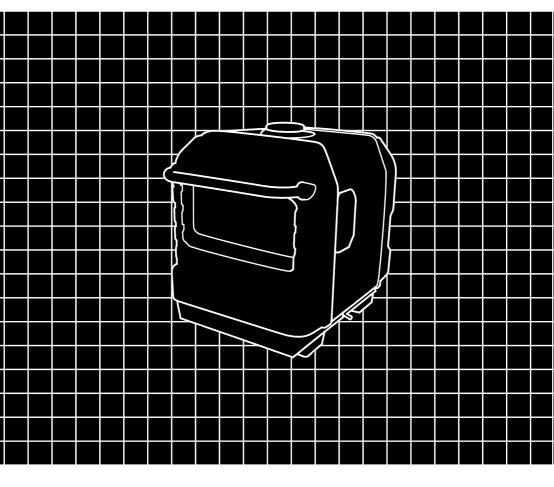


# Owner's Manual GENERATOR EU3000is



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See page 85 for Initial Use Instructions

# WARNING:

Α

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

## 

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

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

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

The information and specifications included in this publication were in effect at the time of approval for printing. 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 *Distributor's Limited Warranty* (see page 79) 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 and is supported by the parts and service divisions of American Honda. Your Honda servicing dealer is dedicated to your satisfaction and will be pleased to answer your questions and concerns.

The illustrations herein are mainly based on: NON-CALIFORNIA TYPE

• The illustration may vary according to the type.

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 A and one of three signal words, DANGER, WARNING, or CAUTION.

These signal words mean:



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

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

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.

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# **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**

- Exhaust contains poisonous carbon monoxide, a colorless, odorless gas. Breathing carbon monoxide can cause loss of consciousness and may lead to death.
- If you run the generator in an area that is confined, or even partly enclosed area, the air you breathe could contain a dangerous amount of exhaust gas.
- Never run your generator inside a garage, house, or near open windows or doors.

### **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 parallel operation cable kit (optional equipment) when connecting two EU3000is generators for parallel operation.
- Never connect different generator models.

### 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.

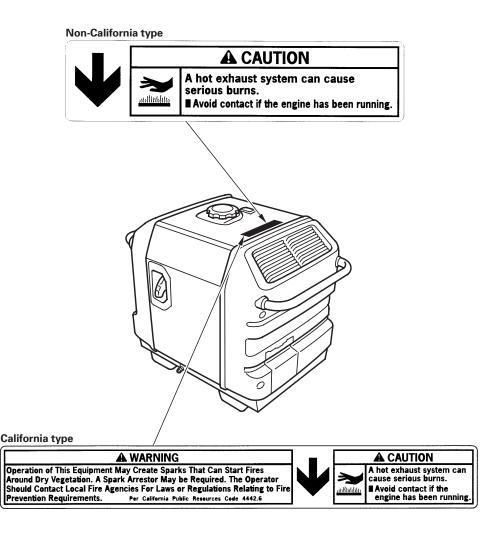
### **Refuel With Care**

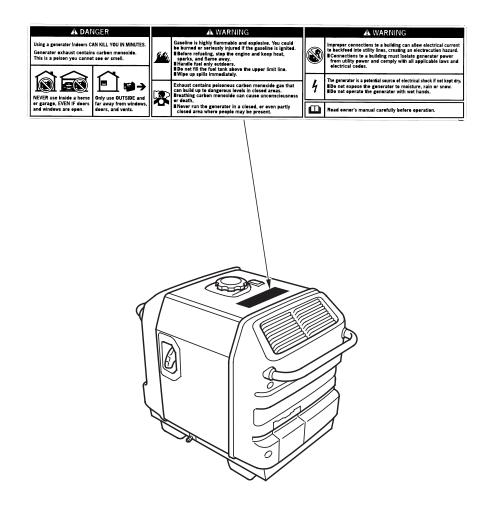
Gasoline is extremely flammable, and gasoline vapor can explode. Allow the engine to cool if the generator has been in operation. Refuel only outdoors in a well-ventilated area with the engine off. Do not overfill the fuel tank. Never smoke near gasoline, and keep other flames and sparks away. Always 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 generator dealer for a replacement.

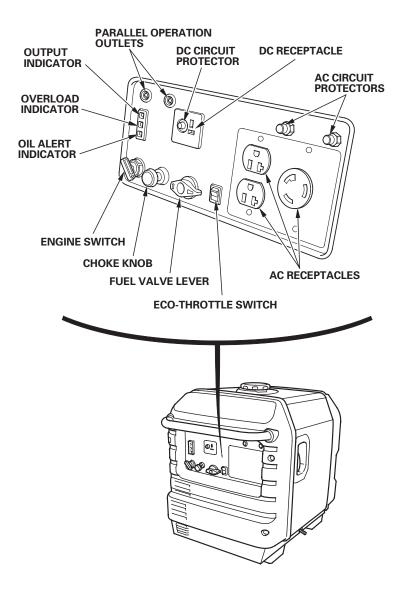




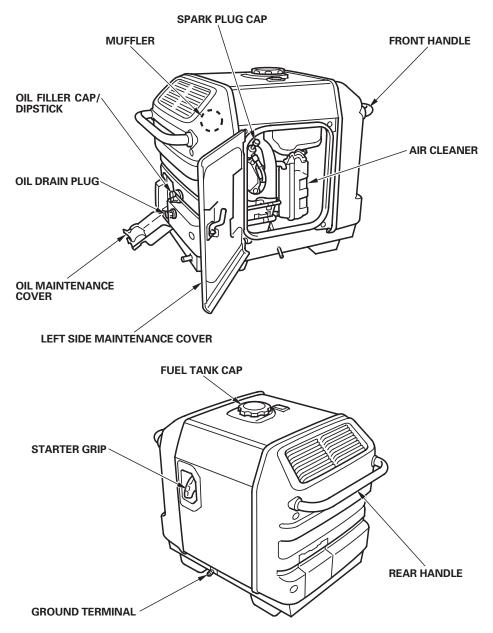
# **CONTROLS & FEATURES**

## **COMPONENT & CONTROL LOCATIONS**

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



#### <NON-CALIFORNIA TYPE>



### CONTROLS

## **Engine Switch**

The engine switch controls the ignition system, and it operates the electric starter.

OFF — Stops the engine. The engine switch key can be removed/inserted.

ON — Running position, and for starting with the recoil starter.

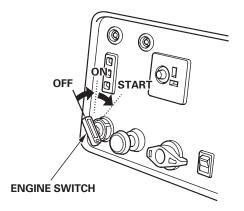
START — Operates the electric starter.

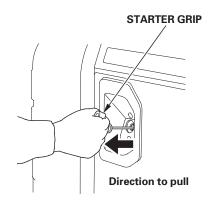
## **Starter Grip**

Used when the battery voltage is too low to turn the starter motor. Pulling the starter grip operates the recoil starter to crank the engine.

### NOTICE

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





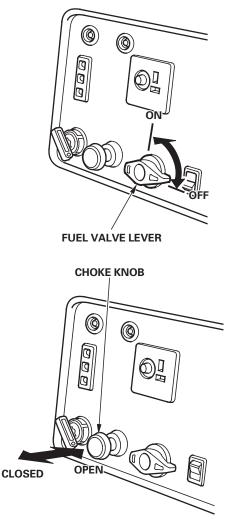
## **CONTROLS & FEATURES**

### **Fuel Valve Lever**

The fuel valve lever is located on the control panel.

The fuel valve must be in the ON position for the engine to run.

After stopping the engine, turn the fuel valve to the OFF position.



#### **Choke Knob**

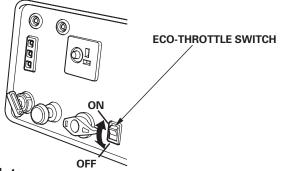
The choke is used to provide proper starting mixture when the engine is cold. It can be opened and closed by operating the choke knob manually. Move the choke knob to the closed position to enrich the mixture for cold starting.

## Eco-Throttle<sup>™</sup> Switch

The Eco-Throttle<sup>™</sup> 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.

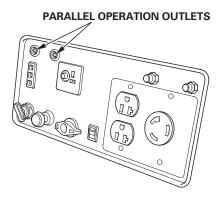
If high electrical loads are connected simultaneously, turn the Eco-Throttle switch to the OFF position to reduce voltage changes.

- **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. Generator operates at full speed.



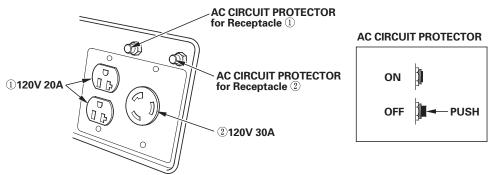
## **Parallel Operation Outlets**

These outlets are used for connecting two EU3000is generators for parallel operation (see page 29). A Honda approved parallel operation cable kit (optional equipment) is required for parallel operation. This kit can be purchased from an authorized Honda generator dealer.



## **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 120V 20A receptacle or 120V 30A locking plug receptacle. 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.

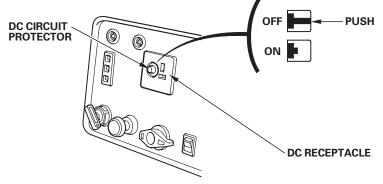


## **DC Receptacle**

The DC receptacle should ONLY be used for charging 12-volt automotive type batteries. The DC charging output is not regulated.

## **DC Circuit Protector**

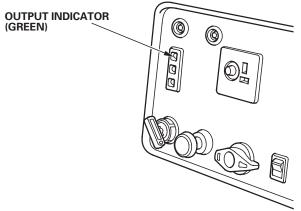
The DC circuit protector automatically shuts off the DC battery charging circuit when the DC charging circuit is overloaded, when there is a problem with the battery, or when the connections between the battery and the generator are improper. However, the circuit protector does not prevent overcharging.



### FEATURES

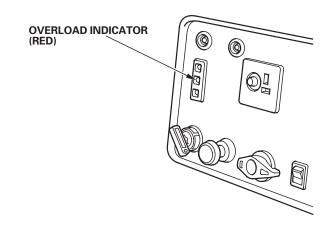
#### **Output Indicator**

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



#### **Overload Indicator**

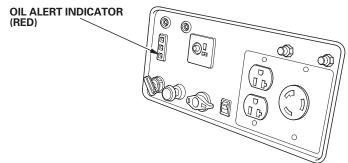
If the generator is overloaded (in excess of 3.0 kVA), or if there is a short circuit in a connected appliance, the overload indicator (red) will come ON. The overload indicator (red) will stay ON, and after about four seconds, current to the connected appliance(s) will shut off, and the output indicator (green) will go OFF. However, the engine will continue to run.



## Oil Alert<sup>®</sup> Indicator

The Oil Alert<sup>®</sup> 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).

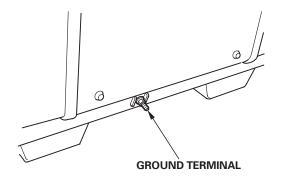
If the engine stops or the Oil Alert indicator (red) comes on when you turn the engine switch to START position or pull the starter grip, check the engine oil level (see page 44) before troubleshooting in other areas.



## **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.



# **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 28 and 32).

## **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.

## **A**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 pre-operation inspection before each operation, and correct any problem.

## **BEFORE OPERATION**

To prevent a possible fire, keep the generator at least 3 feet (1 meter) away from building walls and other equipment during operation. Do not place flammable objects close to the engine.

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

#### **Check the Engine**

Check the oil level (see page 44). A low oil level will cause the Oil Alert system to shut down the engine.

Check the air filter (see page 47). A dirty air filter will restrict air flow to the carburetor, reducing engine and generator performance.

Check the fuel level (see page 42). 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.

## **A**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 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.
- Operate the generator at least 3 feet (1 meter) away from buildings and other equipment.
- Do not operate the generator in an enclosed structure.

## STARTING THE ENGINE

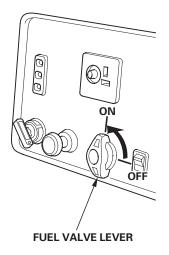
To prevent a possible fire, keep the generator at least 3 feet (1 meter) away from building walls and other equipment during operation. Do not place flammable objects close to the engine.

NOTICE

Operating this generator less than 3 feet (1 meter) from a building or other obstruction can cause overheating and damage the generator. For proper cooling, allow at least 3 feet (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 *AC OPERATION* (see page 27) or *DC OPERATION* (see page 33) 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 valve 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, pull the choke knob out to the CLOSED position.

To restart a warm engine, leave the choke knob in the OPEN position.

5. Turn the engine switch to the START position, and hold it there until the engine starts. When the engine starts, release the key, allowing the switch to return to the ON position.

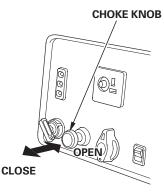
If the engine fails to start within 5 seconds, release the key, and wait at least 10 seconds before operating the starter again.

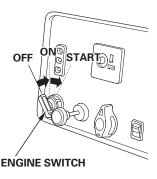
#### NOTICE

Using the electric starter for more than 5 seconds at a time will overheat the starter motor and can damage it.

Do not leave the engine switch in the ON position when the generator is not operating as the battery will discharge. Turn the engine switch to the OFF position when not in use.







6. If the choke knob was moved to the CLOSED position to start the engine, gradually push it to the OPEN position as the engine warms up.



000

7. 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.



**CHOKE KNOB** 

61



## Manual starting:

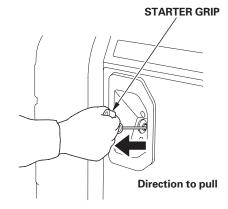
- 1. Make sure that all appliances connected to the generator are turned off.
- 2. Turn the fuel valve lever to the ON position.
- To start a cold engine, pull the choke knob out to the CLOSED position.
   To restart a warm engine, leave the choke knob in the OPEN position.
- 4. Turn the engine switch to the ON position.

## **OPERATION**

5. 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.

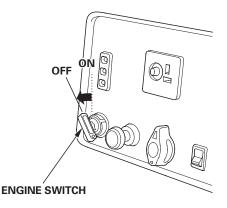


- 6. If the choke knob was moved to the CLOSED position to start the engine, gradually push it to the OPEN position as the engine warms up.
- 7. If you wish to use the Eco-Throttle system, turn the Eco-Throttle switch to the ON position after the engine has warmed up for 2 or 3 minutes.

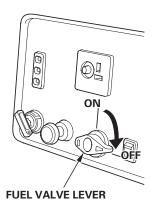
## **STOPPING THE ENGINE**

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 that are connected to the generator or the parallel operation kit.
- 2. Turn the engine switch to the OFF position.



3. Turn the fuel valve lever to the OFF position.



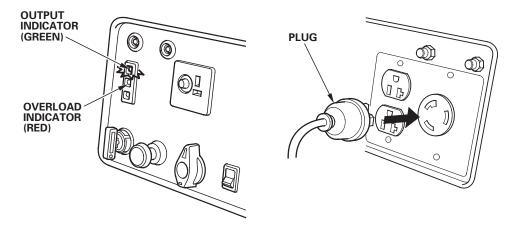
4. If two generators were connected for parallel operation, disconnect the parallel operation kit/receptacle assembly after stopping the engines if you do not wish to resume parallel operation.

### **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.



3. Turn on the appliance.

If the generator is overloaded (in excess of 3.0 kVA), if there is a short circuit in a connected appliance, or if the inverter is overheated, the overload indicator (red) will come ON. The overload indicator (red) will stay ON, and after about five 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, an overload, or an overheated inverter. 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.
- Make sure that the combined electrical rating of the tools or appliances do 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.

#### NOTICE

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

Limit operation requiring maximum power to 30 minutes. Maximum power is:

#### 3.0 kVA

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

### 2.8 kVA

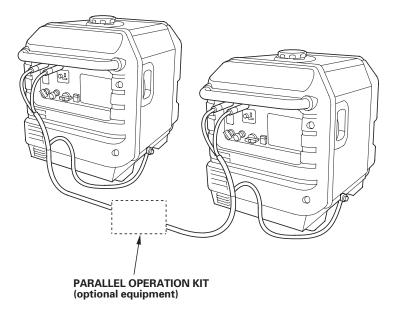
The total power requirements (VA) of all appliances connected must be considered. Appliance and power tool manufacturers usually list rating information near the model number or serial number.

## AC PARALLEL OPERATION

Before connecting an appliance to either generator, make sure that the appliance 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.

1. Connect the parallel operation kit between the two EU3000is generators following the instructions supplied with the kit.



2. Start the generators (see page22) and make sure the output indicator (green) on each generator comes on.

- 3. Plug in the appliance following the instruction provided with the parallel operation cable kit.
- 4. Turn on the appliance.

If the generators are overloaded (see page 32 ), 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 engines and investigate the problem.

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

#### **AC Parallel Operation Applications**

Follow the instructions included with the parallel operation cable kit.

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.
- Make sure that the combined electrical rating of the tools or appliances do 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.
- Never connect different generator models and types.
- Use only a Honda approved parallel operation kit (optional equipment) when connecting two EU3000is generators for parallel operation.
- Never connect or remove the parallel operation kit when the generator is running.
- For single generator operation, the parallel operation kit must be removed.

#### 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. Limit operation requiring maximum power to 30 minutes. Maximum power in parallel operation is:

### 6.0 kVA

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

## 5.6 kVA

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.

#### **DC OPERATION**

The DC receptacle should ONLY be used for charging 12-volt automotive type batteries. The DC charging output is not regulated.

DC output will vary according to the position of the Eco-Throttle switch. When the Eco-Throttle switch is turned to the ON position and the AC output is not used, the DC current will be about one-third of the rated current.

#### **DC Current**

Eco-Throttle switch Model	OFF	ON (Do not use the AC output)
EU3000is	12 A	approximately 4 A

#### Connecting the battery charging cable (optional equipment):

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

## **A**WARNING

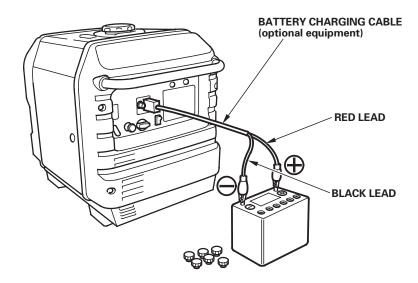
The battery gives off explosive hydrogen gas during normal operation.

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

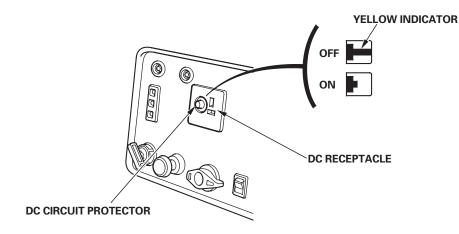


4. Start the generator.

#### NOTICE

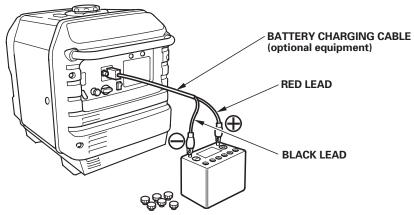
Do not start the vehicle while the battery charging cable is connected and the generator is running. The vehicle or the generator may be damaged.

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



### Disconnecting the battery charging cable:

- 1. Stop the engine.
- 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.



# ECO-THROTTLE<sup>™</sup> SYSTEM

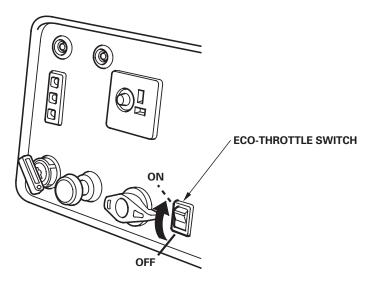
With the switch in the ON position, engine speed is automatically lowered when loads are reduced, turned off, or disconnected. When appliances are turned on or reconnected, the engine returns to the proper speed to power the electrical load. In the OFF position, the Eco-Throttle system does not operate.

Appliances with large start-up power demands may not allow the engine to reach normal operating rpm when they are connected to the generator. Turn the Eco-Throttle switch 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.

# **A**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.

### **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 Federal or State Occupational Safety and Health Administration (OSHA) regulations, 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.

# **A**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 your 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.

Maintenance, replacement, or repair of the emission control devices and systems may be performed by any engine repair establishment or individual, using parts that are "certified" to EPA standards.

### 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.

# **A**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 non-flammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks, and flames away from all fuel-related parts.

### MAINTENANCE SCHEDULE

REGULAR SERVICE PERIOD (3)			First	Every	Every	Every	
Perform at every indicated month		Each	month	3	6	year	
or operating hour interval,		use	or	months	months	or	page
whichever comes first.			20 Hrs.	or	or	300 Hrs.	
ITEM				50 Hrs.	100 Hrs.		
Engine oil	Check level	0					44
	Change		0		0		45
Air cleaner	Check	0					47
	Clean			<b>ः(1)</b>			48
	Replace					O <b>*</b>	47
Sediment cup	Clean				0		54
Spark plug	Check-adjust				0		49
	Replace					0	49
Spark arrester	Clean				0		51
Valve clearance	Check-adjust					ः(2)	
Combustion	Clean	After every 500 Hrs. (2)					
chamber							
Fuel tank and filter	Clean					O(2)	—
Fuel tube	Check	Every 2 years (Replace if necessary) (2)			sary) (2)	—	
Canister	Check	Every 2 years (2)					
(California type)							
Purge tube	Check	Every 2 years (2)					
(California type)				_			
Charge tube Check Every 2 years (2)							
(California type)							

\* Replace the paper air filter only.

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

(2) These items should be serviced by your Honda 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.

Failure to follow this maintenance schedule could result in non-warrantable failures.

# REFUELING

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

# **A**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

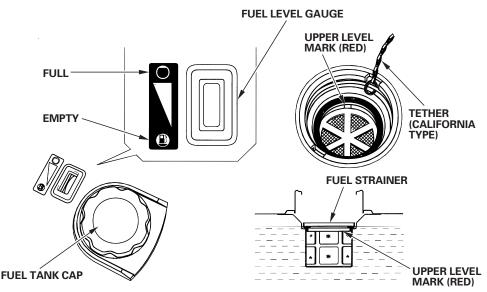
Fuel can damage paint and plastic. Be careful not to spill fuel when filling your fuel tank. Damage caused by spilled fuel is not covered under warranty.

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 above the upper level mark.

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.

# SERVICING YOUR GENERATOR



After refueling, reinstall the fuel tank cap securely.

### **FUEL RECOMMENDATIONS**

This engine is certified to operate on regular unleaded gasoline with 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.

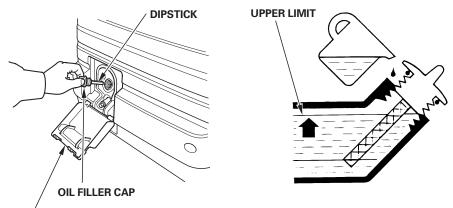
Engine damage or performance problems that result from using a fuel with percentages of ethanol or methanol greater than shown above are not covered under warranty.

If your equipment will be used on an infrequent or intermittent basis, please refer to the fuel section of the *STORAGE* chapter (page 61) for additional information regarding fuel deterioration.

# **ENGINE OIL LEVEL CHECK**

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

- 1. Open the oil maintenance cover.
- 2. Remove the oil filler cap and wipe the dipstick clean.
- 3. Check the oil level by inserting the dipstick into the filler neck without screwing it in.
- 4. If the oil level is low, fill to the upper limit of the oil filler neck with the recommended oil.
- 5. Close and latch the oil maintenance cover.



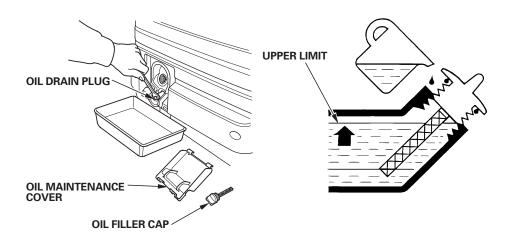
**OIL MAINTENANCE COVER** 

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. Open and remove the oil maintenance cover.
- 2. Place a suitable container below the engine to catch the oil, then remove the drain plug and sealing washer, remove the oil filler cap, and drain the oil.
- 3. Reinstall the oil drain plug and a new sealing washer. Tighten the plug securely.
- 4. Refill with the recommended oil (see page 46) and check the oil level.
- 5. Reinstall, close, and latch the oil maintenance cover.



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

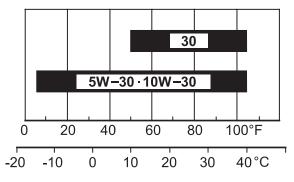
#### NOTICE

Improper disposal of engine oil can be harmful to the environment. If you change your own oil, please dispose of it 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 a drain.

## 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 SJ or later (or equivalent) oil.

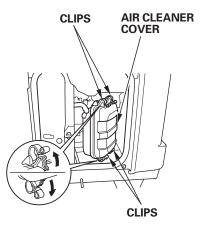
# AIR CLEANER SERVICE

- 1. Use a screwdriver to loosen the latch and open the left side maintenance cover.
- 2. Unsnap the air cleaner cover clips, and remove the air cleaner cover.

- 3. Check the foam air filter and paper air filter to be sure they are clean and in good condition. If the foam air filter is dirty, clean it as described on page 48. If the paper air filter is dirty, replace it with new one. Do not clean the paper air filter.
- 4. Reinstall the air cleaner cover.
- 5. Close and latch the left side maintenance cover.

### NOTICE

Operating the engine without an air filter or with a damaged air filter will allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by the Distributor's Limited Warranty.





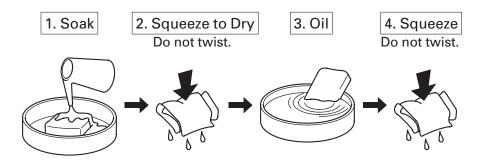
AIR CLEANER COVER



# FOAM AIR FILTER CLEANING

A dirty foam air filter will restrict air flow to the carburetor, reducing engine performance. If you operate the generator in very dusty areas, clean the foam air filter more frequently than specified in the Maintenance Schedule.

- 1. Wash the foam air filter in a solution of household detergent and warm water, then rinse thoroughly, or wash in non-flammable or high flash point solvent. Allow the foam air filter to dry thoroughly.
- 2. Soak the foam air filter 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 foam air filter.



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.

## SPARK PLUG SERVICE

In order to service the spark plug, you will need a spark plug wrench (commercially available).

Recommended spark plugs: BPR5ES (NGK) W16EPR-U (DENSO)

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

NOTICE

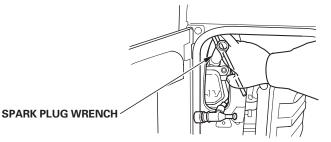
An incorrect spark plug can cause engine damage.

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

- 1. Use a screwdriver to loosen the latch and open the left side maintenance cover.
- 2. Loosen the cover screw and remove the spark plug inspection cover.

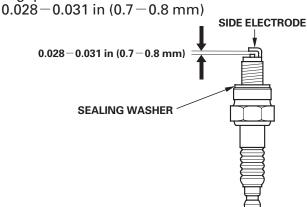


- 3. Remove the spark plug cap.
- 4. Clean any dirt from around the spark plug base.
- 5. Use a spark plug wrench to remove the spark plug.



# SERVICING YOUR GENERATOR

- 6. Visually inspect the spark plug. Replace it if the electrodes are worn or if the insulator is cracked, chipped, or fouled.
- 7. 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:



- 8. Check that the spark plug sealing washer is in good condition, and thread the spark plug in by hand to prevent cross-threading.
- 9. 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.

#### NOTICE

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

- 10. Reinstall the spark plug inspection cover and tighten the cover screw.
- 11. Close and latch the left side maintenance cover.

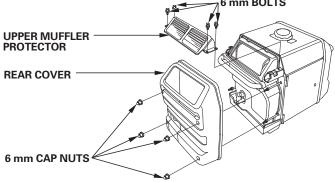
## SPARK ARRESTER SERVICE

The spark arrester must be serviced every 100 hours to keep it functioning as designed.

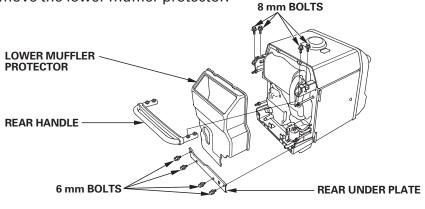
If the engine has been running, the muffler will be very hot. Allow the muffler to cool before servicing the spark arrester.

Clean the spark arrester as follows:

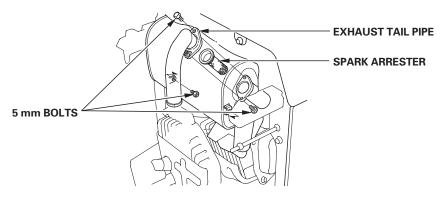
- 1. Remove the four 6 mm cap nuts, and remove the rear cover.
- 2. Remove the four 6 mm bolts, and remove the upper muffler protector.



- 3. Remove the four 8 mm bolts, and remove the rear handle.
- 4. Remove the four 6 mm bolts, and remove the rear under plate.
- 5. Remove the lower muffler protector.



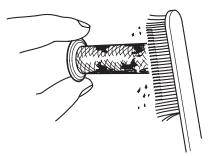
6. Remove the three 5 mm bolts, and remove the exhaust tail pipe and the spark arrester.



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

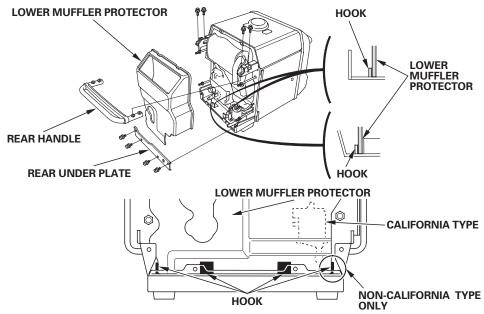
Be careful to avoid damaging the screen.

The spark arrester must be free of breaks and holes. Replace the spark arrester if it is damaged.



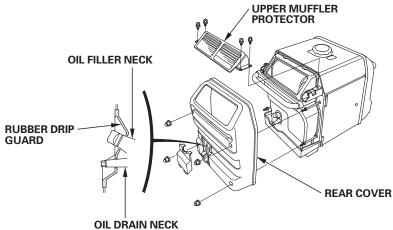
8. Install the spark arrester and the exhaust tail pipe in the reverse order of removal.

9. Install the lower muffler protector, the rear under plate, and the rear handle in the reverse order of removal.



Install the lower muffler protector inside the hook securely.

10. Install the upper muffler protector and the rear cover in the reverse order of removal.

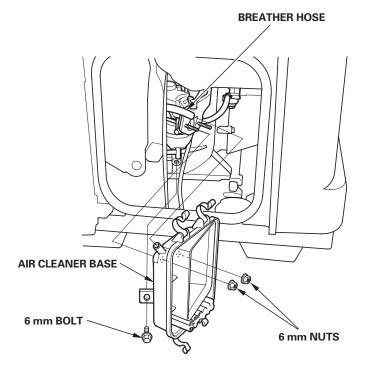


When installing the rear cover, carefully fit the rubber drip guard around the oil filler neck and oil drain neck.

### SEDIMENT CUP CLEANING

The sediment cup prevents dirt or water that 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 engine switch to the OFF position.
- 2. Turn the fuel valve lever to the OFF position.
- 3. Use a screwdriver to loosen the latch and open the left side maintenance cover.
- 4. Remove the air cleaner cover and paper air filter (see page 47).
- 5. Disconnect the breather hose from the air cleaner base.
- 6. Remove the 6 mm bolt and two 6 mm nuts, and remove the air cleaner base.



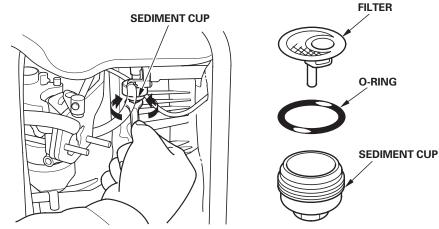
7. Unscrew the sediment cup.

# **A**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.
- 8. Clean the sediment cup, O-ring, and filter in non-flammable or high flash point solvent.
- 9. Reinstall the filter, O-ring, and sediment cup.
- 10. Turn the fuel valve ON and check for leaks.
- 11. Reinstall the air cleaner base, and connect the breather hose to the air cleaner base.
- 12. Reinstall the paper air filter and air cleaner cover.
- 13. Close and latch the left side maintenance cover.



### **BATTERY SERVICE**

Your generator's engine charging system charges the battery while the engine is running. However, if the generator is only used periodically, the battery must be charged monthly to maintain the battery service life.

# **A**WARNING

The battery contains sulfuric acid (electrolyte), which is highly corrosive and poisonous. Getting electrolyte in your eyes or on your skin can cause serious burns.

Wear protective clothing and eye protection when working near the battery. KEEP CHILDREN AWAY FROM THE BATTERY.

### **Emergency Procedures**

**Eyes** — Flush with water from a cup or other container for at least fifteen minutes. (Water under pressure can damage the eye.) Immediately call 911 (USA only) or a physician.

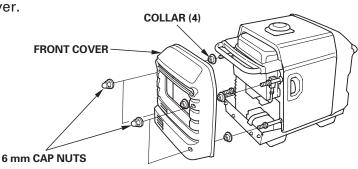
 $\mathbf{Skin}-\mathbf{Remove}$  contaminated clothing. Flush the skin with large quantities of water. Call a physician immediately.

**Swallowing** – Drink water or milk. Call your local Poison Control Center (USA only) or a physician immediately.

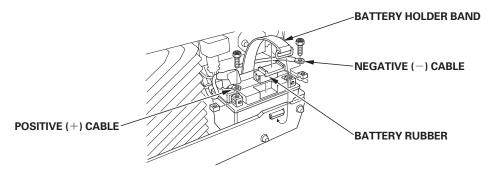
### **Battery Removal**

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

1.Remove the four 6 mm cap nuts, and remove the front cover.



- 2. Remove the battery holder band.
- 3. Remove the negative (-) cable from the battery negative (-) terminal, and then remove the positive (+) cable from the battery positive (+) terminal.



4. Remove the battery and the battery rubber from the battery tray.

### **Battery Charging**

# 

The battery will expel explosive hydrogen gas when overcharged.

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

Always use a regulated charger that provides the correct charging current to prevent overcharging.

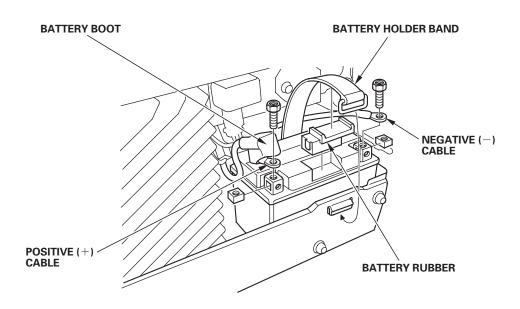
Wear protective clothing and a face shield, or have a skilled mechanic perform the battery maintenance.

The battery is rated at 8.6 Ah (ampere-hours). Charging current should equal 10% of the battery's ampere-hour rating. A battery charger should be used that can be adjusted to deliver 0.9 amps.

- 1. Connect the battery charger following the manufacturer's instructions.
- 2. Charge the battery 3-4 hours.
- 3. Clean the outside of the battery and the battery tray compartment with a solution of baking soda and water.

### **Battery Installation**

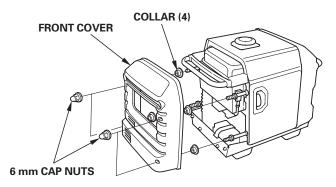
- 1. Install the battery in the generator.
- 2. Connect the battery positive (+) cable to the battery positive (+) terminal first and tighten the bolt securely.
- 3. Slide the battery boot over the positive (+) cable and terminal.
- 4. Connect the battery negative (-) cable to the battery negative (-) terminal, and tighten the bolt securely.
- 5. Install the battery rubber and the battery holder band.
- 6. Install the front cover, and install the four 6 mm cap nuts, making sure the four collared washers are placed in the rubber grommets inside the cover.



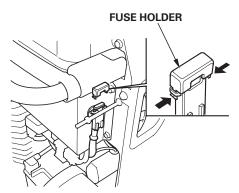
# FUSE

If the fuse is blown, the starter motor won't operate.

- 1. Turn the engine switch to the OFF position.
- 2. Remove the four 6 mm cap nuts and the front cover.



3. Remove the fuse holder cover and replace the fuse. The specified fuse is 5A.



If frequent fuse failure occurs, determine the cause and correct the problem before attempting to operate the generator further.

### NOTICE

Never use a fuse with a different rating from that specified. Serious damage to the electrical system or fire may result.

# 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.

The *Distributor's Limited Warranty* does not cover fuel system damage or engine performance problems resulting from neglected storage preparation.

You can extend fuel storage life by adding a gasoline stabilizer that is formulated for that purpose, or you can avoid fuel deterioration problems by draining the carburetor, sediment cup (if applicable) and/ or fuel tank.

Service according to the table below:

STORAGE TIME	RECOMMENDED SERVICE PROCEDURE TO PREVENT HARD STARTING
Less than 1 month	No preparation required
1 to 2 months	Fill with fresh gasoline and add gasoline stabilizer *.
2 months to 1 year	Fill with fresh gasoline and add gasoline stabilizer *. Drain the carburetor float bowl (page 63).
1 year or more	Drain the fuel sediment cup (page 54 ). Fill with fresh gasoline and add gasoline stabilizer *. Drain the carburetor float bowl (page 63 ). Drain the fuel sediment cup (page 54 ). Remove the spark plug. Put a teaspoon of engine oil into the cylinder. Turn the engine slowly with the pull rope to distribute the oil. Reinstall the spark plug. Change the engine oil (page 45 ). After removal from storage, drain the stored gasoline into a suitable container, and fill with fresh gasoline before starting.
Follow the manufa	lizers that are formulated to extend storage life. acturer's instructions for use. orized Honda generator dealer for stabilizer

### Draining the Fuel Tank and Carburetor

<b>A</b> WARNING	
Gasoline is highly flammable and explosive.	
You can be burned or seriously injured when handling fuel.	
<ul> <li>Stop the engine and keep heat, sparks, and flame away.</li> <li>Handle fuel only outdoors.</li> <li>Wine up spills immediately.</li> </ul>	

- 1. Use a screwdriver to loosen the latch and open the left side maintenance cover.
- 2. Place a suitable gasoline container below the carburetor drain hose.
- 3. Move the fuel valve to the ON position.
- 4. Loosen the carburetor drain screw and drain the gasoline from the carburetor and tank.



- 5. After all the fuel has drained into the container, tighten the drain screw securely.
- 6. Remove the sediment cup and empty it (see page 54).
- 7. Reinstall the sediment cup.
- 8. Close the left side maintenance cover.

# Engine Oil

- 1. Change the engine oil (see page 45).
- 2. Remove the spark plug, and pour between one and two teaspoons (5 cc) of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.
- 3. 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.

### Battery

Charge the battery before storing the generator (see page 56).

### 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 valve lever in the OFF position (see page 26) 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 generator was stored for 1 year or longer, drain the fuel tank (see page 63) and refuel 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 or fuel 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. When transporting the generator, turn the engine switch and the fuel valve OFF, and keep the generator level to reduce the possibility of fuel leakage.

Take care not to drop or strike the generator when transporting. Do not place heavy objects on the generator.

# TAKING CARE OF UNEXPECTED PROBLEMS

## **ENGINE WILL NOT START**

Possible Cause	Correction
Fuel valve lever OFF.	Turn lever ON (p. 22).
Engine switch OFF.	Turn engine switch to ON
_	(p. 23).
Out of fuel.	Refuel (p. 42).
Bad fuel; generator stored	Drain fuel tank and carburetor
without treating or draining	(p. 63).
gasoline, or refueled with bad	Refuel with fresh gasoline
gasoline.	(p. 42).
Low oil level caused Oil Alert	Add oil (p. 44).
to stop engine.	Turn engine switch to OFF and
	then restart the engine.
Spark plug faulty, fouled, or	Gap or replace spark plug
improperly gapped.	(p. 49).
Spark plug wet with fuel	Dry and reinstall spark plug.
(flooded engine).	
Fuel filter restricted,	Take the generator to an
carburetor malfunction,	authorized Honda servicing
ignition malfunction, valves	dealer, or refer to the shop
stuck, etc.	manual.

### **ENGINE LACKS POWER**

Possible cause	Correction
Air filter restricted.	Clean or replace air filter
	(p. 47, 48).
Bad fuel; generator stored	Drain fuel tank and carburetor
without treating or draining	(p. 63).
gasoline, or refueled with bad	Refuel with fresh gasoline
gasoline.	(p. 42).
Fuel filter restricted,	Take the generator to an
carburetor malfunction,	authorized Honda servicing
ignition malfunction, valves	dealer, or refer to the shop
stuck, etc.	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.
AC Circuit protector tripped.	Check AC load and reset circuit protector (p. 16).
Faulty power tool or	Replace or repair power tool or
appliance.	appliance.
	Stop and restart the engine.
Faulty generator.	Take the generator to an
	authorized Honda servicing
	dealer, or refer to the shop
	manual.

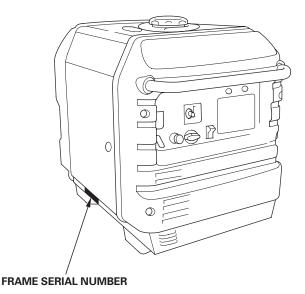
### NO POWER AT THE DC RECEPTACLE

Possible Cause	Correction
DC circuit protector OFF.	Turn DC circuit protector ON (p. 16).
Faulty generator.	Take the generator to an authorized Honda servicing dealer, or refer to the shop manual.

# **TECHNICAL & CONSUMER INFORMATION**

# **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 5,000 feet (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 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.

#### 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 5,000 feet (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.

# **Emission Control System Information**

# Source of Emissions

The combustion process produces carbon monoxide, oxides of nitrogen, and hydrocarbons. Control of hydrocarbons and oxides of nitrogen is very important because, under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but it is toxic.

Honda utilizes appropriate air/fuel ratios and other emissions control systems to reduce the emissions of carbon monoxide, oxides of nitrogen, and hydrocarbons.

Additionally, Honda fuel systems utilize components and control technologies to reduce evaporative emissions.

# The U.S. and California Clean Air Acts

EPA and California regulations require all manufacturers to furnish written instructions describing the operation and maintenance of emission control systems.

The following instructions and procedures must be followed in order to keep the Honda engine emissions within the emission standards.

# Tampering and Altering

Tampering with or altering the emission control system may increase emissions beyond the legal limit. Among those acts that constitute tampering are:

- Removal or alteration of any part of intake, fuel, or exhaust systems.
- Altering or defeating the governor linkage or speed-adjusting mechanism to cause the engine to operate outside its design parameters.

# Problems That May Affect Emissions

If you are aware of any of the following symptoms, have your engine inspected and repaired by your authorized Honda servicing dealer.

- Hard starting or stalling after starting.
- Rough idle.
- Misfiring or backfiring under load.
- Afterburning (backfiring).
- Black exhaust smoke or high fuel consumption.

# Replacement Parts

The emission control systems on your new Honda engine were designed, built, and certified to conform with applicable emission regulations. We recommend the use of Honda Genuine parts whenever you have maintenance done. These original-design replacement parts are manufactured to the same standards as the original parts, so you can be confident of their performance. The use of replacement parts that are not of the original design and quality may impair the effectiveness of your emission control system.

A manufacturer of an aftermarket part assumes the responsibility that the part will not adversely affect emission performance. The manufacturer or rebuilder of the part must certify that use of the part will not result in a failure of the engine to comply with emission regulations.

## Maintenance

Follow the *MAINTENANCE SCHEDULE* on page 41. 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 dusty conditions, will require more frequent service.

#### Air Index (Models certified for sale in California)

An Air Index Information label is applied to engines certified to an emission durability time period in accordance with the requirements of the California Air Resources Board.

The bar graph is intended to provide you, our customer, the ability to compare the emissions performance of available engines. The lower the Air Index, the less pollution.

The durability description is intended to provide you with information relating to the engine's emission durability period. The descriptive term indicates the useful life period for the engine's emission control system. See your *Emission Control System Warranty* (see page 80) for additional information.

Descriptive Term	Applicable to Emission Durability Period
Moderate	50 hours (0 $-$ 80 cc, inclusive)
	125 hours (greater than 80 cc)
Intermediate	125 hours (0–80 cc, inclusive)
	250 hours (greater than 80 cc)
Extended	300 hours (0–80 cc, inclusive)
	500 hours (greater than 80 cc)
	1,000 hours (225 cc and greater)

# Specifications

Dimensions	
Model (Type)	EU3000is
Description code	EZGF
Length	25.9 in (658 mm)
Width	17.6 in (447 mm)
Height	22.0 in (558 mm)
Dry mass [weight]	130.1 lbs (59.0 kg) *1
	130.7 lbs (59.3 kg) *2

\* 1: Non-California type(AN type) \* 2: California type(AC type)

#### Engine

Eligino	
Model	GX200
Engine type	4-stroke, overhead valve, single cylinder
Displacement	12.0 cu-in (196 cm <sup>3</sup> )
[Bore x Stroke]	$(2.68 imes2.13 ext{ in }(68.0 imes54.0 ext{ mm}))$
Compression ratio	8.5:1
Engine speed	3,500–3,800 rpm (with Eco-Throttle switch OFF)
Cooling system	Forced air
Ignition system	Transistor magneto
Oil capacity	0.58 US qt (0.55 L)
Fuel tank capacity	3.51 US gal (13.0 L)
Spark plug	BPR5ES (NGK) · W16EPR-U (DENSO)

#### Generator

Model EU3000is		EU3000is
Туре		California type (AC type) · Non-California type (AN type)
	Rated voltage	120 V
	Rated frequency	60 Hz
AC output	Rated current	23.4 A
	Rated output	2.8 kVA
	Maximum output	3.0 kVA
DC output		Only for charging 12V automotive batteries.
		Maximum charging output = 12A

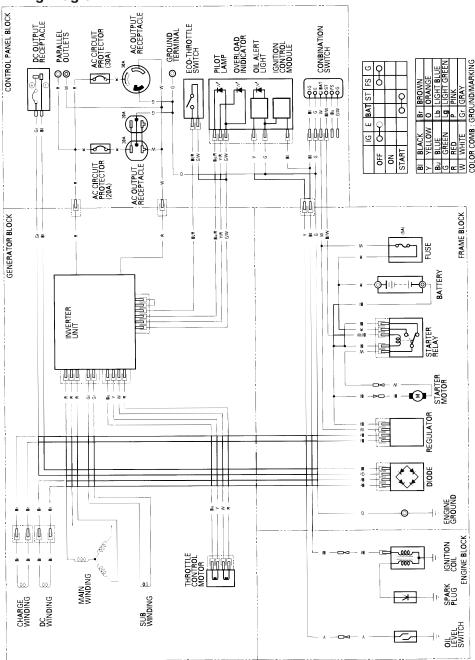
#### Tuneup

ITEM	SPECIFICATION	MAINTENANCE
Spark plug gap	0.028-0.031 in (0.7-0.8 mm)	Refer to page 49
Valve clearance (cold)	IN: 0.15±0.02 mm	See your authorized
	EX: 0.20±0.02 mm	Honda dealer.
Other specifications	No other adjustments needed.	
0 10 11		

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

# **TECHNICAL & CONSUMER INFORMATION**

# Wiring Diagram



# **CONSUMER INFORMATION**

# **Dealer Locator Information**

To find an authorized Honda Servicing Dealer anywhere in the United States: Call (800) 426-7701 or visit our web site: www.hondapowerequipment.com/dealerlocator/

## Honda Publications

#### Shop Manual

This manual covers complete maintenance and overhaul procedures. It is intended to be used by a skilled technician. Available through your Honda dealer or through Helm Inc. at 1 (888) 292-5395 or visit www.hondapowerequipment.com/ productmanuals

# Parts Catalog

This manual provides complete, illustrated parts lists. Available through your Honda dealer.

## Accessories Catalog

Your authorized Honda power equipment dealer offers a wide selection of accessories (optional equipment) to make your generator even more useful.

Visit www.hondapowerequipment.com/products/accessories/ and click on Generators and Welders to see the entire catalog of accessories.

#### **Customer Service Information**

Honda Power Equipment dealership personnel are trained professionals. They should be able to answer any question you may have. If you encounter a problem that your dealer does not solve to your satisfaction, please discuss it with the dealership's management. The Service Manager or General Manager can help. Almost all problems are solved in this way.

If you are dissatisfied with the decision made by the dealership's management, contact the Honda Power Equipment Customer Relations Office. You can write:

American Honda Motor Co., Inc. Power Equipment Division Customer Relations Office 4900 Marconi Drive Alpharetta, Georgia 30005-8847

Or telephone: (770) 497-6400 8:30 am to 7:00 pm ET

When you write or call, please give us this information:

- Model and serial numbers (see page 70)
- Name of the dealer who sold the generator to you
- Name and address of the dealer who services your generator
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem

#### Distributor's Limited Warranty

Distributor 5 Entrited Warranty		
PRODUCTS COVERED	LENGTH OF WARRANTY (1)	
BY THIS WARRANTY	(from date of original retail purchase)	
EU series generators	Private	Commercial/
_	Residential (2)	Rental/Institutional
	36 months	36 months
Parts & Accessories.	See your authorized Honda servicing	
	dealer for details	

(1) This warranty applies to products purchased at retail or placed in rental service on or after January 1, 2009.

(2) Private residential: Used in maintaining owner's primary and/or secondary residence. Any other use, including but not limited to informal "for hire" use, is considered commercial/rental/ institutional use.

#### To Qualify for this Warranty:

The product must be purchased in the United States, Puerto Rico, or the U.S. Virgin Islands from American Honda or a dealer authorized by American Honda to sell those products. This warranty applies to the first retail purchaser and each subsequent owner during the applicable warranty time period.

#### What American Honda will Repair or Replace Under Warranty:

American Honda will repair or replace, at its option, any part that is proven to be defective in material or workmanship under normal use during the applicable warranty time period. Warranty repairs and replacements will be made without charge for parts or labor. Anything replaced under warranty becomes the property of American Honda Motor Company, Inc. All parts replaced under warranty will be considered as part of the original product and any warranty on those parts will expire coincident with the original product warranty.

#### To Obtain Warranty Service:

You must take the Honda generator and proof of original retail purchase date, at your expense, to any Honda Power Equipment dealer in the United States, Puerto Rico, or the U.S. Virgin Islands who is authorized to service that product, during the dealer's normal business hours. If you are unable to obtain warranty service, or are dissatisfied with the warranty service you receive, take the following steps: First, contact the owner of the dealership involved; normally this should resolve the problem. However, if you should require further assistance, write or call the Power Equipment Customer Relations Department of American Honda Motor Co., Inc. Refer to page 78 for contact information.

#### Exclusions:

This warranty does not extend to parts affected or damaged by accident and/or collision, normal wear, fuel contamination, use in an application for which the product was not designed, or any other misuse, neglect, incorporation or use of unsuitable attachments or parts, unauthorized alteration, or any causes other than defects in material or workmanship of the product.

Any product that has ever been declared a total loss or sold for salvage by a financial institution or insurer.

#### Disclaimer of Consequential Damage and Limitation of Implied Warranties:

American Honda disclaims any responsibility for loss of time or use of the product, transportation, commercial loss, or any other incidental or consequential damage. Any implied warranties are limited to the duration of this written limited warranty. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions and limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## **Emission Control System Warranty**

Your new Honda Power Equipment engine complies with the U.S. EPA, Environment Canada, and State of California emission regulations (models certified for sale in California only). American Honda Motor Co., Inc. provides the emission warranty coverage for engines in the United States, and its territories. Honda Canada Inc. provides the emission warranty for engines in the 13 provinces and territories of Canada. In the remainder of this Emission Control System Warranty, American Honda Motor Company Inc. and Honda Canada Inc. will be referred to as Honda.

#### Your Warranty Rights And Obligations: California

The California Air Resources Board and Honda are pleased to explain the emission control system warranty on your Honda Power Equipment engine. In California, new spark-ignited small off-road equipment engines must be designed, built, and equipped to meet the State's stringent anti-smog standards.

#### Other States, U.S. territories, and Canada

In other areas of the United States and in Canada, your engine must be designed, built, and equipped to meet the U.S. EPA and Environment Canada emission standards for spark-ignited engines at or below 19 kilowatts. Specific Honda products that do not meet the California emissions regulations can be identified by a "Not for Sale in California" decal.

#### All of the United States and Canada

Honda must warrant the emission control system on your power equipment engine for the period of time listed below, provided there has been no abuse, neglect, or improper maintenance of your power equipment engine. Where a warrantable condition exists, Honda will repair your power equipment engine at no cost to you including diagnosis, parts, and labor.

Your emission control system may include such parts as the carburetor or fuel injection system, the ignition system, and catalytic converter. Also included may be hoses, connectors, and other emission-related assemblies (see page 84 for additional covered parts).

#### Owner's Warranty Responsibility:

As the power equipment engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. Honda recommends that you retain all receipts covering maintenance on your power equipment engine, but Honda cannot deny warranty coverage solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the power equipment engine owner, you should however be aware Honda may deny you warranty coverage if your power equipment engine or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

You are responsible for presenting your power equipment engine to a Honda Power Equipment dealer as soon as a problem exists. The emission related warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your emission warranty rights and responsibilities, you should contact the Honda Office in your region:

American Honda Motor Co., Inc. Power Equipment Customer Relations 4900 Marconi Drive Alpharetta, Georgia 30005-8847 Telephone: (888) 888-3139 Email: powerequipmentemissions @ahm.honda.com

Honda Canada Inc. Power Equipment Customer Relations

or Visit www.honda.ca for contact information. Telephone: (888) 946-6329

## Warranty Coverage:

Honda power equipment engines sold in the United States and Canada are covered by this warranty for a period of two years from the date of delivery to the original retail purchaser or the length of the *Honda Distributor's Limited Warranty*, whichever is longer. This warranty is transferable to each subsequent purchaser for the duration of the warranty period.

If any emission-related part on your engine is defective, the part will be repaired or replaced by Honda without charge for diagnosis, parts, or labor. All defective parts replaced under this warranty become the property of Honda. A list of warranted parts is on page 84. Normal maintenance items, such as spark plugs and filters, that are on the warranted parts list are warranted up to their required replacement interval only.

Honda will also replace other engine components damaged by a failure of any warranted part during the warranty period.

Only Honda approved replacement parts may be used in the performance of any warranty repairs and must be provided without charge to the owner. The use of replacement parts not equivalent to the original parts may impair the effectiveness of your engine emission control system. If such a replacement part is used in the repair or maintenance of your engine, and an authorized Honda dealer determines it is defective or causes a failure of a warranted part, your claim for repair of your engine may be denied. If the part in question is not related to the reason your engine requires repair, your claim will not be denied.

#### To Obtain Warranty Service:

You must, at your own expense, take your Honda Power Equipment engine or the product on which it is installed, along with your sales registration card or other proof of original purchase date, to any Honda Power Equipment dealer who is authorized by Honda to sell and service that Honda product during his normal business hours. Claims for repair or adjustment found to be caused solely by defects in material or workmanship will not be denied because the engine was not properly maintained and used.

If you are unable to obtain warranty service or are dissatisfied with the warranty service you received, contact the owner of the dealership involved. Normally this should resolve your problem. However, if you require further assistance, contact the Honda office in your region.

American Honda Motor Co., Inc. Power Equipment Customer Relations 4900 Marconi Drive Alpharetta, Georgia 30005-8847 Telephone: (888) 888-3139 Email: powerequipmentemissions @ahm.honda.com Honda Canada Inc. Power Equipment Customer Relations

or Visit www.honda.ca for contact information. Telephone: (888) 946-6329

#### Exclusions:

Failures other than those resulting from defects in material or workmanship are not covered by this warranty. This warranty does not extend to emission control systems or parts that are affected or damaged by owner abuse, neglect, improper maintenance, misuse, misfueling, improper storage, collision, the incorporation of, or use of, unsuitable attachments, or the unauthorized alteration of any part.

This warranty does not cover replacement of expendable maintenance items made in connection with required maintenance services after the item's first scheduled replacement as listed in the maintenance section of the product owner's manual, such as: spark plugs and filters.

#### Disclaimer of Consequential Damage and Limitation of Implied Warranties:

American Honda Motor Co., Inc. and Honda Canada Inc. disclaim any responsibility for incidental or consequential damages such as loss of time or the use of the power equipment, or any commercial loss due to the failure of the equipment; and any implied warranties are limited to the duration of this written warranty. This warranty is applicable only where the California, U.S. EPA, or environment Canada emission control system warranty regulation is in effect.

Emission Control System Warranty Parts:		
SYSTEMS COVERED	PARTS	
<b>BY THIS WARRANTY:</b>	DESCRIPTION:	
Fuel Metering	Carburetor assembly, (includes starting	
	enrichment system),	
	Engine temperature sensor,	
	Engine control module, Fuel regulator,	
	Intake manifold	
Evaporative	Fuel tank, Fuel cap, Fuel hoses,	
	Vapor hoses, Carbon canister,	
	Canister mounting brackets,	
	Fuel strainer, Fuel cock, Fuel pump,	
	Fuel hose joint, Canister purge hose joint	
Exhaust	Catalyst, Exhaust manifold	
Air Induction	Air filter housing, Air filter element*	
Ignition	Flywheel magneto, Ignition pulse	
	generator, Crankshaft position sensor,	
	Power coil, Ignition coil assembly,	
	Ignition control module, Spark plug cap,	
	Spark plug*	
Crankcase Emission	Crankcase breather tube, oil filler cap	
Control		
Miscellaneous Parts	Tubing, fittings, seals, gaskets,	
	and clamps associated with these listed	
	systems.	

#### Emission Control System Warranty Parts:

Note: This list applies to parts supplied by Honda and does not cover parts supplied by the equipment manufacturer. Please see the original equipment manufacturer's emissions warranty for non-Honda parts.

\* Covered up to the first required replacement only.

See the Maintenance Schedule on page 41.

# **INITIAL USE INSTRUCTIONS**

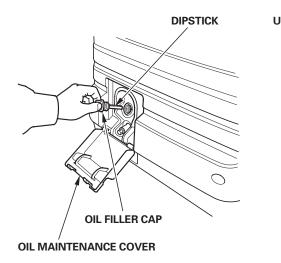
# **ENGINE OIL**

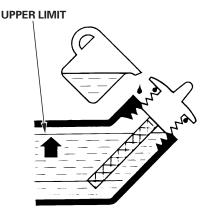
The generator is shipped **WITHOUT OIL** in the engine.

- 1. Place the generator on a level surface.
- 2. Open the oil maintenance cover.
- 3. Remove the oil filler cap.
- 4. Add enough SAE 10W-30 API service category SJ or later (or equivalent) oil to bring the oil level to the upper limit of the oil filler neck. SAE 10W-30 oil is recommended for general use; for additional recommendations, see page 46.

**Do not overfill the engine with oil.** If the engine is overfilled, the excess oil may be transferred to the air cleaner housing and air filter.

- 5. Screw in the oil filler cap/dipstick securely.
- 6. Close and latch the oil maintenance cover.





# FUEL

Add fuel to the generator in a well-ventilated area. 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.

This engine is certified to operate on unleaded gasoline with a pump octane rating of 86 or higher. Refer to page 42 for additional fuel recommendations.

# **A**WARNING

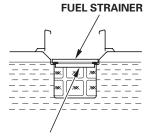
Gasoline is highly flammable and explosive.

You can be burned or seriously injured when handling fuel.

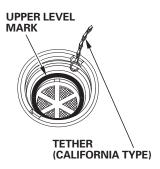
- Stop the engine and keep heat, sparks, and flame away.
- Handle fuel only outdoors.
- Wipe up spills immediately.
- 1. Remove the fuel tank cap.
- 2. Fuel carefully to avoid spilling fuel. Do not fill the fuel tank above the upper level mark (red) on the fuel strainer.
- 3. After refueling, reinstall the fuel tank cap securely.



FUEL TANK CAP



UPPER LEVEL MARK (RED)



#### 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.

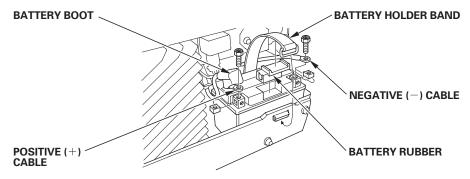
Move the generator at least 10 feet (3 meters) away from the fueling source and site before starting the engine.

#### BATTERY

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

The battery is disconnected for shipment.

- 1. Remove the front cover (see page 57)
- 2. Connect the battery positive (+) cable to the battery positive (+) terminal first and tighten the bolt securely.
- 3. Slide the battery boot over the positive (+) cable and terminal.
- 4. Connect the battery negative (-) cable to the battery negative (-) terminal, and tighten the bolt securely.
- 5. Install the battery rubber and the battery holder band.
- 6. Install the front cover, and install the four 6 mm cap nuts, making sure the four collared washers are placed in the rubber grommets inside the cover.



# **BEFORE OPERATION**

Before using the generator, all generator operators must read the following chapters and sections:

- GENERATOR SAFETY (pages 6 10)
- CONTROLS & FEATURES (pages 11-18)
- **BEFORE OPERATION** (pages 19-20)
- OPERATION (page 21)
- STARTING THE ENGINE (pages 22-25 )
- STOPPING THE ENGINE (page 26)
- MAINTENANCE SCHEDULE (page 41)

# REGISTRATION

## **Please Register Your Generator**

If your dealer did not collect registration information from you, please take a few minutes and register your purchase with Honda. This allows us to contact you with any important updates regarding your generator. Please note registration is not required to obtain warranty service. You can register your generator by visiting the Honda Power Equipment website, www.hondapowerequipment.com and selecting Product Registration. Your information will remain confidential. It will not be released to any other company or organization.

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# QUICK REFERENCE INFORMATION

Fuel	Туре	Regular unleaded gasoline with a pump octane rating of 86 or higher					
Engine Oil	Туре	SAE 10W-30, API SJ or later (or equivalent), for general use (page 46)					
Spark Plug	Туре	BPR5ES (NGK)					
		W16EPR-U (DENSO)					
	Electrode Gap	0.028-0.031 in (0.7-0.8 mm)					
Maintenance	Before each	Check engine oil level.					
	use	Check air filter.					
	First 20 hours	Change engine oil.					
	Subsequent	See Maintenance Schedule					
		(page 41)					



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