

H·E·R·O

Pressure Washers

PW-2530-AC

COMMERCIAL GRADE
COLD WATER PRESSURE WASHER
2500 PSI @ 3 GPM



H·E·R·O

HERO Products Group

Version 5 Feb 2006

SAFETY AND OPERATING MANUAL



**WARNING: DO NOT OPERATE THIS EQUIPMENT WITHOUT READING
AND UNDERSTANDING ALL SAFETY AND OPERATING INSTRUCTIONS
SEE PAGES 3 – 14**



**FACTORY LOCATED AT:
720 EATON WAY
DELTA, B.C. CANADA
V3M 6J9**

H·E·R·O

www.hero.ca

**U.S.A ADDRESS:
P.O. BOX 75
CUSTER, WASHINGTON
98240-0075**

PHONE: (604) 522-6543

FAX: (604) 522-8735

TOLL FREE: (800) 494-4376

<i>Table of Contents</i>	
Safety Instructions	3
Important Operating / Maintenance Instructions	3
Start-Up & Operation	4
Nozzle Selection & Chemical Injection	5
Trouble Shooting	6
Pump Schematic & Parts List	7
Unloader Valve/Chemical Injector Schematic & Parts List	8
Pressure Washer Cart Exploded View	9
Warranty	10

IMPORTANT SAFETY INSTRUCTIONS

This manual has important information for the use and safe operation of this machine. Read thoroughly and understand all warnings before using.

- ☑ Read all the instructions before using machine
- ☑ To reduce risk of injury, close supervision is necessary when the machine is used near children. Do not allow children to operate pressure washer at any time.
- ☑ Know how to stop the machine and bleed pressure quickly.
- ☑ Keep operating area clear of all persons.
- ☑ Follow the maintenance instructions specified in the manual.
- ☑ Operate this unit in a well ventilated area.
- ☑ Wear protective eye wear & clothing when operating.

- ☒ 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. Do not spray flammable liquids.
- ☒ Never add gasoline to a hot engine as this can result in a fire or explosion. Allow engine to cool before refueling.
- ☒ Never direct spray at pressure washer unit.
- ☒ Keep water spray away from any electrical wiring.

****WARNING****

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

IMPORTANT OPERATION / MAINTENANCE INSTRUCTIONS

- ☑ Change oil in pump after the first 50 hours, then every 500 hours.
**Use 30W Non-Detergent Hydraulic oil.
Available from Hero Industries, Part # PW-5015**
- ☑ 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 bled of all liquid.

START-UP AND OPERATION INTRODUCTION

1. Verify that the vented YELLOW dip stick is installed in the 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 Pump oil should be visible half way up sight glass. Use 30W non-detergent hydraulic oil.

2. Before first use, check engine and pump oil levels.

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. Model APS2500 = 4 GPM (gallons per minute), of water flow). Damage to the pump will occur if there is not enough volume. To check the water supply volume, obtain a empty 5 gallon container and record the time it takes to fill the container. It should be within the required GPM, if it is not then you should find another water supply.

4. Connect a minimum 5/8" diameter garden hose to the water inlet or bottom connection on the pump head (Female hose connector). Fig. 4

5. Connect the high pressure hose to the water "Outlet" or upper connection on the pump head. (Male quick connect nipple) as shown in Fig. 5.

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

7. Remove high pressure nozzle from quick coupler & open gun. This will allow pump to be fully primed before starting engine.

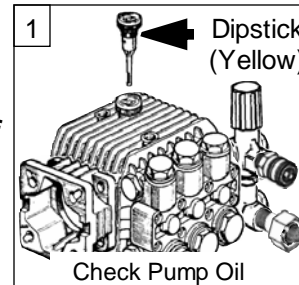
8. Turn on the water supply and make sure that there is no leaks in water supply hose.

9. Trigger the spray gun to purge all air from the system, **PRIOR** to starting engine.

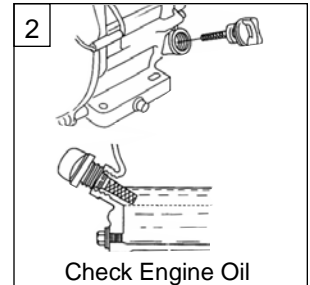
10. Start the engine by following this procedure:

- Turn the ON/OFF switch to ON.
- Turn the GAS to ON.
- Turn the CHOKE to FULL.
- Push the THROTTLE lever to the ON position.
- Pull the STARTING cord. Gun should be held open, with water flowing freely while pulling starting cord.
- Once the engine has started, reduce the CHOKE until it is OFF, and open the THROTTLE to full ON. It is now safe to release trigger to the off position. *Use these instructions in conjunction with instructions provided in the Honda manual.*

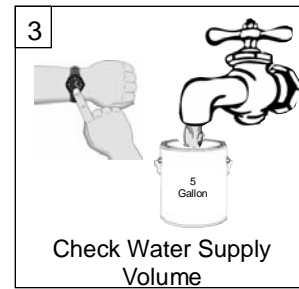
Continued on page 5



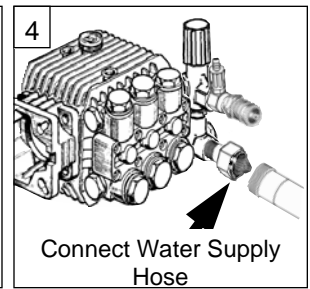
Check Pump Oil



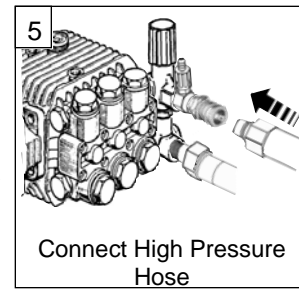
Check Engine Oil



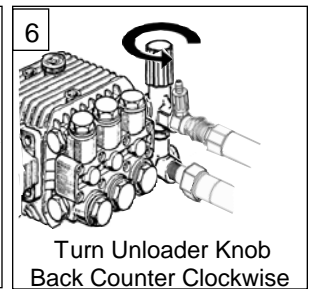
Check Water Supply Volume



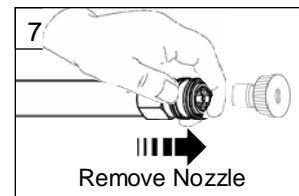
Connect Water Supply Hose



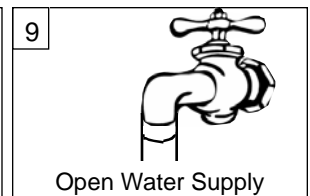
Connect High Pressure Hose



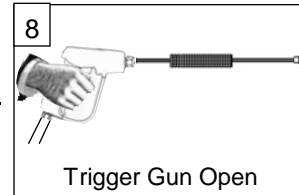
Turn Unloader Knob Back Counter Clockwise



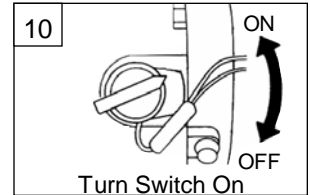
Remove Nozzle



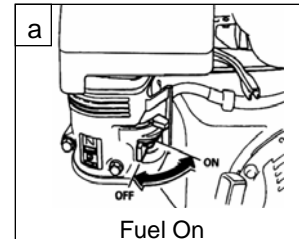
Open Water Supply



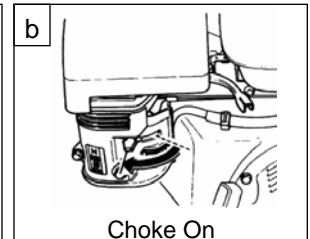
Trigger Gun Open



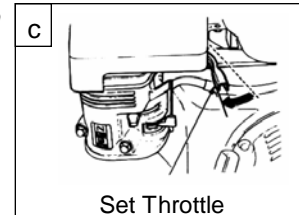
Turn Switch On



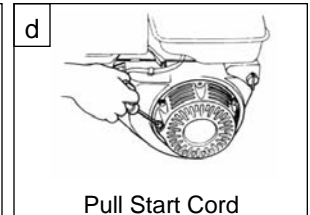
Fuel On



Choke On



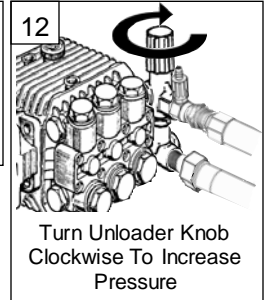
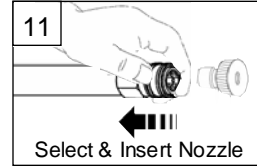
Set Throttle



Pull Start Cord

START-UP AND OPERATION INTRODUCTION

11. Select the desired tip for the job. Insert tip into wand (quick-connect fittings).
- | | | |
|--------|-----|--|
| RED | 0° | Direct Spray , <i>Direct or Concentrated Cleaning.</i> |
| YELLOW | 15° | Narrow Fan , <i>General Use.</i> |
| GREEN | 25° | Medium Fan , <i>General use.</i> |
| WHITE | 40° | Wide Fan , <i>Soft Pattern, For Rinsing.</i> |
| BLACK | 65° | Chemical Injector Tip. <i>Must be used when operating chemical injector</i> |
12. Trigger the gun and begin turning the unloader knob in a clockwise direction until you reach your desired pressure.

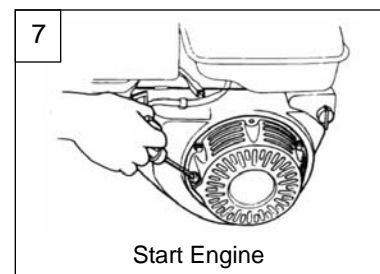
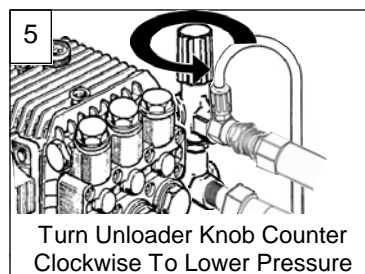
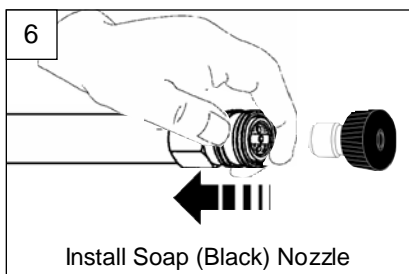
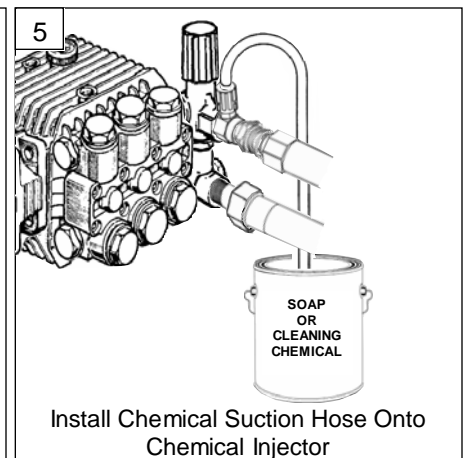
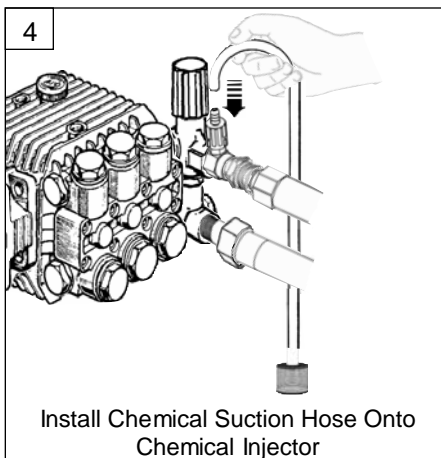
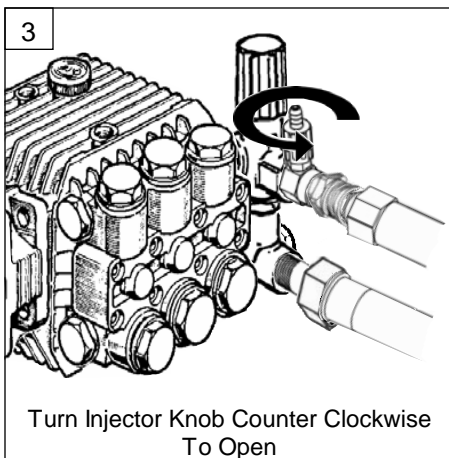
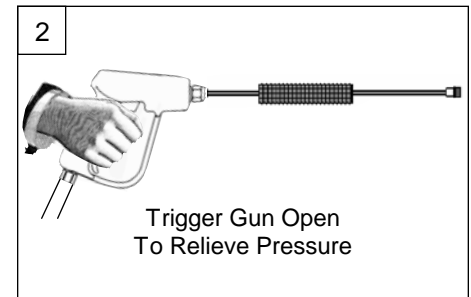
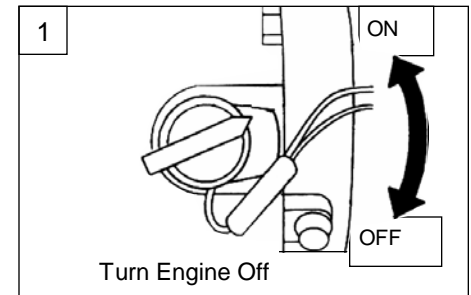


Chemical and Soap Spray

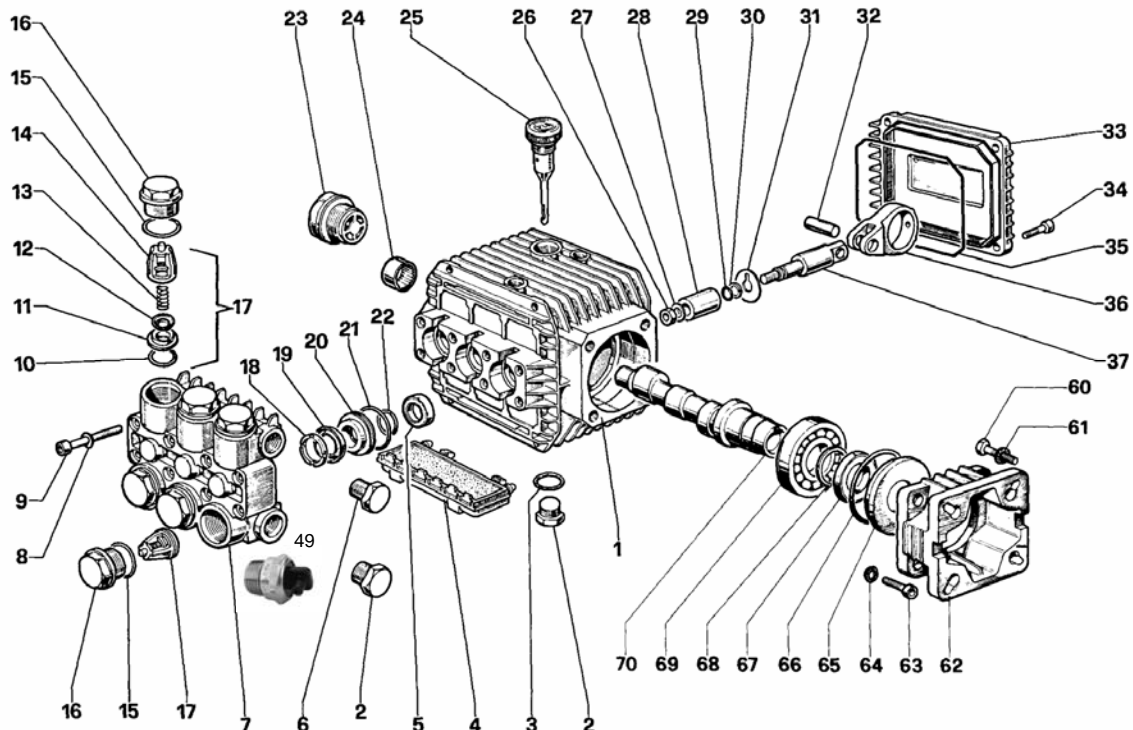
To introduce chemicals/detergent to the spray,

1. Turn unit off.
 2. Trigger gun to relieve all internal fluid pressure.
 3. Attach chemical injector to unit if using a quick disconnect injector.
 4. Open the chemical injector knob by turning it counter clockwise.
 5. Connect the chemical injector line to the chemical injector.
 6. Place the suction line filter end into the chemical / detergent jug. Use only detergent designed for use with pressure washers. Only use chemicals/detergents in well ventilated areas.
1. Install "Black" injector tip into gun. **VERY IMPORTANT.** The injector will only dispense detergent with the BLACK nozzle.
 2. Re-start pump and set pressure to low.
 3. Apply detergent to work surface. Do not allow detergents to dry on any surface.

Injector siphoning is best at very low pressure. Once the injector material stream has been established, the pump operating pressure can be increased. Remember to flush injector with clean water after use.



PUMP SCHEMATIC & PARTS LIST



REPAIR KITS						
Kit #	1	83	84	86	96	97
Ref # Included	6, 7, 8, 10, 11, 12,(17)	5	15, 16	20, 21, 22	18, 19, 20, 21, 22	18, 19, 21, 22
Number of Pieces						

Ref #	Part #	Description	Kit #	Qty
	PW-2555	Pump / Unloader Assy.		
	PW-2540	Pump Only		
1	PW-51010622	Crankcase		1
2	PW-98210000	Cap		2
3	PW-90383300	O-Ring		1
4	PW-51209051	Cover		1
5	PW-90156500	Oil Seal	83	3
6	PW-98204100	Cap		1
7	PW-51120041	Manifold		1
8	PW-96693800	Washer		8
9	PW-99194300	Screw, M6 X 40		8
10	PW-90384100	O-Ring	1	6
11		Sold Only in Kit 1	1	6
12		Sold Only in Kit 1	1	6
13		Sold Only in Kit 1	1	6
14		Sold Only in Kit 1	1	6
15	PW-90384700	O-Ring	84	6
16	PW-98221800	Valve Cap	84	6
17	PW-36703201	Valve Assembly	1	6
18	PW-51100051	Head Ring	96, 97	3
19	PW-90262000	Packing	96, 97	3
20	PW-51080070	Packing Retainer	86, 96	3
21	PW-90360400	O-Ring	86, 96, 97	3
22	PW-90383500	O-Ring	86, 96, 97	3
23	PW-97596800	Sight Glass		1
24	PW-91801500	Needle Bearing		1

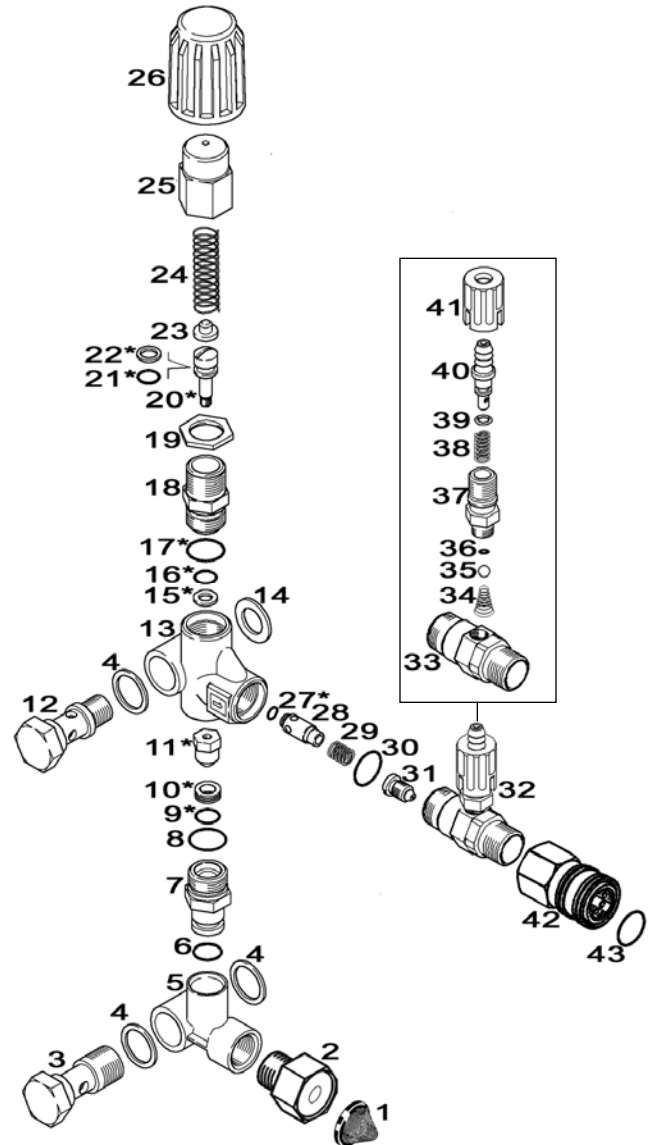
Ref #	Part #	Description	Kit #	Qty
25	PW-98210300	Dip Stick		1
26	PW-92221600	Nut, M8		3
27	PW-96700800	Washer, M8		3
28	PW-51040009	Plunger, (15 mm)		3
29	PW-90357200	O-Ring		3
30	PW-90502200	Back-up Ring		3
31	PW-967070	Washer, Finger		3
32	PW-9773100	Connecting Rod Pin		3
33	PW-51160022	Crankcase Cover		1
34	PW-99186700	Screw, M6 X 18		4
35	PW-90391700	Gasket		1
36	PW-51030022	Connecting Rod End		3
37	PW-51050056	Piston Guide		3
38	PW-99334500	Screw, 3/8-BSPP		4
39	PW-96710400	Washer, M10		4
40	PW-99186700	Screw, M6 X 18		4
41	PW-96693800	Washer, M6.4		4
42	PW-10034422	Flange		1
43	PW-50211551	Spacer		1
44	PW-90409700	O-Ring		1
45	PW-90164400	Oil Seal		1
46	PW-90066700	Snap Ring		1
47	PW-20283521	Bearing		1
48	PW-51020935	Crankshaft		1
49	PW-1077	Thermal Relief Valve		1

UNLOADER VALVE AND CHEMICAL INJECTOR

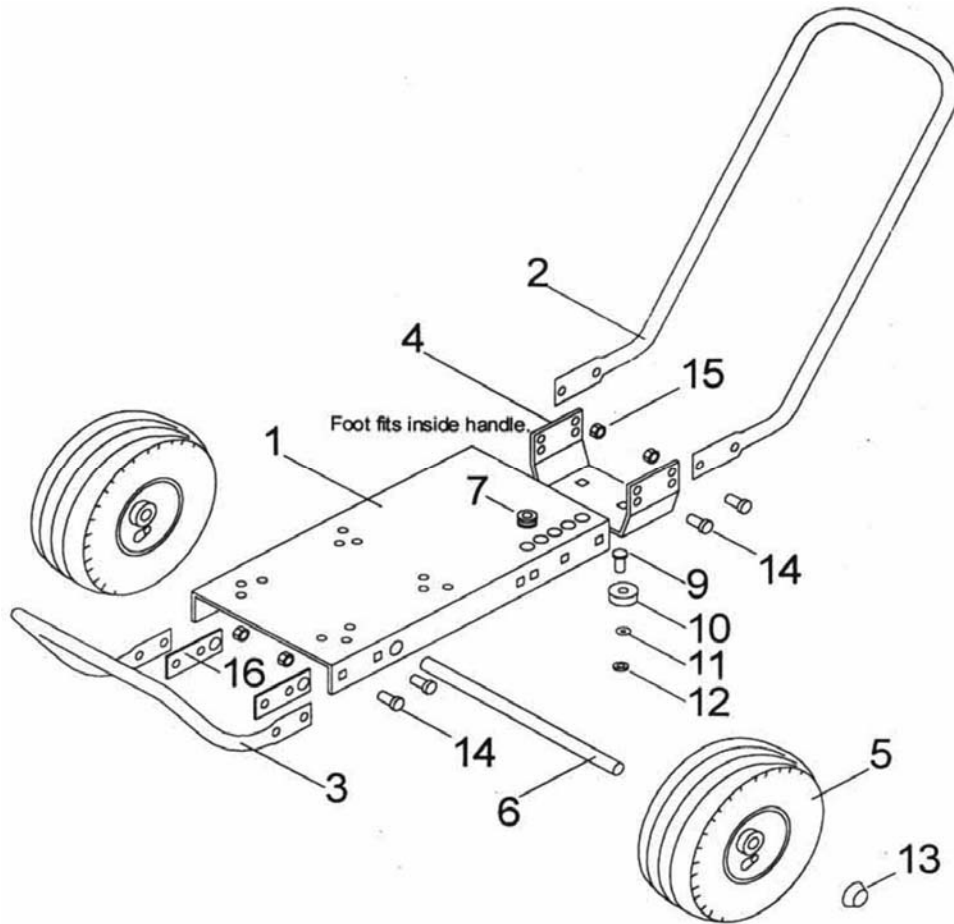
Ref #	Part #	Description	Kit	Qty
	PW-1130	Unloader Assembly		1
1	PW-1060	Filter Washer		1
	PW-1060	Filter Washer, Pack of 2		1
2	PW-1400	Inlet		1
3	PW-60080331	Banjo Bolt, 3/8", Brass		1
4	PW-14410000	Washer, 3/8"		1
5	PW-60082135	Manifold		1
6	PW-10310996	O-Ring		1
7	PW-60038231	Housing		1
8	PW-10306600	O-Ring		1
9	PW-10300500	O-Ring	*	1
10	PW-60031151	Seat	*	1
11	PW-60033321	Ball & Housing	*	1
12	PW-60038531	Banjo Bolt, 1/4", Brass		1
13	PW-60080135	Housing		1
14	PW-14381322	Aluminum Washer		1
15	PW-10400600	Back Up Ring	*	1
16	PW-10305101	O-Ring	*	1
17	PW-10306600	O-Ring	*	1
18	PW-60030331	Housing	*	1
19	PW-60031731	Lock Nut		1
20	PW-60033151	Piston		1
21	PW-10305500	O-Ring	*	1
22	PW-10400800	Back Up Ring	*	1
23	PW-60031061	Spring Seat		1
24	PW-60031361	Spring		1
25	PW-60030431	Knob, Brass		1
26	PW-60031584	Knob, Plastic		1
27	PW-60030135	O-Ring	*	1
28	PW-60038311	Check Valve		1
29	PW-60031251	Spring		1
30	PW-10306600	O-Ring		1
31	PW-21021351	Injector Nozzle		1
32	PW-100824	Chemical Injector Assembly		1
33	PW-21021131	Injector Body		1
34	PW-21016051	Spring		1
35	PW-14742001	Ball		1
36	PW-10304900	O-Ring		1
37	PW-21016131	Nipple		1
38	PW-21015851	Spring		1
39	PW-10304301	O-Ring		1
40	PW-21015532	Hose Barb		1
41	PW-21017184	Knob		1
42	PW-1050	Coupler, 3/8" NPT, Female		1
43	PW-1180	O-Ring, 3/8 Coupler		1
*	PW-60039824	Unloader Repair Kit	*	1

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 a poor economical choice.



PRESSURE WASHER CART SCHEMATICS



REF #	PART NUMBER	DESCRIPTION	QTY REQ'D
1	PW4330-1781	BASE	1
2	PW4330-1441	HANDLE, LONG	1
3	PW4330-1434	HANDLE, SHORT	1
4	PW4330-1436	FOOT BRACKET	1
5	PW4330-1726	WHEEL, TIRE 10.5" PNUEMATIC	2
6	PW4330-1727	AXLE	1
7	PW4330-1435	GROMMET	5
9	PW4330-1211	CARRIAGE BOLT, 3/8-16 X 1"	2
10	PW4330-1114	FOOT PAD, 2.5" DIA	2
11	PW4330-1115	FLAT WASHER, 3/8"	2
12	PW4330-1116	NUT, 3/8-16 NYLOCK	2
13	PW4330-1407	AXEL NUT, PUSH ON 5/8"	2
14	PW4330-1241	CARRIAGE BOLT, 1/4- 20 X 1"	8
15	PW4330-1209	NUT, 1/4-20 NYLOCK	8
16	PW4330-1792	AXEL SUPPORT, 5/8"	2

WARRANTY

I.C.T.C. H.E.R.O. Products Group pressure washer is warranted to be free from defects in materials and workmanship under normal use for a period of two years from the original date of purchase, when operated and maintained in accordance with the Maintenance and Operation Instructions supplied with the unit.

The warranty does not cover:

1. Misuse or negligence
2. Normal wear & tear items i.e. nozzles, hoses, quick couplers, O-rings, trigger guns, wands, belts, packings, pistons, valve assemblies, strainers or filters, thermal protectors
3. Damage due to freezing or fluctuations in water supply

This warranty is extended only to the original purchaser. Warranty is void if repairs are attempted by anyone other than an Authorized Service Center. Engines are warranted by their manufacturer & are assisted by their local service centers.

I.C.T.C. H.E.R.O. Products Group 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.

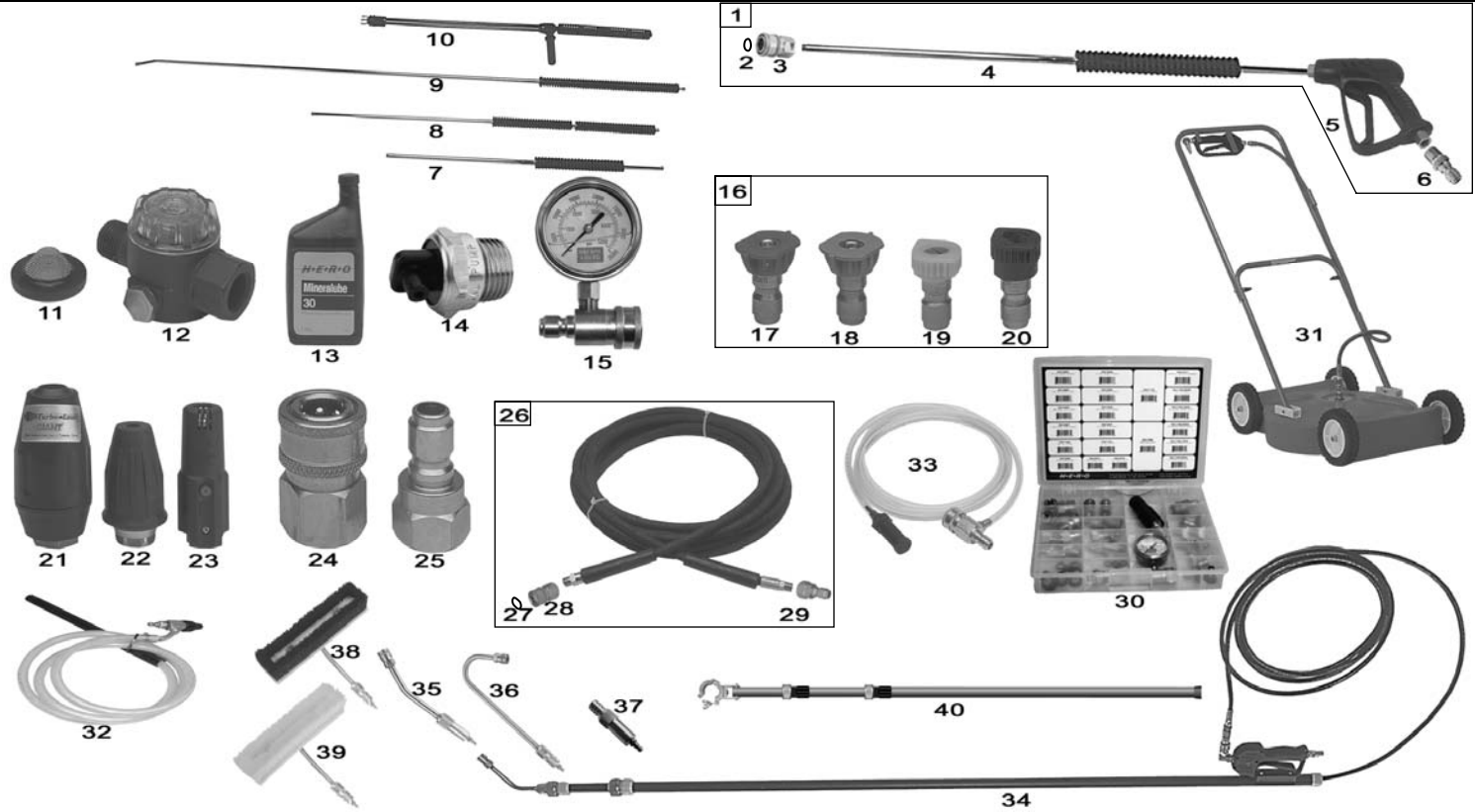
OIL CHANGE RECORD

DATE OIL CHANGED	DAY/MONTH/YEAR	ESTIMATED HOURS OF USE SINCE LAST OIL CHANGE

TROUBLE SHOOTING

Problem	Possible Cause	Solution
Pump running normally but pressure washer does not achieve rated pressure	Pump is sucking in air. Valves worn or dirty. Insufficient water flow. Unloader valve packing is worn. Nozzle incorrect size or worn. Worn piston packing.	Check that all hoses and fittings are tight. Check valves, 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 or packing. Insufficient water flow.	Check, clean or replace. Check that all hoses and fittings are tight. Check and replace. Increase water supply. Make require a different water supply source.
Pressure drops after period of normal use	Nozzle worn. Valves worn, dirty or stuck. Unloader valve packing is worn. Worn piston or packing.	Check and replace. Check, clean or replace. Check and replace. Check and replace.
Pump noisy/making unusual sounds	Pump is sucking in air. Valves worn or dirty. Worn bearings. Water too hot.	Check that all hoses and fittings are tight. Check valves, clean or replace. Check and replace if necessary. Reduce temperature.
Water and/or foam in the oil	High humidity in the air. Piston packing and oil seal worn.	Check and change oil twice as often. Check and replace.
Water dripping from under pressure washer	Piston Packing worn. Piston Plungers cracked. Thermal relief valve opened.	Check and replace. Check and replace. Designed to open at 140°F. Check and replace if necessary. Pressure washer running at idle too long. Shut down if not using for more than 2 minutes.
Oil dripping	Oil seal worn.	Check and replace.
Engine will not start or stalls	Lever not set to ON/Start position Fuel valve closed. Low or out of fuel. Low oil shutdown. Worn or fouled spark plug.	Check switch and move to ON position. Check switch and move to open position. Check fuel level and refill. Check oil and add if necessary. Check and replace if necessary.

ACCESSORIES



Ref #	Part #	Description	Ref #	Part #	Description
1	PW-1430	Gun & Wand Assembly, 3000 psi Max.	25	PW-1047	Nipple, Steel, Female, 1/4" NPT
2	PW-1181	O-Ring, 1/4" Coupler		PW-1057	Nipple, Steel, Female, 3/8" NPT
	PW-1181-6	O-Ring, 1/4" Coupler, Pack of 6		PW-1046	Nipple, Steel, Male, 1/4" NPT
3	PW-1045	Q.D Coupler Brass, Female, 1/4"		PW-1055	Nipple, Steel, Male, 3/8" NPT
4	PW-1010	Wand, 36" 3000 psi Max.	26	PW-1425	Hose Assembly, 50' x 3/8", Includes Ref # 27 - 29
5	PW-1000	Heavy Duty Gun, 4000 psi Max.		PW-1455	Hose Assembly, 30' x 3/8", Includes Ref # 27 - 29
6	PW-1055	Nipple, Steel, Male, 3/8"	27	PW-1181	Q/D Coupler O-Ring, 3/8
7	PW-1010	Wand, 36" 3000 psi Max		PW-1181-6	Q/D Coupler O-Ring, 3/8, Pack of 6
8	PW-1012	Wand, 47" 3000 psi Max.	28	PW-1050	Q/D Coupler, Brass, Female, 3/8" NPT
9	PW-1017	Wand, 79" 3000 psi Max.	29	PW-1057	Nipple, Steel, Female, 3/8" NPT
10	PW-1015	Dual Wand, 36" 3000 psi Max.	30	PW-PARTSKIT	Parts & Accessory Kit, Includes Couplers, Nipples, Nozzles, Turbo Nozzle, Strainers, Test Gauge, O-Rings & Thermal Relief Valve
11	PW-1060	Pump Inlet Filter Washer	31	PW-FSC24	Flat Surface Cleaner, 24" Width
	PW-1060-2	Pump Inlet Filter Washer, 2 Pack	32	PW-1116	Sandblast Kit, 2500 psi Max.
12	PW-1062	Inline Pump Inlet Filter	33	PW-1416	Chemical Injector Assembly, 3000 psi Max.
13	PW-5015	Pump Oil, 1 Quart	34	PWH-9206	6 to 12 Feet Telescopic Wand System, Includes: 45° Single Jet Nozzle, Broom Thread Adapter, 8" Starter Brush,
	PW-5015-MP	Pump Oil, 1 Quart, Case of 12		PWH-9208	8 to 16 Feet Telescopic Wand System, Includes: 45° Single Jet Nozzle, Broom Thread Adapter, 8" Starter Brush,
14	PW-1077	Thermal Relief Valve, 3/8" NPT		PWH-9306	6 to 18 Feet Telescopic Wand System, Includes: 45° Single Jet Nozzle, Broom Thread Adapter, 8" Starter Brush,
15	PW-1480	Pressure Test Gauge Kit, 4000 psi Max.		PWH-9308	8 to 24 Feet Telescopic Wand System, Includes: 45° Single Jet Nozzle, Broom Thread Adapter, 8" Starter Brush,
16	PW-1100-035	3.5 Nozzle Kit, Set of 4, 15, 25, 40, & Soap		PWH-9406	6 to 24 Feet Telescopic Wand System, Includes: 45° Single Jet Nozzle, Broom Thread Adapter, 8" Starter Brush,
17	PW-1100-15035	3.5 Nozzle, 15 Degree, Yellow		PWH-9408	8 to 32 Feet Telescopic Wand System, Includes: 45° Single Jet Nozzle, Broom Thread Adapter, 8" Starter Brush,
18	PW-1100-25035	3.5 Nozzle, 25 Degree, Green	35	PW-9053	45° Single Jet Nozzle Attachment, Telescopic Wand
19	PW-1100-25035	3.5 Nozzle, 40 Degree, White	36	PW-9050	Gutter Hook Attachment, Telescopic Wand
20	PW-1100-6540	Soap Nozzle, 65 Degree, Black	37	PW-9070	Flow Through Broom Thread Adapter Attachment, Telescopic Wand
21	PW-1107-40	Turbo Laser Nozzle, Cone Pattern	38	PW-9065	12" Low Pressure, Two Jet, Multi-Purpose Brush, Telescopic Wand
22	PW-1109-45	Turbo Nozzle, Elliptical Pattern	39	PW-9067	12" High Pressure, Two Jet, Hard Surface Brush, Telescopic Wand
23	PW-1110	Rotating Nozzle	40	PWS-9206	6 to 12 Feet Telescopic Wand Support Pole
24	PW-1045	Q/D Coupler, Brass, Female, 1/4" NPT		PWS-9306	6 to 18 Feet Telescopic Wand Support Pole
	PW-1050	Q/D Coupler, Brass, Female, 3/8" NPT			
	PW-1046	Q/D Coupler, Brass, Male, 1/4" NPT			
	PW-1052	Q/D Coupler, Brass, Male, 3/8" NPT			