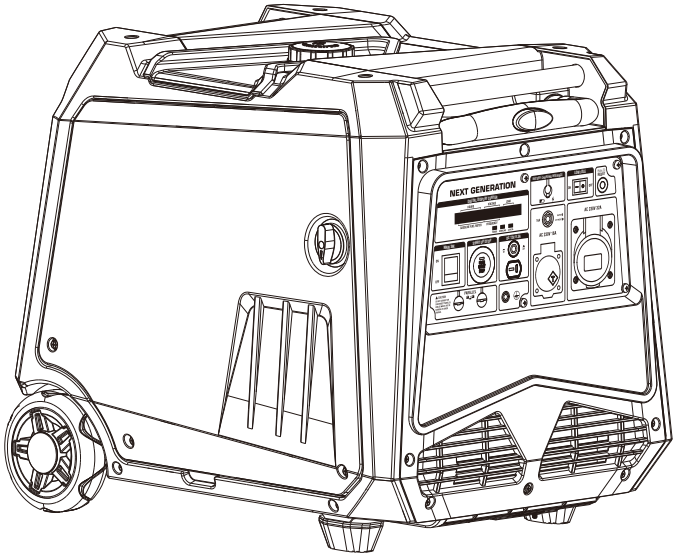
JB/T 10304-2020

# Silent Variable Frequency Drive Motor

## Operating Instruction




温馨提示 :请在使用前认真阅读此说明书，在确保安全及环保的前提下使用！

Thank you very much for choosing our generator sets!

This manual provides instructions on how to operate and use the generator set safely and correctly; please read it carefully before use.

All technical information and illustrations contained in this user manual are consistent with the latest product version at the time of publication.

Due to revisions and other changes, the contents of this user manual may differ slightly from actual conditions. The Company reserves the right to make amendments at any time; no separate notice will be provided when a revised version is issued. We appreciate your understanding. The copyright of this user manual belongs to the Company; reproduction without the Company's prior written consent is strictly prohibited, and violators will be held legally accountable.

This manual is an integral part of the generator set; if the generator set is resold, this manual will be sold together with the generator set.

# Catalogue

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**Safety Warning**

The personal and property safety of you and others is of utmost importance. Please carefully read the user manual and the safety warnings provided on the decals attached to the generator set.

Safety warnings alert you to potential hazards that could endanger you or others. Each safety warning is preceded by one of the following four keywords: "Danger," "Warning," "Caution," or "Beware." The details are as follows:

**Danger** Failure to follow these instructions may put your life at risk or cause extremely serious injury.

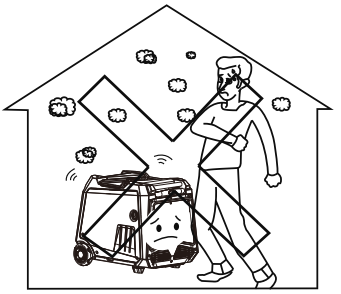
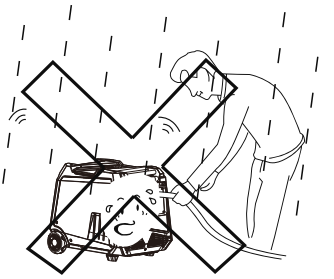
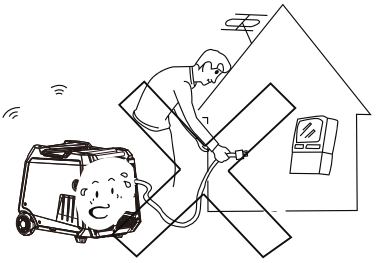
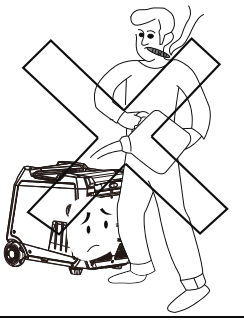
**Warning** Failure to follow these instructions may put your life at risk r cause serious injury.

**Caution** Failure to follow these instructions may result in minor injury.

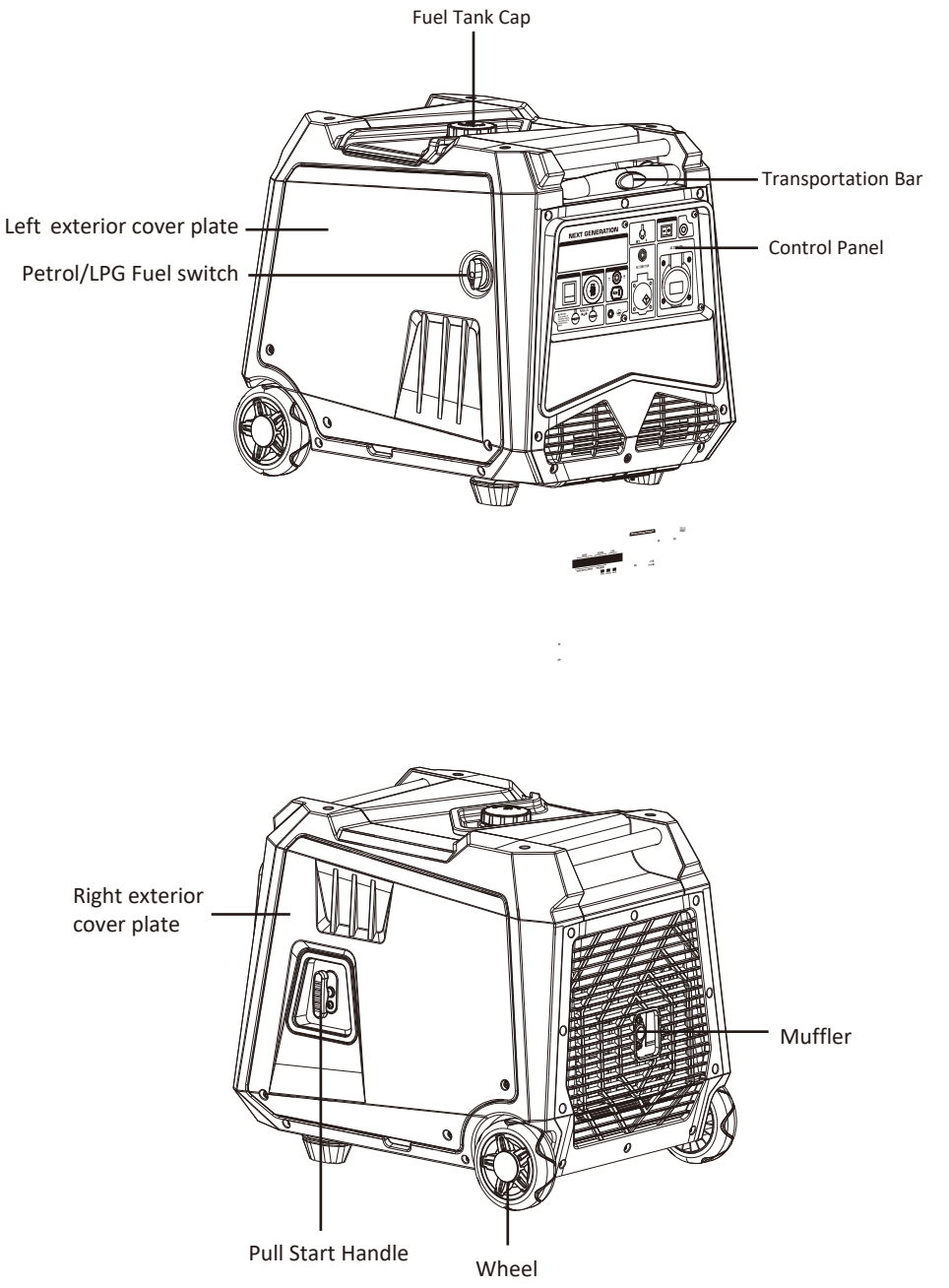
**Note** Failure to follow these instructions may cause damage to your generator set and other property.

## 1. Safety Precautions

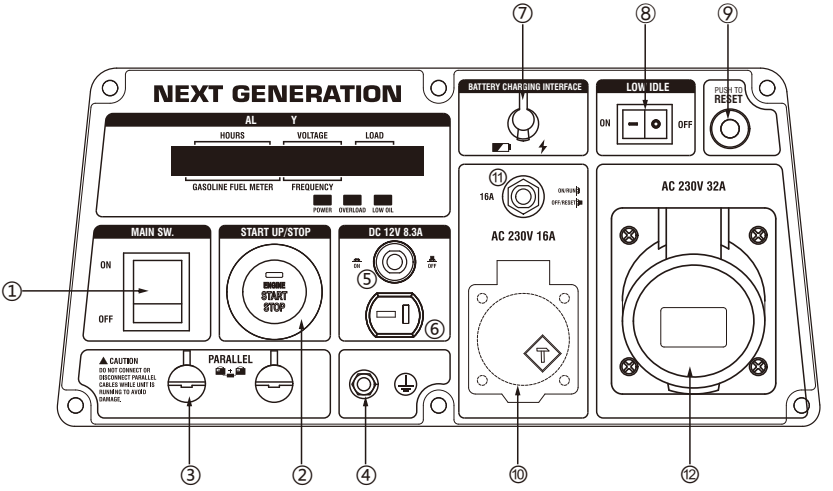
Before operating the generator, reading and understanding the instruction manual and familiarizing yourself with the generator's safe operating procedures can help you prevent accidents.

<table>
<tr><td></td><td></td></tr>
<tr><td>Do not use indoors.</td><td>Do not use in damp environments.</td></tr>
<tr><td></td><td></td></tr>
<tr><td>Do not connect household appliances</td><td>Do not smoke while refueling.</td></tr>
<tr><td></td><td></td></tr>
<tr><td>Do not allow fuel to overflow when refueling.</td><td>Stop the generator before refueling.</td></tr>
</table>

## 2. Component Name



**Control Panel**




| | | |
|---|---|---|
| ① master switch | ② Start/Stop Buttons | ③ Parallel socket |
| ④ earth terminal | ⑤ DC Thermal Protection | ⑥ 12V 8.3A DC power socket |
| ⑦ Battery charging port | ⑧ Energy-saving switch | ⑨ reset button |
| ⑩ 230V 16A AC power socket | ⑪ AC Thermal Protection | ⑫ 230V 32A AC power socket |

## Multi-Functional Digital Display Meter

① 88:88 : Indicates the duration of a single run, which resets to 0 at each startup.

② 8888h: Total operating time of the generator. (Note: The total operating time begins to accumulate only after the generator has operated for 1 hour. If the operating time is less than 1 hour, this value will not be displayed. The cumulative operating time is calculated in hours.)① and ② alternate in display every 8 seconds.

④ **VOLTAGE:**Voltage display.

⑤ **FREQUENCY:**Frequency display.

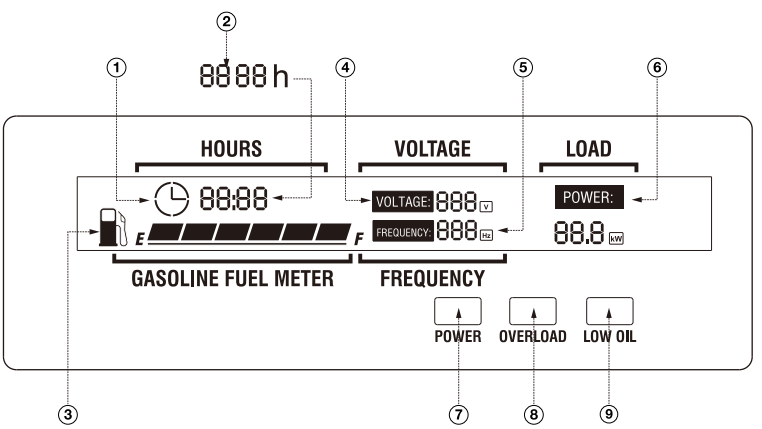
⑥ **LOAD:**Load power display.

⑦ **POWER:**The green light indicates that the system is operating normally.

⑧ **OVERLOAD:**The red light indicates that the generator is overloaded.

⑨ **LOW OIL:**The red light indicates that the oil level is too low.

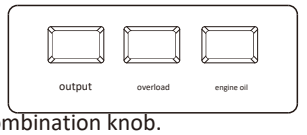
③ **GASOLINE FUEL METER:** Fuel level indicator for the fuel tank.



# 3. Control Functions

**(1) Engine Oil Indicator Light (red)**

When the engine oil level in the crankcase drops below the safety limit, the engine oil protection system will automatically shut off the engine, and the engine oil warning indicator light will illuminate; the engine may only be restarted after the oil level has been topped up to the specified mark.




**Note**: If the engine stalls or fails to start, rotate the combination knob.

Switch the device to the "Run" position, then pull the start handle, as shown below.

If the engine oil indicator light flashes for a few seconds, it indicates insufficient engine oil; refill the engine oil and restart the vehicle.

**(2) Overload Indicator Light (red)**

The overload indicator illuminates when this generator detects that the output of the connected electrical equipment has exceeded its load limit, resulting in overheating of the frequency converter or an increase in AC voltage. In this case, the AC protector activates, halting generator operation to protect both the generator and the connected electrical equipment. The AC indicator light (green) turns off, while the overload indicator light (red) illuminates; however, the generator continues to operate.

If the overload indicator light illuminates and the generator has no output, please take the following corrective actions:

①Turn off the connected electrical equipment and shut down the generator.

②Reduce the total power of the connected electrical equipment to within its rated output range.

③Check the air intake vent for any foreign object blockage and verify whether any related control components exhibit abnormal behavior; if any issues are detected, resolve them immediately.

④After inspection, restart the engine.

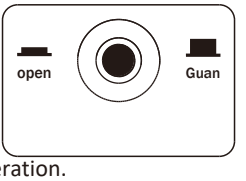
**Note:**When using electrical equipment with a high starting current (such as compressors, submersible pumps, etc.), the overload indicator lamp may illuminate for several seconds at startup; however, this is not the fault previously mentioned.

**(3) Communication Indicator Light (green)**

When the engine starts and operates normally, the AC indicator light illuminates.

**(4) DC Protection**

When electronic equipment connected to the DC supply of the generator is in operation, if the current exceeds the rated current, the DC switch will automatically switch to the "OFF" position. When operating this generator again, please set the DC switch to the "ON" position.




1) Activate the DC output to enable normal operation.

2) When the DC input is "closed," no output is provided. **DC Protection**

## ! Pay Attention To

If the DC protection is disabled, reduce the load on the connected electronic equipment to within the generator's rated output range; if the DC protection remains disabled, cease direct operation of the electrical equipment and consult your distributor.

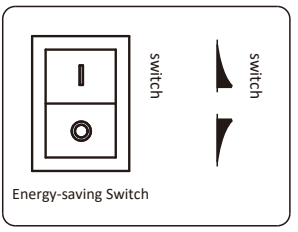
**(5) Energy-Saving Switch**

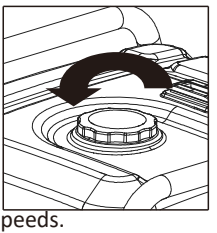
1) "open"

When the energy-saving switch is set to the "ON" position, the device regulates the engine speed based on the connected load, thereby achieving improved fuel efficiency and reduced noise levels.

2) "Guan"

When the energy-saving switch is set to the "Off" position, regardless of whether



With the load connected, all engines operate at their rated speeds.

**Note:** When using the following equipment, such as an air compressor or a sunken water tank, When starting the pump, due to the requirement for a high starting current, the idle switch is essential.

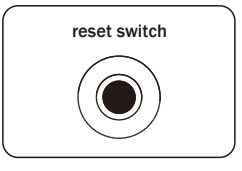
It must be set to the "Off" position.

**(6) Fuel Tank Cap**

Rotate counter clockwise to remove the fuel tank cap.

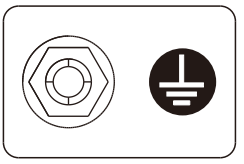
**(7) Reset Button**

In the event of an output overload, the generator will automatically activate its protection mechanism, and no voltage output will be provided. To reduce the load, press the AC recovery switch to restore the generator's output.




**(8) Earth Terminal**

When the grounding terminal is connected to the grounding conductor, this is done to prevent electric shock. When electrical equipment is grounded, the generator must landing.



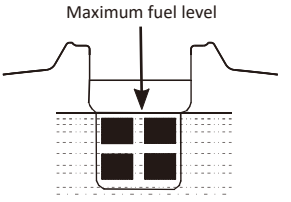
## IV. Preparatory Matters

**(1) Fuel Oil**

**! Danger**

- Fuel is a flammable and hazardous substance; please carefully read the safety precautions before refueling.
- Do not fill the fuel tank too full, otherwise the fuel may overflow once the tank warms up;
- After refueling, ensure that the fuel tank cap is securely tightened.

**! Pay Attention To**




- After refueling, promptly wipe away any residual gasoline with a clean, soft cloth to prevent damage to the plastic housing.
- Lead-free gasoline must be used; lead-containing gasoline can cause serious damage.
- Internal components of the generator;
- Remove the fuel tank cover and add gasoline until the fuel level reaches the red indicator line.
- Fuel tank capacity: 12 L

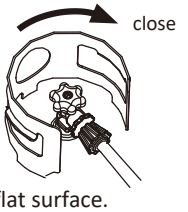
**(2) LPG (Liquefied Petroleum Gas)**

**! Pay Attention To**

- Verify that the re-identification date on the tank is not expired.
- Do not use the attached liquefied petroleum gas hose with any other appliance.

**! Danger**

Explosion hazard. Do not start the generator if you smell propane. When not in use, always fully close the liquefied petroleum gas (LPG) tank valves and disconnect the LPG hose from the generator.




1) Turn off the generator and place it on a well-ventilated flat surface.

2) Confirm that the LPG cylinder valve is fully closed.

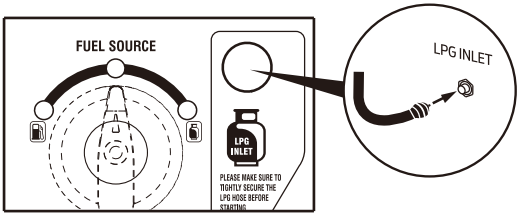
3) Remove the cover on the LPG inlet of the generator.

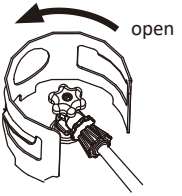
4) Tighten the LPG hose to the LPG inlet of the generator.

Note: Do not use thread seal tape or any other type of sealant to seal LPG hose connections.

5) Use a adjustable wrench to tighten the LPG hose connector until it is secure, but do not overtighten it.

6）Remove the safety plug or cover from the liquefied petroleum gas cylinder valve, then connect the other end of the hose to the connector on the cylinder body.




7）Turn the LPG tank valve to the fully open position. Soak the connection points in soapy water and inspect all joints for leaks. The appearance of bubbles or the enlargement of bubbles indicates the presence of a leak. If a leak is detected at any fitting, turn the LPG tank valve to the fully closed position and tighten the fittings. Then, reopen the LPG tank valve and re-inspect the joints using soapy water.

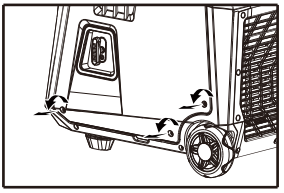
**(3) Engine Oil**

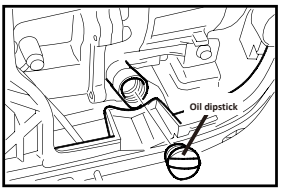
This generator has not been lubricated with engine oil at the time of leaving the factory. Do not start the generator until sufficient engine oil has been added.

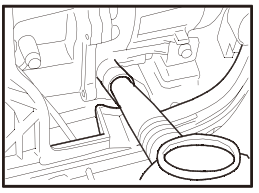
1）Place the generator on a horizontal plane;

2）Loosen the bolt and remove the right exterior cover plate;

3）Unscrew the oil dipstick;





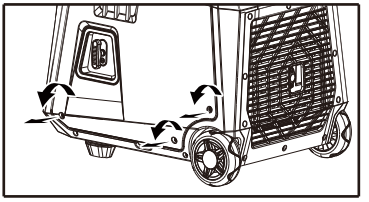
4）Add 0.8 L of engine oil (preferably SAE 10W/30, meeting API SE or higher grade specifications).

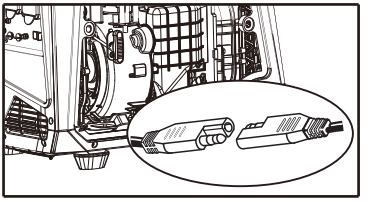
5）Reinstall the right exterior cover plate and tighten the bolts.

**(4) Connect the Battery Cable**

1)On the right side of the generator, loosen the screw and remove the cover plate.

2)The battery is pre-equipped with a quick-connect battery plug. Remove the tie-down strap securing the plug, align it with the corresponding color mark, and then firmly push the plug into place.





**Note:**The generator is equipped with a battery charging function. Once the engine starts running, a small current will gradually charge the battery.

**(5) Pre-Use Inspection**

**! Warning**

Even when the generator is not in operation, its critical components may suddenly fail. Before starting the generator, if any of the following components fail to function properly, carefully inspect and repair them.

**Note:**Check the condition of the generator before each use.

**Pre-operation inspection**

**Fuel oil**

- Check the fuel level in the generator's fuel tank; if necessary, top up the fuel.

**Engine oil**

- Check the oil level of the generator; if necessary, add oil.
- Check for oil leaks.

**Abnormalities during operation**

- Inspect the operating condition of the generator;
- If necessary, please consult your distributor.

**Cell**

- Check whether the battery is fully charged.

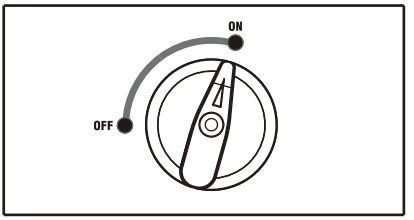
## V. Starting Generator

### Single-fuel aircraft (gasoline)

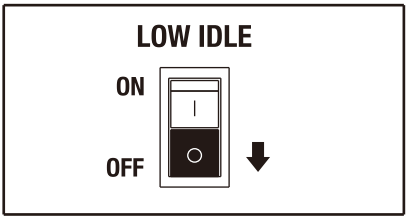
1. Ensure that the generator is placed on a solid, flat, and level surface.

2. Disconnect all electrical loads from the generator. Do not start or stop the generator while electrical equipment is in the on or off position.

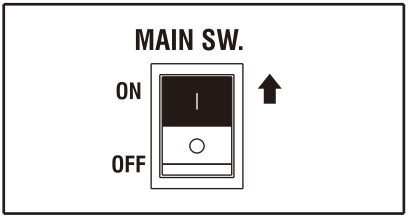
3. Turn the fuel switch to "ON".




4. Set the energy-saving switch to "OFF".

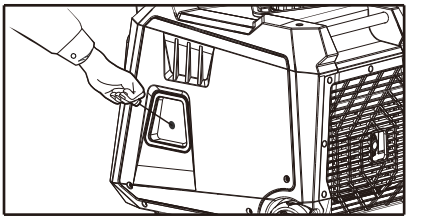



5. Set the main switch to "ON".

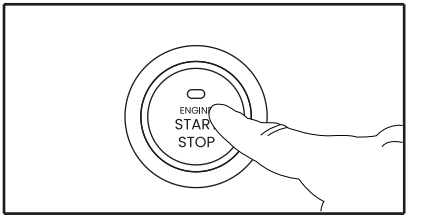



**6. Select the Boot Mode**

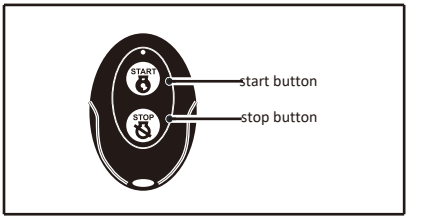
**a. Manual pull start:**Firmly grip and slowly pull the counterweight handle until you feel increased resistance, then pull quickly.



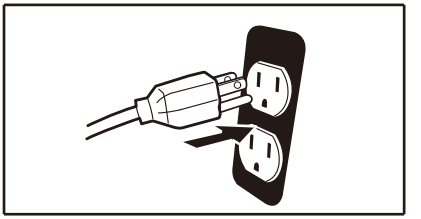
**b. Button activation:**Press the button for 1–3 seconds, then release it to start the generator.




**c. Remote start:**Press the "START (ON)" button on the remote key for one second to start the generator.




7. Connect the load plug.



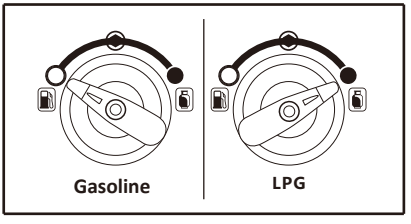
**Dual-Fuel Model (gasoline / LPG)**

1. Ensure that the generator is placed on a solid, flat, and level surface.

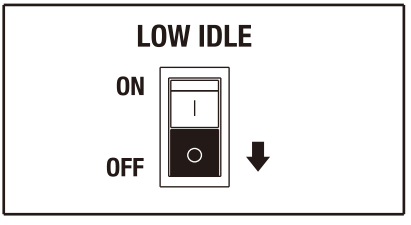
2. Disconnect all electrical loads from the generator. Do not start or stop the generator while electrical equipment is in the on or off position.

3. Turn the fuel switch to the desired fuel source. When the switch is in the "Gasoline" position, the generator is ready to start using "Gasoline." When the switch is in the "LPG" position, the generator is ready to

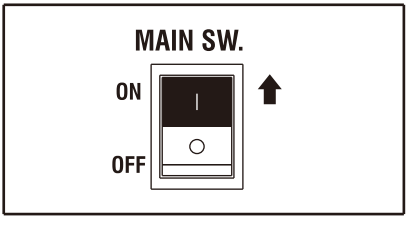
"LPG" has been activated.




4. Set the energy-saving switch to "OFF".



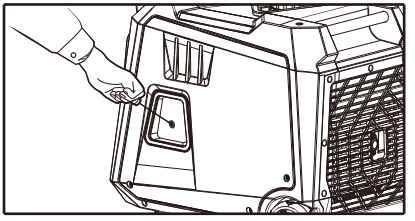

5. Set the main switch to "ON".



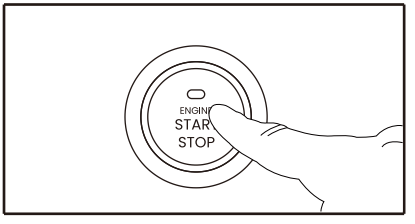

**6. Select the Boot Mode**

**a. Manual pull start:**Grasp firmly and pull slowly

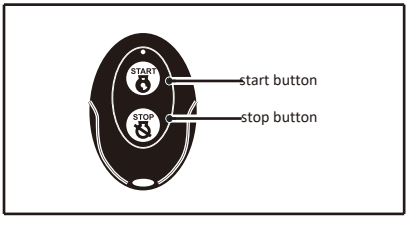
Pull the handle until you feel increased resistance, then pull quickly.



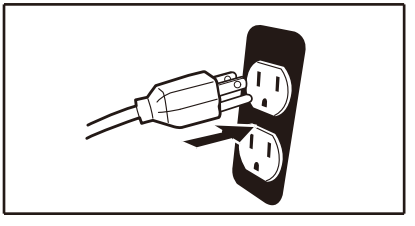
**b. Button activation:**Press the button for 1–3 seconds, then release it to start the generator.




**c. Remote start:**Press the "START (ON)" button on the remote key for one second to start the generator.




7. Connect the load plug.



**Remote control pairing**

(1) Press the one-touch start/stop switch button for 5 seconds, then release it once the indicator light on the one-touch start/stop switch button illuminates.

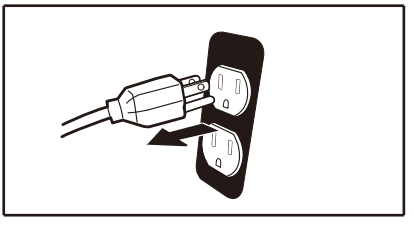
(2) Press the "ON" / "OFF" button on the remote control until the indicator light turns off;

(3) Press the "ON" button on the remote control for approximately 1 second; the generator will start, and the remote control pairing will be successful.

**Note:**The remote control supplied with the generator has already been successfully paired.

## 6、 Turn off the Generator

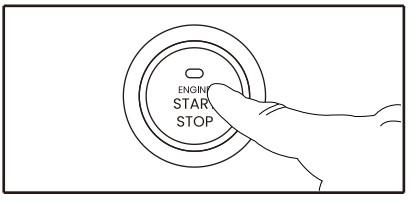
1. Turn off and disconnect all connected electrical loads. Do not start or stop the generator while electrical equipment is energized or in operation.



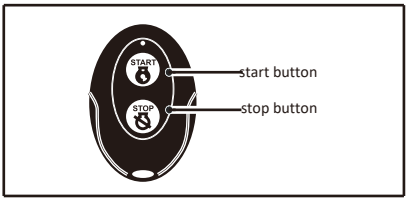
**2. Select the Shutdown Method:**

**a. Button Activation:**Press the Button to Turn off Power Generation.

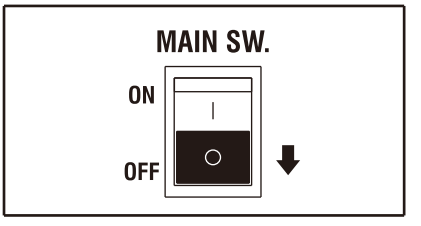
machine.



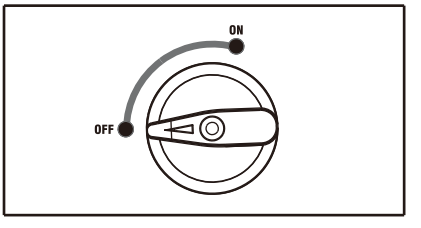

**b. Remote shutdown:**Press the "STOP (OFF)" button on the remote control key for one second to start the generator.




3. Set the main switch to "OFF".




4. Set the fuel switch to "OFF".




**Important Notes**

The above instructions regarding generator startup and shutdown constitute standard operating procedures. Users must follow these standard procedures to start and shut down the generator.

1. If a user directly shuts off the generator using the main switch, a loud popping sound from the silencer may occur; this is a normal phenomenon under abnormal operating conditions.
2. When the battery is disconnected or depleted, directly switching off the generator using the main (general) switch may cause the cold start unit to have difficulty starting or fail to start altogether; this is a normal occurrence under abnormal operating conditions.

## VII. Use of Generator

### (1) Operating environment of the generator

- Operating temperature: -5°C to 40°C;
- Applicable humidity: below 95%;
- Applicable altitude range: areas below 1,500 meters (in areas above 1,000 meters, the power output shall be reduced).

## Standard Atmospheric Conditions

- Ambient temperature Tr: 298 K (25 °C)
- Relative humidity of the air, Φr: 30%
- Absolute atmospheric pressure, Pr: 100 kPa

**When the actual operating conditions differ from the power output specifications of the generator set:**

- For every 5 °C increase in ambient temperature, the power output of the generator decreases by approximately 2%.
- For every 30% increase in relative air humidity, the power output of the generator decreases by approximately 1.5%.
- For every 300-meter increase in altitude, the power output of the generator decreases by approximately 4.5%.

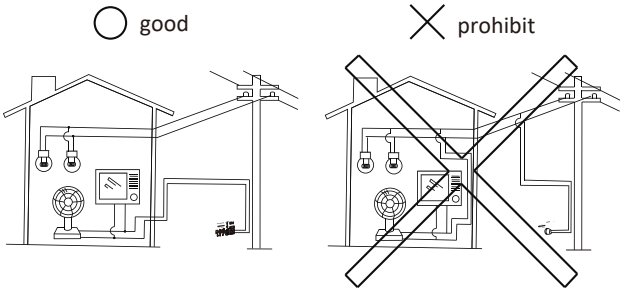
### (2) Generator wiring

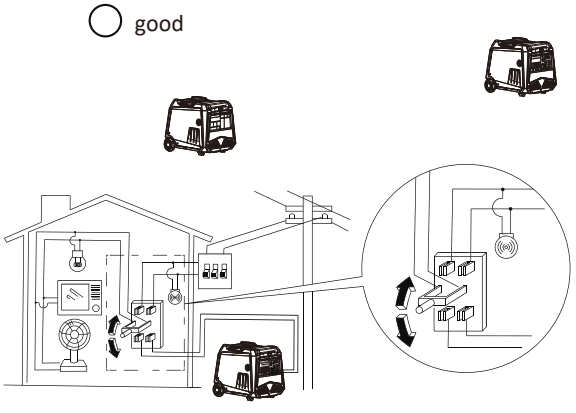
- When connecting a generator to a household power supply as a backup power source, the connection shall be performed by a qualified electrician or someone familiar with electrical systems.
- After connecting the load to the generator, carefully inspect whether the electrical connections are safe and reliable. Incorrect electrical connections may lead to damage to the generator, combustion, or a fire.
- Do not connect this generator to a commercial power outlet.
- When extending the cable, do not exceed its maximum length.

① The cross-sectional area of the 60 mm strip is 1.5 $mm^2$

② The cross-sectional area of the 100 mm strip is 2.5 $mm^2$

- The exterior of the extension cord shall be protected by a layer of tough and elastic rubber sheath (IEC25) or other suitable substitutes.




**AC Connection**

**! Warning** Before inserting the plug, all electrical appliances must be disconnected.

**Pay Attention To**

- Before connecting to the generator, ensure that all electrical equipment, including wires and plugs, is in good condition;
- Verify that all loads connected to the generator operate within its rated load range;
- Verify that the load current is within the rated current range of the rated socket.

**Note:**Confirm that the unit is properly grounded; if the electrical equipment requires grounding, the unit must also be grounded.

① start the engine;

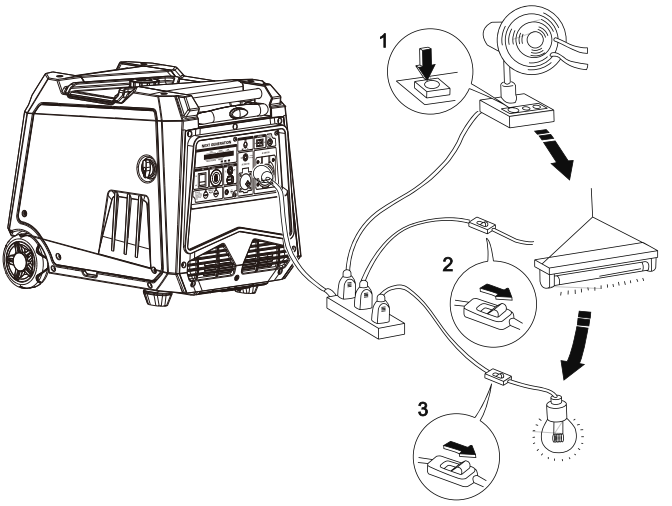
② Set the energy-saving switch to "On";

③ Insert the plug into the AC socket;

④ Confirm that the AC indicator light is lit;

⑤ Turn on the electrical appliances.

**Note:** Before increasing the engine speed, the energy-saving switch must be set to "OFF". If the unit supplies power to multiple loads or electrical equipment, start them sequentially in descending order of their power ratings.




### (3) Generator Grounding

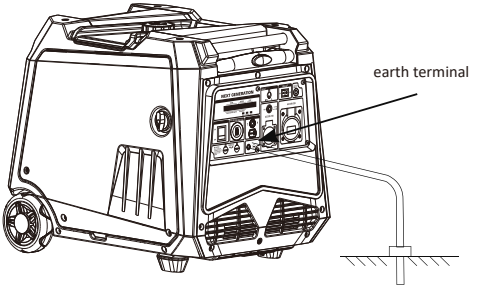
To prevent the generator from sustaining damage due to electric shock or improper electrical use, it is recommended to ground the generator using high-quality conductors with insulating sheathing.

① Please use a ground wire with sufficient electrical capacity;

② Securely connect one end of the ground wire to the grounding bolt on the generator set control panel;

③ Insert the grounding electrode (a steel rod with a diameter of 5–10 mm) at least 200 mm below the ground surface, and connect it to an external lead;

④ Reliably connect the other end of the ground wire to the lead wire of the grounding electrode.



### (4) Chargeing of Accumulators

The recommended storage period for the battery is approximately 6 months. If the generator is not used for an extended period, the battery may lose charge. In such cases, the battery should be recharged. If the battery is damaged or cannot be charged, it should be replaced.**Manual charging:**Pull the generator handle to start the generator; once the generator is running, it will automatically charge the battery.**Charging via an external power source:**Connect the charger to the battery charging port on the generator panel, and connect to the mains power to charge the battery.

**Note:**The charging time is approximately 30–40 minutes.

**! Warning**

- **Do not start the generator while charging using an external power source.**
- **Keep away from open flames.**
- **Store the battery in a cool, dry place, away from direct sunlight.**
- **Do not let children come into contact with batteries.**

**! Pay Attention To**

**1. Proper Charging**

Ensuring proper charging and discharging of lithium-ion batteries can extend their service life. Maintaining the battery charge between 10% and 90%helps optimize battery protection.

**2. Select the Appropriate Charging Temperature**

Charging temperature range for lithium-ion batteries: 0 °C ~ 45 °C.

**3. Avoid Overcharging**

During the charging process, overcharging of lithium-ion batteries must be avoided. Any form of overcharging in lithium batteries can lead to severe degradation of battery performance or even explosion.

### (5) Applied Range

Before using the generator, ensure that the total load falls within the generator's rated load range; otherwise, the generator may be damaged.

| AC |  |  |  | DC  |
|---|---|---|---|---|
| Power factor | 1 | 0.8~0.95 | 0.4–0.75 (efficiency: 0.85) | |
| Output power | ⩽6000W | ⩽4800W | ⩽2400W | Rated voltage: 12V |

**Tip:**

- AC and DC power may be used simultaneously, provided that the total power does not exceed the rated output power.
- When the total power exceeds the rated power, the overload indicator light illuminates.

## VIII. Maintenance

Proper maintenance and upkeep provide the best guarantee for achieving safe, cost-effective, and failure-free operation; they also contribute to environmental protection.

To keep the generator in optimal condition, you must perform regular inspections and maintenance on it.

The maintenance schedule is as follows:

| Maintenance Cycle Items | | At every turn | For the first time, after 1 month or 20 hours of use | Every three months or every 50 hours thereafter | Annual or 100-hour usage |
|---|---|---|---|---|---|
| Engine oil | Check-Add | √ | | | |
| | Renewal | | √ | √ | |
| Gear of the reduction gearbox Oil (if applicable) | Check the oil level | √ | | | |
| | Renewal | | √ | √ | |
| Air cleaner element | Check up | √ | | | |
| | Cleaning | | √ | | |
| | Renewal | | | √ | |
| Sedimentation cup (if applicable) | Cleaning | | | | √ |
| Sparking plug | Clean-Adjust | | | | √* |
| Spark arrester | Cleaning | | | √ | |
| Idle (if applicable)** | Inspection and Adjustment | | | | √ |
| Valve clearance** | Inspection and Adjustment | | | | √ |
| Fuel tank and fuel filter*** | Cleaning | | | | √ |
| Fuel oil line | Check up | Every two years (replace if necessary) | | | |
| Cylinder head, piston | Remove carbon deposits | For engine displacements <225 cc: every 125 hours; for engine displacements ≥ 225 cc: every 250 hours. | | | |

* These items shall be replaced if necessary;

** These items shall be serviced by authorized distributors of the Company, unless the user possesses the appropriate tools and repair capabilities.

**! Pay Attention To**

- If the equipment is frequently operated under high temperature or high load conditions, the engine oil should be replaced every 25 hours;
- If you frequently work in dusty or harsh environments, clean the air filter element every 10 hours; if necessary, replace the air filter element every 25 hours.
- Regarding the inspection cycle and timing, maintenance shall be performed on the first unit to arrive.
- If the maintenance interval has expired, perform the maintenance as specified in the table above as soon as possible.

**! Warning**

Before performing any maintenance, ensure that the engine has been shut down. Place the engine in a horizontal position, and to prevent the engine from starting, separate the spark plug cap from the spark plug.

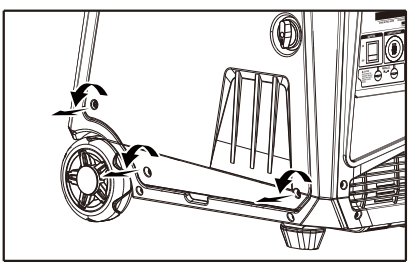
Do not use this equipment indoors or in poorly ventilated areas such as tunnels or caves; ensure that the work area is adequately ventilated. The exhaust gases emitted by the engine contain the toxic gas carbon monoxide; inhalation of this gas can cause shock, loss of consciousness, and even death.

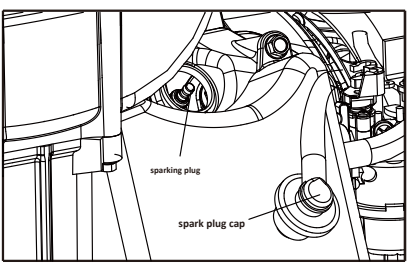
### (1) Spark Plug Inspection

The spark plug is a critical component of the generator and must be inspected regularly.

① Loosen the bolt, then remove the left outer cover and the spark plug cap;

② Insert the screwdriver into the socket, rotate it counter-clockwise, and remove the spark plug;

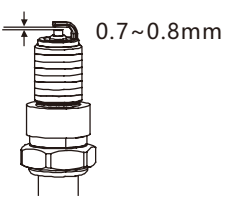





③ Check for discoloration and remove carbon deposits; the porcelain core around the central electrode of the spark plug exhibits a moderately light coloration.

brown;

④ Inspect the spark plug model and gap.




| |
|---|
| Standard Spark: A 5 RTC<br>Spark plug gap: 0.7–0.8 mm |

**Note:**The spark plug gap should be measured using a wire gauge and adjusted if necessary.

⑤ Install the spark plugs

| |
|---|
| Spark plug torque: 12.5 N·m |

**Note**: If no torque wrench is available when installing the spark plugs, a practical approximation is to rotate the spark plug to the correct position, then apply force to turn it an additional 1/4–1/2 turn; however, the spark plug should be tightened to the specified torque as soon as possible.

### (2) Adjust the Carburetor

The carburetor is a critical component of the engine. Its adjustment should be performed by a dealer possessing the necessary expertise, specialized knowledge, and appropriate equipment, ensuring that the adjustment is accurate.

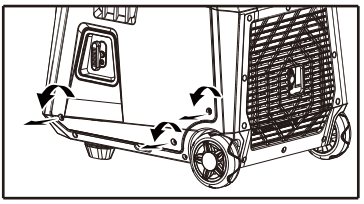
### (3) Change the Engine Oil

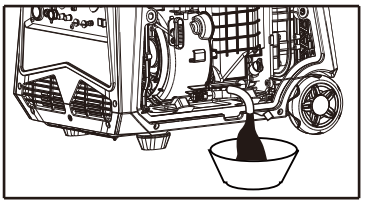
**Warning** Do not drain the engine oil immediately after shutting down the generator. The engine oil is very hot; exercise caution during operation to avoid burns.

1、 Place the generator on a horizontal surface, start it and run it for several minutes to raise its temperature, then shut down the engine and turn the oil switch knob to the "OFF" position;

2、 Loosen the bolt and remove the right exterior cover plate;

3、 Locate the drain pipe;





4、 Place the oil pan beneath the engine, unscrew the oil drain cap, and drain the engine oil;

5、 Once the engine oil has been drained, tighten the cap;

**Note:**When adding engine oil, do not tilt the generator, as adding excessive engine oil may compromise power performance.

6、 Open the oil dipstick, then refill the engine oil to the appropriate mark;

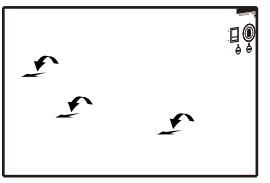
| |
|---|
| Recommended engine oil: SP 5W/40 (synthetic oil) |
| Engine oil grade: SP |
| Volume: 0.8 L |

7、 Tighten the oil dipstick, cover the right exterior cover plate, and tighten the bolts.

### (4) Air Filter

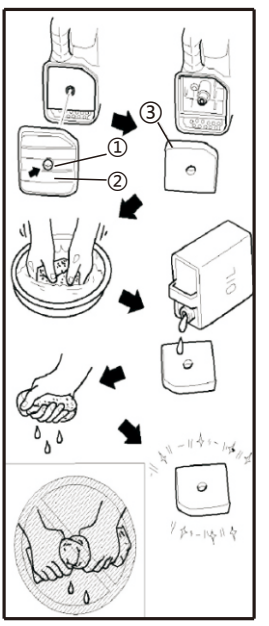
A clogged air filter can restrict airflow to the carburetor. To prevent carburetor failure, regularly service the air filter. If used in environments with high dust levels, perform frequent servicing.

1、 Loosen the bolt of the right exterior cover plate and remove the right exterior cover plate;



2、 Remove screw ① , then remove the air filter cover ②;

3、 Remove the foam filter element ③;




4、 Clean the foam filter element with a suitable cleaning solvent and blow-dry it;

5、 Add a few drops of engine oil to the foam filter element, then squeeze out any excess oil; the foam filter element should become moist, but it should not become oiled.

**Note** Do not forcefully twist the foam filter element to avoid damage.

6、 Place the foam filter element into the air filter;

**Note**: Ensure that the surface of the foam filter element is in close contact with the air filter, leaving no gaps that could allow air leakage.

Do not start the engine when the air filter is not installed, as this may produce excessive toxic gases and cause wear to the oil pan.

7、 Reinstall the air filter cover in its original position and tighten the screws;

8、 Install the air filter cover plate and tighten the knob.

### (5) Fuel Screen

**! Warning**

Do not open the engine oil tank while smoking or in the presence of flames.

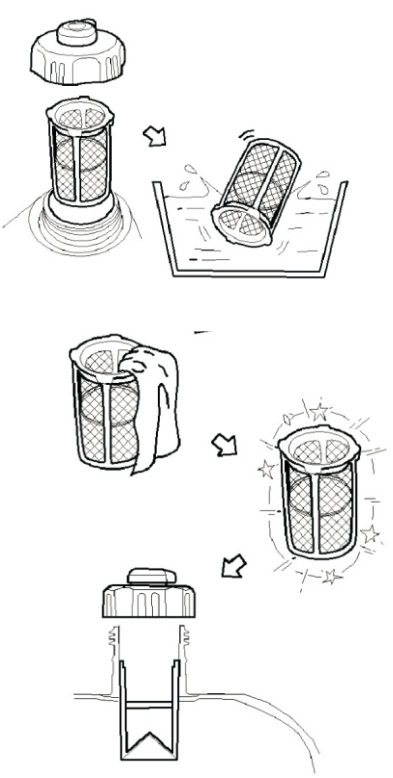
1、 Remove the fuel tank cover and the fuel tank filter screen;

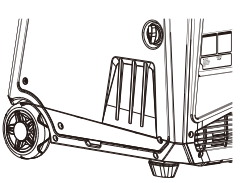
2、 Clean the fuel tank filter using gasoline;

3、 Wipe the filter screen dry and place it back into the fuel tank;

4、 Reinstall the fuel tank cap.

**Note**: Do not tighten the fuel tank cap.





## IX. Storage and Transportation

### (1) Generator Storage

If the product is to be stored for an extended period, you should take appropriate storage measures to prevent deterioration.

1、 Turn off the generator.

2、 Once the generator has cooled down, open the fuel tank cap and remove the fuel filter screen. Transfer all the fuel from the tank to a dedicated fuel transfer tank, then replace the fuel tank cap.

3、 Start the engine, allow the fuel in the carburetor to burn completely, and then shut it down.

**Note:**Do not connect any electrical equipment; the engine's operating time depends on the remaining fuel in the fuel tank.

4、 Open the left exterior cover.

5、 Loosen the fuel drain bolt on the carburetor and drain the fuel from the carburetor into the dedicated fuel tank.

6、 Once the gasoline in the carburetor has been drained, tighten the drain bolt.

7、 Reinstall the left exterior cover plate.

8、 Lower the oil dipstick and drain all oil from the crankcase. Then, fill the crankcase with new oil up to the specified fill mark, and reinstall the oil dipstick.

9、 Gently pull the handle until you feel resistance, ensuring that both the intake and exhaust valves remain closed.

10、 Place the generator set in a clean and dry area.

### (2) Generator Transportation

- When transporting the generator set, ensure that there is no fuel spillage;
- Do not add excessive fuel to the fuel tank;
- Do not operate the generator, and avoid direct exposure to sunlight;
- Do not transport generator sets for extended periods on rough road surfaces.

## 10. Troubleshooting

**The engine will not start**

### (1) Fuel System

a) There is no fuel in the combustion chamber.

b) The fuel tank is empty... Refuel.

c) Oil pipe blockage... Clean the oil pipe.

d) Foreign objects have entered the fuel valve... Clean the fuel valve.

e) Fuel mixture regulator clogged... Clean the fuel mixture regulator.

### (2) Insufficient Engine Oil System

Oil level is too low... Refill the engine oil.

### (3) Circuitry

a) Turn on (activate) the engine switch.

b) Poor spark performance.

c) The spark plugs are contaminated by carbon deposits and moisture... Remove the carbon deposits and thoroughly dry the spark plugs.

d) Fault in the ignition system... Contact your authorized dealer for service.

### (4) Compression Defect

a) Wear of the piston and oil cylinder... Inquire about services from your authorized dealer.

b) The top screws of the cylinder head are loose; appropriately tighten the nuts.

c) The sealing gasket is damaged... Replace the sealing gasket.

**The generator set is not generating electricity.**

a) Check whether the generator has become damp... Perform drying on the generator.

b) Check whether the line connectors are loose... If so, tighten the loose connectors.

c) Check if the output socket is damaged... Replace the socket.

d) Check whether the load is overloaded... Remove the load, shut down the machine, and restart the engine.

## XI. Technical Parameters

| | | | | |
|---|---|---|---|---|
| Engine | Engine type | 180F/P-2 | | |
| | Engine type | Single-cylinder, four-stroke, air-cooled, overhead-valve, gasoline engine with 90° cylinder center tilt | | |
| | Cylinder diameter × stroke (mm) | 80x62 | | |
| | Displacement(cc) | 312 | | |
| | Reduction ratio | 8.5±1 | | |
| | Valve timing | OHV | | |
| | Cooling-down method | Forced cold air | | |
| | Output power (kW/r/min) | 7.0/3600 | | |
| | Starting method | Manual start / Electric start / Remote start | | |
| | Fuel tank capacity(L) | 12L | | |
| | Type and grade of fuel | Lead-free gasoline for vehicles | | |
| | Lubricating oil capacity(L) | 0.8 | | |
| | Lubricating oil grade | SAE 10W/30 | | |
| | Lubricating system | Lubrication by splash | | |
| Gen | Noise level (dB, at 7 m) | 62 | | |
| | Power rating(kW) | 5.5 | 6.0 (Gasoline) / 5.5 (LPG) | 7.5 |
| | Maximum power(kW) | 6.0 | 6.5 (Gasoline) / 6.0 (LPG) | 8.5 |
| | Rated voltage(V) | 230 | | |
| | Rated frequency(Hz) | 50 | | |
| | Rated power factor | 1 | | |
| | Number of phases | Uniphase | | |
| | DC output | 12V/8.3A | | |
| Configure | Any power-generating or power-driven machine | Brushless (permanent magnet) | | |
| | Voltage adjustment | Inverter regulation | | |
| | Frequency adjustment | Inverter regulation | | |
| External dimensions (mm) | | 615*480*550 | | |
| Net weight(kg) | | 52/53.5 | | |

## XII. Detailed Rules of the Three Guarantees

"Three Guarantees" Period

1) General Engines: From the date of purchase by the customer (based on the date the invoice is issued), the full-unit three-guarantee period for four-stroke and two-stroke engines shall be 6 months, while the three-guarantee period for major components shall be 12 months. Major components include: crankshaft, piston, connecting rod, cylinder head, crankcase, crankcase cover, and camshaft.

The "Three Guarantees" policy

1) For products within the "Three Guarantees" period, if quality defects arising from manufacturing, packaging, or other causes compromise the appearance, integrity, safety, performance, or usability of the entire unit, the primary course of action shall be adjustment or repair; products under warranty shall comply with relevant technical standards.

2) Warranty shall apply to all other components, except for those subject to normal wear and tear:

   Standard wear parts: various plugs, switches, pull cords, engine oil filter elements, air filter elements, fuel filter elements, filters, oil seals, water seals, piston rings, spark plugs, carbon brushes, fuses, indicator lights, clutch friction plates, cutting tools, grass collection bags, pump inlet/outlet connectors, various rubber and plastic parts, sealing gaskets, lubricants, decorative decals, and standard fasteners.

3) Strictly comply with the provisions of the Three Guarantees Law and the Consumer Rights Protection Law to effectively safeguard the interests of consumers.

4) In principle, the user shall complete the "Three Guarantees" procedures at the point of purchase from the date of device acquisition, and fill out the Three Guarantees certificate provided in the included *"User Manual"*.

5) During the validity period of the three-warranty coverage, if any failure occurs in the product series due to quality issues, please bring your purchase invoice and the three-warranty documentation to your local or nearest product distributor or authorized service center for inspection and resolution.

## Exclusions from Warranty Coverage

Users who fall under any of the following circumstances shall not be entitled to the "Three Guarantees" benefits; only paid services will be provided. We kindly ask for your understanding.

1) Exceeds the warranty period.

2) In the event that damage is caused to the product by the purchaser due to failure to comply with the requirements set forth in the *"User Manual"*regarding use, maintenance, and storage.

3) Causing damage due to modifications that violate national laws and regulations, or those not approved by this Company.

4) Damage resulting from exceeding the operating limits specified for this product (e.g., maximum matching, maximum continuous operating time, maximum engine speed, etc.) during use.

5) Damage caused by the use of non-genuine spare parts supplied by the Company.

6) Damage caused by using engine oil or gasoline that does not comply with the recommendations in the user manual.

7) Natural wear and tear of wear-prone parts.

8) Damage caused by smoke, chemicals, bird droppings, other chemicals, corrosion, etc.

9) Defects caused by changes in time (e.g., natural fading of the surface, rusting of the electroplated surface, etc.).

10) Defects, damage, or deterioration resulting from improper storage or handling by the user, or prolonged periods of non-use.

11) Perceptual phenomena that do not affect mechanical properties (e. g., noise, vibration, oil leakage, etc.).

12) Test and treat products for sale.

13) Damage caused by performing repairs at non-authorized service centers of our company.

14) In the event of a malfunction, if the damaged condition is not maintained, or if the seller or the repairer's consent is not obtained, and the party proceeds to address the issue on its own, thereby making it impossible to conduct a technical appraisal of the cause of the malfunction.

15) Absence of a Three Guarantees certificate or a valid invoice; or discrepancy between the model indicated on the Three Guarantees certificate and the actual model; or presence of any alterations (except where it can be demonstrated that the product is within its warranty period).

16) Gasoline engines used in competitions are not covered under the warranty.

## Exemption Clause

1) All indirect costs incurred due to repairs shall be borne by the user.
2) The Company shall not be liable for any inconvenience or loss (such as loss of business operations or commercial losses) arising from the inability to use this equipment.
3) The Company shall not be liable for any losses arising from force majeure events such as earthquakes, typhoons, floods, or fires.

## Matters Need Attention

1) The "Three-Part Warranty Certificate" in the *"User Manual"* consists of three copies: the user fills out the first copy upon purchasing the product, and the distributor collects it and returns it to our company.

# Warranty Record Form

| | | | | | |
|---|---|---|---|---|---|
| 1 | Live time | Repair Time | Receipt time | Signature of maintenance personnel | Customer Signature |
| | | | | | |
| | Failure Condition | | | | |
| | Maintenance Items & Results | | | | |
| 2 | Live time | Repair Time | Receipt time | Signature of maintenance personnel | Customer Signature |
| | | | | | |
| | Failure Conditions | | | | |
| | Maintenance Items & Results | | | | |
| 3 | Live time | Repair Time | Receipt time | Signature of maintenance personnel | Customer Signature |
| | | | | | |
| | Failure Condition | | | | |
| | Maintenance Items & Results | | | | |

# Product Warranty Certificate

product information

product name: ____ size of product: ____product model: ____ buying price: ____

Engine number: ____ Rack Number: ____user information

surname and personal name: ____ contact number: ____Use: Public, Household, or Rental (enter "/" within the field)

detailed address: _____Province____ market____ county _____

Purchase Date_____ __year____ __moon____ __sun

Name of the sales entity

_____ (signature)

_____ (Phone) Name of Authorized Service Station

_____ (signature)

_____ (telephone)_____(contacts)

No. 1 unit Company Technical Services Department

Note: 1. The first copy shall be sent back to the Company's Technical Service Department; the second copy shall be retained by the authorized service station; and the third copy shall be retained by the user.

2. For user contact, telephone numbers shall primarily consist of landline numbers; if the user has both a landline and a mobile phone number, both must be provided; if only a mobile phone number is available, the user address must be filled in in detail.
3. It is prohibited to enter the user's contact phone number and address using the address and phone number of a sales outlet or a authorized service center.
4. To ensure that your customer can benefit from subsequent warranty services, please complete all required fields accurately.

# Product Warranty Certificate

product information

product name: ____ size of product: ____product model:buying price: ____

Engine number: ____ Rack Number: ____user information

surname and personal name: ____ contact number: ____Use: Public, Household, or Rental (enter "/" within the field)

detailed address: _____ Province_____ marketcounty _____

Purchase Date_____ __year____ __moon____ __sun

Name of the sales entity

_____ (signature)

_____ (Phone) Name of Authorized Service Station

_____ (signature)

_____ (telephone)_____(contacts)

Second pair

Authorized Service Center

Note: 1. The first copy shall be sent back to the Company's Technical Service Department; the second copy shall be retained by the authorized service station; and the third copy shall be retained by the user.

2. The user's contact telephone number shall, in principle, be a landline number; if both a landline and a mobile phone number are available, both must be provided; if only a mobile phone number is available, the user's address must be provided in detail.
3. It is prohibited to enter the user's contact phone number and address using the address and phone number of a sales outlet or a authorized service center.
4. To ensure that your customer receives subsequent warranty services, please complete all required fields accurately.

# Product Warranty Certificate

product information

product name: ____ size of product: ____product model: ____ buying price: ____

Engine number: ____ Rack Number: ____user information

surname and personal name: _____ contact number: _____

Use: Public, Domestic, or Rental (to be installed within the premises)“ ✓” )

detailed address: _____ Province____ market____ county _____

Purchase Date_____ __year____ __moon____ __sun

Name of the sales entity

_____ (signature)

_____ (Phone) Name of Authorized Service Station

_____ (signature)

_____ (telephone)_____(contacts)

**Third** Link user

Note: 1. The first copy shall be returned to the Company's Technical Service Department; the second copy shall be retained by the authorized service station; and the third copy shall be retained by the customer.

2. The user's contact telephone number shall, in principle, be a landline number; if both a landline and a mobile phone number are available, both must be provided; if only a mobile phone number is available, the user's address must be provided in detail.
3. It is prohibited to enter the user's contact phone number and address using the address and phone number of a sales outlet or a authorized service center.
4. To ensure that your customer can benefit from subsequent warranty services, please complete all required fields accurately.