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

The information and specifications included in this publication were in effect at the time of approval for printing. Honda Motor Co., Ltd. reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation whatever.

INTRODUCTION

Congratulations on your selection of a Honda generator. We are certain you will be pleased with your purchase of one of the finest generators on the market.

We want to help you get the best results from your new generator and to operate it safely. This manual contains all the information on how to do that; please read it carefully.

As you read this manual, you will find information preceded by a NOTICE symbol. That information is intended to help you avoid damage to your generator, other property, or the environment.

We suggest you read the warranty policy to fully understand its coverage and your responsibilities of ownership.

When your generator needs scheduled maintenance, keep in mind that your Honda servicing dealer is specially trained in servicing Honda generators. Your authorized Honda servicing dealer is dedicated to your satisfaction and will be pleased to answer your questions and concerns.

Best Wishes,
Honda Motor Co., Ltd.

A FEW WORDS ABOUT SAFETY

Your safety and the safety of others are very important. And using this generator safely is an important responsibility.

To help you make informed decisions about safety, we have provided operating procedures and other information on labels and in this manual. This information alerts you to potential hazards that could hurt you or others.

Of course, it is not practical or possible to warn you about all the hazards associated with operating or maintaining a generator. You must use your own good judgement.

You will find important safety information in a variety of forms, including:

- **Safety Labels** — on the generator.
- **Safety Messages** — preceded by a safety alert symbol ⚠ and one of three signal words, DANGER, WARNING, or CAUTION.

  These signal words mean:

  ⚠ DANGER You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.

  ⚠ WARNING You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

  ⚠ CAUTION You CAN be HURT if you don't follow instructions.

- **Safety Headings** — such as *IMPORTANT SAFETY INFORMATION*.
- **Safety Section** — such as *GENERATOR SAFETY*.
- **Instructions** — how to use this generator correctly and safely.

This entire book is filled with important safety information — please read it carefully.

CONTENTS

CONTENTS

CONTENTS

GENERATOR SAFETY

IMPORTANT SAFETY INFORMATION

Honda generators are designed for use with electrical equipment that has suitable power requirements. Other uses can result in injury to the operator or damage to the generator and other property.
Most injuries or property damage can be prevented if you follow all instructions in this manual and on the generator. The most common hazards are discussed below, along with the best way to protect yourself and others.

Operator Responsibility

- Know how to stop the generator quickly in case of emergency.
- Understand the use of all generator controls, output receptacles, and connections.
- Be sure that anyone who operates the generator receives proper instruction. Do not let children operate the generator without parental supervision.

Carbon Monoxide Hazards

A generator's exhaust contains toxic carbon monoxide, which you cannot see or smell. Breathing carbon monoxide can KILL YOU IN MINUTES. To avoid carbon monoxide poisoning, follow these instructions when operating a generator:

- Only run a generator OUTSIDE, far away from windows, doors, and vents.
- Never operate a generator inside a house, garage, basement, crawl space, or any enclosed or partially enclosed space.
- Never operate a generator near open doors or windows.
- Get fresh air and seek medical attention immediately if you suspect you have inhaled carbon monoxide.

Early symptoms of carbon monoxide exposure include headache, fatigue, shortness of breath, nausea, and dizziness. Continued exposure to carbon monoxide can cause loss of muscular coordination, loss of consciousness, and then death.

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 that could result in electrocution.
- Do not connect to a building's electrical system unless an isolation switch has been installed by a qualified electrician.
- Use only a Honda approved receptacle box (optional equipment) when connecting two EU20i generators for parallel operation.
- Never connect different generator models and types.

Fire and Burn Hazards

- The exhaust system gets hot enough to ignite some materials.
  - Keep the generator at least 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.

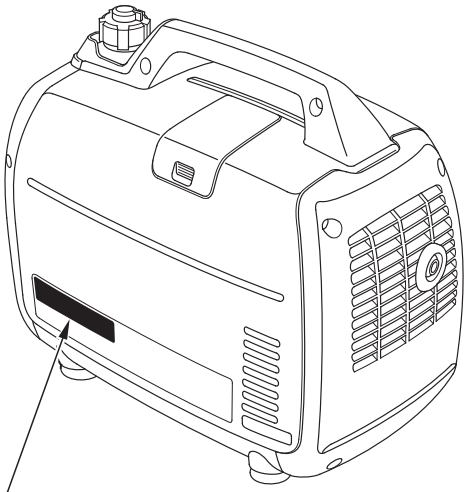
GENERATOR SAFETY

Refuel With Care

Gasoline is extremely flammable, and gasoline vapor can explode.
Allow the engine to cool if the generator has been in operation.
Refuel only outdoors in a well-ventilated area with the engine off.
Do not refuel during operation.
Do not overfill the fuel tank.
Never smoke near gasoline, and keep other flames and sparks away.
Always store gasoline in an approved container.
Make sure that any spilled fuel has been wiped up before starting the engine.

SAFETY LABEL LOCATIONS

These labels warn you of potential hazards that can cause serious injury. Read them carefully. If a label comes off or becomes hard to read, contact your Honda servicing dealer for a replacement.



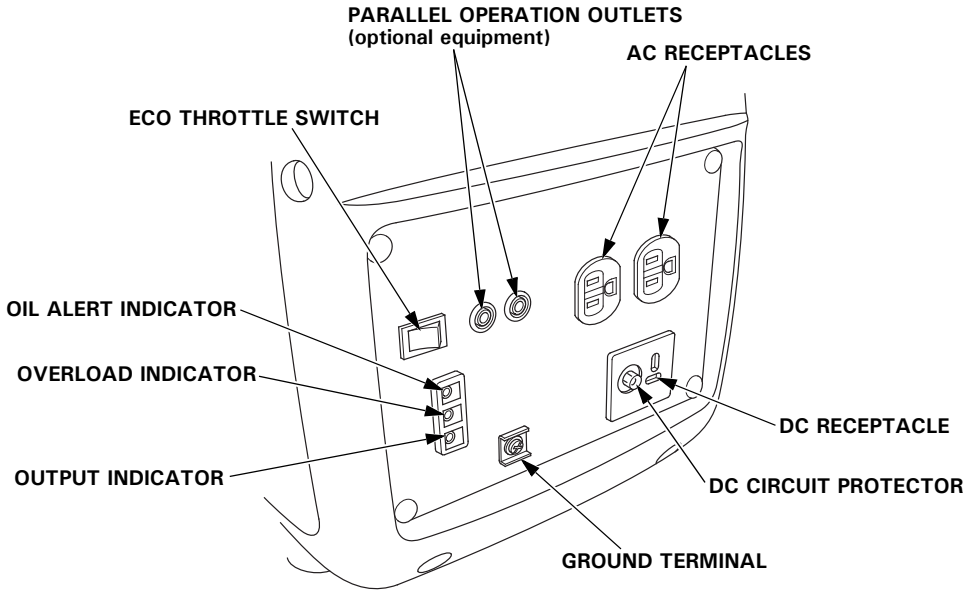
⚠ CAUTION

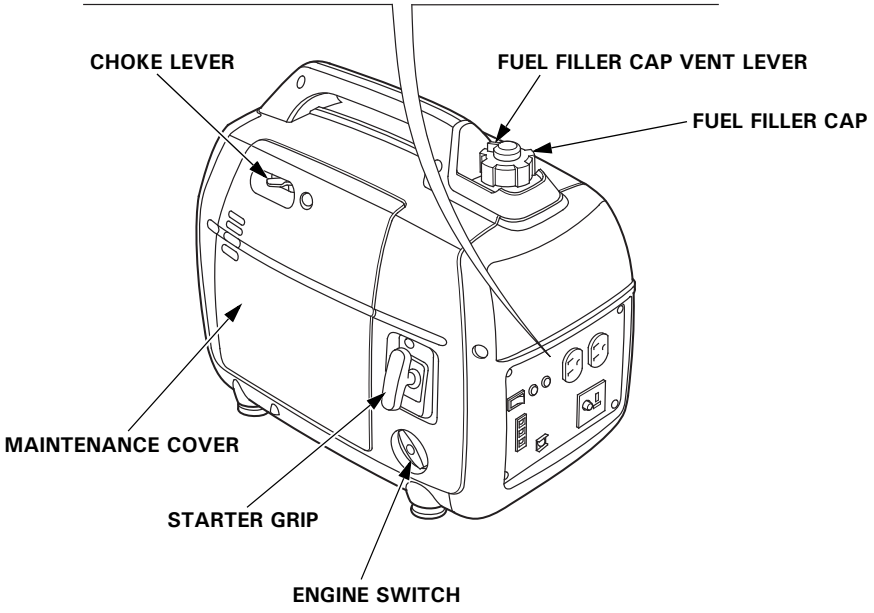
- **DO NOT USE INDOORS DUE TO DANGER OF CARBON MONOXIDE POISONING.**
- **DO NOT CONNECT THE RECEPTACLE OF THIS GENERATOR TO HOUSE WIRING.**
- **STOP THE ENGINE BEFORE REFUELING.**
- **CHECK FOR SPILLED FUEL OR FUEL LEAKS.**
- **DO NOT FILL THE FUEL TANK BEYOND THE UPPER LIMIT LINE.**
- **FOR DETAILED EXPLANATION, READ THE OWNER'S MANUAL.**
- **WHEN STORED OR IN TRANSIT, MAKE CERTAIN THAT THE ENGINE SWITCH AND THE FUEL TANK CAP LEVER ARE IN ''OFF'' POSITION TO PREVENT FUEL LEAKS.**

CONTROLS & FEATURES

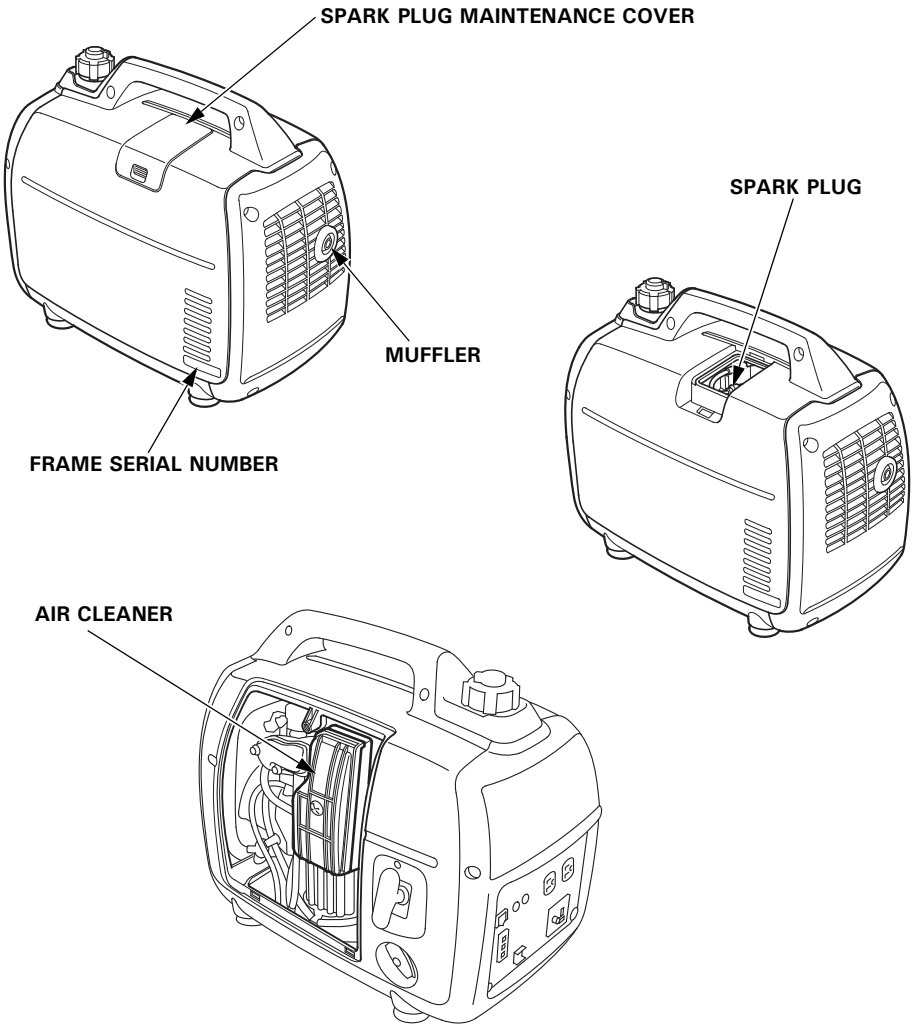
COMPONENT & CONTROL LOCATIONS

Use the illustrations on these pages to locate and identify the most frequently used controls.





CONTROLS & FEATURES



CONTROLS & FEATURES

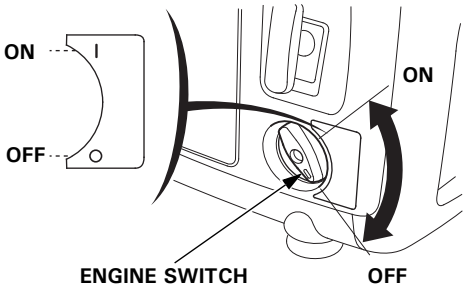
CONTROLS

Engine Switch

The engine switch controls the ignition system and the fuel valve.

OFF – Stops the engine and closes the fuel valve.

ON – Running position; opens the fuel valve and allows the engine to be started.

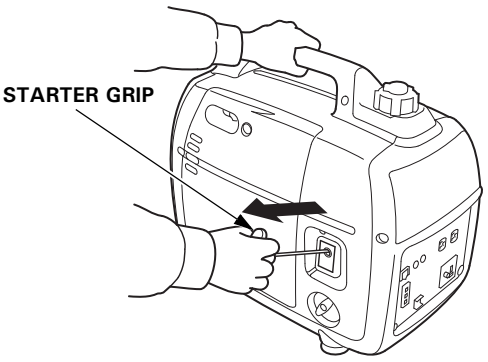


Starter Grip

Pulling the starter grip operates the recoil starter to start the engine.

NOTICE

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

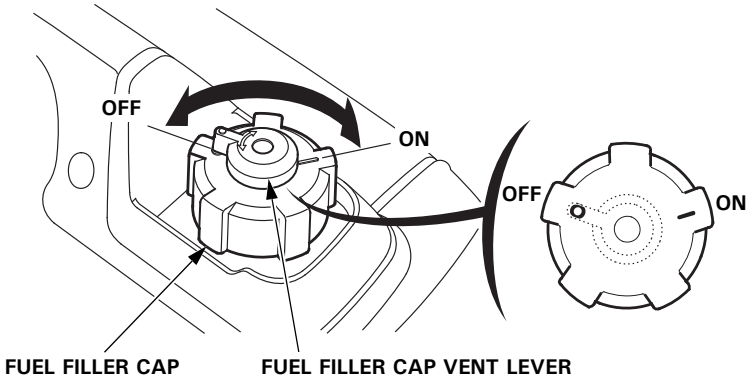


Fuel Filler Cap Vent Lever

The fuel filler cap is provided with a vent lever to seal the fuel tank.

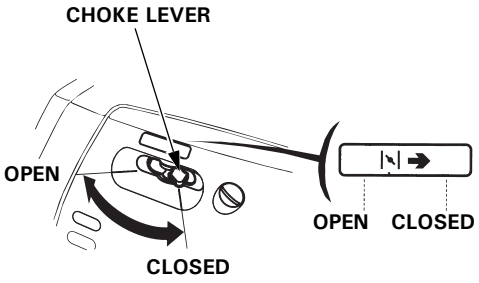
The vent lever must be in the ON position for the engine to run.

When the engine is not in use, leave the vent lever in the OFF position to reduce the possibility of fuel leakage. Allow the engine to cool well before turning the vent lever to the OFF position.



Choke Lever

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



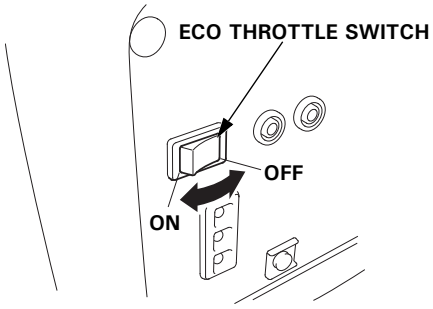
CONTROLS & FEATURES

Eco Throttle Switch

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

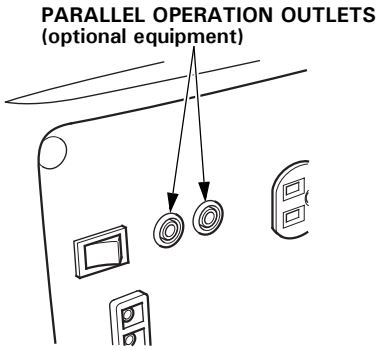
ON: Recommended to minimize fuel consumption and further reduce noise levels when less than a full load is applied to the generator.

OFF: The Eco Throttle system does not operate.



Parallel Operation Outlets (optional equipment)

These outlets are used for connecting two EU20i generators for parallel operation (see page 30). A Honda approved receptacle box (optional equipment) is required for parallel operation. This receptacle box can be purchased from an authorized Honda generator dealer.

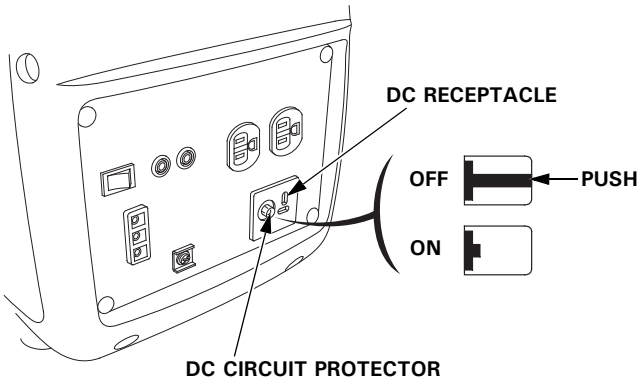


DC Receptacle

The DC receptacle should ONLY be used for charging 12 volt automotive type batteries. The DC charging output is not regulated. This means that the charging output does not decrease as the battery reaches full charge.
Check the battery voltage frequently while charging to prevent overcharging the battery.

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. However, the circuit protector does not prevent overcharging.



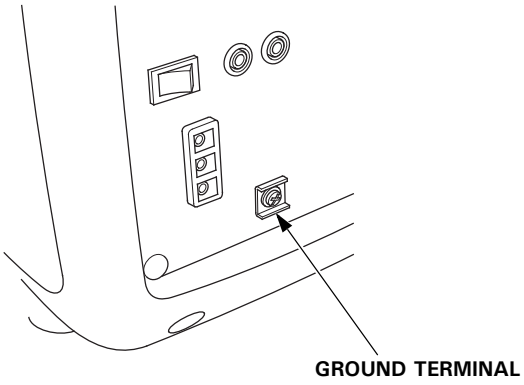
CONTROLS & FEATURES

FEATURES

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.

Before using the ground terminal, consult a qualified electrician, electrical inspector, or local agency having jurisdiction for local codes or ordinances that apply to the intended use of the generator.

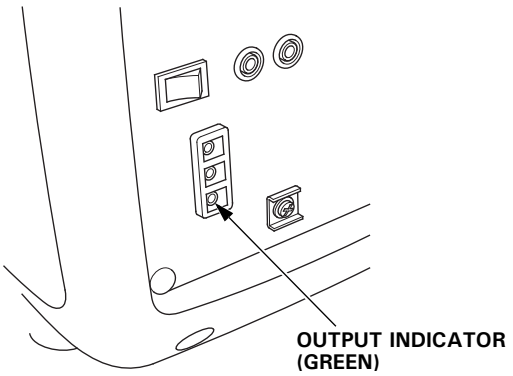


Output Indicator

The output indicator (green) is illuminated when the generator is operating normally. It indicates that the generator is producing electrical power at the receptacles.

In addition, the output indicator has a simplified hour meter function. When you start the engine, the indicator blinks according to the generator's cumulative operating hours as follows:

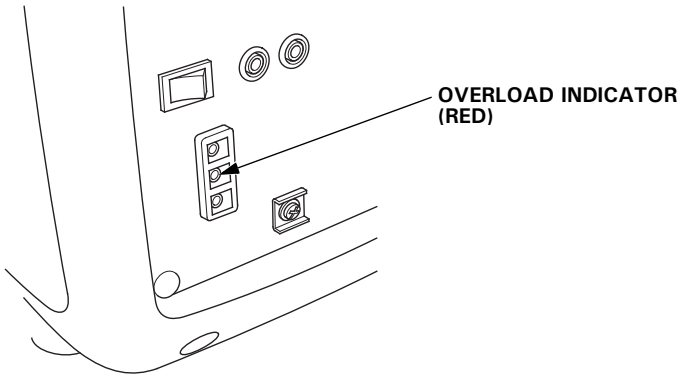
- No blinks: 0–100 hours
- 1 blink: 100–200 hours
- 2 blinks: 200–300 hours
- 3 blinks: 300–400 hours
- 4 blinks: 400–500 hours
- 5 blinks: 500 or more hours



CONTROLS & FEATURES

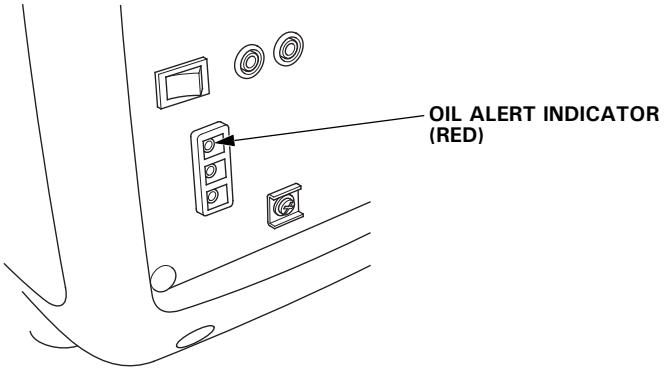
Overload Indicator

If the generator is overloaded (in excess of 2.0 kVA), or if there is a short circuit in a connected appliance, the overload indicator (red) will come ON. The overload indicator (red) will stay ON, and after about four seconds, current to the connected appliance(s) will shut off, and the output indicator (green) will go OFF. However, the engine will continue to run.



Oil Alert Indicator

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 indicator (red) comes ON and the Oil Alert system automatically will stop the engine (the engine switch will remain in the ON position).
If the engine stops or the Oil Alert indicator (red) comes ON when you pull the starter grip, check the engine oil level (see page 47) before troubleshooting in other areas.



BEFORE OPERATION

ARE YOU READY TO GET STARTED?

Your safety is your responsibility. A little time spent in preparation will significantly reduce your risk of injury.

Knowledge
Read and understand this manual. Know what the controls do and how to operate them.

Familiarize yourself with the generator and its operation before you begin using it. Know how to quickly shut off the generator in case of an emergency.

If the generator is being used to power appliances, be sure that they do not exceed the generator's load rating (see pages 29 and 34).

IS YOUR GENERATOR READY TO GO?

For your safety, and to maximize the service life of your equipment, it is very important to take a few moments before you operate the generator to check its condition. Be sure to take care of any problem you find, or have your servicing dealer correct it, before you operate the generator.

⚠WARNING

Improperly maintaining this generator, or failing to correct a problem before operation, could cause a malfunction in which you could be seriously injured.

Always perform a preoperation inspection before each operation, and correct any problem.

BEFORE OPERATION

To prevent a possible fire, keep the generator at least 1 meter away from building walls and other equipment during operation. Do not place flammable objects close to the engine.

Before beginning your preoperation checks, be sure the generator is on a level surface and the engine switch is in the OFF position.

Check the Engine

Check the engine oil level (see page 47). A low engine oil level will cause the Oil Alert system to shut down the engine.

Check the air filters (see page 51). Dirty air filters will restrict air flow to the carburetor, reducing engine and generator performance.

Check the fuel level (see page 44). Starting with a full tank will help to eliminate or reduce operating interruptions for refueling.

OPERATION

SAFE OPERATING PRECAUTIONS

Before operating the generator for the first time, review chapters *GENERATOR SAFETY* (see page 6) and *BEFORE OPERATION* (see page 19).

For your safety, do not operate the generator in an enclosed area such as a garage. Your generator's exhaust contains poisonous carbon monoxide gas that can collect rapidly in an enclosed area and cause illness or death.

⚠WARNING

Exhaust contains poisonous carbon monoxide gas that can build up to dangerous levels in closed areas. Breathing carbon monoxide can cause unconsciousness or death.

Never run the generator in a closed, or even partly closed area where people may be present.

Before connecting an AC appliance or power cord to the generator:

- Use grounded 3 prong extension cords, tools, and appliances, or double insulated tools and appliances.
- Inspect cords and plugs, and replace if damaged.
- Make sure that the appliance is in good working order. Faulty appliances or power cords can create a potential for electric shock.
- Make sure the electrical rating of the tool or appliance does not exceed the maximum power rating of the generator.
- Operate the generator at least 1 meter away from buildings and other equipment.
- Do not operate the generator in an enclosed structure.
- Do not place flammable objects close to the engine.

OPERATION

STARTING THE ENGINE

To prevent a possible fire, keep the generator at least 1 meter away from building walls and other equipment during operation. Do not place flammable objects close to the engine.

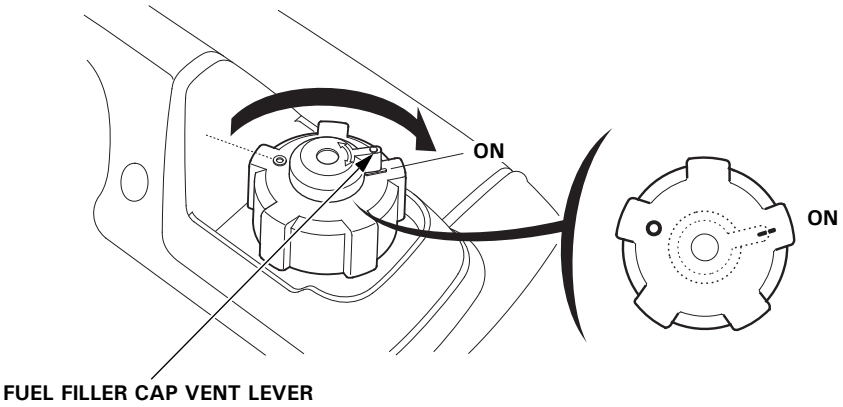
NOTICE

Operating this generator less than 1 meter from a building or other obstruction can cause overheating and damage the generator. For proper cooling, allow at least 1 meter of empty space above and around the generator.

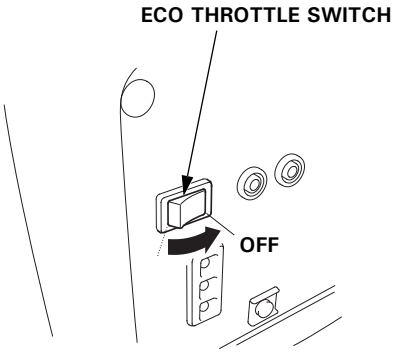
Refer to *SAFE OPERATING PRECAUTIONS* on page 21 and perform the *IS YOUR GENERATOR READY TO GO?* checks (see page 19).
Refer to the *AC OPERATION* (see page 27) or *DC OPERATION* (see page 35) for connecting loads to the generator.

1. Make sure that all appliances connected to the generator are turned off. The generator may be hard to start if a load is connected.

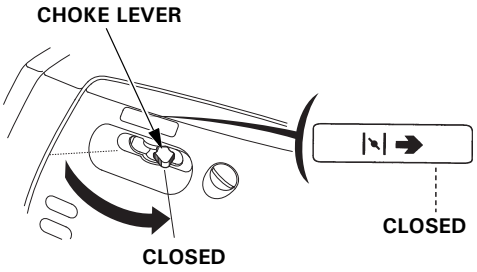
2. Turn the fuel filler cap vent lever to the ON position.



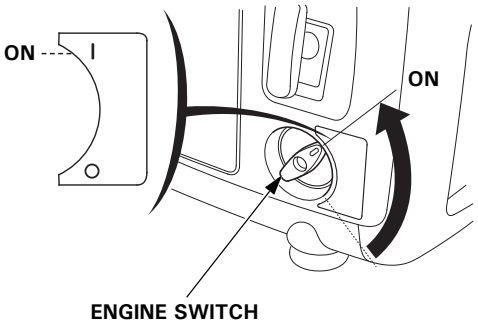
3. Make sure the Eco Throttle switch is in the OFF position, or more time will be required for warm-up.



4. To start a cold engine, move the choke lever to the CLOSED position. To restart a warm engine, leave the choke lever in the OPEN position.

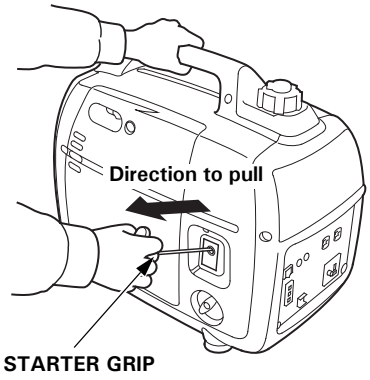


5. Turn the engine switch to the ON position.



OPERATION

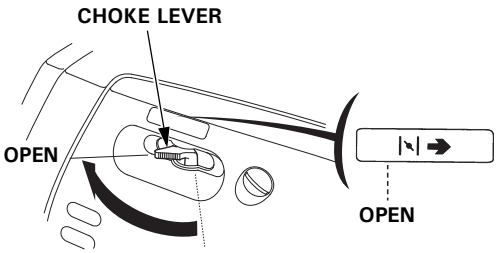
6. Pull the starter grip lightly until you feel resistance, then pull briskly in the direction of the arrow as shown.



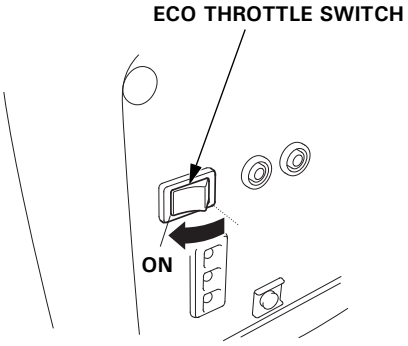
NOTICE

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

7. If the choke lever was moved to the CLOSED position to start the engine, gradually move it to the OPEN position as the engine warms up.



8. If you wish to use the Eco Throttle system, turn the Eco Throttle switch to the ON position after the engine has warmed up for 2 or 3 minutes.

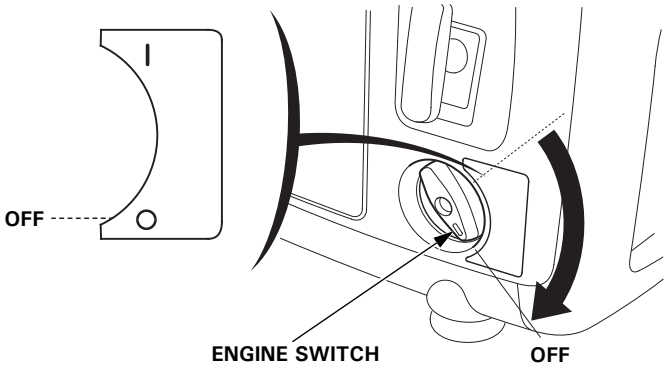


STOPPING THE ENGINE

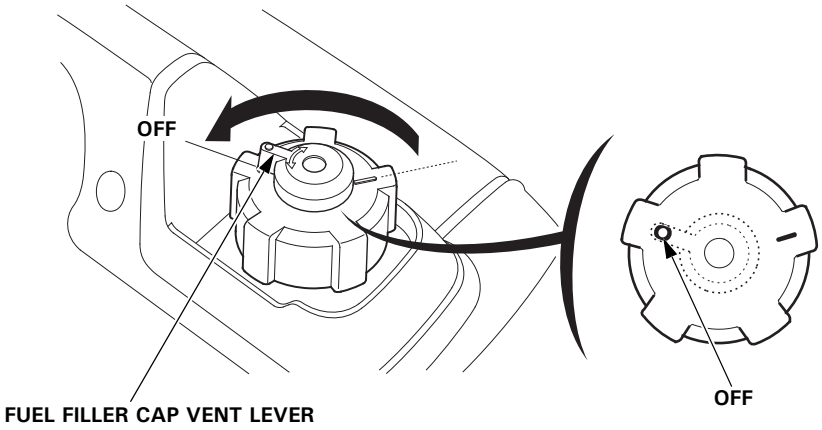
To stop the engine in an emergency, simply turn the engine switch to the OFF position. Under normal conditions, use the following procedure.

1. Turn off or disconnect all appliances connected to the generator.

2. Turn the engine switch to the OFF position.

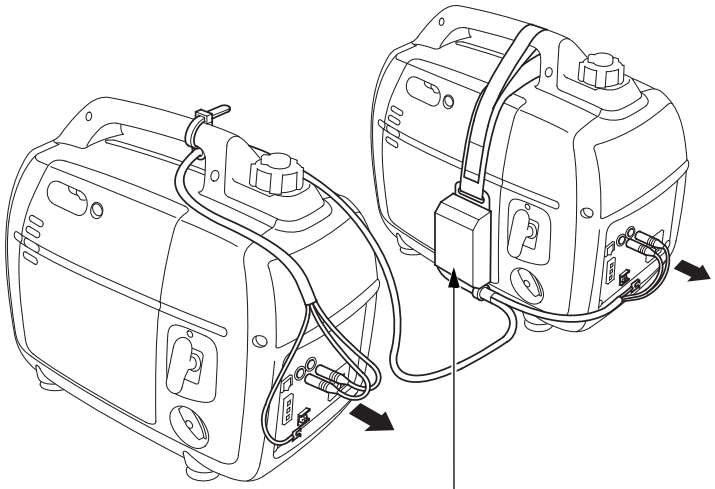


3. Allow the engine to cool, and then turn the fuel filler cap vent lever to the OFF position.



OPERATION

4. When parallel operation has been executed, pull the receptacle box for parallel operation.

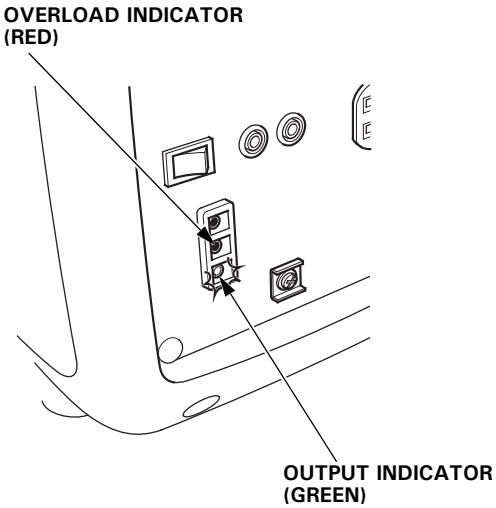


RECEPTACLE BOX FOR PARALLEL OPERATION (optional equipment)

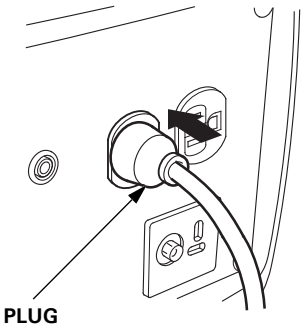
AC OPERATION

Before connecting an appliance to the generator, make sure that it is in good working order and that its electrical rating does not exceed that of the generator.
Most motorized appliances require more than their electrical rating for startup. When an electric motor is started, the overload indicator (red) may come ON. This is normal if the overload indicator (red) goes OFF within 4 seconds. If the overload indicator (red) stays ON, consult your generator dealer.

1. Start the engine (see page 22) and make sure the output indicator (green) comes ON.



2. Plug in the appliance into the receptacle.



3. Turn on the appliance.

If the generator is overloaded (see page 29), or if there is a short circuit in a connected appliance, the overload indicator (red) will go ON. The overload indicator (red) will stay ON, and after about four seconds, current to the connected appliance(s) will shut off, and the output indicator (green) will go OFF. Stop the engine and investigate the problem.

Determine if the cause is a short circuit in a connected appliance or an overload. Correct the problem and restart the generator.

AC Applications
Before connecting an appliance or power cord to the generator:

- Make sure that it is in good working order. A faulty appliance or power cord 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 the rated load capacity of the generator has been exceeded.

Most appliance motors require more than their rated wattage for startup.
Make sure the electrical rating of the tool or appliance does not exceed the maximum power rating of the generator.

Maximum power is:

2.0 kVA

For continuous operation, do not exceed the rated power.
Rated power is:

1.6 kVA

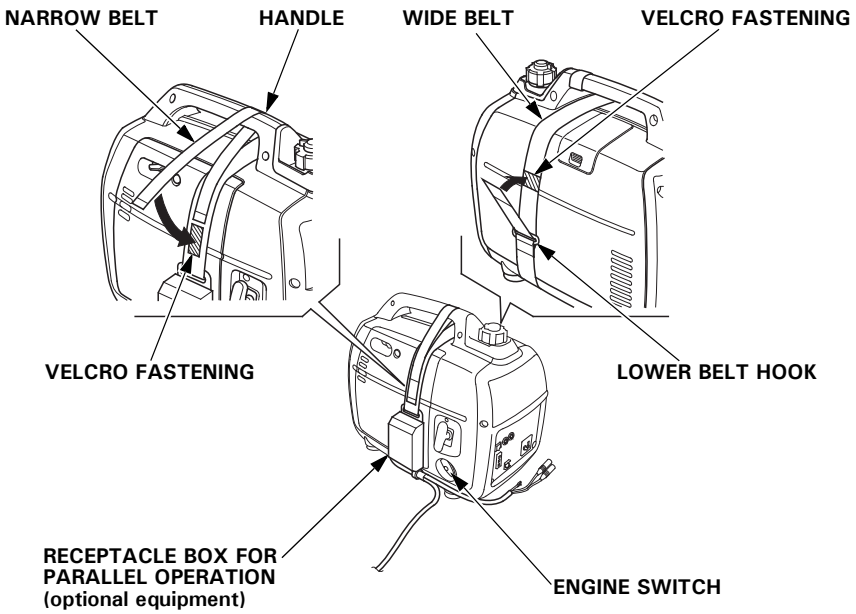
In either case, the total power requirements (VA) of all appliances connected must be considered. Appliance and power tool manufacturers usually list rating information near the model number or serial number.

OPERATION

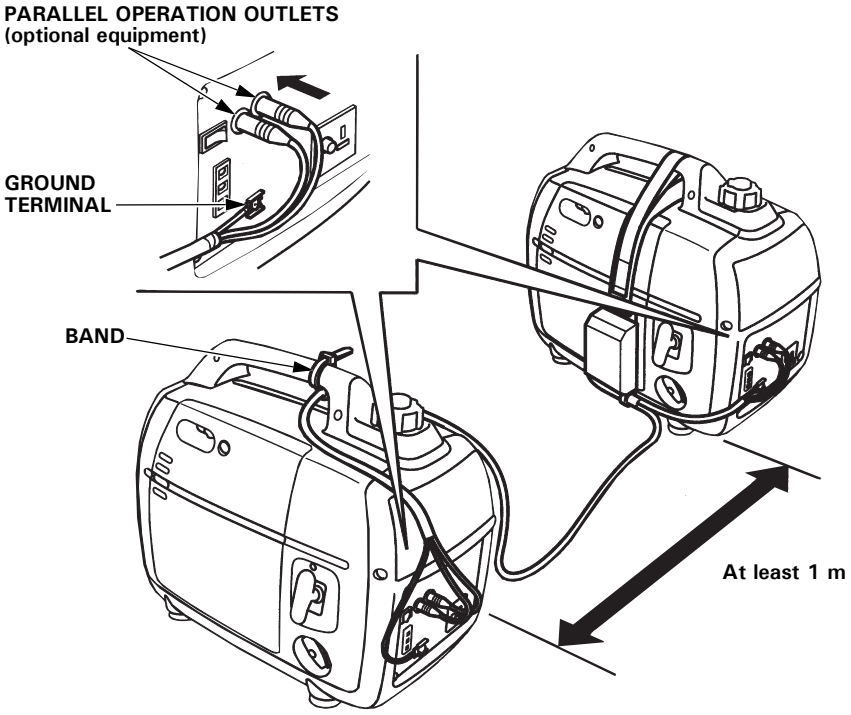
AC PARALLEL OPERATION (optional equipment)

Before connecting an appliance to either generator, make sure that it is in good working order and that its electrical rating does not exceed that of the receptacle.
Most motorized appliances require more than their electrical rating for startup. When an electric motor is started, the overload indicator (red) may come ON. This is normal if the overload indicator (red) goes OFF within 4 seconds. If the overload indicator (red) stays ON, consult your generator dealer.
During parallel operation, the Eco Throttle switch should be in the same position on both generators.

1. Install the receptacle box for parallel operation on to the one generator and secure it with setting band as shown.
   - Set the belt on the front side of the handle.
   - Secure the narrow belt to the handle with the velcro fastening.
   - Pass the upper wide belt through the lower belt hook and secure with the velcro fastening.
   - Route the receptacle box wires under the engine switch.
   - Install the belts so they are not slack.



2. Connect the cable connectors and ground terminals of the receptacle box for parallel operation to the generators and secure the cord clamp to handle.
   - Place two generators at least 1 meter away from each other during parallel operation.
   - Route the wire through the handle and clamp it to the handle using the band.
   - Take care not to slacken the wire toward the starter grip side.
   - Connect the longer wire to the generator on which the receptacle box for parallel operation is not installed.
   - Do not set the generators with the exhaust side face to face each other.



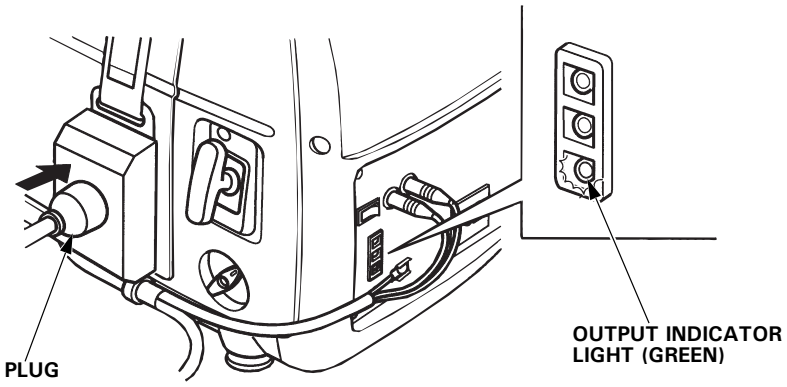
3. Connect the ground terminal of one generator to the ground.
   - When an appliance is connected to the ground, connect the generator to the ground as well.

OPERATION

4. Start the engines and make sure the output indicators (green) come ON.

5. Confirm that the appliance to be used is switched off, and plug in the appliance.

6. Switch on the equipment to be used.



If the generators are overloaded (see page 34), or if there is a short circuit in a connected appliance, the overload indicator (red) will go ON. The overload indicator (red) will stay ON, and after about four seconds, current to the connected appliance(s) will shut off, and the output indicator (green) will go OFF. Stop both engines and investigate the problem.
Determine if the cause is a short circuit in a connected appliance or an overload. Correct the problem and restart the generator.

AC Parallel Operation Applications

Before connecting an appliance or power cord to the generator:

- Make sure that it is in good working order. A faulty appliance or power cord 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 the rated load capacity of the generator has been exceeded.
- Never connect different generator models and types.
- Use only a Honda approved receptacle box (optional equipment) when connecting two EU20i generators for parallel operation.
- Never connect or remove the receptacle box when the generator is running.
- For single generator operation, the receptacle box for parallel operation must be removed.

OPERATION

Most appliance motors require more than their rated wattage for startup.
Make sure the electrical rating of the tool or appliance does not exceed the maximum power rating of the generator.

Maximum power in parallel operation is:

4.0 kVA

For continuous operation, do not exceed the rated power.
Rated power in parallel operation is:

3.2 kVA

In either case, the total power requirements (VA) of all appliances connected must be considered. Appliance and power tool manufacturers usually list rating information near the model number or serial number.

NOTICE

Substantial overloading that continuously lights the overload indicator (red) may damage the generator. Marginal overloading that temporarily lights the overload indicator (red) may shorten the service life of the generator.

DC OPERATION

The DC receptacle should ONLY be used for charging 12 volt automotive type batteries. The DC charging output is not regulated. This means that the charging output is constant; it does not decrease as the battery reaches full charge. Check the battery voltage frequently while charging to prevent overcharging the battery.

When using the DC output, turn the Eco Throttle switch to the OFF position.

Connecting the battery charging cable (optional equipment):

1. Before connecting the battery charging cable to a battery that is installed in a vehicle, disconnect the vehicle battery ground cable from the negative (–) battery terminal.

⚠WARNING

The battery gives off explosive hydrogen gas during normal operation.

A spark or flame can cause the battery to explode with enough force to kill or seriously hurt you.

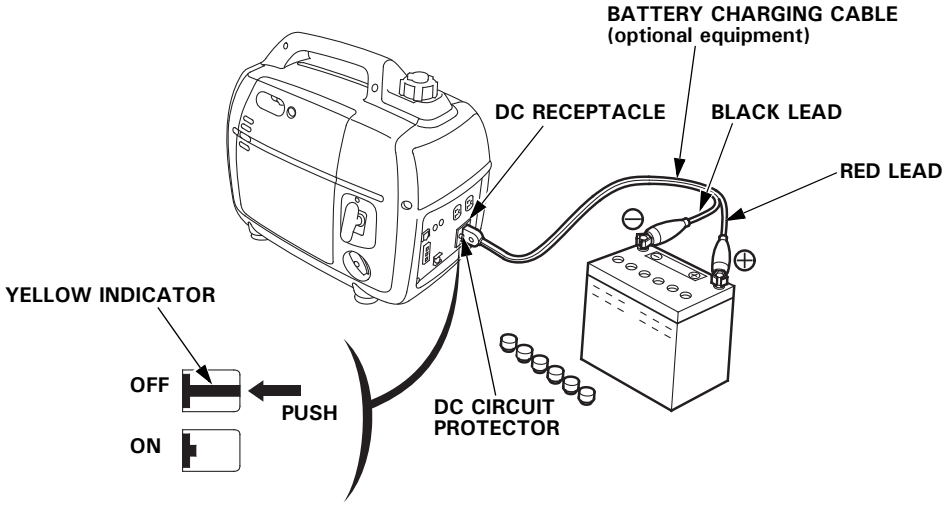
Wear protective clothing and a face shield, or have a skilled mechanic perform the battery maintenance.

WARNING: Battery posts, terminals, and related accessories contain lead and lead components. **Wash hands after handling**.

2. Plug the battery charging cable into the DC receptacle of the generator.

OPERATION

3. Connect the red lead of the battery charging cable to the positive (+) battery terminal and the black lead to the negative (–) battery terminal.



4. Start the generator (see page 22).

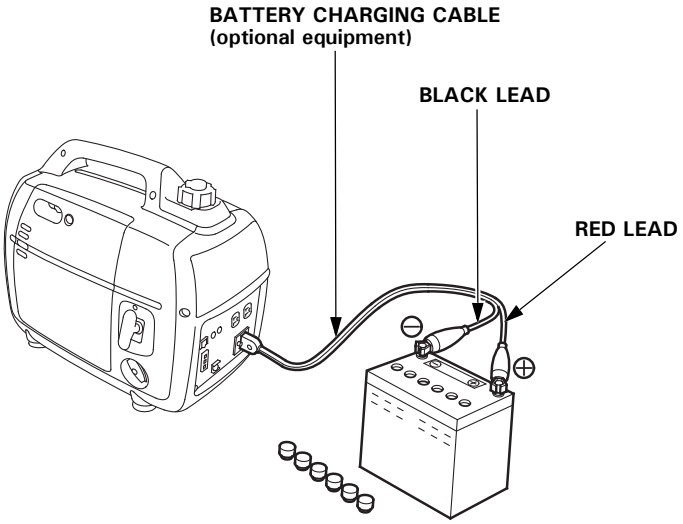
NOTICE

Do not start the vehicle while the battery charging cable is connected and the generator is running. The vehicle or the generator may be damaged.

An overloaded DC circuit, excessive current draw by the battery, or a wiring problem will trip the DC circuit protector (PUSH button extends out). If this happens, wait a few minutes before pushing in the circuit protector to resume operation. If the DC circuit protector continues to go OFF, discontinue charging and see your authorized Honda generator dealer. The circuit protector does not prevent overcharging the battery.

Disconnecting the battery charging cable:

1. Stop the engine (see page 25).
2. Disconnect the black lead of the battery charging cable from the negative (–) battery terminal.
3. Disconnect the red lead of the battery charging cable from the positive (+) battery terminal.
4. Disconnect the battery charging cable from the DC receptacle of the generator.
5. Connect the vehicle battery ground cable to the negative (–) battery terminal.



OPERATION

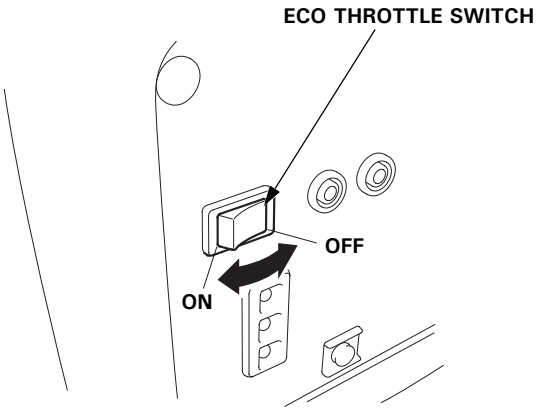
ECO THROTTLE SYSTEM

With the switch in the ON position, engine speed is automatically lowered when loads are reduced, turned OFF, or disconnected. When appliances are turned ON or reconnected, the engine returns to the proper speed to power the electrical load. In the OFF position, the Eco Throttle system does not operate.

Appliances with large startup power demands may not allow the engine to reach normal operating rpm when they are connected to the generator. Turn the Eco Throttle to the OFF position and connect the appliance to the generator. If the engine still will not reach normal operating speed, check that the appliance does not exceed the rated load capacity of the generator.

If high electrical loads are connected simultaneously, turn the Eco Throttle switch to the OFF position to reduce voltage changes.

The Eco Throttle system is not effective for use with appliances or tools that require only momentary power. If the tool or appliance will be turned ON and OFF quickly, the Eco Throttle switch should be in the OFF position.
When using the DC output, turn the Eco Throttle switch to the OFF position.



STANDBY POWER

Connections to a Building's Electrical System

Connections for standby power to a building's 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.

⚠WARNING

Improper connections to a building's electrical system can allow current from the generator to backfeed into the utility lines.

Such backfeed may electrocute 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.

Consult the utility company or a qualified electrician prior to making any power connections.

In some areas, generators are required by law to be registered with local utility companies. Check local regulations for proper registration and use procedures.

System Ground

Honda portable generators have a system ground that connects the generator frame components to the ground terminals in the AC output receptacles. The system ground is not connected to the AC neutral wire. If the generator is tested with a receptacle tester, it will not show the same ground circuit condition as for a home receptacle.

OPERATION

Special Requirements

NOTICE

Keep all cooling holes open and clear of debris, mud, water, etc. Cooling holes are located on the side panel, the control panel, and the bottom of the generator. If the cooling holes are blocked, the generator may overheat and damage the engine, inverter, or windings.

NOTICE

Do not lay the generator on its side when moving, storing, or operating it. Oil may leak and damage the engine or your property.

There may be applicable laws, local codes, or ordinances that apply to the intended use of the generator. Please consult a qualified electrician, electrical inspector, or the local agency having jurisdiction.

- In some areas, generators are required to be registered with local utility companies.
- If the generator is used at a construction site, there may be additional regulations that must be observed.

SERVICING YOUR GENERATOR

THE IMPORTANCE OF MAINTENANCE

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

To help you properly care for your generator, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures using basic hand tools. Other service tasks that are more difficult or require special tools are best handled by professionals and are normally performed by a Honda technician or other qualified mechanic.

The maintenance schedule applies to normal operating conditions. If you operate your generator under unusual conditions, such as sustained high load or high temperature operation, or use it in dusty conditions, consult your servicing dealer for recommendations applicable to your individual needs and use.

⚠ 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 owner's manual.

Remember that an authorized Honda servicing dealer knows your generator best and is fully equipped to maintain and repair it.

To ensure the best quality and reliability, use only new, Honda Genuine parts or their equivalents for repair and replacement.

SERVICING YOUR GENERATOR

MAINTENANCE SAFETY

Some of the most important safety precautions follow. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.

⚠WARNING

Failure to properly follow maintenance instructions and precautions can cause you to be seriously hurt or killed.

Always follow the procedures and precautions in the owner's manual.

Safety Precautions

Make sure the engine is off before you begin any maintenance or repairs. This will eliminate several potential hazards:

– **Carbon monoxide poisoning from engine exhaust.**
Operate outside away from open windows or doors.

– **Burns from hot parts.**
Let the engine and exhaust system cool before touching.

– **Injury from moving parts.**
Do not run the engine unless instructed to do so.

- Read the instructions before you begin, and make sure you have the tools and skills required.
- 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

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first. / ITEM		Each use	First month or 20 hrs.	Every 3 months or 50 hrs.	Every 6 months or 100 hrs.	Every year or 200 hrs.	Page
Engine oil	Check level	o					47
	Change		o		o		49
Air cleaner	Check	o					51
	Clean			o (1)			53
Spark plug	Check-adjust				o		54
	Replace					o	54
Valve clearance	Check-adjust					o (2)	—
Combustion chamber	Clean	After every 300 hrs. (2)					—
Fuel tank and filter	Clean				o (2)		—
Fuel tube	Check	Every 2 years (Replace if necessary) (2)					—

(1) Service more frequently when used in dusty areas.
(2) These items should be serviced by your servicing dealer, unless you have the proper tools and are mechanically proficient. Refer to the Honda shop manual for service procedures.
(3) For commercial use, log hours of operation to determine proper maintenance intervals.

SERVICING YOUR GENERATOR

REFUELING

With the engine stopped, remove the fuel filler cap and check the fuel level. Refill the fuel tank if the fuel level is low.

⚠WARNING

Gasoline is highly flammable and explosive.

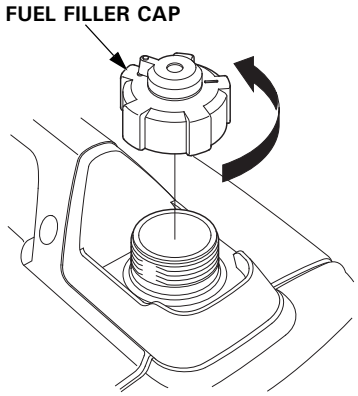
You can be burned or seriously injured when handling fuel.

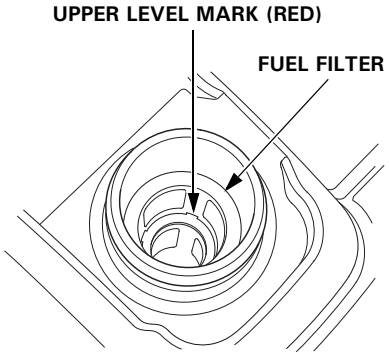
- Stop the engine and keep heat, sparks, and flame away.
- Handle fuel only outdoors.
- Wipe up spills immediately.

NOTICE

Fuel can damage paint and plastic. Be careful not to spill fuel when filling your fuel tank. Damage caused by spilled fuel is not covered under warranty.

Refuel in a well ventilated area before starting the engine. If the engine has been running, allow it to cool. Refuel carefully to avoid spilling fuel. Do not fill the fuel tank above the upper level mark (red) on the fuel filter.
Never refuel the engine inside a building where gasoline fumes may reach flames or sparks. Keep gasoline away from appliance pilot lights, barbecues, electric appliances, power tools, etc.
Spilled fuel is not only a fire hazard, it causes environmental damage. Wipe up spills immediately.





After refueling, reinstall the fuel filler cap securely.

SERVICING YOUR GENERATOR

FUEL RECOMMENDATIONS

This engine is certified to operate on regular unleaded gasoline with a research octane rating of 91 or higher (a pump octane rating of 86 or higher).

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt or water in the fuel tank.

You may use regular unleaded gasoline containing no more than 10% ethanol (E10) or 5% methanol by volume. In addition, methanol must contain cosolvents and corrosion inhibitors.

Use of fuels with content of ethanol or methanol greater than shown above may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of the fuel system.

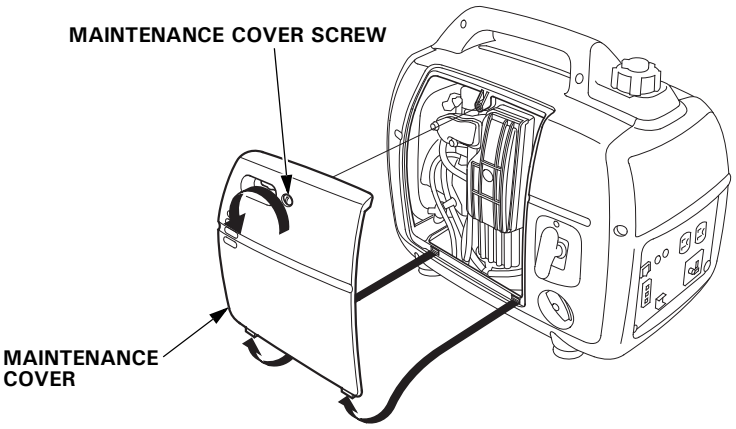
Engine damage or performance problems that result from using a fuel with percentages of ethanol or methanol greater than shown above are not covered under warranty.

If your equipment will be used on an infrequent basis, please refer to the fuel section of the *STORAGE* chapter (see page 56) for additional information regarding fuel deterioration.

ENGINE OIL LEVEL CHECK

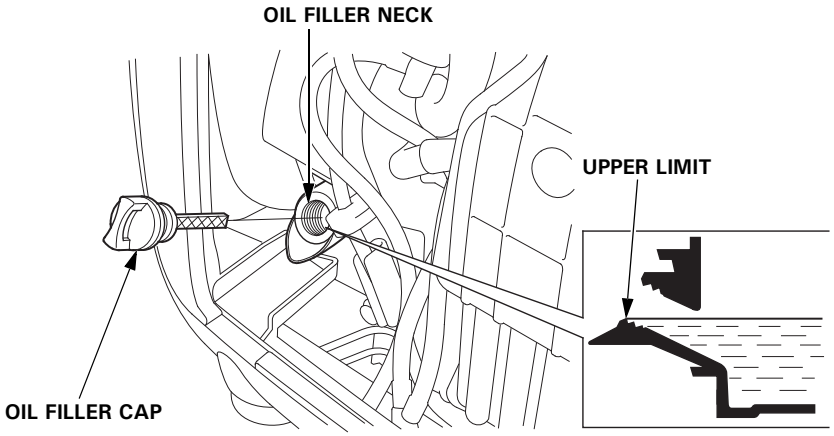
Check the engine oil level with the generator on a level surface and the engine stopped.

1. Loosen the maintenance cover screw and remove the maintenance cover.



SERVICING YOUR GENERATOR

2. Remove the oil filler cap.
3. Check the oil level. If it is below the upper limit, fill with the recommended oil to the upper limit of the oil filler neck (see page 50).
4. Reinstall the oil filler cap securely.
5. Reinstall the maintenance cover and tighten the maintenance cover screw securely.



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

ENGINE OIL CHANGE

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

1. Turn the engine switch and fuel filler cap vent lever to the OFF position (see page 25) to reduce the possibility of fuel leakage.
2. Loosen the maintenance cover screw and remove the maintenance cover (see page 47).
3. Place a suitable container next to the engine to catch the used oil.
4. Remove the oil filler cap, and drain the oil into the container by tipping the engine toward the oil filler neck.

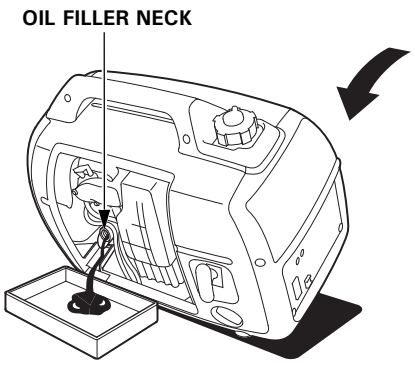
NOTICE

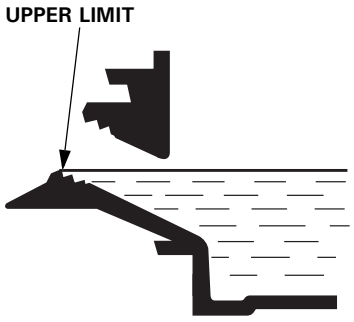
Improper disposal of engine oil can be harmful to the environment. If you change your own oil, please dispose of the used oil properly. Put it in a sealed container, and take it to a recycling center. Do not discard it in a trash bin, dump it on the ground, or pour it down the drain.

5. With the engine in a level position, fill with the recommended oil to the upper limit of the oil filler neck (see page 50).
6. Reinstall the oil filler cap securely.
7. Reinstall the maintenance cover and tighten the maintenance cover screw securely.

ENGINE OIL CAPACITY: 0.40 L

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



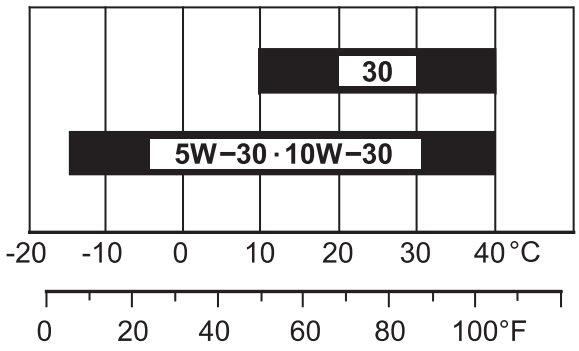


SERVICING YOUR GENERATOR

ENGINE OIL RECOMMENDATIONS

Oil is a major factor affecting performance and service life. Use 4-stroke automotive detergent oil.

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

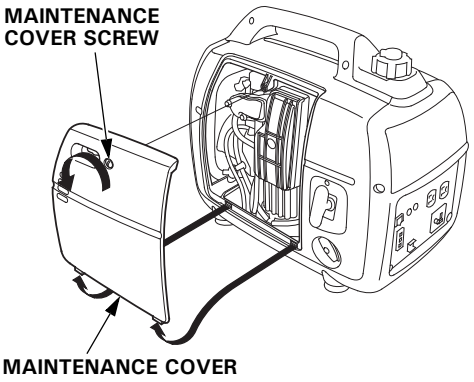


AMBIENT TEMPERATURE

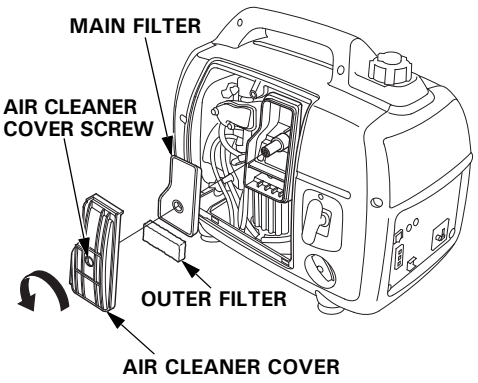
The SAE oil viscosity and service category are in the API label on the oil container. Honda recommends that you use API service category SE or later (or equivalent) oil.

AIR CLEANER SERVICE

1. Loosen the maintenance cover screw and remove the maintenance cover.



2. Loosen the air cleaner cover screw, and remove the air cleaner cover.

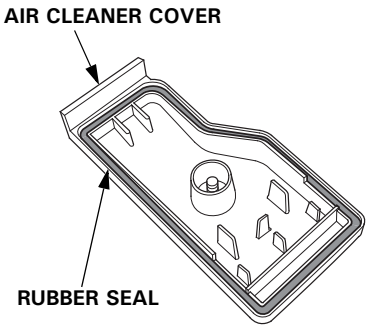


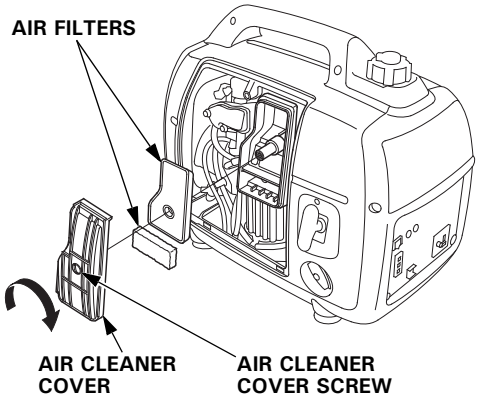
3. Remove the main and outer filters from the air cleaner housing.

4. Check the main and outer filters to be sure they are clean and in good condition. If the main and outer filters are dirty, clean them as described on page 53. Replace the main and outer filters if they are damaged.

SERVICING YOUR GENERATOR

5. Reinstall the air filters.
6. Make sure that the rubber seal is set in the groove of the air cleaner cover.
7. Reinstall the air cleaner cover, and tighten the air cleaner cover screw.
8. Reinstall the maintenance cover and tighten the maintenance cover screw securely.





NOTICE

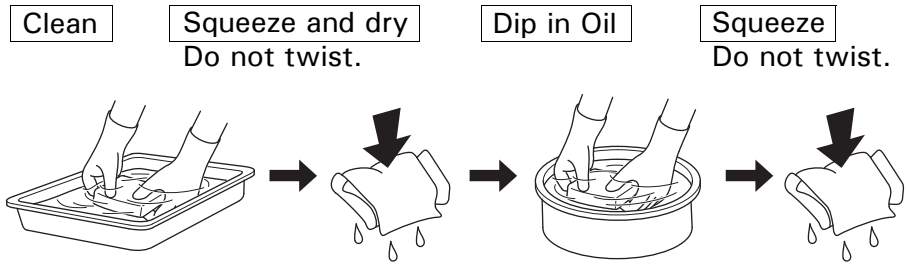
Operating the engine without the air filters or with a damaged air filter will allow dirt to enter the engine, causing rapid engine wear.

MAIN AND OUTER FILTER CLEANING

Dirty air filters will restrict air flow to the carburetor, reducing engine performance. If you operate the generator in very dusty areas, clean the main and outer filters more frequently than specified in the Maintenance Schedule.

1. Clean the air filters in warm soapy water, rinse, and allow to dry thoroughly, or clean in nonflammable solvent and allow to dry.

2. Dip the air cleaner element in clean engine oil, and then squeeze out all excess oil. The engine will smoke when started if too much oil is left in the air filters.



3. Wipe dirt from the air cleaner housing and cover using a moist rag. Be careful to prevent dirt from entering the air duct that leads to the carburetor.

SERVICING YOUR GENERATOR

SPARK PLUG SERVICE

Recommended spark plug: CR5HSB (NGK)

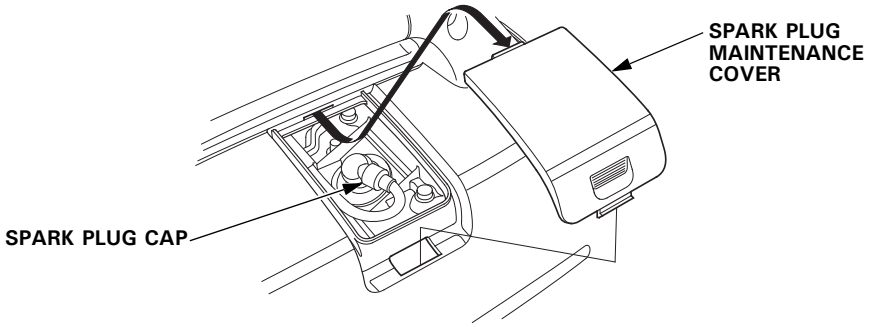
To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

NOTICE

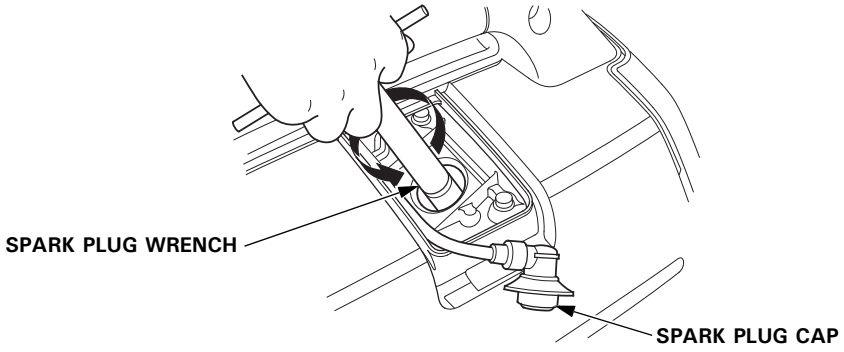
An incorrect spark plug can cause engine damage.

If the engine is hot, allow it to cool before servicing the spark plug.

1. Remove the spark plug maintenance cover.



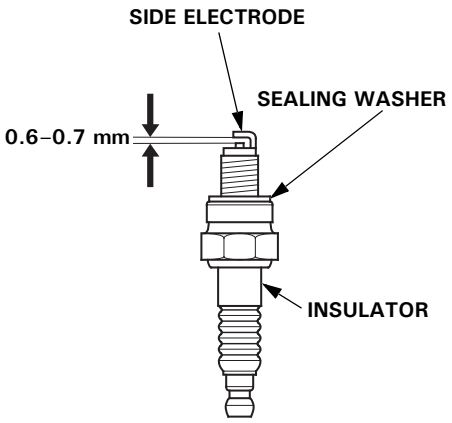
2. Remove the spark plug cap.
3. Clean any dirt from around the spark plug base.
4. Use a spark plug wrench to remove the spark plug.



5. Inspect the spark plug. Replace it if the electrodes are worn or if the insulator is cracked, chipped, or fouled.

6. Measure the spark plug electrode gap with a wire type feeler gauge. Correct the gap, if necessary, by carefully bending the side electrode.

   The gap should be:
   0.6–0.7 mm



7. Make sure that the spark plug sealing washer is in good condition, and thread the spark plug in by hand to prevent cross threading.

8. After the spark plug is seated, tighten with a spark plug wrench to compress the sealing washer.

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

   NOTICE

   A loose spark plug can overheat and damage the engine. Overtightening the spark plug can damage the threads in the cylinder head.

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

10. Reinstall the spark plug maintenance cover.

STORAGE

STORAGE PREPARATION

Proper storage preparation is essential for keeping your generator trouble free and looking good. The following steps will help to keep rust and corrosion from impairing your generator's function and appearance, and will make the engine easier to start when you use the generator again.

Cleaning

Wipe the generator with a moist cloth. After the generator has dried, touch up any damaged paint, and coat other areas that may rust with a light film of oil.

Fuel

NOTICE

Depending on the region where you operate your equipment, fuel formulations may deteriorate and oxidize rapidly. Fuel deterioration and oxidation can occur in as little as 30 days and may cause damage to the carburetor and/or fuel system. Please check with your servicing dealer for local storage recommendations.

Gasoline will oxidize and deteriorate in storage. Old gasoline will cause hard starting, and it leaves gum deposits that clog the fuel system. If the gasoline in your generator deteriorates during storage, you may need to have the carburetor and other fuel system components serviced or replaced.
The length of time that gasoline can be left in your fuel tank and carburetor without causing functional problems will vary with such factors as gasoline blend, your storage temperatures, and whether the fuel tank is partially or completely filled. The air in a partially filled fuel tank promotes fuel deterioration. Very warm storage temperatures accelerate fuel deterioration. Fuel deterioration problems may occur within a few months, or even less if the gasoline was not fresh when you filled the fuel tank.

Draining the Fuel Tank and Carburetor

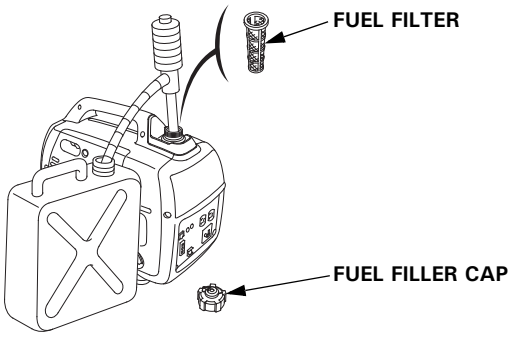
⚠ WARNING

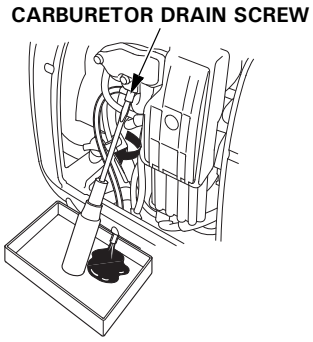
Gasoline is highly flammable and explosive.

You can be burned or seriously injured when handling fuel.

- Stop the engine and keep heat, sparks, and flame away.
- Handle fuel only outdoors.
- Wipe up spills immediately.

1. Unscrew the fuel filler cap (see page 45), remove the fuel filter, and empty the fuel tank into an approved gasoline container. We recommend using a commercially available gasoline hand pump to empty the tank. Do not use an electric pump. Reinstall the fuel filter and the fuel filler cap.
2. Loosen the maintenance cover screw and remove the maintenance cover (see page 47).
3. Loosen the carburetor drain screw, and drain the gasoline from the carburetor into a suitable container.
4. Remove the spark plug maintenance cover and the spark plug cap (see page 54).
5. Turn the engine switch to the ON position (see page 23).
6. Pull the starter grip (see page 24) 3 to 4 times to drain the gasoline from the fuel pump into a suitable container.
7. Turn the engine switch to the OFF position.
8. Tighten the carburetor drain screw.





STORAGE

Engine Oil

1. Change the engine oil (see page 49).
2. Remove the spark plug (see page 54), and pour approximately one teaspoon (5 cc) of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.
3. Reinstall the spark plug cap on the spark plug securely.
4. Reinstall the spark plug maintenance cover.
5. Reinstall the maintenance cover and tighten the maintenance cover screw securely.
6. Pull the starter grip (see page 24) slowly until you feel resistance, then return the starter grip gently. This closes the valves so moisture cannot enter.

STORAGE PRECAUTIONS

If your generator will be stored with gasoline in the fuel tank and carburetor, it is important to reduce the hazard of gasoline vapor ignition.

Select a well ventilated storage area away from any appliance that operates with a flame, such as a furnace, water heater, or clothes dryer. Also avoid any area with a spark producing electric motor, or where power tools are operated.

If possible, avoid storage areas with high humidity, because that promotes rust and corrosion.

Unless all fuel has been drained from the fuel tank, leave the engine switch in the OFF position, and the fuel filler cap vent lever in the OFF position (see page 25) to reduce the possibility of leakage.

Place the generator on a level surface. Tilting or laying it on its side can cause fuel or oil leakage.

With the engine and exhaust system cool, cover the generator to keep out dust. A hot engine and exhaust system can ignite or melt some materials.

Do not use sheet plastic as a dust cover. A nonporous cover will trap moisture around the generator, promoting rust and corrosion.

REMOVAL FROM STORAGE

Check your generator as described in the *BEFORE OPERATION* chapter of this manual (see page 19).

If the fuel was drained during storage preparation, fill the tank with fresh gasoline. If you keep a container of gasoline for refueling, be sure that it contains only fresh gasoline. Gasoline oxidizes and deteriorates over time, causing hard starting.

If the cylinder was coated with oil during storage preparation, the engine may smoke briefly at startup. This is normal.

TRANSPORTING

NOTICE

Do not lay the generator on its side when moving, storing, or operating it. Oil may leak and damage the engine or your property.

If the generator has been used, allow it cool for at least 15 minutes before loading the generator on the transport vehicle. A hot engine and exhaust system can burn you and can ignite some material.
To prevent fuel spillage when transporting, the generator should be secured upright in its normal operating position, with the engine switch OFF and the fuel filler cap vent lever turned fully counterclockwise to the OFF position (see page 25).
Take care not to drop or strike the generator when transporting.
Do not place heavy object on the generator.

TAKING CARE OF UNEXPECTED PROBLEMS

ENGINE WILL NOT START

Possible Cause	Correction
Fuel filler cap vent lever is in the OFF position.	Turn the fuel filler cap vent lever to the ON position (see page 22).
Engine switch is in the OFF position.	Turn engine switch to the ON position (see page 23).
Out of fuel.	Refuel (see page 44).
Bad fuel; generator stored without treating or draining gasoline, or refueled with bad gasoline.	Drain fuel tank and carburetor (see page 57). Refuel with fresh gasoline (see page 44).
Low engine oil level caused Oil Alert to stop engine.	Turn the engine switch to the OFF position. Add engine oil. Then turn the engine switch to the ON position and restart the engine.
Spark plug faulty, fouled, or improperly gapped.	Gap or replace spark plug (see page 54).
Spark plug wet with fuel (flooded engine).	Dry and reinstall spark plug.
Fuel filter restricted, carburetor malfunction, ignition malfunction, valves stuck, etc.	Take the generator to your servicing dealer, or refer to the shop manual.

TAKING CARE OF UNEXPECTED PROBLEMS

ENGINE LACKS POWER

Possible Cause	Correction
Air filter restricted.	Clean or replace air filter (see page 51).
Bad fuel; generator stored without treating or draining gasoline, or refueled with bad gasoline.	Drain fuel tank and carburetor (see page 57). Refuel with fresh gasoline (see page 44).
Fuel filter restricted, carburetor malfunction, ignition malfunction, valves stuck, etc.	Take the generator to your servicing dealer, or refer to the shop manual.

NO POWER AT THE AC RECEPTACLES

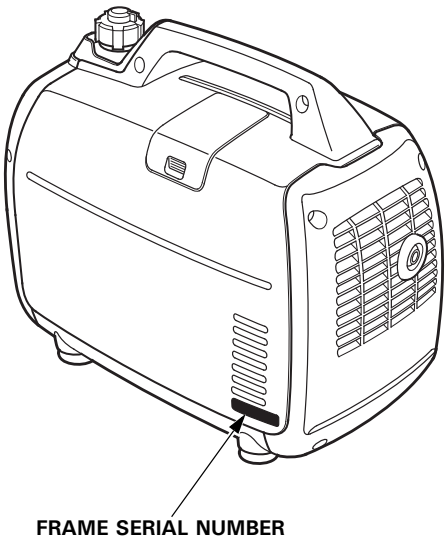
Possible Cause	Correction
Output indicator is OFF, and overload indicator is ON.	Check AC load. Stop and restart the engine.
	Check the cooling air inlet. Stop and restart the engine.
Faulty power tool or appliance.	Replace or repair power tool or appliance. Stop and restart the engine.
Faulty generator.	Take the generator to your servicing dealer, or refer to the shop manual.

NO POWER AT THE DC RECEPTACLES

Possible Cause	Correction
DC circuit protector OFF.	Push the DC circuit protector to the ON position (see page 36).
Faulty generator.	Take the generator to your servicing dealer, or refer to the shop manual.

TECHNICAL INFORMATION

SERIAL NUMBER LOCATION



Record the frame serial number and date purchased in the spaces below. You will need this information when ordering parts, and when making technical or warranty inquiries.

Frame serial number:_____

Date purchased:_____

CARBURETOR MODIFICATION FOR 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 1,500 meters, have your authorized Honda servicing 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 300 meter increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

NOTICE

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 1,500 meters with a modified carburetor may cause the engine to overheat and result in serious engine damage. For use at low altitudes, have your servicing dealer return the carburetor to original factory specifications.

TECHNICAL INFORMATION

SPECIFICATIONS

Dimensions

Model	EU20i
Description code	EACT
Length	512 mm
Width	290 mm
Height	425 mm
Dry mass [weight]	20.7 kg

Engine

Model	GX100
Engine type	4-stroke, overhead camshaft, single cylinder
Displacement [Bore × Stroke]	98.5 cm^3 [56.0 × 40.0 mm]
Compression ratio	8.5:1
Engine speed	4,300–5,000 rpm (with Eco Throttle switch OFF)
Cooling system	Forced air
Ignition system	Full transistor
Engine oil capacity	0.40 L
Fuel tank capacity	3.6 L
Spark plug	CR5HSB (NGK)

Generator

Model		EU20i
Type		RR4, RR5, RR6, RR7 types
AC output	Rated Voltage	220 V
	Rated Frequency	50 Hz
	Rated Current	7.3 A
	Rated Output	1.6 kVA
	Maximum Output	2.0 kVA
DC output		Only for charging 12 V automotive batteries. Maximum changing output = 8 A

Specifications may vary according to the types, and are subject to change without notice.

WIRING DIAGRAM

ACOR	AC Output Receptacle
Cot	Parallel operation socket
CPB	Control Panel Block
DC, CP	DC Circuit Protector
DC, D	DC Diode
DCOR	DC Output Receptacle
DC, W	DC Winding
EcoSw	Eco throttle switch
EgB	Engine Block
EgG	Engine Ground
ESw	Engine Switch
ExW	Exciter Winding
FrB	Frame Block
FrG	Frame Ground
GeB	Generator Block
GT	Ground Terminal
IB	Inverter Block
IgC	Ignition Coil
IU	Inverter Unit
MW	Main Winding
OAL	Oil Alert Indicator
OAU	Oil Alert Unit
OI	Overload Indicator
OLSw	Oil Level Switch
PC	Pulser Coil
PL	Output Indicator
RBx	Receptacle Box for Parallel Operation
SP	Spark Plug
SpU	Spark Unit
StpM	Stepping Motor (Throttle Control)
SW	Sub Winding
To Ge	To Generator

Bl	BLACK
Y	YELLOW
Bu	BLUE
G	GREEN
R	RED
W	WHITE
Br	BROWN
Lg	LIGHT GREEN
Gr	GRAY
Lb	LIGHT BLUE
O	ORANGE
P	PINK

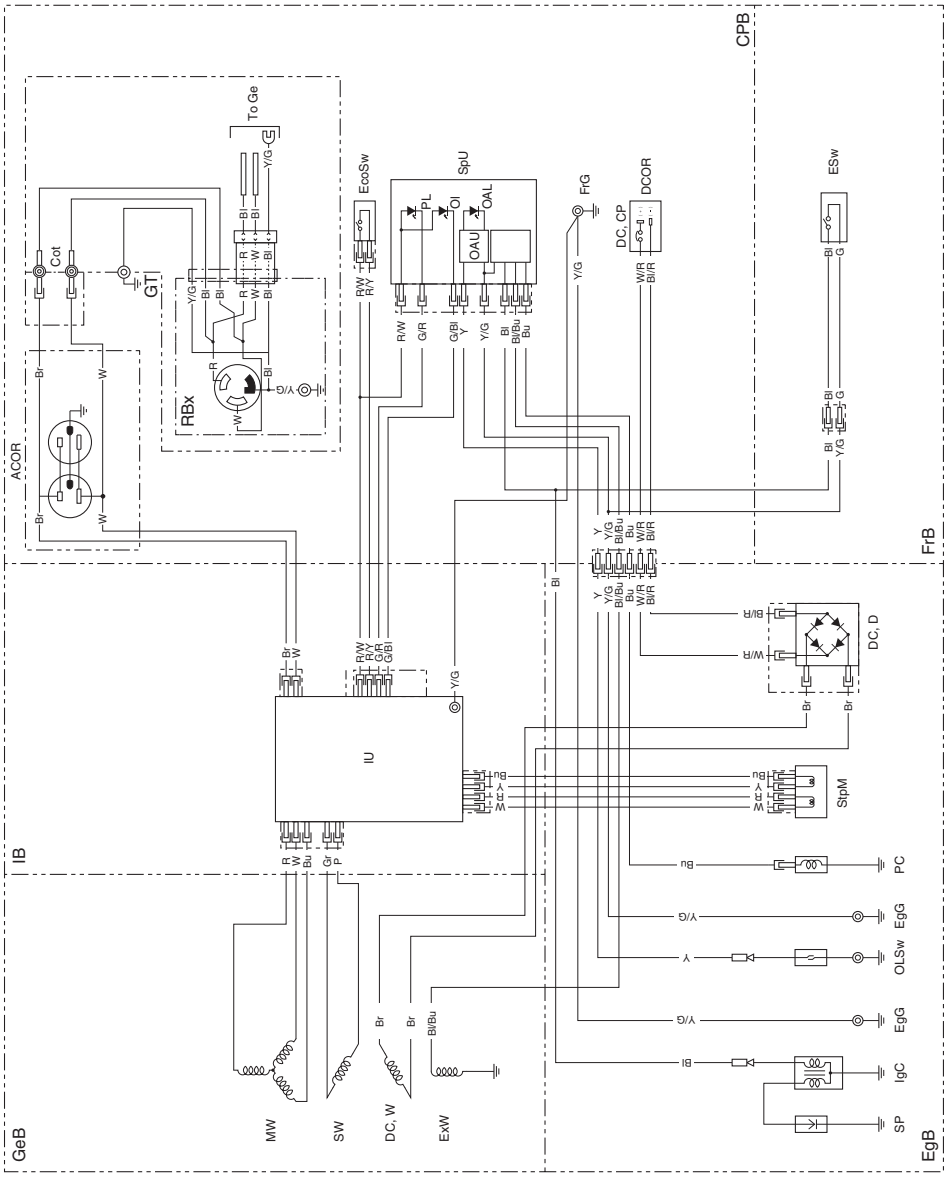
ENGINE SWITCH

	G	Bl
OFF	o——	——o
ON		

ECO THROTTLE SWITCH

	R/W	R/Y	ECO
ON	o——	——o	OFF
OFF			ON

TECHNICAL INFORMATION



INDEX

INDEX

INDEX