

POWERTECH



2KW Sine Wave Inverter Generator

User Manual

MG-4508

PREFACE

Thank you for purchasing our generators.

This manual includes information on operation and maintenance of the MG-4508 generator.

All information in this publication is based on the latest product information available at the time of approval for printing.

We reserve the right to make changes at any time without notice and without incurring any obligation.

This publication cannot be reproduced entirely or partially without written consent.

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

Please pay special attention to the following statements:



Failure to properly follow these precautions may result in damage to the equipment, serious personal injury or DEATH! Read all labels and the owner's manual before operating this generator.

Operate only in well ventilated areas.

Exhaust gas contains poisonous carbon monoxide which is lethal.

Always stop engine before refueling. Wait 5 minutes before restarting.

Check for spilled fuel or leaks. Clean and/or repair before use.

Keep any sources of ignition away from fuel tank, at all times.



Indicates a strong possibility of severe personal injury or death if instructions are not followed.



Indicates a possibility of personal injury or equipment damage if instructions are not followed.

NOTE: Gives helpful information.

If a problem should arise, or if you have any questions about the generator, consult an authorized dealer.



Our generators are designed to offer safe and reliable service if operated according to the instructions. Read and understand the Owner's Manual before operating the generator. Failure to do so could result in personal injury or equipment damage.

CONTENTS

1. SAFETY INSTRUCTIONS	
2. SAFETY LABEL LOCATIONS	
3. COMPONENT IDENTIFICATION	
4. CONTROL PANEL	
5. PRE-OPERATION CHECK	
6. STARTING THE ENGINE	
7. GENERATOR USE	
8. STOPPING THE ENGINE	
9. DOUBLE GENERATORS PARALLEL	
10. MAINTENANCE	
11. TRANSPORTING/STORAGE	
12. TROUBLESHOOTING	
13. SPECIFICATIONS	
14. ELECTRICAL WIRING DIAGRAM	
15. PARTS LIST	
16. SUPPLIED ACCESSORIES	

1. SAFETY INSTRUCTIONS

WARNING

Operate carefully to ensure the safety of users and others.

WARNING



- Our generators are designed to offer safe and reliable service if operated according to the instructions. Read and understand the Owner's Manual before operating the generator. Failure to do so could result in personal injury or equipment damage.

WARNING



- Exhaust gas contains poisonous carbon monoxide. Never run the generator in an enclosed area. Make sure to provide adequate ventilation. When installed in ventilated protection are to be observed.

WARNING



- The muffler gets very hot during operation and remains hot for a while after it stops. Be careful not to touch the muffler while it is hot. Leave the engine to cool before transporting the generator indoors.
- The engine exhaust system is heated during operation and remains hot immediately after it stops. To prevent scalding, pay attention to the warning marks attached to the generator.

To ensure safe operation—

WARNING

- Gasoline is extremely flammable and explosive under certain conditions. Refuel in a well ventilated area with the engine off.
- Keep away from cigarette, smoke and sparks when re-fueling the generator. Always refuel in a well-ventilated location.
- Wipe up spilled gasoline at once.
- Restrict use of the generator in areas with high risks of fire.

WARNING



- As a source of standby power for buildings, its connection to the power system of the buildings must be done by a professional electrician and must comply with all applicable laws and electrical codes. Improper connection may allow electric current to back feed from the generator into the utility lines, which may electrocute the workers of the power company or others who are working on the lines during a power outage, and when utility power is restored, the generator may explode, burn, or cause fires in the building's electrical system.

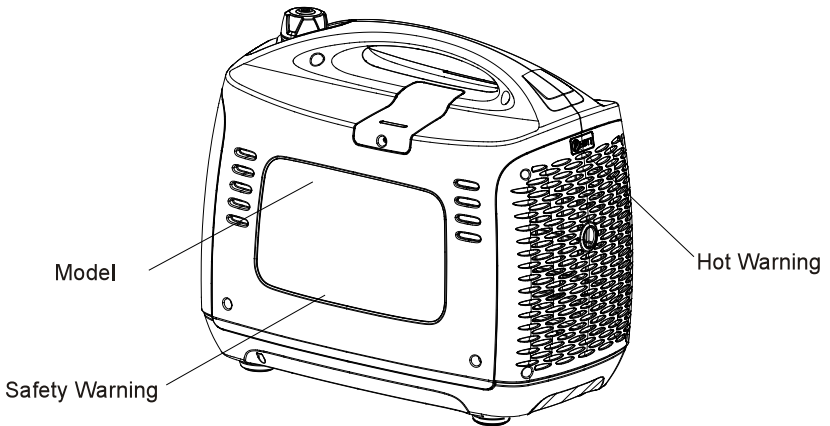
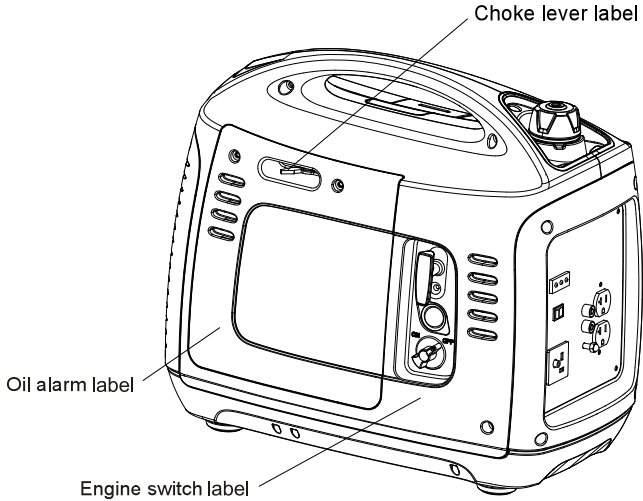
WARNING

- Always make a pre-operation inspection before you start the engine. You may prevent an accident or equipment damage.
- Place the generator at least 1m(3ft) away from buildings or other equipment during operation.
- Operate the generator on a level surface. If the generator is tilted, fuel spillage may be caused.
- Know how to stop the generator quickly and understand operation of all the controls. Never permit anyone to operate the generator without proper instructions.
- Keep children and pets away from the generator when it is in operation.
- Keep away from rotating parts while the generator is running.
- The generator is a potential source of electrical shocks when misused; do not operate with wet hands.
- Do not operate the generator in rain or snow or allow it to get wet.

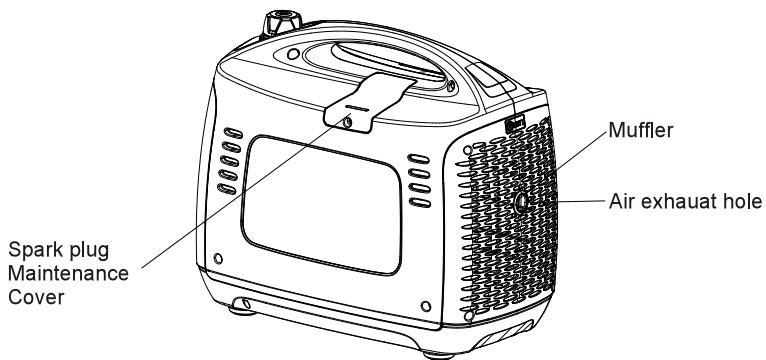
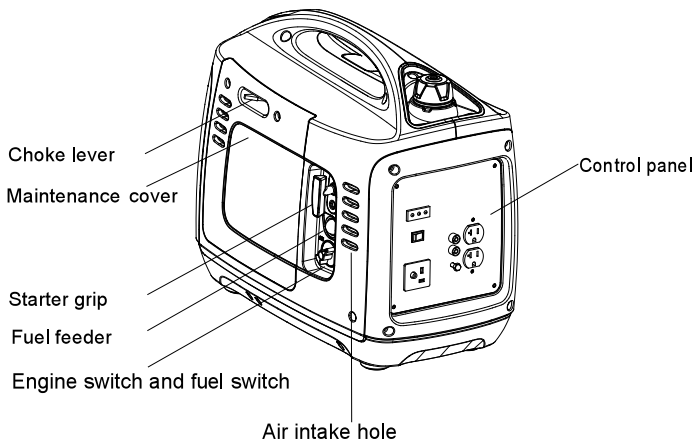
2. SAFETY LABEL LOCATIONS

These labels warn you potential hazards that can cause serious injury. Read the labels and safety notes and precautions described in manual carefully.

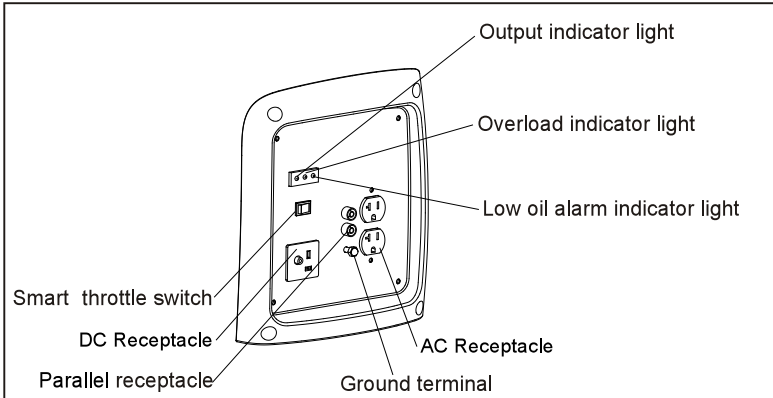
Authorized service, call the service hotline or send email to service email box.



3. COMPONENT IDENTIFICATION



4. CONTROL PANEL



Parallel receptacle

The parallel cabinet can be connected with the parallel socket when the generator set needs to increase the parallel output power.

Smart throttle

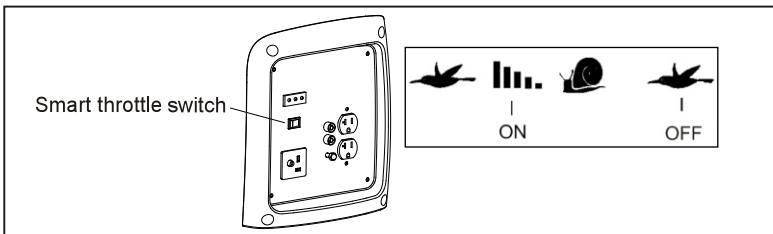
Engine speed is kept at idle automatically when electrical equipments are disconnected from the generator and it will return to the proper speed to the power of the electrical load when the electrical equipments are reconnected. This position is used to minimize the fuel consumption while in operation.

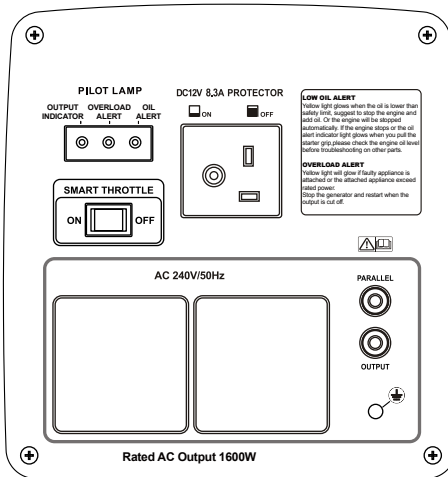
⚠ NOTE

- The smart throttle system does not operate effectively if the electrical equipments require a high electric power
- When high electrical loads are connected simultaneously, users can turn the smart throttle switch to the OFF position to reduce voltage changes.
- In DC charging, turn the smart throttle switch to the OFF position.

ON: Recommended to minimize fuel consumption and further reduce noise levels when no load is applied to the generator.

OFF: Smart throttle system does not operate.





AU

5.PRE-OPERATION CHECK

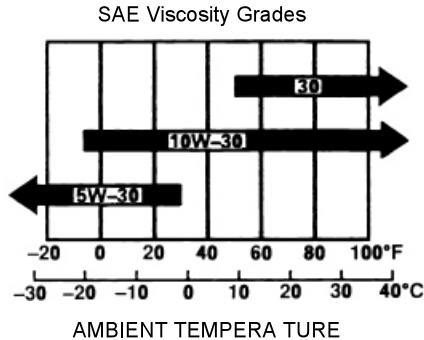
⚠ CAUTION

- Make sure to check the generator on a level surface with the engine off.

1. Check the engine oil level.

⚠ CAUTION

- Using nondetergent oil or 2-stroke engine oil could shorten the engine's service life.
- Use a high-detergent, premium quality 4-stroke engine oil certified to meet or exceed U.S. automobile manufacturer's requirements for API Service Classification SE/SF.
- Select the appropriate viscosity for the average temperature in your area.



⚠ CAUTION

- Store and use the oil carefully in order to prevent dust or dirt from flowing into the oil. If oil is overfilled, wipe it up at once.
- Never mix different kinds of oil.

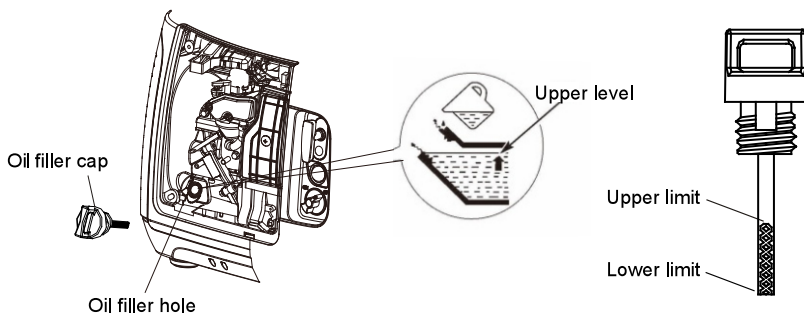
Loosen the cover screw and remove the left side maintenance cover.

Remove the oil filler cap, and wipe the dipstick with a clean rag. Check the oil level by inserting the dipstick in the filler hole without screwing it in.

If the oil level is below the end of the dipstick, refill the recommended oil up to the top of the oil filler neck.

⚠ NOTE

- Running the engine with insufficient oil can cause serious engine damage.
- The Low Oil Alarm System will automatically stop the engine before the oil level falls below the safe limit. However, to avoid the inconvenience of an unexpected shutdown, it is still advisable to visually inspect the oil level regularly.



2. Check the fuel level.

Use automotive gasoline (Unleaded or lowleaded is preferred to minimize combustion chamber deposits).

If the fuel level is low, refuel the fuel tank until the level increased to the specified mark.

Never use an oil/gasoline mixture or dirty gasoline.

Avoid getting dirt, dust or water in the fuel tank.

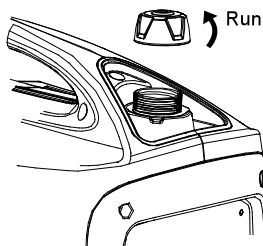
After refueling, tighten the oil rule securely.

⚠ WARNING

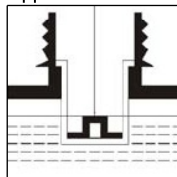
- Gasoline is extremely flammable and is explosive under certain conditions.
- Refuel in a well-ventilated area with the engine off. Do not smoke or allow flames or sparks in the area where the engine is refueled or where gasoline is stored.
- Do not overfill the fuel tank (there should be no fuel above the upper limit mark). After refueling, make sure the tank cap is closed properly and securely.
- Be careful not to spill fuel when refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.
- Avoid repeated or prolonged contact with skin or inhale of vapor. KEEP IT OUT OF THE REACH OF CHILDREN.

Fuel tank capacity: 3.7 liter (0.97 US gal, 0.81 Uk gal)

Fuel filler cap



Upper limit mark



Gasolines containing alcohol

If you decide to use the gasoline containing alcohol (gasohol), make sure that its octane rating is not lower than our recommendation. There are two types of gasohol: one containing ethanol, and the other containing methanol. Do not use gasohol that contains more than 10% ethanol. Do not use gasoline in which the methanol (methyl or wood alcohol) does not contain cosolvents or corrosion inhibitors. Never use gasoline containing more than 5% methanol, even if it has cosolvents and corrosion inhibitors.

NOTE

- Fuel system damage or engine performance problems resulting from the use of fuels that contain alcohol is not covered under the warranty. We do not warrant the use of fuels containing methanol since evidence of their suitability is as yet incomplete.
- Before buying fuel from an unfamiliar station, try to find out if the fuel contains alcohol, if it does, confirm the type and percentage of alcohol used. If you notice any undesirable operating abnormality while replace it by a gasoline which does not contain alcohol.

3. Check the air cleaner.

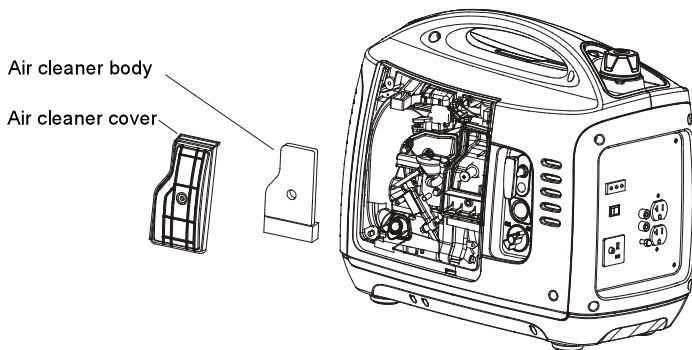
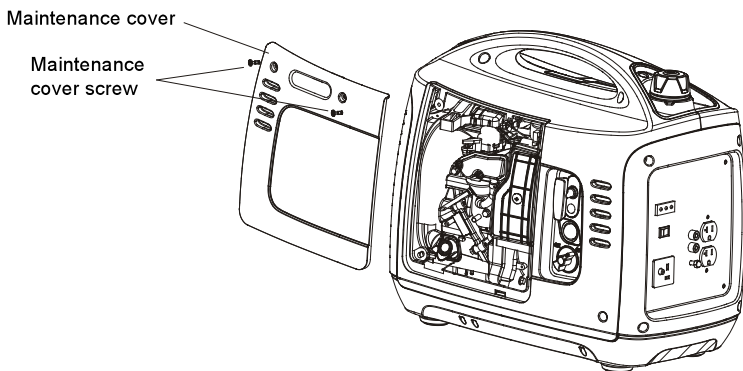
Check the air cleaner element to make sure that it is clean and in a good condition.

Loosen the cover screw and remove the left side maintenance cover.

Press the latch tab on the top of the air cleaner body, remove the air cleaner cover, check the element. Clean or replace the element if necessary.

CAUTION

- Never run the engine without the air cleaner. Rapid engine wear may be resulted from contaminants, such as dust and dirt which is drawn through the carburetor into the engine.

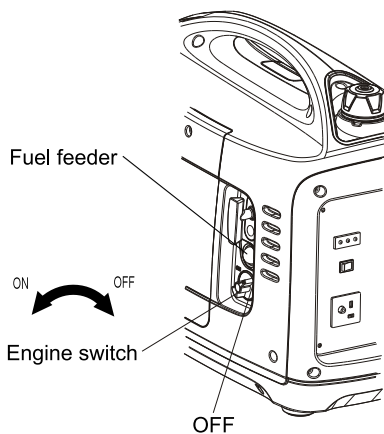


5. STARTING THE ENGINE

NOTE

- Before starting the engine, disconnect the load from the DC sockets.
- When starting the generator after adding fuel for the first time or after long term storage, or after running out of fuel, turn the engine switch to the " ON" position, press the fuel feeder 20 times before starting the engine.

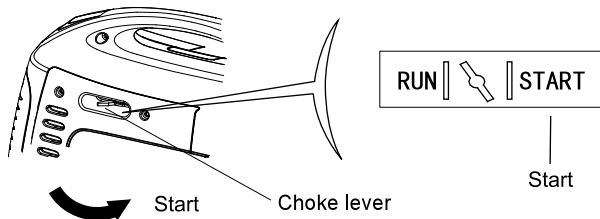
1. Turn the engine switch to the ON position.



2. Move the choke handle to the START position.

NOTE:

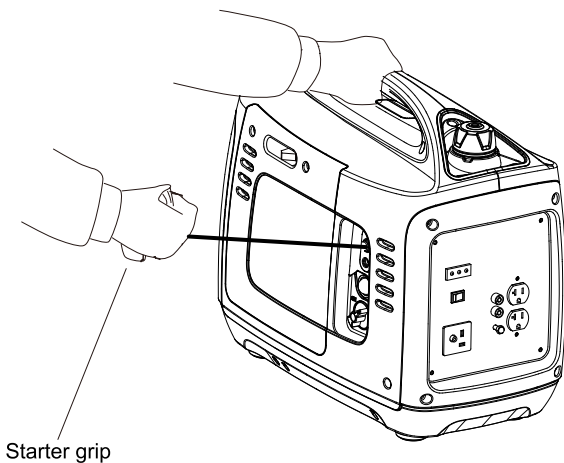
Do not use the choke when the engine is hot or when the air temperature is high.



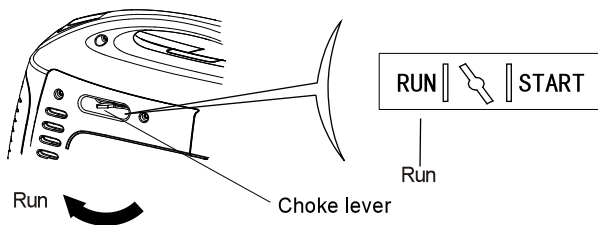
3. Pull the starter grip slightly until resistance is felt and then pull it swiftly in the arrow direction as shown below.

⚠ CAUTION

- Do not allow the starter grip to snap back, Return it slowly by hand.
- Please pull starter cord along with horizontal angle of 45 degree. Do not pull starter cord up and let it touch the cover



4. Move the choke handle to the RUN position after the engine warms up.



! NOTE

- If the engine stops and will not restart, check the engine oil level before troubleshooting in other areas.
- Please operate the machine in the plane less than 15 degree.

High altitude operation

At high altitude, the standard carburetor air-fuel mixture will be excessively rich. Performance will decrease, and fuel consumption will increase.

High altitude performance can be improved by installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screws. If you always operate the generator at altitudes higher than 1,600 m (6,000 feet) above sea level, **ask your authorized dealer** to perform these carburetor modifications.

Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for an increase in altitude by every 305m. The impact of altitude on the horsepower will be even bigger if no carburetor modification is made.

! CAUTION

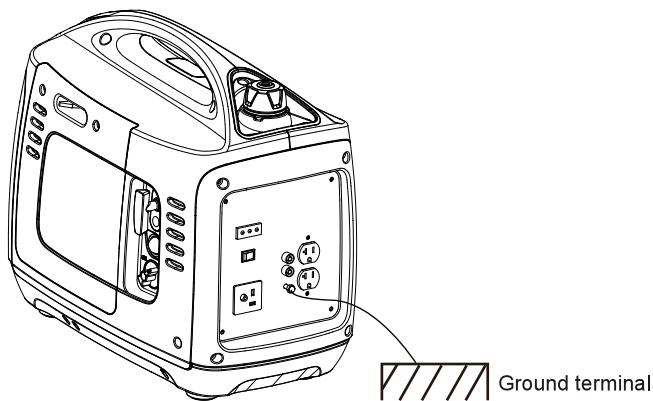
- Operation of the generator at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

7. GENERATOR USE

Be sure to ground the generator when the connected equipment is grounded.

WARNING

- To prevent electrical shock from improper uses, the generator should be grounded. Connect a thick wire between the generator's ground terminal and an external ground source.
- As a source of standby power for buildings, its connection to the power system of the buildings must be done by a professional electrician and must comply with all applicable laws and electrical codes. Improper connection may allow electric current to back feed from the generator into the utility lines, which may electrocute the workers of the power company or others who are working on the lines during a power outage, and when utility power is restored, the generator may explode, burn, or cause fires in the building's electrical system.



CAUTION

- Do not exceed the rated power.
The total wattage of all appliances connected must be considered.
- Do not exceed the current limit specified for any one receptacle.
- Do not connect the generator to a household circuit. This could cause the damage to the generator or to electrical appliances in the house.
- Do not modify or use the generator for purposes other than what is intended for.
Also observe the following when using the generator.

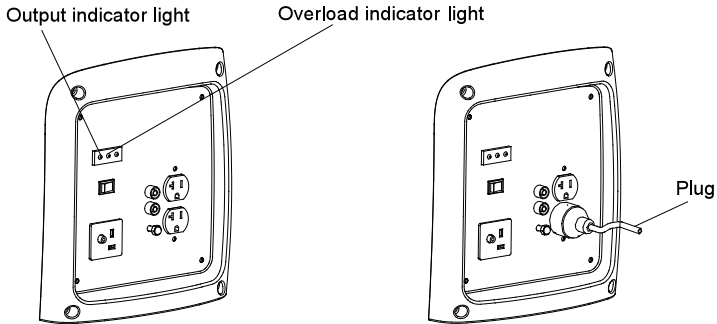
- Do not connect an extension to exhaust pipe.
- When an extension cable is required, make sure to use a rubber sheathed flexible cable (IEC 245 or equivalent).
- Limit length of extension cables; 60m for cables of 1.5mm² and 100m for cables of 2.5mm². Long extension cables will reduce usable power due to resistance in the extension cable.
- Keep the generator away from other electric cables or wires such as commercial power supply lines.

NOTE

- The DC receptacle can be used while the AC power is in use. If you use both at the same time, be sure not to exceed the total power for AC and DC.
- Most appliance motors require more than their rated wattage for start-up.

AC applications

1. Start the engine and make sure only the output indicator light (green) comes on.
2. Confirm that the appliance to be used is switched off, and plug in the appliance.



CAUTION

- Substantial overloading that keeps the overload indicator light (yellow) on may damage the generator. Marginal overloading that temporarily lights the overload indicator light (yellow) may shorten the service life of the generator.
- Make sure that all appliances are in a good working condition before connecting them to the generator. If an appliance begins to operate abnormally, becomes sluggish, or stops suddenly, turn off the generator engine switch immediately. Then disconnect the appliance, and examine it for signs of malfunction.

3. In order to acquire both the best effect and the maximum service life of the generator. Usually, a new generator should run for 20 hours under 50% load, then it may reach the optimal performance.

Output and Overload Indicators, Oil Level Indicator

The output indicator light (green) will remain ON in normal operating conditions. If the generator is overloaded (in excess of 1.8kVA), or if there is a short circuit in the connected appliances, the output indicator light (green) will go OFF, the overload indicator light (yellow) will go ON and current to the connected appliance will be shut off.

Stop the engine if the overload indicator light (yellow) comes ON and investigate the overload source.

Oil Level Indicator

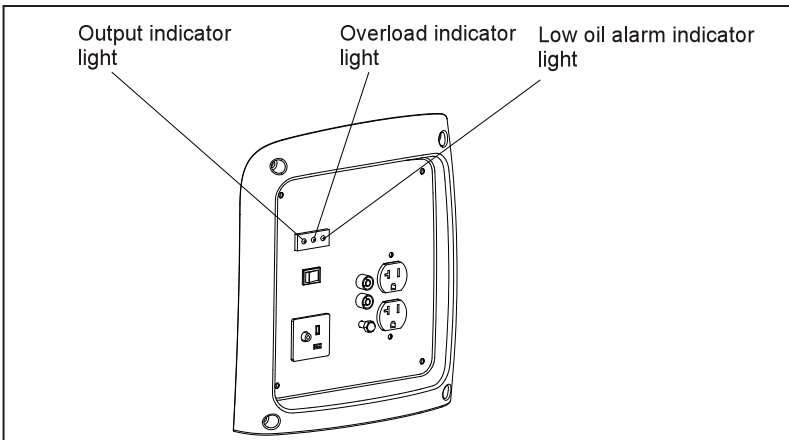
If the oil level indicator light comes on, please check.

! NOTE

- Before connecting an appliance to the generator, check to make sure it is in a good condition and that its electrical rating does not exceed that of the generator. Then connect the power cord of the appliance, and start the engine.

! NOTE

- When an electric motor is started, both the overload indicator light (yellow) and the output indicator light (green) may go on simultaneously. This is normal if the overload indicator light (yellow) goes off after about four (4) seconds. If the overload indicator light (yellow) stays on, consult your generator dealer.



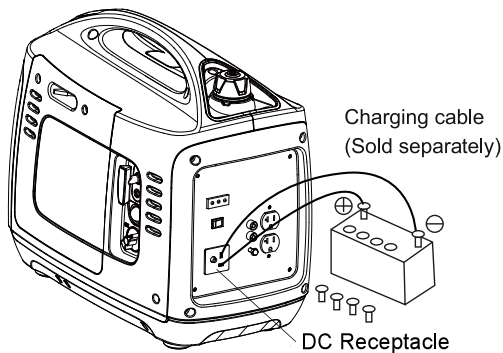
DC application

The DC receptacle may be used for charging 12 volt automotive-type batteries only, the zero load voltage is 15V-30V.

NOTE

- In DC operation, turn the Smart-throttle switch to the OFF position.

1. Connect the charging cables to the DC receptacle of the generator and then to the battery terminals.



WARNING

- To prevent the possibility of creating a spark near the battery, connect charging cable first to the generator, then to the battery. Disconnect cable first at the battery.
- Before connecting charging cables to a battery that is installed in a vehicle, disconnect the vehicles grounded battery cable. Reconnect the vehicle's grounded battery cable after the charging cables are removed. This procedure will prevent the possibility of a short circuit and sparks if you make accidental contact between a battery terminal and the vehicle's frame or body.

CAUTION

- Do not attempt to start an automobile engine with the generator still connected to the battery. The generator may be damaged.
- Connect the positive battery terminal to the positive charging cord. Do not reverse the charging cables, or serious damage to the generator and/or battery may occur.

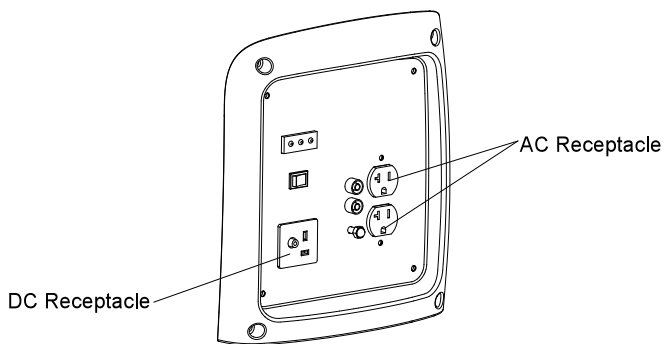
WARNING

- As the battery gives off explosive gases, so keep spark, flames and cigarettes away. Provide adequate ventilation when charging.
- The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.
 - If electrolyte gets on your skin, flush with water.
 - If electrolyte gets in your eyes, flush with water for at least 15 minutes and call a physician.
- Electrolyte is poisonous.
 - If swallowed, drink a large quantity of water or milk and consult a physician.
- KEEP OUT OF REACH OF CHILDREN.

2. Start the engine

NOTE

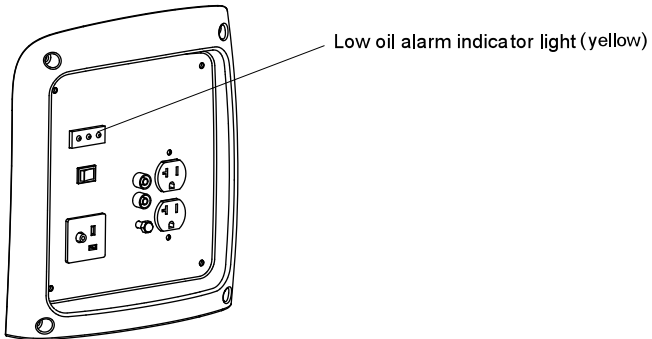
- The DC receptacle may be used while the AC power is in use.
- An overloaded DC circuit will trip the DC circuit protector. If this happens, wait a few minutes before pushing in the circuit protector to resume operation.

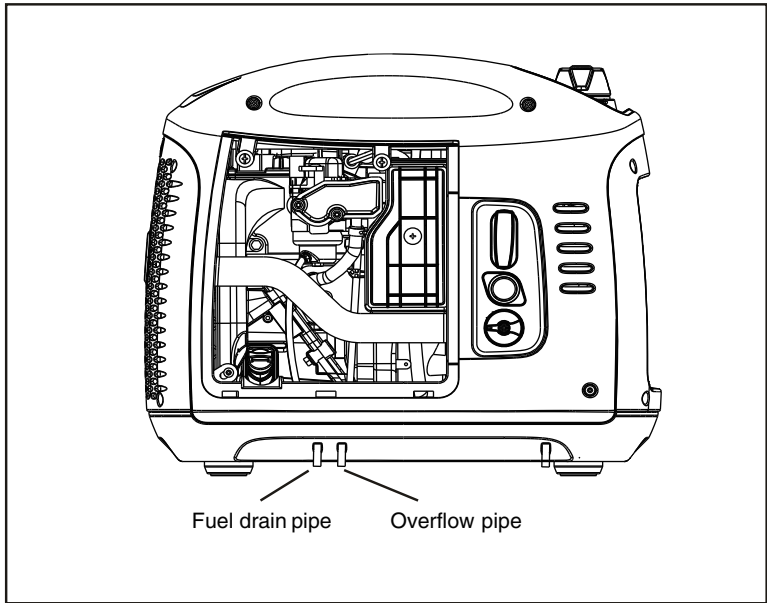


Low oil alarm system

The low oil alarm system is designed to prevent engine damage caused by an insufficient amount of oil in the crankcase. Before the oil level in the crankcase falls below a safe limit, the low oil alarm system will automatically shut down the engine (the engine switch will remain in the ON position).

If the low oil alarm system shuts down the engine, the low oil alarm indicator light (yellow) will be on when you operate the starter and the engine will not start. If this occurs, add engine oil.





Fuel drain pipe: To drain the remaining gasoline in the carburetor before long time storing the machine or when the gasoline is dirty.

Overflow pipe: In normal condition, it will keep ventilating to make balance between the carburetor and atmospheric pressure. When a failure happens on the carburetor, it will prevent the gasoline flowing into the cylinder, air filter or casing.

⚠ NOTE

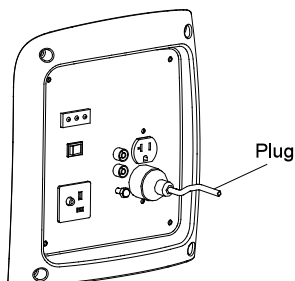
- Do not fold the overflow pipe and cause jam.
- It is gasoline that flows out of these two pipes. Please collect it into the environmental friendly container.

8. STOPPING THE ENGINE

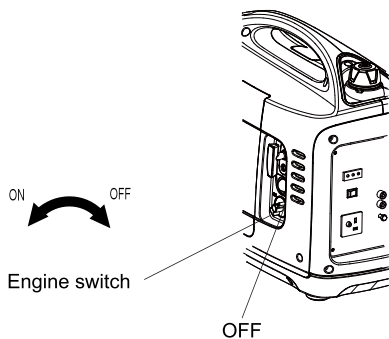
To stop the engine in an emergency, turn the engine switch to the OFF position.

IN NORMAL USE:

1. Switch off the connected equipment and pull the inserted plug out.



2. Turn the engine switch to the OFF position



CAUTION

- Make sure that the engine switch is at the position OFF when stopping, moving or storing the generator.

9.DOUBLE GENERATORS PARALLEL

WARNING:

- The special parallel cable for our MG-4508 is only applicable to the parallel operation of two MG-4508 generators. It cannot be used for paralleling three or more than three generators.

Make sure that only parallel output cable is used for parallel running. Other cables are forbidden.

- While connecting the generator and electrical appliance with the parallel output cable, do carefully and safely insert the plug into the receptacle.
- While operating parallel
 - (1)When the generator voltage is 100-120V: only output through the receptacle on the parallel cable wire, don't use the receptacle on the control panel of the generator.
 - (2)When the generator voltage is 220-240V: use the receptacle on the control panel of the generator.

Make sure that the plugs on the parallel cable wire are inserted to the related proper receptacles.

Make sure the output is directly from the receptacles on the parallel output cable while parallel running, instead of the receptacles on the generator control panels.

- Don't disconnect the PARALLEL I/O special connection cable and parallel output cable during the parallel running, connect the PARALLEL I/O special connection cable before start the engine, and then connect the parallel output cable. You can disconnect the PARALLEL I/O special connection cable and parallel output cable only after stopping the generator.

If the parallel output cable is still connected, cut off the current output after either generator was shut off.

- Don't use the parallel output cable and parallel connection cable while operating two generator separately.
- Don't connect the parallel cable wire while the two generator running singly.
- Read SD2000i operation manual before using the generator.

Confirm the bellows before starting the both generators.

(1). Make sure two PARALLEL I/O terminals on either control panel have been connected reliably with special communication cable.

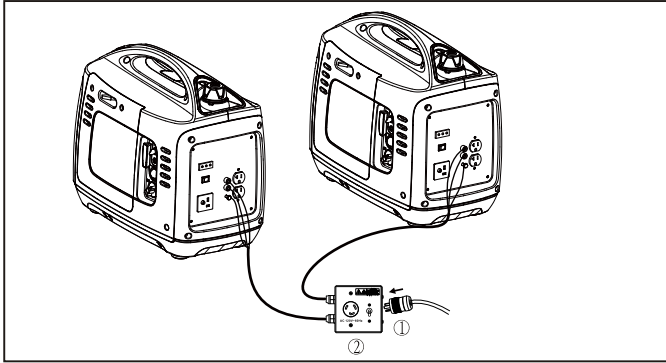
(2). The parallel cable has been connected to the PARALLEL OUTPUT terminals on each generator control panels.

If either of above mentioned two connections hasn't been done properly, either generator won't output power while the two generators are running separately.

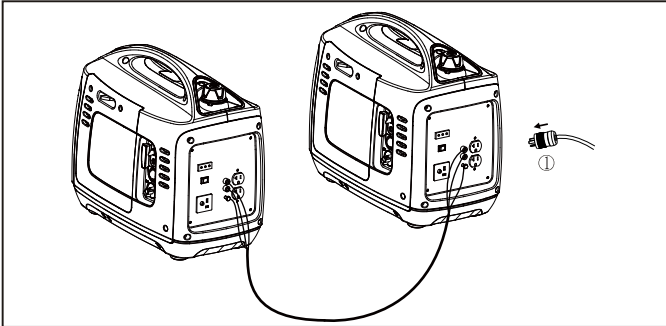
6. Securely plug the electrical appliance plug ① into parallel cable receptacle②, switch on the electrical appliance power supply.

Confirm the followings before starting both of the two generators.

(1)When the generator voltage is 100-120V: only output through the receptacle on the parallel cable wire, don't use the receptacle on the control panel of the generator.



(2)When the generator voltage is 220-240V: Safely plug the electric appliance ① into the socket of the control panel of one of the generators. Turn on the electric appliance.



⚠ NOTE

- The required output of the electrical appliance cannot exceed the rated output of parallel generators.
- Please mention that the parallel cable is not included in the product, but may be purchased separately.

Shut off the generators:

1. Turn off the power of electrical appliance, pull out the receptacle plug.
2. Turn off the two generators.
3. First disconnect the cable on the PARALLEL OUTPUT terminals of the two generators. And then remove the PARALLEL I/O parallel connection cable.

10. MAINTENANCE

The purpose of the maintenance and adjustment schedule is to keep the generator in the best operating condition.

WARNING

- Shut off the engine before performing any maintenance. If the engine must be run, make sure the area is well ventilated. The exhaust contains poisonous carbon monoxide gas.

CAUTION

- Use genuine parts provided by us or their equivalences. The use of replacement parts which are not of equivalent quality may damage the generator.

Inspect or service as scheduled in the table below.

Maintenance Schedule

REGULAR SERVICE PERIOD(3)		EACH USE	FIRST MONTH OR 20HRS	EVERY 3 MONTHS OR 50HRS	EVERY 6 MONTHS OR 100 HRS	EVERY YEAR OR 200 HRS
ITEM Perform at every indicated month or operating hour interval, whichever comes first.						
Engine oil	Check level	○				
	Change		○		○	
Air cleaner	Check	○				
	Clean			○(1)		
Spark plug	Check-adjust				○	
	Replace					○
Valve clearance	Check-adjust					○(2)
Fuel tank and filter	Clean				○(2)	
Fuel line	Check	Every 2 years (Replace if necessary) (2)				

Please change the oil after the first 20 hours of use.

NOTE: (1) Service more frequently when used in dusty areas.

(2) These items should be serviced by an authorized service.

(3) For commercial use, log hours of operation to determine proper maintenance intervals.

1. CHANGING OIL

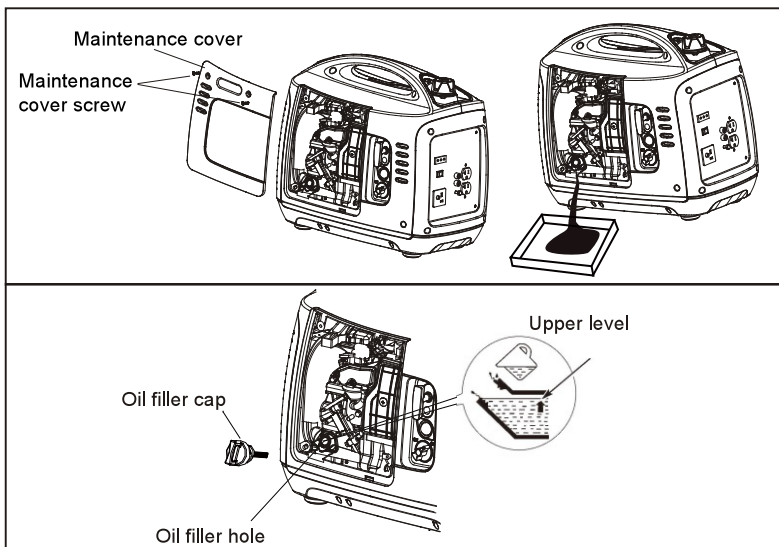
Drain the oil while the engine is still warm to ensure rapid and complete draining.

CAUTION

- Make sure to turn the engine switch and the fuel cap vent lever OFF before draining.

1. Loosen the cover screw and remove the left side maintenance cover.
2. Remove the oil filler cap.
3. Drain dirty oil into a container thoroughly.
4. Refill with the recommended oil, and check the oil level.
5. Reinstall the left side maintenance cover and tighten the cover screw securely.

Engine oil capacity: 0,35L



Wash your hands with soap and water after handling used oil.

NOTE

- Please dispose of used motor oil in an eco-friendly way. We suggest you store it in a sealed container and send it to the local service station for reclamation. Do not throw it in the trash or pour it on the ground.

2. AIR CLEANER SERVICE

A dirty air cleaner will restrict air flow to the carburetor. To prevent carburetor malfunction, service the air cleaner regularly. Service more frequently when operating the generator in extremely dirty areas.

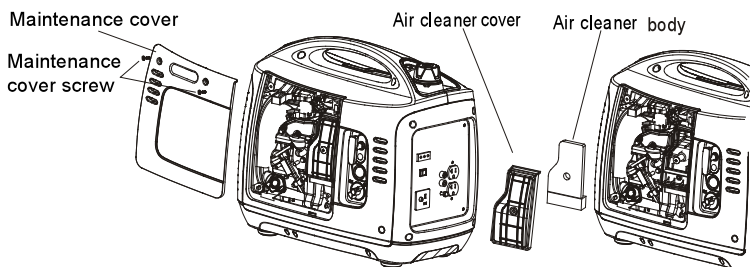
WARNING

- Do not use gasoline or low flash point solvents for cleaning. They are flammable and explosive under certain conditions.

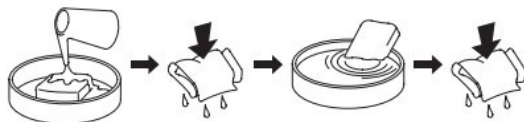
CAUTION

- Never run the generator without air cleaner, otherwise engine wear may be accelerated.

- Loosen the cover screw and remove the left side maintenance cover.
- Remove the air cleaner cover.
- Wash the element in a non-flammable or high flash point solvent and dry it thoroughly.
- Soak the element in clean engine oil and squeeze out the excess oil.
- Reinstall the main and outer air cleaner elements and the air cleaner cover. Tighten the cover screw securely.
- Reinstall the maintenance cover and tighten the cover screw securely.



cleaning Wring out and dry Dipping into oil Wring out oil

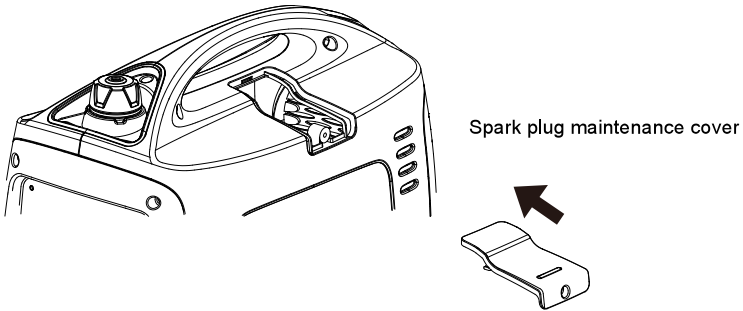


3. SPARK PLUG SERVICE

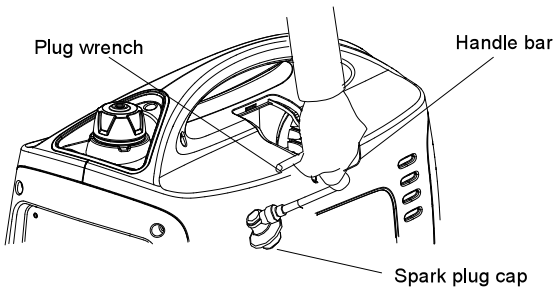
RECOMMENDED SPARK PLUG: BOSCH R6 SUF

To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

1. Remove the spark plug maintenance cover



2. Remove the spark plug cap.
3. Clean any dirt from around the spark plug base.
4. Use the wrench to remove the spark plug.

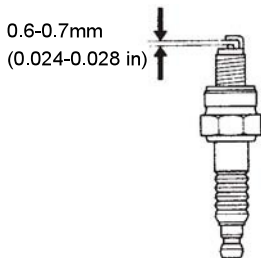


5. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped.

Clean the spark plug with a wire brush if it is to be reused.

6. Measure the plug gap with a feeler gauge.

The gap should be 0.6~0.7mm (0.024-0.028in). Correct as necessary by carefully bending the side electrode.



7. Install the spark plug carefully, by hand, to avoid cross-threading.

8. After a new spark plug has been seated by hand, it should be tightened 1/2 turn with a wrench to compress its washer.

If a used plug is reinstalled, it will only require 1/8 to 1/4 turn after being seated.

9. Reinstall the spark plug cap on the spark plug securely.

10. Reinstall the spark plug maintenance cover.

CAUTION

- The spark plug must be securely tightened. An improperly tightened plug can become very hot and possibly damage the generator.
- Never use a spark plug with an improper heat range.
- Never use a spark plug without damping resistance, or it will cause no AC output.

4.SPARK ARRESTER MAINTENANCE(Equipped type only)

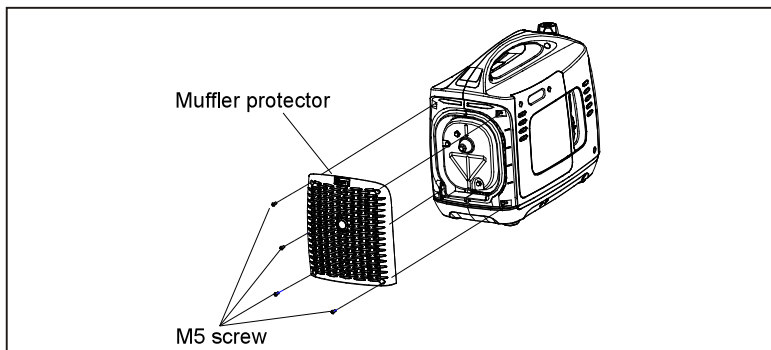
⚠ WARNING

- If the generator has just been run, the muffler will be very hot. Leave it to cool before proceeding.

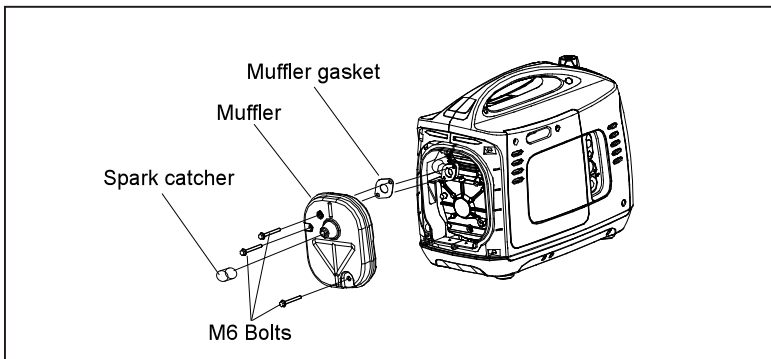
⚠ CAUTION

- The spark arrester must be serviced every 100 hours to maintain its efficiency.

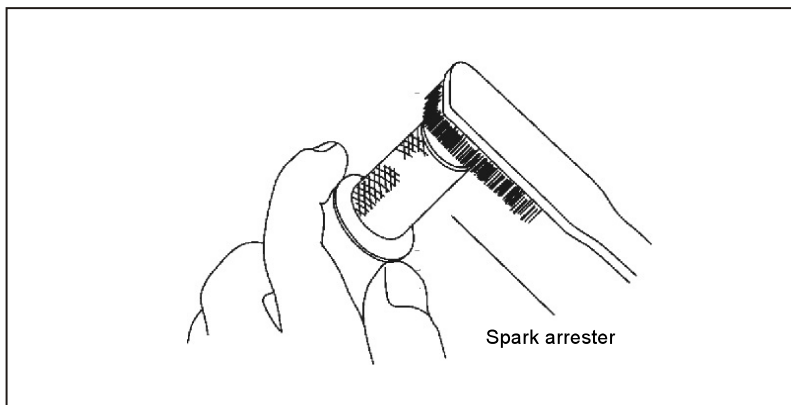
1.Remove the four M5 screws, and remove the muffler protector.



2.Remove the there M6 bolts, and remove the muffler, the spark arrester and the muffler gasket



3. Use a brush to remove carbon deposits from the spark arrester screen.



4. Check the muffler gasket; replace if damaged. Reinstall the muffler gasket, the spark arrester, the muffler and the muffler protector in the reverse order of removal.

11. TRANSPORTING/STORAGE

To prevent fuel spillage when transporting or during temporary storage, the generator should be secured upright in its normal operating position, with the engine switch OFF.

Allow the engine to cool well before turning the fuel cap vent lever to the OFF position.

WARNING

When transporting the generator:

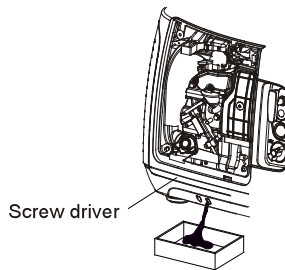
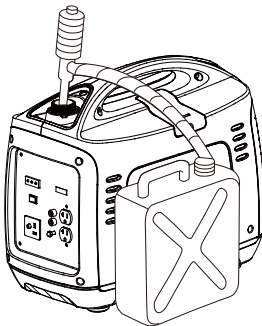
- Do not overfill the tank (there should be no fuel in the filler neck).
- Do not operate the generator while it is on a vehicle. Take the generator off the vehicle and use it in a well ventilated place.
- Avoid a place exposed to direct sunlight when putting the generator on a vehicle. If the generator is left in an enclosed vehicle for many hours, high temperature inside the vehicle could cause fuel to vaporize resulting in a possible explosion.
- Do not drive on a rough road for long hours with the generator on board. If you must transport the generator on board, drain the fuel from the generator beforehand.

Before storing the unit for an extended period:

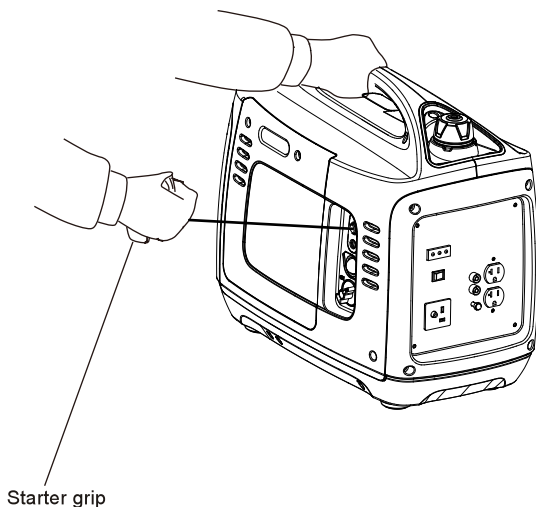
1. Be sure the storage area is free of excessive humidity and dust.
2. Drain the fuel.

WARNING

- Gasoline is extremely flammable and explosive under certain conditions.
- Do not smoke or allow flames or sparks in the area.



- a. Drain all gasoline from the fuel tank into an approved gasoline container.
 - b. Turn the engine switch ON, and loosen the carburetor drain screw and drain the gasoline from the carburetor into a suitable container.
 - c. With the drain screw loosened remove the spark plug cap, and pull the starter grip 3 to 4 times to drain the gasoline from the fuel pump.
 - d. Turn the engine switch to the OFF position, and tighten the drain screw securely.
 - e. Reinstall the spark plug cap on the spark plug securely.
3. Change the engine oil .
 4. Remove the spark plug and pour about a tablespoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.
 5. Slowly pull the starter grip until resistance is felt. At this point, the piston is coming up on its compression stroke and both the intake and exhaust valves are closed. Storing the engine in this position will help to protect it from internal corrosion.

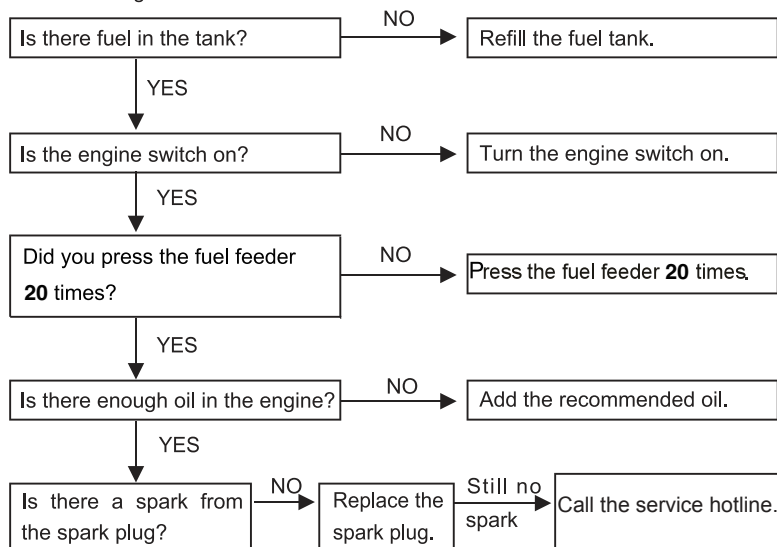


▲ NOTE

Since produces with filled in gasoline and oil should not be forwarded, please ask the consumer to empty the liquids before returning it for service/ exchange/ credit. Such a phrase should also be in the warranty card/ warranty conditions

12. TROUBLESHOOTING

When the engine will not start:



WARNING

- Make sure there is no spilled fuel around the spark plug. Spilled fuel may ignite.

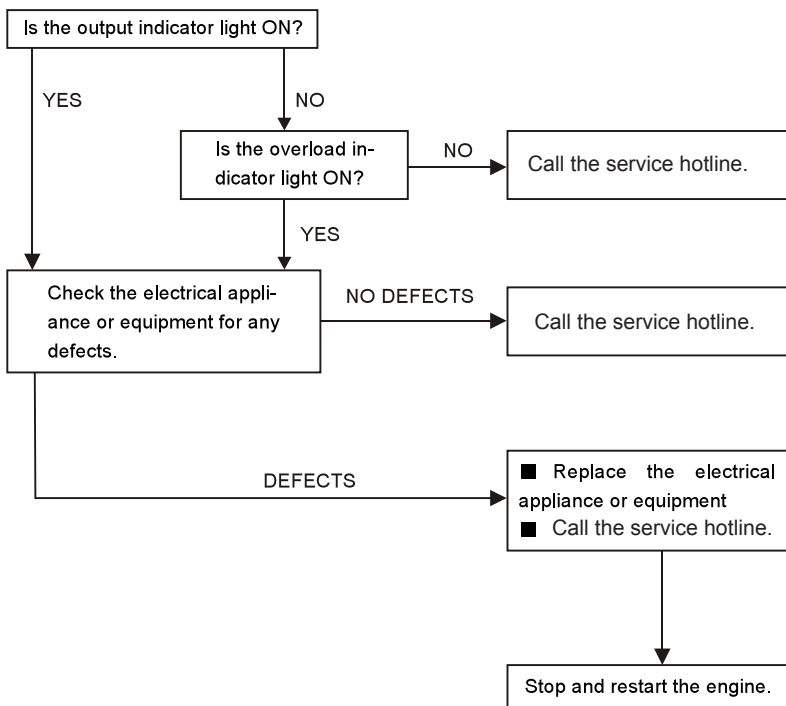
Is the fuel reaching the carburetor.

If the engine still does not start, call the service hotline.

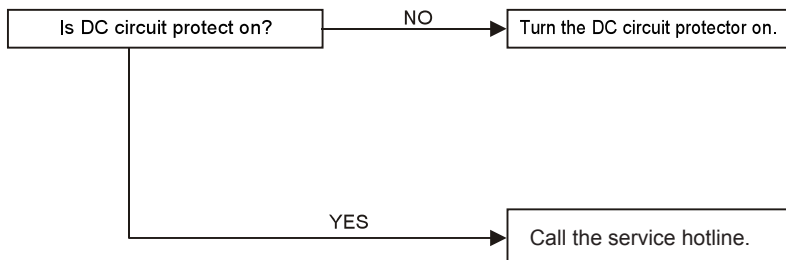
To check:

- 1) Remove the spark plug cap and clean any dirt from around the spark plug.
- 2) Remove the spark plug and install the spark plug in the plug cap.
- 3) Set the plug side electrode on the cylinder head to ground.
- 4) Pull the recoil starter, sparks should jump across the gap.

Appliance does not operate:



No electricity at the DC receptacle:



NOTE

If you have a problem which cannot be solved by following the hints in this list, please contact our authorized service.

13. SPECIFICATIONS

SPECIFICATIONS

Model	MG-4508			
Rated frequency (Hz)	50/60	60	50	50
Rated voltage (V)	100	120	230	240
Rated current (A)	16	13.3	7	6.7
Rated rotation speed [r/min]	4600			
Rated output (kVA)	1.6			
Max. output (kVA)	2.0			

DC output

DC voltage	12V-8.3A
Electric circuit breaker	Available
Phase number	Single phase

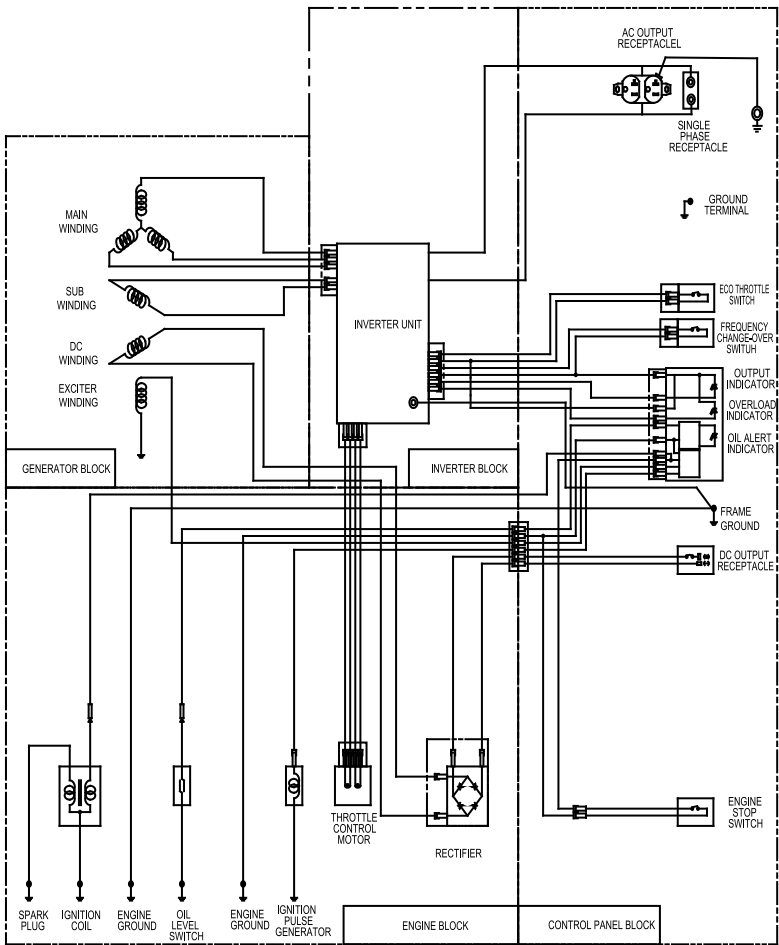
Engine

Model Type	JF158FGH
Type	Single cylinder, air-cooled, 4 stroke, gasoline engine
Displacement (Bore × Stroke)	105.6 cc (58 × 40mm)
Compression ratio	8.5:1
Max. power [kW/(r/min)]	2.2/4800
Rated rotation speed [r/min]	4800
Ignition system	T. C. I
Spark plug	NGK
Starting system	Recoil starter
Fuel	Automotive unleaded gasoline
Fuel consumption (g /kW·h)	420
Lube oil	SAE 10W-30(CC level above)

Fuel tank capacity (L)	3.7
Continuous running time (hr) (at rated output)	3.8
Guaranteed sound power level(LWA)	91
Overall dimension (L×W×H) [mm(in)]	532×300×461(20.94×11.81×18.15)
Dry weight [kg(lbs)]	23 (50.7)

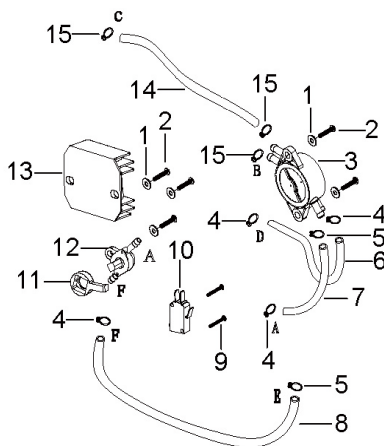
*: The declared values shall consider uncertainties due to production variation and measurement procedures.

14. ELECTRICAL WIRING DIAGRAM

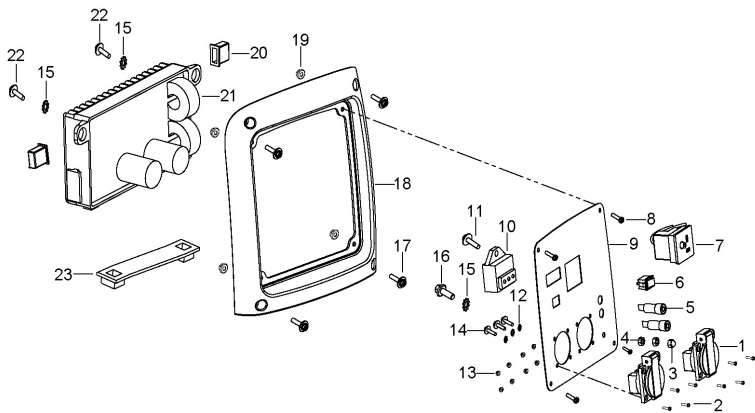


PARTS LIST

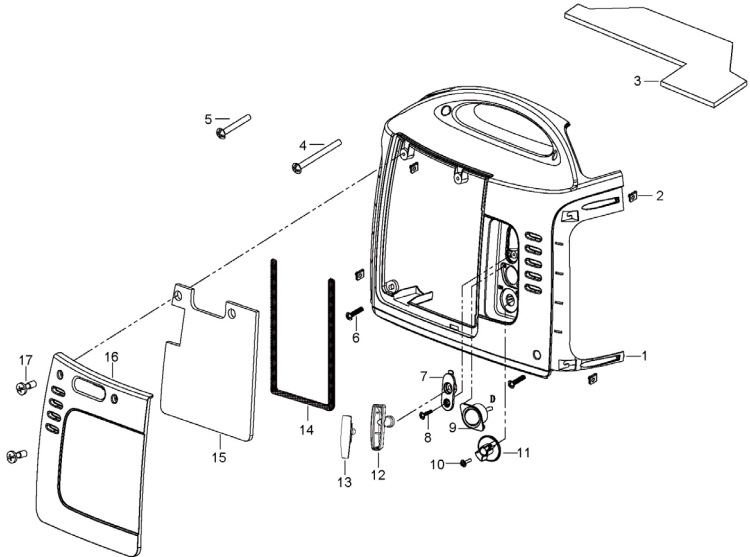
No	Part Number	Part Name	Qty
1	B07030004007	Plain Washer $\Phi 4.3 \times \Phi 10 \times 0.8$	4
2	B05050401617	Cross Recessed Tapping Screw With Oval Head ST3.9X16C	5
3	21060421202000	Oil Pump	1
4	31190421202000	Spring Clip Air Tube Clamp $\Phi 8$	4
5	31200421202000	Spring Clip Air Tube Clamp $\Phi 9$	2
6	31020422002000	Tube 1, Fuel $\Phi 4.5 \times \Phi 8.5 \times 180$	1
7	31080422002000	Tube 2, Fuel $\Phi 4.5 \times \Phi 8.5 \times 175$	1
8	31060422002000	Tube 3, Fuel $\Phi 4.5 \times \Phi 8.5 \times 180$	1
9	B05050301617	Cross Recessed Tapping Screw With Oval Head ST2.9X16C	2
10	35120132002000	Switch Assy., Engine Stop	1
11	30200421202000	Switch Knob	1
12	20110421200000	Petcock Assy	1
13	23210422000000	Voltage Stabilizer	1
14	31040422002000	Suction Pipe	1
15	31210421202000	Spring Clip Air Tube Clamp $\Phi 10.5$	3



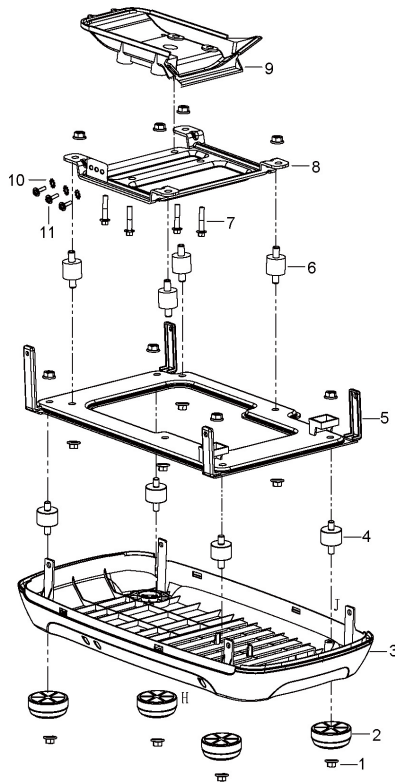
No	Part Number	Part Name	Qty
1	22120410900000	AC Socket	1
2	B02220401227	Cross Recessed Countersunk Head Screw M4x12	8
3	B04190600003	Acron Nut	1
4	B04010612568	Hexagon Nut M6	2
5	22180421202000	Socket Composite	2
6	22030410900000	Switch Auto-Throttle	1
7	20170422000000	Receptacle, D.C.(12V 8.3A)	1
8	B02210501267	Pan Head Screws With Cross Recessed	4
9	22010422002000	Panel	1
10	23280422000000	Spark Unit	1
11	B13080501267	Screw,Washer Assemblies M5X12	1
12	B07180005056	Lock Washers External Teeth $\Phi 9.64 \times \Phi 5.3 \times 0.6$	3
13	B04280400027	Hexagon Flange Nut M4	8
14	B13080500867	Screw,Washer Assemblies M5X8	4
15	B07180006056	Lock Washers External Teeth $\Phi 10.57 \times \Phi 6.4 \times 0.6$	3
16	B01310601667	Hexagon Flange Bolt M6X16	1
17	B13080502067	Screw M5X20	4
18	30020422002000	Front Cover	1
19	B04280512567	Hexagon Flange Nut M5	4
20	30240422002000	Shockproof Block 1,Inverter	2
21	23120422002000	Inverter Assembly 230V 50HZ	1
22	B13080600867	Screw,Washer Assemblies M6X8	2
23	30250422002000	Shockproof Block 1,Inverter	1



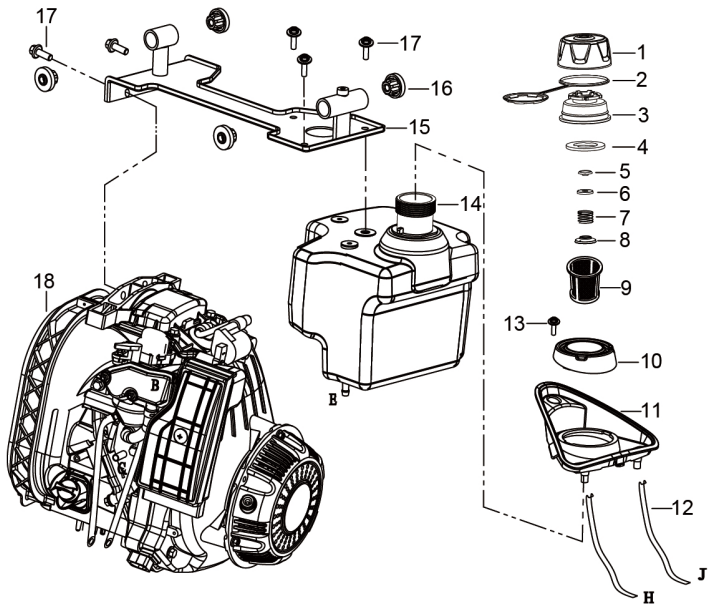
No	Part Number	Part Name	Qty
1	30040422002000	Left Casing	1
2	30220421202000	Spring Nut M5	4
3	30190422002000	Left Foam	1
4	B02210607567	Pan Head Screw With Cross Recess M6X75	1
5	B02210605067	Pan Head Screw With Cross Recess M6X50	1
6	B02210601667	Pan Head Screw With Cross Recess M6X16	2
7	20010422002000	Guipe, Starter Rope	1
8	B05050501617	Cross Recessed Tapping Screw With Oval Head ST5.0X16C	1
9	21070421202000	Oil Feeder	1
10	30240421202000	Knob Retaining Screw M4X11	1
11	30190421202000	Knob, Engine Switch	1
12	30160421202000	Pull Starter Handle	1
13	30170421202000	Pull Starter Handle Cover	1
14	30170422002000	Oil Fill Access Door Seal	1
15	30210422002000	Oil Fill Access Cover Foam	1
16	30100422002000	Oil Fill Access Cover	1
17	30230421202000	Mcross Recessed Locking Screw With Oval Head	2



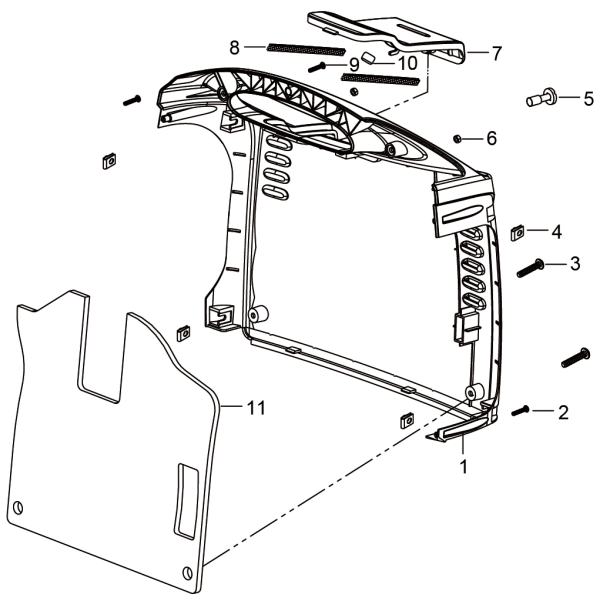
No	Part Number	Part Name	Qty
1	B04280812567	Hexagon Flange Nut M8	16
2	30390421202000	Shockproof Foot,Bottom	4
3	30030422002000	Aubber	1
4	30270422002000	Rubber Pad 2	4
5	26030422002081	Fixed Plate,Bottom II	1
6	30260422002000	Rubber Pad 3	4
7	B01310802567	Hexagon Flange Bolt M8X25	4
8	26050422002020	Fixed Plate,Bottom III	1
9	30150422002000	Engine Base	1
10	B07180005056	Lock Washers External Teeth $\Phi 9.64 \times \Phi 5.3 \times 0.6$	3
11	B13080501267	Screw,Washer Assembles M5X12	3



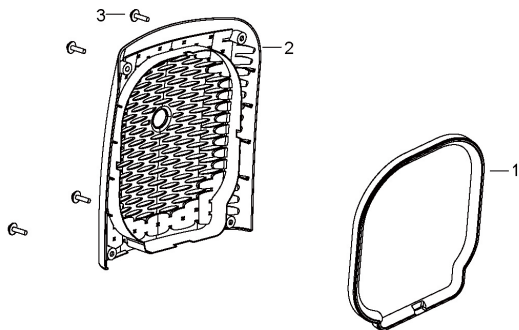
No	Part Number	Part Name	Qty
1	33120422003000	Cap Assy., Fuel Tank	1
2	31100421202000	Adapter Ring	1
3	33130422003000	Inner cap	1
4	31110421202000	Fuel Tank Cap Washer	1
5	37080115001000	Washer	1
6	37090115001000	Vavle Seat	1
7	37100115001000	Wire Spring	1
8	37110115001000	Vavle Disc	1
9	21030421202000	Filter	1
10	31010421202000	Seal, Fuel Filler Neck	1
11	30160422002000	Diversion Cover	1
12	31090422002000	Drain Line $\Phi 5 \times \Phi 7.5 \times 470$	2
13	B13080600867	Screw,Washer Assembles M6X8	1
14	21010422002000	Fuel Tank	1
15	26010422002080	Fixed Plate,Top	1
16	30340421202000	Shockproof Block,Fixed Plate	4
17	B13080601267	Screw,Washer Assembles M6X12	5
18	101140030001000	Engine ASSY	1



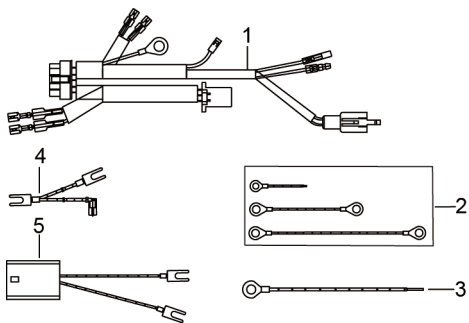
No	Part Number	Part Name	Qty
1	30060422002000	Right Casing	1
2	B05004020017	Pan Head Tapping Screws With Cross Recessed ST4.0X20	3
3	B02210601667	Pan Head Screws With Cross Recessed M6X16	2
4	30220421202000	Spring Nut M5	4
5	30230421202000	Cross Recessed Locking Screw With Oval Head	1
6	B04010612567	Hexagon Nut M6	2
7	30120422002000	Spark Plug Disassembly Cover	1
8	30180422002000	Spark Plug Disassembly Cover Foam	2
9	B05004020017	Pan Head Tapping Screws With Cross Recessed	1
10	30080422002000	Handle Cover	1
11	30200422002000	Right Foam	1



No	Part Number	Part Name	Qty
1	30230422002000	Rubber Ring,Rear Cover	1
2	30010422002000	Rear Cover	1
3	B13080502067	Screw,Washer Assembles M5X20	4

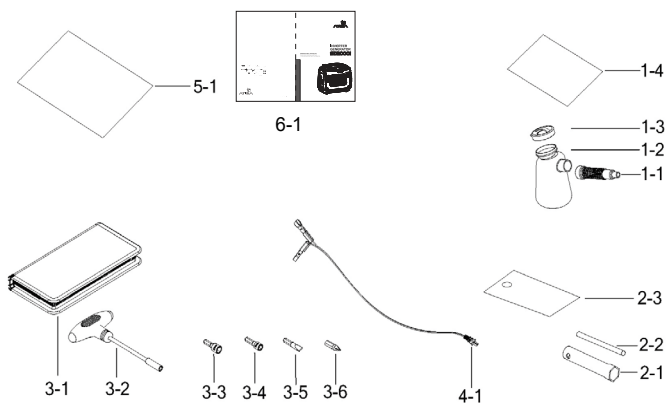


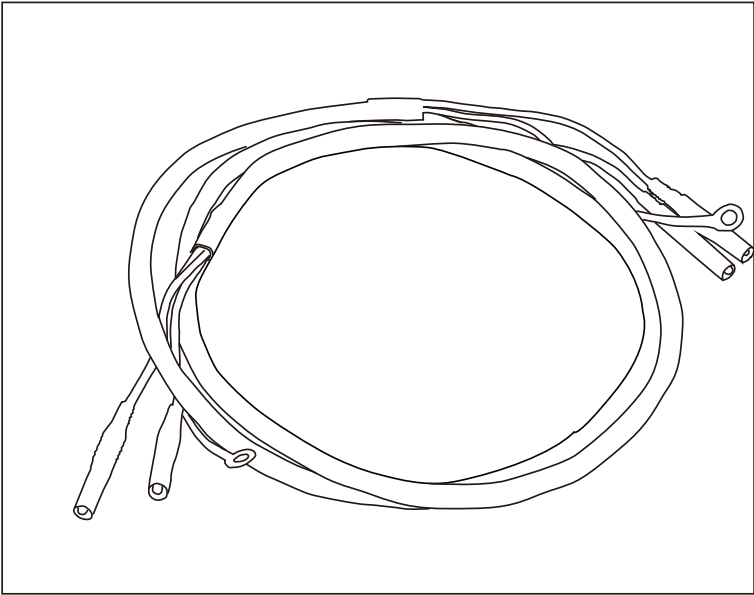
No	Part Number	Part Name	Qty
1	22040421202000	Wire Harness Assy., Control	1
2	22120421202000	Ground Wire 1(EU)	1
3	22040422002000	Ground Wire 2(EU)	1
4	22060422002000	Parallel Energizing Lines (EU)	2
5	22080421202000	AC Connection Cable (EU)	1



16. Supplied Accessories



No	Part Number	Part Name	Qty
1-1	30410422001000	Oiler Nozzle	1
1-2	30420422001000	Oiler	1
1-3	30430422001000	Oiler Cap	1
1-4	30440422001000	PVC Bag 1 190X190X0.03mm	1
2-1	28010421200000	Spark Plug Socket	1
2-2	38060411500000	Spark Plug Socket Wrench	1
2-3	38070411500000	PVC Bag 2 70X210mm	1
3-1	20250422001000	Tooling Bag	1
3-2	20280422001000	Sleeve Wrench	1
3-3	30470422001000	Sleeve,10mm	1
3-4	30490422001000	Sleeve,8mm	1
3-5	38120421202000	Straight Screwdriver	1
3-6	37060426003000	Cross Screwdriver	1
4-1	20210042100000	Assy., Charge(1.7M)	1
5-1	30921011201000	PVC Bag 3 170X250mm	1
6-1		Operation Manual	1





⚠ NOTE

- This accessory is used for parallel connection of two generators, so that we can get power superposition.
- If you need, buy it in addition. and please choose the correct model refer to the following list.

Accessory	Application	Requirement	PICTURE
Part Number	Generators	Voltage (V)	
AT-PKIT1000	SD1000i	100~240	
	AY2000i SD2000i	220~240	
AT-PKIT2000S	AY2000i SD2000i	100~120	

THIS PAGE INTENTIONALLY LEFT BLANK

THIS PAGE INTENTIONALLY LEFT BLANK

DISTRIBUTED BY:
TechBrands by Electus Distribution Pty. Ltd.
320 Victoria Rd, Rydalmere
NSW 2116 Australia
Ph: 1300 738 555
Int'l: +61 2 8832 3200
Fax: 1300 738 500
www.techbrands.com
Made in China