

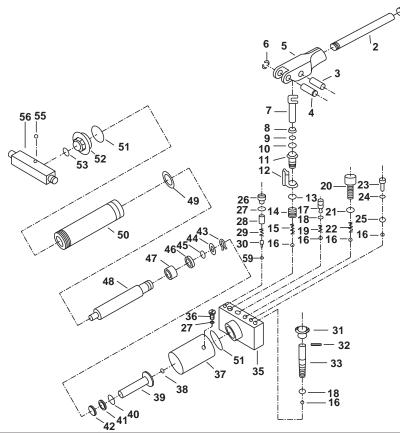
Parts List & Operating Instructions for:

1521

# Low Lift Transmission Jack

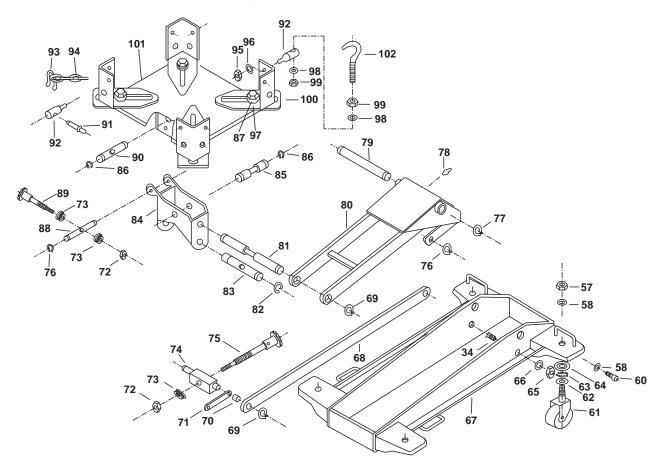
Max. Capacity: 1,000 lbs. (500 kg)

# Hydraulic Unit Hardware and Handle



# Parts List

ltem	No.		ltem	No.		ltem	No.	
Part No	. Reqd.	Description	Part No.	Reqd.	Description	Part No.	Reqd.	Description
1	1	Handle Grip	19	1	Spring	37	1	Reservoir
2	1	Handle	20	1	Screw	38	1	O-ring
3	1	Rivet	21	1	Seal Ring	39	1	Ram
4	1	Rivet	22	1	Spring	40	1	Retaining Ring
5	1	Socket	23	1	Screw	41	1	O-ring
6	1	Snap Ring	24	1	Seal Ring	42	1	Y-ring
7	1	Plunger	25	1	Ball	43	1	Retaining Ring
8	1	Wiper	26	1	Screw	44	1	Washer
9	1	Back-up Ring	27	1	O-ring	45	1	O-ring
10	1	O-ring	28	1	Screw	46	1	Retaining O-ring
11	1	Pump	29	1	Spring	47	1	Bushing
12	1	Pump Seat	30	1	Ball Seat	48	1	Piston Rod
13	1	Seal Ring	31	1	Knob	49	1	O-ring
14	1	Screw	32	1	Pin			Continued 🖙
15	1	Spring	33	1	Release Rod			Continued
16	5	Ball	34	2	Bolt			
17	1	Screw	35	1	Valve Block			
18	2	O-ring	36	1	Oil Fill Plug			



## **Hydraulic Unit Base**

# Parts List contd.

ltem	No.		ltem	No.	
Part No.	Reqd.	Description	Part No.	Reqd.	Description
50	1	Cylinder	77	2	Snap Ring
51	2	Seal Ring	78	1	Grease Fitting
52	1	Cylinder Nut	79	1	Shaft Arm
53	1	O-ring	80	1	Lifting Arm Assembly
55	1	Pin	81	1	Axle
56	1	Link Rod	82	2	Retaining Ring
57	4	Nut	83	1	Axle
58	6	Lock Washer	84	1	Saddle Base
59	1	Ball	85	1	Axle
60	2	Screw	86	4	Snap Ring
61	4	Caster Assembly	87	4	Screw
62	4	Lower Plate	88	1	Axle
63	80	Ball	89	1	Screw
64	4	Upper Plate	90	1	Axle
65	2	Nut	91	2	Chain Screw
66	2	Lock Washer	92	4	Hook Guide
67	1	Side Plate	93	2	Chain Connector
68	2	Long Link Rod	94	2	Chain
69	4	Snap Ring	95	4	Nut
70	2	Spacer	96	4	Washer
71	2	Short Link Rod	97	4	Washer
72	2	Nut	98	4	Washer
73	3	Thrust Bearing	99	4	Nut
74	1	Guide Axle	100	4	Containing Angle
75	1	Screw	101	1	Saddle
76	4	Snap Ring	102	1	Chain Hook

## **Parts List & Operating Instructions**

### Form No. 527900

# Repair Kits

ltem

No. Qty. Description

Item	Description	lterr	
		·	
		No. 7 8 9 10 11 12	
No.         Qty.         Description         No.           Caster Kit         Hyd           No. 527901 includes:         No.           57         1         Nut         7           58         1         Lock Washer         8           61         1         Caster Assembly         9           62         1         Lower Plate         10           63         20         Ball         11           64         1         Upper Plate         12           Chain Kit         14         14         14           No. 527904 includes:         15         91         2           91         2         Chain Screw         16           92         4         Hook Guide         17           93         2         Chain Connector         18           94         2         Chain         19           95         4         Nut         23           102         1         Chain Hook         24           29         4         Nut         23           102         1         Chain Hook         24           25         Grease Fitting         28         29			
No. 52790912924932942954964984994	04 includes: Chain Screw Hook Guide Chain Connector Chain Nut Washer Washer Nut	15 16 17 18 19 20 21 22 23 24	
No. 5279	10 includes:	26 27 28	
		30	
		-	
2 1	Handle		
No. 5279 3 1 4 1 5 1	<b>17 includes:</b> Rivet Rivet Socket	36 37 38 39 40 41	
Hardwar No. 5279 16 3 17 1 18 1 19 1 20 1 21 1 22 1 23 1 24 1	re Kit 18 includes: Ball Screw O-ring Spring Screw Seal Ring Spring Screw Seal Ring Screw	43 44 45 46 47 48 49 50 51 52 53	
26 1 27 1 28 1 29 1 30 1	Screw O-ring Screw Spring Ball Seat	<b>No.</b> 55 56	
		ividi	

m o.	Qtv.	Description
_		c Unit Kit
. 5	2791	11 includes:
,	1	Plunger
3	1	Wiper
)	1	Back-up Ring
)	1	O-ring
	1	Pump
-	1 1	Pump Seat Seal Ring
, L	1	Screw
<u>}</u> ;; ;; ;; ;;	1	Spring
;	5	Ball
	1	Screw
3	2	O-ring
)	1	Spring
)	1	Screw
,	1 1	Seal Ring Spring
-	1	Screw
ļ	1	Seal Ring
	1	Ball
;	1	Screw
·	2	O-ring
3	1	Screw
) )	1 1	Spring
,	1	Ball Seat Knob
,	1	Pin
	1	Release Rod
;	1	Valve Block
;	1	Oil Fill Plug
	1	Reservoir
; )	1	O-ring
) )	1 1	Ram Rotaining Bing
,	1	Retaining Ring O-ring
,	1	Y-ring
3	1	Retaining Ring
ŀ	1	Washer
	1	O-ring
5	1	O-ring Retaining
	1	Bush Distan Dad
; )	1 1	Piston Rod O-ring
, )	1	Cylinder
<b>,</b>	2	Seal Ring
2	1	Cylinder Nut
}	1	O-ring
)	1	Ball
•	1 01	ook Kit
		ock Kit 73 includes:
. 5	1	Pin
;	1	Link Rod
;	2	Snap Ring
		2

### Main Pivot Pin Kit No. 528674 includes:

### 77 2 Snap Ring

79 Shaft Arm 1

Pivo	t Sc	rew (Long) Kit
No. 5	2790	06 includes:
70	2	Spacer
71	2	Short Link Rod
72	1	Nut
73	1	Thrust Bearing
74	1	Guide Axle
75	1	Screw
82	2	Retaining Ring
83	1	Axle
Pivo	t Sc	rew (Short) Kit
		07 includes:
72	2	Nut
73	3	Thrust Bearing
76	4	Snap Ring
86	4	Snap Ring
88	1	Axle
89	1	Screw
90	1	Axle
Pum	p Si	tation Kit
		13 includes:
7	1	Plunger
8	1	Wiper
9	1	Back-up Ring
10	1	O-ring
11	1	Pump
12	1	Pump Seat
13	1	Seal Ring
14	1	Screw
15	1	Spring
16	1	Ball

### Ram Kit

No. 527916 includes:			
38	1	O-ring	
39	1	Ram	
40	1	Retaining Ring	
41	1	O-ring	
42	1	Y-ring	
43	1	Retaining Ring	
44	1	Washer	
45	1	O-ring	
46	1	O-ring Retaining	
47	1	Bush	
48	1	Piston Rod	
49	1	O-ring	
50	1	Cylinder	
51	2	Seal Ring	
53	1	O-ring	
Release Valve Kit No. 527914 includes:			

#### 16 1 Ball

- O-ring 18 1 31 1 Knob
- 32 1 Pin
- Release Rod 33 1

ltem No.	Qty.	Description			
No. 5	Reservoir Kit No. 527915 includes:				
37	1	Reservoir			
51	2	Seal Ring			
52	1	Cylinder Nut			
53	1	O-ring			
Saddle No. 527902 includes:					
101	1	Saddle			
Saddle Angle Kit					

### Sa No. 527905 includes:

87	1	Screw	
97	1	Washer	

100 1 Containing Angle

### Saddle Level Arms Kit No

No.	No. 527909 includes:			
34	2	Bolt		
65	2	Nut		
66	2	Lock Washer		
68	2	Long Link Rod		
69	2	Snap Ring		
Saddle Pivot Base Kit				

#### No. 527908 includes: 69 2 Snap Ring 81

81	1	Axle
84	1	Saddle Base
85	1	Axle
86	2	Snap Ring

### Seal Kit

No.	52791	2 includes:
8	1	Wiper
9	1	Back-up Ring
10	1	O-ring
13	1	Seal Ring
18	2	O-ring
21	1	Seal Ring
24	1	Seal Ring
27	2	O-ring
36	1	Oil Fill Plug
38	1	O-ring
40	1	Retaining Ring
41	1	O-ring
42	1	Y-ring
43	1	Retaining Ring
44	1	Washer
45	1	O-ring
46	1	O-ring Retaining
49	1	O-ring
51	2	Seal Ring
53	1	O-ring

## **Safety Precautions**

WARNING: To prevent personal injury and/or property damage,



- Study, understand, and follow all instructions before operating this device. If the operator cannot read or understand these operating instructions and safety precautions, they must be read and discussed in the operator's native language.
- Wear eye protection that meets ANSI Z87.1 and OSHA standards.
- Use only on hard, level surfaces.



- Inspect the jack before each use; do not use the jack if it is damaged, altered, or in poor condition.
- No alterations shall be made to this product unless approved by OTC. If a modification is needed, contact OTC Technical Services.



- Use of this product is limited to the removal, installation, and transportation in the lowered position of only automotive or truck transmissions.
- Do not exceed the rated capacity of 1,000 lbs. (500 kg).
- Adequately support the vehicle before starting repairs.
- Stay out from underneath the load at all times.
- Secure the load to the jack.
- Lower the jack slowly and carefully while watching the position of the load.
- SLOWLY AND CAREFULLY move the jack around corners.
- Use only approved hydraulic fluid (Chevron AW Hydraulic Oil MV or equivalent). The use of alcohol or hydraulic brake fluid could damage seals and result in jack failure.

## **Operating Instructions**

- 1. Position the jack under the transmission.
- 2. Close the control valve.
- 3. Operate the pump handle to raise the boom and align the mounting plate with the transmission.
- 4. Remove the transmission according to the instructions in the vehicle service manual.
- 5. Position the transmission on the mounting plate, resting against the angle plates.
  - The mounting plate may be tilted forward and backward by turning the tilt knob.
  - The mounting plate may be tilted side-to-side by adjusting the two vertical hex head cap screws.
- 6. Secure the transmission to the mounting plate.
- 7. Lower the load by slowly opening the control valve. The control valve regulates how fast the boom is lowered.

## Parts List & Operating Instructions

## **Preventive Maintenance**

IMPORTANT: Dirt is the greatest single cause of failure in hydraulic units. Keep the 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 element.
- 2. Regularly lubricate the moving parts.
- 3. Replace the oil in the reservoir at least once per year. To check the oil level, place the jack on level ground and lower the lift arm completely. Remove the filler plug. The oil level should be within 3/8" of the filler plug hole. If necessary, add approved anti-wear hydraulic jack oil, and install the filler plug again. IMPORTANT: Use only approved hydraulic fluid (Chevron AW Hydraulic Oil MV or equivalent). The use of alcohol or hydraulic brake fluid could damage 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. Malfunctioning swivel heads or adjusting screws
- f. Loose hardware
- g. 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
Jack does not lift	<ol> <li>Release valve is open</li> <li>Low/no oil in reservoir</li> <li>Air-locked system</li> <li>Load is above capacity of jack</li> <li>Delivery valve and/or bypass valve not working correctly</li> <li>Packing worn out or defective</li> </ol>	<ol> <li>Close release valve.</li> <li>Fill with oil and bleed system.</li> <li>Bleed system.</li> <li>Use correct equipment.</li> <li>Clean to remove dirt or foreign matter. Replace oil.</li> <li>Replace power unit.</li> </ol>
Jack lifts only partially	1. Too much or not enough oil	1. Check oil level.
Jack advances slowly	<ol> <li>Pump not working correctly</li> <li>Leaking seals</li> </ol>	1. Replace power unit. 2. Replace power unit.
Jack lifts load, but doesn't hold	<ol> <li>Cylinder packing is leaking</li> <li>Valve not working correctly (suction, delivery, release, or bypass)</li> <li>Air-locked system</li> </ol>	<ol> <li>Replace power unit.</li> <li>Inspect valves. Clean and repair seat surfaces.</li> <li>Bleed system.</li> </ol>
Jack leaks oil	1. Worn or damaged seals	1. Replace power unit.
Jack will not retract	1. Release valve is closed	1. Open or clean release valve.
Jack retracts slowly	<ol> <li>Cylinder damaged internally</li> <li>Link section is binding</li> </ol>	<ol> <li>Send jack to OTC authorized service center for repair.</li> <li>Lubricate link section.</li> </ol>