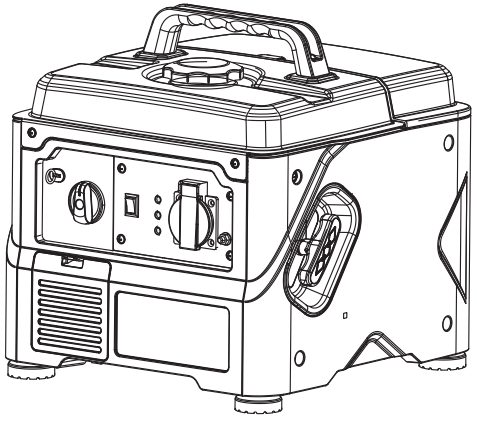
1kW

GASOLINE INVERTER GENERATOR

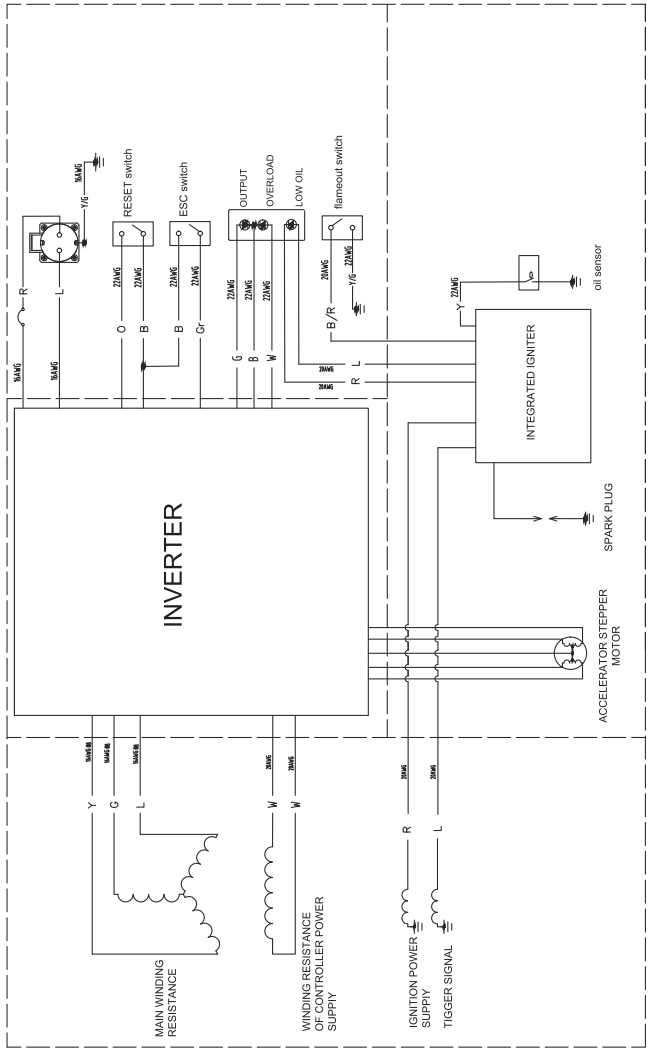
Owner's Manual



ORIGINAL INSTRUCTION

93004-YGD1110

11. WIRING DIAGRAM



Thank you for choosing a silent inverter gasoline engine generator set of our company.

This manual contains the information on how to do that. Please read it carefully before operating. Operating safely and correctly can help you get the best results.

All information in this publication is based on the latest product information available at the time of printing. The contents in this manual may be different from the actual parts due to revision and other changes.

Our company reserves the right to make changes at any time without notice and without incurring any obligation. No part of this publication may be reproduced without our company’s written permission.

This manual should be considered a permanent part of the generator and should accompany the generator if it is resold.

SAFETY WARNINGS

Personal safety and property safety of you and others are very important. . Please read these messages which is preceded by a symbol ⚠ or **NOTICE** carefully.

⚠DANGER

You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.

⚠WARNING

You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

⚠CAUTION

You CAN be HURT if you don't follow instructions.

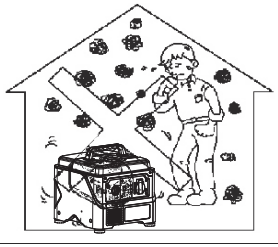
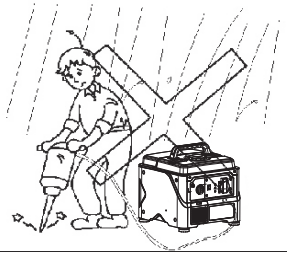
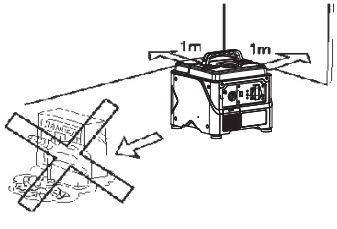
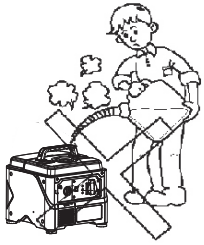
NOTICE

Your generator or other property could be damaged if you don't follow instructions.

CONTENTS

1. SAFETY INFORMATION

Read and understand this owner's manual before operating your generator. It will help you avoid accidents if you get familiar with your generator's safe operation procedures.

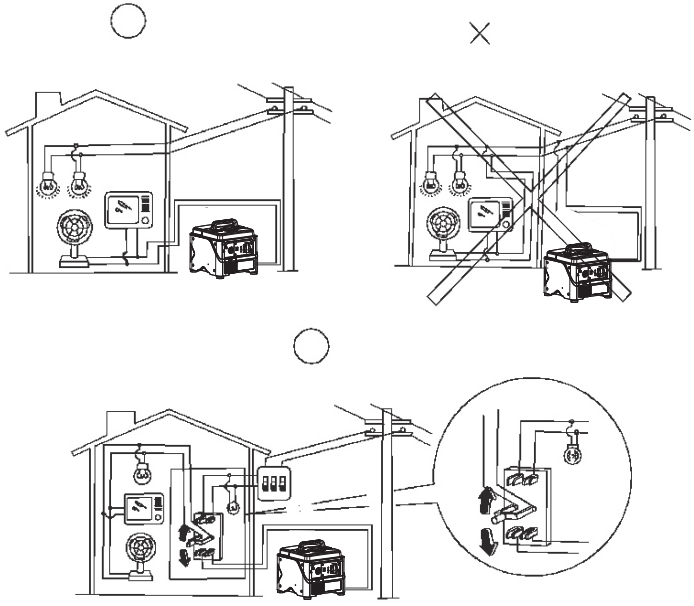
	
Never use it indoors	Never use it in a wet condition
	
Keep it at least 1m away from inflammables	Never smoke when fueling
	
Don't spill when fueling	Stop the engine before fueling

Connections to a Home Power Supply

NOTICE

If the generator is to be connected to a home power supply as a standby, connection shall be performed by a professional electrician or by another person with proficient electrical skill.

When the loads are connected to the generator, please carefully check whether electrical connections are safe and reliable. Any improper connection may cause damage to the generator, or cause a fire.



SAFETY INSTRUCTIONS

- Read this manual carefully- familiarize yourself with the appliance. Follow all operational notes and restrictions, and take note of possible hazards of this device.
- Place the appliance on stable surfaces only.
- The load must not exceed the power marked on the rating label of the generator. Overloading may result in damage to, or a shorter life of the appliance.
- The motor must not be operated with excessive rotary speed. The operation of the motor with excessive rotary speed raises the risk of injury. Parts which affect the rotary speed must not be altered or replaced.
- Do not operate or store the appliance in wet or humid surroundings or on highly conductive surfaces such as metal coatings or steel constructions.
- Do not operate or store the appliance in wet or humid surroundings.

⚠ DANGER: Poisonous gas!
Engine exhaust gas is poisonous; don't operate in an unventilated room. When installed in ventilated room, additional requirement for fire and explosion protection shall be observed.

⚠ WARNING: Gasoline is highly flammable and easily ignited!

- Don't refuel during operation;
- Don't refuel while smoking or near naked flames;
- Don't spill fuel;
- Store fuel in containers specifically designed for this purpose;
- Refuel outdoors only and don't smoke while refueling;
- Add fuel before starting the engine. Never remove the cap of the fuel tank or add gasoline while the engine is running or when the engine is hot;
- If gasoline is spilled, don't attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapours have dissipated;
- Replace all fuel tank and container caps securely;
- Always turn generator off before refueling. Allow generator to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.
- Do not overfill gas tank. Gas may expand during operation. Do not fill to the top of the tank.
- Always check for spilled gas before operating.
- Empty gasoline tank before storing or transporting the generator.
- Before transporting, turn fuel valve to off and disconnect spark plug.

⚠ WARNING: This generator produces powerful voltage, which can result in electrocution!

- ALWAYS ground the generator before using it (see the "Ground the Generator" portion of the "PREPARING THE GENERATOR FOR USE" section).
- Generator should only be plugged into electrical devices, either directly or with an extension cord. When using extension lines or mobile distribution networks the total length of lines for a cross section of 1.5 mm^2should not exceed 60 m; for a cross section of 2.5 mm^2this should not exceed 100 m.

- NEVER connect to other power sources.
- Do not use in rainy or wet conditions.
- Do not touch bare wires or receptacles (outlets).
- Protect children by keeping them at a safe distance from the generating set. Do not allow children or non-qualified persons to operate.
- Electrical equipment (including lines and plug connections) should not be defective.
- The generating set must not be connected to other power sources, such as the power company supply mains.
- Protection against electrical shock depends on circuit breakers specially matched to the generating set. If the circuit breakers require replacement they must be replaced with a circuit breaker having identical ratings and performance characteristics.
- Due to high mechanical stresses only tough rubber-sheathed flexible cable or the equivalent should be used.
- The user that he shall conform to regulations of electrical safety applicable to the place where the generating sets are used.
- The generator ground terminal is connected to the frame of the generator, the metal non-current carrying parts of the generator, and ground terminal of each receptacle. Before using the ground terminal, consult a qualified electrician or electrical inspector for local applicable regulations
- Connections for standby power to a building electrical system must be made by a qualified electrician. The connection must isolate the generator power from utility power, and must comply with all applicable laws and electrical codes. A transfer switch, which isolates the generator power from utility power is available through qualified equipment following local laws and regulations.

⚠ WARNING: This generator produces heat when running!

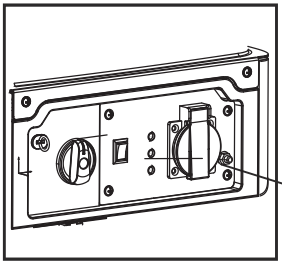
- Some parts of the internal combustion engine are hot and may cause burns. Do not touch hot surfaces. Pay attention to the warnings on the generating set.
- Allow generator to cool several minutes after use before touching engine or areas which heat during use.

⚠ CAUTION: Misuse of this generator can damage it or shorten its life!

- Use generator only for its intended purposes.
- Operate only on dry, level surfaces; do not operate the generator underground.
- Allow generator to run for several minutes before connecting electrical devices.
- Shut off and disconnect any malfunctioning devices from generator.
- Do not exceed the load capacity of the generator by plugging in more electrical devices than the unit can handle.
- Do not turn on electrical devices until after they are connected to the generator.
- Turn off all connected electrical devices before stopping the generator.
- Don not operates the generator in an explosible condition

Generator Ground Circuit

In order to prevent electric shock due to shoddy electrical appliances or wrong use of electricity, the generator must be grounded with a good-quality insulated conductor.



NOTICE

Make sure the control panel, louver and the inverter bottom side cooling well and without chips, mud and water come in. it may damage the engine, inverter or alternator if the cooling vent blocked.

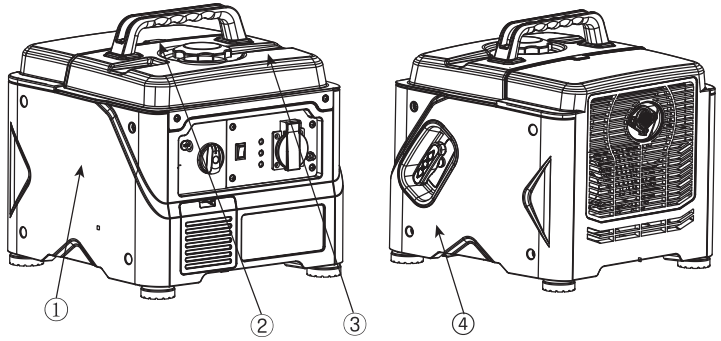
Do not mix the generator with other stuff If moving, storing or running the unit.

It may cause the generator damage or bring property safety issue when the generator in leakage.

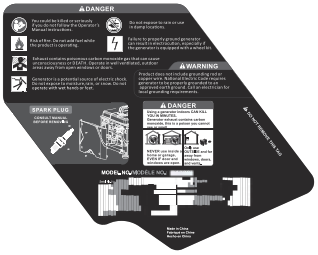
2. LOCATION OF IMPORTANT LABELS

Please read the following labels carefully before operation this machine.

TIP : Maintain or replace safety and instruction labels, as necessary.



①

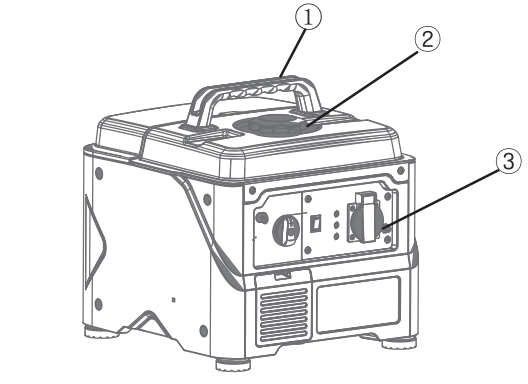


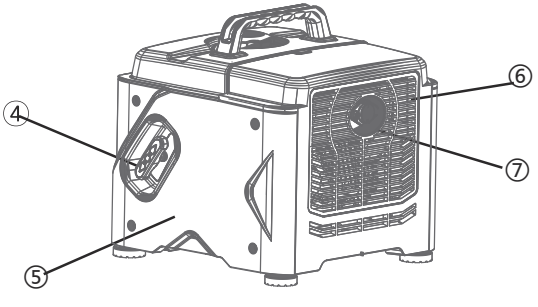
②

③

④

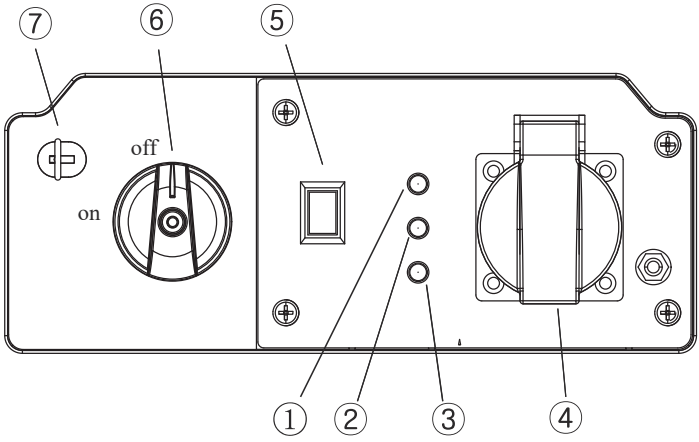
3. DISCRIPTION





① Carrying handle
② Fuel tank cap
③ Control panel
④ Recoil starter
⑤ Oil filler cap
⑥ Louver
⑦ Muffler

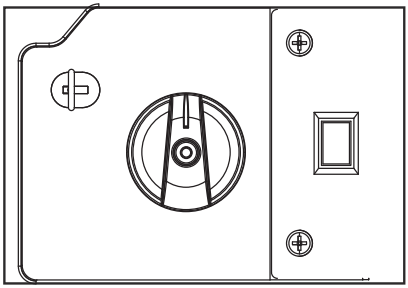
3.1 Control panel



① Oil warning light
② Overload indicator light
③ AC pilot light
④ AC receptacle
⑤ Engine switch
⑥ Fuel switch knob
⑦ Throttle switch

4. CONTROL FUNCTION

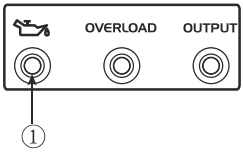
4.1 Fuel switch knob



"OFF ":Fuel is switched off.The engine will not run.

"ON":Fuel is switched on.The engine can be start.

4.2 Oil warning light (red)

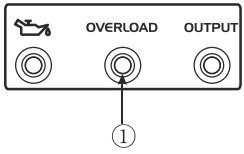


When the oil level falls below the lower level, the oil warning light ① comes on and then the engine stops automatically. Unless you refill with oil, the engine will not start again.

Tip: If the engine stalls or does not start, turn the engine switch to “ON” and then pull the recoil starter.

If the oil warning light flickers for a few seconds, the engine oil is insufficient. Add oil and restart.

4.3 Overload indicator light (Red)



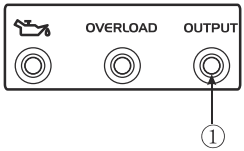
The overload indicator light ① comes on when an overload of a connected electrical device is detected, the inverter control unit overheats, or the AC output voltage rises. Then, the AC protector will trip, stopping power generation in order to protect the generator and any connected electric devices. The AC pilot light (Green) will go off and the overload indicator light (Red) will stay on, but the engine will not stop running.

When the overload indicator light comes on and power generation stops, proceed as follows:

1. Turn off any connected electric devices and stop the engine.
2. Reduce the total wattage of connected electric devices within the rated output.
3. Check for blockages in the cooling air inlet and around the control unit. If any blockages are found, remove.
4. After checking, restart the engine.

Tip: The overload indicator light may come on for a few seconds at first when using electric devices that require a large starting current, such as a compressor or a submergible pump. However, this is not a malfunction.

4.4 AC pilot light (Green)



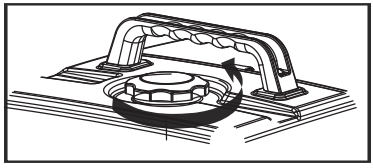
The AC pilot light ① comes on when the engine starts and produces power.

⚠CAUTION

Reduce the load of the connected electric device below the specified rated output of the generator if the DC protector turns off. If the DC protector turns off again, stop using the device immediately and consult our company authorized dealer.

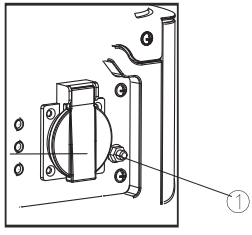
4.5 Fuel tank cap

Remove the fuel tank cap by turning it counterclockwise.



4.6 Ground (Earth) terminal

Ground (Earth) terminal ① connects the earth line for prevention of electric shock. When the electric device is earthed, always the generator must be earthed.



5. PREPARATION

5.1 Fuel

⚠DANGER

- Fuel is highly flammable and poisonous. Check "SAFETY INFORMA -TION" carefully before filling.
- Do not overfill the fuel tank, otherwise it may overflow when the fuel warms up and expands.
- After fill the fuel, make sure the fuel tank cap is tightened securely.

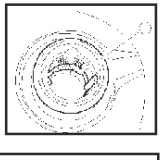
NOTICE

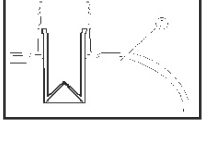
- Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.
- Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts.

Remove the fuel tank cap and fill the fuel into the tank up to the red level.

① Red line

② Fuel level





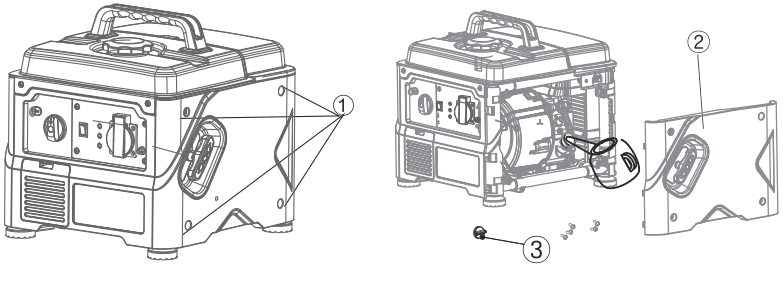
Recommended fuel:
Unleaded gasoline
Fuel tank capacity:
Total: 2.8L

5.2 Engine oil

NOTICE

The generator has been shipped without engine oil. Do not start the engine till fill with the sufficient engine oil.

1. Place the generator on a level surface.
2. Remove the screws ①, and then remove the cover ②.
3. Remove the oil filler cap ③.



4. Fill the specified amount of the recommended engine oil, and then install and tighten the oil filler cap.
5. Install the cover and tighten the screws.

Recommended engine oil: SAE 15W-40 Recommended engine oil grade: API Service SE type or higher Engine oil quantity: 0.28 L

5.3 PRE-OPERATION CHECK

⚠WARNING

If any item in the Pre-operation check is not working properly, have it inspected and repaired before operating the generator.
The condition of a generator is the owner's responsibility. Vital components can start to deteriorate quickly and unexpectedly, even if the generator unused.

TIP: Pre-operation checks should be made each time the generator is used.

Pre-operation check

Fuel (See page 15)

- Check fuel level in fuel tank.
- Refuel if necessary.

Engine oil (See page 16)

- Check oil level in engine.
- If necessary, add recommended oil to specified level.
- Check generator for oil leakage.

The point where abnormality was recognized by use

- Check operation.
- If necessary, add recommended oil to specified level.
- If necessary, consult our company authorized dealer.

6. OPERATION

⚠WARNING

- Never operate the engine in a closed area or it may cause unconsciousness and death within a short time. Operate the engine in a well ventilated area.
- Before starting the engine, do not connect any electric devices.

NOTICE

- The generator has been shipped without engine oil. Do not start the engine till fill with the sufficient engine oil.
- Do not tilt the generator when adding engine oil. This could result in overfilling and damage to the engine.

TIP:

The generator can be used with the rated output load at standard atmospheric conditions.

"Standard atmospheric conditions"

Ambient temperature 25℃

Barometric pressure 100kPa

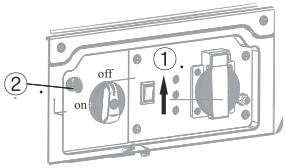
Relative humidity 30%

The output of the generator varies due to change temperature, altitude (lower air pressure at higher altitude) and humidity.

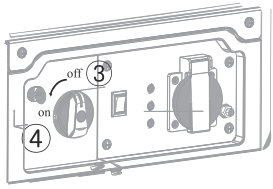
The output of the generator is reduced when the temperature, the humidity and the altitude are higher than standard atmospheric conditions.

Additionally, the load must be reduced when using in a confined areas, as generator cooling is affected.

6.1 Starting the engine



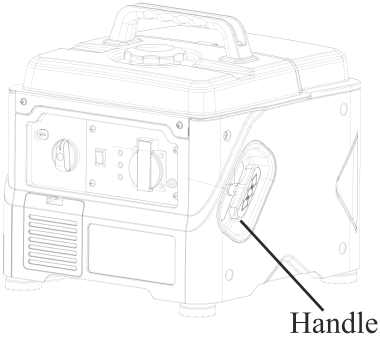
1. Turn the engine switch to "ON" ①.
2. Pull the choke out ② .
3. Turn the Fuel switch knob to "ON" ④



TIP: The choke is not required to start a warm engine.Push the choke in.

4. Pull slowly on the recoil starter until it is engaged, then pull it briskly.

TIP: Grasp the carrying handle firmly to prevent the generator from falling over when pulling the recoil starter.



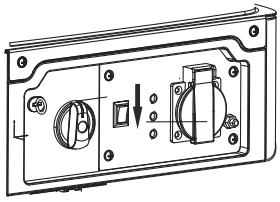
5. After the engine starts, warm up the engine until the engine does not stop when push the choke in to “OFF” .

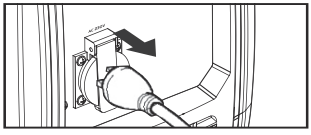
6.2 Stopping the engine

TIP：Turn off any electric devices.

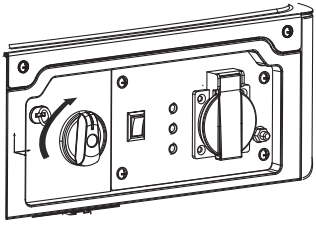
1. Disconnect any electric devices.

2. Turn the engine switch to “OFF”





3. Turn the fuel switch knob to “OFF” .



6.3 Alternating Current (AC) connection

⚠WARNING

Be sure any electric devices are turned off before plugging them in.

NOTICE

- **Be sure all electric devices including the lines and plug connections are in good condition before connection to the generator.**
- **Be sure the total load is within generator rated output.**
- **Be sure the receptacle load current is within receptacle rated current.**

TIP: Make sure to ground (Earth) the generator. When the electric device is earthed, always the generator must be earthed.

1. Start the engine.
2. Plug in to AC receptacle.
3. Make sure the AC pilot light is on.
4. Turn on any electric devices.

TIP:

If the generator is connected to multiple loads or electricity consumers, please remember to first connect the one with the highest starting current. and last connect the one with the lowest starting current.

6.4 Application range

When using the generator, make sure the total load is within rated output of a generator. Otherwise, generator damage may occur.

AC			
Power factor	1	0.8−0.95	0.4−0.75 (Efficiency 0.85)
1kW	⩽1000W	⩽ 800W	⩽340W

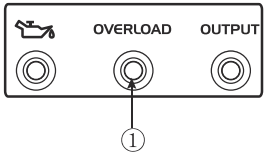
TIP:

- Application wattage indicates when each device is used by itself.
- The simultaneous usage of AC and DC power is possible but total wattage should not exceed the rated output.

EX:

Generator rated output		1kW
Frequency	Power factor	
AC	1.0	⩽1000W
	0.8	⩽800W

- The overload indicator light ① comes on when total wattage exceeds the application range. (See page 10 for more details.)



NOTICE

- Do not overload. The total load of all electrical appliances appliance must not exceed the supply range of the generator. Overloading will damage the generator.
- When supplying precision equipment, electronic controllers, PCs, Electronic computers, microcomputer based equipment or battery chargers, keep the generator a sufficient distance away to prevent electrical interference from the engine. Also ensure that electrical noise form the engine does not interfere with any other electrical devices located near the generator.
- If the generator is to supply medical equipment, advice should first be obtained from the manufacturer, a medical professional or hospital.
- Some electrical appliances or general-purpose electric motors have High starting currents, and cannot therefore be used, even if they lie within the supply ranges given in the above table. Consult the equipment manufacturer for further advice.

7. MAINTENANCE

The engine must be properly maintained to ensure its operation be safe, economy and trouble-free, as well as eco-friendly.

In order to keep your gasoline engine in good working condition, it must be periodically serviced. The following maintenance schedule and routine inspection procedures must be carefully followed:

Items \ Frequency		Each time	First 1 month or first 20hrs of operation	Thereafter, every 3 months or every 50hrs of operation	Every year or every 100 hrs of operation
Engine oil	Check-Refill	√			
	Replace		√	√	
Reduction gear oil(if equipped)	Oil level check	√			
	Replace		√	√	
Air filter element	Check	√			
	Clean		√		
	Replace			√	
Deposit Cup (if equipped)	Clean				√
Spark Plug	Check-adjust				√
	Replace	Every year or 250 hrs of operation			
Spark arrester	Clean			√	
Idling (if equipped)*	Check-adjust				√
Valve clearan -ce *	Check-adjust				√
Fuel tank & fuel filter *	Clean				√
Fuel line	Check	Every 2 years(change if necessary)			
Cylinder head, piston	Clean up carb -on *	＜225cc, Every 125hrs ≧225cc, Every 250hrs			

* These items should be maintained and repaired by our authorized dealer, unless the owner has appropriate tools and is proficient with mechanical maintenance.

NOTICE

- If the gasoline engine frequently works under high temperature or heavy load, change the oil every 25 hours.
- If the engine frequently work under dusty or other severe circumstances, clean the air filter element every 10 hours; If necessary, change the air filter element every 25 hours.
- The maintenance period and the exact time (hour), the one which comes first should govern.
- If you have missed the scheduled time to maintain your engine, do it as soon as possible.

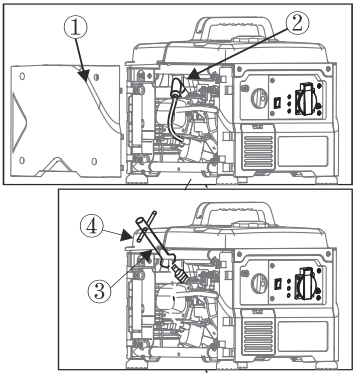
⚠WARNING

Stop the engine before servicing. Put the engine on a level surface and remove the spark plug cap to prevent the engine from starting.
Do not operate the engine in a poorly ventilated room or other enclosed area. Be sure to keep good ventilation in working area. The exhaust from the engine may contain poisonous CO, inhalation can cause shock, unconsciousness and even death.

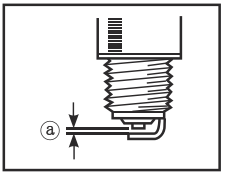
7.1 Spark plug inspection

The spark plug is important engine components, which should be checked periodically.

1. Remove the cap ① and the spark plug cap ②, and Insert the tool ③ through the hole from the outside of the cover.



2. Insert the handlebar ④ into the tool ③ and turn it counterclockwise to remove the spark plug.
3. Check for discoloration and remove the carbon. The porcelain insulator around the center electrode of spark plug should be a medium-to-light tan color.
4. Check the spark plug type and gap.



Standard Spark Plug: A5RTC
Spark Plug Gap: 0.6-0.8mm

TIP: The spark plug gap should be measured with a wire thickness gauge and, If necessary, adjusted to specification.

5. Install the spark plug.

Spark Plug Torque: 12.5 N*m (1.25kgf*m, 9 lbf*ft)

TIP: If a torque wrench is not available when installing a spark plug, a good estimate of the correct torque is 1/4-1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

6. Install the spark plug cap and spark plug cover.

7.2 Carburetor adjustment

The carburetor is a vital part of the engine. Adjusting should be left to our company authorized dealer with the professional knowledge, specialized date, and equipment to do so properly.

7.3 Engine oil replacement (refer to 5.2)

⚠WARNING

Avoid draining the engine oil immediately after stopping the engine. The oil is hot and should be handled with care to avoid burns.

1. Place the generator on a level surface and warm up the engine for several minutes. The stop the engine and turn the engine switch, fuel switch knob to "OFF".
2. Remove the screws and then remove the cover.
3. Remove the oil filler cap .
4. Place an oil pan under the engine. Tilt the generator to drain the oil completely.
5. Replace the generator on a level surface.

NOTICE

Do not tilt the generator when adding engine oil. This could result in overfilling and damage to the engine.

6. Add engine oil to the upper level.

Recommended engine oil: SAE 10W-40 Recommended engine oil grade: API Service SE type or higher Engine oil quantity: 0.28L

7. Wipe the cover clean, and wipe up any spilled oil.

NOTICE

Be sure no foreign material enters the crankcase.

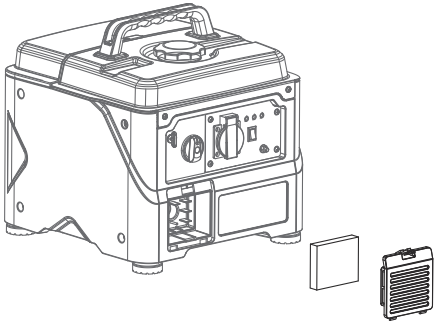
8. Install the oil filler cap.

9. Install the cover and tighten the screws.

7.4 Air filter

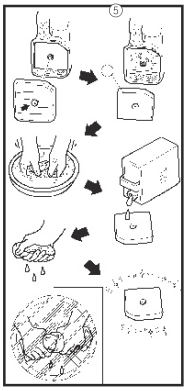
1. Remove the air filter case cover .

2. Remove the foam element .



3. Wash the foam element in solvent and dry it.

4. Oil the foam element and squeeze out excess oil.
   The foam element should be wet but not dripping.



NOTICE

Do not wring out the foam element when squeezing it. This could cause it to tear.

5. Insert the foam element into the air filter case.

TIP: Be sure the foam element sealing surface matcher the air filter so there is no air leak.

The engine should never run without the foam element; excessive piston and cylinder wear may result.

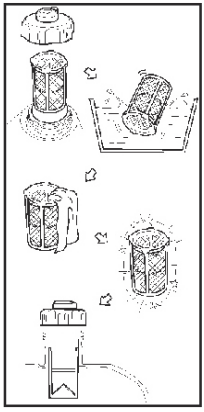
6. Install the air filter case cover in its original position.

7.5 Muffler screen

⚠WARNING

The engine and muffler will be very hot after the engine has been run. Avoid touching the engine and muffler while they are still hot with any part of your body or clothing during inspection or repair.

7.6 Fuel tank filter



WARNING

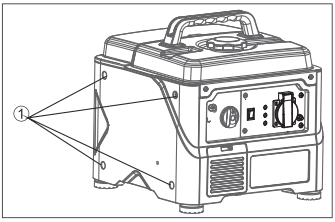
Never use the gasoline while smoking or in the vicinity of an open flame.

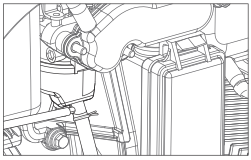
1. Remove the fuel tank cap and filter.
2. Clean the filter with gasoline.
3. Wipe the filter and install it.
4. Install the fuel tank cap.

Be sure the fuel tank cap is tightened securely.

7.7 Fuel filter

1. Remove the screws ①, and then remove the cover, and drain the fuel.





2. Hold and move up the clamp, then take off the hose from the tank.
3. Take out the fuel filter.
4. Clean the filter with gasoline.
5. Dry the filter and put it bank into tank.
6. Install the hose and clamp, then open the fuel valve to check whether it is leak.
7. Install the cover and tighten the screws.

8. STORAGE

Long term storage of your machine will require some preventive procedures to guard against deterioration.

8.1 Drain the fuel

1. Stop the engine.(See page 22).
2. Remove the fuel tank cap, remove the filter . Extract the fuel from the fuel tank into an approved gasoline container. Then, install the fuel tank cap.

⚠WARNING

Fuel is highly flammable and poisonous. Check "SAFETY INFORMATION" (See page 5) carefully.

NOTICE

Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.

3. Start the engine (See Page 21) and leave it run until it stops. The engine stops in approx. 20 minutes. Time by running out of fuel.

TIP:

- Do not connect with any electrical devices. (unloaded operation)
- Duration of the running engine depends on the amount of the fuel left in the tank.

4. Remove the screws, and then remove the cover.
5. Drain the fuel from the carburetor by loosening the drain screw on the carburetor float chamber.
6. Turn the engine switch to “OFF”.
7. Tighten the drain screw.
8. Install the cover and tighten the screws.
9. Turn the fuel switch to “OFF” after the engine has completely cools down.

8.2 Engine

Perform the following steps to protect the cylinder, piston ring, etc. from corrosion.

1. Remove the spark plug, pour about one table- spoon of SAE 15W-40 into the spark plug hole and reinstall the spark plug. Recoil start the engine by turning over several times (with the engine switch off) to coat the cylinder walls with oil.
2. Pull the recoil starter until you feel compression. Then stop pulling. (This prevents the cylinder and valves from rusting).
3. Clean exterior of the generator. Store the generator in a dry, well-wentilated place, with the cover placed over it.

9. TROUBLESHOOTING

9.1 Engine won't start

1. Fuel systems

No fuel supplied to combustion chamber.

○ No fuel in tank…Supply fuel.

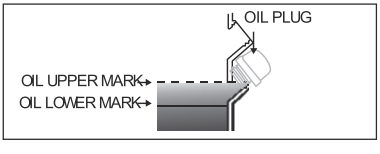
○ Clogged fuel filter …. Clean fuel filter.

○ Clogged carburetor…. Clean carburetor.

2. Engine oil system

Insufficient

○ Oil level is low…. Add engine oil.



3. Electrical systems

○ Pull the choke out and pull the recoil starter … Poor spark.

○ Spark plug dirty with carbon or wet … Remove carbon or wipe spark plug dry.

○ Faulty ignition system … consult our company authorized dealer.

9.2 Generator won't produce power

○ The AC pilot light (Green) go off …. Stop the engine, then restart.

10. SPECIFICATIONS

	Model No.	1kW
Genrator	Type	Silent Inverter
	Rated frequency(Hz)	50, 60
	Rated voltage	220, 230
	Rated output power(kw)	1
	Power factor	1
	Fuel tank capacity(L)	2.8
	Fuel type	Unleaded Gasoline
	Continue Runing Time (at rated power)(h)	4
	AC output quality	ISO8528 G2
Engine	Engine	R56-i
	Engine type	Single cylinder, 4-Stroke, forced air cooling, OHV
	Displacement(cc)	56
	Oil capacity (L)	0.28
	Spark Model No.	A5RTC
	Starting mode	Recoil starter
Genrator set	Length×Width×Height(mm)	336×327×306
	Net weight (kg)	12.5
According to Directive 2000/14/EC and 2005/88/EC, ISO 8528-10 Guaranteed sound power: 95dB(A) Emissionsound pressure level: 79.4dB(A) Uncertaincy K: 1.97dB(A)		