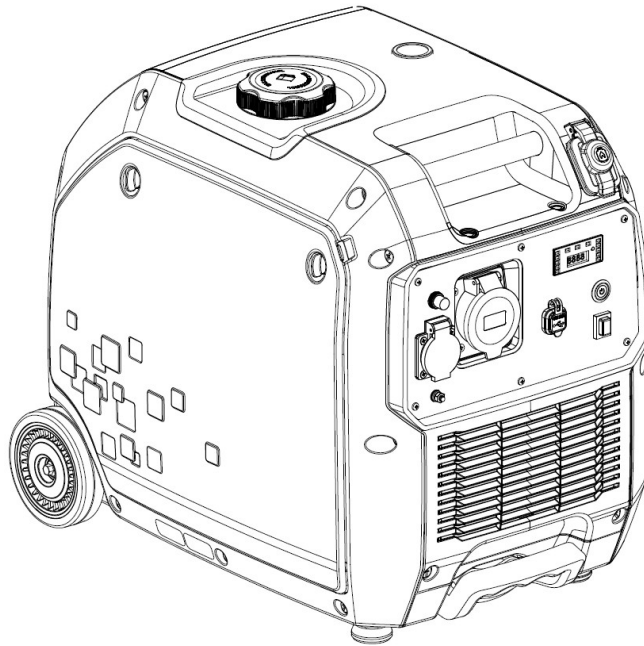


VARI®



ORIGINAL INSTRUCTIONS FOR USE

ECV 5500 W

SILENT INVERTER GENERATOR

INSTRUCTIONS FOR USE



Read this manual carefully before operation.
This manual includes important guidance for safety operation.

This Manual contains important safety information and instructions for operating this generating set. **PLEASE READ THIS MANUAL CAREFULLY.** Failure to do so could result in property damage and/or personal INJURY/DEATH.

Provide this manual to any operator of this generating set. This manual should be considered as a permanent part of your generating set and should remain with it when you sell it.

All pictures & figures are only one example of series generating set. It shall be only for reference and perhaps there will be difference between pictures & figures and physical products.

All information in this publication is based on the latest product information available at the time of printing. We reserve the right to change, alter and/or improve the product and this document at any time without notice and without incurring any obligation.

No part of this publication shall be reproduced without written permission.

Write down the generating set's serial number and purchase information. Keep this manual and the receipt for future reference.

Model:

Serial number:

Date of purchase:

Contents

I. Operator safety.....	1
1. Safety rules	1
II. Getting started.....	6
1. Unpacking.....	6
2. Usage of pull rod.....	6
3. Features and Controls.....	8
III. Instructions for use.....	13
1. Operating checklist	13
2. Starting the generating set.....	19
3. Connect to electrical devices	24
4. Stopping the generating set.....	26
IV. Maintenance.....	28
1. Maintenance schedule	28
2. Generating set maintenance.....	29
3. Engine maintenance	30
V. Trouble-shooting	35
VI. Storage and transportation	36
VII. Specification.....	37
1. Specification parameter table	37
2. Wiring diagram	38

I. Operator safety

1. Safety rules



Pay attention to this safety alert symbol. Obey all safety messages that followed by this symbol to avoid possible property damage, INJURY or DEATH.

Each safety message is preceded by a safety alert symbol and one of three words, DANGER, WARNING, or CAUTION.

DANGER

Indicates a hazardous situation which, if not strictly complied with, will result in substantial property damage, serious injury or DEATH.

WARNING

Indicates a hazardous situation which, if not strictly complied with, may result in property damage, serious injury or DEATH.

CAUTION

Indicates a hazardous situation which, if not strictly complied with, could result in property damage or injury.



WARNING

READ THIS MANUAL COMPLETELY BEFORE OPERATING.

DO NOT operate this generating set until you have read ALL safety, Operation, and maintenance instructions listed in this manual.

Failure to follow the instructions may result in property damage, INJURY or DEATH.

The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be possessed by the operator.

WARNING

This product is a home generator and an air-cooled generator cannot run full time. It is prohibited to modify this generator without authorization or use it in an unsuitable place.

WARNING

Before each use, carefully check the parts for looseness or damage, observe the oil or fuel for leaks, or other conditions that may affect normal operation. All damaged or defective parts shall be repaired or replaced without delay.

Be clear about the location of all controls and safety signs.

Ensure that all safety indicators are always in the correct positions and in the correct working conditions.

Please run the generator on a level surface.

It is forbidden to block the cooling channel with objects.

It is forbidden to expose the generator to excessive humidity or a large amount of dust.

It is forbidden for children or untrained persons to operate the generator.

It is forbidden to run the generator unattended, so you must turn off the generator before leaving.

Do not touch the generator when it is running or just stopped.

Keep a space of 0.9 m around the generator to ensure good cooling.



DANGER

MOVING PARTS

Moving parts may cause serious injury. Keep hands and feet away from moving parts.

When the generator is in operation, do not cover or wrap it or remove the protective device.

Moving parts may cover hands, feet, hair, clothing, etc., and may cause traumatic amputation or serious fracture.

Please tie up your long hair. Do not wear loose, shaky and other clothing that may be drawn into the generator.



WARNING

RECOIL

Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let go.

Unintentional startup can result in accident.

WARNING

Lithium batteries are maintenance free. In case of any faults, please contact your local dealer. It is forbidden to handle it by yourself.



WARNING

HOT SURFACE

Engine and generator generate heat during operation, so touching hot surfaces may cause severe scalding.

Avoid contact with high temperature exhaust gas.

Do not touch the high temperature surface.

Do not touch the generator when it is running or just stopped.



DANGER

FIRE OR EXPLOSION

Gasoline and liquefied petroleum gas (LPG) are both flammable and explosive substances.

LPG may cause fire or explosion if ignited.

Fire or explosion may cause serious burns or death.

Fill the fuel tank with fuel outdoors or in a well-ventilated area and ensure that the generator is off.

Be sure to wipe up the overflowing fuel before running the generator.

Store fuel in a suitable fuel storage unit. Do not store fuel or flammable materials near it.

Before running the generator, please keep it away from any inflammable materials.

If there is smoke, spark, open fire and other abnormalities during running of the generator, immediately shut down the generator. Turn off the fuel valve and disconnect the fitting on the fuel port. The LPG shall be kept away from sparks or open flames.

Never run the generator when there is a leak in the fuel system or LPG system.

Before storing or transporting the generator, empty the fuel tank and disconnect the fitting on the fuel port.

Please provide fire extinguisher nearby for use in case of fire.



WARNING

FIRE

Operation of this engine may create sparks that can start fires around flammable material.

This engine may not be equipped with a spark arresting muffler. If the engine will be used around flammable materials, or on land covered with materials such as agricultural crops, forest, brush, grass, or other similar items, then an approved spark arrester must be installed.

In some area, a spark arrester is required by law.

Please contact local fire agencies for laws or regulations relating to fire prevention requirements.



Flammable materials can catch fire when they come into contact with hot surfaces. Do not place flammable objects within 1.5 meters.



DANGER

ELECTRIC SHOCK

The generator generates high voltages and currents that will cause death during running.

The generator must be properly grounded. If the generator is not properly grounded, it may cause electric shock, especially if the generator is equipped with wheels. Please contact the electrician for local regulations regarding generator grounding.

Grounding installation should be performed by a qualified electrician. Improper grounding may result in death due to electric shock.

To reduce the danger of electric shock, do not use old, worn, bare, or any defective or damaged wires.

Do not touch exposed wires or sockets.

Please keep the generator dry and do not use it in humid weather.

It is forbidden to operate the generator or touch the wires while standing in water, or with bare feet, or with wet hands or feet.

It is forbidden for children or untrained persons to operate or maintain the generator.

When using generator as standby power, notify the power grid. Use an approved transfer switch to isolate the grid from the generator.

Do not connect the generator into the grid before the transfer switch is properly installed by the qualified electrician.



⚠ DANGER

TOXIC FUME

The exhaust gas from the engine contains many colorless, odorless and poisonous gases such as CO and NO compounds. Running the engine indoors will cause poisoning and even death.

Do not use the engine in buildings or any other enclosed environments, even if the doors and windows are open.

Place the generator in a well-ventilated area, and pay attention to the wind direction and airflow.



⚠ DANGER

TOXIC GAS

LPG contains harmful substances such as hydrogen sulfide and carbon dioxide.

When the gas of these harmful substances is absorbed by the human body, it will cause coma, vomiting and other poisoning phenomena or death.

It is prohibited to use the generator in an enclosed environment or in the building even if the doors and windows are open.

Use the generator in a well-ventilated area, and pay attention to the wind direction and airflow.



⚠ DANGER

LOW TEMPERATURE BURN

The boiling point of LPG is low, below 0 °C. The liquid formed by pressurization is usually stored in LPG cylinders. If there is a gas leak, gas splashing on the human body will cause frostbite.

Do not touch the leaking LPG cylinder directly without any protection.

II. Getting started

1. Unpacking

Remove the generator from the packaging box.

- Place the packaging box on a solid and flat surface.
- Carefully cut each corner of the packaging box from top to bottom. Lay each side open and flat on the ground.
- Remove all accessories except the generator from the packaging box.

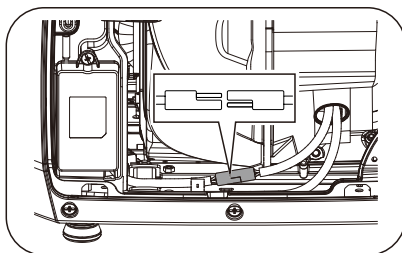
The following steps apply to electric start.

Connect the battery cable before the first use.

Unscrew the fixing bolt on the right maintenance panel and remove the maintenance panel.

Connect the battery harness, put the right maintenance panel back in place, and tighten the bolts.

Also, make sure that the combination switch lever is not pressed down by the right maintenance panel when installing the right maintenance panel back into place.



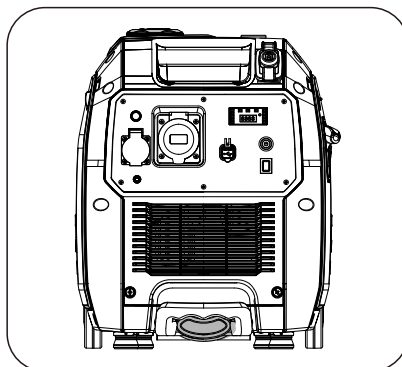
2. Usage of pull rod

⚠ CAUTION

Make sure the generator is placed on a level ground before using the pull rod.

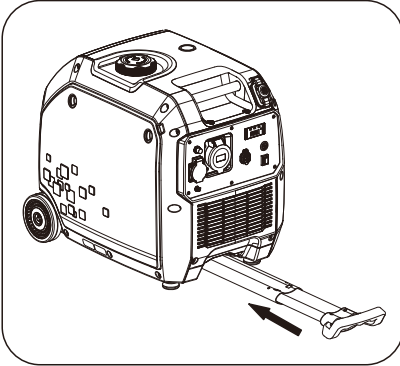
Using the pull rod

After the pull rod button is pressed, the telescopic pull rod will pop out automatically; hold the lever and pull out the pull rod. The pull rod makes a "click" sound indicating that the pull rod has been pulled out completely, and in this case, the generator can be moved.

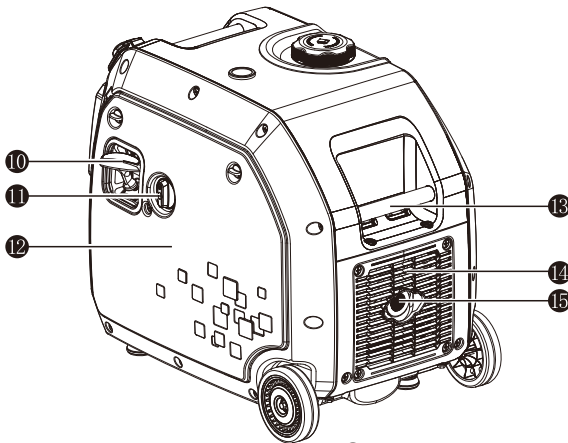
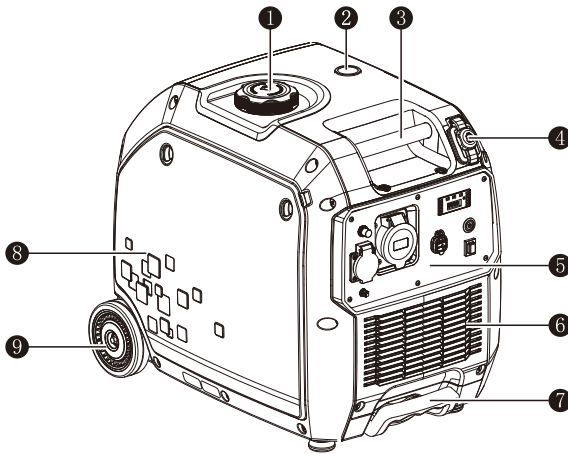


Pull rod reset

Press the pull rod button and hold the lever, push it inward towards the generator to the original position until the pull rod makes a “click” sound, indicating that it has been reset.

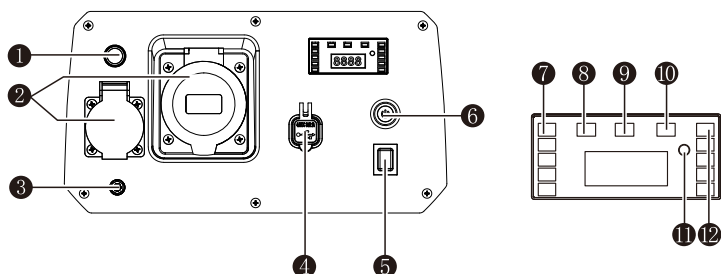


3. Main features and controls



- | | |
|------------------------------------|---|
| ① Fuel tank cap | ⑩ Start handle |
| ② Fuel level indicator sight glass | ⑪ Combination switch
(start (If equipped), run,
shut-off, and flameout) |
| ③ Front lift handle | ⑫ Right maintenance panel |
| ④ Fuel port (If equipped) | ⑬ Rear lift handle |
| ⑤ Panel assembly | ⑭ Silencer shutter |
| ⑥ Air inlet shutter | ⑮ Silencer |
| ⑦ Lever | |
| ⑧ Left maintenance panel | |
| ⑨ Wheels | |

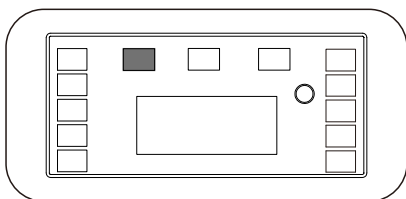
Panel assembly



- | | |
|-----------------------------|-----------------------------|
| ① Overcurrent protector | ② AC output |
| ③ Ground terminal | ④ USB port |
| ⑤ Energy-saving switch | ⑥ Push button |
| ⑦ Load indicator light | ⑧ Overload indicator light |
| ⑨ Operation indicator light | ⑩ Oil indicator light |
| ⑪ Reset button | ⑫ Oil level indicator light |

Overload indicator light (red)

If the overload indicator light is on, it indicates that the generator has detected the overload of connected electrical device output. In this case, stop the generator to protect it and the connected electrical device. The operation indicator light (green) goes out and the overload indicator light (red) flashes for 3 s every time, but the generator does not stop running.

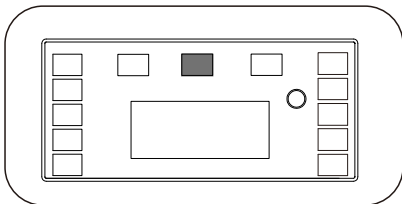


When the overload indicator light flashes and the generator set has no output, please take the following measures:

- Reduce the total power of the connected electrical device to within the range of the rated output.
- Inspect whether the cold air inlet is blocked by foreign matters and whether the relevant control parts are abnormal. If there is any problem, eliminate it immediately.
- Press the reset button.

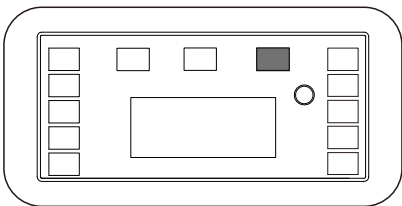
Operation indicator light (green)

When the engine is started and outputs normally, the operation indicator light is on.



Engine oil warning light (yellow)

When the oil level in the crankcase drops below the safety line, the engine oil protection system will automatically turn off the generator, and the engine oil warning light will flash as you pull the start handle; after being filled with enough oil, the generator can be started again.



NOTE:

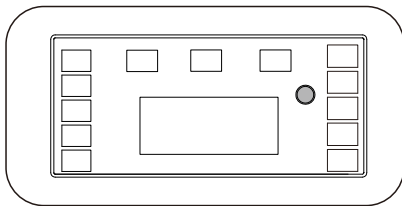
If the generator is in flameout and can not be started, please turn the combination switch to the “RUN” position, and then pull the start handle, if the oil warning light lights up, the oil

capacity is insufficient, and then add the oil and restart the generator.

Reset button

When the generator produces overload protection without output, reduce the load and then gently press the reset button to restore the output.

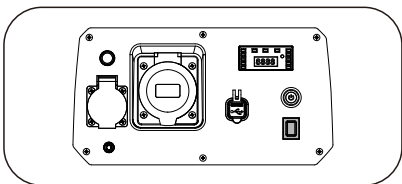
In normal use, press the reset button to switch the display of voltage, frequency, running time, etc.



Energy-saving switch

When the energy-saving switch is in the “ON” position, the generator will intelligently control the engine speed according to the connected load, to reduce fuel consumption and noise.

When the energy-saving switch is in the “OFF” position, the engine runs at the rated speed regardless of whether the load is connected.

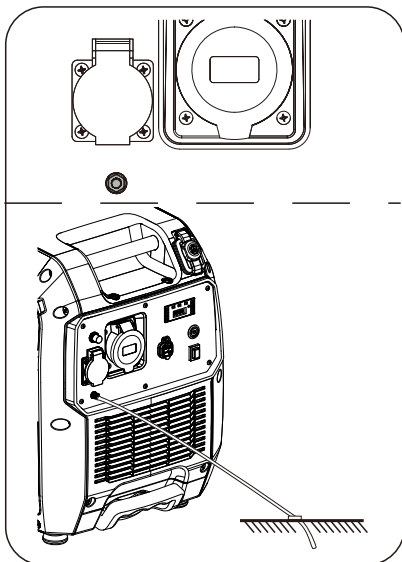


NOTE:

When using equipment with high start current (such as air compressor, submersible water pump, etc.), please turn the energy-saving switch to the "OFF" position.

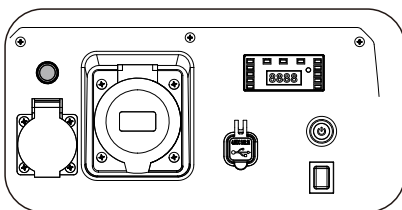
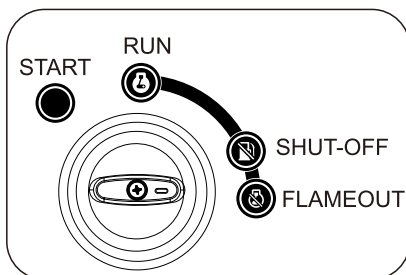
Ground stud

A cable shall be used to connect the ground stud to the ground to avoid electric shock due to failure of the device. Before using the generator, make sure that the ground wire is connected.

**Overcurrent protector**

When the generator is overloaded or overheated for a long time, the overcurrent protector will disconnect the output; in this case, please re-reduce the load or run it under no load for a few minutes, and then press the overcurrent protector button to restore the output.

Note: the overcurrent protector is relevant to the operating current, ambient temperature and other factors, so the protection time will be different.

**Combination switch****START (if equipped (recoil start))**

Close the choke.

RUN

The generator works normally.

SHUT-OFF

The supply of fuel in the fuel tank stops, the generator is still running and burning off the excess fuel in the pipe before shutdown.

⚠ CAUTION

If the generator will not be in use for a short time, please enable this function, or you can also unscrew the drain bolt of the carburetor to discharge the fuel in the fuel cup from the generator.

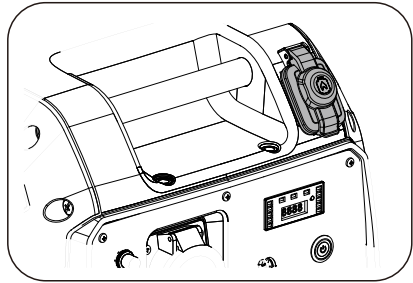
Flameout

The generator stops working.

⚠ CAUTION

After the load is removed from the generator, please run the generator under no load for 3 minutes to balance the temperature, and then activate the flameout function.

LPG female connector (If applicable)



Open the LPG waterproof cover, align the male joint of the relief valve pipe with the LPG female joint and insert it until a click is heard, indicating that the relief valve is firmly connected.

After the relief valve is firmly connected, the carburetor will stop supplying fuel and the generator can only use fuel at this time.

⚠ CAUTION

If the generator needs to use the fuel, please close the fuel cylinder valve and disconnect the relief valve from the generator, and then the generator can use the fuel normally.

III. Instructions for use

1. Operating checklist

1 Operation place

Applicable to use outdoors only. Please place the generator in a well-ventilated area.

The generator must be placed on a firm and flat surface in a well-ventilated place with clean and dry surrounding environment for operation.

Use the generator only within the scope of application of it. If you are unclear about the scope of application of the product, please consult your local distributor.

In some specific locations and areas, the use of the generator must meet some additional terms or regulations, please consult your local dealer.



⚠ DANGER

TOXIC GAS/FUME

LPG contains harmful substances such as hydrogen sulfide and carbon dioxide. When the gas of these harmful substances is inhaled by the human body, it will cause

coma, vomiting and other positive phenomena or death.

The exhaust gas of the engine contains CO. Use indoors may lead to death!

It is forbidden to operate the engine in a building or other enclosed environments, even if the doors and windows are open.

When before the generator, make sure that the generator is in a well-ventilated place and clean up the area around it. Careful consideration shall be given to wind direction and air flow for arrangement of the generator.

High altitude

To ensure proper operation of the generator at high altitudes, it may be necessary to equip the carburetor with a high altitude kit. If the generator is always used in areas with an altitude of more than 1500 m, consult your local dealer for high altitude kit information.

⚠ CAUTION

Using a high altitude carburetor kit at altitudes below 1500 m may cause the engine to be overheated, causing serious damage to

the engine. When using generator in low altitude areas, restore the carburetor to factory specifications at the dealer.

⚠ CAUTION

Even if the carburetor is modified, the power of the generator will decrease with the increase of altitude, and the power will decrease by 3.5% for an increase of every 300 meters. If the carburetor is not modified, the altitude height will have a greater impact on power.

2 Operation place

Inspect parts for looseness or damage, check oil or fuel for leaks, or check other conditions that may affect the proper functioning of the generator. All damaged or defective parts shall be repaired or replaced without delay.

Clean the dirt or foreign matters on the surfaces around the air inlet, vent and recoil starter of the generator.

The generator should not be moved or tipped over during operation.

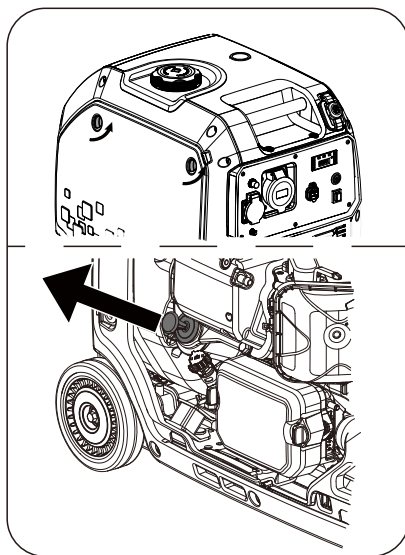
⚠ WARNING

Problems identified must be corrected before running the generator, otherwise it will result in property damage, and even serious personal injury or death.

3 Inspect the engine oil

Before the generator runs, place the generator horizontally and check the oil level.

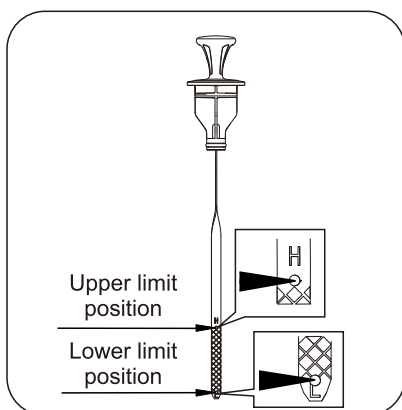
Remove the left maintenance panel after unscrewing the fixing bolt.



Remove the oil dipstick and wipe it clean.

Insert the dipstick into the filler, taking care to insert the entire dipstick to the bottom, then pull it out again, observe the dipstick and check the oil level. The amount of oil shall be within the upper and lower limits of the dipstick scale.

If the oil level is too low, add the recommended oil to the upper limit of the dipstick.



Install the dipstick and left maintenance panel in place again.

Please learn more about **oil filling** in the **maintenance section**.

Oil level: 0.85 L

Recommended grade of engine oil: SAE10W-30

CAUTION

Run the generator only on a flat surface.

The engine is equipped with an engine oil alarm, when the oil level is below the lower limit, the generator will automatically shut down.

To avoid inconvenience caused by unexpected shutdown, please add the oil to the upper limit position and check the oil level regularly.

WARNING

Please use the 4-stroke engine oil recommended in the section “Maintenance” as oil is an important factor affecting the performance and service life of a generator.

WARNING

The engine is not filled with oil before delivery. Any attempt to rotate the crankshaft or start the engine before incorrectly adding the oil of recommended grade and capacity may cause permanent damage to the engine and void the product warranty.

4 Operation place

Inspect the fuel level before starting the generator. Please add fuel if necessary.

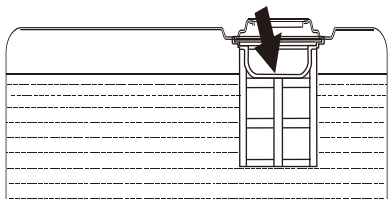
Use fresh and clean unleaded gasoline.

Do not mix oil and fuel.

Do not add oil or fuel above upper limit. In order to leave room for the gasoline to volatilize.

Fasten the fuel tank cap. If the fuel overflows, please wipe the fuel with a clean cloth.

Maximum fuel level



Fuel level: please refer to the specification sheet for details.

CAUTION

A certain amount of pressure will be formed in the fuel tank due to the volatilization of gasoline. Let the generator cool down for at least 2 minutes before removing the fuel tank cap. Slowly loosen the fuel cap to release the pressure in the fuel tank.



DANGER

FIRE OR EXPLOSION

Gasoline is a flammable and explosive substance.

Do not fill the fuel tank with fuel indoors or when the generator is running or at high temperature.

Filling the fuel tank with fuel should be done outdoors and in a well-ventilated environment with the generator shut down.

At the end of each refueling, the overflowing fuel should be wiped off.

Regularly inspect the fuel system for damage or leakage. Do not run the generator when there is a leak in the fuel system.

Use appropriate fuel storage units and storage measures. It is forbidden to store fuel or inflammable materials near it.

Please provide the fire extinguisher nearby for use in case of fire.

CAUTION

When filling the fuel tank with fuel, the filling amount should not exceed the upper limit. Overfilling may lead to unstable operation of the

engine, even flameout, damage to the canister (if equipped), and void warranty.

Do not use engine cleaners or carburetor cleaners in the fuel tank as they may cause permanent damage. Avoid deposition of colloids in fuel system components (e.g. carburetor, fuel filter, fuel pipe or fuel tank) during storage. Experience has shown that alcohol-blended fuels (so-called alcohol gasoline, including ethanol or methanol) absorb moisture during storage, which leads to decomposition and formation of acid liquor. Acidic fuels will damage the fuel system of the generator. Please read carefully the relevant requirements for "Storage".

Gasoline-alcohol blended fuel: The fuel with volume ratio of 10% alcohol and 90% unleaded gasoline is usable. Gasoline and alcohol mixture of other mixing ratios shall not be used.

Engine damage caused by the use of spoiled, failed or contaminated fuel will not be covered by the warranty.

CAUTION

In order to minimize colloid deposits in the fuel system and ensure start-up, please add the appropriate fuel according to the usage. Please do not continue to use fuel left over from the last use.

CAUTION

The generator shall be cooled for at least 2 minutes before opening the fuel tank cap for refueling. Slowly loosen the fuel cap to relieve pressure in the fuel tank.

5

Operation place

Before starting the generator, disconnect the electrical device from the generator and turn off the circuit breaker.

It may be difficult to start the generator after the electrical device is connected.

The electrical device to be connected must not exceed the maximum power range of the generator. Refer to the specification sheet for details.

6

Grounding

The generator must be properly grounded.

Grounding inside the generator or the electrical device will help prevent electric shock, especially if the generator is wheeled.

Static electricity can easily accumulate in ungrounded devices, and proper grounding can also help eliminate static electricity.



⚠ DANGER

ELECTRIC SHOCK

A generator that is not properly grounded may cause electric shock.

The ground terminal has been set up on the generator. For remote grounding, a large copper wire $\geq 6 \text{ mm}^2$ shall be used between the generator ground terminal and the good ground terminal.

Different regions may also have specific generator grounding requirements. Users are strongly advised to consult the dealer for further information.

7

LPG cylinder check

LPG is stored in special fuel cylinders. Inspect the fuel cylinder for sufficient LPG before using LPG. Inspect if there is a risk of fuel leakage, and if so, replace with a safe fuel cylinder with sufficient LPG immediately.

⚠ CAUTION

Before using LPG, please check the thread connection between LPG cylinder and the pressure relief valve is well.

8

Inspection of connection with LPG

Connect one end of the relief valve to the fuel cylinder and the other end to the LPG female joint of the panel. Moisten the connector with soapy water and start the generator. Inspect all connectors for leaks.

If bubbles appear and become larger, it indicates that any connector is not installed in place or is damaged, resulting in leakage. Please close the fuel cylinder valve and turn off the generator immediately, reinstall the connector or replace it with an undamaged one.

If the leak is not resolved or the

leak is not on the connector, please stop using the generator immediately and contact the local dealer.



⚠ DANGER

FIRE OR EXPLOSION

LPG is a flammable and explosive substance.

It is forbidden to lay the LPG cylinder by lying it down, and the fuel cylinder shall be kept in an upright position when being used.

If the fuel cylinder leaks, the generator shall be immediately shut down, and the leaking fuel cylinder shall be replaced with another one, to ensure there is no risk of leakage after the replacement. Then the generator can be restarted.

It is forbidden to put the fuel cylinder close to the fire or heat.

Minors are prohibited from cylinder and using the equipment.

Please use the LPG cylinder that meets the national standard. Please provide the fire extinguisher nearby for use in case of fire.

2. Starting the generator

(Fuel Operation)

1

Before use, perform the “Inspection items before use” and remove all loads.

2

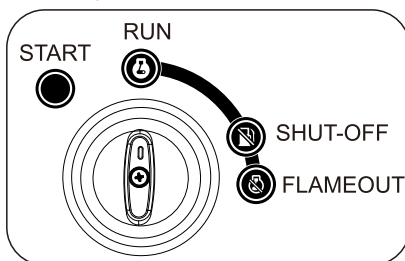
Suitable for recoil start and electric start

Cold start: turn the combination switch to “START” position.

Warm start: turn the combination switch to “RUN” position. If it cannot be started, please turn the combination switch to the “START” position and then start it again.

Suitable to start by Push button

Turn the combination switch to “RUN” position.



3

Select according to the actual configuration of the user

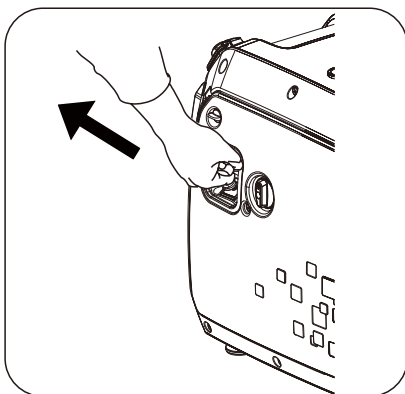
Recoil start:

To start the generator, hold the handle of the recoil starter and

pull it slowly until there is resistance and then quickly pull the handle to start the generator.

WARNING

Please check the condition of the starter rope before use. If the rope is seriously worn, please replace it at the authorized local dealer in time.



WARNING

RECOIL

When the recoil starter retracts quickly after start-up, the hand and arm will be pulled toward the engine faster.

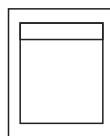
Unpreparedness may result in accidental injury.

CAUTION

During start-up, the choke may be affected by temperature or other factors and may require different openings.

Electric start (If configured)

Press and hold the start button for 0.3-5 s and then release it, and the generator will be started, and the start button will be reset automatically.



Start button

WARNING

When the generator cannot be started through electric start due to low battery power, which is caused by generator idling for a long time or in improper use, please manually control the damper and start the generator according to the steps for recoil start. The generator will automatically charge the battery after normal operation.

Start by push button (If configured)

Press the push button once to start the generator.



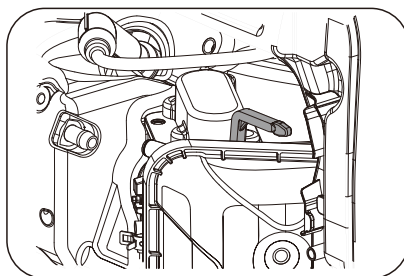
⚠ CAUTION

After the generator is used for a period of time, if the push speed of the motor decreases, it means that the battery needs to be replaced. Before shutting down the generator, ensure that the combination switch in “Flameout” position, to prevent battery power loss, which may affect the next start.

If the generator still fails to be started or is shut down after three attempts, find the cause of the fault and eliminate it.

The engine oil alarm prevents the generator from being started when the oil level in the crankcase is below the lower limit.

Before the operation, please do a routine inspection of the oil. The recommended maintenance interval can be found in the maintenance section.



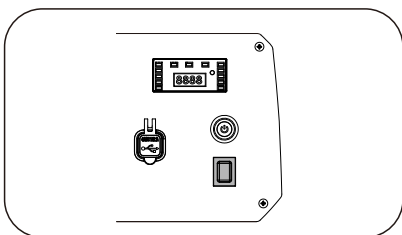
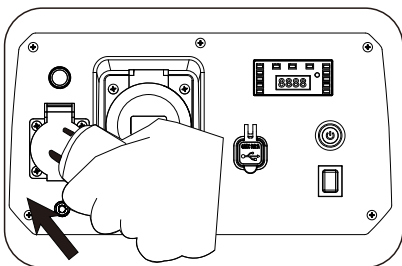
⚠ CAUTION

When the generator can not be started through the electric start, please open the left maintenance panel, and start the generator through the choke handle and the start handle together.

4

After completing the above operations, the generator can be connected to the electrical devices.

When the electrical devices require high initial power, please turn the energy-saving switch to “OFF” position. When no more initial power is needed, please turn the energy-saving switch to “ON” position. It is recommended to refer to the “Power Reference Table” on page 25.



⚠ WARNING

When the generator output terminal is connected to the electrical device and the electrical device is on, it is prohibited to start or shut down the generator.

⚠ CAUTION

Do not continue to start the generator before the fault is removed.

It is forbidden to start the generator after using other batteries without authorization.

Starting generator with LPG (If equipped)

1

Please perform pre-use inspection items and remove all loads.

2

Connection steps of relief valve assembly, generator and fuel cylinder.

1. Attach the relief valve hose assembly (threaded end) to the fuel cylinder valve and tighten it.
2. Remove the shields from the generator LPG female connector and relief valve pipe male connector.
3. Align the upper male connector of the relief valve pipe with the generator LPG female connector and insert it until you hear a “click” sound, indicating that the relief valve pipe and the generator LPG female connector are firmly connected.

3

Open the fuel cylinder valve.

4

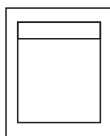
Select according to the actual configuration of the user

Recoil start:

1. Before starting the generator, turn the combination switch to “START” position.
2. Hold the handle of the recoil starter and pull it slowly until there is resistance, and then quickly pull the handle to start the generator.

Electric start:

Press and hold the start button in “ON” position for 0.3-5 s and then release it, and then the generator will be started.



Start button

Push by push button:

Press the push button once to start the generator.

**5**

Suitable for recoil start and electric start

After the generator is started, turn the combination switch to “RUN” position.

6

After the above operation, the generator can be loaded.

3. Connecting electrical device

- a. Inspect whether the power cord is damaged before use. If the cord is deformed, such as deformation and incisions, it will lead to the risk of electric shock.
- b. Confirm that the generator is grounded. If the electric device requires grounding, the generator must be grounded.
- c. Ensure that all electrical devices are turned off.
- d. After the generator is started, let it run for a few minutes to allow it to warm up to a steady state.
- e. Confirm the connection and then turn on the electric device you expected.
- f. Before stopping the generator, please turn off the electrical device or disconnect the output.
- g. If the generator provides power to more than one electrical devices, start each electrical device according to the size of the load, from small to large.

DANGER

If the connected device is overheated, please shut down the device immediately and disconnect it from the generator.



DANGER

ELECTRIC SHOCK

In order to reduce the danger of electric shock, do not use aging, worn or exposed wires with electric shock danger.

It is prohibited to touch exposed wires or plugs.

It is prohibited to operate the generator or electric wire in the water or with bare feet, or with wet hands or wet feet.

Load capacity

It must be ensured that the generator is capable of providing sufficient power to meet the required operating power and initial power of all electrical devices powered at the same time. Calculate the required operating power and initial power according to the following steps.

- a. Select the electrical devices to be supplied with power simultaneously.
- b. The operating power is equal to the sum of the power of all the electrical device that need to be supplied with power.
- c. Initial power refers to the short-term peak power required by the electrical device during starting. Because not all

electrical devices are started at the same time, the initial power can be evaluated by summing the power obtained in step 2 and the highest additional peak power of all electrical devices.

⚠ WARNING

Exceeding the load capacity of the generator will damage the generator and its connected electrical devices.

⚠ WARNING

It is necessary to equip with circuit protector or switch to isolate the generating set from the electric utility when the generating set is mainly used for backup. Failure to isolate the generating set from the power utility may result in injury or death to electric utility workers and damage to the generating set due to back feed of electrical energy.

Wattage Reference Chart

Electric equipment		Rate power(W)	Starting power(W)
Appliances	Tablet TV 27"	80	100
	Energy saving lamb	5-50	5-50
	Electric cooker	1000	1000
	Computer	250	250
	Electric fan	50	100
	Washing machine	250	500
	Refrigerator	50	300
	Air-conditioner	1600	3200
Electric tooling	Electric hammer	1000	1500
	Impact Hammer	3000	6000
	Water pump	2200	5000
	Electric welding machine	5000	7500
	Air compressor	5000	10000

4. Stopping the generating set

Turn off the electrical devices and then unplug all the electrical device plugs from the panel.

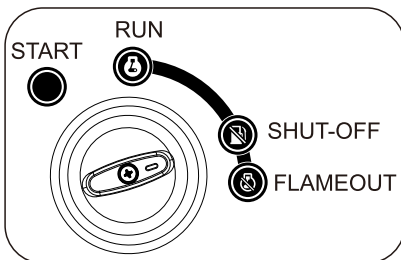
⚠ WARNING

Do not turn off the generator while the electrical device is connected and working.

Stop using Gasoline

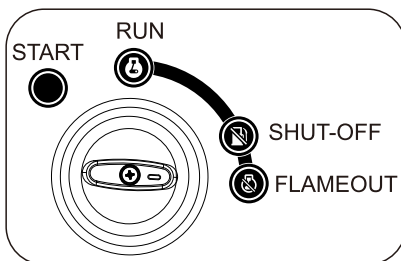
1

Turn the combination switch to “SHUT-OFF” position. Let the generator burn off the excess fuel in the fuel circuit, and the generator will be automatically shut down.



2

Turn the combination switch to “FLAMEOUT” position.



⚠ WARNING

The generator is idle for a long time:

If the generator needs to be idle for a long time, please turn the fuel cock to “Shut-off” position. Turn the combination switch to “Flameout” position until the fuel in the carburetor oil cup burns out and the generator has an automatic flameout.

If the combination switch is not turned to “Flameout” position and the battery is not in use for a long time, it will lose power, resulting in failure to start the generator normally.

Stopping generator when using LPG (If equipped)

1

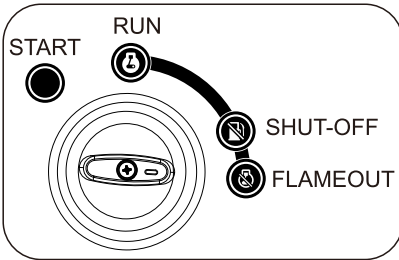
Let the generator run without load for 3 min to stabilize the internal temperatures of the engine and the generator.

2

Close the fuel cylinder valve.

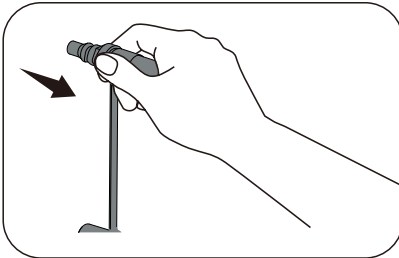
3

Turn the combination switch to “FLAMEOUT” position.



4

Remove the relief valve from the generator LPG female joint and cover it with the shield.



IV. Maintenance

It is the operator's responsibility to complete all scheduled maintenance in a timely manner. Correct any issue before operating the generating set. Always follow the inspection and maintenance recommendations and schedules in this manual.



⚠ DANGER

Accidental starts can cause Severe injury or death. Remove the spark plug cap and ground generating set before performing any service.

⚠ WARNING

Improper maintenance or failure to correct a problem before operation can cause a malfunction and result in property damage, serious injury or DEATH.

Improper maintenance will void your warranty.

⚠ CAUTION

The filter element may contains PAHs, PAHs are harmful for your health. Please wear gloves for protection during air filter maintenance.

1. Maintenance schedule

Stop the generating set before servicing, disconnect all electric devices and battery (If equipped), and cool down the generating set completely.

Serve the generating set in a clean, dry and flat area, so that no accident would happen during the servicing. Please make the wheel in brake state to stop accidental movement of generating set.

Follow the service intervals indicated in the chart below. Service your generating set more frequently when operating in adverse conditions.

Contact your local authorized service dealer for your generating set or engine maintenance needs.

		Each time before use	The first month or 10 hours ^{note2}	Every three months or 50 hours ^{note2}	Every six months or 100 hours ^{note2}	Every year or 300 hours ^{note2}
Engine oil	Inspection	√				
	Replacement		√		√	
Air filter	Inspection	√				
	Cleaning				√ ^{note3}	
Spark plug	Inspection and adjustment				√	
	Replacement					√
Spark Extinguisher ^{note1}	Cleaning				√	
Idle speed	Inspection and adjustment					√ ^{note4}
Valve clearance	Inspection and adjustment					√ ^{note4}
Oil tube	Inspection	Every two years ^{note4}				

NOTE :

Note1: Applicable types (if available).

Note2: Before each season and after then (whichever comes first).

Note3: Service more frequently under severe, dusty, dirty conditions.

Note4: To be performed by knowledgeable, experienced owners or the authorized dealer.

2. Generating set maintenance

Use a damp cloth to clean exterior surfaces of the generating set. Use a soft brush to clean the dirt and oil.

Use compressed air (25 PSI) to clear dirt and debris from the generating set.

Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

WARNING

It is forbidden to tamper with the generator in any of the above ways.

It is forbidden to tamper with the inverter speed. The generator has been set to the correct rated frequency and voltage before delivery. Unauthorized tampering with the factory settings of the inverter will void your warranty.

⚠ WARNING

DO NOT use water to clean the generating set. Water can enter the generating set through the cooling slots and damage the generating set windings.

3. Engine maintenance

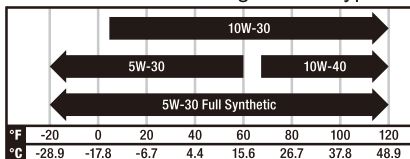
Engine oil

Only use four-stroke engine oil of SJ, SL or equivalent level which are in accordance with or higher than API standard.

Check the API label on oil bottle or other container, and make sure the “SJ, SL” or equivalent level letter is in the label.

SAE 10W-30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.

Recommended Engine Oil Type



Ambient temperature

Oil capacity (rated):

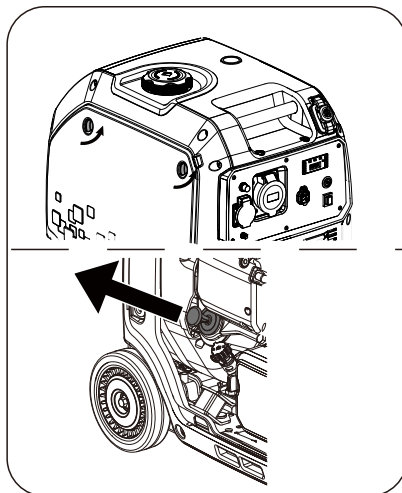
See parameters

Adding oil

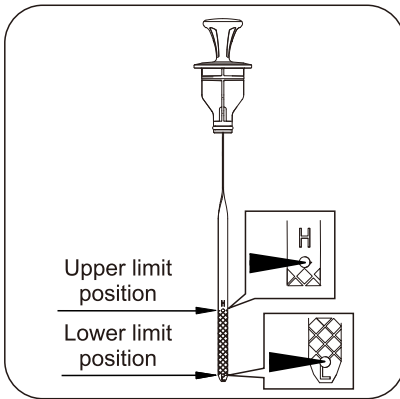
⚠ WARNING

The engine is not filled with oil before delivery. Any operation of the engine before the recommended type and volume of oil is not properly added will cause damage to the engine and void the warranty.

- Place the generator on a flat surface.
- Remove the left maintenance panel after unscrewing the fixing bolts.
- Remove the dipstick.



- Fill the recommended oil to the upper limit.



⚠ CAUTION

Inspection of the filling scale mark

Insert the dipstick into the oil filler and hold it in the filler neck position. Do not insert the dipstick into the filler. Then take out the dipstick and check the dipstick oil level.

e. Install the dipstick back to its original position and fix the left maintenance panel with fixing bolts.

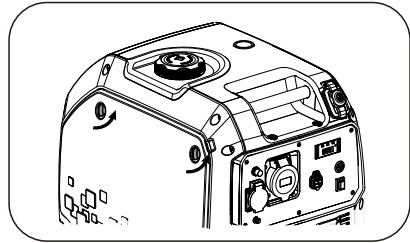
Change the oil

⚠ WARNING

When the generator is hot and the oil temperature is likely to exceed 100 °C, change the oil carefully to avoid scalding.

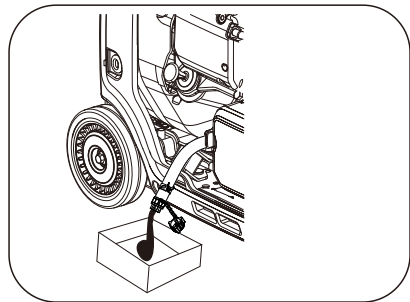
a. Place the generator on a flat surface.

b. Remove the left maintenance panel after unscrewing the fixing bolts.



c. Place the waste oil box under the generator drain pipe outlet, release the drain pipe and unscrew the pipe plug so that the generator completely drains the oil to be changed.

After draining the oil, refit the plug and drain pipe to their original positions.



d. Remove the dipstick and wipe it clean.

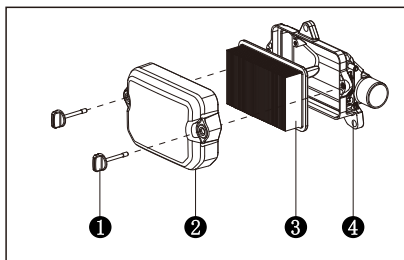
e. Add the recommended oil to the upper limit of the dipstick.

f. Install the dipstick back to its original position and fix the left

maintenance panel with fixing bolts.

g. Please use approved waste management facilities/ equipment to dispose of used oil.

Air filter



- ❶ Air filter fixing bolt
- ❷ Air filter cover
- ❸ Paper air filter element
- ❹ Air filter base

- a. Unscrew the fixing bolt and remove the air filter cover.
- b. Take out the paper air filter element.
- c. Inspect whether the whole paper filter element is damaged, and if damaged, please replace it in time.
- d. Tap the filter element gently to let the dust or debris attached to the filter element fall off.
- e. Install the filter element and air filter cover back into the base and fix them with fixing bolts.

WARNING

The air filter is a key part that affects the emission performance, and any form of modification is strictly prohibited.

It is prohibited to use the engine without installing or correctly installing the air filter, otherwise the engine will be seriously worn or damaged, and the product warranty will be void.

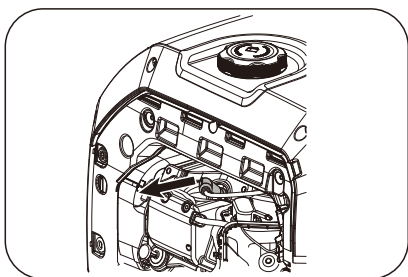
It is strictly forbidden to use organic solvent to clean the paper filter element, and to use compressed air to blow and clean it.

Spark plug

WARNING

Before repairing the spark killer, make sure that the engine has cooled down completely.

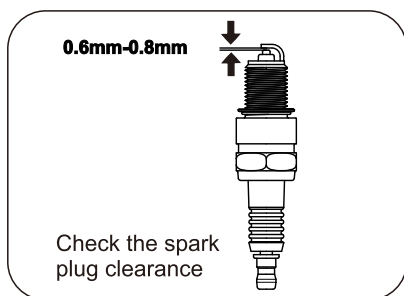
- a. Remove the left maintenance panel after unscrewing the fixing bolt.
- b. Clean the dirt around the spark plug cap and spark plug.
- c. Remove the spark plug cap and unscrew the spark plug with a special socket.



d. Observe the spark plug and spark plug washer for damage. If there is no damage, please clean it with a wire brush. If there is any damage, please replace it in time.

e. Inspect the spark plug clearance. If necessary, carefully bend one end of the electrode to adjust its clearance.

Spark plug clearance: 0.6 mm-0.8 mm



f. Carefully screw the spark plug thread into the engine by hand.

g. When the spark plug is fixed, tighten it firmly with a special socket for the spark plug.

Requirements for tightening torque of spark plug: 20~25 Nm

h. Attach the spark plug cap to the spark plug and connect the

spark plug wire to the spark plug.

⚠ WARNING

Use spark plugs of the recommended type or equivalent. It is forbidden to use spark plugs with improper calorific value range.

i. Install the left maintenance panel and fix it with fixing bolts.

Spark killer (If equipped)

a. Before repairing the spark killer, please allow the engine to cool down completely.

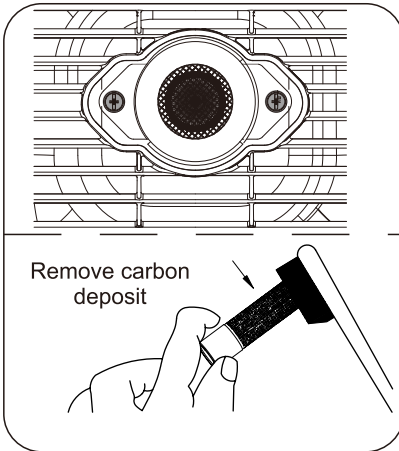
b. Use a magnetic tool to remove the set screws and attach the cover plate to the end of the spark killer and leave it in the silencer.

c. Remove the spark killer screen.

d. Carefully remove the carbon scale from the spark killer screen with a wire brush.

e. If the spark killer is damaged, please replace it in time.

f. Install the spark killer to the silencer and fix it with the two screws.



Speed

The speed has been pre-set at the factory and should rarely require readjustment. Consult your local authorized dealer for such needs.

⚠ WARNING

Unapproved adjustment will damage your engine and/or your electrical devices and void your warranty.

Adjustment

There has no other service and/or adjustment need for your generator.

Unapproved adjustments or tampering can damage your generator and your electrical devices and will void your warranty. Contact your local dealer for such needs.

⚠ WARNING

Tampering with the factory set governor will damage your generator and void your warranty.




V. Troubleshooting

Failure	Trouble	Solution
Generating set fails to start	Turn the combination switch to “FLAMEOUT” or “OFF” position.	Turn the combination switch to “RUN” position, and then start the generator according to start steps.
	Lack of fuel.	Fill the fuel tank with fuel in accordance with the instructions in this manual.
	Lack of engine oil.	Check oil level. This engine is equipped with a low oil sensor. The engine cannot be started unless the oil level is above the prescribed lower limit.
	No ignition.	Remove the spark plug cap. Clean the dirt around the spark plug base, and then remove the spark plug. Insert the spark plug into the spark plug cap. Turn the combination switch to “RUN” position. Pull the recoil starter and observe whether there is any electric spark between the spark plug clearance. Replace the spark plug if there is no spark. Follow the instructions in this manual to reinstall the spark plug and start the engine. If necessary, please consult your local dealer.
	Spark plug is splashed by fuel	Remove the spark plug and wipe the fuel.
	Low battery power (electric start)	Manually start the generator to charge the battery (time≥30 min).
Generating set has no output	Overload protection	Reconnect the circuit breaker or overcurrent protector.
	Mismatched cable installation or extension cable	Inspect the load-carrying capacity of the end face of the cable installation or extension cable. If necessary, please consult your local dealer.

VI. Storage and transportation

Storage

The generating set should be started at least once every 2 weeks and allowed to run for at least 20 minutes. Follow the instructions below for longer term storage if the generating set will be out of service for 2 months or more.



FIRE OR EXPLOSION


Gasoline is a flammable and explosive substance. Before storing or transporting engine, the empty the fuel tank and close the fuel cock.

- Allow the generator to cool completely before storage.
- Clean the generator according to the instructions in the maintenance section.
- Drain all fuel in the fuel tank, pipe and carburetor to prevent the formation of colloids.
- Turn the combination switch to "Flameout" position and disconnect the fuel supply.
- Drain the oil.
- Remove the spark plug and pour 15 ml of fresh oil into the cylinder. Rotate the crankshaft slowly so that the oil is well distributed in the cylinder, thus lubricating the cylinder. Install the spark plug again.

- Disconnect the battery.
- Please store it in a clean and dry area away from direct sunlight.

Transportation

In order to prevent fuel leakage during transportation or storage of the generator for a short time, the generator should be in the normal operating position and fixed vertically, with the generator combination switch in "FLAMEOUT" position and the fuel cock in "OFF" position.

**WARNING**

When transporting:

Do not overfill the tank. Do not operate the generating set while it is on vehicle. Take the generating set off the vehicle and use it in a well-ventilated place. Avoid a place exposed to direct sunlight when putting the generating set on a vehicle. If the generating set is left in an enclosed vehicle for many hours, high temperature inside the vehicle could cause fuel to vaporize resulting in a possible explosion. Do not drive on a rough road for an extended period with the generating set on board. If you must transport the generating set on a rough road, drain the fuel from the generating set beforehand.

VII. Specification

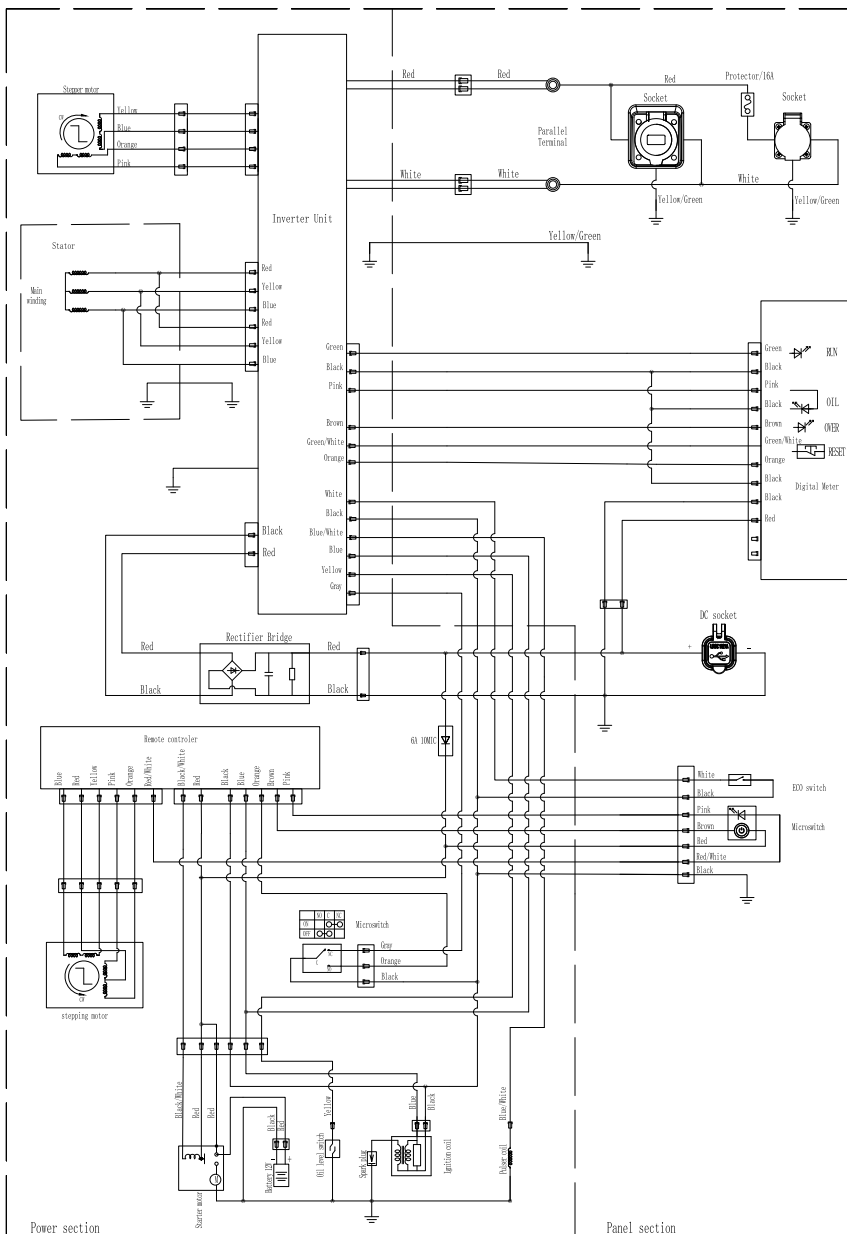
1. Specification parameter table

Model		BQH6200(E)	
Feature			
Engine parameter	Engine model	GB300(E)-2	
	Style	OHV, forced cooling, four stroke, single cylinder	
	Displacement (cm ³)	302	
	Ignition system	TCI	
	Start style	Hand recoil or electric starting	
	Oil capacity(L)	0.85	
Series parameter	Frequency(Hz)	50	60
	Voltage(V)	230	120/240
	Rated power(kW)	5.0	5.0
	Maximum power(kW)	5.5	5.5
	Power factor	1	
	Insulation rate	F	
	Fuel capacity(L)	13.5	
	Operating temperature(°C)	-10~40	
	Max. site altitude of installation(m)	1500	
	Measured sound pressure level(dB(A))	≤ 74	
	Measurement uncertainty(dB(A))	≤ 1.5	
	Guaranteed sound power level(dB(A))	≤ 95	
	Net weight(kg)	48.2 (manual start) 50.5 (electric start)	

Note: The generating set with different specification and configurations may have different parameters and may change at any time without notice.

2. Wiring diagram

BQH6200E electric start



Note: This circuit diagram is for reference only due to the generator set condition difference.



Producer:

CHONGQING ZONGSHEN GENERAL POWER MACHINE CO., LTD.

Address: Zongshen Industry Zone, Banan District, Chongqing, 400054, China

Phone: 0086-23-66372525

Hot Line: 0086-4001380026

<http://www.zongshenpower.com>

2407#



Importer and distributor:

VARI, a.s.

Address: Opolanská 350, 289 07 Libice nad Cidlinou, Czech Republic

Phone: +420 325 637 276

E-mail: vari@vari.cz

<https://www.vari.cz>

Published: 2023