SPX POWER TEAM®

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Form No. 102948

Parts List and Operating Instructions for:

9105A
9205A
9210A
9220A

HYDRAULIC JACK

Max. Capacity: 5 Ton For 9105A & 9205A
10 Ton For 9210A
20 Ton for 9220A

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.

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: Shaded areas reflect last revision(s) made to this form.

FILLING THE RESERVOIR

WARNING: Do not overfill the reservoir! This jack's maximum lift stroke is determined by the amount of oil in its reservoir. If too much oil is added, the piston could extend beyond its length causing it to fall out of the jack.

1. Fill with oil only to the level indicated in Figure 1.
2. Always stop pumping the jack handle as soon as the yellow lift stop line appears on the piston.

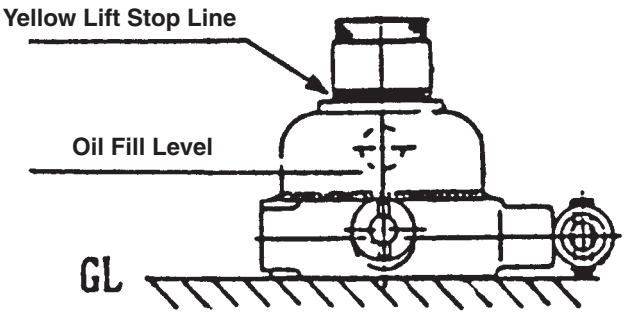


Figure 1

OPERATING INSTRUCTIONS

IMPORTANT: This jack will operate properly in a vertical position (see Figure 2) or in one specific horizontal position. This horizontal position is when the flat side of the jack body casting is down (see Figure 3). In any other horizontal position this jack will not function properly.

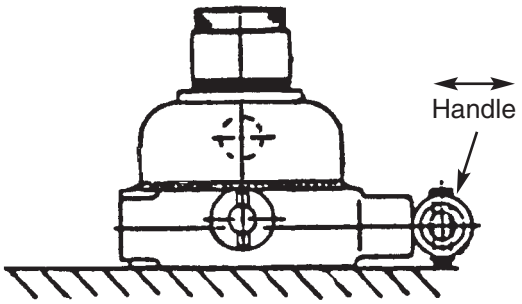


Figure 2

1. To raise the jack, close the release valve tightly by turning it clockwise. Insert the handle into the handle socket and operate the pump.

   WARNING: Stop pumping when the yellow lift stop line appears on the piston.
2. To lower the jack, slowly open the release valve stem by turning it counterclockwise.

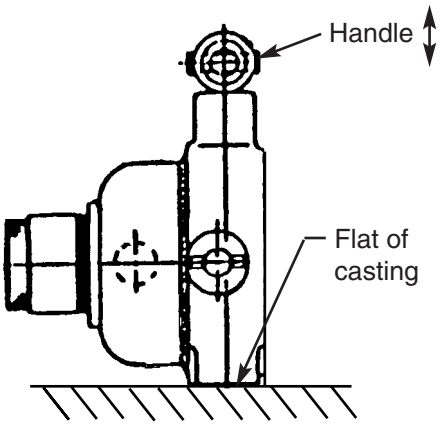


Figure 3

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.

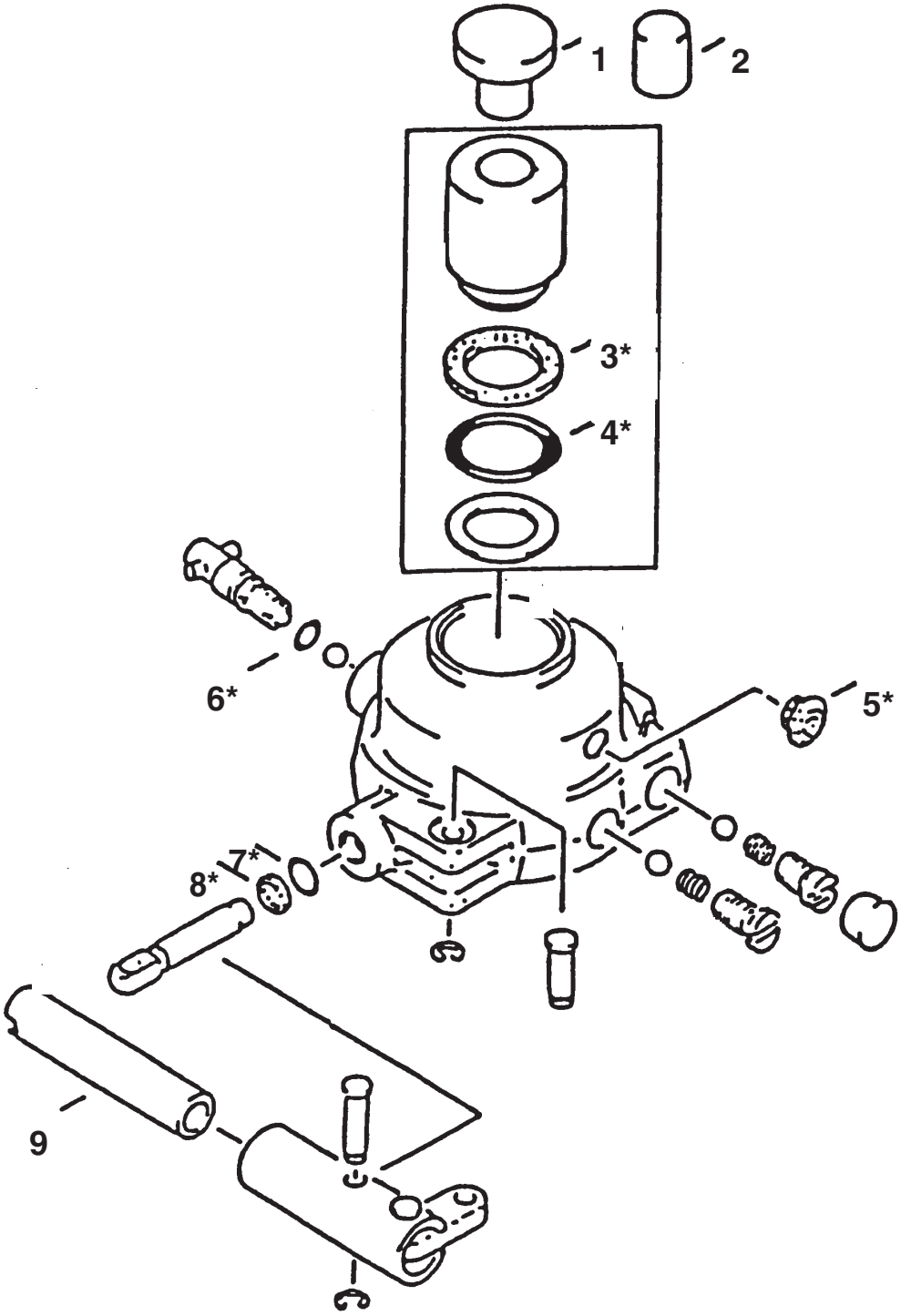
1. When the jack is not in use, keep the piston and pump rods fully retracted. Store the jack on its base and in a well protected area where it will not be exposed to corrosive vapors, abrasive dust, or any other harmful elements.
2. Visually inspect the jack before each use. Take corrective action if 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	1. With jack sitting on its base and ram retracted, bleed air by opening release valve. Pump for 10 seconds.
	2. Viscosity of oil too high	2. Change to lower viscosity oil.
	3. Internal leakage in cylinder	3. Replace worn seals. Check for excessive contamination or wear.
	4. Cylinder sticking or binding	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	1. Close release valve
	2. Low/no oil in reservoir	2. Fill with oil and bleed system
	3. Air-locked system	3. Bleed the system
	4. Load is above capacity of system	4. Use correct equipment
	5. Improper horizontal position	5. Operates horizontally ***only*** when flat of casting is downward (see Operating Instructions section).
Jack only extends partially	1. Reservoir is low on oil	1. Fill reservoir
	2. Piston rod is binding	2. Check for dirt, gummy deposits, or leaks. Check for misalignment, worn parts, or defective seals.
Jack advances slowly	1. Pump not working correctly	1. Rework pump
	2. Leaking seals	2. Replace seals
Jack advances but doesn't hold pressure	1. Cylinder seals are leaking	1. Replace seals
	2. Pump check valve not working correctly	2. Clean/replace check valve
	3. Overload valve leaking or not adjusted correctly	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	1. Open release valve
	2. Cylinder damaged internally	2. Send jack to authorized service center for repair
	3. Reservoir too full	3. Drain oil to correct level

PARTS LIST FOR 9105A & 9205A



Item No.	Part No.	No. Req'd	Description
1	**9105A-1**	1	Supporting Plate
2	**9105A-2**	1	Adapter
3	***9105A-3**	1	Ram Backup Ring
4	***9105A-4**	1	Ram Packing
5	***9105A-5**	1	Filler Plug
6	***9105A-6**	1	Release Packing
7	***9105A-7**	1	Pump Packing
8	***9105A-8**	1	Pump Backup Ring
9	**9105A-9**	1	Handle

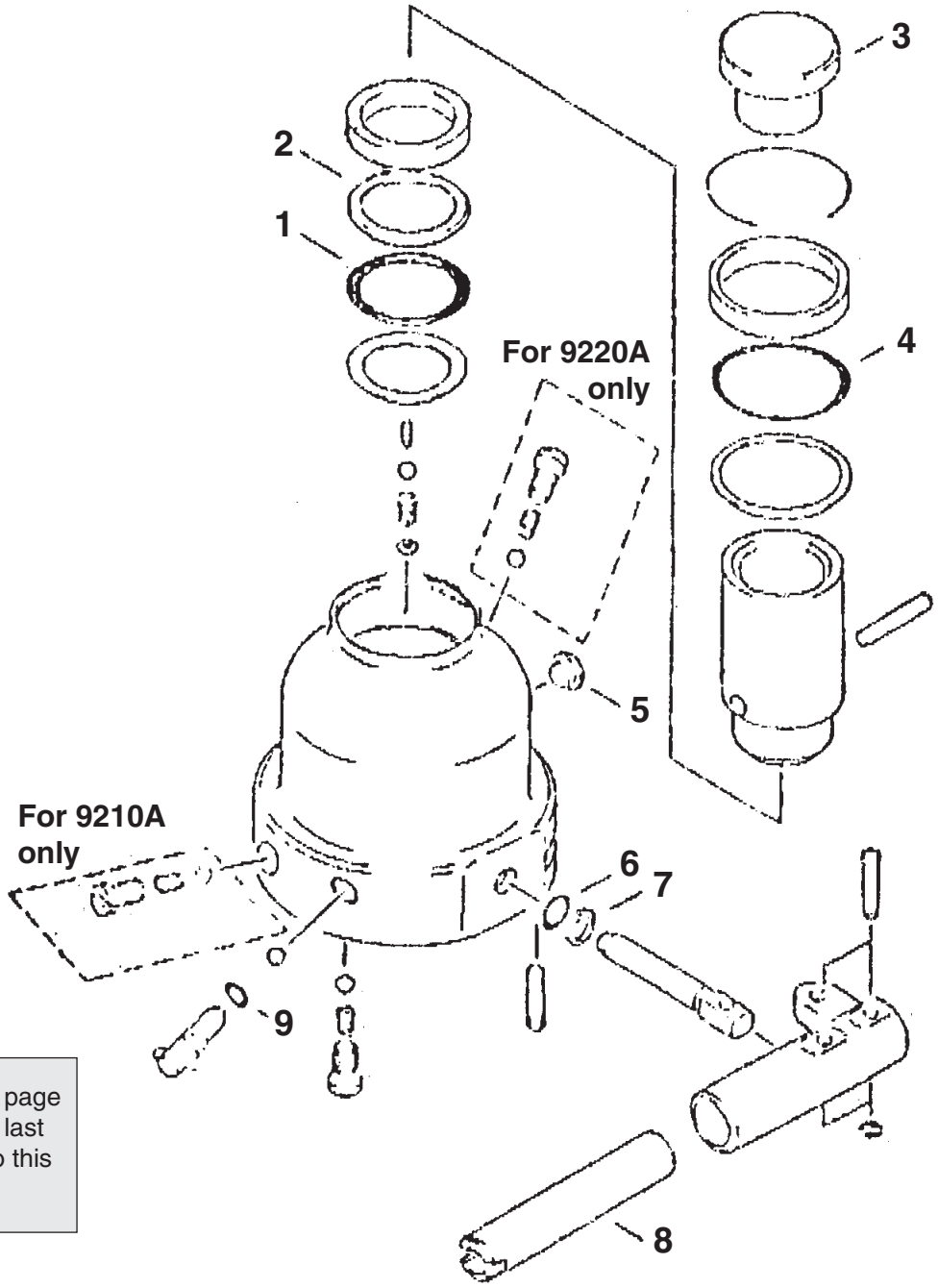
PARTS INCLUDED BUT NOT SHOWN

351713	1	Decal (For 9105A)
351956	1	Decal (For 9205A)

Part numbers marked with an asterisk (*) are contained in Repair Kit No. 9105A-10.

Note: Shaded areas reflect last revision(s) made to this form.

PARTS LIST FOR 9210A & 9220A



Note: This page added at last revision to this form.

Item No.	Part No.	No. Req'd	Description
1	*9210A-5	1	Ram Packing (For 9210A)
	†9220A-3	1	Ram Packing (For 9220A)
2	*9210A-4	1	Ram Backup Ring (For 9210A)
	†9220A-2	1	Ram Backup Ring (For 9220A)
3	9210A-1	1	Supporting Plate (For 9210A)
	9220A-4	1	Supporting Plate (For 9220A)
4	*9210A-6	1	Cylinder Packing (For 9210A)
	†9220A-6	1	Cylinder Packing (For 9220A)
5	*†9105A-5	1	Filler Plug
6	*†9210A-3	1	Pump Packing
7	*9210A-2	1	Pump Backup Ring (For 9210A)
	†9220A-1	1	Pump Backup Ring (For 9220A)
8	9210A-7	1	Handle (For 9210A)
	9220A-5	1	Handle (For 9220A)
9	*†9105A-6	1	Release Packing

PARTS INCLUDED BUT NOT SHOWN

351957	1	Decal (For 9210A)
351958	1	Decal (For 9220A)

Part numbers marked with an asterisk (*) are contained in Repair Kit No. 9210A-8.
Part numbers marked with a dagger (†) are contained in Repair Kit No. 9220A-7.