
High Lift Transmission Jack

Max. Capacity: 453.59 kg (1,000 lbs.)



Description:
Use to install and remove vehicle transmissions for repair.

Explanation of Safety Signal Words

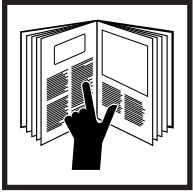
The safety signal word designates the degree or level of hazard seriousness.

- ⚠ 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.

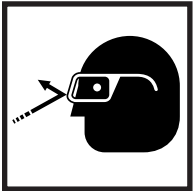
CAUTION: Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Safety Precautions

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



- Study, understand, and follow all safety precautions and operating instructions before using this transmission jack. If the operator cannot read these instructions, operating instructions and safety precautions must be read and discussed in the operator's native language.



- Wear eye protection that meets ANSI Z87.1, CE EN166, AS/NZS 1337, and OSHA standards.



- Only qualified operators may install, operate, adjust, maintain, clean, inspect, or transport this transmission jack.
- 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.
- Only use the jack on a hard, level surface.
- Center the load on the jack saddle. Off center loads can damage the seals in the hydraulic cylinder and cause jack failure.
- 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 use this transmission jack for anything other than its intended purpose.
- No alteration shall be made to this product.
- Inspect the condition of the transmission jack before each use. Do not use if damaged, altered, or in poor condition.
- Do not use adapters with this jack unless supplied by OTC.
- Use only anti-wear hydraulic jack oil with a 215 SUS viscosity rating at 37.78° C (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.

Setup Instructions

1. Remove the transmission jack from the pallet, and attach the casters using the hex nuts provided.
2. Remove the hex nuts holding the head assembly plate, and replace them with the wing nuts provided.
3. **Remove the shipping oil plug**, and replace it with the vented oil plug provided.
4. The transmission jack is shipped with hydraulic oil in the cylinder reservoir. 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.

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 strap assembly around the component.

Maintenance

1. Use only anti-wear hydraulic jack oil. The use of alcohol, hydraulic brake fluid, or transmission oil could damage the seals in the cylinder and result in jack failure.
2. Check the oil level periodically:
 - a. Lower the jack to its lowest position.
 - b. Remove the filler plug.
 - c. Add hydraulic oil (215 SUS viscosity at 37.78° C [100° F]) until the oil level is within 50.8 mm (2 inches) to 63.5 mm (2.5 inches) of the filler hole opening.
 - d. Install the filler plug.
3. Lubricate the foot pump pivot points as needed with SAE 30 motor oil to prevent premature wear.
4. Keep the jack clean and well lubricated to prevent foreign matter from entering the hydraulic system.

Bleeding Air from the Jack

1. Lower the jack to its lowest position.
2. Remove the reservoir filler plug. Add hydraulic oil (215 SUS viscosity at 37.78° C [100° F]) until the oil level is within 50.8 mm (2 inches) to 63.5 mm (2.5 inches) of the filler hole opening.
3. Remove the foot pedal and piston assembly by removing the button head screws.
4. Fill the foot pedal piston bore and rod internal spring cavity with hydraulic oil.
5. Plug the rod internal spring cavity, and quickly install the rod into the rod bore. **Note:** This must be done quickly to ensure the cavities are filled with oil and not air.
6. Using the button head screws, reattach the foot pedal assembly.
7. Pump the foot pedal to extend the cylinder to a full stroke, and then retract. Repeat this two or three times.
8. Check the hydraulic oil level and add more if needed.

Inspection and Maintenance

 **CAUTION:** To prevent personal injury,

- Only qualified personnel shall perform inspections to this transmission jack.
- Before each use, an approved inspector must inspect the transmission jack for bends, cracks, dents, elongated holes, or missing hardware. If damage is found, discontinue use.

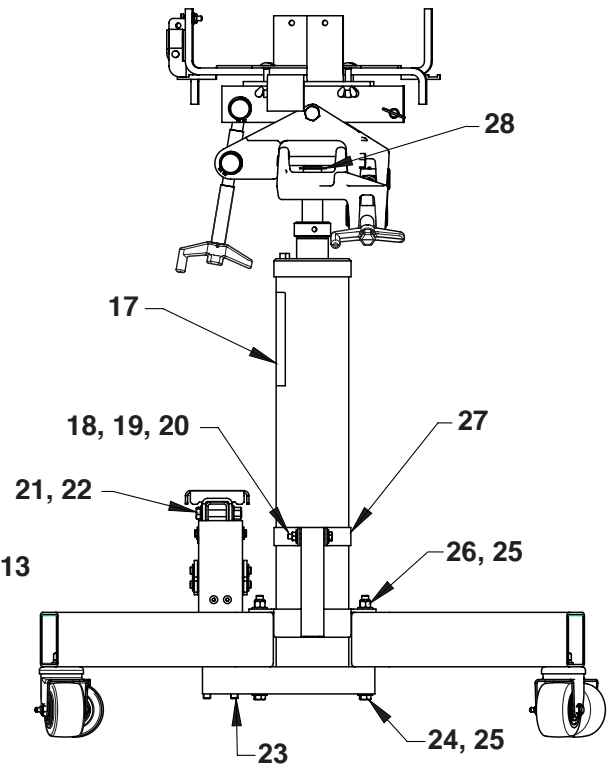
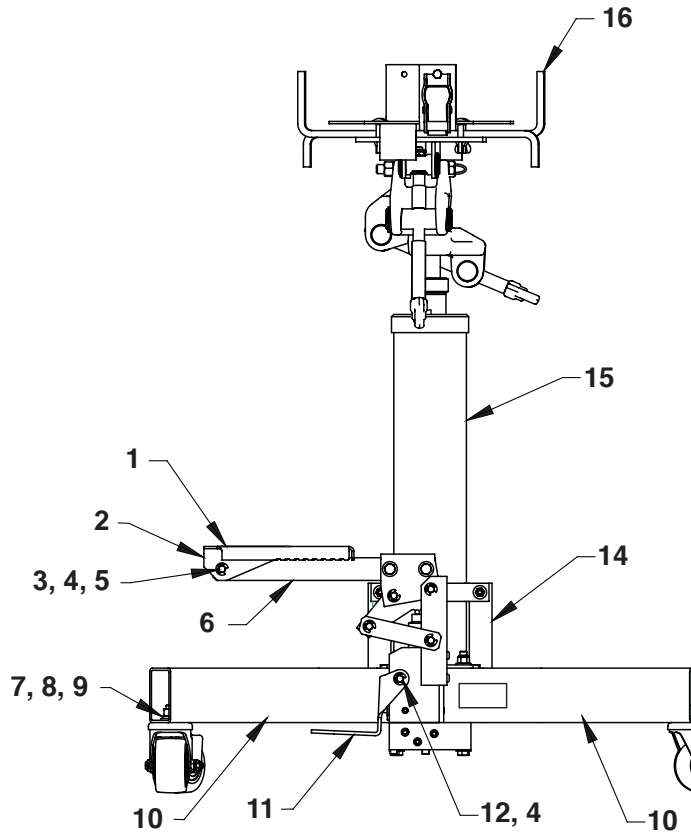
Parts List & Operating Instructions

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 fails to extend or extends partially.	1. Low oil level.	<i>1. Fill to correct oil level.</i>
Incomplete or spongy cylinder response when foot pedal is pumped.	1. Low oil level. 2. Air in system.	<i>1. Fill to correct oil level. 2. Bleed air from system.</i>
Abnormal leakage through unit breather.	1. Low oil level.	<i>1. Fill to correct oil level.</i>
Jack fails to extend when foot pedal is pumped.	1. Release valve malfunction. 2. Contamination. 3. Cylinder packing failure.	<i>1. Pump foot pedal with release valve open. 2. Disassemble and clean unit. 3. Install repair kit.</i>
Cylinder creeps.	1. Load exceeds maximum lifting capacity. 2. Release valve is leaking.	<i>1. Reduce load. 2. Flush release valve by pumping foot pedal with release valve open.</i>
Cylinder doesn't retract when release pedal is activated.	1. Light load. 2. Cylinder is binding.	<i>1. Unit requires 35 lbs. to return. 2. Disassemble unit; replace defective parts.</i>
Cylinder doesn't extend.	1. Contamination. 2. Bad packing.	<i>1. Disassemble and clean unit. 2. Install repair kit.</i>
Cylinder extends when foot pedal is pressed, and retracts as foot pedal retracts.	1. Release valve malfunction. 2. Contamination.	<i>1. Flush release valve by pumping foot pedal with release valve open. 2. Disassemble and clean unit.</i>

Parts Lists

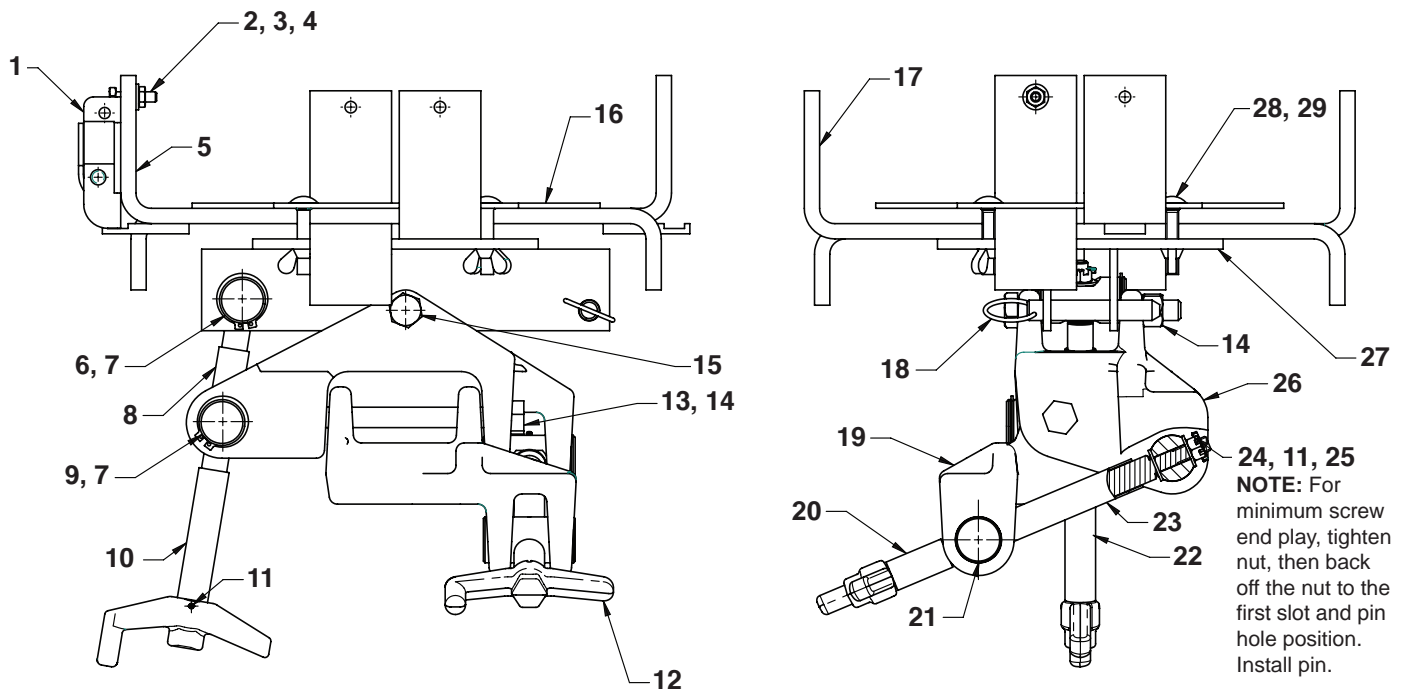


Item No.	Part No.	No. Req'd	Description
1	222263	1	Grip Pad
2	558477	1	Pedal
3	558772	2	Round Hole Washer
4	11032	4	External Retaining Ring — for 9.53 mm (.375 in.) dia shaft
5	23088	1	Clevis Pin
6	559279	1	Pedal Lever
7	12004	4	Flat Washer — 12.7 mm x 3 mm (.500 in. x .120 in.)
8	220419	4	Metric Hex Nut — M12 x 31.8 mm (1.25 in.)
9	10249	4	Lockwasher — for 12.7 mm (1/2 in.) bolt
10	556826	2	Leg Base
11	556804	1	Foot Pedal
12	557754	1	Clevis Pin
13	556829	4	Swivel Caster
14	558823	1	Support Bracket
15	556840	1	High Lift Transmission Jack

Item No.	Part No.	No. Req'd	Description
16	556830	1	Head Assembly
17	560936	1	Logo Decal
18	10229	4	Washer — for 6.35 mm (.25 in.) bolt
19	12809	2	Hex Locknut — 1/4-20
20	120698	2	Bolt — 1/4-20 x 55.88 mm (2.25 in.)
21	211319	2	Hex Locknut — .375-16
22	11544	2	Hex Head Cap Screw — 3/8-16 x 55.88 mm (2.25 in.)
23	10890	3	Socket Head Cap Screw — 1/4-20 x 50.8 mm (2 in.)
24	556828	4	Hex Head Cap Screw
25	10258	12	Plain Washer — for 9.53 mm (.375 in.) bolt
26	556825	4	Hex Nut
27	558822	2	Support Strap
28	11903	1	External Retaining Ring — for 25.4 mm (1 in.) dia. shaft

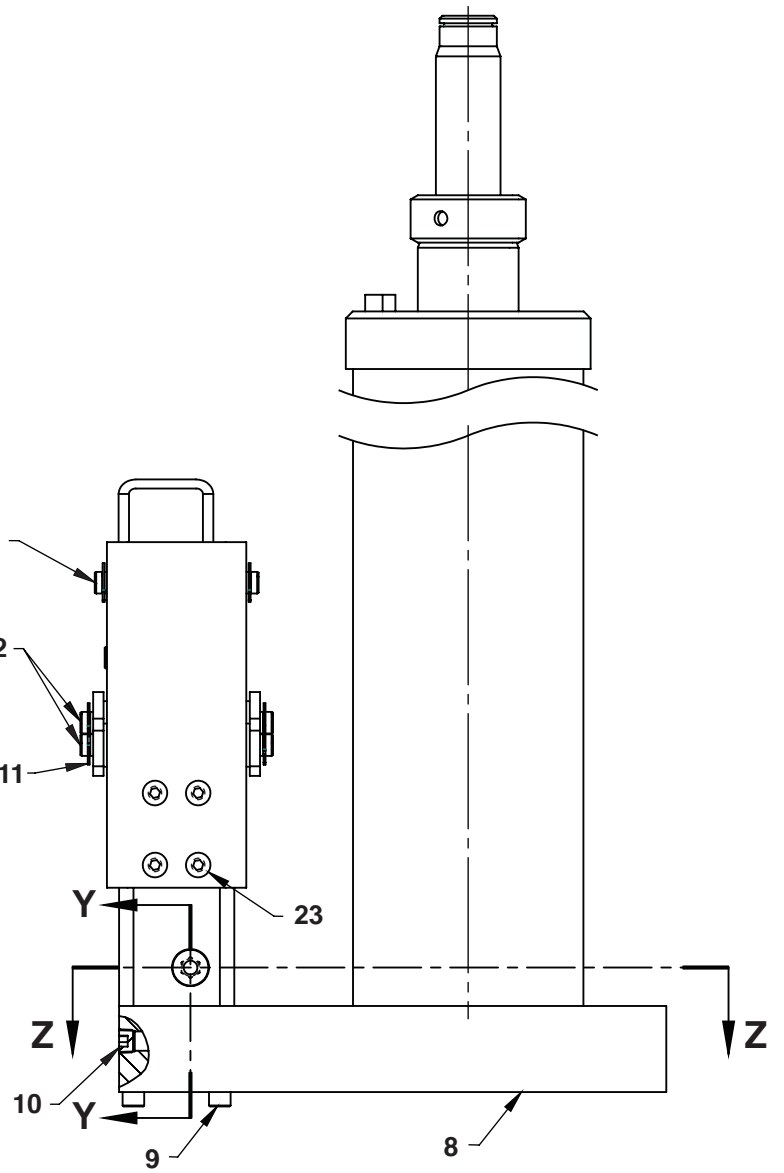
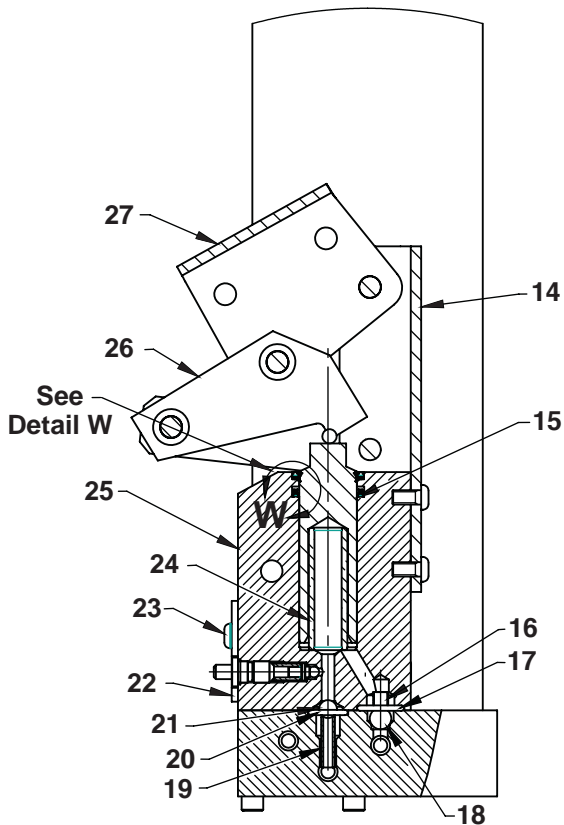
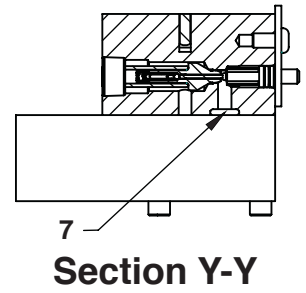
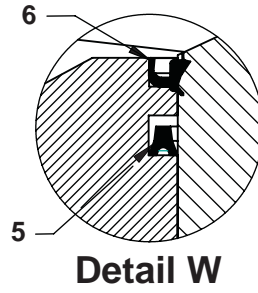
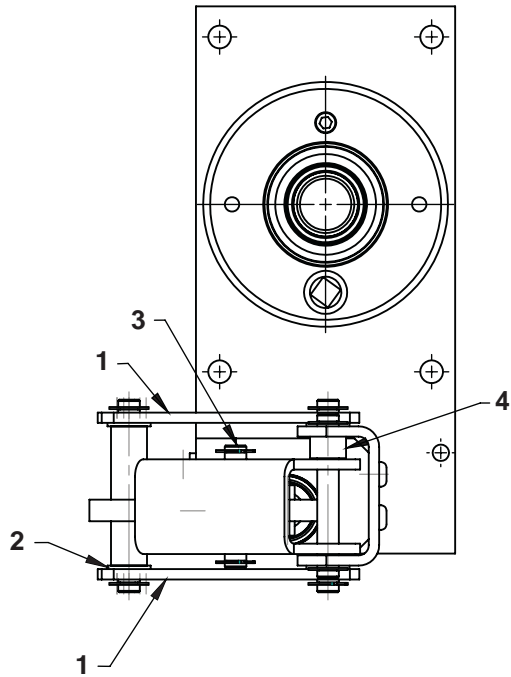
Parts List & Operating Instructions

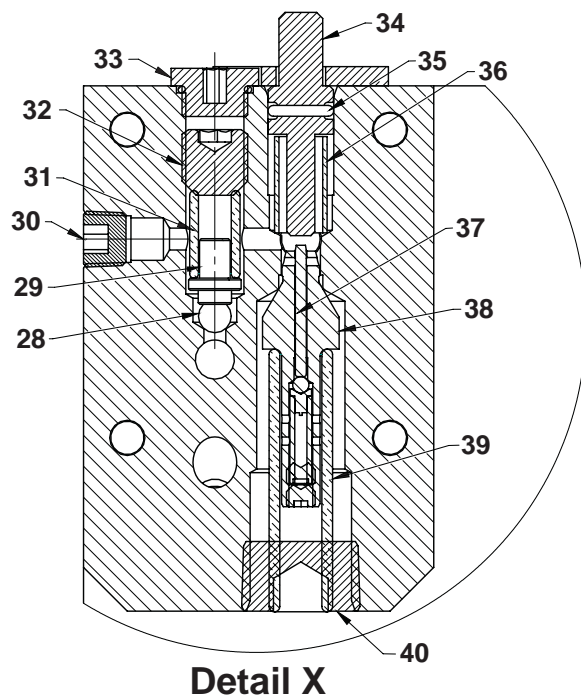
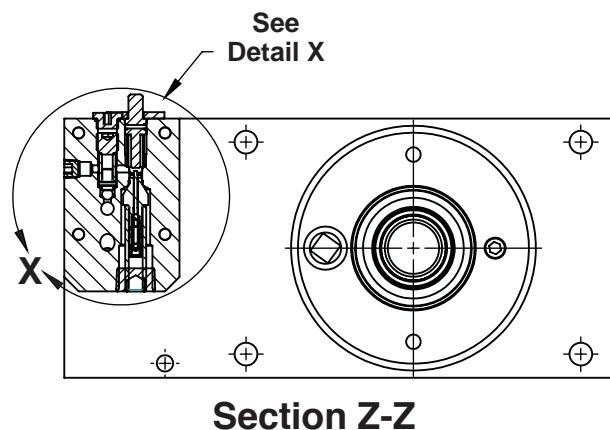
Head Assembly



Item No.	Part No.	No. Req'd.	Description
1	314153	1	Strap Assembly
2	10017	1	Hex Hd. Cap Screw — 1/4-20 x 25.4 mm (1 in.)
3	10383	1	Hex Jam Nut — 1/4-20
4	12719	1	Flat Washer — for 6.35 mm (.25 in.) bolt
5	440398	2	Bracket
6	222237	2	Pivot Shaft
7	12365	4	External Retaining Ring — for 28.6 mm (1.125 in.) shaft
8	560995	1	Spacer
9	222238	1	Pivot Shaft
10	560994	1	Spacer
11	10895	4	Roll Pin — 3.35 mm (.132 in.) dia. x 19 mm (.75 in.)
12	556805	2	Crank
13	222239	1	Hex Hd. Screw — 1/2-13 x 15.24 cm (6 in.)
14	15013	2	Hex Locknut — 1/2-13
15	10093	1	Hex Hd. Cap Screw — 1/2-13 x 101.6 mm (4 in.)
16	440399-BL2	1	Top Plate
17	222243	2	Adapter Bracket
18	15997	1	Cotterless Hitch Pin
19	314154	1	Pivot
20	559748	1	Spacer
21	222236	1	Pivot Shaft
22	314152	2	Threaded Rod — NOTE: Apply lubricant (OTC #12387) to the threads of both screws.
23	559747	1	Spacer
24	222235	2	Slotted Hex Nut — 3/8-16
25	214021	4	Thrust Bearing Washer — for 9.56 mm (.375 in.) bolt
26	440400	1	Pivot Linkage
27	63007	1	Plate
28	222234	4	Carriage Bolt — 5/16-18 x 44.5 mm (1.75 in.)
29	10590	4	Wing Nut — 5/16-18

Jack Assembly

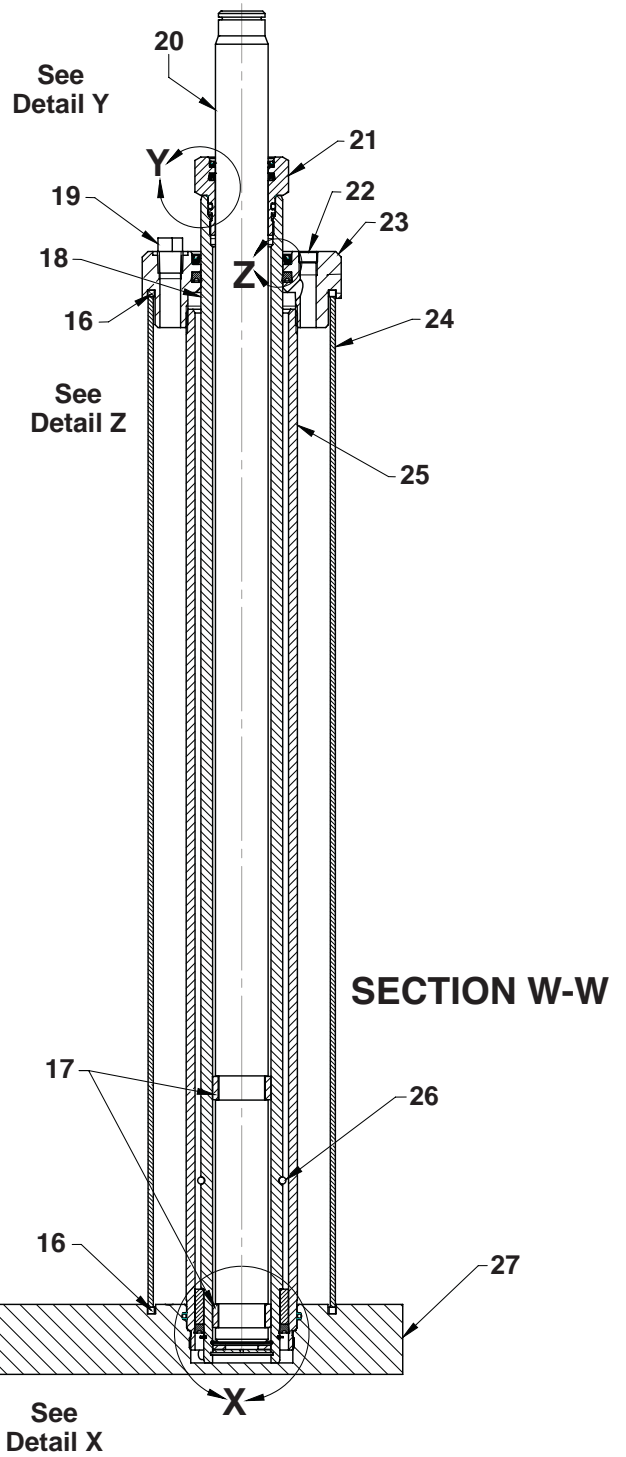
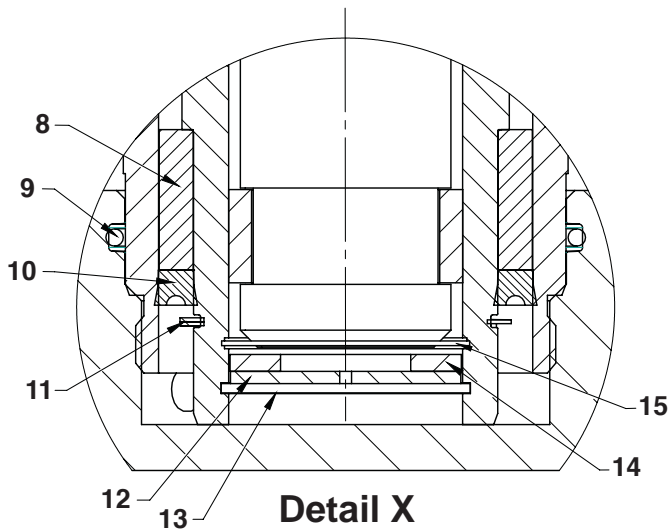
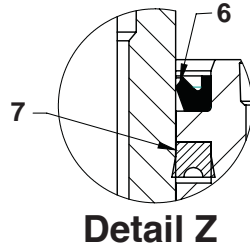
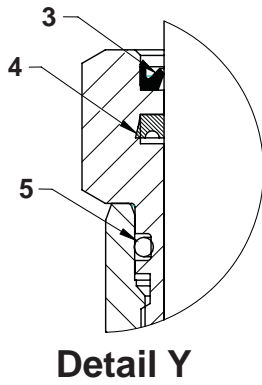
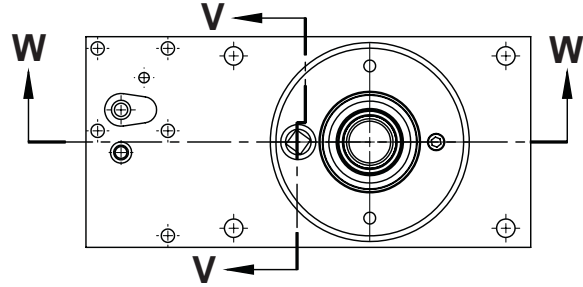
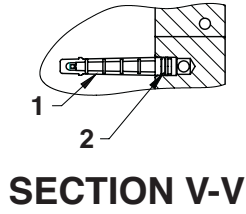




Item No.	Part No.	No. Req'd	Description
1	558464	2	Link
2	558772	6	Round Hole Washer
3	23088	1	Clevis Pin
4	558476	1	Spacer
5	* 252660	1	U-cup — 3.175 mm x 25.4 mm (1.25 in. x 1.00 in.)
6	* 15087	1	Rod Wiper — 3.175 mm x 25.4 mm (1.25 in. x 1.00 in.)
7	* 252104	1	O-ring — 12.7 mm x 7.87 mm (.50 in. x .31 in.)
8	556838	1	Cylinder
9	10890	4	Socket Hd. Screw — 1/4-20 x 50.8 mm (2 in.)
10	251279	4	Plug Fitting — 3.175 mm (1/8 in.) thread size
11	11032	8	External Retaining Ring — for 9.525 mm (.375 in.) shaft
12	558471	2	Clevis Pin
13	559883	1	Clevis Pin
14	558463	1	Link
15	558479	1	Pump Piston
16	207355	1	Spring — 6.6 mm x 16 mm x 0.51 mm (.26 OD x .63 x .02)
17	* 10273	1	O-ring — 20.6 mm x 15.8 mm (.81 in. x .62 in.)
18	10378	1	Ball — 9.56 mm (.375 in.) dia.
19	251295	1	Spring — 6.1 mm x 28.7 mm x 1.02 mm (.24 OD x 1.13 x .04)

Item No.	Part No.	No. Req'd	Description
20	* 10275	1	O-ring — 23.62 mm x 19.05 mm (.93 OD x .75 in.)
21	10377	1	Ball — 7.9 mm (.3125 in.) dia.
22	558629	1	Plate
23	251437	5	Button Hd. Screw — 1/4-20 x 7.87 mm (1/2 in.) lg.
24	210362	1	Spring — 17 mm x 109.47 mm x 2.54 mm (.67 OD x 4.31 x .10)
25	558480	1	Valve Block
26	558481	1	Link
27	559278	1	Link
28	12223	1	Metal Ball — 4.78 mm (.188 in.) dia.
29	556823	1	Ball Guide
30	15130	1	Internal Drive Hex Plug
31	556824	1	Spring
32	556817	1	Self-locking Socket Set Screw
33	556818	1	Threaded Fitting
34	351587	1	Release Valve Button
35	* 10266	1	O-ring — .37 x .25
36	559233	1	Compression Spring
37	559222	1	Dowel Pin
38	559619	1	Metering Poppet Assembly
39	13165	1	Spring — 9.14 mm x 38.1 mm x 1.524 mm (.36 OD x 1.5 x .06)
40	16232	1	Plug Fitting — 3/8 thread size

Cylinder Assembly



Parts List & Operating Instructions

Item No.	Part No.	No. Req'd.	Description
1	215075	1	Filter Screen
2	* 12557	1	O-ring — 8.64 mm x 5.59 mm (.34 OD x .22 ID)
3	* 15089	1	Rod Wiper — 35.05 mm x 28.7 mm (1.38 OD x 1.13 in.)
4	* 252656	1	U-cup — 35.1 mm x 28.7 mm (1.38 OD x 1.13 ID)
5	* 104485	1	O-ring — 36.58 mm x 31.75 mm (1.44 in. x 1.25 in.)
6	* 212160	1	Rod Wiper — 54.10 mm x 44.45 mm (2.13 in. x 1.75 in.)
7	* 252655	1	U-cup — 54 mm x 44.45 mm (2.13 OD x 1.75 ID)
8	351440	1	Piston Head
9	* 252533	1	O-ring — 65 mm x 60.45 mm (2.56 OD x 2.38 ID)
10	* 251964	1	U-cup — 50.8 mm x 41.4 mm (2.00 OD x 1.63 ID)
11	250999	1	External Retaining Ring — for 41.28 mm (1.625 in.) shaft
12	252632	1	Spacer
13	252657	1	Internal Retaining Ring — for 31.75 mm (1.25 in.) hole
14	250971	1	Washer — 31.75 mm x 17.78 mm (1.25 in. x .70 in.)
15	253402	1	Internal Retaining Ring — for 32.77 mm (1.29 in.) hole
16	556836	1	Square O-ring Seal
17	252659	2	Wear Ring
18	421484	1	Piston Rod
19	10970	1	Square External Drive Plug
20	556834	1	Shaft
21	421531	1	End Rod
22	251279	1	Hex Internal Drive Plug
23	556832	1	Reservoir Rod Cap
24	351436	1	Reservoir Tube
25	421485	1	Cylinder Tube
26	212013	1	Internal Retaining Ring — for 40.13 mm (1.58 in.) hole
27	556831	1	Cylinder Manifold Block

Items marked with an asterisk (*) are included in Repair Kit No. 561420.