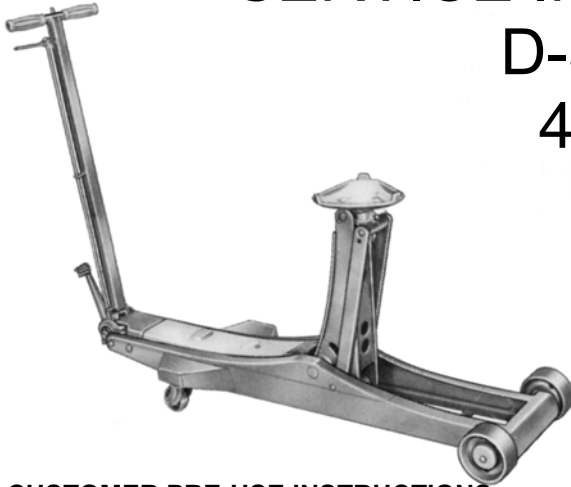


1120 SOUTH CRYSTAL AVE * BENTON HARBOR MI
PH: 269-925-7777 FAX: 269-925-6656

SERVICE INSTRUCTIONS

D-51223

4 TON



CUSTOMER PRE-USE INSTRUCTIONS

THE FOLLOWING IS A LIST OF PROCEDURES TO FOLLOW TO GET THE MOST OUT OF YOUR NEW HYDRAULIC FLOOR JACK:

1. Remove cardboard and shipping materials for jack.
2. Turn jack on side and loosen packing nuts. Packing nuts are located at each end of cylinder where the polished rods extend. Both packing nuts are to be moderately tight to prevent oil leakage and to allow foot pedal and lift arm to move freely.
3. Turn jack back to up-right position. Remove oil filler plug from the top of cylinder and discard small drive screw in filler plug and return vented plug back in cylinder.
4. You are now ready to operate your equipment. Using foot pedal, pump the lift arm up to top position. When lift arm is at the top of its stroke, foot pedal will become tight. If this does not occur, jack is either air bound or low on fluid.

TO ASSEMBLE:

1. Check the handle set screw for tightness.
2. Remove and discard the vent filler plug. This is very important, as the vent hole must always be kept open so the jack can "breathe".

TO OPERATE:

1. The jack is easily maneuvered by depressing the Handle Lock Lever until the lock rod engages one of the two handle positions, and then pivoting the jack on its rear castor.
2. Place the jack in position so that the saddle will engage an approved lifting area of the vehicle. The saddle is raised to the contact point by the foot pedal. Light loads may be raised by the foot pedal alone. On low clearance vehicles it is often advantageous to operate the foot pedal by hand while watching to assure proper saddle contact. Surface on which jack rests should be fairly flat to prevent twisting of frame. Load should be centered in saddle.
3. Pump with handle for easy lifting. Do not attempt to raise jack beyond its travel stops.
4. To lower the load, pull back gently on the release lever.
5. Be certain that area beneath vehicle is clear before lowering vehicle. Always use the release lever lock to prevent unintentional operation of the release lever.

TO REFILL:

Remove the filler plug and with the saddle DOWN put in HAND JACK HYDRAULIC OIL, GRADE 32, ISO VISCOSITY 32, SAE 5W20 until the level comes up to within 1/4" to 3/8" below filler hole. Overfilling causes oil to spurt out the vent hole as jack is lowered, or may prevent jack from lowering properly. Insufficient oil causes jack to lift only part way. Always be sure to put in oil only when the saddle is down. Be careful not to let any dirt get into the reservoir while the Filler Plug is out.

LUBRICATION INSTRUCTIONS

1. For added service life and ease of operation, lubricate wheels and hinge points frequently.
2. Grease should be used on exposed parts if unit is constantly used under wet conditions.

TO SERVICE:

1. Keep all working parts thoroughly lubricated.
2. Packing nuts at the piston and pump plunger should be kept moderately tight. These packings are NOT under high pressure, and should only be tight enough to prevent leakage.
3. Ball valve may be removed for inspection and cleaning by removing the Ball Chamber Plug and turning the jack on its side, allowing the ball to roll out.

IMPORTANT: Whenever it is necessary to loosen or remove the Ball Chamber Plug, the gasket should be replaced with a new one. Oil leakage at this point is usually caused by trying to use an old gasket over again.

4. If pumping fails to raise the rated load, the lower ball valve is leaking, and it should be inspected for dirt or other obstruction. Also check for proper oil level.
5. If the load raises on the down stroke of the handle and immediately settles back, forcing the handle up, it shows the upper ball valve is leaking.

WARNING: Always use stands to support vehicle before attempting under vehicle repairs or inspections.

TO RELIEVE WHEN AIR-BOUND

1. Should the oil supply run too low, the jack may become air-bound and work on only a half stroke of the handle. Fill the jack with oil, raise the saddle, and then lower the saddle while holding the foot pedal depressed. This will flush out any air in the system, and excess oil may run out of the vent. Be sure jack is properly filled with oil before putting it back in service. Oil should cover piston rod.

TO REMOVE CYLINDER

1. Remove the cotter in the cross head.
2. Remove the cotter and pin in the pump.
3. Remove the cotter and pin in the release yoke.
4. Place cotter key in while depressing foot pedal. This allows for easy removal and reassembly if spring is left on return rod.
5. Raise the lifting arm by means of the saddle, and place a block of wood between the arm and frame to hold up the arm.

6. This releases the cylinder at the forward end, so that it may be removed as a complete unit, for service.

TO REPLACE CUP

1. After removing the cylinder unit as described above, place it in a vise, Note that the vise jaws should grip the steel block, not the steel cylinder. Set the unit in the vise with the steel cylinder and piston up. Remove the vent plug.
2. Unscrew the cylinder cap and lift the piston out of the cylinder.
3. Remove the nut and washer which holds the cup at the end of the piston; put in the new cup, and replace nut and washer.
4. In fitting the new cup into the cylinder, USE GREAT CARE as the cup passes the filler plug hole not to cut or otherwise damage the cup. Then replace the cylinder cap.
5. To replace the small cup on the pump, turn the cylinder unit pump end upward in the vise.
6. Unscrew the packing nut and pull out the pump plunger. Remove the nut that holds cup to end of plunger, insert new cup, and replace nut.

RELEASE GROUP ASSEMBLY FUNCTION

1. A means to manually release jack and safety overload circuit. If underloaded jack bleeds down, release valve may be out of alignment.
2. In release group assembly, spring governs load jack will lift. When pressure of cylinder overcomes spring tension the release valve floats off seat. It is imperative that the release valve floats freely in release group assembly. To check: use forefinger and thumb to grasp the release valve when the release clevis pin passes thru, and wiggle from side to side. There should be a minimum of .002 to .004 clearance. If no movement is noted, remove hex nut, release valve guide and release spring, and place release valve with release valve guide back in release nut. Tap end of release spring with Brass hammer. Slide release valve guide into position and noting where alignment is off, correct misalignment by tapping welded needle bracket accordingly with Brass hammer, Reassemble and set pressure by hydraulic means.

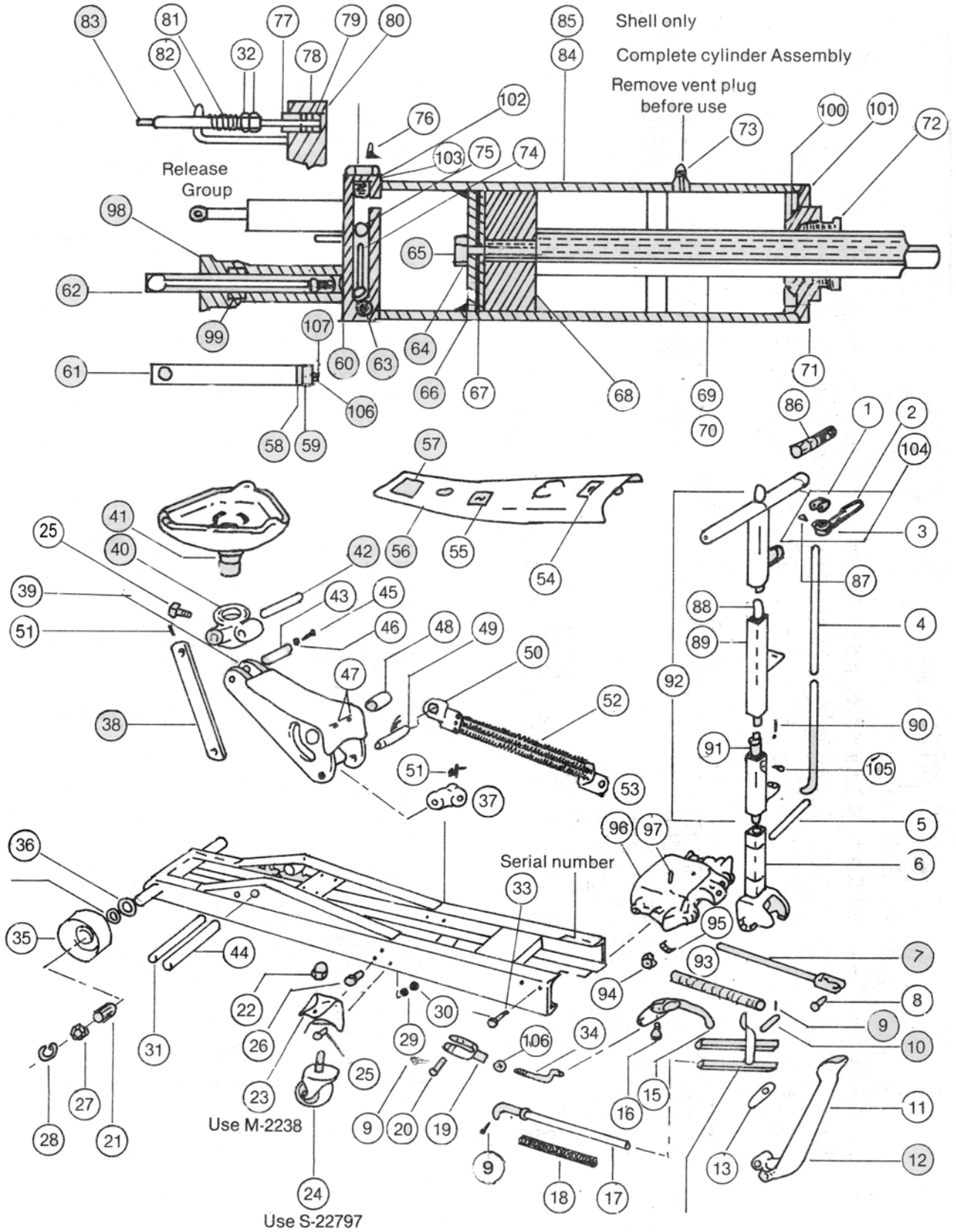
NOTE: This procedure should only be done by a qualified Authorized Service Center.

WARNING

- A. **THIS DEVICE IS A LIFTING DEVICE ONLY. THE LOAD SHALL BE SUPPORTED IMMEDIATELY BY OTHER APPROPRIATE MEANS.**
- B. **DO NOT OVERLOAD. OVERLOADING CAN CAUSE DAMAGE TO OR FAILURE OF THE JACK.**
- C. **LIFT ONLY ON AREAS OF THE VEHICLE AS SPECIFIED BY THE VEHICLE MANUFACTURER.**
- D. **THIS JACK DESIGNED FOR USE ONLY ON HARD, LEVEL SURFACES CAPABLE OF SUSTAINING THE LOAD. USE ON OTHER THAN HARD, LEVEL SURFACES CAN RESULT IN JACK INSTABILITY AND POSSIBLE LOSS OF LOAD.**
- E. **FAILURE TO HEED THESE WARNINGS MAY RESULT IN LOSS OF LOAD, DAMAGE TO THE JACK, AND/OR FAILURE RESULTING IN PERSONAL INJURY OR PROPERTY DAMAGE.**

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PARTS LIST

<i>Item No.</i>	<i>Part No.</i>	<i>Description</i>	<i>Item No.</i>	<i>Part No.</i>	<i>Description</i>
1.	S-7075	Release Lock	54.	S-21023	Caution Label
2.	M-1157	Release Handle	55.	S-24747	Gov't Label
3.	S-23689	Roll Pin 1/2 x 1/2	56.	S-23023	Cover
4.	S-5261	Release Rod	57.	S-23041	Name Plate
5.	S-6551	Handle Yoke Pin	58.	S-24690	Back-up Washer
6.	M-1414	Handle Yoke	59.	S-24648	Piston Cup Washer
7.	AS-20495	Return Rod Assembly	60.	S-2505	Ball 5/16
8.	S-5263	Handle Yoke Rivet	61.	S-24497	Pump Piston
9.	S-107	Cotter Pin 1/8 x 1	62.	AS-24498	Pump Piston Assembly
10.	S-6549	Clevis Pin	63.	S-1806	Pipe Plug 3/16NPT
11.	M-1416	Foot Pedal	64.	S-3008	Lockwasher 1/2
12.	S-23872	Sq. Hd. Set Screw 1/4NC x 5/8	65.	S-9522	Hex Nut 1/2-20NF
13.	S-6552	Foot Pedal Pin	66.	S-4714	Piston Cup
14.	M-2237	Pump Link	67.	S-2782	Piston Cup Washer
15.	M-1417	Release Lever	68.	M-2166	Ram Head
16.	S-6560	Release Lever Pin	69.	S-7487A	Piston Rod
17.	S-27384	Return Plunger Rod	70.	AS-21379	Piston Rod Assembly
18.	S-9786	Return Spring	71.	M-2016	Cylinder Cap
19.	S-5123	Release Clevis	72.	M-2019	Piston Packing Nut
20.	S-4710	Release Clevis Pin	73.	S-18071	Filler Plug
21.	S-22795	Cage Roller Bearing	74.	S-5355	Ball Weight
22.	S-6605	Acorn Nut	75.	S-2750	Ball 1/2
23.	M-2238A	Swivel Caster Bracket	76.	S-1805	Pipe Plug
24.	S-22797A	Swivel Caster	77.	S-5176	Release Packing Nut
25.	S-105	Hx Hd Screw 3/8-16NC x 1	78.	S-21051	Packing Housing
26.	S-944	Hx Hd Screw 3/8-16NC x 1-1/4	79.	S-15047	O-Ring 3/8
27.	S-899	Washer 1-3/4 OD x 1-1/32 ID x 3/32 THK	80.	S-17829	O-Ring 9/16
28.	S-22796	Retaining Ring	81.	S-2591	Release Spring
29.	S-1325	Lockwasher 3/8	82.	S-5173	Release Valve Guide
30.	S-595	Hex Nut 3/8-16	83.	S-21050	Release Valve
31.	S-22745	Parallel Link Pin 3/4 x 8-1/2	84.	AS-23347A	Complete Cylinder Assembly
32.	S-1934	Hex Nut 3/8	85.	AS-15130A	Complete Shell
33.	S-114	Hx Hd. Cap Screw 1/2-13NC x 2-1/2	86.	S-20886	Handle Grips
34.	S-6546	Release Pull Rod	87.	S-23872	Sq. Hd. Set Screw 1/4-20 x 3/4
35.	M-840	Wheel	88.	AS-6550	Lock Rod
36.	S-19990	Wheel Washer	89.	AS-6660	Handle Weldment
37.	M-1716	Crosshead	90.	S-4074	Cotter Key 1/16-1/2
38.	S-6538	Parallel Link	91.	S-2329	Lock Rod Return Spring
39.	AS-23344	Lifting Arm	92.	AS-6545	Complete Handle Assembly
40.	M-1415	Saddle Bracket	93.	S-1366	Handle Return Spring
41.	M-2122	Saddle	94.	S-508	Hex Head 1/2-73
42.	S-5264	Parallel Saddle Pin	95.	S-512	Lockwasher
43.	S-6554	Saddle Bracket Pin	96.	M-2239	Tie Casting
44.	S-22744A	Lift Arm Pin 1-1/4 x 8-1/2	97.	S-15694	Roll Pin
45.	S-6655	Rd. Hd. Mach. Scw 1/4-20NC x 1/4	98.	M-1167	Pump Packing Nut
46.	S-10189	1/4 Int & Ext Star Washer	99.	S-7412	Packing Washer 7/8
47.	S-6593	Roll Pin 1/8 x 3/8	100.	S-6614	Packing Washer 1-1/4
48.	S-6575	Lift Arm Bushing	101.	S-22962	Cylinder Gasket
49.	S-22743	Crosshead Pin	102.	S-9309	Ball Chamber Plug
50.	S-22747A	Spring Retainer	103.	S-2594	Ball Chamber Gasket
51.	S-2907	Cotter Key 3/16 x 2"	104.	AS-22107	Release Handle Assembly
52.	S-16061	Lift Arm Spring	105.	S-102	Sq. Hd. Set Screw 5/16 x 24 Nut
53.	S-22746A	Caster Spring Retainer	106.	S-1863	5/16 x 24 Nut
			107.	S-7413	Pump Washer

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