

FERRUM

**INVERTER GENERATOR
Owner's Manual**

Thank you for buying our inverter generator.

- The copyright of this specification belongs to our company.
- Any contents of the manual shall not be copied without the written permission of the company.
- The company reserves the right of modification of product and revision of the manual without any notice.
- This book is an integral part of generators and should be incidental to the sale of generators.
- This manual includes instructions for the operation and maintenance of generators. Please read the instruction carefully before using, otherwise the wrong operation may lead to safety trouble or equipment damage. Proper and safe operation will extend the service life of generator.
- The company will continue to innovate and improve the design and quality of products.
- All the contents of this book are in line with the latest products at the time of printing this book.
- If there are any malfunctions or any areas of unfamiliarity with the generator, please consult the company's after-sales service department.

 WARNING

- Please follow the operation of this manual book to ensure the inverter generator is safe and reliable. Be sure to read the manual before using, otherwise the wrong operation will lead to safety risks or equipment damage.

★ The manual may vary depending on
the type of generator.

SAFETY WARNING

You and other people's personal and property safety is very important. Please read carefully about the safety warnings in the manual or on the stickers.

Safety warnings can mention you the dangers that may hurt you or others. Safety warnings including: "DANGER" "WARNING" "NOTICE".

The details are as follow.

 DANGER

If you do not follow the instructions, your life will be in danger or you will be seriously injured.

 WARNING

If you do not follow the instructions, your life could be in danger or you will be seriously injured.

 NOTICE

If you do not follow the instructions, you will be slightly injured.

If you do not follow the instructions, your generator set and other property may be damaged.

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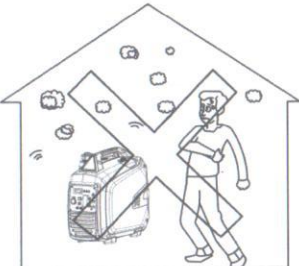
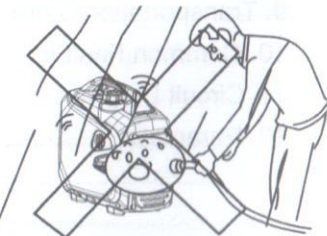
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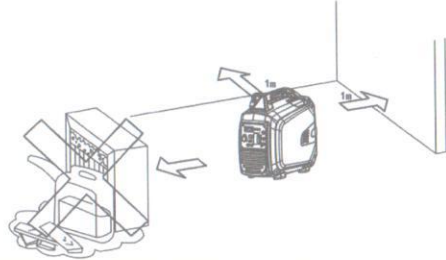
1. Safety Information

1.1 Safety Specification

Please read and understand this manual well before operating.

Familiarize with the safe operating procedures of generators can help you avoid accidents.

	
Do not use indoor	Do not use it in damp environment.
	
Products without ATS function should not be directly connected to the household power grid.	Do not smoke while fueling

	
Do not spill fuel while filling.	Do not re-fuel while generator is running.
	
Keep the generator away from combustible materials at least 1 meter while in use.	

1.2 Special Requirements

- Electrical equipment, including wires and plugs, should have no exposed parts.
- Protective circuit breaker should be matched with the generator equipment. If replacement is to be carried out, a circuit breaker with exactly the same parameters and performance should be used.
- Ground the generator properly before use.
- If an extension cord is needed, the following requirements should be met: 4mm², with a wire length not exceeding 100m.

2. Safety Warning

Please read the manual carefully before using.

Safety warnings



Warning; hot surface.

Taking care to avoid coming into contact with a hot surface.



Gasoline is flammable and explosive, please use it outdoors. Before adding gasoline, stop the engine and keep away from sources of ignition. Please add gasoline outdoors.



Exhaust gas contains carbon monoxide, it is strictly prohibited to use in indoor and closed environment.



When adding gasoline, please do not exceed the upper limit of the gasoline tank and immediately wipe off any spilled gasoline. After the addition is completed, please tighten the fuel tank cap to prevent gasoline leakage.



Let the generator cool before storing.

Gasoline is explosive and flammable. Please use the generator outdoor.



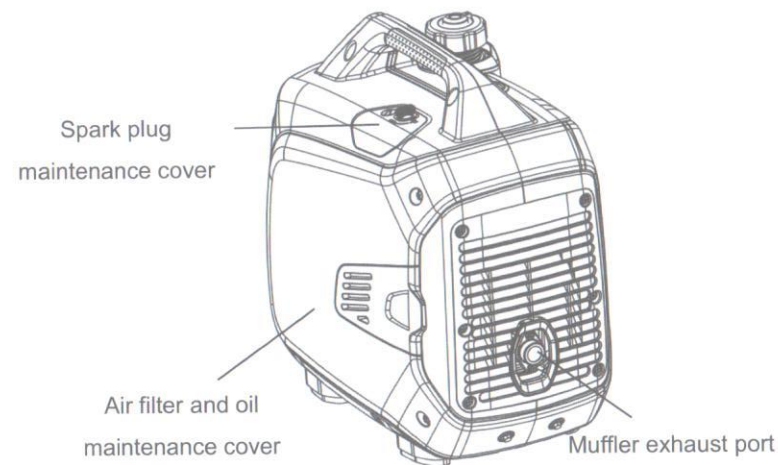
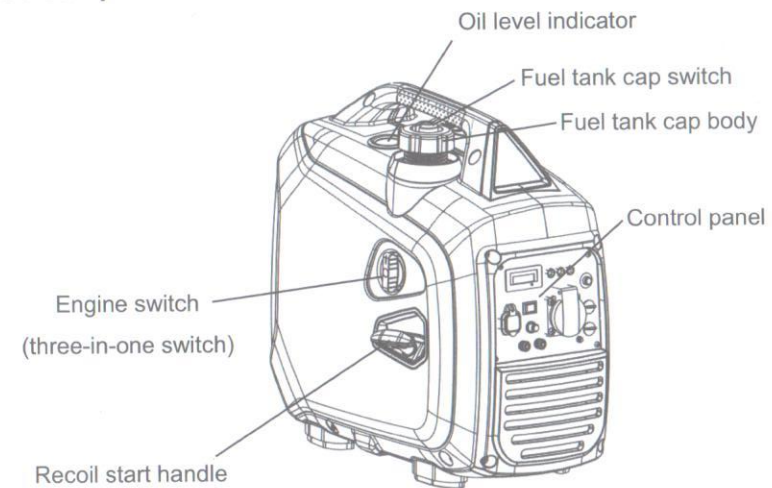
Do not connect to a building's electrical system.



Please read the instruction manual carefully before use.

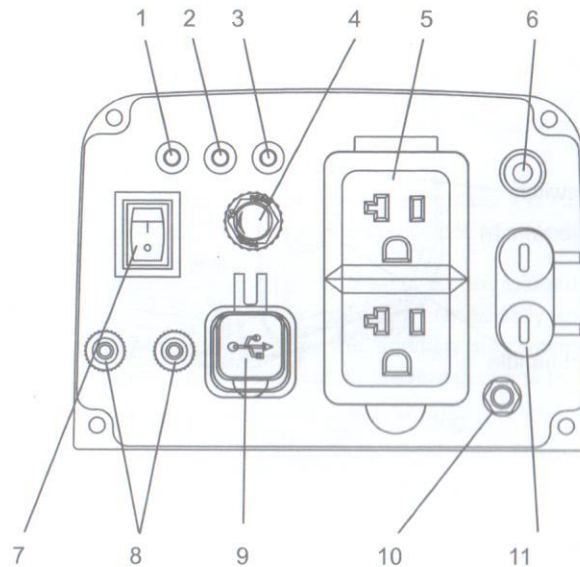
3. Components Identification

3.1 Components Feature



3.2 Control Panel

(Depending on the configuration, the factory will make the appropriate adjustments, those changes are without separate notice.)



1. Low oil indicator light	7. ECO(energy-saving switch)
2. Fault indicator light	8. DC output terminal
3. Operation indicator light	9. Dual-stage USB
4. DC protector	10. Ground terminal
5. AC output socket	11. Grid-connected socket
6. Reset button	

4. Control System

4.1 Energy-saving Switch

4.1.1 "ON"

When the energy-saving switch is placed in the "ON" position, the energy-saving device controls the engine speed according to the connected load, thus achieving better fuel consumption and low noise.



4.1.2 "OFF"

When the energy-saving switch is set to the "OFF" position, the engine will run at a relatively high speed regardless of whether a load is connected.

Tips: When using devices such as air compressors or submersible water pumps, the ECO must be turned off as a large starting current is required.

4.2 Oil Alarm System (Yellow)

The engine oil protection system will stop the engine automatically if the oil is insufficient and the oil indicator will turn on. Check the oil level and re-fill it if necessary then restart again.



If the engine oil indicator flashes for few seconds, it means the oil capacity is insufficient. Refill the oil and restart the engine.

4.3 Fault Indicator Light (Red)

4.3.1 When the red indicator light flashes and the green indicator light remains on, it indicates that the generator set has exceeded the rated load.

Prolonged use will automatically cut off the output. Please reduce the load equipment or lower the load power to within the rated power range.



4.3.2 When the green indicator light goes out and the red indicator light flashes 6 times every 3 seconds, it indicates that the generator set's overload protection or short circuit has caused the output to be disconnected. Please reduce the load equipment or lower the load power to within the rated power range, or clear the short circuit fault, and then gently touch the reset button. When the green indicator light lights up again, it indicates that the generator set is operating normally.

4.3.3 When the green indicator light goes out and the red indicator light flashes three times every 3 seconds, it indicates that the operating temperature of the generator set has exceeded the limit. Please turn off the generator set and place it in a well-ventilated environment with a temperature below 40°C before using it again. Or reduce the load power and then gently touch the reset button. When the green indicator light lights up again, it indicates that the generator set is operating normally.

4.3.4 When the green indicator light goes out and the red indicator light flashes once every 3 seconds, it indicates that the power input of the generator set is insufficient. Please turn off the generator set, maintain the air filter, spark plugs and carburetor before using it again. Or reduce the load power and then gently touch the reset button. When the green indicator light lights up again, it indicates that the generator set is operating normally.

Tips: When using inductive or capacitive load equipment with very high starting current (such as

compressors, submersible pumps, etc.), the fault indicator light may be on for a few seconds. This is a normal phenomenon because the inverter is controlled based on the current. As long as the duration does not reach the protection time, the equipment will return to normal after successful operation.

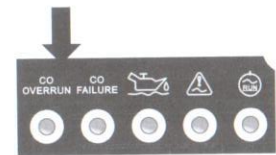
4.4 Operation Indicator Light (Green)

The operation indicator light will be on when the engine starts and outputs normally.



4.5 CO Over-limit Indicator Light (Red)

When the CO concentration in the air exceeds the value stipulated by relevant regulations in the environment where the generator set is located, it will flash and cause the generator set to shut down, no longer emitting exhaust gas.



4.6 CO Equipment Fault Indicator Light (Yellow)

When the CO sensor of the generator set malfunctions and cannot normally determine the CO concentration in the environment, the indicator light will illuminate, causing the generator set to shut off and fail to start normally. In such cases, the CO sensor equipment needs to be replaced or the generator set should be repaired.

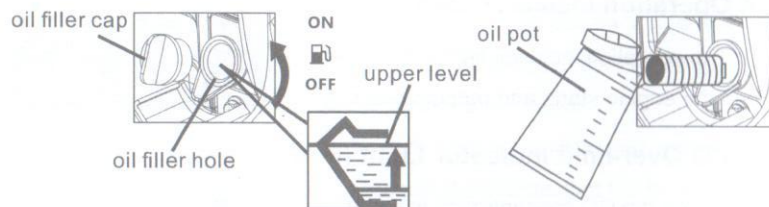


5. Pre - operational Check

Before use, make sure the generator is placed on a level ground and the engine is turned off.

5.1 Check the Oil Level

Remove the oil dipstick and wipe it with a clean cotton cloth. After reinserting the crankcase, take it out and check the oil level. If the oil level is below the indicated line on the dipstick, add oil.



NOTICE

- Do not use 2-stroke engine oil or engine oil without cleaning agents, otherwise it will shorten the service life of the engine.

- Please use high-quality 4-stroke engine oil, which must meet or exceed the SJ grade of the American Petroleum Institute classification as required by American automakers.

- Choose the engine oil that suits the viscosity of the average temperature in your area.

The SAE viscosity grades are shown in the table above.

Environment temperature	Engine oil model
-25°C-30°C	10W-30
-15°C-40°C	15W-40

NOTICE

- Store and use engine oil carefully to prevent dirt or dust from falling into it. When adding engine oil, wipe the area around the oil filler port clean.

Do not mix engine oils of different specifications to avoid negative impacts on the performance of the engine oil.

NOTICE

- Running the engine with insufficient engine oil may seriously damage the engine.

- The oil alarm system will automatically shut down the engine before the oil level drops to the safe limit. However, to avoid the inconvenience caused by unexpected shutdowns, we still recommend that you check the oil level regularly.

5.2 Check the Gasoline Level

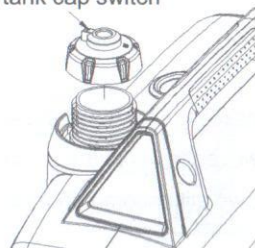
- Please use unleaded gasoline, 92# or higher.
- Do not use a mixture of engine oil and gasoline or dirty gasoline.
- Prevent dirt and water from entering the fuel tank.
- Do not use gasoline with an ethanol content higher than 10% or gasoline containing methanol, otherwise it will seriously damage the engine.

WARNING

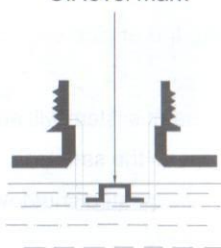
- Under certain circumstances, gasoline is extremely flammable and explosive.
- Please refuel in a well-ventilated area and turn off the engine. Smoking and open flames are strictly prohibited in the engine refueling area and the gasoline storage area.

- Gasoline must not overflow the fuel tank (the fuel level should be lower than the red fuel level indicator). After refueling, tighten the fuel tank cap.
- After refueling, promptly dry the remaining gasoline with a clean and soft cloth.
- Avoid prolonged and repeated skin contact with gasoline or inhalation of steam.
- Do not let children come into contact with gasoline.

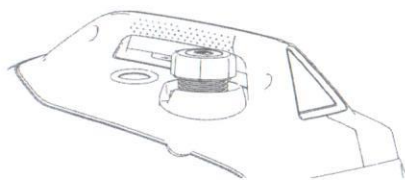
Fuel tank cap switch



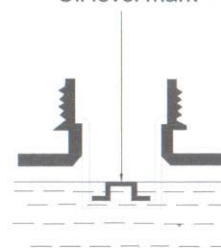
Oil level mark



After refueling the fuel tank cap without a vent hole, make sure the fuel tank cap is tightened (when a "clicking" sound occurs).



Oil level mark



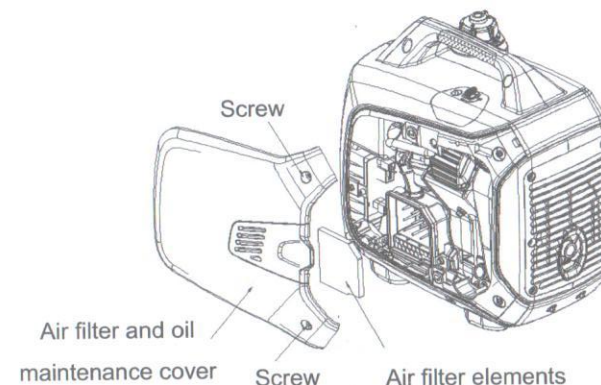
5.3 Check the Air Filter

Check the air filter element to ensure it is clean and functioning properly.

5.3.1 Loosen the screws of the air filter maintenance cover and

remove the air filter maintenance cover.

5.3.2 Loosen the screws of the air filter cover and remove it.



5.3.3 Remove the filter element of the air filter. If necessary, the filter element needs to be cleaned or replaced.

NOTICE

- The engine is not allowed to run without an air filter element; otherwise, dirt will enter the engine through the carburetor, causing rapid wear of the engine.

5.4 Starting Engine

NOTICE

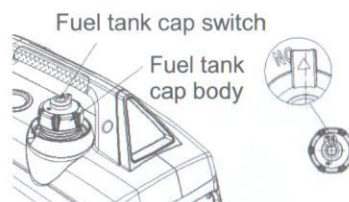
- Before starting the engine, disconnect the electrical equipment from the AC socket of the generator.
- When using it for the first time (after a long period of non-use or when starting after running out of gasoline), turn the engine switch knob to the

"on" position and wait for ten to twenty seconds before starting to allow gasoline to enter the engine carburetor.

⚠ WARNING

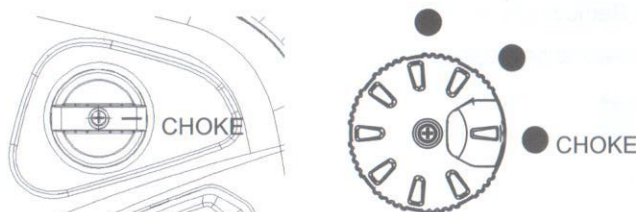
- **Do not use indoors or in enclosed environments.**

5.4.1 If the generator is equipped with the tank cover as shown in the right picture, please turn the tank cover switch to the "On" position.



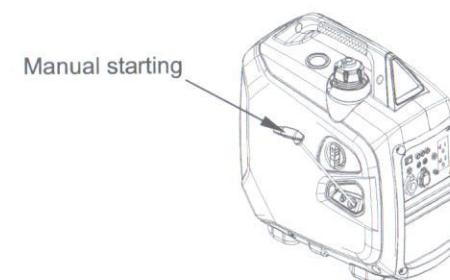
Note: When transporting the generator, the fuel tank cap switch should be turned to the "off" position.

5.4.2 Turn the generator engine switch knob to the "CHOKE" position.

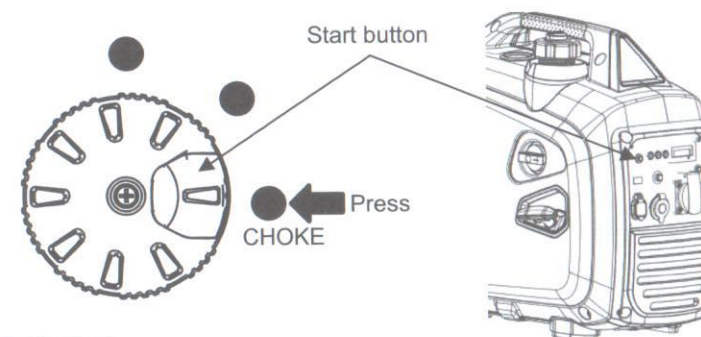


5.4.3 Rotate the combined switch to the starting position (the damper is closed position). Note: When the engine is relatively hot or the ambient temperature is relatively high, the damper does not need to be closed.

5.4.4 Hand start: Gently pull the start handle until you feel resistance, and then quickly pull it in the direction indicated by the arrow in the following picture.



5.4.5 Electric start: When using it for the first time, connect the positive and negative terminals of the battery. Note that the red wire should be connected to the positive terminal (+) and the black wire to the negative terminal (-) of the battery. Then press the start button for 0.5 seconds.



⚠ NOTICE

- When pulling the start handle, the pulling Angle should not be too large to avoid wearing the handle's casing.
- Do not allow the start handle to rebound and retract automatically to avoid damaging the housing. The starting handle should be slowly put

back.

5.4.6 remote start

A. Confirm whether the load is within the rated power range of the generator;

B. Rotate the start switch to place the start button in the "RUN" position;

a. Fuel on b. Ignition system on c. Power on the remote control

C. Press the "ON" button of the remote key, and the generator will start by itself. (To avoid misoperation, there is an operation delay function. Please press the remote button for about 1-2 seconds when operating the remote.)



D. Electrical loads can only be connected after the generator has started.

NOTICE

When the generator with remote control configuration fails to start after more than three remote control starting operations, please press the "OFF" button of the remote control key to stop the repeated starting and switch to hand-pull starting, or eliminate the fault before performing the remote control operation. Otherwise, the starting motor and battery may be damaged.

When the generator is not in use for a long time, please set the start button of the start switch to the "off" position to prevent the generator from

being in standby mode, which may cause the battery to be discharged, making it impossible to start remotely. Also, turn off the fuel to prevent oil leakage incidents.

When using the starting battery of a generator set in daily life, the following usage precautions should be noted to protect the starting battery and extend its service life:

1. Theoretically, the battery power should be maintained at over 60%, which is more conducive to extending the service life of the storage battery.

2. When starting the generator, please be careful not to start it repeatedly in a short period of time to avoid damaging the battery or the circuit. If the generator cannot be started after five consecutive attempts, please stop the machine for inspection or send it to a designated maintenance point for inspection and repair.

3. If the unit is not to be used for a long time, please fully charge the battery and then disconnect the negative terminal of the battery connection. Store the unit in a dry and cool place. The self-discharge of the battery is affected by the environmental temperature and humidity. High temperature and high humidity will accelerate the self-discharge of the battery. The battery should be charged and replenished monthly to maintain its power level above 60%, preventing irreversible capacity loss due to self-discharge and low capacity.

4. If you find that the battery of the unit cannot be charged or cannot be started, please check whether the battery is completely drained or damaged. If it is only completely drained, you can charge it by starting the generator or charging the battery with a charger. If the battery is damaged or has a low capacity, please replace it. The generator can still be started in the following ways when the battery power is exhausted or the battery is

damaged:

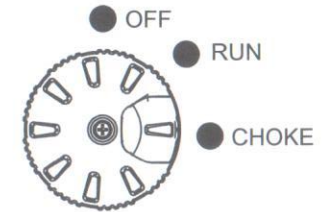
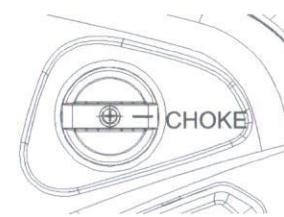
Start by connecting an external DC12V power supply

There are two methods for this approach:

a. Connect an external DC12V power supply from the DC12V output socket on the control panel. Connect the external DC12V power supply to the DC12V output socket or terminal post on the control panel of the generator set through a wire plug. Then, perform a normal hand-pull start through the starting handle, and the generator can be started. This approach provides power to the system to enable the generator set control system to work and assist the operator in starting the generator. Please note that the remote control start or electric start cannot be used normally at this time. Do not attempt it to avoid damaging the electrical system.

b. Connect a DC12V battery or an external DC12V power supply in parallel to the battery of the generator set. After disassembling the maintenance door. Connect the spare DC12V battery or DC12V power supply in parallel to the battery terminals. This method provides power for the system to enable the generator set control system to work and assist the operator in starting the generator. If the battery or power supply used is no smaller than the DC12V battery that comes with the unit, it can be started by hand pull, electric start or remote control. If a low-power DC12V power supply is used, it can only be started by recoil to avoid damaging the electrical system or the DC12V power supply, as the current that a general low-power DC12V power supply can provide is insufficient to start the generator.

5.4.7 When the engine is running, turn the engine switch to the "RUN" position.



NOTICE

If the engine cannot be started after it stops, first check the position of the fuel tank cap switch, the engine switch (three-in-one switch) and the operation steps. If none of them work, then check the oil level.

NOTICE

- If the generator is used at an altitude above 1,500 meters, please contact our dealer to replace the carburetor at high altitudes. (Carburetors at high altitudes cannot be used in low-altitude areas; otherwise, the engine will be damaged due to overheating.)

6. The Use of Generator

WARNING

- To prevent electric shock caused by incorrect use, the generator should be grounded.



- As a backup power source, the generator cannot be connected to the power system of the power grid company.

NOTICE

- Do not overload the generator.
- Do not connect the generator to the household power system of the power grid company; otherwise, it may cause electric shock and death when people come into contact with the wires. And damage the generator or household appliances.
- Do not operate in parallel with generator sets of other brands.
- Do not lengthen the engine exhaust pipe.
- If an extension cable is required, a flexible cable with a rubber sheath (in compliance with IEC245 or the corresponding regulations) should be used. The length limit of the cable: A 2.5mm² cable is 60 meters long. The 4.0mm² cable is 100 meters long.
- Keep the generator away from other wires and cables, such as the distribution network.

NOTICE

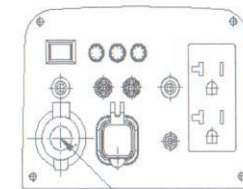
- When using an AC power supply, a DC power supply can be used simultaneously.
- If both AC and DC sockets are used simultaneously, make sure the total power does not exceed the sum of the AC and DC power.

6.1 Use of DC Power Supply

When the DC socket is unloaded, the output voltage is 15-20V DC. For 12V DC load only.

NOTICE

- When using alternating current, a direct current power supply can be used.
- Overloading a DC current may cause the DC overcurrent protector to act. First, remove the DC load, wait for a few minutes, and then reset the DC protector button.



DC cigarette lighter socket

6.2 Use of AC Power Supply

6.2.1 Start the engine and make sure its AC output indicator light (green) is on.

6.2.2 Turn off the switches of the electrical equipment and then insert the electrical equipment into the output socket of the generator.

6.2.3 To achieve the best usage effect and the maximum service life of the generator, a new generator should generally operate at 50% load for 20 hours to ensure the engine performance reaches its peak.

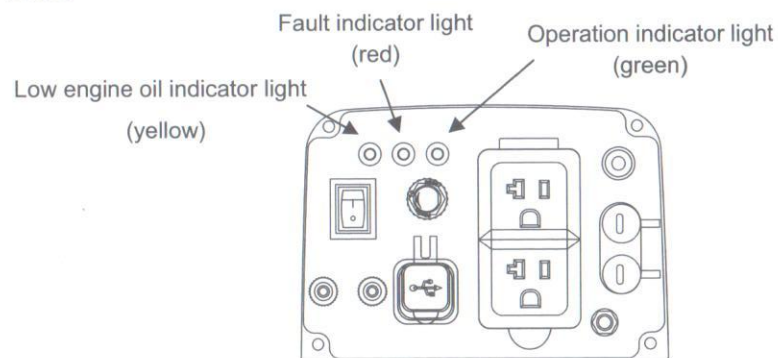
NOTICE

- Before connecting the AC output of the generator, it is necessary to confirm that the electrical equipment can work normally. If during use, the electrical equipment suddenly stops working or operates abnormally, immediately disconnect the electrical equipment and stop the engine.

6.3 Operation Indicator Light, Fault Indicator Light

- Under normal conditions, the operation indicator light is on.

- If the generator is overloaded or if there is an internal short circuit in the connected electrical equipment, the operation indicator light goes out while the fault indicator light comes on. At this time, the output power supply will be cut off, but the engine will still run.
- If the fault indicator light comes on, the electrical equipment should be disconnected first. If the fault indicator light goes out and the operation indicator light is on, you can reconnect the electrical equipment. Otherwise, please turn off the engine and check for faults.



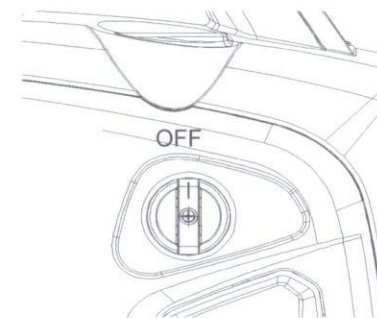
6.4 Low Oil Level Alarm System

- The low oil level alarm system is designed to prevent the engine from being damaged due to insufficient crankcase oil. Before the engine oil in the crankcase drops to the safety line, the low oil level alarm system automatically shuts down the engine (the generator engine switch remains in the "on" position).
- After the low oil level alarm system turns off the engine, if you start the engine again, the low oil level warning indicator light (yellow) will be on and the engine cannot run. If this happens, please add engine oil.

7. Stop the Generator

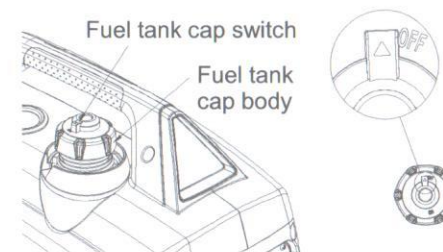
If the engine is to be stopped urgently, please turn the generator engine switch to the "off" position.

- 7.1 Turn off the electrical equipment and unplug the output plug of the generator.
- 7.2 Turn the generator engine switch to the "OFF" position.

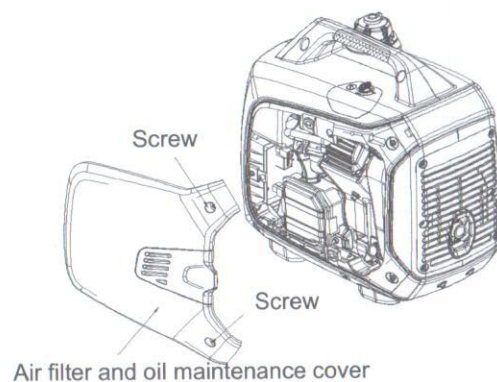


Turn the generator fuel tank switch knob to the "OFF" position.

- 7.3 If the generator is equipped with the fuel tank cover as shown in the picture below, after the generator has completely cooled down, please turn the fuel tank cover switch counterclockwise to the "OFF" position.

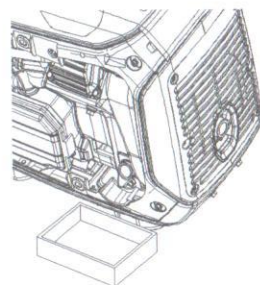


When turning off, moving or storing the generator, make sure that the fuel tank cap switch and the engine switch are in the "off" position.



8.1.2 Remove the oil dipstick.

8.1.3 Drain the waste engine oil.



8.1.4 Add the recommended engine oil and check the oil level.



8.1.5 Reinstall the upper filter maintenance cover and tighten the screws.

NOTICE

- According to environmental requirements, used engine oil should be sealed in containers and handed over to professional processing centers for recycling. Do not throw it into the trash can or splash it on the ground.

8.2 Air Filter

A dirty air filter can block air from entering the carburetor. To prevent the carburetor from malfunctioning, it is necessary to maintain the air filter regularly. If the generator is often used in areas with high dust levels, even more frequent maintenance is required.

WARNING

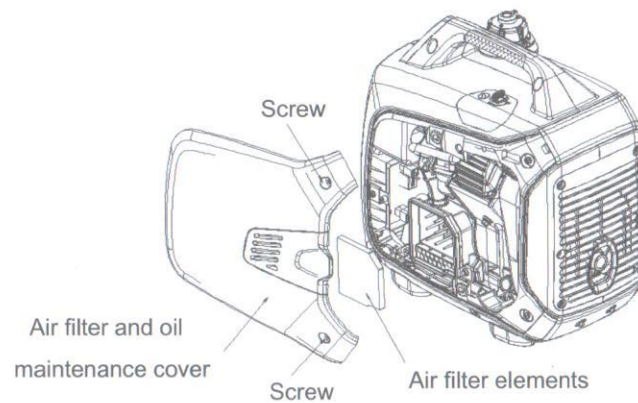
- Do not clean the generator with gasoline or low flash point solvents, as they are flammable and explosive under certain conditions.

NOTICE

- Do not operate the generator without an air filter, otherwise it will cause rapid wear of the engine.

8.2.1 Loosen the screws of the air filter maintenance cover and remove the air filter maintenance cover.

8.2.2 Loosen the screws of the air filter cover and remove it.

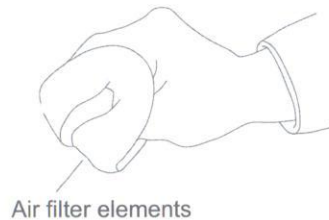


8.2.3 Remove the filter element and clean it with a non-flammable or high flash point solvent (such as kerosene or motorcycle engine oil), and then dry the filter element.

8.2.4 Immerse the filter element with clean engine oil and squeeze out the excess oil.

8.2.5 Reinstall the filter element and the air filter cover.

8.2.6 Reinstall the upper filter maintenance cover and tighten the screws.

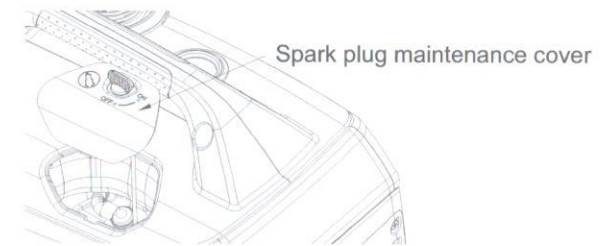


Air filter elements

8.3 Spark Plug

To ensure the normal operation of the engine, the spark plug gap must be appropriate and there should be no carbon deposits on the spark plugs.

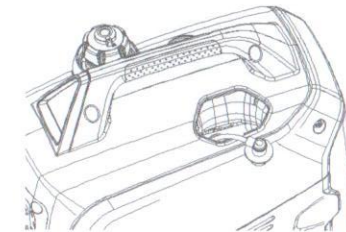
8.3.1 Open the spark plug maintenance cover



Spark plug maintenance cover

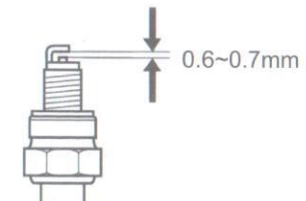
8.3.2 Remove the spark plug cap.

8.3.3 Remove the spark plug with a spark plug wrench.



8.3.4 Visually inspect the spark plug. If the insulator has cracks, it must be scrapped. If the spark plug can be reused, clean it with a wire brush.

8.3.5 Measure the spark plug clearance with a standard gauge. The spark plug gap should be 0.6-0.7mm.



NOTICE

- The spark plug must be installed firmly; otherwise, it will become very hot and damage the generator. Do not use spark plugs with different heat values.

1. Install the spark plugs carefully by hand and be careful not to misalign the threads.
2. After manually installing a new spark plug, tighten it by half a turn with a wrench and press the gasket in place. If an old spark plug has already been installed, after positioning it, it only needs to be tightened by 1/8 to 1/4 turn.
3. Reinstall the spark plug caps properly.
4. Reinstall the spark plug maintenance cover and tighten the screws.

8.4 Spark Collector

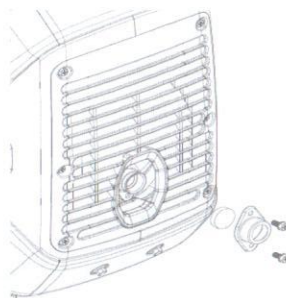
WARNING

The spark collector must be maintained once every 100 hours of engine operation.

8.4.1 When the muffler cools down, loosen the screw of the muffler's exhaust port and remove the spark collector.

8.4.2 Use a brush to clean the carbon deposits on the spark collector. If the spark collector is damaged, it needs to be replaced.

8.4.3 Reinstall the spark collector properly.



9. Transportation/Storage

To prevent oil leakage from the generator during transportation or temporary storage, it is essential to turn off the fuel tank cap switch and the engine switch of the generator in the "off" position to keep the generator in the normal operating position. After the engine has completely cooled down, turn the fuel tank cap switch counterclockwise to the "off" position.

WARNING

When transporting the generator:

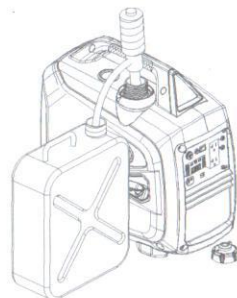
- Do not let the gasoline overflow from the fuel tank. There should be no gasoline around the neck of the fuel filler.
- When the generator is placed on the vehicle, do not operate it. Instead, remove the generator from the vehicle and operate it in a well-ventilated area.
- Do not expose the generator directly to the sun.
- Do not leave the generator in a sealed compartment for a long time. The high temperature inside the compartment may cause gasoline to vaporize, leading to an explosion.
- The carriages equipped with generators must not be jolted for a long time on uneven roads. If you have to drive on such a road, drain the gasoline and engine oil in advance.
- Before storing the generator for a long time, the following should be done:

9.1 Ensure that the storage area is clean and not damp.

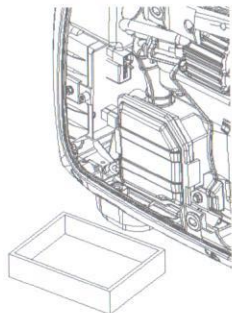
9.2 Drain all the gasoline.

 WARNING

- Under certain circumstances, gasoline is flammable and explosive. Smoking and open flames are strictly prohibited near gasoline.



- A. Extract the gasoline from the fuel tank to the appropriate container.
- B. Turn the generator engine switch knob to the "on" position, loosen the oil drain screw on the carburetor, and discharge the gasoline in the carburetor into a suitable container.



- C. Remove the spark plug cap, pull the start handle three to four times to drain the gasoline from the fuel pipe and carburetor.
- D. Turn the generator engine switch knob to the "off" position, and then tighten the carburetor drain screw.

- E. Reinstall the spark plug cap onto the spark plug.

9.3 Change the engine oil.

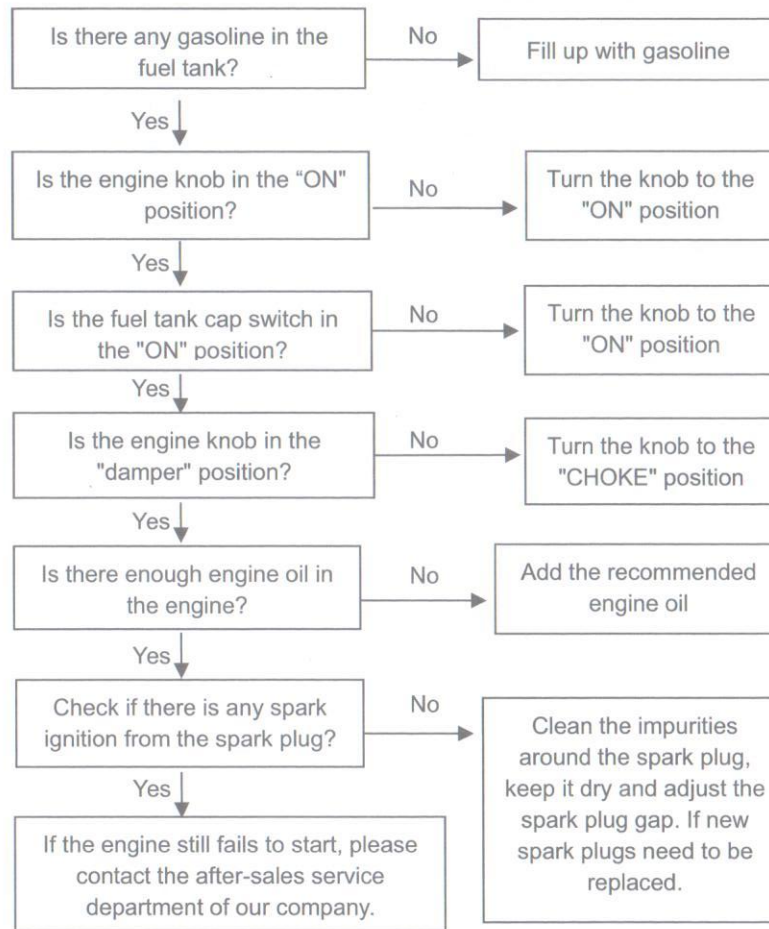
9.4 Remove the spark plugs and pour about 10 to 20ml of clean engine oil into the cylinder. Slowly lift the handle to make the engine run a few turns to evenly distribute the engine oil, and then reinstall the spark plugs.

9.5 Slowly lift the handle until you feel obvious resistance. At this point, the piston is at the high compression stroke end, and both the intake valve and the exhaust valve are closed simultaneously. Storing the engine in this situation helps prevent rust inside.

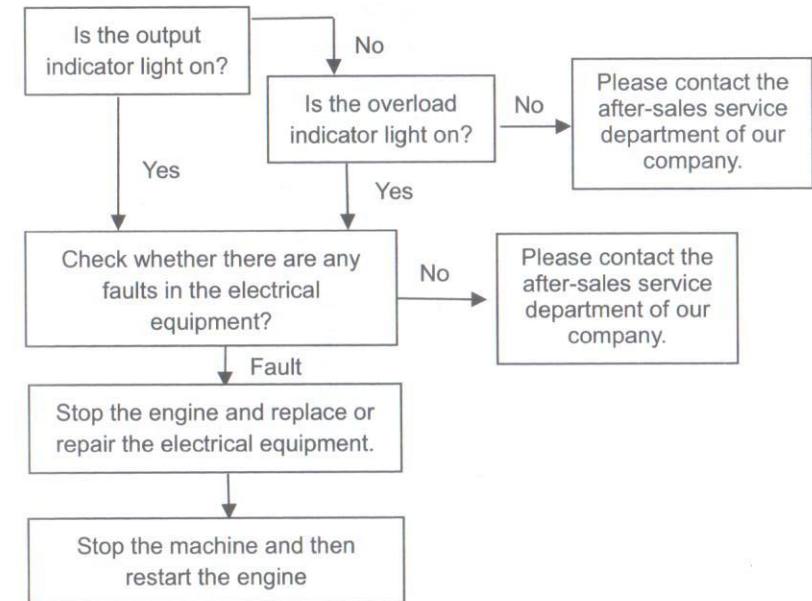
9.6 For electrically started generators equipped with batteries, fully charge the battery and then disconnect the negative terminal of the battery connection. Store the unit in a dry and cool place. The self-discharge of the battery is affected by the environmental temperature and humidity. High temperature and high humidity will accelerate the self-discharge of the battery. The battery should be charged and replenished monthly to maintain its power level above 60%, preventing irreversible capacity loss due to self-discharge and low capacity.

10. Common Fault Elimination

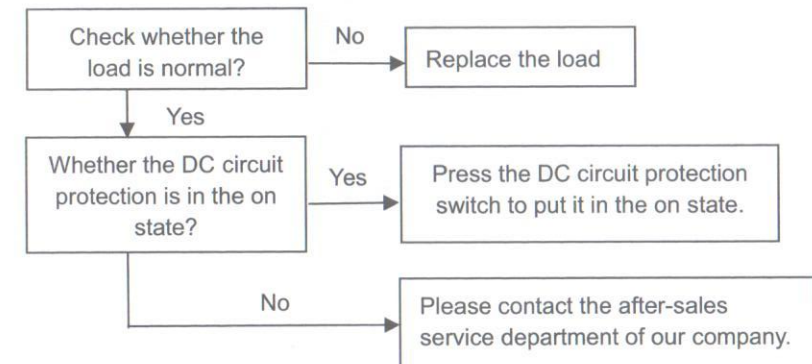
The engine can't start:



The equipment connected to the generator cannot start:



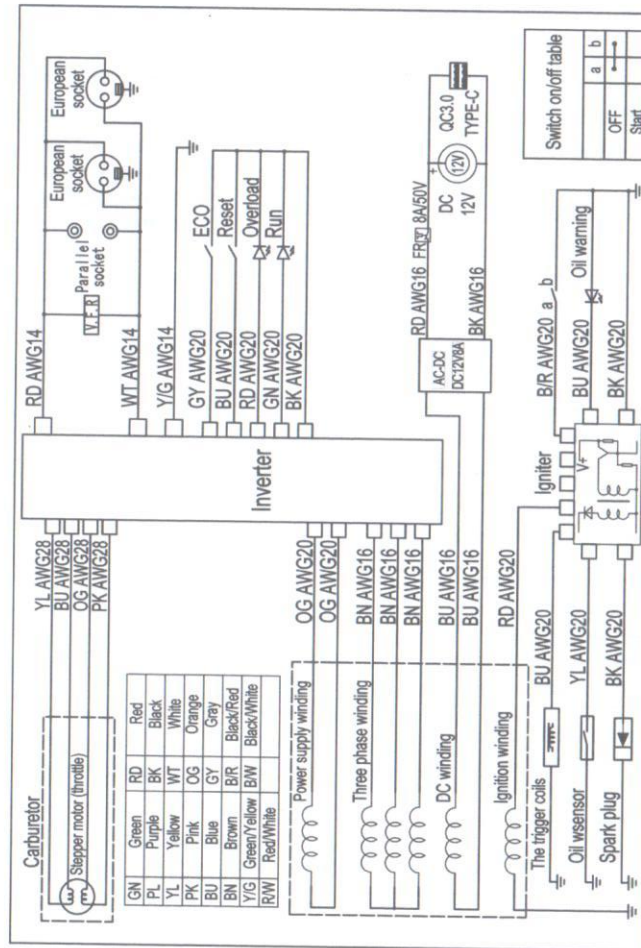
No current in the DC socket:



11. Circuit Diagram

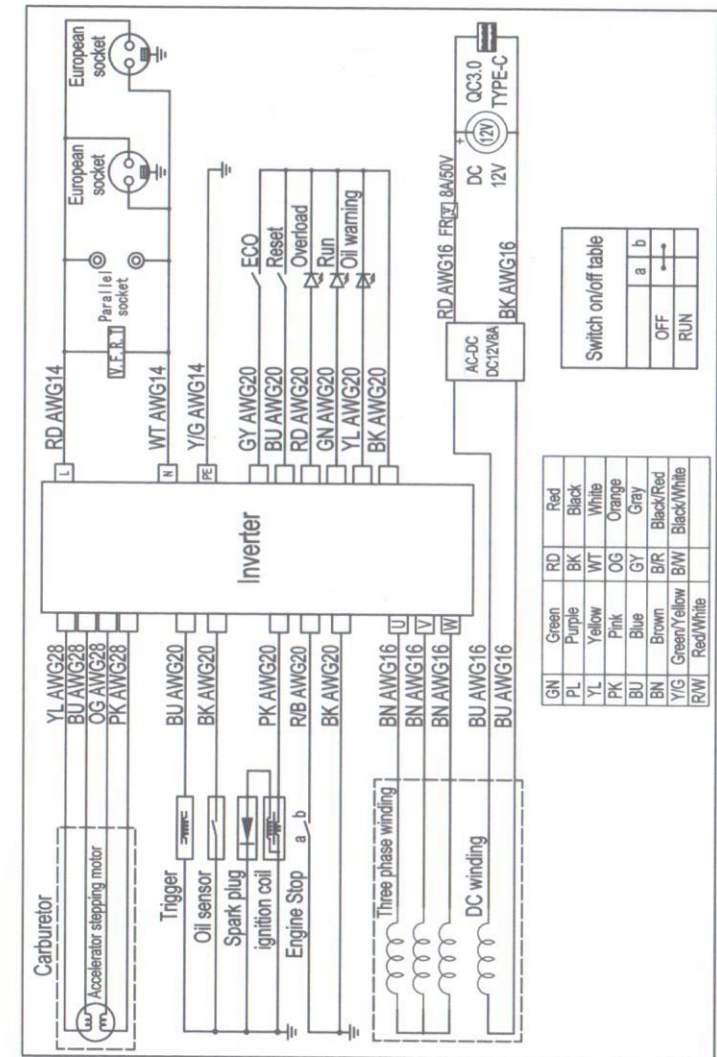
(According to different configurations, the factory will make corresponding adjustments. Subject to change without prior notice)

2350iS/2850iS



39

3250iS/3900iS/4450iS



40

12. Parameter

Gasoline engine	Items	FRGG2830io	FRGG3335io
	Engine type	Single cylinder, four-stroke, air-cooled	
	Displacement(cc)	97.6	143
	Ignition system	TCI	
	Start mode	Recoil start/E-start	
	Oil capacity(L)	0.35	0.4
Generator set	Tank capacity (L)	4	7
	Fuel type	Unleaded gasoline	
	Frequency (Hz)	50	
	Phase	Single phase	
	Voltage (V)	230	
	Rated power(kW)	2.8	3.2
	Max. power (kW)	3.0	3.5
	DC output	12V/8.3A	
	L x W x H (mm)	480x285x460	500x305x500

8. Maintain

The purpose of maintenance and periodic servicing is to keep the generator in the best operating condition.

WARNING

- Before carrying out any maintenance, please turn off the engine. If the engine must be operated during maintenance, it must be done in a well-ventilated area as the exhaust gas contains carbon monoxide.

NOTICE

- To ensure quality, when replacing damaged parts, please use the original spare parts of our company or parts of the same quality.

Maintain and Repair Plan

Maintenance Cycle Table		Each Use	1st Month or 10 Hours	Every 3 Months or 50 Hours	Every 6 Months or 100 Hours	Every 2 Years or 200 Hours
Maintenance Items						
Engine	Check Oil Level	○				
	Oil	Replace			○	
Air Filter	Inspect	○				
	Clean			○ (1)		
Spark Plug	Inspect and Adjust			○		
	Replace					○
Spark	Clean				○	

Collector						
Valve Clearance	Inspect and Adjust					○ (2)
Fuel Tank and Strainer	Clean				○	
Cylinder Head	Clean	Every 300h(2)				
Oil Pipe	Inspect	Every 2 years (replace if necessary) (2)				

1.If used in an environment with a lot of dust, please increase the maintenance frequency of air filter.

2. The maintenance items for this part require professional repair tools and skills.

3. If it is used for commercial purposes, due to long-term use, the frequency of maintenance can be increased.

8.1 Change the Engine Oil

When the engine just stops, the engine oil should be drained quickly and thoroughly.

8.1.1 Loosen the screws of the air filter maintenance cover and remove the air filter maintenance cover.