

ELECTRIC HIGH PRESSURE WASHER

INSTRUCTION MANUAL

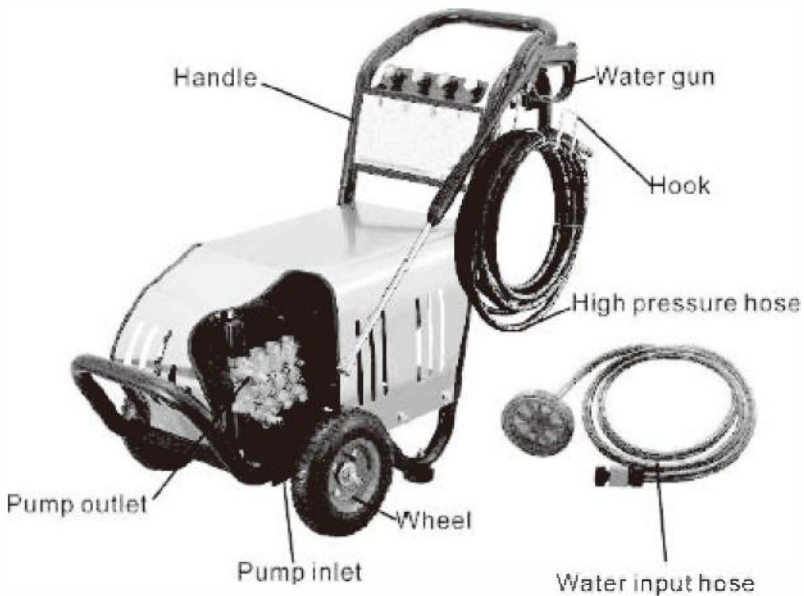


Please read this book carefully before operating.

APPLICATION

High pressure washer mainly used for cleaning and maintaining motor vehicle, project vehicle, project mechanism and agricultural mechanism, such as cleaning car, bulldozer, concrete stirrer and so on, also can be used to clean hotel, showplace, station, dock and so on.

ITEM DESCRIPTION



WORKING THEORY

Motor connect to crank directly, driving piston pump working, water enter into pump through inlet hose, high pressure stream pass by outlet connector, high pressure hose enter into trigger valve, press high pressure , water sprayed by nozzle of spray pole.

MAIN TECHNICAL DATA

MODEL	ES1.8-2	ES2.2-2	ES3-2	ES2.2-4	ES3-4	ET2.2-4	ET3-4	ET4-4	ET5.5-4	ET7.5-4
WORK PRESSURE	100-110Bar	90-100Bar	110-120Bar	90-100Bar	110-120Bar	90-100Bar	110-120Bar	186-200Bar	230-250Bar	230-250Bar
MAX PRESSURE	130Bar	130Bar	150Bar	130Bar	150Bar	130Bar	150Bar	220Bar	275Bar	275Bar
RATED POWER	1.8KW	2.2KW	3KW	2.2KW	3KW	2.2KW	3KW	4KW	5.5KW	7.5KW
WORK VOLTAGE	220V50HZ	220V50HZ	220V50HZ	220V50HZ	220V50HZ	380V50HZ	380V50HZ	380V50HZ	380V50HZ	380V50HZ
ROTATE SPEED	2800RPM	2800RPM	2800RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM
THEORY FLOW	6.5LPM	12.6LPM	12.6LPM	12.6LPM	12.6LPM	12.6LPM	12.6LPM	12.6LPM	12.6LPM	15LPM

Never

Never point nozzle at people or animals.

Never drink alcohol or use drugs while operating this equipment.

Never operate while standing in water.

Never touch plug with wet hands.

Never let electrical connections rest in water.

Never operate pressure washer without the water turned on

Never use hot water

SAFETY RULE

When using this product, basic precautions should always be followed:

- Read all the instructions before using the product.
- High pressure jets can be dangerous if subject to misuse. The jet must not be directed at persons, animals, electrical devices, or the machine

itself.

- To reduce the risk of injury, do not operate the machine near children.
- Learn how to stop the machine and release pressure quickly. Be thoroughly familiar with the controls.
- Stay alert — watch what you are doing.



- Wear safety goggles.
- Do not use acids, solvents, or any flammable material in this product.

These products can cause physical injuries to the operator and irreversible damage to the machine.

- Do not operate the product when fatigued or under the influence of alcohol or drugs.
- Keep operating area clear of all persons.
- Do not stand on unstable surfaces. Stand with both feet balanced at all times.
- To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.
- The Trigger Gun Safety Lock PREVENTS the trigger from accidentally being engaged. This safety feature DOES NOT lock trigger in the on position.

Water Supply (Cold Water Only)

- Water hose must be at least 1/2 inch in diameter.

- Flow rate of water supply must not fall below 4 GPM (gallons per minute).
- Flow rate can be determined by running the water for one minute into an empty 5-gallon container.
- The water supply temperature must not exceed 104°F/40°C.
- Never use the pressure washer to draw in water contaminated with solvents, e.g. paint thinner, gasoline, oil, etc.
- Always prevent debris from being drawn into the unit by using a clean water source.

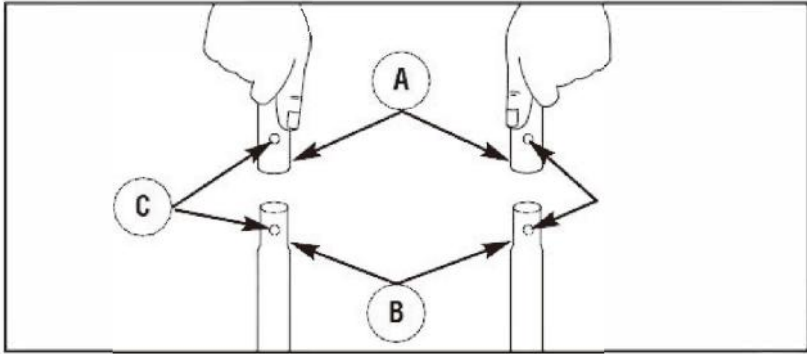
ASSEMBLY INSTRUCTIONS

To prepare your pressure washer for operation, you will need to perform these tasks:

1. Attach handle, wheel, hook
2. Add oil to pump.
3. Connect high pressure hose to spray gun and pump.
4. Connect water supply to pump.
5. Attach nozzle extension to spray gun.
6. Connect power.

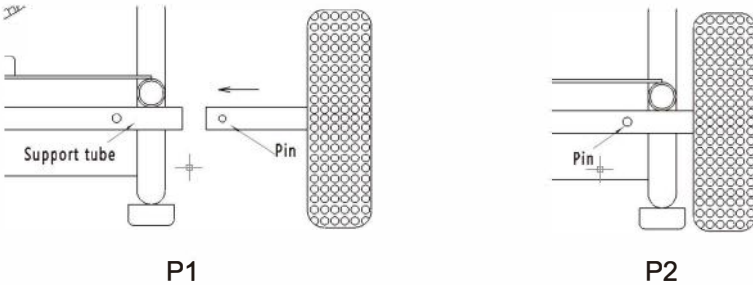
Attach Handle and wheel

1. Place handle **(A)** onto handle supports **(B)** connected to main unit.
Make sure holes **(C)** in handle align with holes **(C)** on handle supports.



NOTE: It may be necessary to move the handle supports from side to side in order to align the handle so it will slide over the handle supports. Hold the location pin in the wheel set backward in horizontal level and press the locating pin into supporting tube until the click is heard, which indicates the pin clutches at the supporting tube.(P1)

Until the pin is higher than the thickness of supporting wall.(P2)



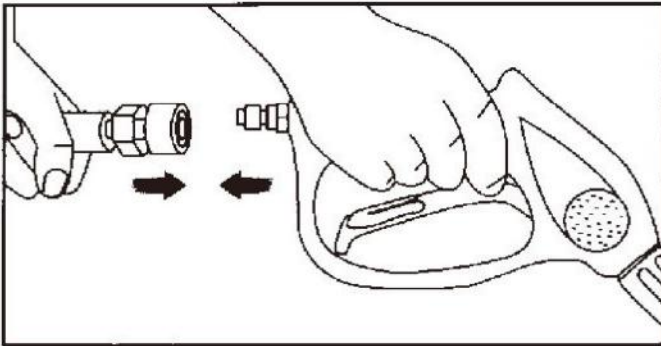
Add pump Oil

- Place pressure washer on a level surface.
- For the convenience of transport, Pump without machine oil, and Breather plug is not installed. Please add 15W/40 machine oil before

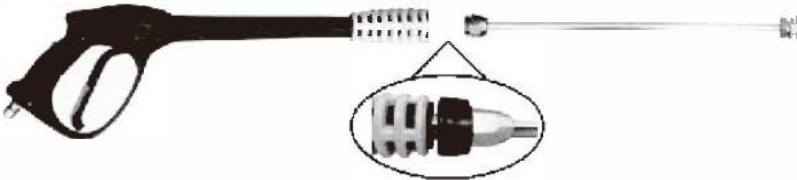
using. Machine oil quantity is subject to slightly not too oil lens center line, then install the breather plug.

Connect Hose and Water Supply to Pump

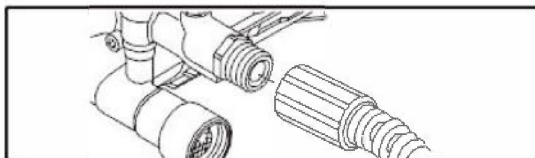
1. Attach high pressure hose to gun. Tighten securely.



2. Connect spray wand to gun. Tighten securely.

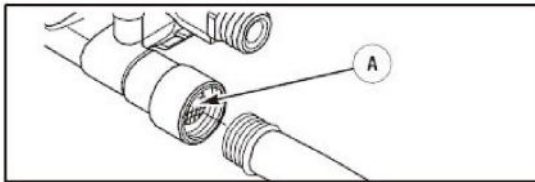


3. Assemble grommet kit and quick-connect nozzles as described in the instructions supplied.
4. Attach other end of high pressure hose to high pressure outlet on pump. Tighten by hand.



5. Run water through your garden hose for 30 seconds to clean out any debris. **IMPORTANT:** DO NOT siphon standing water for the water supply. Use ONLY cold water (less than 104°F (40°C)).

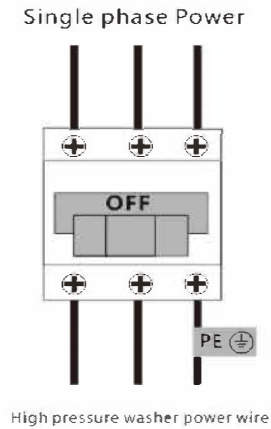
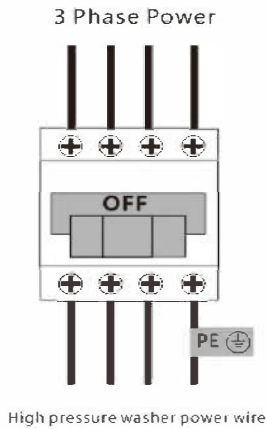
6. Before connecting water inlet hose to water inlet, inspect inlet screen (A). Clean screen if it contains debris or have it replaced if damaged. DO NOT run pressure washer if inlet screen is damaged.



7. Connect the water inlet hose (not to exceed 50 feet in length) to the water inlet. Tighten by hand.

CONNECT POWER

1. Choose right power supply nearby
2. Turn off power switch
3. Connect the power wire of high pressure washer.
4. Turn on power switch



GROUNDING Instructions

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER- Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Do not use any type of adapter with this product.

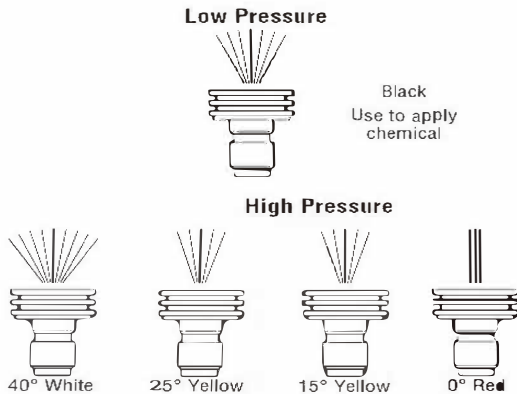
HOW TO USE

Turn on the pressure washer (I). **The motor starts only if the trigger of the gun is pulled and shuts off when the trigger is released.**

Read instruction manual carefully before operating this machine, check whether screw, nut loose, oil in crank tank dry. If no oil, shall inject to half, exchange oil-cork with hole. Not allowed to be working without oil. Connect one side of high pressure hose to pump body, the other side connected to spray gun, then connect the inlet hose to inlet connector, ensure not leakage, open water source, press spray gun, waiting for drain all air inside then turn on switch, can be use.

How to Use Spray Tips

The quick-connect on the nozzle extension allows you to switch between four different quick connect spray tips. Spray tips can be changed while pressure washer is running once spray gun trigger lock is engaged. The spray tips vary the spray pattern as shown below.



1. Pull back collar on quick-connect and pull current spray tip off. Store spray tips in holder provided on the nozzle extension.
2. Select desired spray tip:
 - For gentle rinse, select white 40° spray tip.
 - To scour surface, select yellow 15° or red 0° spray tip.
 - To apply detergent, select black spray tip.
3. Pull back on collar, insert new spray tip and release collar. Tug on spray tip to make sure it is securely in place.

Usage Tips

- For most effective cleaning, keep spray tip from 8 to 24 inches (20 to 61 cm) away from cleaning surface.
- If you get spray tip too close, especially using a high pressure Spray tip, you may damage surface being cleaned.
- DO NOT get closer than 6 inches (15 cm) when cleaning tires.

OPERATING AND MAINTENANCE

When cleaning, the distance between spray nozzle to surface not too far, shall be 10cm, because the pressure of the spray nozzle will be reduce if too far.

The pressure not over working pressure, pressure shall be adjusted under jet situation.

When operating, the bottom of pump if have few drips, not effect using. It is normal.

When finished cleaning, release trigger valve, turn off motor (within 3 minutes), because after release trigger valve the will do bypass working, water flowed in the pump body, if too long, will be very hot, broken seal or other parts.

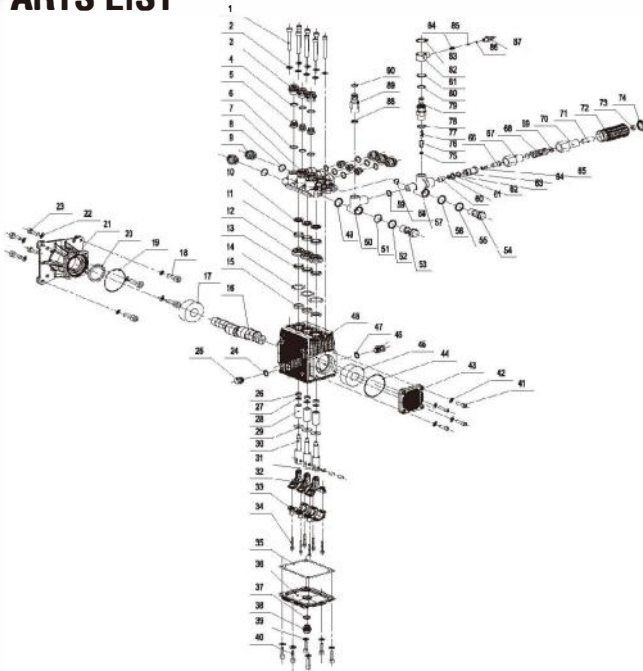
Spray pole is made of iron paint chrome, keep carefully when operating, when not using, put the spray gun hung on the pothook, drain out the balance water inside.

If Long-term stock, drain out all water in pump, separate inlet hose from water source, running motor about 1 minutes without water source, take inlet hose and high pressure hose drain all water in hose, when high pressure hose drain shall press trigger valve.

TROUBLE SHOOTING

Trouble	Cause	Remedy
The motor fails to start or when running automatic stop	<ol style="list-style-type: none"> 1. No power or socket is not good enough 2. Switch is broken 3. No oil in crank tank 4. Voltage too low 5. Motor burn out 	<ol style="list-style-type: none"> 1. Check power, repair socket 2. Change switch 3. Inject oil 4. Check voltage 5. Change motor
No jet from nozzle or pressure not stabile.	<ol style="list-style-type: none"> 1. Nozzle blocked 2. Inlet hose broken 3. air in the pipe 4. filter blockage 	<ol style="list-style-type: none"> 1. Dredge nozzle 2. Check connector of inlet hose, drain air of hose or change inlet hose. 3. First check whether the connection of screw thread end of water inlet hose is tight, and then fill the inlet hose with water, next trigger the gun, and start the motor. 4. clean the filter.
Spray gun and connector leakage	<ol style="list-style-type: none"> 1. Screw of connector loosen or seal broken 2. Quick connector not in proper position or O-ring broken 	<ol style="list-style-type: none"> 1. Tighten screw or change seal. 2. Re-insert quick connector or change seal.
Crankcase heats	<ol style="list-style-type: none"> 1. Too much oil 2. The friction between the connecting rod and the crankshaft caused by too little oil. 	<ol style="list-style-type: none"> 1. let out the extra oil. 2. dismantle the pump to remove friction marks ob the connecting rod and crankshaft.
No water or too little water from the gun	<ol style="list-style-type: none"> 1. the new pump can not suck water 2. debris in the pump 3. water inlet and outlet check valve damaged 	<ol style="list-style-type: none"> 1. start the motor and fill the water inlet hose with the water to drain up the air in the hose 2. dismantle and repair the pump 3. change the check valve

PUMP PARTS LIST



No.	Name	Qty	No.	Name	Qty	No.	Name	Qty	No.	Name	Qty	No.	Name	Qty
1	Bolt	8	19	O-ring	1	37	O-ring	1	55	O-ring	1	73	Nut	1
2	Washer	8	20	Frame oil seal	1	38	Oil plug	1	56	O-ring	2	74	Regulator handle cover	1
3	Valve cap	6	21	Connection base	1	39	Washer	6	57	Cross connector	1	75	O-ring	1
4	O-ring	6	22	Spring washer	4	40	Bolt	6	58	O-ring	1	76	Bypass valve	1
5	Inlet valve	6	23	Bolt	4	41	Bolt	4	59	O-ring	1	77	Bypass spring	1
6	O-ring	6	24	O-ring	1	42	Washer	4	60	Regulating valve	1	78	O-ring	1
7	copper pump body	1	25	Oil plug	1	43	Crankcase small cover	1	61	O-ring	1	79	Outlet connector	1
8	O-ring	2	26	Nut	3	44	O-ring	1	62	O-ring	1	80	O-ring	1
9	Stopper	2	27	Flat washer	3	45	Bearing	1	63	O-ring	1	81	O-ring	1
10	Flat washer	3	28	Ceramic plunger	3	46	Vent plug	1	64	Valve core frame	1	82	Revolvable connector	1
11	water seal	3	29	Copper washer	3	47	O-ring	1	65	O-ring	1	83	Axis spring clip	1
12	Middle sleeve	3	30	Plunger core	3	48	Crankcase	1	66	Regulating valve core	1	84	Tower spring	1
13	Water Seal PD18	3	31	Column pin	3	49	O-ring	1	67	Copper connector	1	85	Steel ball	1
14	O-ring	3	32	Connection shaft	3	50	Cross connector	1	68	Regulating spring	1	86	O-ring	1
15	Oil seal	3	33	Connection shaft base	3	51	O-ring	1	69	Regulating spring washer	2	87	Detergent pipe inlet	1
16	Shaft	1	34	Bolt	6	52	O-ring	1	70	Regulator cover	1	88	O-ring	1
17	Bearing	1	35	Crankcase washer	1	53	Inlet connector I	1	71	Bolt	1	89	Inlet connector	1
18	Bolt	4	36	Crankcase big cover	1	54	Inlet connector	1	72	Regulator handle	1	90	O-ring	1