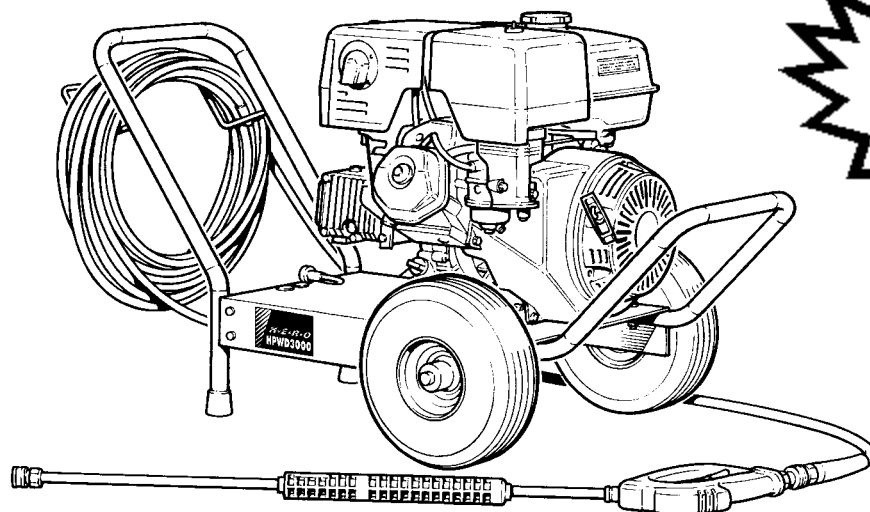


H.E.R.O. ***Pressure Washers***

PW2700-SC & PW2000-SC



**New for
2000**

H.E.R.O. Industries

a division of Middlefield Bancorp Limited
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<i>Table of Contents</i>	
Safety Instructions	3
Important Operating / Maintenance Precautions	4
Start-Up	4-5
Shutting Down	5
Nozzle Selection	6
Trouble Shooting	7
Pump Schematic & Parts List	14 - 16
Unloader and Injector Control Schematic & Parts List,	17 - 18
Pump Service	19
Repair Kits	20
Chassis Parts, Gun, Hose, & Accessories	21 - 22

WARRANTY

This product is warranted to be free from defects in materials and workmanship under normal use and service, for a period of two years from the date of purchase, when operated and maintained in accordance with the Maintenance and Operation Instructions supplied with the unit. The warranty does not cover misuse or negligence.

This warranty is extended only to the original purchaser. Hoses, spray guns, wands and other accessories are warranted for 30 days. Warranty is void if repairs are attempted by anyone other than an Authorized Service Center.

H.E.R.O. Industries liability under warranty is limited to repair of product and /or replacement of parts, and is given to the purchaser in lieu of all other remedies including incidental and consequential charges. There are no expressed warranties other than those specified herein.

IMPORTANT SAFETY PRECAUTIONS

This book has important information for the use and safe operation of this machine. Read and understand all warnings before you start working.

WARNING - WHEN USING THIS MACHINE:

- Read all the instructions before using machine
- To reduce risk of injury, close supervision is necessary when the machine is used near children
- Know how to stop the machine and bleed pressure quickly. Be quite familiar with the controls.
- Stay alert! Watch what you are doing.
- Keep operating area clear of all persons.
- Follow the maintenance instructions specified in the manual.
- Do not operate the machine when fatigued or under the influence of alcohol or drugs.
- Do not overreach or stand on unstable support. Keep good footing and balance at all times.
- To prevent fire hazard, do not use with or near inflammables such as; gasoline, grain dust, solvents and thinners.
- Never add gasoline to a hot engine as this can result in a fire or explosion.
- Never direct spray at the pressure washer unit.

Warning

**Risk of injection or injury.
Do not direct discharge stream at persons or animals. The high
pressure water stream can cause injury or death!**

IMPORTANT OPERATION / MAINTENANCE PRECAUTIONS

- ☑ Change oil in pump after the first 50 hours, then every 500 hours.
Use SAE30 Non-Detergent Motor oil.
- ☑ Change engine oil as specified by the Honda. See Honda owners manual.
- ☒ **Do Not** run washer longer than 3 minutes with gun closed, as this can result in damage to the seals. Heat generated by the re-circulating water can damage seals.
- ☒ Avoid **freezing** pump. Drain unit prior to storage, or run an antifreeze solution through pump. Ensure the pump and hoses are completely bleed of all liquid.

START-UP AND OPERATION INTRODUCTION

1. Verify that the vented YELLOW dip stick is installed in pressure washer pump. **Remove the RED shipping plug (if present) from top of the pump and replace it with the YELLOW oil level dipstick provided. Fig. 1**

2. Before first use, check engine and pump oil levels.
Note: For shipping purposes, engine oil has not been added.

Before each use, check engine oil level by unscrewing the oil dipstick. Add motor oil (consult Honda manual for correct grade) as required to bring to proper level, approximately mid-way on dipstick.

3. Check water supply volume. To operate correctly, the unit requires a water supply 25% greater than the units output. (i.e. PW2700SC = 3 GPM, PW2000SC = 3.75 GPM of water flow).

To test water supply output;

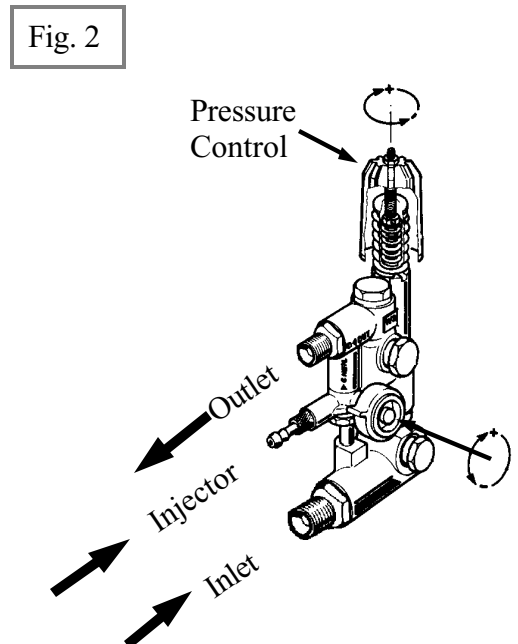
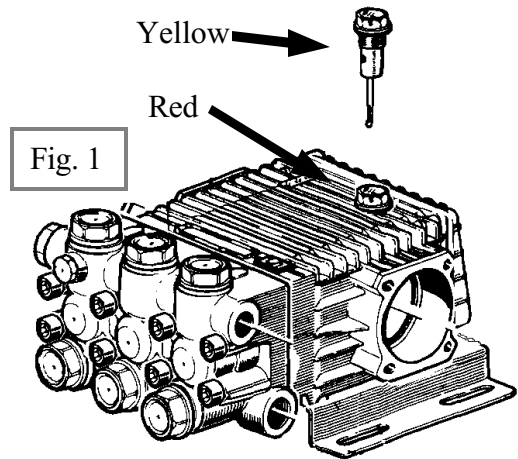
- a) Turn water flow to full maximum output.
- b) Place a 5 gallon pail or container under water flow for exactly 1 minute (60 seconds).
- c) Measure contents to determine water flow.

4. Connect a standard garden hose to the water inlet or bottom connection on the pump head (Female hose connector). Fig. 2.

5. Connect the high pressure hose to the water “Outlet” or upper connection on the pump head. (Male quick connect nipple). Fig. 2.

6. Turn the unloader knob on top of the pump head counter-clockwise to reduce the pressure prior to starting the machine.

7. Select the desired tip for the job. Insert tip into wand



START-UP AND OPERATION INTRODUCTION

(quick-connect fittings). See page 6.

RED-0°, **Narrow Fan**, *Direct or Concentrated Cleaning.*

YELLOW - 15°, **Medium Fan**, *General Use.*

WHITE - 40°, **Wide Fan**, *Soft Pattern, For Rinsing.*

BLACK - 65°, **Chemical Injector Tip**. *Must be used when operating chemical injector*

8. If using injector system, insert BLACK spray tip and connect the detergent/chemical suction line to the fitting marked "Injector" and place the filter end into the chemical/detergent jug. Turn the knob clockwise to prevent suction until desired.
9. **Turn on the water supply and trigger the spray gun to purge all air from the system, PRIOR to starting engine. VERY IMPORTANT!!**
10. Start the engine by following this procedure:
 - a. Turn the ON/OFF switch to ON.
 - b. Turn the GAS to ON.
 - c. Turn the CHOKE to FULL.
 - d. Push the THROTTLE lever to the ON position.
 - e. Pull the STARTING cord.
 - f. Once the engine has started, reduce the CHOKE until it is OFF, and open the THROTTLE to full ON. *Use these instructions in conjunction with instructions provided in the Honda manual.*
11. At this point, the gun is triggered to evacuate any remaining air in the system. Then trigger the gun and begin turning the red unloader knob in a clockwise direction as far as it will turn. You should now have full pressure.
12. To introduce chemicals/detergent to the spray, do the following;
 - a. Install "Black" injector tip.
 - b. Turn the CHEMICAL/DETERGENT adjustment knob counter- clockwise.
 - c. Trigger the SPRAY GUN and continue to turn the ADJUSTING knob until the desired amount of chemical flow is achieved.
 - d. Trigger the SPRAY GUN and continue to turn the ADJUSTING knob until the desired amount of chemical flow is achieved.
1. Trigger the spray gun and reduce the pressure by turning the unloader knob counter-clockwise.

SHUTTING DOWN THE MACHINE AFTER USE

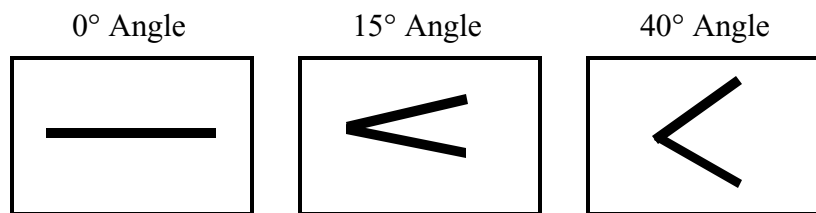
2. Turn engine switch to the OFF position.
3. Turn the throttle and gas levers to the OFF or Closed positions.
4. Shut OFF the water.
5. Trigger gun to remove any remaining pressure in the system.
6. Disconnect hose.

NOZZLE SELECTION

For your convenience, we have provided a selection of nozzles to choose from.
Your machine is equipped with a 0°, 15°, 40°, and a chemical nozzle.

If you require a different cleaning action, we suggest selecting the correct tip for the job.

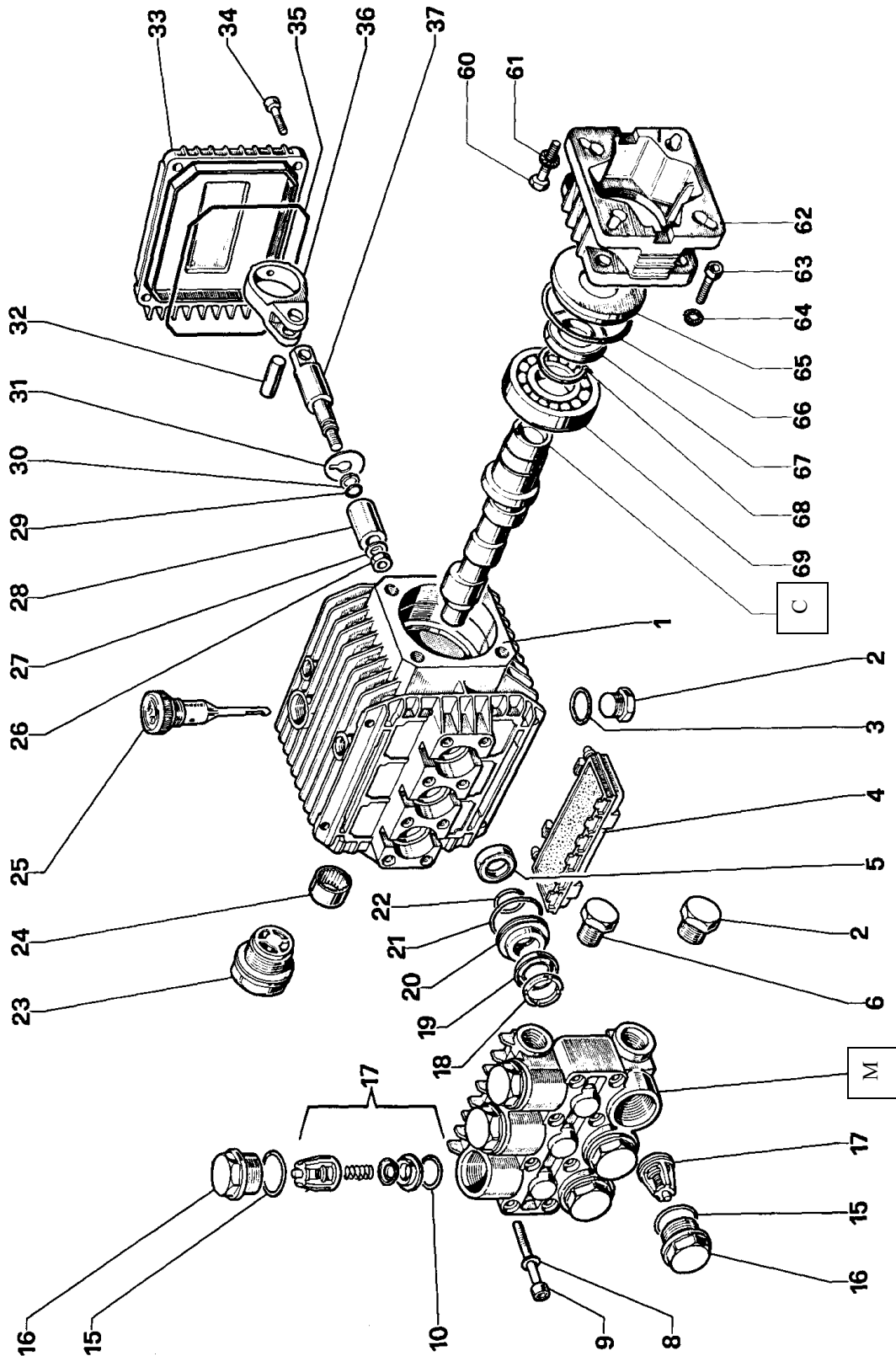
1. RED = 0° Angle - High impact, solid stream.
2. YELLOW = 15° Angle - Narrow width spray pattern.
3. WHITE = 40° Angle - Wide width spray pattern.
4. BLACK = Chemical Injector



TROUBLE SHOOTING

FAULT	CAUSE	REMEDY
Pump running normally but pressure does not achieve rated pressure.	Pump sucking air. Valves worn or dirty. Insufficient water flow. Unloader valve packing worn. Nozzle incorrect or worn. Worn piston packing.	Check that hoses and fittings are air tight. Check, clean or replace. Increase water supply. Check and replace. Check and replace. Check and replace.
Fluctuating pressure	Valves worn, dirty or stuck. Pump sucking air. Worn piston packing. Insufficient water flow.	Check, clean or replace. Check that hoses and fittings are air tight. Check and replace. Increase water supply. May require new water supply source.
Pressure drops after period of normal use.	Nozzle worn. Valves worn, dirty or stuck. Unloader valve packing worn. Worn piston packing.	Check and replace. Check, clean or replace. Check, clean or replace. Check and replace.
Pump noisy	Pump sucking air. Valves dirty or worn. Worn bearings. Water too hot.	Check that hoses and fittings are air tight. Check, clean or replace. Check and replace if necessary. Reduce temperature.
Presence of water in oil	High humidity in air. Piston packing and oil seal worn.	Check and change oil twice as often. Check and replace.
Water dripping from under pump.	Piston packing worn. The O-rings of piston guide or retainer worn. Thermal relief valve opened.	Check and replace. Check and replace. Check and replace.
Oil dripping.	Oil seal worn.	Check and replace.
Engine will not start.	Low fuel level. Low oil level. Worn spark plug or gap.	Add fuel. Add oil. Replace.

HPWD2000LC - TT9071 Pump Assembly HPWD2700 – TT2530 Pump Assembly



REF #	PART #	DESCRIPTION	QTY
Assembly	PW-2535	Pump Only, HPWD2000LC, TT9071 <u>with</u> thermal valve. After 3-1-98,	
Assembly	PW-2710	Pump / Unloader Assy. HPWD2700, TT2530 <u>without</u> thermal valve.	
1	PW-51.0106.22	Crankcase	1
2	PW-98.2100.00	Cap	2
3	PW-90.3833.00	O-Ring	1
4	PW-51.2090.51	Cover	1
5	PW-90.1565.00	Oil Seal	Kit 83
6	PW-98.2041.00	Cap	1
M	PW-51.1200.41	Manifold, HPWD2000, TT9071	1
M	PW-51.1201.41	Manifold, HPWD2700, TT2530 See page 19	1
8	PW-96.6938.00	Washer	8
9	PW-99.1943.00	Screw	8
10	PW-90.3841.00	O-Ring	Kit 1
11		Sold Only In Kit 1	Kit 1
12		Sold Only In Kit 1	Kit 1
13		Sold Only In Kit 1	Kit 1
14		Sold Only In Kit 1	Kit 1
15	PW-90.3847.00	O-Ring	Kit 84
16	PW-98.2218.00	Cap	Kit 84
17	PW-36.7032.01	Valve Unit	Kit 1
18	PW-51.1000.51	Head Ring	Kit 96-97
19	PW-90.2620.00	Packing	Kit 96-97
20	PW-51.0800.70	Packing Retainer	Kit 86-96
21	PW-90.3604.00	O-Ring	Kit 86-96-97
22	PW-90.3835.00	O-Ring	Kit 86-96-97
23	PW-97.5968.00	Oil Level Indicator	1
24	PW-91.8014.00	Bearing	1
25	PW-98.2103.00	O-Ring	1
26	PW-92.2216.00	Nut	3
27	PW-96.7008.00	Washer	3
28	PW-51.0400.09	Piston	3

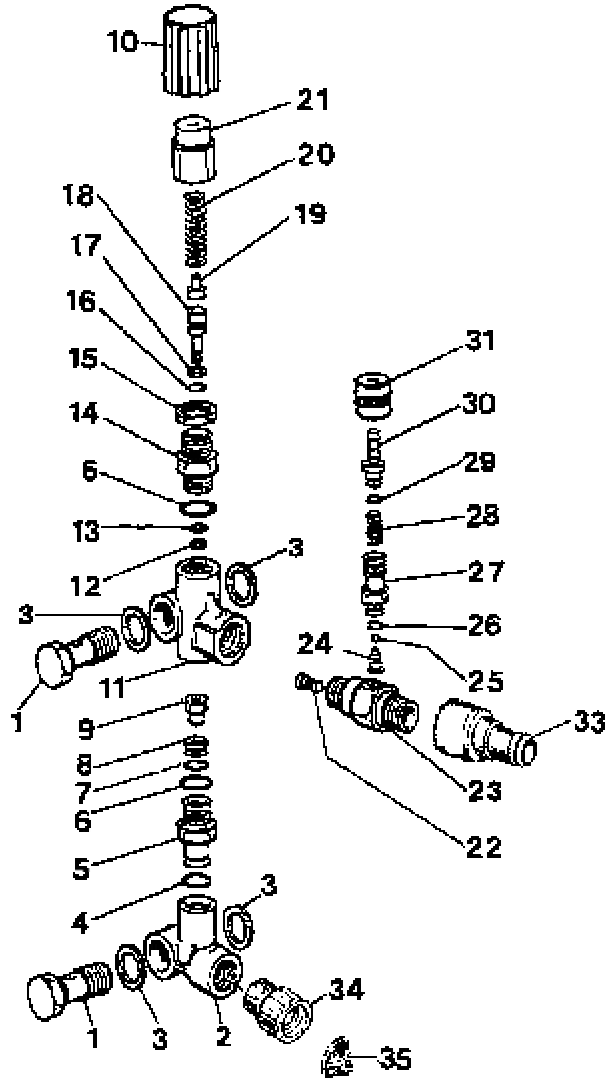
REF #	PART #	DESCRIPTION	QTY
29	PW-90.3572.00	O-Ring	3
30	PW-90.5022.00	Anti-Extrusion Ring	3
31	PW-96.7070.00	Washer	3
32	PW-97.7310.00	Piston Pin	3
33	PW-51.1600.22	Crankcase Cover	1
34	PW-99.1867.00	Screw	4
35	PW-90.3917.00	O-Ring	1
36	PW-51.0300.22	Connecting Rod	3
37	PW-51.0500.56	Valve Guide	3
60	PW-99.2730.00	Screw	4
61	PW-96.7014.00	Washer	4
62	PW-10.0346.22	Flange, Motor Mounting	1
63	PW-99.1867.00	Screw	4
64	PW-96.6938.00	Washer	4
65	PW-50.2115.51	Spacer	1
66	PW-90.4097.00	O-Ring	1
67	PW-90.1644.00	Oil Seal	1
68	PW-90.0667.00	Circlip	1
69	PW-91.8373.00	Bearing	1
C	PW-51.0211.35	Crankshaft, HPWD2000LC, TT9071	1
C	PW-51.0221.65	Crankshaft, HPWD2700, TT2530	1
71	PW-1077	Valve, Thermal Protection, 1/2, w/ Barb <i>HPWD2000LC & HPWD2700 Only</i>	1
72	PW-1405	Tubing, Pressure Relief Valve	1

UNLOADER AND INJECTOR CONTROLS - PW-1130

**HPWD2000 Only
(Model WP10
Unloader With
Injector)**

Unloader Service

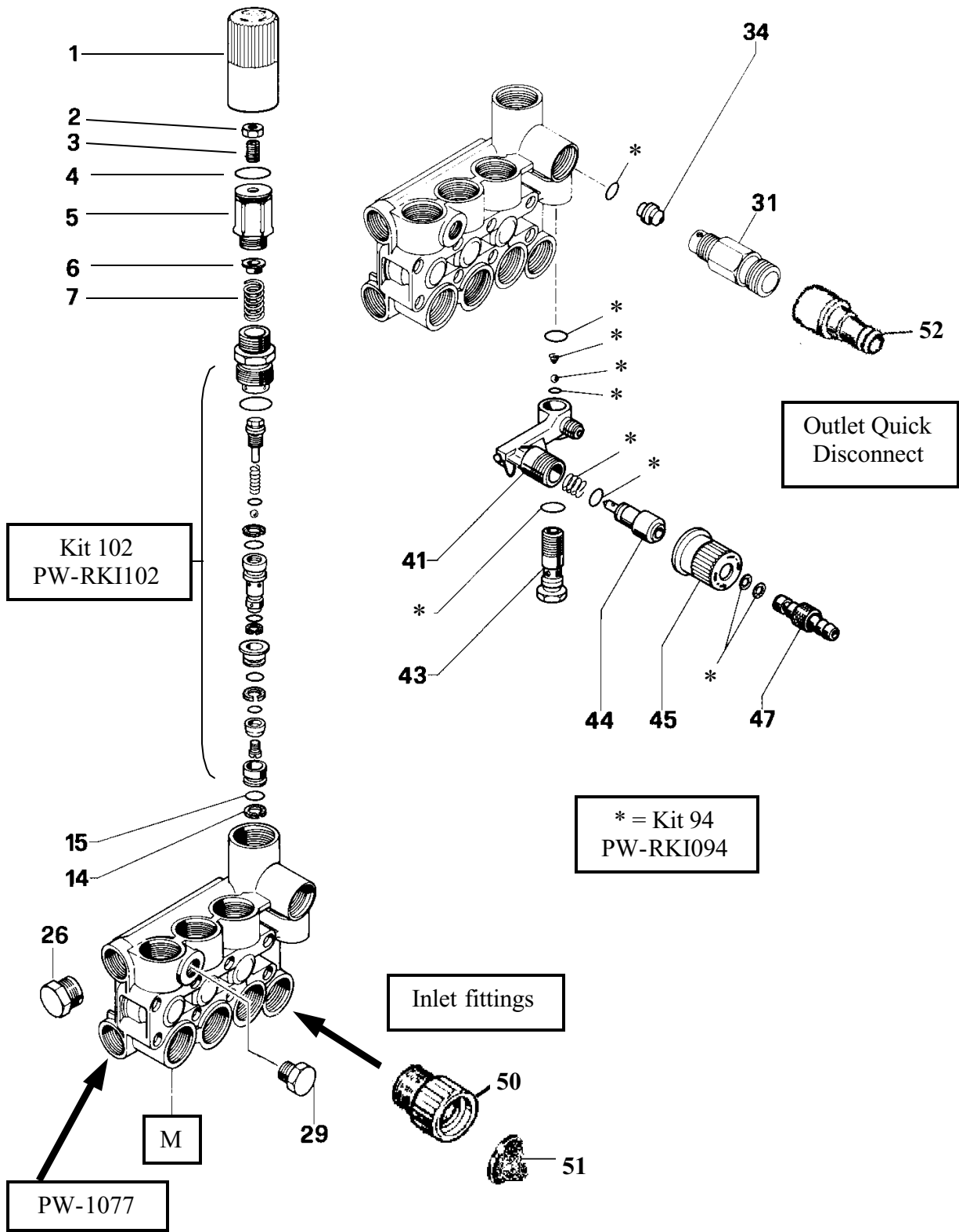
The unloader is made up of many small o-rings, springs and check balls. Repair kits are available to replace these "Soft Goods". Repairs requiring the replacement of valve bodies or "Hard Goods" may be more economically solved through the replacement of the entire "Bolt On" unloader. Shop labor may make an unloader repair a poor economical choice.



REF #	PART #	DESCRIPTION	QTY
1 - 31	PW-1130	Unloader, With Chemical Injector, Less Intake Fitting, HPWD2000LC Only, After 3-1-98	1
2	PW-60.0821.35	Lower Body	1
3	PW-14.4100.00	Washer	4
4	PW-10.3109.96	O-Ring	1
5	PW-60.0396.31	Connector	1
6	PW-10.3066.01	O-Ring	3
7	PW-10.3005.00	O-Ring	1
8	PW-60.0311.51	Seat	1
9	PW-60.0333.21	Ball Holder	1
10	PW-60.0315.84	Adjustment Knob	1

REF #	PART #	DESCRIPTION	QTY
11	PW-60.0801.35	Valve Body	1
12	PW-10.4006.00	Seal	1
13	PW-10.3051.01	O-Ring	1
14	PW-60.0303.31	Connector	1
15	PW-60.0317.31		1
16	PW-10.3055.00	O-Ring	1
17	PW-10.4008.00		1
18	PW-60.0331.51	Piston	1
19	PW-60.0310.61	Spring Support	1
20	PW-60.0313.61	Spring	1
21	PW-60.0304.31	Valve Cap	1
22	PW-21.0212.51	Nozzle	1
23	PW-21.0211.31	Injector Body	1
24	PW-21.0160.51	Spring	1
25	PW-14.7420.01	Ball	1
26	PW-10.3049.00	O-Ring	1
27	PW-21.0161.31	Nipple	1
28	PW-21.0158.31	Spring	1
29	PW-10.3043.01	O-Ring	1
30	PW-21.0155.31	Injector Nipple, Hose	1
31	PW-21.0156.31	Knob	1
33	PW-1055	Outlet Plug, Quick-Disconnect, 3/8" Female	1
34	PW-1400	Inlet, Garden Hose, Female	1
35	PW-1060	Washer, Filter	1

BUILT-IN UNLOADER AND INJECTOR CONTROLS – HPWD2700



BUILT-IN UNLOADER AND INJECTOR CONTROLS – HPWD2700

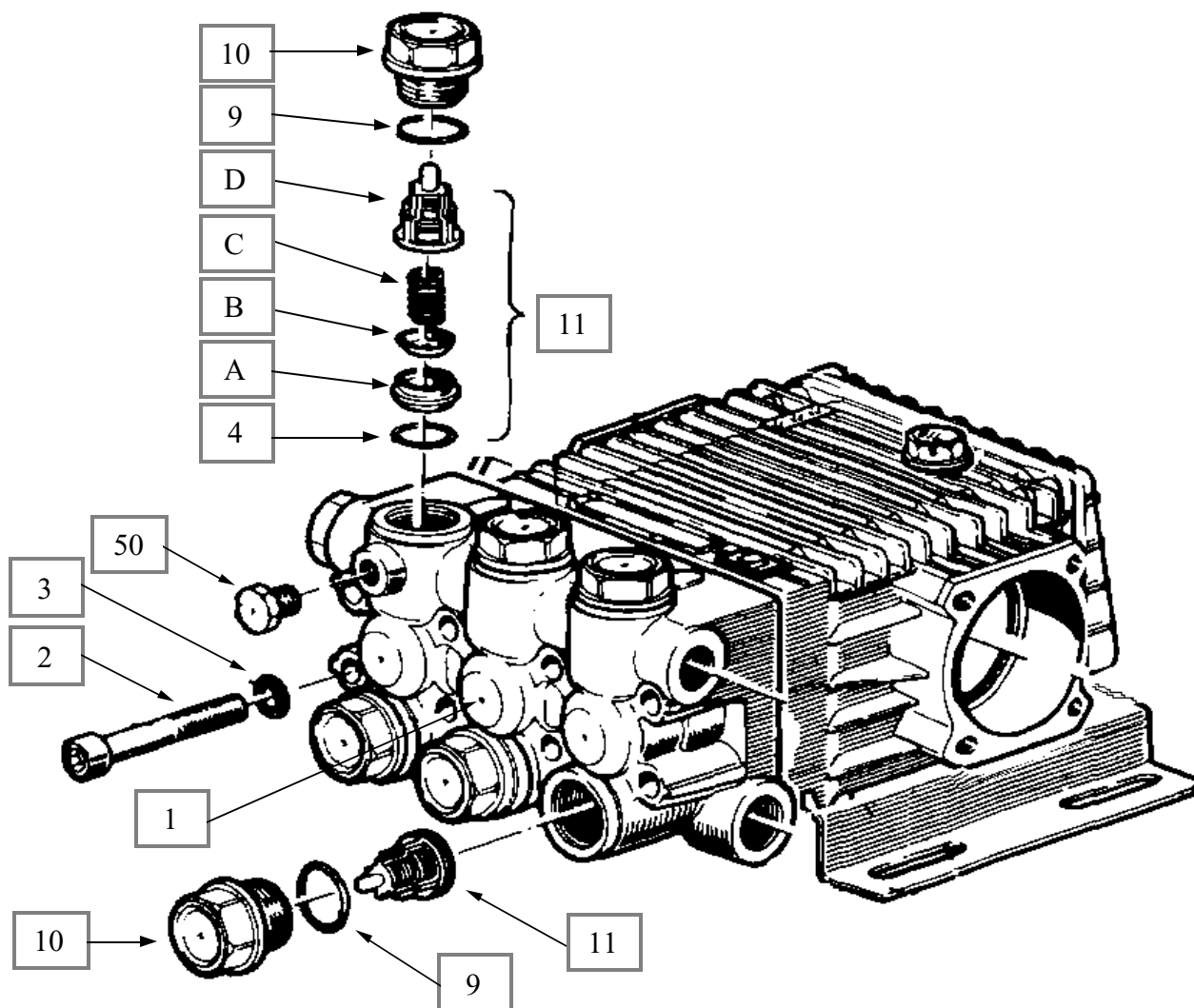
REF #	PART #	DESCRIPTION	QTY
1	PW-36.3187.51	Knob	1
2	PW-92.2218.00	Nut	1
3	PW-99.3054.00	Screw	1
4	PW-99.3598.00	O-Ring	1
5	PW-36.3185.70	Valve Cap	1
6	PW-36.3169.70	Valve Plate	1
7	PW-94.7436.00	Spring	1
8 – 23	PW-RKI102	Repair Kit, Parts only sold in Kit PW-RKI102.	Kit
26	PW-98.2100.00	Cap	1
29	PW-98.2041.00	Cap	1
M	PW-51.1201.41	Manifold, Refer to diagram on page 14 for internal parts.	1
31	PW-10.0078.70	Nipple	1
34	PW-10.0151.66	Nozzle	1
33, 35 to 40, 42, 46	PW-RKI094	Repair Kit, Parts only sold in Kit – PW-RKI094.	Kit
41	PW-36.3181.51	Body	1
43	PW-36.2563.70	Valve Seat	1
44	PW-36.2564.70	Shutter	1
45	PW-36.2565.51	Knob	1
47	PW-36.2566.70	Injector Nipple	1
50	4-667-70	Inlet, Garden Hose Connector, Female	1
51	PW-1060	Filter Washer	1
52	PW-1055	Outlet Nipple, Quick-Disconnect, 3/8" Female	1

PUMP SERVICE

All inlet and discharge valves can be serviced without disrupting the inlet or discharge plumbing. The inlet and discharge valves are identical on all H.E.R.O. models. See pages 8-10 and 14-16.

VALVE ASSEMBLIES

1. To service any valve, remove valve cap (ref # 10) and extract valve assembly (ref # 4-A-D-9).
2. Examine o-rings and replace if there is any evidence of cuts, abrasions or distortion.
3. Remove valve assembly (ref # A-D) from valve cavity.
4. Remove o-ring (ref # 4) from valve cavity.
5. Only one valve kit is necessary to repair all the valves in the pump. The kit includes new o-rings, valve seat, poppet, spring and retainer, (ref # 4, A-D) all pre-assembled.
6. Install new o-ring in valve cavity.
7. Insert assembly into valve cavity.
8. Replace valve cap (ref # 10) and torque to 74 foot pounds.



REPAIR KITS

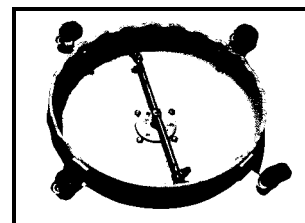
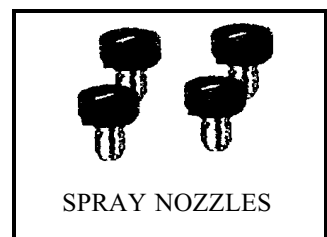
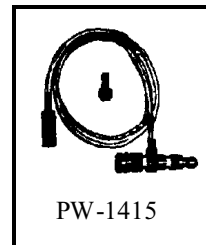
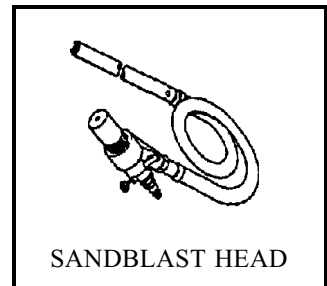
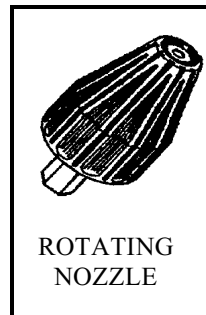
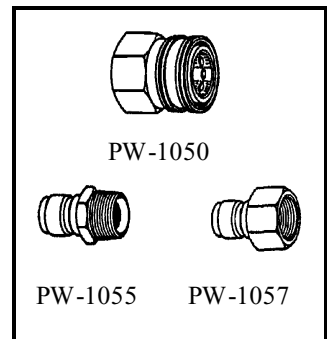
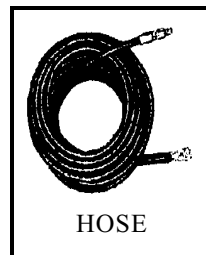
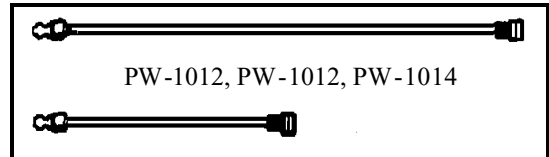
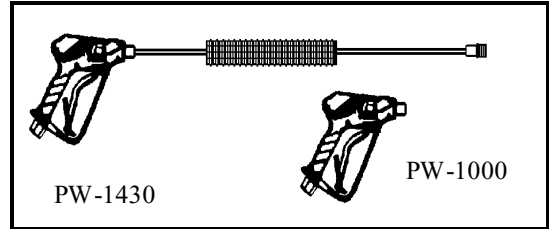
Part Number	Description	Kit #	Ref# Included	Page #	# Pieces
PW-RKI001	Repair Kit, Valve, 1500 / 2000LC	1	10,11,12,13,14,17	12,15	6
PW-RKI023	Repair Kit, Oil Seal, 2500, 3000	23	17	9	3
PW-RKI083	Repair Kit, Oil Seal, 1500	83	5	15	3
PW-RKI084	Valve Cap & O-ring, TT9091	84	15, 16	15	6
PW-RKI086	High & Low Pressure Seals, TT9091	86	20, 21, 22	15	3
PW-RKI088	Repair Kit, High-Low Pressure Seals / Restop. 2500, 3000	88	43, 44, 51	10	3
PW-RKI089	Brass Ring, High Pressure Seals, WW960, WW961	89	42	10	3
PW-RKI090	High Pressure Seal, WW960, WW961	90	45	10	6
PW-RKI093	Repair Kit, Unloader, Complete Part # PW-1140	93	5, 10, 11, 15, 16, 18, 19, 20, 21, 22, 23, 24, 29, 36, 37, 38, 39	12	1
PW-RKI094	Repair Kit, Unloader, Soft Parts Only, Part # PW-1140	94	18, 32, 41, 43, 46, 47, 53, 54, 55, 56	12	1
PW-RKI096	Repair Kit, Seal Kit Complete TT9091, 3 Kits needed per unit	96	18, 19, 20, 21, 22	15	1
PW-RKI097	Repair Kit, Packing	97	18, 19, 21, 22	15	3
PW-RKI123	Repair Kit, Valve,	123	4,5,6,7,8,11	9	6
PW-RKI124	Valve Cap (Brass) & O-ring, WW960, WW961	124	9, 10	9	6
PW-RKI125	Low Pressure Brass Ring & O-Ring	125	40, 41	10	3
PW-RKI130	Repair Kit, Packing, 15mm, 2500, 3000	130	40, 41, 42, 43, 44, 45, 51	10	1

CHASSIS PARTS, GUN, HOSE & ACCESSORIES

PART #	DESCRIPTION	QTY
PW-4290	Cart Base, c/w Axle	1
PW-4255	Handle, Rear	1
PW-4260	Handle, Front	1
PW-4080	Assembly, Rubber foot	2
67/16A	Wheel, Pneumatic	2
HW6088	Cap, Axle Hat, 5/8	2
PW-4075	Grommet, Tip Holding	4
PW-2715	Engine, Gas, Honda, c/w Oil Alert, HPWD2700	1
PW-1515	Engine, Gas, Honda, c/w Oil Alert, HPWD2000	1
PW-1020	Strainer, Chemical Suction, c/w Tubing, less fitting	1
PW-1430	Gun / Wand Assembly. C/W: PW-1000, 1010, 1045, 1055	ASSY
PW-1055	Plug, Quick-Disconnect, 3/8 Steel, Male	1
PW-1435	Assembly, Pressure Washer Hose, 50' with 2 female quick connect fittings, After 3-1-98 (PW-1030 & 2x PW-1050)	Assembly
PW-1100-0001	Spray Nozzle, 0 Degree, RED, HPWD2000 Only	1
PW-1100-00035	Spray Nozzle, 0 Degree, RED, HPWD2700 Only	1
PW-1100-00045	Spray Nozzle, 0 Degree, RED	1
PW-1100-1504	Spray Nozzle, 15 Degree, Yellow, HPWD2000 Only	1
PW-1100-15035	Spray Nozzle, 15 Degree, YELLOW, HPWD2700 Only	1
PW-1100-15045	Spray Nozzle, 15 Degree, YELLOW	1
PW-1100-4004	Spray Nozzle, 40 Degree, White, HPWD2000 Only	1
PW-1100-40035	Spray Nozzle, 40 Degree, WHITE, HPWD2700 Only	1
PW-1100-40045	Spray Nozzle, 40 Degree, WHITE	1
PW-1100-6540	Wash Nozzle, 65 Degree, BLACK, ALL MODELS	1
97B	Decal " Quality By Design "	1
PW-4085	Decal, Warning, Pressure Washing	1

ACCESSORIES

- PW-1430Pressure washer gun/wand assembly
- PW-1000Gun, less fittings,
- PW-1010Wand, w/insulator, 30',
- PW-1012Wand, w/ insulator, 48',
- PW-1014Wand, w/insulator, 79',
- PW-1015Wand, twin-lance, less fittings,
- PW-1020Strainer, chemical suction,
.....c/w tubing, less fitting,
- PW-1022Fitting, chemical suction
- PW-1415Assembly, chemical injector hose,
.....c/w brass fitting
- PW-1435Assembly, pressure washer hose
.....w/ 2 female q/c, after 3-1-98
- PW-1025Hose assembly, pressure washer,
.....25', less quick connect fittings
- PW-1030Hose assembly, pressure washer,
.....50', less quick connect fittings
- PW-1035Socket assembly, swivel/quick- disconnect
- PW-1045Body, quick-disconnect, 1/4 brass, female
- PW-1050Body, quick-disconnect, 3/8 brass, female
- PW-1055Plug, quick-disconnect, 3/8 steel, male
- PW-1057Plug, quick-disconnect, 3/8 steel, female
- PW-1065Gauge, 0-3000 psi
- PW-1070Gauge, 0-4000 psi
- PW-1105Nozzle, rotating, 2000 psi, less q/c fitting,
.....HPWD-1500 only
- PW-1110Nozzle, rotating, 3000 psi, less q/c fitting,
.....HPWD 2500/3000 only
- PW-1115Assembly, sandblast head, HPWD 1500
- PW-1116Assembly, sandblast head, HPWD 2500
- PW-1117Assembly, sandblast head, HPWD 3000
- PW-1120Plug, quick-disconnect, 1/4 male,
.....for rotating nozzle
- 10-WW-18Whirl-a-way, 18'
- 10-WW-24Whirl-a-way, 24'



WHIRL-A-WAY

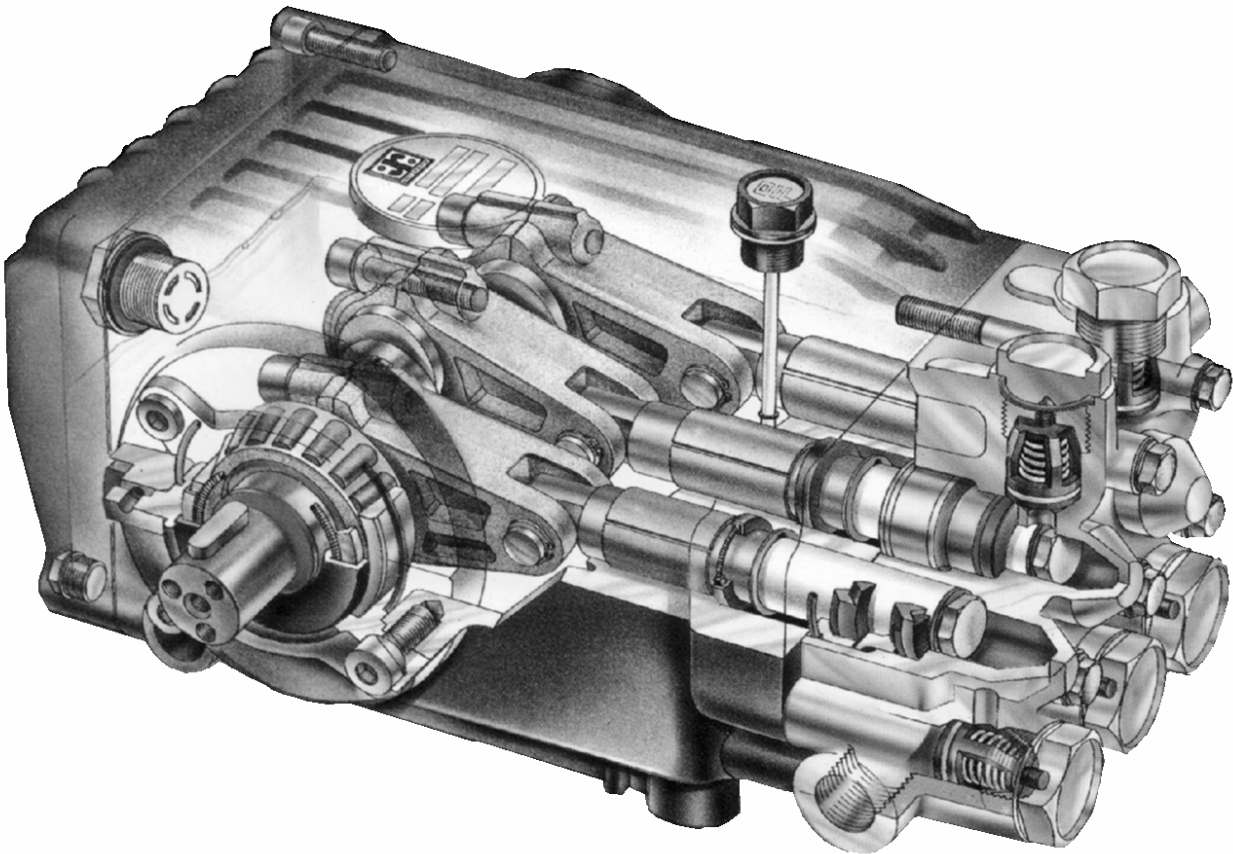


**SERVICE RECORDS
NOTES**

DATE	SERVICE PREFORMED	CHECK

HOERD

Pressure Washers



MODEL # _____

SERIAL # _____

PURCHASED ON _____

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