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HYDRAULIC TOE JACK OPERATING INSTRUCTION MANUAL

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OPERATION AND MAINTENANCE MANUAL FOR SIMPLEX HYDRAULIC TOE JACKS

Simplex THJA Series hydraulic toe jacks are designed for lifting loads. These products meet American National Standard specifications ANSI/ASME PALD 2009 and ASME B30.1-2009

⚠ WARNING

Use of jacks to move heavy loads involves risk of serious injury unless jacks are properly used and maintained by properly qualified, trained and supervised personnel. In no event should jacks be operated by anyone who has not read, or is not strictly complying with, the operating procedures and precautions contained in this manual. (Additional copies of this manual are available upon request.)

Reference Safety Standard Publications:

- **Code of Federal Regulations – Title 29 Occupational Safety and Health Standards (Superintendent of Documents, US Government Printing Office, Washington, DC 20402.)**
- **ANSI B 30.1 Standards – Jacks (American Society of Mechanical Engineers, United Engineering Center, 345 East 47th St., New York, New York 10017.)**

OPERATING AND SAFETY PROCEDURES PRECAUTIONS:

To avoid risk of serious injury, do the following before each and every use of the jack:

1. Assure that the operator is properly trained and qualified, and is properly supervised and instructed in the safe and proper use of the jack, and all related equipment for the specific application. Also, ensure that the operator has read and understood these "**Operating and Safety Procedures and Precautions**."

2. Have the jack first examined carefully by a qualified person for signs of any cracks, damage, wear or other condition which might cause the jack to malfunction or fail. Then operate the jack without load through at least one full cycle to verify proper functioning of all mechanisms without binding, slippage, or other condition which might affect proper functioning. Then immediately before use assure that all mechanisms are free of dirt, stones or other foreign objects.

3. Determine the maximum weight of the load, and the distance it is to be lifted; and then be sure that neither the load nor the distance to be lifted exceeds the jack's rated load capacity and stated maximum travel, as set out on the decal affixed to the jack.

4. Ensure that the jack is on a firm foundation, evenly and rigidly supported at the base; properly aligned with the load; and securely seated at both the lifting point and the base so that neither the jack nor the load can slip or shift.

5. Ensure that the lever bar's full arc of travel, and the surrounding workspace, are free of all obstructions.

6. When using the jack to move or lift a load follow operating instructions and ensure that securely placed and affixed blocking, guys, guides and other safety constraints are properly installed which follow the load during operation, so as to prevent the load from failing or shifting, even should the jack fail or be accidentally dislocated.

7. Immediately after lifting, permanently secure the raised load with fixed retainers and supports, installed in accordance with OSHA standards, and with inspection and approval by a safety engineer or other qualified person or authority; and be sure that the lever bar is removed from the socket.

8. Before lowering the load, be sure that all obstructions are removed (and refer also to all operating and safety procedures and precautions.) Ensure that securely affixed guys, guides and other safety constraints are properly installed which follow the load during operation so as to prevent the load from becoming unstable lower the load evenly.

9. If more than one jack is used to move, raise or lower a load: ensure that all jacks of identical type and properly positioned so that the load will remain evenly distributed during jacking. Follow operating instructions and activate all jack levers in unison with slow precision coordinated strokes taking care to move the load evenly.

⚠ **CAUTION**: Uneven load distribution and uneven lifting or lowering can cause a sudden shift of load with consequent overloading of jack or inability to hold or control load or lever bar.

Abide by the following safety rules of things not to do in using the jack:

- Never use a jack beyond (or if you do not know) its rated capacity or stated travel.
- Never use a jack which appears cracked, worn, bent or otherwise damaged.
- Never apply force to extend the jack after stop contact has occurred.
- Never continue to lift a load if the jack is visibly deflecting or distorting under load, or if any misalignment begins to occur between the jack and the load.
- Never lift human cargo; nor allow personnel on or under the load before the lifting is complete and the load has been fully secured.
- Never allow raised load to be supported by jacks or lift without being secured; and never leave the lever bar in socket after lifting is complete. (Accidentally striking of unattached bar projecting from socket risks the jack becoming dislocated or dislodged causing the load to shift of fall.)
- Never strike jack housing or parts with a hammer or other heavy object to align or set jack. (In addition to causing possible damage to the jack, flying chips or other objects may cause serious injury to anyone in the vicinity who is not wearing protective goggles and clothing.

OPERATING INSTRUCTIONS:

RAISING THE LOAD:

1. Insert slotted wrench end of operating handle over the release valves. Turn release valve clockwise to close. **NOTE**: (Open release valve. Insert handle into socket and pump the jack several times to ensure internal lubrication and bleed the accumulated air from the system.)

2. Insert end of operating handle into the jack pump beam.
3. Pump the handle until plunger reaches the desired height.
4. Jacks can be used horizontally if the pump is located below the barrel of the jack.

LOWERING THE JACK:

1. Insert slotted end of handle over the release valve.
2. Turn handle counterclockwise very slowly to control the speed of descent. If release valve is opened too quickly when there is a load on the jack, the load could fall off or shock load could be applied to the jack.
3. The 2 ton jack plungers are gravity return – it will take a while for the plunger to retract without a load. The time can be shortened by applying some pressure on the plunger.
4. After plunger is retracted and the job is finished, inspect and clean the jack before storing.

FILLING THE RESERVOIR:

1. Remove filler plug.
2. Open release valve.
3. Fill reservoir with SIMPLEX hydraulic oil or equivalent ISO32 hydraulic oil.
4. Stand unit on its base and let excess oil run out. Replace filler plug.
5. If the plunger is sluggish or erratic during advance or retract, open the release valve and rapidly pump the handle. Close the release valve and check for smooth operation. If problems persist, contact a SIMPLEX Service Center.

⚠ **CAUTION**: **NEVER FILL THE RESERVOIR UNLESS THE JACK IS FULLY RETRACTED**

MAINTENANCE

- Wipe jack down after every use.
- Completely change oil at least twice a year.
- Thoroughly Lubricate all pivot pins and Linkages with lubricating oil before using the jack and after every 10 ram up/ down cycles.
- Lubricate the slide with a #2 lithium grease, monthly.

The following conditions require more frequent oil changes.

A. Rigorous duty, where oil may leak out or become contaminated.
B. High humidity environment and extreme changes in temperature that can result in condensation inside the reservoir.
C. Dirty or dusty environments that may contaminate the oil.

To avoid injuries and accidents:

- Do not stand over the jack-operating handle.
- Do not go under a load supported by jacks.
- Remove jack operating handle when not in use.

SPECIFICATIONS

MODEL	CAPACITY		MIN HEIGHT		MAX HEIGHT	
	TOE- tons [kN]	HEAD- tons [kN]	TOE- in [mm]	HEAD- in [mm]	TOE- in [mm]	HEAD- in [mm]
TJH2A	2 [19.6]	3 [29.4]	0.67 [17]	9.25 [235]	5.20 [132]	13.78 [350]
TJH5A	5 [49]	7 [68.6]	1.06 [27]	11.54 [293]	5.79 [147]	16.26 [413]
TJH10A	10 [98]	13 [127.5]	1.22 [31]	12.87 [327]	6.93 [176]	18.58 [472]

MODEL	TOE SIZE in [mm]	HEAD SIZE in [mm]	LENGTH OF HANDLE- in [mm]	BASE AREA in [mm]	NET WEIGHT lb [kg]	HANDLE EFFORT lbf [kgf]
TJH2A	1.97X1.97 [50X50]	2.36X3.54 [60X90]	11.5 [291]	7X4.92 [178X125]	18.7 [8.5]	76.4 [34.7]
TJH5A	2.24X2.95 [57X75]	3.46X4.84 [88X123]	23.5 [597]	10.63X7.20 [270X183]	49.6 [22.5]	49.5 [22.4]
TJH10A	2.36X3.31 [60X84]	4.64X5.74 [118X146]	23.5 [597]	11.30X8.66 [287X220]	82.7 [37.5]	56.2 [25.5]

Notes:

Dimensions shown are approximate.

All product specifications are subject to change without notice.

CE

This tool conforms with the requirements for CE Marking.

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