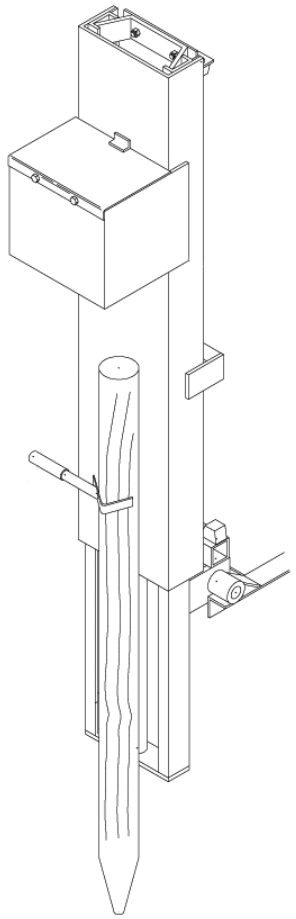
Farm King

OPERATOR AND PARTS MANUAL

Post Driver

2400 Model



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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.

Introduction

Farm King 2400 trailered post drivers makes work easy. Available in a PTO or 9 hp engine models, Farm King post driver trailers can work with a tractor or behind a pick-up truck. Designed to be maneuverable and durable Farm King post drivers are perfect for farmers, ranchers, and contractors.

Keep this manual handy for frequent reference. All new operators or owners must review the manual before using the equipment and at least 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 seen facing in the direction of travel of the implement.

Safety

Safety Instructions

Remember, YOU are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that everyone operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

The alert symbol is used throughout this manual. It indicates attention is required and identifies hazards. Follow the recommended precautions.

The safety alert symbol means...
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

	CAUTION	The caution symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
	WARNING	The Warning Symbol indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.
	DANGER	The Danger Symbol indicates an imminently hazardous situation that, if not avoided will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

General Safety

- Have a first-aid kit available for use and know how to use it. Have a fire extinguisher available, stored in a highly visible location, and know how to use it.
- Wear appropriate protective gear. This list may include but is not limited to:
  - hard hat
  - protective shoes with slip resistant soles
  - protective glasses or goggles
  - heavy gloves
  - wet weather gear
  - hearing protection
  - respirator or filter mask
- Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, or unplugging the equipment.
- Do not attempt any unauthorized modifications to your Farm King product as this could affect function or safety, and could affect the life of the equipment.
- Never start or operate the mower except from the operator's station on the power unit.
- Inspect and clean the working area before operating.
- Keep hands, feet, clothing, and hair away from moving parts.
- Ensure bystanders are clear of the area before operating.
- Do not mount post driver on tractors weighing less than 3000 lb (1360 kg). Operating or transporting post driver mounted on a tractor weighing less than 3000 lb (1360 kg) could result in tractor roll over causing serious injury or death to operator and person(s) nearby.
- Never mount post driver on tractors without ROPS protection.
- Only one person, the operator, should be allowed to operate the post driver.
- Never ride or permit others to ride, on the drawbar of the tractor or on the post driver.
- Never allow anyone, other than the operator, on the tractor when operating or transporting the post driver.

Operation Safety

- Never allow anyone near the post driver when you are performing operating functions.
- 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.
- If mast extension kit is installed or hammer is weighted, operator must use own discretion when adding sufficient ballast to trailer weight box to ensure safe and stable operation of post driver.
- Make certain everyone is clear before operating or moving the post driver.
- Keep all untrained personnel away from the post driver at all times. Only personnel knowledgeable in the operation should be allowed near or in control of the post driver.
- 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 hand held post holder or optional post guide to position post under hammer when driving posts. Using one of these devices may prevent injury to hand or arm.

- 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.
- Always attach a safety chain to the tractor or vehicle hitch before transporting post driver. Serious damage to the post driver and serious injury or death could result from post driver separating from tractor or the vehicle hitch.
- 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 use discretion when operating or transporting post driver on uneven terrain. Uneven terrain may cause post driver to upset causing serious injury or death to person(s) nearby and serious damage to post driver.
- 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.

Assembly Safety

- Never exceed 40 km/h (25 mph) when transporting post driver.
- Use an aligning punch to line up holes. Keep fingers out of these holes. Any sudden movement of heavy components will severely injure or sever your fingers.
- Use a hoist or adequate manpower to lift the heavy components into place. Use adequate jacks or support materials. Attempting to lift heavy components by yourself could cause serious injury.
- Before installing hammer always place a minimum ballast of 250 lb (113 kg) in weight box of the trailer for stability.
- If mast extension kit is installed or hammer is weighted, operator must use own discretion when adding sufficient ballast to trailer weight box to insure safe assembly and operation of post driver.

- Be sure all bolts and hydraulic fittings are tight, and all cotter pins are installed in pins.
- Support the frame securely before assembling the components. Inadequate support may result in the heavy components falling causing serious damage to post driver and may cause serious injury to operator or person(s) nearby.
- Be sure all wheel bolts are checked for tightness during initial transport or when first operating post driver. Loose wheel bolts may result in the wheel falling off causing serious damage to post driver and may cause serious injury to operator or person(s) nearby.
- Before applying pressure to hydraulic system, be sure all connections are tight and components are not damaged.
- Before proceeding with balance of assembly, place a block under rear stabilizer, arrow 1, or ILL. 1. Hitch cylinder should be in closed position. Blocking rear stabilizer will prevent any sudden frame movement when assembling the rest of the post driver.
- Support hammer assembly with chain hoist or other over head support during assembly of frame and tilt cylinder. If heavy hammer assembly fell, person(s) nearby could be seriously injured.
- Use cardboard or wood as a backstop when searching for hydraulic leaks. Escaping hydraulic oil under pressure can cause serious injury if it penetrates the skin. See a doctor immediately if injured.
- Before installing hammer always place a minimum ballast of 250 lb (113 kg) in the weight box of trailer for stability. If mast extension kit is installed or hammer is weighted, operator must use own discretion when adding sufficient ballast to trailer weight box to ensure sage and stable operation of post driver.
- Relieve hydraulic pressure before disconnecting hydraulic components. Hydraulic components under pressure, may cause parts and hydraulic fluid to fly out at a high velocity which could cause serious injury.
- Never remove stabilizer bar from rear of post driver. Stabilizer bar prevents post driver from falling backwards when post driver is disconnected from transport vehicle.

Transport Safety

- Never exceed 40 km/h (25 mph) when transporting post driver.
- Reduce speed when transporting post driver over uneven or rough terrain.
- Shift the tractor into a lower gear when transporting post driver down hills or steep slopes.
- Be sure SMV (slow moving vehicle) emblem is clean and visible before transporting post driver. The SMV emblem warns other vehicles approaching from rear.
- Comply with all State, Provincial, Federal and local laws when transporting post driver on roadways.
- Retract all cylinders before transporting post driver.
- Always test the hitch weight before releasing the post driver from the transport vehicle or hold down.
- Lift the hitch slowly and keep it no higher than the tow bar when attaching or releasing it from the transport vehicle.
- Do not move the post driver by hand. Make certain the post driver trailer is properly secured to a transport vehicle.
- When transporting the post driver on a public road or highway by night or during the day, use accessory lights and devices to give adequate warning to the operators of other vehicles. Check local regulations.

- Always attach a safety chain to the tractor or vehicle hitch before transporting post driver. Serious damage to the post driver and serious injury or death to person(s) nearby could result from post driver separating from tractor or the vehicle hitch.
- Always use discretion when operating or transporting post driver on uneven terrain. Uneven terrain may cause post driver to upset causing serious injury or death to person(s) nearby and serious damage to post driver.

Maintenance Safety

- Always support post driver trailer and hammer on stands or blocks and have sufficient weight on the hitch, or have the hitch attached to a transport vehicle before performing assembly or repair work under or around post driver.
- Never work on the hammer when it is in the raised or partially raised position.
- 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 all 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 treatment is not administered immediately.
- If spray-can paint is used, be careful when discarding empty cans. Do not incinerate or puncture can.
- Do not permit smoking, sparks, or open flame where combustible lubricants or liquids are being used.
- Replace any worn or damaged hydraulic hoses and keep all hydraulic hoses and hydraulic fittings tight.
- Shut off all power before adjusting, servicing or cleaning the post driver.
- Do not lubricate or adjust post driver when it is being operated or while it is in motion.
- Always retract all cylinders, shut off tractor engine and disengage PTO or shut off post driver engine before lubricating post driver.
- When servicing the post driver, make sure the hitch is securely attached to transport vehicle, or hitch hold down.
- Replace any safety decals that are damaged or are illegible.

Storage Safety

- Do not store the post driver with the hammer raised.
- Lift the hitch slowly and keep it no higher than the tow bar when attaching or releasing it from the transport vehicle.

Installation

- To install safety signs, ensure the installation area is clean and dry. Decide on the exact position before you remove the backing paper. Remove the smallest portion of the split backing paper and align over the specified area. Carefully press in place.
- Slowly peel back the remaining paper and smooth the remaining portion in place. Small air pockets can be pierced with a pin and smoothed out.
- Replace safety signs immediately should they become damaged, torn or illegible. Obtain replacements from your authorized dealer using the part numbers shown.

Assembly Instructions

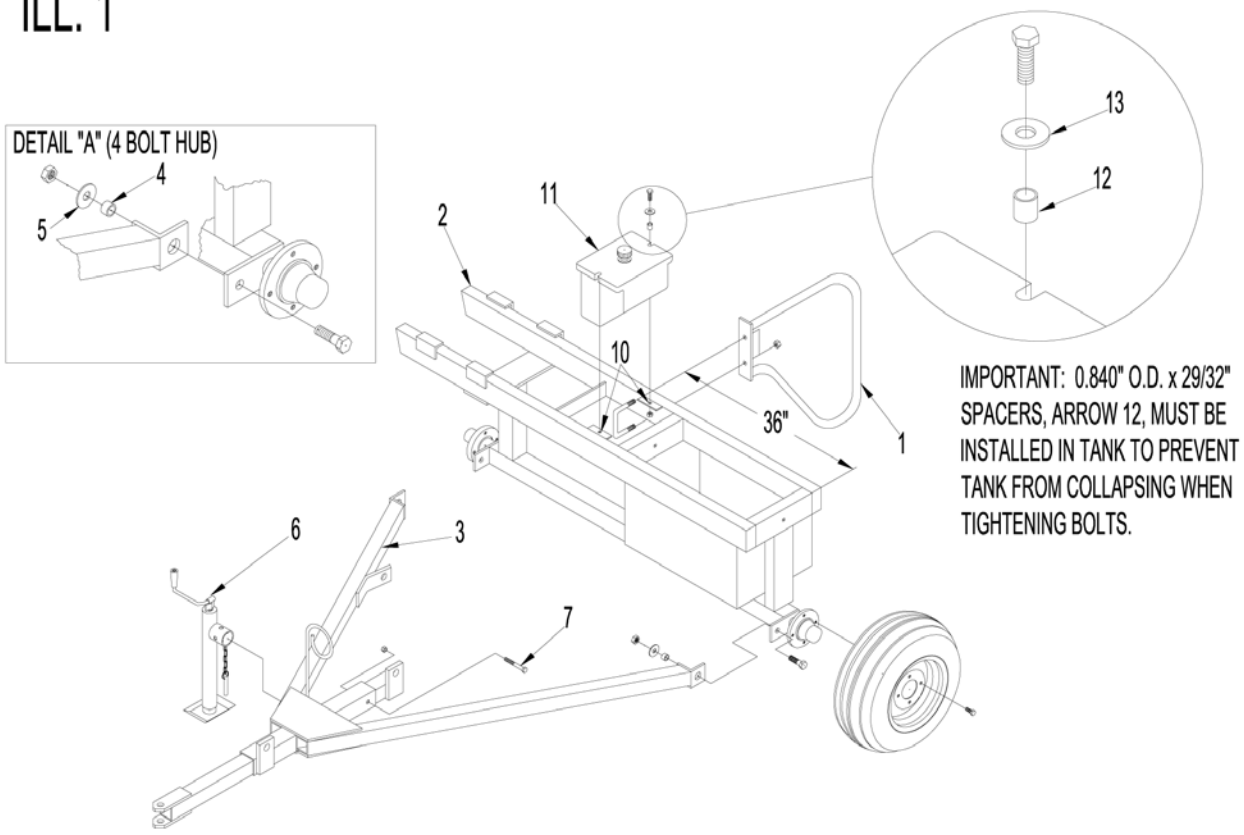
	CAUTION	Use a hoist or adequate manpower to lift heavy components in place. Attempting to lift heavy components by yourself could cause serious injury.

	CAUTION	Support frame securely before assembling components. Heavy frame could cause serious injury if it fell.

1. See ILL. 1. Fasten rear stabilizer bar, arrow 1, to rear of frame, arrow 2, with one (1)-5/8" x 4" (16 x 102 mm) U-bolt c/w nuts and lockwashers. Position approximately 36" (914 mm) from LH end of frame. Tighten bolts.

	DANGER	Never remove stabilizer bar from rear of post driver. Stabilizer bar prevents post drive from falling backwards when post driver is disconnected from transport vehicle.

ILL. 1



NOTE: Left and right is determined by standing behind the machine and facing forward.

2. Hitch assembly

   Place hitch assembly, arrow 3, between frame hitch lugs. To fasten hitch to frame, install two (2) 3/4" x 2-1/2" (19 x 64 mm) hex bolts from outside of frame lugs through holes in hitch. Next, install a 3/4" (19 mm) ID x 5/8" (16 mm) long bushing, arrow 4, over end of each bolt and into hole of hitch. Then place a 2" (51 mm) OD x 3/4" (19 mm) ID flatwasher, arrow 5, over each bolt. Secure each bolt with 3/4" (19 mm) nylon locknut. Tighten bolts.

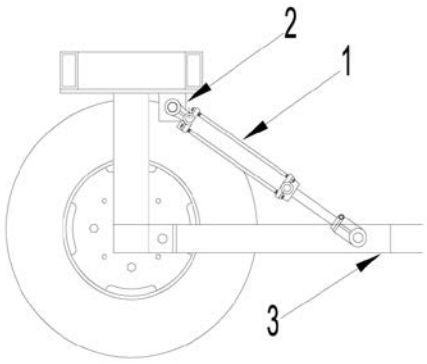
	CAUTION	When assembling post driver, use aligning punch to line up holes. Keep fingers out of holes. Any sudden movement of heavy components will severely injure or sever your fingers.

3. See ILL. 2. Fasten 2" x 8" (51 x 203 mm) hydraulic cylinder, arrow 1, to hitch and frame. Attach barrel end to lug, arrow 2, on frame. Be sure port are facing RHS. Attach shaft end of cylinder to lug, arrow 3, on hitch. Use cylinder pins supplied with cylinder to attach cylinder. Cylinder should be in closed position so frame is tilted forward as shown in ILL. 2.

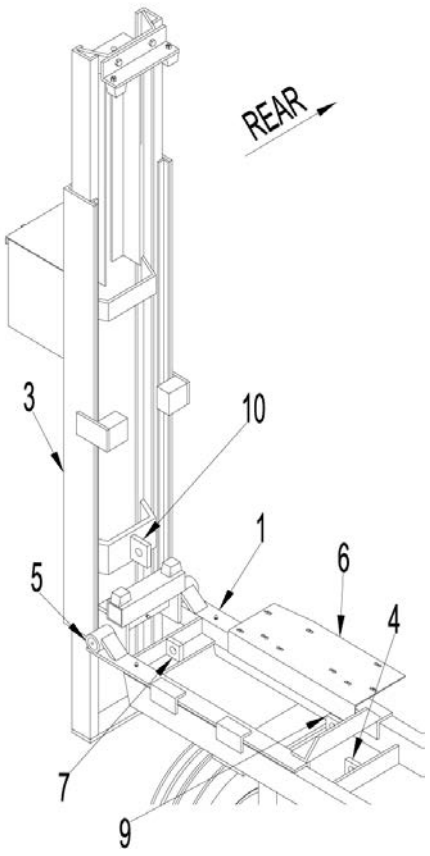
4. If post driver was ordered from factory less tires, install 6.70 x 15 - 4 ply tires or equivalent on wheels. 7.60 x 15 - 4 ply can also be used. Ensure tire pressure is 28 PSI.

5. See ILL. 1. Install wheel and tire, arrow 14, assemblies to hubs, arrow 15. Tighten wheel bolts. Check wheel bolt tightness during first week of transport and periodically thereafter.

ILL. 2.



ILL. 3.



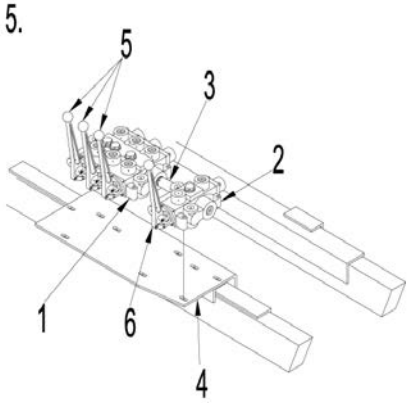
CAUTION	Be sure all wheel bolts are checked for tightness during initial transport or when first operating post driver. Loose wheel bolts may result in the wheel falling off causing serious damage to post driver and may cause serious injury to operator or person(s) nearby.

6. See ILL. 1. Install wheel and tire, arrow 14, assemblies to hubs, arrow 15. Tighten wheel bolts. Check wheel bolt tightness during first week of transport and periodically thereafter.
7. See ILL. 1. If optional horizontal hitch cylinder kit is not used, one (1) 5/8" x 4" (16 x 102 mm) NC hex bolt, c/w locknut, arrow 7, must be installed. This will prevent the hitch from sliding in or out during transport.

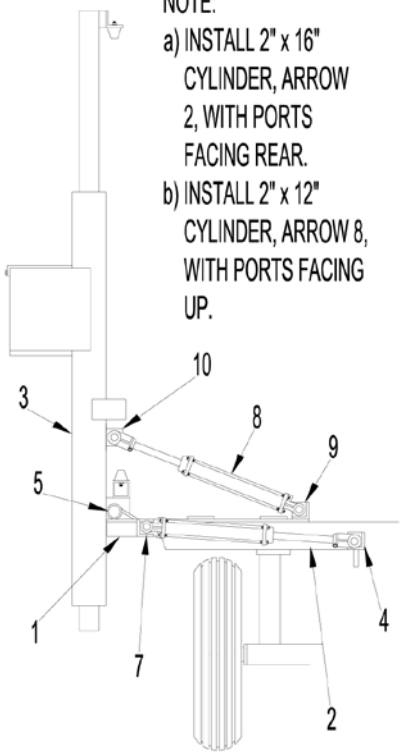
CAUTION	Before proceeding with balance of assembly, place a block under rear stabilizer bar, arrow 1, of ILL. 1. Hitch cylinder should be in closed position. Blocking rear stabilizer will prevent any sudden frame movement when assembling the rest of the post driver.

WARNING	Before installing hammer always place a minimum ballast of 250 lb (113 kg) in the weight box of trailer for stability. If mast extension kit is installed or hammer is weighted, operator must use own discretion when adding sufficient ballast to trailer weight box to ensure safe and stable operation of post driver.

ILL. 5.



ILL. 4.



8. See ILL. 3 & 4. With horizontal slide, arrow 1, inserted into frame, fasten a 2" x 16" (51 x 406 mm) hydraulic cylinder, arrow 2, to frame and horizontal slide. Attach barrel end to lug, arrow 7, on horizontal slide frame. Be sure ports are facing towards rear. Attach shaft end of cylinder to lug, arrow 4, on frame. Use cylinder pins supplied with cylinder to attach cylinder. See both illustrations.

9. See ILL. 3 & 4. Fasten hammer assembly, arrow 3, to horizontal slide, arrow 1, with one 1-3/8" dia x 17-1/2" pin (35 x 445 mm), arrow 5. Secure pin with two 3/8" x 2" (10 x 51 mm) cotter pins. See both illustrations.

10. See ILL. 3 & 4. Fasten a 2" x 12" (51 x 305 mm) hydraulic cylinder, arrow 8, to horizontal slide and hammer assembly. Attach barrel end to lug, arrow 9, on horizontal slide. Be sure ports are facing up. Fasten shaft end to lug, arrow 10, on hammer assembly. Use cylinder pins supplied with cylinder to attach cylinder. See both illustrations.

11. See ILL. 1. Attach oil reservoir, arrow 11, to two (2) lugs, arrow 10, on frame. Before installing bolts, place one (1) 13/16" OD x 29/32" (21 x 23 mm) spacer, arrow 12, in slot on each side of reservoir. Place One (1) 3/8" (10 mm) OD x 9/16" (14 mm) ID flatwasher, arrow 13, over each slot. Secure reservoir to frame with two (2) 1/2" x 2" (13 x 51 mm) hex bolts c/w locknut. Fasten bolts through flatwasher and spacer. Tighten bolts.

    NOTE: 13/16" OD x 29/32" (21 x 23 mm) spacers, arrow 12, must be installed in tank to prevent tank from collapsing when tightening bolts.

	CAUTION	Support hammer assembly with chain hoist or other over head support during assembly to frame and tilt cylinder. If heavy hammer assembly fell, persons nearby could be seriously injured.

12. See ILL. 5. Join 3 spool valve, arrow 1, and single spool valve, arrow 2, together with a 3/4" x 2" (19 x 51 mm) NPT nipple, arrow 3. Next, fasten (3) control levers, arrow 5, to 3 spool valve. Attach handles so that they point up. If your post pounder is equipped with hydraulic hitch extension kit, proceed to section 12. If hydraulic hitch extension kit is not used, fasten valve assembly to valve bracket, arrow 4, with (6) 3/8" x 2" (10 x 51 mm) NC hex bolts c/w nuts lockwashers and flatwashers. Place flatwasher on bottom side of mount plate.

    NOTE: If hydraulic hitch extension kit is used, see next page before attaching bracket.

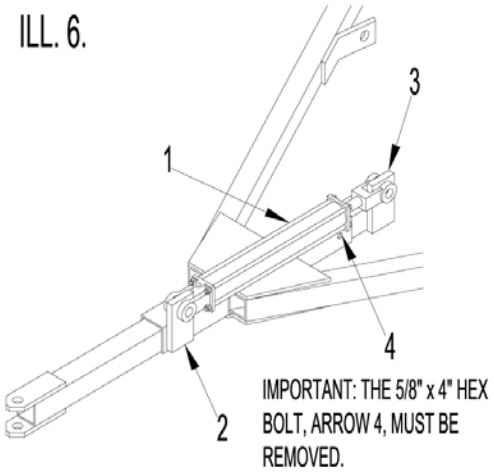
Hitch extension kit (optional)

A - Hydraulic Cylinder Installation See ILL. 6. Fasten barrel end of 2" x 16" (51 x 406 mm) hydraulic cylinder , arrow 1, to front cylinder lug, arrow 2. Fasten shaft end of 2" x 16" (51 x 406 mm) cylinder to rear cylinder lug, arrow 3. Use cylinder pins supplied with cylinder to attached cylinder.

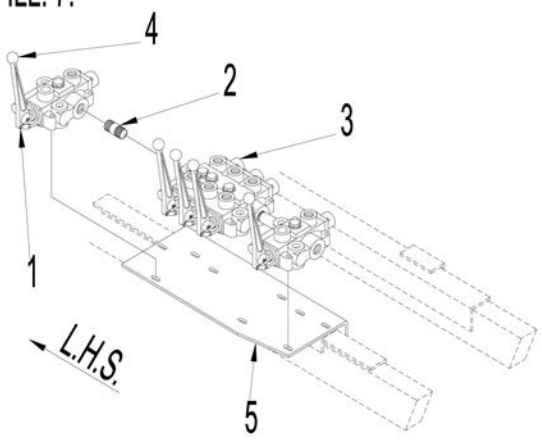
NOTE: For post drivers with hitch extension kit, the 5/8" x 4" NC hex bolt, arrow 4, must be removed.

	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.

ILL. 6.



ILL. 7.



B - Single spool valve installation. See ILL. 7. Connect single spool valve, arrow 1, to IN port on LHS of 3 spool valve, arrow 3. Next attach handle, arrow 4, to single spool valve arrow 1. Attach handle so it points up.

C - See ILL. 7. Fasten valve assembly to valve bracket, arrow 5, (9) 3/8" x 2" (10 x 51 mm) NC hex bolt c/w nuts, lockwashers and flatwashers. Place flatwashers on bottom side of mount pl.

13. Mounting Honda engine - engine drive only - see ILL. 8.

A - Attaching engine mount plate, arrow 1. The LHS of the motor mount plate is fastened to the inside of the LHS hitch tube, using two (2) 1/2" x 2-1/2" (13 x 64 mm) U-bolts c/w nut and lockwasher, arrow 3. The RHS of the motor mount plate is fastened to the outside of the RHS witch tube. The motor mount plate is fastened this way so the engine is not damaged when the post rack pivots forward.

B - Fasten Honda engine, arrow 2, to top of mount plate, arrow 1. Secure with (4) 3/8" x 1-3/4" (10 x 44 mm) hex bolts c/w nuts, lockwashers and flatwashers. Place 7/16" ID flatwashers, over engine mount holes and bottom of mount plate. Tighten bolts.

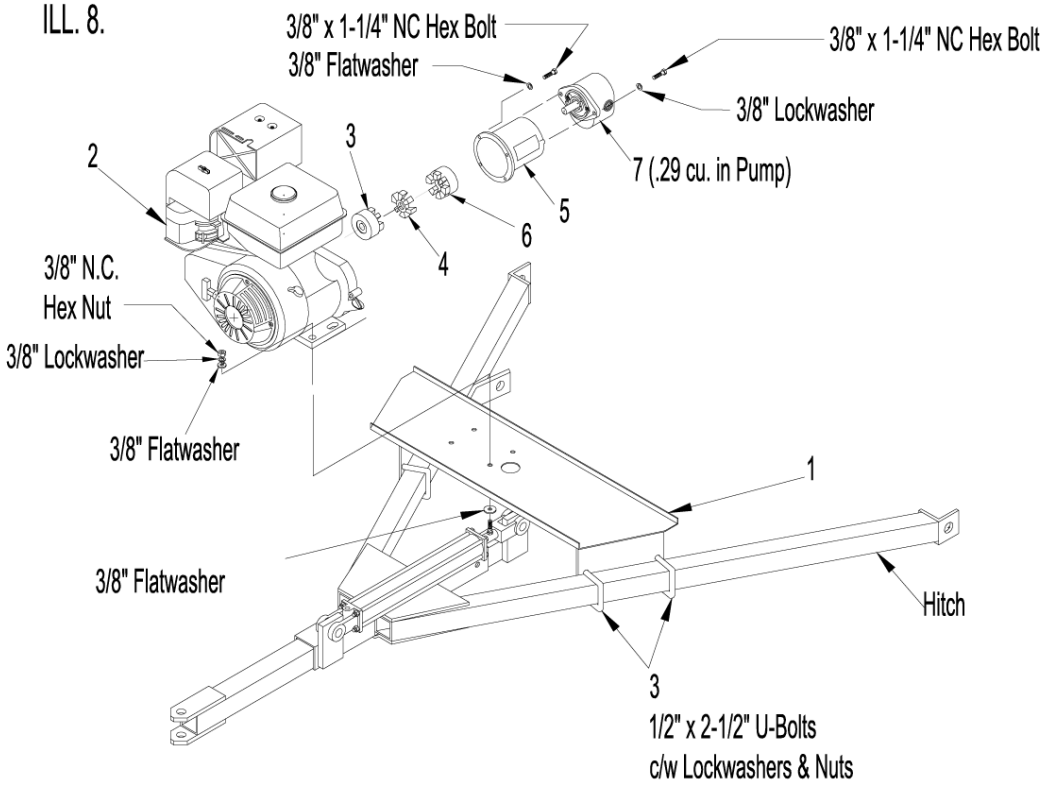
C - Install 1" (25 mm) ID drive coupling, arrow 3, on engine drive shaft, leave screw loose. (Be sure key is installed).

D - Place 6 spoke rubber spider, arrow 4, over drive of coupling, arrow 3.

E - Place 4 hole end on pump mount housing, arrow 5, over engine drive shaft and fasten to four (4) threaded holes in engine. Secure with four (4) 3/8" x 1-1/4" (10 x 32 mm) NC hex bolt c/w pressure treated bolts.

F - Next install 3/4" (19 mm) ID drive coupling, arrow 6, on pumps, arrow 7, drive shaft leave. Set screw loose. (Be sure key is installed)

ILL. 8.



G - Place shaft end of pump, arrow 7, over end of pump mount housing, arrow 5. Be sure pump orientation is correct. The "Cassappa" letter on back side pump must not be upside down. If pump is upside down, "IN" and "OUT" pump will not be on correct side. Also be sure drive coupler on pump shaft engages pump side of engine drive shaft. Remove one of the side access covers (yellow) on pump housing to view flex coupler from the side. Next, secure pump to housing with two (2) 3/8" x 1-1/4" (10 x 32 mm) NC hex bolt c/w lockwashers.

H - Using side access on pump housing, adjust flex coupler of engine and pump shafts so both metal couplings are tight against rubber spider and fully engaged. Then tighten set screws to secure couplings to shafts.

I - Replace the side access cover(s) (yellow) on pump mount housing.

14. Attaching hydraulic hoses and fittings

See ILL. 9. for PTO system less horizontal hitch cylinder.
See ILL. 10. for engine plane system less horizontal hitch cylinder.
See ILL. 11. for PTO system with horizontal hitch cylinder.
See ILL 12. for engine drive system with horizontal hitch cylinder

NOTE: Do not use teflon tape to seal hydraulic hoses and fittings. If pieces of tape gets into the hydraulic system they may plug small orifices.

NOTE: Cleanliness is absolutely necessary to prevent contamination when hooking up the hydraulic system components. Handle fittings carefully. Do not remove the caps from hose ends, valves, or oil tank.

A - Attach hoses and fittings of hydraulic system to hydraulic pump, valves, cylinders and oil reservoir as shown in ILL. 9, 10, 11 and 12.

NOTE: Be sure the 3/8" (10 mm) male-female swivels with restricted orifice, painted black, are installed in the 2" x 8" (51 x 203 mm) hitch tilt cylinder and the 2" x 12" (51 x 305 mm) hammer tilt cylinder. Two fittings are required per cylinder.

B - PTO type pump only - see ILL. 9 or 11
- Fasten torque arm and chain assembly to pump with two (2) 3/8" x 1-1/2" (10 x 38 mm) N.C. hex bolts complete with nuts and lockwashers. Fasten as shown in ILL. 9 or 11 from bottom of pump.

- Install 3/16" (5 mm) key in pump shaft, then slide PTO adapter over shaft. Secure by tightening set screw. See ILL. 9 or 11.

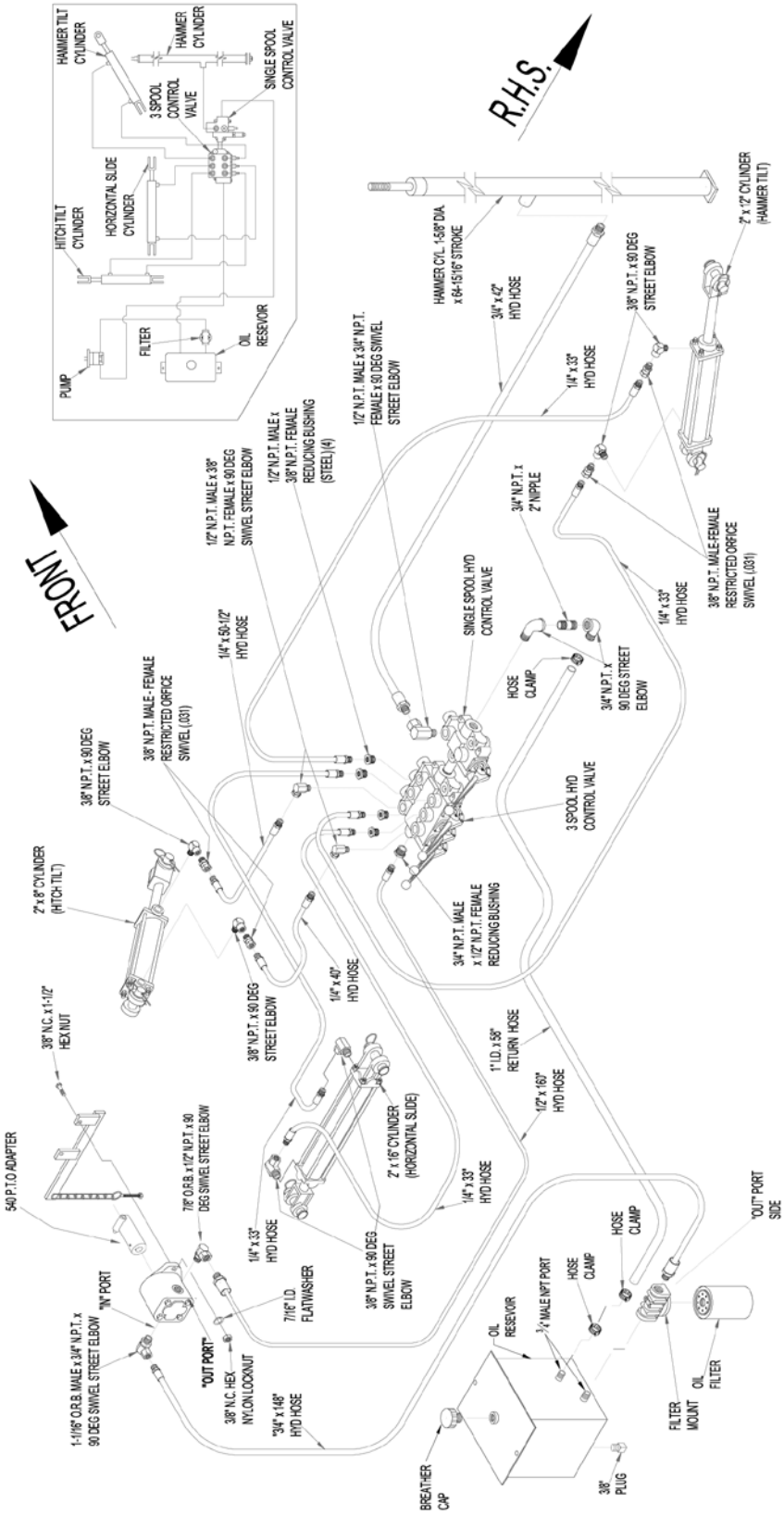
C - NOTE: When the post driver has been idle for a period of time, the hammer and tilt cylinders may creep causing a void in the cylinder. This cylinder movement is caused by a lack of oil pressure in cylinders when the post driver is not being used. For piston seals to hold oil there must be enough hydraulic pressure in the cylinders to deform the seal. This seal deformation pushes the seal against the wall of the cylinder and piston block, giving an oil tight seal.

The void in both tilt cylinders must be filled to prevent cylinder movement when driving posts. Therefore, before operating the post driver, cycle the hammer tilt cylinder and hitch tilt cylinder once daily. Push or pull the valve handle to maximum position when cycling or operating the cylinders. Do no feather. Feathering or holding valve handles in a partially open position will also cause a void in the cylinders.

	WARNING	Use cardboard or wood as a backstop when searching for hydraulic leaks. Escaping hydraulic oil under pressure can cause serious injury if it penetrates the skin. See a doctor immediately.

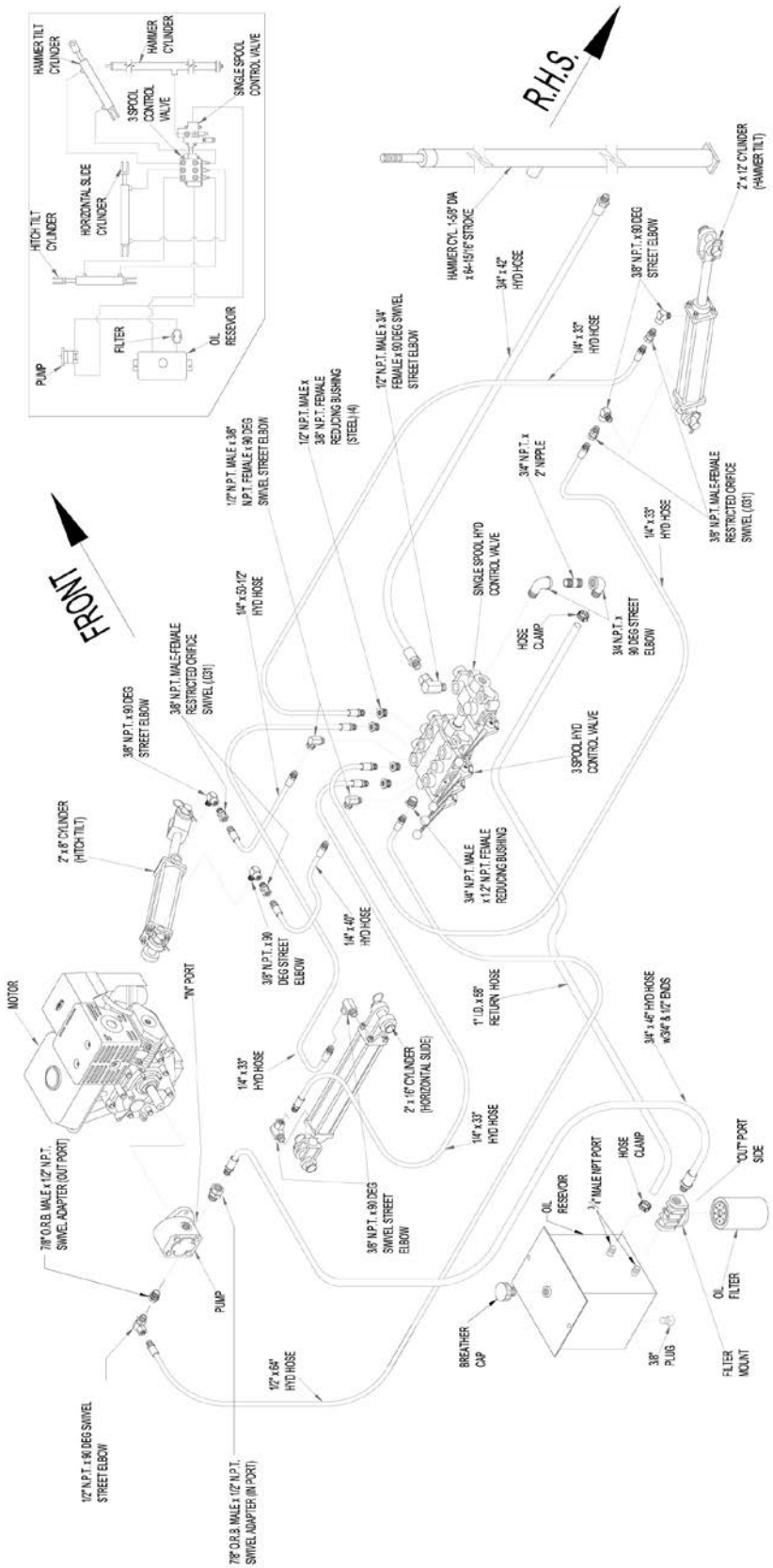
	WARNING	Relieve hydraulic pressure before disconnecting hydraulic components. Hydraulic components under pressure, may cause parts and hydraulic fluid to fly out at a high velocity which could cause serious injury.

Hydraulic System for PTO Drive



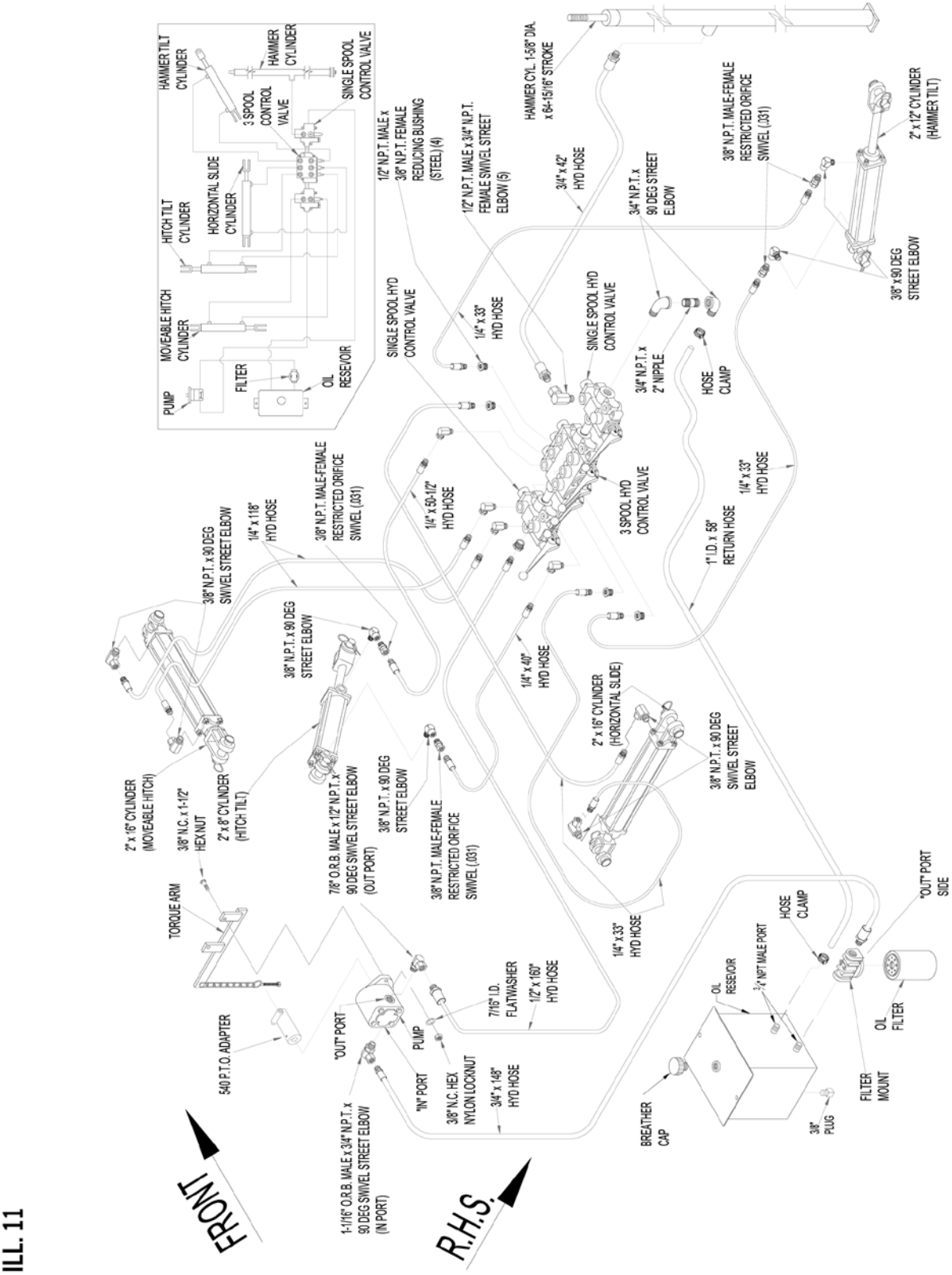
ILL. 9

Hydraulic System for Engine Drive



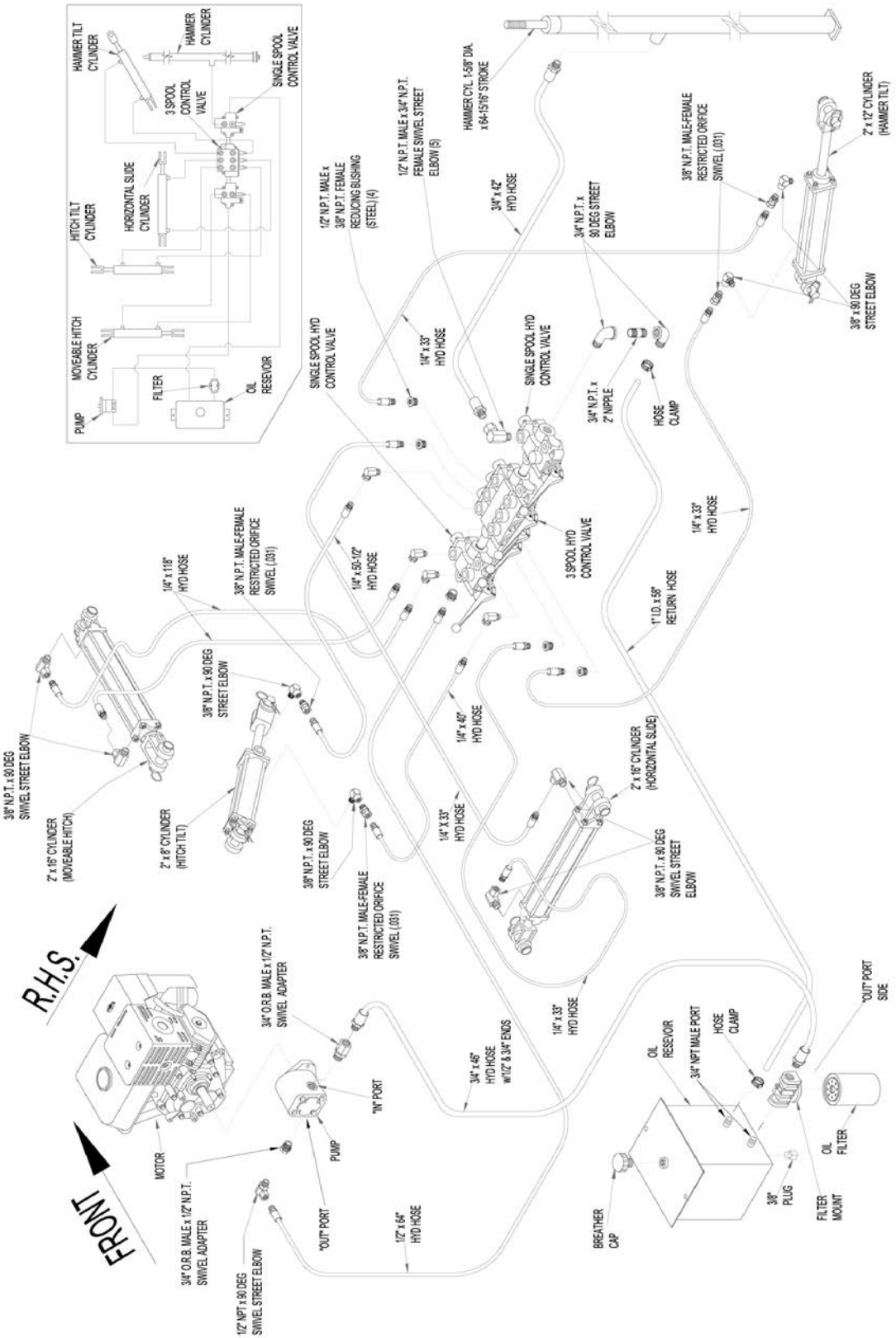
ILL. 10

Hydraulic System for PTO Drive c/w Optional Hitch Extension Kit



ILL. 11

Hydraulic System for Engine Drive c/w Optional Hitch Extension Kit



ILL. 12

15. Filling hydraulic system - see ILL. 7, ILL. 8 and ILL. 10.

    A - Fill oil reservoir with hydraulic oil. Use Esso Hydro 56 or equivalent.

    B - Hitch post driver to tractor and install pump to PTO. (PTO installation not required for engine drive models.)

    C - Engage PTO or start engine. Using hydraulic valve control levers, pump hydraulic oil into all cylinders. Extend and contract cylinders until completely filled with oil. Add oil to reservoir as required. The level should be 1 inch from top of tank. Oil reservoir is shown in ILL. 7 and 8.

	WARNING	Relieve hydraulic pressure before disconnecting hydraulic components. Hydraulic components under pressure, may cause parts and hydraulic fluid to fly out at a high velocity which could cause serious injury.

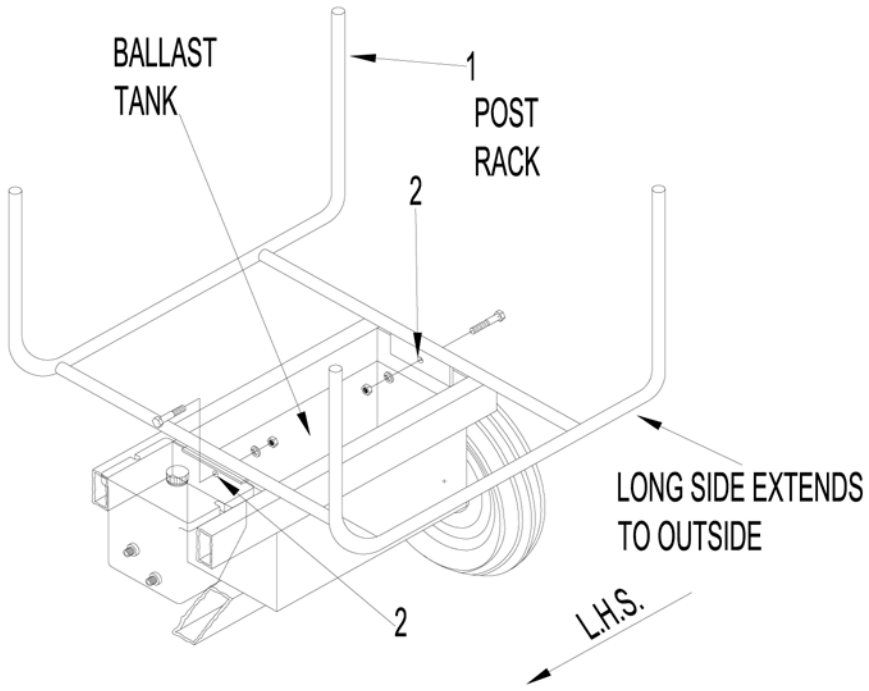
16. Installing post rack (optional) - see ILL. 13.

    Bolt post rack, arrow 1, to top LHS or post driver frame. Fasten two (2) holes, arrow 2, drilled in frame. Secure (2) 5/8" x 3-1/2" hex bolts c/w nuts and lockwashers. Post rack is made so uprights are offset to one side. Be sure post rack is installed so long side is extended to outside.

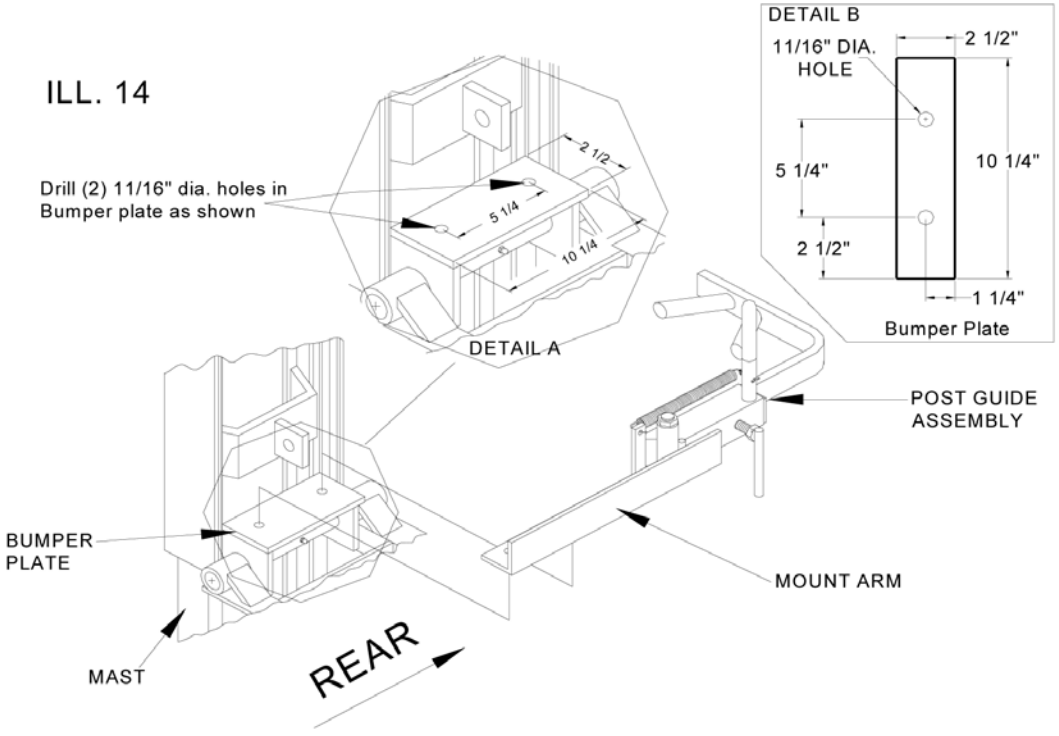
    NOTE: If post rack is assembled so long side of offset extends to the inside, the rack will be placed over the hydraulic tank which may damage tank when posts are laid in rack.

17. See ILL. 13. To help keep post driver stable when driving post, fill ballast tank on left hand side of trailer with suitable material. Approximately 250 lb (113 kg) of material.

ILL. 13.


BALLAST TANK
1
POST RACK
2
LONG SIDE EXTENDS TO OUTSIDE
2
L.H.S.

ILL. 14


Drill (2) 11/16" dia. holes in Bumper plate as shown
2 1/2
5 1/4
10 1/4
DETAIL A
DETAIL B
11/16" DIA. HOLE
2 1/2"
5 1/4"
10 1/4"
2 1/2"
1 1/4"
Bumper Plate
POST GUIDE ASSEMBLY
BUMPER PLATE
MOUNT ARM
MAST
REAR

	CAUTION	Block hammer in raised position. If hydraulic system failed or if hydraulic lever was accidentally operated, hammer could fall causing serious injury or death.

	CAUTION	Be sure all bolts and hydraulic fittings are tight, and all cotter pins are installed in pins.

18. Post guide installation instructions - see ILL. 14.

    Step I - Operate Post Driver to move hammer and mast to vertical position. Raise hammer approximately 12" (305 mm).

    Step II - If Post Driver does not have installation holes in bumper plate, then proceed as follows:

    - See ILL. 14. Mark location of holes on bumper plate and drill two (2) 11/16" (17 mm) diameter holes. Detail A and B show where holes must be located in bumper plate.

    Step ILL - See ILL. 14. Fasten mount arm of post guide assembly to two (2) holes in bumper plate of mast. Position as shown. Secure with two (2) 5/8" x 1-1/2" (16 x 38 mm) NC hex bolt c/w nuts and lockwashers. Tighten bolts.

Operation Instructions

1. Preparing Post Driver for operation

A - Check the oil level in oil reservoir. The level should be 1" (25 mm) from top of reservoir. If filling is required, use esso hydro 56 or equivalent.

B - Check that the rubber bumpers on upper and lower hammer stops are in place and in good condition.

C - Ensure tire pressure is 28 PSI.

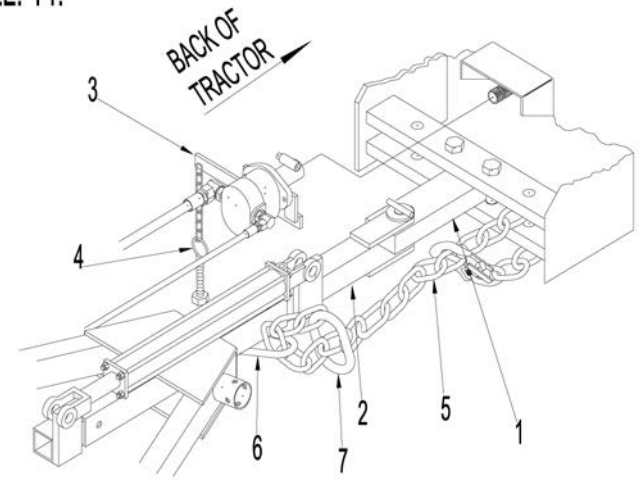
D - Be sure ballast box on trailer, shown in ILL. 9, has a minimum of 250 lb (113 kg) or ballast.

	WARNING	Always have a minimum ballast of 250 lb (113 kg) in weight box of the trailer for stability. If mast extension kit is installed or hammer is weighted, operator must use own discretion when adding sufficient ballast to trailer weight box to ensure safe and stable operation of post driver.

E - Ensure both sides of hammer slide are greased before activating controls.

F - Check all bolts for tightness.

ILL. 14.



Tractor hook-up - see ILL. 14

A - Before hitching the post driver to the tractor, pin the tractor drawbar, arrow 1, in a fixed, center position. A fixed drawbar provides greater stability.

B - Back tractor into position and attach the post driver hitch, arrow 2, to tractor drawbar.

	DANGER	Lift the hitch slowly and keep it no higher than the tow bar when attaching or releasing it from the transport vehicle.

	WARNING	Always ensure tractor's PTO safety shield is installed.

C - For PTO drive only - see ILL. 10
- With torque arm, arrow 3, on left hand side, connect the spline adapter of pump, arrow 4, onto the tractor PTO shaft.
- Place I-bolt of torque arm and chain, arrow 4, through a convenient hole in drawbar. Secure with flatwasher and locknut.

	CAUTION	Before connecting (or disconnecting) hydraulic pump to (or from) tractor's PTO shaft, disengage PTO and shut off tractor engine.

	CAUTION	If the torque arm chain of PTO is not properly secured, severe damage to the pump and hydraulic circuitry could occur.

	DANGER	Always stay clear of PTO when it is engaged. Serious injury or death will result if clothing, hair or limbs are caught in PTO drive shaft.

D - Install safety chain - see ILL. 14.
- Thread chain, arrow 5, through loop, arrow 6, on front RHS of hitch
- To fasten chain to loop, arrow 6, create a loop by threading end of chain through large link, arrow 7 at one end.
- Next, connect opposite end of chain to tractor drawbar support.

NOTE: When transporting post driver, always use a safety chain. The safety chain should have a minimum ultimate tensile strength along the line of travel equal to or greater than the gross weight of the post driver.

	DANGER	Always attach a safety chain to the tractor or vehicle hitch before transporting post driver. Serious damage to the post driver and serious injury or death could result from post driver separating from tractor or the vehicle hitch.

3. Operation hydraulic controls - see ILL. 15.
   The four control levers operate post driver as follows.

   A - Lever, arrow 1, raises and lowers hammer.

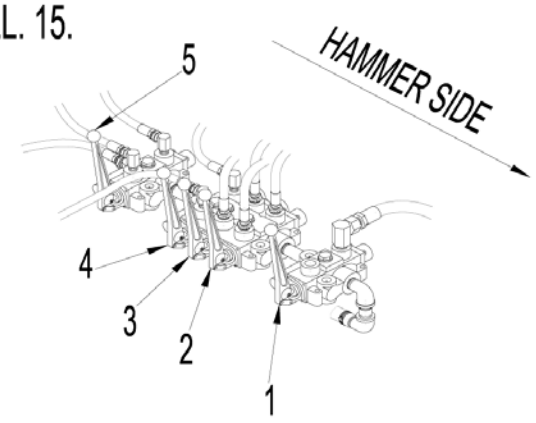
   B - Lever, arrow 2, tilts hammer in and out.

   C - Lever, arrow 3, moves hammer in and out horizontally.

   D - Lever, arrow 4, tilts hammer forward and backwards.

   E - Lever, arrow 5, extends and contracts front of hitch. This moves trailer back and forth to align with post. (Optional)

ILL. 15.



⚠	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.

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

⚠	CAUTION	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.

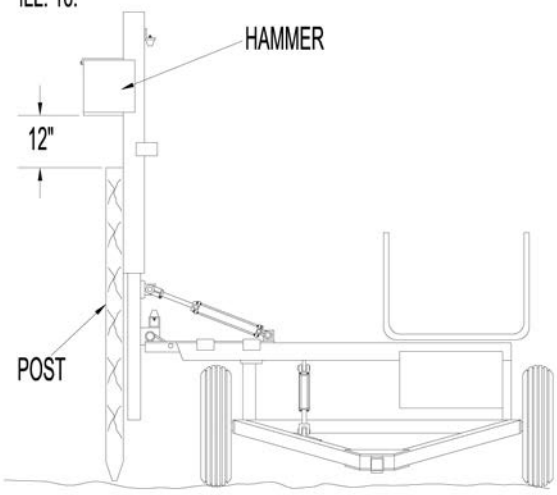
4. Driving post - see ILL. 16.

A - Before starting to drive posts, cycle 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.

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 also cause a void in tilt cylinders.

ILL. 16.



	DANGER	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.

B - Manoeuvre post driver trailer into position.

C - Turn on PTO or start POST DRIVER ENGINE.

D - See ILL. 15. Position and align hammer by operating valve levers, arrow 2, 3, and 4. These levers will locate hammer in desired working position.

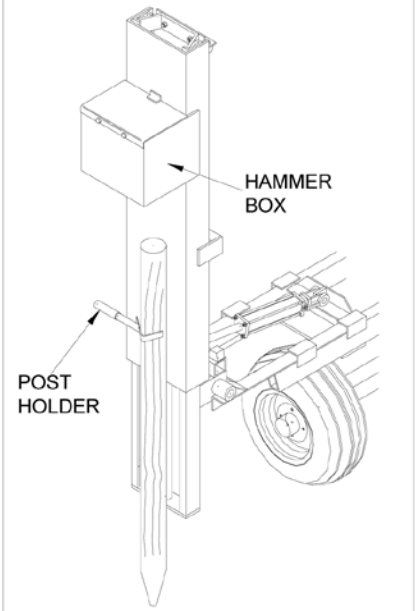
E - Raise hammer approximately 12 inches above post as shown in ILL 16.

DANGER	Never remove stabilizer bar from rear of post driver. Stabilizer bar prevents post driver from falling backwards when post driver is disconnected from transport vehicle.

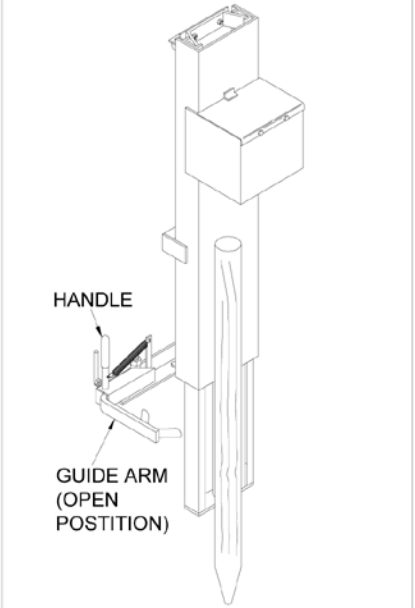
DANGER	Do not operate post driver when it is disconnected from transport vehicle.

CAUTION	Make certain everyone is clear before operating or moving the post driver.

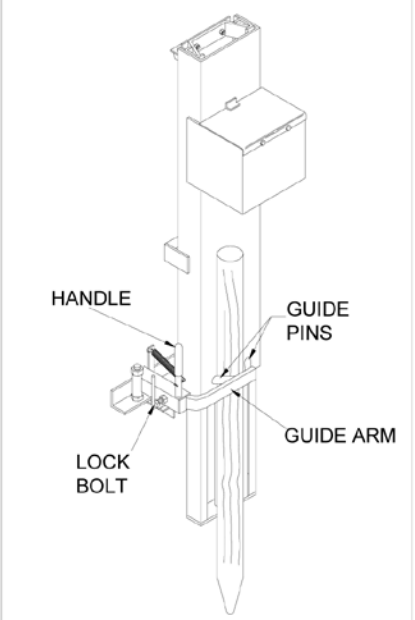
ILL. 17 (HAND HELD HOLDER)



ILL. 18 (OPTIONAL POST GUIDE)



ILL. 19 (OPTIONAL POST GUIDE)



DANGER	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.

F - Holding post under hammer
- Hand held holder - See ILL. 17. Position post under hammer. Using the hand held post holder, hold post against hammer. Start to drive post, see paragraph G, H and I below.

- Optional post guide - see ILL. 17.
Step 1 - Place guide arm in open position and place post under hammer. ILL. 18 shows guide arm in open position.
Step 2 - See ILL. 19. Close post guide over post so guide pins hold post.
Step 3 - See ILL. 19. If necessary, loosen lock bolt and adjust guide arm “IN” or “OUT” so guide pins hold post securely. Tighten lock bolt.
Step 4 - Start to drive post. See Paragraphs G, H and I below.

	DANGER	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.

G - Push hammer valve lever, arrow 1 (ILL. 15), “IN” to drop hammer on post. Use 12" (305 mm) strokes to start post and increase stroke as required.

H - NOTE: Do not use too much force when operating hammer valve lever. Handle mount rackets will be damaged if lever is pushed too hard to drop hammer.

I - NOTE: It is not recommended to add ballast to hammer box. The additional weight may cause post driver and tractor to become unstable.

	DANGER	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.

	CAUTION	If mast extension kit is installed or hammer is weighted, operator must use own discretion when adding sufficient ballast to trailer weight box to ensure safe and stable operation of post driver.

	DANGER	Contact local utility companies for underground services before installing posts

	DANGER	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.

	DANGER	Contact local utility companies for underground services before installing posts
	DANGER	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
	DANGER	Always make sure the hitch of the post driver has a downward weight.
	DANGER	Never place your hand on top of the post
	WARNING	Use safety glasses and hand wear to protect against splinters.
	CAUTION	Never use the valve to stop the hammer unless in extreme emergency. The resulting extreme hydraulic pressure could damage hydraulic system.
	CAUTION	Keep all untrained personnel away from the post driver at all times. Only personnel knowledgeable in the operation should be allowed near or in control of the post driver.
	DANGER	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.

5. To transport post driver, proceed as follows: see ILL. 20

   A - Lower hammer cylinder to bottom.

   B - Move hammer "IN" by contracting horizontal slide cylinder, arrow 1.

   C - Tilt hammer in over trailer by contracting hammer tilt cylinder, arrow 2.

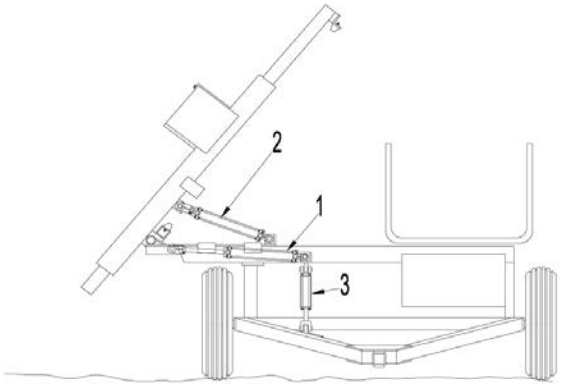
   D - Tilt trailer all the way forward by contracting hitch cylinder, arrow 3.

   E - Contract hitch extension cylinder, arrow 4. (optional)

   F - Now disengage PTO or POST DRIVER ENGINE.

   G - Ensure that safety chain is installed between tractor vehicle and post driver hitch. See ILL. 14.

ILL. 20.



	CAUTION	Always attach a safety chain to the tractor or vehicle hitch before transporting post driver. Serious damage to the post driver and serious injury or death could result from post driver separating from tractor or the vehicle hitch.

	CAUTION	Never allow anyone near the post driver when you are performing operating functions.

	CAUTION	When transporting the post driver on a public road or highway by night or during the day, use accessory lights and devices to give adequate warning to the operators of other vehicles. Check local regulations.

	CAUTION	Be sure SMV (Slow Moving Vehicle) emblem is clean and visible before transporting post driver. The SMV emblem warns other vehicles approaching from rear.
	CAUTION	Never exceed 40 km/h (25 mph) when transporting post driver.
	CAUTION	Reduce speed when transporting post driver over uneven or rough terrain.
	CAUTION	Shift tractor into a lower gear when transporting post driver down hills or steep slopes.
	CAUTION	Comply with all state, federal, and local laws when transporting post driver on roadways.
	WARNING	Retract all cylinders before transporting post driver.
	DANGER	Always test the hitch weight before releasing the post driver from the transport vehicle or hold down.
	DANGER	Do not move the post driver by hand. Make certain the post driver trailer is properly secured to a transport vehicle.

6. Mast extension kit (installation) - instructions to convert from low hammer to high hammer. (optional)

   NOTE: To prevent post driver from falling while converting hammer, hitch post driver to tractor or other transport vehicle.

   A - See ILL. 21. With post driver hitched to transport vehicle, position hammer so it is in a vertical position, then raise hammer so rubber bumpers are above bracket, arrow 5. Next, place a safety block between bottom of hammer and bottom of mast.

CAUTION	Place a block between bottom of hammer and bottom of mast. If hydraulic system failed or if hydraulic lever was accidentally operated, hammer could fall causing serious injury or death.

   B - Remove top angle iron bumper stop, arrow 1, from bracket, arrow 6, at top of mast. Next install same bumper stop, lower bracket, arrow 5, at mid point of mast. Position bumper as shown. Fasten with (2) 1/2" x 1-1/2" (13 x 38 mm) hex bolts c/w nuts and locks.

   C - Remove safety block and lower hammer so rubber bumpers rest on bumper stop, arrow 6.

   D - See ILL. 21. Insert mast extension, arrow 2, into top of mast. Secure to bracket, arrow 7, with (2) 1/2" x 1-1/2" (13 x 38 mm) hex bolts c/w nuts and lockwashers.

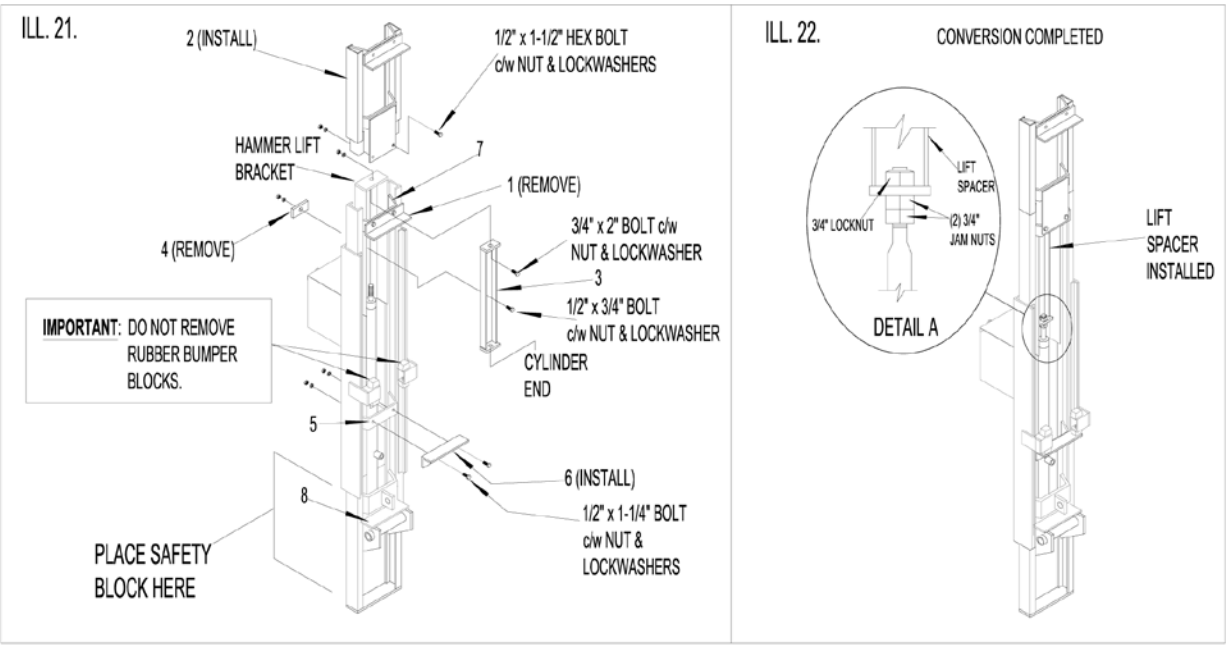
   E - Remove nut from top of hammer cylinder and allow shaft to retract into cylinder.

   F - See ILL. 21. Install lift spacer, arrow 3, inside the hammer lift bracket as shown. Fasten top of lift spacer with (1) 3/4" x 2" (19 x 51 mm) hex bolt c/w nut and lockwasher. Fasten center of lift spacer to front of hammer lift bracket with one (1) backing plate, arrow 4, and one (1) 1/2" x 1-3/4" (13 x 44 mm) bolt c/w nut and lockwasher. Locate backing plate, arrow 4, over front of hammer lift bracket.

   G - See ILL. 21. Next install hammer cylinder shaft in hole in bottom of lift spacer, arrow 3. Secure shaft with three (3) 3/4" (19 mm) nuts, one 3/4" (19 mm) locknut on top of lift spacer and two (2) 3/4" (19 mm) jam nuts at bottom of lift spacer. Turn locknut until 1/4" (6 mm) of thread extends beyond nut. Next tighten top jam nut against bottom of lift spacer. Then lock top jam nut by tightening bottom jam nut against it, See ILL. 22, Detail "A".

   NOTE: Be sure all bolts and cylinder shaft nuts are tight before using post driver.

CAUTION	If mast extension kit is installed or hammer is weighted, operator must use own discretion when adding sufficient ballast to trailer weight box to ensure safe and stable operation of post driver.



7. Mast extension kit (removal) - instructions to convert from high hammer to low hammer position. (optional)

   NOTE: To prevent post driver from falling while converting hammer, hitch post driver to tractor or other transport vehicle.

   A - See ILL. 23. With post driver hitched to transport vehicle, position hammer so it is in a vertical position and lower hammer on to bumper stop, arrow 6.

   B - Remove mast extension, arrow 2, from top of mast.

   C - See ILL. 23. Remove nut from top of hammer cylinder and allow shaft to retract into cylinder.

   D - See ILL. 23. Remove lift spacer, arrow 3, front top of hammer.

   E - See ILL. 23. Next, pull shaft out of cylinder and insert it through hole in hammer lift bracket, arrow 9. Shaft is secured with three (3) 3/4" (19 mm) nuts, one 3/4" (19 mm) locknut on top of bracket and two (2) 3/4" (19 mm) jam nuts at bottom of bracket. Turn locknut until 1/4" (6 mm) of thread extends beyond nut. Next, tighten top jam nut against bottom of lift bracket. Then lock top jam nut by tightening bottom jam nut against it. See ILL. 24, Detail "A".

   F - See ILL. 23. Use hydraulic system, raise hammer so rubber bumpers are above top bracket, arrow 6. Then place a safety block between bottom of hammer and bottom of mast.

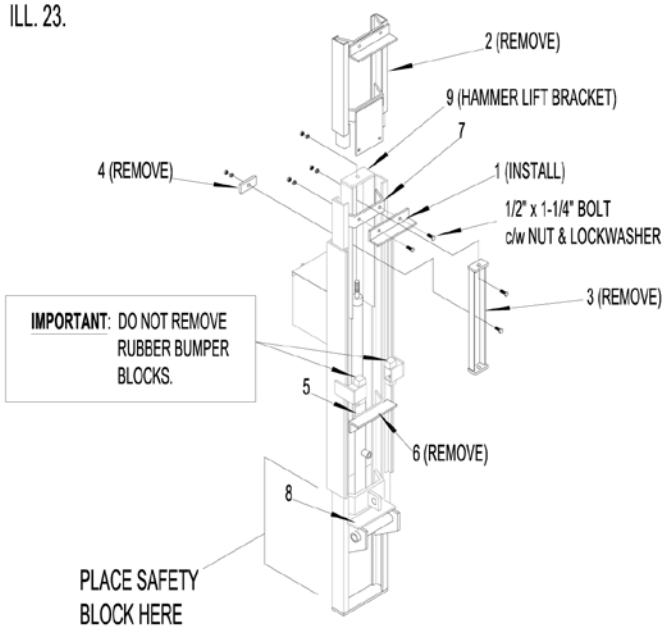
⚠	CAUTION	Place a block between bottom of hammer and bottom of mast. If hydraulic system failed or if hydraulic lever was accidentally operated, hammer could fall causing serious injury or death.

G - See ILL. 23. Remove lower bumper stop, arrow 6, from bracket, arrow 5. Next remove safety block and lower hammer so rubber stops rests on bottom stop, arrow 8.

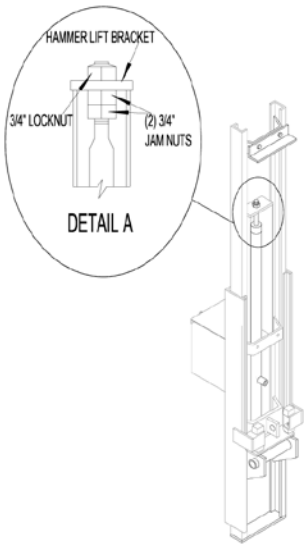
H - See ILL. 23. Fasten hammer stop, arrow 1, to bracket, arrow 7, with two (2) 1/2" x 1-1/2" (13 x 38 mm) bolts c/w nuts and lockwashers. (This is the same bracket (arrow 6) that was removed earlier).

NOTE: Be sure all bolts and cylinder shaft nuts are tight before using post driver.

ILL. 23.



ILL. 24. CONVERSION COMPLETED



Maintenance

1. Lubricate post driver as follows - see ILL. 25.

   A - Grease hammer pivots every 50 hours of operation.

   B - Grease horizontal slide every 50 hours of operation.

   C - Raise hammer and grease both sides of hammer slide every 10 hours of operation.

   D - Replace wheel bearings and hub seals every 150 hours of operation or 1 year of service, whichever comes first. Pack bearing with high quality grease.

	CAUTION	Do not lubricate or adjust post driver when it is being operated or while it is in motion.

	CAUTION	Always retract all cylinders, shut off tractor engine and disengage PTO or shut off post driver engine before lubricating post driver.

2. Hydraulic systems

   A - Periodically check level of hydraulic oil in reservoir. Oil should be within 1" (25 mm) of the top of reservoir.

   B - Change oil filter every 200 hours of operation.

3. Wheel and tires

   A - Check wheel bolts for tightness during first week of operation and periodically thereafter.

   B - Tighten wheel bearings as follows:
   - Remove dust cap.
   - Remove cotter pin from slotted nut.
   - Tighten slotted nut until there is a slight drag on bearings after adjustment is complete.

   C - Keep tire pressure at 28 PSI. Low or over inflated tires can cause serious damage to tires.

4. Check for any loose bolts and tighten if required.
5. Be sure all pins have cotter pins or hair pin cotters installed.
6. Replace any safety decals that are damaged or are illegible.

 CAUTION	Always support post driver trailer and hammer on stands or blocks and have sufficient weight on the hitch, or have the hitch attached to a transport vehicle before performing assembly or repair work under or around post driver.

 DANGER	Never work on the hammer when it is in the raised or partially raised position. If hammer fell, operator or person(s) nearby could be seriously injured or killed.

 WARNING	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.

 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 escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatments is not administered immediately.

 CAUTION	If spray-can is used, be careful when discarding empty cans. Do not incinerate or puncture can.

 CAUTION	Do not permit smoking, sparks, or open flame where combustible lubricants or liquids are being used.

 CAUTION	Replace any worn or damaged hydraulic hoses and keep all hydraulic hoses and hydraulic fittings tight.

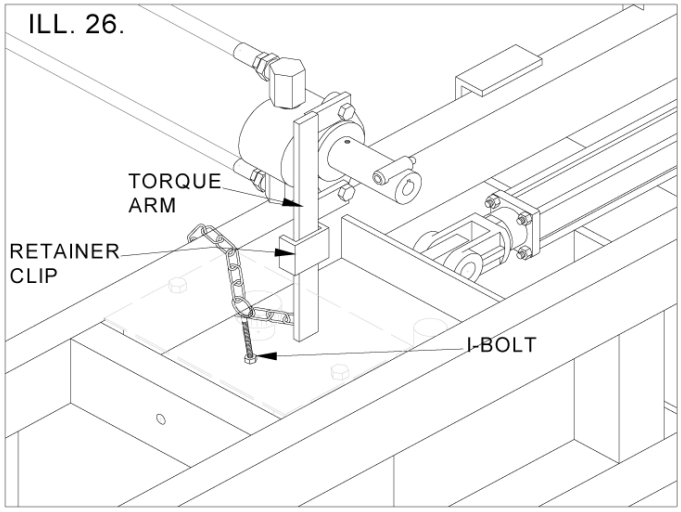
	CAUTION	Shut off all power before adjusting, servicing or cleaning the post driver.

	IMPORTANT	Replace any safety decals that are damaged or are illegible.

Storage

1. Fully contract all cylinders. Be sure hammer is lowered to bottom position.
2. Clean and lubricate all grease points and hammer slide when storing post driver for extended period of time.
3. Inspect the post driver for any missing, worn, or damaged parts. Replace parts as required.
4. Check for any loose bolts and tighten if required.
5. Be sure all pins have cotter pins or hair pin cotters installed.
6. Disconnect the post driver from the transport vehicle.
7. For PTO drive machines only -
   After removing pump from tractor's PTO, the pump assembly can be stored on the trailer frame by inserting torque arm into a retainer clip welded to frame as shown in ILL. 26. Secure pump in place by wrapping the torque arm chain around frame and inserting I-bolt through a link. Install nut and washer on I-bolt.

ILL. 26.



CAUTION

Lift the hitch slowly and keep it no higher than the tow bar when attaching or releasing it from the transport vehicle.

CAUTION

Do not store post driver with hammer in raised position. If hammer fell person(s) nearby could be seriously injured.

DANGER

Always make sure the hitch of the post driver has a downward weight.

Beginning of Season Service

1. Clean off any dirt or grease that may have accumulated on moving parts. This will prevent abrasive action that could cause excessive wear.
2. Thoroughly inspect the post driver for any loose or missing parts and adjust as necessary. Replace any worn or damaged parts.
3. Replace any safety decals that are damage or are illegible.

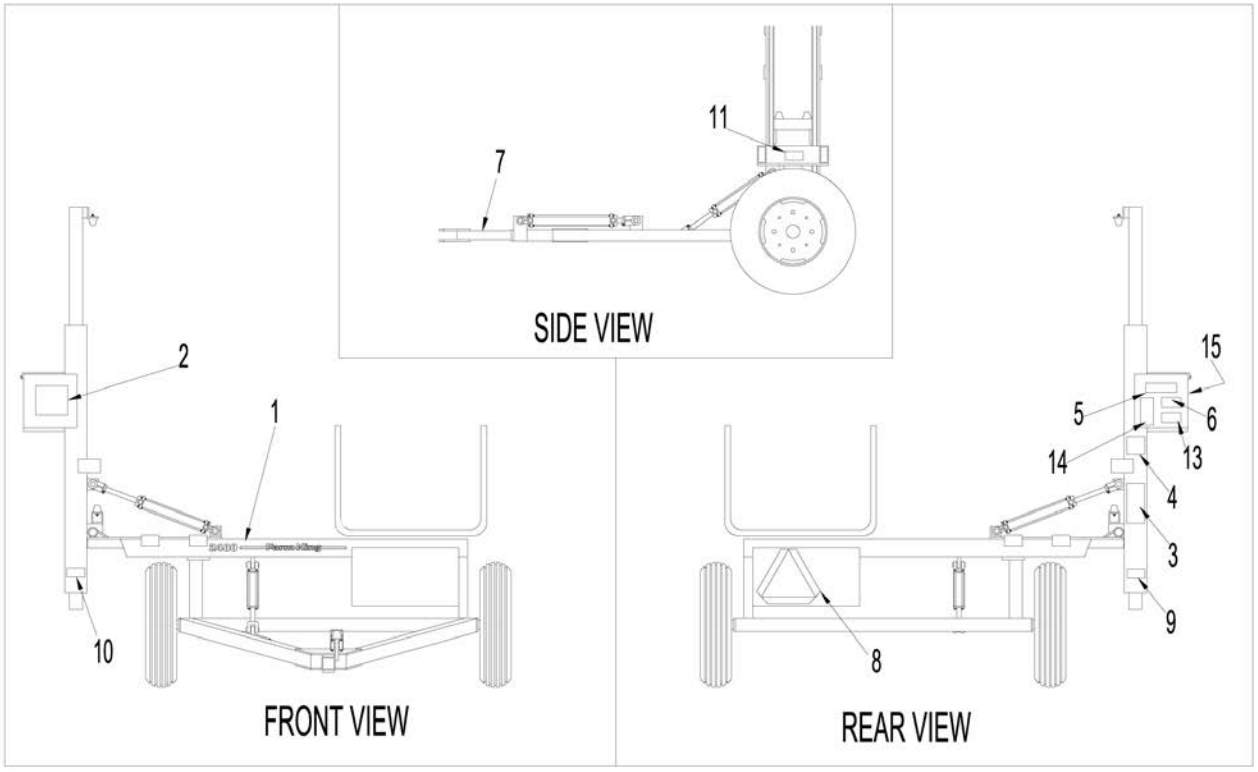
End of Season Service

1. Coat all sliding parts with a layer of grease to prevent rust. The chief enemies of your post driver, rust and corrosion, are busy the year-round. A little time and effort spent protecting the post driver from destructive moisture will repay you in longer service, easier operation, and higher resale value. 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.
2. Replace worn or damaged parts.
3. Replace any safety decals that are damaged or are illegible.

CAUTION

When servicing the post driver, make sure the hitch is securely attached to transport vehicle, or hitch hold down.

Decals and Paint Drawing

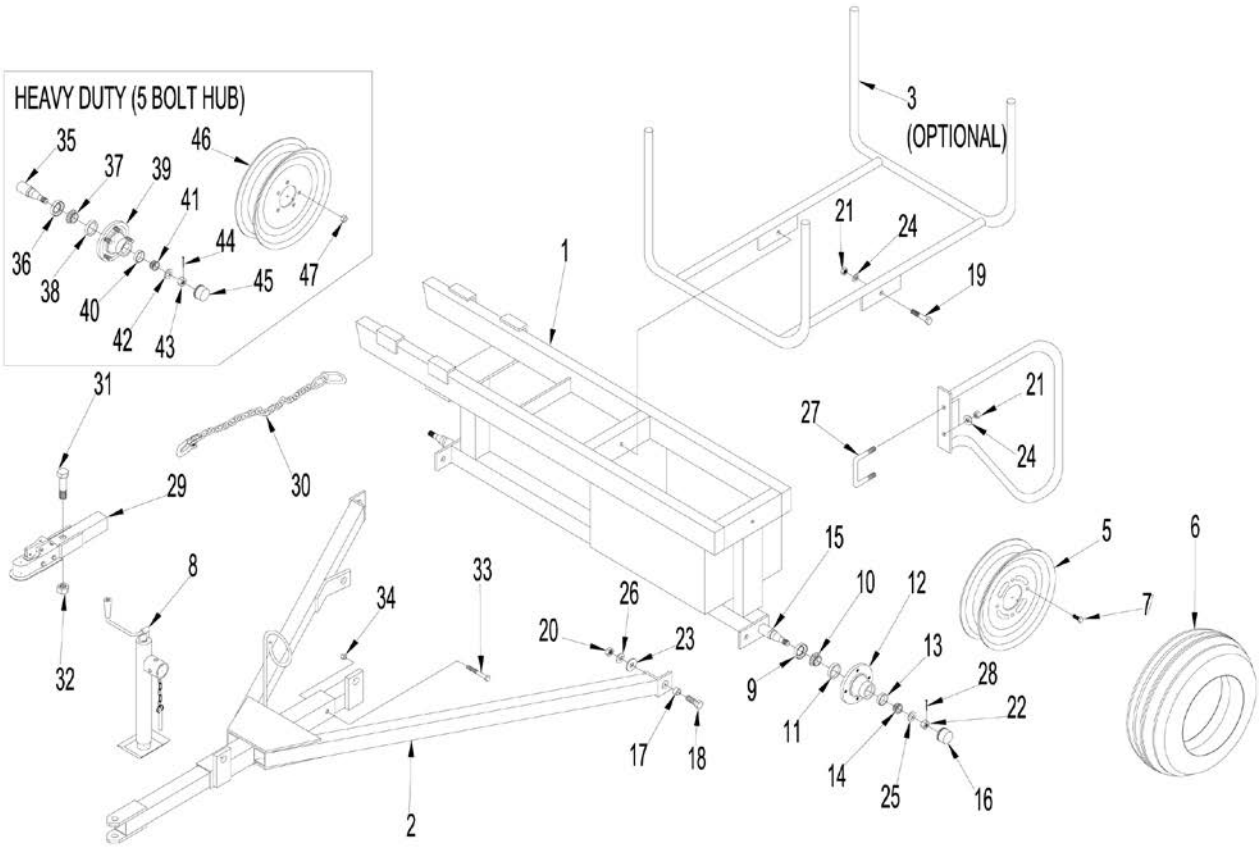


When Ordering Parts

Always give your dealer the Model, Color and Serial Number of your machine to assist him in ordering and obtaining the correct parts. Use the exploded view and tabular listing of the area of interest to exactly identify the required part.

Item	Part Number	Description	Qty
1	P80536	Decal, Model 2400	1
2	80501	Decal, Danger - 6" x 8" (152 x 203 mm)	1
3	80503	Decal, Warning & Caution - 4" x 9" (102 x 229 mm)	1
4	80504	Decal, Important - 4" x 4" (102 x 102 mm)	1
5	80500	Decal, Danger - 3-1/2" x 7" (89 x 178 mm)	1
6	80502	Decal, Caution - 2-3/4" x 4-1/2" (70 x 114 mm)	1
7	80505	Decal, Danger - 1-7/8" x 5-1/8" (47 x 130 mm)	1
8	A70007	Decal, SMV	1
9	DF10050	Decal, Red Reflector - 4" x 2" (102 x 51 mm)	1
10	DF10057	Decal, Yellow Reflector - 4" x 2" (102 x 51 mm)	1
11		Serial No. Tag	1
13	A75764	Decal, Warning - 4-1/2" x 2-5/16" (114 x 67 mm)	1
14	P80532	Decal, Danger - 4-1/4" x 8" (108 x 203 mm)	1
15	910625	Decal, Farm King	1

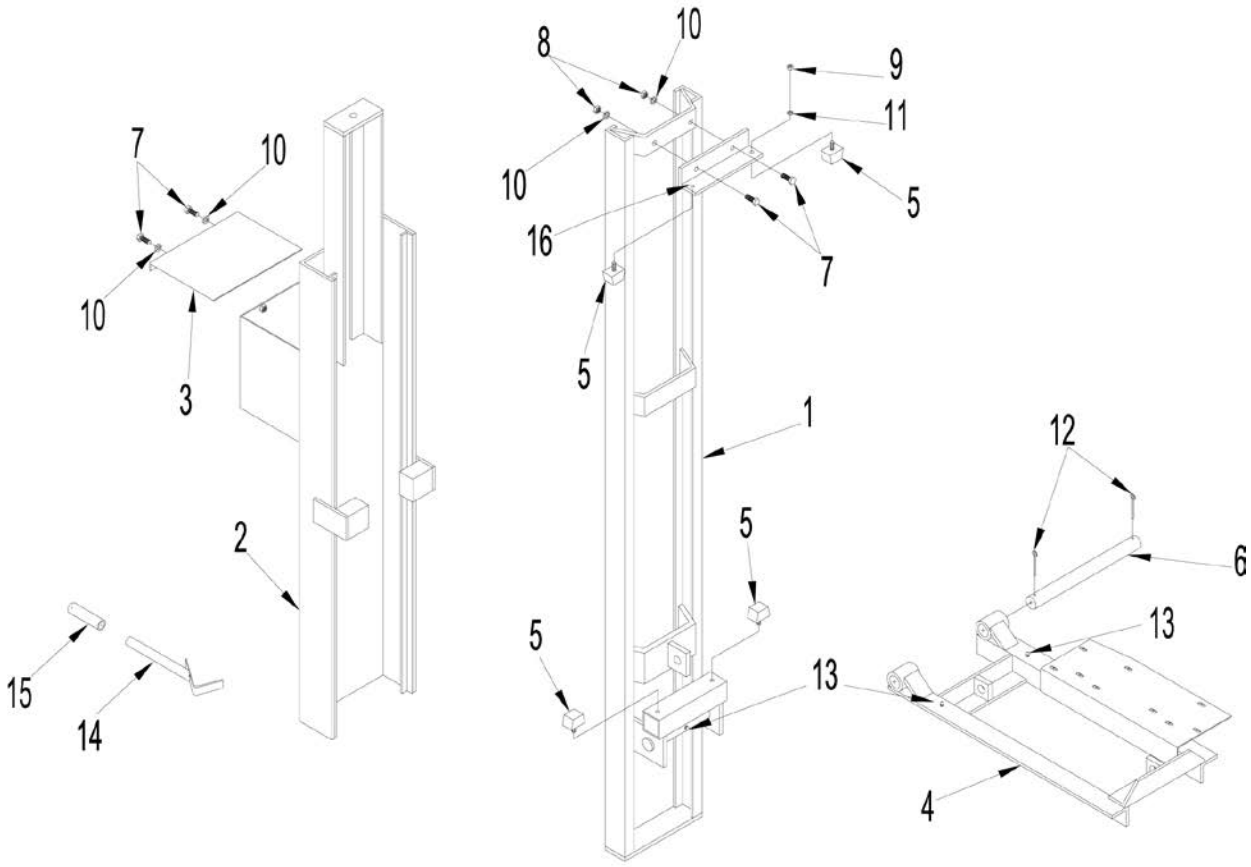
Frame and Hitch Assembly Drawing



Item	Part #	Description	Qty
1	P80570	Main Frame Assembly	1
2	P80571	Hitch Assembly	1
3	P80572	Post Rack Assembly (Option) (Fits Model 2400 Only)	1
4	P80674	Rear Stabilizer Bar	1
5	P80547	4 Bolt Rim 15" (381 mm)	2
6		Tire - 6.70 x 15 4 PR	2
7	P80546	1/2" x 1" (13 x 25 mm) NF Wheel Stud	8
8	P80594	Hitch Jack (Option)	1
9	P80545	Hub Seal (411)	2
10	DR89	Inner Bearing 67048	2
11	DR90	Inner Cup 67010	2
12	P80548	411 Hub (Complete w/ Cups)	2
13	P80543	Outer Cup 11910	2
14	P80544	Outer Bearing 11949	2
15	P80540	411 Spindle c/w 3/4" (19 mm) Slotted Nut (Weld-On)	2
16	P80549	Hub Cap	2
17	P80596	1" OD x 25/32" (25 x 20 mm) ID x 5/8" (16 mm) Long Bushing	2
18	B075025	3/4" x 2-1/2" (19 x 64 mm) NC Hex Bolt	2
19	B062035	5/8" x 3-1/2" (16 x 89 mm) NC Hex Bolt	2
20	BN075L	3/4" (19 mm) NC Hex Nylon Lock Nut - Prior to June/03 3/4" (19 mm) Std Nut was used w/ 3/4" (19 mm) Lockwasher	2
21	BN062	5/8" (16 mm) NC Hex Nut	2
22	DR82	3/4" (19 mm) NF Slotted Hex Nut	2
23		2" (51 mm) OD x 13/16" (21 mm) ID Flat Washer	2
24	BW062L	5/8" (16 mm) Lockwasher	2
25		1-1/2" (38 mm) OD x 13/16" (21 mm) ID Flat Washer	2
26	BW075L	3/4" (19 mm) Lockwasher Used w/ Std Hex Nut prior to June/03	2
27	C50541	5/8" x 4" x 3-7/16" (16 x 102 x 87 mm) U-bolt (Plated)	1
28	BP01075	5/32" x 3/4" (7 x 19 mm) Cotter Pin	2
29	P80574	2" (51 mm) Ball Style Hitch Tongue (Option) - Note: If you are replacing older 1-7/8" (47 mm) Hitch Tongue, the 1-7/8" (47 mm) ball must be replaced w/ 2" (51 mm) ball. Ball not supplied.	
30	P80508	Safety Chain - 10100 lb (Option)	1
31	B100040	1" x 4" (25 x 102 mm) NC Hex Bolt (Used w/ Optional Ball Style Hitch)	
32	BN100	1" (25 mm) NC Hex Nut (Used w/ Optional Ball Style Hitch)	1
33	B050040	1/2" x 4" (13 x 102 mm) NC Hex Bolt (Used w/ Optional Horizontal Hitch Cylinder Kit)	1
34	BN050L	1/2" (13 mm) NC Nylon Hex Lock Nut (Used w/ Optional Horizontal Hitch Cylinder Kit)	1
35	DR77	517 Spindle - For 5 Bolt Hub	2
36	DR85	Grease Seal	2

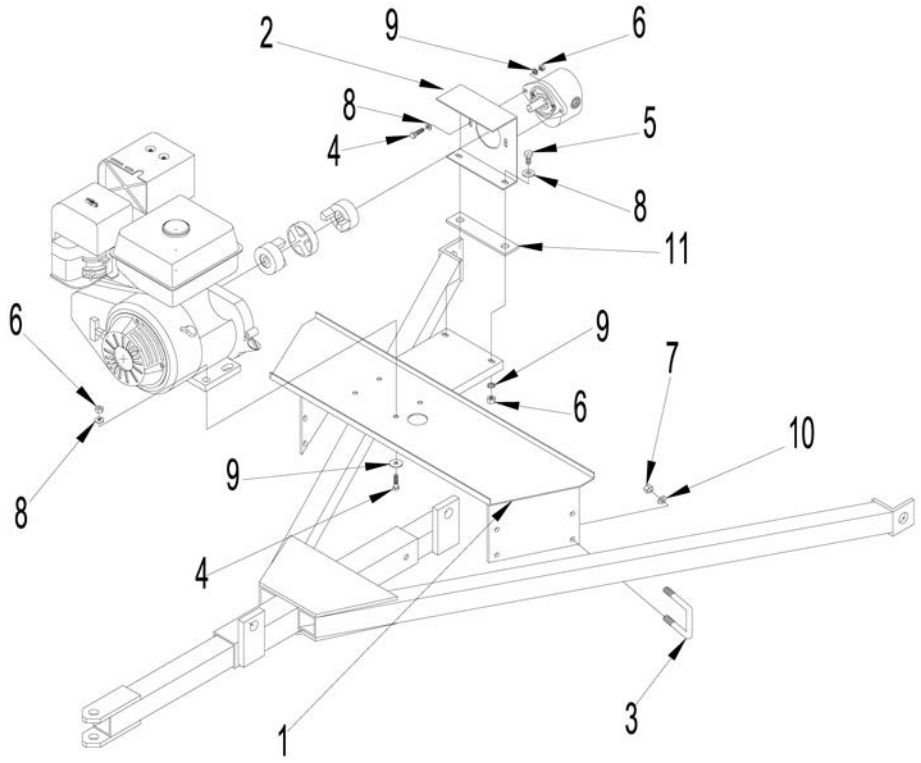
Item	Part #	Description	Qty
37	DR91	Inner Bearing LM48548	2
38	DR92	Inner Cup LM48510	2
39	DRA3	Hub c/w Cups & Wheel Studs (DR87)	2
40	DR90	Outer Cup LM67010	2
41	DR89	Outer Bearing LM67048	2
42		1-3/4" OD x 15/16 ID x 1/8" (44 x 24 x 3 mm) Flatwasher (Plated)	2
43	DR83	7/8" (22 mm) NF Hex Slotted Nut	2
44	BP18100	3/16" x 1" (5 x 25 mm) Cotter Pin	2
45	DR88	Hub Cap	2
46	DR93	15" x 5" (381 x 127 mm) - 5 Hole Rim	2
47	DR86	1/2" (13 mm) NF Tapered Wheel Nut	10

Hammer Assembly Drawing - Non-Extendable Type



Item	Part #	Description	Qty
1	P80616	Mast Assembly	1
2	P80640	Hammer Assembly	1
3	P80650	Hammer Lid	1
4	P80575	Horizontal Slide - Rear Mount Valve	1
5	P80628	Rubber Stop Block	4
6	P80661	Pivot Pin (Mast)	1
7	B050012	1/2" x 1-1/4" (13 x 32 mm) Hex Bolt	4
8	BN050	1/2" (13 mm) Hex Nut	2
9	BN037	3/8" (10 mm) Hex Nut	2
10	BW050L	1/2" (13 mm) Lockwasher	8
11	BW037L	3/8" (10 mm) Lockwasher	4
12	BP31200	5/16" x 2" (8 x 51 mm) Cotter Pin	2
13	10GN1	1/4" (6 mm) - 28" (711 mm) Straight Grease Fitting (Zirk)	3
14	P80601	Post Holder	1
15	P80602	Rubber Grip - Post Holder	1
16	P80523	Hammer Stop Bracket - Top	1

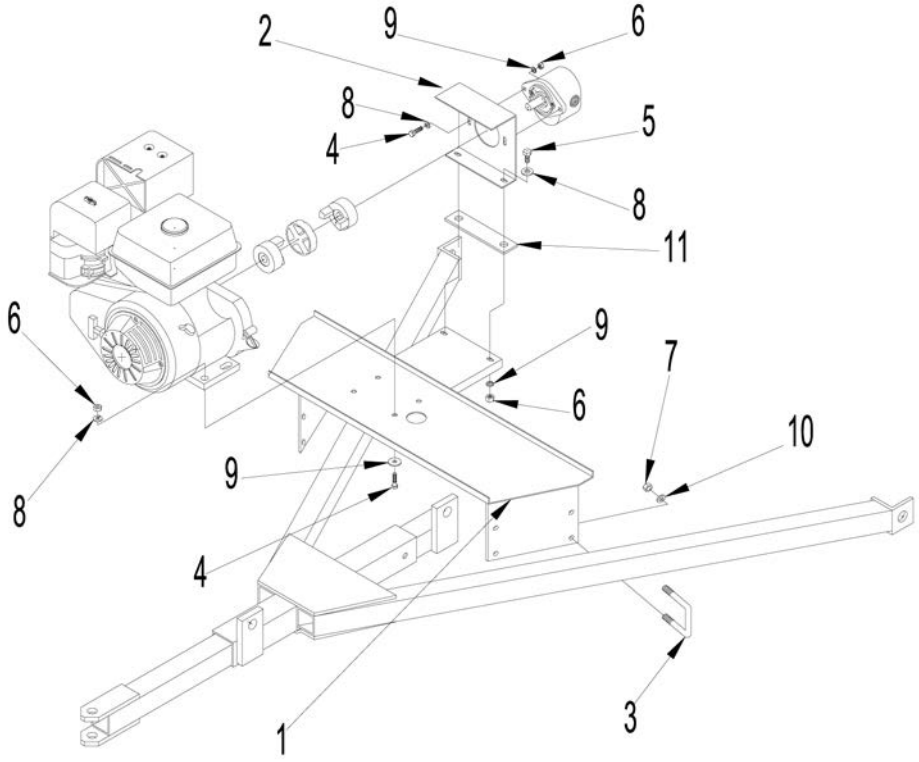
Hammer Assembly Drawing - Extendable Type



Item	Part #	Description	Qty
1	P80761	Mast Assembly	1
2	P80762	Hammer Assembly	1
3	P80650	Hammer Lid	1
4	P80575	Horizontal Slide - Rear Mount Valve	1
5	P80757	Bumper Stop	
6	P80661	Pivot Pin (Mast)	1
7	P80601	Post Holder	1
8	P80602	Rubber Grip - Post Holder	1
9	P80628	Rubber Stop Block	4
10	BP37200	3/8" x 2" (10 x 51 mm) Cotter Pin	2
11	B050012	1/2" x 1-1/4" (13 x 32 mm) NC Hex Bolt	4
12	BN050	1/2" (13 mm) NC Hex Nut	5
13	BN037	3/8" (10 mm) NC Hex Nut	4
14	BW050L	1/2" (13 mm) Lockwasher	5
15	BW037L	3/8" (10 mm)Lockwasher	4
16	10GN1	1/4 - 28 Grease Zirk	3
17	P80763	Mast Extension - Hi-Lift Hammer (Optional)	1
18	P80764	Spacer Block - Hi-Lift Hammer (Optional)	1
19	B050015	1/2" x 1-1/2" (13 x 38 mm) NC Hex Bolt	3
20	P80766	Backing Plate - Lift Spacer (Optional)	1

Mount and Drive System Drawing - 6:1 Engine Driven Pump

(used prior to June 2006)

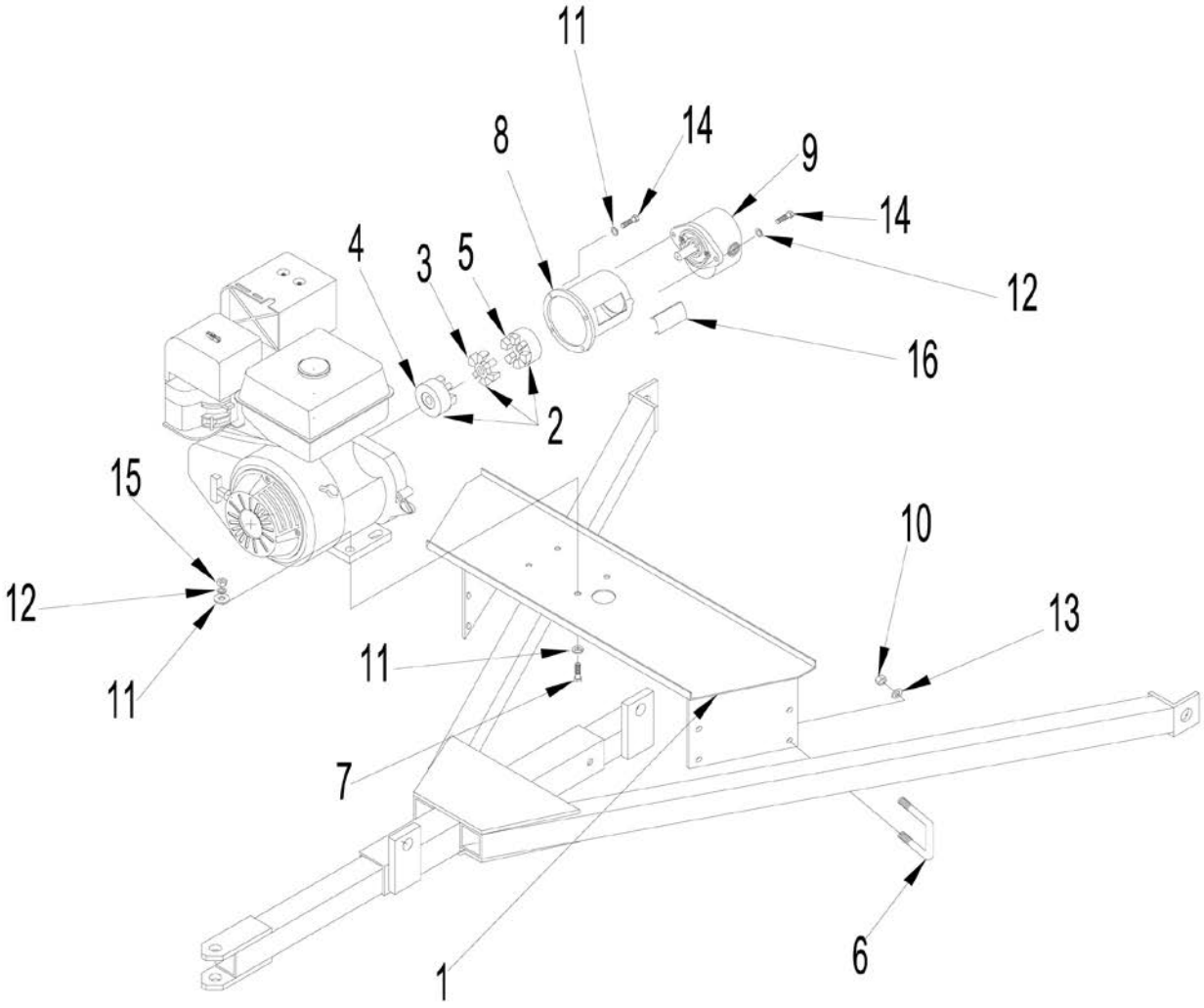


Item	Part #	Description	Qty
1	P80576	Motor Mount Plate - Honda 6:1 Engine	1
2	P80592	Pump Mount Bracket	1
3		1/2" x 2-1/2" x 3-9/16" (13 x 64 x 90 mm) U-bolt	4
4	B037015	3/8" x 1-1/2" (10 x 38 mm) Hex Bolt	6
5	B037310	3/8" x 1" (10 x 51 mm) Hex Bolt	2
6	BN037	3/8" (10 mm) Hex Nut	8
7	BN050	1/2" (13 mm) Hex Nut	8
8		7/16" (11 mm) ID Flatwasher	8
9	BW037L	3/8" (10 mm) Lockwasher	8
10	BW050L	1/2" (13 mm) Lockwasher	8
11	P80577	1/4" (6 mm) Shim - Pump Mount	*

* As required

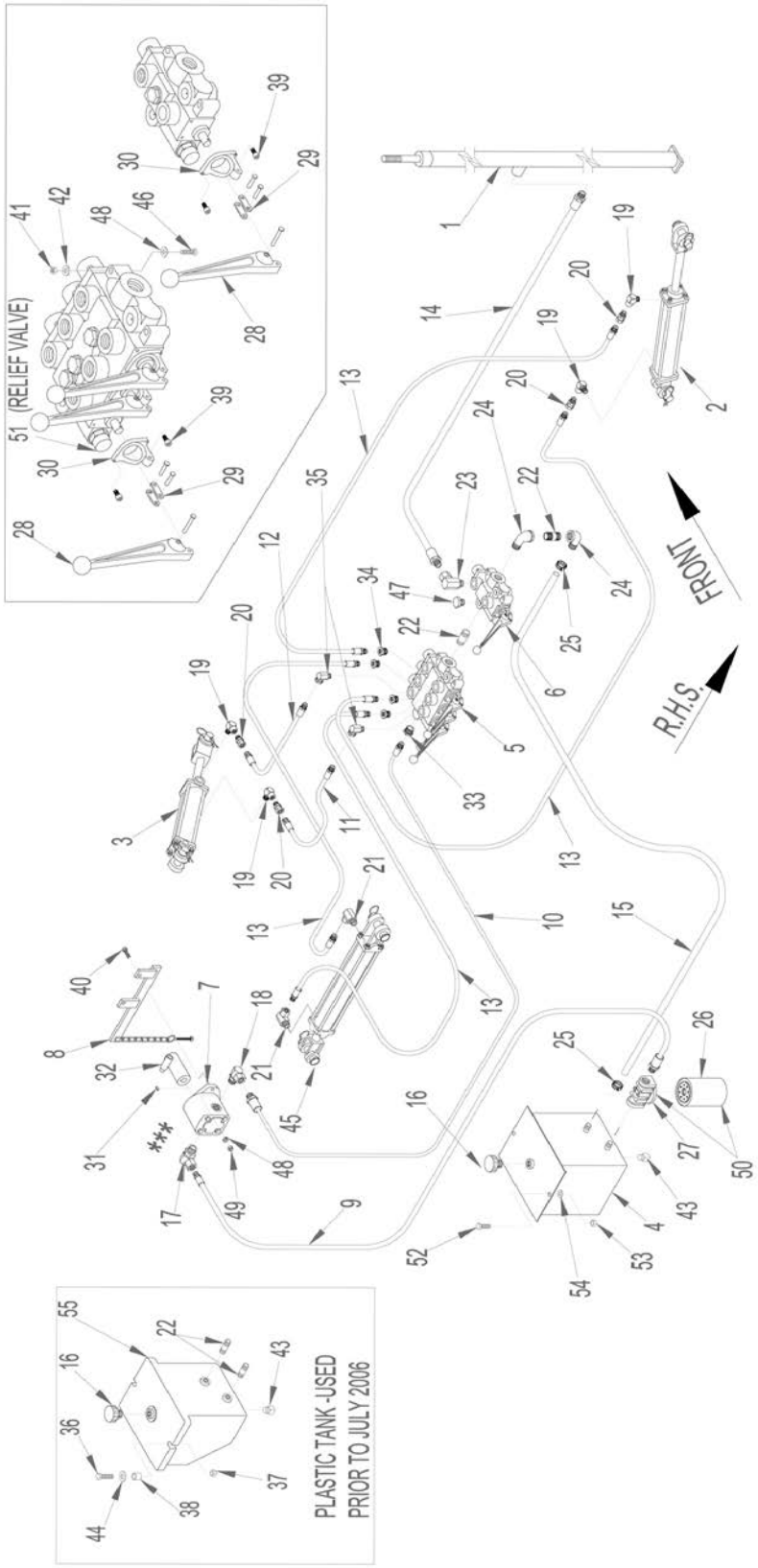
Mount and Drive System Drawing - 1:1 Engine Drive Pump

(used after June 2006)



Item	Part #	Description	Qty
1		Motor Mount Plate - 1:1 Drive Engine	1
2	P80587	Flex Coupler Complete - 6 Spoke type	1
3	P80608	Coupling Insert - 6 Spoke type	1
4	P80609	1" Coupling Half - 6 Spoke type	1
5	P80610	3/4" Coupling Half - 6 Spoke type	1
6	M80010	1/2" x 2-1/2" x 3-9/16" (13 x 64 x 90 mm) U-bolt	4
7	B037017	3/8" x 1-3/4" (10 x 44 mm) NC Hex Bolt	4
8	P80603	Pump Mount Housing c/w Access Covers	1
9	P80599	.29 cu in. Pump - Cassappa	1
10	BN050	1/2" (13 mm) NC Hex Nut	8
11	---	9/16" (14 mm) ID Flatwasher	12
12	BW037L	3/8" (10 mm) Lockwasher	6
13	BW050L	1/2" (13 mm) Lockwasher	8
14	B037012	3/8" x 1-1/4" (10 x 6 mm) NC Hex Bolt	6
15	BN037	3/8" (10 mm) NC Hex Nut	4
16	P80604	Access Cover - Pump Mount Housing	2

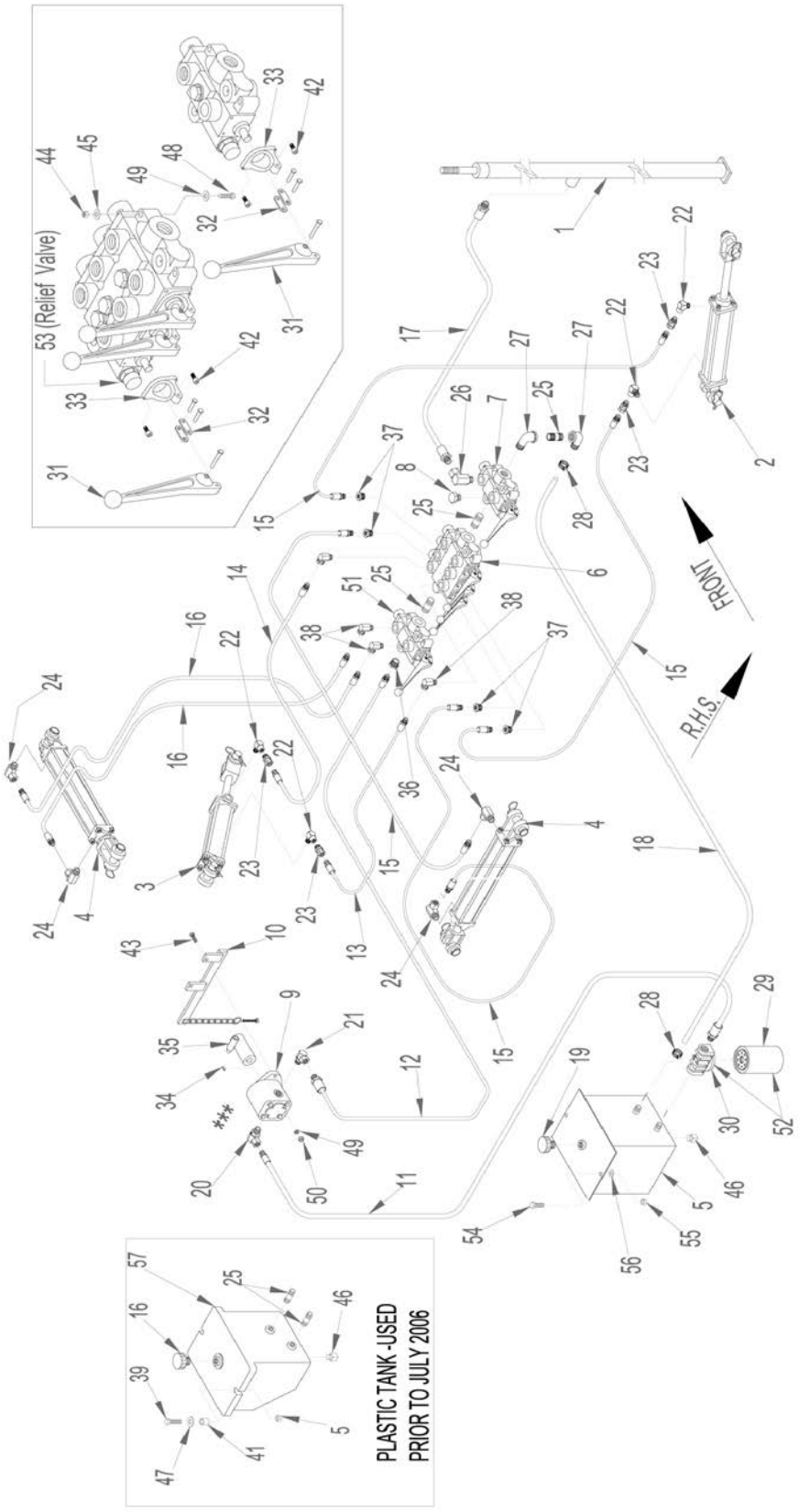
Hydraulic System PTO Drive Drawing



Item	Part #	Description	Qty
1	281	Hammer Cylinder - 1-5/8" Dia x 64-15/16" (41 x 1649 mm) Stroke c/w Nuts & Mount Pad	1
2	282	2" x 12" (51 x 305 mm) Cylinder c/w Pins (For Hammer Tilt)	2
3	283	2" x 8" (51 x 203 mm) Cylinder c/w Pins (For Frame Tilt)	1
4	P80511	Hydraulic Oil Reservoir - Steel	1
5	P80681	3 Spool Hyd Control Valve	1
6	P80682	Single Spool Hyd Control Valve	1
**	P80530	Seal Kit - Cross 3 Spool Valve	1
**	P80528	Seal Kit - Cross Single Spool Valve	1
7	P80689	Pump - PTO - w/ NPT Ports (Danfoss)	1
	P80703	Pump - PTO - w/ ORB Ports (Cassappa)	1
***	P80518	Seal Kit - Danfoss Pump	1
***	P80517	Seal Kit- Cassappa Pump	1
***	P80516	Shaft Seal Only - Cassappa Pump	1
8	P80512	Torque Arm	1
9	P3045	3/4" x 148" (19 x 3759 mm) Hyd Hose c/w 3/4" (19 mm) Ends PTO	1
10	P3044	1/2" x 160" (13 x 4064 mm) Hyd Hose c/w 1/2" (13 mm) Ends	1
11	P3028	1/4" x 40" (6 x 1016 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
12	P3029	1/4" x 50-1/2" (6 x 1283 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
13	P3030	1/4" x 33" (6 x 838 mm) Hyd Hose c/w 3/8" (10 mm) Ends	4
14	P3033	3/4" x 42" (19 x 1067 mm) Hyd Hose c/w 3/4" (19 mm) Ends	1
15	P3048	1" (25 mm) ID x 58" (1473 mm) Return Hose	1
16	P80510	Breather Cap	1
17	A70670	1-1/16" (27 mm) ORB Male x 3/4" (19 mm) NPT Female x 90 Deg Swivel Street Elbow (For Cassappa Motor Only)	1
	P80691	1" (25 mm) Male NPT x 3/4" (19 mm) NPT Female x 90 Deg Swivel Street Elbow (For Danfoss Motor Only)	1
18	P80706	7/8" (22 mm) ORB Male x 1/2" (13 mm) NPT Female x 90 Deg Swivel Street Elbow (For Cassappa Motor Only)	1
	DL9775	1/2" (13 mm) NPT Male x 1/2" (13 mm) NPT Female x 90 Deg Swivel Street Elbow (For Danfoss Motor Only)	1
19	DL5283	3/8" (10 mm) NPT x 90 Deg Street Elbow - Steel	4
20	P80704	3/8" (10 mm) NPT Male-Female Restricted Orifice Swivel (0.31)	4
21	DL9769	3/8" (10 mm) NPT x 90 Deg Swivel Street Elbow	2
22	P80693	3/4" (19 mm) NPT x 2" (51 mm) Nipple	2
23	P80694	1/2" (13 mm) NPT Male x 3/4" (19 mm) NPT Female 90 Deg Female Swivel Street Elbow	1
24	P80695	3/4" (19 mm) NPT x 90 Deg Street Elbow	2
25	A70278	1-1/2" (38 mm) Hose Clamp	2
26	P80700	Oil Filter	1
27	P80699	Filter Mount	1
28	P80680	Handle	4

Item	Part #	Description	Qty
29	P80679	Link Kit	4
30	P80685	Handle Bracket - Cross	4
31	P80588	3/16" (5 mm) Square x 1-1/4" (32 mm) Key	1
32	P80687	540 PTO Adapter 3/4" (19 mm) Dia	1
33	P80698	3/4" (19 mm) NPT Male x 1/2" (13 mm) NPT Female Reducing Bushing - Steel	1
34	P80702	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female Reducing Bushing - Steel	4
35	P80675	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female x 90 Deg Swivel Street Elbow	2
36	B050020	1/2" x 2" (13 x 51 mm) NC Hex Bolt	2
37	BN050L	1/2" (13 mm) NC Hex Nylon Locknut	2
38	P80584	7/8" (22 mm) OD x 7/8" (22 mm) Long Spacer	2
39	P80676	1/4" (6 mm) NC x 1/2" (13 mm) Socket Head Capscrew	8
40	B037015	3/8" x 1-1/2" (10 x 38 mm) NC Hex Bolt	2
41	BN037	3/8" (10 mm) NC Hex Nut	6
42	BW037L	3/8" (10 mm) Lockwasher	6
43	P80584	3/8" (10 mm) NPT Plug - Square Head	1
44		9/16" (14 mm) ID Flatwasher	2
45	302	2" x 16" (51 x 406 mm) Cylinder c/w Pins (For Horizontal Slide)	1
46	B037020	3/8" x 2" (10 x 51 mm) NC Hex Bolt (Plated)	6
47	P80585	1/2" (13 mm) NPT Plug	1
48		7/16" ID x 1" (11 x 25 mm) OD Flatwasher (Plated)	8
49	BN037L	3/8" (10 mm) NC Hex Nylon Locknut	2
50	P80701	Filter & Filter Mount Assembly	1
51	P80709	Relief Valve - 1500 PSI - Cross	1
52	B050012	1/2" x 1-1/4" (13 x 32 mm) NC Hex Bolt	2
53	BN050	1/2" (13 mm) NC Hex Nut	2
54	BW050L	1/2" (13 mm) Lockwasher	2
55	P80513	Hydraulic Oil Reservoir - Plastic	1

Hydraulic System PTO Drive c/w Optional Hitch Extension Kit Drawing

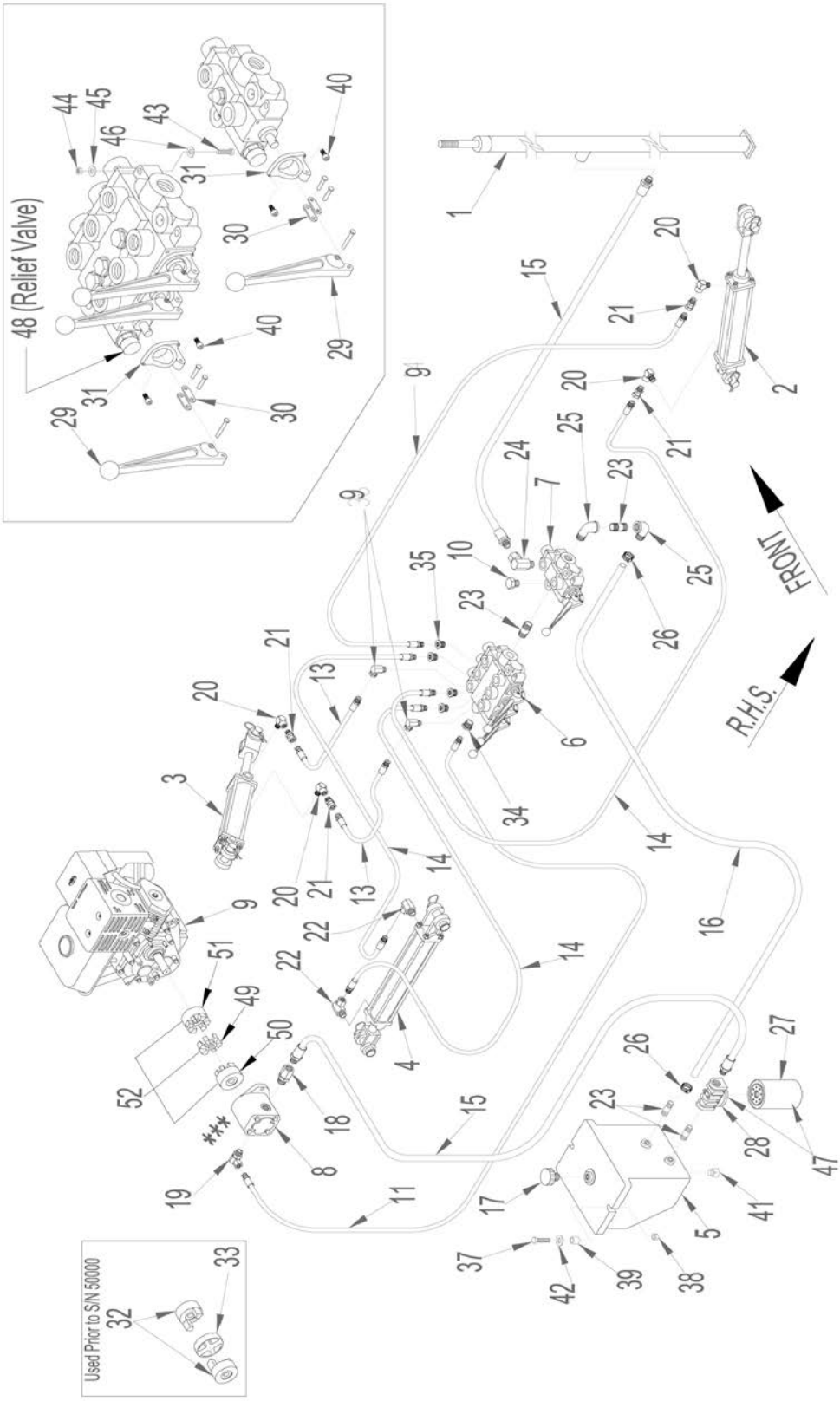


Item	Part #	Description	Qty
1	281	Hammer Cylinder - 1-5/8" Dia x 64-15/16" (41 x 72 mm) Stroke c/w Nuts & Mount Pad	1
2	282	2" x 12" (51 x 304 mm) Cylinder c/w Pins (For Hammer Tilt)	1
3	283	2" x 8" (51 x 203 mm) Cylinder c/w Pins (For Frame Tilt)	1
4	302	2" x 16" (51 x 406 mm) Cylinder c/w Pins (For Horizontal Slide & Hitch Extension)	2
5	P80511	Hydraulic Oil Reservoir - Steel	1
6	P80681	3 Spool Hyd Control Valve	1
7	P80682	Single Spool Hyd Control Valve - Single Acting for Hammer	2
**	P80530	Seal Kit - Cross 3 Spool Valve	1
**	P80528	Seal Kit - Cross Single Spool Valve	1
8	P80585	1/2" (13 mm) NPT Plug	1
9	P80689	Pump PTO w/ NPT Ports (Danfoss)	1
	P80703	Pump PTO w/ ORB Ports (Cassappa)	1
***	P80518	Seal Kit - Danfoss Pump	1
***	P80517	Seal Kit - Cassappa Pump	1
***	P80516	Shaft Seal Only - Cassappa Pump	
10	P80512	Torque Arm	1
11	P3045	3/4" x 148" (19 mm) Hyd Hose c/w 3/4" (10 mm) Ends PTO	1
12	P3044	1/2" x 160" (13 x 4064 mm) Hyd Hose c/w 1/2" (13 mm) Ends	1
13	P3028	1/4" x 40" (6 x 1016 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
14	P3029	1/4" x 50-1/2" (6 x 1283 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
15	P3030	1/4" x 33" (6 x 838 mm) Hyd Hose c/w 3/8" (10 mm) Ends	2
16	P4300	1/4" x 118" (6 x 2997 mm) Hyd Hose c/w 3/8" (10 mm) Ends	2
17	P3033	3/4" x 42" (19 x 1067 mm) Hyd Hose c/w 3/4" (19 mm) Ends	1
18	P3048	1" (25 mm) ID x 58" (1473 mm) Return Hose	1
19	P80510	Breather Cap	1
20	A70670	1-1/16" (27 mm) ORB Male x 3/4" (19 mm) NPT Female x 90 Deg Swivel Street Elbow (For Cassappa Pump)	1
	P80691	1" (25 mm) Male NPT x 3/4" (19 mm) NPT Female x 90 Deg Swivel Street Elbow (For Danfoss Pump)	1
21	P80706	7/8" (22 mm) ORB Male x 1/2" (13 mm) NPT Female x 90 Deg Swivel Street Elbow (For Cassappa Pump)	1
	DL9775	1/2" (13 mm) NPT Male x 1/2" (13 mm) NPT Female x 90 Deg Swivel Street Elbow (For Danfoss Pump)	1
22	DL5283	3/8" (10 mm) NPT x 90 Deg Street Elbow (Steel)	4
23	P80704	3/8" (10 mm) NPT x Male-Female Restricted Orifice Swivel (0.31)	4
24	DL9769	3/8" (10 mm) NPT x 90 Deg Swivel Street Elbow	4
25	P80693	3/4" (19 mm) NPT x 2" (51 mm) Nipple	3
26	P80694	1/2" (13 mm) NPT Male x 3/4" (19 mm) NPT Female x 90 Deg Female Swivel Street Elbow	1
27	P80695	3/4" (19 mm) NPT x 90 Deg Street Elbow	2

Item	Part #	Description	Qty
28	A70278	1-1/2" (38 mm) Hose Clamp	2
29	P80700	Oil Filter	1
30	P80699	Filter Mount	1
31	P80680	Handle	5
32	P80679	Link Kit	5
33	P80685	Handle Bracket - Cross	1
34	P80588	3/16" (5 mm) Square x 1-1/4" (32 mm) Key	1
35	P80687	540 PTO Adaptor 3/4" (19 mm) Diameter	1
36	P80698	3/4" (19 mm) NPT Male x 1/2" (13 mm) NPT Female Reducing Bushing - Steel	1
37	P80702	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female Reducing Bushing - Steel	4
38	P80675	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female x 90 Deg Swivel Street Elbow	4
39	BO50020	1/2" x 2" (13 x 51 mm) NC Hex Bolt	2
40	BN050L	1/2" (13 mm) NC Hex Nylon Locknut	2
41	P80584	7/8" OD x 7/8" (22 x 22 mm) Long Spacer	2
42	P80676	1/4" NC x 1/2" (6 x 13 mm) Socket Head Capscrew	10
43	BO37015	3/8" x 1-1/2" (10 x 38 mm) NC Hex Bolt	2
44	BN037	3/8" (10 mm) NC Hex Nut	8
45	BW037L	3/8" (10 mm) Lockwasher	8
46	P80584	3/8" (10 mm) NPT Plug - Square Head	1
47		9/16" (14 mm) ID Flatwasher	2
48	BO37020	3/8" x 2" (10 x 51 mm) NC Hex Bolt	6
49		7/16" ID x 1" (11 x 25 mm) OD Flatwasher	10
50	BN037L	3/8" (10 mm) NC Hex Nylon Locknut	2
51	P80531	Single Spool Hyd Control Valve - Double Acting for Hitch	1
52	P80701	Filter & Filter Mount Assembly	1
53	P80709	Relief Valve - 1500 PSI - Cross	1
54	BO50012	1/2" x 1-1/4" (13 x 32 mm) NC Hex Bolt	7
55	BN050	1/2" (13 mm) NC Hex Nut	2
56	BW050L	1/2" (13 mm) Lockwasher	2
57	P80513	Hydraulic Oil Reservoir - Plastic	1

Hydraulic System Engine Drive Drawing

(w/ 6:1 Reduction Drive)

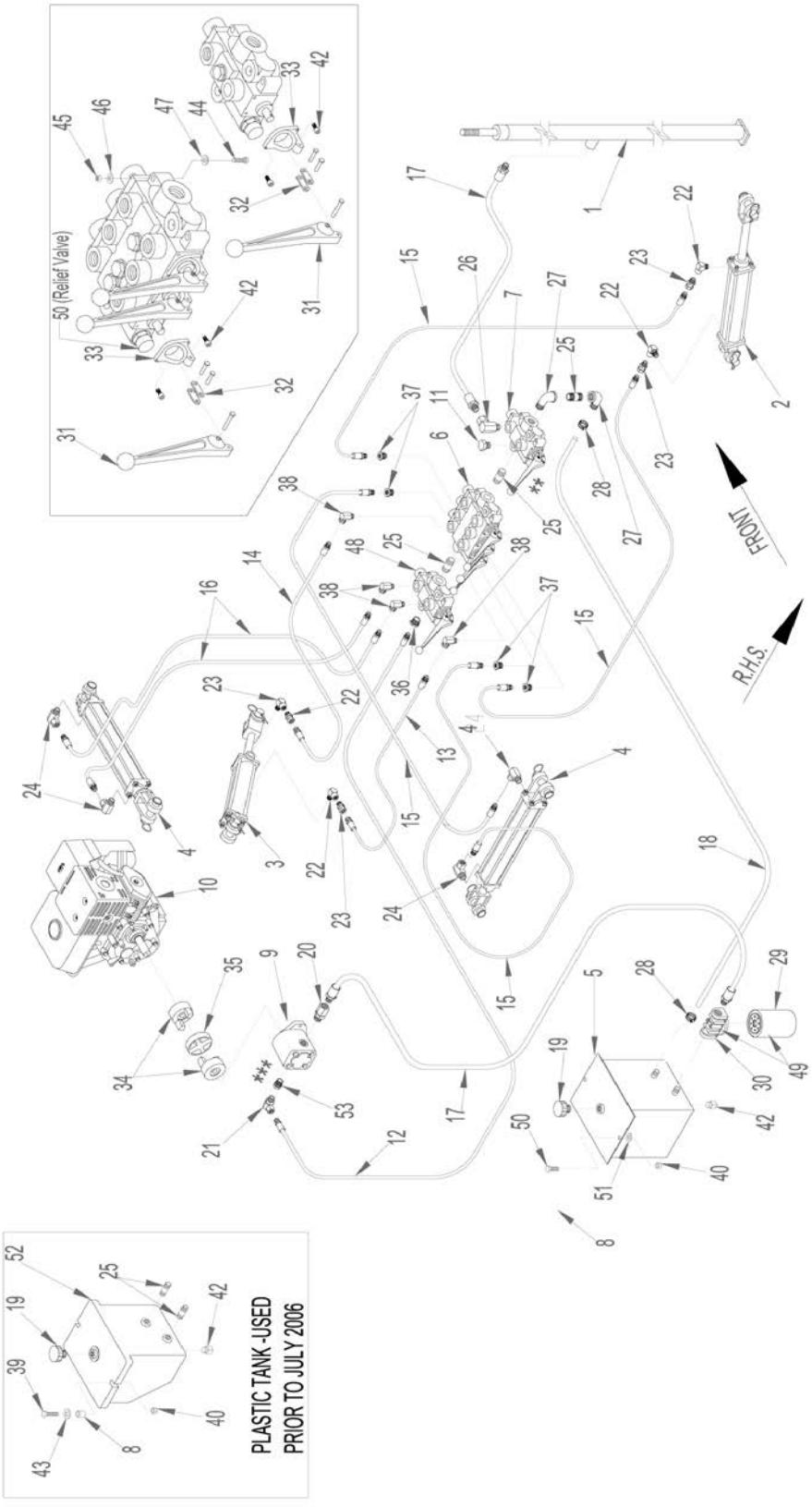


Item	Part #	Description	Qty
1	281	Hammer Cylinder - 1-5/8" Dia x 64-15/16" (41 x 88 mm) Stroke c/w Nuts & Mount Pad	1
2	282	2" x 12" (51 x 305 mm) Cylinder c/w Pins (For Hammer Tilt)	2
3	283	2" x 8" (51 x 203 mm) Cylinder c/w Pins (For Frame Tilt)	1
4	302	2" x 16" (51 x 406 mm) Cylinder c/w Pins (For Horizontal Slide)	1
5	P80513	Hydraulic Oil Reservoir - Plastic	1
6	P80681	3 Spool Hyd Control Valve	1
7	P80682	Single Spool Hyd Control Valve - (Single Acting for Hammer)	1
**	P80528	Seal Kit - Cross Single Spool Valve	1
**	P80530	Seal Kit - Cross 3 Spool Valve	1
8	P80598	Pump - Engine Drive w/ ORB Ports (Cassappa) - 1.99 cu. in. - used w/ Honda Engine - 6:1 Drive	1
	P80597	Pump - Engine Drive w/ NPT Ports (Danfoss) - 1.99 cu. in. - used w/ Honda Engine - 6:1 Drive	1
***	P80518	Seal Kit - Danfoss Pump	1
***	P80517	Seal Kit - Cassappa Pump	1
***	P80516	Shaft Seal Only - Cassappa Pump	
9	P80600	Honda Engine (9 H.P.) - w/ 6:1 Reduction Drive	1
10	P80585	1/2" (13 mm) NPT Plug	1
11	P4301	1/2" x 64" (13 x 1626 mm) Hyd Hose c/w 1/2" (13 mm) Ends	
12	P3028	1/4" x 40" (6 x 1016 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
13	P3029	1/4" x 50-1/2" (6 x 1283 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
14	P3030	1/4" x 33" (6 x 838 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
15	P3033	3/4" x 42" (19 x 1067 mm) Hyd Hose c/w 3/4" (10 mm) Ends	4
16	P3048	1" (25 mm) ID x 58" (1473 mm) Return Hose	1
17	P80510	Breather Cap	1
18	P80707	1" (25 mm) NPT Male x 3/4" (19 mm) NPT Female Swivel Adapter (For Danfoss Pump)	1
	A70706	1-1/16" (27 mm) ORB Male x 3/4" (19 mm) NPT Female Swivel Adapter (For Cassappa Pump)	1
19	DL9775	1/2" (13 mm) NPT Male x 1/2" (13 mm) NPT Female x 90 Deg Swivel Street Elbow (For Danfoss Pump)	1
	A70670	7/8" (22 mm) ORB Male x 1/2" (13 mm) NPT 90 Deg Swivel Street Elbow (For Cassappa Pump)	1
20	DL5283	3/8" (10 mm) NPT x 90 Deg Street Elbow (Steel)	1
21	P80704	3/8" (10 mm) NPT Male-Female Restricted Orifice Swivel (0.31)	4
22	DL9769	3/8" (10 mm) NPT x 90 Deg Swivel Street Elbow	2
23	P80693	3/4" (19 mm) NPT x 2" (51 mm) Nipple	2
24	P80694	1/2" (13 mm) NPT Male x 3/4" (19 mm) NPT Female 90 Deg Swivel Street Elbow	1
25	P80695	3/4" (19 mm) NPT x 90 Deg Street Elbow	2
26	A70278	1-1/2" (38 mm) Hose Clamp	2
27	P80700	Oil Filter	1

Item	Part #	Description	Qty
28	P80699	Filter Mount	1
29	P80680	Handle	4
30	P80679	Link Kit	4
31	P80685	Handle Bracket - Cross	4
32	P80591	1" (25 mm) Flex Coupling - 4 Spoke Type - (used prior to S/N 50000)	1
	P80590	3/4" (10 mm) Flex Coupling - 4 Spoke Type - (used prior to S/N 50000)	1
33	P80589	Coupling Insert - 4 Spoke Type - (used prior to S/N 50000)	1
34	P80698	3/4" (19 mm) NPT Male x 1/2" (13 mm) NPT Female Reducing Bushing (Steel)	1
35	P80702	1/2" (13mm) NPT Male x 3/8" (10 mm) NPT Female Reducing Bushing (Steel)	1
36	P80675	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female x 90 Deg Swivel Street Elbow	2
37	BO50020	1/2" x 2" (13 x 51 mm) NC Hex Bolt	2
38	BN050L	1/2" (13 mm) NC Hex Nylon Locknut	2
39	P80583	7/8" OD x 7/8" (22 x 22 mm) Long Space	2
40	P80676	1/4" NC x 1/2" (6 x 13 mm) Socket Head Capscrew	8
41	P80584	3/8" (10 mm) NPT Plug (Square Head)	1
42		9/16" (14 mm) ID Flatwasher	2
43	BO37020	3/8" x 2" (10 x 51 mm) NC Hex Bolt	6
44	BN037	3/8" (10 mm) NC Hex Nut	6
45	BW037L	3/8" (10 mm) Lockwasher	6
46		7/16" (11 mm) ID x 1" (25 mm) OD Flatwasher	6
47	P80701	Filter & Filter Mount Assembly	1
48	P80709	Relief Valve - 1500 PSI - Cross	1
49	P80608	Coupling Insert - 6 Spoke Type - (used on S/N 50000 & later)	1
50	P80609	1" (25 mm) Coupling Half - 6 Spoke Type - (used on S/N 50000 & later)	1
51	P80610	3/4" (19 mm) Coupling Half - 6 Spoke Type - (used on S/N 50000 & later)	1
52	P80587	Flex Coupler Complete	1

Hydraulic System Engine Drive c/w Optional Hitch Extension Kit Drawing

(w/ 6:1 Reduction Drive)

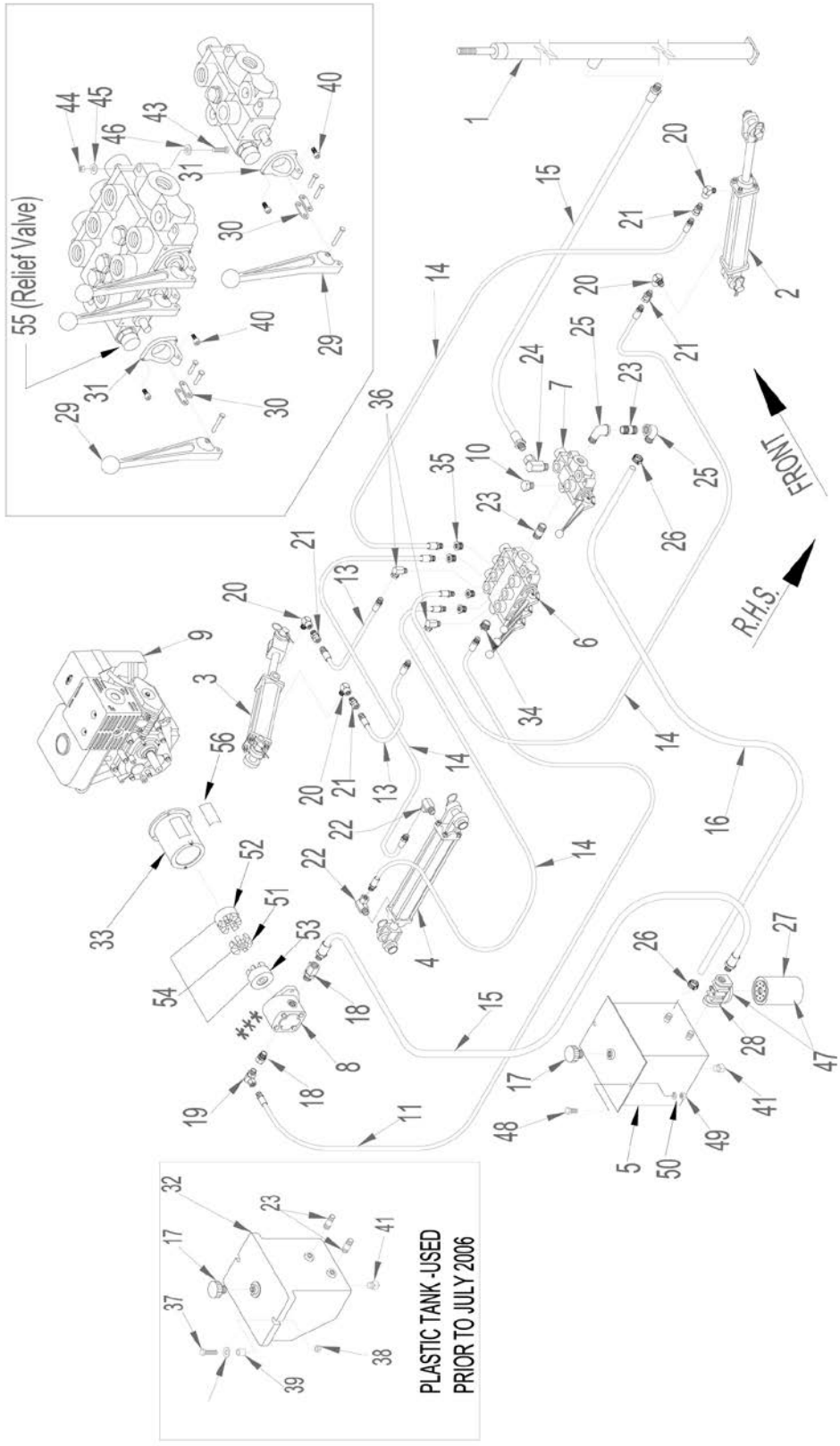


Item	Part #	Description	Qty
1	281	Hammer Cylinder - 1-5/8" Dia x 64-15/16" (41 x 88 mm) Stroke c/w Nuts & Mount Pad	1
2	282	2" x 12" (51 x 305 mm) Cylinder c/w Pins (For Hammer Tilt)	1
3	283	2" x 8" (51 x 203 mm) Cylinder c/w Pins (For Frame Tilt)	1
4	302	2" x 16" (51 x 406 mm) Cylinder c/w Pins (For Horizontal Slide & Hitch Extension)	2
5	P80513	Hydraulic Oil Reservoir - Plastic	1
6	P80681	3 Spool Hyd Control Valve	1
7	P80682	Single Spool Hyd Control Valve	1
**	P80528	Seal Kit - Cross Single Spool Valve	1
**	P80530	Seal Kit - Cross 3 Spool Valve	1
8	P80583	7/8" OD x 7/8" (22 x 22 mm) Long Spacer	1
9	P80598	Pump (Engine Drive) w/ NPT Ports (Danfoss) - 1.99 cu. in. - (used w/ Honda Engine - 6:1 drive)	1
	P80597	Pump (Engine Drive) w/ ORB Ports (Cassappa) - 1.99 cu. in. - (used w/ Honda Engine - 6:1 drive)	1
***	P80518	Seal Kit - Danfoss Pump	1
***	P80516	Seal Kit - Cassappa Pump	1
***	P80517	Shaft Seal Only - Cassappa Pump	
10	P80600	Honda Engine (9 hp) - w/ 6:1 Reduction Drive	1
11	P80585	1/2" NPT Plug	1
12	P4301	1/2" x 64" (13 x 1626 mm) Hyd Hose c/w 1/2" (13 mm) Ends	1
13	P3028	1/4" x 40" (6 x 1016 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
14	P3029	1/4" x 50-1/2" (6 x 1283 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
15	P3030	1/4" x 33" (6 x 838 mm) Hyd Hose c/w 3/8" (10 mm) Ends	2
16	P4300	1/4" x 118" (6 x 2997 mm) Hyd Hose c/w 3/8" (10 mm) Ends	2
17	P3033	3/4" x 42" (19 x 1067 mm) Hyd Hose c/w 3/4" (19 mm) Ends	1
18	P3048	1" ID x 58" (25 x 1473 mm) Return Hose	1
19	P80510	Breather Cap	1
20	P80707	1" (25 mm) NPT Male x 3/4" (19 mm) NPT Female Swivel Adapter (For Danfoss Pump)	1
	P80708	1-1/16" (27 mm) ORB Male x 3/4" (19 mm) NPT Female Swivel Adapter (For Cassappa Pump)	1
21	DL9775	1/2" (13 mm) NPT Male x 1/2" (13 mm) NPT Female x 90 Deg Swivel Street Elbow (For Danfoss Pump)	1
	P80706	7/8" ORB Male x 1/2" NPT x 90 Deg Swivel Street Elbow (For Cassappa Pump)	1
22	DL5283	3/8" NPT x 90 Deg Street Elbow (Steel)	4
23	P80704	3/8" NPT x Male-Female Restricted Orifice Swivel (0.31)	4
24	DL9769	3/8" NPT x 90 Deg Swivel Street Elbow	4
25	P80693	3/4" NPT x 2" Nipple	3
26	P80694	1/2" NPT Male x 3/4" NPT Female x 90 Deg Female Swivel Street Elbow	1

Item	Part #	Description	Qty
27	P80695	3/4" (19 mm) NPT x 90 Deg Street Elbow	2
28	A70278	1-1/2" (38 mm) Hose Clamp	2
29	P80700	Oil Filter	1
30	P80699	Filter Mount	1
31	P80680	Handle	5
32	P80679	Link Kit	5
33	P80685	Handle Bracket	5
34	P80591	1" (25 mm) Flex Coupling - 4 Spoke Type - used prior to S/N 5000	1
	P80590	3/4" (19 mm) Flex Coupling - 4 Spoke Type - used prior to S/N 5000	1
35	P80589	Coupling Insert - 4 Spoke Type - used prior to S/N 5000	1
36	P80698	3/4" (19 mm) NPT Male x 1/2" (13 mm) NPT Female Reducing Bushing - Steel	1
37	P80702	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female Reducing Bushing - Steel	4
38	P80675	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female x 90 Deg Swivel Street Elbow	4
39	BO50020	1/2" x 2" (13 x 51 mm) NC Hex Bolt	2
40	BN050	1/2" (13 mm) NC Hex Nylon Locknut	2
41	P80676	1/4" NC x 1/2" (6 x 13 mm) Socket Head Capscrew	10
42	P80584	3/8" (10 mm) NPT Plug (Square Head)	1
43		9/16" (14 mm) ID Flatwasher	2
44	BO37020	3/8" x 2" (10 x 51 mm) NC Hex Bolt	8
45	BN037	3/8" (10 mm) NC Hex Nut	8
46	BW037L	3/8" (10 mm) Lockwasher	8
47		7/16" ID x 1" (11 x 25 mm) OD Flatwasher (Plated)	8
48	P80531	Single Spool Hyd Control Valve (Double Acting for Hitch)	1
49	P80701	Filter & Filter Mount Assembly	1
50	P80709	Relief Valve - 1500 PSI - Cross	1
51	P80608	Coupling Insert - 6 Spoke Type (used on S/N 50000 & later)	1
52	P80609	1" Flex Coupling - 6 Spoke Type (used on S/N 50000 & later)	1
53	P80610	3/4" Flex Coupling - 6 Spoke Type (used on S/N 50000 & later)	1
54	P80587	Flex Coupler Complete	1

Hydraulic System Engine

(w/ Direct Drive Pump after July 1/06)

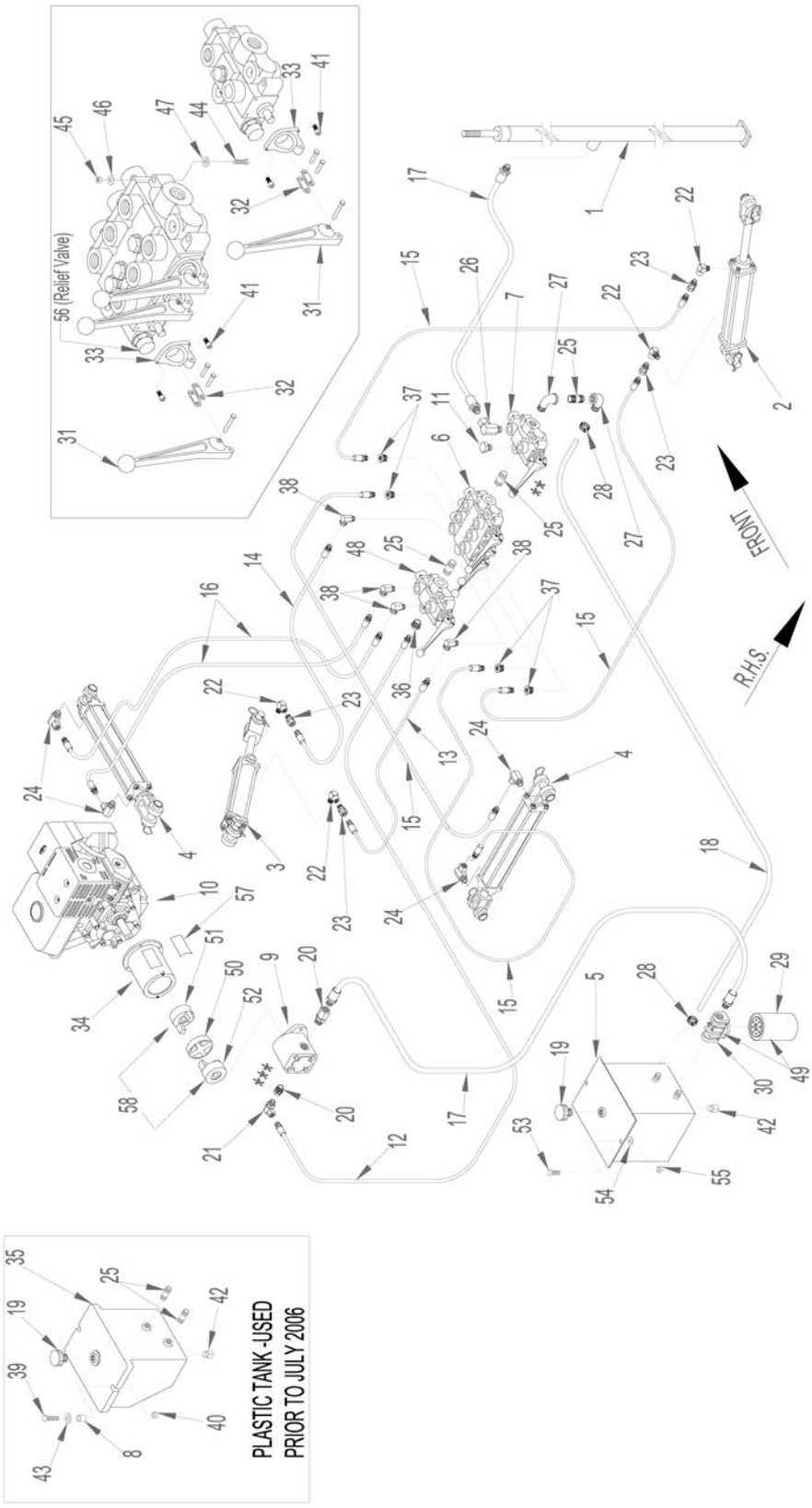


Item	Part #	Description	Qty
1	281	Hammer Cylinder - 1-5/8" Dia x 64-15/16" (41 x 88 mm) Stroke c/w Nuts & Mount Pad	1
2	282	2" x 12" (51 x 305 mm) Cylinder c/w Pins (For Hammer Tilt)	2
3	283	2" x 8" (51 x 203 mm) Cylinder c/w Pins (For Frame Tilt)	1
4	302	2" x 16" (51 x 406 mm) Cylinder c/w Pins (For Horizontal Slide)	1
5	P80511	Hydraulic Oil Reservoir - Steel	1
6	P80681	3 Spool Hyd Control Valve	1
7	P80682	Single Spool Hyd Control Valve - (Single Acting for Hammer)	1
**	P80528	Seal Kit - Cross Single Spool Valve	1
**	P80530	Seal Kit - Cross 3 Spool Valve	1
8	P80599	.29 cu. in. Pump - Engine Drive (Cassappa)	1
***	P80517	Seal Kit - Cassappa Pump	1
***	P80516	Shaft Seal Only - Cassappa Pump	1
9	P80611	Honda Engine (9 HP) - (No Reduction Drive)	1
	P80612	Hy-Spec Engine (9 HP) - (no Reduction Drive)	1
10	P80585	1/2" (13 mm) NPT Plug	1
11	P4301	1/2" x 64" (13 x 1626 mm) Hyd Hose c/w 1/2" (13 mm) Ends	1
12	P3028	1/4" x 40" (6 x 1016 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
13	P3029	1/4" x 50-1/2" (6 x 1283 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
14	P3030	1/4" x 33" (6 x 838 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
15	P3033	3/4" x 46" (19 x 1168 mm) Hyd Hose c/w 3/4" (10 mm) & 1/2" (13 mm) Ends	4
16	P3048	1" (25 mm) ID x 58" (1473 mm) Return Hose	1
17	P80510	Breather Cap	1
18	A70706	7/8" (22 mm) - 14 ORB Male x 1/2" (13 mm) NPT Female Swivel Adapter	2
19	DL9775	1/2" (13 mm) NPT x 90 Deg Swivel Street Elbow	1
20	DL5283	3/8" (10 mm) NPT x 90 Deg Street Elbow (Steel)	1
21	P80704	3/8" (10 mm) NPT Male-Female Restricted Orifice Swivel (0.31)	4
22	DL9769	3/8" (10 mm) NPT x 90 Deg Swivel Street Elbow	2
23	P80693	3/4" (19 mm) NPT x 2" (51 mm) Nipple	2
24	P80694	1/2" (13 mm) NPT Male x 3/4" (19 mm) NPT Female 90 Deg Swivel Street Elbow	1
25	P80695	3/4" (19 mm) NPT x 90 Deg Street Elbow	2
26	A70278	1-1/2" (38 mm) Hose Clamp	2
27	P80700	Oil Filter	1
28	P80699	Filter Mount	1
29	P80680	Handle	4
30	P80679	Link Kit	4
31	P80685	Handle Bracket - Cross	4
32	P80513	Hydraulic Oil Reservoir - Plastic	1
33	P80603	Pump Mount Housing	1

Item	Part #	Description	Qty
34	P80698	3/4" (19 mm) NPT Male x 1/2" (13 mm) NPT Female Reducing Bushing (Steel)	1
35	P80702	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female Reducing Bushing (Steel)	1
36	P80675	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female x 90 Deg Swivel Street Elbow	2
37	BO50020	1/2" x 2" (13 x 51 mm) NC Hex Bolt	2
38	BN050L	1/2" (13 mm) NC Hex Nylon Locknut	2
39	P80583	7/8" OD x 7/8" (22 x 22 mm) Long Space	2
40	P80676	1/4" NC x 1/2" (6 x 13 mm) Socket Head Capscrew	8
41	P80584	3/8" (10 mm) NPT Plug (Square Head)	1
42	---	9/16" (14 mm) ID Flatwasher	2
43	BO37020	3/8" x 2" (10 x 51 mm) NC Hex Bolt	6
44	BN037	3/8" (10 mm) NC Hex Nut	6
45	BW037L	3/8" (10 mm) Lockwasher	6
46	---	7/16" ID x 1" (11 x 25 mm) OD Flatwasher	6
47	P80701	Filter & Filter Mount Assembly	1
48	BO50012	1/2" x 1-1/4" (13 x 32 mm) NC Hex Bolt	2
49	BN050	1/2" (13 mm) NC Hex Bolt	2
50	BW050L	1/2" (13 mm) Lockwasher	2
51	P80608	Coupling Insert - 6 Spoke Type	1
52	P80609	1" (25 mm) Flex Coupling - 6 Spoke Type	1
53	P80610	3/4" (19 mm) Flex Coupling - 6 Spoke Type	1
54	P80587	Flex Coupler Complete	1
55	P80709	Relief Valve - 1500 PSI - Cross	1
56	P80604	Access Cover - Pump Mount Housing	2

Hydraulic System Engine c/w Optional Hitch Extension Kit Drawing

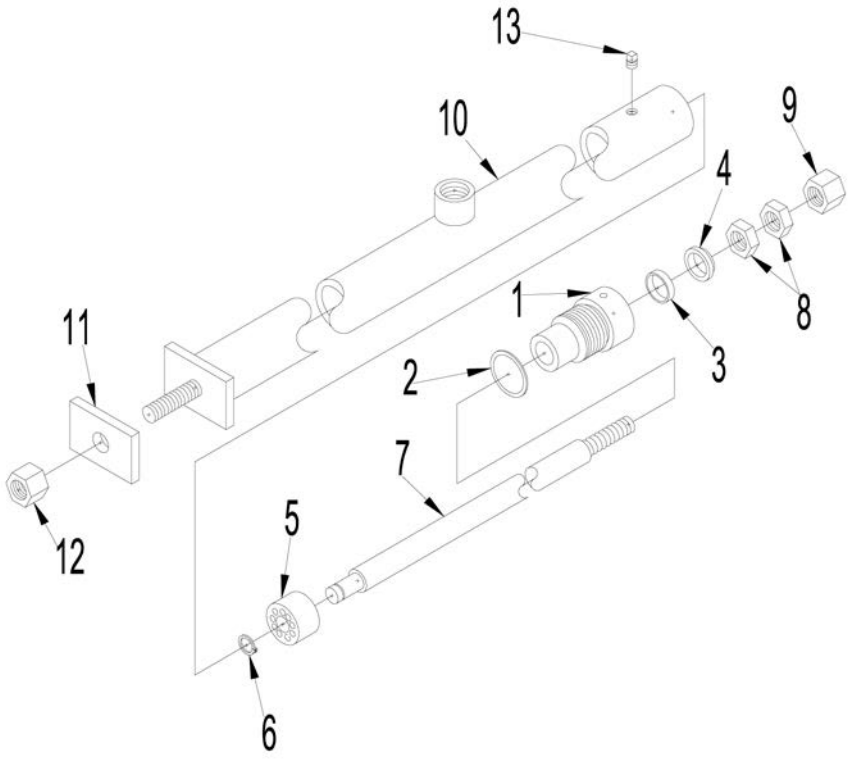
(w/ Direct Drive Pump after July 1/06)



Item	Part #	Description	Qty
1	281	Hammer Cylinder - 1-5/8" Dia x 64-15/16" (41 x 88 mm) Stroke c/w Nuts & Mount Pad	1
2	282	2" x 12" (51 x 305 mm) Cylinder c/w Pins (For Hammer Tilt)	2
3	283	2" x 8" (51 x 203 mm) Cylinder c/w Pins (For Frame Tilt)	1
4	302	2" x 16" (51 x 406 mm) Cylinder c/w Pins (For Horizontal Slide)	1
5	P80511	Hydraulic Oil Reservoir - Steel	1
6	P80681	3 Spool Hyd Control Valve	1
7	P80682	Single Spool Hyd Control Valve	1
**	P80528	Seal Kit - Cross Single Spool Valve	1
**	P80530	Seal Kit - Cross 3 Spool Valve	1
8	P80583	7/8" OD x 7/8" (22 x 22 mm) Long Spacer	1
9	P80599	.29 Engine Drive Pump - Cassappa	1
***	P805617	Seal Kit - Cassappa Pump	1
***	P80516	Shaft Seal Only - Cassappa Pump	1
10	P80611	Honda Engine (9 HP) - (No Reduction Drive)	1
	P80612	Hy-Spec Engine (9 HP) - (No Reduction Drive)	1
11	P80585	1/2" (13 mm) NPT Plug	1
12	P4301	1/2" x 64" (13 x 1626 mm) Hyd Hose c/w 1/2" (13 mm) Ends	1
13	P3028	1/4" x 40" (6 x 1016 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
14	P3029	1/4" x 50-1/2" (6 x 1283 mm) Hyd Hose c/w 3/8" (10 mm) Ends	1
15	P3030	1/4" x 33" (6 x 838 mm) Hyd Hose c/w 3/8" (10 mm) Ends	2
16	P4300P	1/4" x 118" (6 x 2997 mm) Hyd Hose c/w 3/8" (10 mm) Ends	2
17	P3033	3/4" x 46" (19 x 1168 mm) Hyd Hose c/w 3/4" (19 mm) and 1/2" (13 mm) Ends	1
18	P3048	1" ID x 58" (25 x 1473 mm) Return Hose	1
19	P3048	Breather Cap	1
20	L4043	7/8" (22 mm) ORB Male x 1/2" (13 mm) NPT Female Swivel Adapter	2
21	DL9775	1/2" (13 mm) NPT x 90 Deg Swivel Street Elbow	1
22	DL5283	3/8" (10 mm) NPT x 90 Deg Street Elbow (Steel)	4
23	P80704	3/8" (10 mm) NPT Male-Female Restricted Orifice Swivel (0.31)	4
24	DL9769	3/8" (10 mm) NPT x 90 Deg Swivel Street Elbow	4
25	P80693	3/4" (19 mm) NPT x 2" (51 mm) Nipple	3
26	P80694	1/2" (13 mm) NPT Male x 3/4" (19 mm) NPT Female 90 Deg Swivel Street Elbow	1
27	P80695	3/4" (19 mm) NPT x 90 Deg Street Elbow	2
28	A70278	1-1/2" (38 mm) Hose Clamp	2
29	P80700	Oil Filter	1
30	P80699	Filter Mount	1
31	P80680	Handle	5
32	P80679	Link Kit	5
33	P80685	Handle Bracket	5

Item	Part #	Description	Qty
34	P80603	Pump Mount Housing	1
35	P80513	Hydraulic Oil Reservoir - Plastic	1
36	P80698	3/4" (19 mm) NPT Male x 1/2" (13 mm) NPT Female Reducing Bushing (Steel)	1
37	P80702	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female Reducing Bushing (Steel)	4
38	P80675	1/2" (13 mm) NPT Male x 3/8" (10 mm) NPT Female x 90 Deg Swivel Street Elbow	4
39	BO50020	1/2" x 2" (13 x 51 mm) NC Hex Bolt	2
40	BN050L	1/2" (13 mm) NC Hex Nylon Locknut	2
41	P80676	1/4" NC x 1/2" (6 x 13 mm) Socket Head Capscrew	10
42	P80584	3/8" (10 mm) NPT Plug (Square Head)	1
43		9/16" (14 mm) ID Flatwasher	2
44	BO37020	3/8" x 2" (10 x 51 mm) NC Hex Bolt	8
45	BN037	3/8" (10 mm) NC Hex Nut	8
46	BW037L	3/8" (10 mm) Lockwasher	8
47		7/16" ID x 1" (11 x 25 mm) OD Flatwasher	8
48	P80531	Single Spool Hyd Control Valve - (Double Acting for Hitch)	1
49	P80701	Filter & Filter Mount Assembly	1
50	P80608	Coupling Insert - 6 Spoke Type	1
51	P80609	1" (25 mm) Flex Coupling - 6 Spoke Type	1
52	P80610	3/4" (19 mm) Flex Coupling - 6 Spoke Type	1
53	BO50012	1/2" x 1-1/4" (13 x 32 mm) NC Hex Bolt	2
54	BN050L	1/2" (13 mm) Lockwasher	2
55	BN050	1/2" (13 mm) NC Hex Nut	2
56	P80709	Relief Valve - 1500 PSI - Cross	1
57	P80604	Access Cover - Pump Mount Housing	2
58	P80587	Flex Coupler Complete	1

Hammer Cylinder Drawing

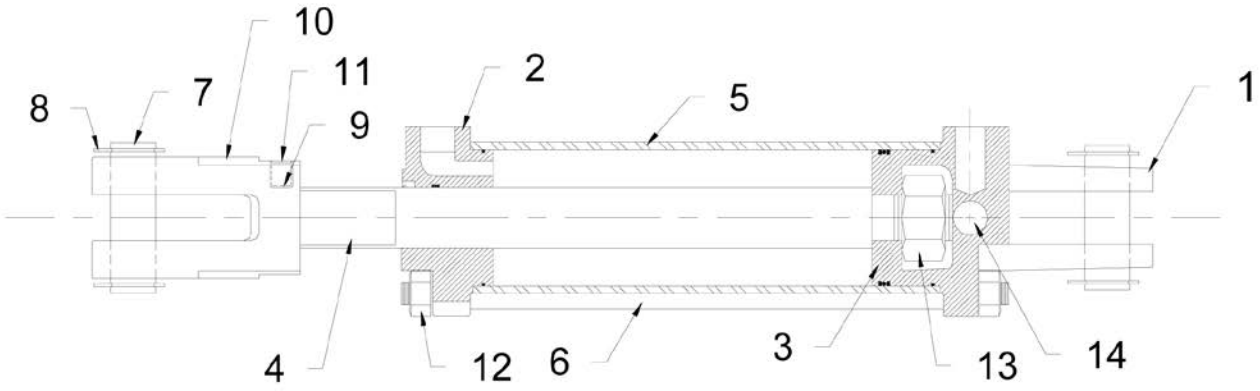


Item	Part #	Description	Qty
1	16HP1	1-5/8" OD x 7/8" (41 x 22 mm) ID Headplate (N5)	1
2	10OR5	1-3/4" OD x 1-1/2" ID x 1/8" (44 x 38 x 3 mm) O-Ring	1
3	1ORS8	7/8" (22 mm) ID Rod Seal	1
4	10WS8	7/8" (22 mm) ID Wiper Seal	1
5	16PB1	1-5/8" (41 mm) Diameter Rod Guide	1
6	10RR1	5/8" (16 mm) Dia Shaft Retaining Ring	1
7	10SH56	7/8" (22 mm) Diameter x 73-1/8" (1857 mm) Long Cylinder Shaft	1
8	10NU7	3/4" (19 mm) - 16 UNF Hex Jam Nut (Grade 2)	2
9	10NU8	3/4" (19 mm) - 16 UNF Hex Nylon Locknut (Grade 5)	1
10	16TU1	1-5/8" x 69-1/4" (41 x 1759 mm) Barrel	1
11	P80522	3/8" x 2-1/4" x 3-1/4" (10 x 57 x 83 mm) Mount Pad	1
12	10NU9	5/8" (16 mm) - 18 UNF Hex Nylon Locknut (Grade 5)	1
13	P80705	1/8" NPT Square Head Plug	1

Seal Kit - No. 1608N5

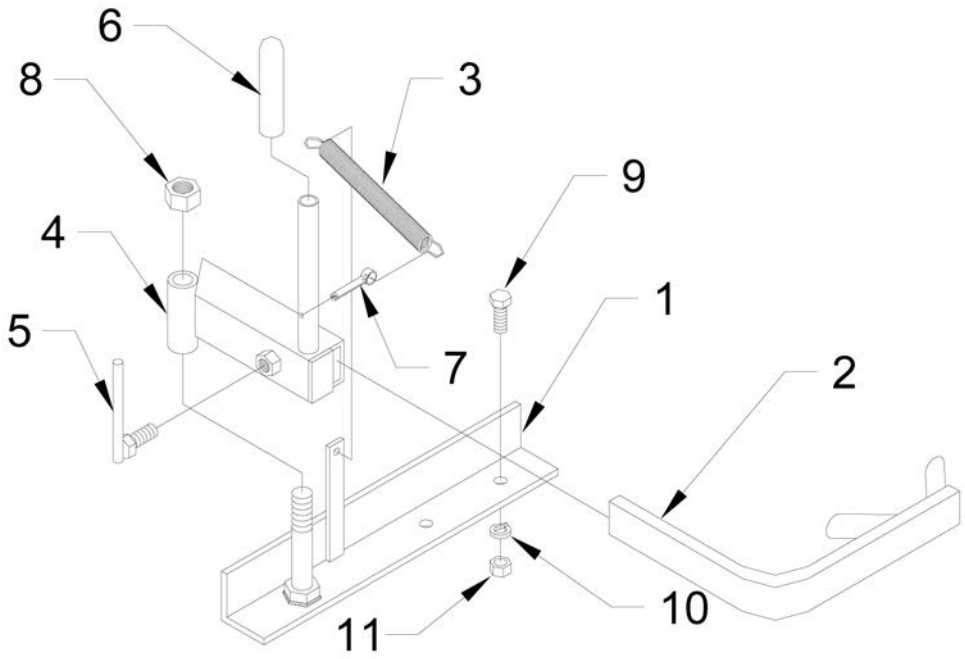
Kit #	Description	Qty
100R5	1-3/4" OD x 1-1/2" ID x 1/8" (44 x 38 mm) O-Ring	1
10RS8	7/8" (22 mm) ID Rod Seal	1
10WS8	7/8" (22 mm) ID Wiper Seal	1

Hydraulic Cylinders - Monarch (Hitch, Slide and Tilt)



Item	Part #	Description	2" x 8" Qty	2" x 12" Qty	2" x 16" Qty
1	492805	Clevis Cap For 1" (25 mm) Pin	1	1	1
2	492806	Rod Cap	1	1	1
3	492548	2" (51 mm) Dia Piston	1	1	1
4	492851	Rod 8" (203 mm) Stroke	1		
	492853	Rod 12" (305 mm) Stroke		1	
	492355	Rod 16" (406 mm) Stroke			1
5	491608	Tube 8" (203 mm) Stroke	1		
	491612	Tube 12" (305 mm) Stroke		1	1
6	491616	Tube 16" (406 mm) Stroke			
	492216	Tie Rod 8" (203 mm) Stroke	4		1
	492222	Tie Rod 12" (305 mm) Stroke		4	
	492226	Tie Rod 16" (406 mm) Stroke			4
7 & 8	640091	Pin (2) For 1" Dia (25 mm)	2	2	2
9	498006	Thread Lock	1	1	1
10	492650	Rod Clevis For 1" (25 mm) Pin	1	1	1
11	148390	Set Screw	1	1	1
12	128230	Nut -Tie Rod	8	8	8
13	129090	Nut - Piston	1	1	1
14	196530	Plug	1	1	1
**	639572	Seal Kit Rod Dia 1-1/8" (28 mm)	1	1	1

Post Guide (Optional) Drawing



Item	Part #	Description	Qty
1	P80732	Mounting Bracket	1
2	P80733	Post Holding Arm	1
3	A70157	Extension Spring	1
4	A80734	Arm Actuator	1
5	A80735	Lock Bolt	1
6	P80602	Rubber Grip	1
7	BP25200	1/4" x 2" (6 x 51 mm) Cotter Pin	1
8	BN100L	1" (25 mm) NC Hex Nylon Lock Nut	1
9	BO62015	5/8" x 1-1/2" (16 x 38 mm) NC Hex Bolt	2
10	BW062L	5/8" (16 mm) Lockwashers	2
11	BN062	5/8" (16 mm) Hex Nut	2

Delivery Checklist

Pre-delivery

- ☐ Check engine fluid levels (if equipped) and hydraulic fluid in reservoir).
- ☐ Lubricate the entire machine as recommended in the Operator's Manual.
- ☐ Check all bolts for tightness and cotter pins are installed.
- ☐ Ensure both sides of hammer slide are greased before first use.
- ☐ Ensure the rubber bumpers on upper & lower hammer stops are in place.
- ☐ Check Operator's Manual to ensure all decals are correctly installed.
- ☐ Ensure hammer does not rise too slowly or stick while rising.
- ☐ Check hydraulic hoses are leak free and hydraulic cylinders are filled with oil.
- ☐ Do not mount on tractor weighing less than 3,000 lb (1365 kg).
- ☐ Ensure all pins are properly secured with cotter pins, especially the 3-point hitch pins (which also secure post driver to skid-steer mount frame).
- ☐ Raise front leg of stand assembly and lock in raised position before operating post driver.
- ☐ Ensure Post Holder tool is present and Post Guide installed correctly (if equipped).

Dealer Representative:

Date:

Customer Delivery

- ☐ Give the Operator's Manual to your customer.
- ☐ Inform your customer of all safety precautions, maintenance procedures, and demonstrate proper & safe operation of the Post Driver.
- ☐ Verify correct serial number.
- ☐ Attach Post Driver to your customer's tractor, skid-steer, or vehicle.
- ☐ Ensure hitch jack is in transport position (if equipped).
- ☐ Connect PTO pump to tractor's PTO, connect safety chain (if equipped).
- ☐ Ensure machine functions properly. (Raise/ lower hammer, slide, tilt, etc).
- ☐ Start tractor or engine & run all controls so your customer understands correct operation of the Post Driver and ensure all functions are working properly.
- ☐ Explain warranty.

Dealer Representative:

Date:

Farm King Limited Warranty

This document limits your warranty rights.

Base Limited Warranty

Buhler Industries Inc. provides this warranty only to original retail purchasers of its product. Buhler Industries Inc. warrants to such purchasers that all Buhler Industries Inc. 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 12 months (80 days for commercial applications). This limited warranty applies only to those parts and components manufactured by Buhler Industries Inc. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

Buhler Industries Inc. 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 Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Buhler Industries Inc. reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection. Parts must be returned through the selling representative and the buyer must prepay transportation charges.

Buhler Industries Inc. 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 Buhler Industries Inc. 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. Also: Buckets and Bucket Tines carry no warranty, Bent Spears carry no warranty, Snowblower Fan Shafts carry no warranty, Mower Blades carry no warranty, Portable Auger Parts Have Two (2) Year Warranty, Loader Parts Have Two (2) Year Warranty. The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Industries Inc. will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

Repair Parts Limited Warranty

Buhler Industries Inc. warrants Farm King replacement parts purchased after the expiration of the Buhler Industries Inc. 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. Buhler Industries Inc. 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 Buhler Industries Inc. 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 Buhler Industries Inc. 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 Buhler Industries Inc.; 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 Buhler Industries Inc.

Authorized Dealer and Labor Costs
Repairs eligible for labor under this limited warranty must be made by Buhler Industries Inc. or an authorized Farm King dealer. Buhler Industries Inc. 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 Buhler Industries Inc. 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. Buhler Industries Inc. will not approve or pay invoices sent for repairs that Buhler Industries Inc. has not previously approved. Warranty service does not extend the original term of this limited warranty.

Warranty Requirements
To be covered by warranty, each Farm King new product must be registered with Buhler Industries Inc. 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, Buhler Industries Inc. will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

Warranty Claims:
Warranty requests must be prepared on Buhler Industries Inc. Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty (30) day period from date of failure repair.

Warranty Labor:
Any labor subject to warranty must be authorized by Buhler Industries Inc. The labor rate for replacing defective parts, where applicable, will be credited at 100% of the dealer's posted shop rate.

Exclusive Effect of Warranty and Limitation of Liability

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. 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, BUHLER INDUSTRIES INC. 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 BUHLER INDUSTRIES INC.'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 PRODUCTS MANUFACTURED BY BUHLER INDUSTRIES INC. ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL BUHLER INDUSTRIES INC. 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 provinces or 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 province to province or state to state.

Buhler Industries Inc. 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 Buhler Industries Inc. to the purchaser, and Buhler Industries Inc. 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 Buhler Industries Inc.'s ability to obtain materials or manufacture 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.

Government Legislation:
Warranty terms and conditions are subject to provincial or state legislation.

Important Note: This warranty does not apply to rentals.

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