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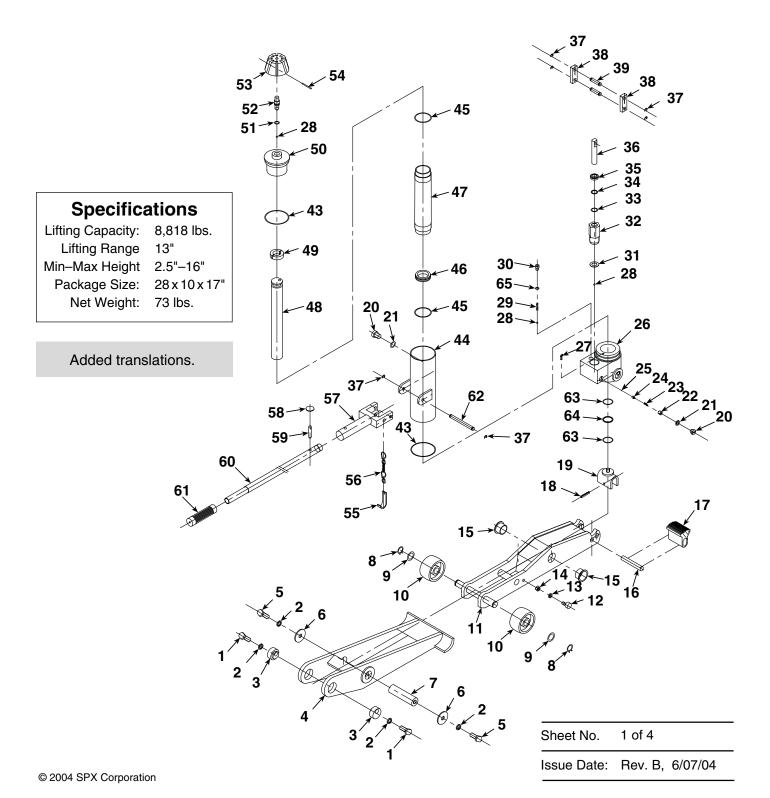
Parts List & Operating Instructions for:

Form No. 525814

1540

4-Ton Fork Lift Jack

Application: Servicing Fork Lift Machinery



ltem No.	Qty.	Description	ltem No.	Qty.	Description
1	2	Screw	32	1	Pump
2	4	Lock Washer	33	1	O-ring
3	2	Trunnion	34	1	Back-up Ring
4	1	Frame 1	35	1	Wiper
5	2	Screw	36	1	Plunger
6	2	Washer	37	6	Retaining Ring
7	1	Axle	38	2	Link Rod
8	2	Snap Ring	39	2	Pin
9	2	Washer	43	2	O-ring
10	2	Wheel	44	1	Oil Tank
11	1	Frame 2	45	2	O-ring
12	2	Screw	46	1	Port Ring
13	2	Lock Washer	47	1	Cylinder
14	2	Nut	48	1	Piston Rod
15	2	Spacer	49	1	Piston
16	1	Pin	50	1	Valve Seat
17	1	Saddle	51	1	O-ring
18	1	Pin	52	1	Release Rod
19	1	Piston Rod Pad	53	1	Release Knob
20	2	Screw	54	1	Pin
21	2	Seal Ring	55	1	Chain Hook
22	1	Screw	56	1	Chain
23	1	Spring	57	1	Handle Base
24	1	Ball Seat	58	1	Ring
25	1	Ball	59	1	Pin
26	1	Valve Block	60	1	Handle
27	1	Filter	61	1	Grip
28	3	Ball	62	1	Pin
29	1	Spring	63	2	O-ring
30	1	Screw	64	1	Back-up Ring
31	1	Seal Ring	65	1	Seal Ring

Parts Description

Item

Replacement Kits

110.	Qiy.	Description			
Handla Kit					
Handle Kit No. 525820					
37	2	Retaining Ring			
55	1	Chain Hook			
56	1	Chain			
50 57	1	Handle Base			
58	1	Ring			
59	1	Pin			
60	1	Handle			
61	1	Grip			
62	1	Pin			
l le cal					
	rauii 5258	c Unit			
18	5250 1	Pin			
19	1	Piston Rod Pad			
20					
	2	Screw			
21	2 1	Seal Ring			
22		Screw			
23	1	Spring			
24	1	Ball Seat			
25	1	Ball			
26	1	Valve Block			
27	1	Filter			
28	3	Ball			
29	1	Spring			
30	1	Screw			
31	1	Seal Ring			
32	1	Pump			
33	1	O-ring			
34	1	Back-up Ring			
35	1	Wiper			
36	1	Plunger			
43	2	O-ring			
44	1	Oil Tank			
45	2	O-ring			
46	1	Port Ring			
47	1	Cylinder			
48	1	Piston Rod			
49	1	Piston			
50	1	Valve Seat			
51	1	O-ring			
52	1	Release Rod			
53	1	Release Knob			
54	1	Pin			
63	2	O-ring			
64	1	Back-up Ring			
65	1	Seal Ring			
		5			

Item

No.

Qty. Description

No.	Qty.	Description		
Hydraulic Unit Rebuild Kit No. 525826				
18	1	Pin		
19	1	Piston Rod Pad		
20	2	Screw		
21	2	Seal Ring		
22	1	Screw		
23	1	Spring		
24	1	Ball Seat		
25	1	Ball		
27	1	Filter		
28	1	Ball		
29	1	Spring		
30	1	Screw		
43	2	O-ring		
45	2	O-ring		
46	1	Port Ring		
47	1	Cylinder		
48	1	Piston Rod		
49	1	Piston		
50	1	Valve Seat		
63	2	O-ring		
64	1	Back-up Ring		
65	1	Seal Ring		

Jack Stop Kit

No. 525824			
12	1	Screw	
13	1	Lock Washer	
14	1	Nut	

Pivot Pins Kit No. 525823

1	2	Screw
2	4	Lock Washer
3	2	Trunnion
5	2	Screw
6	2	Washer
7	1	Axle
15	2	Spacer

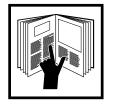
Pump Station Kit No. 525825

NO. 3	5250	020
28	1	Ball
31	1	Seal Ring
32	1	Pump
33	1	O-ring
34	1	Back-up Ring
35	1	Wiper
36	1	Plunger
37	4	Retaining Ring
38	2	Link Rod
39	2	Pin

Item No.	Qty.	Description
Rele No. 5 28 51 52 53 54		Knob Kit 18 Ball O-ring Release Rod Release Knob Pin
Sado No. 5 16 17		
Seal No. 5 21 23 24 25 27 28 29 31 33 34 35 43 45 46 51 63 64 65		seal Ring Spring Ball Seat Ball Filter Ball Spring Seal Ring O-ring Back-up Ring Wiper O-ring O-ring Port Ring O-ring D-ring Back-up Ring Seal Ring
Whe No. 5 9 10		

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Safety Precautions

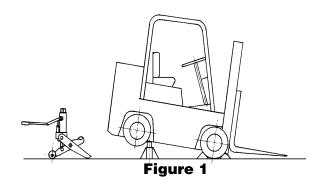






CAUTION: To prevent personal injury and damage to equipment,

- Read, understand, and follow all instructions, including the ANSI B30.1 safety code for jacks. Before using the fork lift jack to lift a vehicle, refer to the vehicle service manual for recommended lifting surfaces on the vehicle chassis.
- Wear protective eyewear that meets the requirements of ANSI Z87.1 and OSHA.
- Inspect the jack before each use; do not use the jack if it's damaged, altered, or in poor condition.
- Use the jack for lifting purposes only.
- A load must never exceed the rated lifting capacity (4 ton) of the jack.
- Only use the jack on a hard, level surface.
- Do not tilt the vehicle more than 15° when using the serrated pad. Tilting the vehicle too far may result in the jack kicking out suddenly and dropping the load.
- Stay clear of lifted loads and the scissor mechanism of the jack.
- Place support stands under the axles before working on the vehicle. See Figure 1.
- Do not modify the jack or use adapters unless approved or supplied by OTC.



- Lower the jack slowly and carefully while watching the position of the jack saddle. Do not drive the fork lift truck off the jack, or move the fork lift when it is supported by the jack.
- Use only approved hydraulic fluid (Mobile DTE #13 or equivalent). The use of alcohol, hydraulic brake fluid, or automatic transmission fluid (ATF) could damage seals and result in jack failure.

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

Bleeding Air from the Fork Lift Jack

Air can accumulate within a hydraulic system during shipment or after prolonged use. This entrapped air causes the jack to respond slowly or feel "spongy." To remove the air:

1. Open the release valve (large knob on top) by turning the knob two full turns counterclockwise (CCW).

- 2. Pump handle slowly 5–10 times.
- 3. Close release valve.

If jack does not lift correctly, repeat steps 1 through 3.

Operating Instructions

To raise the jack,

- 1. Insert handle into handle base.
- 2. Turn release valve (turn the knob clockwise until resistance is felt); do not over tighten.

To lower the jack,

1. SLOWLY turn the release valve counterclockwise. **IMPORTANT: When lowering a fork lift truck, keep the rate of** lowering under your control. Do not lower the fork lift until the area is free of personnel, tools, and equipment. Stay clear of the rear wheels on the jack; the wheels will move backward when the jack is lowered.

Recommended Method to Raise a Vehicle

- 1. Lower the forks on the fork lift. Remove any load. Clear personnel from the area.
- 2. Carefully select a lifting point on the fork lift. It must be strong enough to resist the lifting force without damage to the fork lift.
- 3. Cradle a support point in the notch at the end of the lift arm. See Figure 2-B. Use the serrated pad to raise a vehicle with a flat underside. See Figure 2-A.

A CAUTION: To prevent injury or equipment damage,

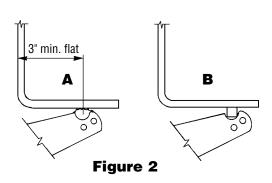
- Use only the serrated lifting pad or the notch in the end of the lifting arm as the means of lifting. Do not use any other part of the jack as a lifting contact point.
- Do not tilt the vehicle more than 15° when using the serrated pad. Tilting the vehicle too far may result in the jack kicking out suddenly and dropping the load.
- Do not use cribbing under the jack or on top of the lift pad. The jack must remain in direct contact with the floor; the lift pad or notch must be in direct contact with the fork lift.
- 4. Position the lift pad at least 3" inward toward the center of the vehicle from the beginning of the flat surface. See Figure 2-A.

Lifting from the Side

1. Position the jack closer to the rear wheels than the front wheels to maintain balance. See Figure 3. If the fork lift seems heavier at one end, lower the jack and move it closer to the heavy end.

CAUTION: When lifting narrow fork lift trucks (less than 40" wide) from the sides, the height between the floor and the bottom of the raised tire cannot be more than one fourth (1/4) the tire tread width. (Tread width is measured from centerline to centerline of the tire treads.) If this height is exceeded, the fork lift truck could tip over or the jack could drop the load. See Figure 4.

Example: If tread width is 36", the bottom of the vehicle tire may never be more than 9" off the floor.



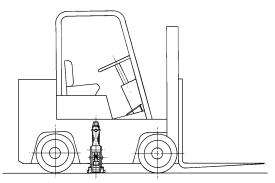


Figure 3

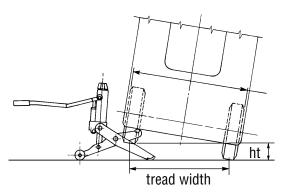


Figure 4

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Lifting from the End

- 1. Position the jack at the center of the fork lift truck. See Figure 5.
- 2. Chock the wheels at the opposite end of the fork lift.

A CAUTION: To prevent injury or equipment damage,

- Do not lift from the end of the fork lift if the contact surface is sloped or rounded, such as in the counter weight areas.
- When lifting 3-wheeled trucks, never lift the 2-wheeled end.



Figure 5

Preventive Maintenance

IMPORTANT: The greatest single cause of failure in hydraulic units is dirt. Keep the fork lift 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. Store the jack in a well-protected area where it will not be exposed to corrosive vapors, abrasive dust, or any other harmful elements.
- 2. Regularly lubricate the stem of the pump plunger with heavy grade machine oil.
- 3. To check the oil level, place the fork lift jack on level ground, and completely retract the ram. Remove the plug from the oil filler hole. The oil level should be within 1/4" of the filler plug hole. If necessary, add approved anti-wear hydraulic jack oil (Mobile DTE #13 or equivalent), and install the filler plug again. IMPORTANT: The use of alcohol, hydraulic brake fluid, detergent motor oil, or automatic transmission fluid (ATF) could damage the seals and result in jack failure.
- 4. 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
- d. Scored or damaged piston rod e. Loose hardware

f. Modified or altered equipment

c. Leaking hydraulic fluid

Troubleshooting 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. Refer to section titled "Bleeding Air from the Fork Lift Jack."	
	2. Oil viscosity too high	2. Change to a lower viscosity oil.	
	3. Internal leakage in cylinder	3. Replace worn packings. Look for	
	0	excessive contamination or wear.	
	4. Cylinder sticking or binding	4. Look for dirt, gummy deposits, leaks, misalignment, worn parts, defective packings	
Jack does not lift	1. Release valve is open	1. Close release valve.	
	Low/no oil in reservoir	2. Fill with oil and bleed system.	
	3. Air-locked system	3. Bleed system.	
	Load is above capacity of jack	4. Use correct equipment.	
	5. Delivery valve and/or bypass	5. Clean to remove dirt or foreign matter.	
	valve not working correctly	Replace oil.	
	6. Packing worn out or defective	6. Repair power unit.	
Jack lifts only partially	1. Too much or not enough oil	1. Check oil level.	
Jack advances slowly	1. Air in system	1. Refer to section titled "Bleeding Air from the Fork Lift Jack."	
	2. Pump not working correctly	2. Repair power unit.	
	3. Leaking seals	<i>3. Repair power unit or seals.</i>	
Jack lifts load, but doesn't hold	1. Cylinder packing is leaking	1. Repair power unit or seals.	
	2. Valve not working correctly (suction,	2. Inspect valves. Clean and repair seat	
	delivery, release, or bypass)	surfaces.	
	3. Air-locked system	3. Bleed system.	
Jack leaks oil	1. Worn or damaged seals	1. Repair power unit or seals.	
Jack will not retract	1. Release valve is closed	1. Open or clean release valve.	
Jack retracts slowly	1. Cylinder damaged internally	1. Send jack to OTC authorized service center	
	2 Link costion is hinding	for repair. 2. Lubricate link section.	
	2. Link section is binding	2. LUDIICALE IIIK SECLIUII.	

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