

### OWNER'S MANUAL A112003

### **3000W DIGITAL INVERTER GENERATOR**



#### FOR SERVICE CALL: (USA)1-866-591-8921/(CANADA)1-514-885-0916

**WARNING** : To reduce the risk of injury, user must read this manual before assembling, operating and maintaining this unit, You are responsible for operating the product properly & safely.

### WARNING!

Read the following instructions before using the product!

These instructions below are for your safety.**PLEASE READ AND UNDERSTAND THIS MANUAL COMPLETELY BEFORE OPERATING THE MACHINE**, retain them for future reference. Familiarize yourself with them to reduce hazards like personal injuries and damage to property.

### TABLE OF CONTENTS

Safety rules	2
Product specifications	9
Know your generator	10
Generator preparation	13
Starting the generator	15
Stopping the generator	
Subsequent starting of the generator	
Using the generator	20
Maintenance	26
Storage&Transportation	
Troubleshooting	
Wiring diagram	
A112003 Exploded View & Part List	38

### SAFETY RULES

Read and observe all warnings, cautions, and instructions on the generator and in this owner's manual before operating your generator.

**NOTE:** The following safety information is not meant to cover all possible conditions and situations that may occur. Read the entire Owner's Manual for safety and operating instructions. Failure to follow instructions and safety information could result in serious injury or death. This safety alert symbol is used to identify safety information about hazards that can result in personal injury.

A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard. **DANGER** indicates a hazard, which, if not avoided, will result in death or serious injury.

**WARNING** Failure to follow WARNING instructions could result in severe injury or death to the engine operator, a bystander, or a person inspecting or repairing the engine.

**CAUTION** indicates a hazard, which, if not avoided, might result in minor or moderate injury.

**CAUTION** when used without the alert symbol, indicates a situation that could result in damage to the engine or generator.

#### EXHAUST FUMES ARE POISONOUS.



### CARBON MONOXIDE

Using a generator indoors CAN KILL YOU IN MINUTES.

Generator exhaust contains high levels of carbon monoxide (**CO**), a poisonous gas you cannot see or smell. If you can smell the generator exhaust you are breathing **CO**. But even if you cannot smell the exhaust, you could be breathing **CO**.

or it may cause unconsciousness and death within a short time. Operate the engine in a well ventilated area.

**NEVER** operate a generator inside houses, garages, crawlspaces, or other partly 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 if you use a generator correctly, **CO** may leak into the house. **ALWAYS** use a battery-powered or battery-backup **CO** alarm in your house.

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."

### FUEL IS HIGHLY FLAMMABLE AND POISONOUS

WARNING: This generator may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death if ignited. A nearby open flame can lead to explosion even if it isn't directly in contact with gasoline.

- Always turn off the engine when refuelling.Allow generator to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.
- Never refuel while smoking or in the vicinity of an open flame.
- Take care not to spill any fuel on the engine or muffler when refuelling.
- If you swallow any fuel, inhale fuel vapor, or allow any to get in your eyes, see your doctor immediately. If any fuel spills on your skin or clothing, immediately wash with soap and

water and change your clothes.

- When operating or transporting the machine, be sure it is kept upright. If it tilts, fuel may leak from the carburetor or fuel tank.
- Do not operate near open flame.
- Do not smoke near generator.
- Always operate on a firm, level surface.
- Do not overfill fuel tank. Gasoline may expand during operation. Do not fill to the top of the tank. Allow for expansion.
- Always check for spilled fuel before operating.
- Empty fuel tank before storing or transporting the generator.

**WARNING:** This generator produces powerful voltage, which can result in electrocution.

• **ALWAYS** ground the generator before using it (see the "Ground the Generator" portion of the "GENERATOR PREPARATION" section).

• Generator should only be plugged into electrical devices, either directly or with an extension cord. **NEVER** connect to a building electrical system without a qualified electrician. Such connections must comply with local electrical laws and codes. Failure to comply can create a back-feed, which may result in serious injury or death to utility workers.

• Use a ground fault circuit interrupter (GFCI) in highly conductive areas such as metal decking or steel work. GFCIs are available in-line with some extension cords.

- Do not use in rainy conditions.
- Do not touch bare wires or receptacles (outlets).
- Do not allow children or non-qualified persons to operate.

#### ENGINE AND MUFFLER MAY BE HOT



produces heat when running.

- Place the machine in a place where pedestrians or children are not likely to touch the machine.
- Avoid placing any flammable materials near the exhaust outlet during operation.
- Keep the machine at least 1 m (3 ft) from buildings or other equipment, or the engine may overheat.
- Avoid operating the engine with a dust cover.

Temperatures near exhaust can exceed 150°F (65° C).

- Do not touch hot surfaces. Pay attention to warning labels on the generator identifying hot parts of the machine.
- Allow generator to cool down after use before touching engine or areas of the generator that become hot during use.

**CAUTION:** Misuse of this generator can damage it or shorten its life.

- Only use generator for its intended purposes.
- Operate only on dry, level surfaces.
- Allow generator to run for several minutes before connecting electrical devices.
- Shut off and disconnect any

malfunctioning devices from generator.

- Do not exceed the wattage capacity of the generator by plugging in more electrical devices than the unit can handle.
- Do not turn on electrical devices until after they are connected to the generator.
- Turn off all connected electrical devices before stopping the generator.
- Turn the engine switch to "**OFF**" position when the engine is not running.

### IMPORTANT SAFETY INSTRUCTIONS

**SAVE THESE INSTRUCTIONS** - This manual contains important instructions for the AAVIX 3000W inverter generator that should be followed during installation and maintenance of the generator.

Generators vibrate in normal use. During and after the use of the generator, inspect both the generator as well as extension and power supply cords for damage resulting from vibration. Have damaged items repaired or replaced as necessary. Do not use plugs or cords that show signs of damage such as broken or cracked insulation or damaged blades.

For power outages, permanently installed stationary generators are better suited for providing backup power to the home. Even a properly connected portable generator can become overloaded. This may result in overheating or stressing of the components, possibly leading to a generator failure.

### READ INSTRUCTIONS IN OWNER'S GUIDE BEFORE USING CHARGER.

ONLY OPERATE IN WELL-VENTILATED AREA.

EXHAUST GAS CONTAINS POISONOUS CARBON MONOXIDE.

CHECK FOR SPILLED FUEL OR FUEL LEAKS.

STOP ENGINE BEFORE REFUELING. DO NOT OPERATE NEAR FLAMMABLE MATERIALS.

ELECTROCUTION CAN OCCUR IF GENERATOR IS USED IN RAIN, SNOW, OR NEAR WATER.

**KEEP THIS UNIT DRY AT ALL TIMES.** 



Never use it in a wet condition.



### Never directly connect it to a house power system.



### Keep it at least 1m(3ft) away from inflammable.



### Never smoke when fueling.



Don't spill when fueling.



### Stop engine when fueling.

### CONNECTION TO A HOUSE POWER SUPPLY

#### **CONNECTION NOTES**

- Avoid connecting the generator to commercial power outlet.
- Avoid connecting the generator in parallel with any other generator.

WARNING: Before the generator can be connected to a building's electrical system, a licensed electrician must install an isolation (transfer) switch in the building's main fuse box. The switch is the connection point for generator power and allows selection of generator or main line power to the building. This will prevent the generator from charging the main power line (backfeeding) when the main power supply has failed or has been turned off for line repair. Backfeeding can electrocute or injure line maintenance personnel. Also, generator and building electrical system damage can occur when normal operating power returns if unit is used without an isolation switch.

WARNING: If this generator is used as a supply for a building's wiring system as a standby, the generator must be installed by a qualified electrician and connected to a transfer switch as a separately derived system in accordance with the National Electrical Code, NFPA 70. The generator shall be connected to a transfer switch that switches all conductors excluding the equipment grounding conductor. The frame of the generator shall be connected to an approved grounding electrode.

Any improper connection may cause damage to the generator, or cause a fire.

### **EXTENSION CORD NOTES**

• When using an extension cord, its total length should not exceed:

1) 60 meters(196ft) for cross section of 1.5 mm square.

2) 100 meters(328ft) for cross section of 2.5 mm square.

 This extension cord should be protected by a tough flexible rubber sheath (IEC 245) or the equivalent to withstand mechanical stresses.



**CORRECT CONNECTION** 



WRONG CONNECTION

х



#### CORRECT CONNECTION

### **ELECTRIC SHOCK PREVENTION**

- Never operate the engine in rain or snow.
- Never touch the machine with wet hands or electrical shock will occur.
- Be sure to ground (earth) the generator.

#### NOTE:

 Use ground (earth) lead of sufficient current capacity. Ground (earth) Lead Diameter:

0.12 mm (0.005 in)/ampere

EX: 10 Ampere $\rightarrow$ 1.2 mm (0.05 in)

### GENERATOR GROUND CIRCUIT

In order to prevent electric shock due to shoddy electrical appliances or wrong use of electricity, the generator must be grounded with a good-quality insulated conductor.





Make sure the control panel, louver and the inverter bottom side cooling well and without chips, mud and water come in. it may damage the engine, inverter or alternator if the cooling vent blocked.

Do not mix the generator with other stuff. If moving, storing or running the unit, it may cause the generator damage or property safety issue when the generator in leakage.

### **PRODUCT SPECIFICATIONS**

Model	A112003	
	Туре	Inverter
Generator	Rated Frequency (Hz)	60
	Rated Voltage (V)	120
	Rated Output Power (KW)	2.8
	Max Output Power (KW)	3.0
	Power Factor	1.0
	Charging Voltage (DC)(V)	12
	Charging Current (DC)(A)	8
	Overload Protect (DC)	Non-fuse Protector
	USB Port	5V, 1 A&2.1A
	Phase	Single
Engine	Engine Type	Single cylinder, 4-stroke, forced air cooling, OHV
	Displacement (cc)	192
	Fuel Type	Unleaded Gasoline
	Fuel Tank Capacity	3.9 US gallon (15 liters)
	Fuel Consumption (g/KW.h)	≤380
	Continue Running Time	17.5hours (at 1/2 load) 8hours (at rated load)
	Oil Capacity	0.41 quarts (0.45 liters)
	Spark Plug Model No.	F5RTC
	Starting Mode	Recoil Starter
Generator	Length×Width×Height	27.9x17x21inch(710x433x530 mm)
Set	Net weight	110 lbs(50kg)

### **KNOW YOUR GENERATOR**



1	Fuel gauge	5	Air intake
2	Fuel tank cap	6	Recoil starter
3	Draw handle	7	Louver
4	Control panel	8	Muffler

#### Accessories



### **Control Panel**

1

## 9

- **AC receptacle** 1
- **AC protector** 2
- 3 **DC** receptacle
- 4 **USB** Port
- Low oil warning LED (yellow) 12 DC protector 5
- **Economy control switch** 6
- AC pilot LED (green) 7

- 13 12 10 11
  - **Engine switch** 8
  - Ground (earth) terminal 9

5

6

8

- **10** Overload indicator LED (red)
- 11 Fuel cock knob
- - 13 Choke knob

The diagrams and pictograms herewith enclosed in this manual are a guide but not necessarily an exact copy of the actual product.

### **CONTROL FUNCTION**

#### **Engine switch**

The engine switch controls the ignition system.

- 1. **Offr**": Insert the key provided, ignition circuit is switched off. The engine will not run.
- 2. "ON": Ignition circuit is switched on. The engine runs on its position.
- 3. "START": to start the engine.

#### **CAUTION:**

Take your hand off the switch immediately after the engine starts. If the ignition switch is held down in the "Start" position longer 5 seconds, it could damage the starter,

### Oil warning light (Yellow)

When the oil level falls below the lower level, the oil warning light (yellow) comes on and then the engine stops automatically. Unless you refill with oil, the engine will not start again.

**NOTE:** If the engine stalls or does not start, turn the engine switch to "ON" and then pull the recoil starter. If the oil warning light (yellow) flickers for a few seconds, the engine oil is insufficient. Add oil and restart.

### AC pilot light (Green)

The AC pilot light (Green) comes on when the engine starts and produces power.

### **Overload indicator light (Red)**

This light turns ON when the generator is overloaded and will cut power to the receptacles.

### **DC protector**

The DC protector turns to "**OFF**" automatically when electric device being connected to the generator is operating and current above the rated flows. To use this equipment again, turn on DC protector by pressing its button to "**ON**".

- 1. "ON": Direct current is output.
- 2. "OFF": Direct current is not output.



CAUTION:

Reduce the load of the connected electric

device below the specified rated output of the generator if the DC protector turns off. If the DC protector turns off again, stop using the device immediately and consult customer service center.

### **AC Protector**

The AC protector turns off automatically when the AC load exceeds the generator rated output. Press to reset the AC protector.

**CAUTION:** Reduce the load to the specified generator rated output if the AC protector turns off. If it turns off again, consult our service center.

### Economy control switch (ECS) 1. "ON"

When the ESC switch (Black) is turned to "ON", the economy control unit controls the engine speed according to the connected load. The results are better fuel consumption and less noise.

#### 2. "OFF"

When the ECS switch (Black) is turned to"**OFF**", the engine runs at the rated speed 4500r/min regardless of whether there is a load connected or not. **NOTE:** The ECS switch (Black) must be turned to"**OFF**" when using electric devices that require a large starting current, such as a compressor of a submergible pump.



**Fuel tank cap** Remove the fuel tank cap by turning it

#### counterclockwise.

### Fuel Cock Knob

The fuel cock knob is used to supply fuel from the fuel tank to the carburetor.

### Ground (Earth) terminal

Ground (Earth) terminal connects the earth line for prevention of electric shock. When the electric device is earthed, always the generator must be earthed.



### Choke knob

Pull the choke knob to close the choke valve, push to open it. "**Close**": Higher fuel to air ratio. "**Open**": Lower fuel to air ratio.

### GENERATOR PREPARATION

### USING THE GENERATOR FOR THE FIRST TIME



Pre-operation checks should be made each time the

generator is used. The following section describes steps necessary to prepare the generator for use. If after reading this section, you are unsure about how to perform any of the steps please call customer service center. Failure to perform these steps properly can damage the generator or shorten its life.

### Step 1- ADD OIL

The generator is shipped without oil. User

must add the proper amount of oil before operating the generator for the first time. The oil capacity of the engine crankcase is 0.41qts (0.45 liters).

### **Engine Oil Recommendations**

Select good quality detergent oil bearing the American Petroleum Institute (API) service classifications SJ, SL, or SM. (Synthetic oils may be used.) Use the ASE viscosity grade of oil from the following chart that matches the starting temperature anticipated before the next oil changes.Recommended oil:



### To add oil, follow these steps:

1. Make sure the generator is on a level surface. Tilting the generator to assist in filling will cause oil to flow into engine areas and will cause damage. Keep generator level!

2. Loosen the screw and remove the small panel.



3. Unscrew the dipstick from the engine and set aside (Keep it clean).



4. Using a funnel provided, add oil slowly to bring level to full.



- To check the oil level: wipe the dipstick with a clean rag. Insert the dipstick into the oil fill opening without screwing in. Remove the dipstick to check the oil mark.
- 6. Slowly add more oil and repeat step 5 until the oil mark reaches to the top of the dipstick. Do not over fill the crankcase. The generator is equipped with a low oil sensor and will not start if the amount of oil is insufficient.
- 7. Check for oil leaks. Tighten dipstick

firmly before closing the access panel.



### Step 2-ADD GASOLINE

DANGER: This generator may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death if ignited. A nearby open flame can lead to explosion even if not directly in contact with gasoline.

Use fresh (within 30 days from purchase), kead-free gasoline with a minimum of 87 octane rating. Do not mix oil with gasoline.

#### To add gasoline, follow these steps:

1. Make sure the generator is on a level surface.

2. Remove the fuel tank cap and set aside (Keep it clean).

**NOTE:** The fuel cap may be tight and hard to unscrew.

3. Slowly add unleaded gasoline into the fuel tank until fuel indicator in the fuel level gauge moves to the "MAX" from the "MIN".



Be careful not to overfill. The capacity of the fuel tank is 3.9 US gallon.

**NOTE:** Do not fill above the top of the fuel filter. Gasoline will expand and spill

over during use when the fuel warms up even with the fuel cap in place.

- 4. After refueling, make sure the tank cap is tightened securely.
- 5. Wipe up any spilled fuel immediately with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.

### 

Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts.

- Never use an oil/gasoline mixture.
- Never use old gasoline.
- Avoid getting dirt or water into the fuel tank.
- Gasoline can age in the tank and make starting difficult. Never store generator for extended periods of time with fuel in the tank.

NOTE: Fuel deteriorates over time. It may be DIFFICULT to start the engine if you use fuel which has been kept for more than 30 days. Towards the end of the season, it is advisable to put only as much fuel in the tank as you need for each use, since it should be completely used up before storing the product. Empty remaining fuel from the tank and the CARBURETTOR when storing the product for over 30 days.

### Step 3-GROUND (Earth) THE GENERATOR

**WARNING:** Make sure to ground (earth) the generator. Failure to properly ground the generator can result

in electrocution.

Ground the generator by tightening the grounding nut on the front control panel against a grounding wire. A generally acceptable grounding wire is a No. 12 AWG (American Wire Gauge) stranded copper wire. This grounding wire should be connected at the other end to a copper, brass, or steel-grounding rod that is driven into the earth. Wire and grounding rods are not included in generator contents.

Grounding codes can vary by location. Contact a local electrician to check the area codes.



### STARTING THE GENERATOR

Before starting the generator, make sure you have read and performed the steps in the "Generator Preperation" section of this manual. If you are unsure about how to perform any of the steps in this manual please call customer service center.

### NOTE:

The generator can be used with the rated output load at standard atmospheric conditions.

"Standard atmospheric conditions" Ambient temperature 25°C Barometric pressure 100kPa Relative humidity 30% The output of the generator varies due to change temperature, altitude (lower air pressure at higher altitude) and humidity.

The output of the generator is reduced when the temperature, the humidity and the altitude are higher than standard atmospheric conditions.

Additionally, the load must be reduced when using in a confined areas, as generator cooling is affected.



Using a generator indoors CAN KILL YOU IN MINUTES.

Generator exhaust contains carbon monoxide (CO). This is a poison gas you cannot see or smell. If you can smell the generator exhaust, you are breathing CO. Even if you cannot smell the exhaust, you may be breathing CO.

NEVER use a generator inside homes, garages, crawlspaces, or other partly 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 outside and far away from windows, doors, and vents. These openings can pull in generator exhaust. Even if 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 may have carbon monoxide poisoning. **WARNING:** This generator produces powerful voltage, which can result in electrocution.

**ALWAYS** ground the generator before using it (see the "Ground the Generator" portion of the "Generator Preperation" section).

- Generator should only be plugged into electrical devices, either directly or with an extension cord. NEVER connect to a building electrical system without a qualified electrician. Such connections must comply with local electrical laws and codes. Failure to comply can create a back-feed, which may result in serious injury or death to utility workers.
- Use a ground fault circuit interrupter (GFCI) in highly conductive areas such as metal decking or steel work. GFCIs are available in-line with some extension cords.
- Do not use in rainy or wet conditions.
- Do not touch bare wires or receptacles (outlets).
- Do not allow children or non-qualified persons to operate.

**CAUTION:** Disconnect all electrical loads from the generator before attempting to start.

### STARTING THE ENGINE

 Unplug all electrical devices from the generator during starting. Otherwise it can be difficult for the engine to start.



- Check that the generator is properly grounded (Refer to "Ground the Generator").
- 3. Check the oil and fuel levels.
- 4. Turn the ECS switch (Black) to "**OFF**" position.



5. Turn the engine switch (Red) to "**OFF**" position.



6. Pull the choke knob fully out.

**WARNING:** The choke is not required to start a warm engine. Press the choke knob full in.



### 7. Turn the fuel cock knob to "**ON**" position.



8. Pull slowly on the recoil starter until it is engaged, then pull it briskly.

**NOTE:** Grasp the carrying handle firmly to prevent the generator from falling over when pulling the recoil starter.



- After the engine starts, warm up the engine until the engine does not stop. when press the choke knob full in.
- 10. Push the choke knob fully in.



11. Allow the generator to run for several minutes before attempting to connect any electrical devices. This allows the generator to stabilize its speed and temperature.

### NOTE:

When starting the engine in areas where the ambient temperature is below 0°C (32°F), the engine automatically operates at the rated r/min (2800 r/min) for 5 minutes to warm up the engine regardless of the economy control switch position. The economy control unit operates normally afterwards if the economy control switch is turned to "ON" position.

- In ambient temperature below 0°C(32°F), the engine will run at the rated speed (2800r/min) for 5 minutes to warm up the engine.
- In ambient temperature below  $5^{\circ}C(41^{\circ}F)$ , the engine will run at the speed (2800r/min) for 3 minutes to warm

up the engine.

 The ESC unit operates normally after the above time period, while the ECS switch (Black) is "ON" position.

### ECONOMY CONTROL SWITCH

This generator is equipped with an Economy Control Switch. Engaging the switch will automatically adjust the engine speed to match the load at hand. When an electrical device comes on line, the generator engine will automatically speed up to supply the power needed and will slow down as the need decreases. The variable engine speed can reduce fuel consumption and noise level. When the economy swich is off, the engine runs at normal speed continuously.

### STOPPING THE GENERATOR

### To Stop The Generator

1. Turn off any electric devices prior to unplugging them from the generator.

**NOTE:** Unplugging running devices can cause damage to the generator

2. Turn the economy control switch (Black) to the **OFF** position.



2. Disconnect any electric devices.



3. Turn the engine switch to <sup>(C)</sup> "**OFF**" **position**.



4. Turn the fuel cock knob to "OFF".



**WARNING:** Allow the generator to cool for several minutes before touching areas that become hot during use.

**CAUTION:** Allowing gasoline to sit in the fuel tank and carburettor for more than 30 days can make it difficult to start the generator in the future. Drain off the gasoline, refering to generator "Generator Storage" section.

### SUBSEQUENT STARTING OF

### THE GENERATOR

### PRE-OPERATION CHECK NOTE:

Pre-operation checks should be made each time the generator is used.

The engine and muffler will be very hot after the engine has been run. Avoid touching the engine and muffler while they are still hot with any part of

your body or clothing during inspection or repair.



If any item in the Pre-operation check is not working properly, have it inspected and repaired before operating the generator.

The condition of a generator is the owner's responsibility. Vital components can start to deteriorate quickly and unexpectedly, even if the generator unused.



the user should be familiar with the procedures described in the section titled "Using the Generator for the First Time." If the user has not yet read this section, go back and read it now.

If this is not the first time using the generator, the user should take the following steps to prepare it for operation.

### Step 1 - CHECK THE OIL

Oil consumption is normal during generator use. The generator is equipped with a low oil pressure shutoff to protect it from damage. The oil level of the engine should be checked before each use to ensure that the engine crankcase contains sufficient lubricant.

#### To check or add oil, follow these steps:

1. Place the generator on a level surface.

- 2. Open access panel. Clean around oil fill hole. Remove dipstick and wipe the dipstick with a clean rag. Insert the dipstick into the oil fill opening without screwing in. Remove the dipstick to check the oil mark. Add recommended oil if the oil mark covers less than specified level.
- 3. Slowly add more oil until the oil mark reaches to the top of dipstick. Do not over fill the crankcase.

4. Tighten dipstick firmly, then reinstall small panel before starting the engine.

5. Check generator for oil leakage.

### The point where abnormality was recognized by use.

 6. Check operation. If necessary, add recommended oil to specified level.
 7. If necessary, consult our company authorized dealer.

### Step 2 - CHECK THE FUEL LEVEL

Before starting the generator, check to see that there is sufficient gasoline in the fuel tank. Add additional gasoline as necessary but leave sufficient room in tank for expansion.

WARNING: This generator may emit highly flammable and explosive gasoline vapors, which can cause severe bums or even death if ignited. A nearby open flame can lead to explosion even if not direcdy in contact with fuel.

- Do not operate near open flame.
- Do not smoke near generator.
- Always operate on a firm, level surface.
- Always turn generator off before refueling. Allow generator to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.
- Do not overfill fuel tank. Gasoline may expand during operation. Do not fill to the top of the tank. Allow for expansion.
- Always check for spilled fuel before operating. Clean up any spilled fuel before starting.
- Empty fuel tank before storing or transporting the generator.
- Before transporting, turn fuel the air vent knob to **OFF** position.



- Use only **UNLEADED** gasoline.
- Do not use old gasoline.
- Never use an oil / gasoline mixture.
- Avoid getting dirt or water into the fuel tank.

### Step 3 - GROUND THE GENERATOR

**WARNING:** Failure to properly ground the generator can result in electrocution.

Ground the generator by tightening the grounding nut on the front control panel against a grounding wire. A generally acceptable grounding wire is a No. 12 AWG (American Wire Gauge) stranded copper wire. This grounding wire should be connected at the other end to a copper, brass, or steel-grounding rod that is driven into the earth. Wire and grounding rod are not included in generator contents.

Grounding codes can vary by location. Contact a local electrician for area codes.

# USING THE

WARNING: When this generator is used on a building's wiring system, the generator must be installed by a qualified electrician and connected to a transfer switch as a separately derived system in accordance with the National Electrical Code, NFPA 70. The generator shall be connected to a transfer switch that switches all conductors other than the equipment grounding conductor. The frame of the generator shall be connected to an approved grounding electrode.

For power outages, permanently installed stationary generators are better suited for providing backup power to the home. Even a properly connected portable generator can become overloaded. This may result in overheating or stressing the machine's components, possibly leading to a generator failure.

Before connecting electrical devices, allow the generator to run for a few

minutes to stabilize the speed and voltage output.

CAUTION: Become familiar with the markings on the panel before connecting electrical devices. Connect electrical devices running on AC current according to their wattage requirements. The chart shows the rated and surge wattage of the generator.

The rated (running) wattage is the wattage the generator can produce on a continuous basis.

The surge wattage is the maximum amount of power the generator can produce for an extremely short period of time (seconds). Many electrical devices such as refrigerators require short bursts of extra power in addition to the rated wattage listed by the device to start their motors. The surge wattage ability of the generator covers this extra power requirement.

ltem	Rated (Running) Wattage	Surge Wattage
A112003	2800	3000

### **Generator Wattage**

The total running wattage requirement of the electrical devices connected to the generator should not exceed the rated wattage of the generator itself. To calculate the total wattage requirement of the electrical devices you plan to connect, find the rated (or running) wattage of each device. This number should be listed somewhere on the device or in its instruction manual. If this wattage cannot be found, calculate it by multiplying the Voltage requirement by the Amperage drawn:

#### Watts = Volts x Amperes

When the rated wattage requirement of each electrical device has been determined, add these numbers to find the total rated wattage needed. If this number exceeds the rated wattage of the generator, **DO NOT** connect all these devices. Select a combination of electrical devices, which have a total rated wattage lower than or equal to the rated wattage of the generator.

**CAUTION:** The generator can run at its surge wattage capacity for only a short time. Connect electrical devices requiring a rated (running) wattage equal to or less than the rated wattage of the generator. Never connect devices requiring a rated wattage equal to the surge wattage of the generator. This can trip the circuit protectors (circuit breakers).

**NOTE**: Check the wattage on the electrical device. Once the electrical devices that will be powered by the generator have been determined, connect these devices according to the following procedure:

- 1. Plug in each electrical device, making sure that the device is turned off.
- 2. Check the overload light and power

indicator light. If the overload light (RED) is on and the inner electronic breaker cut power to the receptacles. To recover the power, shut down the engine, wait until the light turns off, disconnect the plugs and restart the generator. If the inner electronic breaker does not reset, wait several minutes and try again. (The manual AC overload protector could turn off, press to reset it). If the power light still does not come on, call the customer service number for further instructions.

**CAUTION:** Do not connect 50Hz loads to the generator.

### SOME NOTES ABOUT POWER

Long or thin cords can drain the power provided to an electrical device by the generator. When using such cords, allow for a slightly higher rated wattage requirement by the electrical device. See Table 1 for recommended cords based on the power requirement of the electrical device.

TABLE 1						
Device Requir ement s	Amps	2.5	5	7.5	10	15
	Watts (120V)	300	600	900	1200	1800
Max.	#8 wire	NR	NR	NR	NR	NR
Cord	#10 wire	NR	NR	350	250	150
h (ft) by	#12 wire	NR	300	200	150	100
Wire Gauge	#14 wire	375	200	125	100	65
	#16 wire	250	125	100	50	NR

\*NR = Not Recommended

- Maximum Extension Cord Lengths by Power Requirement.

If an overload occurs, shut down the generator. Unplug all electrical devices and wait five minutes. Then, start the unit back up again to get power back.

### APPLICATION RANGE

When using the generator, make sure the total load is within rated output of a generator. Otherwise, generator damage may occur.

AC	Power factor	Rated output power
	1	≤2,800W
	0.8-0.95	≤2,240W
۲ <u>ا</u>	0.4-0.75 (Efficiency 0.85)	≤950W
DC D		Rated
		voltage 12V
● ↔		Rated
		current 8A

### NOTE:

• Application wattage indicates when each device is used by itself.

• The simultaneous usage of AC and DC power is possible but total wattage should not exceed the rated output.

#### EXAMPLE:

Generator ra	2,800W	
Frequency	Power	
factor		
AC	1.0	≤2,700W
0.8		≤2,140W
DC		96W(12V/8A)

The overload indicator light (Red) comes

on when total wattage exceeds the application range. (See "CONTROL FUNCTION" section for more details.)



**CAUTION:** Be sure the total load is within generator rated output otherwise generator damage will occur.

### NOTE:

- Some precision equipment is voltage sensitive and may require a more uniform voltage supply than portable generators provide. Examples include some medical equipment, electronic controllers, PC, Electronic computers, microcomputer based equipment or battery chargers, and some inverters that sense peak and RMS voltage values. Consult the precision equipment vendor before relying on any portable generator to provide power to such equipment.
- If the generator is to supply medical equipment, advice should first be obtained from the manufacturer, a medical professional or hospital.
- Some electrical appliances or general-purpose electric motors have High starting currents, and cannot therefore be used, even if they lie within the supply ranges given in the above table. Consult the equipment manufacturer for further advice.

### ALTERNATING CURRENT **CONNECTION**

**NOTE:** Make sure to ground (Earth) the generator. When the electric device is earthed, always the generator must be earthed.



**CAUTION:** 

- Be sure all electric devices including the lines and plug connections are in good condition before connection to the generator.
- Be sure any electric devices are turned off before plugging it in.
- Be sure the total load is within generator rated output.
- Be sure the receptacle load current is within receptacle rated current.
- 1. Wind the power lead 2 or 3 turns around handle.



- 2. Start the engine.
- 3. Allow the generator to run for several minutes before attempting to connect any electrical devices.
- 4. Plug in to the AC receptacle.
- 5. Make sure the AC pilot light is on.
- 6. Turn the economy control switch to the "ON" position and turn on any electric devices.



### NOTE:

The economy control switch must be turned to "OFF" when using electric devices that require a large starting current, such as a compressor or a submergible pump.

### **Overload indicator light (Red)**

The overload indicator light (Red) comes on when an overload of a connected electrical device is detected, the inverter control unit overheats, or the AC output voltage rises. Then, the electronic breaker will activate, stopping power generation in order to protect the generator and any connected electric devices. The AC pilot light (green) will go off and the overload indicator light (red) will stay on, but the engine will not stop running.When the overload indicator light (Red) comes on and power generation stops,proceed as follows:

- 1. Turn **off** any connected electric devices and stop the engine.
- 2. Reduce the total wattage of connected electric devices within the application range.
- 3. Check for blockages in the cooling air inlet and around the control unit. If any blockages are found, remove it.
- Check the AC overload protector.
   When it turns off, press to reset it.
   Otherwise, it's not necessary to reset it.



5. After checking, restart the engine. **NOTE:** 

- The generator AC output automatically resets when the engine is stopped and then restarted.
- The overload indicator light (Red) may come on for a few seconds at first when using electric devices that require a large starting current, such

as a compressor or a submergible pump. However, this is not a malfunction.

 The ECS switch (Black) must be turned to "OFF" to increase engine speed to rated rpm. If the generator is connected to multiple loads or electricity consumers, please remember to first connect the one with the highest starting current, and last connect the one with the lowest starting current.

### **12V DC OUTLET**

The 12V DC outlet can be used with the supplied charge cable and USB charger and other commercially available 12V DC automotive style plugs. The DC output is unregulated and can damage some products. Confirm your accessory input voltage is at 12V DC. When using the DC outlet turn the Economy Control Switch to the "OFF" position.

**WARNING:** Do not operate a device while it is plugged in to the 12V DC.

### Battery charging



- Be sure the battery leads are properly connected
- Be sure the breather hose is properly connected and is not damaged or obstructed.
- At full charge, electrolyte specific gravity is between 1.26 and 1.28.
- Check specific gravity hourly.
- 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.** 

• Charge the battery in the correct procedure by following instructions in the owner's manual for the battery.

1. Wind the battery charging lead (furnished as an accessory) 2 or 3 turns around the handle and plug into DC receptacle.



2. Start the engine. Turn the ECS switch (Black) "**OFF**".



3. Make sure that the DC protector is turned on.



4. 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.
- The DC protector turns off automatically if current above the rated flows during

battery charging. Beforing restarting to charge the battery, press to resetthe DC protector. If the DC protector turns off again, stop charging the battery immediately and consult our service center.

5. Disconnect the plug from the receptacle, and remove the charge lead after fully charged.

### MAINTENANCE

Regular maintenance is most important for best performance and safe operation.



WARNING: Stop the engine before starting maintenance

work. Proper routine maintenance of the generator will help prolong the life of the

machine and trouble-free, as well as eco-friendly.

If there are any questions about the maintenance procedures listed in this manual, please call our service center.

### Recommended maintenance schedule as below.

lte	ms Frequency	Pre-Op- eration check (daily)	First 8 hours	Every 25 hours	Every 3 months or 50 hours	Every 6 months or 100 hours	Every year	As neces- sary
Engine oil	Check-level	V						
Engine oli	Replace		V	√*		V		√*
Air filter	Check/Clean/Replace	V			V			٧*
Spark plug	Check/clean/Adjust gap				V			٧*
Fuel tank &	Check-refill	V						٧*
fuel filter**	Clean					V		
Fuel line	Check fuel hose for crack or damage	V						٧*
Choke knob	Check choke operation	V						
Valve clearance* *	Check-adjust When engine is cold						V	
Decarboniz	More frequently							٧*

ation							
Fittings/	Check all fittings and					V	
Fasteners	fasteners correct if						
	necessary						
Idle	Check/adjust engine					V	
speed**	idle speed						
Crankcase	Check breather hose					V	
breather	for cracks or damage						٧*
system**							
Muffler	Check /Clean/replace						./*
screen**							V
Cylinder	Clean up	<225cc, 6	every 1	25hrs			
head, piston	Carbon **	$\geq$ 225cc, every 250hrs					

\*\* The installation and major repair work shall be carried out only by our authorized dealer or other specifically trained personnel.

\* Clean/change more often under dusty conditions or operating under heavy load.



• If the gasoline engine frequently works under high temperature or heavy load, change the oil every 25 hours.

• If the engine frequently work under dusty or other severe circumstances, clean the air filter element every 10 hours; If necessary, change the air filter element every 25 hours.

• The maintenance period and the exact time (hour), the one which comes first should govern.

• If you have missed the scheduled time to maintain your engine, do it as soon as possible.



Stop the engine before servicing. Put the engine on a level surface and remove the spark plug cap to prevent the engine from starting. Do not operate the engine in a poorly ventilated room or other enclosed area. Be sure to keep good ventilation in working area. The exhaust from the engine may contain poisonous CO, inhalation can cause shock, unconsciousness and even death.

### **CLEANING THE GENERATOR**

Never clean the generator when it is running! Never clean with a bucket of water or a hose. Water can get inside the working parts of the generator and cause a short circuit or corrosion.

Always try to use the generator in a cool, dry place. If the generator becomes dirty, clean the exterior with a damp cloth, a soft brush, a vacuum or pressurized air.

### CHECKING THE OIL

Check the oil level of the generator according to the Recommended Maintenance Schedule above. The generator is equipped with an automatic shutoff to protect it from running on low oil. The generator should be checked before each use for proper oil level. This is a critical step for proper engine starting. To check the oil level:

- 1. Make sure the generator is on a level surface.
- 2. Open access panel. Clean around oil fill. Remove dipstick and wipe the dipstick with a clean rag. Insert the dipstick into the oil fill opening without screwing in. Remove the dipstick to check the oil mark. Add oil if the oil mark covers less than one half of the dipstick.
- 3. Slowly add more oil and repeat step 2 until the oil mark reaches to the top of dipstick . Do not over fill the crankcase.



4. Reinstall oil dipstick and access panel.

### **CHANGING/ADDING OIL**

Avoid draining the engine oil immediately after stopping the engine. The oil is hot and should be handled with care to avoid burns.

Change the oil according to the Recommended Maintenance Schedule above. Change the oil when the engine is warm. This will allow for complete drainage. Change oil more often if operating under heavy load or high ambient temperatures. It is also necessary to drain the oil from the crankcase if it has become contaminated with water or dirt. The oil capacity of the generator engine is 0.41 qts. Add oil when the oil level is low. For proper type and weight of oil refer to "add oil" portion of the "Generator Preparation" section.

#### Step 1: drain the engine oil

- Place the machine on a level surface and warm up the engine for several minutes. Prepare a used-oil pan and socket wrench in advance.
- 2. Then stop the engine.
- Tilt the generator so the used-oil pan could be placed under the oil drain position and a socket wrench could be put inside to release the oil drain screw.



- Replace the generator on a level surface, so that the oil can be completely drained. Keep generator level!
- 5. Check the oil drain screw. If damaged, replace.
- 6. Retighten the oil drain screw.

Drain Screw Torque: 17 N.m (1.7 kgf.m, 12 lbf.ft).

- 7. Check for any oil leaks round the oil drain screw.
- 8. Clean any oil spillage round the oil drain screw.

**CAUTION:** Never dispose of used motor oil in the trash or down a drain. Please call a local recycling center or auto garage to arrange oil disposal.

### Step 2 refill engine oil



Do not tilt the generator when adding engine oil. Tilting the generator to assist in filling will cause oil to flow into engine areas and will cause damage. Keep generator level!

Refer to the "ADD OIL" in the "Generator Preparation".

### SPARK PLUG INSPECTION



- 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.

You should periodically remove and inspect the spark plug.

The spark plug is important for proper engine operation, which should be checked periodically.

A good spark plug should be intact, free of deposits, and properly gapped. Refer to Recommended Maintenance Schedule above. To inspect the spark plug:

1. Loosen bolts and the access panel.



- 2. Remove spark plug boot. Be careful not to tear insulation or wire.
- Unscrew the spark plug counterclockwise from the engine by the spark plug wrench provided. There is limited space for the wrench to turn. Use both rows of holes in the spark plug wrench to gain leverage to loosen the plug.

### Spark plug wrench



- 4. Visually inspect the spark plug for cracks or excessive electrode wear.
  Replace as necessary.Remove the carbon. The porcelain insulator around the center standard electrode of spark plug should be a medium-to-light tan color.
- 5. Measure the plug gap with a wire thickness gauge. The gap should be 0.6-0.7 mm (0.024-0.028 in).



- 6. If re-using the spark plug, use a wire brush to clean any dirt from around the spark plug base then re-gap the spark plug.
- 7. Screw the spark plug back into the spark plug hole using the spark plug wrench. Do not over-tighten spark plug. Recommended tightening of spark plug is 1/2 to 3/4 of a turn after spark plug gasket contacts spark plug hole.

Spark Plug Torque: 17.5 N\*m

(1.75kgf\*m, 13 lbf\*ft)

**NOTE:** If a torque wrench is not available when installing a spark plug, a good estimate of the correct torque is 1/4-1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

- 8. Reinstall the spark plug boot and spark plug cover.
- 9. Reinstall the access panel and tighten the bolts.
- 1) put the screw #1 & 4 in the access panel, but donot tighten it fully.
- 2) put the screw #3 & 6 in the access panel, but donot tighten it fully.
- 3) put the screw #2 & 5 in the access panel, but donot tighten it fully.



4) tighten all screws well

### CARBURETOR ADJUSTMENT



The carburetor is a vital part of the engine. Adjusting should be left to our company authorized dealer with the professional knowledge, specialized date, and equipment to do so properly.

### AIR FILTER

Routine maintenance of the air cleaner helps maintain proper airflow to the carburetor. Occasionally check that the air cleaner is free of excessive dirt. Refer to Recommended Maintenance Schedule above.

**CAUTION:** running the engine with dirty, damaged or missing air cleaner element will cause the engine to wear out prematurely.

1. Loosen the screws, and remove the access panel.



**2.** Remove the clip holding the air filter cover ①. Take out the air filter cover and foam element ②.





#### AIR FILTER FOAM

- 3. Remove the foam from air filter.
- 4. Check and clean the air filter, replace with a new one if the element is damaged.
- 5. Good air filter can be washed in soapy water, dried and reused.



Do not wring out the foam element when squeezing it. This could cause it to tear.

- 6. Oil the foam and squeeze out excess oil. It should be wet but not dripping.
- 7. Wipe off excessive oil from the air cleaner case. Small amount of oil in the element is normal and necessary for the engine to work properly.



- 8. Reinstall the air filter element, replace the air filter cover in its original position.
- 9. Reinstall the access panel and tighten the screw.
- 1) put the screw #1 & 4 in the access panel, but donot tighten it fully.
- 2) put the screw #3 & 6 in the access panel, but donot tighten it fully.
- put the screw #2 & 5 in the access panel, but donot tighten it fully.



4) tighten all screws well



- Be sure the foam element sealing surface to match the air filter case, so there is no air leak.
- The engine should never run without the element; excessive piston and cylinder wear may result.
- Never use solvent while smoking or in the vicinity of an open flame.
- Running the engine with dirty, damaged or missing air cleaner element will cause the engine to wear out prematurely.

### MUFFLER SCREEN AND SPARK ARRESTER



WARNING: The engine and muffler will be very hot after

the engine has been run. Avoid touching the engine and muffler while they are still hot with any part of your body or clothing during inspection or repair.

1. Remove the screws 1 8pcs, and then pull outward on the areas of the



2. Loosen the bolt ③ and then remove the muffler cap ④, the muffler screen ⑤.



3. Use a flathead screw driver to pry the spark arrester out from the muffler. Remove the spark arrester.



4. Remove the carbon deposits on the muffler screen and spark arrester using a wire brush.



When cleaning, use the wire brush lightly

to avoid damaging or scratching of muffler screen and spark arrester.



- 5. Check the muffler screen and spark arrester. Replace them if damaged.
- 6. Reinstall the spark arrester and muffler screen and the muffler cap.
- 7. Reinstall the cover and tighten the screws.

### FUEL TANK FILTER

### 

Never use the gasoline while smoking or in the vicinity of an open flame.

- 1. Remove the fuel tank cap and filter.
- 2. Clean the filter with gasoline.
- 3. Wipe the filter and install it.
- 4. Retighten the fuel tank cap.

**NOTE:** Be sure the fuel tank cap is tightened securely.



### STORAGE

To store the machine for more than 30 days will require some preventive procedures to guard against deterioration.

### DRAINING THE FUEL TANK

Clean fuel tank each year or before storing the generator for extended periods of time. To drain the fuel tank and carburetor:

- 1. Turn the engine switch to  $\circlearrowright$  "OFF".
- 2. Remove the fuel tank cap, remove the filter.
- 3. Drain the fuel from the fuek tank into an approved gasoline container using a commercially available hand siphon.



4. Once fuel is drained, reinstall the fuel cap.



Fuel is highly flammable and poisonous. see "SAFETY INFORMATION" section carefully.



Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.

5. Remove the six screws, and then

remove the access panel 2.



6. Insert the fuel drain hose of the carburettor into the fuel container.7. Drain the fuel from the carburettor by loosening the drain screw on the carburetor float chamber.



- 8. Retighten the drain screw.
- 9. Turn the engine switch to  $\circ$  "**OFF**".
- 10. Reinstall the access panel following below.
- 1) put the screw #1 & 4 in the access panel, but donot tighten it fully.
- 2) put the screw #3 & 6 in the access panel, but donot tighten it fully.
- 3) put the screw #2 & 5 in the access panel, but donot tighten it fully.



- 4) tighten all screws well
- 11. Start generator without any device connected to it until it stops. This burns out the any fuel in the carburetor.

### 

- Do not connect with any electrical devices.
- Duration of the running engine depends on the amount of the fuel left in the tank.

### NOTE:

Slightly tight the screw at first. Do not tight the screws too firmly.Until all screwed into, and then tightened firmly.12. Store the emptied gasoline in a suitable place.

## **CAUTION:** Do not store fuel for more than 3 months.

### DRAIN THE ENGINE OIL

Refer to the "CHANGING/ADDING OIL" in the "MAINTENANCE"

### ENGINE

 Remove the spark plug, pour about one table- spoon of SAE 10W30 or 20W40 motor oil into the spark plug hole and reinstall the spark plug.

- Pull the Choke knob to out
   OFF position. Recoil start the engine by turning over several times (with ignition off) to coat the cylinder walls with oil.
- 3. Pull the recoil starter until you feel compression. Then stop pulling. (This prevents the cylinder and valves from rusting).
- 4. Clean exterior of the generator.
- 5. Store the generator in a cool,dry, well-wentilated place, with the cover placed over it.
- 6. Do not obstruct any ventilation openings.
- 7. The generator must remain in a vertical position when stored, carried or operated.
- 8. If the generator is being stored for short periods of time (within 30 days), add stabilized fuel to the fuel tank until full.
  - **NOTE:** Filling the tank reduces the amount of air in the tank and helps reduce deterioration of fuel. Run the engine for 2-3 minutes allowing stabilized fuel mixture to circulate through the carburetor.
- 9. In order to prevent corrosion, please coat antirust oil on all screw, at least once half one year.

### CAUTION:

• Never place any type of storage cover on the generator while it is still hot.

### TRANSPORTATION

- Keep the generator upright. Never place the generator side down. Doing so will make it difficult to start.
- Tighten fuel cap. Drain the fuel tank if possible (see "Drain the Fuel Tank").

### TROUBLESHOOTING

**IMPORTANT:** If trouble persists, please call our customer service center.

Problem	Cause	Solution
	Engine switch in " <b>OFF</b> " position	Set engine switch to <b>"ON"</b> position.
	Fuel cock knob in " <b>OFF</b> " position	Set Fuel cock knob to <b>"ON"</b> position.
	Pull the Choke knob fully out when warm start	Press the choke knob full in
	Engine is filled with contaminated or old fuel	Change the fuel in the tank.
	Not enough oil in crankcase	Add or replace engine oil.
Spark plug is dirty or wSpark plug is broken.Generator is not on lev surfaceEngine will not startGenerator was tilted w	Spark plug is dirty or wet	Remove carbon or wipe spark plug dry.
	Spark plug is broken.	Replace spark plug.
	Generator is not on level surface	Move generator to a level surface to prevent low oil shutdown from triggering.
	Engine needs maintenance	Get a professional engine tune-up at an authorized small engine repair shop
	Generator was tilted when	Remove spark plugs, turn <b>off</b> engine switch then
	adding oil, or shipped	pull recoil starter four times to remove oil from
	side-down	the combustion chamber.
	Worn out piston and cylinder	Consult our customer service center
	Loose cylinder head nuts	Tighten nuts properly.
	Damaged gasket	Replace gasket
	Fuel systems: No fuel supplie	d to combustion chamber
	1.No fuel in tank	Refuel
	2.Clogged fuel line	Clean fuel line
	3.Clogged carburetor	Clean carburetor
	4. Air filter is dirty.	Clean or replace air filter.
	5.Faulty ignition system	Consult service center
Engine	Not enough oil in crankcase	Add or change oil
stops	Engine is out of fuel	Add fuel.

Blue smoke in exhaust	Generator inclined, oil entered combustion	Move generator to a level position
	Too much oil was added to the crankcase.	Drain excessive oil.
Generator	Bad connecting wires/cables.	If using an extension cord, try a different one.
runs but does not support all electrical devices connected.	Bad electrical device connected to generator.	Try connecting a different device
	Generator is overloaded, Overload light is on	Perform these steps: 1. Turn <b>off</b> all electrical devices. 2. Unplug all electrical devices. 3. Shut down the engine. 4. Wait several minutes and then start the engine. 5. Try connecting fewer electrical loads to the generator.
	Short in one of the connected devices.	Try disconnecting any faulty or short-circuited electrical loads.
Generator does not produce power	Safety device (DC protector) to " <b>OFF</b> "	Press the DC protector to " <b>ON</b> "
	The AC pilot light (Green) go <b>off</b>	Stop the engine, then restart

### WIRING DIAGRAM



### A112003 EXPLODED VIEW AND PART LIST

FIG.1 Co	ontrol Panel				
$\begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$					
Refe#	Description	Qty/pc	Stock#		
1-1	tapping screw-fuel switch rod	6	A112003-1-1		
1-2	cross screw M4X14	8	A112003-1-2		
1-3	stop switch(black), smart switch	1	A112003-1-3		
1-4	pilot light	3	A112003-1-4		
1-5	earth point	2	A112003-1-5		
1-6	panel	1	A112003-1-6		
1-7	30A socket	1	A112003-1-7		
1-8	20A socket	1	A112003-1-8		
1-9	30A AC protector	1	A112003-1-9		
1-10	20A AC protector	1	A112003-1-10		
1-11	DC protector	1	A112003-1-11		
1-12	USB Voltage stabilizer	8	A112003-1-12		
1-13	USB port	1	A112003-1-13		
1-14	side cover	2	A112003-1-14		
1-15	M4 tapping screw	8	A112003-1-15		
1-16	fuel switch	1	A112003-1-16		
1-17	fuel pipe	2	A112003-1-17		
1-18	cross screw M5X20	1	A112003-1-18		
1-19	panel housing	1	A112003-1-19		
1-20	cross screw M6X30	4	A112003-1-20		

FIG.2 Muffler Cover				
$\begin{array}{c} 12 \\ 12 \\ 6 \\ 4 \\ 7 \\ 8 \\ 9 \\ 9 \\ 9 \\ 8 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 2 \\ 2 \\ 1 \\ 1 \\ 2 \\ 2$				
Refe#	Description	Qty/pc	Stock#	
2-1	M3 Tapping Screw	2	A112003-2-1	
2-2	M4 Tapping Screw	12	A112003-2-2	
2-3	Muffler Cover	1	A112003-2-3	
2-4	Wheel	2	A112003-2-4	
2-5	Cross Screw M6X30	4	A112003-2-5	
2-6	M10x70 Flange Bolt	2	A112003-2-6	
2-7	Bushing	2	A112003-2-7	
2-8	Wheel Support	2	A112003-2-8	
2-9	Hexagonal Nut M10	2	A112003-2-9	
2-10	Muffler Housing	1	A112003-2-10	
2-11	Side Cover	2	A112003-2-11	
2-12	Hexagonal Flange Bolt	2	A112003-2-12	

### 

FIG.3 Frame Cover Parts			
FIG.3 Frame Cover Parts			
Refe#	Description	Qty/pc	Stock#
3-1	Flange Bolt M6X45	2	A112003-3-1
3-2	Gel	1	A112003-3-2
3-3	Groud Foot	2	A112003-3-3
3-4	Bottom Cover	1	A112003-3-4
3-5	Flange Nut M8	4	A112003-3-5
3-6	Shock Absorption Base	2	A112003-3-6
3-7	Shock Absorption Foot	4	A112003-3-7
3-8	Hexagonal Flange Bolt	51	A112003-3-8
3-9	Limit Speed Part	1	A112003-3-9
3-10	Support Frame	1	A112003-3-10
3-11	Inverter Board	1	A112003-3-11
3-12	Hexagonal Flange Bolt M6x25	4	A112003-3-12
3-16	Choke Line	1	A112003-3-16
3-17	Relay	1	A112003-3-17
3-18	Bridge Rectifiers	1	A112003-3-18
3-19	Cross Screw M5X20	1	A112003-3-19
3-20	Cross Bolt M4x14	8	A112003-3-20
3-21	Bushing	4	A112003-3-21
3-22	Long Handel	1	A112003-3-22
3-23	Short Handel	1	A112003-3-23

3-24	Left Panel	1	A112003-3-24
3-25	Tank Support Base	2	A112003-3-25
3-26	Rear Panel	1	A112003-3-26
3-27	Oil Panel	1	A112003-3-27
3-28	Front Panel	1	A112003-3-28
3-29	Push Handel Part	1	A112003-3-29
3-30	Push Handel Box	1	A112003-3-30
3-31	Right Panel	1	A112003-3-31
3-32	Top Cover	1	A112003-3-32
3-33	Tank Mouth Rubber	1	A112003-3-33
3-34	Mirror	1	A112003-3-34
3-1	Flange Bolt M6X45	2	A112003-3-1
3-2	Gel	1	A112003-3-2
3-3	Groud Foot	2	A112003-3-3

### FIG.4 Fuel Tank Components



Refe#	Description	Qty/pc	Stock#
4-1	Carbon Tin	1	A112003-4-1
4-2	Fuel Pipe 810mm	1	A112003-4-2
4-3	Fuel Pipe 230 Mm	1	A112003-4-3
4-4	One-Way Valve	1	A112003-4-4
4-5	Tank	1	A112003-4-5
4-6	Fuel Level Gauge	1	A112003-4-6
4-7	Fuel Filter	1	A112003-4-7
4-8	Сар	1	A112003-4-8

4-9	11# Rubber Parts	4	A112003-4-9
4-10	Bushing Ф9.1ХФ7Х7.1	4	A112003-4-10
4-11	Shim Ф18ХФ6.5Х1	4	A112003-4-11
4-12	Flange Bolt M6x12	4	A112003-4-12
4-13	Cross Screw M4X14	2	A112003-4-13

#### FIG.5 Motor Components



Refe#	Description	Qty/pc	Stock#
5-1	Tapping Crew	8	A112003-5-1
5-2	Hexagonal Flange Bolt M6x12	3	A112003-5-2
5-3	Fan	1	A112003-5-3
5-4	Hexagonal Flange Nut M14	1	A112003-5-4
5-5	Stator	1	A112003-5-5
5-6	Hexagonal Flange Bolt M6x 55	4	A112003-5-6
5-7	Rotor	1	A112003-5-7
5-8	Flange Nut M6 X 18	4	A112003-5-8
5-9	Alternator Cover	1	A112003-5-9
5-10	Clamping Nut	1	A112003-5-10
5-11	Hexagonal Nut M8	2	A112003-5-11
5-12	Muffler	1	A112003-5-12
5-13	Muffler Cover	1	A112003-5-13
5-14	Hexagonal Flange Bolt M8x35	4	A112003-5-14
5-15	Engine Base	1	A112003-5-15
5-16	Flange Nut M8	4	A112003-5-16
5-17	PinФ10X15	4	A112003-5-17
5-18	Engine	1	A112003-5-18

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