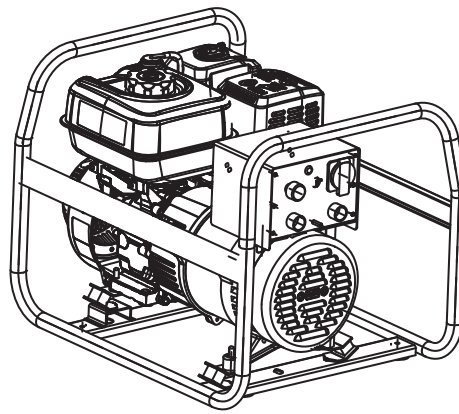
HyperWelding

WELDING GENERATOR

Owner's Manual



SAVE THIS MANUAL FOR FUTURE REFERENCE

IMPORTANT SAFETY INSTRUCTIONS ARE INCLUDED IN THIS MANUAL

This manual will tell you how to use and maintain the “ Welding Generator ” machine, please read the manual carefully before operating the machine. Operating the machine in the best conditions will increase the machine's lifetime.

If you have any suggestions for the manual please
contact our company.

Our company is striving to make constant upgrades to our equipment to provide best machine to customers, so the specifications for each unit may vary from machine to machine, company will not able to inform users, please kindly understand.

Contents

1. Safety Instruction

Please read the manual before operation, failure to comply with the manual could lead to danger of operator, others and the machine.

1.1.Protect yourself and others. Welding can make you and others in danger of many risk factors: Make sure to never weld without a welding mask. This goes for not only the operator, but all other bystanders as well. The damages to eyes include: electric arc, dazzle reflections, dazzle flicker, sparking molten, metal splashing. Looking at welding arc without eye protection can inflict great pain and even temporary blindness. Therefore, this products owner/operator should ensure the welding machine operated by a user with prior welding knowledge. Use these professional protective equipment when operating.

-Face shield

-dedicated heat resistant gloves

-Protective clothing and shoes

1.2. Power supply and welding current can cause shock damage. Please do not touch inside or face plate of welding machine at any time. Make sure operator and all other have a dry ground insulation protection. Do not

let your body touch the ground and the electrode at that same time.。

1.3 Welding fumes and gasses can cause serious harm to operator and all other by standards. Please keep your head away from a place you could possibly breathe in fumes and make sure to use the machine in a well ventilated area.

1.4 Do not operate machinery if you have a pacemaker. This includes being anywhere near the machine even if someone else is operating. The magnetic field produced by the welding machine could have adverse effects on a pacemaker.。

1.5 Welding splatter can cause fire and explosions. Do not weld in dangerous situations such as around flammables, explosives, a closed barrel or pipe.

1.6 There is extreme heat produced by the exhaust pipe, engine, air compressor and muffler. Please do not touch these parts or have flammables anywhere near the unit.The high temperature produced by the exhaust is capable of igniting any flammables or explosives.

1.7 It is important that this unit is installed, used and maintained by professionals. Do not tamper or remove any safety or warning signs located on the unit.

1.8 The engine operates on gasoline. It is important to keep inmind this unit cannot be run indoors. Carbon Monoxide has no odor and can be fatal in a short period of time.

1.9 Gasoline is highly flammable and is capable of causing a large explosion. Please shut down the machine before
ever adding fuel or oil. When adding fuel or oil make sure it is done in a well ventilated area. When filling the fuel tank be sure you always leave enough space for natural fuel inflation. Make sure to not smoke near fuel supply. Keep away from all other flames, sparks, etc. Make sure to wipe all leaked fuel on the unit before starting.

1.10 The auxiliary electricity(AC 230V) is high voltage electricity, please avoid machine be affected with damp, and avoid excessive drag and wear of the wire, in case of electricity leakage or short circuit phenomenon.

1.11 Check the oil level prior to each use by removing the oil dipstick. Do not operate the unit if it has become overfilled with oil, as this can affect normal operations. In addition make sure to change the oil on a regular basis.

1.12 Refrain from using the air compressor when welding. Also, it is recommended that you disconnect all sources from the generator as well when welding.
1.13 Welding power source used for pipeline defrost operation is prohibited.

2.Specifications

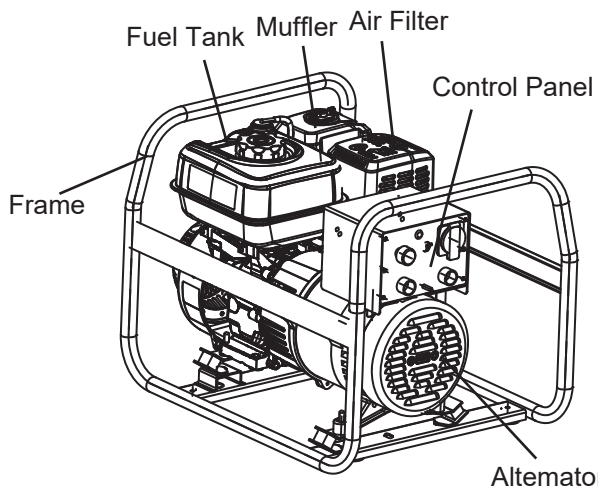
		Model
		PW 5.2
Welding	None-load Voltage（V）	70
	Rated Load Voltage（V）	22-25.2
	Current Regulation Range（A）	50-130
	Rated Duty Cycle（%）	60
	Power Static Characteristic Curve	Dropping characteristic
	Rated Voltage (V)	AC 230V
	Rated Power（kW）	2.5
	Max Power (kW)	2.8
Engine	Cooling System	Air cool
	Air Valve	OHV
	Lgnition System	CDI
	Fuel Tank Capacity(L)	3.6
	Oil Alert System	YES
	Fuel Consumption（g/hp.hr）	374
	Start Mode	Recoil
Complete Machine	Length×Width×Height（mm）	610×470×480
	Weight（Kg）	51
	IP Grade	IP21
	Insulation grade	F

3.Component identification

⚠ WARING

Control panel please be subject to the real object

PW 5.2



4.Preparation

4.1 Before starting the unit, please read this manual carefully, fully understand the operating procedures, and do not blindly start the machine.

4.2 checks whether the unit parts are completely equipped, and the connecting bolts, nuts and other fasteners and joints are assembly securely, if not, please be repaired in a timely manner.

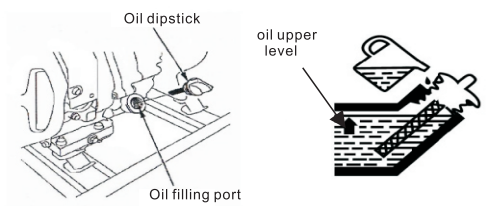
4.3 The engine oil level check (Machine should be flat on the ground, keep the state of engine shutdown to check oil level);

4.3.1 Take out the oil level gauge oil, and wiped clean;

4.3.2 After inserted, and then take out the oil gauge to detect the oil level;

4.3.3 if oil level is close to or below oil level dipstick mark, please open the protective cover, exposing the oil gauge, unscrew the oil feeler gauge, add the recommended oil to the line mark. (see below)

oil to its proper level.



4.4 Engine Oil Recommodation

4.4.1Oil is a major factor affecting engine performance and service life. Please use 4-stroke gasoline engine oil meet or exceed API classification SE grade or equivalent rating required. Remember to check the oil API classification label on the package to make sure it comes with the letters SE or an equivalent grade of.

4.4.2 Regularly check and change the oil to avoid the oil level is too low, too high, too dirty, too thick to cause a malfunction.

4.4.3 Recommend uses oil SAE10W -30. When the local average temperature is within the recommended range, you can use other oil viscosity shown in the graph.

4.5Check if enough fuel in tank. Refuel with fuel filter, leave appropriate spacein the fuel tank to prevent accidents due to fuel expansion. Tank cap should be tightly closed after re fuel. Gasoline number label should above 90#. Do not use stale or contaminated gasoline or petrol/oil mixture and avoid dirt or water drop into fuel tank.

4.6 air filter inspection

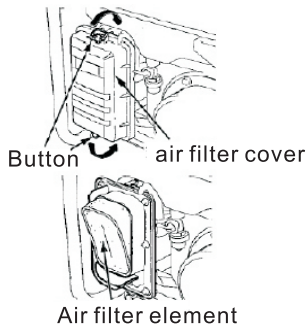
4.6.1 Open air filter clip, then open the air filter cover.

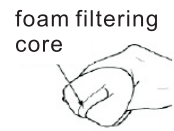
4.6.2 Release hooks from fixed pin hole of the air filter

box, remove the air filter cover. being careful not to damage the air filter cover.

4.6.3 Remove filter element from the air filter cover.

4.6.4 Checking if air filter is clean and in good condition. If air filter is dirty, wash it. If the air filter is damaged, it must be replaced.





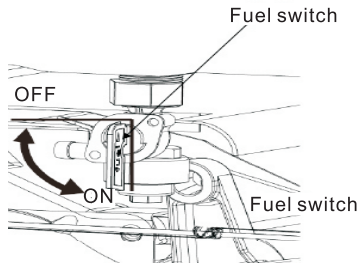
4.6.5 Reload filter element on the bottom cover of air filter.

4.6.6 Remount air filter cover, observeprotective cover, and confirm air filter locked. Make sure there is no gap between upper cover and bottom cover. In the absence of air filter element or filter element were damaged, dust will enter into engine, causing rapid engine wear.

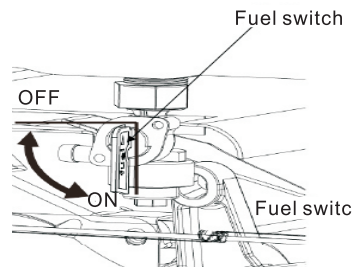
4.7 please Check The Battery Voltage Between 11.5-12.5 When Starting The Cmachine.

5.Starting

5.1 Turn on fuel switch. "Fuel valve" located between fuel tank and carburetor.When you want to start generator, turn fuel valve to "on" position.After shut down,please turn the fuel valve to “off” position.



5.2The choke is used to provide an enriched fuel mixture when starting a cold engine. It can be opened and closed by operating the choke rod manually. Pull the rod out toward “CLOSED” to enrich the mixture for cold starting. After starting please immediately push rod to OPEN, this is to provide suitable air and fuel mixture for running engine.



5.3 Start and stop engine.

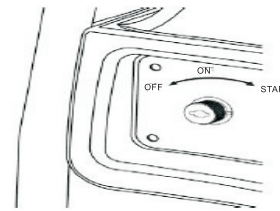
5.3.1Electric start machine: Please operate starting key on the control panel, turn to clockwise until engine started, and turn back the key to start position. If not started, please try it again after 30s.

Stop：Stop engine running Start：Startengine Open：Machine running

off: stop the unit

start：start the unit

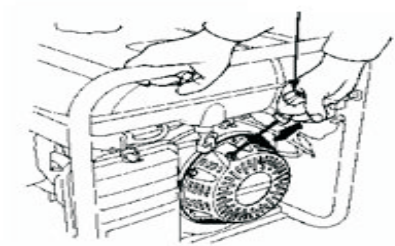
on：running the unit



5.3.2To start the engine, pull the starter grip lightly until resistance is felt, then pull briskly.

Notice:

Do not allow the starter grip to snap back against the engine. Return it gently toprevent damage to the starter.



6. Running

6.1 Environment temperature: welding:-10℃～40℃.

6.2 Transportation and storage: -20℃～55℃.

6.3 Relative humidity:≤50%in40℃,≤90% in 20℃, suitable altitude≤1000.

6.4 Inclination angle: welding electricity resource inclination angle shouldn't exceed 10degree.

6.5When connect plug to panel, if there is short circuit or over load, the circuit breaker will shut down automatically, once is was shut down, please check the external appliance ok or not, then check if the loading is exceed the machine maximum limit.

Notice: Circuit breaker cannot control the welding output.

6.6connection: provided a single welding terminal. We suggest following date for choosing welding rod and wire. For reference only.

Work piece thickness（mm）	≦2	3	4~5	6~12	Above 13
Welding rod diameter (mm)	1.6~2.5	2.5~3.2	3.2~4	4.0~5.0	5.0~6.0

Welding rod diameter (mm)	2.0	2.5	3.2	4.0	≧5.0
Welding Current (A)	40~60	60~80	90~130	160~210	200~270

7. Stop

7.1Remove loading: Shut down circuit breaker, stop welding, let the engine run for 3 mins without loading, then switch the starting key to OFF position.

7.2If long time transportation or long time storage, remove loading before stop engine, then turn off fuel tank switch, and let engine running until automatic stop, this is to use up the fuel in carburetor, avoid carbon fouling or fuel fouling in carburetor.

7.3 Checking after engine stopped: Each appliance connecting bolt and nut have no loosen.

8. Maintenance

Good maintenance is essential for safe, economical, and trouble-free operation. It will alsohelp reduce air pollution.To help you properly care for your machine, the following pages include a maintenanceschedule, routine inspection procedures, and simple maintenance procedures using basichand tools. Other service tasks that are more difficult, or require special tools, are besthandled by professionals and are normally performed by our technician or other qualifiedmechanic.

Daily maintance cycle

Item: based on the runing target month or the runing hour to maintain		each time	the first month or 20h	every 3month or 50h	every 6month or 100h	every 1year or 300h
ENG oil	check the level	○				
	change		○		○	
Air cleaner filter	check	○				
	clean			○		
Sedimentation glass	clean				○	
Spark plug	check-adjust				○	
	replace					○
Valve clearance	Check -adjust					○
Combustion chamber	clean		every 500h			
Case and filter	clean					○
Fuel hose	check	○	every two years(if necessar,please replace)			

8.1 Engine Oil Change

Drain the oil while the engine is warm to assure complete and rapid draining.

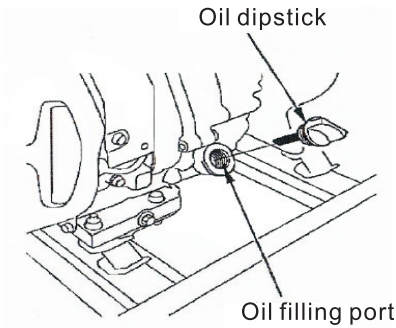
8.1.1 Put the machine on higher than ground surface position, then remove the drain plug and sealing washer, remove the oil filler cap and drain the oil.

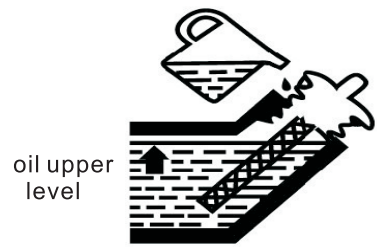
8.1.2 After drain out all oil, install the drain plug and sealing washer. Tighten the plug securely.

8.1.3 Refill with the recommended oil and check the level.

8.1.4 Wash hands with soap when you done replacing the oil.

oil to its proper level.

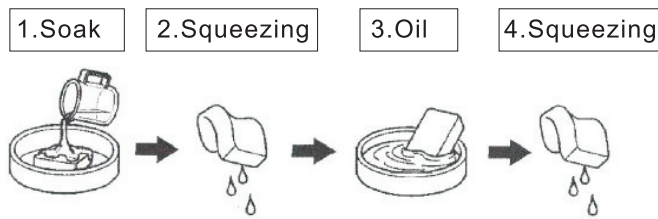




Notice: In order to protect the environment we strongly urge all users to drain the oil into a sealed container. Once finished please dispose of the oil into an oil waste barrel or to a local company that handles waste oil.

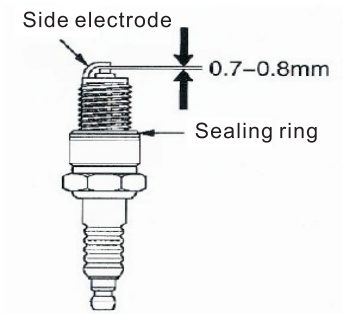
8.2 Cleaning the air filter

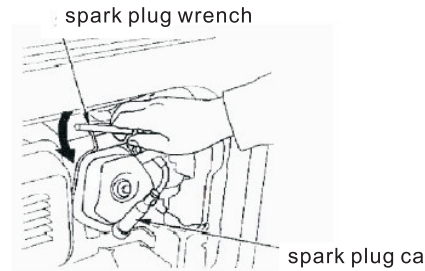
8.2.1 Use warm soapy water when cleaning the air filter. Make sure you dry the filter before installing.



8.3 Spark Plug Maintenance

In order to keep your Genertor at peak performance, the spark plug must be adjusted to get rid the unit of any carbon laydown. Using the wrong spark plug will damage the engine. Always remember to make sure the unit has had ample time to cool down before you perform any maintenance on the spark plug.





8.3.1 Firstly clean the dirt around spark plug, and then remove the spark plug cap, and use wrench to remove spark plug.

8.3.2 Visually inspect the spark plug. Change a new one if the insulator is cracked or chipped.

8.3.3 Measure the plug gap with a feeler gauge, if necessary, by carefully bending the side electrode, the correct clearance should be 0.70~0.80mm.

8.3.4 Check that the spark plug washer is in good condition, and thread the sparkplug in by hand, don't screw too tight.After the spark plug is seated, tighten with a spark plug wrench to compress the washer.If installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer. If reinstalling a used spark plug, tighten 1/8-1/4 turn after the spark plug seats to compress the washer.

Notice: The Spark plug must be securely tightened. An improperly tightened Spark plug can become very hot and could damage the engine. If too much tight then cylinder bolt thread might be damaged.

8.3.5 Settle back the plug cap.

8.4 Battery maintenance

Genset charging system will charge the battery when the machine is working.The battery should be charged

every month to prolong the life span of battery and make sure the genset performance.

8.4.1 Battery is full of corrosive liquid. Eyes and skin will be seriously burned when touched the liquid.

8.4.2 Beside the battery operation, please wear protective clothing and wearing goggles, keep the battery far away from children.

NOTE: To dip into your eyes: rinse with water in a cup or other containers for at least 15 minutes (with a pressure of water that can damage the eyes), and then take immediate medical care. Carelessly stick to the skin: take off your clothes, rinse the skin with plenty of water, and then take immediate medical care. Accidentally enter the body: drink plenty of water or milk, and then take immediate medical measures.

8.5 Fuel

8.5.1 Depending on different area, the gasoline fuel has different degree change and oxidation, even in short days like 30days, the gasoline fuel will get deterioration and oxidation, and damage carburetor and fuel system, please consult to local dealer of how to storage the machine.

8.5.2 Once gasoline get deterioration, it will lead to

engine starting become harder, and leave colloid sediment to block fuel system. If gasoline deterioration was found, you maybe need to repair or change carburetor and engine fuel system.

8.5.3 Gasoline can keep in fuel tank and not get deterioration, this depends on many factors, such as mixture of gasoline, temperature and fuel tank full filled or not. If fuel tank wasn't full filled, gasoline mixed with some air, so will become deterioration faster. High temperature and bad quality gasoline fuel also will speed up the deterioration speed.

8.6 Drain our fuel in fuel bank and carburetor.

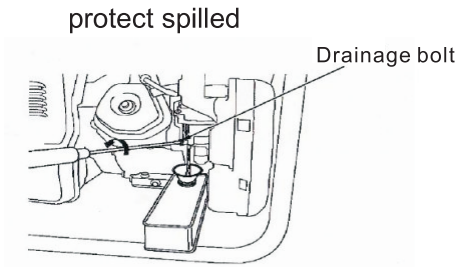
Warning: Gasoline is highly farmable and explosive, you might be burned or seriously injure when deal with gasoline. Please must turn off engine, and stay far away from fire, high temperature and any flame. Only operate at outdoor and sweep off spilt gasoline.

8.6.1 Put a suitable container under carburetor, and use funnel to prevent fuel spill out.

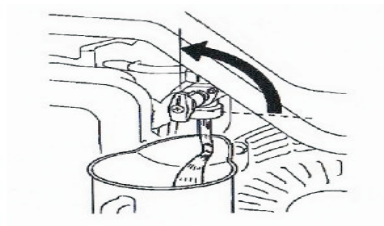
8.6.2 Loose carburetor oil drain bolt, drain out gasoline in carburetor.

8.6.3 Screw back the bolt after drain out all fuel.

8.6.4 Put a suitable container under sediment cup, and use funnel to preventfuel spill out.



8.6.5 Open the sediment cupand turn fuel valve to ON, drain our all fuel and screw back the cup.



Notice: Occasionally you may hear “tok tok” or "ping ping" (metallic rapping noise) whileoperating under heavy loads. If this happen occurs ata steady engine speed, under normal load, please change brands and grade of gasoline immediately, if the abnormal sound still happen after change gasoline, please consult an authorized dealer.

NOTICE: Long time running the engine with abnormal sound can cause enginedamage. And damaged parts are not covered in dealer’s quality warranty.

9. Common Fault and Trouble Shooting

Fault	Failure Cause	Trouble Shooting
Could not start	1. low voltage on the genset battery 2.Fuel cock not open. 3.Chock valve not open 4. Low oil level 5. Oil warning system problem 6.Bad fuel oil quality 7.Oil clogging 8.Ignition system problem 9.Carburetor problem	1.Charge the battery(electric start model) 2.Open fuel cock 3.Refer step 3 4.Check oil level, add to the level 5.Pull up warning wire, restart to confirm (after confirm should stop machine) 6.Change fuel oil 7.Clean oil pipe 8.Check and clean spark plug 9.Clean or repair carburetor
Genset no output	1.Voltage meter broken 2.Alternator leading wire and control panel wire fall off or not connect well. 3.Brush and slip ring do not connect well or disconnection 4.AVR control panel broken 5.Short circuit, open circuit or grounded wire 6.Circuit breaker not open	1.After confirm, stop machine and replace 2.Check and repair 3.Clean slip ring or replace brush or connect wire 4.replace 5.Inspect and repair, or replace alternator winding. 6.Open circuit breaker (only limited to assistant power)
Output voltage high or low	1.High or low rotate peed 2.Sample wire fall off or loose 3.AVR problem	1.Adjust rotate speed 2.Reconnect 3.Replace AVR
Current high or low or cannot adjust	1.High or low rotate peed 2.Short circuit, open circuit or grounded winding 3.MDS or rectifier diode short circuit or grounded 4.AVR problem	1.Adjust rotate speed 2.Check and repair, or replace alternator winding 3.Replace MDS module or rectifier diode 4.Replace AVR
Alternator smoking	1.Rotor and stator rub 2.Overload 3.Winding short circuit or grounded 4.MDS or rectifier diode short circuit or grounded	1.Replace or repair 2.Remove some load 3.Replace alternator winding 4.Replace MDS module or rectifier diode

10.Schematic Diagram