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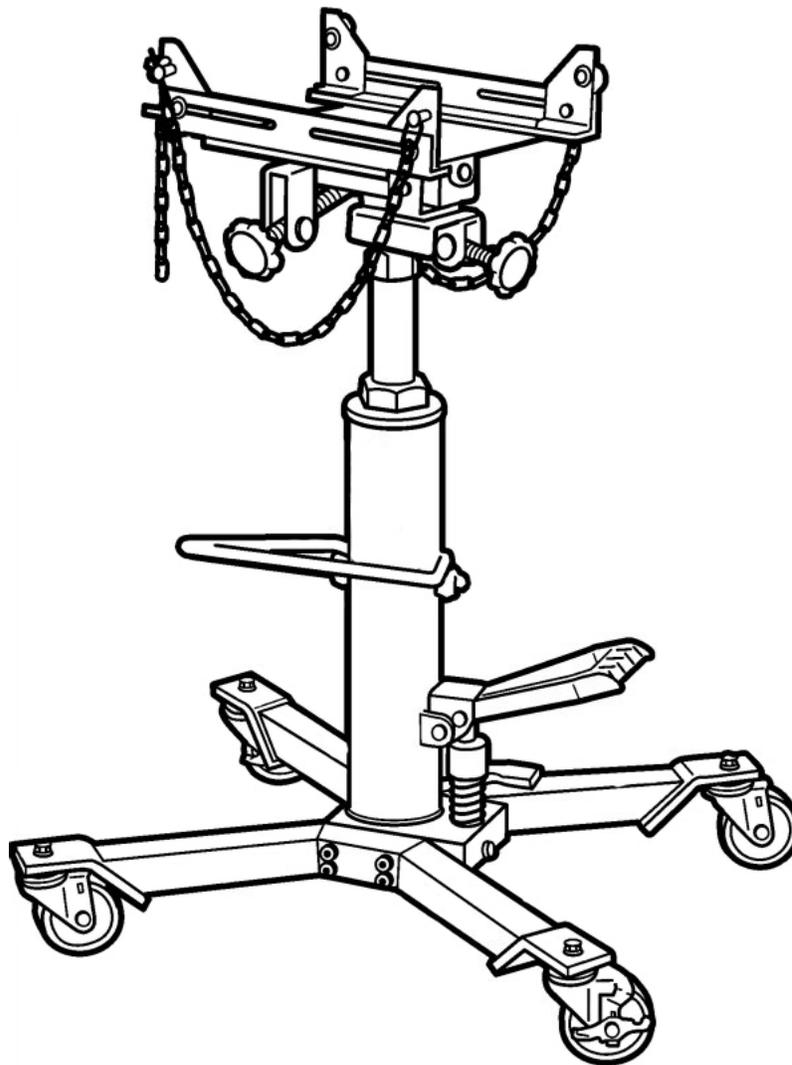
Form No. SP04522068

Parts List and
Operating Instructions
for:

TJH10

High-Lift Transmission Jack

Maximum Capacity: 1,000 lbs (453 kg)



Application:
Installation and removal of automobile transmissions.

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Explanation of Safety Signal Words

The safety signal word designates the degree or level of hazard seriousness.



DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION: Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Safety Precautions



WARNING: To prevent personal injury and/or damage to equipment,



- Read, understand, and follow all safety precautions and operating instructions.

- Wear eye protection that meets the requirements of ANSI Z87.1 and OSHA.

- A load must never exceed the rated lifting capacity of the jack.

- Do not lift or support the vehicle with this jack. Place support stands under the vehicle before starting repairs.



- Use the jack on a hard, smooth, level surface only.

- Center the load on the jack saddle. Off-center loads can damage the seals in the hydraulic cylinder and cause jack failure.



- Use of this jack is limited to the removal, installation, and transportation (in the lowered position) of transmissions, transfer cases, and transaxles.

- Do not raise, lower, or transport a transmission (or other component) unless it is secured by the restraint system. It is the operator's responsibility to adjust the restraint system to a safe, suitable position for the component.

- Never move the jack with a load any higher off the ground than necessary. Slowly and carefully move the jack around corners because the load could tip. Stay clear of a lifted load.

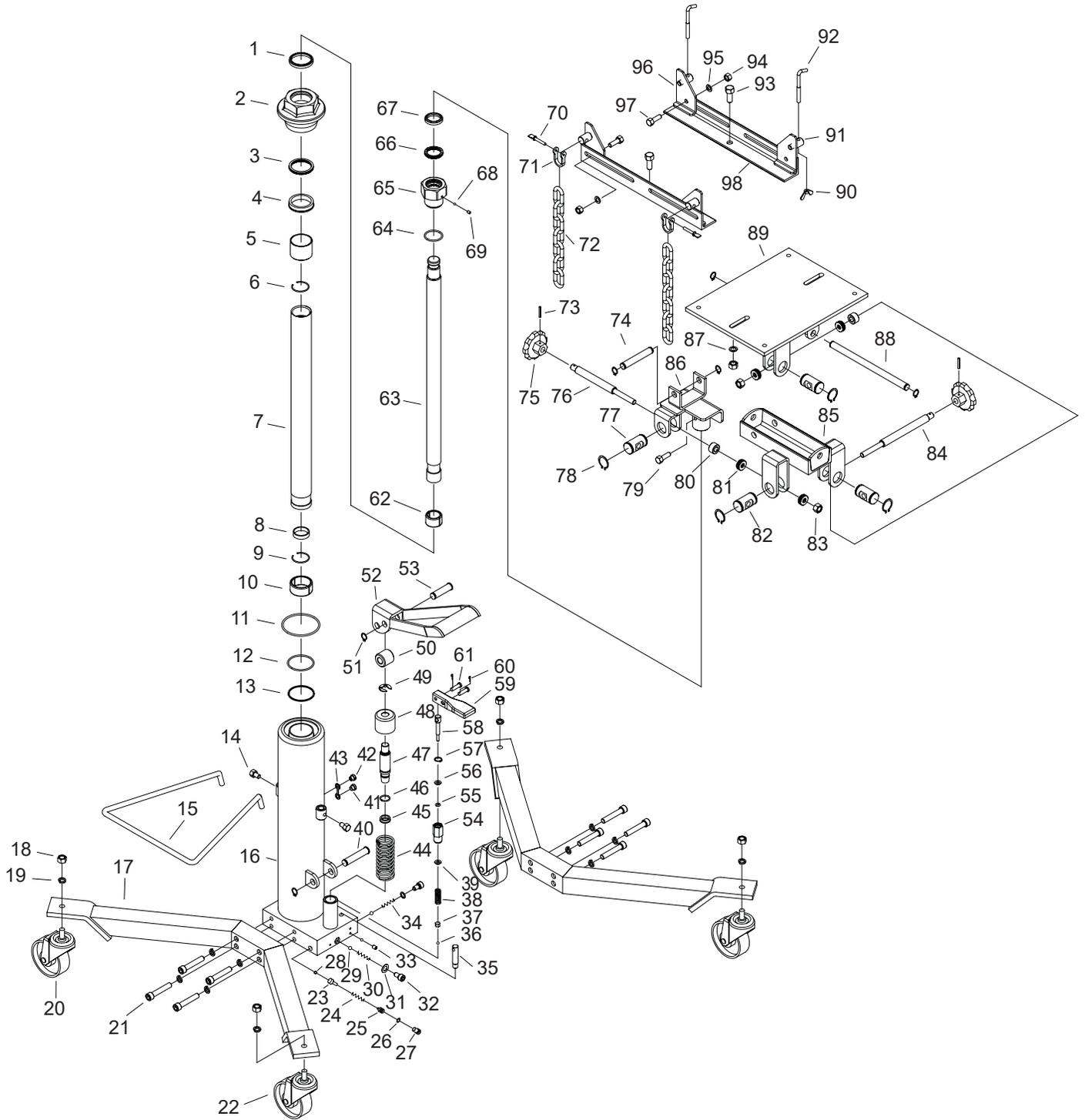
- Lower the jack slowly and carefully while watching the position of the load.

- Do not modify the jack or use adapters unless approved or supplied by OTC.

- Use only OTC-approved hydraulic oil with a 215 SUS viscosity rating at 100° F. Do not use alcohol, hydraulic brake fluid, or transmission oil as this can damage seals and result in jack failure.

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

Parts List



Item No.	Qty.	Description	Item No.	Qty.	Description
1	1	Dustproof	50	1	Bushing
* 2	1	Screw Cap	51	6	Snap Ring
3	1	Y-seal	52	1	Foot Pedal
4	1	Bushing	53	1	Pin
5	1	Bushing	54	1	Oil Release Valve
6	1	Snap Ring	55	1	O-ring
* 7	1	Inner Cylinder	56	1	Washer
8	1	Bushing	57	1	Snap Ring
9	1	Snap Ring	58	1	Oil Release Rod
10	1	Bushing	59	1	Oil Release Pedal
11	1	O-ring	60	2	Pin
12	1	O-ring	61	2	Pin
13	1	Nylon Washer	62	1	Bushing
14	2	Bolt	* 63	1	Piston Rod
15	1	Draw Bar	64	1	O-ring
* 16	1	Oil Cylinder Assembly	65	1	Screw Cap
* 17	2	Leg	66	1	Y-seal
18	6	Nut	67	1	Dustproof
19	12	Lock Washer	68	1	Steel Ball
20	2	Swivel Caster A	69	1	Air Bleed Screw
21	8	Bolt	70	2	Screw
22	2	Swivel Caster B	71	2	Link
23	1	Ball Seat	72	2	Safety Chain
24	1	Spring	73	2	Pin
25	1	Screw	74	1	Shaft
26	1	O-ring	75	2	Knob
27	1	Bolt	76	1	Screw
28	1	Steel Ball	77	2	Shaft
29	2	Steel Ball	78	8	Snap Ring
30	1	Spring	79	1	Bolt
31	2	Copper Washer	80	2	Bushing
32	2	Bolt	81	4	Bearing
33	4	Screw	82	2	Shaft
34	1	Spring	83	2	Locknut
35	1	Rod	84	1	Screw
36	5	Steel Ball	85	1	Bracket
37	1	Ball Seat	86	1	Bracket
38	1	Spring	87	2	Flat Washer
39	1	Copper Washer	88	1	Shaft
40	1	Pin	89	1	Universal Saddle
41	1	Screw	90	2	Screw Cap
42	1	Screw	91	2	Fixing Bracket A
43	1	Sealing Gasket	92	2	Hook
44	1	Spring	93	2	Bolt
45	1	Y-seal	94	4	Nut
46	1	O-ring	95	4	Flat Washer
47	1	Pump Plunger	96	2	Fixing Bracket B
48	1	Spring Cover	97	4	Bolt
49	1	Snap Ring	98	2	Corner Bracket

Items marked with an asterisk (*) are not available as repair parts.

Replacement Kits

Item No.	Qty.	Description
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Caster Kit No. 529138

18	4	Nut
19	4	Lock Washer
20	2	Swivel Caster A
22	2	Swivel Caster B

Foot Pedal Kit No. 529139

35	1	Rod
36	1	Steel Ball
37	1	Ball Seat
38	1	Spring
39	1	Copper Washer
40	1	Pin
44	1	Spring
45	1	Y-seal
46	1	O-ring
47	1	Pump Plunger
48	1	Spring Cover
49	1	Snap Ring
50	1	Bushing
51	2	Snap Ring
52	1	Foot Pedal
53	1	Pin
54	1	Oil Release Valve
55	1	O-ring
56	1	Washer
57	1	Snap Ring
58	1	Oil Release Rod
59	1	Oil Release Pedal
60	2	Pin
61	2	Pin

Hardware Kit No. 529143

14	2	Bolt
15	1	Draw Bar
18	6	Nut
19	12	Lock Washer
21	8	Bolt
49	1	Snap Ring
51	6	Snap Ring
53	1	Pin
60	2	Pin
61	2	Pin
70	2	Screw
71	2	Link
72	2	Safety Chain
73	2	Pin
78	8	Snap Ring
79	1	Bolt
80	2	Bushing
81	4	Bearing
83	2	Locknut
87	2	Flat Washer
90	2	Screw Cap
92	2	Hook
93	2	Bolt
94	4	Nut
95	4	Flat Washer
97	4	Bolt

Item No.	Qty.	Description
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Hydraulic Kit No. 529142

1	1	Dustproof
3	1	Y-seal
4	1	Bushing
5	1	Bushing
6	1	Snap Ring
8	1	Bushing
9	1	Snap Ring
10	1	Bushing
11	1	O-ring
12	1	O-ring
13	1	Nylon Washer
23	1	Ball Seat
24	1	Spring
25	1	Screw
26	1	O-ring
27	1	Bolt
28	1	Steel Ball
29	2	Steel Ball
30	1	Spring
31	2	Copper Washer
32	2	Bolt
33	2	Screw
34	1	Spring
41	1	Screw
42	1	Screw
43	1	Sealing Gasket
62	1	Bushing
64	1	O-ring
66	1	Y-seal
67	1	Dustproof
68	1	Steel Ball
69	1	Air Bleed Screw

Item No.	Qty.	Description
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Saddle Kit No. 529140

70	2	Screw
71	2	Link
72	2	Safety Chain
79	1	Bolt
85	1	Bracket
86	1	Bracket
89	1	Universal Saddle
90	2	Screw Cap
91	2	Fixing Bracket A
92	2	Hook
93	2	Bolt
94	4	Nut
95	4	Flat Washer
96	2	Fixing Bracket B
97	4	Bolt
98	2	Corner Bracket

Tilt Screw Kit No. 529141

73	2	Pin
74	1	Shaft
75	2	Knob
76	1	Screw
77	2	Shaft
78	8	Snap Ring
80	2	Bushing
81	4	Bearing
82	2	Shaft
83	2	Locknut
84	1	Screw
87	2	Flat Washer
88	1	Shaft

This document contains product parts lists, and 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.

Get parts at
OTCparts.com



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

Assembly

1. Assemble the swivel casters on the jack legs using lock washers and nuts provided. See Figure 1.

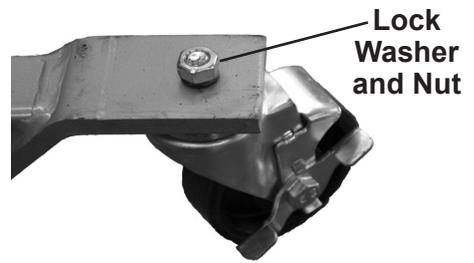


Figure 1

2. Assemble the legs (with the casters) to the jack's base, and finger tighten the Allen socket bolts and lock washers provided. See Figure 2.
3. Position the jack (with legs) on a hard, level surface. Tighten the Allen socket bolts while all four casters are contacting the floor and the jack appears vertical to the floor.

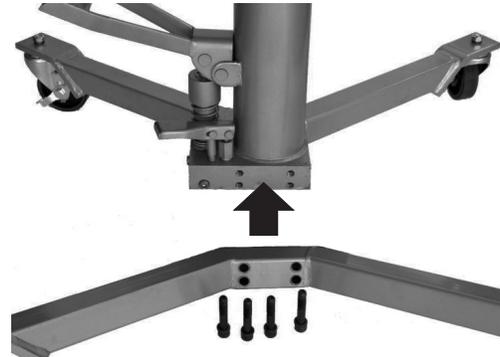


Figure 2

4. Insert the draw bar into its socket on the cylinder, and secure it with the hex bolts provided. See Figure 3.
5. Loosen the bolt from outside the saddle adapter. Mount the saddle adapter onto the top of the piston rod. Tighten the bolt and secure the entire saddle assembly. See Figure 4.
6. Use the tilt adjusting knob to adjust the saddle angle to a relatively horizontal position.

Note: If using the OTC 1758 Fuel Tank Handler, proceed to the Setup instructions at this point.

7. Attach the two corner support brackets onto the universal saddle, and fasten with the hex bolts and nuts.
8. Assemble the fixing bracket on the corner support bracket and secure with the hook and screw caps. Assemble chains and chain hardware to the corner support bracket.

The chains and chain hardware are provided to secure the transmission, transfer box, or differential to the saddle assembly by the different shape of their housing. When using, both ends of the chain should be anchored to the bracket.

WARNING: Do not raise, lower, or transport a transmission (or other component) unless it is secured by the restraint system. It is the operator's responsibility to adjust the restraint system to a safe, suitable position for the component. OTC is not subject to any responsibility for incorrect setups of the restraint system that may cause personal injury and / or property damage.

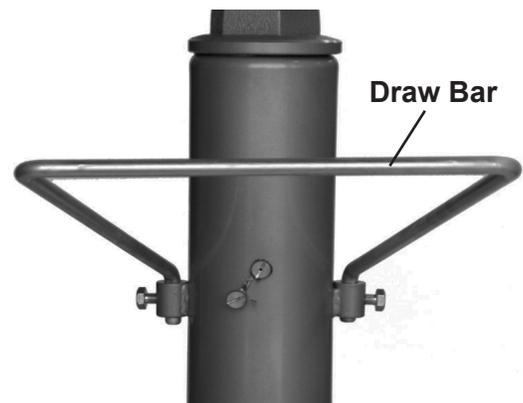


Figure 3

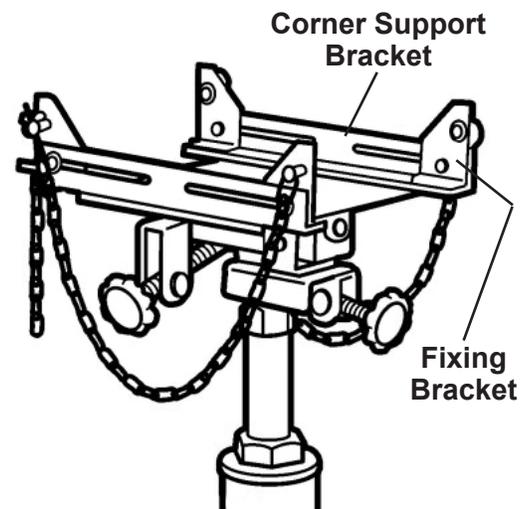
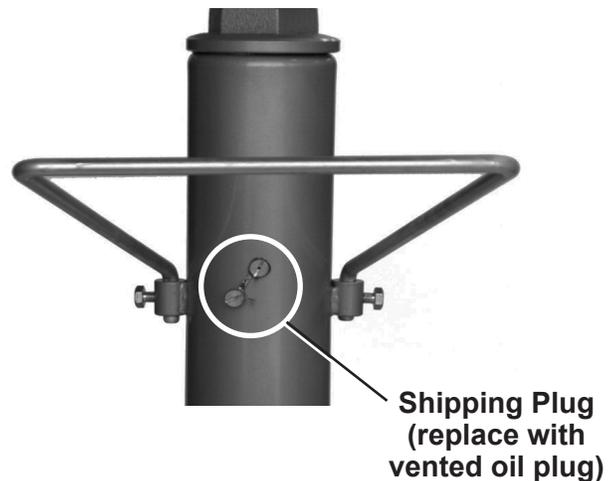


Figure 4

Set Up Instructions

1. To prevent oil leak during shipment, a shipping plug is used to ensure the best sealing function. Remove the shipping oil plug, and replace it with the vented oil plug provided.
2. The reservoir tube is shipped filled with hydraulic oil. Before using the jack for the first time, press the release pedal to open the release valve, and operate the foot pump eight full strokes to distribute the oil.



Bleeding Air From The Hydraulic System

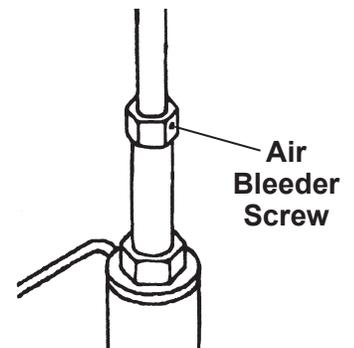
Air can accumulate within a hydraulic system during shipment or after prolonged use. This entrapped air causes the jack to respond slowly or feel “spongy.” Use the steps below to bleed the system.

Follow these steps to bleed the air in the oil system:

1. Pump the jack to the highest point where the first and the second piston cylinders are both at maximum height.
2. Get the help of another person to keep the release pedal depressed, and activate the foot pedal about 20 times.
3. Let go of the release pedal; the air in the oil system should be bled successfully.

Follow these steps to bleed the air in the second cylinder:

1. Locate the air bleeder screw at the top nut, which is on the top of the first piston rod.
2. Pump the jack to its maximum height. Use an Allen socket wrench to loosen the air bleeder screw for no more than two 360° turns. Push the saddle assembly downward to exert the air in the cylinder out until nothing but oil drains out of the bleed hole.
3. Tighten the bleeder screw and repeat step 2 to check again. It may be necessary to repeat step 2 several times.



Operating Instructions

1. Follow the vehicle’s recommended service procedure for removal of the component.
2. Position the jack under the vehicle.
3. Raise the jack by operating the foot pump until the saddle touches the component.
4. Adjust the support brackets to fit the component. Use the tilt crank to align the saddle with the component.

⚠ WARNING: To prevent personal injury and/or damage to equipment, center the load on the jack saddle. Off-center loads can damage the seals in the hydraulic cylinder and cause jack failure.

5. Finish raising the jack to the component. Secure the chain assembly around the component.

⚠ WARNING: Do not raise, lower, or transport a transmission (or other component) unless it is secured by the restraint system. It is the operator’s responsibility to adjust the restraint system to a safe, suitable position for the component.

Maintenance

Regularly lubricate all moving parts of the jack. Pay special attention to the lift screw and related linkages.

1. A medium weight lubricating grease should be used on all external moving parts, such as the bearing surface, pivot points, tilt screws, etc.
2. Regularly check the oil level. With the saddle fully lowered, remove the oil filler screw, and check the oil level. The oil level should be at the bottom of the filler screw hole. Add oil if necessary.
3. Use only OTC-approved hydraulic oil with a 215 SUS viscosity rating at 100° F. Do not use alcohol, hydraulic brake fluid, or transmission oil as this can damage seals and result in jack failure.
4. If the jack fails to operate, check the oil level and/or bleed unit before seeking service.
5. Do not use this jack as a wash rack when washing or steam cleaning transmissions.

Troubleshooting Guide

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

Trouble	Cause	Solution
Unit fails to extend or extends partially	1. Low fluid level	1. Refer to Maintenance section and fill to correct fluid level.
Incomplete or spongy cylinder response when foot pedal is pumped	1. Low fluid level 2. Air in system	1. Fill to correct fluid level. 2. Refer to Bleeding Air from the Hydraulic System.
Abnormal leakage through unit breather	1. Low fluid level	1. Refer to Maintenance section and fill to correct fluid level.
Unit fails to extend when foot pedal is pumped	1. Release valve malfunction 2. Contamination 3. Cylinder packing failure	1. Pump foot pedal with release valve open. 2. Disassemble and clean unit. 3. Install the necessary items from repair kit No. 529142.
Cylinder creeps	1. Load exceeds maximum lifting capacity 2. Release valve is leaking	1. Reduce load or use jack with sufficient lifting capacity. 2. Flush release valve by pumping foot pedal with release valve open.
Cylinder doesn't retract when release pedal is activated	1. Light load 2. Cylinder is binding	1. Unit requires 35 lbs. to return. 2. Disassemble unit; replace defective parts.
Cylinder doesn't extend	1. Contamination 2. Bad packing	1. Disassemble and clean unit. 2. Install repair kit No. 529142.
Cylinder extends when foot pedal is pressed, and retracts as foot pedal retracts	1. Release valve malfunction 2. Contamination	1. Flush release valve by pumping foot pedal with release valve open. 2. Disassemble and clean unit.