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Form No. 554043

Parts List &  
 Operating Instructions  
 for:

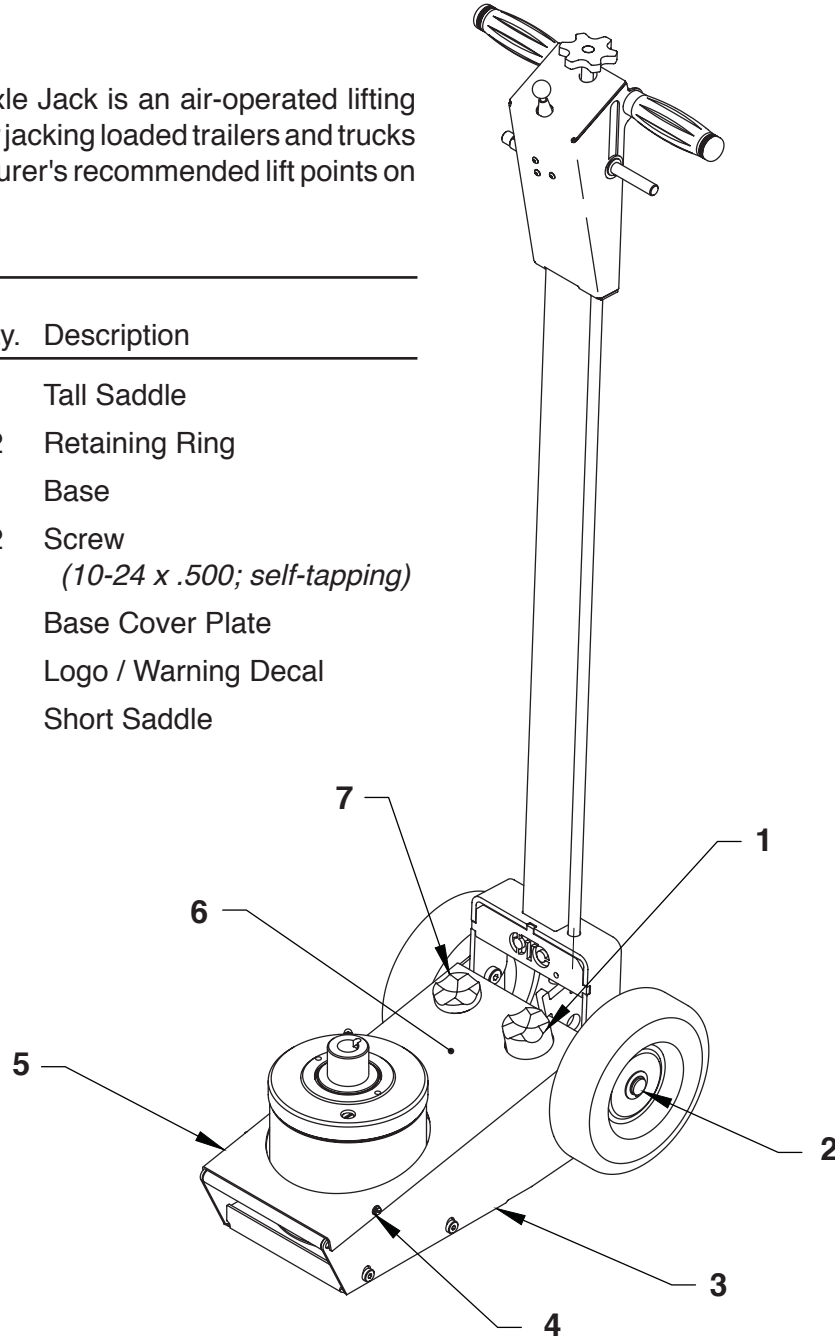
5092

## Under Axle Jack

Max. Capacity: 27.5 Tons

No. 5092 Under Axle Jack is an air-operated lifting device designed for jacking loaded trailers and trucks using the manufacturer's recommended lift points on the chassis.

Item No.	Part No.	Qty.	Description
1	★	1	Tall Saddle
2	★	2	Retaining Ring
3	542068	1	Base
4	14456	2	Screw (10-24 x .500; self-tapping)
5	542073	1	Base Cover Plate
6	★	1	Logo / Warning Decal
7	★	1	Short Saddle

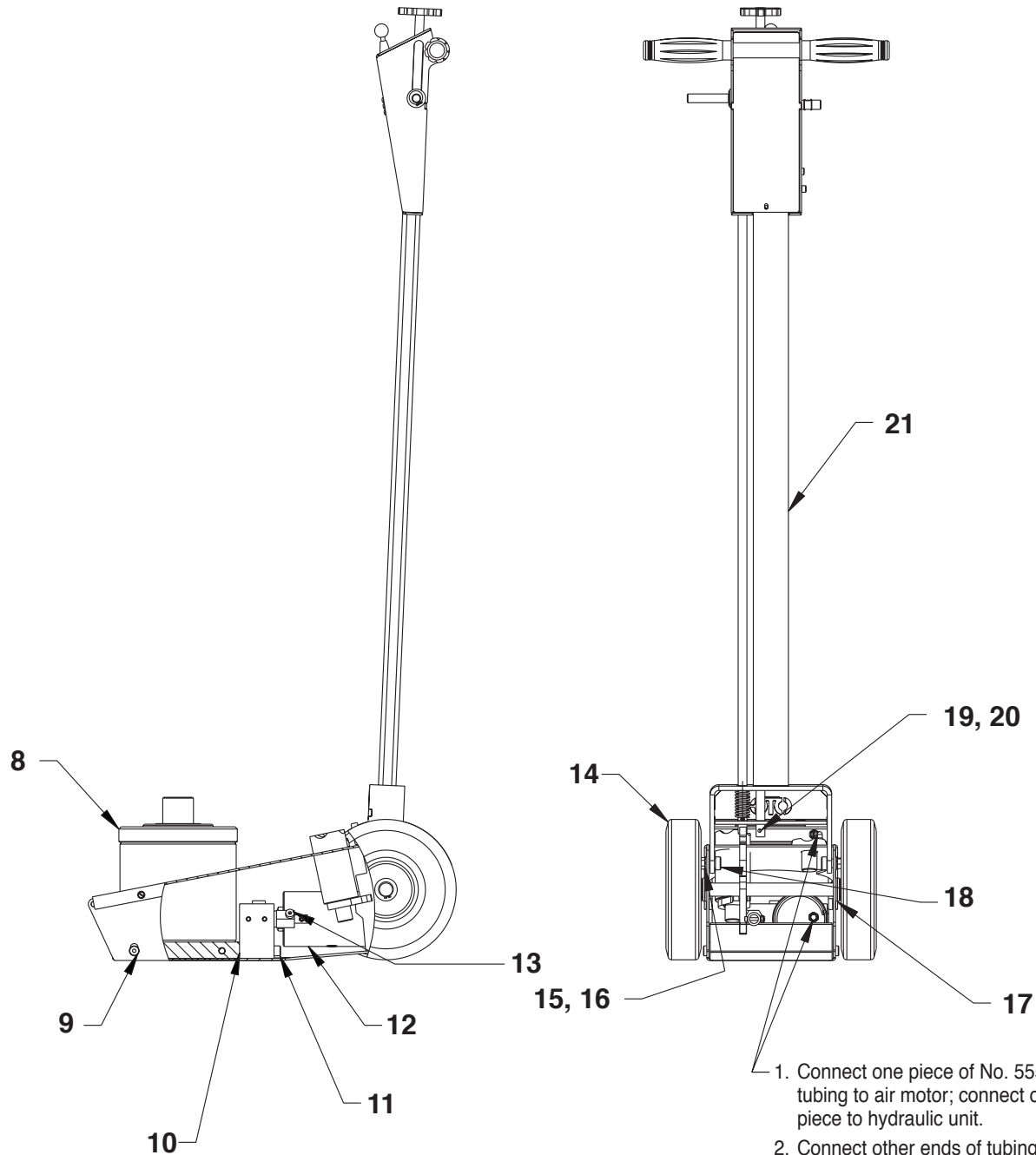


Items marked with a star (★) are contained in replacement parts kits. See sheet 3 of 4, back.

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Sheet No. 1 of 4

Issue Date: Rev. D, May 2, 2013



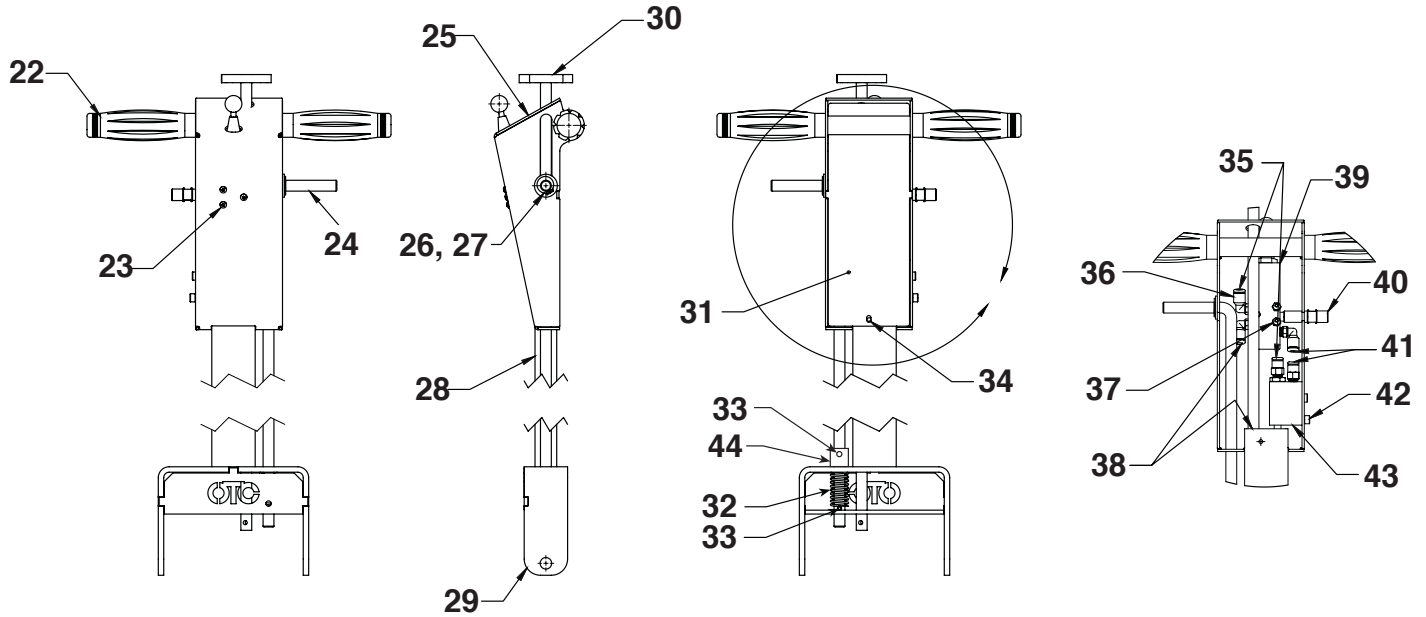
1. Connect one piece of No. 555032 tubing to air motor; connect other piece to hydraulic unit.
2. Connect other ends of tubing to split end of No. 554212 "Y" fitting; connect single end of "Y" fitting to No. 555032 tubing from handle.

Items marked with a star (★) are contained in replacement parts kits. See sheet 3 of 4, back.

Item No.	Part No.	Qty.	Description
8	542069	1	Hydraulic Assembly
9	★	4	Socket Hd. Cap Screw (.375-16)
10	★	2	O-ring
11	★	2	Socket Hd. Cap Screw (apply Loctite®; torque to 30 ft-lbs)
12	542061	1	Air Pump & Motor Assembly (parts list on sheet 3)
13	★	1	Release Shaft
14	★	2	Wheel

Item No.	Part No.	Qty.	Description
15	★	2	Hex Nut (3/8-16)
16	★	2	Lockwasher (3/8)
17	★	6	Washer
18	★	2	Shoulder Bolt
19	★	2	Metric Hex Hd. Cap Screw
20	★	2	Locknut (M4 x .70)
21	542062	1	Handle Assembly (parts list on sheet 2)

No. 542062 Handle Assembly

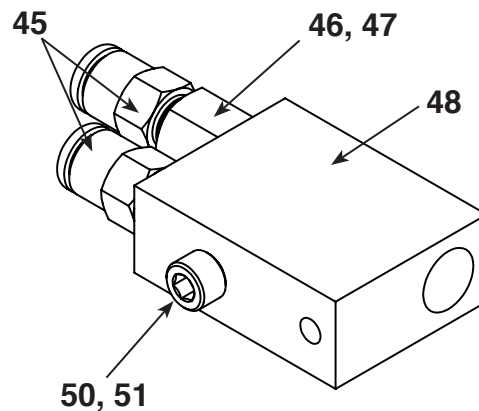


Item No.	Part No.	Qty.	Description
22	★	2	Handle Grip
23	★	3	Button Hd. Cap Screw (8-32)
24	542070	1	Handle Lock Rod
25	554333	1	Control Decal
26	★	1	Retaining Ring
27	★	1	Washer (1/2")
28	★	1	Warning Decal
29	568399	1	Handle
30	542067	1	Release Knob
31	542064	1	Cover Plate
32	★	1	Compression Spring
33	★	2	Roll Pin

Item No.	Part No.	Qty.	Description
34	★	1	Screw (10-24 x .500)
35	555032	9.25"	Tubing
36	★	3	Push-to-Connect Fitting
37	★	3	Locknut (M4 x .70)
38	555032	44"	Tubing
39	554112	1	Valve
40	★	1	Nipple (.250 NPT x .125 NPT)
41	★	2.5"	Tubing
42	★	1	Socket Hd. Cap Screw
43	553772	1	Vacuum Generator Assembly (see parts list below)
44	563599	1	Adapter

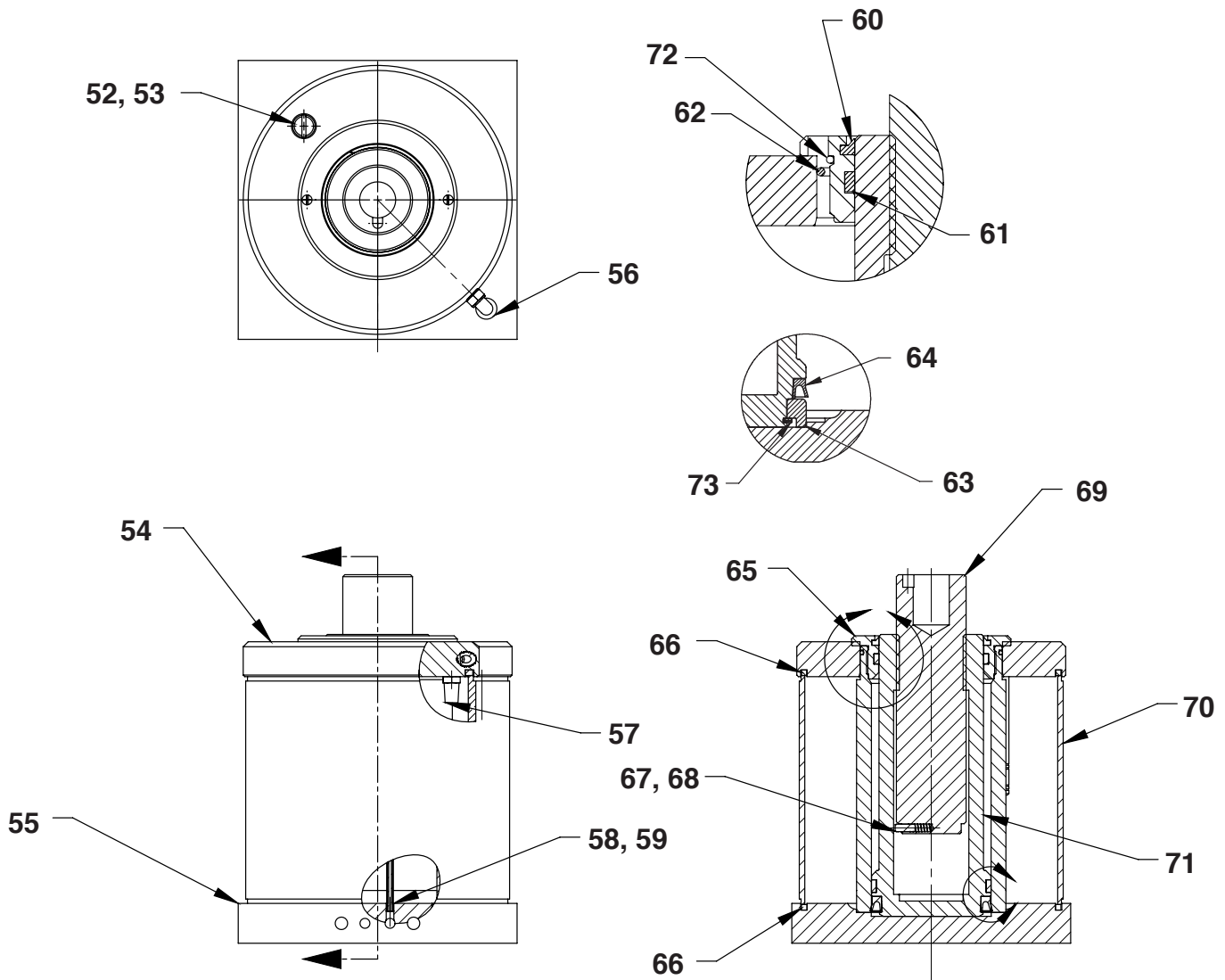
No. 553772 Vacuum Generator Assembly

Item No.	Part No.	Qty.	Description
45	554113	2	Push-to-Connect Fitting (8 mm)
46	566336	1	Venturi Nozzle
47	★	1	O-ring (nitrile)
48	566335	1	Venturi Valve Block
50	554114	1	Socket Head Cap Screw
51	★	1	O-ring (fluoroelastomer)



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No. 542069 Hydraulic Assembly

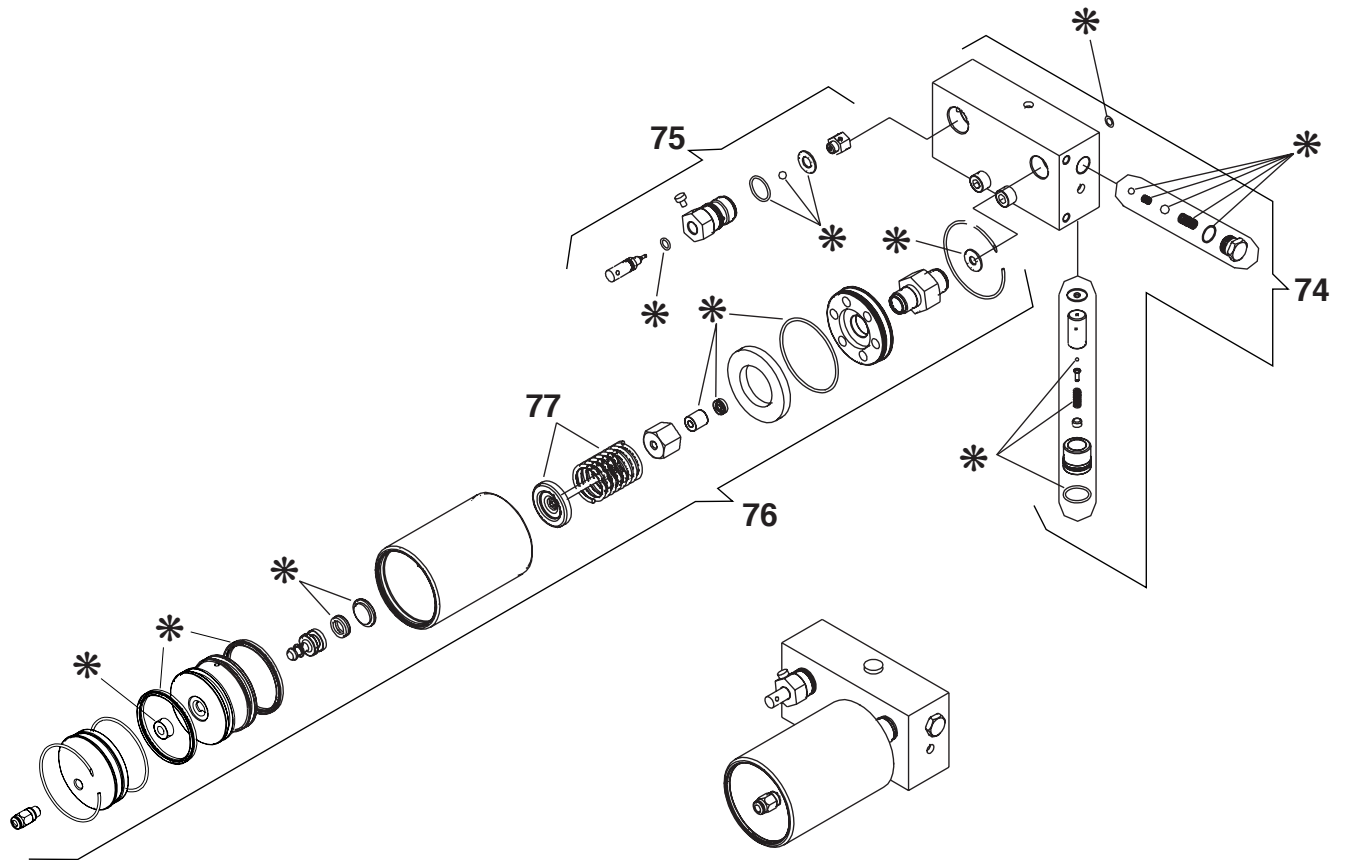


Item No.	Part No.	Qty.	Description
52	★	1	Fill Plug
53	★	1	O-ring
54	548124	1	Reservoir Cap
55	542080	1	Base
56	★	1	Push-to-Connect Fitting
57	★	1	Exhaust Muffler
58	★	1	Screen Filter
59	★	1	Filter Retainer
60	★	1	Seal
61	★	1	Wear Ring
62	★	1	O-ring
63	558437	1	Piston Wear Ring
64	★	1	U-cup

Item No.	Part No.	Qty.	Description
65	566495	1	Gland Nut <i>(torque to 100 ft-lbs)</i>
66	★	2	Seal
67	★	1	Spring
68	★	1	Dowel Pin
69	542085	1	Extension Screw
70	548123	1	Reservoir Tube
71	542084	1	Piston
72	★	1	O-ring
73	★	1	External Retaining Ring

Items marked with a star (★) are contained in replacement parts kits. See sheet 3 of 4, back.

No. 542061 Air Motor Assembly



Item No.	Part No.	Description
74	<b>555014</b>	Block Assembly
75	<b>555015</b>	Release Valve
76	<b>555016</b>	Air Motor
77	<b>555017</b>	Air Motor Plunger Assembly
*	<b>555018</b>	Air Motor Seal Kit

Item No.	Qty.	Description
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**No. 563502  
Fastener Kit**

9	4	Socket Hd. Cap Screw (.375-16)
11	2	Socket Hd. Cap Screw (Loctite®; torque to 30 ft.lbs.)
15	2	Hex Nut (3/8-16)
16	2	Lockwasher (3/8)
17	6	Washer
18	2	Shoulder Bolt
19	2	Metric Hex Hd. Cap Screw
20	2	Locknut (M4 x .70)
23	3	Button Hd. Cap Screw (8-32)
27	1	Washer (1/2 in.)
34	3	Screw (10-24 x .500)

**No. 563503  
Handle Hardware Kit**

36	3	Push-to-Connect Fitting
37	3	Locknut (M4 x .70)
40	1	Nipple (.250 NPT x .125 NPT)
41	6.5 ft.	Tubing
42	1	Socket Hd. Cap Screw

Item No.	Qty.	Description
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**No. 563504  
Handle Grip Kit**

22	2	Handle Grip
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**No. 563505  
Hardware Kit**

2	2	Retaining Ring
6	1	Logo / Warning Decal
13	1	Release Shaft
26	1	Retaining Ring
28	1	Warning Decal
32	1	Spring
33	2	Roll Pin
67	1	Spring
68	1	Dowel Pin
1	1	Y-fitting

Item No.	Qty.	Description
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**No. 563506  
Seal Repair Kit**

10	2	O-ring
47	1	O-ring (nitrile)
51	1	O-ring (fluoroelastomer)
52	1	Fill Plug
53	1	O-ring
56	1	Push-to-Connect Fitting
57	1	Exhaust Muffler
58	1	Screen Filter
59	1	Filter Retainer
60	1	Seal
61	1	Wear Ring
62	1	O-ring
64	1	U-cup
66	2	Seal
72	1	O-ring
73	1	External Retaining Ring

**No. 563507  
Saddle Kit**

1	1	Tall Saddle
7	1	Short Saddle

**No. 563508  
Wheel Repair Kit**

2	2	Retaining Ring
14	2	Wheel

This document contains product parts lists as well as information regarding operation and maintenance. Items listed in the parts list have been carefully tested and selected by OTC.

**Therefore: Use only OTC replacement parts.**

Product questions may be directed to the OTC Technical Services Department at (800) 533-6127.



Get parts at [OTCparts.com](http://OTCparts.com).

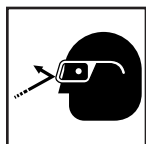
## Safety Precautions



**CAUTION:** To prevent personal injury and damage to equipment,



- Study, understand, and follow all instructions before operating this device.
- Wear protective eyewear that meets the requirements of ANSI Z87.1 and OSHA.
- Do not exceed the rated capacity of the jack.



- Use the jack only on a hard, level surface.
- This jack is a lifting device only. Immediately after lifting, support the vehicle with appropriate means.
- Do not move or dolly the vehicle while it is on the jack.



- Lift only on areas of the vehicle as specified by the vehicle manufacturer.
- No alterations shall be made to this product.

## Operating Instructions

1. Lubricate the air inlet on the jack with 1/2 oz. clean lubricating oil; lack of oil can cause pump malfunction.
2. Connect the air supply. (90 – 120 psi of clean, dry air is required for the capacity of this jack.)
3. Set the vehicle's parking brakes and / or block the wheels.
4. Position the jack under the vehicle at the vehicle manufacturer's recommended lifting point on the chassis.
5. Close the release valve by turning the release knob clockwise (CW) until snug.
6. Move the air valve lever to the right to raise the jack saddle until it touches the vehicle. Check the placement of the saddle lugs. Finish lifting the vehicle.
7. Place approved safety stands under the vehicle at points that will provide stable support. Before making repairs, lower the vehicle onto the safety stands by SLOWLY and carefully turning the release knob counterclockwise (CCW). Move the air valve lever to the left to retract the cylinder. *Note: Keep the air supply attached to the jack.*

### Bleeding Air from the Under Axle 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 release knob all the way counterclockwise (CCW).
2. Connect the air supply to the jack.
3. Move the air valve lever to the left until the cylinder is fully retracted.
4. Close the release valve by turning the release knob all the way clockwise (CW) until snug.
5. Move the air valve lever to the right until the cylinder is fully extended.
6. Lower the cylinder by turning the release knob all the way CCW. Move the air valve lever to the left until the cylinder is fully retracted.
7. Repeat steps 1 – 6 five or more times.

## Preventive Maintenance

**Important: The greatest single cause of failure in hydraulic units is dirt. Keep the under axle 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.
3. Replace the oil in the reservoir at least once per year. To check the oil level, disconnect the air supply, place the under axle jack on level ground, and completely retract the ram. Remove the filler plug / dipstick, wipe it clean, and reinstall it, threading it in all the way. Remove the dipstick again and note the oil level. The oil level should be between the two marks on the dipstick. Add or remove approved anti-wear hydraulic jack oil as needed, and install the dipstick. **CAUTION: The use of alcohol, hydraulic brake fluid, detergent motor oil, 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 or damaged housing
  - b. Excessive wear, bending, or other damage
  - c. Leaking hydraulic fluid
  - d. Scored or damaged piston rod
  - e. Loose hardware
  - f. Modified or altered equipment

## Troubleshooting Guide

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

Trouble	Cause	Solution
<b>Erratic action</b>	<ol style="list-style-type: none"> <li>1. Air in system.</li> <li>2. Oil viscosity too high.</li> <li>3. Internal leakage in cylinder.</li> <li>4. Cylinder sticking or binding.</li> </ol>	<ol style="list-style-type: none"> <li>1. Follow the instructions in this document, "Bleeding Air from the Under Axle Jack".</li> <li>2. Change to a lower viscosity oil.</li> <li>3. Replace worn packings. Look for excessive contamination or wear.</li> <li>4. Look for dirt, gummy deposits, or leaks. Check for misalignment, worn parts, or defective packings.</li> </ol>
<b>Jack does not lift</b>	<ol style="list-style-type: none"> <li>1. Release valve is open.</li> <li>2. Low / no oil in reservoir.</li> <li>3. Air-locked system.</li> <li>4. Load is above capacity of jack.</li> <li>5. Delivery valve and / or bypass valve not working correctly.</li> <li>6. Packing worn out or defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Close release valve.</li> <li>2. Fill with oil and bleed system.</li> <li>3. Follow the instructions in this document, "Bleeding Air from the Under Axle Jack".</li> <li>4. Use correct equipment.</li> <li>5. Clean to remove dirt or foreign matter. Replace oil.</li> <li>6. Replace power unit.</li> </ol>
<b>Jack lifts only partially</b>	<ol style="list-style-type: none"> <li>1. Not enough oil.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check oil level.</li> </ol>
<b>Jack advances slowly</b>	<ol style="list-style-type: none"> <li>1. Low air pressure.</li> <li>2. Seals are leaking.</li> <li>3. Pump not working correctly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust air pressure to 90–175 psi.</li> <li>2. Take jack to OTC authorized service center for repair.</li> <li>3. Take jack to OTC authorized service center for repair.</li> </ol>
<b>Jack lifts load, but does not hold</b>	<ol style="list-style-type: none"> <li>1. Cylinder packing is leaking.</li> <li>2. Valve not working correctly (delivery, release, or bypass).</li> <li>3. Air-locked system.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace seals.</li> <li>2. Take jack to OTC authorized service center for repair.</li> <li>3. Bleed system.</li> </ol>
<b>Jack leaks oil</b>	<ol style="list-style-type: none"> <li>1. Worn or damaged seals.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take jack to OTC authorized service center for repair.</li> </ol>
<b>Jack will not retract</b>	<ol style="list-style-type: none"> <li>1. Release valve is closed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Open or clean release valve.</li> </ol>
<b>Jack retracts slowly</b>	<ol style="list-style-type: none"> <li>1. Cylinder damaged internally.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take jack to OTC authorized service center for repair.</li> </ol>
<b>Sound of air leaking when lever is in retract position.</b>	<ol style="list-style-type: none"> <li>1. This is normal.</li> </ol>	