



INSTRUCTION MANUAL REPAIR PARTS LIST

4 TON PORTO-POWER KIT

MODEL B65114

WARNING

1. READ, STUDY, AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS FURNISHED WITH THIS EQUIPMENT BEFORE USE.
2. THIS EQUIPMENT IS DESIGNED FOR USE ONLY WITH BLACKHAWK BODY/FRAME EQUIPMENT AND ATTACHMENTS. USE WITH ANY OTHER EQUIPMENT MAY RESULT IN OVER-LOADING, REDUCED LOAD CAPACITY, REDUCED STABILITY, AND/OR SYSTEM FAILURE.
3. DO NOT OVERLOAD. OVERLOADING IS OFTEN INDICATED BY BOWING EXTENSION TUBES OR SLIPPING ATTACHMENTS AND CAN RESULT IN PERSONAL INJURY OR DAMAGE TO THE EQUIPMENT.
4. MAINTAIN PROPER OIL LEVEL. OVERFILLING MAY CAUSE DAMAGE TO, OR FAILURE OF THIS EQUIPMENT.
5. WHEN OFFSET ATTACHMENTS ARE USED, THE RATED CAPACITY IS ALWAYS REDUCED BY 50%. FOR EACH EXTENSION TUBE USED IN THE SETUP, THE OVERALL RATED CAPACITY IS REDUCED AN ADDITIONAL 50%. REFER TO OPERATING INSTRUCTIONS PROVIDED FOR TYPICAL SETUPS AND CORRESPONDING LOAD CAPACITIES.
6. DO NOT OPEN FILLER SCREW FOR ANY REASON, UNLESS RAM IS FULLY RETRACTED.
7. DO NOT CONNECT PUMP TO ANY RAM THAT IS EXTENDED OR PARTIALLY EXTENDED.
8. PRIOR TO APPLYING A LOAD, INSURE THAT ALL ATTACHMENTS AND EXTENSION TUBES ARE FULLY ENGAGED.
9. INSURE LOAD IS CENTRALLY APPLIED TO ATTACHMENTS AND RAM SADDLE TO MINIMIZE AN OFF CENTER LOAD CONDITION.
10. BLACKHAWK RECOMMENDS THE USE OF A FORCE GAUGE TO VERIFY THE ACTUAL LOAD BEING APPLIED FOR VARIOUS TYPES OF SETUPS USED.
11. IT IS THE OWNER'S RESPONSIBILITY TO KEEP DECALS LEGIBLE AND INTACT. REPLACEMENT DECALS ARE AVAILABLE FROM AUTHORIZED SERVICE CENTERS OR THE FACTORY.
12. 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 this equipment. 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.

Maintenance. This equipment shall be maintained in accordance with instructions listed under "Maintenance."

Inspection

1. Visual inspection shall be made before each use of this equipment checking for leaking hydraulic fluid, worn or damaged hose and fittings, and damaged or bent extension tubes or attachments.

2. Each piece of equipment shall be inspected by an authorized Blackhawk service center immediately, if subjected to an abnormal load or shock.
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 this equipment 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.

Damaged Equipment. Any equipment 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 by an authorized Blackhawk service center.

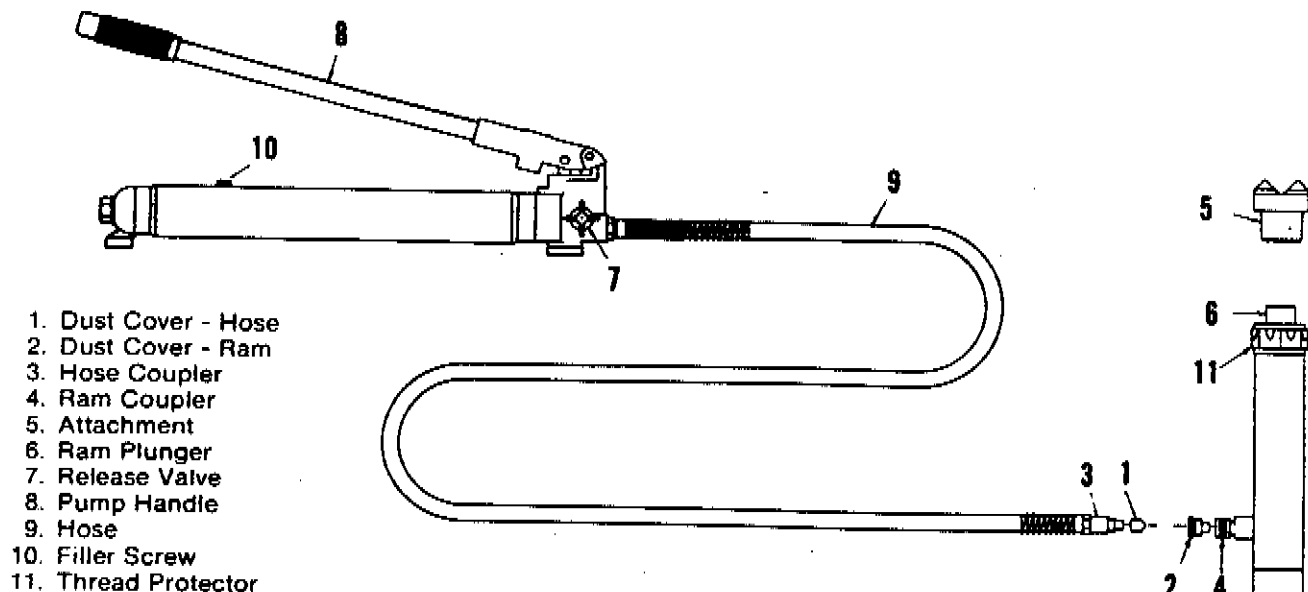


FIGURE 1

BASIC PRINCIPLES OF OPERATION (See Figure 1)

1. To prepare the pump and ram for operation, remove dust covers (1 and 2) from hose coupler (3) and ram coupler (4). Connect hose coupler to ram coupler and thread retaining ring on to hold hose in position. Select an appropriate attachment (5) and assemble onto ram plunger (6). Make sure attachment is properly seated on plunger.

If attachment threads onto ram - remove and retain thread protector for reuse - assemble attachment to ram.

2. The use of extension tubes or off-center attachments such as plunger or ram toes can significantly reduce the capacity of the system. When using extension tubes, never put the shortest tubes in the middle of the setup - they should always be on the ends.
3. **Operation.** To operate - close the release valve (7) by turning clockwise until snug (do not overtighten). Operate pump handle (8) which pumps oil through hose (9) to the ram, causing the ram plunger (6) to extend until it contacts the workpiece. Continue pumping until the desired operation is completed.

To release the pump and retract the ram plunge slowly turn the release valve (7) counterclockwise. The release speed can be controlled by the amount the release valve is turned.

PUMP OPERATING POSITIONS (See Figures 2 and 3)

When the pump is used in a horizontal position, the handle must be on top as shown in figure 2. When the pump is used in a vertical position, the hose must be pointed downwards (fig. 3). Any other position will prevent oil from being pumped into the hose and ram.

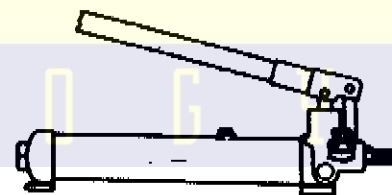


FIGURE 2

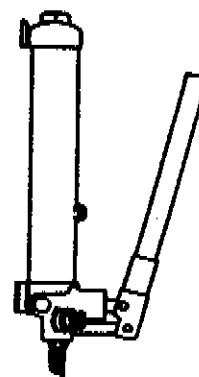


FIGURE 3

NOTE

The pump is equipped with an overload valve that will by-pass (pump oil back into reservoir) when the system reaches maximum pressure. At this point, continued pumping will have no effect on system.

Be careful, however, to watch for signs that the system is overloading or that the equipment setup is unstable. If bowing of extension tubes or shifting of attachments occurs - release the pump immediately and reposition equipment. Continual overloading on a given workpiece may indicate that a higher capacity bodyframe kit should be used.

MAINTENANCE

1. When the equipment is not in use, keep the ram retracted and the pump release valve closed.
2. Keep equipment clean. Lubricate moving parts on pump handle. Store in box when not in use. Avoid sharp kinks in hose.
3. If hydraulic fluid is required, refill at filler screw (Figure 1, item 10) only with genuine Blackhawk jack oil. Total Oil Capacity: 25 fluid ounces. Pump Useable Oil: 22 fluid ounces.

OPERATION

TROUBLESHOOTING

1. Occasionally during transit or storage, or through use, the pump or ram can become low on fluid, or air can be introduced into the system causing it to become "air-bound."
2. To bleed hydraulic system - place pump in a horizontal position and place ram so that the ram plunger is pointed downward (Figure 4). The ram and hose must be lower than the pump discharge port. Open release valve one full turn, and pump handle full stroke 10-12 times. Close release valve. Pump to extend ram plunger fully, then release. Repeat two or three times if required.

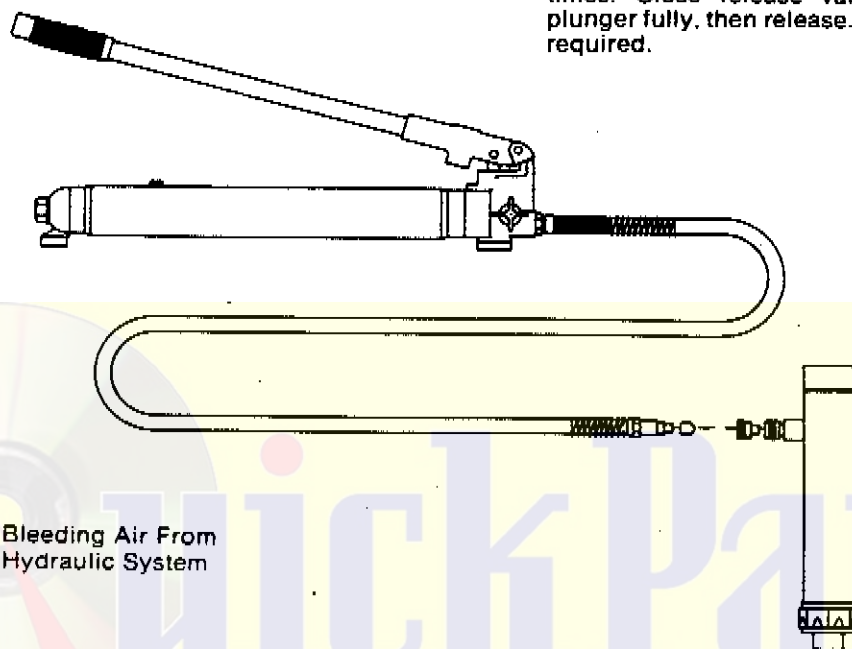
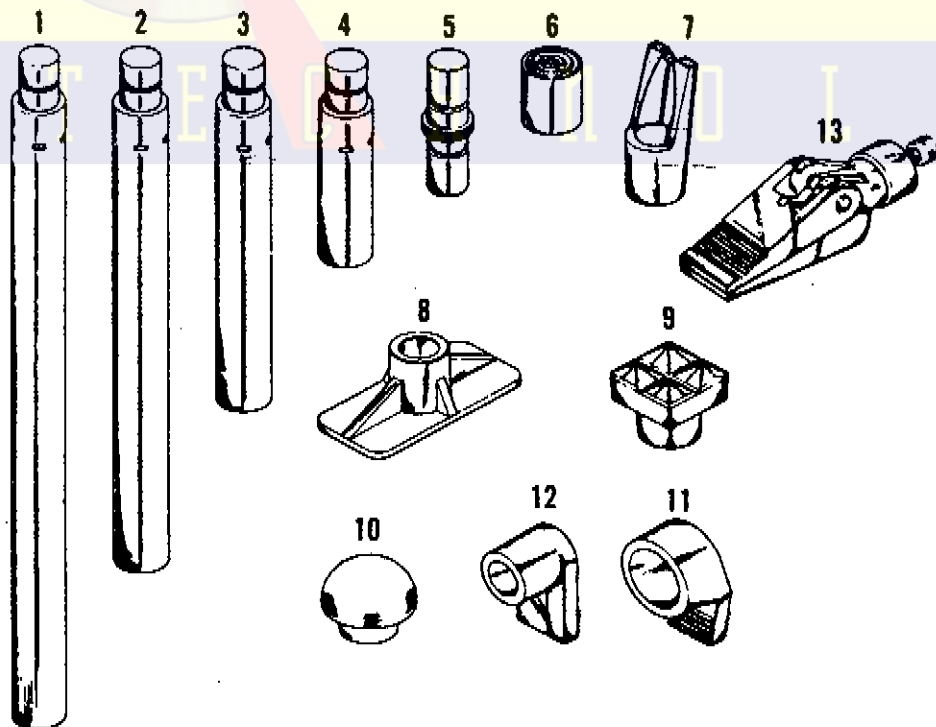


FIGURE 4



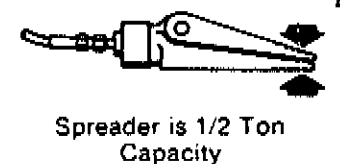
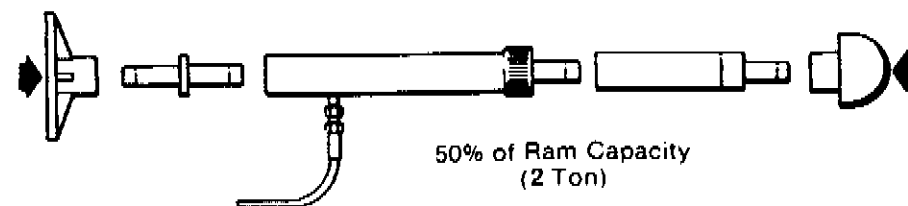
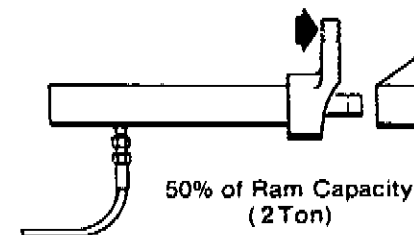
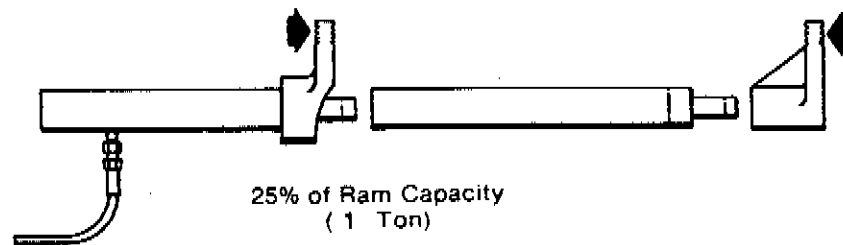
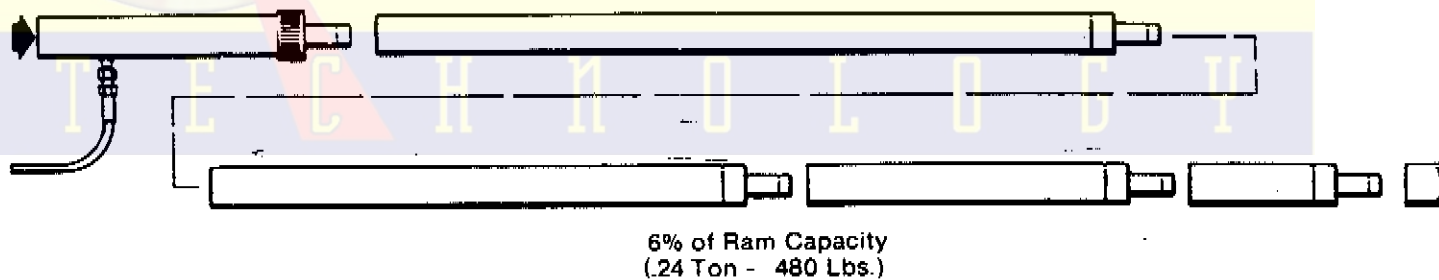
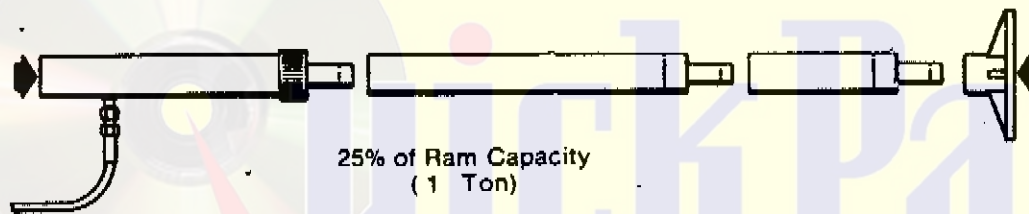
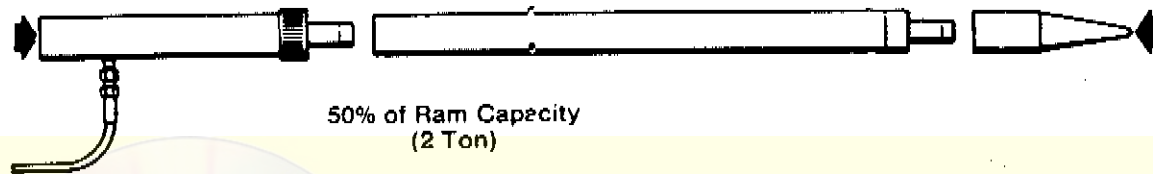
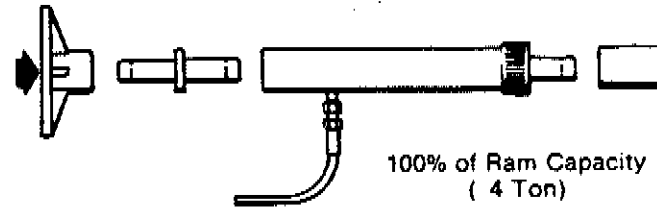
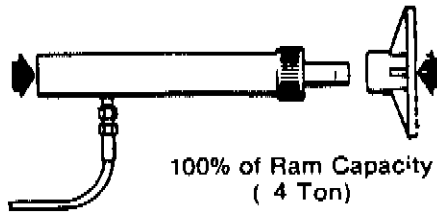
ATTACHMENTS

1. B65162 27" Extension Tube
2. B65163 18" Extension Tube
3. B65164 10" Extension Tube
4. B65165 4" Extension Tube
5. B65179 Male Connector
6. B65167 Serrated Saddle
7. B65166 Wedge Head
8. B65168 Flat Base
9. B65173 90° Comb. Head
10. B65180 Rubber Head
11. B65169 Ram Toe
12. B65172 Plunger Toe
13. B65123 Hydraulic Spreader

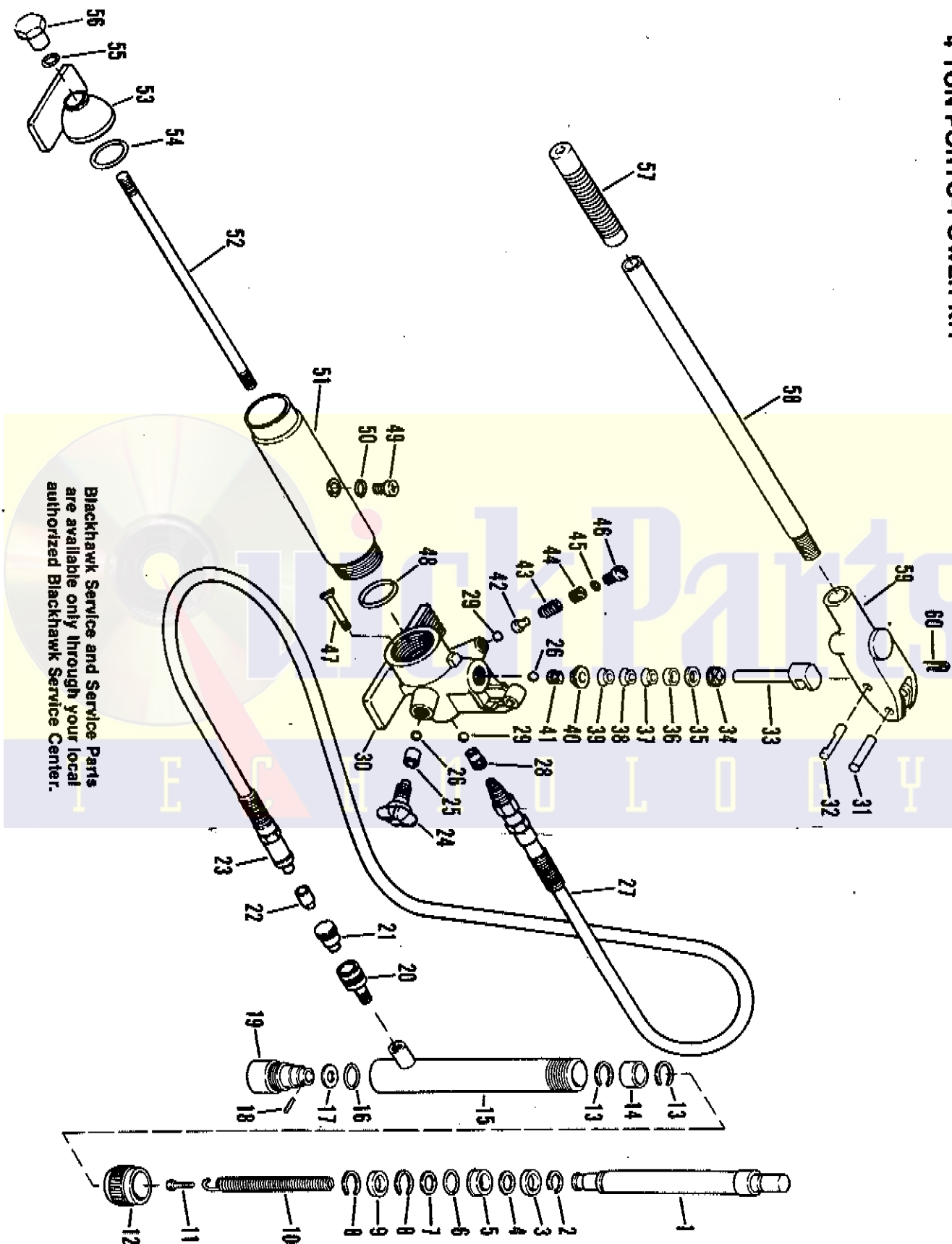
TYPICAL HOOK-UP AND LOAD CAPACITIES

The capacity of this equipment is significantly affected by the number of attachments used, and the type of load applied. (See warnings on page 1.) Several typical hook-ups are illustrated below. The approximate load capacity

of each set up is noted with the illustration. When using two or more extension tubes together, always position the shortest tube, farthest away from the ram.



EXPLODED PARTS DRAWING 4 TON PORTO-POWER KIT



Blackhawk Service and Service Parts
are available only through your local
authorized Blackhawk Service Center.

4 Ton Porto-Power Kit Model B65114

Item No.	Part Code	Description	Qty. Required
1	H69355	Ram Plunger	1
**2	H69286	Snap Ring	1
3	H69275	Collar	1
**4	H69289	Back-Up, Ring	1
**5	H69290	U-Cup	1
6	H69297	"O" Ring	1
7	H69299	Washer	1
**8	H69340	Internal Snap Ring	2
**9	H69283	Bushing	1
10	H69359	Spring	1
11	H69345	Hex Head Bolt	1
12	H69476	Thread Protector, Ring	1
**13	H69284	Retaining Ring	2
14	H69358	Cylinder Collar	1
15	H31619	Cylinder	1
**16	H69352	"O" Ring	1
17	H69287	Back-Up, Ring	1
18	H69475	Spring Pin	1
19	H31620	Cylinder Base	1
20	H69477	Quick Coupler - Female	1
21	H69356	Dust Cover - Female	1
22	H69291	Dust Cover - Male	1
23	H69478	Quick Coupler - Male	1
24	H31621	Release Valve	1
*25	H69522	Packing - Release Valve	1
*26	H69415	Ball 1/4"	2
27	65176	Hose	1
28	H69298	Bolt Plug	1
29	H69414	Ball 3/16"	2
30	H31622	Base	1
31	H69351	Pin - Socket	1
32	H69292	Pin - Piston	1
33	H69348	Piston - Pump	1
34	H69296	Screw Adjustment	1
35	H69293	Washer	1
*36	H69279	Upper Seal Base	1

Item No.	Part Code	Description	Qty. Required
37	H69294	"V" - Oil Seal	1
38	H69479	"V" - Oil Seal	1
*39	H69278	"V" - Oil Seal	4
*40	H69277	Lower Seal Base	1
*41	H69276	Cup Filter	1
42	H69434	Spring Cup	1
*43	H69281	Spring Safety Valve	1
44	H69341	Screw Safety Valve	1
*45	H69282	"O" Ring Safety Valve	1
46	H69342	Screw Protector Safety Valve	1
47	H69417	Filter	1
*48	H69280	"O" Ring	2
49	H31623	Filler Screw	1
*50	H69437	"O" Ring Filler Screw	1
51	H31624	Reservoir	1
52	H69339	Bolt Rod	1
53	H31625	Bracket	1
54	H69280	"O" Ring Reservoir	1
*55	H69285	"O" Ring	1
56	H31626	Nut	1
57	H69354	Rubber Hand Grip	1
58	H31627	Handle	1
59	H31628	Handle Sleeve	1
60	H69409	Retaining Ring	1
61	H31614	Tool Box Only (Not shown)	1
62	65117	Ram Assembly Only (Not shown)	1
63	65116	Pump Assembly Only (Not shown)	1
64	H31617	Warning Decal Only - Pump (Not shown)	1
65	H86852	Product Decal - Pump (Not shown)	1
66	H86853	Product Decal - Ram (Not shown)	1

* Included in H31629 Pump Repair Kit

** Included in H31630 Ram Repair Kit

T E C H N O L O G Y