HEIN-WERNER AUTOMOTIVE®

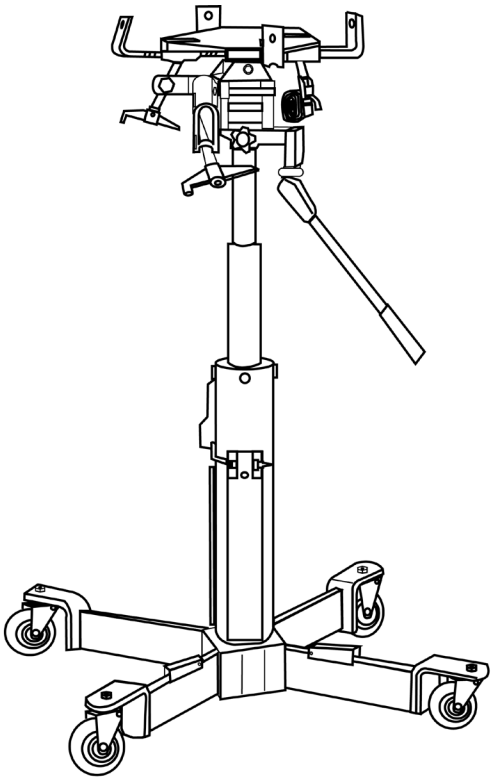
Hydraulic Telescopic Transmission Jack

Operating Instructions & Parts Manual

Model Number
HW93720

Capacity
1/2 Ton

Made in the U.S.A.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

SFA Companies
10939 N. Pomona Ave. Kansas City, MO 64153
816-891-6390 customerservices@heinwerner-automotive.com

READ THIS MANUAL CAREFULLY AND RETAIN FOR YOUR RECORDS

HW93720-M0 rev 06052009

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SIGNAL WORDS

Signal words call attention to a safety message/messages, or a property damage message/messages, and designates a degree or level of hazard seriousness. The signal words are **"DANGER", "WARNING", "CAUTION"**, and **"NOTICE"**.

- **DANGER:** Indicates a hazardous situation, which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.
- **WARNING:** Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.
- **CAUTION:** Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury. It may be used to alert against unsafe practices.
- **NOTICE:** Indicates a property damage message

RECEIVING INSPECTION

Before attempting to operate this jack, thoroughly read and understand this manual. Completely remove all tape and packaging. Inspect the jack immediately upon delivery. If shipping damage is evident, inform the delivering carrier immediately and contact customer service at the numbers and address printed on the back cover of this manual.

INTRODUCTION

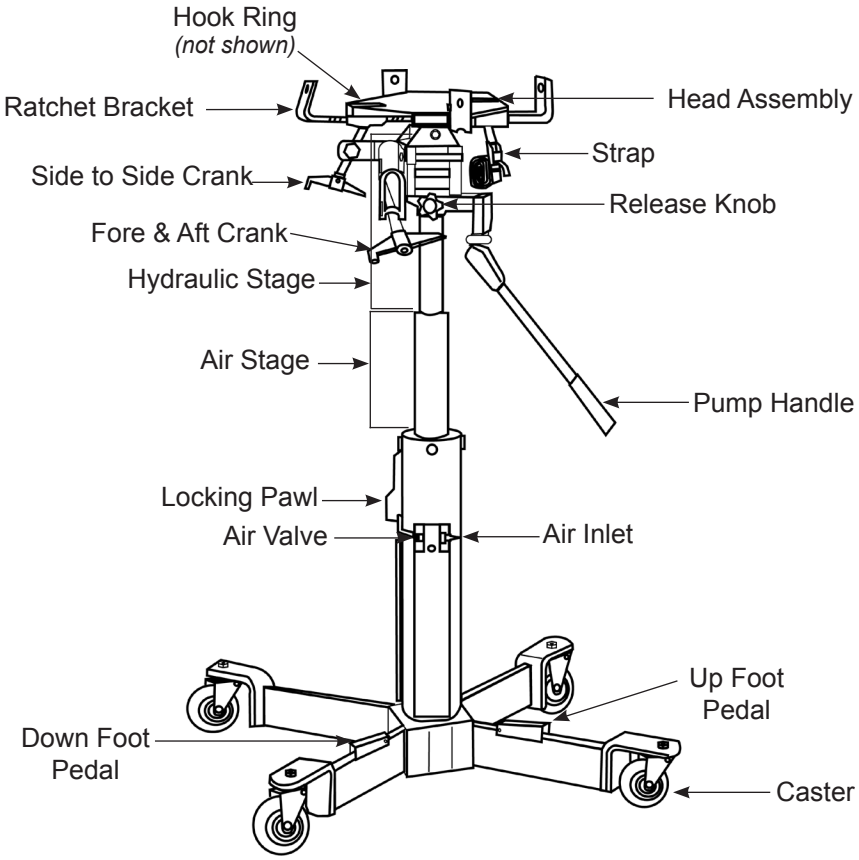
Owner and / or Operator Responsibilities

The owner and / or user must have an understanding of the manufacturer's operating instructions and warnings before using this jack. Personnel involved in the use and operation of equipment shall be careful, competent, trained, and qualified in the safe operation of the equipment and its proper use when servicing motor vehicles and their components. Warning information should be emphasized and understood.

The owner / manager must make this manual available to all personnel using this jack at your direction. They must read and understand the contents of this manual. If the operator is illiterate or is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in a language the operator understands by the purchaser / owner, making sure that the operator comprehends its contents and observes the proper procedures for use of this jack.

Owner and / or user must study and maintain for future reference the manufacturer's instructions. Owner and / or user are responsible for keeping all warning labels and instruction manuals legible and intact. Replacement labels and literature are available from the manufacturer.

COMPONENT IDENTIFICATION



SPECIFICATIONS

Capacity:	1,000 lb. / 455 kg
Starting Height:	34 1/2”
Lifting Height:	72”
Width:	41"
Length:	41"
4 Swivel Casters:	4"
Air Pressure:	90 to 160 psi
Weight:	125 lb.
Tilt Forward:	50°
Tilt Rear:	20°
Tilt Side:	10°

SAFETY INSTRUCTIONS

⚠ WARNING

The HW93720 is designed only to assist in the removal and installation of automotive and light truck transmissions/ transfer cases weighing up to 1,000 lbs. Special factory made adaptors are available to help stabilize some transmissions.

To avoid serious injury or death, read this manual carefully before operating this unit. Call customer service at (816) 891-6390 if you have any questions.
Failure to understand and obey safety instructions may result in unsafe or improper use of this product.

- Do not overload the maximum lifting capacity of this jack, 1,000 lb. / 455 kg.
- No alterations shall be made to this product.
- Use this jack only on hard, level surfaces capable of sustaining the load.
- Be sure vehicle is appropriately supported before starting repairs.
- Do not allow any part of your body under the load while jack is supporting a load.
- Use only the factory supplied adapters. Do not use adapters that are not supplied by the manufacturer.
- Do not use this jack as a workbench.
- Lift only by means of the head assembly, never use any other part of the jack as a lifting surface.
- Keep transmission in the lowest position when rolling jack across floor.
- Keep strap tightly secured until ready to remove transmission from jack.
- Do not tow loaded jack by hydraulic pump handle.
- Do not use this jack to remove and/or install gas/fuel tanks.
- When transferring a load to the lift, the air stage should be fully lowered or fully raised and pressurized. If a load is transferred to the lift when the air cylinder is only partially raised, the lift will drop suddenly.

Failure to understand and obey this warning may result in personal injury and / or property damage.

OPERATING INSTRUCTIONS

1. With vehicle elevated on lift, position jack near transmission to be removed.
2. Attach air hose. Depress foot pedal marked “UP” and raise air stage to its fully extended and locked position. The locking pawl will automatically engage when the air stage is at full height. Air hose may be removed.
3. Close the hydraulic release valve by turning CLOCKWISE. Pump the handle to raise head assembly close to transmission to be removed. If hydraulic stage does not lift, see “Priming Instructions” on page 7.
4. Roll head assembly side to side and tilt forward or back as needed to firmly contact bottom of transmission.
5. With short strokes of pump handle, jack may be raised slowly to contact transmission.
6. Push in the 4 ratchet brackets on head assembly firmly to contact sides of transmission (see Figure 1).

Unlock pawls to pull out ratchet brackets

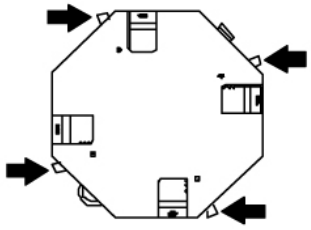


Figure 1

7. Secure transmission to the jack by placing the strap over the transmission, hook it in the hook ring, and then pull the strap tight. See Figure 2.

8. Before unbolting transmission from engine, support engine with stand, or other appropriate device. See Figure 3.

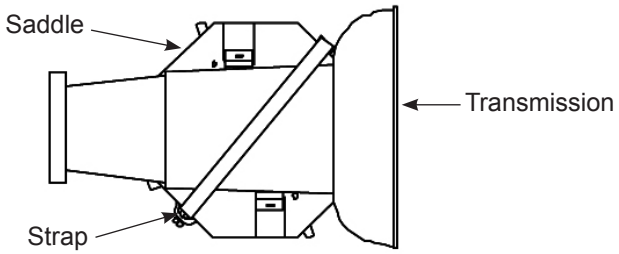


Figure 2

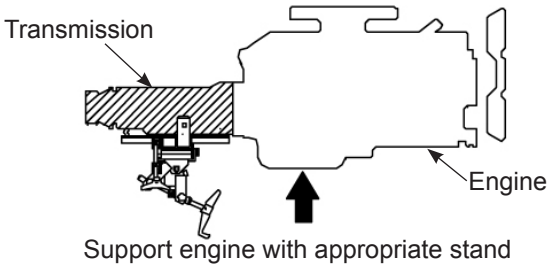


Figure 3

9. When component is free, lower hydraulic stage slowly by turning hydraulic release valve COUNTER-CLOCKWISE. Then lower air stage by depressing foot pedal marked “DOWN”.

If load is resting on the locking pawl, attach air hose and depress “UP” foot pedal briefly so locking pawl will release. Air stage should then lower when “DOWN” foot pedal is depressed.

⚠ WARNING

Never pry locking pawl to release the load, the load will drop. Failure to heed this warning may result in personal injury and / or property damage.

LUBRICATE: Apply light machine oil at all points of movement to jack monthly.

Priming Instructions

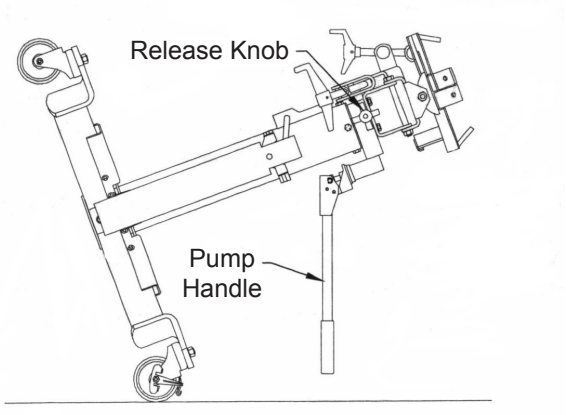


Figure 4

Tilt entire jack over on two casters with the pump handle down as shown in Figure 4.
Open hydraulic release valve by turning release knob and operate the pump handle until resistance is felt.
Close hydraulic release valve and continue pumping handle while restoring jack to upright position.

OPTIONAL ADAPTERS

All Purpose Adapter Kit, HW93721

Enables easy removal of transmission and transfer case as one unit. Also allows easy removal of front wheel drive transaxles.

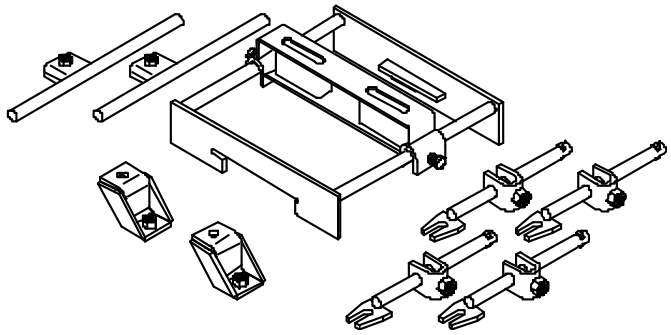


Figure 5

MAINTENANCE INSTRUCTIONS

⚠ WARNING

All inspection and maintenance procedures must be performed ***after*** the jack has been removed from service. Failure to heed this warning may result in serious personal injury and / or property damage.

⚠ WARNING

Lower unit completely and exhaust all air from the air cylinder before servicing the air cylinder. Failure to exhaust all air from the air cylinder can cause rapid separation of the piston rod from the air cylinder. Failure to heed this warning may result in serious personal injury and / or property damage.

1. Apply light machine oil at all portions of movement to the jack monthly.
2. All warning and capacity labels should be readable and complete. Wash external surfaces of unit and decals with a mild soap solution.

Air Valve Cleaning Instructions

Occasionally pieces of scale or rust from the airline will become lodged under the rubber seats of the air valve causing air leakage. This leakage is easily detected since lift will raise slowly when you connect the air line to the quick coupler inlet even thought the valve lever has not been touched. If this occurs, the Inlet Side of the valve needs cleaning. The lift may also lower slowly when you disconnect the airline from the quick coupler even though the valve lever has not been touched. If this occurs, either the Inlet Side or both sides of the valve needs cleaning. To clean, refer to Figure 5 and follow these instructions: A. Remove the adapter (2) from the Inlet Side of the air control valve. Inspect screen (1) for foreign particles and clean as required. B. Remove the spool (7) from the body by pushing on spool (7) (from center toward the outside of valve) with a piece of stiff wire or nail. C. Carefully examine the valve seal (6) for any scale, dirt or foreign matter. If foreign matter is embedded in the valve seal (6), remove the screw (4) and cup (5) from the end of spool (7) and clean the seal (6), turn over the seal and reassemble. D. Lubricate the spool (7) with light chassis grease. E. Reassemble the valve in this order: First, insert the spool (7). Make sure that the spool with the O-Ring (8) is reassembled on the Inlet Side. Second, insert spring (3). Third, assemble adapter (2) into inlet side and plug (10) into exhaust side of body (9). The valve should now operate like new.

1	1-312-91004	Screen	1
2	1-274-12001	Adapter	1
3	1-233-12001	Spring	2
4	0-202-10601	Screw	2
5	1-312-91003	Cup	2
6	1-390-10006	Seal	2
7	1-312-91002	Spool	2
8	0-390-00005	O-ring	1
9	4-312-91001	Body	1
10	1-275-21004	Plug	1
11	0-235-21009	Roll Pin	1
12	Note (2)	Handle	1

Notes:

1. Complete Valve Assembly, with Handle:

2-312-01005	Valve Assembly, Tee Handle
2-312-01006	Valve Assembly, Long Handle
2-312-01007	Valve Assembly, Winged Handle

2. Handle Part Numbers:

12A	1-232-20053	Tee Handle
12B	1-232-20034	Long Handle
12C	1-232-20052	Winged Handle

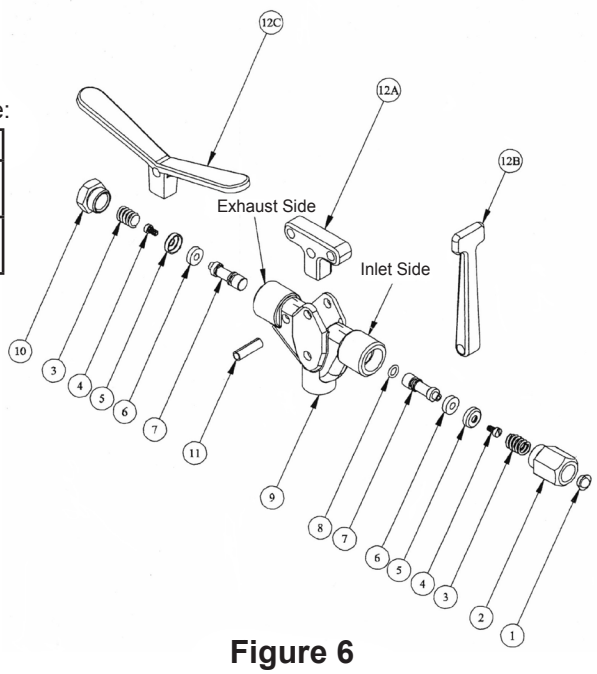


Figure 6

STRUCTURAL INSPECTION

⚠ WARNING

This unit must be removed from service and inspected for damage immediately if the unit is subjected to an abnormal shock or load. Failure to heed this warning may result in personal injury and / or property damage.

NOTICE: Before each use, the owner must inspect, or appoint a knowledgeable person to visually inspect all components of the jack for signs of corrosion and / or excessive wear.

The owner must inspect, or appoint a knowledgeable person to inspect the jack. Each jack must be inspected immediately if subjected to an abnormal load or shock. Any jack which appears to be damaged in any way, is found to be badly worn, or operates abnormally shall be removed from service until necessary repairs are made. Refer to the “Maintenance Instructions” and the “Structural Inspection” sections located in this manual.

Inspect the jack daily as follows:

1. Visually inspect the jack for signs of cracking, chipping, or excessive wear, including all welds.
2. Visually inspect all four casters for cracking, chipping or excessive wear.
3. Visually inspect the power unit for oil leaks.

If any irregularities or problems are detected during an inspection or during operation, the unit must be removed from service immediately and repaired. Contact customer service at the numbers and address printed on the back cover of this manual.

REPLENISH OIL SUPPLY

With all four casters of the jack resting on the floor, lower the hydraulic stage fully and remove the head assembly by extracting the four head mounting bolts. See Figure 7. Carefully clean the top of the jack to remove all dirt, especially in the vicinity of the fill plug. Remove the release knob by turning counterclockwise. Remove the fill plug and using a squirt-oil can, slowly add Tellus T22 oil (or equivalent) until reservoir overflows. Note: The release knob opening serves as reservoir vent during filling. Be sure to reinstall release knob and fill plug, and then remount the head assembly.

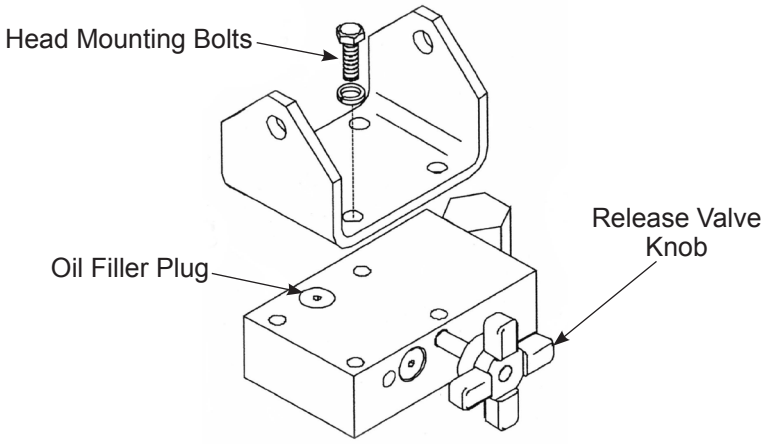


Figure 7

TROUBLESHOOTING

This section is a list of possible problems, which may be encountered, and their solutions. If the solution listed fails to correct the problem, call customer service at the numbers and address printed on the back cover of this manual. Please have the model number, and serial number of your jack available. The serial number is permanently stamped on the left front caster bracket.

PROBLEM	**CAUSE / SOLUTION**
Hydraulic stage fails to lift a load	Out of prime: See “Priming Instructions” on decal fastened to the jack and also found in the “Operating Instructions” section of this manual. Low oil level. See the “Replenish Oil Supply” section on page 9. Hydraulic Release valve is open. Close hydraulic release valve by turning release knob clockwise.
Air stage fails to lift a load	Inadequate air pressure. 90 – 160 psi required.
Hydraulic stage fails to hold a load	Release knob not securely closed. Turn release knob clockwise to tighten.
Air stage fails to hold a load	Air leak. Remove jack from service and repair leak. Possible dirty air valve seals. Follow simple directions on cleaning the air valve located in the “Maintenance Instructions” section of this manual.
Locking pawl cannot be released with light foot pressure on the down foot pedal	Attach air hose and depress up foot pedal to pressurize air cylinder. The air stage will extend completely and now the down foot pedal will pull the locking pawl back so the air stage will lower. Do not attempt to pry the pawl loose.

REPLACEMENT PARTS

(refer to page 11 thru 13)

Not all components of the jack are replacement items, but are illustrated as a convenient reference of location and position in the assembly sequence. When ordering parts, give model number, part number and parts description. Call or write for current pricing: Hein-Werner Customer Support, 10939 N. Pomona Ave. Kansas City, MO 64153. Phone: (816)891-6390; E-mail: customerservices@heinwerner-automotive.com

Replacement Parts Illustration for HW93720 - Frame

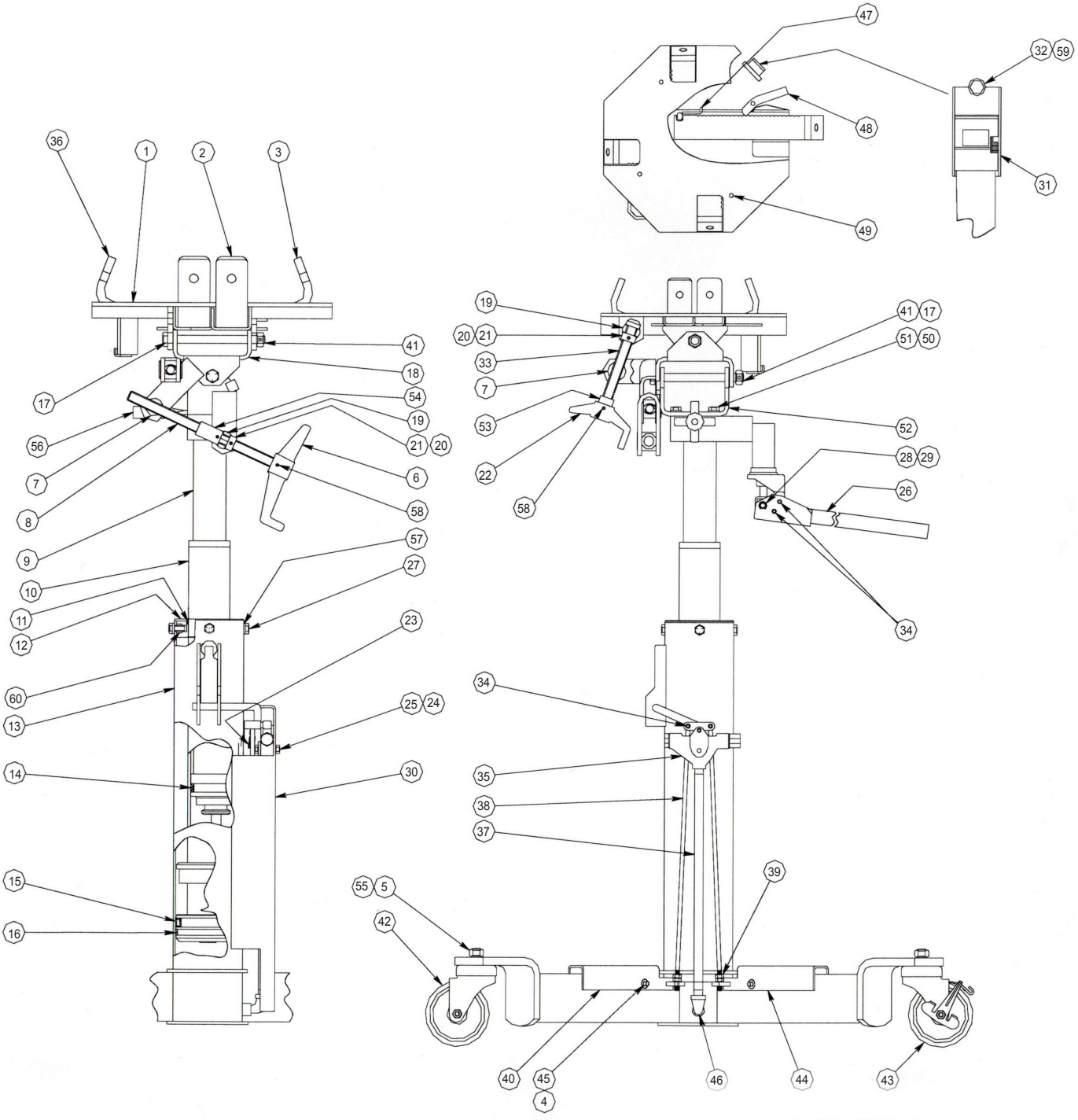


Figure 8- Parts Illustration for Model HW93720 Frame

Replacement Parts List for HW93720 - Frame (see Figure 8)

ITEM	QTY	PART#	DESCRIPTION
1	1	239672	Adapter Weldment
2	2	239667	Bracket, Long, Transmission
3	1	239669	Bracket, Transmission
4	2	239644	Rivet, Round Head
5	4	239657	Nut, Hex, Jam 1/2-13 UNC
6	1	239681	Crank, Drilled, 5/8 Bore
7	2	1-825-04078	Nut
8	1	239680	Shaft, Tilt, Long, Drilled
9	1	239629	Power Unit, Hydraulic
10	1	241078	Piston Rod Weldment
11*	1	239637	Packing, Gasket, 2 3/4 x 2-1/2 x 1/8L
12	1	241082	Gland, 4"
13	1	241081	Base Frame Weldment
14*	1	1-390-11007	Wiper Ring, 2-1/4 Piston
15*	1	241079	Seal, 4OD x 3-1/4ID x 1/2 Deep
16*	1	241080	Wiper Ring, 4" Bore
17	2	1-200-31421	Capscrew, Hex Hd, Grade 5
18	1	239676	Pivot Bracket Weldment
19	2	1-826-04079	Pivot
20	3	239660	Spacer, Drilled
21	3	239661	Roll Pin, 3/16 Dia x 7/8"L
22	1	239665	Crank, Drilled 5/8 Bore
23	1	1-233-01002	Spring, Extension, 3/8 Dia
24	1	239642	Nut, Hex, 1/4-20 UNC, Selflocking
25	1	239650	Capscrew, Hex Hd, 1/4-20 UNC, 1-3/4L, Grade 5
26	1	239634	Pump Handle Weldment
27	4	241083	Capscrew, Hex Hd, 3/8-16 UNC x 3/4L, Selflocking
28	1	239631	Shaft, Grooved Ends, 3/8Dia x 1-9/16L
29	2	239630	Retaining Ring, "E", 3/8 Dia
30	1	239649	Valve Cover

ITEM	QTY	PART#	DESCRIPTION
31	1	1-237-00004	Strap Assembly
32	1	0-200-31002	Capscrew, Hex Hd, 1/4-20 UNF, 1/2L, Grade 5
33	1	239674	Tilt Shaft Weldment
34	2	239633	Roll Pin, 1/4 Dia x 1-1/2L
35	1	239647	Valve, Air, 3-way, Tee Handle
36	1	239669	Bracket Transmission
37	1	239651	Nipple, 1/4, 14-3/4L, Sch 40
38	2	239646	Control Rod Weldment
39	4	239645	Nut, Hex 1/4-20 UNC
40	1	239658	Pedal Down Weldment
41	2	1-203-01403	Nut, Hex, 1/2-13 UNC, Selflocking
42	2	239655	Caster, Swivel Stem, 4"
43	2	239656	Caster, Swivel 4" w/ Brake
44	1	239643	Pedal Up Weldment
45	2	0-203-51002	Nut, 1/4 Palnut
46	1	239652	Elbow, 1/4, 90 Degree, Street
47	3	1-825-04100	Angle, Stop, Trans, Brkt
48	4	239666	Ratchet Pawl Subassembly
49	4	239671	Roll Pin, 1/4 Dia, 7/8L
50	4	239677	Capscrew, Hex Hd, 3/8-24 UNF x 1L, Grade 5
51	4	239678	Washer, Lock, Split , 3/8 Med.
52	1	239679	Bracket Weldment, Hyd. Power Unit
53	1	239664	Spacer
54	1	239660	Spacer, Drilled, 1.51L
55	4	0-204-11400	Washer, Lock, Split, 1/2 Med.
56	1	239648	Tow Handle
57	4	0-204-11202	Washer, Lock, Split, 3/8
58	2	0-235-21011	Roll Pin, 3/16 Dia x 1-1/8L
59	1	0-204-01005	Washer, Flat, 1/4 Narrow Rim
60	4	0-203-01200	Nut, Hex, 3/8-16UNC
(*)	-	8-848-01001	Soft Seal Kit (see note)

Note: Soft Seal Kit 8-848-01001 includes item# 11, 14, 15, 16 & (# 1, 3, 11 & 17 from hydraulic unit page 13)

Replacement Parts HW93720- Hydraulic Unit

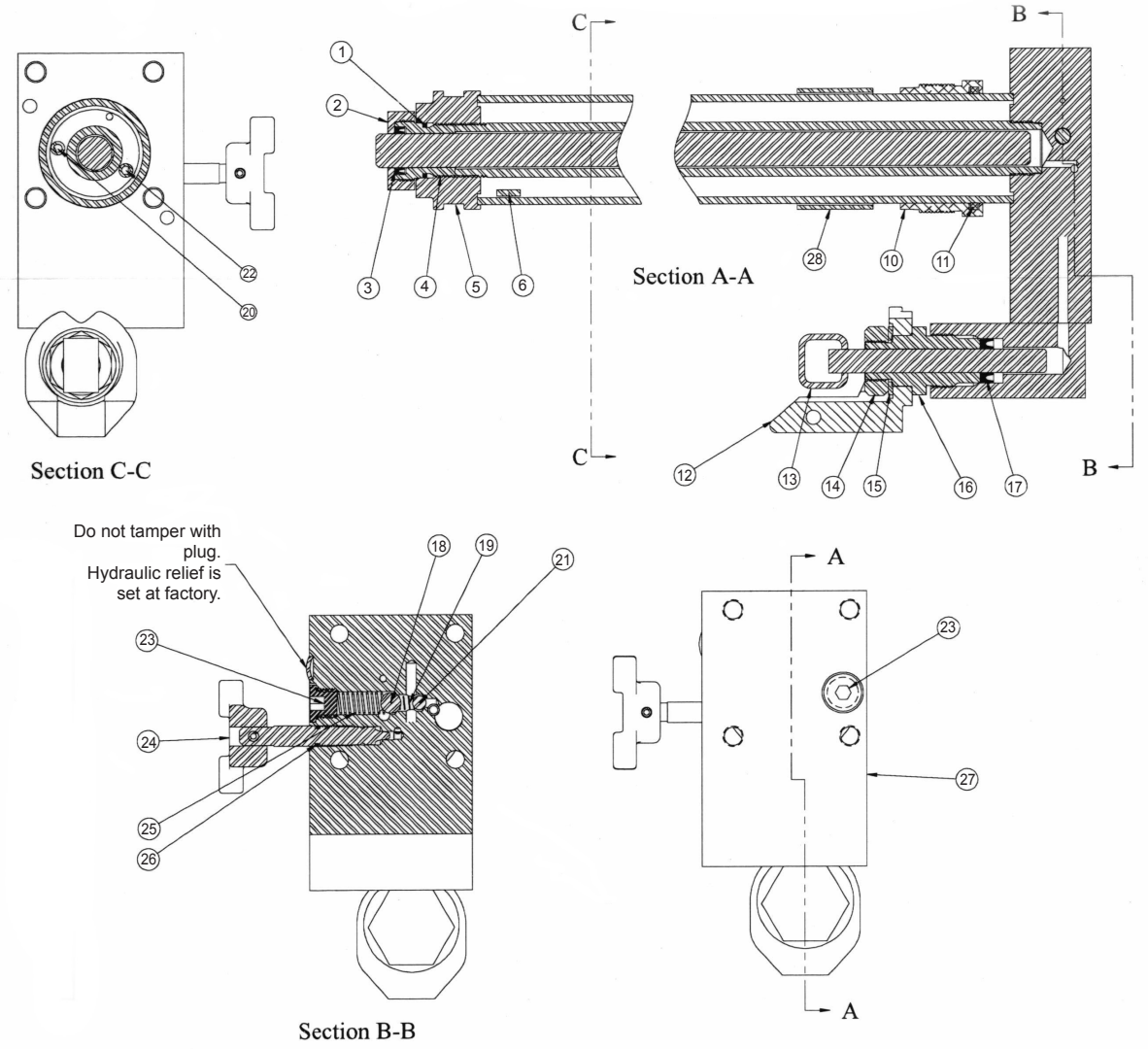


Figure 9- Parts Illustration for Model HW93720 Hydraulic Unit

ITEM	QTY	PART#	DESCRIPTION
1*	1	390-01010	O'Ring 1"ODx13/16 ID, 3/32Dia
2	1	353-49238	Seal Backup
3*	1	390-10082	Seal, U-cup, 5/8 IDx 7/8 OD
4	1	353-49236	Ram Guide, 5/8 ID
5	1	353-49237	Cap
6	1	353-49010	Magnet, 1/8Dia x 7/16 L
7	1	353-42028	Ram, 5/8 Dia
8	1	353-41024	Reservoir Tube
9	1	353-41059	Cylinder Tube
10	1	353-43044	Packing Gland, 2" Bore Short
11*	1	391-10001	Packing, Gasket 2-1/4ODx 2 ID
12	1	825-04001	Swivel Pivot
13 #^	1	353-49175	Plunger Weldment
14 #	1	203-61708	Nut, Jam, 3/4-16UNF, Steel
15 #	1	204-01707	Washer, Plain 3/4 x 14Ga.

ITEM	QTY	PART#	DESCRIPTION
16 #	1	353-49123	Pump Sleeve
17 #^*	1	390-10007	Seal, 13/16OD x 7/16ID x 1/4
18	1	236-00006	Ball, 3/8Dia, Stainless Steel
19	1	233-10007	Spring, Compression .25OD
20	1	353-49059	Suction tube, 22-5/8" Long
21	1	236-00005	Ball, 1/4Dia, Stainless Steel
22	1	353-49060	Suction Tube, 6" L
23	2	274-34001	Plug, Straight Thread
24	1	353-49168	Release Knob Subassembly
25	1	233-12002	Spring, Compression, .406D
26	1	390-00002	O'ring, 3/8OD x 1/4ID x 1/16
27	1	353-49146	Hydraulic Block Weldment
28	1	848-04024	Spacer
(#)	-	826-01013	Pump Kit (13, 14, 15, 16 & 17)
(^)	-	826-01014	Plunger Kit (13 & 17)

(*) Note: Soft Seal Kit 8-848-01001 includes item# 1,3,11, 17 & (11, 14, 15 & 16 from frame pg. 12)

TWO YEAR LIMITED WARRANTY

For a period of two (2) years from date of purchase, SFA Companies will repair or replace, at its option, without charge, any of its products which fail due to a defect in material or workmanship under normal usage. This limited warranty is a consumer's exclusive remedy.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, to SFA Companies Warranty Service Department, 10939 N. Pomona Ave., Kansas City, MO 64153.
Except where such limitations and exclusions are specifically prohibited by applicable law:

(1) THE CONSUMER'S SOLE AND EXCLUSIVE REMEDY SHALL BE THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS DESCRIBED ABOVE.
(2) SFA COMPANIES SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGE OR LOSS WHATSOEVER.
(3) ANY IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED TO TWO YEARS, OTHERWISE THE REPAIR, REPLACEMENT OR REFUND AS PROVIDED UNDER THIS EXPRESS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER, AND IS PROVIDED IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.
(4) ANY MODIFICATION, ALTERATION, ABUSE, UNAUTHORIZED SERVICE OR ORNAMENTAL DESIGN VOIDS THIS WARRANTY AND IS NOT COVERED BY THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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