

# **BOSS PRESSURE WASHERS LTD.**

**INDUSTRIAL HOT WATER PRESSURE WASHER**



**Call us at 1-888 811 4659**

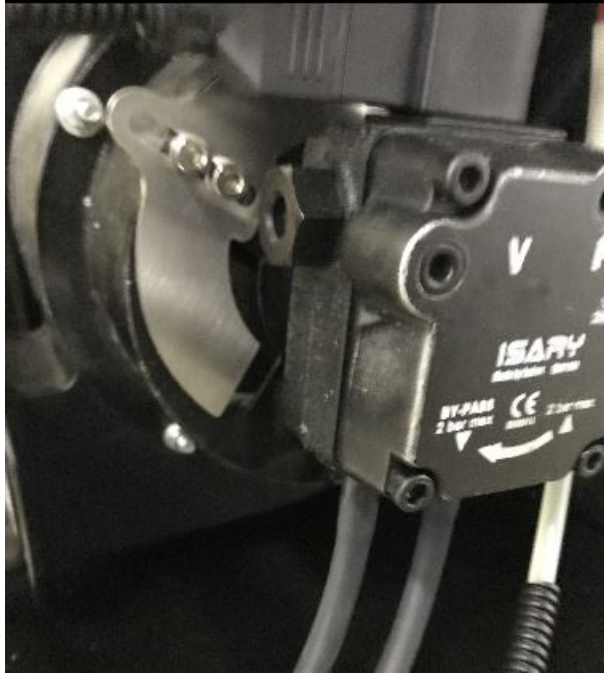
*[www.bosspressurewashers.com](http://www.bosspressurewashers.com)*

## **INDUSTRIAL HOT WATER PRESSURE WASHER OPERATOR'S MANUAL**

***READ USER MANUAL COMPLETELY  
PRIOR TO USING ALL MACHINERY!!***

## **IF MACHINE IS BLOWING BLACK SMOKE:**

If blowing black smoke you need to open the air intake plate located behind the diesel pump protecting the fan. You will see allen screws. Loosen them partially and pull adjust the plate so there is a wider opening and then tighten the screws. This should help the incomplete combustion which may be occurring.



## **IF MACHINE IS HAVING A BURNER ISSUE:**

1. Make sure the machine is on and cycling water. If it's hooked up to a hose or a water tank, make sure water is flowing through the machine.
2. Check that there is enough diesel in the tank.
3. Check your battery, if it is not fully charged the burner will not fire. (not leaving the burner switch on will deplete the battery over time)
4. Check the igniter tips for the burner for proper alignment and make sure they are clean. This can be done by removing the three bolts that hold the burner assembly together. Realign the contacts and clean the contacts with emery cloth or fine grit sandpaper.
5. If all of the first 4 steps do not work check that the diesel fuel pump is pumping fuel. This can be done by having the machine running with the burner switched to on, remove the out fuel line (clear plastic hose going to the burner from the pump. Tip make sure you have a container to catch the excess diesel)
6. Make sure the diesel fuel pump is plugged in fully. This is located on the Honda side of the machine in the lower cavity.
7. Make sure the electrical contacts for the igniter are firmly seated.
8. Make sure the diesel fuel nozzle in the burner assembly is clean and free of blockage
9. Advanced steps: You will need to open the burner control panel. 1. Make sure the timer delay is seated and the dial is set to the proper function. 2. Make sure the relays are fully seated and operating (you can test this by having the machine on and move the off/on switch and thermostat dial, they will light up with green light if functioning)
10. Electrical testing: 1. Test the fuel pump electrical it should be receiving 12v power 2. Test the igniter contacts should be receiving 6-12v 3. Test the timer delay contact, relay contact. 4. Test the transformer(voltage shown on it as these units vary) 5. Test the thermostat, it should be receiving 3-6v

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date of purchase and keep in a safe place for future reference.

Model Number \_\_\_\_\_  
 Serial Number \_\_\_\_\_  
 Date of Purchase \_\_\_\_\_

**INTRODUCTION & IMPORTANT SAFETY INFORMATION**

The model and serial numbers will be found on a decal attached to the pressure washer. You should record both serial number and

Thank you for purchasing this Hot Water Pressure Washer. All information in this manual is based on the latest product information available at the time of printing. We reserves the right to make changes at any time without incurring any obligation. 1

**Owner/User Responsibility:**

The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this pressure washer. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warnings should be read to and discussed with the operator in the operator's native language by the

Purchaser/owner, making sure that the operator comprehends its contents.

Owner and/or user must study and maintain for future reference the manufacturers' instructions.

**This manual should be considered a permanent part of the machine and should remain with it if machine is resold.**

**When ordering parts, please specify model and serial number.**

**IMPORTANT SAFETY INFORMATION**

**CAUTION: To reduce the risk of injury, read operating instructions carefully before using.**

- CAUTION** 1. Read the owner's manual thoroughly. Failure to follow

**WARNING: Flammable liquids can create fumes which can ignite causing property damage or severe injury.**



5. Risk of explosion - do not spray flammable liquids or operate in an explosive location. Operate only where open flame or torch is permitted.

**WARNING: Do not place machine near flammable objects when the engine is hot.**

**WARNING: Keep water spray away from electrical wiring or fatal electric shock may**



result.

**WARNING: Spray gun kicks back. Hold with both hands.**

6. Grip cleaning wand securely with both hands before starting the cleaner. Failure to do this could result in injury from a whipping wand.

**WARNING: Risk of fire. Do not add fuel when the machine is operating.**

7. Allow engine to cool for 2 minutes before refueling. If any fuel is spilled, make sure area is dry before testing spark plug

or starting the engine. (Fire and/or explosion may occur if this is not done.)

Gasoline engines on mobile or portable equipment shall be refueled:

- a. Outdoors;
- b. With the engine on the equipment stopped;
- c. With no source of ignition within 10 feet of the dispensing point;
- d. Make allowances for expansion of the fuel should the equipment be exposed to a higher ambient temperature.



In an overfilling situation, additional precautions are necessary to ensure that the situation is handled in a safe manner.



**WARNING: Risk of infection or severe injury to persons - Keep clear of nozzle - Do not touch or directly discharge stream at persons. This machine is to be used only by trained operators.**

**CAUTION: Hot discharge fluid. Do not touch or directly discharge stream at persons.**

10. Never make adjustments on machine while in operation.

**WARNING: Use only in well ventilated areas. Failure to observe this warning could cause a loss of consciousness or death. This machine was designed for outdoor use only. Use,**

**high pressure extension hose to clean indoors. Store indoors.**

9. Eye safety devices and foot protection must be worn when using this equipment.
11. Avoid installing in small areas or near exhaust fans Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death. It also contains chemicals known, in certain quantities, to cause cancer, birth defects or other reproductive harm.
12. Do not operate with the spray gun in the off position for more than five minutes as this may cause damage to the pump.
13. The best insurance against an accident is precaution and knowledge of the machine.
14. We will not be liable for any changes made to our standard machines, or any components not purchased from us.
15. Read engine safety instructions provided.
16. Never run pump dry or leave spray gun closed longer than 5 minutes.

17. Inlet water must be from a cold, clean fresh city water supply.

**WARNING: Only use recommended fuel. Using other fuels may result in a serious explosion causing personal injury, property damage or loss of life.**



- 25. Protect high pressure hose from vehicle traffic and sharp objects.
- 26. Before disconnecting high pressure hose from water outlet, turn burner off and pull the trigger on the spray gun allowing water to cool to below 100° F before stopping machine. Then open the spray gun to relieve pressure. Failure to properly cool down or maintain the heating coil may result in a steam explosion and/or heating coil damage.
- 27. Do not overreach or stand on unstable support. Keep good footing and balance at all times.
- 28. **This machine must be attended during operation.**
- 29. **IMPORTANT NOTICE:** When using the boiler on the pressure washer be sure to run cold water through the boiler before shutting down the machine
- 30. **IMPORTANT NOTICE:** Make sure you only use SAE 30 or 40 non-detergent oil in the pump
- 31. **CAUTION: Risk of injury. Disconnect battery ground terminal before servicing.**
- 32. **CAUTION: Moving this machine on a slope causes instability and may result in machines tipping over. Use lifting bar provided on the center top of frame.**

## COMPONENT IDENTIFICATION

### Refer to Appendix

**Pump** — Develops high pressure.

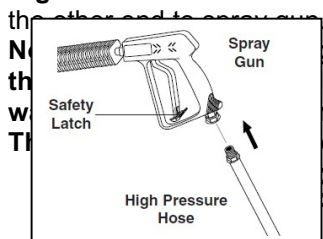
**Starter Grip** — (Not Shown) Used for starting the engine manually.

**Spray Gun** — Controls the application of water and detergent onto cleaning surface with trigger device. Includes safety latch.

**Detergent Injector** — Allows you to siphon and mix detergents.

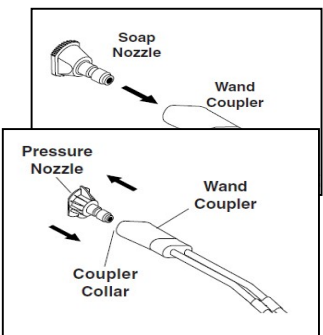
**Variable Pressure Control Wand** — Must be connected to the spray gun. This wand handle controls discharge flow from one tube to both wand tubes. When water is discharged from both tubes you will have a pressure loss and allows chemical siphoning when used in combination with a detergent injector.

**High Pressure Hose** — Connects to the pump and to the spray gun.



**STEP 1:** Attach the high pressure hose to the spray gun using teflon tape on the threads. Place the pump protector on the floor. Internal pump damage.

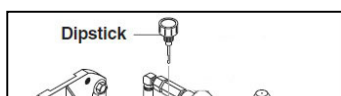
## ASSEMBLY INSTRUCTIONS



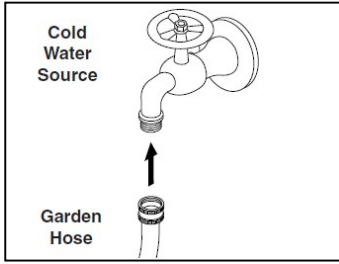
**STEP 2:** Pull the spring-loaded collar of the wand coupler back to insert your choice of pressure nozzle.

**STEP 3:** Release the coupler collar and push the nozzle until collar clicks.

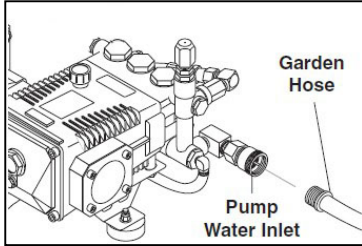
Pull the nozzle to make sure it is seated properly.



**STEP 4:** Remove shipping cap and install oil dipstick. Check pump oil level by using dipstick or observe oil

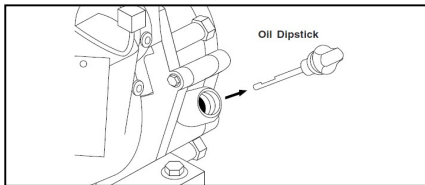


**STEP 6:** Connect garden hose to the cold water source.



**STEP 7:** Connect the garden hose to pump water inlet. Inspect inlets. **CAUTION:** Do not run the pump without water or pump damage will result.

## OPERATING INSTRUCTIONS

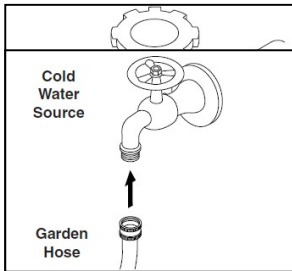


**STEP 1:** Check engine oil level. Oil level should be level with the bottom of the oil filler neck. Be sure the machine is level when checking the oil level. (Refer to the engine's operating manual included with machine.) We recommend

that the oil be changed after the first 5 hours of use, then once every 50 hours.

**Note:** Improper oil levels will cause low oil sensor to shut off engine.

**IMPORTANT!** Do not run engine with high or low oil levels as this will cause engine damage.

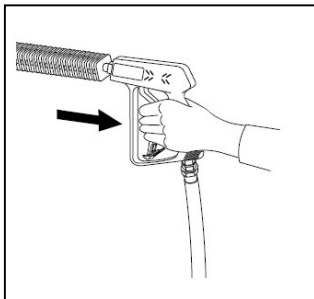


**STEP 2:** Do not use leaded gasoline. Do not use leaded gasoline.

**STEP 3:** Read warnings on

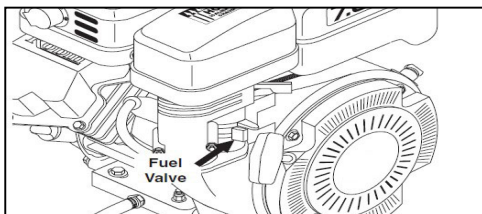
pg 4 of engine manual.

completely. Never use hot water.



**STEP 4:** Trigger the spray gun to eliminate trapped air then wait for a steady flow of water to emerge from the spray nozzle.

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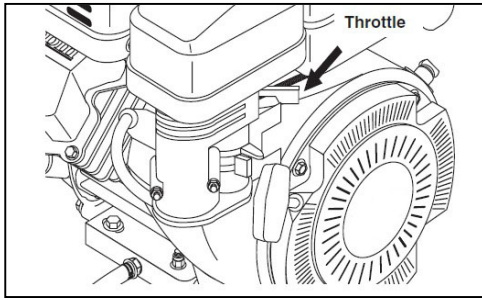


**STEP 5:** Rotate the fuel shut-off valve to the "On" position.

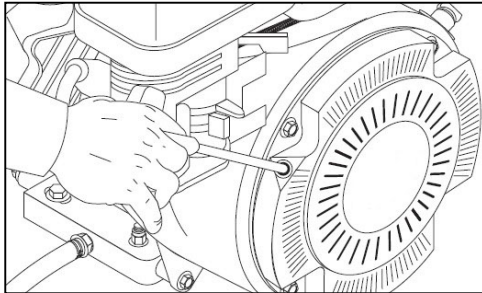
Slide the fuel valve lever to the "ON" position. When the engine is not in use, leave the fuel valve in the "OFF" position.





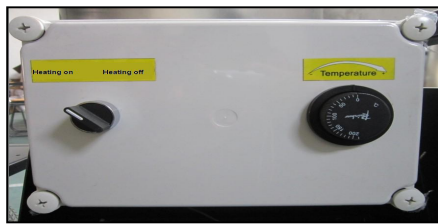


**STEP 7:** Turn the engine to "Run" position.

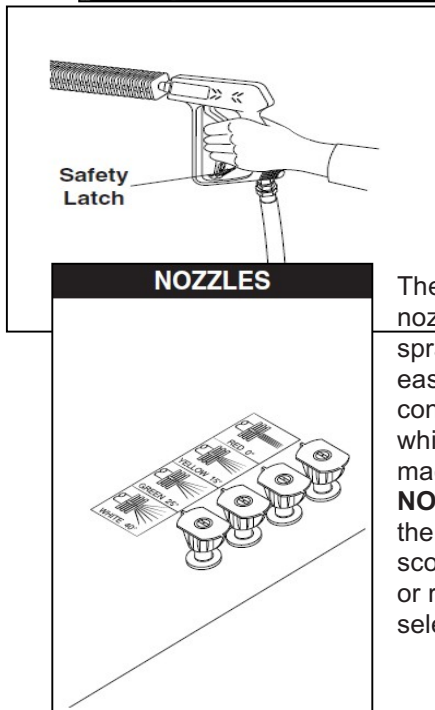


**STEP 8:** Pull the starter grip. If the engine fails to start after 2 pulls, squeeze the trigger gun to release pressure and repeat step. Return starter gently. After the engine warms up enough to run smoothly, move choke to run position and throttle to fast position.

**CAUTION:** Small engines may kick back. Do not hold pull starter grip tightly in hand.



**STEP 8:** Turn on HEAT Switch, Fastening-down temperature On 90°C



**WARNING!** Never replace nozzles without engaging the safety latch on the spray gun trigger.

The four color-coded quick connect nozzles provide a wide array of spray widths from 0° to 45° and are easily accessible when placed in the convenient rubber nozzle holder, which is provided on the front of the machine.

**NOTE:** For a more gentle rinse, select the white 40° or green 25° nozzle. To scour the surface, select the yellow 15° or red 0° nozzle. To apply detergent select the black nozzle.

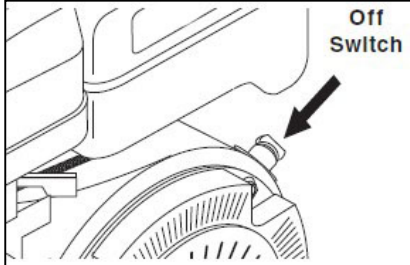
**Recommendations:**

- Before cleaning any surface, an inconspicuous area should be cleaned to test spray pattern and distance for maximum cleaning results.
- If painted surfaces are peeling or chipping, use extreme caution as pressure washer may remove the loose paint from the surface.
- Keep the spray nozzle a safe distance from the surface you plan to clean. High

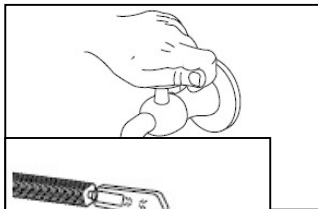


## SHUTTING DOWN AND CLEAN-UP

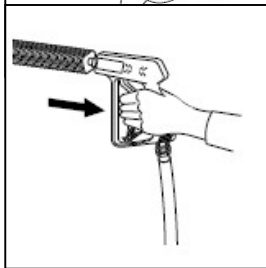
**STEP 1:** Turn temperature controller on 0 station, turn off HEAT Switch.



**STEP 2:** Turn off the engine.



**STEP 3:** Turn off water supply.



**STEP 4:** Press trigger to release water pressure.

**STEP 5:** Disconnect the garden hose from the water inlet on the machine.

**STEP 6:** Disconnect the high pressure hose from high pressure outlet.



**STEP 7:** Engage the spray gun safety lock.

## STORAGE

**CAUTION:** Always store your pressure washer in a location where the temperature will not fall below 32°F (0°C). The pump in this machine is susceptible to permanent damage if frozen. **FREEZE DAMAGE IS NOT COVERED BY WARRANTY.**

1. Stop the pressure washer, squeeze spray gun trigger to release pressure.
2. Detach water supply hose and high pressure hose.
3. Turn on the machine for a few seconds, until remaining water exits. Turn engine off immediately.
4. Drain the gas and oil from the engine.
5. Do not allow high pressure hose to become kinked.
6. Store the machine and accessories in a room which does not reach freezing temperatures.

**CAUTION:** Failure to follow the above directions will result in damage to your pressure washer.

When the pressure washer is not being operated or is being stored for more than one month, follow these instructions:

1. Replenish engine oil to upper level.
2. Drain gasoline from fuel tank, fuel line, fuel valve and carburetor.
3. Pour about one teaspoon of engine oil through the spark plug hole, pull the starter grip several times and replace the plug. Then pull the starter grip slowly until you feel increased pressure which indicates the piston is on its compression stroke and leave it in that position. This closes both the intake and exhaust valves to prevent rusting of cylinder.
4. Cover the pressure washer and store in a clean, dry place that is well ventilated away from open flame or sparks. NOTE: The use of a fuel additive, such as STA-RITE® or an equivalent, will minimize the formulation of fuel deposits during



## PREVENTATIVE MAINTENANCE

1. Check to see that the water pump is properly lubricated.
2. Follow Winterizing Procedures to prevent freeze damage to the pump and coils.
3. Always neutralize and flush detergent from system after use.
4. If water is known to be high in mineral content, use a water softener in your water system or de-scale as needed.
5. Do not allow acidic, caustic or abrasive fluids to be pumped through system.
6. Always use our high grade quality cleaning products.
7. Never run pump dry for extended periods of time.
8. Use clean fuel: kerosene, No. 1 fuel oil or diesel. Replace fuel filter every 100 hours of operation. Avoid water contaminated fuel as it will seize up the fuel pump.
9. If machine is operated with smoking or eye burning exhaust, coils will soot up, not letting water reach maximum operating temperature. (See section on Air Adjustments.)
10. Never allow water to be sprayed on or near engine or burner assembly or any electrical component.
11. Periodically de-lime coils as per instructions.
12. Check to see that engine is properly lubricated. It is advisable, periodically, to visually inspect the burner. Check air inlet to make sure it is not clogged or blocked. Wipe off any oil spills and keep this equipment clean and dry. The areas around the pressure washer should be kept clean and free of combustible materials, gasoline and other flammable vapors and liquids. The flow of combustion and ventilating air to the burner must not be blocked or obstructed in any manner. Consult factory if vent stacking is going to be used.

## MAINTENANCE AND SERVICE

### **Unloader Valves:**

Unloader valves are preset and tested at the factory before shipping. Occasional adjustment of the unloader may be necessary to maintain correct pressure.

### **Winterizing Procedure:**

Damage due to freezing is not covered by warranty. Adhere to the following cold weather procedures whenever the washer must be stored or operated outdoors under freezing conditions. HOT WATER PRESSURE WASHER OPERATOR'S MANUAL  
connector and, by injecting compressed air, all water will be blown out of the system.

During winter months, when temperatures drop below 32°F, protecting your machine against freezing is necessary. Store the machine in a heated room. If this is not possible then mix a 50/50 solution of anti-freeze/ water into a 5 gallon bucket. Use SAE 30W non-detergent oil at winter, using SAE 40W non-detergent oil at summer. Place a short section of garden hose into the bucket and connect it to the machine. Charge oil after the first 100 hours of use. Thereafter, change the oil at 100 hour intervals. Oil level should be checked by using the dipstick found on top of the pump or the red dot visible through the oil gauge window. Oil should be maintained at that level.

### **Fuel:**

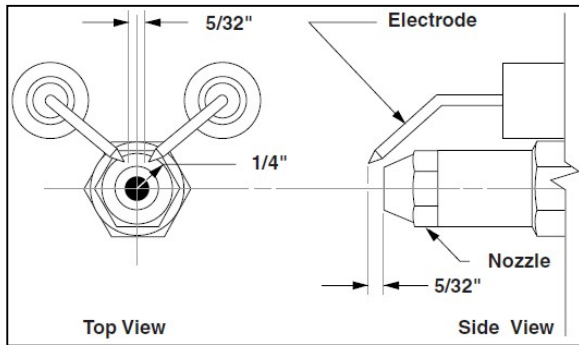
Use clean fuel oil that is not contaminated with water and debris. Replace fuel filter and drain tank every 100 hours of operation. Use No. 1 or No. 2 Heating Oil (ASTM D306) only.

**NEVER** use gasoline in your burner tank. Gasoline is more combustible than fuel oil and a serious explosion could result. **NEVER** use crankcase or waste oil in your

burner. Fuel unit malfunction could result from contamination.

### **Fuel Control System:**

These machines utilize a fuel solenoid valve located on the fuel pump to control the flow of fuel to the combustion chamber. This solenoid valve, which is normally closed, is activated by a flow switch when water is flowing through it. When an operator releases the trigger on the spray gun, the flow of water through the flow switch stops, turning off the current to the fuel solenoid. The solenoid then closes, shutting off the supply of fuel to the combustion chamber. Controlling the flow of fuel in this way allows for an instantaneous burn or no burn situation, thereby eliminating high and low water temperatures, and combustion smoke normally

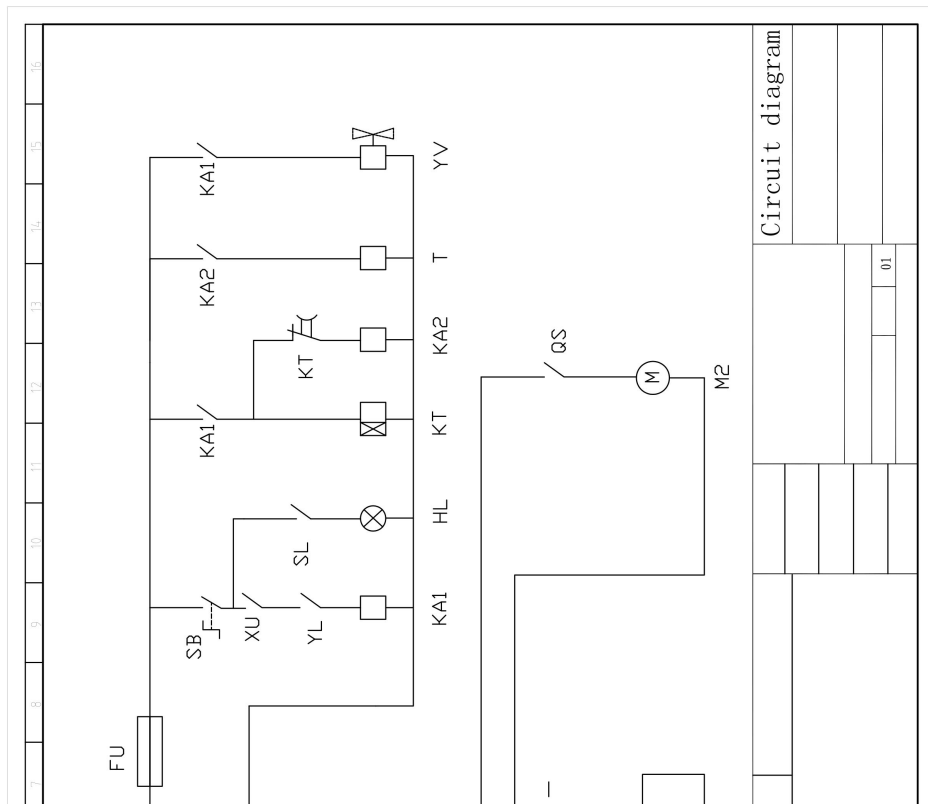
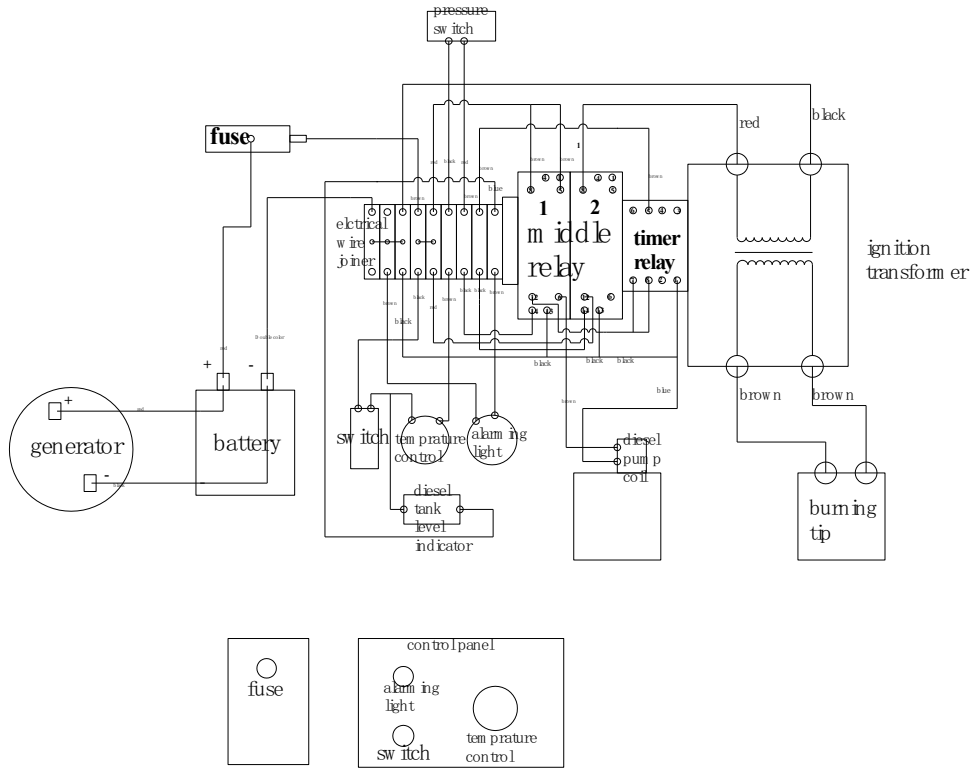


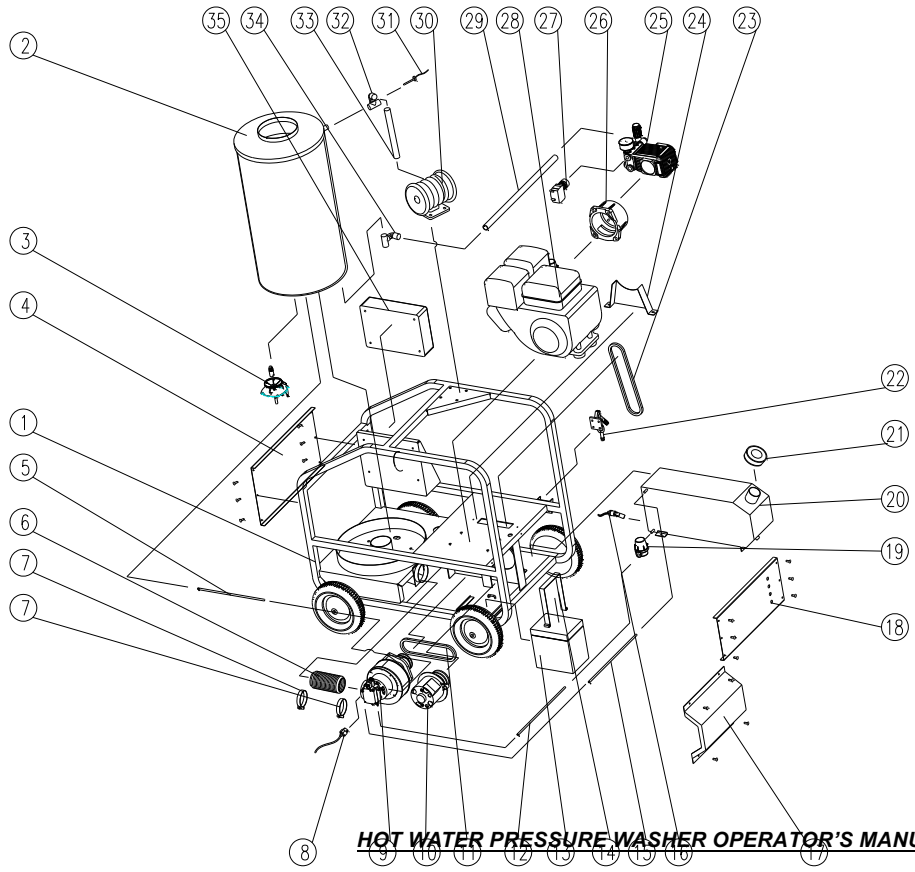
Periodically check wiring connections. If necessary to adjust electrodes, use diagram.

## Parts List

### PARTS LIST

Ref No.	Description	Ref No.	Description	Ref No.	Description
1	Drain plug	26	Retainer ring	51	O-ring
2	Gasket	27	O-ring	52	Outlet banjo bolt
3	Screw	28	Low pressure seal	53	O-ring
4	Crankcase cover	29	Seal compaction ring	54	O-ring
5	O-ring	30	Seal Compaction flake	55	Checking valve
6	Side glass	31	High-pressure seal	56	Spring
7	Fix clip	32	Supporting ring	57	O-ring
8	O-ring	33	Plastic cap	58	Outlet quick connector
9	Vented oil plug	34	Knob	59	Inlet banjo bolt
10	O-ring	35	Spring	60	O-ring
11	Bolt	36	Spring seat	61	By-pass housing
12	Crankshaft cover	37	Jam nut	62	Swivel nut
13	O-ring	38	Fix screw	63	Inlet connector
14	Snap ring	39	Unloader Valve	64	Inlet water filter
15	Ball bearing	40	Valve Seat	65	O-ring
16	Crankshaft	41	O-ring	66	Valve Plug
17	Connecting rod	42	O-ring	67	O-ring
18	Fix pin	43	Valve housing	68	Checking valve assy
19	Ceramic plunger	44	Soap suction nozzle	69	O-ring
20	Crankcase	45	O-ring	70	Outlet plug
21	Needle bearing	46	Steel ball	71	Inlet plug
22	Flange	47	Spring	72	Bolt
23	Oil seal	48	Valve plug	73	Manifold head





1	frame	1
2	burner parts	1
3	ignition parts	1
4	front board	1
5	pressure oil hose	1
6	wind pipe	1
7	collar clamp	2
8	diesel pump mag-valve plug	1
9	fan parts	1
10	alternator	1
11	belt 1	1
12	diesel outlet pipe	1
13	battery	1
14	battery fixing belt	1
15	diesel return pipe	1
16	diesel volume switch	1
17	battery board	1
18	back board	1
19	diesel filter	1
20	diesel tank	1
21	diesel tank cap	1
22	brake	1

## NOTES

## NOTES