is a list of Kit Numbers for this product and the Bundle Numbers, Descriptions, and Quantities for each Kit.

Qty.	Bundle	Description
2400 POST DRIVER WITH PTO DRIVE, POST RACK, POST GUIDE, AND SAFETY CHAIN		
1	EZP2400	MAIN ASSEMBLY
2400 POST DRIVER WITH 9 HP ENGINE DRIVE, POST RACK, POST GUIDE, AND SAFETY CHAIN		
1	EZP2400HE	MAIN ASSEMBLY
OPTIONS		
1	EZEH01	HYD. EXTENDABLE HITCH KIT
1	EZME11	MAST EXTENSION KIT
1	EZBH01	2" BALL HITCH RECEIVER

Hardware Torque Values

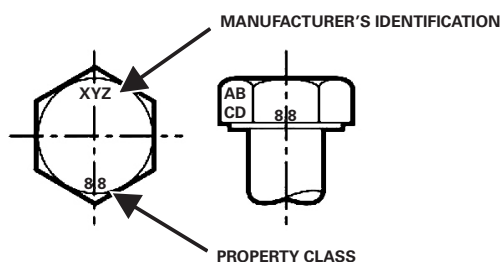
Metric Chart

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

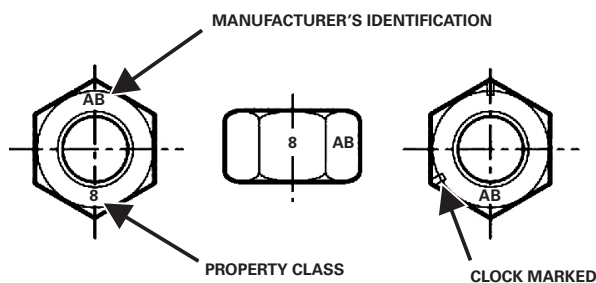
Use the following charts to determine the correct torque when checking, adjusting or replacing hardware. **Torque values are listed in newton-meters (inch* or foot pounds) for normal assembly applications.**

NOMINAL SIZE	CLASS 5.8		CLASS 8.8		CLASS 10.9		LOCK NUTS
	UNPLATED	PLATED W / ZNCR	UNPLATED	PLATED W / ZNCR	UNPLATED	PLATED W / ZNCR	CL.8 W/ CL. 8.8 BOLT
M4	1.7 (15*)	2.2 (19*)	2.6 (23*)	3.4 (30*)	3.7 (33*)	4.8 (42*)	1.8 (16*)
M6	5.8 (51*)	7.6 (67*)	8.9 (79*)	12 (102*)	13 (115*)	17 (150*)	6.3 (56*)
M8	14 (124*)	18 (159*)	22 (195*)	28 (248*)	31 (274*)	40 (354*)	15 (133*)
M10	28 (21)	36 (27)	43 (32)	56 (41)	61 (45)	79 (58)	30 (22)
M12	49 (36)	63 (46)	75 (55)	97 (72)	107 (79)	138 (102)	53 (39)
M16	121 (89)	158 (117)	186 (137)	240 (177)	266 (196)	344 (254)	131 (97)
M20	237 (175)	307 (226)	375 (277)	485 (358)	519 (383)	671 (495)	265 (195)
M24	411 (303)	531 (392)	648 (478)	839 (619)	897 (662)	1160 (855)	458 (338)
NOTE: TORQUE VALUES SHOWN WITH * ARE INCH POUNDS.							

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



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



Hardware Torque Values (Cont'd)

Imperial Chart

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

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

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

Identification of Hex Cap Screws and Carriage Bolts



GRADE 2
SAE BOLT



GRADE 5
SAE BOLTS



GRADE 8
SAE BOLTS



GRADE 2
SAE NUTS

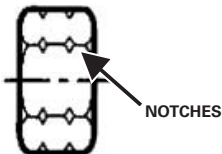


GRADE 5
SAE NUTS



GRADE 8
SAE NUTS

Identification of Hex Nuts and Lock Nuts

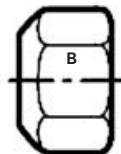


GRADE IDENTIFICATION

GRADE A: NO NOTCHES

GRADE B: ONE CIRCUMFERENTIAL NOTCH

GRADE C: TWO CIRCUMFERENTIAL NOTCHES

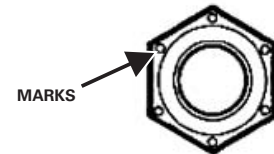


GRADE IDENTIFICATION

GRADE A: NO MARK

GRADE B: LETTER B

GRADE C: LETTER C



GRADE IDENTIFICATION

GRADE A: NO MARKS

GRADE B: THREE MARKS

GRADE C: SIX MARKS

MARKS NEED NOT BE
LOCATED AT CORNERS

Warranty

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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 one (1) year. 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.

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.

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