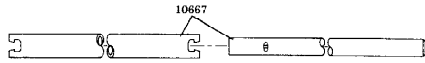


**PORTABLE  
HYDRAULIC JACK**  
50 TON CAPACITY

**Models 91-602  
93602**  
**Series "N"**

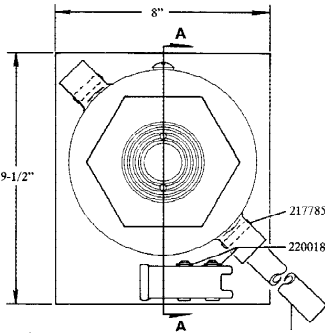
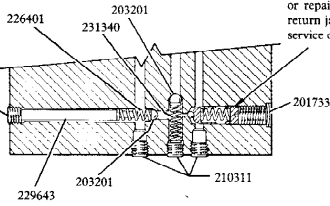
**SPECIFICATIONS**

Height (Closed)	Power Raise	Maximum Height	Lift Cap Diameter
12"	7"	19"	3-1/4"



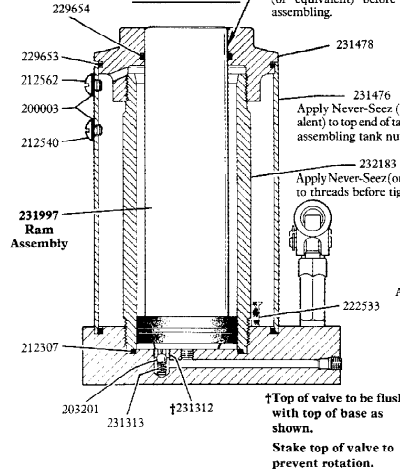
**SECTION B-B**

Safety valve is factory pre-set. If adjustment or repair is required, return jack to nearest service depot.

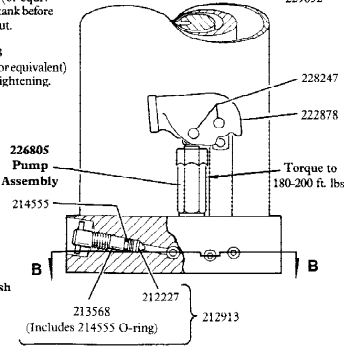


**SECTION A-A**

Lubricate I.D. of tank nut with Lubriplate (or equivalent) before assembling.



↑ Top of valve to be flush with top of base as shown. Stake top of valve to prevent rotation.



**TROUBLESHOOTING**

PROBLEM	SOLUTION
1) Will not lift load. 2) Will not lift full height. 3) Pump feels "Spongy" under load.	Jack could be low on oil - with jack in upright position and ram fully lowered, remove filler screw (the lower screw on the reservoir) and fill reservoir with clean HYDRAULIC JACK OIL - correct oil level is reached when oil level is at bottom edge of filler screw hole.  Jack could be "air bound" - open the release valve one full turn and pump the handle vigorously. Close the release valve and pump to raise ram about 3". Loosen set screw in top of ram. Pump slowly until air stops bubbling around the set screw threads. Tighten set screw. Use adjustable spanner wrench in holes provided in top of ram to prevent rotation of ram.
1) Will not lift load. 2) Handle raises under load. 3) Handle lowers under load. 4) Will not hold load.	Valves might not be closing - open the release valve one full turn and pump the handle vigorously to flush the valves. Close the release valve and operate normally.
1) Will not work in horizontal position.	Jack in wrong position for horizontal operation - jack must be laying on its right side with the handle socket and release valve nearest ground.  Jack could be low on oil - with jack in upright position and ram fully lowered, remove filler screw (the lower screw on the reservoir) and fill reservoir with clean HYDRAULIC JACK OIL - correct oil level is reached when oil level is at bottom edge of filler screw hole.
1) Leaks around release.	Release valve seal may be damaged or worn out - thoroughly clean area around release valve and place jack in horizontal position with release valve facing upward BEFORE removing it. Remove the release stem and o-ring assembly. Remove the o-ring seal and thoroughly clean the stem. Install new seal on release stem. Remove the valve tip and any dirt or foreign matter from release valve hole in jack base with clean lint-free rag. Liberally apply clean grease to seal on release stem. Re-install release valve parts and operate normally.
1) Will not lift full height. 2) Will not lower completely.	Air vent screw could be closed - make certain that vent is open about two full turns.

If the above procedures do not correct the problem, contact your nearest service depot. When submitting any jack or equipment to be repaired, be sure to state the nature of the problem and indicate whether an estimate of the repair cost is needed.

**IMPORTANT:** As with any hydraulic unit, this unit may occasionally become "air bound" due to being tipped over during shipment. Refer to instructions above to purge air from the jack.



A DIVISION OF  
McNEIL CORPORATION

One Lincoln Way  
St. Louis, MO 63120-1578  
(314) 679-4200

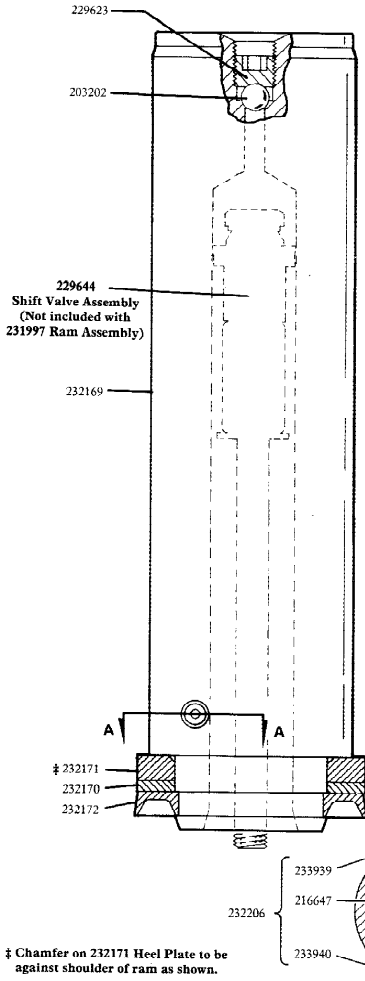
**SECTION - W2**  
**PAGE - 11**

**RETAIN THIS INFORMATION FOR FUTURE REFERENCE**

When ordering replacement parts, list: Part Number, Description, Model Number, and Series Letter.

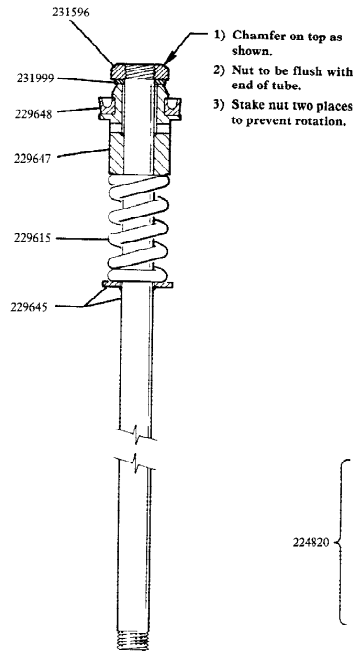
LINCOLN provides a Distributor Network that stocks equipment and replacement parts. A list of Authorized Service Departments will be furnished upon request.

**231997  
RAM ASSEMBLY**



‡ Chamfer on 232171 Heel Plate to be against shoulder of ram as shown.

**229644  
SHIFT VALVE ASSEMBLY**

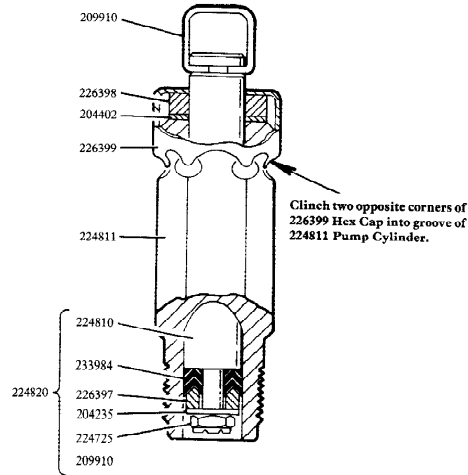


- 1) Chamfer on top as shown.
- 2) Nut to be flush with end of tube.
- 3) Stake nut two places to prevent rotation.

**SECTION A-A**

MODEL	LABEL KIT NO.	REPAIR KIT NO.
91-602	240156	91-379
93602	240157	240543

**226805  
PUMP ASSEMBLY**



Clinch two opposite corners of 226399 Hex Cap into groove of 224811 Pump Cylinder.

**SERVICE PARTS**

PART	QUAN.	DESCRIPTION
10667	1	Handle assembly
200003	2	Gasket
201733	1	Expansion plug
*205201	3	Ball
*203202	1	Roll
204235	1	Washer
204402	1	Washer
209910	1	Pump clip
*210311	4	Pipe plug
212227	1	Valve
*212307	1	O-ring
212540	1	Filler screw
212562	1	Vent screw
212913	1	Release stem & valve ass'y.
213568	1	Release stem & o-ring ass'y.
*214555	1	O-ring
216647	1	Spring
217785	2	Roll pin
220018	2	Retaining ring
*222533	1	Screen
222678	1	Handle socket
224725	1	Locket
224810	1	Piston
224811	1	Cylinder
224820	1	Pump piston assembly
*226397	1	Washer (rubber)
*226398	1	Washer (felt)
226399	1	Cap
226401	1	Spring
226805	1	Pump assembly
228247	2	Pin
229615	1	Spring
229623	1	Set screw
229643	1	Spacer
229644	1	Shift valve assembly
229645	1	Center tube & washer
229647	1	Shift valve
*229648	1	U-cup packing
*229652	2	Handle
*229653	2	Handle
*229654	2	O-ring
231312	1	Quad ring
231313	1	Dump valve
231340	1	Spring
231340	1	Spring
231476	1	Oil tank
231478	1	Tank nut
231596	1	Nut
231997	1	Ram assembly
*231999	1	Seal
232169	1	Ram
*232170	1	Back up washer
232171	1	Heel plate
*232172	1	U-cup packing
232183	1	Cylinder
232206	1	Cross pin assembly
233939	1	Cross pin (female)
233940	1	Cross pin (male)
*233984	3	V-packing

\*Included in 91-379 & 240543 Repair Kits.