Blackhawk Automotive™

INSTRUCTION MANUAL
REPAIR PARTS LIST

5800 PSI AIR/HYDRAULIC PUMP

MODEL B94801

FEATURES

- EXTRA HIGH DELIVERY at full pressure.
- RUGGED STEEL AND ALUMINUM MOTOR.
- DUAL RELEASE FOR CONTROLLED LOAD RELEASE AND OPTIONAL SELF—LOCKING QUICK RELEASE FOR HANDS FREE RETRACTION.
- LOW EFFORT CONTROL PEDAL. Ideal for hand operation of presses, etc.
- WORKS ON 40 TO 120 PSI AIR PRESSURE. (See Flow Chart on Next Page)
- HOLDS PRESSURE even when air supply is removed.
- HARDENED HYDRAULIC PISTON for extended life.
- INTERNAL RELIEF VALVE for optimum performance and protection of hydraulic equipment.

⚠ WARNING

1. Read, study and understand all warnings and operating instructions furnished with this equipment before use.
2. It is your responsibility to keep the warning label in place and legible. Replacement labels are available from the factory (Part Code 28321).
3. Use only with cylinder, hoses and equipment rated for 10,000 psi oil pressure.
4. Always use a pressure gauge to verify the actual load being applied to the equipment for various types of set-ups used.
5. Do not operate pump when hydraulic oil is not at proper level or with reservoir vent screw installed.
6. Before use, the oil level should be checked, provided all cylinders are retracted and pump turned off. Use only hydraulic jack oil. An improper oil level may result in an inoperable pump, damage to internal components, and damage or failure of equipment used in conjunction with pump.
7. This is a pumping device only. Do not use pump to maintain hydraulic pressure on equipment. Secure loads by other appropriate means.
8. Relieve all line pressure before disconnecting hose.
9. Failure to heed these warnings may result in loss of load, damage to equipment, and/or failure resulting in property damage, personal or fatal injury.

OWNER'S RESPONSIBILITY

Operation. The owner and/or operator shall have an understanding of these operating instructions and warnings before operating the pump. Warning information shall be emphasized and understood. If the user is not fluent in English, the instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents. If the owner and/or operator does not understand the operating instructions fully, they should contact a local Blackhawk Service Center or call the factory direct for assistance.

Maintenance. The pump shall be maintained in accordance with instructions listed under "Maintenance."

Inspection

1. Visual inspection shall be made before each use of the pump, checking for leaking hydraulic fluid, and damaged, loose or missing parts.
2. Each pump, if subjected to an abnormal load or shock, shall be inspected before reuse by an authorized Blackhawk Service Center.
3. Owners and/or users should be aware that repair of this equipment may require specialized knowledge and facilities. It is recommended that an annual inspection of the pump be made by an authorized Blackhawk Service Center and that any defective parts, decals or warning labels be replaced with genuine Blackhawk parts. A list of authorized service centers is available from Blackhawk.

ASSEMBLY

Assemble air and hydraulic lines as required.

IMPORTANT

IN THE EVENT THAT AN IN-LINE REGULATOR-FILTER-LUBRICATOR IS USED, USE A GOOD GRADE OF SAE 30 OR 30W MOTOR OIL AND ADJUST THE DEVICE TO THE MIN. SETTING. NOTE BY USE OF THIS DEVICE THE PUMP MAY EXHAUST LUBE OIL EXTERNALLY.

INSTRUCTIONS BEFORE USE

IMPORTANT

Read all instructions carefully before attempting to assemble or operate these pumps. Most malfunctions in new equipment are the result of improper operation and/or improper set-up assembly.

Preparation. Remove pump from shipping container — but do not remove any plugs or valves until the unit is ready to be fully assembled to prevent dirt or foreign matter from contaminating system.

Inspection:

1. Visually inspect all components for shipping damage. If any damage is found - notify carrier immediately.
2. Remove vent screw (item #8) from fill plug prior to operation.

IMPORTANT

FAILURE TO DO SO MAY RESULT IN DAMAGE TO EQUIPMENT.

H2890900
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AIR MOTOR PARTS

ITEM NO.	PART NO.	DESCRIPTION	REQ'D. QTY.
1.	H2835000	Release Button	1
*2.	H1460500	O-Ring	1
3.	H2835100	Release Pin	1
**4.	H2830300	Cartridge Relief Valve	1
5.	H2836000	Spring Guide	1
6.	H6735100	Spring, Compression	1
7.	H0301000	Ball, 0.375" Dia.	1
8.	H2827800	Hydraulic Block	1
9.	H2544000	Pipe Plug, 1/4" NPTF	1
10.	H2593500	Pipe Plug, 1/8" NPTF	3
11.	H6732900	Cyl., Hydraulic	1
*12.	H6734300	U-Cup, Preloaded	1
*13.	H6733200	Packing Nut	1
14.	H6736900	Air Cyl. Assy.	1
15.	H6346600	Hose Clamp, 0.38" Dia.	2
16.	H2825600	Hose, Synthetic	1
17.	H6735000	Spring, Compression	1
18.	H0267500	Ball, 0.250" Dia.	1
19.	H6733400	Intake Seat	1
20.	H6737100	Spring, Compression	1
21.	H6732400	Retainer, Piston	1
22.	H6734900	Piston, Hydraulic	1
23.	H6734800	Air Piston	1
24.	H2827300	Plug	1
* 25.	H6794400	U-Cup Seal	1
* 26.	H6152600	Seal, Air	1
* 27.	H6733900	Air Seal, Exhaust	1
28.	H2827200	Air Body	1
* 29.	H6734100	Seal, Air	2
* 30.	H6734200	Sq. Ring Seal	2
31.	H6735300	Piston, Air Valve	1
32.	H2547000	SSS 1/4-20 x 0.25" Cup Pt.	1
33.	H2593500	Pipe Plug, 1/8" NPTF	1
34.	H6733000	Hcs 1/4-20 x 6.25"	4
* 35.	H1625900	O-Ring	1
36.	H6793000	Air Feed Button	1
37.	H2833300	Ball, 0.406" Dia.	1
38.	H2833400	Compression Spring	1
39.	H2834400	Pipe Plug, 3/8" NPTF	1
*40.	H6734600	Backup Ring	2
41.	H2834900	Release Valve	1
42.	H2835300	Ball, 0.125" Dia.	1
43.	H2870500	Spring	1
44.	H2835200	Spacer	1
45.	H2835500	Spring	1
46.	H6013500	Pipe Plug, 3/8" NPTF	1
47.	H2827400	Bumper, Air Valve	1
*48.	H6245500	O-Ring	1
49.	H2827700	Cover, Air Body	1
*50.	H6733100	O-Ring	1
51.	H6276800	Tube	1
52.	H2830200	Spring Cap	1
53.	BS303700	Copper Washer	1

* H2834800 New Repair Kit

Air Supply. Check for adequate air supply. See chart.

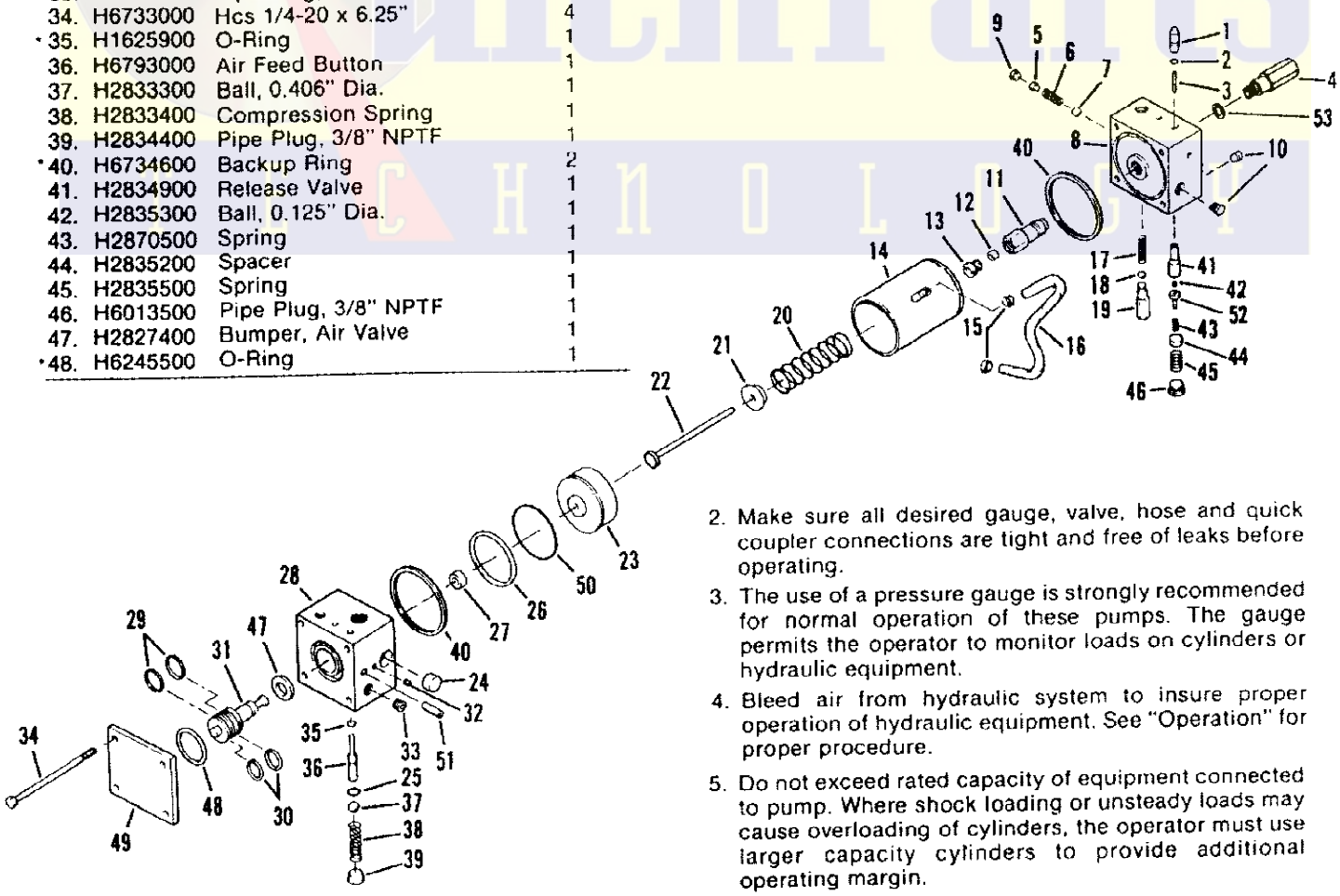
FLOW CHART/AVERAGE READINGS
(Cubic Inches per Minute)

Air Pressure	No Load	2000 PSI	4000 PSI	6000 PSI	8000 PSI	10,000 PSI
60	47.7	26.2	17.4	–	–	–
80	49.4	31.7	23.2	15.9	–	–
90	50.9	34.8	25.3	18.3	–	–
100	52.5	36.6	27.7	20.4	–	–
120	54.9	39.6	30.2	23.5	–	–

Based on 36 cfm air delivery @ 175 psi.

Hydraulic Connections

1. Check hydraulic oil level with fill indicator in reservoir to prevent possible pump burnout. Oil level should be no more than 1-1/2" from top of reservoir plate with cylinders retracted. Add Blackhawk Hydraulic jack oil as necessary.



2. Make sure all desired gauge, valve, hose and quick coupler connections are tight and free of leaks before operating.
3. The use of a pressure gauge is strongly recommended for normal operation of these pumps. The gauge permits the operator to monitor loads on cylinders or hydraulic equipment.
4. Bleed air from hydraulic system to insure proper operation of hydraulic equipment. See "Operation" for proper procedure.
5. Do not exceed rated capacity of equipment connected to pump. Where shock loading or unsteady loads may cause overloading of cylinders, the operator must use larger capacity cylinders to provide additional operating margin.

OPERATION

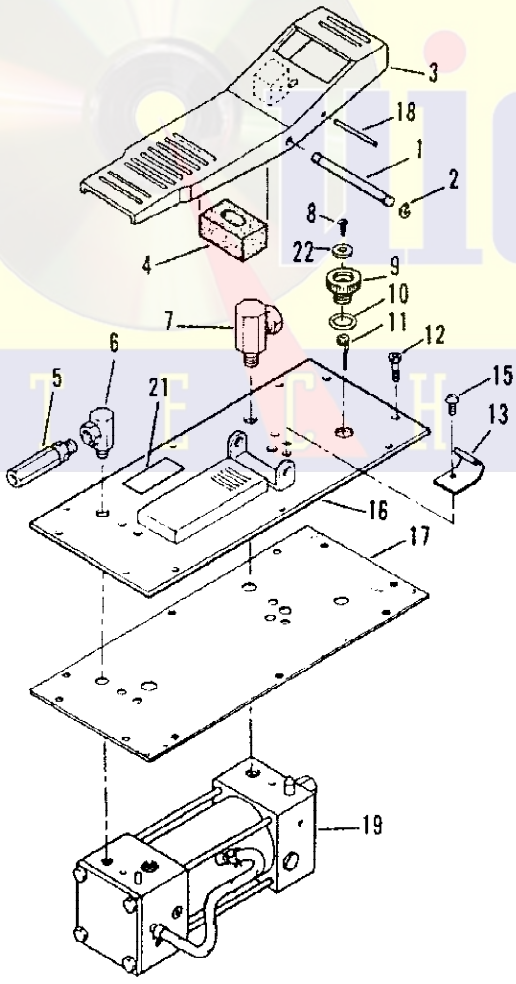
NOTE

THE PUMP REQUIRES A BREAK-IN PERIOD OF 5 HOURS OF OPERATION BEFORE OPTIMUM PERFORMANCE AS SHOWN IN THE FLOW CHART CAN BE OBTAINED. LUBRICATION OF THE AIR MOTOR DURING EARLY OPERATION WILL IMPROVE PERFORMANCE DURING BREAK-IN PERIOD, BUT MAY RESULT IN PUMP EXHAUSTING LUBE OIL EXTERNALLY.

1. One side of pedal activates pump operation. The other side releases pump pressure.
2. To bleed air from pump, depress release while using screwdriver to depress air feed button.
3. This product is equipped with a unique 2-stage release valve along with an optional automatic ram retraction feature. The 1st stage release is a highly sensitive restrictive release mode which allows total control when releasing the load. The 2nd stage release is a quick dump (unrestricted) release mode which allows rapid ram retraction during a no load condition. Note the 2nd stage mode cannot be activated until the pump's internal pressure is less than 2000 psi. Higher pressures will not allow this stage to activate and the pedal travel is limited due to excessive pedal effort required.

   The optional automatic ram retraction feature is only activated in the unloaded condition and basically allows hands free release. Once the load has been released the pedal will lock in the 2nd stage release mode until manually shifted by the operator.

NOTE: If the self-locking ram retraction feature is required for your application the pump is designed to easily activate locking device. Simply loosen item #15 (H6385400) button head screw and slide item #13 (H2831100) spring clip back until roll pin in pump pedal engages when pedal is depressed in release mode. Retighten item #15. Item #15 is readily accessible through clearance hole along top surface of pump pedal. No disassembly is required to activate self-locking feature.



MAINTENANCE

1. **Maintain Oil Level.** Check hydraulic oil level every 30 hours of operation. Add Blackhawk Hydraulic jack oil when necessary. Oil level should be checked with fill indicator in fill plug.

   Completely change hydraulic oil every 300 hours of operation. In extremely dusty areas or extreme heat (in excess of 180°), the oil will need to be changed more frequently.
2. If a problem with the pump's performance develops, consult "Troubleshooting." In most cases, the problem can be easily resolved. If the listed procedures do not remedy the problem, the pump should be taken to an authorized Blackhawk Service Center for repair.

   Owners and/or users should be aware that repair of this equipment may require specialized knowledge and facilities and that any defective parts, decals, or warning labels should be replaced with genuine Blackhawk parts. A list of authorized service centers is available from Blackhawk.
3. Periodically inspect air and exhaust filters. If cleaning is required, use air hose only. Do not use any type of solvent.
4. Lubricate pedal periodically.

ITEM NO.	PART CODE	DESCRIPTION	REQ'D. QTY.
1	H2826900	Pin, Pivot	1
2	H1234500	Pin, Ring	2
3	H2828200	Pedal	1
4	H2825700	Foam Muffler	1
5	H6778400	Air Filter Kit	1
6	H6527200	Elbow, Swivel 90°	1
7	H2836100	Elbow, Swivel 90°	1
8	H2835700	Screw, Vent	1
9	H6621300	Plug, Fill	1
10	H2830500	Square Ring	1
11	H2838800	Indicator, Fill	1
12	H2824900	Screw, Cover	10
13	H2831100	Spring Clip	1
15	H6385400	Screw, Btn. Hd.	3
16	H2826500	Cover Plate Assy.	1
•17	H2826100	Gasket	1
18	H1484100	Roll Pin	1
19	H2826300	Air Motor Assy	1
20	H2832100	Warning Decal (Not shown)	2
21	H2892200	Model Decal	1
22	H2830600	O-Ring	1

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