

HYDRAULIC JACK

Max. Capacity: 12 Ton (Low & Standard Heights) and 20 Ton (Low Height)

MARATHON LIFETIME™ WARRANTY EFFECTIVE 4-1-84

All Power Team products and parts, with the exception noted below, are warranted against defects in materials and workmanship for the life of the product or part.

Power Team's warranty is expressly limited to persons who purchase Power Team's products or parts for the resale or use in the ordinary course of the buyer's business. This warranty does not cover any product or part that has been abused, worn out, heated, ground or otherwise altered, used for a purpose other than that for which it was intended, or used in a manner inconsistent with any instructions regarding its use.

Power Team's electronic products are warranted against defects in material and workmanship for one year.

This warranty does not cover any chains, batteries, electric motors, knives or cutter blades which are sold with Power Team products. All electric motors are separately warranted by their manufacturer under the conditions stated in the separated warranty.

THIS WARRANTY IS EXCLUSIVE, AND POWER TEAM MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS MANUFACTURED AND SOLD BY IT, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER. No agent, employee or representative of Power Team has any authority to bind Power Team to any affirmation, representation or warranty concerning Power Team products or parts, except as stated herein.

To qualify for warranty consideration, return the Power Team product, freight prepaid, to a Power Team authorized repair center or to the Power Team factory. If any product or part manufactured by Power Team is found to be defective by Power Team, in its sole judgement, Power Team will, at its option, either repair or replace such defective product or part and return it via best ground transportation, freight prepaid. THIS REMEDY SHALL BE THE EXCLUSIVE REMEDY AVAILABLE FOR ANY DEFECTS IN THE PRODUCTS OR PARTS MANUFACTURED AND SOLD BY POWER TEAM OR FOR DAMAGES RESULTING FROM ANY OTHER CAUSE WHATSOEVER, INCLUDING WITHOUT LIMITATION, POWER TEAM'S NEGLIGENCE. POWER TEAM SHALL NOT, IN ANY EVENT, BE LIABLE TO ANY BUYER FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND, WHETHER FOR DEFECTIVE OR NON-CONFORMING GOODS, NEGLIGENCE, ON THE BASIS OF STRICT LIABILITY OR FOR ANY OTHER REASON.

The purpose of this exclusive remedy shall be to provide the buyer with repair or replacement of products or parts manufactured by Power Team found to be defective in materials or workmanship or negligently manufactured. This exclusive remedy shall not be deemed to have failed of its essential purpose so long as Power Team is willing and able to replace said defective products or parts in the prescribed manner.

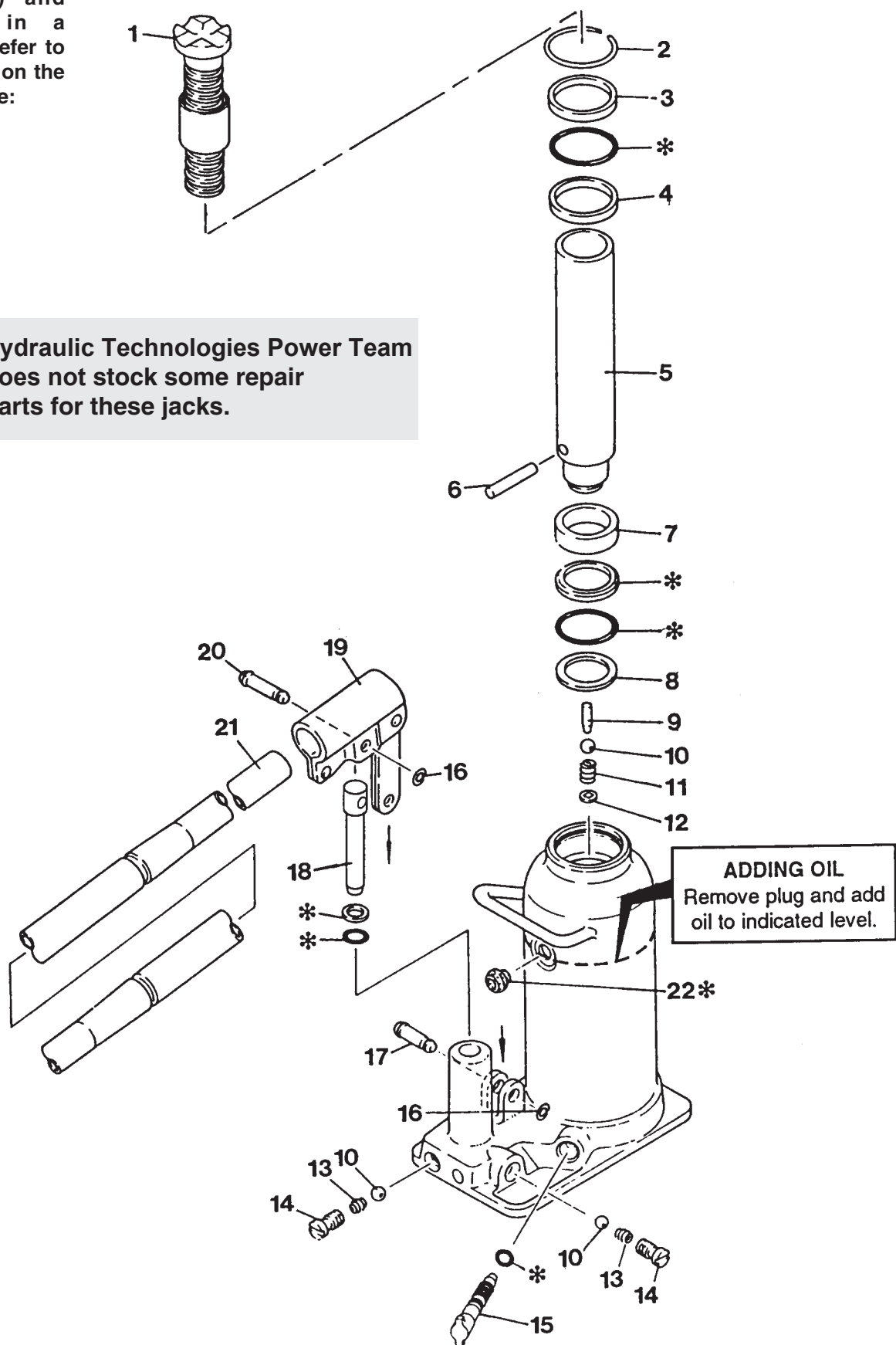
INTRODUCTION

These instructions are written to help you, the user, more effectively use and maintain your Power Team jacks. Some of the information applying to construction, installation, operation, inspection, and maintenance of hydraulic jacks was selected from ANSI B30.1 and ASME PALD-1. The documents may be ordered from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th, New York, New York 10017.

PARTS LIST

Replacement parts are marked with an asterisk (*) and contained in a Repair Kit. Refer to the parts list on the opposite page:

NOTE: Hydraulic Technologies Power Team does not stock some repair parts for these jacks.



Item No.	No. Req'd	Description	12 Ton Std. Height 9112A	12 Ton Low Height 9012A	20 Ton Low Height 9020A
1	1	Adjusting Screw Assembly	N/A	N/A	N/A
2	1	Snap Ring	N/A	N/A	N/A
3	1	Stuffing Ring	310512-15	N/A	N/A
4	1	Stopper Ring	N/A	310513-16	N/A
5	1	Ram	N/A	N/A	N/A
6	1	Horizontal Pin	N/A	N/A	N/A
7	1	Ram Packing Seat	N/A	N/A	N/A
8	1	Ram Packing Stopper	N/A	N/A	N/A
9	1	Vertical Pin	N/A	N/A	N/A
10	3	Valve Ball	N/A	310513-6	310513-6
11	1	Ram Spring	N/A	N/A	N/A
12	1	Ram Spring Stopper Ring	N/A	N/A	N/A
13	2	Valve Spring	310512-7	310513-7	310513-7
14	2	Valve Plug	310512-8	310513-8	310513-8
15	1	Release Assembly	310512-10	310513-10	310513-10
16	2	Snap Ring	310512-5	310513-5	310521-6
17	1	Pump Stay Pin	N/A	N/A	N/A
18	1	Pump Plunger	310512-1	310513-1	310521-1
19	1	Handle Socket Assembly	N/A	N/A	N/A
20	1	Pump Plunger Pin	310512-2	N/A	310521-2
21	1	Handle	310512-19	310512-19	310520-5
22	1	Rubber Filler Plug	251568	251568	251568
	1	Decal	310438	310439	310441
	1	Repair Kit	310512-18	310513-18	310521-19



SAFETY PRECAUTIONS

WARNING: To help prevent personal injury and damage to equipment,

- Read, understand, and follow all instructions, including the ANSI B30.1 and ASME PALD-1 safety codes.
- Always wear approved safety glasses.
- Inspect the jack before each use; do not use the jack if it is damaged, altered, or in poor condition.
- Use the jack for jacking purposes only.
- Never exceed the rated capacity of the jack.
- Only use the jack on a hard level surface.
- Center the load on the jack saddle. Off-center loads can damage the seals and cause jack failure.
- Lift only dead weight.
- Stay clear of lifted loads. Use safety stands to support the load before making repairs.
- Use only Power Team hydraulic fluid.

This guide cannot cover every situation, so always do the job with safety first.

Note: Labeled several parts N/A at last revision(s) made to this form.

OPERATING INSTRUCTIONS

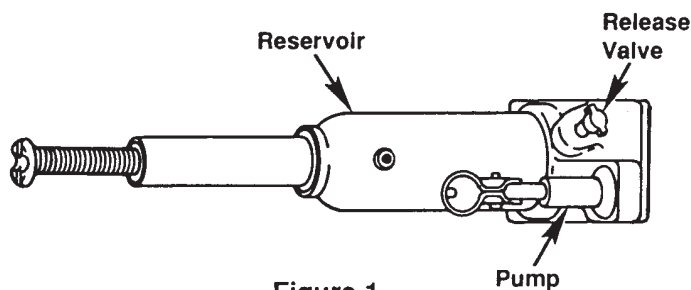


Figure 1

1. To raise the jack, close the release valve tightly by turning it clockwise. Insert the handle into the pump receiver and operate the pump.
2. To lower the jack, slowly open the release valve knob by turning it counterclockwise.

NOTE: To use the jack in a horizontal position, the jack **MUST** be placed on its side so the pump is lower than the reservoir. See Figure 1.

PREVENTIVE MAINTENANCE

IMPORTANT: The greatest single cause of failure in hydraulic units is dirt. Keep the jack clean and well lubricated to prevent foreign matter from entering the system. If the jack has been exposed to rain, snow, sand, or grit, it must be cleaned before it is used.

1. When the jack is not in use, keep the piston and pump rods fully retracted. Store the jack on its base and in a well protected area where it will not be exposed to corrosive vapors, abrasive dust, or any other harmful elements.
2. Visually inspect the jack before each use. Take corrective action if any of the following problems are found:
 - a. Cracked or damaged housing
 - b. Excessive wear, bending, or other damage
 - c. Leaking hydraulic fluid
 - d. Scored or damaged piston rod
 - e. Incorrectly functioning swivel heads or adjusting screws
 - f. Loose hardware
 - g. Modified or altered equipment

TROUBLE-SHOOTING GUIDE

Repair procedures must be performed in a dirt-free environment by qualified personnel who are familiar with this equipment.

TROUBLE	CAUSE	SOLUTION
Erratic Action	1. Air in system 2. Viscosity of oil too high 3. Internal leakage in cylinder 4. Cylinder sticking or binding	1. With jack sitting on 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	1. Release valve is open 2. Low/no oil in reservoir 3. Air-locked system 4. Load is above capacity of system	1. Close release valve 2. Fill with oil and bleed system 3. Bleed the system 4. Use correct equipment
Jack only extends partially	1. Reservoir is low on oil 2. Piston rod is binding	1. Fill reservoir 2. Check for dirt, gummy deposits, or leaks. Check for misalignment, worn parts, or defective seals.
Jack advances slowly	1. Pump not working correctly 2. Leaking seals	1. Rework pump 2. Replace seals
Jack advances but doesn't hold pressure	1. Cylinder seals are leaking 2. Pump check valve not working correctly 3. Overload valve leaking or not adjusted correctly	1. Replace seals 2. Clean/replace check valve 3. Replace/adjust overload valve
Jack leaks oil	1. Worn or damaged seals	1. Replace seals
Jack will not retract or retracts slowly	1. Release valve is closed 2. Cylinder damaged internally 3. Reservoir too full	1. Open release valve 2. Send jack to authorized service center for repair 3. Drain oil to correct level