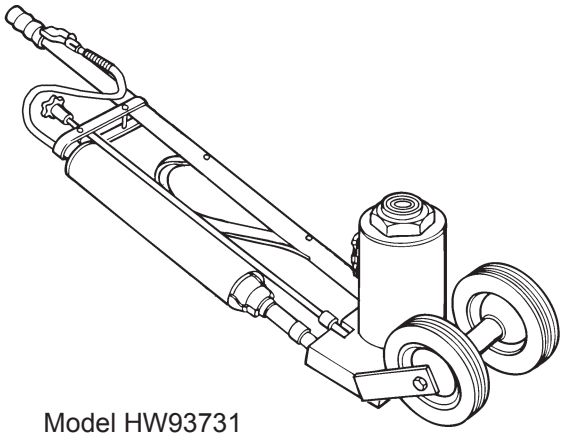
HEIN-WERNER AUTOMOTIVE®

Air Actuated Truck Jacks

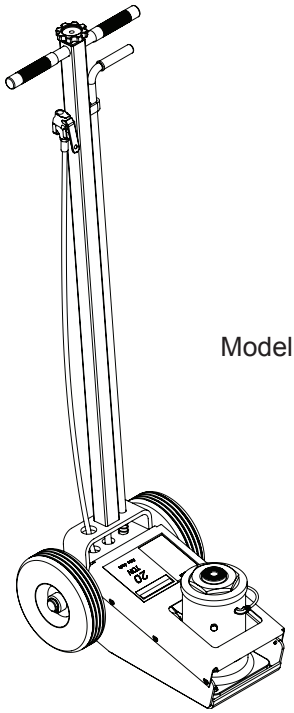
Operating Instructions & Parts Manual

Model Number	Capacity
HW93731	20 Ton
HW93733	20 Ton

Made in the U.S.A.



Model HW93731



Model HW93733

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.

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

SIGNAL WORDS

⚠ DANGER Indicates situation which, if not avoided, will result in death or serious injury	**⚠ WARNING** Indicates situation which, if not avoided, could result in death or serious injury
⚠ CAUTION Indicates situation which, if not avoided, could result in minor or moderate injury	**NOTICE** Indicates situation which, if not avoided, could result in damage to property

⚠ WARNING

- Study, understand, and follow all instructions before operating this device.
- Do not exceed rated capacity.
- Use only on hard, level surface.
- This is a lifting device only. Immediately after lifting, support the vehicle with appropriate means.
- Do not move or dolly the vehicle while on the jack.
- Lift only on areas of the vehicle as specified by the vehicle manufacturer.
- No alterations shall be made to this product.
- Failure to heed these markings may result in personal injury and/or property damage.

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 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 broken, bent, cracked, or damaged parts (including labels) are noted. Any jack that appears damaged in any way, operates abnormally or is missing parts, shall be removed from service immediately and the manufacturer notified. If you suspect that the jack was subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue use until the 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 and assemblies with Hein-Werner authorized replacement parts only (see Replacement Parts, pages 6 thru 11).

PRODUCT DESCRIPTION

Hein-Werner Air Actuated Hydraulic Truck Jacks are designed to lift, but not support, rated capacity loads. They are designed to be used vertically. Immediately after lifting, loads must be supported by appropriate mechanical means (as opposed to hydraulic means), such as a pair of appropriately rated jack stands.

⚠ **WARNING:** *NEVER use a hydraulic jack as a stand-alone device. After lifting, immediately support the vehicle with a pair of appropriately rated stands.*

SPECIFICATIONS

Model HW93731	
Rated Load Capacity	20 tons (40,000 lbs)
Low Pick Up Height	9-1/2"
High Lifting Point	17-1/2"
Power Raise	5-1/2"
Screw Extension	2-1/2"
Base Size	8" x 5-1/2"
Ram Diameter	2-3/16"
Handle Length	50"
Wheel Diameter	6"
Max. Air Pressure Supply	150 psi
Required Air Pressure For Lifting Loads	140 psi for 40,000 lb. 125 psi for 35,400 lb. 100 psi for 27,900 lb. 75 psi for 19,700 lb.

Model HW93733	
Rated Load Capacity	20 tons (40,000lbs)
Low Height	9"
High Height With Extension	19-3/4"
Screw Extension	4 3/4"
Lift Cap Diameter	2"
Wheel Diameter	8"
Chassis Overall Length	20"
Width at Wheels	13-1/4"
Handle Length	45"
Base Size	8" x 17"
Max. Air Pressure Supply	150 psi
Typical Operating Pressure	125 - 150 psi
Typical Lift Time - Full Raise (20 ton, 150 psi)	2 min. 15 sec

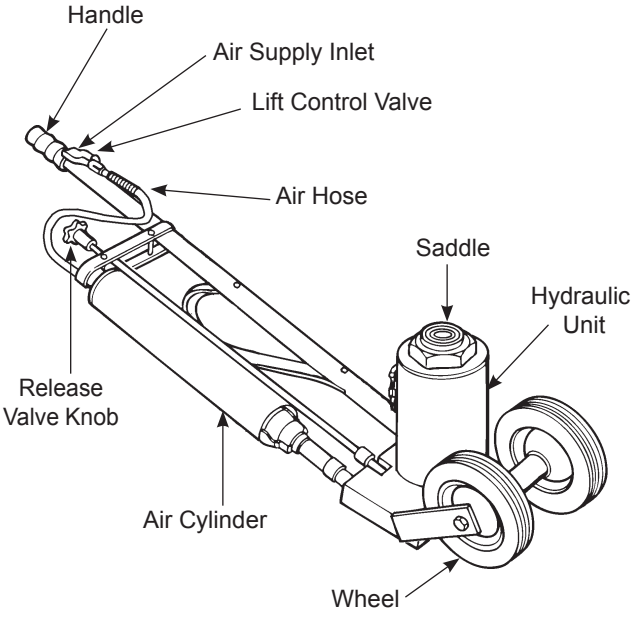


Figure 1 - Model HW93731 Nomenclature

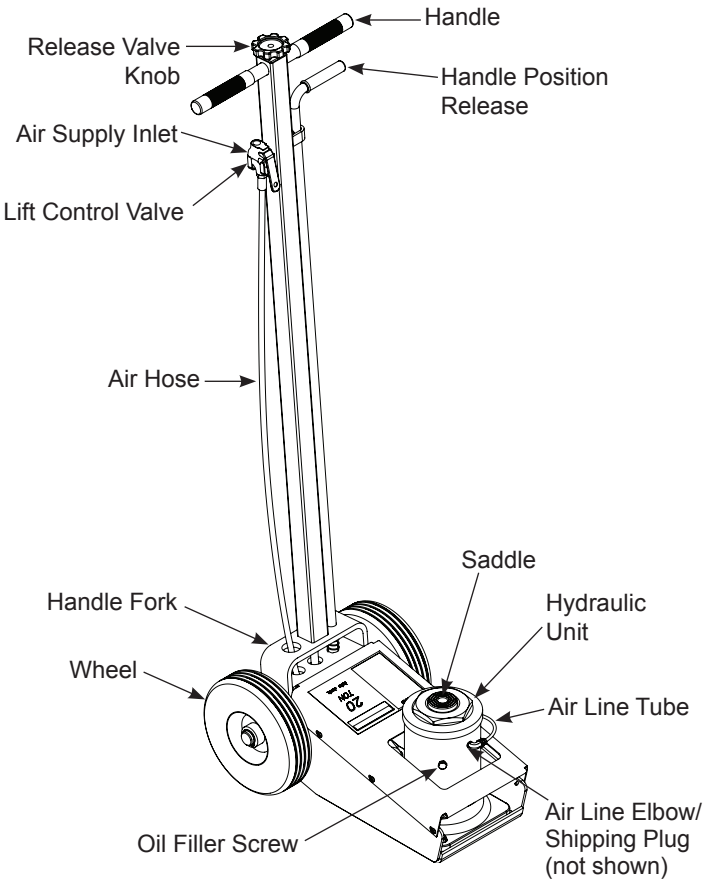
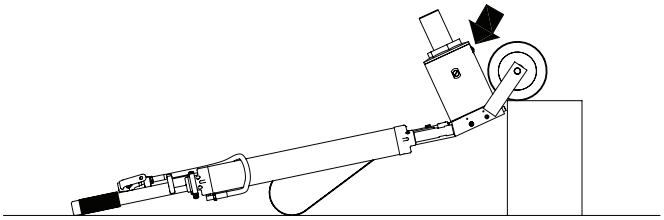


Figure 2 - Model HW93733 Nomenclature

PREPARATION

1. Verify that the product and the application are compatible, if in doubt contact Hein-Werner Technical Service (816) 891-6390.
2. Read the operator's manual completely and familiarize yourself thoroughly with the product and its components, and recognize the potential hazards associated with its use before using this product.
3. To familiarize yourself with the basic operation of the jack, locate and turn the release valve knob:
   a. *Clockwise* until firm resistance is felt to further turning. This is the 'CLOSED' release valve position used to raise the load.
   b. *Counter-clockwise*, but no more than 1/2 full turn from the closed position. This is the 'OPEN' release valve position used to lower the load. The more you turn the release valve knob counter-clockwise, the faster the load descends.
4. Locate and remove the oil filler screw (ref. part #13 for Model HW93731, part #24 for Model HW93733, in replacement parts section) with ram fully retracted. This will help release any pressurized air which may be trapped within the reservoir. Check oil level. Proper oil level should be just below the rim of oil filler hole.



Model HW93731 Air Bleeding - Arrow indicates approximate Air Vent Screw location.

5. Reinstall oil filler screw.
6. For Model HW93733, remove the shipping plug and install with air line elbow to reservoir (ref. part #47 in replacement parts section).
7. Remove the plastic plug from air supply inlet and install a 1/4" PT air coupler (not provided). To ensure dependable, trouble free operation, an inline air dryer and oiler is recommended.

NOTICE: *Ensure that thread tape or compound is used when servicing connections.*

8. Pour a teaspoon of good quality air tool lubricant, such as #630-AAA Lubriplate, into the air supply inlet of the lift control valve. Connect to adequate air source and operate for 3 seconds to evenly distribute lubricant.
9. Ensure that jack rolls freely. Raise and lower the unloaded saddle throughout the lifting range before putting into service to ensure the pump operates smoothly. Replace worn or damaged parts with Hein-Werner replacement parts only. Lubricate as instructed in Maintenance Section.

OPERATION

Lifting

NOTICE: *Loosen the filler screw before use.*

1. Connect air source to the air supply inlet.
2. Follow the vehicle manufacturer's recommended guidelines for lifting. Engage the emergency brake and chock each unlifted wheel in both directions to prevent inadvertent vehicle movement.
3. Locate and close the release valve by turning the release valve knob clockwise until firm resistance is felt.
4. Refer to the vehicle manufacturer owner's manual to locate approved lifting points on the vehicle. Center jack saddle under lift point.
5. Verify lift point, squeeze the lift control valve until saddle contacts load. To lift, continue squeezing the lift control. Release the grip on the lift control valve when load reaches desired height.
6. Immediately transfer the load to appropriately rated jack stands.

⚠ **WARNING:** *Overloading may cause hydraulic system failure*.

Lowering

⚠ **WARNING:** *Clear all tools and personnel before lowering vehicle. Open the release valve slowly. Maintain control of speed at which the load decends at all times.*

1. Raise load high enough to clear the jack stands; then remove jack stands.
2. Slowly turn release valve knob counter-clockwise, but no more than 1/2 turn. If the load fails to lower:
   a. Use another jack to raise the vehicle high enough to reinstall jack stands.
   b. Remove the malfunctioning jack and then jack stands.
   c. Using the non-malfunctioning jack, lower the load.
3. After removing jack from under load, push saddle down to reduce ram exposure to rust and contamination.

MAINTENANCE

NOTICE: *Use only quality hydraulic jack fluid. 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. Hein-Werner hydraulic jack oil HW93291 or equivalent is recommended.*

Adding Fluid

1. With saddle fully lowered, set jack in its upright, level position. Locate and remove oil filler screw. It may be necessary to remove cover plate on model HW93733.
2. Fill with hydraulic fluid until just below the rim of the oil filler hole. Reinstall oil filler screw.

Changing Fluid

NOTICE: *For best performance and longest life, completely replace fluid supply annually.*

1. With saddle fully lowered, and pump piston fully depressed, remove oil filler screw. It may be necessary to remove cover plate on model HW93733.
2. Lay the jack on its side and drain the fluid into a suitable container.

NOTICE: *Dispose of hydraulic fluid in accordance with local environmental regulations.*

3. Set jack in its level, upright position and fill with fluid until just below the rim of the oil filler hole. Reinstall the oil filler screw.

Lubrication

1. A periodic coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that wheels move freely and the pump functions smoothly.
2. When used on a daily basis, air pump should be internally lubricated before each use. Use only good quality air tool lubricant such as #630 - AAA Lubriplate. If no inline oiler is used, pour a teaspoon of air tool oil into the inlet of the air control valve. Simply operate the jack using the air feature in order to fully distribute the oil.

Cleaning

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

NOTICE: *Never use sandpaper or abrasive material on these surfaces.*

Storage

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

REPLACEMENT PARTS

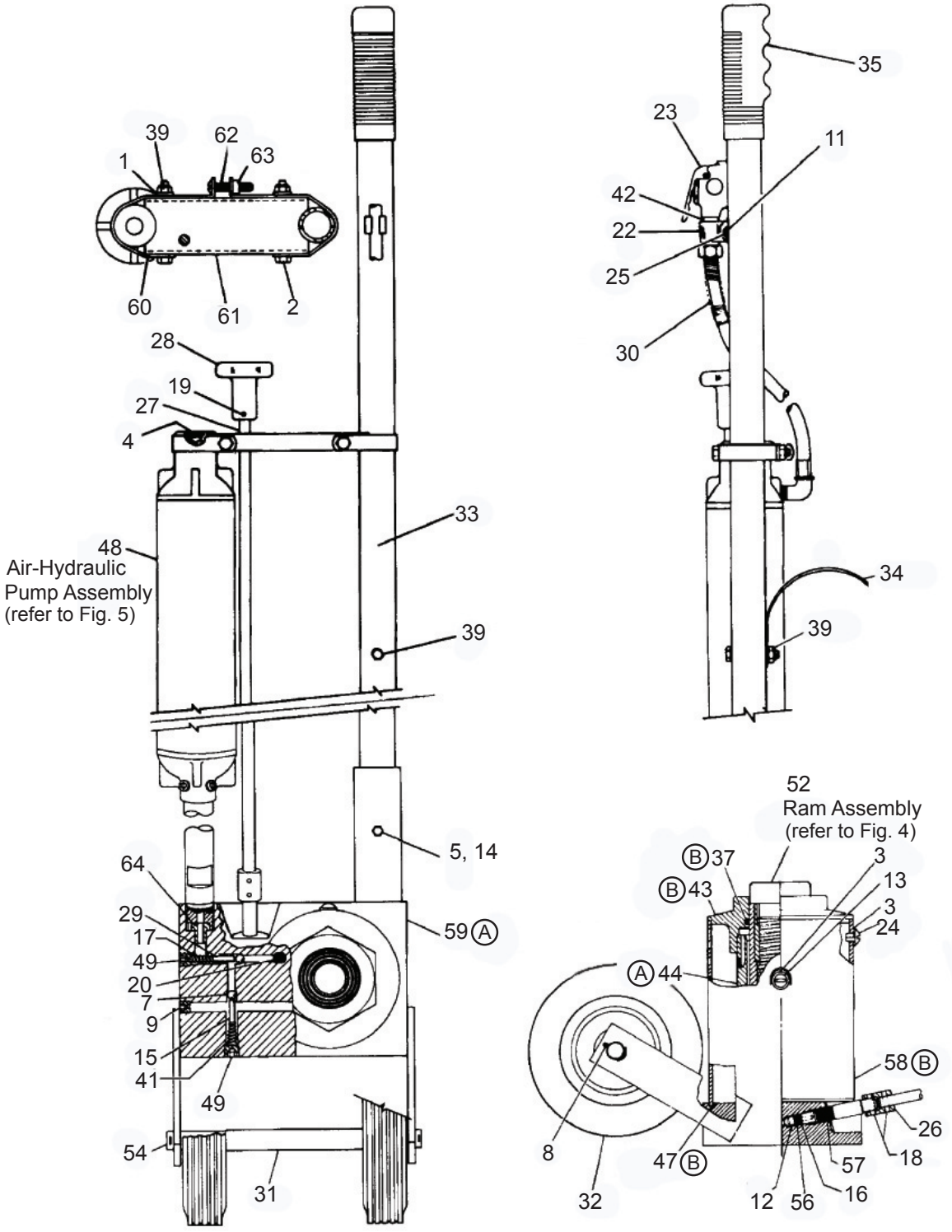
(refer to page 6 thru 11)

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 part description.

TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Jack will not lift load	• Release valve not tightly closed • Overload condition • Air supply inadequate	• Ensure release valve tightly closed • Remedy overload condition • Ensure adequate air supply
Jack will lift, but not maintain pressure	• Release valve not tightly closed • Overload condition • Hydraulic unit malfunction	• Ensure release valve tightly closed • Remedy overload condition • Contact Tech. Service
Jack will not lower after unloading	• Reservoir overfilled • Linkage binding	• Ensure load is removed, then drain fluid to proper level • Clean and lubricate moving parts
Poor lift performance	• Fluid level low • Air trapped in system	• Ensure proper fluid level • With saddle fully lowered, remove oil filler plug to let pressurized air escape, then reinstall oil filler plug
Jack will not lift to full extension	• Fluid level low	• Ensure proper fluid level

Replacement Parts Illustration For Model HW93731 (Part I) - ref page 8 for parts list



Ⓐ Apply Never-Seez (or equivalent) to threads and face at both ends of Ram Cylinder (ref part #44) before assembling. Assemble to Base (part #59) and tighten to crush fit.

Ⓑ Lubricate O-rings (part #37 & 47), Tank Nut (part #43), and upper & lower of Oil Tank (part #58) with lubriplate (or comparable lubricant) before assembling. Tighten to a crush fit.

Figure 3 - Parts Illustration for Model HW93731 - Main

Replacement Parts Illustration For Model HW93731 (Part II) - ref page 8 for parts list

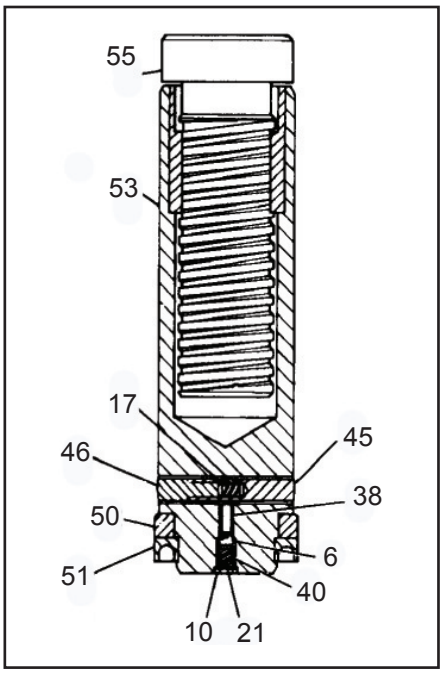


Figure 4 - Parts Illustration for Model HW93731 -Ram Assembly

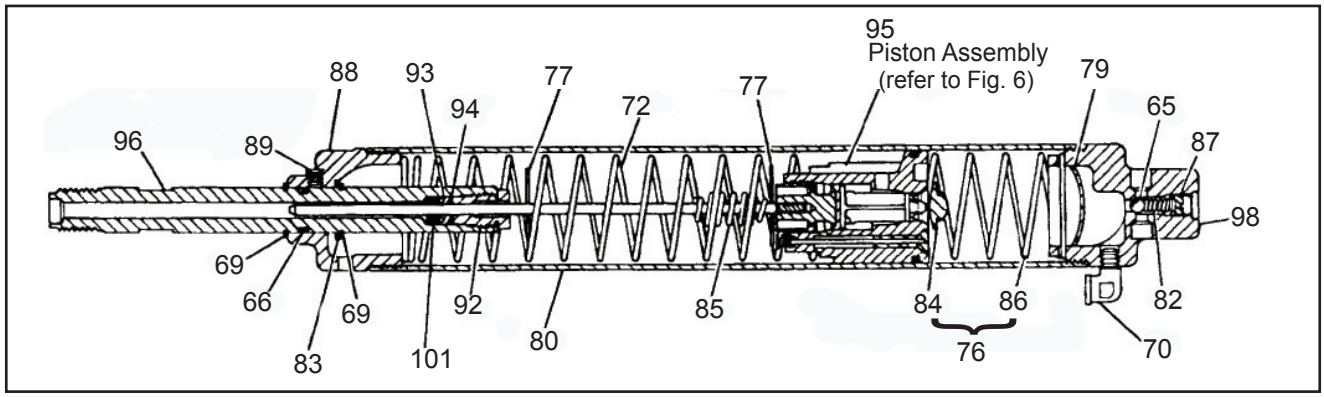


Figure 5 - Parts Illustration for Model HW93731 -Air Hydraulic Pump Assembly

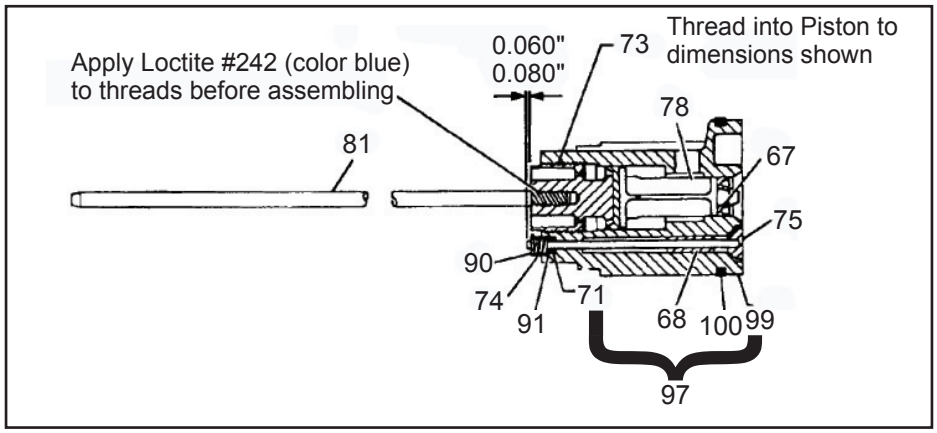


Figure 6 - Parts Illustration for Model HW93731 -Pump Piston Assembly

Replacement Parts List For Model HW93731 - ref pages 6 & 7 for parts drawing

Item	Part No.	Description	Qty
1	48230	Washer	2
2	50062	Bolt	2
3*	200003	Gasket	2
4	201733	Expansion Plug	1
5	201787	Lockwasher	1
6*	203199	Ball	1
7*	203202	Ball	3
8	204446	Cotter Pin	2
9	210311	Pipe Plug	1
10	210411	Washer	1
11	211737	Lockwasher	1
12	212227	Poppet Release Valve	1
13	212540	Filler Screw	1
14	212566	Bolt	1
15	213728	Spacer	1
16*	214555	O-ring	1
17	216647	Spring	2
18	217649	Roll Pin	2
19	217898	Roll Pin	1
20	222533	Screen	1
21	223166	Screen	1
22	223172	Hose Clip	1
23	351000	Air Valve	1
24	212562	Air Vent Screw	1
25	224081	Screw	1
26	224164	Adapter	1
27	224165	Rod	1
28	224166	Hand Knob	1
29	224180	Spacer	1
30	224182	Air Hose	1
31	224472	Spacer	1
32	224475	Wheel	2
33	224521	Handle	1
34	224640	Balance Strap	1
35	224641	Handle Grip	1
36	224644	Bolt	3
37*	224648	O-ring	1
38	225483	Pin	1
39	226019	Hex Locknut	5
40	226331	Spring	1

Item	Part No.	Description	Qty
41	226401	Spring	2
42	226483	Pipe nipple	1
43	227136	Tank Nut	1
44	227533	Ram Cylinder	1
45	228090	Cross pin	1
46	228091	Cross pin	1
47	228099	O-ring	1
48	228929	Air-hydraulic Pump Assy.	1
49	229131	Pipe Plug	2
50	230125	Heel Plate	1
51	230126	U-cup Packing	1
52	230134	Ram Assembly	1
53	245958	Ram	1
54	231102	Axle	1
55	232618	Extension Screw Assy.	1
56*	233917	Plastic Spring	1
57	233922	Release Stem	1
58	234933	Oil tank	1
59	234935	Base	1
60	234990	Strap	2
61	234999	Support Bracket	1
62	236717	Screw	1
63	236718	Nut	1
64	242876	Bushing	1
65	203202	Ball	1
66*#	219861	O-ring	1
67*#	221013	U-cup Packing	1
68	221377	Roll Pin	1
69	221820	Retaining Ring	2
70	222202	Elbow	1
71*#	222288	O-ring	1
72	223173	Return Spring	1
73	223183	Plug	1

Item	Part No.	Description	Qty
74	223184	Spring	1
75#	223187	Valve & Plunger	1
76	223194	Spring & Rubber Cushing	1
77	223203	Trip Washer	2
78	223678	Pump Packing & Piston	1
79	223680	Screen	1
80	224034	Air Cylinder	1
81	224038	Pump Rod	1
82	224156	Spring	1
83	224469	Washer	1
84	225371	Grommet	1
85	225384	Trip Spring	1
86	226153	Spring	1
87	226373	Adjusting Screw	1
88	N/A	End Block	1
89	226451	Set Screw	2
90	228235	Cotter Pin	1
91	228813	Washer	1
92	228814	Gland Unit	1
93*#	228815	U-cup Packing	1
94	228816	Washer	1
95	228930	Piston Assembly	1
96	228933	Pump Cylinder	1
97	231347	Piston & Roll Pin Assembly	1
98	N/A	Cylinder Cap	1
99	236684	Piston	1
100	236685	Sealing Ring	1
101	242877	Bushing	1
(*)	240579	Repair Kit	-
(#)	240564	Air Hyd. Pump Repair Kit	-

(*) indicates items included in Repair Kit 240579
(#) indicates items included in Repair Kit 240564

Replacement Parts Illustration For Model HW93733 (Part I) - ref page 11 for parts list

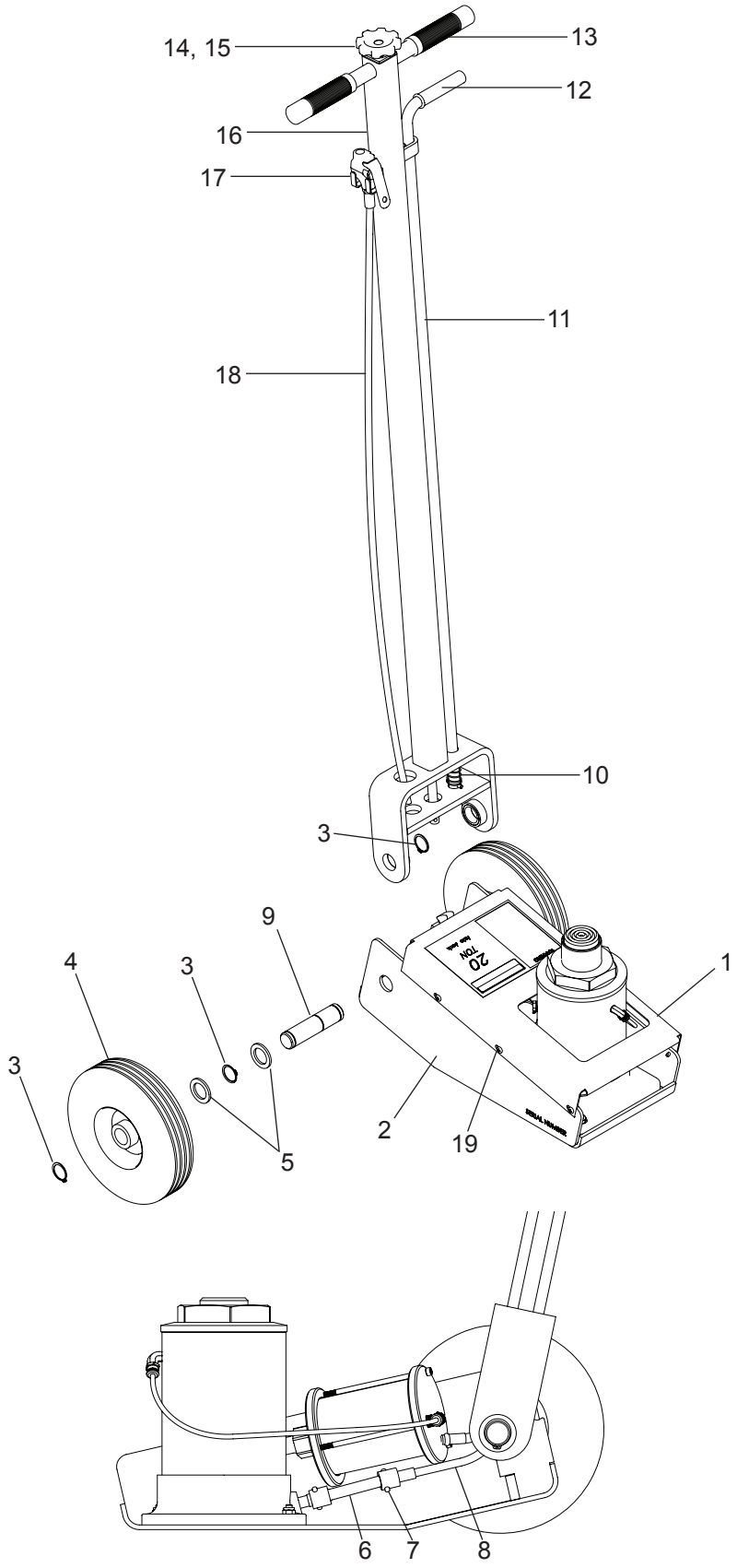
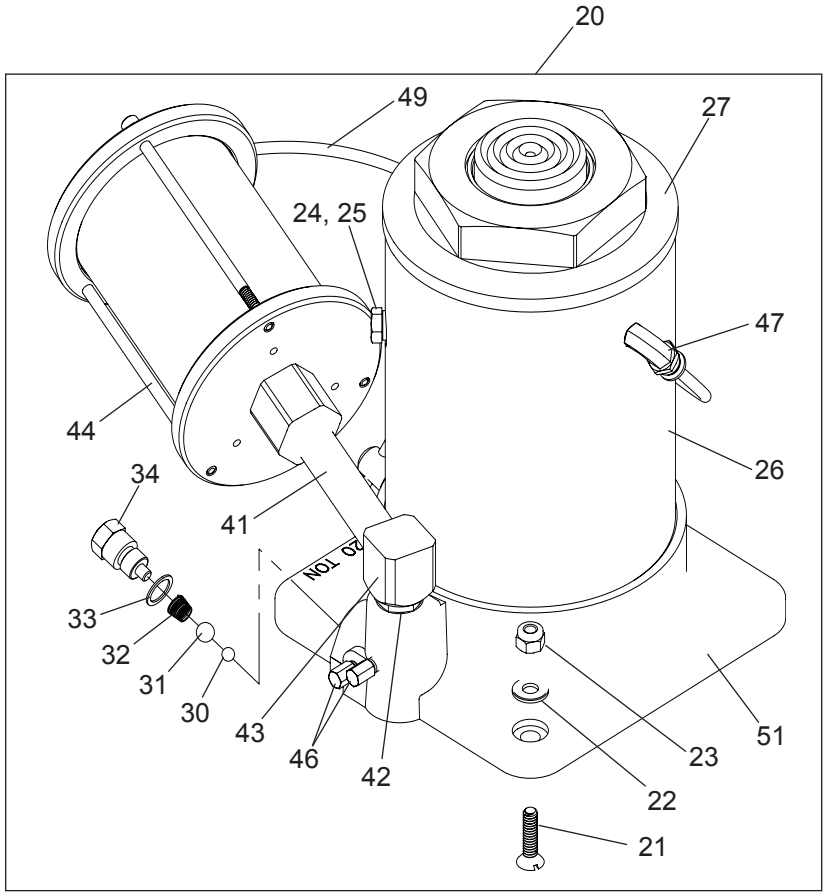
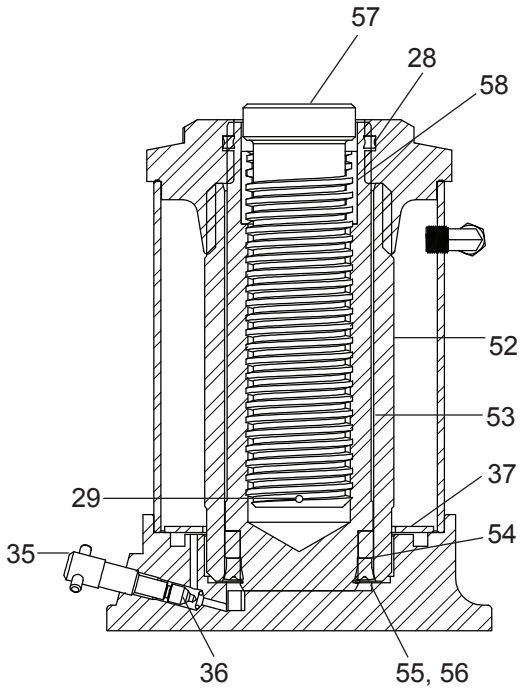


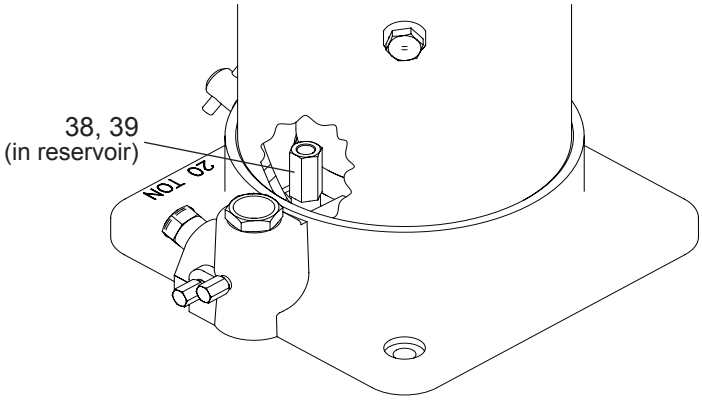
Figure 7 - Parts Illustration for Model HW93733 - Main Frame

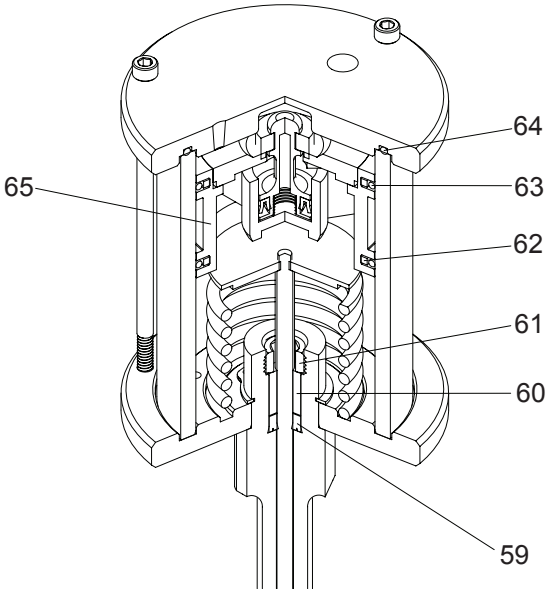
Replacement Parts Illustration For Model HW93733 (Part II) - ref page 11 for parts list





Hydraulic Unit Assembly (includes Air Motor)





Model HW93733 Air Motor

Figure 8 - Parts Illustration for Model HW93733 - Air Motor & Hydraulic Unit

Replacement Parts List For Model HW93733 - ref pages 9 & 10 for parts drawings.

Item	Part No.	Description	Qty
1	BK210980SF	Top Cover	1
2	BJ511626SF	Frame Weldment	1
3	BB557523SF	Retaining ring, .94D	6
4	BE587106	Wheel, Rubber 8 x 2.5	2
5	85004016SF	Axle Thrust Washer, 1 ID	2
6	BK901038SF	Release Valve Adapter	1
7	23521011	Pin, 3/16D	2
8	85004024	Flex Shaft	1
9	BJ395104SF	Wheel Axle 1 x 4-1/8L	2
10	23314012SF	Handle Release Spring	1
11	85002007SF	Release Rod	1
12	H0933000	Handle Grip, Release Rod	1
13	23220001	Handle Grip	2
14	23220094SF	Knob, Release Valve	1
15	23521011SF	Pin, Knob 3/16 x 1-1/8L	1
16	85001011SF	Handle Assembly	1
17	1-312-00002	Air Valve, 1/4NPT	1
18	BJ354646	Air Hose, 1/4 ID	1
19	SJ100374	Screw, Phillips	6
20	90000352SF	Jack & Air Motor Assy.	1
21	BJ318028	Screw, Flat	2
22	BD215108	Washer, 1/4	2
23	SJ100079	Nut, Hex 1/4-20UNC	2
24*	AJ100060	Filler Screw	1
25*	AJ100020	Gasket, 15/32OD	1
26	BJ389025	Reservoir	1
27	BJ398020	Top Cap	1
28*	NJ100046	Quad ring	1
29	BD674061	Pin, 1/8 x 9/16L	1
30*	B1160000	Ball, 7/32	1
31*	BS116000	Ball, 5/16	1

Item	Part No.	Description	Qty
32*	AJ100040	Valve Spring	1
33*	BB159167	Gaket, 19/32OD	1
34*	BK300600	Valve Plug	1
35	BK490010	Release Spindle	1
36*	AJ100312	O-ring, 3/16ID	1
37	BK810800	Washer, 4-5/8OD	1
38	BK876900	Relief Valve	1
39	BS303700	Washer, 3/8OD, 17/64ID	1
40	BJ790096	Nipple, 1/8 NPT	1
41	BK729200SF	Adapter, Air Motor	1
42	BJ580096	Pump Nipple	1
43	BK729100SF	Elbow, 78°	2
44	928456	Air Motor	1
45	BJ788039	Bushing	1
46	B1060100	Plug, Hex 1/4-28UNF	2
47	BJ990096	Male Elbow, 90°, 1/8MPT	2
48	N/A		
49	BJ649268	Tube, 1/4OD x 16L	1
50	BJ479096	Street Elbow, 90°	1
51	N/A	Base	1
52	BJ390030	Cylinder	1
53	21100488	Plunger	1
54*	36400011	Bearing	1
55*	248428	U-cup, 2.5 x 2 x .38	1
56*	30600031	Retaining Ring	1
57	BJ382028	Adj, Screw	1
58	BJ385446	Plunger Sleeve	1
(*)	B7002000	Repair Kit	-

(*) indicates items included in Repair Kit B7002000

Replacement Parts List For Model HW93733 Air Motor - ref page 10

Item	Part No.	Description	Qty
59	928464	U-cup	1
60	928463	Brass Bushing	1
61	928467	Hollow-Lock Set Screw	1
62	928449	Air Piston Square O-ring	2
63	928452	Air Piston O-ring	2
64	928453	O-ring	1

Item	Part No.	Description	Qty
65*	928469	Air Piston Assembly	1
66**	928468	Seal Kit	1

* Includes complete Air Piston assembly with O-rings 62 and 63

** Includes Part Numbers 59, 60, 61, 62, 63 and 64

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