



Guardian

MODEL 71, 93, 95, 98, 912

HYDRAULIC JACK

GENERAL MAINTENANCE and OPERATING INSTRUCTIONS

With reasonable care, the Guardian Hydraulic Jack will give a long life of service. Depending on the amount of usage, some vital parts may have to be replaced periodically. Consult the nearest Guardian service station in your area for replacement parts and/or repair service.

IMPORTANT: Do not overload the Jack above the rated capacity.

Prevent "side-loading" — make sure load is centered.

Do not push or tilt load off from the Jack.

NOTE:

A Jack may become "airbound" in transit, or due to being upset, in which case the Jack will fail to raise. Remedy this situation by extending the Ram manually, opening the release valve, (26), and then pushing the Ram down, thus expelling air which may have entered the system.

1. OIL: Jack should always be filled with oil to filler hole level. Filler hole (5) is located on reservoir tube approximately $\frac{1}{3}$ the way up the tube. Oil level should be checked with the Ram fully retracted and the Jack standing in the upright position. Make sure no dirt or other foreign matter enters the reservoir while checking oil level and refilling. **IMPORTANT:** Use only Hydraulic Jack Oil.

2. PUMP PISTON: Oil leakage around pump piston (20) while the jack is under load, or short ram stroke, is an indication the pump piston cup (24) needs replacement. To make this replacement, first remove the pin rings (13 & 14) and pull out pins (17 & 18). Remove packing nut (19) and pull out piston. Remove piston cup and backing washer (23 & 24) and snap on a new set. Snap off piston from rod and replace nylon wiper. Make sure piston chamber is clean, dip piston in oil and tap piston in jack. Replace packing nut and tighten down. Replace pins and handle socket.

3. RELEASE VALVE: If jack fails to lift the load, hold the load, or the ram stroke is short, the release valve

(26) may need cleaning or replacement. To make this determination, remove the release valve by loosening release valve packing nut (29). Packing (27) and washer (28) may remain in valve chamber when screw is removed, but these should also be removed so that the release valve chamber may be inspected and cleaned thoroughly. Check the valve seat for nicks and the point of the release screw for scratches and damage. If the old release screw is reinstalled in the jack, it is recommended that new packing be used. New release screws are shipped complete with packing.

4. PUMP VALVES: Pump valves (30) and valve seats must be clean and in good condition at all times. This is the most critical area of a Hydraulic Jack. Failure to develop necessary Hydraulic pressure may be the result of a piece of dirt on the edge of a valve seat, a damaged or corroded ball, or defective spring. Valves may be inspected by removing the pump valve plug (32) and valve seal (31). The springs and balls are removed by tipping the Jack on its side so that the balls and springs drop out. Make sure no pressure is in the system prior to removing the pump valves by first opening the release valve. Valve chamber should be inspected for dirt and contamination. The valve seats should be given particular attention for damage or dirt. Balls and springs should be free of dirt, corrosion, nicks, notches, or other forms of damage. Reassemble valve components, replacing defective parts, in order shown in the illustration on the reverse side, i.e. (a) small ball-(b) small spring-(c) large ball-(d) large spring-(e) valve seal, and (f) valve plug. Valve seal should be installed using special tool SS-12.

5. RAM CUP: If the ram (6) lowers under load, it is an indication of oil leaking past a worn, damaged, or defective ram cup (8). Check the condition of the Ram Cup by removing the top nut (3) and extracting the Ram (6) from the Cylinder (11). While the Ram is removed from the Cylinder, the Cylinder should be checked for scoring or any other damage.

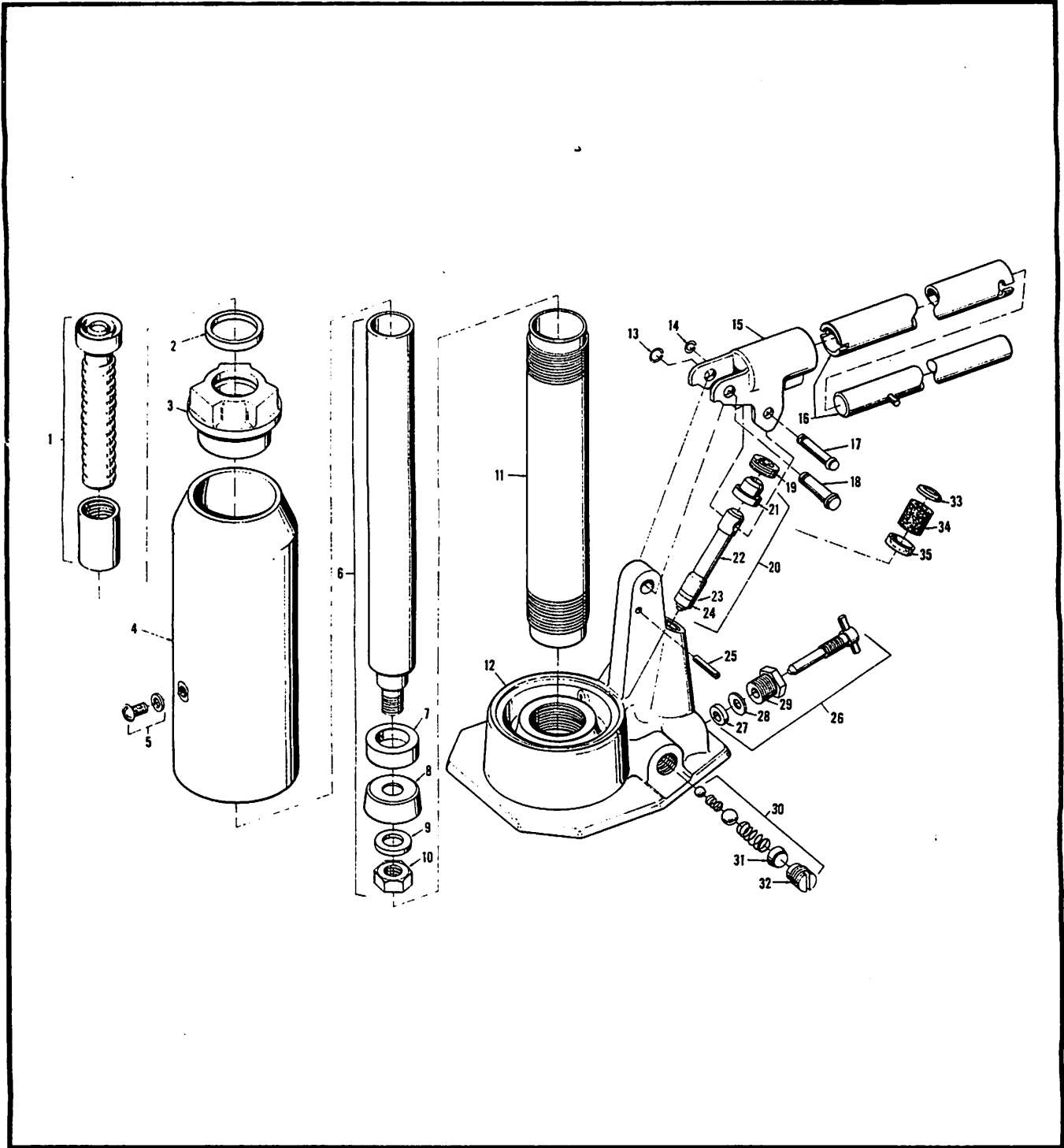
Before reassembly, remove old shellac from top of reservoir tube (4). Top of reservoir tube should then be brushed with shellac, and top nut (3) installed securely.

6. EXTENSION SCREW: Replace a damaged extension screw (1) by placing the ram in a soft-jaw vise, fully extending the screw, and tapping the screw gently to dislodge the locking pin. New extension screw may be reinstalled immediately.

USE ONLY GENUINE HYDRAULIC JACK OIL IN ANY GUARDIAN JACK

REV. 8-1-73

**MODEL 71, 93, 95, 98, 912
HYDRAULIC JACK
REPAIR PARTS LIST**



Item numbers shown above are only for your convenience in locating the part on the parts list. When ordering, always specify the PART NUMBER — not the item number — and give complete name of part and model number of jack. If the length of the part is shown on the parts list, verify it with the old part. If different, state exact length and diameter of old part.

ORDER REPAIR PARTS DIRECT FROM NEAREST GUARDIAN OFFICIAL SERVICE STATION

REV. 8-1-73

THE GUARDIAN CO. WAUKESHA, WISCONSIN 53186 • PHONE 414/542-6611

MODEL 71, 93, 95, 98, 912 HYDRAULIC JACK REPAIR PARTS LIST

		MODEL 71	MODEL 93	MODEL 95	MODEL 98	MODEL 912
Item No.	Description	Part No.	Part No.	Part No.	Part No.	Part No.
1	Extension Screw Assembly	8240	8240	9685	14540	3360
2	Quad Ring	20625	20625	20675	20725	20750
3	Top Nut	60210	18433	60214	18438	18439
4	Reservoir Tube	60207	18457	60215	18459	18461
5	Filler Screw & Washer	25620	25620	25620	25620	25620
6	Ram Assembly	8180	9463	9460	12730	14910
7	Spacer	1720	18482	10710	13210	15165
8	Cup	2525	2515	11115	13290	15245
9	Retainer	1970	2051	11030	13260	15210
10	Jam Nut	26270	26270	18960	18960	18960
11	Cylinder	970	18453	10580	13145	15630
12	Base Assembly	60209	60375	60362	60378	60368
13	Pin Ring	12415	12415	12415	12415	12415
14	Pin Ring	12165	12165	12165	12165	12165
15	Handle Socket	18449	18449	18449	18449	18449
16	Handle Assembly	18369	9595	9595	9595	9595
17	Pin	18492	18492	18492	18492	18492
18	Pin	18491	18491	18491	18491	18491
19	Packing Nut	60599	60599	60599	60599	60599
20	Piston Assembly <i>81109</i>	61177	61177	61177	61177	61177
21	Nylon Wiper	60621	60621	60621	60621	60621
23	B U Washer	18496	18496	18496	18496	18496
24	U Cup	18500	18500	18500	18500	18500
25	Roll Pin	26675	26675	26675	26675	26675
26	Release Screw Assembly	8020	8020	8020	8020	8020
27	Packing	4520	4520	4520	4520	4520
28	Washer	6230	6230	6230	6230	6230
29	Nut	1290	1290	1290	1290	1290
30	Pump Valves	80127	80127	80127	80127	80127
31	Seal	11520	11520	11520	11520	11520
32	Plug	11855	11855	11855	11855	11855
33	Decal (Not Shown)	61950	61951	61952	61953	61954