HEIL®

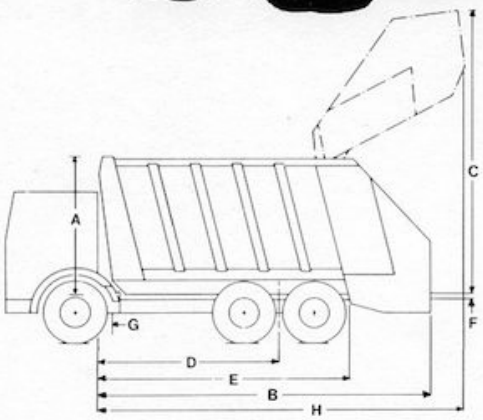
SERVICE DEPT.

Replacement Manual for LP-900 Series

NO. R73638-979

LOAD-PACKER 900 Series

Available in 18, 20, 25 and 32 cubic yard capacity



FEATURES

- ☐ Fast 28 Second Cycle Time
- ☐ 9 Second Reload Time
- ☐ 2¾ Yard Hopper
- ☐ Better Weight Distribution
- ☐ High Strength Steel Construction
- ☐ Modern Attractive Styling
- ☐ Advanced Packing Geometry
- ☐ Quieter Operation
- ☐ Increased Load Density

SPECIFICATIONS (INCHES & POUNDS)

Model	Cap. Cu.Yd.	A	B	C	D*		E	F	G	H	Wd.	Wt.
					CA	CT						
LP-918	18	94	224½	198	124	108	158½	5 5/16	7	242½	96	12,000
LP-920	20	94	239½	198	139	126	173½	5 5/16	7	257½	96	12,400
LP-925	25	94	272½	198		156	206½	5 5/16	7	290½	96	13,300
LP-932	32	94	313½	198		197	247½	5 5/16	7	331½	96	14,800

* Can be mounted on shorter CT depending on state weight restrictions and chassis rating. Back of cab interference such as exhaust and air cleaners may require longer CA or CT.

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LIST OF ILLUSTRATIONS

SECTION II
OPERATION

2-1. Operating Hints. (See figure 2-1).

a. Idle engine with power take-off engaged for 5 to 10 minutes before starting loadpacking mechanism in extremely cold weather.

b. De-clutch engine when engaging power take-off. For automatic transmission follow manufacturer's recommended procedure.

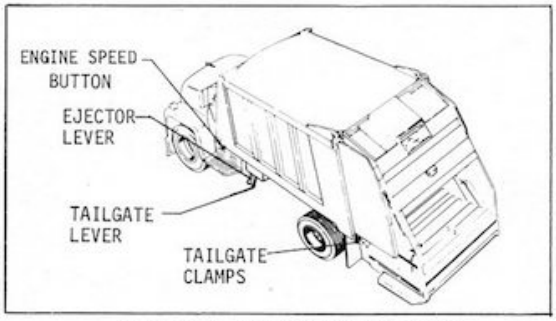


Figure 2-1. Load Packer Controls

c. Do not operate packing mechanism or leave power take-off engaged when truck is traveling.

d. Turn solenoid switch "ON" only when operating packing mechanism.

e. The solenoid regulates the speed of the complete packing cycle at 28 seconds. Do not foot accelerate engine over this solenoid regulated speed as excessive speed can damage packing mechanism, truck transmission or power take-off.

CAUTION

Use hopper loading pattern shown on figure 3-1 for better compaction and less fallback.

2-2. To Operate Packing Mechanism. (See figure 2-2).

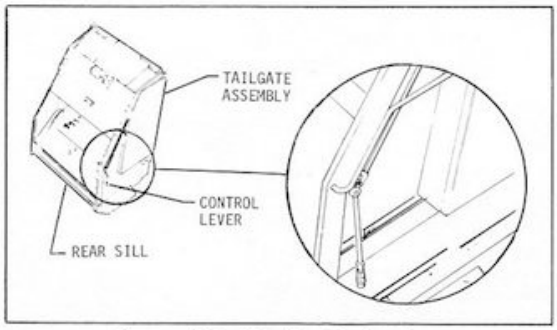


Figure 2-2. Packing Mechanism

a. Engage power take-off lever.

b. Turn solenoid switch "ON".

c. Push control lever forward and hold to start packing mechanism. When the packing mechanism reaches the loading sill, pull the control lever to the rear. The packing mechanism will automatically operate through the REMAINDER of packing cycle.

d. To stop - move control lever to center position.

e. To change direction of panel motion - move control lever to reverse position.

WARNING

Whenever the packing mechanism is started, all persons must stay clear of the hopper until the packing panel has passed the hopper loading edge.

2-3. To Raise Tailgate.

a. Engage power take-off.

b. If material is packed in hopper, cycle the mechanism until hopper is clear.

c. Unlatch both tailgate clamps.

d. Push engine speed button to left of levers to increase engine speed. Push tailgate lever to raise; hold in this position until gate is raised.

WARNING

Under no circumstance, should any person pass, stand or work under the raised tailgate.

2-4. To Operate Ejector Panel.

a. Push engine speed button to increase engine speed, then push ejector lever in and hold in this position until load is ejected.

b. When any traveling is done with the load packer empty, the ejector panel should be brought to the front of the load packer, the telescopic cylinder retracted.

c. When preparing for normal route pickup, the ejector panel should be positioned about 36" from the tailgate. For bulk packing, it should be at least 72" from the tailgate.

2-5. To Lower Tailgate.

a. Pull and hold tailgate lever out until tailgate is completely lowered.

b. Disengage power take-off.

c. Securely latch both tailgate clamps. (Do not travel on highway with tailgate clamps unlatched.)

SECTION III
MAINTENANCE & SERVICING LOAD PACKER

3-1.. Packing Cycle Speed. (See figure 3-1).

a. Due to variations in transmission and power take-off speeds, it is necessary to adjust the solenoid-carburetor linkage to obtain a complete packing cycle in 28 seconds (hopper empty). Check time lapse with a watch from the moment the packing cycle is started until the cycle is completed. Always readjust packing cycle speed if engine has been serviced. The adjusting screw on the solenoid lever is provided to shorten or lengthen the linkage cable to increase or decrease the engine speed to obtain the proper packing cycle speed.

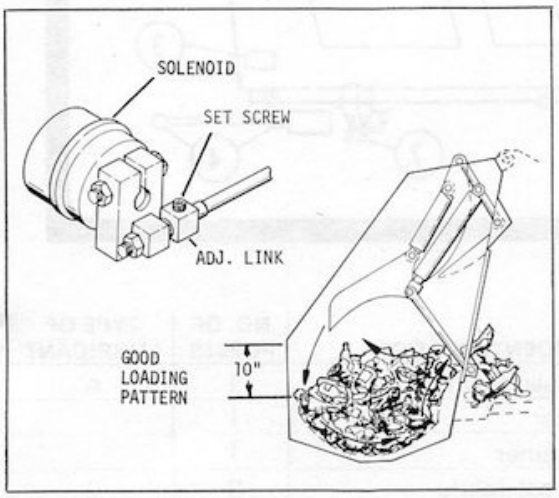


Figure 3-1. Packing Cycle

3-2. Solenoid.

a. If solenoid does not automatically accelerate engine during packing cycle, connect battery directly to solenoid terminals. If it operates, check the following for cause of trouble.

(1) Circuit switch on dash in "OFF" position.

(2) Solenoid operating lever loose on shaft.

(3) Solenoid to carburetor linkage binding.

(4) Loose wiring connections.

(5) Contact points in relay burned.

(6) Circuit switch on dash defective.

Note

Alternator must keep battery fully charged to insure maximum solenoid pull.

3-3. Hydraulic Control Linkage And Valves. (See figure 3-2).

a. All control linkages and valves are set at the factory and normally need no further attention except for periodic servicing indicated below and on Lubrication and Service Chart, figure 3-3.

(1) Check oil level in hydraulic tank daily. Keep oil level to full mark on dipstick. Check oil level with ejector panel at front of the body, tailgate lowered and all cylinders fully retracted.

IMPORTANT

(2) Remove and replace oil filter element in front of body after the first 40 hours of operation. Replace element every 500 hours thereafter.

(3) Remove oil strainer from hydraulic tank and clean in fuel oil or kerosene yearly.

(4) Drain and refill hydraulic tank each year preferably in the spring. Use only Mobile - D.T.E. 13; Texaco - 1833; Power Steering - 4634; Shell Oil - Tellus 21; Standard Oil - Rycon 15; Atlantic Richfield - Duro AW-5150, S215, 5320; Pure-Union Co. (Union 76), UNAX, AW150; Marathon Oil - Indurance 600 SAE 10W; Gulf Oil - Harmony 43-AW. In cold climate when temperature gets below zero use only: Mobil D.T.E.-13; Texaco - 1833; Standard Oil - Rycon 15; Gulf Oil - Harmony 43-AW.

(5) Apply oil (squirt can) S.A.E. #20 Motor Oil to all control rods, pins, clevises, etc. every 40 operating hours. All controls must be kept friction free at all times to operate properly.

(6) Use #1 pressure gun grease on P.T.O. U-Joints and tailgate clamps. There are no other grease fittings.

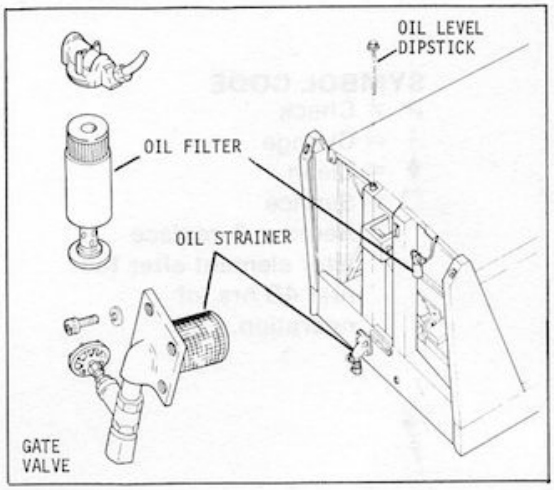
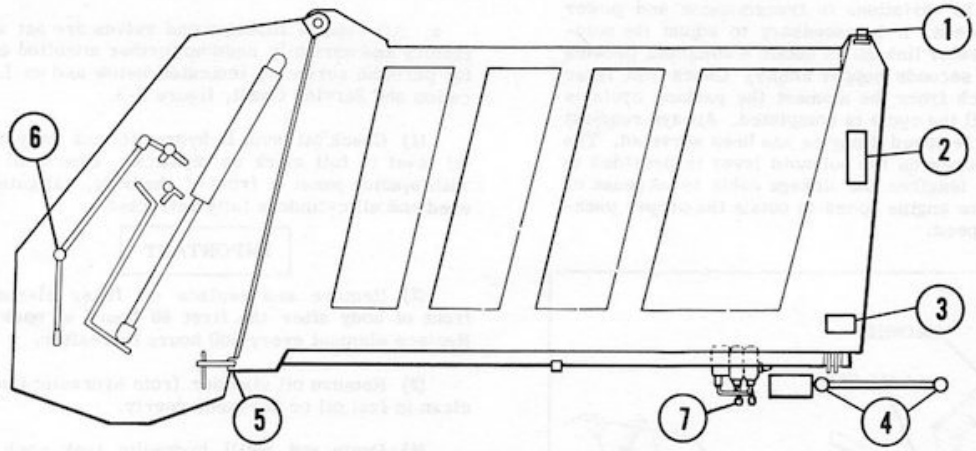


Figure 3-2. Hydraulic Controls

LP-900 SERVICE & LUBRICATION GUIDE



ITEM	SERVICE INTERVAL DAILY	40 HRS.	500 HRS.	YEARLY	IDENTIFICATION	NO. OF POINTS	TYPE OF LUBRICANT
1	✓			+	Hydraulic System	1	A
2		*	+		Oil Filter	1	
3				♦	Oil Strainer	1	
4		□			Universal Joints	3	B
5		□			Tailgate Latch	2	B
6		□			Tailgate Controls	6	C
7		□			Underbody Valve Handles	6	C

SYMBOL CODE

✓ = Check
\+ = Change
♦ = Clean
□ = Service
* = Remove & replace filter element after the first 40 hrs. of operation.

LUBRICANT TYPES

A = Hyd. oil (Anti-wear agents, non-foaming, rust & oxidation inhibited) as listed on Page 3-1.
B = #1 pressure gun grease
C = S.A.E. #20 squirt can application

WARNING

NO PERSON SHOULD EVER STAND IN THE HOPPER OR ON THE HOPPER SILL WHILE ADJUSTMENTS ARE BEING MADE ON THE PACKING MECHANISM WITH THE ENGINE RUNNING; NOR SHOULD ANY PERSON BE INSIDE THE BODY WITH THE ENGINE RUNNING. ALWAYS REMOVE IGNITION KEYS, AND PLACE A SIGN ON THE STEERING WHEEL BEFORE & DURING REPAIRS TO THE PACKER OR EJECTOR PANEL, OR BOTH. EXCEPT DURING MAINTENANCE TESTING, UNDER NO CIRCUMSTANCE, SHOULD A PERSON PASS, STAND OR WORK UNDER A RAISED TAILGATE UNLESS PROPERLY AND ADEQUATELY BLOCKED OR SUPPORTED BY SOME EXTERNAL MEANS.

3-4. Single Spool Control Valve (4-Way).

a. The single spool 4-way valve controls the packing mechanism thru a complete cycle. This valve also manually controls the inside packing cylinders. It is located 20" to the left of the tailgate centerline on the rear side of the main beam. (See figure 3-4).

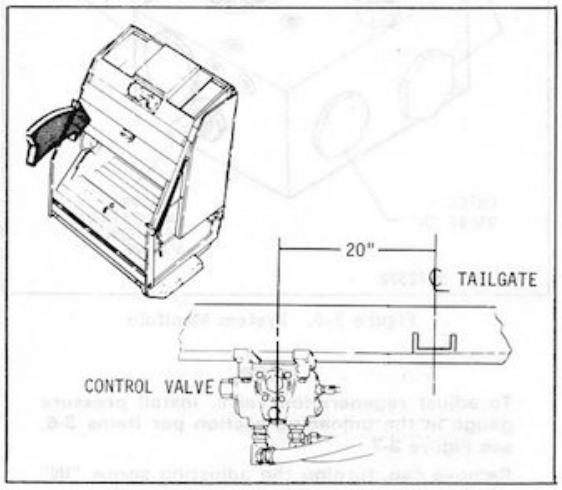


Figure 3-4. Control Valve Location

b. Linkage Adjustment Procedure. (See figure 3-5.)

(1) Pull Tailgate Control Valve all the way out, dimension "A" equals 2 inches, then check to see that the Bell Crank (Item 18) has a minimum of 1/4 inch clearance between the Bell Crank and Hydraulic Hose fitting at point "B". (See View A-A in Figure 3-5.)

(2) Adjust length of Control Rod (Item 7) to 39-3/4 inches, dimension "C" (Figure 3-5).

(3) Return Tailgate Control Valve to a neutral position, dimension "D" equals 1-11/16 inches. Then adjust length of Actuator Assembly (Item 16) and position Micro Switch (Item 15) so that Roller on Micro Switch (Item 15) rests on the low position of the Actuator (Item 16).

(4) Adjust Pivot Assembly (Item 10) so as to stop the packing cycle where the eye of the outside packing cylinder measures 5-1/2 inches to the head of barrel, dimension "F" (Figure 3-5).

(5) To set dead man control push control handle into forward position and set adjusting bolt on spring lever stop so that control handle can be released from forward position and return to stop or neutral position. The setting should be such as to require manual force to hold the handle in forward position and return to stop position when released.

3-5. System Pressure Relief Valve. (See figure 3-6).

a. The packer system relief valve is set at 2500 P.S.I. and controls the pressure in the packing hydraulic circuit, the tailgate and ejector panel circuits. This relief valve is pre-set at the factory and sealed.

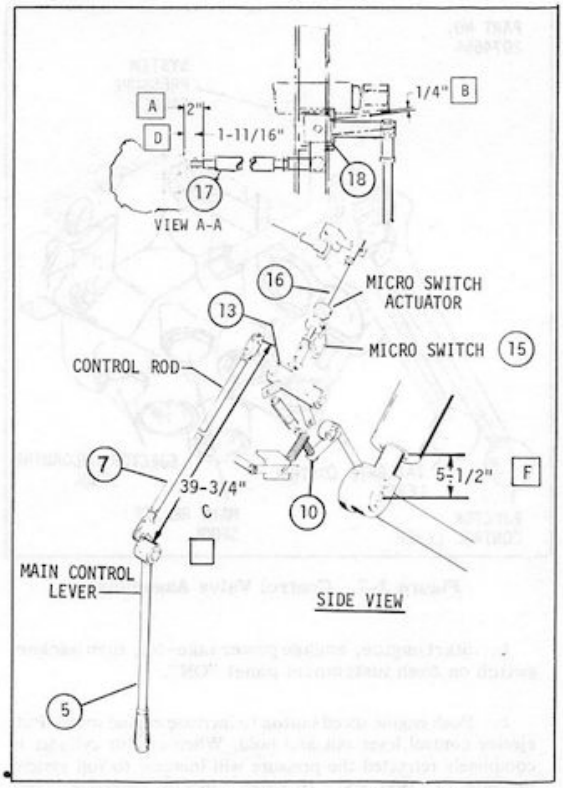


Figure 3-5. Control Lever Assembly

WARNING

Only authorized personnel may remove this seal and adjust this valve. Unauthorized removal of this seal will void the Warranty.

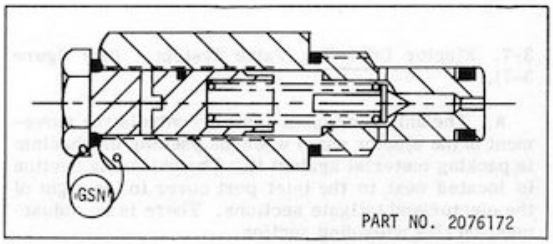


Figure 3-6. Pressure Relief Valve (Sealed)

3-6. To Check Packer System Pressure.

a. Remove 3/8" pipe plug from unloading section and install a gauge. (See figure 3-7.)

Note

A 3000# gauge should be used to prevent damage to the gauge while checking pressures. Check gauge for accuracy.

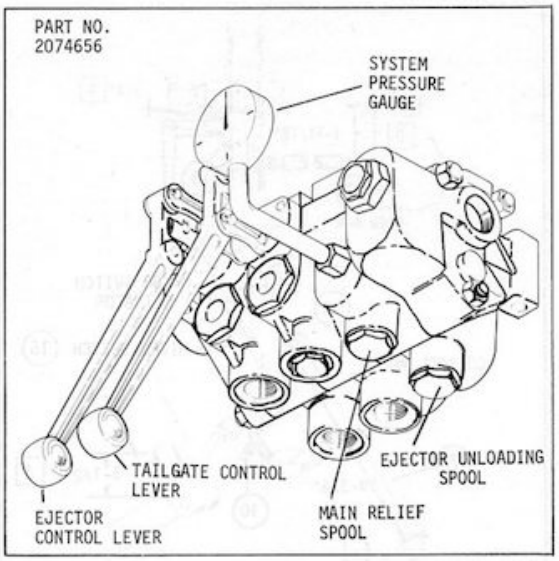


Figure 3-7. Control Valve Assembly

b. Start engine, engage power take-off, turn packer switch on dash instrument panel "ON".

c. Push engine speed button to increase engine speed. Pull ejector control lever out and hold. When ejector cylinder is completely retracted the pressure will increase to full system pressure of 2500 PSI. If relief valve is defective, your Distributor can initiate repairs.

WARNING

Only authorized personnel may remove this seal and adjust this valve. Unauthorized removal of this seal will void the Warranty.

3-7. Ejector Unloading Valve System. (See figure 3-7).

a. The unloading spool system controls the movement of the ejector panel when the packing mechanism is packing material against it. The unloading section is located next to the inlet port cover to the right of the ejector and tailgate sections. There is no adjustment on this unloading section.

The spools in this section are actuated when the relief valve opens, allowing the hydraulic oil from the telescopic cylinder to return to tank.

3-8. Regeneration Valve. (See figure 3-9).

a. The regeneration valve holds the packing mechanism up while the inside packing cylinders are retracting. When the inside packing cylinders are fully retracted, the regeneration valve will open allowing the packing mechanism to lower.

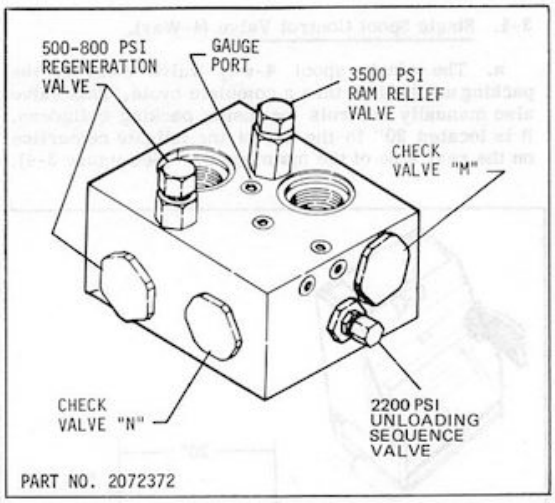


Figure 3-8. System Manifold

Note

To adjust regeneration valve, install pressure gauge in the unloading section per Items 3-6, see Figure 3-7.

Remove cap, turning the adjusting screw "IN" will increase the pressure, reversing this procedure will lower the pressure. The regeneration valve should be adjusted to a minimum pressure to hold packing mechanism up between 500 to 800 PSI.

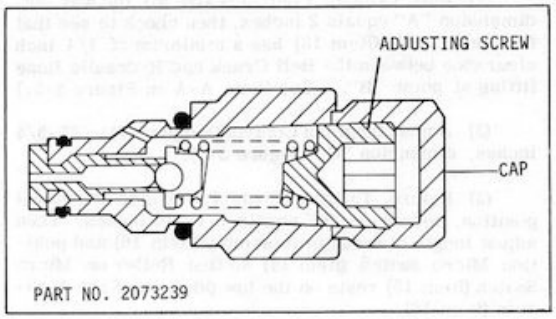


Figure 3-9. Regeneration Valve

3-9. Ram Relief Valve. (See figure 3-10).

a. The ram relief valve relieves excessive pressure in the inside packing cylinders as the outside packing cylinders are retracting during the packing cycle.

This relief valve cartridge is set at 3500 PSI at the factory and is sealed.

To check the pressure setting, it must be done under load conditions. Insert pressure gauge in the gauge port of the system manifold shown in Figure 3-8, use a 4000 PSI pressure gauge. This should be performed by an authorized Distributor.

WARNING

Only authorized personnel may remove this seal and adjust this valve. Unauthorized removal of this seal will void the Warranty.

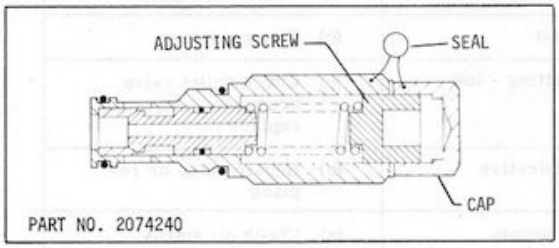


Figure 3-10. Ram Relief Valve (Sealed)

3-10. Unloading Sequence Valve. (See figure 3-11).

a. The unloading sequence valve controls the outside packing cylinders while the inside packing cylinders are extending. When the inside packing cylinders are extended, this unloading sequence valve opens and allows the outside packing cylinders to retract to complete the packing cycle. This unloading sequence valve is adjusted at the factory to 2200 PSI.

b. To adjust the unloading valve cartridge, insert pressure gauge in gauge port as shown in Figure 3-7. Remove adjusting screw cap. Turning the adjusting screw "IN" will increase the pressure and the reverse procedure will lower the pressure. Start engine and engage P.T.O. and solenoid switch, lower the packing mechanism to the loading sill.

Start packing mechanism cycle, when the inside packing cylinders extend to approximately 3/4 extended, shift the control lever to the center or neutral position.

Then pull the control lever toward the rear of the packer slowly so that the 4-Way Valve is just shifted enough to allow the hydraulic oil to bleed into the cylinders. At this time, the pressure gauge will register the pressure, which should be 2200 PSI, allowing the valve to shift.

See Figure 3-29 for position of panel when sequence valve shifts at 2200 PSI.

c. Replace cartridge if defective.

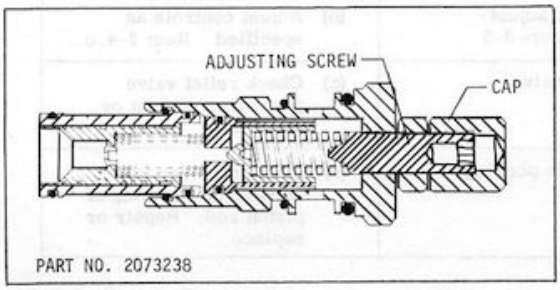


Figure 3-11. Unloading Sequence Valve

3-11. Trouble Shooting Guide.

WARNING

No person should ever stand in the hopper or on the hopper sill while adjustments are being made on the packing mechanism with engine running; nor should any person be inside the body with the engine running. Always remove ignition keys, and place a sign on the steering wheel before & during repairs to the packer or ejector panel, or both, except during maintenance testing.

Under no circumstance, should a person pass, stand or work under a raised tailgate unless properly and adequately blocked or supported by some external means.

a. Basic items needed to facilitate the diagnosis of any MALFUNCTION and its remedy other than the standard mechanics tools are:

(1) The LP-900 Operation and Maintenance Manual.

(2) A hydraulic pressure gauge, calibrated from "0" pressure to 4000# PSI to check all load packer pressures.

(3) Test lamp with jumper wires to check electrical circuitry.

The above listed items will assist in determining any malfunction, mechanical, hydraulic or electrical.

WARNING

The trouble shooter should never switch terminal wiring as all units are factory tested to insure proper wiring before shipment to dealer.

b. A mechanical problem can often be discovered by simple observation as in the following example:

EXAMPLE

The control lever is moved forward to lower the packing mechanism to the loading sill. If by doing this the packing mechanism does not operate, this could indicate a mechanical problem. By removing the side cover on the right hand side of the tailgate and observing the control linkage, it is found that the bell crank lever is hitting the hydraulic hose fitting. Adjustments can be made by following the Linkage Adjustment Procedure stated in Section III, paragraph 3-4.b., Reference Figure 3-5.

c. A hydraulic problem can be isolated by using the trouble shooting section of this manual, Page 3-7, Item 6, rather than a "hit and miss" approach.

EXAMPLE

While cycling the packing mechanism, the lower panel sweeps into the hopper and stops. The problem can be hydraulic or mechanical. By referring to the trouble shooting section of this manual, Page 3-6 under Item 6, the corrective action can be taken to remedy the malfunctions.

TROUBLE SHOOTING GUIDE

MALFUNCTION	PROBABLE CAUSES	CORRECTIVE ACTION
1. Packer will not cycle, ejector panel will not move, tailgate will not raise	(a) P.T.O. not in gear	(a) Engage P.T.O.
	(b) Inadequate oil supply	(b) Check oil supply
	(c) Strainer plugged	(c) Clean strainer
	(d) Relief valve setting - low or open	(d) Check relief valve pressure. Adjust or replace
	(e) System pump defective	(e) Repair pump or replace
2. Packer cycle slow	(a) Inadequate oil supply	(a) Check oil supply
	(b) Strainer plugged	(b) Clean strainer
	(c) Relief valve setting low	(c) Check relief valve pressure. Adjust or replace
	(d) Engine solenoid defective	(d) Check solenoid. See Item 3-2
	(e) Circuit switch turned off	(e) Turn circuit switch on instrument panel to "ON"
3. If inside packing cylinders will not retract at the beginning of cycle. See Figure 3-26	(a) 4-Way control valve linkage inoperable	(a) Check control linkage See Figure 3-5, Page 3-3
	(b) Regeneration valve set too low	(b) Re-adjust or replace valve, Item 3-8, Page 3-4
	(c) Defective inside packing cylinder	(c) Repair or replace cylinder. See Figure 3-24, Page 3-12
4. If outside packing cylinders will not extend or lower erratically. See Figure 3-26	(a) Regeneration valve set too high	(a) Re-adjust. See Figure 3-9, Page 3-4
	(b) Foreign material in hopper slots	(b) Inspect and remove
5. If lower packing panel stops at loading sill See Figure 3-27	(a) Too much material on loading sill	(a) Move control handle to rear which will clear sill
	(b) Controls out of adjustment. See Figure 3-5	(b) Adjust controls as specified - Item 3-4.b
	(c) System relief valve pressure low	(c) Check relief valve pressure. Adjust or replace
	(d) Defective inside packing cylinder	(d) Check cylinder for leakage or scouring of piston rod. Repair or replace

TROUBLE SHOOTING GUIDE (cont)

MALFUNCTION	PROBABLE CAUSES	CORRECTIVE ACTION
5. If lower packing panel stops at loading sill See Figure 3-27 (cont)	(e) Regeneration valve stuck open	(e) Clean and adjust or replace
6. Packing panel sweeps into hopper and stops, engine at solenoid speed, relief valve unloading	(a) Unloading sequence valve stuck closed	(a) Adjust and clean or replace cartridge
	(b) System sequence valve set higher than system pressure	(b) Adjust to proper settings - 2200 PSI.
7. If packing panel drifts down after completing packing cycle. See Figure 3-29	(a) Check valve N is open	(a) Clean or replace. See Figure 3-8
	(b) Regeneration valve leaking	(b) Clean, adjust or replace
	(c) Outside packing cylinder defective	(c) Repair or replace
8. If lower packing panel drifts back after completing packing cycle See Figure 3-29	(a) Check valve M is open	(a) Clean or replace. See Figure 3-8
	(b) Ram relief valve is leaking	(b) Clean or replace
	(c) Inside packing cylinders defective	(c) Repair or replace
9. If the ejector panel does not retract automatically	(a) Panel is mechanically blocked	(a) Inspect and repair
	(b) Ejector unloading spool stuck closed. See Figure 3-7	(b) Clean
	(c) System relief cartridge stuck closed	(c) Clean and adjust or replace. See Items 3-5, 3-7 and Figures 3-6, 3-7
10. If the packing mechanism stalls at the end of the packing cycle	(a) Cycle stop cam and spring not adjusted	(a) Adjust cycle stop cam and spring. See Item 3-4.b. and Figure 3-5
11. Packing panel will not sweep into hopper, and prematurely raises to stop position	(a) Unloading sequence valve not adjusted properly or defective	(a) Adjusting unloading sequence valve or replace. See Item 3-10
	(b) Hopper is over-loaded	(b) Recycle without adding material to hopper

3-12. To Remove Upper and Lower Packing Panels.

a. Remove tailgate covers. (See figure 3-12.)

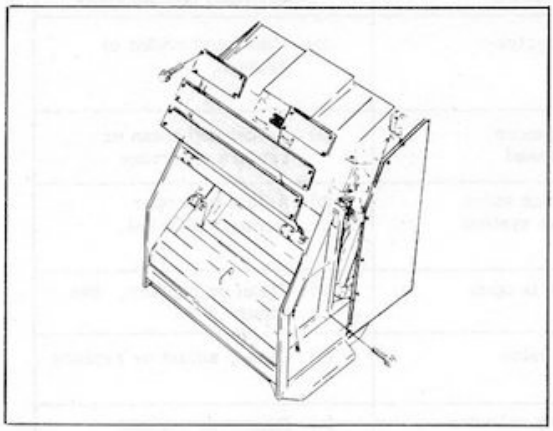


Figure 3-12. Tailgate Cover Removal

b. Raise packing mechanism to its fully raised position as shown in figure 3-13 and secure with chain fall.

c. Remove retainers and shafts from the inside upper links (point "A", figure 3-13). Lower packing mechanism to bottom of hopper and remove chain fall.

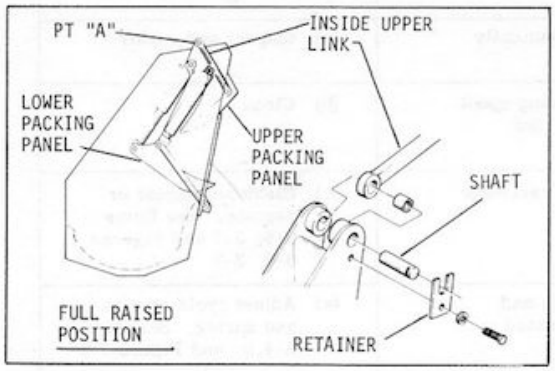


Figure 3-13. Retainer and Shaft Removal

d. Open the tailgate to a position of two feet as shown in figure 3-14. Block and secure using chain fall.

e. Remove retainers and shafts from the inside upper links (point "B", figure 3-14). Remove inside upper links (one each side).

f. Remove retainers and shafts from the outside lower links (point "C", figure 3-15).

g. Remove block and chain fall. Lower tailgate to its fully lowered position.

h. Remove both outside packing cylinders. See paragraph 3-17 for removal procedure. Raise the packing mechanism with chain fall.

i. Remove lower outside links (one each side).

j. Lower packing mechanism with chain fall. Remove both inside packing cylinders. See paragraph 3-23 for removal procedure.

k. Remove pivot shaft connecting the upper and lower packing panels (point "D", figure 3-16).

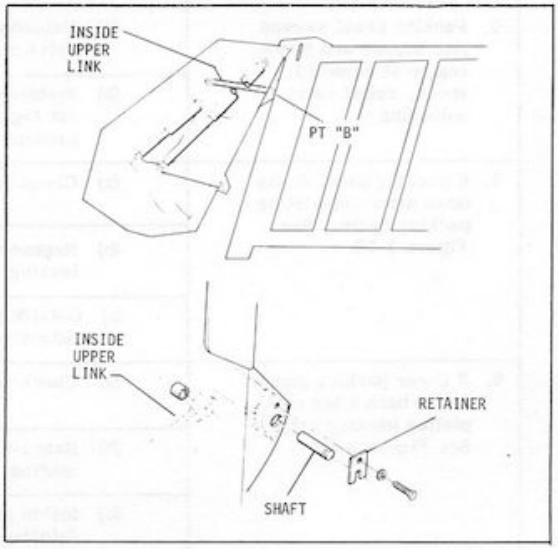


Figure 3-14. Inside Upper Link Removal

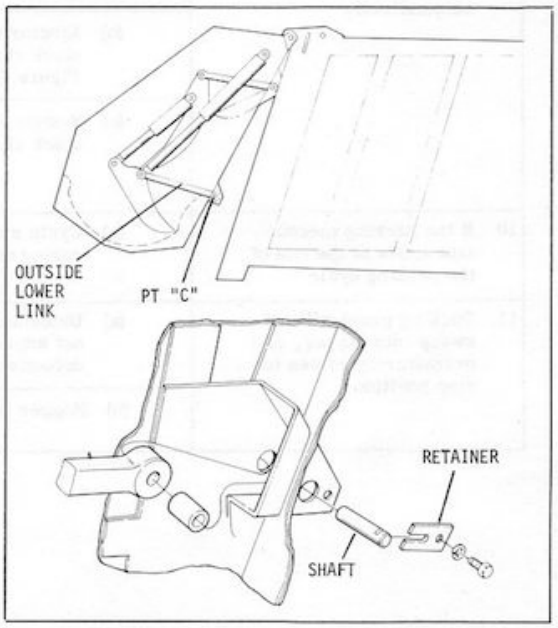


Figure 3-15. Outside Lower Link Removal

3-13. To Remove Telescopic Cylinder (Inside Body).

a. Remove pin at cylinder base, attaching to ejector panel. (See figure 3-17).

b. At engine idle, retract cylinder to desired position.

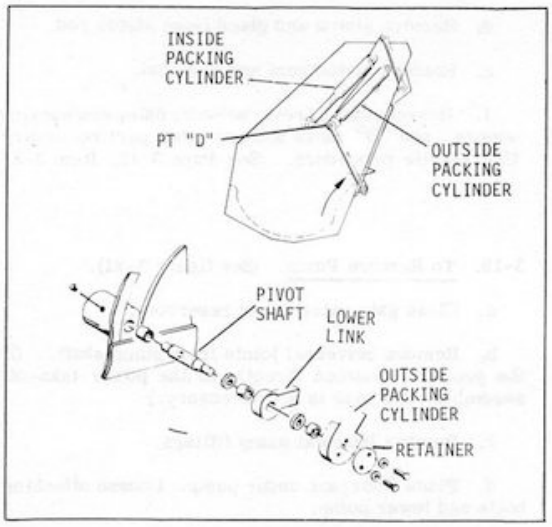


Figure 3-16. Pivot Shaft Removal

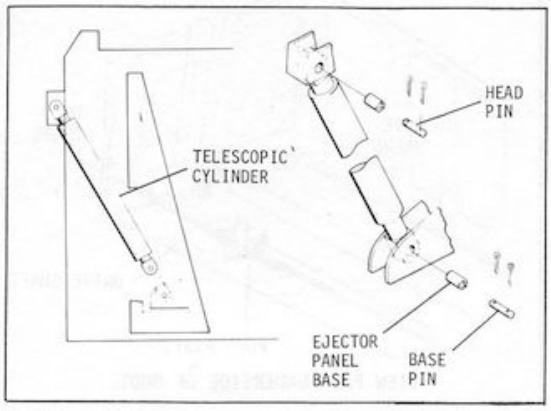


Figure 3-17. Telescopic Cylinder Removal

c. Remove hose at cylinder head, plug hose to keep dirt out.

d. Brace or support cylinder suitably.

e. Remove head pin.

Note

It is not necessary to disassemble cylinder to replace packing. To replace packing, first remove packing nut and use hook rod to remove old packing. Install (1) one packing ring at a time, and tamp carefully in place.

3-14. To Disassemble Telescopic Cylinder. (See figure 3-18).

a. Remove fittings from upper end of cylinder.

b. Remove packing nut and packing gland from small stage. Stand complete cylinder on base end and secure. Remove smallest cylinder section. Proceed to next section using above disassembly procedure until cylinder is completely disassembled.

Note

When removing glands, use a ring compressor to retain oil rings and back-up ring from lodging in threads of sections.

c. Remove "O" rings, seals and piston rings, inspect for damage and replace as necessary.

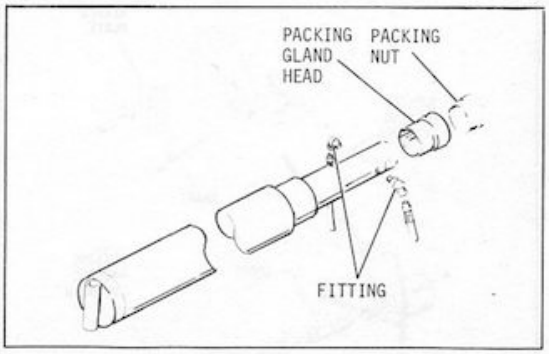


Figure 3-18. Telescopic Cylinder Disassembly

3-15. To Reassemble Telescopic Cylinder.

a. Installing largest section first, use a ring compressor to compress piston rings on sections to prevent damage to rings. Use a ring compressor on glands to prevent damage to "O" rings.

b. Proceed with next largest section using above procedure until completely assembled.

c. Install all hoses and fittings.

Note

After unit has been operated for a short time, check each section for leakage. There should be a light oil film but no excessive seepage or flow.

3-16. Installation of Telescopic Cylinder.

a. Install head pin and hose.

b. At engine idle speed, extend cylinder to desired position and install cylinder base pin to ejector panel.

3-17. To Remove Outside Packing Cylinder. (See figure 3-19).

a. Extend cylinders by lowering upper and lower packing panels.

b. Remove hoses from cylinder, plug hoses to keep dirt out.

c. Support cylinder with sling or chain fall.

d. Remove upper keeper plate and shaft.

e. Remove lower retainer and shaft.

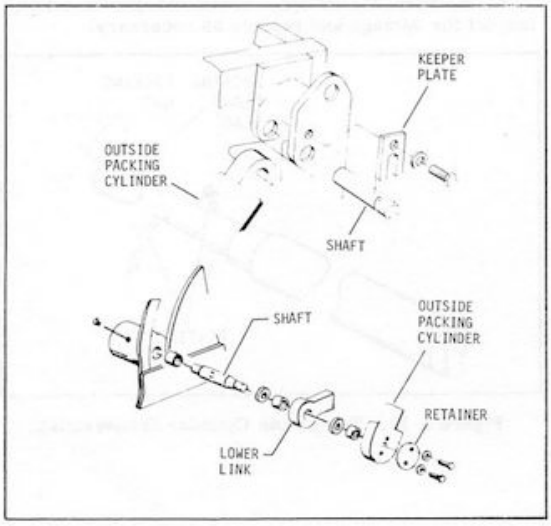


Figure 3-19. Outside Packing Cylinder Removal

3-18. To Disassemble Outside Packing Cylinder. (See figure 3-20).

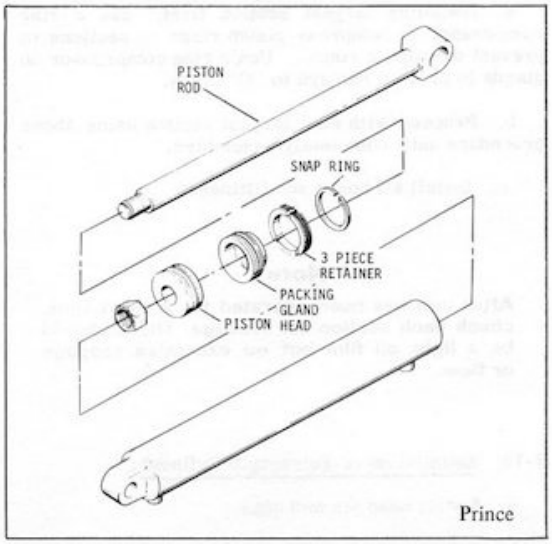


Figure 3-20. Outside Packing Cylinder Disassembly

a. Remove snap ring.

b. Remove 3 piece retainer by pushing retainer in.

c. Pull entire assembly from barrel.

d. Remove piston and gland from piston rod.

e. Remove piston seal and rod seal.

f. Reassemble in reverse order using new packing, wipers, and "O" rings and any other part necessary. Use Loctite procedure. See Page 3-12, Item 3-27.

3-19. To Remove Pump. (See figure 3-21).

a. Close gate valve on oil reservoir.

b. Remove universal joints from pump shaft. (If the pump is mounted directly to the power take-off assembly, this step is not necessary.)

c. Remove hoses at pump fittings.

d. Place floor jack under pump. Loosen attaching bolts and lower pump.

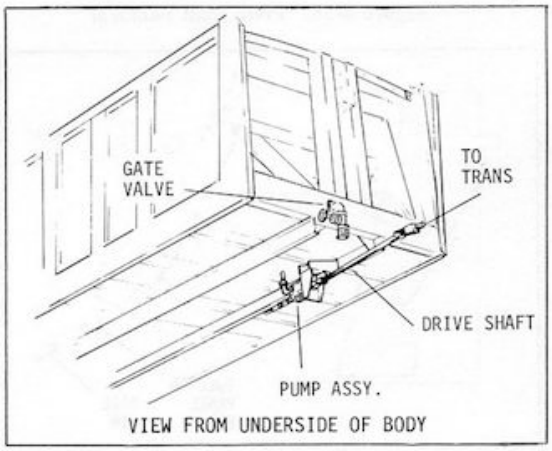


Figure 3-21. Pump Removal

3-20. General Service of Pump.

a. Insufficient pump pressure generally indicates internal wear of the gears; body and bearings and may require replacement. A slight wear pattern of gear and body is normal. Discolored bearings and shafts indicate the pump has been run at excessive speed with insufficient oil.

b. To replace oil seal, remove universal joint at the pump. Remove seal and replace.

3-21. To Remove Tailgate Lift Cylinder. (See figure

a. Lower tailgate to its fully lowered position.

b. Remove hoses from cylinder, plug hose ends and cylinder to keep dirt out.

c. Support cylinder with sling or chain fall.

d. Remove lower retainer and shaft.

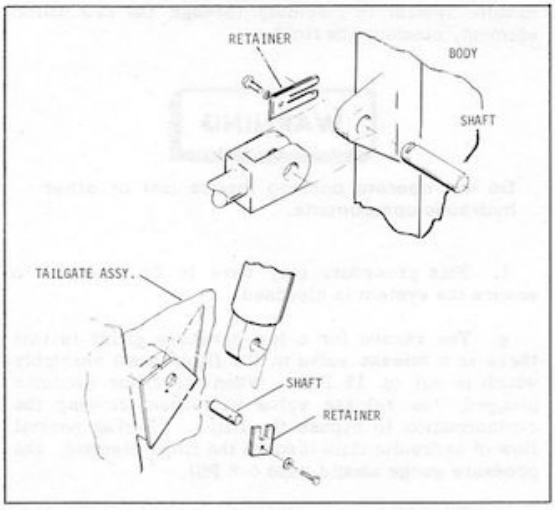


Figure 3-22. Tailgate Lift Cylinder Removal

3-22. To Disassemble Tailgate Lift Cylinder. (See figure 3-23).

a. Remove retainer ring.

b. Pull entire assembly from barrel.

c. Remove piston rod and piston.

d. Remove packing and "O" rings.

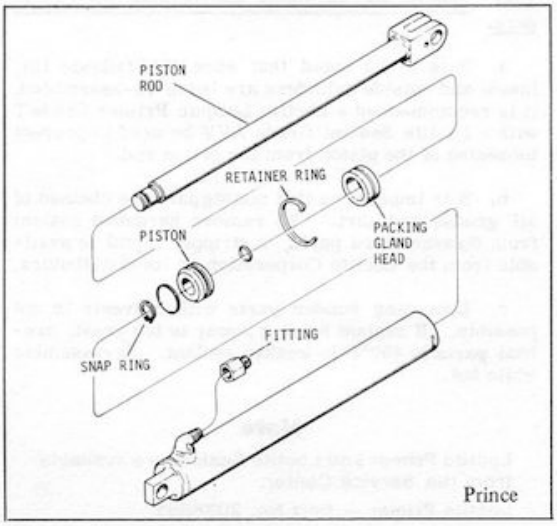


Figure 3-23. Tailgate Lift Cylinder Disassembly

Note

Re-assemble items in reverse order, using new packing, wipers and any other items necessary.
Use LOCTITE procedure, See page 3-12 Item 3-27.

3-23. To Remove Inside Packing Cylinder. (See figure 3-24).

a. Lower packing mechanism to bottom of hopper.

b. Remove hoses, plug hoses and cylinder ports to keep dirt out.

c. Support cylinder with sling or chain fall.

d. Remove upper and lower retainer plates and shafts.

3-24. To Disassemble Inside Packing Cylinder. (See figure 3-25).

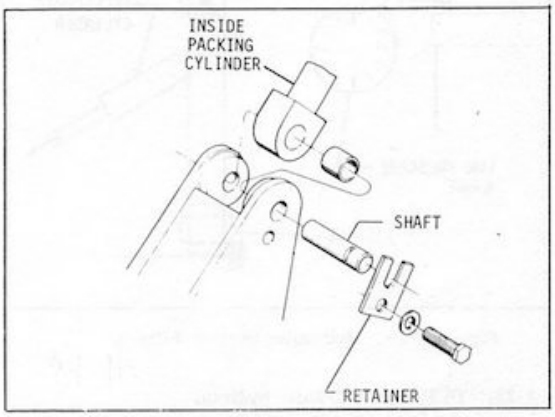


Figure 3-24. Remove Inside Packing Cylinder

a. Remove retainer ring.

b. Remove 3 piece retainer by pushing retainer in.

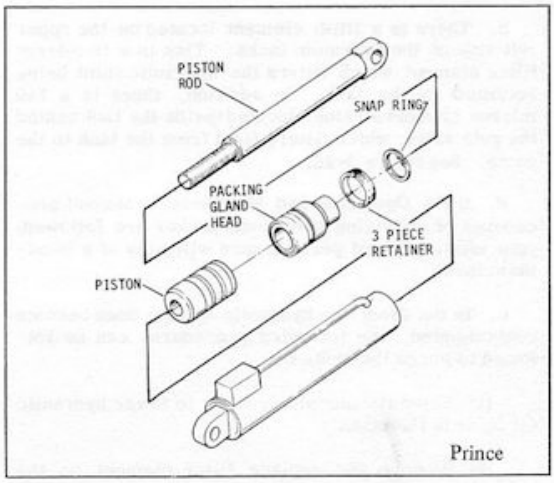


Figure 3-25. Inside Packing Cylinder Disassembly

c. Pull entire assembly from barrel.

d. Remove piston rod and piston.

e. Remove packing and wipers.

Note

Re-assemble items in reverse order, using new packing, wipers and "O" rings and any other items necessary.

Use LOCTITE procedure, See page 3-12 Item 3-27.

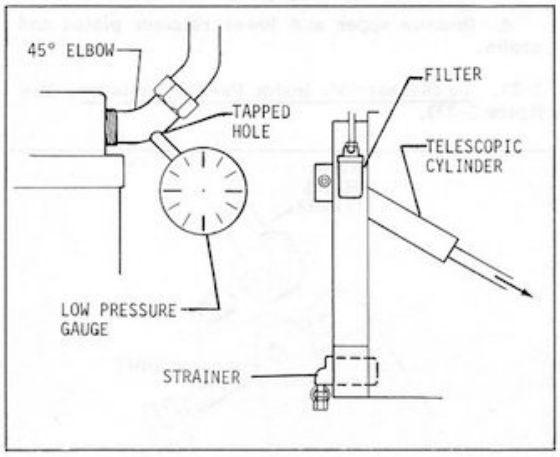


Figure 3-26. Hydraulic System Filters

3-25. To Purge Hydraulic System.

a. With improved hydraulic efficiency and a full performance hydraulic system, it is essential that the system be clean of contamination.

b. A filtering system has been provided on the current loadpacker, Models LP-700-9 and LP-900, that will aid the owners in keeping the system clean.

c. There is a filter element located on the upper left side of the hydraulic tanks. This is a 10 micron filter element which filters the hydraulic fluid being returned to the tank. In addition, there is a 140 micron element strainer located inside the tank behind the gate valve, which filters fluid from the tank to the pump. See figure 3-26.

d. If the Operation and Maintenance Manual procedures of servicing your load packer are followed, your efficiency and performance will stay at a maximum level.

e. In the event the hydraulic system does become contaminated, the following procedures can be followed to purge the system.

(1) Extend telescopic cylinder to lower hydraulic oil level in the tanks.

(2) Remove and replace filter element on the upper left hand side of the tank.

(3) At the same time, remove the 45° elbow located at the filter inlet, drill and tap for a pressure gauge port, reinstall and insert a low pressure gauge. (See figure 3-26).

(4) The PTO may then be engaged allowing hydraulic system to circulate through the new filter element, cleaning the fluid.

WARNING

Do not operate packing mechanism or other hydraulic components.

f. This procedure may have to be repeated to ensure the system is cleansed.

g. The reason for a low pressure gauge is that there is a release valve in the filter head assembly which is set at 15 PSI. When the filter becomes plugged, the release valve will open allowing the contamination to bypass the filter. During normal flow of hydraulic fluid through the filter element, the pressure gauge should read 4-6 PSI.

h. Should there be any further questions or information required, contact the Service Department.

3-26. Special Re-Assembly Instructions for Steel Jacketed Bearing.

a. When re-installing the steel jacketed bearings, the mating surfaces must be cleaned of all grease and dirt. After this is completed, an application of Loctite Locquic Primer Grade T be applied to both surfaces, followed by a Loctite Sealant Grade AVV. The assembly may then be completed allowing (2) two hours for a full cure.

3-27. Special Re-Assembly Instructions for Cylinders.

a. It is to be noted that when the tailgate lift, inside and outside cylinders are being re-assembled, it is recommended a Loctite Locquic Primer Grade T with a Loctite Sealant Grade AVV be used to prevent loosening of the piston from the piston rod.

b. It is imperative that mating parts be cleaned of all grease and dirt. To remove hardened sealant from disassembled parts, a stripper liquid is available from the Loctite Corporation or its distributors.

c. Loosening bonded parts with solvents is not possible. If sealant holding power is too great, preheat parts to 450°F to weaken sealant. Disassemble while hot.

Note

Loctite Primer and Loctite Sealant are available from the Service Center.

Loctite Primer — Part No. 2076591

Loctite Sealant — Part No. 2076592

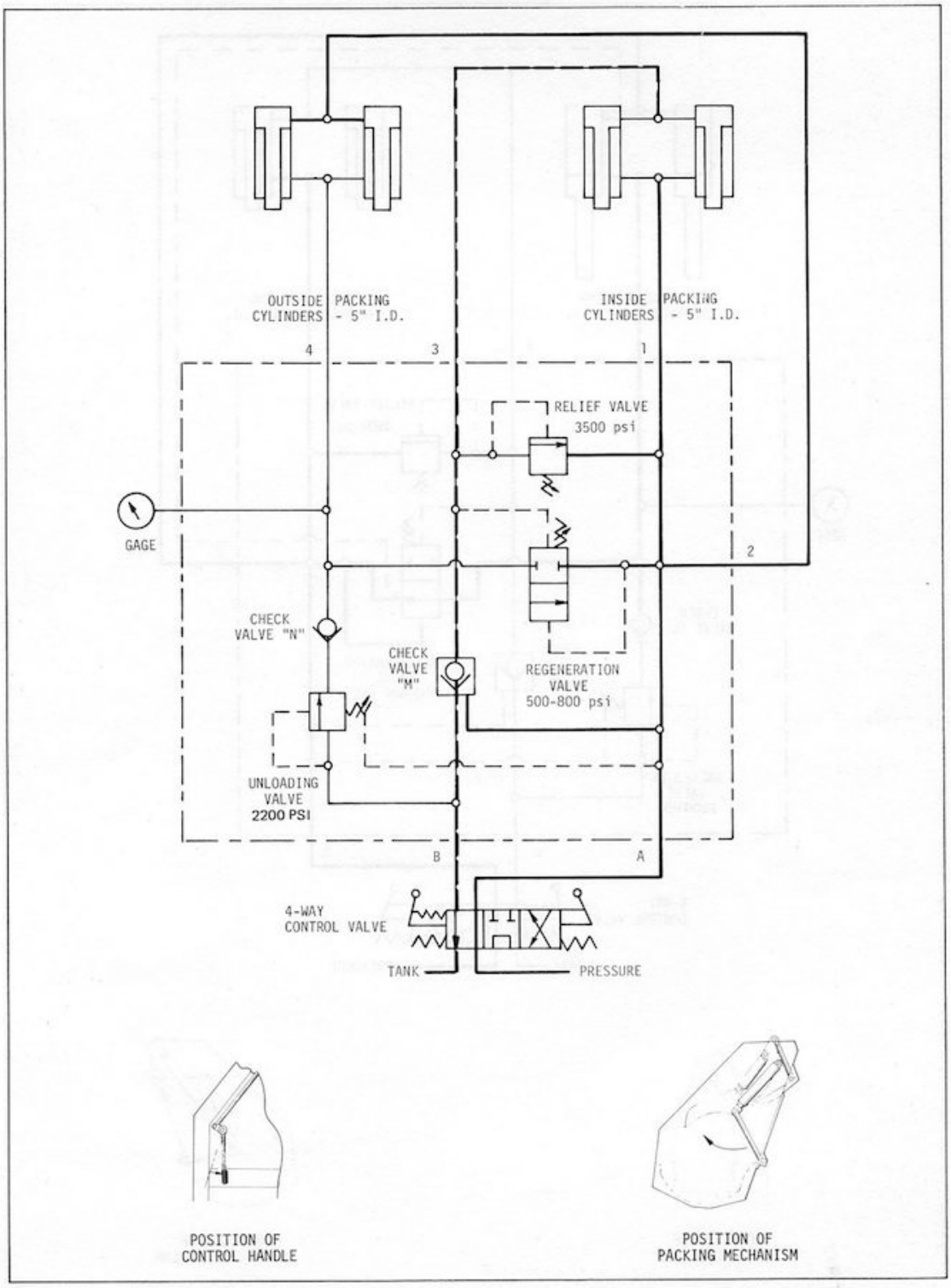

OUTSIDE PACKING CYLINDERS - 5" I.D.
INSIDE PACKING CYLINDERS - 5" I.D.
4
3
1
2
RELIEF VALVE 3500 psi
GAGE
CHECK VALVE "N"
CHECK VALVE "M"
REGENERATION VALVE 500-800 psi
UNLOADING VALVE 2200 PSI
B
A
4-WAY CONTROL VALVE
TANK
PRESSURE
POSITION OF CONTROL HANDLE
POSITION OF PACKING MECHANISM

Figure 3-27

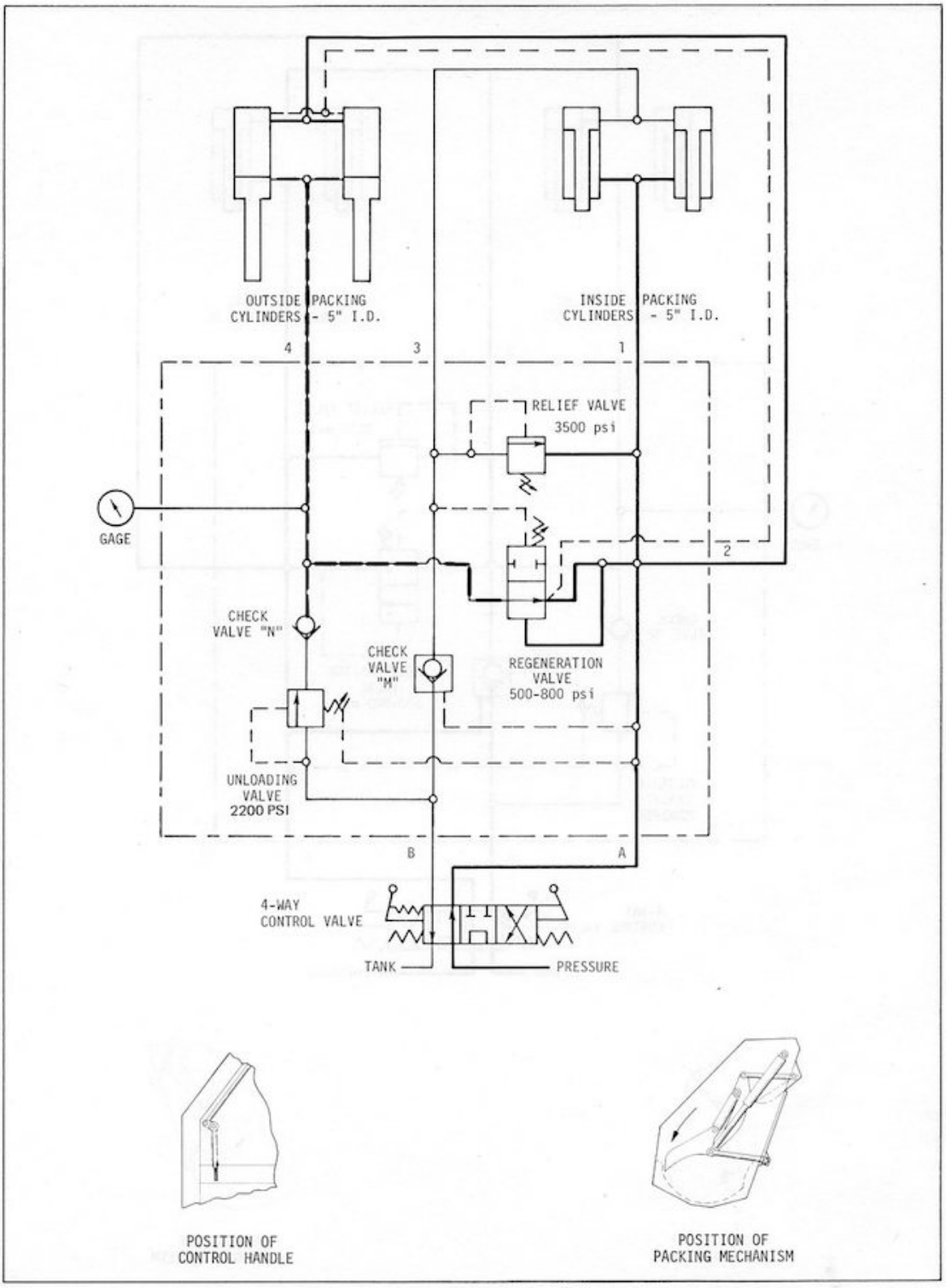


Figure 3-28
EFF. S/N
400000

Date
9-1-77

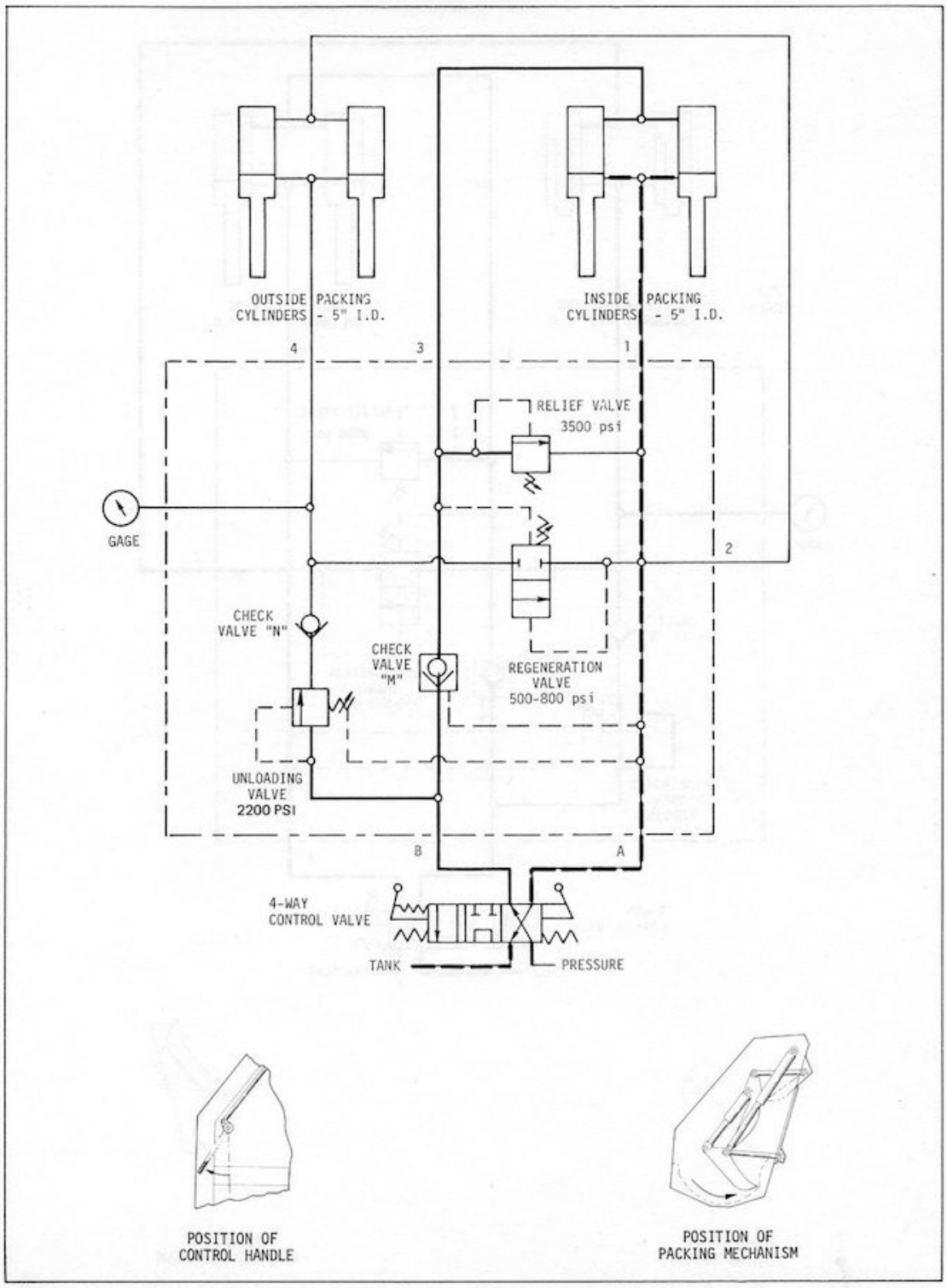


Figure 3-29
EFF. S/N 400000

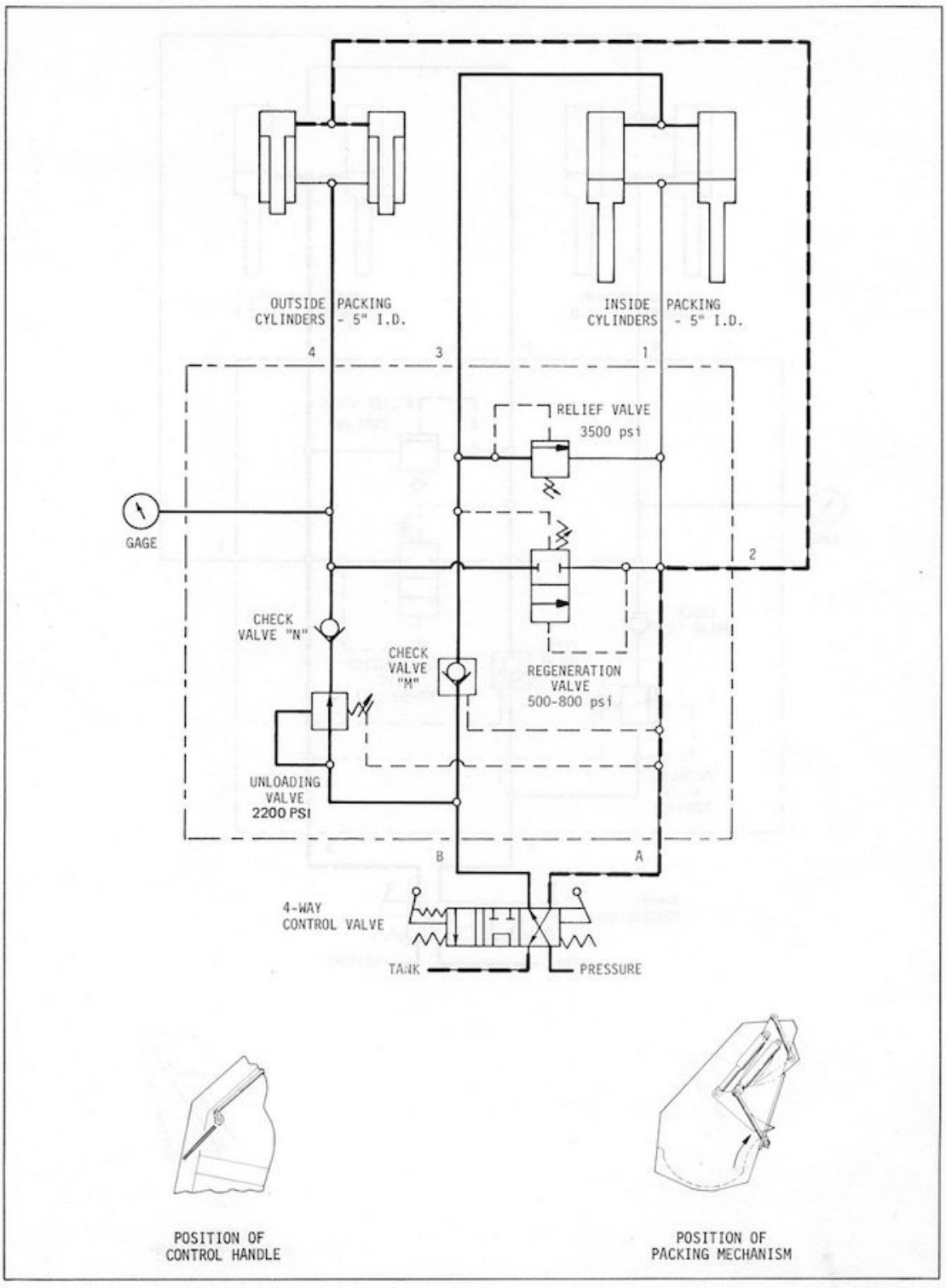


Figure 3-30
EFF. S/N
400000

Date
9-1-77

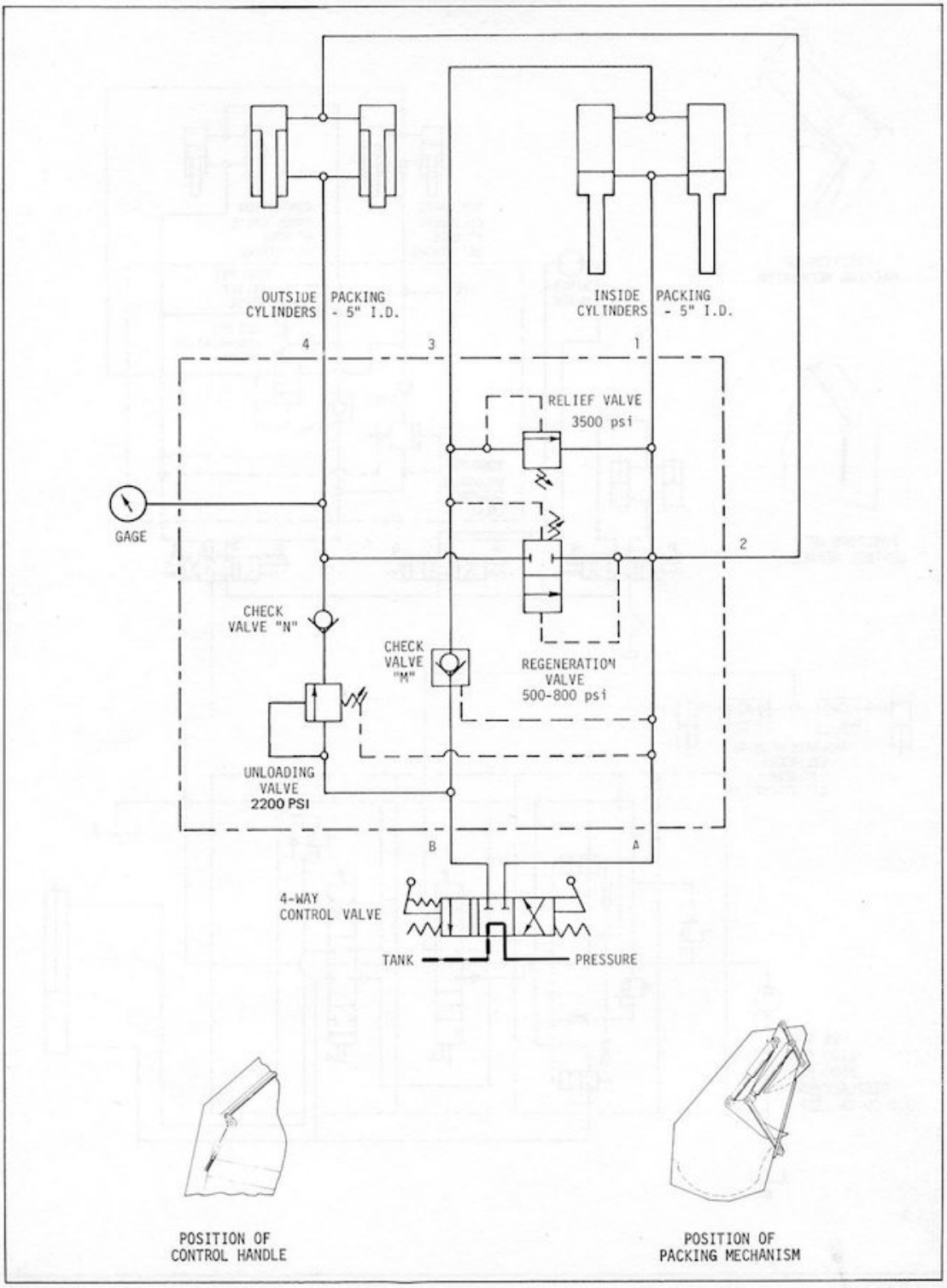

OUTSIDE PACKING CYLINDERS - 5" I.D.
INSIDE PACKING CYLINDERS - 5" I.D.
4
3
1
2
RELIEF VALVE
3500 psi
GAGE
CHECK VALVE "N"
CHECK VALVE "M"
REGENERATION VALVE
500-800 psi
UNLOADING VALVE
2200 PSI
B
A
4-WAY CONTROL VALVE
TANK
PRESSURE
POSITION OF CONTROL HANDLE
POSITION OF PACKING MECHANISM

Figure 3-31

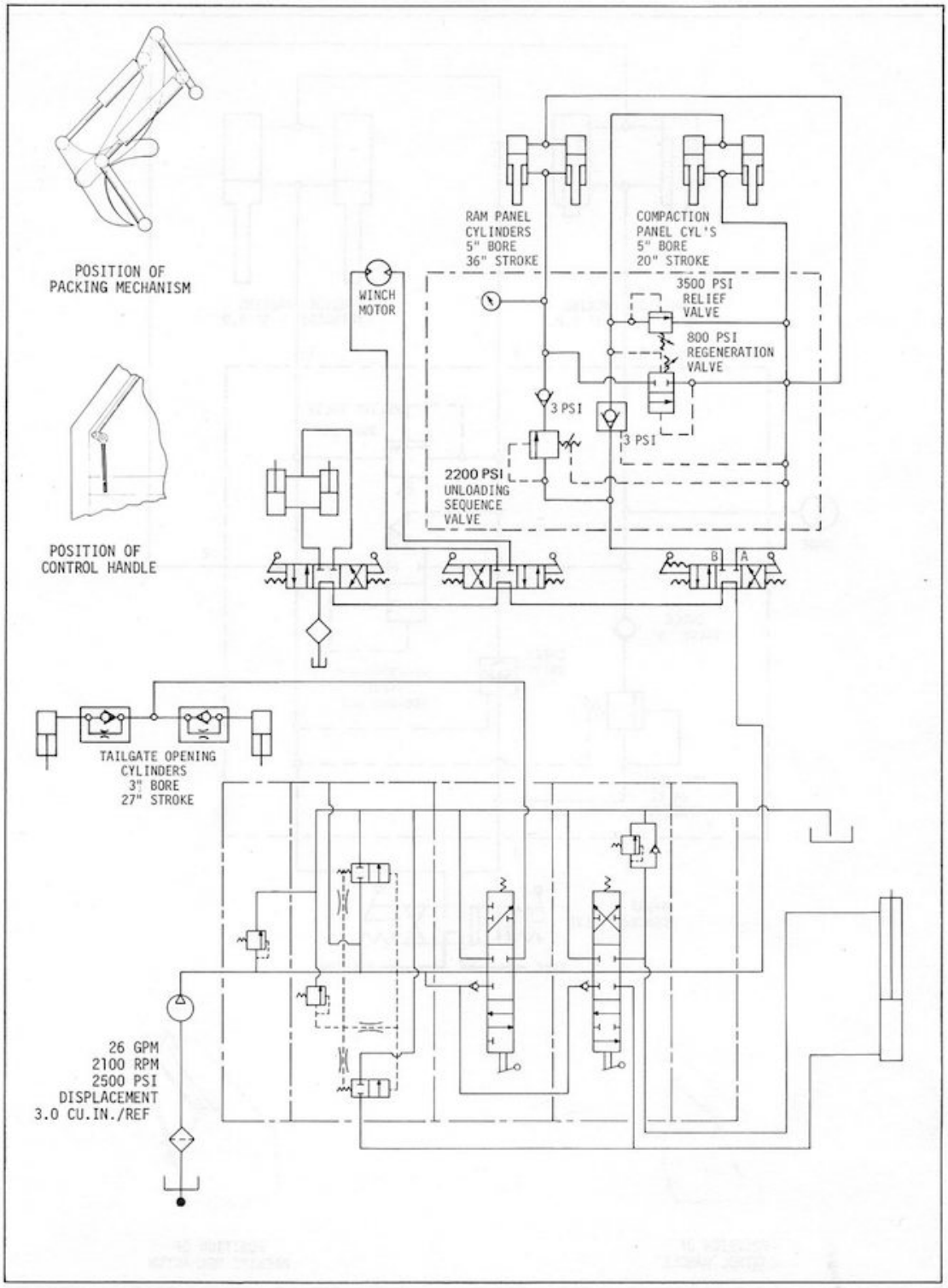

POSITION OF
PACKING MECHANISM
POSITION OF
CONTROL HANDLE
RAM PANEL
CYLINDERS
5" BORE
36" STROKE
COMPACTION
PANEL CYL'S
5" BORE
20" STROKE
WINCH
MOTOR
3500 PSI
RELIEF
VALVE
800 PSI
REGENERATION
VALVE
3 PSI
3 PSI
2200 PSI
UNLOADING
SEQUENCE
VALVE
B
A
TAILGATE OPENING
CYLINDERS
3" BORE
27" STROKE
26 GPM
2100 RPM
2500 PSI
DISPLACEMENT
3.0 CU.IN./REF

Figure 3-32.