

# **GASOLINE GENERATOR SET**

## **SPG8000**



## **PORTABLE GENERATOR INSTRUCTION MANUAL**

### **IMPORTANT!**

**Please make certain that persons who are to use this equipment thoroughly read and understand these instructions and any additional instructions provided prior to operation.**

# WARNING

The generator is a potential source of electrical shock if misused. **DO NOT** expose the generator to moisture, rain or snow. **DO NOT** let the generator get wet, and do not operate it with wet hands.

<b>▲ WARNING</b>	
	<p>GASOLINE IS HIGHLY FLAMMABLE AND EXPLOSIVE. YOU COULD BE BURNED OR SERIOUSLY INJURED IF THE GASOLINE IS IGNITED.</p> <ul style="list-style-type: none"><li>■ BEFORE REFUELING, STOP THE ENGINE AND KEEP HEAT, SPARKS AND FLAME AWAY.</li><li>■ HANDLE FUEL ONLY OUTDOORS.</li><li>■ DO NOT FILL THE FUEL TANK ABOVE THE UPPER LIMIT LINE.</li><li>■ WIPE UP SPILLS IMMEDIATELY.</li></ul>
	<p>EXHAUST CONTAINS POISONOUS CARBON MONOXIDE GAS THAT CAN BUILD UP TO DANGEROUS LEVELS IN CLOSED AREAS. BREATHING CARBON MONOXIDE CAN CAUSE UNCONSCIOUSNESS OR DEATH.</p> <ul style="list-style-type: none"><li>■ NEVER RUN THE GENERATOR IN A CLOSED, OR EVEN PARTLY CLOSED AREA WHERE PEOPLE MAY BE PRESENT.</li></ul>
	<p>IMPROPER CONNECTIONS TO A BUILDING CAN ALLOW ELECTRICAL CURRENT TO BACKFEED INTO UTILITY LINES, CREATING AN ELECTROCUTION HAZARD.</p> <ul style="list-style-type: none"><li>■ CONNECTIONS TO A BUILDING MUST ISOLATE GENERATOR POWER FROM UTILITY POWER AND COMPLY WITH ALL APPLICABLE LAWS AND ELECTRICAL CODES.</li></ul>
	<p>THE GENERATOR IS A POTENTIAL SOURCE OF ELECTRICAL SHOCK IF NOT KEPT DRY.</p> <ul style="list-style-type: none"><li>■ DO NOT EXPOSE THE GENERATOR TO MOISTURE, RAIN OR SNOW.</li><li>■ DO NOT OPERATE THE GENERATOR WITH WET HANDS.</li></ul>
	<p>READ OWNER'S MANUAL CAREFULLY BEFORE OPERATION.</p>

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## ☆ SAFETY INFORMATION

Read and understand this instruction manual before operating your generator. You can help prevent accidents by being familiar with your generator's controls, and by observing safe operating procedure

### Operator Responsibility

Know how to stop the generator quickly in case of emergency.

Under stand the use of all generator controls, output receptacles, and connections.

Do not let children operate the generator without parental supervision.

### Carbon Monoxide Hazards

Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death.

If you run the generator in an area that is confined, or even partially enclosed, the air you breathe could contain a dangerous amount of exhaust gas. To keep exhaust gas from accumulating, provide adequate ventilation.

### Electric Shock Hazards

The generator produces enough electric power to cause a serious shock or electrocution if misused.

Using a generator or electrical appliance in wet conditions, such as rain or snow, or near a pool or sprinkler system, or when your hands are wet, could result in electrocution. Keep the generator dry.

If the generator is stored outdoors, unprotected from the weather, check all of the electrical components on the control panel, before each use. Moisture or ice can cause a malfunction or short circuit in electrical components, which could result in electrocution.

Do not connect to a building electrical system unless a qualified electrician has installed an isolation switch.

### Fire and Burn Hazards

The exhaust system gets hot enough to ignite some materials.

Keep the generator at least 3 feet (1 meter) away from buildings and other equipment during operation.

Do not enclose the generator in any structure.

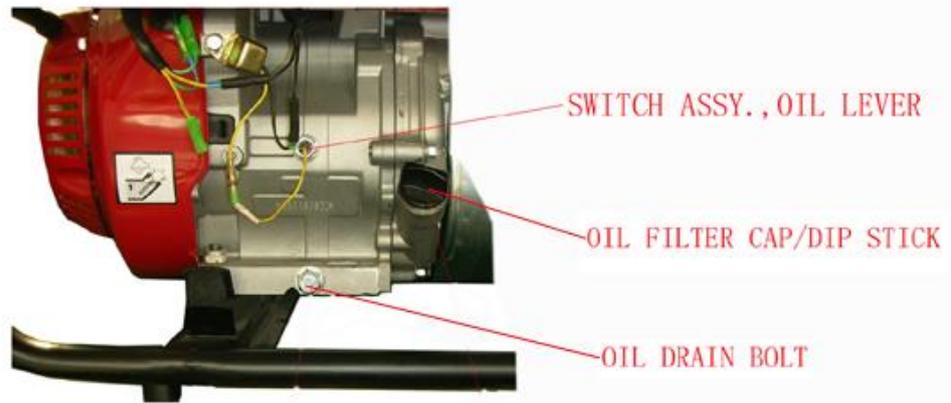
Keep flammable materials away from the generator.

The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Let the engine cool before storing the generator indoors.

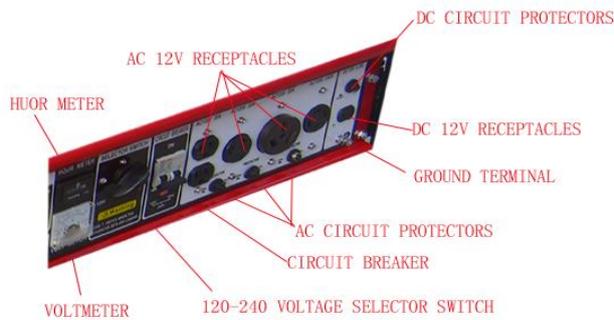
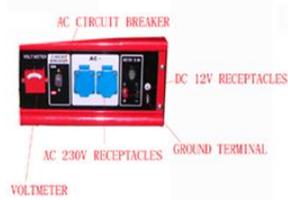
Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks where the generator is refueled or where gasoline is stored. Refuel in a well-ventilated area with the engine stopped.

Fuel vapors are extremely flammable and may ignite after the engine has started. Make sure that any spilled fuel has been wiped up before starting the generator.

# ☆ COMPONENT IDENTIFICATION



## CONTROL PANEL SPECIES:



## ◆ MANUAL START

### Engine Switch

To start and stop the engine.

#### Switch position:

OFF: To stop the engine.

ON: To run the engine .



## ◆ ELECTRIC START

### Engine Key

To start and stop the engine.

#### Key position:

OFF: To stop the engine. Key can be removed / inserted.

ON: To run the engine after starting.

START: To start the engine by operating the starter motor.



#### **WARNING:**

Do not turn the key switch to START position when the engine is running to prevent damage of starting motor.

## Recoil Starter

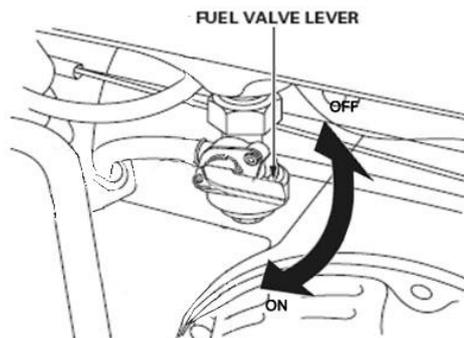
To start the engine, pull the starter grip lightly until resistance is felt, then pull briskly.

#### **WARNING:**

Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.

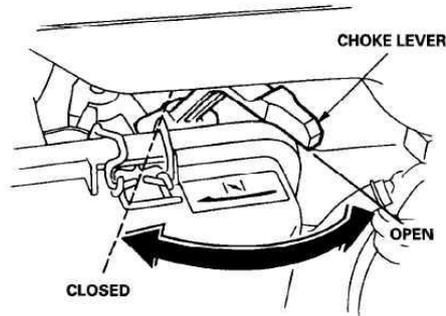
## Fuel Valve Lever

The fuel valve is located between the fuel tank and carburetor. When the valve lever is in the ON position, fuel is allowed to flow from the fuel tank to the carburetor. Be sure to return the fuel valve lever to the OFF position after stopping the engine.



## Choke Rod

The choke is used to provide an enriched fuel mixture when starting a cold engine. It can be opened and closed by operating the choke rod manually. Pull the rod out toward **CLOSED** to enrich the mixture for cold starting.



## AC Receptacle

Only a 230V appliance is being connected to any of the 230V 3-prong receptacles. **Or**

Only a 120V appliance is being connected to any of the 120V 3-prong receptacles, a 240V appliance is connected to the 4-prong receptacle.

## Ground Terminal

The generator ground terminal is connected to the frame of the generator, the metal non-current-carrying parts of the generator, and the ground terminals of each receptacle.

## DC 12V Binding Post

The DC 12V binding post may only be used for charging 12 volt automotive type batteries.

## DC Circuit Protector

The DC circuit protector automatically shuts off the DC battery charging circuit when the DC charging circuit is overloaded, when there is a problem with the battery, or when the connections between the battery and the generator are improper.

## Oil Alert System

The Oil Alert system is designed to prevent engine damage caused by an insufficient amount of oil in the crankcase. Before the oil level in the crankcase can fall below a safe limit, the Oil Alert system will automatically stop the engine (the engine switch will remain in the ON position). The Oil Alert system should not take the place of checking the oil level before each use.

If the engine stops and will not restart, check the engine oil level before troubleshooting in other areas.

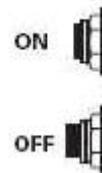
## AC Circuit Breaker

The AC circuit breaker will automatically switch OFF if there is a short circuit or a significant overload of the generator at the receptacle. If the AC circuit breaker is switched OFF automatically, check that the appliance is working properly and does not exceed the rated load capacity of the circuit before switching the AC circuit breaker ON again.

The AC circuit breaker may be used to switch the generator power ON or OFF

## AC Circuit Protector

The AC circuit protectors will automatically switch OFF if there is a short circuit or a significant overload of the generator at the 20A 120V, 30A 120V, 30A 240V plug. If an AC circuit protector switches OFF automatically, check that the appliance is working properly and does not exceed the rated load capacity of the circuit before resetting the AC circuit protector ON.



## ☆ PRE-OPERATION CHECK

### Engine Oil

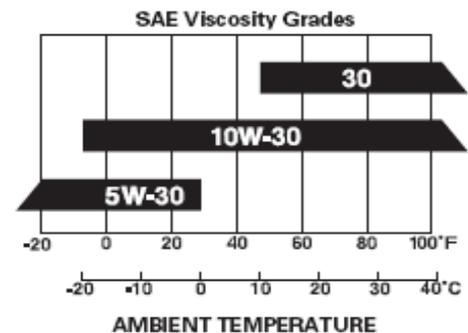
#### **WARNING:**

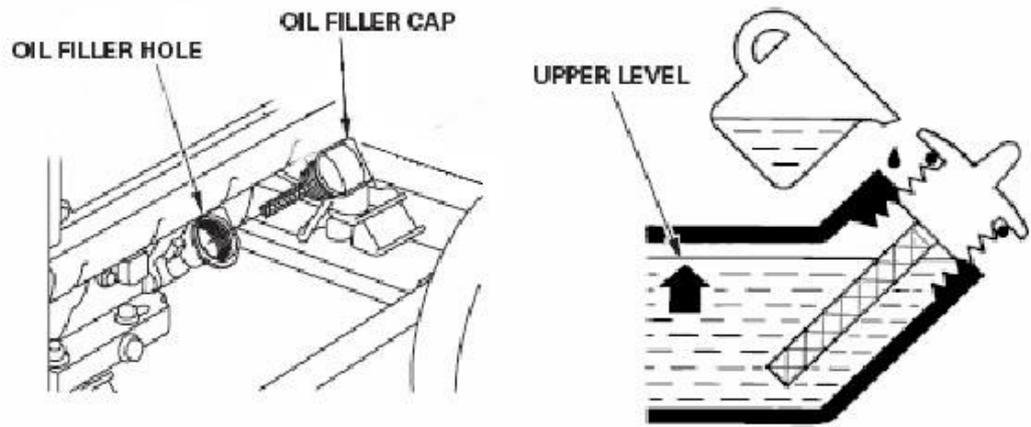
Engine oil is a major factor affecting engine performance and service life. Non-detergent and 2-stroke engine oils will damage the engine and are not recommended.

★ Check the oil level BEFORE EACH USE with the generator on a level surface and the engine stopped.

★ Use 4-stroke motor oil that meets or exceeds the requirements for API service classification SJ. Always check the API SERVICE label on the oil container to be sure it includes the letter SJ.

★ SAE 10W-30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.





1. Remove the oil filler cap and wipe the dipstick clean.
2. Check the oil level by inserting the dipstick into the filler neck without screwing it in.
3. If the level is low, fill to the top of the oil filler neck with the recommended oil.

## Fuel

- ◆ Check the fuel gauge, and refill the tank if the fuel level is low.
- ◆ Refuel carefully to avoid spilling fuel. Do not fill above the shoulder of the fuel strainer.

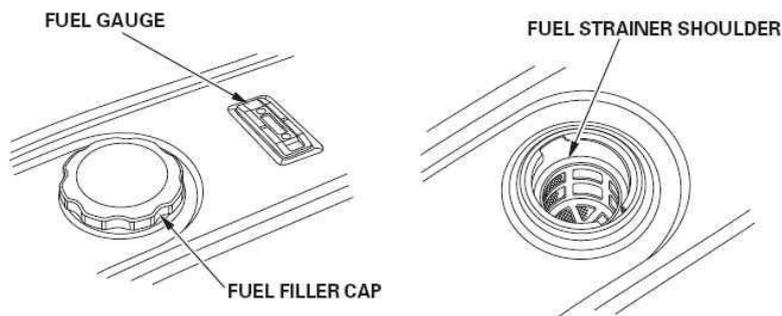
### **WARNING:**

Gasoline is highly flammable and explosive, and you can be burned or seriously injured when refueling.

- ★ Stop engine and keep heat, sparks, and flame away.
- ★ Refuel only outdoors.
- ★ Wipe up spills immediately.
- ◆ Use unleaded gasoline with a pump octane rating of 86 or higher.
- ◆ This engine is certified to operate on unleaded gasoline.  
Unleaded gasoline produces fewer engine and spark plug deposits and extends exhaust system life.

Never use stale or contaminated gasoline or an oil/gasoline mixture.

Avoid getting dirt or water in the fuel tank.



## ☆ STARTING THE ENGINE / STOPPING THE ENGINE

### Starting the Engine

#### ◆ MANUAL START

1. Make sure that the AC circuit breaker is in the OFF position. The generator may be hard to start if a load is connected.

2. Turn the fuel valve lever to the ON position.
3. The choke will be closed if the engine is cold, pull the choke rod out to the CLOSED position.
4. Turn the engine switch to the ON position.
5. Pull the starter grip lightly until resistance is felt, then pull briskly.

### **WARNING:**

Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.

6. If you have closed the choke, push it to the OPEN position as the engine warms up.

#### **◆ ELECTRIC START**

1. Make sure that the AC circuit breaker is in the OFF position. The generator may be hard to start if a load is connected.
2. Turn the fuel valve lever to the ON position.
3. The choke will be closed if the engine is cold, pull the choke rod out to the CLOSED position.
4. Connect the battery cables to the generator.
5. Turn the engine switch to the START position and hold it there for 5 seconds or until the engine starts.

## **Operating Range**

### **NOTE:**

Some precision equipment is voltage sensitive and may require a more uniform voltage supply than portable generators provide. Examples include some medical equipment, personal computers, 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.

## **Connection Alternating Current (AC)**

- **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 frame.
  2. Start the engine.
  3. plug into AC receptacle.
  4. Make sure the voltage meter indicates the rated voltage.
  5. Turn the AC switch to the “ON” position and turn on any electric devices.

### **WARNING:**

Operating the starter motor for more than 5 seconds can damage the motor. If the engine fails to start, release the switch and wait 10 seconds before operating the starter again.

If the speed of the starter motor drops after a period of time, it is an indication that the battery should be recharged.

When the engine starts, allow the engine switch to return to the ON position.

6. If you have closed the choke, push it to the OPEN position as the engine warms up.

## Stopping the Engine

### In an emergency:

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

### In normal use:

1. Turn the AC circuit breaker to the OFF position.
2. Turn the engine switch to the OFF position.
3. Turn the fuel valve lever to the OFF position.

## ☆OPERATING INSTRUCTIONS

### Connections to a Building Electrical System

Connections for standby power to a building electrical system must be made by a qualified electrician. The connection must isolate the generator power from utility power, and must comply with all applicable laws and electrical codes. A transfer switch, which isolates generator power from utility power, is prerequisite.

### **WARNING:**

utility company workers or others who contact the lines during a power outage, and the generator may explode, burn, or cause fires when utility power is restored. Improper connections to a building electrical system can allow electrical current from the generator to back feed into the utility lines. Such back feed may electrocute you. Consult the utility company or a qualified electrician.

### Connection Notes

- Avoid connecting the generator to commercial power outlets. This is a single phase generator only.
- Avoid connecting the generator in parallel with any other generator.

### Ground System

The portable generators have a system ground that connects generator frame components to the ground terminals in the AC output receptacles. The system ground is not connected to the AC neutral wire.

Make sure you connect a proper ground (earth) to the generator. **You should use the ground terminal on the front panel of the generator and a stake at the end of uncovered copper ground wire driven into soil. This completes a safe natural ground circuit.**

Ground(earth) Lead

Diameter:

0.12mm(0.005in) per (ampere) Amp

### EXAMPLE:

10(Ampere) Amps → 1.2mm (0.05in)

### AC Applications

Before connecting an appliance or power cord to the generator:

Make sure that it is in good working order. Faulty appliances or power cords can create a potential for electrical shock.

If an appliance begins to operate abnormally, becomes sluggish or stops suddenly, turn it off immediately. Disconnect the appliance, and determine whether the problem is the appliance, or if the rated load capacity of the generator has been exceeded.

Make sure that the electrical rating of the tool or appliance does not exceed that of the generator. Never exceed the maximum power rating of the generator. Power levels between rated and maximum may be used for no more than 30 minutes.

**WARNING:**

Substantial overloading will open the circuit breaker. Exceeding the time limit for maximum power operation or slightly overloading the generator may not switch the circuit breaker or circuit protector OFF, but will shorten the service life of the generator.

### **AC Operation**

1. Start the engine .
2. the voltage output.

you can use the 230V receptacles simultaneously. **Or**

you can use the 120V and 240V receptacles simultaneously.

3. Plug in the appliance.

Most motorized appliances require more than their rated power for start up.

Do not exceed the current limit specified for any one receptacle. If an overloaded circuit causes the AC circuit breaker to switch OFF.

### **DC Operation**

The DC terminals may ONLY be used for charging 12 volt automotive type batteries.

### **High Altitude Operation**

At high altitude, the standard carburetor air/fuel mixture will be too rich. Performance will decrease, and fuel consumption will increase. A very rich mixture will also foul the spark plug and cause hard starting. Operation at an altitude that differs from that at which this engine was certified, for extended periods of time, may increase emissions.

High altitude performance can be improved by specific modifications to the carburetor. If you always operate your generator at altitudes above 5,000 feet (1,500 meters), have your dealer perform this carburetor modification. This engine, when operated at high altitude with the carburetor modifications for high altitude use, will meet each emission standard throughout its useful life.

Even with carburetor modification, engine horsepower will decrease about 3.5% for each 1,000-foot (300-meter) increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

**WARNING:**

When the carburetor has been modified for high altitude operation, the air/fuel mixture will be too lean for low altitude use. Operation at altitudes below 5,000 feet (1,500 meters) with a modified carburetor may cause the engine to overheat and result in serious engine damage.

## **☆ MAINTENANCE**

### **The Importance of Maintenance**

Good maintenance is essential for safe, economical, and trouble-free operation. It will also help reduce air pollution.

**WARNING:**

Improper maintenance, or failure to correct a problem before operation, can cause a malfunction in which you can be seriously hurt or killed.

Always follow the inspection and maintenance recommendations and schedules in this instruction manual.

## Maintenance Safety

Make sure the engine is off before you begin any maintenance or repairs.

Let the engine and exhaust system cool before touching.

To reduce the possibility of fire or explosion, be careful when working around gasoline. Use only a nonflammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks, and flames away from all fuel-related parts.

## Maintenance Schedule

Remember that this schedule is based on the assumption that your machine will be used for its designed purpose. Sustained high-load or high-temperature operation, or use in unusually wet or dusty conditions, will require more frequent service.

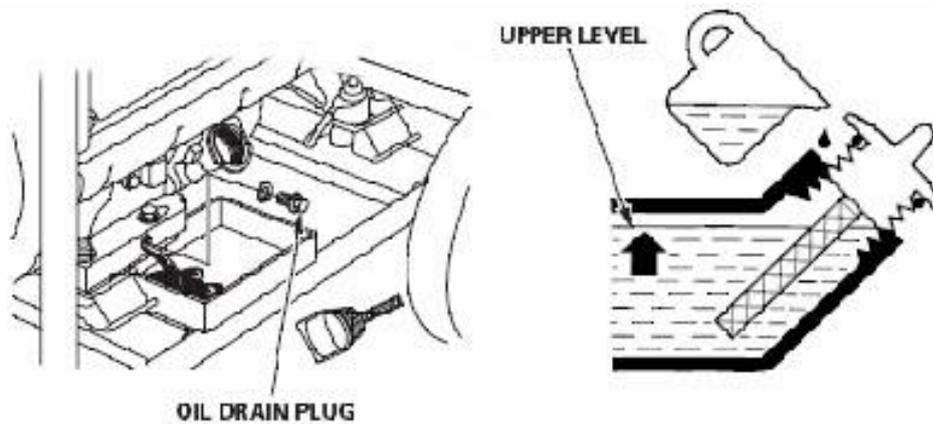
- (1) Service more frequently when used in dusty areas.
- (2) For commercial use, log hours of operation to determine proper maintenance intervals

REGULAR SERVICE PERIOD (3)		Before each use	First month or 20 Hrs.	Every 3 months or 50 Hrs.	Every 6 months or 100 Hrs.	Every year or 300 Hrs.
• Engine oil	Check	○				
	Change		○		○	
• Air cleaner	Check	○				
	Clean			○(1)		
• Sediment cup	Clean				○	
• Spark plug	Clean-Adjust				○	
	Replace					○
• Spark arrester	Clean				○	
• Idle speed	Check-Adjust					○
• Valve clearance	Check-Adjust					○
• Combustion chamber	Clean	After every 500 Hrs.				
• Fuel tank and filter	Clean				○	
• Fuel tube	Check	Every 2 years (Replace if necessary)				

## Engine Oil Change

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

1. Remove the drain plug and sealing washer, remove the oil filler cap, and drain the oil.
2. Reinstall the drain plug and sealing washer. Tighten the plug securely.
3. Refill with the recommended oil and check the oil level.
4. Wash your hands with soap and water after handling used oil.



## Air Cleaner Service

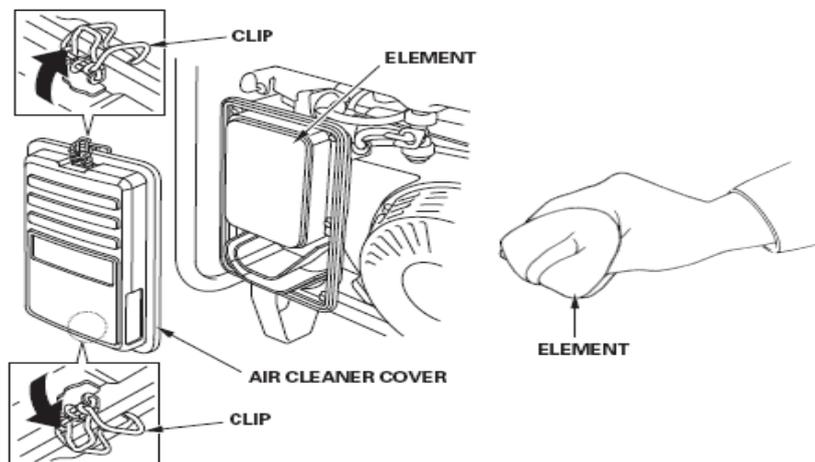
A dirty air cleaner will restrict air flow to the carburetor. To prevent carburetor malfunction, service the air cleaner regularly. Service more frequently when operating the generator in extremely dusty areas.

### **WARNING:**

Never run the generator without the air filter. Rapid engine wear will result.

1. Unsnap the air cleaner cover clips, remove the air cleaner cover, and remove the element.
2. Wash the air cleaner element in a solution of household detergent and warm water, then rinse thoroughly, or wash in nonflammable or high flashpoint solvent. Allow the air cleaner element to dry thoroughly.
3. Soak the air cleaner element in clean engine oil and squeeze out the excess oil. The engine will smoke during initial startup if too much oil is left in the air cleaner element.

Reinstall the air cleaner element and the cover.



## Fuel Sediment Cup Cleaning

The sediment cup prevents dirt or water, which may be in the fuel tank from entering the carburetor. If the engine has not been run for a long time, the sediment cup should be cleaned.

1. Turn the fuel valve lever to the OFF position. Remove the sediment cup, O-ring, and filter.
2. Clean the sediment cup, O-ring, and filter in nonflammable or high flash point solvent.

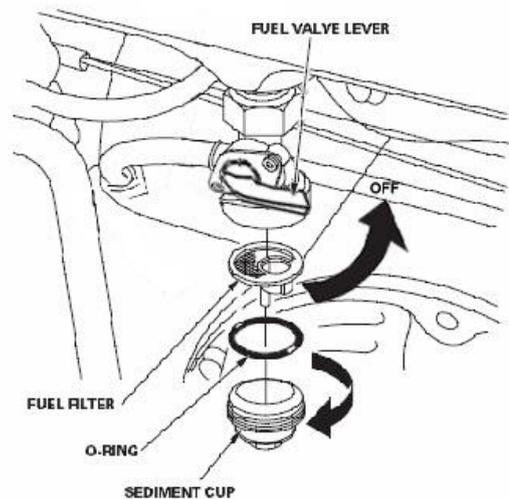
3. Reinstall the filter, O-ring, and sediment cup.
4. Turn the fuel valve lever ON and check for leaks.

## Spark Plug Service

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

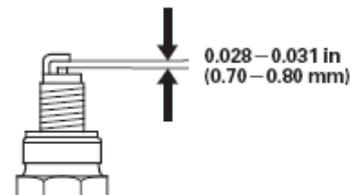
If the engine has been running, the muffler will be very hot. Be careful not to touch the muffler.

1. Remove the spark plug cap.
2. Clean any dirt from around the spark plug base.
3. Use a spark plug wrench to remove the spark plug.
4. Visually inspect the spark plug. Discard it if the insulator is cracked, chipped or fouled.
5. Measure the plug gap with a feeler gauge. Correct as necessary by carefully bending the side electrode.



**The gap should be:** 0.028–0.031 in (0.70–0.80 mm)

6. Check that the spark plug washer is in good condition, and thread the spark plug in by hand to prevent cross-threading.
7. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.



—If installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer. If reinstalling a used spark plug, tighten 1/8 – 1/4 turn after the spark plug seats to compress the washer.

### **WARNING:**

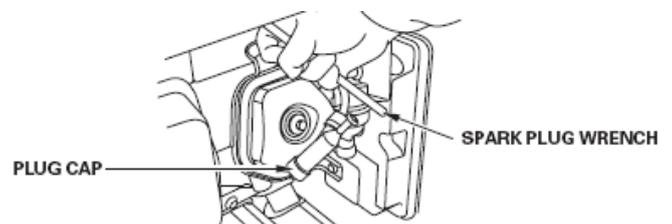
The spark plug must be securely tightened. An improperly tightened spark plug can become very hot and could damage the engine. Never use spark plugs which have an improper heat range.

**STORAGE**

Before storing the unit for an extended period: Be sure the storage area is free of excessive humidity and dust. Service according to the table below:

### ☆**STORAGE**

Before storing the unit for an extended period: Be sure the storage area is free of excessive humidity and dust. Service according to the table below



<b>STORAGE TIME</b>	<b>RECOMMENDED SERVICE PROCEDURE TO PREVENT HARD STARTING</b>
Less than 1 month	No preparation required
1 to 2 months	Fill with fresh gasoline and add gasoline conditioner.
2 months to 1 year	Fill with fresh gasoline and add gasoline conditioner. Drain the carburetor float bowl. Drain the fuel sediment cup.
1 year or more	Fill with fresh gasoline and add gasoline conditioner. Drain the carburetor float bowl. Drain the fuel sediment cup. Remove the spark plug. Put a tablespoon of engine oil into the cylinder. Turn the engine slowly with the recoil starter to distribute the oil. Reinstall the spark plug. Change the engine oil. After removal from storage, drain the stored gasoline into a suitable container, and fill with fresh gasoline before starting.
Use gasoline conditioners that are formulated to extend storage life. Contact your authorized Dexin generator dealer for conditioner recommendations.	

1. Drain the carburetor by loosening the drain screw. Drain the gasoline into a suitable container.

**WARNING:**

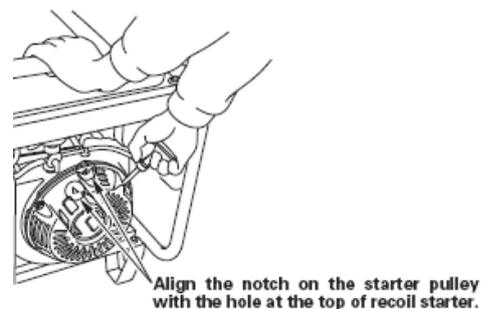
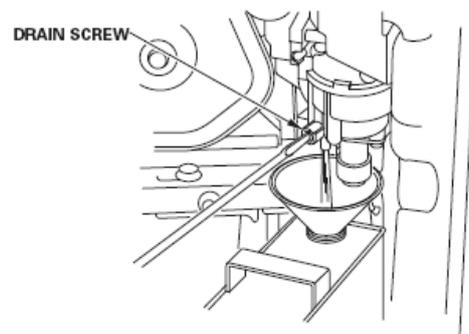
Gasoline is extremely flammable and is explosive under certain conditions. Perform this task in a well-ventilated area with the engine stopped.

Do not smoke or allow flames or sparks in the area during this procedure.

2. Change the engine oil.

3. Remove the spark plug, and pour about a tablespoon of clean engine oil into the cylinder. Turn the engine several revolutions slowly with the recoil starter to distribute the oil, then reinstall the spark plug.

4. Slowly pull the starter grip until resistance is felt. At this point, the piston is coming up on its compression stroke and both the intake and exhaust valves are closed. Storing the engine in this position will help to protect it from internal corrosion.



## ☆ TROUBLESHOOTING

**Note:** Troubleshooting problems may have similar causes and solutions.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The engine will not start	Is there fuel in the tank?	Refill the fuel tank.
	Is there enough oil in the engine?	Add the recommended oil.
	Is the spark plug in good condition?	Readjust gap and dry the spark plug. Replace it if necessary.
	Is the fuel reaching the carburetor?	Clean the fuel sediment cup.
No electricity at the AC receptacles	Is the AC circuit breaker ON?	Turn the AC circuit breaker ON.
	Check the electrical appliance or equipment for any defects.	<ul style="list-style-type: none"> <li>• Replace the electrical appliance or equipment.</li> <li>• Take the electrical appliance or equipment to an electrical shop for repair.</li> </ul>

## ☆ Easy Start Instruction

- 1) 、 Apply at least 1 gallon of gasoline or until gasoline gauge shows over 2 gallons full.
- 2) 、 Apply engine oil (10-30w) until you can see oil surface at the top. Apply oil cap, low oil kill switch is know activated.
- 3) 、 Turn on/off switch to ON position (located on control panel).
- 4) 、 Turn fuel control valve to ON position.
- 5) 、 Move air hindrance level (CHOKE) to the left. Tune Key to Start or pull Recoil Start Rope (complete easy pulls) until start.
- 6)After start move Choke level to the right (slowly). If engine dies complete the above procedures. If Choke is left on and engine dies your spark plug is known fouled and will need to be cleaned.
- 7)Before you apply any plugs into receptacles make sure you Circuit Breaker Switch is in the ON position.
- 8)Enjoy your emergency/back-up power.