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Form No. 106461

**Parts List and
Operating Instructions
for:**

**1503
1504**

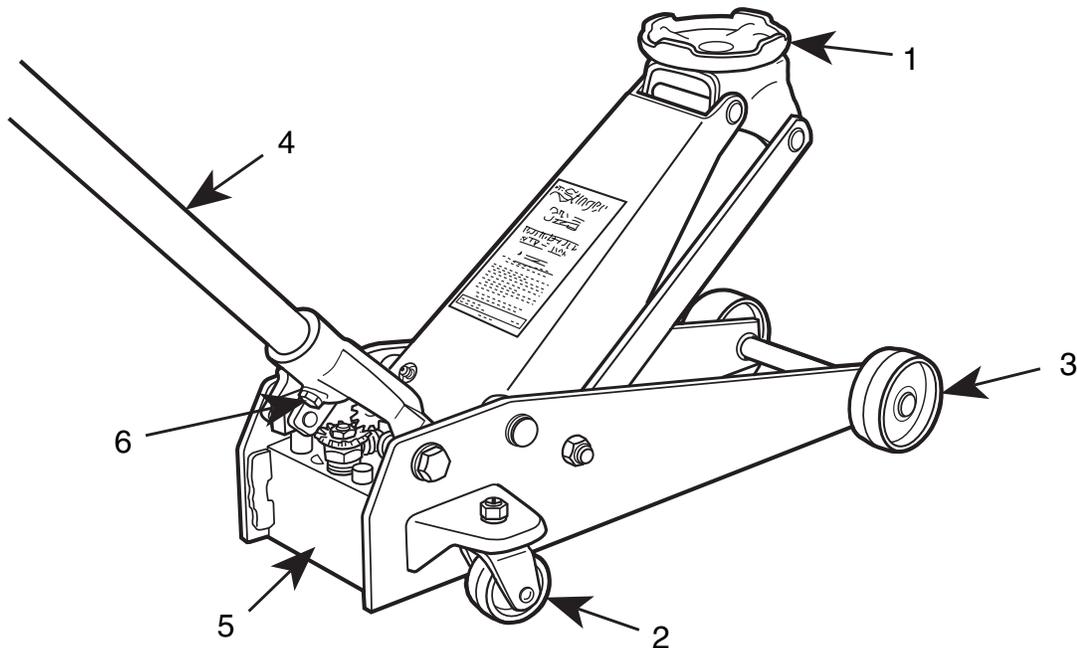
Service Jack

No. 1503 Max. Capacity: 2-1/2 Tons

No. 1504 Max. Capacity: 3 Tons

Replacement Items for 1503 & 1504

Item No.	Part No.	Description
1	504887	Saddle
2	504884	Caster
3	504885	Wheel (for 1503)
	511501	Wheel (for 1504)
4	504886	Handle
5	504883	Hydraulic Unit (for 1503)
	511507	Hydraulic Unit (for 1504)
Not shown	512223	Handle Return Spring
6	512224	Handle Retaining Bolt



Sheet No. 1 of 2

Issue Date: Rev. C, 6-4-2003

Safety Precautions

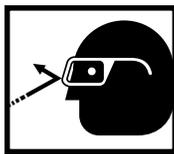


Caution: To prevent personal injury and damage to equipment,

- Read, understand, and follow all instructions, including ASME PALD Part 10 for service jacks. If the operator cannot read English, operating instructions and safety precautions must be read and discussed in the operator's native language.

Si el operador no puede leer el inglés, las instrucciones de operación y las precauciones de seguridad deberán leerse y comentarse en el idioma nativo del operador.

Si l'utilisateur ne peut lire l'anglais, les instructions et les consignes de sécurité doivent lui être expliquées dans sa langue maternelle.



- Before using the service jack to lift a vehicle, refer to the vehicle service manual to determine recommended lifting surfaces on the vehicle chassis.
- Wear eye protection that meets ANSI Z87.1 and OSHA standards.
- Inspect the jack before each use; do not use the jack if it's damaged, altered, or in poor condition. Take corrective action if any of the following conditions are found: cracked or damaged housing; excessive wear, bending, or other damage; leaking hydraulic fluid; scored or damaged piston rod; loose hardware; modified or altered equipment.



- A load must never exceed the rated lifting capacity of the jack.
- Use the jack on a hard, level surface. The jack must be free to roll without any obstructions while lifting or lowering the vehicle. The wheels of the vehicle must be in the straight-ahead position, and the hand brake released.
- Use the jack for lifting purposes only. Stay clear of a lifted load. Place support stands under the axles before working on the vehicle.
- Center the load on the jack saddle. Off-center loads can damage seals and cause jack failure. Lift only dead weight.
- Do not use blocks or other extenders between the saddle and the load being lifted.
- 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.
- Use only approved hydraulic fluid (Chevron AW Hydraulic Oil or equivalent). The use of alcohol, hydraulic brake fluid, or transmission oil could damage seals and result in jack failure.

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

Setup

Assembling the Handle

1. Loosen the thumb screw on the back of the handle socket.
2. Grease the socket opening. Insert the handle.
3. Torque the thumb screw again to 150–200 in. lbs.

Bleeding Air from the Service 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 by turning the handle all the way counterclockwise (CCW).

2. Pump the handle six full strokes.
3. Close the release valve by turning the handle all the way clockwise (CW).
4. Pump the handle until the lift arm is fully extended.
5. Lower the lift arm by turning the handle all the way counterclockwise (CCW). If the jack does not immediately respond, repeat steps 2–4.

Operating Instructions

Setup

1. Loosen the thumb screw on the front of the handle socket.
2. Grease the socket opening. Insert the handle.
3. Torque the thumb screw to 150–200 in. lbs.

Operation

1. Close the release valve by turning the handle clockwise (CW) as far as it will go.
2. Position the jack under the vehicle. **IMPORTANT: Use the manufacturer's recommended lifting points on the chassis.**
3. Pump the jack handle to raise the saddle to the contact point.
4. Check the placement of the jack; the load must be centered on the jack saddle. **IMPORTANT: Avoid wheel obstructions such as gravel, tools, or uneven expansion joints.**
5. Finish lifting the vehicle by pumping the handle. Do not attempt to raise the jack beyond its travel stops.
6. Place approved support stands under the vehicle at points that will provide stable support. Before making repairs on the vehicle, lower it onto the support stands by SLOWLY and CAREFULLY turning the handle counterclockwise (CCW).

Preventive Maintenance

IMPORTANT: The greatest single cause of failure in hydraulic units is dirt. Keep the service 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 moving parts in the wheels, arm, and handle.
3. Replace the oil in the reservoir at least once per year. To check the oil level, lower the lift arm completely. Remove the rubber filler plug. Oil level should be at the bottom of the filler plug hole. If necessary, add approved anti-wear hydraulic jack oil, and install the filler plug. **IMPORTANT: The use of alcohol, hydraulic brake fluid, or transmission oil 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, damaged housing
 - b. excessive wear, bending, other damage
 - c. leaking hydraulic fluid
 - d. scored, damaged piston rod
 - e. loose hardware
 - f. modified equipment
5. Keep warning labels and instructional decals clean and readable. Use a mild soap solution to wash external surfaces of the jack.

These instructions are written to help you, the user, more effectively use and maintain your OTC jacks. Some of the information applying to construction, installation, operation, inspection, and maintenance of hydraulic jacks was selected from ANSI B30.1. It is strongly recommended that the user read ANSI B30.1. The document may be ordered from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th, New York, New York 10017.

Troubleshooting Guide

Repair procedures must be performed in a dirt-free environment by qualified personnel who are familiar with this equipment. **CAUTION: All inspection, maintenance, and repair procedures must be performed when the jack is free of a load (not in use).**

Trouble	Cause	Solution
Jack does not lift	<ol style="list-style-type: none"> 1. Release valve is open. 2. Low/no oil in reservoir. 3. Air-locked system. 4. Load is above capacity of jack. 5. Delivery valve and/or bypass valve not working correctly. 6. Packing worn out or defective. 	<ol style="list-style-type: none"> 1. <i>Close release valve.</i> 2. <i>Fill with oil and bleed system.</i> 3. <i>Bleed system.</i> 4. <i>Use correct equipment.</i> 5. <i>Clean to remove dirt or foreign matter. Replace oil.</i> 6. <i>Replace hydraulic unit.</i>
Jack lifts only partially	<ol style="list-style-type: none"> 1. Too much or not enough oil. 	<ol style="list-style-type: none"> 1. <i>Check oil level.</i>
Jack advances slowly	<ol style="list-style-type: none"> 1. Pump not working correctly. 2. Leaking seals. 	<ol style="list-style-type: none"> 1. <i>Replace hydraulic unit.</i> 2. <i>Replace hydraulic unit.</i>
Jack lifts load, but doesn't hold	<ol style="list-style-type: none"> 1. Cylinder packing is leaking. 2. Valve not working correctly (suction, delivery, release, or bypass). 3. Air-locked system. 	<ol style="list-style-type: none"> 1. <i>Replace hydraulic unit.</i> 2. <i>Inspect valves. Clean and repair seat surfaces.</i> 3. <i>Bleed system.</i>
Jack leaks oil	<ol style="list-style-type: none"> 1. Worn or damaged seals. 	<ol style="list-style-type: none"> 1. <i>Replace hydraulic unit.</i>
Jack will not retract	<ol style="list-style-type: none"> 1. Release valve is closed. 	<ol style="list-style-type: none"> 1. <i>Open release valve all the way counterclockwise (CCW). May be necessary to clean release valve.</i>
Jack retracts slowly	<ol style="list-style-type: none"> 1. Cylinder damaged internally. 2. Link section is binding. 	<ol style="list-style-type: none"> 1. <i>Send jack to OTC-authorized service center. (Refer to OTC Form No. 104031.)</i> 2. <i>Lubricate or replace link section.</i>