



Toll Free: 1-800-579-8088 Web: www.zinko.com

MODEL

ZMHL-2-2

2 Ton Long Ram Hydraulic Jack

Operating Instructions & Repair Parts List

Operation

The owner and/or operator shall have an understanding of these operating instructions and warnings before operating the jack. Warning information shall be emphasized and understood. If the operator is not fluent in English, the instructions and warning shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents.

WARNING

For Your Safety and to Prevent Injury

1. **READ THIS OPERATION MANUAL THOROUGHLY** and fully understand its contents before using the jack.
The manual explains important warning information.
2. This jack is designed for lifting purposes only, not for supporting loads.
3. Immediately after jacking, support vehicle (load) with appropriately rated stands or equivalent blocking.
4. **DO NOT ALLOW JACK ALONE, TO SUPPORT VEHICLE (LOAD).**
5. **DO NOT OVERLOAD THIS JACK BEYOND ITS RATED CAPACITY.**
6. This jack is designed for use only on hard level surfaces capable of sustaining the load. Use on other than hard level surfaces may result in jack instability and possible loss of load.
7. Failure to read these warnings may result in loss of load, damage to jack and/or failure resulting in personal injury or property damage.
8. **NEVER** get your arm, leg, and/or body under a heavy load supported only by a jack.
9. When the handle is not in use, remove it from the body of the jack. Never use a handle other than the one designated by the specifications.

Inspection

1. Visual inspection shall be made before each use of the jack, checking for leaking hydraulic fluid, and damaged, loose or missing parts.
2. Each jack shall be inspected by an authorized **ZINKO** service facility immediately, if subjected to an abnormal load or shock.
3. Owners and/or users should be aware that repair of this equipment may require specialized knowledge and facilities. It is recommended that an annual inspection of the jack be made by an authorized **ZINKO** service facility and that any defective parts, decals or warning labels be replaced with genuine **ZINKO** parts. A list of authorized service facilities is available from **ZINKO**.

Damaged Jacks

Any jack which appears to be damaged in any way, is found to be badly worn, or operates abnormally SHALL BE REMOVED FROM SERVICE until necessary repairs are made by an authorized **ZINKO** service facility.

Operating Instructions (Before Use)

1. **Check oil level.** With the jack in an upright position and the ram completely retracted, open release valve by turning release assembly counterclockwise. Remove filler plug; the oil level should be just up to the hole. Fill if necessary with clean hydraulic jack oil. **NEVER USE BRAKE OR SHOCK ABSORBER FLUID.**
2. **Lubricate internal components.** With release valve open, pump handle six full strokes to assure proper internal lubrication.
3. **Bleed the hydraulic system.** During transit hydraulic jacks may become "air-bound", causing spongy ram action. To bleed the hydraulic system: **a)** Close the release valve by turning clockwise. **b)** Insert handle in socket and pump jack up to full height. **c)** Open the release valve, invert the jack and force the ram to retract.

Using the Jack

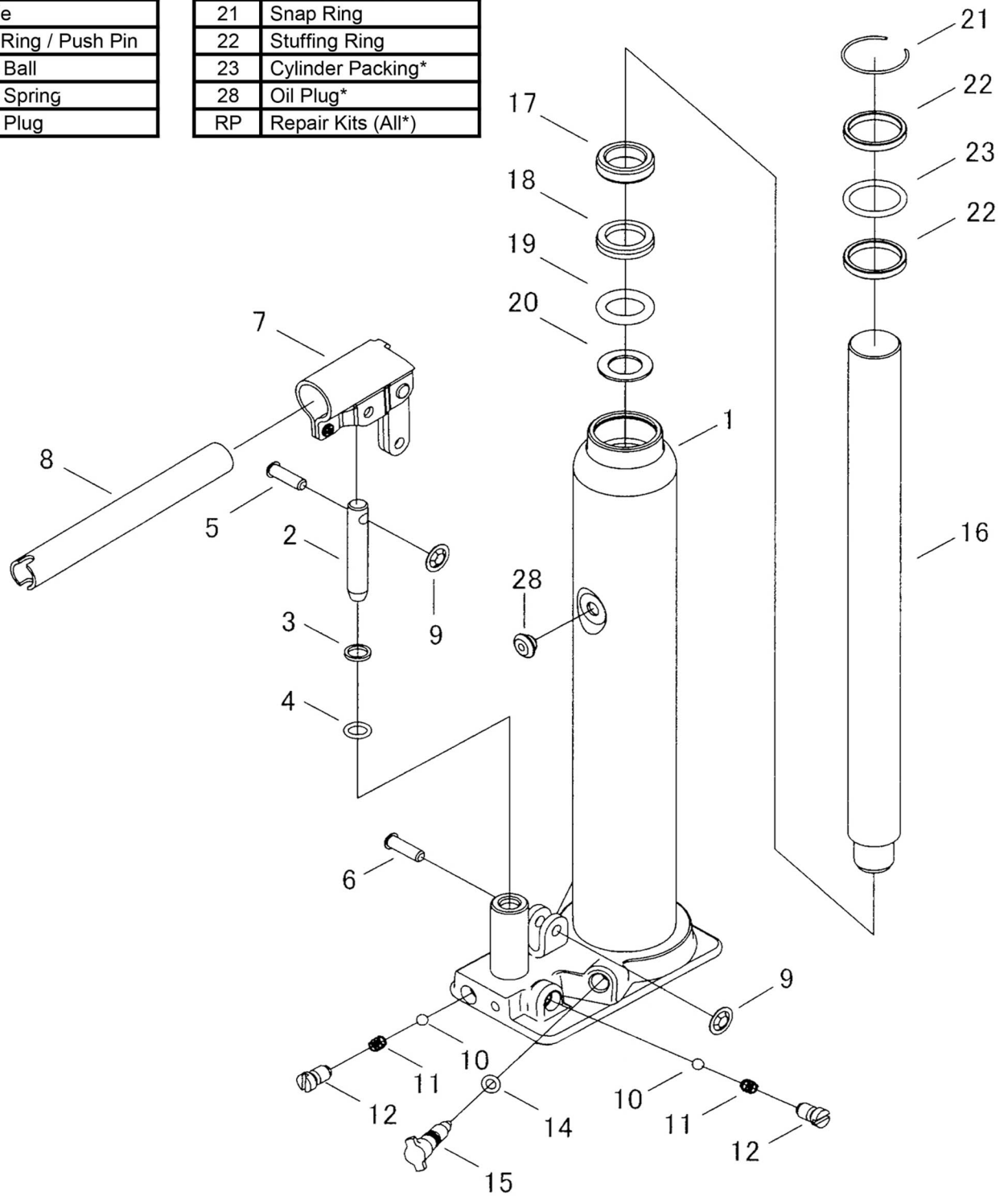
1. **To raise:** Turn release assembly clockwise to close release valve. Position jack where desired and adjust extension screw if necessary, being sure that load is centered. Insert handle in socket and pump handle until load is at desired height.
2. **To Lower:** Open release valve by slowly turning release assembly counterclockwise.
3. **For Horizontal Operation:** Place jack pump side down, then proceed as with vertical operation.

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#	Description
1	Body Assy
2	Pump Plunger
3	Pump Backup Ring*
4	Pump Packing*
5	Pump Plunger Pin
6	Pump Stay Pin
7	Handle Socket Assy
8	Handle
9	Snap Ring / Push Pin
10	Valve Ball
11	Valve Spring
12	Valve Plug

#	Description
14	Release Packing*
15	Release Assy
16	Ram
17	Ram Packing Sheet
18	Ram Backup Ring*
19	Ram Packing*
20	Ram Packing Stopper
21	Snap Ring
22	Stuffing Ring
23	Cylinder Packing*
28	Oil Plug*
RP	Repair Kits (All*)



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⚠ CAUTION

1. **DO NOT OVERFILL OIL BEYOND THE OIL FILL LEVEL, AS THE JACK'S OIL AMOUNT LIMITS THE MAXIMUM EXTENSION OF THE RAM.** Too much oil may make the ram fall off, which may result in a serious accident.
2. **SLOWLY TURN RELEASE STEM.** Turning it quickly makes a heavy load fall rapidly, which may result in jack's losing engagement at jacking point, and/or damage to jack leading to a serious accident.
3. If stains on labels make it difficult to make out the instructions on them, or jack appears to be in an abnormal condition, consult your dealer immediately.
4. Ensure no foreign matter such as dirt enters the system while filling oil. **NEVER USE BRAKE OIL OR VEGETABLE OIL, AS SUCH OIL CAUSES JACK TO MALFUNCTION.**

Maintenance

1. **Lubrication.** LACK OF OIL CAN CAUSE MALFUNCTION. Occasionally lubricate the handle socket pivot point, extension screw, and release screw thread to prevent corrosion.
2. **To Add or Replace Hydraulic Jack Oil.**
 - a) Retract ram completely.
 - b) Remove filler plug with your fingers and fill reservoir with designated jack oil or general hydraulic fluid to the bottom edge of fill hole with jack upright.
 - c) Replace filler plug, operate pump to the ram's full height, and continue pumping for five or six times at the position. Push down ram completely and push open filler plug sideways to let out air.

Proper Oil: ISO VG 10. Never use high viscosity oil or volatile oil such as brake oil or vegetable oil which may cause malfunction. We recommend annual oil replacement and inspection. Please contact a **ZINKO** service center for service inspection.
3. **Storing Jack.** After using, clean jack, check sliding and rotating parts and oil as needed. When storing, keep ram and extension screw at lowest position and store the unit(s) indoors.

Troubleshooting

PROBLEM	CAUSE	SOLUTION
Erratic Action.	<ol style="list-style-type: none"> 1) Air in the system. 2) Viscosity of oil too high. 3) Internal leakage in cylinder. 4) Cylinder sticking or binding. 	<ol style="list-style-type: none"> 1) With jack sitting in its base and ram retracted, bleed air by opening release valve. Pump for 10 seconds. 2) Change to lower viscosity oil. 3) Replace worn seals. Check for excessive contamination or wear. 4) Check for dirt, gummy deposits, or leaks. Check for misalignment, worn parts or defective seals.
Jack Does Not Advance.	<ol style="list-style-type: none"> 1) Release valve is open. 2) Low/No oil in reservoir. 3) Air-locked system. 4) Load exceeds system's capacity. 5) Improper horizontal position. 	<ol style="list-style-type: none"> 1) Close valve clockwise. 2) Fill with oil and bleed system. 3) Bleed the system. 4) Use correct equipment. 5) Operates horizontally ONLY when flat of casting is downward.
Jack Only Extends Partially.	<ol style="list-style-type: none"> 1) Reservoir is low on oil. 2) Piston rod is binding. 	<ol style="list-style-type: none"> 1) Fill reservoir with oil. 2) Check for dirt, gummy deposits, or leaks. Check for misalignment, worn parts or defective seals.
Jack Advances Slowly.	<ol style="list-style-type: none"> 1) Pump not working correctly. 2) Leaking seals. 	<ol style="list-style-type: none"> 1) Rework pump. 2) Replace seals.
Jack Advances But Doesn't Hold Pressure.	<ol style="list-style-type: none"> 1) Cylinder seals are leaking. 2) Pump check valve not working correctly. 3) Overload valve leaking or not adjusted correctly. 	<ol style="list-style-type: none"> 1) Replace seals. 2) Clean/replace check valve. 3) Replace/adjust overload valve.
Jack Leaks Oil.	<ol style="list-style-type: none"> 1) Worn or damaged seals. 	<ol style="list-style-type: none"> 1) Replace seals.
Jack Will Not Retract Or Retracts Slowly.	<ol style="list-style-type: none"> 1) Release valve is closed. 2) Cylinder damaged internally. 3) Reservoir too full. 	<ol style="list-style-type: none"> 1) Open release valve. 2) Send to authorized service center. 3) Drain oil to correct level.

If the above procedures do not correct the problem, contact your nearest **ZINKO** service facility. 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.