



Hydraulic Transmission Jack

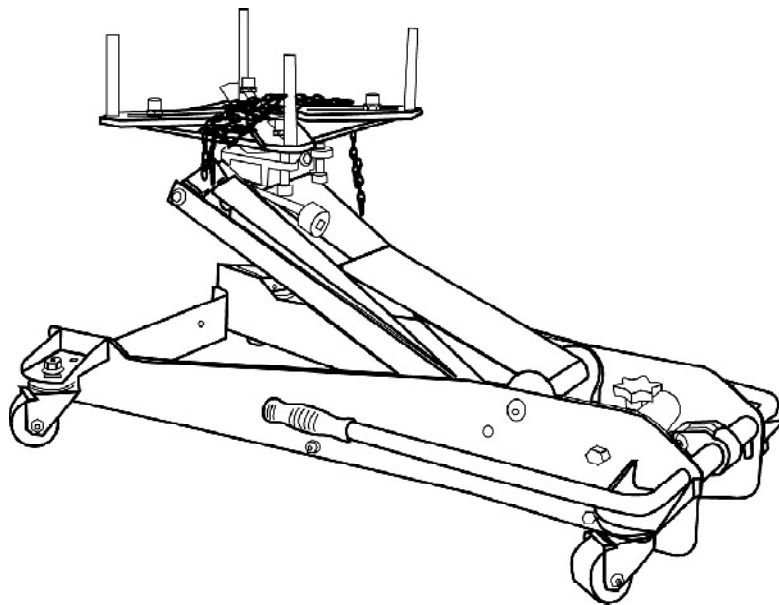
Operating Instructions & Parts Manual

Model Number
HW93716

Capacity
1/2 Ton



**Made in North
America**



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
customerservices@heinwerner-automotive.com

Read this manual and follow all the Safety Rules and Operating Instructions before using this product.


SAFETY and GENERAL INFORMATION

Save these instructions. For your safety, read, understand, and follow the information provided with and on this jack. The owner and operator of this equipment shall have an understanding of this jack and safe operating procedures before attempting to use. The owner and operator shall be aware that use and repair of this product may require special skills and knowledge. Instructions and safety information shall be conveyed in the operator's native language before use of this jack is authorized. If any doubt exists as to the safe and proper use of this jack, remove from service immediately.

Inspect before each use. Do not use if there are broken, bent, cracked, or damaged parts (including labels). Any jack that appears damaged in any way, operates abnormally or is missing parts, shall be removed from service immediately. If the jack has been or suspected to have been subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue to use until jack has been checked by a Hein-Werner authorized service center (contact distributor or manufacturer for list of Authorized Service Centers). It is recommended that an annual inspection be done by qualified personnel. Replace worn or damaged parts with Hein-Werner Authorized Replacement Parts only. Labels and Operator's Manuals are available from manufacturer.

PRODUCT DESCRIPTION

Hein-Werner Hydraulic Transmission Jack is designed to be used as an aid in the removal and installation of automotive and light truck transmissions, transfer cases and transaxles. This jack is for use under portable lift equipment, where vehicle must be supported by a pair of appropriately rated vehicle stands.

 DO NOT use for any purpose other than those uses outlined above.

SPECIFICATIONS

Model	Capacity	Min. Height	Max. Height	Saddle Base	Expanded Saddle Area	Jack Size (L x W)	Gross Weight
HW93716	1/2 Ton	5 1/2"	23 3/4"	9" x 9"	21" x 21"	33" x 20"	110 lb.

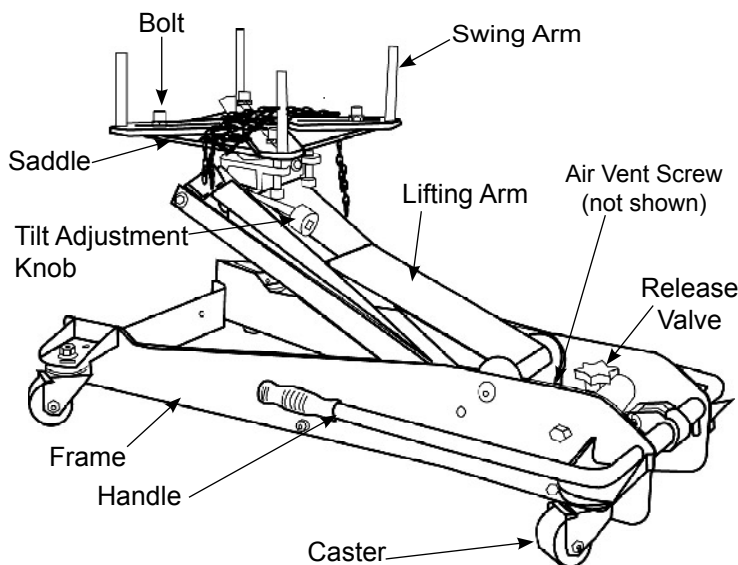


Figure 1- Model HW93716 Nomenclature


ASSEMBLY

Swing Arms: Align and insert bolt through the swinging arm and top plate assembly. Securely tighten the bolt. Repeat for the remaining swinging arms and bolts.

Chain: Insert the eyebolt through the roller that is attached to the attachment bar. Securely fasten with the provided wing nut. Ascertain the chain, the eyebolt, hook, and wing nut are all securely fastened.

BEFORE USE

1. Verify that the product and the application are compatible, if in doubt call Hein-Werner Technical Service (816) 891-6390.
2. Read the operator's manual completely and familiarize yourself thoroughly with the product, its components and recognize the potential hazards associated with its use **before** using this product.
3. Lower saddle fully, locate and remove air vent screw. Ensure the oil level is within ~3/16" from the inner cylinder as viewed from the oil filler hole. Reinstall air vent screw.
4. Replace worn or damaged parts and assemblies with Hein-Werner replacement parts only. Lubricate as instructed in Maintenance Section.

 **ADVERTENCIA**


- Leer, comprender, y seguir las instrucciones antes de utilizar el aparato.
- El manual de instrucciones y la información de seguridad deben estar comunicado en lengua del operador antes del uso.
- No seguir estas indicaciones puede causar daños personales o materiales.

OPERATION (see Fig. 1)

Raise Saddle Assembly

1. Locate and close release valve by turning it clockwise firmly, then pump the handle until the load is contacted.
2. Follow vehicle manufacturers recommended procedures for removing the load as outlined in vehicle service manual or repair guide.
3. Secure load with provided chains.

Important: Ensure the transmission is centered on the jack. An off-center transmission could cause the jack to tip over resulting in personal injury or property damage. For your safety, do not exceed 10 degree tilt angle of the saddle assembly in all directions.

 **WARNING**


- Study, understand, and follow all printed materials provided with/on this product before use.
- Do not exceed rated capacity.
- Use only on hard, level surfaces capable of supporting rated capacity loads.
- Use of this jack is limited to the removal, installation and transportation of transmissions, transfer cases and transaxles. Do not use a transmission jack to tilt or support a vehicle.
- Ensure the center gravity of load is centered on the saddle.
- For your safety, do not exceed 10 degree tilt angle of the saddle assembly in all directions.
- Adequately support the vehicle before servicing.
- Use only chains, slings, attachments and/or adapters supplied by the manufacturer.
- If loaded jack must be moved, make sure that the load is secured, stable and in lowest position.
- Transfer load immediately to appropriate support device for service or repair.
- Shock loads may cause the sudden loss of load and/ or cause the jack to tip or flip over violently, bend or break.
- No alterations shall be made on this product.
- Failure to heed these markings may result in personal injury and/or property damage.

 **WARNING**



To avoid crushing and related injuries:
NEVER work on, under or around a load supported only by jack. Immediately transfer the load to an appropriate work station.

Lower Saddle Assembly

 Be sure all tools and personnel are clear before lowering load. Dynamic shock loads are created by quickly opening and closing the release valve as the load is being lowered. The resulting overload may cause hydraulic system failure.

1. Secure the load to the jack with provided chain.
2. *Slowly, gently*, turn release valve counter-clockwise to lower load. No more than 1/2 full turn until load is fully lowered.
3. Immediately transfer the load to an appropriate repair fixture.

MAINTENANCE

Important: Use only a good grade hydraulic jack oil. Avoid mixing different types of fluid and **never** use brake fluid, turbine oil, transmission fluid, motor oil, or glycerin. Improper fluid can cause failure of the jack and the potential for sudden and immediate loss of load. We recommend Hein-Werner HW93291 or equivalent hydraulic jack oil.

Adding Oil

1. With saddle fully lowered, set jack in its upright, level position. Locate and remove air vent screw.
2. Fill with oil until ~3/16" above the inner cylinder as seen from the oil filler hole. Reinstall air vent screw.

Changing Oil

For best performance and longest lift, replace the complete fluid supply annually.

1. With saddle fully lowered, and pump piston fully depressed, remove air vent screw.
2. Lay the jack on its side and drain the fluid into a suitable container.

Note: Dispose of hydraulic fluid in accordance with local regulations.

3. Set jack in its level, upright position and fill with oil until ~3/16" above the inner cylinder as seen from the oil filler hole. Reinstall air vent screw.

Lubrication

A periodic coating of light lubricating oil to pivot points, axles, and hinges will help to prevent rust and assure that wheels, castors, and pump assemblies move freely.

Cleaning

Periodically inspect the ram for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

Note: Never use sandpaper or abrasive material on these surfaces!

Storage

When not in use, store the jack with ram fully retracted.

REPLACEMENT PARTS

(refer to page 6 & 7)

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

TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Jack will not lift load	<ul style="list-style-type: none"> • Release valve not tightly closed • Overload condition 	<ul style="list-style-type: none"> • Ensure release valve tightly closed • Remedy overload condition
Jack will lift, but not maintain pressure	<ul style="list-style-type: none"> • Release valve not tightly closed • Overload condition • Hydraulic unit malfunction 	<ul style="list-style-type: none"> • Ensure release valve tightly closed • Remedy overload condition • Contact Tech. Service
Jack will not lower after unloading	<ul style="list-style-type: none"> • Reservoir overfilled • Linkage binding 	<ul style="list-style-type: none"> • Ensure load is removed, then drain fluid to proper level • Clean and lubricate moving parts
Poor lift performance	<ul style="list-style-type: none"> • Fluid level low 	<ul style="list-style-type: none"> • Ensure proper fluid level
Jack will not lift to full extension	<ul style="list-style-type: none"> • Fluid level low 	<ul style="list-style-type: none"> • Ensure proper fluid level



TWO YEARS 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 fails 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.

Replacement Parts Illustration for Model HW93716 (refer to Parts list on page 7)

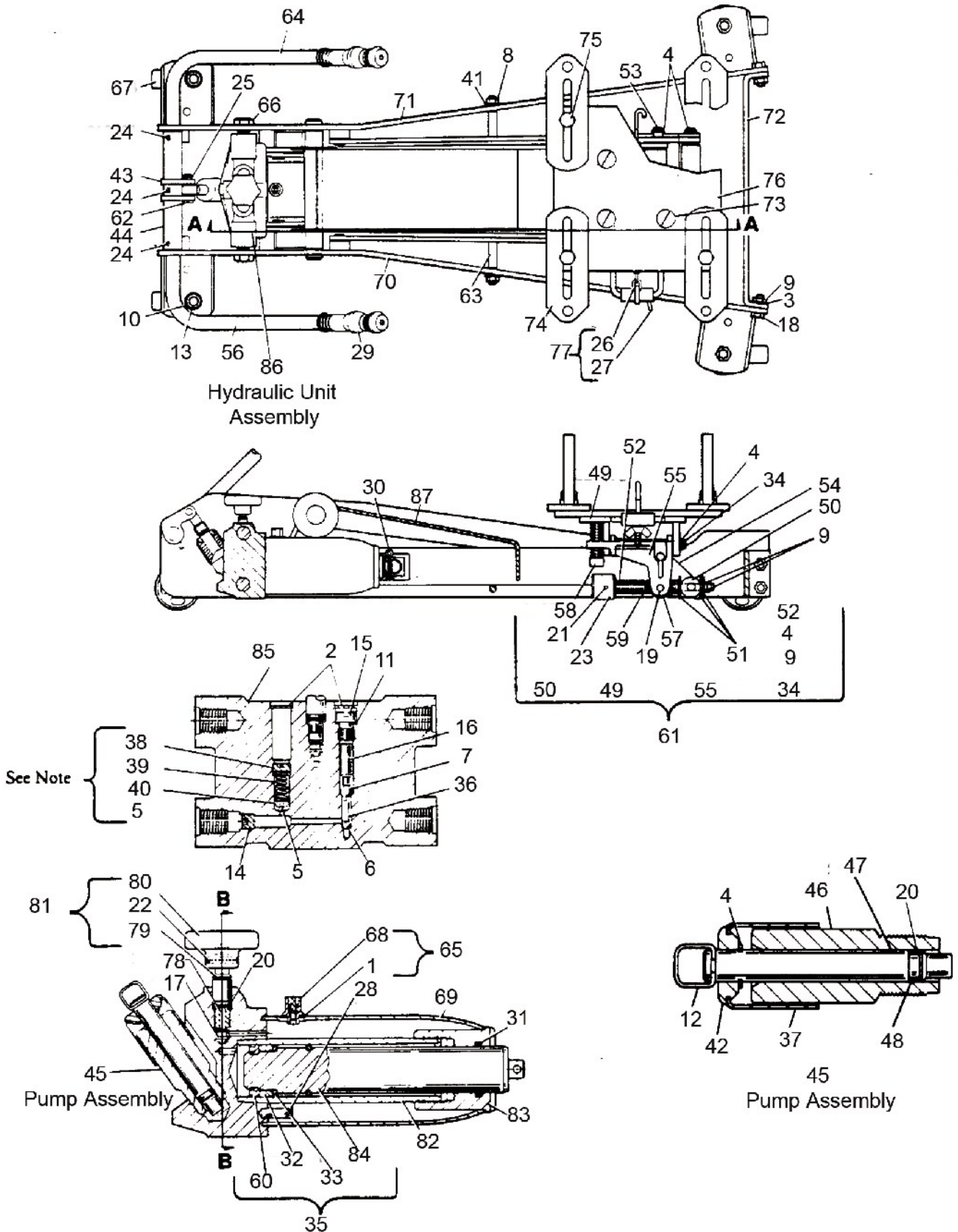


Figure 2 - Parts Illustration for Model HW93716

Replacement Parts List for Model HW93716 (refer to Parts Illustration on page 6)

Item	Part #	Description	Qty
1	200003	Gasket	1
2	201733	Plug	2
3	201789	Lockwasher	4
4	201801	Retaining Ring	7
5*	203196	Ball	1
6*	203198	Ball	1
7*	203201	Ball	1
8	203265	Nut	2
9	203275	Nut	6
10	203349	Nut	4
11*	204842	Gasket	1
12	209910	Pump Clip	1
13	209970	Lockwasher	4
14	210311	Plug	1
15	211013	Plug	1
16	211014	Spacer	1
17	212227	Poppet	1
18	212638	Bolt	4
19	214599	Pin	2
20*	216143	O-Ring	2
21	217782	Roll Pin	1
22	217898	Roll Pin	1
23	218962	Knob	1
24	219531	Roll Pin	3
25	220018	Retaining Ring	1
26	220861	Chain, Eyebolt & Hook	1
27	220865	Wing Nut	1
28*	221318	Screen	1
29	221365	Handle Grip	2
30	221408	Cotter Pin	1
31*	221748	Quad Ring	1
32*	224760	Heel Plate	1
33*	224867	Washer	1
34	224889	Pin	1
35	225518	Ram Ass'y.	1
36	226330	Spacer	1
37	226357	Pump Sleeve	1
38	226373	Screw	1
39	226375	Spring	1
40	226376	Adapter	1
41	226738	Lockwasher	2
42	227571	Grommet	1
43	227576	Handle Socket	1
45	227670	Pump Ass'y.	1

Item	Part#	Description	Qty
46	227671	Cylinder	1
47	227672	Piston	1
48	227673	Washer	1
49	227692	Tilt Pad Ass'y.	1
50	227715	Tilt Pin	1
51	227717	Washer	3
52	227718	Tilt Screw	1
53	227719	Pin	1
54	227720	Link	2
55	227721	Cradle	1
56	227723	Handle- R.H.	1
57	227724	Pivot Nut	1
58	227726	Tilt Screw	2
59	227766	Cotter Pin	2
60*	227919	U-Cup Packing	1
61	228002	Cradle & Tilt Pad Ass'y.	1
62	228247	Pin	1
63	228570	Pin	1
64	228789	Handle- L.H.	1
65	231316	Plug & Gasket Ass'y.	1
66	231589	Bolt	4
67	231603	Caster	4
68	231638	Filler Plug & Vent Valve	1
69	231641	Oil Tank	1
70	231951	Side Plate Ass'y. - R.H.	1
71	231952	Side Plate Ass'y. - L.H.	1
72	231960	Spacer	1
73	233032	Screw	4
74	233033	Swing Arm Ass'y.	4
75	233037	Bolt	4
76	233143	Top Plate Ass'y.	1
77	233893	Chain & Terminal Ass'y.	1
78*	233917	Spring	1
79	233920	Release Stem	1
80	233977	Hand Knob	1
81	234005	Release Stem Ass'y.	1
82	234571	Cylinder	1
83	234665	Tank Nut	1
84	234666	Ram	1
85	234794	Unit Block	1
86	234983	Hydraulic Unit Ass'y.	1
87	234984	Bell Crank Ass'y.	1
(*)	240521	Repair Kit	-

(*) items sold separately in 240521 Repair Kit

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