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Form No. 528217

**Parts List &  
Operating Instructions  
for:**

**1793A**

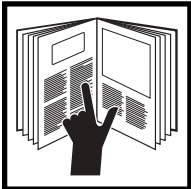
## High Lift Transmission Jack

Max. Capacity: 1,000 lbs.

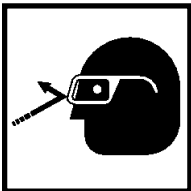
*Application: Installation and removal of automobile transmissions*



### Safety Precautions

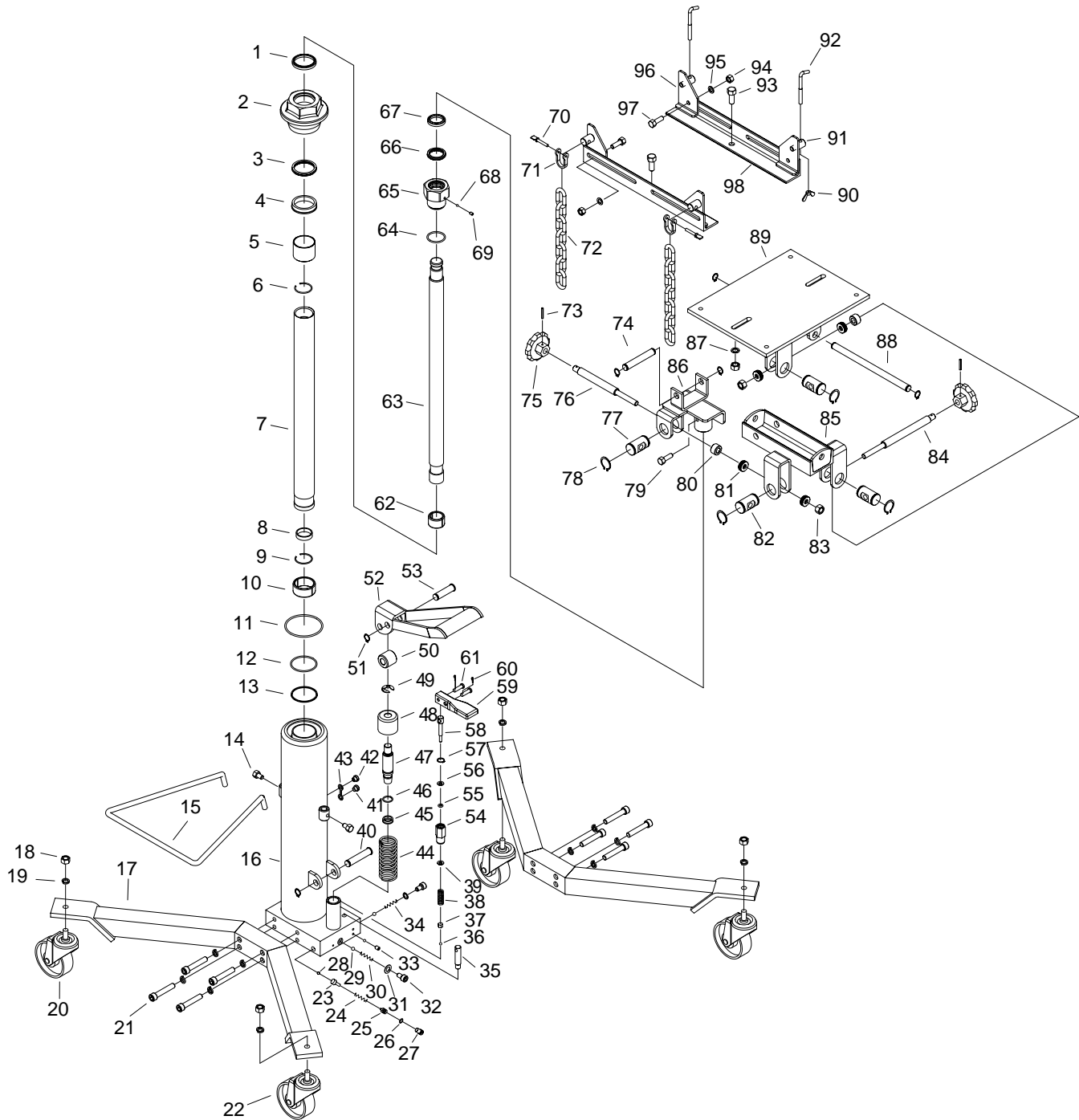


- ! WARNING:** To help prevent personal injury and damage to equipment,
- Study, understand, and follow all safety precautions and operating instructions before operating this device.
  - Wear eye protection that meets ANSI Z87.1 and OSHA standards.
  - A load must never exceed rated jack capacity.
  - Do not lift or support the vehicle with this jack. Adequately support the vehicle before starting repairs.
  - Use only on a hard, level surface.
  - Center the load on the jack saddle. Off-center loads can damage the seals in the ram and cause jack failure.
  - Use of this product is limited to the removal, installation, and transportation, in the lowered position, of transmissions, transfer cases, and transaxles.
  - 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 anti-wear hydraulic jack oil with a 215 SUS viscosity rating at 100° F. 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.

# Parts List



## Parts List

Item No.	Qty.	Description
1	1	Dustproof
* 2	1	Screw Cap
3	1	Y-seal
4	1	Bushing
5	1	Bushing
6	1	Snap Ring
* 7	1	Inner Cylinder
8	1	Bushing
9	1	Snap Ring
10	1	Bushing
11	1	O-ring
12	1	O-ring
13	1	Nylon Washer
14	2	Bolt
15	1	Draw Bar
* 16	1	Oil Cylinder Assembly
* 17	2	Leg
18	6	Nut
19	12	Lock Washer
20	2	Swivel Caster A
21	8	Bolt
22	2	Swivel Caster B
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	4	Screw
34	1	Spring
35	1	Rod
36	5	Steel Ball
37	1	Ball Seat
38	1	Spring
39	1	Copper Washer
40	1	Pin
41	1	Screw
42	1	Screw
43	1	Sealing Gasket
44	1	Spring
45	1	Y-seal
46	1	O-ring
47	1	Pump Plunger
48	1	Spring Cover
49	1	Snap Ring

Item No.	Qty.	Description
50	1	Bushing
51	6	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
62	1	Bushing
* 63	1	Piston Rod
64	1	O-ring
65	1	Screw Cap
66	1	Y-seal
67	1	Dustproof
68	1	Steel Ball
69	1	Air Bleed Screw
70	2	Screw
71	2	Link
72	2	Safety Chain
73	2	Pin
74	1	Shaft
75	2	Knob
76	1	Screw
77	2	Shaft
78	8	Snap Ring
79	1	Bolt
80	2	Bushing
81	4	Bearing
82	2	Shaft
83	2	Locknut
84	1	Screw
85	1	Bracket
86	1	Bracket
87	2	Flat Washer
88	1	Shaft
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

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	4	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

Refer to any operating instructions included with the product for detailed information about operation, testing, disassembly, reassembly, and preventive maintenance.

Items found in this parts list have been carefully tested and selected by OTC. **Therefore: Use only OTC replacement parts!**

Additional questions can be directed to our Technical Services Dept. at 1-800-533-6127.

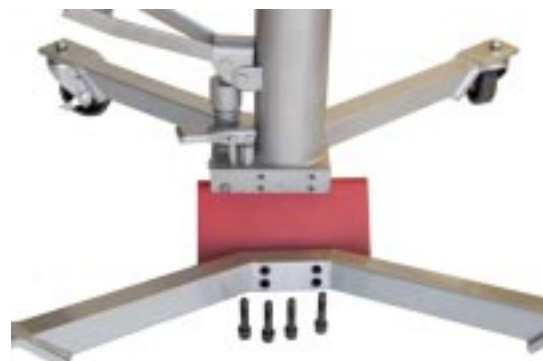
## Assembly

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.

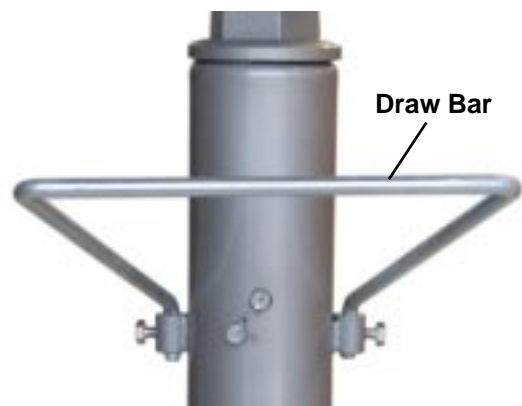
*Note: If you will be using the Fuel Tank Handler, proceed to the Setup instructions at this point.*

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.

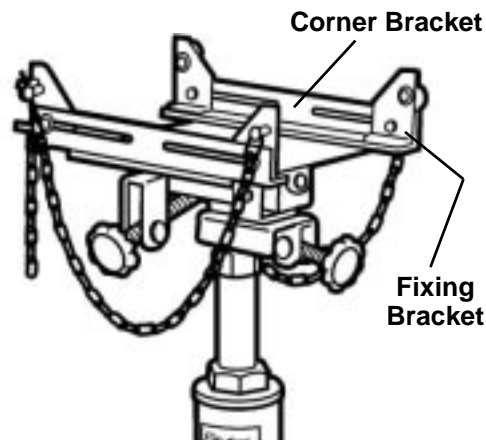
The chains and chain hardware are provided to secure the transmission, transfer box, or differential to the saddle assembly by the different shape of their housing. When using, both ends of the chain should be anchored to the bracket.



**WARNING:** Do not raise, lower, or transport a transmission unless it is secured by the restraint system. It is your responsibility to adjust the restraint system to a suitable position. SPX is not subject to any responsibility for incorrect setups of the restraint system that may cause personal injury and / or property damage.



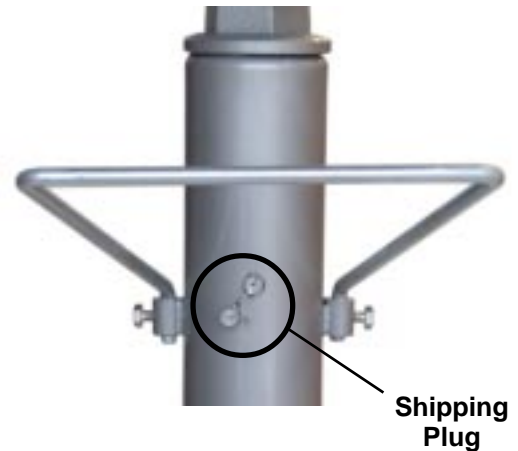
**Figure 3**



**Figure 4**

## Setup 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

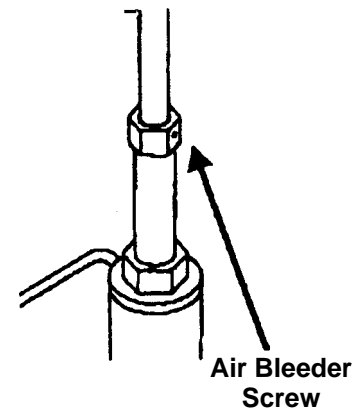
Air can accumulate within a hydraulic system during shipment or after prolonged use. This entrapped air causes the jack to respond slowly or feel “spongy.” Use the steps below to bleed the system.

### 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 rams 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 double check. It may be necessary to repeat the above steps 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.
5. Use the tilt crank to align the saddle with the component.
6. Finish raising the jack to the component. Secure the chain assembly around 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 holes. Add oil if necessary.
3. Use only hydraulic jack oil. Do not use hydraulic brake fluid.
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
<b>Unit fails to extend or extends partially</b>	1. Low fluid level	1. Refer to Maintenance section and fill to correct fluid level.
<b>Incomplete or spongy cylinder response when foot pedal is pumped</b>	1. Low fluid level 2. Air in system	1. Fill to correct fluid level. 2. Refer to Bleeding Air from the Hydraulic System.
<b>Abnormal leakage through unit breather</b>	1. Low fluid level	1. Refer to Maintenance section and fill to correct fluid level.
<b>Unit fails to extend when foot pedal is pumped</b>	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.
<b>Cylinder creeps</b>	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.
<b>Cylinder doesn't retract when release pedal is activated</b>	1. Light load 2. Cylinder is binding	1. Unit requires 35 lbs. to return. 2. Disassemble unit; replace defective parts.
<b>Cylinder doesn't extend</b>	1. Contamination 2. Bad packing	1. Disassemble and clean unit. 2. Install repair kit No. 529142.
<b>Cylinder extends when foot pedal is pressed, and retracts as foot pedal retracts</b>	1. Release valve malfunction 2. Contamination	1. Flush release valve by pumping foot pedal with release valve open. 2. Disassemble and clean unit.