

Ezee-On

OPERATOR'S MANUAL

**MODEL 1450 3 POINT HITCH
POST DRIVER
CATEGORY I and II MOUNT**

*includes
ASSEMBLY INSTRUCTIONS
and
PARTS LIST*

Manufactured

By

Ezee-On Manufacturing

PRINTED IN CANADA

Vegreville, Alberta

Canada

722F

EZEE-ON MANUFACTURING

Limited Warranty Policy

Ezee-On Manufacturing's products are warranted to the original non-commercial purchaser to be free from defects in material and workmanship for a minimum period of twelve (12) months from the original date of purchase.

Ezee-On Manufacturing's obligation under this warranty shall be limited to the repair or exchange, at Ezee-On's option, free of charge to the original purchaser, any part or component that, in our judgment, shows evidence of such defect. Further, that such part shall be returned within thirty (30) days from date of failure to Ezee-On Manufacturing, routed through the dealer and distributor from whom the equipment was purchased, **transportation charges prepaid**.

This warranty shall not be interpreted to render Ezee-On Manufacturing liable for injury or damages of any kind or nature to person or property. This warranty does not include claims for, or extend to the loss or damage of crops, loss because of delay in seeding/ planting or harvesting, or any expense or loss incurred for labor, substitute machinery, rental, transportation expense or for any other reason.

Except as set forth above, Ezee-On Manufacturing shall have no obligation or liability of any kind on account of any of its equipment and shall not be liable for special or consequential damages. Ezee-On Manufacturing makes no other warranty, expressed or implied, and, specifically, Ezee-On Manufacturing disclaims any implied warranty or merchantability or fitness for a particular purpose. The purchaser is solely responsible for determining suitability of Ezee-On equipment purchased. This warranty is subject to any existing conditions of supply, which may directly affect our ability to obtain materials or manufacture replacement parts.

Ezee-On reserves the right to make improvements in the design of products and/ or changes in specifications at any time, without incurring any obligation to owners of units previously sold. No one other than Ezee-On Manufacturing is authorized to alter, modify or enlarge this warranty.

Genuine Ezee-On replacement parts and components will be warranted for 90 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer.

Under no circumstances will this warranty cover any merchandise or components thereof, which, in the opinion of the Company, has been subjected to misuse, unauthorized modifications, alteration, an accident or if repairs have been made with parts other than those obtainable through Ezee-On Manufacturing.

Commercial Use: Warranty for commercial, rental or custom use of any Ezee-On product is limited to 90 days, parts and labor.

Twelve Months Warranty:

All Ezee-On manufactured products are warranted for twelve consecutive months from the date of delivery of the new Ezee-On product to the original non-commercial purchaser.

- 1-12 Months: 100% parts and labor coverage

Extended Coverage Limited Warranty (24 additional months):

Air Drills, Coulter Drills, Air Carts, Cultivators, Chisel Plows, Offset and Tandem Discs and Post Drivers carry limited extended warranty. Ezee-On Manufacturing's obligations under this extended warranty coverage shall be limited to repair or exchange, at Ezee-On Manufacturing's option, for the original, non-commercial owner:

- 13-24 Months: 100% Ezee-On manufactured components only, NO labour – see below for description
- 25-36 Months: 50% Ezee-On manufactured components only, NO labour – see below for description

Ezee-On manufactured components are, but not limited to: frames, axles, hitches, castor assemblies, packers, turnbuckles, rockshafts, packer frames, packers – steel, tanks – air cart seed and fertilizer tanks, seed cups, metering rollers.

NON Ezee-On manufactured components are, but not limited to: Monitors, tires, rims, bearings, hydraulics: motors, pumps, controls, cylinders, hoses and valves; sprockets, chain, rubber packer wheel tires, polyurethane wheel mounted packers, coulter blades, shanks, springs, bolts, pulleys, air hoses, sweeps, spikes, spoons, seals, power wheels, hitch jacks, hubs and wheels.

The Company in no way warrants engines, batteries, coulter assemblies, rubber tires, or other trade accessories since these items are warranted separately by their respective manufacturers.

T2-215 Bearing Extended Coverage Limited Warranty:

Seven year limited warranty: Extended coverage (13-84 months) on T2-215 Series bearing is limited to the replacement of ball bearings and seals for the original, non-commercial owner. Associated bearing parts, labor, freight, etc., are not covered.

Warranty Limitations and/ or Exclusions:

1. Buckets & bucket tines, bale spears & tines, grapple tines, pallet forks, shanks, all ground engaging tools, disc openers and disc blades, air seeder hose and normal wear parts/ items carry NO warranty.
2. There is no warranty coverage if parts or attachments, other than those made or marketed by Ezee-On Manufacturing have been used in connection with the unit, and in the sole judgment of Ezee-On, such use affects its performance or reliability.
3. If the equipment has been altered or repaired in a manner which, in the sole judgment of Ezee-On, affects its performance, stability or reliability.
4. The purchaser shall be responsible for dealer travel time to the machine or to deliver the machine to the dealer's service shop for repair. Ezee-On Manufacturing does not cover delivery charges or travel time.

This warranty policy is subject to change without prior written notice at Ezee-On Manufacturing's sole discretion.

Revision: September 1, 2004

EZEE-ON MANUFACTURING

Warranty Registration Form

NOTE: Warranty reimbursement is contingent upon product registration. Please complete this form and forward by mail or fax to the address above.

OWNER'S NAME: _____

ADDRESS: _____

CITY: _____ STATE/ PROVINCE: _____

POSTAL/ ZIP CODE: _____

PHONE #: _____

EMAIL Address: _____

Model Purchased: _____

Serial Number: _____

Dealer's Name: _____

Dealer's Location: _____

I/ We acknowledge receipt of the Owner's manual for the above specified implement and acknowledge that the Owner's Manual contains the Limited Warranty Statement governing the implement purchased and also contains information vital to the proper and safe operation of this equipment.

Owner's Signature(s)

Date Signed

INTRODUCTION

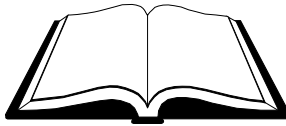
THANK YOU for choosing to purchase this Ezee-On implement, we are confident you will be impressed with its performance.

In addition to the traditional values of simplicity, reliability and durability, your new EZEE-ON implement incorporates a number of operational and safety features. We urge you to familiarize yourself with the maintenance and operation of your implement by reading this Manual thoroughly and completely. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL contains important information regarding assembly, maintenance, operating instructions, and troubleshooting problems, and should be considered a permanent part of your implement.

Remember that it is the responsibility of the Operator to ensure that the implement is field ready, prior to first operation. However, should you encounter a problem, please contact your dealer immediately.

READ THIS MANUAL CAREFULLY TO ENSURE THAT YOUR NEW IMPLEMENT IS ASSEMBLED AND ADJUSTED CORRECTLY PRIOR TO FIRST OPERATION.



RIGHT and LEFT is determined by standing behind the machine and facing FORWARD, in the direction of travel.



This symbol is used to identify safety messages. When you see this symbol, read the safety message carefully.

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EZEE-ON MANUFACTURING RESERVES THE RIGHT to make improvements in design and changes in specifications at any time without notice and without incurring any obligation to install them on units previously sold. Specifications, descriptions, and illustrative material herein are as accurate as known at time of publication, but are subject to change without notice.

SPECIFICATIONS

Minimum Tractor Weight – 3000 lbs (1360 Kgs)
Hammer Face 9" x 12 – 1/2"
Maximum Hammer Height – 112"
3 Point Hitch Type – Category I and II

HYDRAULICS

Hammer Cylinder- 1 5/8" x 64" Stroke
Hammer Tilt Cylinder- 2" x 8" Stroke
Hammer Swivel Cylinder- 2" x 8" Stroke
Hydraulic Oil Reservoir- 2.1 Imperial Gallons
Hydraulic Pump- 4.5 U.S. Gal/Min @ 540 r.p.m

SAFETY RECOMMENDATIONS



Watch for this symbol. It identifies important safety messages. When you see this symbol, read the safety message carefully.

GENERAL SAFETY

1. Do not mount post driver on tractors weighing less than 3000 lbs (1360 Kgs). Operating or transporting post driver mounted on a tractor weighing less than 3000 lbs (1360 Kgs) could result in tractor roll over causing serious injury or death to operator and person(s) nearby.
2. Never mount post driver on tractors without ROPS protection.
3. Only one person, the operator, should be allowed to operate the post driver.
4. Never ride or permit others to ride, on the drawbar of the tractor or on the post driver.
5. Never allow anyone, other than the operator, on the tractor when operating or transporting the post driver.
6. Follow all safety precautions in your tractor manual.
7. Keep a first aid kit in the tractor at all times.



ASSEMBLY SAFETY

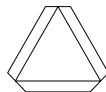
1. Use an aligning punch to line up holes. Keep fingers out of these holes. Any sudden movement of heavy components will severely injure or sever your fingers.
2. Use a hoist or adequate manpower to lift the heavy components into place. Use adequate jacks or support materials. Attempting to lift heavy components by yourself could cause serious injury.
3. Be sure all bolts and hydraulic fittings are tight, and all cotter pins are installed in pins.
4. Before applying pressure to hydraulic system, be sure all connections are tight and components are not damaged.
5. 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.
6. 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.
7. Operator should always observe the movement of hammer and mast assembly when raising and folding post driver for transport. If upper link of 3-point hitch was adjusted too short, and/or the upper limit of the 3-point hitch is set to high, the hammer and mast assembly could strike operator or rear of tractor causing serious injury or death to operator or serious damage to tractor.
8. Before connecting (or disconnecting) hydraulic pump to (or from) tractor P.T.O. shaft, disengage P.T.O. and shut off tractor engine. Serious injury or death may occur if P.T.O. was accidentally engaged while connecting or disconnecting pump.
9. If the torque arm chain of P.T.O. pump is not properly secured, severe damage to the pump and hydraulic circuitry could occur.
10. Always stay clear of P.T.O. when it is engaged. Serious injury or death will result if clothing, hair or limbs were caught in P.T.O. shaft.
11. Always ensure tractor's P.T.O. safety shield is installed.
12. Be sure all hammer tilt cylinder pins are properly installed and secured with retainers. Serious injury or death may occur to operator or person(s) nearby if cylinder pin(s) fell out and hammer fell.

OPERATING SAFETY

1. Never allow anyone near the post driver when you are performing operating functions.
2. When tilting, raising or lowering the hammer, keep all persons away from the post driver.
3. Wear safety glasses and hand wear to protect against splinters.
4. Make certain everyone is clear before operating or moving the post driver.
5. 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.
6. Contact local utility companies for underground services before installing posts.
7. Never place your hand on top of the post at any time during operation. Serious injury may occur.
8. 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.
9. Know the functions of each operating lever of hydraulic controls before proceeding with operations. Never use the valve to stop the hammer except in extreme emergency. The resulting extreme hydraulic pressure may seriously damage hydraulic system.
10. 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.
11. If the torque arm chain of PTO pump is not properly secured, severe damage to the pump and hydraulic circuitry could occur.
12. Always stay clear of P.T.O. drive shaft when it is in operation. Serious injury or death will result if clothing, hair or limbs are caught in these drive shafts.
13. Before connecting (or disconnecting) hydraulic pump to (or from) tractor's P.T.O. shaft, disengage P.T.O. and shut off tractor engine. Serious injury or death may occur if P.T.O. was accidentally engaged while connecting or disconnecting pump.
14. Always ensure tractor's P.T.O. safety shield is installed.
15. To avoid serious injury or death, use discretion when adding ballast to hammer as both tractor and post driver may become unstable during either operation or transporting unit. (It is not recommended to add ballast to hammer).
16. 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.
17. Never allow another person to hold the post when post driver is being operated. Serious injury or death will result if a person is struck by a falling or tilting hammer.
18. Always lower post driver stand to ground 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.
19. Operator should always observe the movement of hammer and mast assembly when raising and folding post driver for transport. If upper link of 3-point hitch was adjusted too short and/or the upper limit of the 3-point hitch is set too high, the hammer and mast assembly could strike operator in tractor seat or rear of tractor causing serious injury or death to operator or serious damage to tractor.
20. Incorrect adjustment of upper link and wrong hole selection when pinning upper link to tractor may cause post driver to interfere with rear of tractor cab or strike operator resulting in serious injury to operator and serious damage to tractor.
21. Always use extra care when operating post driver with optional mast extension installed. The extra height of the hammer may cause tractor and post driver to become unstable.
22. Use extra care when operating post driver in uneven terrain. Tractor and post driver may become unstable and roll over causing serious injury or death.

TRANSPORT SAFETY

1. Reduce speed when transporting post driver over uneven or rough terrain.
2. Shift the tractor into a lower gear when transporting post driver down hills or steep slopes.
3. Be sure SMV (slow moving vehicle) emblem is clean and visible before transporting post driver. The SMV emblem warns other vehicles approaching from rear.



4. Always comply with all State, Provincial, Federal and local laws when transporting post driver on roadways.
5. Retract hammer cylinder and upper tilt cylinder before transporting post driver.
6. 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.

MAINTENANCE

1. 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.
2. 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.
3. 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.
4. If spray-can paint is used, be careful when discarding empty cans. Do not incinerate or puncture can.
5. Do not permit smoking, sparks, or open flame where combustible lubricants or liquids are being used.
6. Replace any worn or damaged hydraulic hoses and keep all hydraulic hoses and hydraulic fittings tight.
7. Shut off all power and lock tractor brakes before adjusting, servicing or cleaning the post driver.
8. Do not lubricate or adjust post driver when it is being operated or while it is in motion.
9. Always retract all cylinders, shut off tractor engine, disengage P.T.O. and lock tractor brakes before lubricating post driver.
10. Replace any safety decals that are damaged or are illegible.

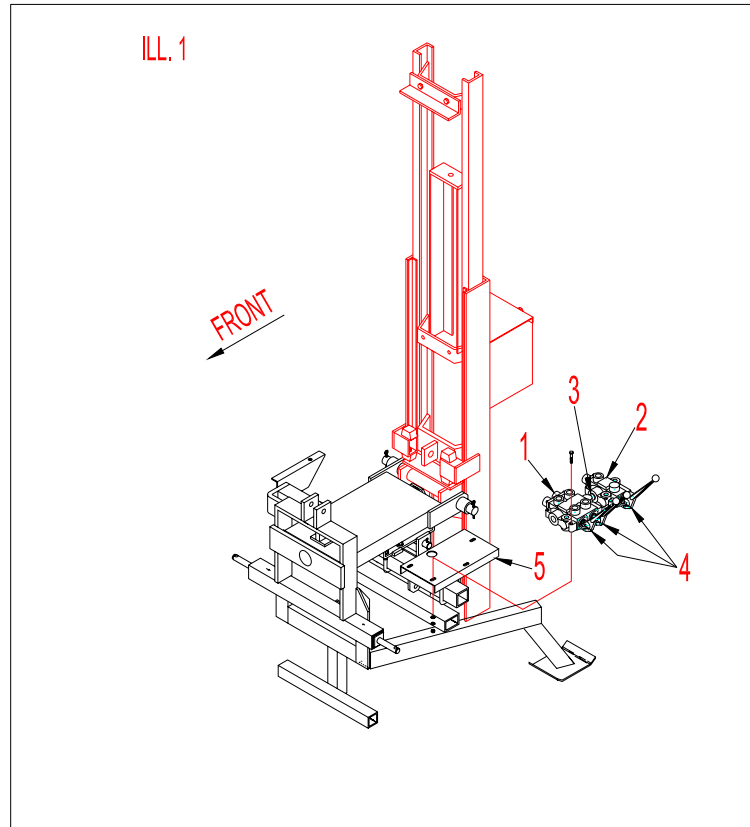
STORAGE SAFETY

1. Do not store the post driver with the hammer raised. If hammer fell person(s) nearby could be seriously injured.
2. Always close both tilt cylinders when storing post driver.

NOTE: *An accident is usually caused by someone's carelessness, neglect, or oversight. Remember, safety comes first.*

**AN ACCIDENT NOT ONLY HURTS,
BUT ALSO COSTS YOU VALUABLE LOST TIME.**

ASSEMBLY INSTRUCTIONS

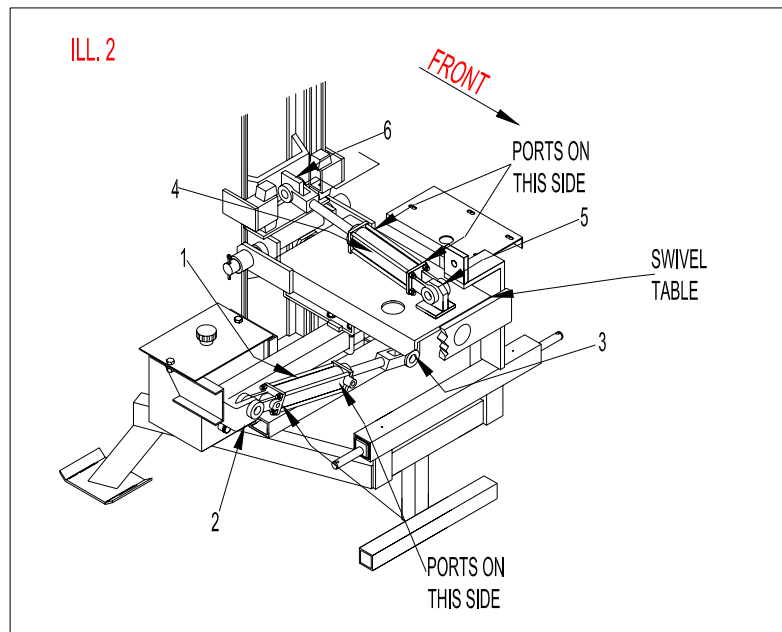


CAUTION: USE A HOIST OR ADEQUATE MANPOWER TO LIFT HEAVY COMPONENTS IN PLACE. ATTEMPTING TO LIFT HEAVY COMPONENTS BY YOURSELF COULD CAUSE SERIOUS INJURY.

1. See ILL. 1. Join 2 spool valve, arrow 1, and single spool valve, arrow 2, with one (1) 3/4" N.P.T. x 2" nipple, arrow 3. Next, fasten three (3) control levers, arrow 4, to the two valves. Attach handles so they point up. Fasten valve assembly to top of valve bracket, arrow 5, with four (4) 3/8" x 2" N.C. hex bolts c/w nuts, lockwashers and flatwasher. Place flatwashers on bottom of valve mount plate. Tighten bolts.

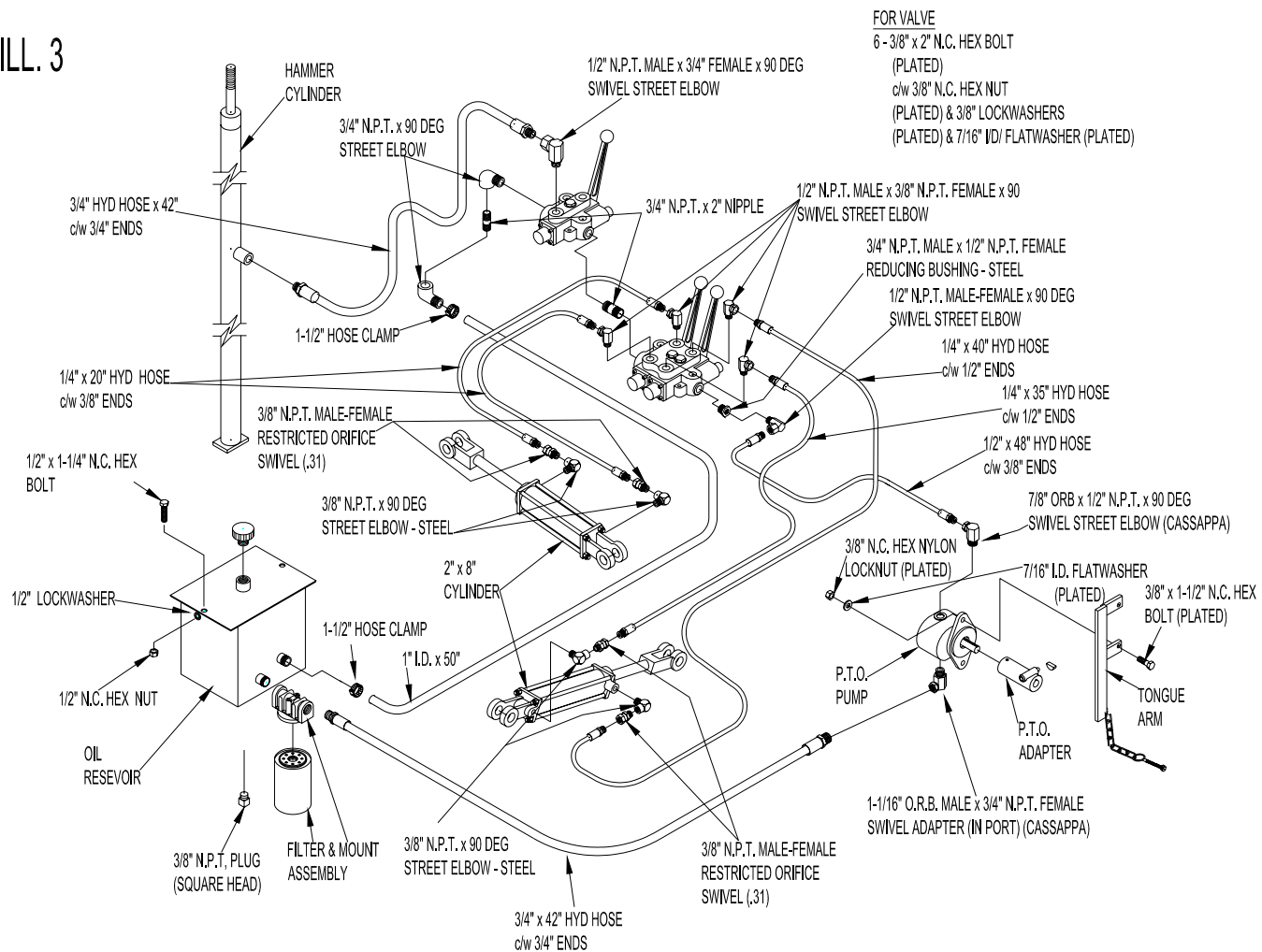


CAUTION: WHEN ASSEMBLING POST DRIVER, USE ALIGNING PUNCH TO LINE UP HOLES. KEEP FINGERS OUT OF HOLES. ANY SUDDEN MOVEMENT OF HEAVY COMPONENTS WILL SEVERELY INJURE OR SEVER YOUR FINGERS.



2. See ILL. 2. Fasten barrel end of a 2" x 8" cylinder, arrow 1, to cylinder lug, arrow 2, of hydraulic support bar. Position so ports are facing away from hammer. Fasten shaft end of same cylinder to lug, arrow 3, under swivel table. Fasten barrel end of the other 2" x 8" cylinder, arrow 4, to cylinder lug, arrow 5, on swivel table. Position so ports are facing hydraulic valves. Fasten shaft end of cylinder to lug, arrow 6, on hammer. Secure each cylinder with two (2) cylinder pins. Secure each cylinder pin with two (2) clips.

ILL. 3



3. Attaching hydraulic hose and fittings. See ILL. 3 on page 5.

IMPORTANT: 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.

IMPORTANT: CLEANLINESS IS ABSOLUTELY NECESSARY TO PREVENT CONTAMINATION WHEN HOOKING UP THE HYDRAULIC SYSTEM COMPONENTS. HANDLE FITTINGS CAREFULLY.

- h) Attach hoses and fittings to hydraulic pump, filter, valves, cylinders and oil reservoir as shown in ILL. 3.

IMPORTANT: BE SURE THE 3/8" MALE - FEMALE SWIVEL ADAPTORS WITH RESTRICTED ORIFICE, (PAINTED BLACK), ARE INSTALLED IN THE 2" x 8" HAMMER TILT CYLINDER AND IN THE 2" x 8" HAMMER SWIVEL CYLINDER. TWO FITTINGS ARE REQUIRED PER CYLINDER.

- i) Fasten torque arm assembly to pump with two (2) 3/8" x 1-1/2" N.C. hex bolts c/w nuts and lockwashers. Fasten as shown in ILL. 3.

- j) Install 3/16" key in pump shaft, then slide P.T.O. adapter over shaft. Secure by tightening set screw. See ILL. 3.

- k) **IMPORTANT NOTE:** WHEN THE POST DRIVER HAS BEEN IDLE FOR A PERIOD OF TIME, THE HAMMER TILT CYLINDERS MAY CREEP CAUSING A VOID IN THE CYLINDERS. 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.



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 IF INJURED.



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.



CAUTION: DO NOT MOUNT POST DRIVER ON TRACTOR WEIGHING LESS THAN 3000 LBS (1360 KGS). OPERATING OR TRANSPORTING POST DRIVER MOUNTED ON A TRACTOR WEIGHING LESS THAN 3000 LBS (1360 KGS) COULD RESULT IN TRACTOR ROLL OVER CAUSING SERIOUS INJURY OR DEATH TO OPERATOR OR PERSON(S) NEARBY.

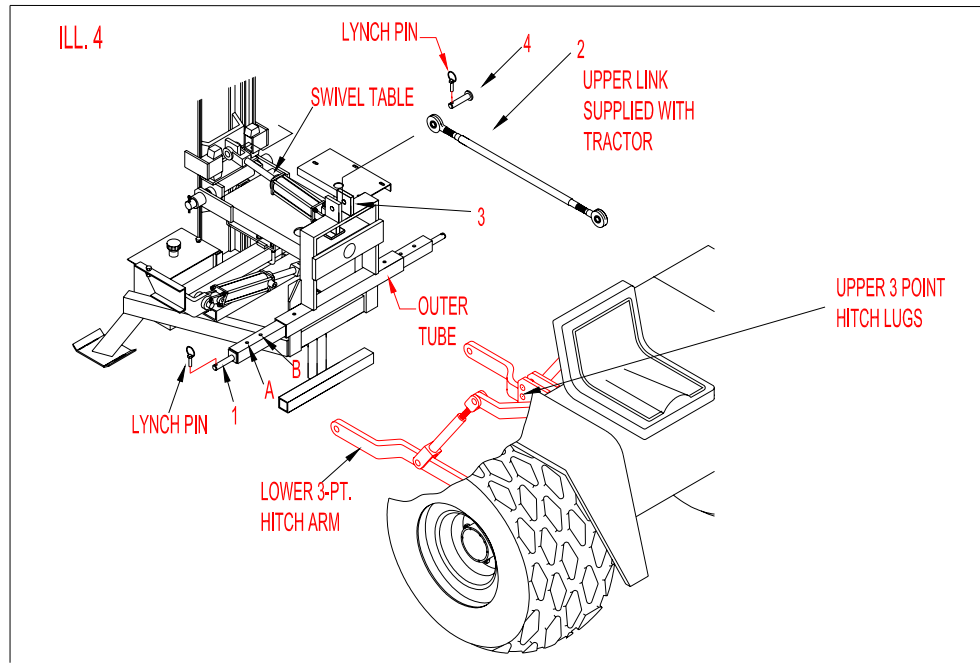


CAUTION: NEVER MOUNT POST DRIVER ON TRACTOR WITHOUT ROPS PROTECTION.

- A) Category I, see ILL. 4. Move both hitch inner tubes, arrow 1, IN so hole "A" aligns with hole in outer tube. Install a 1/2" x 3" bolt in hole, secure bolt with 1/2" locknut. Place each lower arm of 3 point hitch over draw pin, arrow 1. Secure with lock pin supplied with tractor's 3 point hitch.

NOTE: For Category II hitches install 1-1/8" O.D. x 1-3/4" bushings over draw pins.

Category II, see ILL. 4. Move both inner hitch tubes, arrow 1, OUT so hole "B" aligns with hole in outer tube. Install a 1/2" x 3-1/2" bolt in hole, secure bolt with 1/2" locknut. Place each lower arm of 3 point hitch over draw pin, arrow 1. Secure with lynch pins.



IMPORTANT: USE EXTREME CAUTION WHEN SHORTENING UPPER LINK, ARROW 2, (SEE ILL. 8). TURNING LINK IN TOO MUCH MAY CAUSE HAMMER TO INTERFERE WITH REAR OF TRACTOR WHEN POST DRIVER IS RAISED WITH HAMMER FOLDED. THIS MAY CAUSE SERIOUS DAMAGE TO TRACTOR AND SERIOUS INJURY TO TRACTOR OPERATOR.

- B) CONNECTING UPPER LINK — See ILL. 4. Pin upper link, arrow 2, (supplied with tractor) to upper lugs of tractors' three point hitch. Select hole (if more than one set of holes are available) which gives the most desirable post driver position when raised for transport. Selecting incorrect hole in upper 3 point hitch lug of tractor may cause hammer and mast to interfere with rear of tractor or **strike tractor's operator causing serious injury to operator and damage to tractor.** Use pin supplied with tractor. Install opposite end of upper link, arrow 2, between upper lugs, arrow 3, of post driver frame. Fasten with pin, arrow 4. Then secure pin with lynch pin.

NOTE: For Category II hitch install 1" O.D. x 1-15/16" bushing in upper of link, arrow 2.



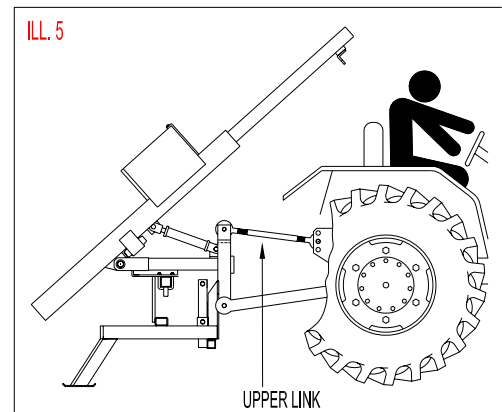
CAUTION: INCORRECT ADJUSTMENT OF UPPER LINK AND WRONG HOLE SELECTION WHEN PINNING UPPER LINK TO TRACTOR MAY CAUSE POST DRIVER TO INTERFERE WITH REAR OF TRACTOR CAB OR STRIKE TRACTOR OPERATOR RESULTING IN SERIOUS INJURY TO OPERATOR AND SERIOUS DAMAGE TO TRACTOR.

- c) **ADJUSTING LIMITS OF THREE POINT HITCH** – To allow safe operation of post driver the upper and lower limits of 3 point hitch must be set as follows:
- Set lower limit so post driver legs rest on the ground. Upper link may have to be adjusted so all legs rest on the ground.
 - Set the upper limits so post driver has adequate ground clearance for transport. To set upper limit, first fold hammer into transport position then **slowly raise post driver** with 3 point hitch. Use extra care when activating 3 point hitch. Be sure 3 point hitch does not automatically rise to maximum height when activated. To start with, set upper limit at $\frac{1}{2}$ or less of maximum lift height, then adjust as required. Observe position, of hammer as post driver is being raised. When post driver reaches desired safe height, hammer should be well clear of operator in tractor seat and rear of tractor.

IMPORTANT: WHEN RAISING POST DRIVER (WITH 3 POINT HITCH) FOR THE FIRST TIME, RAISE UNIT SLOWLY. BE SURE NO BINDING OCCURS. ALSO ENSURE HAMMER MAST DOES NOT STRIKE REAR OF TRACTOR OR STRIKE TRACTOR'S OPERATOR WHEN HAMMER IS FOLDED FOR TRANSPORT.



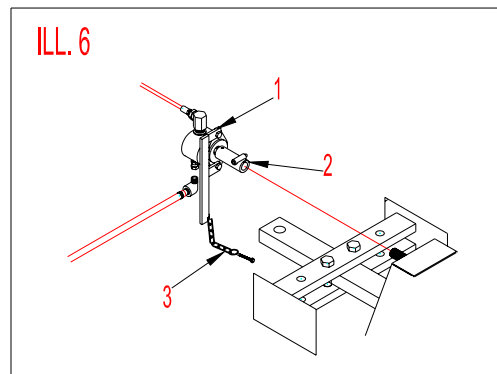
DANGER: OPERATOR SHOULD ALWAYS OBSERVE THE MOVEMENT OF HAMMER AND MAST ASSEMBLY WHEN RAISING AND FOLDING POST DRIVER FOR TRANSPORT. IF UPPER LINK OF 3-POINT HITCH WAS ADJUSTED TOO SHORT AND/OR THE UPPER LIMIT OF THE 3-POINT HITCH IS SET TOO HIGH, THE HAMMER AND MAST ASSEMBLY COULD STRIKE OPERATOR IN TRACTOR SEAT OR REAR OF TRACTOR CAUSING SERIOUS INJURY OR DEATH TO OPERATOR OR SERIOUS DAMAGE TO TRACTOR. SEE ILL. 5.



WARNING: ALWAYS ENSURE TRACTOR'S P.T.O. SAFETY SHIELD IS INSTALLED.

D) Attaching P.T.O. pump. See ILL. 6.

- d1) With torque arm, arrow 1, on left hand side, slide the spline adapter of pump, arrow 2, onto the tractor P.T.O. shaft.
- d2) Place I-Bolt of torque arm chain, arrow 3, through a convenient hole in drawbar. Secure with flatwasher and locknut.



DANGER: BEFORE CONNECTING (OR DISCONNECTING) HYDRAULIC PUMP TO (OR FROM) TRACTOR P.T.O. SHAFT, DISENGAGE P.T.O. AND SHUT OFF TRACTOR ENGINE. SERIOUS INJURY OR DEATH MAY OCCUR IF P.T.O. WAS ACCIDENTLY ENGAGED WHILE CONNECTING OR DISCONNECTING PUMP.



CAUTION: IF THE TORQUE ARM CHAIN OF P.T.O PUMP IS NOT PROPERLY SECURED, SEVERE DAMAGE TO THE PUMP AND HYDRAULIC CIRCUITRY COULD OCCUR. (THIS IS NOT A WARRANTABLE FAILURE).



DANGER: ALWAYS STAY CLEAR OF P.T.O. WHEN IT IS ENGAGED. SERIOUS INJURY OR DEATH WILL RESULT IF CLOTHING, HAIR OR LIMBS ARE CAUGHT IN P.T.O. DRIVE SHAFT.

5. Filling Hydraulic System.

- a) Fill oil reservoir with hydraulic oil, use Esso Hydro 56 or a grade of hydraulic oil that is approved for tractor hydraulic systems.
- b) Engage P.T.O. to start pump. Using hydraulic valve control levers, see section 1 of Operating Instructions, 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 one inch from top of tank. (Oil reservoir is shown in ILL. 3 on page 6).

IMPORTANT: BEFORE APPLYING PRESSURE TO HYDRAULIC SYSTEM, BE SURE ALL CONNECTIONS ARE TIGHT AND COMPONENTS ARE NOT DAMAGED.



CAUTION: BE SURE ALL BOLTS AND HYDRAULIC FITTINGS ARE TIGHT, AND ALL COTTER PINS ARE INSTALLED IN PINS. UNIT COULD BE DAMAGED IF ANY COMPONENT CAME LOOSE.



CAUTION: BE SURE ALL HAMMER TILT CYLINDER PINS ARE PROPERLY INSTALLED AND SECURED WITH RETAINERS. SERIOUS INJURY OR DEATH MAY OCCUR TO OPERATOR OR PERSON(S) NEARBY IF CYLINDER PINS(S) FELL OUT AND HAMMER FELL

OPERATING INSTRUCTIONS

1. PREPARING POST DRIVER FOR OPERATION

- a) To mount post driver to tractors' 3 point hitch, refer to subsections AA≅ to "D" of section 4 on pages 8 to 10.

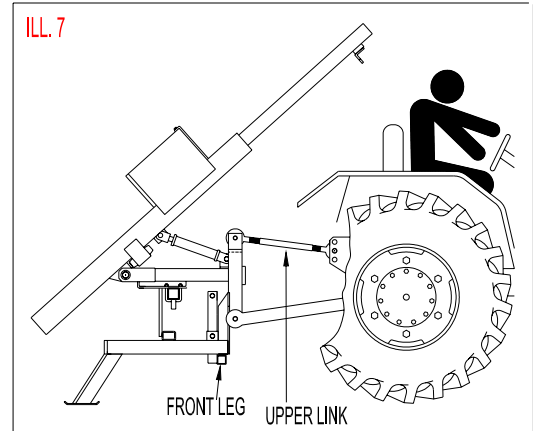


CAUTION: DO NOT MOUNT POST DRIVER ON TRACTOR WEIGHING LESS THAN 3000 LBS (1360 KGS) AND TRACTOR NOT EQUIPPED WITH ROPS PROTECTION.

- b) Check if upper link of 3 point hitch is adjusted properly for tractor. Refer to paragraph "C" of section 10 on page 9.



DANGER: OPERATOR SHOULD ALWAYS OBSERVE THE MOVEMENT OF HAMMER AND MAST ASSEMBLY WHEN RAISING AND FOLDING POST DRIVER FOR TRANSPORT. IF UPPER LINK OF 3-POINT HITCH WAS ADJUSTED TOO SHORT AND/OR THE UPPER LIMIT OF THE 3-POINT HITCH IS SET TOO HIGH, THE HAMMER AND MAST ASSEMBLY COULD STRIKE OPERATOR OR REAR OF TRACTOR CAUSING SERIOUS INJURY OR DEATH TO OPERATOR OR SERIOUS DAMAGE TO TRACTOR. SEE ILL. 7.

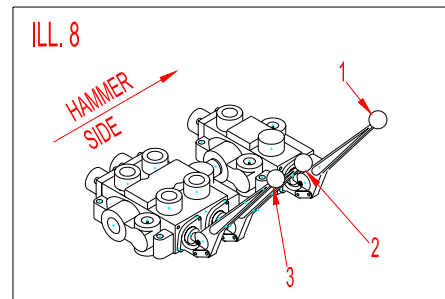


- c) Check the oil level in oil reservoir. The level should be 1 inch from top of reservoir. If filling is required, use ESSO Hydro 56 a grade of hydraulic oil that is approved for tractor hydraulic systems.
- d) Check that the rubber bumpers on upper and lower hammer stops are in place and in good condition.
- e) Ensure both sides of hammer slide are greased before activating controls.
- f) Check all bolts and hydraulic fittings for tightness.
- g) Be sure all pins are properly secured with cotter pins, especially the three point hitch pins.

2. OPERATION OF HYDRAULIC CONTROLS - See ILL. 8.

The three control levers operate post driver as follows:

- 1) Lever, arrow 1, raises and lowers hammer.
- 2) Lever, arrow 2, tilts hammer IN and OUT.
- 3) Lever, arrow 3, rotates hammer towards the left or right when viewing from rear of tractor.



3. SEE ILL. 10. Before operating post driver raise front leg of stand assembly and lock in raised position with pin.



CAUTION: KNOW THE FUNCTIONS OF EACH HYDRAULIC LEVER BEFORE PROCEEDING WITH OPERATIONS.



CAUTION: WHEN TILTING, RAISING OR LOWERING THE HAMMER, KEEP ALL PERSONS AWAY FROM POST DRIVER.



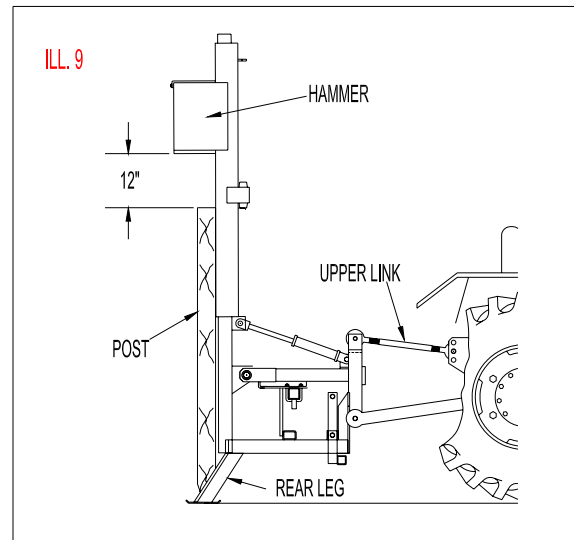
WARNING: FLUID ESCAPING FROM A VERY SMALL HOLE CAN BE ALMOST INVISIBLE. USE A PIECE OF CARDBOARD OR WOOD, RATHER THAN HANDS, TO SEARCH FOR SUSPECTED LEAKS. IF INJURED BY ESCAPED FLUID, SEE A DOCTOR AT ONCE. SERIOUS INFECTION OR REACTION CAN DEVELOP IF PROPER MEDICAL TREATMENT IS NOT ADMINISTERED IMMEDIATELY.

2. DRIVING POSTS - See ILL. 9.

- a) Before starting to drive posts, fully cycle both tilt cylinders. If 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 cylinders to deform seal. This seal deformation pushes the seal against the wall of the cylinder and piston block, giving an oil tight 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

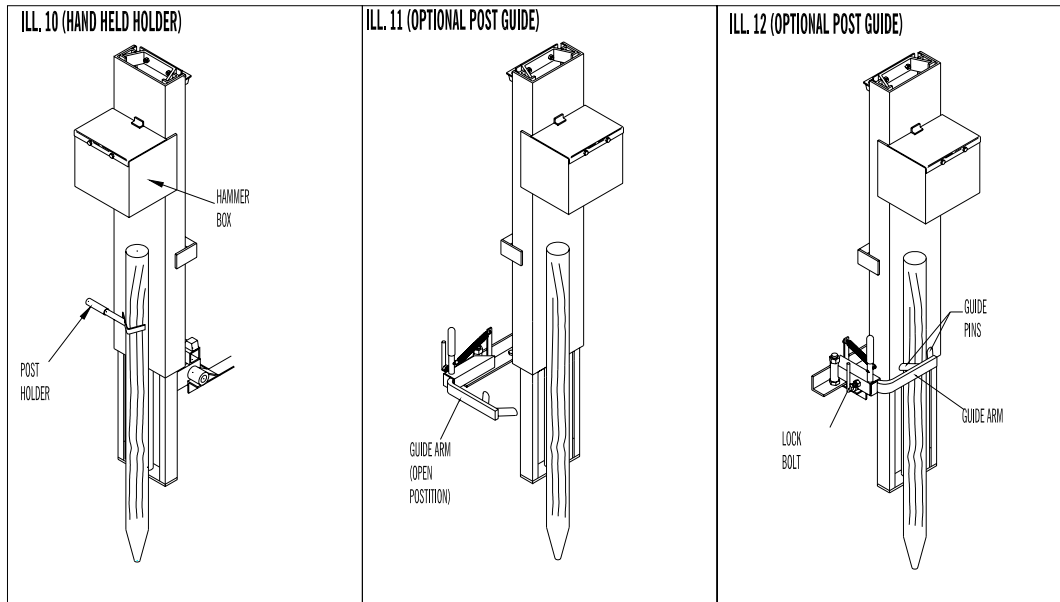


DANGER: ALWAYS STAY CLEAR OF P.T.O. SHAFT WHEN IN OPERATION. SERIOUS INJURY OR DEATH WILL RESULT IF CLOTHING, HAIR OR LIMBS ARE CAUGHT IN THESE DRIVE SHAFTS.

- b) Locate post driver with tractor where post is to be driven.
- c) Using 3 point hitch lower post driver so rear legs of stand rest on the ground.
- d) Turn on P.T.O. to start pump.
- e) Tilt and rotate hammer by operating valve levers, arrow 2, and 3, shown in ILL. 8 on page 11. These levers will locate hammer in desired working position. See Section 2 of OPERATING INSTRUCTIONS on page 11.
- f) Raise hammer approximately 12 inches above post as shown in ILL. 9.



CAUTION: MAKE CERTAIN EVERYONE IS CLEAR BEFORE OPERATING OR MOVING THE POST DRIVER.



DANGER: NEVER ALLOW 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.

G) HOLDING POST UNDER HAMMER - USE SUBSECTION f1 or f2.

g1) HAND HELD HOLDER - See ILL. 10. Position post under hammer. Using the hand held post holder, hold post against hammer. Start to drive post, see Paragraph h, i and j below.

g2) OPTIONAL POST GUIDE - SEE ILL. 11 and 12.

Step 1 - Place guide arm in open position and place post under hammer. ILL. 11 shows guide arm in open position.

Step 2 - See ILL. 12. Close Post Guide over post so guide pins hold post.

Step 3 - See ILL. 12 If necessary, loosen lock bolt and adjust guide arm A_{IN} or A_{OUT} so guide pins hold post securely. Tighten lock bolt.

Step 4 - Start to drive post. See Paragraphs h, i and j below.



CAUTION: ALWAYS USE HAND HELD POST HOLDER OR OPTIONAL POST GUIDE TO POSITION POSTS UNDER HAMMER WHEN DRIVING POSTS. USING HAND HELD POST HOLDER OR POST GUIDE MAY PREVENT INJURY TO HAND.

h) Push hammer valve lever, arrow 1 (ILL. 8 on Page 11), "IN" to drop hammer on post. Use 12" strokes to start driving post and increase stroke as required.

i) **IMPORTANT:** DO NOT USE TOO MUCH FORCE WHEN OPERATING HAMMER VALVE LEVER. HANDLE MOUNT BRACKETS WILL BE DAMAGED IF LEVER IS PUSHED TOO HARD TO DROP HAMMER.

j) **IMPORTANT:** IT IS **NOT** RECOMMENDED TO ADD BALLAST TO HAMMER BOX. THE ADDITIONAL WEIGHT MAY CAUSE POST DRIVER AND TRACTOR TO BECOME UNSTABLE.



DANGER: 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 HAMMER.





WARNING: ALWAYS ENSURE TRACTOR'S P.T.O. SAFETY SHIELD IS INSTALLED.



DANGER: CONTACT LOCAL UTILITY COMPANIES FOR UNDERGROUND SERVICES BEFORE INSTALLING POSTS.



DANGER: WHEN DRIVING POSTS, ALWAYS WATCH FOR OVERHEAD POWER LINES. IF POST DRIVER MAKES CONTACT WITH POWER LINES, OPERATOR OR THOSE NEARBY COULD BE SERIOUSLY INJURED OR KILLED.



DANGER: NEVER PLACE YOUR HAND ON TOP OF 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 MAY SERIOUSLY 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.



WARNING: TO AVOID SERIOUS INJURY OR DEATH. USE DISCRETION WHEN ADDING BALLAST TO HAMMER AS BOTH TRACTOR AND POST DRIVER MAY BECOME UNSTABLE DURING EITHER OPERATION OR TRANSPORTING UNIT.



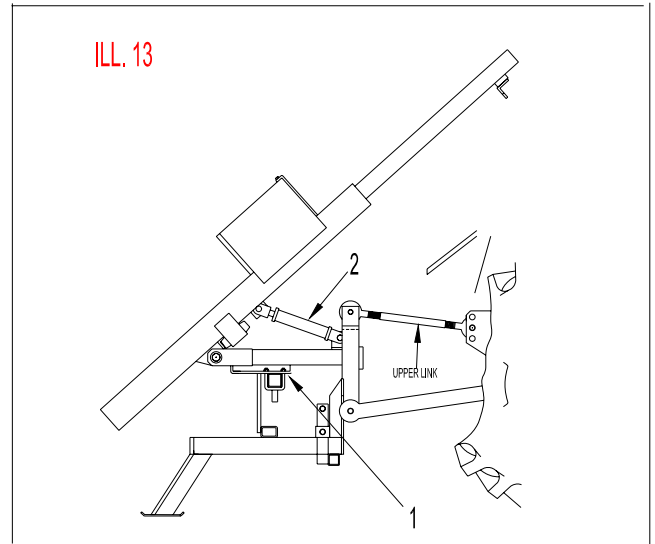
DANGER: ALWAYS LOWER POST DRIVER STAND TO GROUND, LOWER HAMMER AND SHUT OFF POWER WHEN POST DRIVER IS LEFT UNATTENDED OR IS NOT IN OPERATION. SERIOUS INJURY OR DEATH MAY RESULT IF HAMMER FELL UNEXPECTEDLY AND STRUCK PERSON(S) NEARBY.

4. To transport post driver, proceed as follows:
See ILL. 13.

- a) Lower hammer cylinder to bottom.
- b) Rotate hammer by activating lower cylinder, arrow 1, so top of hammer is in 12 o'clock position. (Viewed from rear of tractor).
- c) Tilt hammer in by contracting upper tilt cylinder, arrow 2.
- d) Now disengage P.T.O.



DANGER: OPERATOR SHOULD ALWAYS OBSERVE THE MOVEMENT OF HAMMER AND MAST ASSEMBLY WHEN RAISING AND FOLDING POST DRIVER FOR TRANSPORT. IF UPPER LINK OF 3-POINT HITCH WAS ADJUSTED TOO SHORT AND/OR THE UPPER LIMIT OF THE 3-POINT HITCH IS SET TOO HIGH, THE HAMMER AND MAST ASSEMBLY COULD STRIKE OPERATOR OR REAR OF TRACTOR CAUSING SERIOUS INJURY OR DEATH TO OPERATOR OR SERIOUS DAMAGE TO TRACTOR.



- e) Using 3 point hitch, raise Post Driver.



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: 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 HAMMER CYLINDER AND UPPER TILT CYLINDER BEFORE TRANSPORTING POST DRIVER.

5) MAST EXTENSION KIT (INSTALLATION) - Instructions to convert from **low** hammer to **high** hammer. (OPTIONAL)

IMPORTANT: TO PREVENT POST DRIVER FROM FALLING WHILE CONVERTING HAMMER, ATTACH POST DRIVER TO TRACTOR.

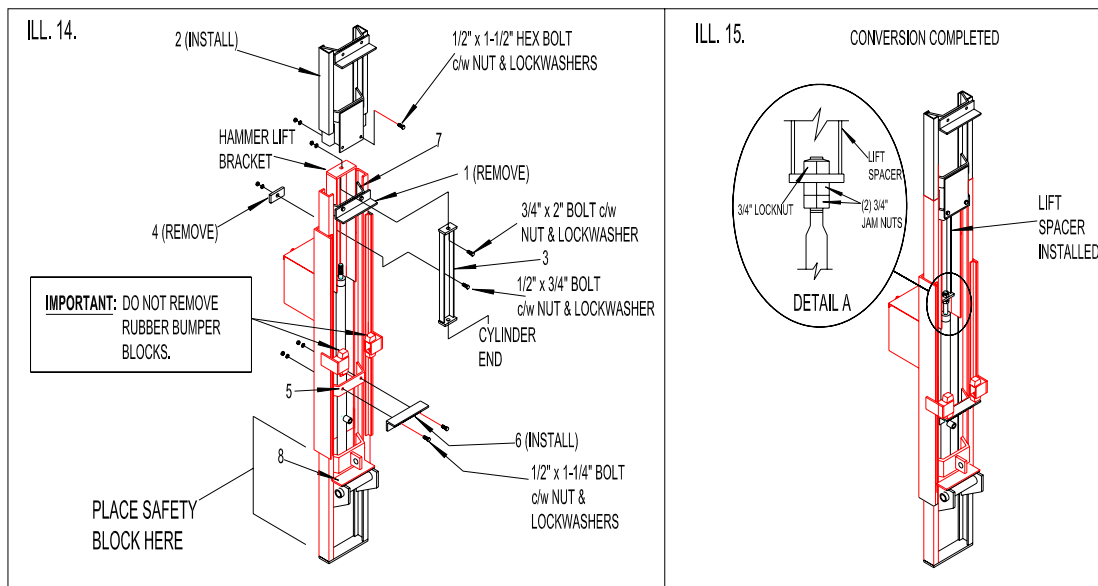
- a) See ILL. 14. With post driver mounted on tractor, position hammer so it is in a vertical position, then raise hammer so rubber bumpers are above bracket, arrow 5. Next, place a safety block between bottom of hammer and bottom of mast.



CAUTION: PLACE A BLOCK BETWEEN BOTTOM OF HAMMER AND BOTTOM OF MAST. IF HYDRAULIC SYSTEM FAILED OR IF HYDRAULIC LEVER WAS ACCIDENTLY 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" 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. 14. Insert mast extension, arrow 2, into top of mast. Secure to bracket, arrow 7, with (2) 1/2" x 1-1/2" 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. 14. Install lift spacer, arrow 3, inside the hammer lift bracket as shown. Fasten top of lift spacer with (1) 3/4" x 2" 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" bolt c/w nut and lockwasher. Locate backing plate, arrow 4, over front of hammer lift bracket.
- g) See ILL. 14. Next install hammer cylinder shaft in hole in bottom of lift spacer, arrow 3. Secure shaft with three (3) 3/4" nuts, one 3/4" locknut on top of lift spacer and two (2) 3/4" jam nuts at bottom of lift spacer. Turn locknut until 1/4" 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. 15, Detail "A".

IMPORTANT: BE SURE ALL BOLTS AND CYLINDER SHAFT NUTS ARE TIGHT BEFORE USING POST DRIVER.



CAUTION: ALWAYS USE EXTRA CARE WHEN OPERATING POST DRIVER WITH MAST EXTENSION INSTALLED. THE EXTRA HEIGHT THE HAMMER IS RAISED MAY CAUSE TRACTOR AND POST DRIVER TO BECOME UNSTABLE.

6) MAST EXTENSION KIT (REMOVAL) - Instructions to convert from **high** hammer to **low** hammer position. (OPTIONAL)

IMPORTANT: TO PREVENT POST DRIVER FROM FALLING WHILE CONVERTING HAMMER, ATTACH POST DRIVER TO TRACTOR.

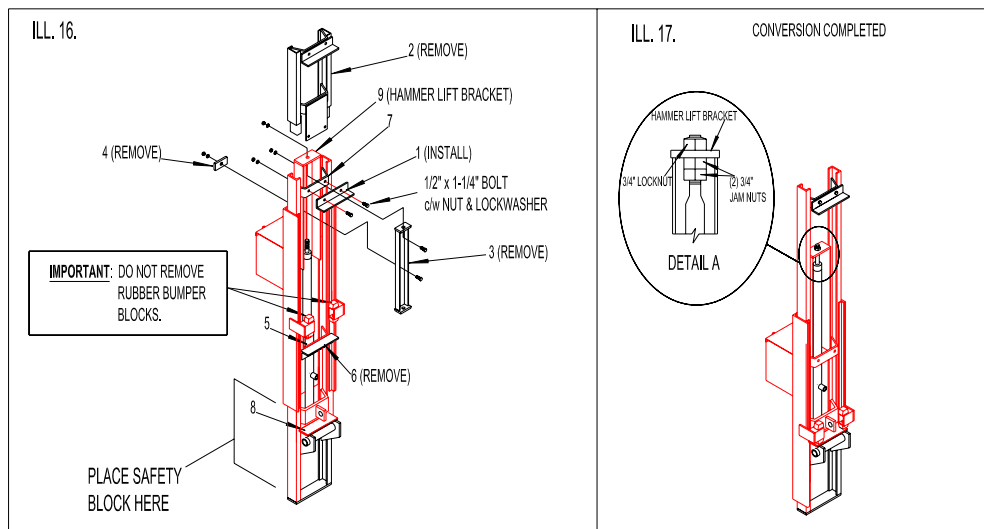
- a) See ILL. 16. With post driver mounted on tractor, position hammer so it is in a vertical position and lower hammer on to bumper stop, arrow 6.
- b) Remove mast extension, arrow 2, from top of mast.
- c) See ILL. 16. Remove nut from top of hammer cylinder and allow shaft to retract into cylinder.
- d) See ILL. 16. Remove lift spacer, arrow 3, front top of hammer.
- e) See ILL. 16. 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" nuts, one 3/4" locknut on top of bracket and two (2) 3/4" jam nuts at bottom of bracket. Turn locknut until 1/4" 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. 17, Detail "A".
- f) See ILL. 16. 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 ACCIDENTLY OPERATED, HAMMER COULD FALL CAUSING SERIOUS INJURY OR DEATH.

- g) See ILL. 16. 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. 16. Fasten hammer stop, arrow 1, to bracket, arrow 7, with two (2) 1/2" x 1-1/4" bolts c/w nuts and lockwashers. (This is the same bracket (arrow 6) that was removed earlier).

IMPORTANT: BE SURE ALL BOLTS AND CYLINDER SHAFT NUTS ARE TIGHT BEFORE USING POST DRIVER.



MAINTENANCE

1. Lubricate post driver as follows: - See ILL. 18.

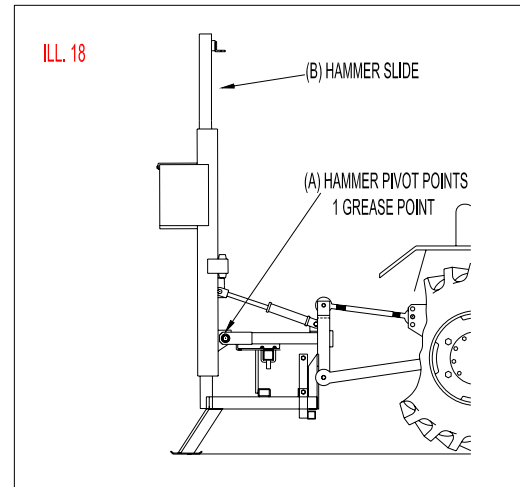
- a) Grease hammer pivots every 50 hours of operation.
- b) Raise hammer and grease both sides of hammer slide every 10 hours of operation.



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, DISENGAGE P.T.O., AND LOCK TRACTOR BRAKES BEFORE LUBRICATING POST DRIVER.



2. HYDRAULIC SYSTEMS

- a) Periodically check level of hydraulic oil in reservoir. Oil should be within 1" of the top of reservoir.
 - b) Change oil filter every 200 hours of operation.
3. Check for any loose bolts and tighten if required.
4. Be sure all pins have cotter pins or hair pin cotters installed, especially pins which secure post driver to tractor 3-point hitch.
5. Replace any safety decals that are damaged or are illegible.



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 TREATMENT 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 AND LOCK TRACTOR BRAKES BEFORE ADJUSTING, SERVICING OR CLEANING THE POST DRIVER.

IMPORTANT: REPLACE ANY SAFETY DECALS THAT ARE DAMAGED OR ARE ILLEGIBLE.

STORAGE

1. Be sure hammer is lowered to bottom position.
2. If post driver is removed from tractor for storage, perform the following procedures:
 - a) Find a level piece of ground.
 - b) Lower front leg of support stand, and lock in lower position with lock pins.
 - c) Using 3 Point hitch, lower post driver to the ground so it is resting on three legs of support stand.
 - d) Using post driver hydraulic controls, lower hammer and close tilt cylinders.
 - e) Shut off tractor engine and lock brakes.
 - f) Remove hydraulic pump from P.T.O.
 - g) Unpin post driver from 3 point hitch.
3. Clean and lubricate all grease points and hammer slide when storing post driver for extended period of time.
4. Inspect the post driver for any missing, worn, or damaged parts. Replace parts as required.
5. Check for any loose bolts and tighten if required.
6. Be sure all pins have cotter pins or hair pin cotters installed.
7. Apply a thin layer of grease to exposed cylinder shafts to prevent rusting when storing post driver for extended period of time.



DANGER: DO NOT STORE POST DRIVER WITH HAMMER IN RAISED POSITION. IF HAMMER FELL PERSON(S) NEARBY COULD BE SERIOUSLY INJURED.

BEGINNING OF SEASON SERVICE

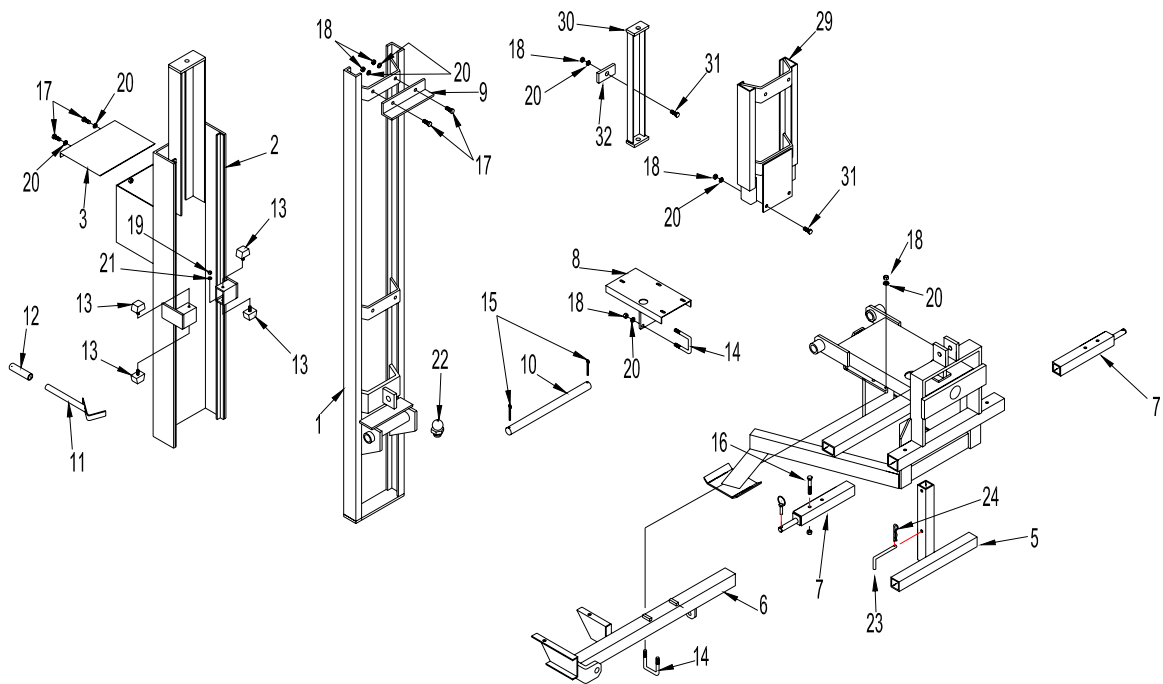
1. Clean off any dirt or grease that may have accumulated on moving parts. This will prevent abrasive action that could cause excessive wear.
2. Thoroughly inspect the post driver for any loose or missing parts and adjust as necessary. Replace any worn or damaged parts.
3. Replace any safety decals that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

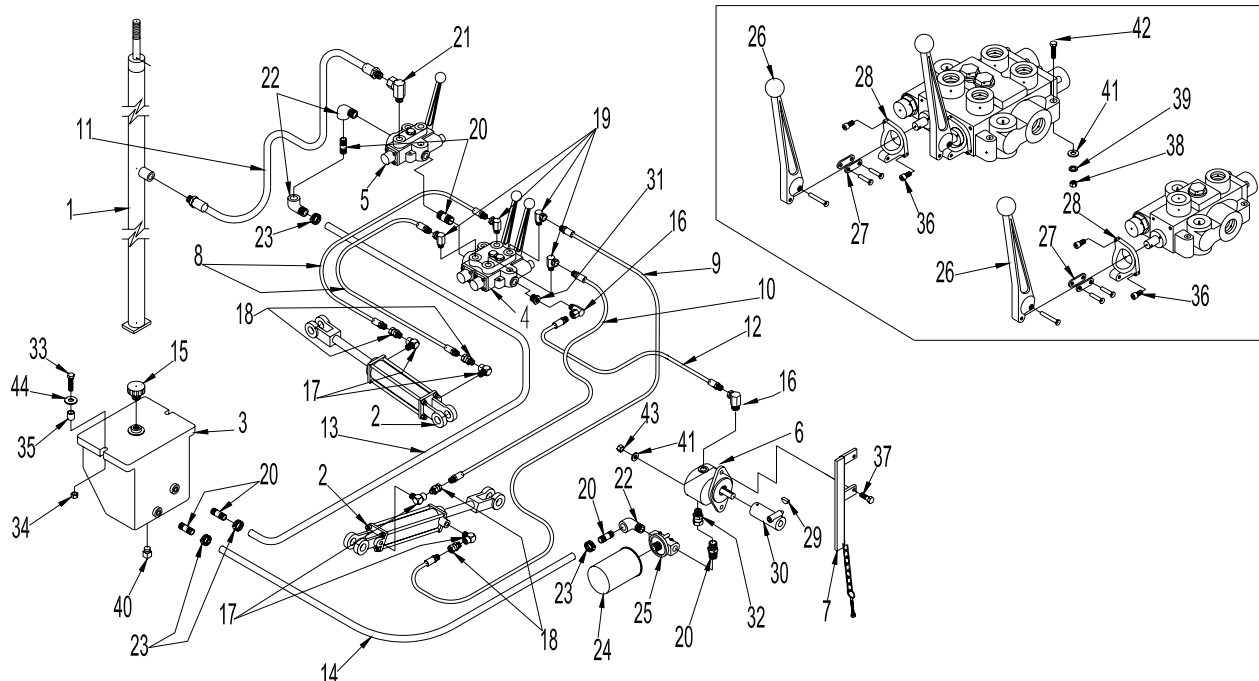
PARTS LIST INDEX
MODEL 1450 POST DRIVER

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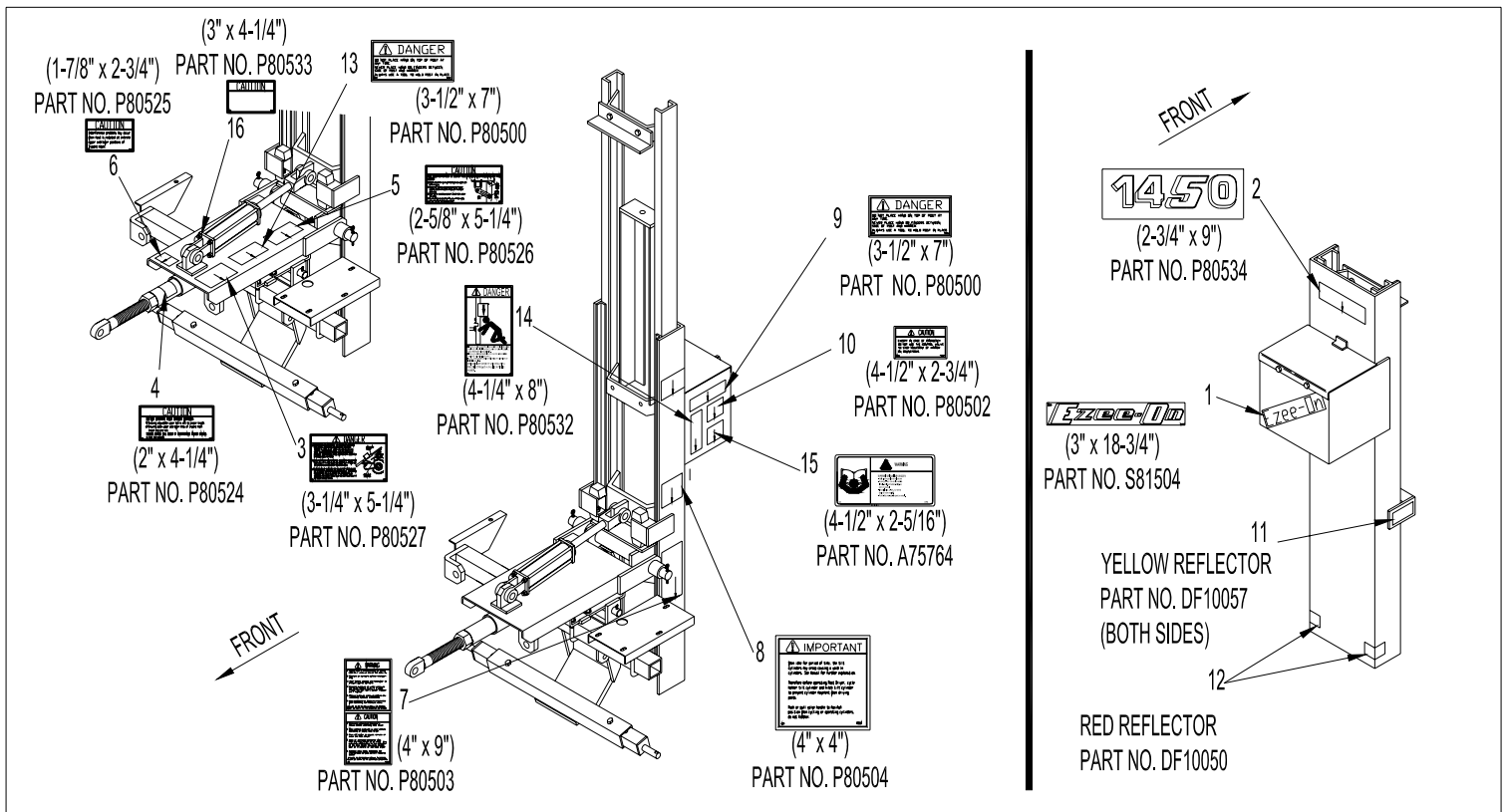
MODEL 1450 HAMMER AND MAST ASSEMBLY

Ref. No.	Part No.	Description	Qty. Req'd
1	P80761	Mast Assembly	1
2	P80762	Hammer Assembly	1
3	P80650	Hammer Lid	1
4	P80800	Stand and Table Assembly	1
5	P80799	Front Leg – Stand	1
6	P80754	Lower Cylinder Support	2
7	P80755	Inner Hitch Tube	1
8	P80756	Valve Plate Mount Bracket	1
9	P80757	Bumper Stop	1
10	PH80661	Pivot Pin (Mast)	1
11	P80601	Post Holder	1
12	P80602	Rubber Grip - Post Holder	1
13	PH80628	Rubber Stop Block	4
14	M80010	1/2" x 3-1/16" C-C x 3-9/16" U-Bolt	4
15	BP37200	3/8" x 2" Cotter Pin	2
16	B050035	1/2" x 3-1/2" N.C. Hex Bolt	2
17	B050012	1/2" x 1-1/4" N.C. Hex Bolt	4
18	BN050	1/2" N.C. Hex Nut	15
19	BN037	3/8" N.C. Hex Nut	4
20	BW050L	1/2" Lockwasher	15
21	BW037L	3/8" Lockwasher	4
22	10GN1	1/4 - 28 Grease Zirk	1
23		Lock Pin – Front Leg	1
24		Hair Pin - Cotter	1
25		Cat II Lowing Bushing	2
26		Cat II Upper Bushing	1



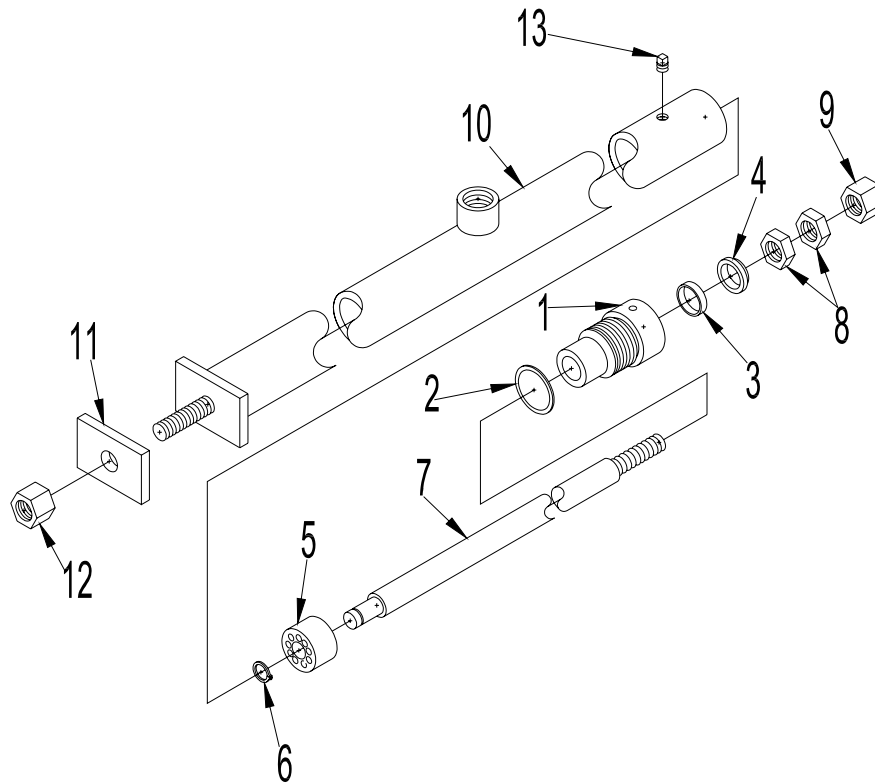
MODEL 1450 HYDRAULIC SYSTEM

Ref. No.	Part No.	Description	Qty. Req'd
1	281	Hammer Cylinder - 1-5/8" Dia. X 63-15/16" Stroke c/w Nuts and Mount Pad	1
2	283	2" x 8" Cylinder c/w Pins	2
3	P80513	Hydraulic Oil Reservoir (Plastic)	1
4	P80750	2 Spool Hydraulic Control Valve	1
*	P80529	Seal Kit - Cross 2 Spool Valve	---
**	P80528	Seal Kit - Cross Single Spool Valve	---
5	P80682	Single Spool Hydraulic Control Valve	1
6	P80703	Pump P.T.O. with O.R.B. Ports (Cassappa)	1
***	P80517	Seal Kit - Cassappa Pump	---
7	P80512	Torque Arm	1
8	L2929	1/4" x 20" Hydraulic Hose c/w 3/8" Ends	2
9	L2909	1/4" x 40" Hydraulic Hose c/w 3/8" Ends	1
10	L2907	1/4" x 35" Hydraulic Hose c/w 3/8" Ends	1
11	P3033	3/4" x 42" Hydraulic Hose c/w 3/4" Ends	1
12	P4329	1/2" x 48" Hydraulic Hose c/w 1/2" Ends	1
13	P4327	1" Fuel Hose x 50" Long (No Ends)	1
14	P4328	1" Fuel Hose x 42" Long (No Ends)	1
15	P80510	Breather Cap	1
16	P80706	7/8" O.R.B. Male x 1/2" N.P.T. x 90 Degree Swivel Street Elbow	1
17	DL5283	3/8" N.P.T. x 90 Degree Street Elbow (Steel)	1
18	P80704	3/8" Male-Female Restricted Orifice Swivel (0.31)	6
19	P80675	1/2" N.P.T. Male x 3/8" N.P.T. Female x 90 Degree Swivel Street Elbow	4
20	BN037L	3/8" Nylon Locknut	2
21	P80694	1/2" N.P.T. Male x 3/4" N.P.T. Female x 90 Degree Female Swivel Street Elbow	6
22	P80695	3/4" N.P.T. x 90 Degree Swivel Street Elbow	1
23	A70728	1-1/2" Hose Clamp	4
24	P80700	Oil Filter	4
25	P80699	Filter Mount	1
26	P80680	Handle - Valve	1
27	P80679	Link Kit	3
28	P80685	Handle Bracket - Cross	3
29	P80588	3/16" Woodruff Key	3
30	P80687	540 P.T.O. Adapter - 3/4" Diameter	1
31	P80698	3/4" N.P.T. Male x 1/2" N.P.T. Female Reducing Bushing - Steel	1
32	P80708	1-1/16" O.R.B. Male x 3/4" N.P.T. Female Swivel Adapter	1
33	B050012	1/2" x 1-1/4" N.C. Capscrew	2
34	BN050L	1/2" N.C. Hex Nylon Locknut	2
35	BW050L	1/2" Lockwasher	2
36	---	1/4" N.C. x 1/2" Socket Head Capscrew	6
37	B037015	3/8" x 1-1/2" N.C. Hex Bolt	7
38	BN037	3/8" N.C. Hex Nut	7
39	BW037L	3/8" Lockwasher	7
40	P80584	3/8" N.P.T. Plug - Square Head	1
41	---	9/16" I.D. Flatwasher	2
42	B037020	3/8" x 2" N.C. Hex Bolt	2



MODEL 1450 DECALS

Ref. No.	Part No.	Description	Qty. Req'd
1	S81504	Ezee-On Decal (3" x 18-3/4")	1
2	P80534	1450 Decal (2-3/4" x 9")	1
3	P80527	Danger Decal (3-1/4" x 5-1/4")	1
4	P80524	Caution Decal (2" x 4-1/4")	1
5	P80525	Caution Decal (1-7/8" x 2-3/4")	1
6	P80503	Warning Decal (4" x 9")	1
7	P80504	Important Decal (4" x 4")	1
8	P80500	Danger Decal (3-1/2" x 7")	1
9	P80502	Caution Decal (2-3/4" x 4-1/2")	1
10	DF10057	Yellow Reflector (2" x 4")	2
11	DF10050	Red Reflector (2" x 4")	2
12	P80505	Danger Decal (1-7/8" x 5-1/4")	1
13	P80532	Danger Decal (4-1/4" x 8")	1
14	A75764	Warning Decal (4-1/2" x 2-5/16")	1
15	P80533	Caution Decal (3" x 4-1/4")	1

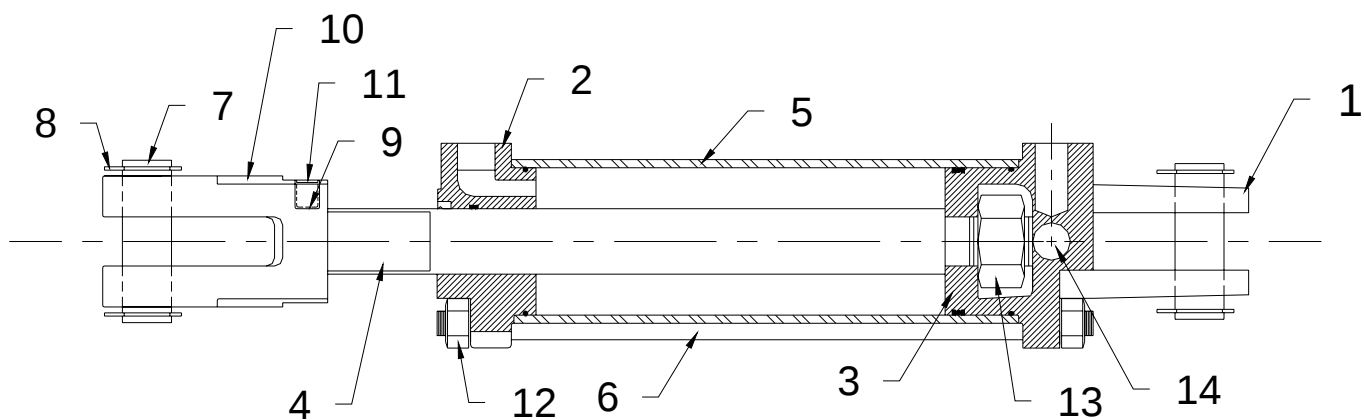


MODEL 1450 HAMMER CYLINDER

REF. NO.	PART NO.	DESCRIPTION	QTY. REQ'D
1	16HP1	1-5/8" O.D. x 7/8" I.D. Headplate (N5)	1
2	10OR5	1-3/4" O.D. x 1-1/2" I.D. x 1/8" O-Ring	1
3	10RS8	7/8" I.D. Rod Seal	1
4	10WS8	7/8" I.D. Wiper Seal	1
5	16PB1	1-5/8" Dia. Rod Guide	1
6	10RR1	5/8" Dia. Shaft Retaining Ring	1
7	10SH56	7/8" Dia. x 73-1/8" Long Cylinder Shaft	1
8	10NU7	3/4" - 16 UNF Hex Jam Nut (Grade 2)	2
9	10NU8	3/4" - 16 UNF Hex Nylon Locknut (Grade 5)	1
10	16TU1	1-5/8" x 69-1/4" Barrel	1
11	P80522	3/8" x 2-1/4" x 3-1/4" Mount Pad	1
12	10NU9	5/8" - 18 UNF Hex Nylon Locknut (Grade 5)	1
13	P80705	1/8" N.P.T. SQ. Head Plug	1

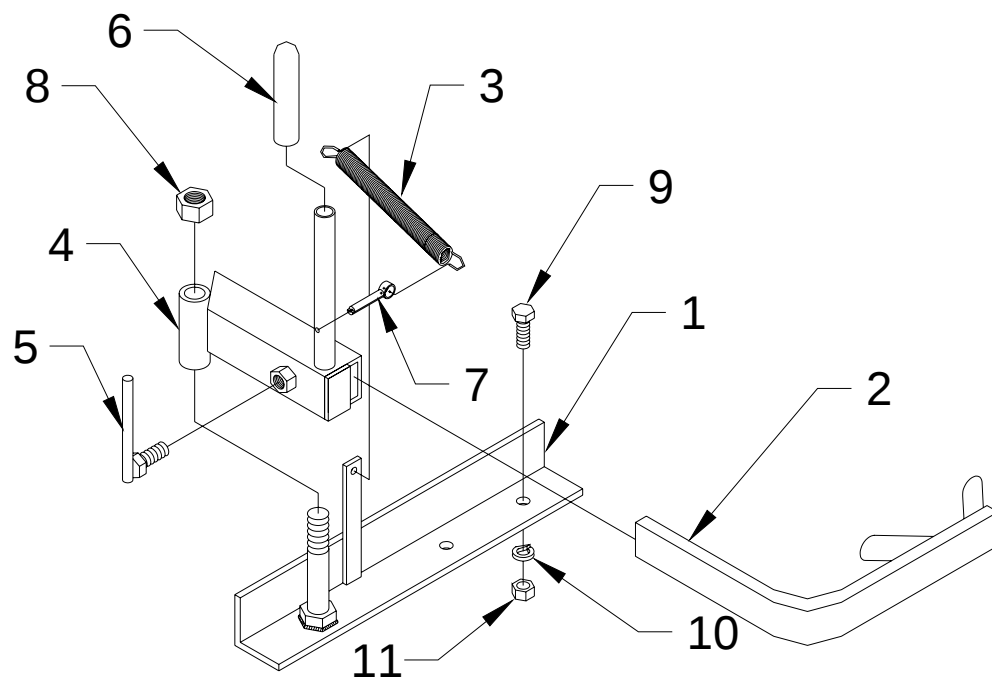
SEAL KIT - NO. 1608N5 - HAMMER CYLINDER

KIT NO.	DESCRIPTION	QTY. REQ'D
100R25	1-3/4" O.D. x 1-1/2" I.D. x 1/8" O-Ring	1
100R8	7/8" I.D. Rod Seal	1
10WS8	7/8" I.D. Wiper Seal	1



MODEL 1450
HYDRAULIC CYLINDERS - MONARCH (SLIDE, and TILT)

REF. NO.	MONARCH PART NO.	DESCRIPTION	MONARCH 2" x 8" QTY. REQ'D
1	492805	Clevis Cap (for 1" Pin)	1
2	492806	Rod Cap	1
3	492548	2" Dia. Piston	1
4	492581	Rod (8" Stroke)	1
5	491608	Tube (8" Stroke)	1
6	492216	Tie Rod (8" Stroke)	4
7 & 8	640091	Pin (2) (for 1" Dia.)	2
9	498006	Third Lock	1
10	492650	Rod Clevis (for 1" Pin)	1
11	148390	Set Screw	1
12	128230	Nut - Tie Rod	8
13	129090	Nut - Piston	1
14	196530	Plug	1
**	639572	Seal Kit (Rod Dia. 1-1/8")	1



POST GUIDE (OPTIONAL)

REF. NO.	PART NO.	DESCRIPTION	QTY REQ'D
1	P80732	Mounting Bracket	1
2	P80733	Post Holding Arm	1
3	A70157	Extension Spring	1
4	P80734	Arm Actuator	1
5	P80735	Lock Bolt	1
6	P80602	Rubber Grip	1
7	BP25200	1/4" x 2" Cotter Pin	1
8	BN100L	1" N.C. Hex Nylon Lock Nut	1
9	B062015	5/8" x 1-1/2" Hex Bolt	1
10	BW062L	5/8" Lockwashers	1
11	BN062	5/8" Hex Nut	1