RICE HYDRO INC

HYDROSTATIC TEST PUMPS • FIRE HOSE TESTERS • SHORING PRESSURE PUMPS • HAND PUMPS

Web: ricehydro.com • **Email:** sales@ricehydro.com • **Phone:** 800-245-4777

Diaphragm Series

Test Pumps

The DP series is the most versatile, reliable, and sought-after Hydrostatic Test Pump on the market today. Designed as a medium pressure, large volume test pump, with positive displacement for optimum speed and performance. Models in this series offer "gallon per minute" flow rates from 11 to 56 (GPM); with "pounds per square inch" testing capabilities from 50 to 600 (PSI). These Hydrostatic Test Pumps will easily fill and test almost any size line you may encounter. "Built to Suit" special order and custom options are available to fit your specific testing needs.

DPH-3B 11 GPM up to 550 PSI

- Triple Diaphragm Pump
- Exceptionally Smooth Operation
- Can Handle up to a 10% Chlorine solution
- No Aerated Lines - Quicker Pressurization
- Adjustable Pressure Regulator with Inlet Bypass
- Stainless Steel Liquid Filled Gauge – Ensures Accurate Reading with less Flutter
- Optional 9-foot Inlet Hose Assembly with camlock coupling and stainless-steel mesh filter
- Optional Wheel and Handle Kit
- Optional Pressure feed tank

DPH-8 32 GPM up to 300 PSI

- Custom Model - DPH-6 19 GPM up to 600 PSI
- Triple Diaphragm Pump
- Exceptionally smooth operation
- Can Handle up to a 10% Chlorine solution
- No Aerated Lines - Quicker Pressurization
- Adjustable Pressure Regulator with Inlet Bypass
- Stainless Steel Liquid Filled Gauge – Ensures Accurate Reading with less Flutter
- Optional 9-foot Inlet Hose Assembly with camlock coupling and stainless-steel mesh filter
- Optional Wheel and Handle Kit
- Optional Pressure feed tank

DPH-56/250 56 GPM up to 250 PSI

- Six Diaphragm Pump
- Exceptionally Smooth Operation
- Can Handle up to a 10% Chlorine solution
- No Aerated Lines - Quicker Pressurization
- Adjustable Pressure Regulator with Inlet Bypass
- Stainless Steel Liquid Filled Gauge – Ensures Accurate Reading with less Flutter
- Optional Wheel and Handle Kit

Accessories

Wheel and Handle Kits

- Portable "Back Saver" - the wheel and handle kit instantly makes your test pump truly portable and easy to maneuver, saving you time, labor, maintenance, and repair
- "NO FLAT" tires are made of polyurethane foam with open and closed air cells, forming a tire two times stronger than rubber, yet soft enough to provide bounce and absorb vibration

Pressured Tanks

- DPH-6, 40 Gallon Tank
- DPH-8, 40 Gallon Tank
- DPH-3B, 20 Gallon Tank
- Fabricated for pressure feeding
- Saves time, labor, repair, and maintenance costs, by virtually eliminating the rupture/damage of diaphragms caused by excessive inlet pressure
- Heavy duty polypropylene tank provides easy access for chemical treatment of water lines and test environment, eliminating the need for a 55-gallon water drum

Inlet Hose Assemblies

- Inlet Hose assembly, 9-foot with camlock coupler
- Protects the pump from debris
- Equipped with a fine mesh stainless steel strainer
- Feeding from a 55-gallon water drum or other source
- Available on most models

RICE HYDRO, INC.

MANUFACTURER'S OPERATING INSTRUCTIONS

TEST PUMP MODEL DP-Series (3/6/8/56-250)

FOR WARRANTY REGISTRATION CALL: 1-800-245-4777

TO ATTACH FLOW METER - CALL FACTORY FOR INSTRUCTIONS

WARNING: Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, operate and service your equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment. For more information go to: www.p65warnings.ca.gov

CAUTIONS:

1. Check **ALL** fluid levels prior to operating the unit.
2. Use the inlet hose that was supplied, or a similar type suction hose the same size as the inlet piping.
3. NEVER connect the inlet of the pump directly to a pressurized water source.
4. Protect the pump from freezing, FLUSH with anti-freeze after each use.

CONNECTING THE PUMP:

1. Check pump oil thru reservoir sight glass, half-way to the top is full. Use 30w non-detergent oil.
2. Check oil level in engine crankcase, use (10W30) as needed.
3. Check oil level in the gear reduction, use (90W) as needed. Oil should be level with the side plugs.
4. On units 6/8 accumulator head is equipped with a valve stem to adjust air pressure of the accumulator diaphragm. Set between 90-120 psi. This is a small cavity and will take very little air to do so.
5. Connect inlet hose assembly provided. The pump MUST be either suction fed (such as out of a barrel), or gravity fed (from a water truck).

A PRESSURIZED LINE CANNOT BE USED TO SUPPLY WATER TO THE PUMP.

Never connect the unit to a water source such as a standpipe, hose bib tap water faucet, etc. … **unless a *PRESSURED FEED* Tank accessory is added.** The source of water should be within 8-10 ft. maximum.

6. Connect high pressure outlet hose supplied by manufacturer with quick connects or direct fitting as provided. If using a hose other than that supplied by manufacturer, PSI and burst rate must meet or exceed manufacturer's requirements.

OPERATING THE PUMP:

1. Turn the outlet ballvalve to the open position, and start the engine. The engine RPM is preset at the factory, **DO NOT ADJUST!**
2. The pressure regulator has been preset at the factory. ***To change this setting you must make this adjustment while the water is flowing freely, and under NO pressure.*** To adjust the pressure, first loosen the locknut. Turn the T-handle/Knob clockwise to increase and counterclockwise to decrease the pressure. Place a ballvalve or similar open and close valve at the end of the outlet hose, open and close this valve multiple times as needed, to check pressure setting and re-adjust as necessary. It is also recommended that you open and close the hosebib located under the gauge to bleed excess air from piping and ensure accurate pressure gauge readings. Upon reaching desired pressure setting, tighten locknut and prepare to begin test.

3. With the ballvalve open begin building pressure in the test environment. Be sure to bleed the air from hosebib under gauge at least once during this process. Once test pressure has been reached, **close the ballvalve and shut-off engine.** An inlet checkvalve prevents water pressure from bleeding back into the pump.
4. Once the outlet ballvalve is closed and your test begins, you have now isolated the test pump from the test environment, any loss of pressure is due to leaks or trapped air being compressed in the test environment.

REMEMBER THESE CAUTIONS:

1. Check all fluid levels prior to operating pump.
2. Use the inlet hose that was supplied, or use a suction hose the same size as the inlet piping.
3. NEVER connect the inlet of the pump directly to a pressurized source.
4. Protect the pump from freezing, FLUSH with anti-freeze

RECOMMENDED PERIODIC MAINTENANCE PROCEDURE

1. Change engine oil after the first 80 hours of operation thereafter every 250 hours of use or every season.
2. Change the oil in the pump body after the first 50 hours of operation thereafter every 250 hours.

TROUBLE SHOOTING FOR DP-SERIES HYDROSTATIC TEST PUMP

IF PUMP FAILS TO BUILD PRESSURE:

1. Look for leaks in water supply hose and connections.

2. Supply hose is too small. Filter may be clogged.

3. Supply hose may be kinked or collapsed. Maximum of 9 feet.

4. The Pump may be sucking air. Small holes in the supply hose are hard to find since the air is drawn inward, therefore no bubbles would be present. Replace the supply hose. Possible loose piping or connections.

5. T-handle/Knob on pressure regulator may be set incorrectly.

6. Faulty pressure gauge, replace.

7. Pump is running too slow. Advance throttle on engine to between 3400-3600 RPM, but no higher.
8. Pipeline being tested may have leaks, or an open valve. Isolate the pump and do a self-test, by placing a ballvalve at the end of the outlet hose.
9. Foreign material may be lodged in a valve, preventing the valve from seating properly. Remove cylinder head. Remove valve assemblies, clean and replace.

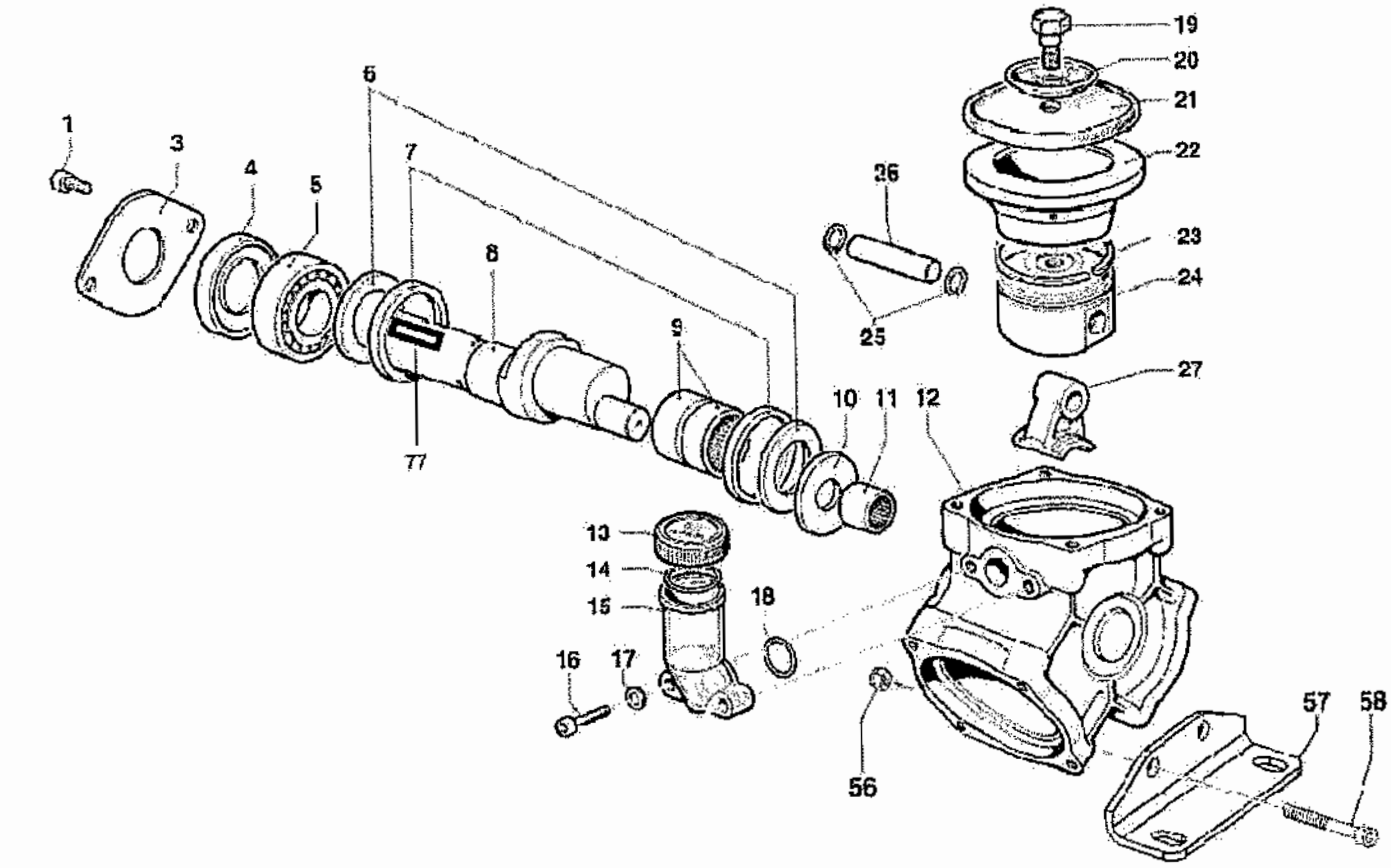
10. Airlock. With pump running, open and close bleed valves several times to remove the air that may be trapped in the piping.

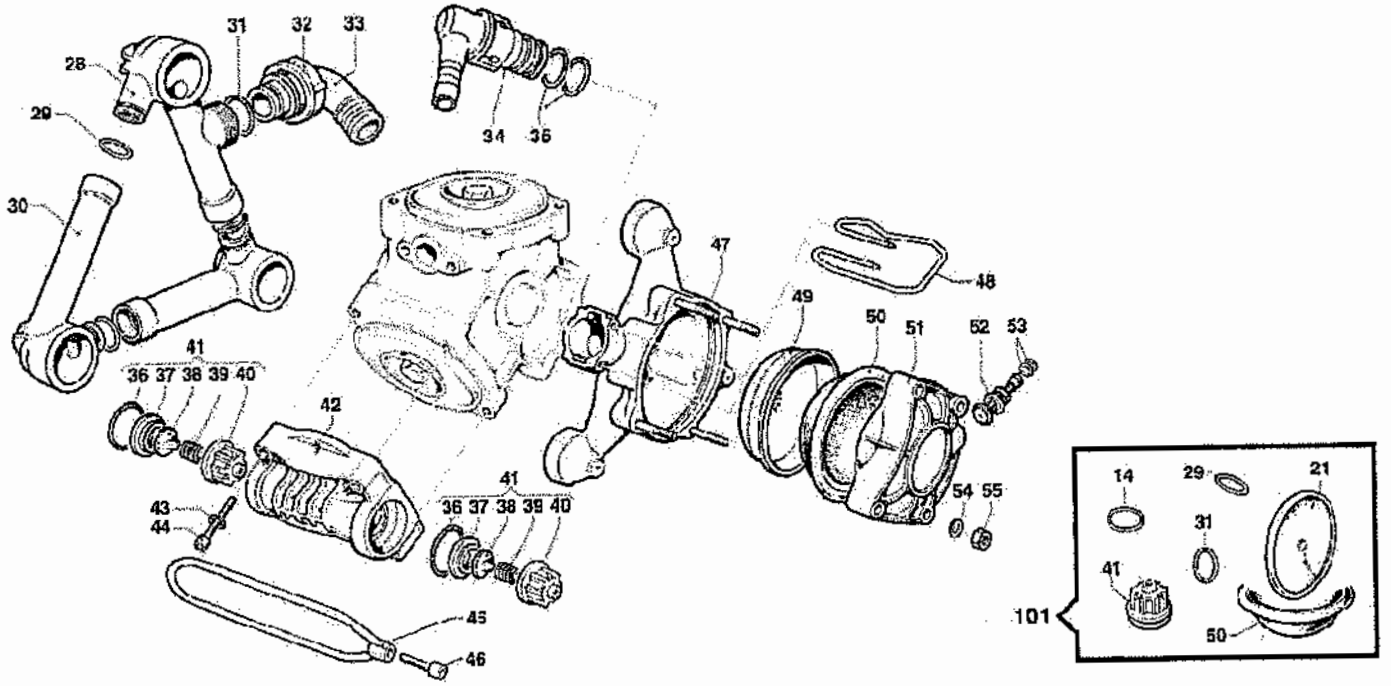
11. Diaphragms may be ruptured, oil in crankcase will be milky white. Drain oil from pump and install new diaphragms.

12. No air in accumulator head on models 6/8, reset between 90-120 psi.

BP125K

6100.0035.00





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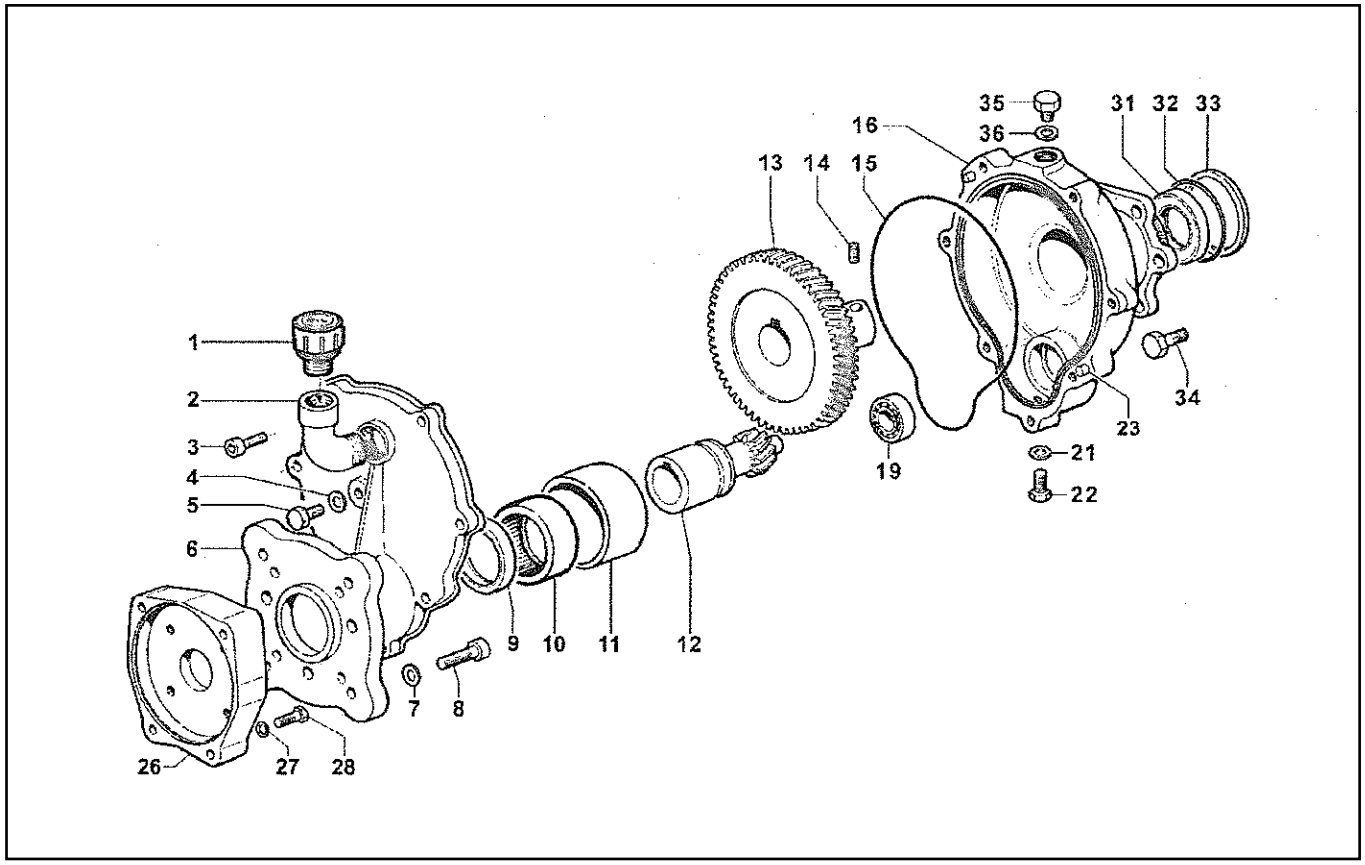

Ref #	Part Number	Description	Qty
1	3200.0082.00	oil cap	1
2	1211.0023.00	elbow	1
3	3609.0041.00	screw	1
4	2811.0051.00	washer	1
5	3607.0214.00	screw	1
6	3002.0559	support	1
7	2811.0004.00	washer	4
8	3609.0002.00	screw	4
9	0019.0052.00	oil seal	1
10	0437.0045.00	bearing	1
11	0204.0053.00	bushing	1
12	2402.0156.00	shaft	1
13	0409.0027.00	gear	1
16	3001.0058.00	housing	1

Ref #	Part Number	Description	Qty
19	0448.0006.00	bearing	1
21	2811.0051.00	washer	1
22	3607.0214.00	screw	1
23	2818.0005.00	pin	2
26	1009.0048.00	flange	1
27	2811.0002.00	washer	4
28	3607.0164.00	screw	4
30	3622.0017.00	screw	1
31	0019.0032.00	oil seal	1
32	1210.0221.00	o-ring	1
33	0601.0280.00	spacer	1
34	3607.0232.00	screw	6
35	3200.0007.00	plug	1
36	2811.0084.00	washer	1

PARTS BREAKDOWN FOR MODEL DPH8 - *S/N #41407 and after*
RICE HYDRO, INC.

PUMP PARTS:

REF#	PART NUMBER..	DESCRIPTION..	QTY REQ'D
1	D8-3609-0171	SCREW	2
3	D8-1004-0013	FLANGE	1
4	D8-0019-0101	FLANGE	1
5	D8-0438-0016	BALL BEARING	1
6	D8-2813-0019	CONNECTING ROD WASHER	2
7	D8-0010-0008	CONNECTING ROD RING	2
8	D8-0001-0394	NON-THROUGHSHAFT	1
9	D8-0437-0045	ROLLER BEARING	2
10	D8-2813-0024	CONNECTING ROD WASHER	1
11	D8-0437-0033	ROLLER BEARING	1
12	D8-0403-0133	PUMP CRANKCASE	1
13	D8-0402-0141	OIL CAP	1
14	D8-1210-0122	O-RING *(in KIT D8-5026-0326)*	1
15	D8-0421-0020	OIL SIGHT GLASS	1
16	D8-3609-0165	SCREW	2
17	D8-2811-0099	WASHER	2
18	D8-1210-0037	O-RING	1
19	D8-3605-0005	DIAPHRAGM HOLDER SCREW	3
20	D8-0602-0045	DISC	3
21	D8-1800-0002	BUNA DIAPHRAGM *(in KIT D8-5026-0326)*	3
22	D8-0400-0077	PISTON SLEEVE	3
23	D8-0020-0009	COMPRESSION RING	3
24	D8-2409-0081	PISTON SLEEVE	3
25	D8-3020-0001	RETAINING CLIP	6
26	D8-3011-0001	PIN	3
27	D8-0205-0034	CONNECTING ROD ASSEMBLY	1
28	D8-3212-0023	SUCTION HOSE	1
29	D8-1210-0047	O-RING *(in KIT D8-5026-0326)*	3
30	D8-3213-0012	SUCTION PIPE	2
31	D8-1210-0034	O-RING *(in KIT D8-5026-0326)*	1
32	D8-1200-0011	WING NUT	1
33	D8-2801-0063	SUCTION ELBOW TAIL	1
34	D8-2803-0052	DISCHARGE ADAPTER *(PICTURE SHOWN NOT ACCURATE)*	1
35	D8-1210-0002	O-RING	2
41	D8-1220-0046	VALVE ASSY. *(in KIT D8-5026-0326)*	6
42	D8-3218-0123	PUMP MANIFOLD	3
43	D8-2811-0098	WASHER	12
44	D8-3609-0161	SCREW	12
45	D8-0418-0041	U-BOLT	3
46	D8-3609-0160	SCREW	3
47	D8-0002-0021	PRESSURE ACCUMULATOR	1
48	D8-1202-0060	DELIVERY HOOK	1
49	D8-0460-0036	DIAPHRAGM SUPPORT CAP	1
50	D8-1800-0034	ACCUMULATOR DIAPHRAGM ***90-120 PSI Setting*** *(in KIT D8-5026-0326)*	1
51	D8-0003-0030	PULSATION DAMPNER	1
52	D8-3610-0003	AIR VALVE	1
53	D8-1209-0033	GASKET	2
54	D8-2811-0098	WASHER	4
55	D8-0604-0105	NUT	4
56	D8-0604-0073	NUT	2
57	D8-2400-0108	PUMP MOUNTING BRACKET	2
58	D8-3609-0051	SCREW	2
77	D8-1602-0018	KEY	1

PUMP OUTLET CONNECTIONS TO PIPING: (REF 34, 35 CONNECTED TO PUMP)

D8-2803-0052	DISCHARGE ADAPTER (***PICTURE NOT ACCURATE)***	1
D8-1210-0002	O-RING	1
EL-G-3/4X90	3/4" x 90 GALVANIZED ELBOW	1

PARTS BREAKDOWN FOR MODEL DPH8 - *S/N #41407 and after*
RICE HYDRO, INC.

GEAR REDUCTION:

REF#	PART NUMBER..	DESCRIPTION..	QTY REQ'D
1	D8-3200-0082	OIL DIPSTICK	1
2	D8-1211-0023	ELBOW	1
3	D8-3609-0041	SCREW	7
4	D8-2811-0051	WASHER	1
5	D8-3607-0214	HEX SCREW	1
6	D8-3002-0559	SUPPORT	1
7	D8-2811-0004	WASHER	4
8	D8-3609-0002	SCREW	4
9	D8-0019-0052	OIL SEAL	1
10	D8-0437-0045	ROLLER BEARING	1
11	D8-0204-0053	BUSHING	1
12	D8-2402-0156	SHAFT	1
13	D8-0409-0027	GEAR	1
16	D8-3001-0058	HOUSING	1
19	D8-0448-0006	ROLLER BEARING	1
21	D8-2811-0051	WASHER	1
22	D8-3607-0214	HEX SCREW	1
23	D8-2818-0005	PIN	2
26	D8-1009-0048	FLANGE	1
27	D8-2811-0002	WASHER	4
28	D8-3607-0164	HEX SCREW	4
30	D8-3622-0017	SCREW	1
31	D8-0019-0032	OIL SEAL	1
32	D8-1210-0221	O-RING	1
33	D8-0601-0280	SPACER	1
34	D8-3607-0232	HEX SCREW	6
35	D8-3200-0007	PLUG	1
36	D8-2811-0084	WASHER	1

MISCELLANEOUS PARTS:

NA	BALLVALVE-3/4	3/4" F X F BALLVALVE	1
NA	HONDA-GX270UTQA2	270 CC 9 HP HONDA GEAR REDUCTION	1
NA	CHECKVALVE-3/4CON	3/4" F X F CHECKVALVE	1
NA	GAUGE-600	0-600 PSI LIQUID GAUGE	1
NA	PUMP-DIA-32/300	TRIPLE DIAPHRAGM PUMP	1
NA	SPRAY-6815-300-3/4	3/4" PRESSURE RELIEF VALVE	1
NA	CARTON-TR6	SHIPPING BOX - EXTRA LARGE	1
NA	HOSE-SUCTION-1&1/2	INLET SIDE PUMP SUCTION	24
NA	INLET-HOSE-1&1/2-RH	1" X 9' FOOT CLEAR HOSE W/STRAINER	1
NA	FILTER-INLET-1&1/2	100 MESH INLET STRAINER	1
NA	LABEL-KIT-DP	INSTRUCTION AND CAUTION STICKERS	1

OUTLET HOSE:

	HOSE-3/4X8-RH	8' FOOT OUTLET HOSE - STANDARD 1
	**3/4" Male Rigid Fitting & 3/4" Male Swivel Fitting included on 8ft outlet hose*	
	COUPLERBODY-3/4	FEMALE PUMP OUTLET - HOSE 1
	COUPLERPLUG-3/4	MALE PUMP OUTLET - PIPING 1
	HOSE-3/4-1250XFT	CUSTOMER TO SPECIFY LENGTH OF HOSE
	3/4" Male Rigid Fitting & 3/4" Male Swivel Fitting	1

KITS:

101	D8-5026-0326	REBUILD KIT	
		REF. #14 O-RING	QTY 1
		REF. #21 BUNA DIAPHRAGM	QTY 3
		REF. #29 O-RING	QTY 3
		REF. #31 O-RING	QTY 1
		REF. #41 VALVE ASSY	QTY 6
		REF. #50 ACCUMULATOR DIAPHRAGM	QTY 1