



1125 INDUSTRIAL COURT * BENTON HARBOR MI
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SERVICE INSTRUCTIONS D-51225



CUSTOMER PRE-USE INSTRUCTIONS

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

1. Remove cardboard and shipping materials from 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 caster.
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.

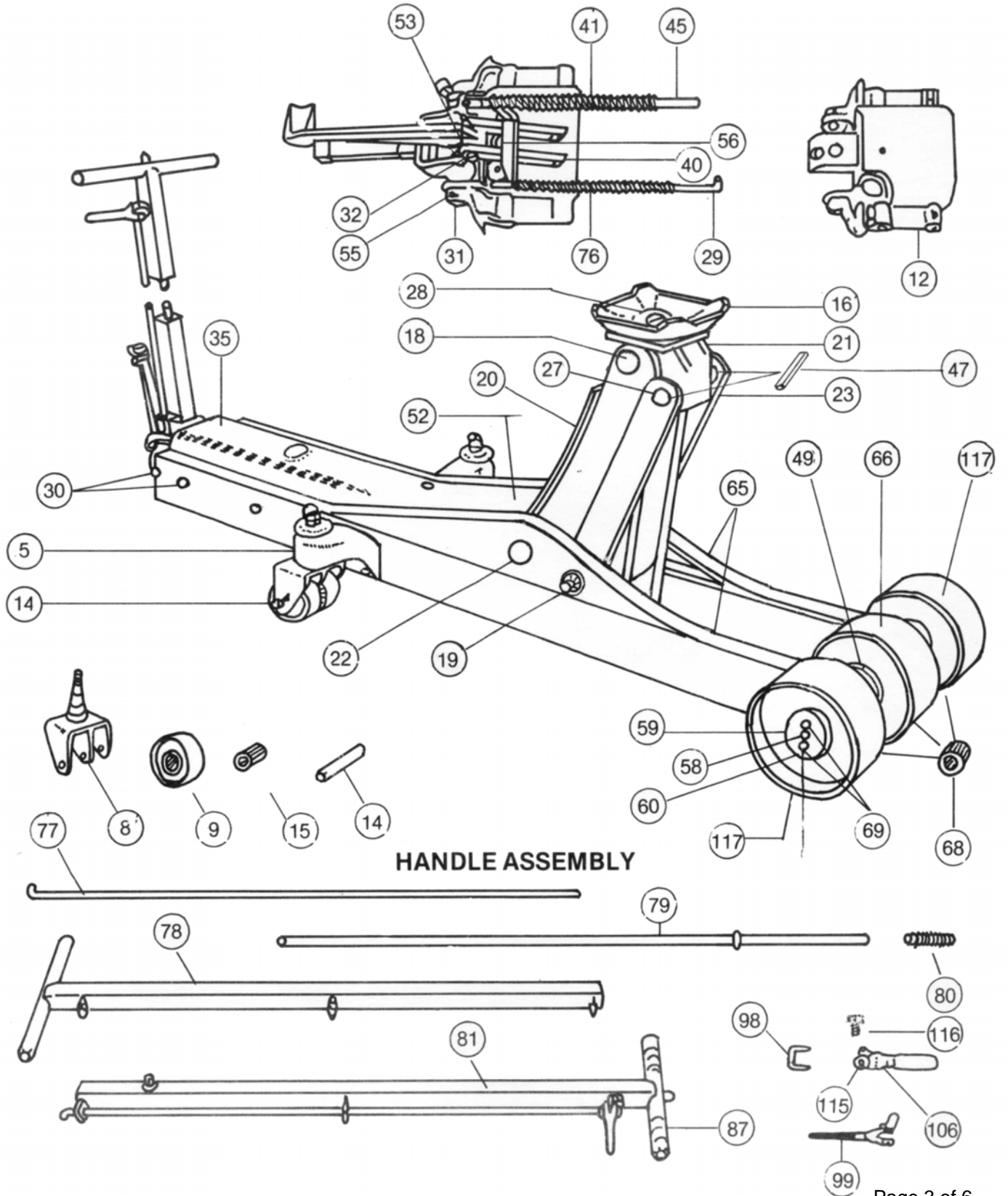
RELEASE GROUP ASSEMBLY FUNCTION

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.

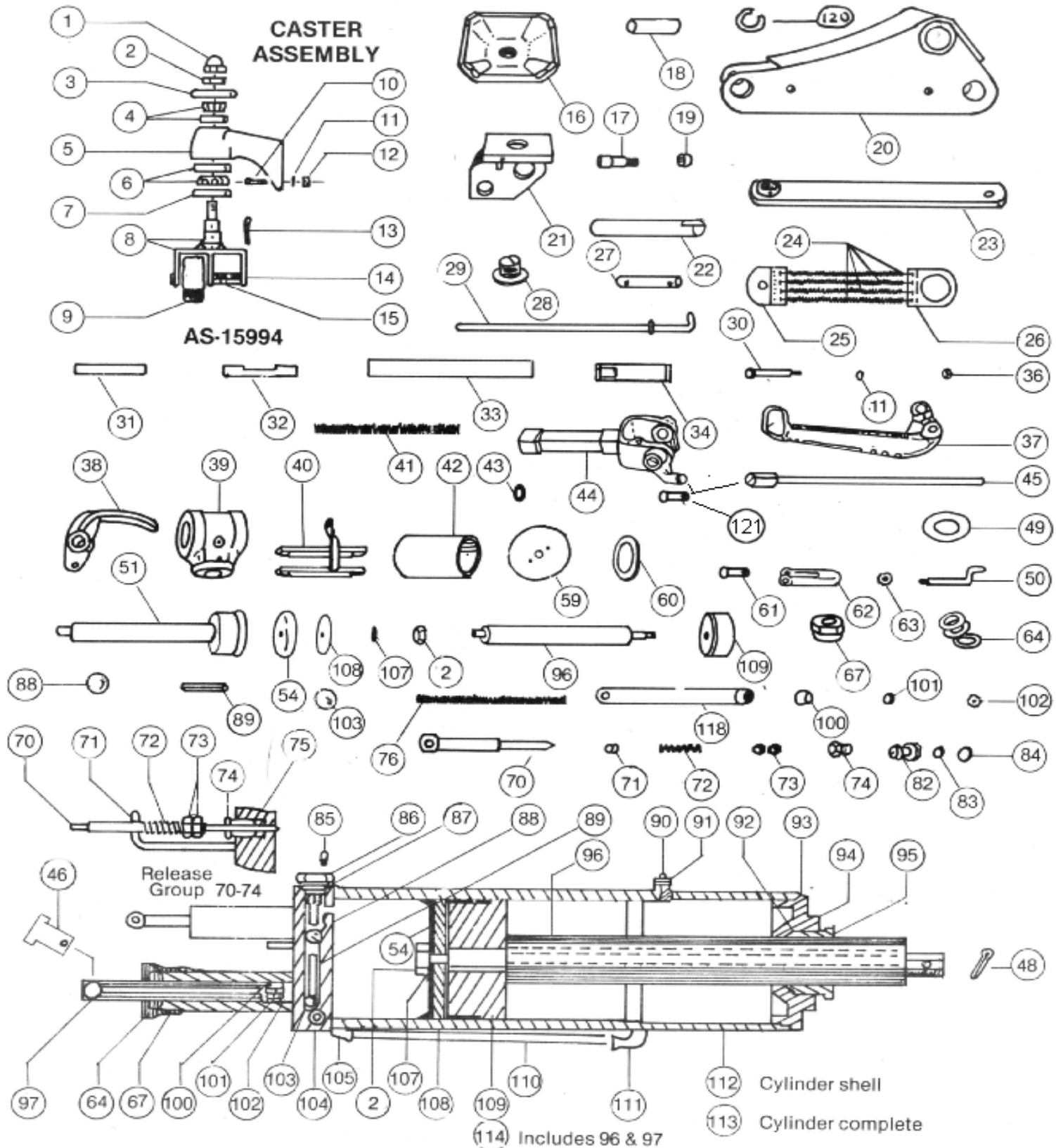
D-51225 20 TON

FRAME AND LIFTING ARM ASSEMBLIES



D-51225 20 TON

MISCELLANEOUS CASTINGS AND STEEL PARTS CUP LEATHERS, PACKING, GASKETS AND FOLLOWERS



D-51225 20 TON PARTS LIST

Item No.	Part No.	Description	Item No.	Part No.	Description
1.	S-6605	Acorn Nut	61.	S-4710	Release Lever Pin
2.	S-2232	Jam Nut	62.	S-5123	Release Yoke
3.	S-24650	Bearing Cap	63.	S-1863	5/16-24 Jam Nut
4.	AS-15814	Upper Bearing Assembly	64.	S-7412	Packing
5.	M-2028	Caster Bracket	65.	AS-15930	Frame Assembly
6.	AS-15815	Lower Bearing Assembly	66.	AS-16037	Center Wheel
7.	S-15429	Bearing Retainer	67.	M-1167	Packing Nut
8.	AS-15957	Caster Assembly	68.	S-11103	Front Roller Bearing
9.	M-1152	Caster Wheel	69.	S-1877	1/4 x 3/4 Cap Screw, Hx. Hd.
10.	S-4594	Hex screw 1/2 x 2-1/2	70.	S-21050	Release Valve
11.	S-1571	1/2 Lockwasher	71.	S-5173	Valve Guide
12.	S-9522	1/2 Nut	72.	S-2591	Release Spring
13.	S-293	Cotter Pin	73.	S-1934	Lock Nut 3/8
14.	S-15971	Caster Axle	74.	S-5176	Release Packing Nut
15.	S-15398	Bearing	75.	AS-21052	Packing House Assembly
16.	M-2043	Saddle	76.	S-9786	Comp. Spring
17.	S-15975	Shoulder Bolt	77.	S-5261	Release Rod
18.	S-15973	Saddle Bracket Pin	78.	AS-6660	Handle Shell
19.	S-15987	Castle Nut	79.	AS-6550	Lock Rod
20.	AS-15944	Lifting Arm	80.	S-2329	Lock Rod Return Spring
21.	AS-15950	Saddle Bracket	81.	AS-6545	Handle Assembly
22.	S-15974	Lift Arm Pin	82.	S-21051	O-Ring Housing
23.	AS-15954	Par. Link	83.	S-15047	O-Ring
24.	S-16061	Lift Arm Spring	84.	S-17829	O-Ring
25.	S-16059	Spring Retainer	85.	S-1805	Pipe Plug
26.	S-16058	Spring Retainer	86.	S-16196	Ball Chamber Plug
27.	S-15972	Par. Link Pin	87.	S-20886	Handle Grip
28.	S-16098	Saddle Screw	88.	S-5122	5/8 Ball
29.	S-27384	Spring Rod	89.	S-5355	Ball Weight
30.	S-7394	Tiecasting Bolt	90.	S-7026	Vent Plug
31.	S-6551	Tiecasting Pin	91.	S-5178	Pipe Plug
32.	S-6552	Foot Pedal Pin	92.	S-16022	Piston Packing
33.	S-15978	Axle	93.	S-22964	Cylinder Cap Gasket
34.	S-15976	Crosshead Pin	94.	M-2041	Cylinder Cap
35.	AS-16051	Cover Plate	95.	M-2042	Packing Nut
36.	S-508	Hex Nut 1/2	96.	S-15969	Piston Rod
37.	M-1416	Foot Pedal	97.	S-24497	Pump Piston Rod
38.	M-1148	Release Lever	98.	S-7075	Release Lock
39.	M-2045	Crosshead	99.	AS-22107	Release Lever Assembly
40.	AS-16039	Pump Bracket or M-2237	100.	S-24648	Pump Cup
41.	S-1365	Comp. Spring	101.	S-7413	Pump Cup Washer
42.	S-15996	Lift Arm Bushing	102.	S-1863	Hex Nut
43.	S-5125	Aluminum Washer	103.	S-3282	7/16 Ball
44.	M-1414	Handle Yoke	104.	S-5652	3/8 Pipe Plug
45.	AS-20495	Yoke Return Rod	105.	S-2	Line Connector
46.	S-6549	Pin	106.	M-1157	Release Lever
47.	S-794	Cotter Pin 3/16 x 1-1/2	107.	S-3010	3/4 Int. Lockwasher
48.	S-3234	Cotter Pin 3/16 x 2-1/2	108.	S-15968	Ram Cup Washer
49.	S-5200	Inside Hub Washer	109.	M-2167	Ram Head
50.	S-16070	Release Pull Lever	110.	S-3	Return Line
51.	AS-16054	Piston Rod Assembly	111.	S-4	Line Connector Elbow
52.	S-16032	Name Plate	112.	AS-15962	Cylinder Shell
53.	S-23872	1/4-20 Sq. Hd. Set Screw	113.	AS-15961	Cylinder Complete
54.	S-16023	Piston Cup	114.	AS-15965	Ram Head Assembly
55.	S-15694	Roll Pin	115.	S-23689	Roll Pin 1/4 x 1/2
56.	S-6586	Release Lever Pin	116.	S-5098	1/4-20 Sq. Hd. Set Screw
57.	M-1423	Tie Casting	117.	AS-12588	Front Wheel
58.	S-5096	Grease Fitting	118.	AS-24498	Pump Rod Assembly
59.	S-9147	Wheel Bearing Cover	119.	S-543	1/4 Lock Washer
60.	S-9149	Inside Wheel Washer	120.	S-25661	Bearing Spacer
			121.	S-121	RIVIT

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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