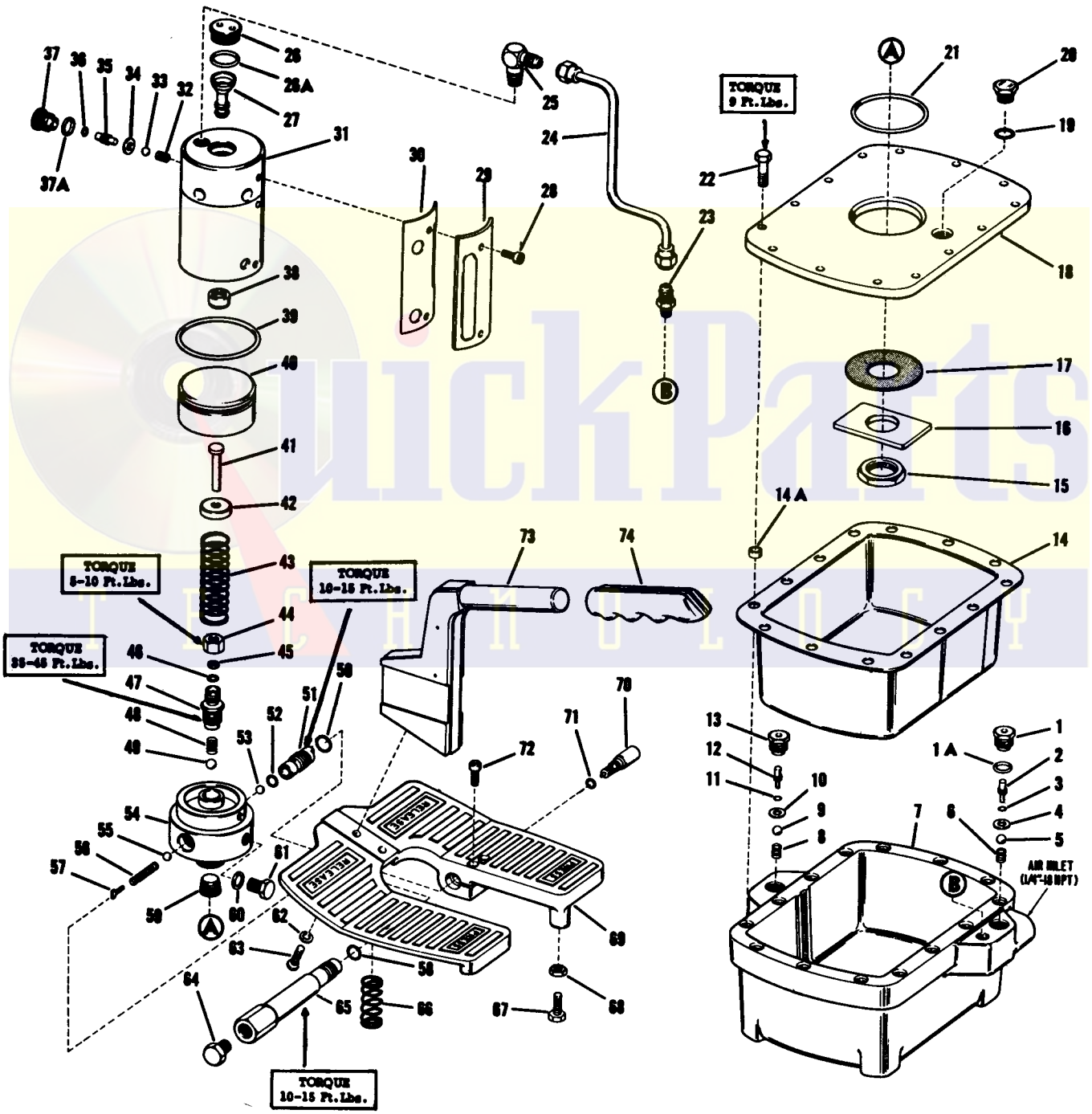
ENERPAC

Instructions & Repair Parts

P-100

Hydraulic/Air Pressure Ratio 100:1(Approx.)



TO PROTECT YOUR WARRANTY, USE ONLY ENERPAC HYDRAULIC OIL.

PARTS LIST

Item No.	Description	No. Req'd.	Part No.-P-100	Part No.-"P-100-1"
1	Throttle Valve Body	1	B728.035	B728.035-1
1A	"O" Ring	1	- - -	B839.503
2	Throttle Valve Stem	1	B727.395	B727.395
3	"O" Ring	1	B744.503	B744.503
4	Seal Washer	1	B860.066	B860.066
5	Ball	1	S1.16	S1.16
6	Spring	1	B936.110	B936.110
7	Base	1	C96.005	C96.005-1
8	Spring	1	B936.110	B936.110
9	Ball	1	S1.16	S1.16
10	Seal Washer	1	B860.066	B860.066
11	"O" Ring	1	B744.503	B744.503
12	Throttle Valve Stem	1	B727.395	B727.395
13	Throttle Valve Body	1	B728.035	B728.035-1
14	Reservoir	1	C445.025	C445.025-1
14A	Bushing	14	- - -	C825.212
15	Nut	1	C325.120	C325.120
16	Clamp Plate	1	C326.299	C326.299
17	Oil Screen	1	C404.018	C404.018
18	Base Cover	1	C322.098	C322.098
19	"O" Ring	1	C403.503	C403.503
20	Reservoir Filler Plug	1	P182.22	P182.22
21	"O" Ring	1	C402.505	C402.505
22	Hex Head Cap Screw	14	C806.048	C806.048
23	Flare Tube Fitting	1	C334.270	C334.270
24	Air Inlet Tube Assembly	1	C331.641	C331.641
25	Flare Tube Fitting	1	C332.291	C332.291
26	Air Servo Plug	1	B743.006	B743.006-1
26A	"O" Ring	1	- - -	BL30.126
27	Exhaust Valve Stem	1	B741.579	B741.579
28	Screw	4	B733.087	B733.087
29	Cover	1	C82.098	C82.098
30	Gasket	1	C323.037	C323.037
31	Air Body & Sleeve Assembly	1	B745.900	B745.900
32	Air Throttle Valve Spring	1	B936.110	B936.110
33	Ball	1	S1.16	S1.16
34	Seal Washer	1	B860.066	B860.066
35	Throttle Valve Stem	1	B727.395	B727.395
36	"O" Ring	1	B744.503	B744.503
37	Throttle Valve Body	1	B728.035	B728.035-1
37A	"O" Ring	1	- - -	B839.503
38	Exhaust Valve Seal	1	B742.808	F15.808
39	Air Piston Ring	1	B713.491	B713.491
40	Air Piston	1	B729.578	B729.578
41	Pump Plunger	1	B702.040	B702.040
42	Washer	1	B703.108	B703.108
43	Plunger Return Spring	1	B704.110	B704.110
44	Nut	1	B705.021	B705.021
45	Back-up Washer	1	B712.562	B712.562
46	"O" Ring	1	B709.503	B709.503
47	Oil Pump Body	1	B730.050	B730.050
48	Spring	1	B726.110	B726.110
49	Ball	1	S1.16	S1.16
50	"O" Ring	1	B839.503	B839.503
51	R.V. Gland Nut	1	B719.011	B719.011

PARTS LIST

Item No.	Description	No. Req'd.	Part No.-P-100	Part No.-"P-100-1"
52	"O" Ring	1	B710.503	B710.503
53	Ball	1	1.16	1.16
54	Hydraulic Circuit Housing	1	C508.580	C508.580
55	Ball	1	1.16	1.16
56	Spring	1	B723.110	B723.110
57	Ball Stop	1	C399.351	C399.351
58	"O" Ring	1	B710.503	B710.503
59	Pipe Plug	1	R389.245	R389.245
60	Gasket	1	B159.167	B159.167
61	Pump Filler Plug	1	AJ100.061	AJ100.061
62	Lock Washer	2	- - -	J66
63	Screw	2	S15.89	S15.89
64	Pipe Plug	1	R515.245	R515.245
65	Oil Outlet Tube	1	C335.302	C335.302
66	Spring	2	A768.141	A768.141
67	Adjusting Screw	1	BL20.141	BL20.141
68	Lock Nut	1	BL20.150	BL20.150
69	Treadle	1	C84.218-1	C84.218-1
70	Release Valve Screw	1	B706.010	C657.010
71	"O" Ring	1	AJ100.312	AJ100.312
72	Screw	1	B715.087	- - -
72	Screw	2	- - -	B715.087
73	Handle	1	C85.070	C85.070
74	Grip	1	C7.550	C7.550
	Drive Screw	2	W78.03	W78.03
	Name Plate	1	C23.026	C23.026
	Decal (Caution)	1	B841.026	B841.026
	Decal	1	C545.026	C545.026
	Decal	2	G422.026	G422.026
	Hydraulic Oil	150 cu. in.	(- - ENERPAC HF-100 Series - -)	

***NOTE:** Orders for parts cannot be filled unless both model and serial number with prefix imprinted on nameplate are given.*

FRANCHISED SERVICE DEPOTS

FRANCHISED SERVICE DEPOT BLACKHAWK

For quality workmanship and genuine Enerpac parts select a Franchised Blackhawk Service Depot for your repair work. Only repairs performed by a Franchised Service Depot displaying this official sign are backed with full factory guarantee. The Classified Section in your Phone Book lists your nearest Franchised Service Depot.

GUARANTEE

Enerpac guarantees its Products against defects in workmanship and materials for 90 days from date of delivery to the user. Only exception is chain, which follows the trade custom of its manufacturers and cannot be guaranteed.

When question of warranty arises, the user should send his unit to the nearest Franchised Service Depot for inspection, transportation to be prepaid and evidence of delivery date furnished.

If the difficulty comes under the terms of our guarantee, the Franchised Service Depot will *repair or replace parts affected* and return prepaid. Our guarantee does not cover ordinary wear and tear, abuse, misuse, overloading, altered products or use of improper fluid.

PARTS, SERVICE INFORMATION AND THE ADMINISTRATION OF FRANCHISED SERVICE DEPOTS FOR ENERPAC PRODUCTS IS PROVIDED BY —

BLACKHAWK SERVICE

MILWAUKEE, WISCONSIN 53246

DIVISION OF **APPLIED POWER** INDUSTRIES, INC.

Please direct all Service Correspondence to BLACKHAWK SERVICE

INSTRUCTIONS

PRELIMINARY PROCEDURE

IMPORTANT: Read all instructions carefully before attempting to use the pump.

1. Unpacking - remove the pump from the shipping container, but do not remove plugs or covers from ports until ready to make plumbing connections.
2. Visually inspect for shipping damage. If found, notify the carrier at once!
3. Install hydraulic gage and make required hydraulic plumbing connections.
4. Check oil level (See "How to add hydraulic oil").
5. Connect air supply.

INSTALLING HYDRAULIC GAGE

1. Remove pipe plug (item #64).
2. Screw the P16.99 (or HP2344) gage adaptor into oil outlet tube (item #65).
   NOTE: HP2344 gage adaptor used with GF813S only.
   CAUTION: Take care not to turn oil outlet tube when removing pipe plug, installing gage adaptor or making hydraulic hose connection.
3. Screw gage into center port of gage adaptor.
4. Make sure connections are tight (use a small amount of pipe dope on all pipe thread connections).

HYDRAULIC HOSE CONNECTION

1. Screw 3/8" N.P.T. hose end into gage adaptor or oil outlet tube.
2. Connect hose half of Spee-D-Coupler to cylinder half of coupler (furnished on all ENERPAC "RC" series cylinders).
3. Be sure all pipe thread connections are tight.
   IMPORTANT: Do not use a wrench on Spee-D-Coupler connections. Be sure coupler halves are wiped clean when making or breaking a connection. Spee-D-Coupler halves seal themselves against oil leakage when disconnected. Dust caps should be attached to prevent dirt from entering exposed ends of Spee-D-Couplers.

HOW TO FILL RESERVOIR

1. Make sure all cylinders are fully retracted and air supply is disconnected.
2. Remove pump filler plug (item #61) and gasket (item #60). Oil should be level with bottom of pump filler port. (If oil is low, proceed to Step #3.)
3. CAREFULLY loosen reservoir filler plug (item #20). The reservoir (flexible rubber container) should be completely filled. If necessary, add ENERPAC HF100 series hydraulic oil.
4. Replace reservoir filler plug (item #20) and "O" ring (item #19).
5. Add a sufficient amount of ENERPAC hydraulic oil to "top off" at level of pump filler port (refer to Step #2 above).
6. Replace pump filler plug (item #61) and gasket (item #60).

AIR HOOK-UP

1. Connect 9 C.F.M. (minimum) air supply to (1/4"-18 N.P.T.) air inlet port. A minimum of 60 psi air pressure is required to operate the pump.
   CAUTION: Do not operate pump above 150 psi air pressure.
2. To insure long, trouble-free pump operation, be sure the air line is equipped with an air filter and regulator.

   IMPORTANT: Maximum hydraulic output pressure can be varied by adjusting air inlet pressure. (Hydraulic/air pressure ratio, approximately 100:1)

PUMP OPERATION

1. To extend cylinder plunger - depress treadle end marked "PRESS".
2. The pump will stop and hold load when treadle is not depressed or if air supply is cut off accidentally.

   NOTE: The cylinder plunger will continue to advance (a short distance) when the treadle is released and there is no load on the cylinder.
3. To retract cylinder plunger - depress treadle end marked "RELEASE". The treadle is spring loaded to return automatically to the "HOLD" position.

   CAUTION: To prevent accidental operation - disconnect air supply when pump is not in use.
4. To purge air from hydraulic system -
   a. Extend cylinder plunger (DO NOT EXCEED RATED CYLINDER CAPACITY OR PLUNGER STROKE.)
   b. Retract cylinder plunger (Cylinder should be inverted and lower than pump reservoir).
   c. Cycle cylinder plunger several times to be sure all air has been returned to the pump reservoir.

   IMPORTANT: Check pump reservoir and add Enerpac hydraulic oil as required (See Instructions- "How to Fill Reservoir").

ADVANCE CONTROL VALVE - ADJUSTMENT

1. Loosen treadle clamp screws (item #72).
2. Loosen lock nut (item #68) and "back off" the adjusting screw (item #67) one turn clockwise.
3. Depress treadle end marked "PRESS" until handle (item #73) touches throttle valve stem (item #35). Do not depress throttle valve stem enough to actuate the motor.
4. With handle in above position, turn the adjusting screw (item #67) until it depresses throttle valve stem (item #2) sufficiently to allow air to enter the reservoir.
5. Retighten lock nut (item #68).
6. Adjust retraction speed of unit (See "Release Control Valve - Adjustment").

RELEASE CONTROL VALVE - ADJUSTMENT

1. Hose with half coupler should be connected to oil outlet tube (item #65).
2. Loosen treadle clamp screws (item #72).
3. Operate air motor until pressure is developed in the system (hose will stiffen slightly under pressure). Release treadle - spring will return treadle to "HOLD" position.
4. Turn release valve screw (item #70) until it contacts, but doesn't move, ball (item #53).
5. Move handle (item #73) toward "RELEASE" position until it is almost midway between neutral "HOLD" and full "RELEASE" position. Tighten treadle clamp screws (item #72).
   NOTE: Further movement of treadle toward release position will open release valve.
6. Check pump operation and readjust (if necessary) to obtain desired retraction speed.