GB902

HYDRAULIC POWERUNIT

GAGE BILT

MADE IN U.S.A.

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GB902 POWERUNIT SPECIFICATIONS

Width . . . . . .5.35 inches

Length . . . . . .10.35 inches

Height. . . . . .8.00 inches

Weight. . . . . .19.5 lbs

Reservoir Capacity . . . . . .(.4) gallons

Power Source - compressed air . . . . . 90-175 psi

Air Consumption (continuous operation): . . . . . 62 CFM

Motor . . . . . Air Motor

Pump - Air Hydraulic, Rapid Advance and Swage . . . . . 25 cu. in./min. @ 5000 psi

Output Pressure:

NOTE: ADJUST AIR PRESSURE ACCORDING TO REQUIRED PULL PRESSURE FOR TOOL BEING USED, CONSULT TOOL MANUALS FOR PROPER SETTINGS.

Pull & Return max . . . . . 10,000 psi.

60 psi . . . . . 5,200 lbs.

70 psi . . . . . 6,200 lbs.

80 psi . . . . . 7,200 lbs.

90 psi . . . . . 8,200 lbs.

100 psi . . . . . 9,000 lbs.

110 psi (MAXIMUM). . . . . (MAXIMUM OUTPUT) 10,000 lbs.

Operating temperature:

Ambient . . . . . min. 0 F . . . . . -18 C

Hydraulic Fluid...max. 150 F . . . . . 65 C

Hydraulic Fluid:

Good Quality Hydraulic Oil.

NOTE:
Please read this manual before servicing or using this tool. Complete with warnings and cautions to prevent severe personal injury or damage the tool.

CAUTION:
Keep dirt and other foreign matter out of hydraulic systems of tools, hoses, couplers and powerunit . Do not let hose fittings and couplers contact a dirty floor or unclean working surface. Foreign matter in hydraulic fluid may cause tool and the powerunits valves to malfunction.

WARNING
Do not pull fastener unless it is placed in an assembly, pin will eject forcibly when pintail breaks off. Severe personal injury may result.

CAUTION
Insure that nose assembly is properly matched for the fastener being installed.

WARNING
When operating installation equipment always wear approved eye protection. Do not look in front of nose assembly or rear of tool when installing fastener.

WARNING
Installation of fasteners may exceed acceptable noise levels. Use approved hearing protection.

WARNING
Proper pull and return pressures are important for proper function of installation tools. Severe personal injury or damage to equipment may occur without correct pressures.

WARNING
Be sure there is adequate clearance for tool and operator's hands before proceeding. Keep fingers clear of any moving parts. Keep fingers clear from fasteners and installed materials. Severe personal injury may result.

WARNING
Always disconnect tool from powerunit before performing any maintenance to any tool or nose assembly. Insure that all connections are proper and there are no visible leaks from tool or hoses before connecting to power .

WARNING
Hydraulic power units that deliver high pressure for the "PULL" and "RETURN" and are not equipped with relief valves are specifically not recommended and may be dangerous.

CAUTION
Keep Nose Assemblies clean and free of chips and debris.

DESCRIPTION:

The GB902 Hydraulic Powerunit is a portable power source designed to operate a wide range of hydraulic installation tools with. It delivers up to 10,000 psi working pressure. It is fired manually by the operator and will accept any GAGE BILT or HUCK® hydraulic tool regardless of trigger style. The unit is activated via a control valve knob and foot pedal. The GB902 consists of a two position air hydraulic pump, four way control valve and relief valve mounted on the reservoir.

Hydraulic quick disconnect couplers are supplied for connecting the tool hoses from the installation equipment.

CAUTION:
THE AIR PRESSURE TO THE UNIT CONTROLS THE OUTPUT AND RETURN PRESSURE TO THE TOOL AND MUST BE PROPERLY ADJUSTED FOR EACH TOOL. CONSULT TOOL MANUALS FOR PROPER SETTINGS.

CAUTION:
SEVERE PERSONAL INJURY OR DAMAGE TO THE SYSTEM AND PERIPHERAL EQUIPMENT MAY OCCUR IF PRESSURES ARE NOT PROPERLY ADJUSTED. CONSULT YOUR INSTALLATION TOOL MANUAL FOR RECOMMENDED PRESSURES, AND ON PAGE 5 & 6 OF THIS MANUAL FOR DIRECTIONS.

INITIAL USE:

1. **Filling the Reservoir.**
   - **A. Clean the area around the filler cap to remove all dust and grit. Any dirt or dust in the oil can damage the pump.**
   - **B. Set all pistons to the return position.**
   - **C. Remove the filler cap and fill with hydraulic oil to within 3/4" from the top of the filler hole. Replace filler breather cap.**
   - **D. Important: Use only a good quality hydraulic jack fluid. Never use brake fluid, transmission fluid, turbine oil, motor oil, alcohol, glycerin etc. Use of other than good quality hydraulic oil will void warranty and damage the pump, hose, and application. We recommend Mobil DTE 13M or equivalent.**
   - **E. Cycle the pump (with tool attached) several times. Re-check the oil level in the pump reservoir with the tool in the relaxed) position.**
   - **F. Check for leaks.**

PREPARATION:

To avoid poor performance and down time, keep foreign material from getting into the hydraulic system. Observe the following points:

1. **Check tool manual for recommended pressures.**
2. **Wipe off couplers before connecting them.**
3. **Do not let hose fittings or couplers lie on the ground or dirty floor.**
4. **Clean area around filler cap before filling the reservoir with hydraulic fluid.**
5. **Use a clean funnel with filter.**
6. **Drain and clean reservoir and fill with clean fluid on a regular basis.**

PRESSURE SETTING:

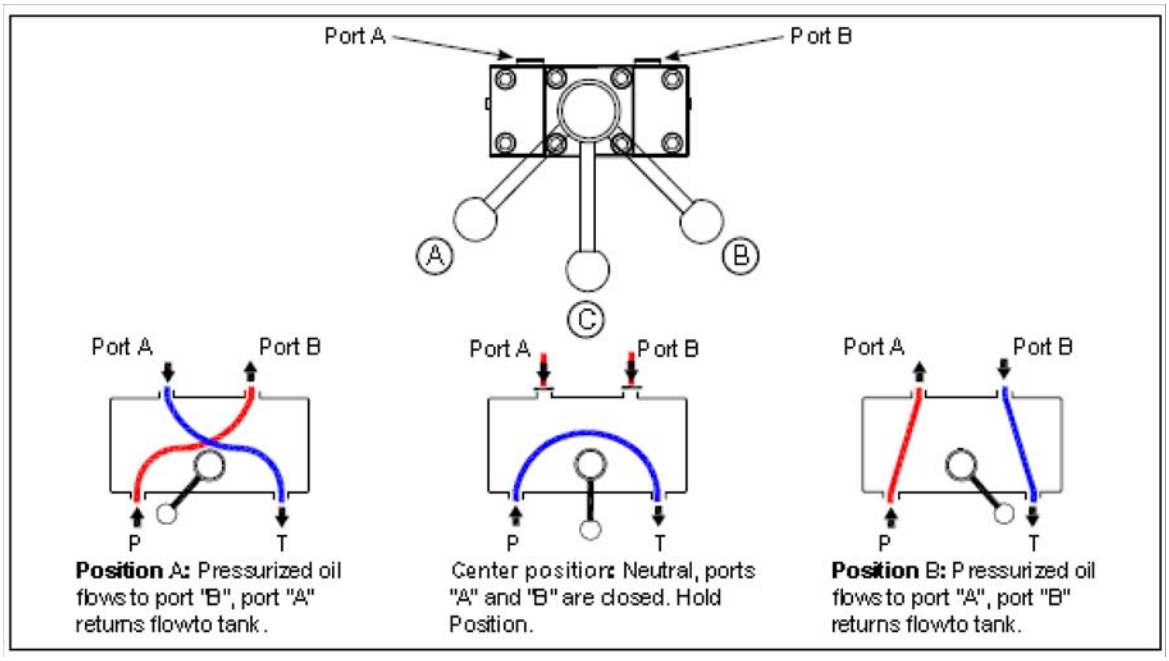
CAUTION:
HYDRAULIC PRESSURE MUST BE SET BEFORE CONNECTING TOOL:
Ensure powerunit does not exceed recommended installation tool pressures. Adjust hydraulic pressure for required pull pressure of tool being used (refer to tool manual).
DO NOT exceed 110 psi air pressure.

NOTE: Preset air regulator to approximate pressure.
90 psi = 8200 lb (not to exceed 110 psi) 10 psi of air is approximately equal to 1000 lbs of hydraulic pressure.

1. Connect Hydraulic gage to pump.
2. Turn handle to -A- position.
3. Hold down foot pedal and read hydraulic gage.
4. Put handle in center (neutral) Position.
5. Adjust air pressure accordingly.
6. Repeat until correct hydraulic pressure is set.

OPERATION:

1. Put pump handle in center (neutral) position.
2. Connect tool to pump.
3. Connect air supply to pump.
4. Insert rivet into nose assembly.
5. Turn handle on pump to position -A-.
6. Hold down on foot pedal until rivet breaks then release pedal.
7. Turn handle to center position for 2 to 5 seconds to release hydraulic pressure.
8. Turn handle on pump to position -B-.
9. Hold down on foot pedal until tool is pushed off of rivet then release pedal.
10. Turn handle on pump to center (neutral) position.



MAINTENANCE:

WARNING:
MAKE SURE AIR IS DISCONNECTED BEFORE SERVICING ANY COMPONENTS.

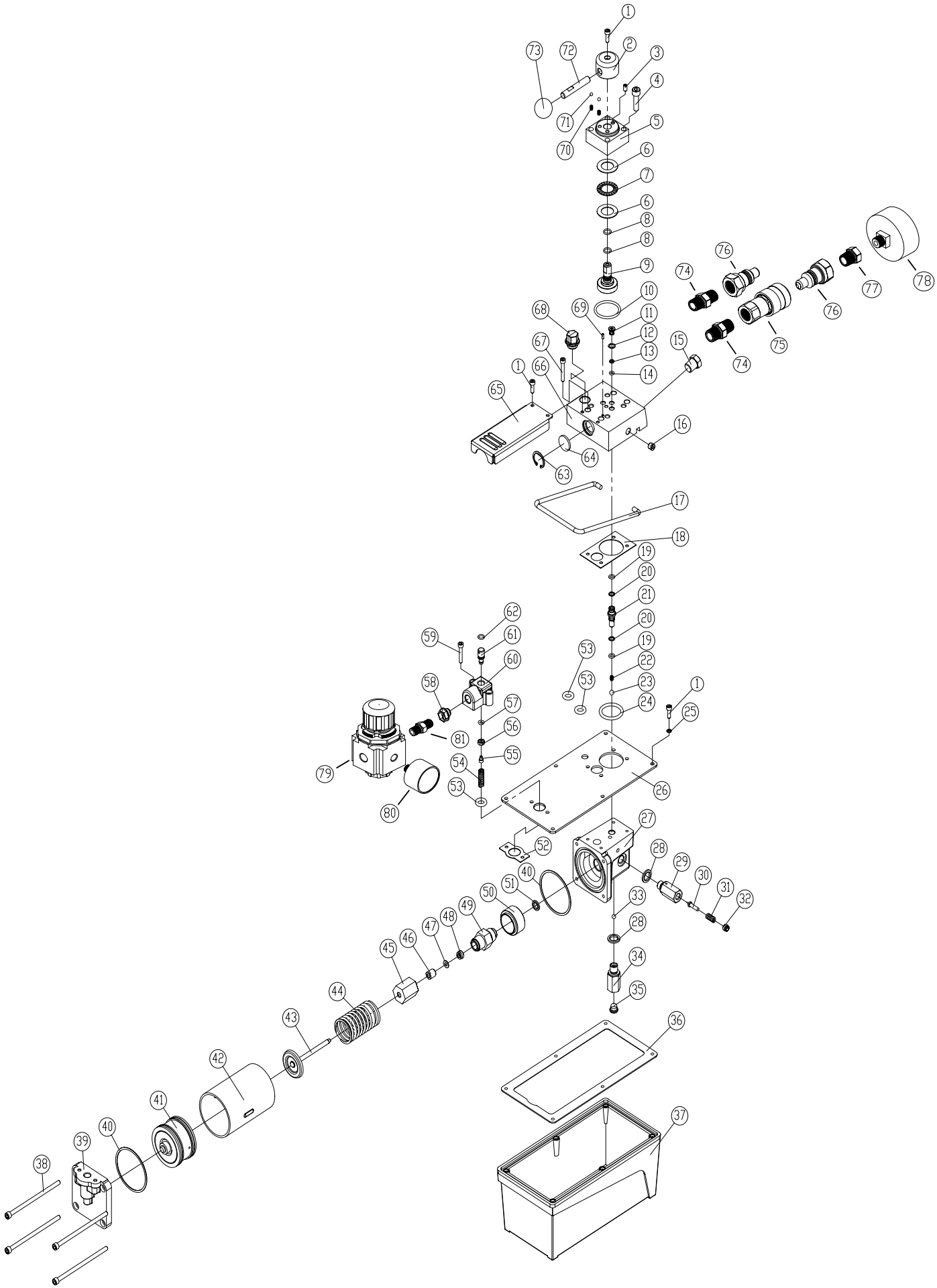
1. Scheduled inspections to detect and correct minor problems are part of an effective preventive maintenance program. 902000 service kit contains a complete set of gaskets, seals and washers these items should be kept on hand at all times.
2. Inspect hydraulic fittings to make sure they are secure.
3. Inspect hoses for signs of damage. Replace hoses if necessary. Inspect during operation to detect any leakage, abnormal heating or vibration.
4. Inspect hydraulic fluid on a regular basis. Clean reservoir and replace fluid if contamination
5 Keep exterior surfaces clean.

TROUBLESHOOTING:

Use the Troubleshooting Chart as an aid in locating problems and correcting them. Always check out the simplest possible cause of malfunction first. Eliminate each possible cause until the part is located. Substitute good parts for suspected bad parts.

TROUBLE SHOOTING CHART:

1. Tool will not reciprocate when motor is running.
   - A. Improperly coupled hoses.
   - B. Bind in tool or nose assembly.
   - C. Pump to motor coupling damaged.
   - D. Hydraulic fluid level is low or viscosity not proper.
   - E. Unloading valve in tool improperly installed or missing.
2. Fastener pintail fails to break off.
   - A. PULL pressure set too low.
   - B. Defective hose couplers.
   - C. Defective internal relief valve or set too low.
   - D. Overheated hydraulic fluid.
   - E. Hydraulic fluid level low or viscosity not proper.
   - F. Defective pump.
3. Tool will not return or push nose assembly off swaged fastener when switch is released.
   - A. Pressure set too low.
4. Pump making noise throughout operating cycle.
   - A. Pump is cavitating, the fluid viscosity is too heavy or the fluid level may be too low.
   - B. Filter is clogged or dirty.
6. Tool operates slow throughout entire cycle.
   - A. Pump is cavitating, the fluid viscosity is too heavy or the fluid level may be too low.
   - B. Filter is clogged or dirty.
   - C. Defective pump.



GB902 Parts List

Ref. No.	Part Number	Description	Qty.
1	902001	Allen Screw	9
2	902002	Control valve cover	1
3	902003	Set screw	1
4	N/A	Allen Screw	4
5	N/A	Control valve base	1
6	N/A	Bearing Washer	2
7	N/A	Bearing	2
8	*	O'ring	2
9	N/A	Control valve	1
10	*	O'ring	1
11	N/A	Oil outlet valve	3
12	N/A	Spring w asher	3
13	*	Back-up ring	3
14	*	O'ring	3
15	902015	Manifold plug (oil output port)	2
16	N/A	Screw	2
17	902017	Carry Handle	1
18	*	gasket	1
19	*	O'ring	2
20	*	Back-up ring	2
21	902021	Oil outlet valve	1
22	*	Compression spring	1
23	902023	Steel ball	1
24	*	O'ring	1
25	*	Washer	6
26	N/A	Top reservoir plate	1
27	N/A	Base	1
28	*	Crush Washer	2
29	902029	Relief valve screw	1
30	902030	Relief valve stem	1
31	*	Compression spring	1
32	902032	Relief valve screw	1
33	902033	Steel ball	1
34	902034	Oil entrance valve	1
35	902035	Filter	1
36	*	Gasket	1
37	902037	Oil Reservoir	1
38	902038	Allen Screw	4
39	902039	End plate, air motor	1
40	902040	Washer	2
41	902041	Air motor piston	1
42	902042	Cylinder, air motor	1

Ref. No.	Part Number	Description	Qty.
43	902043	Pump piston	1
44	902044	Compression spring	1
45	902045	Pump piston guide	1
46	902046	Bushing	1
47	*	Back-up ring	1
48	*	U-cup	1
49	902049	Pump piston cylinder	1
50	902050	Spacer	1
51	*	Crush w asher	1
52	*	Gasket	1
53	*	O'ring	3
54	902054	Compression spring	1
55	902055	Screw	1
56	902056	Air entrance cover	1
57	*	O'ring	1
58	902058	Plastic cap (air inlet port)	1
59	902059	Screw	2
60	902060	Air entrance base	1
61	902061	Air entrance cover	1
62	*	O'ring	1
63	N/A	C-clip	1
64	902064	Noise suppressor	1
65	902065	Foot pedal	1
66	N/A	Oil manifold	1
67	N/A	Screw	1
68a	902068	Shipping plug (red)	1
68b	902068-1	Air vent plug (black)	1
69	N/A	Spring pin	1
70	N/A	Compression spring	2
71	902071	Steel ball	2
72	902072	Control valve lever	1
73	902073	Control valve knob	1
74	403683	Nipple	2
75	585038	Coupler-female	1
76	585047	Coupler-male	2
77	403912	Reducer	1
78	A-1080	Hydraulic pressure gauge	1
79	A-1079	Regulator	1
80	A-1030	Pressure gauge	1
81	A-92	Nipple	1
(*)	902000	Service Kit	

*Indicates items included in, an available only as part of 902000 service kit.

N/A = Not all components of the pump are replacement items, but are illustrated as a reference of location and position in the assembly.

GB902 Powerunit Kits

The GB902 Powerunit is available in various kits to suit your particular need. The kits include the GB902 Powerunit, hoses and hydraulic couplers.

The GB902-12 Kit includes the GB902 Powerunit and a 12-foot Hose Kit, part number 902701
The GB902-26 Kit includes the GB902 Powerunit and a 26-foot Hose Kit, part number 902705
The GB902-38 Kit includes the GB902 Powerunit and a 38-foot Hose Kit, part number 902709
The GB902-52 Kit includes the GB902 Powerunit and a 52-foot Hose Kit, part number 902714