ATIMA

Create Difference

INVERTER GENERATOR AY2200i

OPERATION MANUAL

PLEASE READ THIS MANUAL CAREFULLY.
IT CONTAINS IMPORTANT SAFETY INFORMATION.

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

⚠ WARNING

Exhaust contains poisonous carbon monoxide gas that can build up to dangerous levels in closed areas.Breathing carbon monoxide can cause unconsciousness or death.
Never run the generator in a closed,or even partly closed area where people may be present.

Keep this owner's manual handy so that you can refer to it at any time. This owner's manual is considered a permanent part of the generator and should remain with the generator if resold.

The information and specifications included in this publication were in effect at the time of approval for printing. Shanghai Cosma Mechanical&Electrical Technology Co.,Ltd. reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation Whatever.

Notes

Record the model and serial numbers as well as date and place of purchase for future reference. Have this information available when ordering parts and when making technical or warranty inquiries.

Customer Service
Model Number
AY2200i
Serial Number
Date of Purchase
Purchase Location

Table of contents

This manual contains important information that you need to know and understand in order to assure YOUR SAFETY and PROPER OPERATION OF EQUIPMENT. The following symbols help you recognize this information. Please read the manual and pay attention to these sections.

Instructions!

Read and understand all of these safety instructions. Be sure to retain them for future use.

WARNING!

WARNINGS INDICATE A CERTAINTY OR STRONG POSSIBILITY OF PERSONAL INJURY OR DEATH IF INSTRUCTIONS ARE NOT FOLLOWED.

CAUTION:

CAUTIONS INDICATE A POSSIBILITY OF EQUIPMENT DAMAGE IF INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.

Note:

Notes give helpful information.

WARNING!

IMPROPER OPERATION OR MAINTENANCE OF THIS PRODUCT COULD RESULT IN SERIOUS INJURY AND PROPERTY DAMAGE. READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF PERSONAL INJURY.

Save These Important Safety Instructions!

Read and understand all of these safety instructions. Be sure to retain them for future use.

General Safety Precautions

WARNING!

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SEVERE INJURY OR DEATH.

CAUTION:

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN ALSO RESULT IN DAMAGE TO THE EQUIPMENT AND/OR THE ITEM YOU ARE WORKING ON OR WITH.

Carbon Monoxide

- Carbon Monoxide is an odorless and colorless gas. Breathing exhaust that contains this poisonous gas can cause unconsciousness and may lead to death.
- The engine exhaust from this product contains chemicals recognized by the state of California to cause cancer, birth defects, or other reproductive harm.
- When this tool is running, ensure that the area is well ventilated. Never run the engine in an enclosed area. Run the engine in an open area or with an exhaust evacuation system in an enclosed area.
- NEVER use a generator inside homes, garages, crawlspaces, or other partially enclosed areas. Deadly levels of carbon monoxide can build up in these areas. Using a fan or opening windows and doors does NOT supply enough fresh air.
- ONLY use a generator outdoors and far away from open windows, doors, and vents. These openings can pull in generator exhaust.
- Even when you use a generator correctly, CO may leak into the home. ALWAYS use a battery-powered or battery-backup CO alarm in the home.
- If you start to feel sick, dizzy, or weak after the generator has been running, move to fresh air RIGHT AWAY. See a doctor. You could have carbon monoxide poisoning.

WARNING!

THE EXHAUST CONTAINS POISONOUS CARBON MONOXIDE GAS THAT CAN CAUSE LOSS OF CONSCIOUSNESS AND MAY LEAD TO DEATH.

Gasoline and Oil

This product requires oil and fuel. THE ENGINE WILL NOT START WITHOUT OIL. Work in well ventilated area. Keep cigarettes, flames or sparks away from the work area or where gasoline is stored.

General Safety Precautions

WARNING!

GASOLINE IS EXTREMELY FLAMMABLE AND IS EXPLOSIVE UNDER CERTAIN CONDITIONS. KEEP OUT OF REACH OF CHILDREN.

- Gasoline fuel and fumes are flammable and potentially explosive. Use proper fuel storage and handling procedures. Always have multiple ABC class fire extinguishers nearby.
- Keep the generator and surrounding area clean at all times. Keep the generator at least 5 feet away from buildings and other equipment during operation.
- Fuel or oil spills must be cleaned up immediately. Dispose of fluids and cleaning materials as per any local, state, or federal codes and regulations. Store oily rags in a covered metal container.
- Never store fuel or other flammable materials near the generator.
- Do not smoke, or allow sparks, flames or other sources of ignition around the engine and fuel tank. Fuel vapors are explosive.
- Keep grounded conductive objects, such as tools, away from exposed, live electrical parts and connections to avoid sparking or arcing. These events could ignite fumes or vapors.
- Do not refill the fuel tank while the engine is running or while the engine is still hot. Do not operate the generator with known leaks in the fuel system.
- Excessive buildup of unburned fuel gases in the exhaust system can create a potentially explosive condition. This buildup can occur after repeated failed start attempts, valve testing, or hot engine shutdown. If this occurs, open exhaust system drain plugs, if equipped, and allow the gases to dissipate before attempting to restart the generator.
- Use only engine manufacturer recommended fuel and oil.

Hot Components

WARNING!

HOT EXHAUST CAN BURN YOU. ENGINE AND EXHAUST SYSTEM PARTS BECOME VERY HOT AND REMAIN HOT FOR SOME TIME AFTER THE ENGINE IS RUN. WEAR INSULATED GLOVES OR WAIT UNTIL THE ENGINE AND EXHAUST SYSTEM HAVE COOLED BEFORE HANDLING THESE PARTS.

Work Area

- Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Generators create sparks which may ignite the dust or fumes.
- Keep bystanders, children, and visitors away while operating a generator. Provide barriers or shields as needed.

Chemicals

- Avoid contact with hot fuel, oil, exhaust fumes, and hot solid surfaces.
- Avoid body contact with fuels, oils, and lubricants used in the generator. If swallowed, seek medical treatment immediately. Do not induce vomiting if fuel is swallowed. For skin contact, immediately wash with soap and water. For eye contact, immediately flush eyes with clean water and seek medical attention.

Noise

Prolonged exposure to noise levels above 85dBA is hazardous to hearing.
Always wear ANSI approved ear protection when operating or working around the Generator when it is running.

Extension Cords

If an extension cord (not included) is used, make sure to use only UL approved cords having the correct gauge and length according to the following table:

Nameplate Amps (@full load)	Cord Lengths 0'-50'	50'-100'	100'-150'	150'-200'
0-5	16	16	12	12
5.1-8	16	14	10	-
8.1-12	14	12	-	-
12.1-15	12	10	-	-
15-20	10	10	-	-

Note:

Prior to powering tools and equipment, make sure the generator's rated voltage, wattage, and amperage capacity is adequate to supply all electrical loads that the unit will power. If powering exceeds the generator's capacity, it may be necessary to group one or more of the tools and/or equipment for connection to a separate generator.

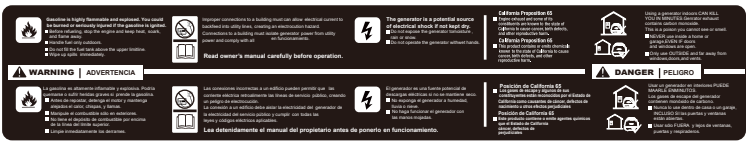
WARNING!

This machine cannot be connected to a building's electrical system as a standby backup power. Improper connections can allow electrical current from the generator to back feed into the utility lines. Such back feed may electrocute utility company workers or others who contact 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 systems.

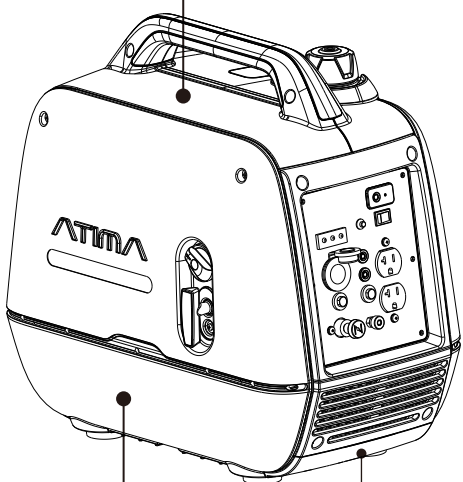
Safety Label Locations

These labels warn you of potential hazards that can cause serious injury. Read them carefully.

If a label comes off or becomes hard to read, call the service hotline.



Warning label CALIFORNIA TYPE label Carbon monoxide warning label



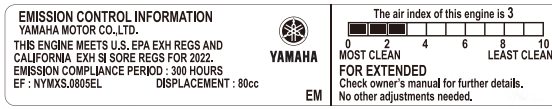
AC Output		Phase	Single
Rated Voltage	120V	Engine speed	4650 rpm
Current	15A	Insulation Class	B
Rated Power	1800Watts	DC output	12V 8.3A
Rated Frequency	60Hz	Fuel	Gasoline

AY2200i Shanghai Cosma Mechanical&Electrical Technology Co.,Ltd.
MADE IN CHINA

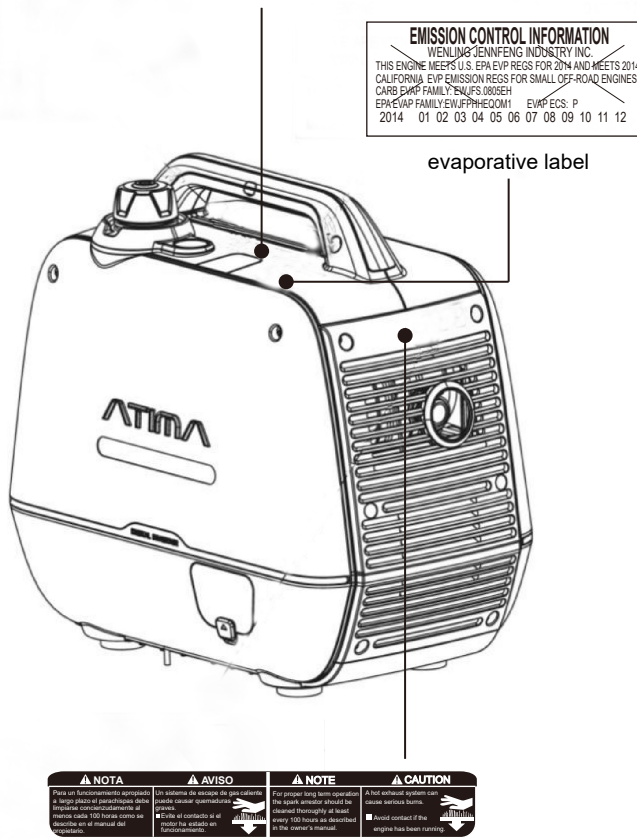
parameter label

Serial NO.
ATDIG-2300001

serial number



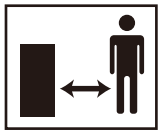
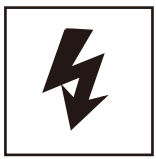
engine emissions labeling



Exhaust gas warning label

	■This generator is designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's manual before operating the generator. Failure to do so could result personal injury or equipment damage.

	■If you are run the generator in an area that is confined, or even partially enclosed area, the air you breathe could contain a dangerous amount of exhaust gas. ■ Never run your generator inside a garage , house or near open windows or doors
	■Do not connect to a building's electrical system unless an isolation switch has been installed by a qualified electrician. ■connections for standby power to a building's electrical system must be made by a qualified electrician and must comply with all applicable laws and electrical codes. Improper connections can allow electrical current from the generator to back feed into the utility lines. Such back feed may electrocute utility company workers or others who contact 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.
	■Gasoline is flammable, please use generator outdoor. If gasoline be ignited, it endangers your life and property. ■Before filling fuel , please stop engine and keep far away from heat , spark and fire ■Please fill fuel outdoor ■Clean immediately the spilled fuel. ■After use, please turn the engine switch to "OFF" position to prevent gasoline leaking

	■Keep the machine at least 1 m (3 ft) from buildings or other equipment, or the engine may overheat.
	■Exhaust contains poisonous carbon monoxide gas that can build up to dangerous levels in closed areas. Breathing carbon monoxide can cause unconsciousness or death. ■Never run the generator in a closed or even partly closed area where people may be present.
	■ Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents. ■ Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Generators create sparks which may ignite the dust or fumes. ■ Keep bystanders, children, and visitors away while operating a generator. Provide barriers or shields as needed.
	■ The generator is a potential source of electrical shock if not kept dry. ■ Do not expose the generator tomoisture , rain or snow. ■ Do not operate the generator withwet hands.

	■ A hot exhaust system can cause serious burns. ■ Avoid contact if the engine has been running.

Specifications

Generator

Model Number	AY2200i	
Rated Frequency(Hz)	60	
Rated Voltage(V)	120	
Rated Current(A)	15	
Rated Output (KW)	1.8	
Max. Output (KW)	1.95	
Safety Device Type	AC protector	Electronic
DC Voltage	12V-8.3A	
Safety Device Type	DC protector	Electronic

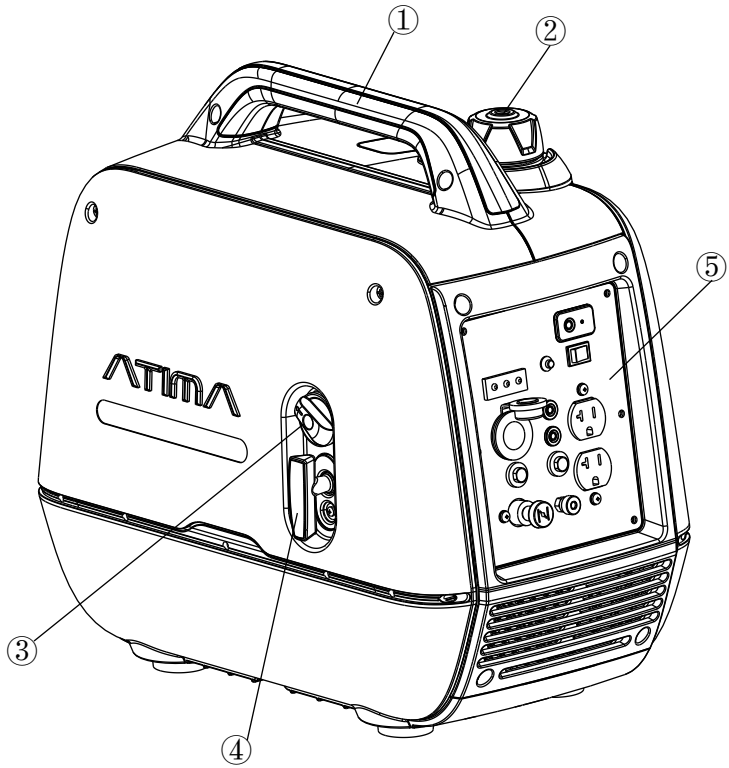
Engine

Engine Type	4-Stroke OHV Air Cooled ,Single Cylinder
Engine Displacement (cc)	80cc,
Bore *Stroke(mm)	48.6 X 43.0
Run Time	8 Hrs (at 50% load)
Compression ratio	8.5:1
Fuel Type	Unleaded gasoline
Fuel Capacity (L)	3.9
Engine Oil Capacity (L)	0.4
Ignition System	CDI
Spark Plug: Type Gap(mm)	BPR6HS (NGK) 0.6-0.7
Guaranteed sound power level(L_{WA})	93
Start Type	Recoil

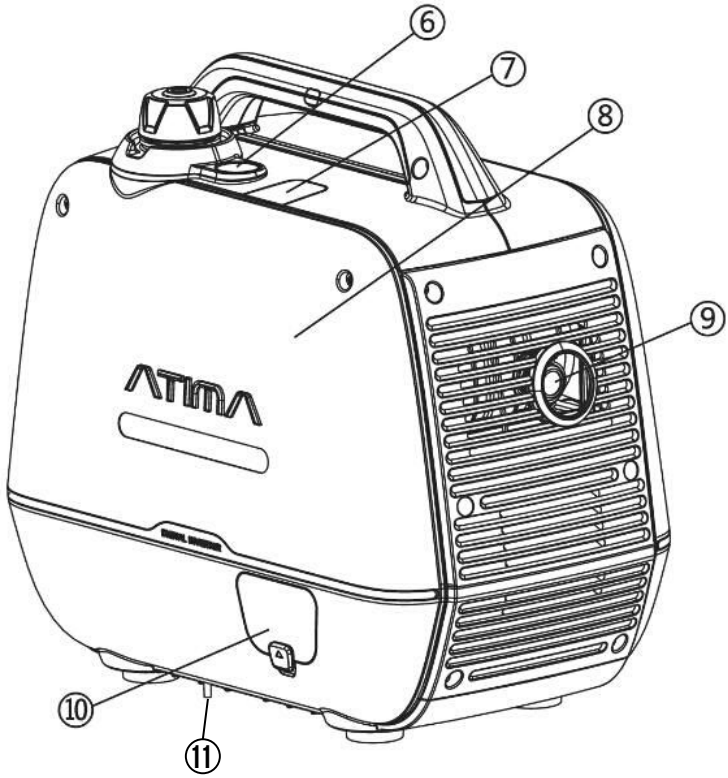
Others

Net/Gross Weight (kg)	21.5/23.5
Overall Dimensions (mm)	500X280X450
Parallel Rated Output(KVA)	3240
Parallel Max. Output (KVA)	3960
Parallel Rated Current (A)	27
Parallel Max. Current (A)	33

COMPONENT IDENTIFICATION :

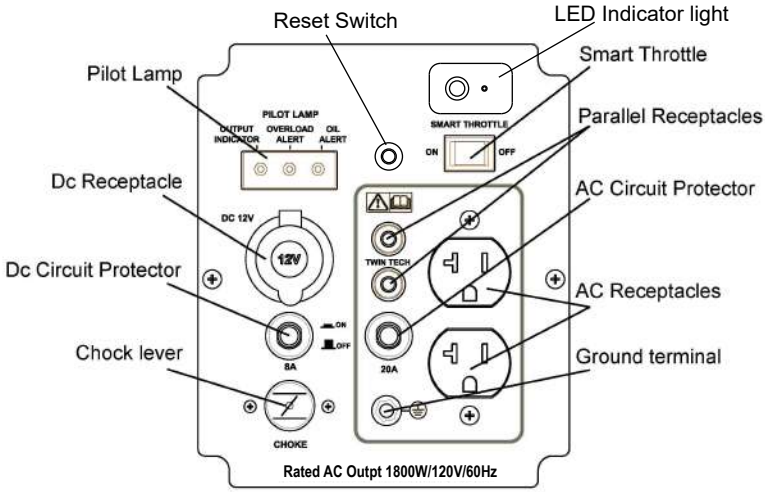


1. Carrying handle
2. Fuel Cap
3. Engine Switch and Fuel Switch
4. Recoil Starter Rope
5. Control Panel



6. Fuel Gauge
7. Spark Plug Cap
8. Removable Service Panel
9. Muffler
10. Oil Check Access
11. Fuel drain pipe

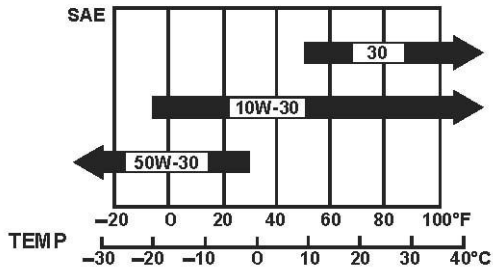
CONTROL PANEL:



USA

ENGINE OIL

Use premium quality 4-stroke engine oil, certified to meet or exceed U.S. automobile manufacturer's requirements for API Service Classification SG, SF. Select the appropriate viscosity for the average temperature in your area.



STARTING TEMPERATURE RANGE

Remove the maintenance access cover. Remove the oil filler cap, and look to see that oil is at the bottom of the threads of the oil filler hole. If the oil level is below the bottom of the threads, refill the recommended oil up to the top of the oil filler neck.

CAUTION

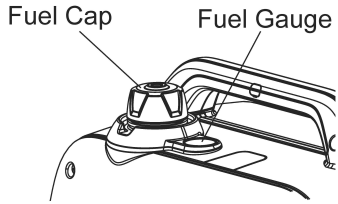
Running the engine with insufficient oil can cause serious engine damage.

Note:

The Oil Alert System will automatically stop the engine before the oil level falls below the safe limit. However, to avoid the inconvenience of an unexpected shutdown, check the oil level regularly.

FUEL

- Use unleaded gasoline only.
- 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 fuel filler cap securely
- Fuel tank capacity(L): 3.9



WARNING!

- Gasoline is extremely flammable and is explosive under certain conditions. Refuel in a well-ventilated area with the engine stopped. 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 Fig. 3B).
- 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 breathing of vapor. KEEP OUT OF REACH OF CHILDREN.

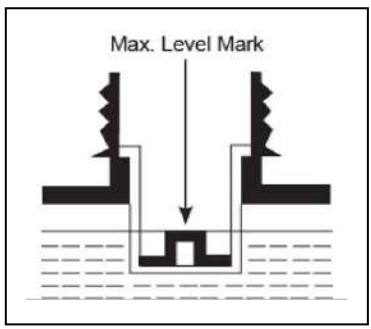


Fig.3B

GASOLINE CONTAINING ALCOHOL

Do not use gasoline that contains more than 10% ethanol.

Note:

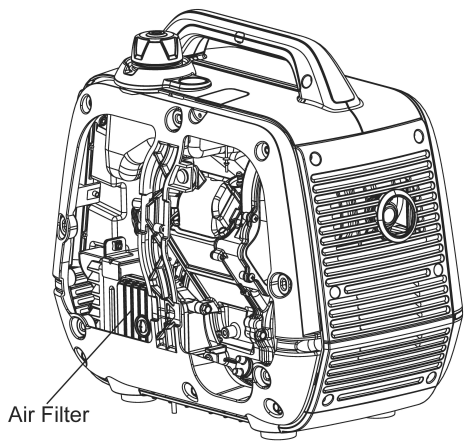
Fuel system damage or engine performance problems resulting from the use of fuels that contain higher percentages of alcohol are not covered under the warranty.

CHECK THE AIR CLEANER

Check the air cleaner element to be sure it is clean and in good condition. Loosen the cover screw and remove the maintenance cover. Press the latch tab on the top of the air cleaner body, remove the air cleaner cover and check the element. Clean or replace the element if necessary.

CAUTION:

Never run the engine without the air cleaner. Rapid engine wear will result from contaminants, such as dust and dirt, being drawn through the carburetor, into the engine.

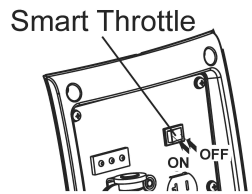


SMART THROTTLE

- The Smart Throttle system automatically reduces engine speed when all loads are turned off or disconnected. When appliances are turned on or reconnected, the engine returns to the proper speed to power the electrical load.
- If high electrical loads are connected simultaneously, turn the Smart Throttle switch to the OFF position to reduce voltage changes.
- When using the DC output, turn the Smart Throttle switch to the OFF position.

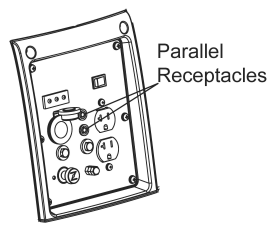
ON: Recommended to minimize fuel consumption and further reduce noise levels when no load is applied to the generator.

OFF: The Smart Throttle system does not operate.



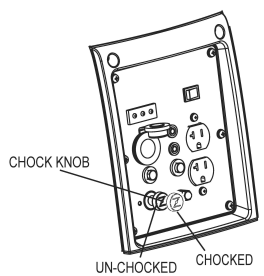
PARALLEL RECEPTACLES

These receptacles are used for connecting two AY2200i generators for parallel operation. An ATIMA approved parallel operation kit (optional equipment) is required for parallel operation. This kit can be purchased from an authorized service



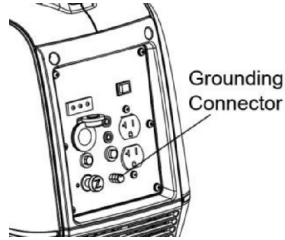
CHOCK KNOB

The choke is used to provide proper starting mixture when the engine is cold. It can be opened and closed by operating the choke knob manually. Pull the choke knob to the CHOCKED position to enrich the mixture for cold starting.



GROUND TERMINAL

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

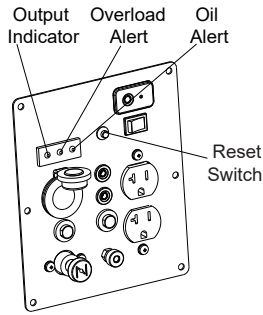


Output and Overload Indicators

The output indicator LED (green) will flash during normal operating conditions. If the generator is overloaded, or if there is a short in the connected appliance, the output indicate LED (green) will go OFF, the overload alert LED (yellow) will go ON and current to the connected appliance will be shut off. Stop the engine if the overload alert LED (yellow) comes ON and investigate the overload source

When the generator cuts off the AC output due to overload, please follow the following steps:

1. Turn off the connected electrical equipment and reduce the total power to the range of rated power output.
2. Press the reset switch on the lower board for 2 seconds, the AC output indicator (green light) will light up, and then the generator output will return to normal.
3. Restart the electrical equipment.



Note:

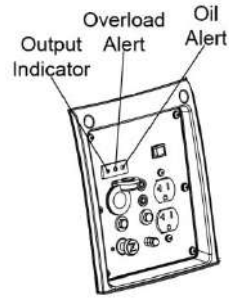
Substantial overloading that continuously lights the overload alert LED (yellow) may damage the generator. Marginal overloading that temporarily lights the overload alert LED (yellow) may shorten the service life of the generator.

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

When an electric motor is started, both the overload alert LED (yellow) and the output indicator LED (green) may go on simultaneously. This is normal if the overload alert LED (yellow) goes off after about four (4) seconds. If the overload alert LED (yellow) stays on, please contact authorized service.

OIL Alert Indicators

The oil alert Indicators is designed to prevent engine damage caused by an insufficient amount of oil in the crank-case. Before the oil level in the crankcase falls below a safe limit, the oil alert system will automatically shut down the engine (the fuel switch will remain in the ON position). If the oil alert system shuts down the engine, the oil alert indicator LED (yellow) will come on when you operate the starter, and the engine will not run. If this occurs, add engine oil.



Electrical Safety

- Do not exceed the rated power.
- Keep all electrical equipment clean and dry. Replace any wiring where the insulation is cracked, cut eroded part or otherwise degraded. Replace terminals that are worn, discolored, or corroded. Keep terminals clean and tight.
- Insulate all connections and disconnected wires.
- Do not abuse the power cord. Keep power cords away from heat, oil, sharp edges, or moving parts. Replace damaged power cords immediately. Damaged power cords increase the risk of electric shock.
- Do not operate the generator with wet hands. Do not expose generator to rain, snow or wet conditions. Water will increase the risk of electric shock. The generator is a potential source of electrical shock if not kept dry.
- Do not attempt to connect or disconnect load connections while standing in water, or on wet or soggy ground.
- Do not touch electrically energized parts of the generator and interconnecting cables or conductors with any part of the body, or with any non-insulated conductive object.
- Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
- When operating a power tool outside, use an outdoor extension cord marked “W-A” or “W”. These extension cords are rated for outdoor use, and reduce the risk of electric shock.

Electrical Safety Continued

- Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs.
- Double insulated tools are equipped with a polarized plug where one blade is wider than the other. This plug fits in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for the three-wire grounded power cord and grounded power supply system.
- Before servicing equipment powered by the generator, disconnect the equipment from its power input.
- The generator must be earth-grounded for fixed installations in accordance with all relevant electrical codes and standards before operation.
- Grounding provides a low-resistance path to carry electricity away from the user in the event of an electrical malfunction.
- All connections and conduits from the generator to the load must only be installed by trained and licensed electricians and in compliance with all relevant local, state, and federal electrical codes and standards, and other regulations where applicable.
- Connect the generator only to a load or electrical system that is compatible with the electrical characteristics and rated capacities of the generator.

- NEVER try to power building or home wiring by plugging the generator into a wall outlet, a practice known as “backfeeding.” This is extremely dangerous and presents an electrocution risk to utility workers and neighbors served by the same utility transformer. It also bypasses some of the built-in household circuit protection devices.

WARNING!

Never run the generator indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, and odorless and deadly gas.

STARTING THE ENGINE

Make sure that all appliances are disconnected from the generator receptacles and that the generator is on a level surface before starting.

1. Turn the engine switch & fuel switch to the “ON” position.
2. Make sure the Smart Throttle is in the “OFF” position.
3. Pull the choke lever to “Choked” position.

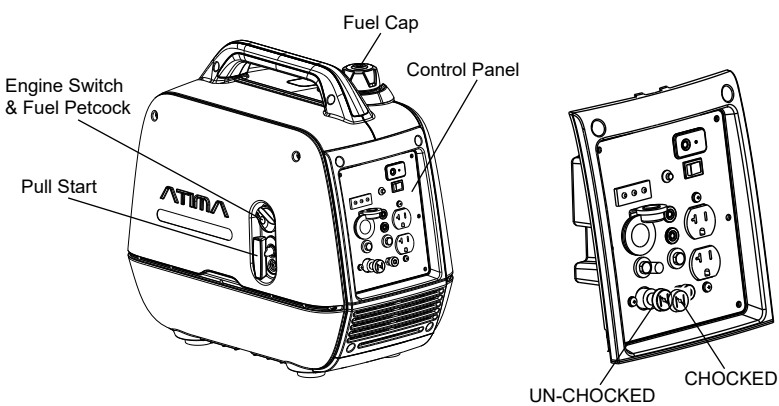
NOTE: If engine is at operating temperature the choke is not needed to restart.

4. Pull the recoil starter slowly, until you feel tension in the starter rope. Then quickly pull the recoil starter handle to completely unwind the starter rope. Do not allow the starter rope to snap back. Let the starter rope slowly rewind as you hold the recoil starter handle.

NOTE: Please pull starter cord along with horizontal angle of 45 degree. Do not pull starter cord up and let it touch the cover.

5. If engine fails to start, please re-check steps 1-4 above.
6. Allow the engine to idle until warm. Then, slowly push choke to the end.
7. Turn Smart Throttle to “ON” to save fuel if not maximizing output on the generator.

NOTE: The engine is equipped with a low oil sensor that will prevent the engine from running when the oil level falls below a critical threshold. 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.

CAUTION:

If modifications are made to the carburetor for high altitude operation, 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.

AC APPLICATIONS

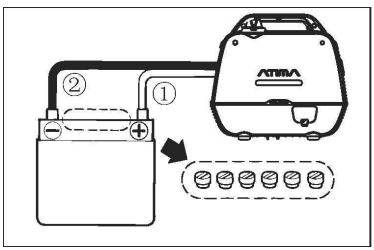
1. Start the engine and make sure the output indicator LED (green) flashes.
2. Confirm that the appliance to be used is switched off, and plug in the appliance.
3. In order to acquire both the best effect and the maximum service life of the generator, operate the generator for 20 hours under 50% load , so that the generator may reach the best performance.

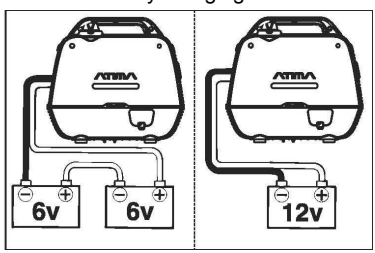
NOTE: The DC receptacle can be used while the AC power is in use. If you use both at the same time, be sure not to exceed the total power for AC and DC.

DC APPLICATIONS

- The generator DC rated voltage is 12V.
- Start the engine first, and then connect the generator to the battery for charging.
- Before starting to charge the battery, make sure that the DC protector is turned on.
  - ① Red wire
  - ② Black wire

1. Start the engine.
2. Connect the red battery charger lead to the positive (+) battery terminal.
3. Connect the black battery charger lead to the negative (-) battery terminal.
4. Turn the smart throttle control switch OFF to start battery charging.

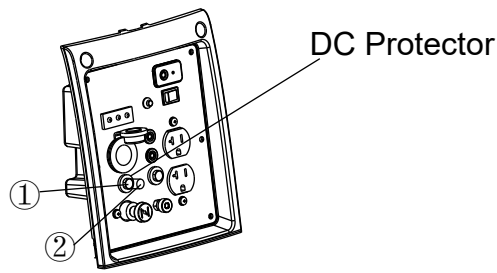




NOTICE

- Be sure the smart throttle control switch is turned off while charging the battery.
- Be sure to connect the red battery charger lead to the positive (+) battery terminal, and connect the black lead to the negative (-) battery terminal.
  Do not reverse these positions.
- Connect the battery charger leads to the battery terminals securely so that they are not disconnected due to engine vibration or other disturbances.
- Charge the battery in the correct procedure by following instructions in the owner's manual for the battery.
- The DC protector turns off ② automatically if current above the rated flows during battery charging.
  To restart charging the battery, turn the DC protector on by pressing its button to "ON" ①. If the DC protector turns off again, stop charging the battery immediately and consult authorized service.

① "ON"
② "OFF"



NOTE:

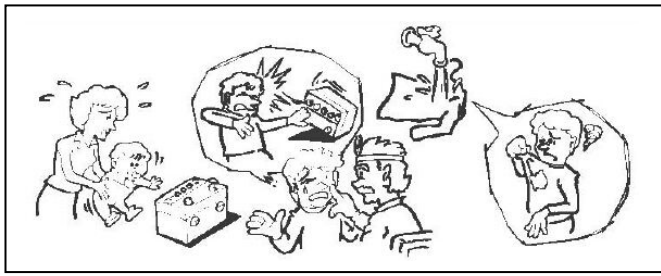
- Follow instructions in the owner's manual for the battery to determine the end of battery charging.
- Measure the specific gravity of electrolyte to determine if the battery is fully charged. At full charge, the electrolyte specific gravity is between 1.26 and 1.28.
- It is advisable to check the specific gravity of the electrolyte at least once every hour to prevent overcharging the battery.

WARNING:

Never smoke or make and break connections at the battery while charging. Sparks may ignite the battery gas.
Battery electrolyte is poisonous and dangerous, causing severe burns, etc. contains sulfuric (sulphuric) acid. Avoid contact with skin, eyes or clothing.

Antidote:

EXTERNAL-Flush with water.
INTERNAL-Drink large quantities of water or milk.
Follow with milk of magnesia, beaten egg or vegetable oil. Call physician immediately.
EYES: Flush with water for 15 minutes and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc., away. Ventilate when charging or using in closed space. Always cover eyes when working near batteries. KEEP OUT OF REACH OF CHILDREN.



Stopping the Engine

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

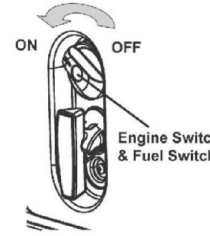
Stopping the Generator

1. Unplug cables.

2. First, turn the FUEL switch to FUEL OFF (Figure 1), and the engine is to be extinguished After the fire. Turn the ENGINE switch to ENGINE OFF (Figure 2).

Figure 1

Figure 2



TRANSPORTING

- Take care not to drop or strike the generator when transporting. Do not place heavy objects on the generator.
- To prevent a fuel spill when transporting, ensure that the fuel cap is on and tight. The generator should be secured upright in its normal operating position with the fuel petcock OFF.
- If the generator has been used, allow it cool for at least 15 minutes before loading the generator on the transport vehicle. A hot engine and exhaust system can burn you and can ignite some material.
- Do not lay the generator on its side when moving, storing, or operating it. Oil and fuel may leak and damage the engine or your property.

WARNING!

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/ exchage/ credit. Such a phrase should also be in the warranty card/ warranty conditions.

Parallel Function

WARNING!

Do not pair more than 2 generators.
It is recommended to only use the ATIMA parallel output cable for parallel operation.

CAUTION:

While operating in parallel, only use the parallel cable outlet.
DO NOT use the outlet on the control panel of the generator while operating in parallel. It may cause an unbalanced output to the parallel connection which may result in damage to the generator(s).

CAUTION:

DO NOT disconnect the parallel connection cable from the control panel while the generators are running. Turn off both generators before disconnecting parallel cables.

Before connecting an appliance to a generator, make sure that the appliance is in good working order and that its electrical rating does not exceed that of the outlet. Most appliances require more than their electrical rating for startup.

Connecting the Parallel Cable

1. Have both generators ready to operate.
2. Make sure all Parallel connections and ground connection on both control panels are secure. (follow instructions with cable kit)

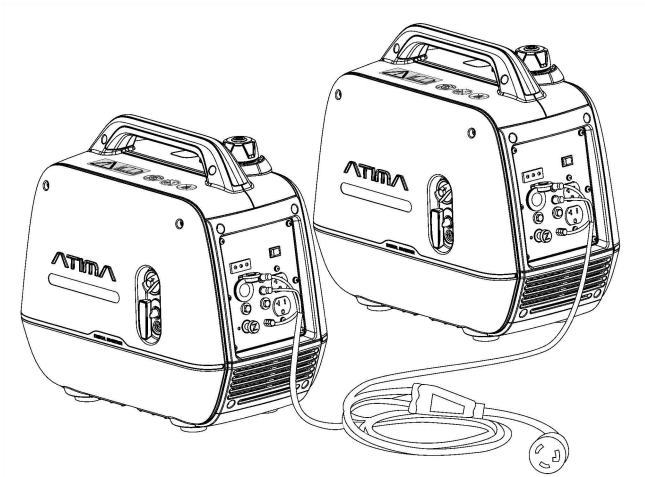
WARNING!

If parallel cables are not properly connected to the generators, either or both generators can be damaged and could explode.

3. Make sure the receptacle on the parallel cables connects securely with the appliances, and the appliances are OFF.

4. Start each generator as the normal operation process.

5. Turn on the appliance after make sure both generators are in normal running(the output indicator LED (green) flashes.



Note:

The required power of the electrical appliance connected to the parallel outlet cannot exceed the rated output of paralleled generators. ***See specifications page in owner's manual.***

Turning Off Generators while in Parallel Function

1. Disconnect or turn off item plugged into parallel receptacle.
2. Turn off both generators.
3. Carefully disconnect the parallel cables from both generators.

MAINTENANCE

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 that can kill

Use genuine ATIMA parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the generator.
The purpose of the maintenance and adjustment schedule is to keep the generator in the best operating condition. Inspect or service as scheduled in the table below.

REGULAR SERVICE PERIOD(3) ITEM Perform at every indicated month or operating hour interval, whichever comes first.		EACH USE	FIRST MONTH OR 20HRS	EVERY 3 MONTHS OR 50HRS	EVERY 6 MONTHS OR 100HRS	EVERY YEAR OR 200HRS
Engine Oil	Check level	O				
	Change		O		O	
Air cleaner	Check			O		
	Change					O
Spark plug	Check-adjust			O		
	Replace					O
Combustion chamber			Clean		Every 300 Hrs. (2)	
Valve clearance	Check-adjust					O (2)
Fuel tank and filter	Clean				O (2)	
Fuel line	Check	Every 2 years (Replace if necessary) (2)				

NOTE:

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

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

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

CHANGING OIL

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

1. Loosen the cover screw and remove the maintenance cover. (Fig. 13A)
2. Remove the oil filler cap. (Fig. 13B)
3. Drain dirty oil into a container thoroughly.
4. Refill with the recommended oil, and check the oil level.
5. Reinstall the maintenance cover and tighten the cover screw securely.
6. Engine oil capacity: 0.4L
7. Wash your hands with soap and water after handing used oil.

NOTE: Please dispose of used motor oil in a manner that is environmentally friendly. We suggest you take it in a sealed container to your local service station for recycling. Do not throw used oil in the trash or pour it on the ground.

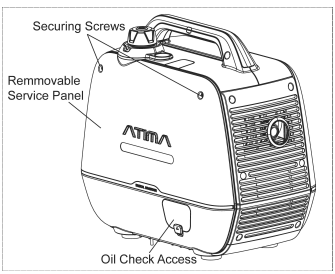


Fig. 13A

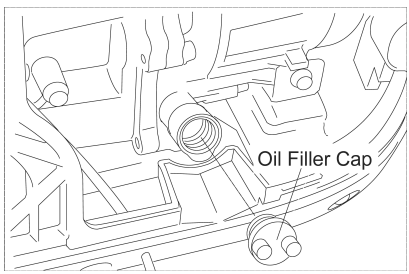


Fig. 13B

AIR CLEANER

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 the air filter, otherwise rapid engine wear may result

AIR CLEANER CONTINUED

1. Loosen the cover screws and remove the maintenance cover. (Fig. 14A)
2. Remove the air cleaner cover. (Fig. 14B)
3. Wash the filter in a non-flammable or high flash point solvent and dry it thoroughly.
4. Soak the filter in clean engine oil and squeeze out the excess oil.
5. Reinstall the air filter and the air cleaner cover. Tighten the cover screw securely.
6. Reinstall the maintenance cover and tighten the cover screw securely.

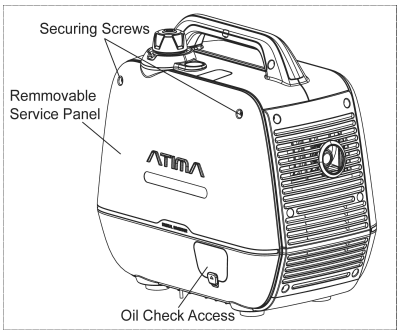


Fig. 14A

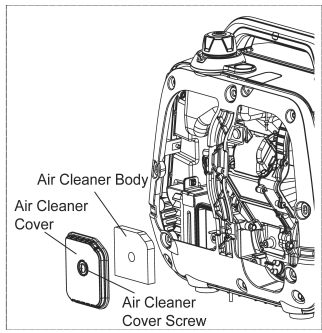
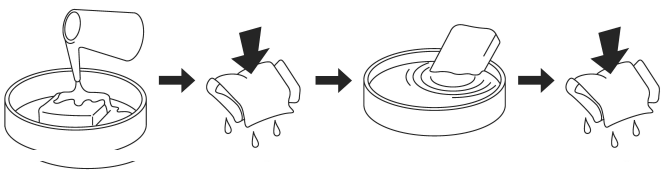


Fig. 14B



Cleaning Wring out and dry Dipping into oil Wring out oil

SPARK PLUG SERVICE

- RECOMMENDED SPARK PLUG: NGK BPR6HS
- To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

1. Loosen the cover screws and remove the maintenance cover. (Fig.15A)
2. Remove the spark plug cap. (Fig. 15B)
3. Clean any dirt from around the spark plug base.
4. Use the wrench to remove the spark plug. (Fig. 15C).

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 0.60-0.70mm (0.024-0.028”). Correct as necessary by carefully bending the side electrode. (Fig. 15 D)
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.
9. If a used plug is being reinstalled, it should only require 1/8 to 1/4 turn after being seated.
10. Reinstall the spark plug cap on the spark plug securely.

CAUTION:
Make sure engine is cool before servicing or removing spark plug.

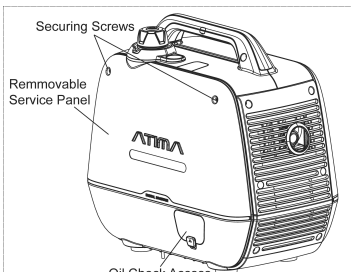


Fig. 15A

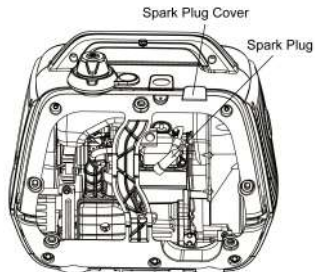


Fig 15B

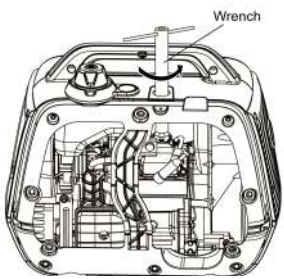


Fig 15C

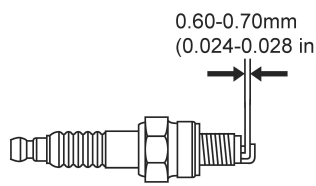


Fig 15D

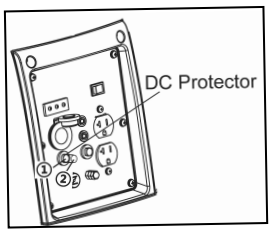
Storing the Generator

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

Storing the unit

1. Be sure the storage area is free of excessive humidity and dust.
   a. Keep heat, sparks, and flame away.
   b. Handle fuel only outdoors.
   c. Wipe up spills immediately.
   d. Keep out of reach of children and pets.
2. Drain the fuel.
   a. Drain all gasoline from the fuel tank into an approved gasoline container.
   b. Loosen the screw of the service panel and remove the service panel, loosen the carburetor bolt and drain the gasolin to a suitable container by the fuel drain pipe.
   c. When all the fuel is drained, turn the petcock to the OFF position, and tighten the drain screw securely.
3. Clear the engine oil.
4. Remove the spark plug and pour about a table- spoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, the reinstall the spark plug.
5. Reinstall the spark plug cap on the spark plug securely.
6. Reinstall the spark plug Access.
7. Reinstall the maintenance cover and tighten the cover screw securely.
8. Pull the starter grip slowly until resistance is felt, then return the starter grip gently. This closes the values so moisture cannot enter.

Troubleshooting



Generator won't produce power

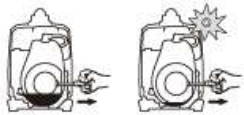
- ○ Safety device (DC protector) to "OFF" ② …· Press the DC protector to "ON" ①.
- ○Safety device (AC) to "OFF" ....Press the AC protector
- ○ Stop the Engine ,then restart..

WARNING!

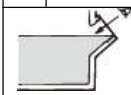
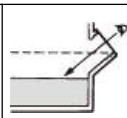
Be sure that is no spilled fuel around the spark plug.
Spilled fuel may ignite.

A	ENGINE DOES NOT START

Turn the engine switch to “ON”, then pull the recoil starter and check if the oil warning light flickers.



C	Does not flicker	D	Flickers.

E	Check engine oil level.		
			
F	OK	G	Level low
Consult authorized service		Add engine oil.	

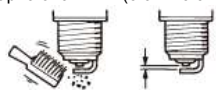
H	Pull the recoil starter and check the spark plug for spark strength. (See “WARNING”)

WARNING

- ■To prevent FIRE HAZARDS be sure fuel is not present in the spark plug area.
- ■To prevent FIRE HAZARDS be sure to place the spark plug as far way as possible from the spark plug hole and carburetor area.
- ■To prevent ELECTRIC SHOCK do not hold spark plug lead with hand while testing.

I	OK	J	Dose not spark

K	Check the spark plug.
	· Type: BPR6HS · Gap: 0.6–0.7 mm (0.024–0.028 in)



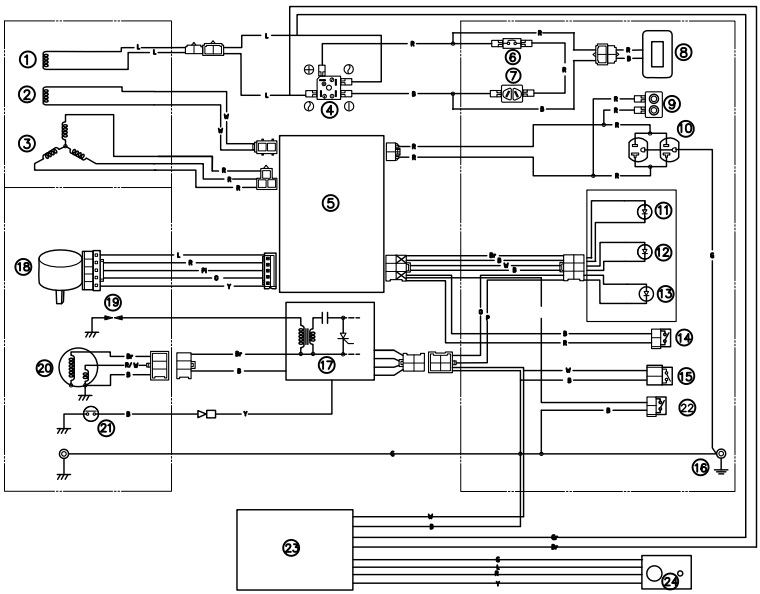
L	Incorrect	M	OK
Replace or Adjust Gap.		Clean the spark plug.	

N	Check the following ■ Fuel line clogging · ■ Air cleaner element clogging.	O	clogging
		P	OK

Q	Clean or Replace; Consult authorized service

R	Consult authorized service

Wiring Diagram For USA

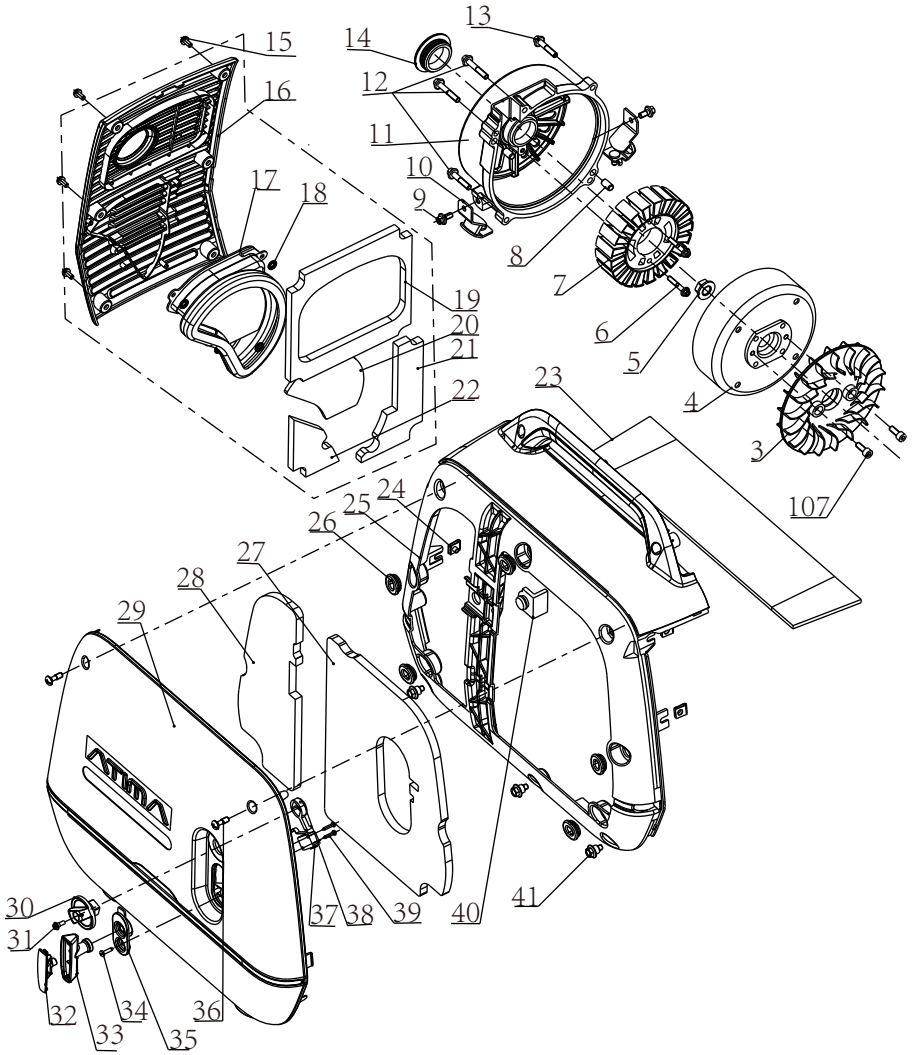


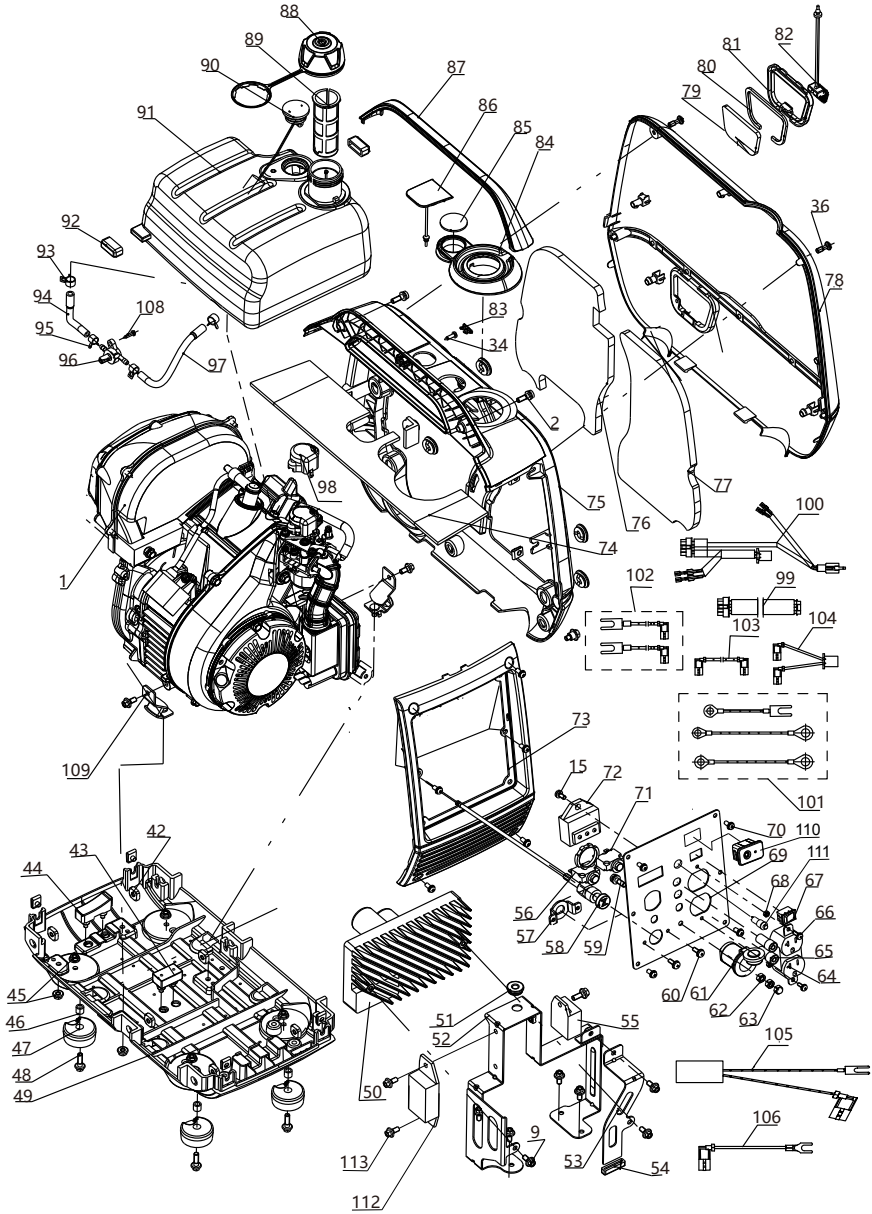
1、DC WINDING
2、SUB WINDING
3、MAIN WINDING
4、 RECTIFIER
5、INVERTER UNIT
6、CIRCUIT BREAKER (DC)
7、DC OUTPUT RECEPTACLE
8、USB OUTPUT RECEPTACLE
9、TWIN TECH (PARALLEL RUNNING TERMINAL)
10、AC OUTPUT RECEPTACLEL
11、OUTPUT INDICATOR
12、OVERLOAD INDICATOR
13、OIL ALERT INDICATOR
14、ECO THROTTLE SWITCH
15、ENGINE STOP SWITCH
16、GROUND (Earth) TERMINAL
17、C.D.I. UNIT CDI
18、THROTTLE CONTROL MOTOR
19、SPARK PLUG
20、C. D. I. MAGNETO
21、0IL LEWEL SWITCH
22、RESET SWITCH .
23、CO DETECTOR
24、LED LIGHT LED

Color Code

B Black	Pi Pink	L Blue
Br Brown	R Red	O Orange
G Green	W White	P Purple
Y Yellow	RW Red/White	Gr Gray

Parts Diagram

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Parts List

No.	Part Number	Part Name	Qty.
1	QJ2000IE-C.02.01	Yamaha Engine (EPA & CARB)	1
2	GB/T818-2000	Phillips Pan Head Screws M6*20	2
3	QJ2000IE-C.02.04-01	Fan	1
4	QJ2000IE-C.02.04.01	Rotor	1
5	JF158FGH.2-1	Hexagon Flange Nut M12X1.25	1
6	GB/T70.1-08	Hexagon Head Screw M5X35	2
7	QJ2000IE-C.02.03.01	Stator Assembly (120V)	1
8	QJ150FMG.5-8	Aligning Pin 8 * 12	2
9	GB5789-86	Hexagon Flange Bolts M6X12	12
10	QJ2000IE-C.02.02	Vibration Insulating Foot Assembly	4
11	QJ2000IE-C.02.03-01	Rear Cover	1
12	GB5789-86	Hexagon Flange bolts M6X35	2
13	GB5789-86	Hexagon Flange Bolts M6X30	3
14	QJ2000IE-C.02.03-03	Rubber Plug, Rear Cover	1
15	GB9074.4-88	Phillips Pan Head Screw M5X16	13
16	QJ2000IE-C.04.04-01	Exhaust Cover	1
17	QJ2000IE-C.04.04-02	Rubber Duct	1
18	XSZ48B.3.1.1-5	Nut Spring Clamps	4
19	QJ2000IE-C.04.04-04Y	Insulating Foam, Exhaust Port	1
20	QJ2000IE-C.04.04-07Y	Insulating Foam, Duct Seal	1
21	QJ2000IE-C.04.04-06Y	Insulating Foam, Right Inlet	1
22	QJ2000IE-C.04.04-05Y	Insulating Foam, Left Inlet	1
23	QJ2000IE-C.04.04-03Y	Insulating Foam, Left Top Seal	1
24	QJ2000IE-B.01-28	Nut, Fender Setting	12
25	QJ2000IE-C.04.01.01	Left Casing	1
26	QJ2000IE-C.04.01.02	Rubber Grommet	10
27	QJ2000IE-C.04.05-03Y	Left Foam Seal I	1
28	QJ2000IE-C.04.05-04Y	Left Foam Seal II	1
29	QJ2000IE-C.04.05-01Y	Left Body Cover	1
30	QJ2000IE-C.04.06-04	Knob, Engine Switch	1
31	QJ2000IE-A.01-17	Knob Retaining Screw	1
32	QJ2000IE-B.01-11	Pull Start Handle Cover	1
33	QJ2000IE-B.01-10	Pull Start Handle	1
34	SJ2823-87	Guide, Starter Rope ST5X16	7
35	QJ2000IE-C.04.05.01	Rope Guide Plate Assembly	1
36	QJ2000IE-B.01-27A	Mcross Recessed Locking Sercw With Oval Head	4
37	IP64F-B.13.04	Switch Assy., Engine Stop	1

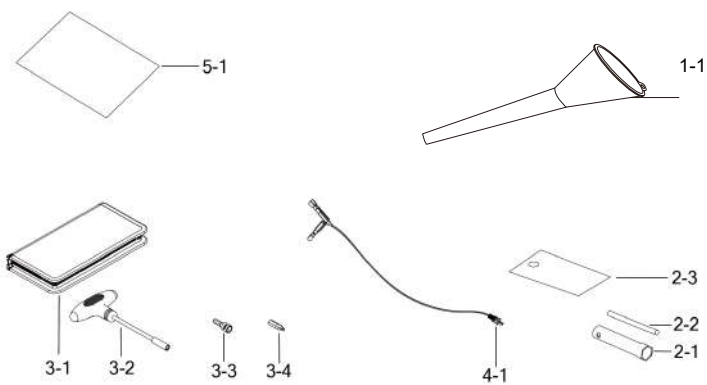
No.	Part Number	Part Name	Qty.
38	QJ1200IE-B.01-26	Ignition Switch	1
39	GB/T9074.18-02	Phillips Oval Head Tapping Screws ST3X16	2
40	QJ2000IE-C.04.01-01	Rubber Stopper	2
41	QJ2000IE-C.01-04	Hexagon Flange Bolt M6X14 w/Shoulder	6
42	QJ2000IE-C.01-03	Square nut M6	6
43	QJ2000IE-C.01-02	Engine Damper	1
44	QJ2000IE-C.01-01	Rear Damper	1
45	GB6177.1-2000	M6 Hexagon Flange Nuts	8
46	QJ2600.01-02	Spacer 8*10	4
47	QJ2000IE-C.01.02-01	Aubber	4
48	GB/T818-2000	Hexagon Flange Bolts M6X20	4
49	QJ2000IE-C.01.01	Body Base Plate	1
50	QJ2000IE-C.01.03	Inverter Assembly	1
51	QJ2000IE-C.01.04-01	Fuel Tank Damping Grommet	1
52	QJ2000IE-C.01.04-01B	INverter Mounting Bracket Assembly	1
53	QJ2000IE-C.01.04-03	INverter Mounting Bracket ,Front	1
54	QJ2000IE-C.01.04-04	INverter Mounting Rubber Cushion	1
55	QJ2000IE-C.02.06C	Rectifiers KBP2506	1
56	QJ6500.02.05	8A Circuit Breaker 8A	1
57	QJ2000IE-C.02.05-01	Choke Mount Plate	1
58	QJ2000IE-C.02.05	Choke Cable Assembly	1
59	GB5789-86	Hexagon Flange Bolts M6X16	1
60	GB9074.4-88	Phillips Pan Head Screw M4X8	2
61	QJ2000IE-C.04.04.03	Receptacle, D.C	1
62	GB/T41-2000	Hex Nut M6	1
63	AY2500I.04-01	Cap Nut M6	1
64	QJ3200.01.04	Double 120V Socket 120V	1
65	QJ2000IE-B.03.05	Socket Composite	2
66	GB/T818-2000	Phillips Pan Head Screw and Washer M4X12	4
67	QJ1200IE-A.03.07	Smart Throttle Switch	1
68	GB6177.1-2000	Hexagon Flange Nuts M4	2
69	QJ2000IE-2C.05.01N	Panel Plat	1
70	GB/T818-2000	Phillips Pan Head Screws M5*12	4
71	QJ3200TB.01.05	20A Circuit Breaker	1
72	QJ2000IE-C.05.03	Indicator Light Assembly	1
73	QJ2000IE-2C.04.03-01	Front Cover	1
74	QJ2000IE-C.04.01-04Y	Insulating Foam, Right Top Seal	1
75	QJ2000IE-C.04.02.01	Right Casing	1

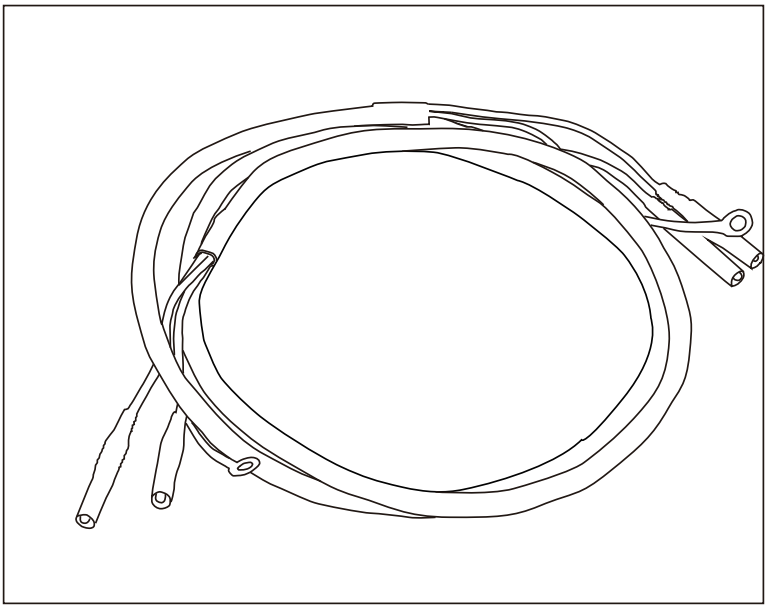
No.	Part Number	Part Name	Qty.
76	QJ2000IE-C.04.06-05Y	Right Foam Seal II	1
77	QJ2000IE-C.04.06-04Y	Right Foam Seal I	1
78	QJ2000IE-C.04.06-01Y	Right Body Cover1	1
79	QJ2000IE-C.04.06-06Y	Oil Fill Access Cover Foam	1
80	QJ2000IE-C.04.06-07Y	Oil Fill Access Cover Foam Strip	1
81	QJ2000IE-C.04.06-02Y	Oil Fill Access Cover	1
82	QJ2000IE-C.04.06-03	Tether, Oil Fill Access Cover	1
83	QJ2000IE-C.04-01Y	Handle Screw Cover	1
84	QJ2000IE-C.04.02-01	Seal, Fuel Filler Neck	1
85	QJ2000IE-C.04.02-02	Fuel Gauge Lens	1
86	QJ2000IE-C.04.02-03	Spark Plug Access Cover	1
87	QJ2000IE-C.04.02	Handle Inset	1
88	QJ21200IE-B.02.12B	Cap Assy., Fuel Tank	1
89	QJ1200IE-C.02.02	Fuel Filter	1
90	QJ2000IE-C.03.02	Fuel Meter	1
91	QJ2000IE-3C.03.01A	Fuel Gauge	1
92	QJ2000IE-C.03-02	Tank Mounting Rubber Cushion	2
93	Φ10.5	Fuel Hose Clamps	2
94	QJ2000IE-C.03.08	Fuel Hose I	1
95	Φ10.5	Fuel Hose Petcock Clamps	2
96	QJ1200IE.01.01A	Petcock Assy	1
97	QJ2000IE-C.03-09	Carburetor Gas Hose	1
98	QJ2000IE-C.02.02	Stepper Motor Cover	1
99	QJ2000IE-01.05-26	Stepper Motor Cable	1
100	QJ2000IE-C.01.05U	Wire Harness Assy., Control	1
101	QJ2000IE-C.01.05.01	Ground Wire 5-5 (USA)	1
101	QJ2000IE-C.01.05.02	Ground Wire 5-6 (USA)	1
101	QJ2000IE-C.01.05.03	Ground Wire 6-6 (USA)	1
102	QJ2000IE-C.01.05.04	Parallel Energizing Lines (USA)	2
103	QJ2000IE-C.01.05.06	DC Protection Socket Cable (USA)	1
104	QJ2000IE-C.01.05.05	DC Connection Cable (USA I)	1
105	QJ2000IE-C.01.05.09U	AC Connection Cable (USA)	1
106	QJ2000IE-C.01.05.04	AC Protection Socket Cable (USA I	1
107	GB/T818-2000	Phillips Pan Head Screws M6X16	2
108	ST2823-87	Guide, Starter Rope ST5x16	1
109	QJ2000IE-C.02.02B	Vibration Insulating Foot Assembly	2
110	QJ2000IE-C.05.06	LED Indicator light	1
111	QJ2000IE-C.01.07	Reset Switch	1

No.	Part Number	Part Name	Qty
112	QJ2000IE-C.02.06	CO Alarm	1
113	GB9074.4-88	Phillips Pan Head Screw M5X16	2

Accessory

No.	Part Number	Part Name	Qty
1-1	38120411501000	Oil Funnel	1
2-1	37050422003000	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	Cross Screwdriver	1
4-1	20210042100000	Plug Wire,T	1
5-1	30921011201000	PVC Bag 170X250mm	1





⚠ NOTE

- This accessory is used for parallel connection of two generators ,so that we can get power superposition.
- If you need, please choose the correct model refer to the following list.
- Please mention that the parallel cable is not included in the product, but may be purchased separately

Accessory	Application	Requirement	PICTURE
Part Number	Generators	Voltage（V)	
AT-PKIT1000	SD1000i	100~240	
	AY2200i SD2000i	220~240	
AT-PKIT2000S	AY2200i SD2000i	100~120	

Carbon Monoxide (CO) Detection and Shut-off System

The CO Detection module monitors for the accumulation of poisonous CO gas found in engine exhaust when the generator is running. If CO detector detects increasing levels of CO gas, it automatically shuts off the engine. CO detector only monitors when the engine is running. Generators are intended to be used outdoors, far from occupied buildings and the exhaust pointed away from personnel and buildings. However, if misused and operated in a location that results in the accumulation of CO, like indoors or in a partially enclosed area, CO detector shuts off the engine, notifies the user of what has happened and directs the user to read the instruction action label for steps to take. **CO detector is not a substitute for an indoor carbon monoxide alarm.**

After a shut-off, a blinking RED light in the CO detector badge on the side of the generator provides notification that the generator was shut off due to an accumulating CO hazard. The RED light will blink for at least five minutes after a CO shut-off. Move the generator to an open, outdoor area and point the exhaust away from people and occupied buildings. Once relocated to a safe area, the generator can be restarted and the proper electrical connections made to supply electrical power. The RED light will stop blinking automatically upon engine re-start. Introduce fresh air and ventilate the location where the generator had shut down.
If a CO detector system fault has occurred and no longer provides protection, the portable generator is shut off automatically and the YELLOW light will blink for at least five minutes in the CO detector

badge to notify the user of the fault. The CO detector module can only be diagnosed and repaired by a trained technician at the dealer. The generator can be re-started, but may continue to shut-off.

CO detector will detect the accumulation of Carbon Monoxide from other fuel burning sources such as engine powered tools or propane heaters used in the area of operation. For example, if another generator is used and the exhaust is pointed at a CO detector equipped generator, CO detector may initiate a shut-off due to rising CO levels. This is not an error. Hazardous Carbon Monoxide has been detected. The user must take action to move and re-direct these devices to better dissipate Carbon Monoxide far away from personnel and occupied buildings.

CO detector test, when the generator is running, you can push the button to test the detector. When you push the button the red light will blink and then the generator shut down.

For All Customer Service Needs

Phone: 1-888-266-6621
Email: support@atimagenerators.com
25 Standen Drive Hamilton, OH 45015

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