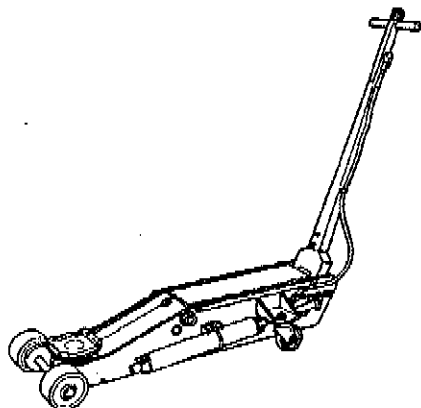


## OWNER/OPERATOR MANUAL



### SPECIFICATIONS

<b>RATED LIFTING CAPACITY</b>	<b>20,000 lbs</b>
LOW PICK UP HEIGHT	6-1/2"
HIGH LIFTING POINT	25"
LIFT CAP SIZE (SQUARE)	7-1/2"
CHASSIS LENGTH	53-3/8"
CHASSIS HEIGHT	9-3/4"
HANDLE LENGTH	50"
FRONT WHEEL DIAMETER	6"
CASTER WHEEL DIAMETER	4"
MAXIMUM AIR PRESSURE SUPPLY	150 psi
REQUIRED AIR PRESSURE FOR LIFTING LOADS	140 psi for 20,000 lbs 125 psi for 17,500 lbs 100 psi for 13,000 lbs 75 psi for 10,000 lbs
SHIPPING WEIGHT	430 lbs

### DESCRIPTION

Model W93662 jack is designed for shops where heavy equipment is serviced. The jack provides the following features:

- Operates manually or with air.
- Dual action pump raises the jack quickly to contact a vehicle lift surface.
- Long chassis and handle reaches under long, low vehicles.
- Handle adjusts to three pumping positions for operator convenience and low clearance vehicles.
- Automatic overload protection prevents overloading and exceeding the jack rated lifting capacity.

### OWNER/OPERATOR RESPONSIBILITY

It is the owner/operator responsibility to properly use and maintain this equipment.

The instructions and warning contained in this manual shall be read and under-

stood by the owner/operator prior to operating this equipment.

If an owner/operator does not understand English, the contents of this manual shall be explained in the owner/operator native language to assure the owner/operator comprehends.

It is the owners/operators responsibility to maintain the legibility of all warning and instruction labels.

The owner/operator shall retain this manual for future reference to important warnings, operating and maintenance instructions.

**⚠ WARNING**

**FOR YOUR SAFETY**



**USE VEHICLE STANDS OR OTHER APPROPRIATE SUPPORTS TO SUPPORT THE VEHICLE /LOAD BEFORE GETTING UNDER IT.**

### ⚠ WARNING

**FAILURE TO FOLLOW WARNINGS MAY RESULT IN INJURY OR PROPERTY DAMAGE**

**USE VEHICLE STANDS AFTER LIFTING**

- \* Use only as a lifting device.
- \* Center the load on the saddle.
- \* Lift only at locations suggested by the manufacturer.
- \* Use jack and vehicle stand saddle lugs for gripping.
- \* Do not exceed rated capacity.
- \* Use only on hard level surfaces.
- \* Set parking brakes and chock wheels.
- \* Do not crawl under vehicle when placing stands.
- \* Lower the vehicle slowly.
- \* For safety, follow the instructions in Owner's Manual.

## INSPECTION

Prior to operation or maintenance a visual jack inspection shall be made. Check for bent or worn chassis parts, hydraulic leaks, damaged, loose or missing parts.

Check jack operation by connecting air hose to jack, closing release valve and pressing air control valve. Make sure jack operates smoothly and is not binding or requires lubrication. If jack does not respond to air pressure, disconnect air hose and manually pump jack handle. If jack still does not respond to pump action, refer to TROUBLESHOOTING and perform AIR PURGING procedure.

If jack is damaged, badly worn, or operates abnormally it shall be removed from service. Contact a factory authorized service center for repair.

If the jack has been subjected to an abnormal load or shock, the jack shall be inspected by a factory authorized service center.

An annual jack inspection is recommended to be performed by a factory authorized service center.

## OPERATION

Jack operation is controlled by external air pressure, the air control valve and opening and closing the release valve with the release knob located on the top of the handle. To raise the jack, connect air hose to jack, firmly close the release valve by turning the release knob clockwise and pressing air control valve. To lower the jack, open the release valve by turning the release knob counterclockwise. The jack may also be operated manually by pumping the jack handle.

When operated manually, the dual action pump will raise the jack quickly until the load is contacted. The pump will then switch automatically to high pressure to raise the load.

The jack handle position may be changed by pulling out the release knob to disengage the lock and moving the handle to

the desired position. Three handle positions are provided for operator convenience.

## RAISING A VEHICLE

- A. Set vehicle parking brakes and block vehicle wheels.
- B. Open release valve by turning release knob counterclockwise and allow jack to fully retract.
- C. Connect air hose to jack. 140 psi is required for rated lifting capacity (20,000 lbs.).
- D. Position jack under desired vehicle lifting point suggested by manufacturer. Floor area in front of jack wheels must be free of obstructions to allow jack to move forward while lifting.
- E. Select the best handle position to operate the jack by pulling up on release knob.
- F. Firmly close release valve by turning release knob clockwise.
- G. The jack lift cap must contact the vehicle lift surface squarely and as close to center of lift cap as possible.
- H. Press air control valve and raise vehicle to desired height. **DO NOT** lift vehicle any higher than is needed to make repairs.

- I. **DO NOT** crawl under vehicle while positioning vehicle stands.
- J. Slowly and carefully lower vehicle on to vehicle stands or other appropriate supports.

## LOWERING A VEHICLE

- A. Make sure release valve is closed by firmly turning release knob clockwise.
- B. Press air control valve and raise vehicle just enough to clear vehicle stands or support means.

- C. Remove vehicle stands or other support means from under vehicle. **DO NOT** crawl under vehicle when removing vehicle stands.
- D. Slowly turn release knob counterclockwise to open release valve and lower vehicle.
- E. When vehicle is fully lowered, remove jack from under vehicle.

## MAINTENANCE

### CHECKING HYDRAULIC OIL LEVEL

Fill hydraulic reservoir as follows:

- A. Open release valve by turning release knob counterclockwise and allow jack to fully retract.
- B. Raise front end of the cover over hydraulic unit assembly to gain access to filler plug on top of the reservoir.
- C. Clean dirt from around filler plug and remove filler plug from hydraulic unit assembly.
- D. Fill hydraulic reservoir with clean hydraulic jack oil to a level that just covers the hydraulic cylinder visible through the filler hole. **Do not overfill.**

 **CAUTION**

**BRAKE OR TRANSMISSION  
FLUIDS WILL DAMAGE  
EQUIPMENT SEALS.**

- E. Reinstall filler plug in hydraulic unit assembly. Hand tightening is usually adequate.
- F. Lower cover over hydraulic unit assembly and latch by pressing downward.

### LUBRICATION

Lubricate jack as follows:

- A. Open release valve by turning release knob counterclockwise and allow jack to fully retract.
- B. Raise cover over hydraulic unit assembly by lifting the end opposite the handle.
- C. Apply oil to release mechanism universal joint, pump linkages and all moving joints at the lower end of the handle.
- D. Apply chassis grease to bell crank ram pin and fulcrum pin grease fittings until pin is fully lubricated.
- E. Close release valve by turning release knob clockwise.
- F. Pump jack handle until jack is fully extended.
- G. Apply oil to all pin joints under lifting cap.
- H. Open release valve by turning release knob counterclockwise and allow jack to fully retract.
- I. Apply oil or chassis grease to wheels, caster swivel bearings, and the hydraulic unit trunion bushings until fully lubricated.
- J. If required, repeat steps C through I until jack operates and moves freely.
- K. Lower cover over hydraulic unit assembly and press down to latch.

## TROUBLESHOOTING

If the following procedures do not correct the problem, contact a factory authorized service center. When submitting a jack or equipment to be repaired, be sure to state the nature of the problem and indicate if a repair cost estimate is required.

### AIR PURGING

As with any hydraulic unit, the jack may occasionally become air bound

due to being tipped over during shipment or handling. To purge air from jack hydraulic circuit, perform the following procedure:

- A. Open release valve by turning release knob on end of jack handle one full turn counterclockwise.
- B. Rapidly pump jack handle six or more full strokes to purge air from hydraulic circuit.
- C. Close release valve by turning release knob clockwise.
- D. Pump jack handle until jack is fully extended. Pump jack handle two or three more full strokes to activate the jacks overtravel limiting device.
- E. Open release valve by turning release knob counterclockwise and allow jack to retract quickly.
- F. Close release valve by turning release knob clockwise.
- G. Check pump action. Close release valve by turning clockwise and repeat procedure using air assist system. If jack does not respond, repeat the above procedure several times until air is fully purged from the hydraulic system.

### COMMON PROBLEMS

#### JACK FEELS SPONGY WHEN LIFTING VEHICLE.

- Air in hydraulic system. Refer to AIR PURGING procedure and purge air from system.

#### JACK WILL NOT LIFT TO FULL HEIGHT.

- Oil level low. Refer to CHECKING HYDRAULIC OIL LEVEL procedure in maintenance section of this manual.

#### JACK WILL NOT HOLD LOAD.

- Release valve not closed or not sealing. Internal repairs may be required.

- Dirt in hydraulic oil or pump ball valves not seating. Flush hydraulic circuit by closing release valve and pumping jack to maximum height. Open release valve and quickly lower jack by manually pushing on lift cap. Repeat if necessary. If this procedure does not correct the problem, internal repairs are required.

#### LIFTING ARM WILL NOT LOWER PROPERLY.

- Broken return springs. Replace return springs.
- Lift arm bearings are binding. Refer to LUBRICATION procedure and lubricate lift arm.
- Hydraulic cylinder ram binding. Repair hydraulic cylinder assembly.
- Fulcrum pin, parallel link pin, bell crank pin, ram cross pin bent or worn. Repair jack as required.

#### AIR-HYDRAULIC PUMP STALLS UNDER HEAVY VEHICLE WEIGHT.

- Air pressure too low. Check air pressure supply. 140 psi is required for rated lifting capacity (20,000 lbs.).
- Air hose restricted or leaking. Check air hose for restrictions or leaks.

#### AIR-HYDRAULIC PUMP LIFTS VEHICLE WEIGHT TO SLOW.

- Air-hydraulic pump requires lubrication. To lubricate, open air valve on handle and squirt 1/2 ounce SAE 30 oil into air inlet. Connect air hose and operate jack to distribute oil internally.
- Air lines restricted or too small.
- Inadequate air supply.

#### AIR-HYDRAULIC PUMP DOES NOT CYCLE. AIR RUSHING OUT EXHAUST PORT.

- 225371 rubber cushion dislodged on spring. Replace rubber cushion.
- 223187 valve and plunger stuck open. Clean valve and valve seat. Replace valve and plunger if required.

## COMMON PROBLEMS (CONT)

- Weep holes plugged in 223183 retainer plug. Remove and clean. Reassemble to dimensions shown on SERVICE PARTS drawing.
- 223173 return spring broken. Replace spring.

**AIR-HYDRAULIC PUMP DOES NOT CYCLE. NO AIR COMING FROM EXHAUST PORT.**

- 223187 valve and plunger not opening. Check for bent 223202 trip washer or bent/rusted valve plunger. Replace parts as required.

**AIR-HYDRAULIC PUMP CYCLES TO SLOW. JACK LIFTS LOAD SLOWER THAN NORMAL.**

- Weep holes plugged in 223183 retainer plug. Remove and clean. Reassemble to dimensions shown on SERVICE PARTS drawing.

**AIR-HYDRAULIC PUMP CYCLES TO FAST. JACK LIFTS LOAD SLOWER THAN NORMAL.**

- 225384 trip spring deformed or broken. Replace trip spring.

### LIMITED WARRANTY

LINCOLN AUTOMOTIVE warrants that jacks and related service equipment sold with the brand names Lincoln, Blackhawk Automotive, Blackhawk Automotive Banner, Blackhawk Automotive Porto-Power, and Winner will be free from defects in material and workmanship during the one (1) year following the date of purchase. This warranty is extended to the original retail purchaser only. If a jack or related service equipment proves to be defective during this warranty period, it will be repaired or replaced without charge. To obtain repair or replacement, it must be shipped, transportation charges prepaid, with proof of date of purchase to a Lincoln Automotive Authorized Warranty and Service Center, within one (1) year following the date of purchase. This warranty does not apply to parts damaged from accident, overload, or abuse, nor does it apply to any equipment which has been altered or used with special attachments other than those recommended by Lincoln Automotive. No other express warranty applies to jacks and related service equipment manufactured by Lincoln Automotive.

ANY IMPLIED WARRANTIES applicable to jacks and related service equipment manufactured by Lincoln Automotive, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WILL LAST ONLY FOR ONE (1) YEAR FROM THE DATE OF PURCHASE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

ONE EXCEPTION TO THE ABOVE WARRANTY BEING PORTO-POWER HYDRAULIC PUMPS & RAMS WHICH HAVE A LIFETIME WARRANTY FROM DATE OF DELIVERY TO USER AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS. WARRANTY DOES NOT ALTERED PRODUCTS, OR USE OF IMPROPER FLUIDS

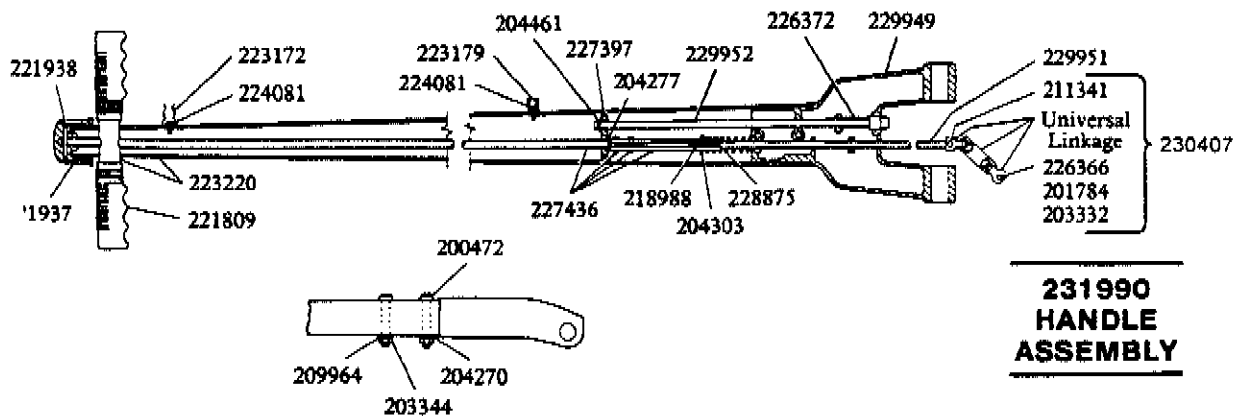
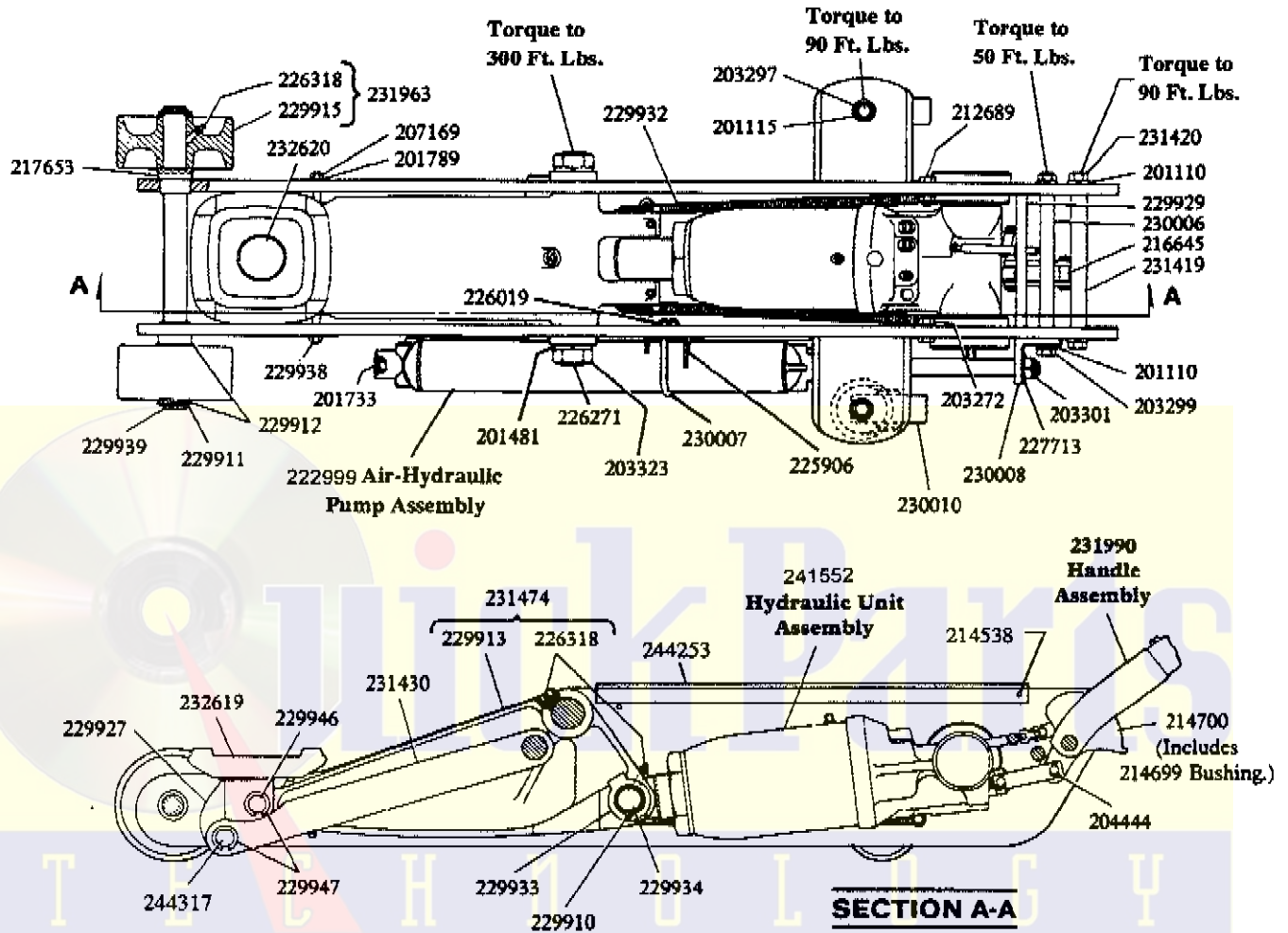
In no event shall Lincoln Automotive be liable for incidental or consequential damages. The liability of Lincoln Automotive on any claim for loss or damage arising out of the sale, resale, or use of a jack or related service equipment shall in no event exceed the purchase price. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

# SERVICE PARTS

Lincoln provides Factory Authorized Service Centers that stock equipment and replacement parts. Contact Lincoln Customer Service, One Lincoln Way, St. Louis, MO 63120-1578, (314) 679-4300 for your nearest Service Center.

When ordering replacement parts, list: part number, description, model number, and series letter.

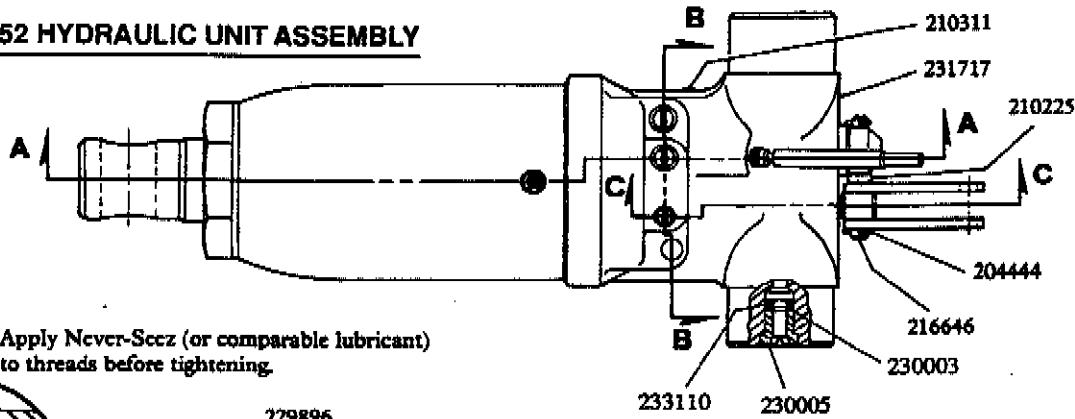


## 231990 HANDLE ASSEMBLY

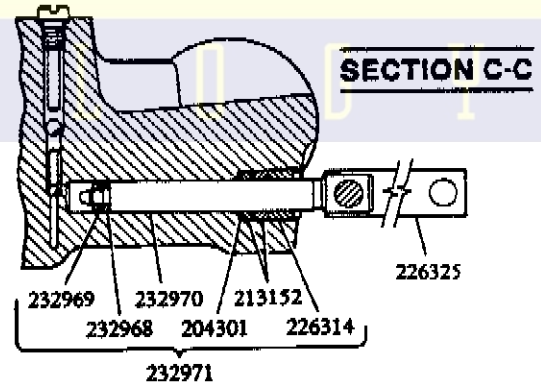
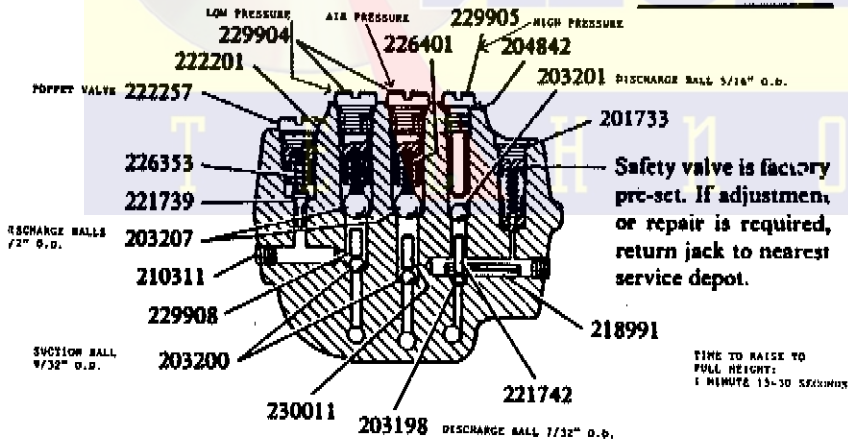
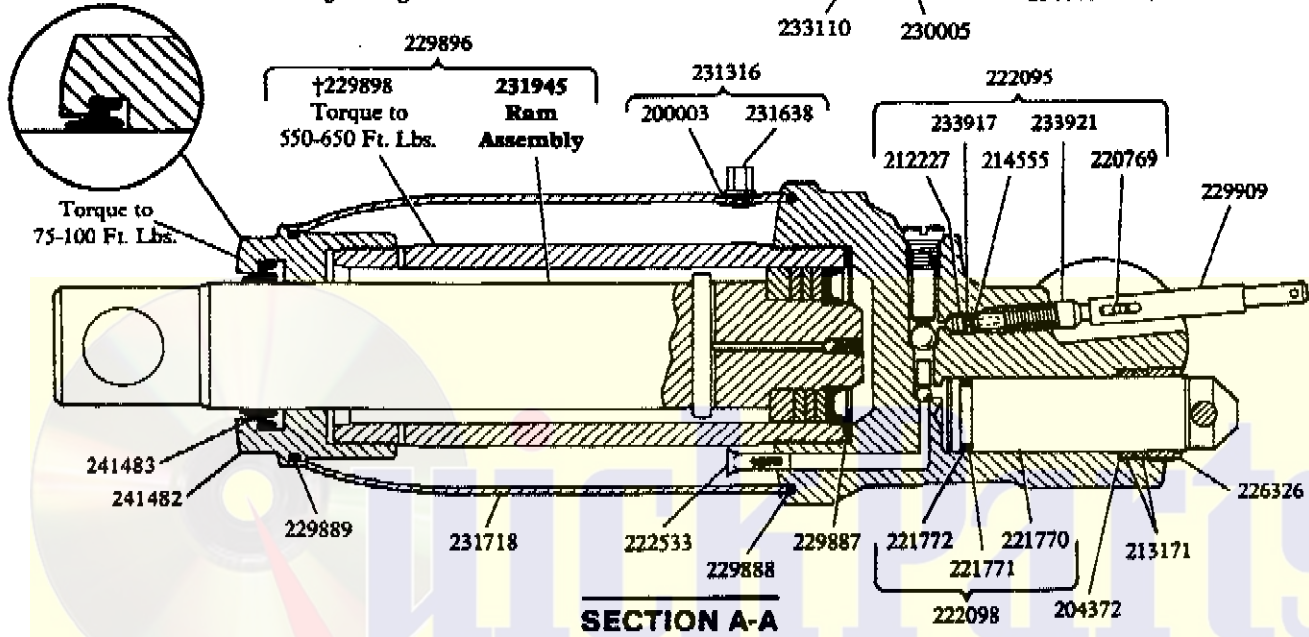
240618 REPAIR KIT  
240632 LABEL KIT

# SERVICE PARTS (CONT)

## 241552 HYDRAULIC UNIT ASSEMBLY

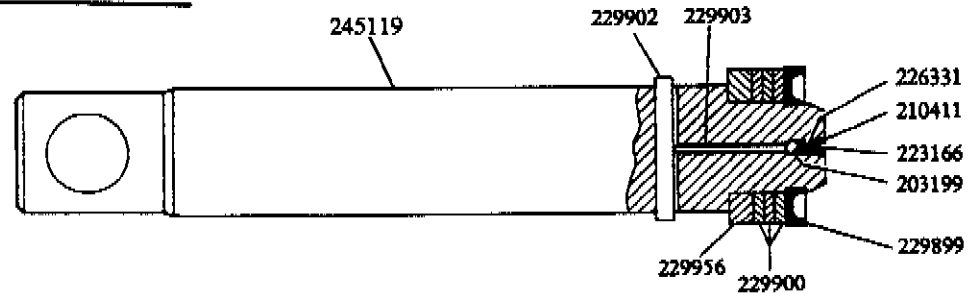


†NOTE: Apply Never-Seccz (or comparable lubricant) to threads before tightening.



NOTE:  
POCKET VALVE OPERATES UNTIL IT REACHES 150 PSI. THEN THE POCKET VALVE OPENS & ALLOWS THE HIGH PRESSURE CIRCUIT TO OPEN FOR RAISING THE LOAD.

231945  
**RAM ASSEMBLY**



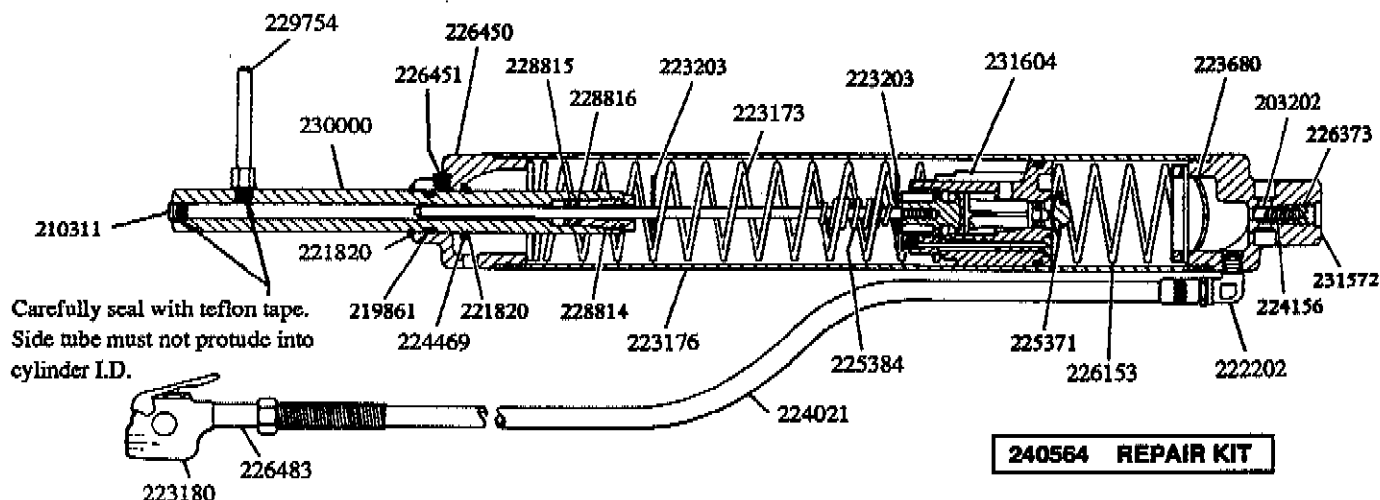
## SERVICE PARTS (CONT)

PART	QTY	DESCRIPTION	PART	QTY	DESCRIPTION
200003	1	Gasket	226353	1●	Spring
200472	2	Bolt	226366	1	Bolt
201110	4	Lockwasher	226372	1	Plunger spring
201115	2	Lockwasher	226401	1●	Spring
201481	2	Lockwasher	227397	1	Handle release link
201733	2	Expansion plug	227436	1	Turning rod assembly
201784	1	Lockwasher	227713	1	Lockwasher
201789	2	Lockwasher	228875	1	Spring
203198	1●	Ball	229887	1●	O-ring
203199	1●	Ball	229888	1●	O-ring
203200	2●	Ball	229889	1●	O-ring
203201	1●	Ball	229896	1	Ram & cylinder assembly
203207	2●	Ball	229897	1	Ram
203272	2	Nut	229898	1	Cylinder
203297	2	Nut	229899	1●	U-cup packing
203299	2	Nut	229900	3●	Back-up washer
203301	1	Nut	229902	1	Cross pin
203323	2	Nut	229903	1	Pin
203332	1	Nut	229904	2	Plug
203344	2	Nut	229905	1	Plug
204270	2	Washer	229908	1	Spacer
204277	1	Washer	229909	1	Slotted tube
204301	1	Washer	229910	2	Retaining ring
204303	1	Washer	229911	2	Retaining ring
204372	1	Washer	229912	4	Washer
204444	4	Cotter pin	229913	1	Bell crank
204461	1	Cotter pin	229915	2	Front wheel
204842	1●	Gasket	229927	1	Cap housing
207169	2	Nut	229929	1	Bearing
209964	2	Lockwasher	229932	2	Spring
210225	1	Spacer	229933	2	Plate
210311	4	Pipe plug	229934	1	Pin
210411	1●	Washer	229938	1	Pin
211341	1	Rivet	229939	1	Axle
212227	1	Release Valve	229946	1	Pin
212689	2	Bolt	229947	4	Retaining ring
213152	2●	Packing ring	229949	1	Handle socket
213171	2●	Packing ring	229951	1	Extension rod
230407	1	Universal linkage assembly	229952	1	Plunger assembly
214538	4	Groove pin	229956	1	Heel plate
214555	1●	O-ring	229989	1	Air-hydraulic pump assembly
214699	1	Bushing	230003	1●	Back-up washer
214700	1	Handle segment & bushing	230005	1	Gland nut
216645	1	Pin	230006	1	Bumper pin
216646	1	Pin	230007	1	Hanger
217653	2	Roll pin	230008	1	Bracket
218988	1	Roll pin	230010	2	Caster
218991	1	Roll pin	230011	1	Spacer
220769	1	Cross pin	231316	1	Filter plug & gasket ass'y.
221739	1	Poppet	231419	1	Fulcrum pin
221742	1	Ball stop plug	231420	2	Bolt
221770	1	Speed pump	231430	2	Parallel link
221771	1●	Back-up washer	231474	1	Bell crank & fittings
221772	1●	Quad ring	231638	1	Filter plug & vent valve
221809	2	Handle grip	231718	1	Oil tank
221937	1	Release knob	231733	1	Base
221938	1	Roll pin	231945	1	Ram assembly
222095	1	Release stem assembly	231963	1	Front wheel assembly
222098	1	Speed pump assembly	231990	1	Handle assembly
222201	1●	Spring	232619	1	Lifting cap
222257	1	Plug	232620	1	Swivel pin
222533	3●	Screen	232968	1●	Back-up washer
223166	1●	Screen	232969	1●	U-cup packing
223172	1	Hose clip	232970	1	Pressure pump
223179	2	Hose clamp	232971	1	Pressure pump & gland packing ass'y.
223220	1	Handle tube & cross bar	241552	1	Hydraulic unit assembly
224081	2	Screw	233110	1●	U-cup packing
225906	1	Bracket	233917	1	Plastic spring
226019	2	Locknut	233921	1	Release stem
226271	1	Fulcrum pin	240632	1	Label kit
226314	1	Gland nut	241482	1	Tank nut
226318	5	Grease fitting	241483	1●	Seal
226325	2	Pump link	244253	1	Cover
226326	1	Gland nut	244317	1	Pin
226331	1●	Spring			

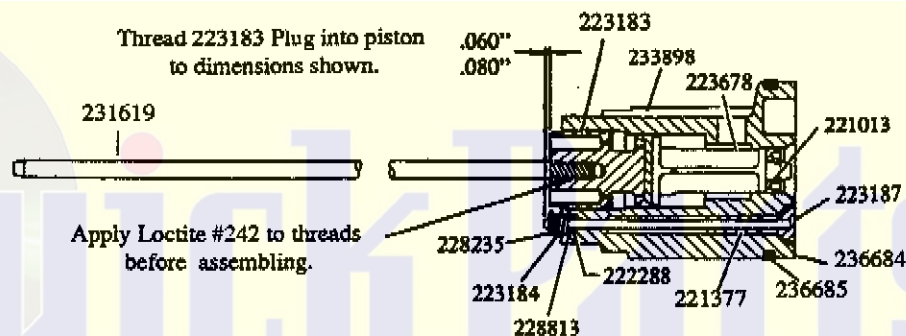
● Included in 240618 Repair Kit.

# SERVICE PARTS (CONT)

## 229999 AIR-HYDRAULIC PUMP ASSEMBLY



### 231604 PISTON ASSEMBLY



PART	QTY	DESCRIPTION	PART	QTY	DESCRIPTION
203202	1	Ball	225371	1	Rubber cushion
210311	1	Pipe Plug	225384	1	Trip spring
219861	1●	O-ring	226153	1	Spring
221013	1●	U-cup packing	226373	1	Adjusting screw
221377	1	Roll pin	226450	1	End block
221820	1	Retaining ring	226451	2	Set screw
222202	1	Elbow	226483	1	Pipe nipple
222288	1●	O-ring	228235	1	Cotter pin
223173	1	Return spring	228813	1	Washer
223176	1	Air cylinder	228814	1●	Gland nut
223180	1	Air valve	228815	1●	U-cup packing
223183	1	Plug	228816	1●	Washer
223184	1	Spring	229754	1	Extension tube
223187	1●	Valve & plunger	230000	1	Pump cylinder
223194	1	Spring & rubber cushion	231347	1	Piston & roll pin ass'y.
223203	2	Trip washer	231572	1	Cylinder cap
223678	1	Pump packing & piston ass'y.	231604	1	Piston assembly
223680	1	Screen	231619	1	Pump rod
224021	1	Air hose assembly	236684	1	Piston
224156	1	Spring	236685	1	Sealing ring
224469	1	Washer			

● Included in 240564 Repair Kit.