

Honda EU22i

OWNER'S MANUAL

Original instructions

MANUEL DE L'UTILISATEUR

Notice originale

BEDIENUNGSANLEITUNG

Originalbetriebsanleitung

MANUALE DELL'UTENTE

Traduzione delle istruzioni originali

Thank you for purchasing a Honda generator.

This manual covers operation and maintenance of the EU22i generator.

All information in this publication is based on the latest product information available at the time of approval for printing.

Honda Motor Co., Ltd. reserves the right to make changes at any time without notice and without incurring any obligation.

No part of this publication may be reproduced without written permission.

This manual should be considered a permanent part of the generator and should remain with it if it is resold.

Pay special attention to statements preceded by the following words:

▲WARNING Indicates a strong possibility of severe personal injury or death if instructions are not followed.

CAUTION: Indicates a possibility of personal injury or equipment damage if instructions are not followed.

NOTE: Gives helpful information.

If a problem should arise, or if you have any questions about the generator, consult an authorized Honda dealer.

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

The illustration may vary according to the type.

CONTENTS

1. SAFETY INSTRUCTIONS.....	3
2. SAFETY LABEL LOCATIONS.....	7
• CE mark and noise label locations	10
3. COMPONENT IDENTIFICATION	11
4. PRE-OPERATION CHECK.....	15
5. STARTING THE ENGINE	20
• Carburetor Modification for High Altitude Operation.....	23
6. GENERATOR USE.....	24
7. STOPPING THE ENGINE	39
8. MAINTENANCE.....	42
9. TRANSPORTING/STORAGE.....	47
10. TROUBLESHOOTING	50
11. SPECIFICATIONS.....	53
12. WIRING DIAGRAM	56
RECEPTACLE	57
MAJOR Honda DISTRIBUTOR ADDRESSES	Inside back cover
“EC Declaration of Conformity”	
CONTENT OUTLINE	Inside back cover

1. SAFETY INSTRUCTIONS

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.

Never attempt to modify the generator. It can cause an accident as well as damage to the generator and appliances. Tampering with the engine voids the EU type-approval of this engine.

- Do not connect an extension to the muffler.
- Do not modify the intake system.
- Do not adjust the governor.
- Do not remove the control panel or do not change the wiring of the control panel.

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.

Be sure to observe the instructions in this manual for how to use the generator and maintenance information. Ignoring or improperly following the instructions can cause an accident such as an electric shock, and the condition of the exhaust gas may deteriorate.

Obey all applicable laws and regulations where the generator is used.

Gasoline and Oil is toxic. Follow the instructions provided by each manufacturer before use.

Place the generator on a firm level place before operation.

Do not operate the generator with any cover removed. You may get your hand or foot caught in the generator and it may cause accident.

Consult your authorized Honda dealer for disassembly and service of the generator that are not covered in this manual.

Carbon Monoxide Hazards

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

If you run the generator in an area that is confined, or even partially enclosed 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.

If you get an electric shock, consult a doctor and have medical treatment immediately.

For parallel operation, use only a Honda approved receptacle box (optional equipment) when connecting the generator combinations shown below.

EU22i and EU22i
EU22i and EU20i *

* An EU22i can only be paired with EU20i models that have serial numbers within the ranges shown below.

Applicable frame serial number of EU20i	EAAJ-2032188 and later
	EACT-1000001 and later

Never connect an EU22i generator to a different generator model, other than the models specified above.

Fire and Burn Hazards

Do not use the generator in areas with a high risk of fire.

The exhaust system gets hot enough to ignite some materials.

- Keep the generator at least 1 meter (3 feet) away from buildings and other equipment during operation.
- Do not enclose the generator in any structure.
- Keep flammable materials away from the generator.

Some parts of the internal combustion engine are hot and may cause burns. Pay attention to the warnings on 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.

Do not pour the water directly on the generator to put out the fire when it occurs. Use an appropriate fire extinguisher specially designed for electric fire or oil fire.

If you inhale fumes produced by an accidental fire with the generator, consult a doctor and have medical treatment immediately.

Refuel With Care

Gasoline is extremely flammable, and gasoline vapor can explode. Allow the engine to cool if the generator has been in operation.

Refuel only outdoors in a well ventilated area with the engine off.

Do not refuel during operation.

Do not overfill the fuel tank.

Never smoke near gasoline, and keep other flames and sparks away.

Always store gasoline in an approved container.

Make sure that any spilled fuel has been wiped up before starting the engine.

Explosion proof

This generator is not compliant with explosion proof.

Disposal

To protect the environment, do not dispose of the used generator, battery, engine oil, etc. carelessly by leaving them in the waste. Observe the local laws or regulations or consult your authorized Honda generator dealer to dispose of these parts.

Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station for reclamation. Do not throw it in the trash or pour it on the ground.

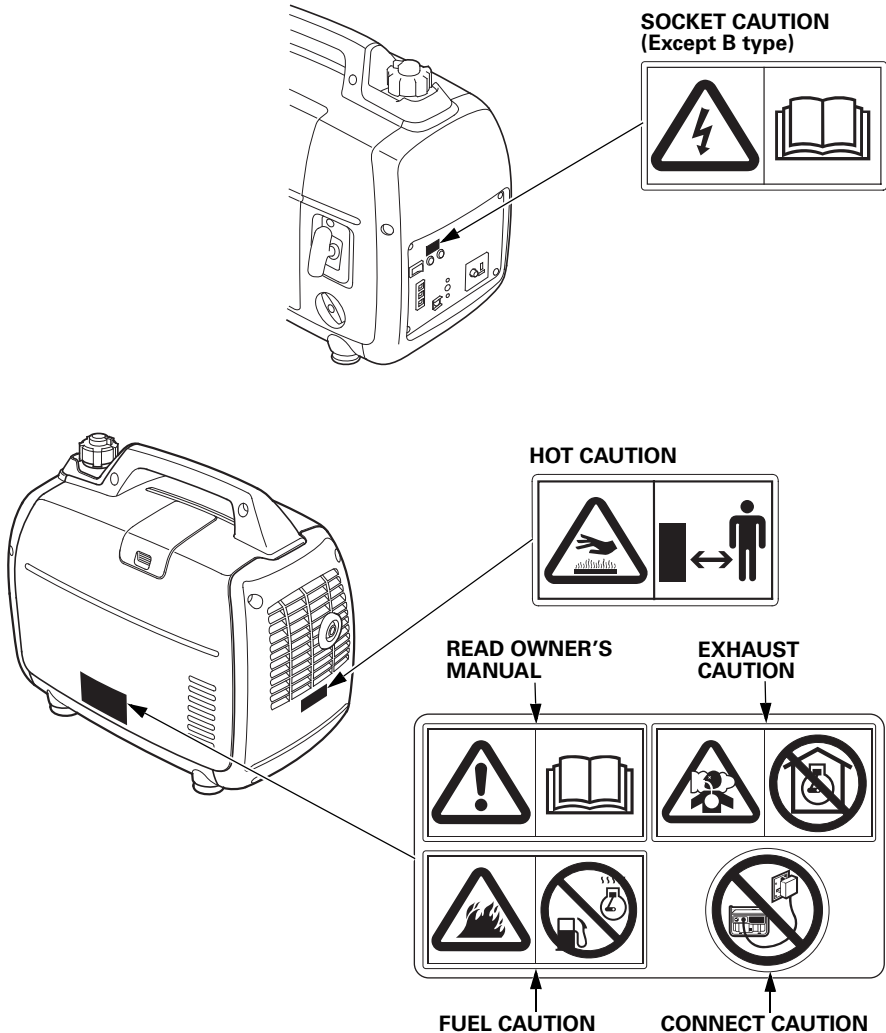
An improperly disposed battery can hurt the environment. Always confirm local regulations for battery disposal. Contact your servicing dealer for a replacement.

2. SAFETY LABEL LOCATIONS

These labels warn you of potential hazards that can cause serious injury. Read the labels and safety notes and precautions described in this manual carefully.

If a label comes off or becomes hard to read, contact your Honda servicing dealer for a replacement.

[For European model: B, B1, E, F, G, W types]





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



- **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 partially enclosed area, the air you breathe could contain a dangerous amount of exhaust gas.**
- **Never run your generator inside a garage, house or near open windows or doors.**



- **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.**



- **Gasoline is highly flammable and explosive. Turn the engine off and let it cool before refueling.**



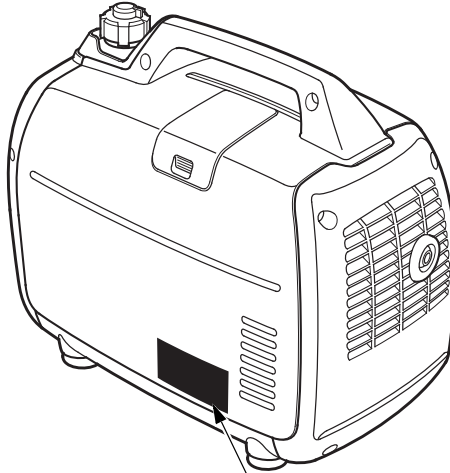
- **Connect and remove the receptacle box for parallel operation with the engine stopped.**
- **For single operation, the receptacle box for parallel operation must be removed.**



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

• CE mark and noise label locations

[For European model: B, B1, E, F, G, W types]



CE MARK and NOISE LABEL
[Example: B1, E, F, G and W types]

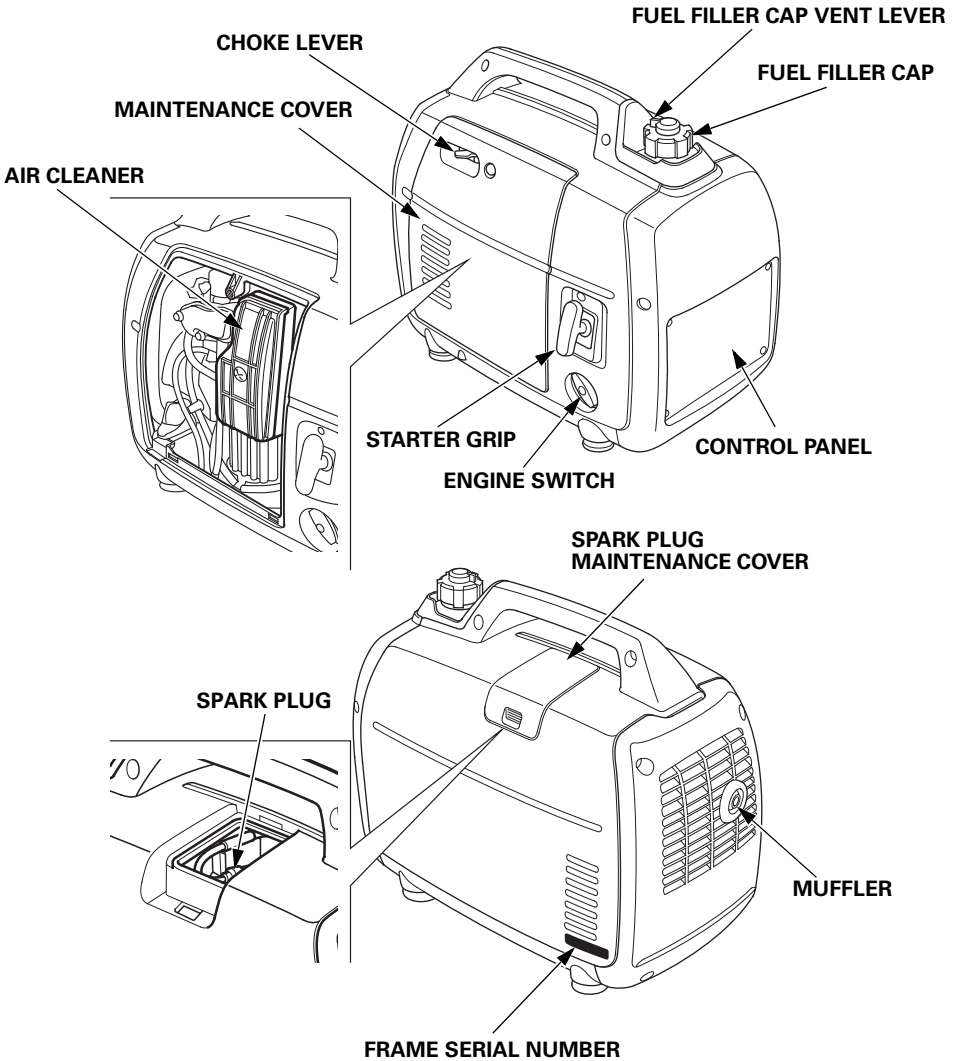
NOISE LABEL
Performance class

 90 dB	EU22i Low-power generating set EN ISO 8528-13			
	Maximum power	MAX 2.2 kW	50 Hz	G1
Rated power	COP 1.8 kW	230V	A	Quality class
Rated power factor	1.0	7.8A	IP23M	IP code
Year of Mfg.	Mass		kg	Dry mass (weight)

Manufacturer and address
Year of manufacture
Name and address of authorized representative and importer

Name and address of manufacturer, authorized representative and importer are written in the "EC Declaration of Conformity" CONTENT OUTLINE in this Owner's Manual.

3. COMPONENT IDENTIFICATION



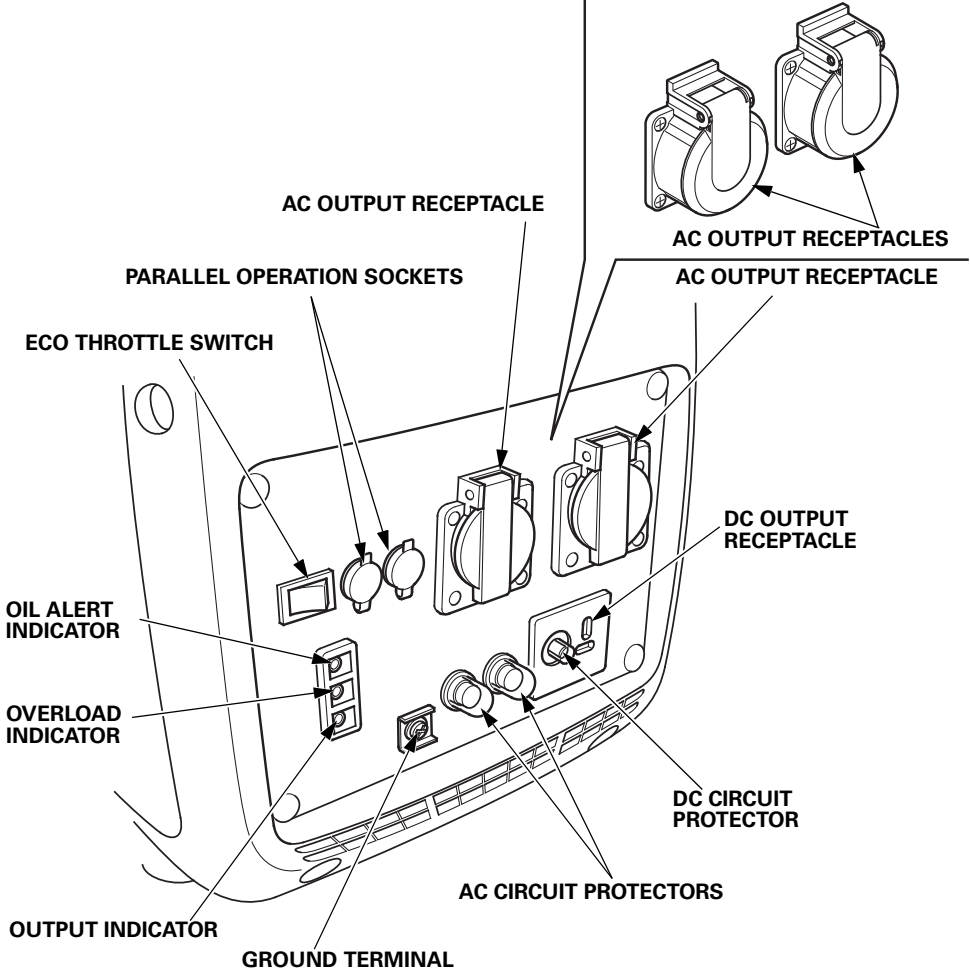
Record the frame serial number in the space below. You will need this serial number when ordering parts.

Frame serial number: _____

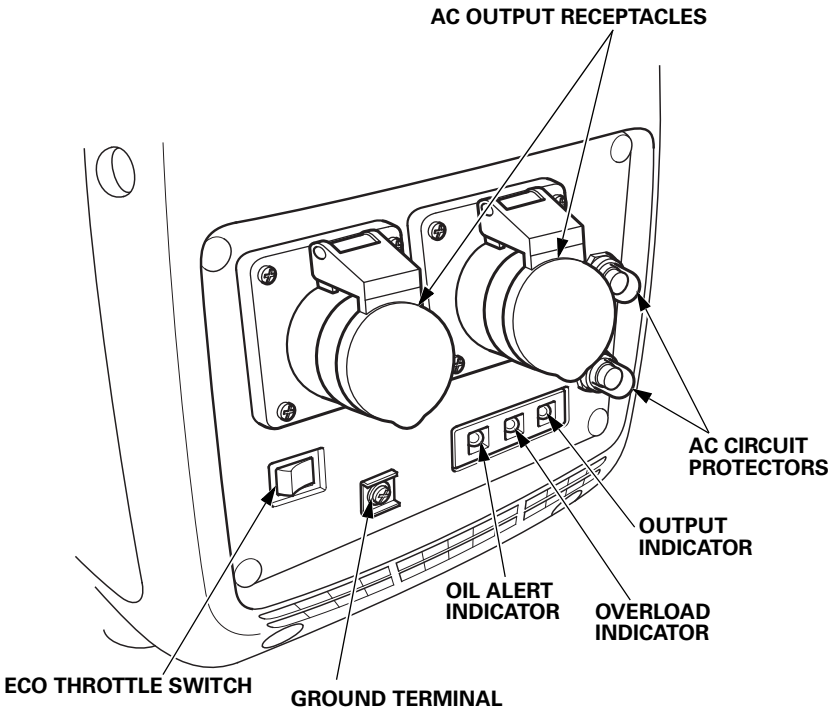
CONTROL PANEL

B1, E, W types

F, G types



B type



Eco Throttle

ECO:

Engine speed is kept at idle automatically when the electrical appliance is disconnected and it returns to the proper speed by the electrical load when electrical appliance is connected. This position is recommended to minimize the fuel consumption while in operation.

NOTE:

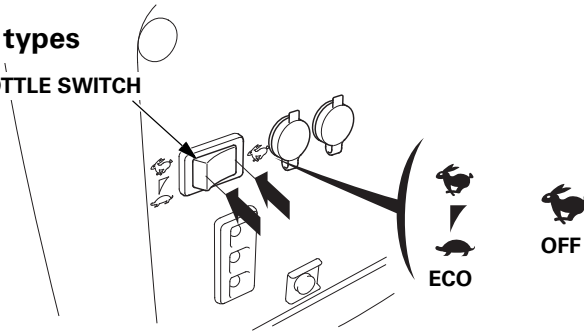
- Eco Throttle system does not operate sufficiently if the electrical appliance requires the momentary electric power.
- When high electrical load appliances is connected simultaneously, turn the Eco Throttle switch to the OFF position to reduce voltage changes.
- In DC operation, turn the eco throttle switch to the OFF position.

OFF:

Eco Throttle system does not operate. Engine speed is kept in the range on the Engine speed (with eco throttle off) in the "SPECIFICATION" page.

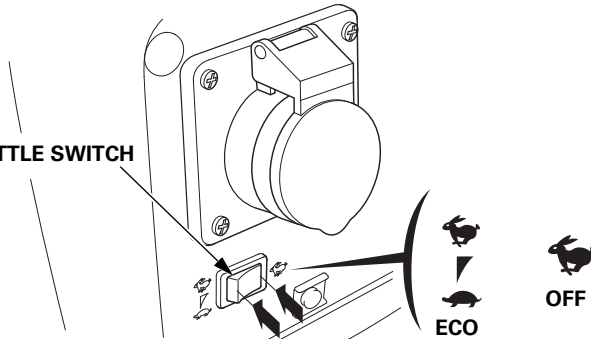
B1, E, F, G, W types

ECO THROTTLE SWITCH



B type

ECO THROTTLE SWITCH



4. PRE-OPERATION CHECK

CAUTION:

Be sure to check the generator on a level surface with the engine stopped.

Before each use, look around and underneath the engine for signs of oil or gasoline leaks.

1. Check the engine oil level.

CAUTION:

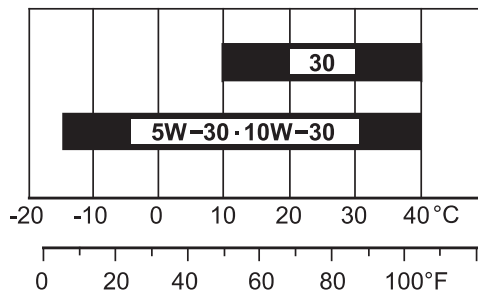
Using non detergent oil or 2-stroke engine oil could shorten the engine's service life.

Recommended oil

Use 4-stroke motor oil that meets or exceeds the requirements for API service category SE or later (or equivalent). Always check the API service label on the oil container to be sure it includes the letters SE or later (or equivalent).

Lubrication oil specifications necessary to maintain the performance of the emissions control system: Honda genuine oil.

Read the instruction on the oil container before use.



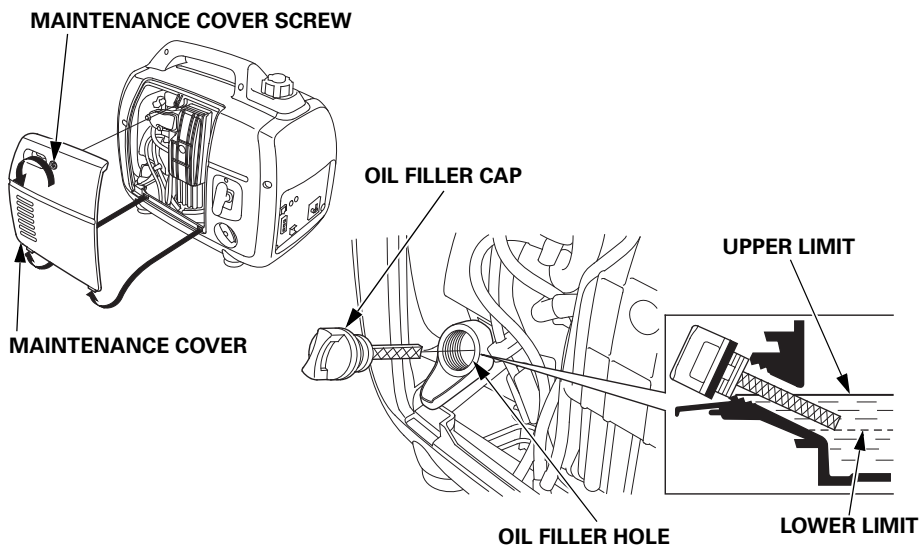
AMBIENT TEMPERATURE

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.

1. Loosen the maintenance cover screw and remove the maintenance cover (see page 43).
2. Remove the oil filler cap and wipe the dipstick clean.
3. Check the oil level by inserting the dipstick into the oil filler neck without screwing it in.
4. If the level is low, fill to the upper limit of the oil filler neck with the recommended oil (see page 15).
5. Reinstall the oil filler cap securely.

CAUTION:

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



NOTE:

The Oil Alert system will automatically stop the engine before the oil level falls below the safe limit. However, to avoid the inconvenience of an unexpected shutdown, it is still advisable to visually inspect the oil level regularly.

2. Check the fuel level.

If the fuel level is low, refuel the fuel tank until the level as specified. After refueling, tighten the fuel filler cap securely.

Use automotive unleaded gasoline with a Research Octane Number of 91 or higher (a Pump Octane Number of 86 or higher).

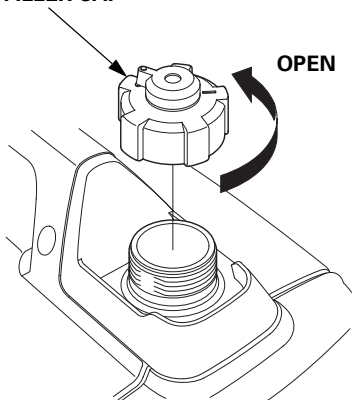
Fuel specification(s) necessary to maintain the performance of the emissions control system: E10 fuel referenced in EU regulation.

Never use gasoline that is stale, contaminated, or mixed with oil. Avoid getting dirt or water in the fuel tank.

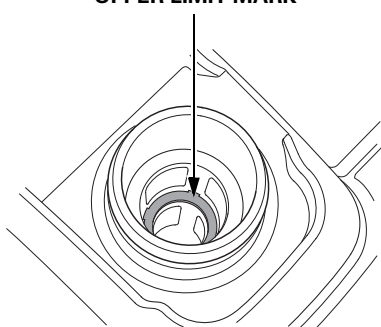
▲WARNING

- **Gasoline is extremely flammable and is explosive under certain conditions.**
- **Refuel in a well ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area where the engine is refueled or where gasoline is stored.**
- **Do not overfill the fuel tank (there should be no fuel above the upper limit mark). After refueling, make sure the fuel filler cap is closed properly and securely.**
- **Be careful not to spill fuel when refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.**
- **Avoid repeated or prolonged contact with skin or breathing of vapor. KEEP OUT OF REACH OF CHILDREN.**

FUEL FILLER CAP



UPPER LIMIT MARK



NOTE:

Gasoline spoils very quickly depending on factors such as light exposure, temperature and time.

In worst cases, gasoline can be contaminated within 30 days. Using contaminated gasoline can seriously damage the engine (carburetor clogged, valve stuck).

Such damage due to spoiled fuel is disallowed from coverage by the warranty.

To avoid this please strictly follow these recommendations:

- Only use specified gasoline (see page 17).
- Use fresh and clean gasoline.
- To slow deterioration, keep gasoline in a certified fuel container.
- If long storage (more than 30 days) is foreseen, drain fuel tank and carburetor (see page 48).

Gasolines Containing Alcohol

If you decide to use a gasoline containing alcohol (gasohol), be sure its octane rating is at least as high as that recommended by Honda. There are two types of "gasohol": one containing ethanol, and the other containing methanol.

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

Do not use gasoline containing more than 5% methanol (methyl or wood alcohol) and that does not also contain co-solvents and corrosion inhibitors for methanol.

NOTE:

- Fuel system damage or engine performance problems resulting from the use of gasoline that contains more alcohol than recommended is not covered under the warranty.
- Before buying gasoline from an unfamiliar station, first determine if the gasoline contains alcohol, if it does, find out the type and percentage of alcohol used.

If you notice any undesirable operating symptoms while using a particular gasoline. Switch to a gasoline that you know contains less than the recommended amount of alcohol.

3. Check the air cleaner.

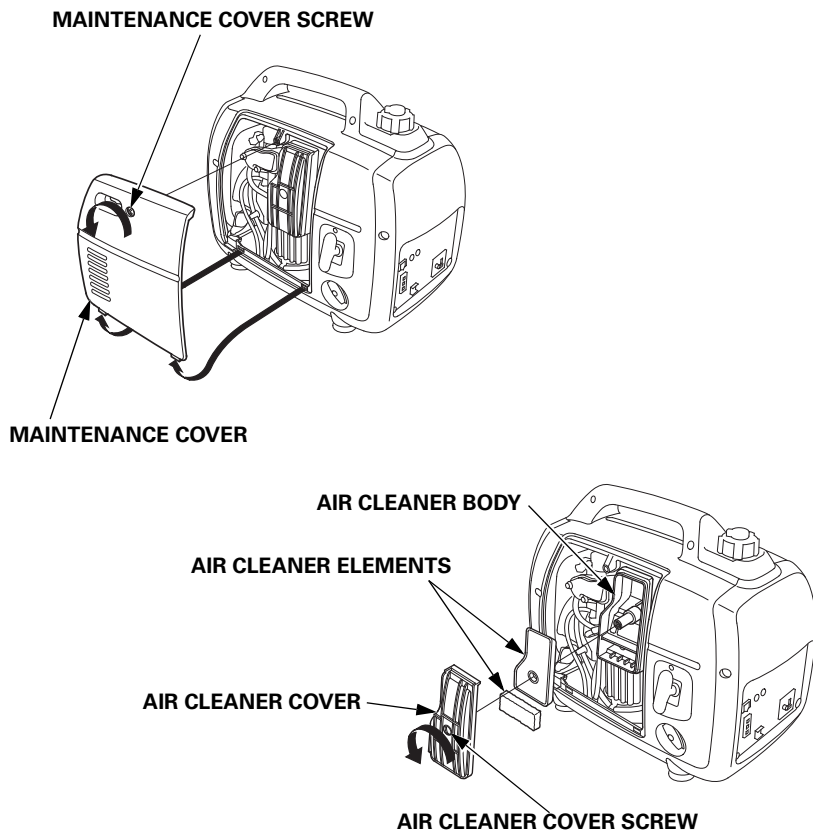
Check the air cleaner elements to be sure they are clean and in good condition.

Loosen the maintenance cover screw and remove the maintenance cover. Loosen the air cleaner cover screw, and remove the air cleaner cover, check the elements.

Clean or replace the elements if necessary (see page 44).

CAUTION:

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



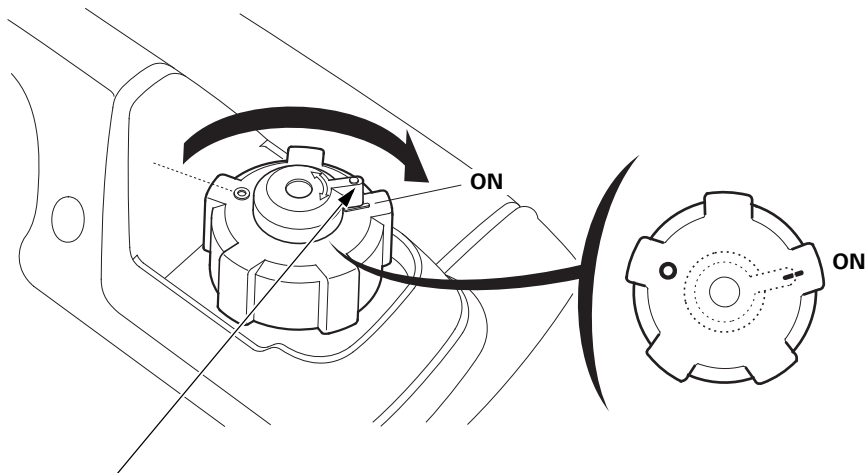
5. STARTING THE ENGINE

Before starting the engine disconnect any load from the AC receptacle.

1. Turn the fuel filler cap vent lever fully clockwise to the ON position.

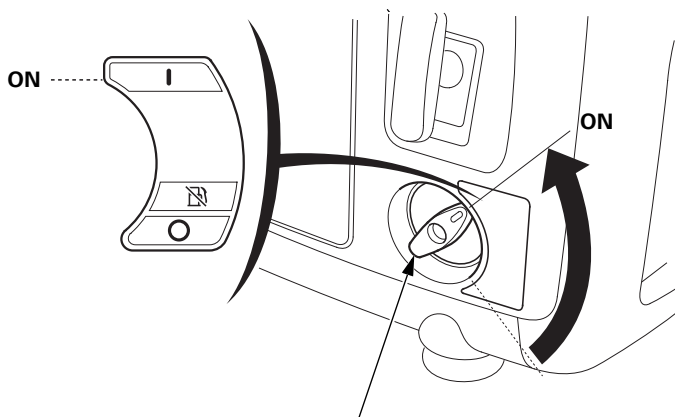
NOTE:

Turn the fuel filler cap vent lever to the OFF position when transporting the generator.



FUEL FILLER CAP VENT LEVER

2. Turn the engine switch to the ON position.

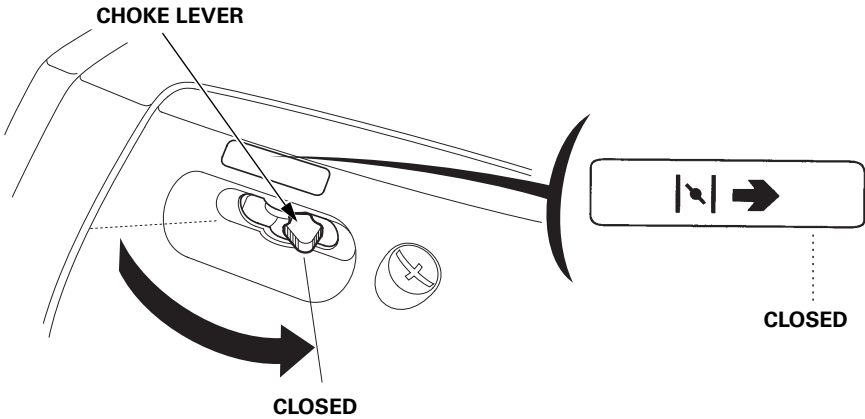


ENGINE SWITCH

3. Move the choke lever to the CLOSED position.

NOTE:

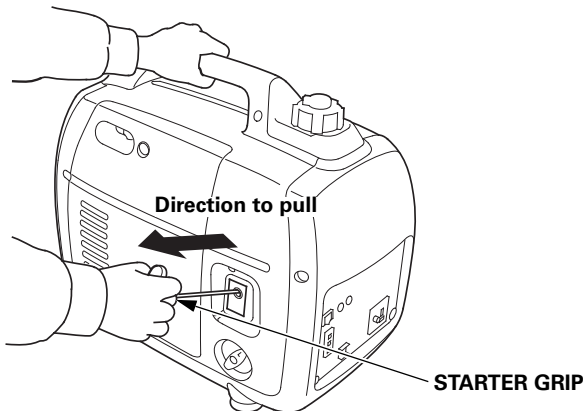
Do not use the choke when the engine is warm or the air temperature is high.



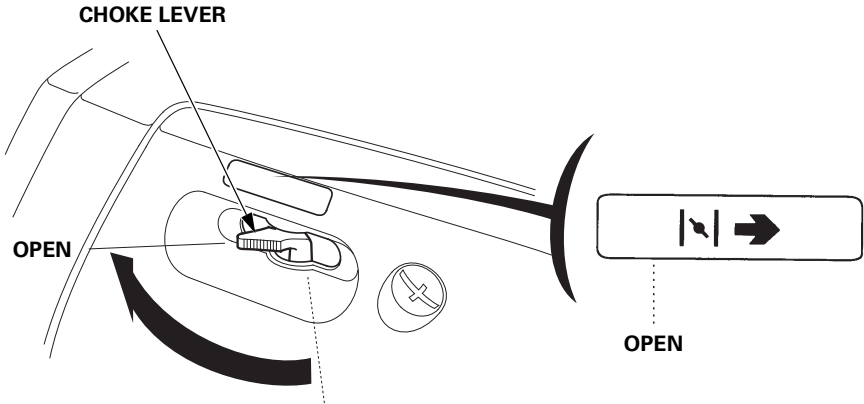
4. Pull the starter grip lightly until you feel resistance, then pull the starter grip briskly toward in the direction of the arrow as shown below.

CAUTION:

- The starter grip can be drawn back very quickly before you release it. This may pull your hand forcefully toward the engine and cause an injury.
- Do not allow the starter grip to snap back. Return it slowly by hand.



5. Move the choke lever to the OPEN position as the engine warms up.



NOTE:

If the engine stops and will not restart, check the engine oil level (see page 16) before troubleshooting in other areas.

- **Carburetor Modification for High Altitude Operation**

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

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

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

CAUTION:

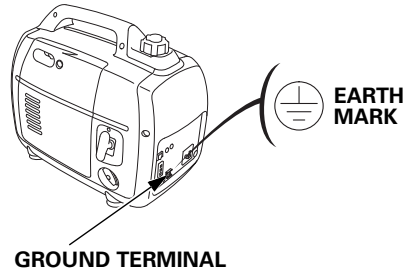
Operation of the generator at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

6. GENERATOR USE

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

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

To ground the terminal of the generator, use a copper wire with same or larger diameter than the cord of the connected appliance.

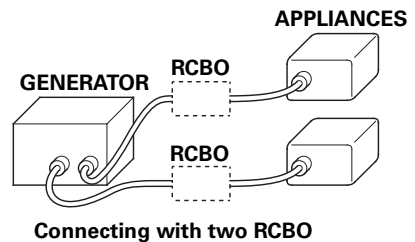
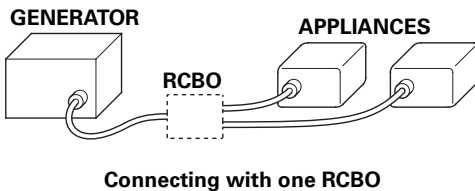


Use extension cord set with ground conductor when connecting an appliance with ground conductor.

To identify the Ground pin in the plug, see RECEPTACLE page 57.

Connect a RCBO (Residual current circuit breaker with overload protection) of 30 mA ground fault detection and cut-off of less than 0.4 seconds at more than 30 A of output current, if you are using two or more appliance.

Follow the instructions provided by each RCBO manufacturer before use.



⚠ 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.

CAUTION:

- Do not exceed the current limit specified for any one receptacle.
- Do not modify or use the generator for other purposes than it is intended for. Also observe the following when using the generator.
- Do not connect an extension to the exhaust pipe.
- When an extension cable is required, be sure to use a tough rubber sheathed flexible cable (IEC 245 or equivalent).

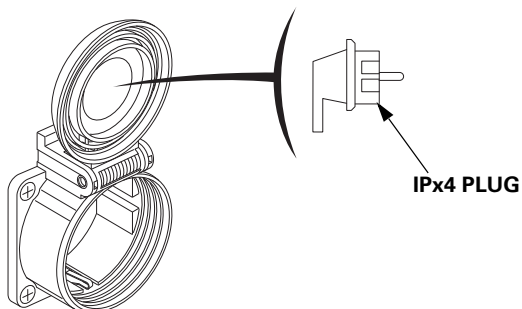
When using an extension cable the resistance value shall not exceed 1.5Ω .

- Limit length of extension cables; 60 m (200 feet) for cables of 1.5 mm^2 (0.0023 in^2) and 100 m (330 feet) for cables of 2.5 mm^2 (0.0039 in^2). Long extension cables will lower usable power due to resistance in the extension cable.
- Keep the generator away from other electric cables or wires such as commercial power supply lines.

⚠ WARNING

G Type

When connecting an angled plug, be sure to use only a IPx4 plug.



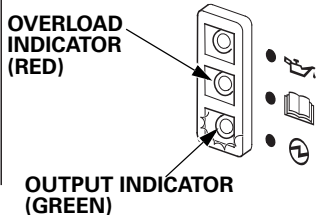
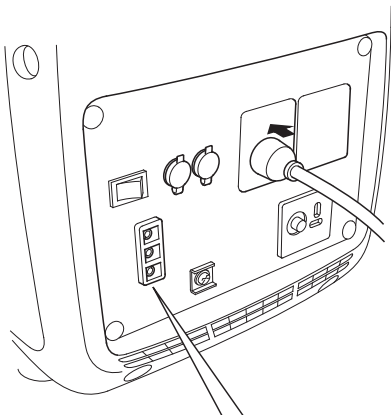
NOTE:

- Most appliance motors require more than their rated wattage for startup. Make sure the electrical rating of the tool or appliance does not exceed the maximum power rating of the generator.
Maximum power is: 2.2 kVA
- For continuous operation, do not exceed the rated power.
Rated power is: 1.8 kVA
- In either case, the total power requirements (VA) of all appliances connected must be considered.
- Substantial overloading will switch OFF the AC circuit protector. Slightly overloading the generator may not switch the AC circuit protector OFF, but will shorten the service life of the generator.
- The DC receptacle can be used while the AC power is in use (Except B type).
If you use both at the same time, do not exceed the maximum AC power.
Maximum AC power: 1.7 kVA

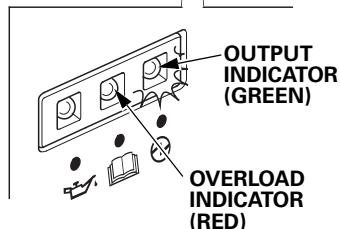
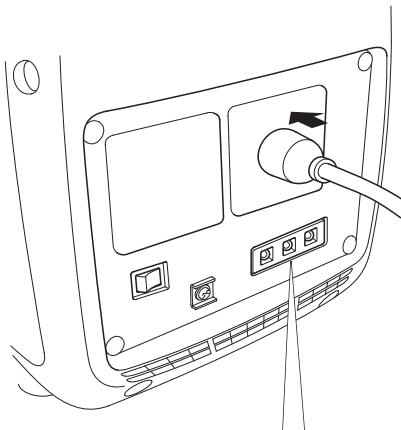
AC applications

1. Start the engine and make sure the Output indicator (green) comes ON.
2. Confirm that the appliance to be used is switched off, and plug in the appliance.

B1, E, F, G, W types



B type



CAUTION:

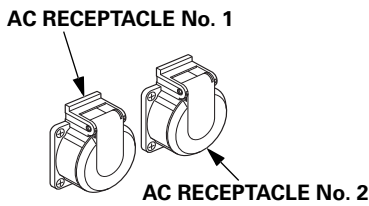
- Substantial overloading that continuously lights the Overload indicator (red) may damage the generator. Marginal overloading that temporarily lights the Overload indicator (red) may shorten the service life of the generator.
- Be sure that all appliances are in good working order before connecting them to the generator. Electrical equipment (including lines and plug connections) should not be defective. If an appliance begins to operate abnormally, becomes sluggish, or stops suddenly, turn off the generator engine switch immediately. Then disconnect the appliance, and examine it for signs of malfunction.

AC Circuit Protector

The AC circuit protectors will automatically switch OFF (push button comes out) if there is a short circuit or a significant overload of the generator at receptacle.

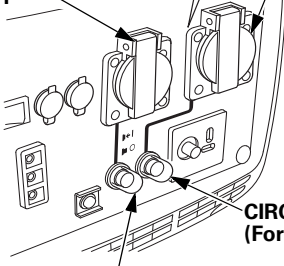
If an AC circuit protector switches OFF automatically, check that the appliance is working properly and does not exceed the rated load capacity of the circuit before resetting the AC circuit protector ON by pushing the push button in.

F, G types



E, W, B1 types

AC RECEPTACLE No. 1



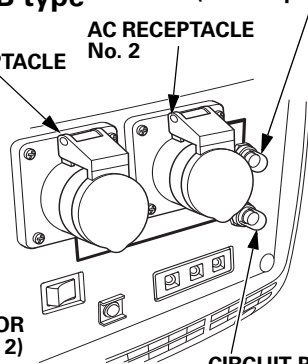
CIRCUIT PROTECTOR (For receptacle No. 1)

CIRCUIT PROTECTOR (For receptacle No. 2)

B type

AC RECEPTACLE No. 1

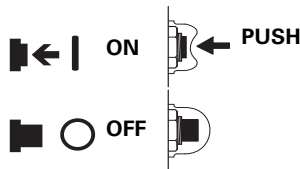
AC RECEPTACLE No. 2



CIRCUIT PROTECTOR (For receptacle No. 2)

CIRCUIT PROTECTOR (For receptacle No. 1)

(when pushed in)



Output and Overload Indicators

The Output indicator (green) will remain ON during normal operating conditions.

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

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

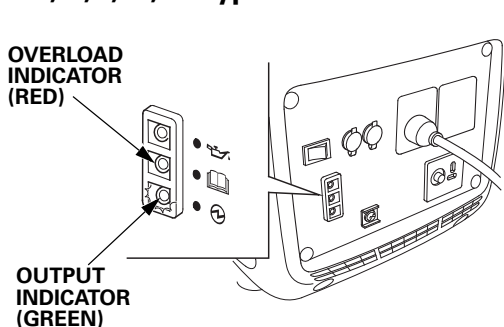
If the generator is overloaded (see page 26), or if there is a short in the connected appliance, the Output indicator (green) will go OFF, the Overload indicator (red) will come ON and current to the connected appliance will be shut off.

Stop the engine if the Overload indicator (red) comes ON and investigate the overload source.

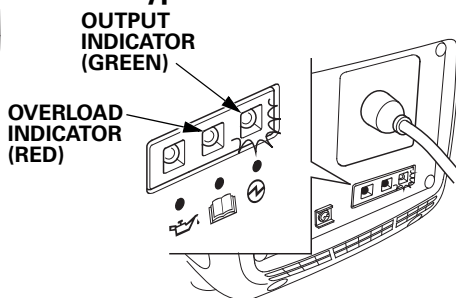
- Before connecting an appliance to the generator, check that it is in good order, and that its electrical rating does not exceed that of the generator. Then connect the power cord of the appliance, and start the engine.

If the overload indicator blink continuously, it suggests an abnormal of inverter unit (see page 51).

B1, E, F, G, W types



B type



NOTE:

When an electric motor is started, both the Overload indicator (red) and the Output indicator (green) may come ON simultaneously. This is normal if the Overload indicator (red) goes OFF after about 4 seconds. If the Overload indicator (red) stays ON, consult your generator dealer.

Parallel operation (Except B type)

Please read the item "GENERATOR USE" before connecting any equipment to be used.

Use only a Honda approved receptacle box for parallel operation (optional) when connecting two EU22i generators for parallel operation.

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

Maximum power in parallel operation is:

EU22i and EU22i	4.4 kVA
EU22i and EU20i	4.2 kVA

For continuous operation, do not exceed the rated power.

Rated power in parallel operation is:

EU22i and EU22i	3.6 kVA
EU22i and EU20i	3.4 kVA

In either case, the total power requirements (VA) of all appliances connected must be considered.

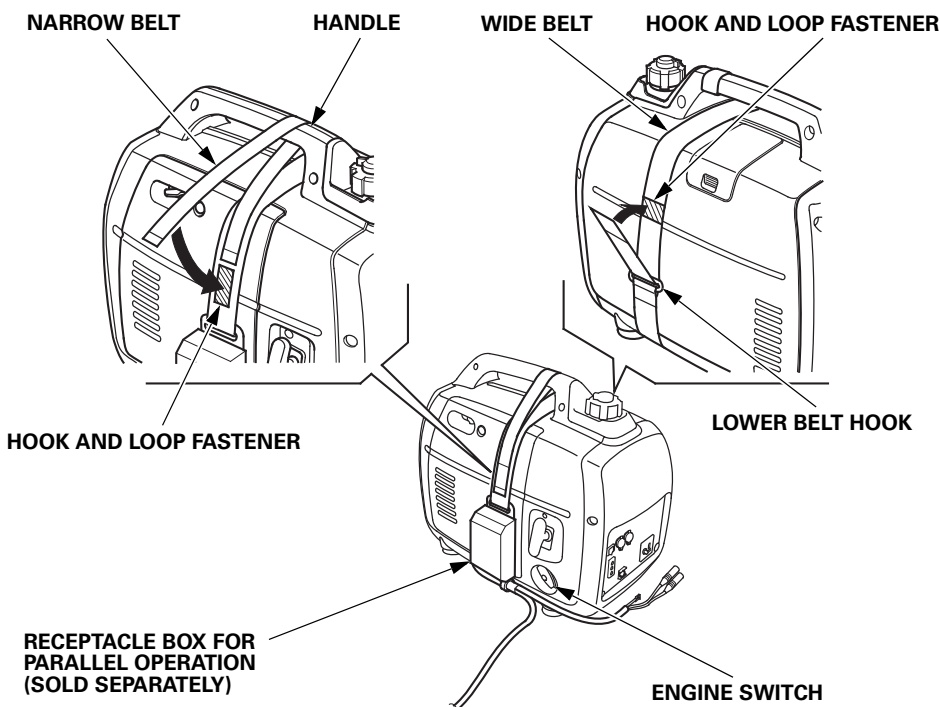
CAUTION:

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.

▲WARNING

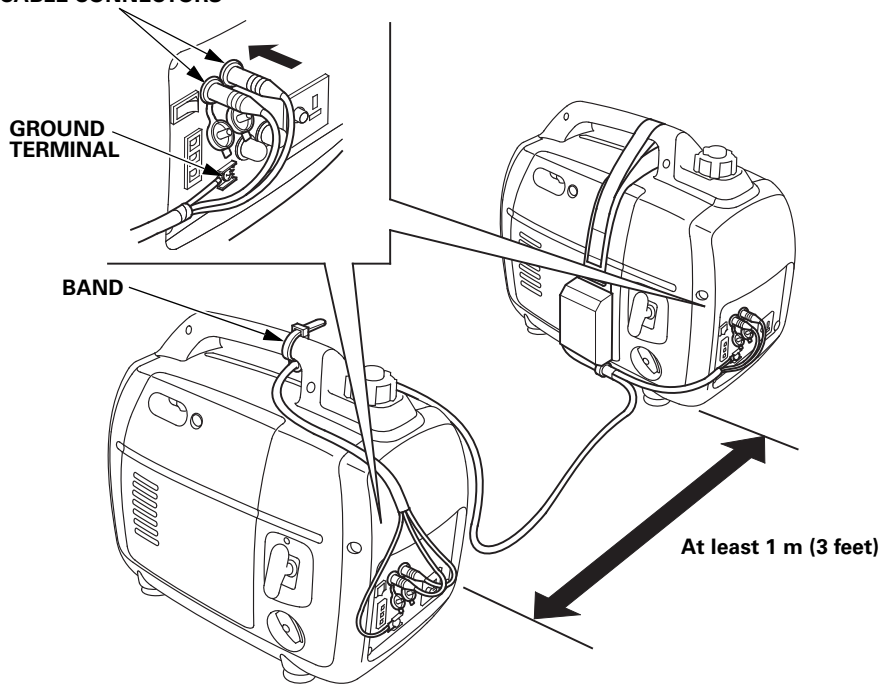
- Never connect other than the specified generator models (see page 4).
- Never connect a cable other than the receptacle box for parallel operation.
- Connect and remove the receptacle box for parallel operation with the engine stopped.
- For single operation, the receptacle box for parallel operation must be removed.

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



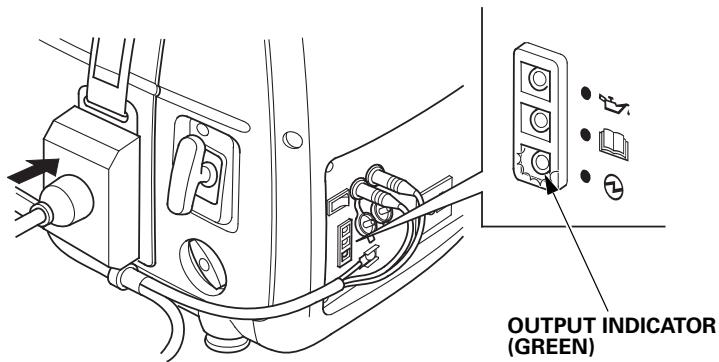
-
2. Connect the cable connectors and ground terminals of the receptacle box for parallel operation to the generators and secure the cord clamp to handle.
- Place two generators at least 1 meter (3 feet) away from each other during parallel operation.
 - Route the wire through the handle and clamp it to the handle using the band.
 - Take care not to slacken the wire toward the starter grip side.
 - Connect the longer wire to the generator on which the receptacle box for parallel operation is not installed.
 - Do not set the generators with the exhaust side face to face each other.

CABLE CONNECTORS



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

-
4. Start the engines and make sure the Output indicators (green) come ON.
 5. Confirm that the appliance to be used is switched off, and plug in the appliance.
 6. Switch on the equipment to be used.



Parallel operation with EU20i

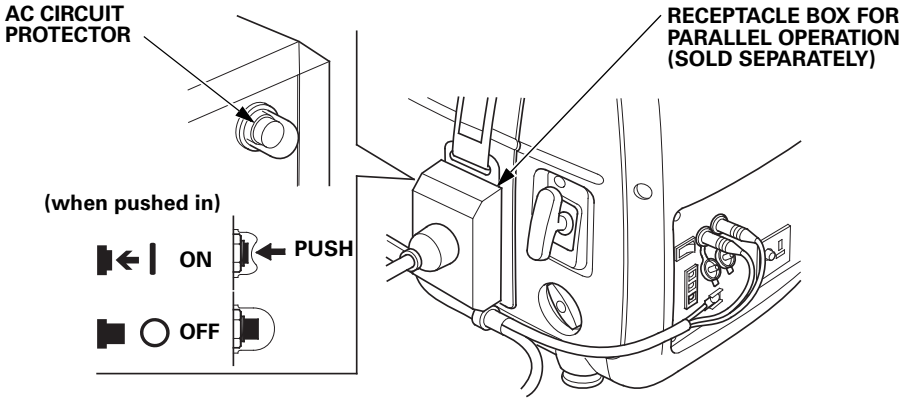
For instructions on how to connect the parallel operation cable, refer to pages 30 through 33.

An EU22i generator may only be connected to EU20i generator that have specific frame serial numbers. Refer to the table below to confirm that your EU20i generator is compatible with an EU22i.

Model	Frame Serial Number Range
EU20i	EAAJ-2032188 and later
	EACT-1000001 and later

AC Circuit Protector (Except B type)

The AC circuit protector on the receptacle box for parallel operation will automatically switch OFF (push button comes out) if there is a short circuit or a significant overload of the generator at receptacle. If an AC circuit protector switches OFF automatically, check that the appliance is working properly and does not exceed the rated load capacity (16 A) of the circuit before resetting the AC circuit protector ON by pushing the push button in.



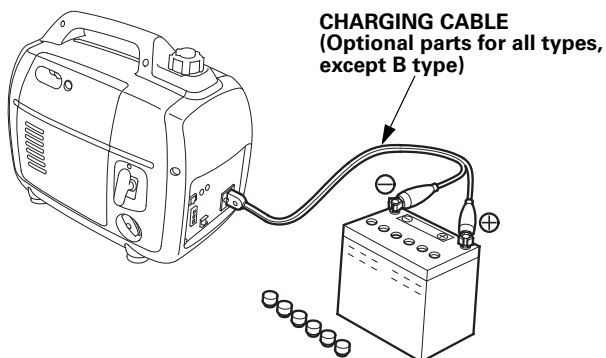
DC application (Except B type)

The DC receptacle may be used for charging 12 volt automotive-type batteries only.

NOTE:

In DC operation, turn the Eco Throttle switch to the OFF position.

1. Connect the charging cable to the DC receptacle of the generator and then to the battery terminals.



⚠ WARNING

- To prevent the possibility of creating a spark near the battery, connect charging cable first to the generator, then to the battery. Disconnect cable first at the battery.
- Before connecting charging cable to a battery that is installed in a vehicle, disconnect the vehicle's battery cable. Reconnect the vehicle's battery cable after the charging cables are removed. This procedure will prevent the possibility of a short circuit and sparks if you make accidental contact between a battery terminal and the vehicle's frame or body.

CAUTION:

- Do not attempt to start an automobile engine with the generator still connected to the battery. The generator may be damaged.
- Connect the positive battery terminal to the positive charging cord. Do not reverse the charging cables, or serious damage to the generator and/or battery may occur.

⚠ WARNING

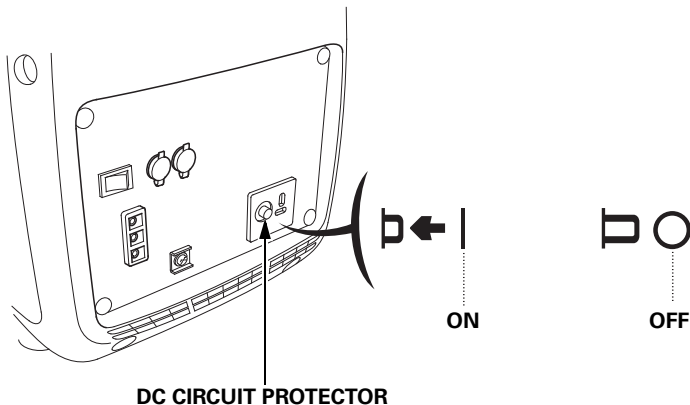
- **Batteries produce explosive gases:** If ignited, and explosion can cause serious injury or blindness. Provide adequate ventilation when charging.
- **CHEMICAL HAZARD:** Battery electrolyte contains sulfuric acid. Contact with eyes or skin, even through clothing, may cause severe burns. Wear a face shield and protective clothing.
- **Keep flames and sparks away, and do not smoke in the area.**
ANTIDOTE: If electrolyte gets into your eyes, flush thoroughly with warm water for at least 15 minutes and call a physician immediately.
- **POISON:** Electrolyte is poison.
ANTIDOTE
 - **External:** Flush thoroughly with water.
 - **Internal:** Drink large quantities of water or milk. Follow with milk of magnesia or vegetable oil, and call a physician immediately.
- **KEEP OUT OF REACH OF CHILDREN.**

2. Start the engine.

NOTE:

- The DC receptacle can be used while the AC power is in use.
- An overload DC circuit will trip the DC circuit protector (push button comes out).

If this happens, wait a few minutes before pushing in the circuit protector to resume operation.

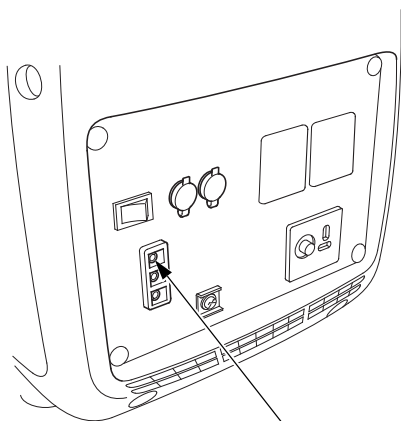


Oil Alert system

The Oil Alert system is designed to prevent engine damage caused by an insufficient amount of oil in the crankcase. Before the oil level in the crankcase falls below a safe limit, the Oil Alert system will automatically shut down the engine (the engine switch will remain in the ON position).

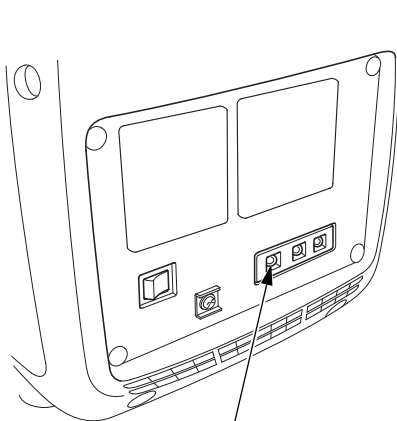
If the Oil Alert system shuts down the engine, the Oil Alert indicator (red) will come ON when you operate the starter, and the engine will not run. If this occurs, check the engine oil level (see page 16).

B1, E, F, G, W types



OIL ALERT INDICATOR (RED)

B type

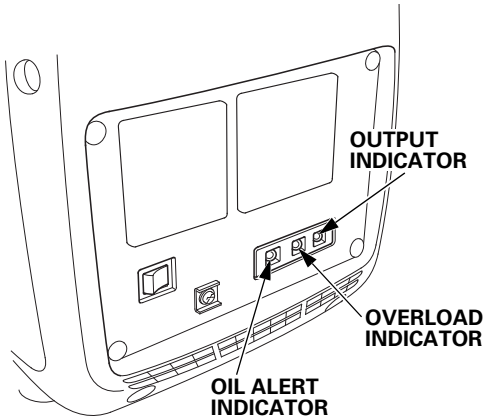
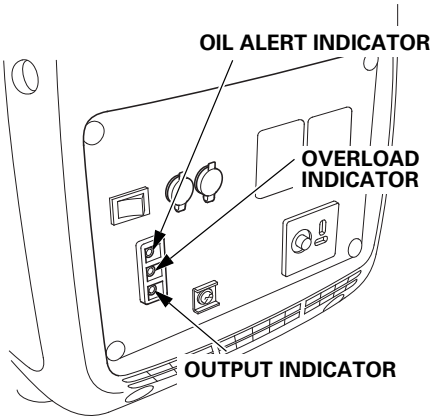


OIL ALERT INDICATOR (RED)

LED Light Patterns

B1, E, F, G, W types

B type



Status	Possible cause	Output Indicator	Overload Indicator	Oil Alert Indicator
Normal	Operating normally	○	●	●
Malfunction	Inverter unit failure	●	☼	●
Abnormal	Output overcurrent	●	○	●
	Inverter unit overheat	●	○	●
Warning	Engine oil low	●	●	○

○ : ON

● : OFF

☼ : Blinking

Refer to *TROUBLESHOOTING* on page 51 for failure diagnosis.

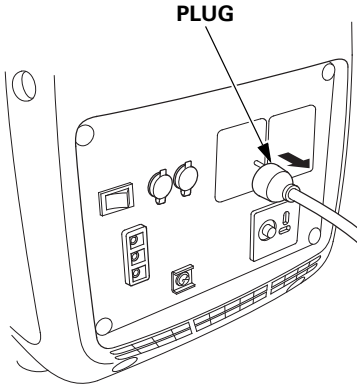
7. STOPPING THE ENGINE

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

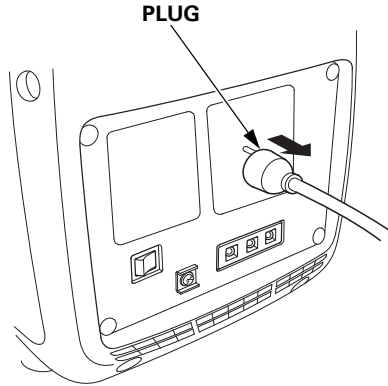
IN NORMAL USE:

1. Switch off the connected equipment and pull the inserted plug.

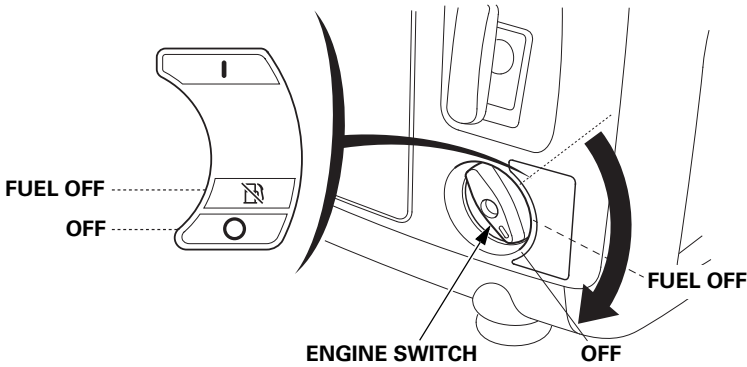
B1, E, F, G, W types



B type



2. Turn the engine switch to the OFF position securely.

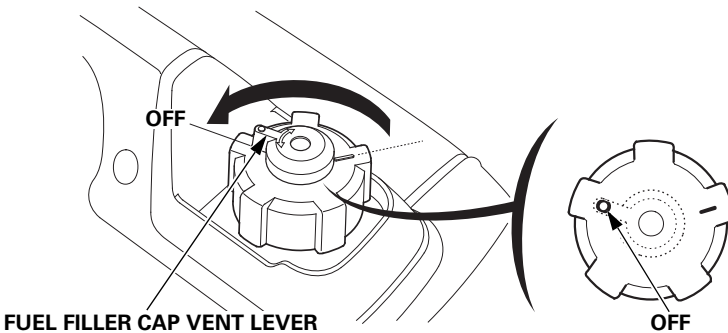


NOTE:

Operating the generator in the FUEL OFF position before turning the engine switch to the OFF position can reduce the fuel in the carburetor.

- When using the FUEL OFF position, the generator will continue to run for several minutes until the fuel in the carburetor has been consumed, and then the engine will stop.
- Turn the engine switch to the OFF position after the engine stops.
- After stopping the engine using the FUEL OFF position, restarting the engine will require additional pulls on the recoil starter.

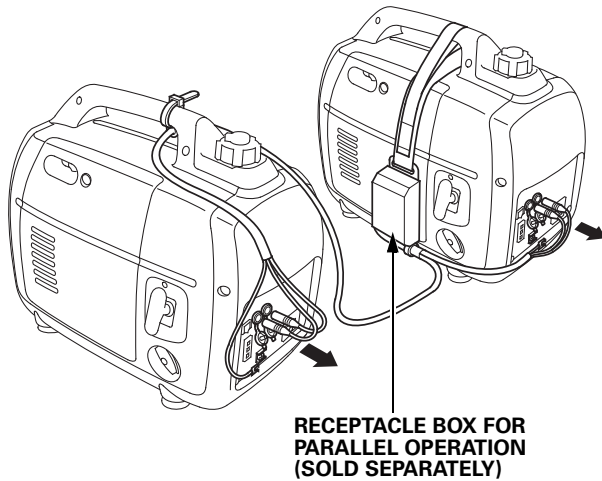
3. Turn the fuel filler cap vent lever fully counterclockwise to the OFF position.



CAUTION:

Be sure the fuel filler cap vent lever and the engine switch are in the OFF position when stopping, transporting and/or storing the generator.

4. If two generators were connected for parallel operation, disconnect the parallel operation cable after stopping the engines (Except B type).



NOTE:

If the generator will not be used for a long period of time, refer to page 48 for information on *Before storing the unit for an extended period.*

8. MAINTENANCE

The purpose of the maintenance and adjustment schedule is to keep the generator in the best operating condition.

Inspect or service as scheduled in the table below.

▲WARNING

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. Be sure there is adequate ventilation whenever you operate the engine.**
- **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.**

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 maintenance.

CAUTION:

Use Honda Genuine parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the generator.

Maintenance Schedule

ITEM	REGULAR SERVICE PERIOD (1) Perform at every indicated month or operating hour interval, whichever comes first.	Each use	First month or 20 hrs.	Every 3 months or 50 hrs.	Every 6 months or 100 hrs.	Every years or 200 hrs.	page
Engine oil	Check level	o					15
	Change		o		o		43
Air cleaner	Check	o					19
	Clean			o (2)			44
Spark plug	Check-adjust				o		45
	Replace					o	
Valve clearance	Check-adjust					o (3)	-
Combustion chamber	Clean	After every 300 hrs. (3)					-
Fuel tank & filter	Clean				o (3)		-
Fuel tube	Check	Every 2 years (Replace if necessary) (3)					-

NOTE: (1) For commercial use, log hours of operation to determine proper maintenance intervals.

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

(3) These items should be serviced by your servicing dealer, unless you have the proper tools and are mechanically proficient. Refer to the Honda shop manual for service procedures.

1. CHANGING OIL

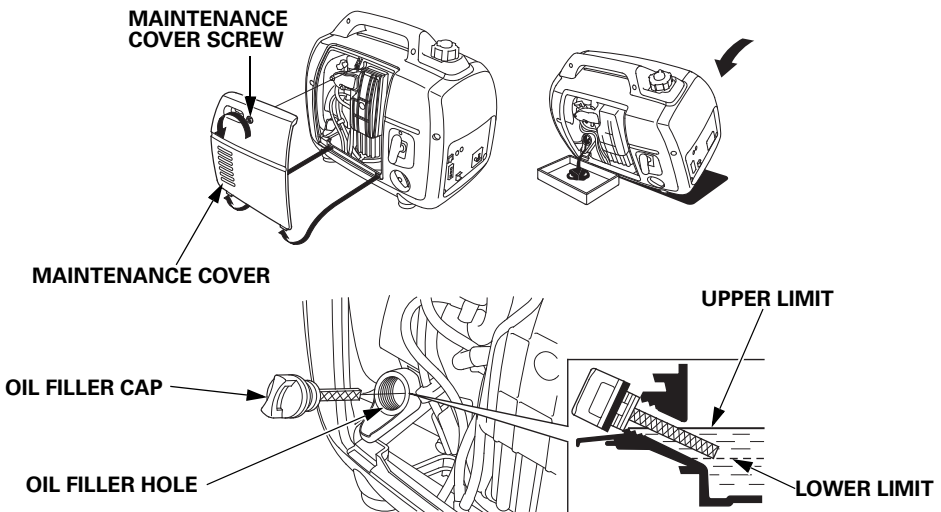
Drain the oil while the engine is still warm to assure rapid and complete draining.

CAUTION:

Make sure to turn the engine switch and the fuel filler cap vent lever to the OFF position before draining.

1. Loosen the maintenance cover screw and remove the maintenance cover.
2. Remove the oil filler cap.
3. Drain dirty oil into a suitable container thoroughly.
4. Refill with the recommended oil (see page 15) and check the oil level.
5. Wipe off all the spilled oil from the generator.
6. Reinstall the oil filler cap.
7. Reinstall the maintenance cover and tighten the maintenance cover screw securely.

ENGINE OIL CAPACITY: 0.44 L (0.46 US qt, 0.39 Imp qt)



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

NOTE:

Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station for reclamation. Do not throw it in the trash or pour it on the ground.

2. AIR CLEANER SERVICE

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

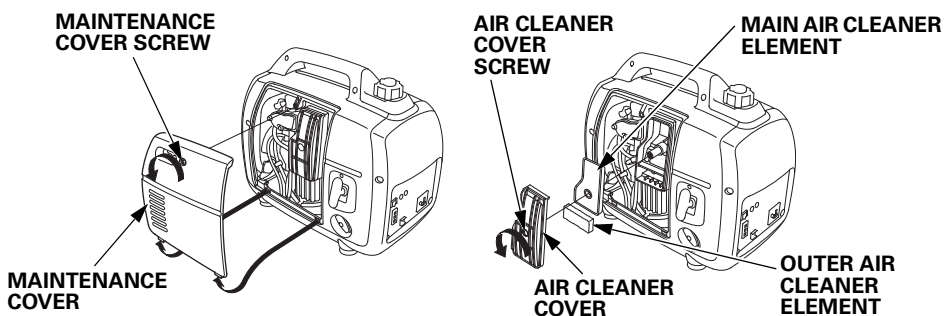
⚠ WARNING

Do not use gasoline or low flash point solvents for cleaning. They are flammable and explosive under certain conditions.

CAUTION:

Never run the generator without the air cleaner. Rapid engine wear may result.

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



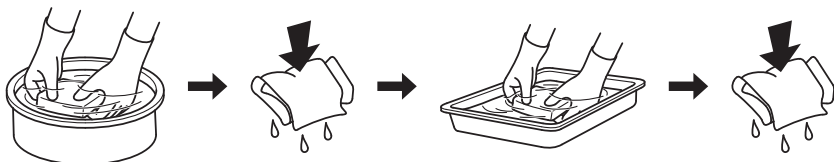
3. Clean in warm soapy water, rinse and allow to dry thoroughly, or clean in high flash point solvent and allow to dry. Dip the main and outer air cleaner elements in clean engine oil and squeeze out all the excess. The engine will smoke during initial startup if too much oil is left in the foam.

Clean

Squeeze and dry
Do not twist.

Dip in oil

Squeeze
Do not twist.



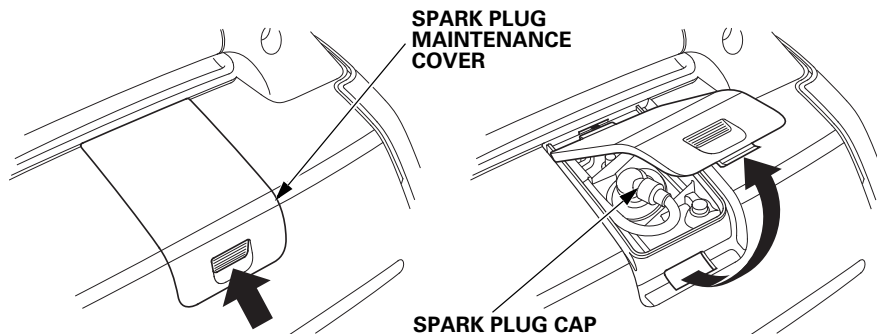
4. Reinstall the main and outer air cleaner elements and the air cleaner cover. Tighten the air cleaner cover screw securely.
5. Reinstall the maintenance cover and tighten the maintenance cover screw securely.

3. SPARK PLUG SERVICE

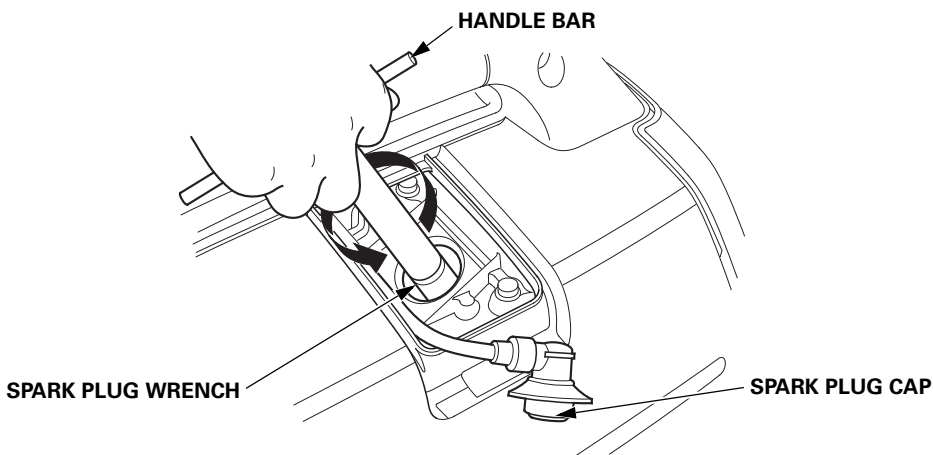
RECOMMENDED SPARK PLUG: CR5HSB (NGK)

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

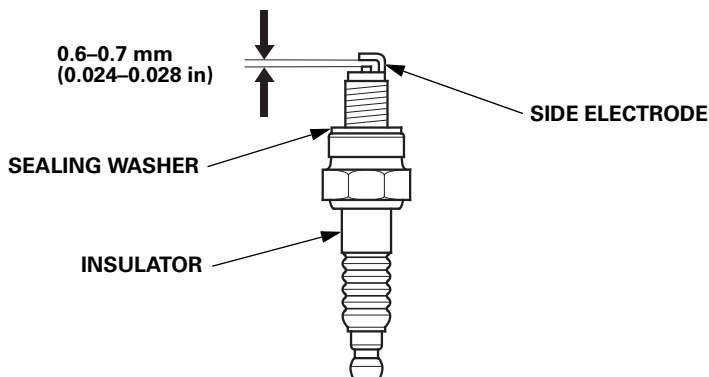
1. Remove the spark plug maintenance cover.



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



-
5. Visually inspect the spark plug. Discard it if the insulator is cracked, chipped, or fouled. Clean the spark plug with a wire brush if it is to be reused.
 6. Measure the plug gap with a feeler gauge.
Correct as necessary by carefully bending the side electrode.
The gap should be:
0.6–0.7 mm (0.024–0.028 in)



7. Install the spark plug carefully by hand, to avoid cross-threading.
8. After a new spark plug has been seated by hand, it should be tightened 1/2 turn with a wrench to compress the sealing washer. If a used plug is being reinstalled, it should only require 1/8 to 1/4 turn after being seated.
9. Reinstall the spark plug cap on the spark plug securely.
10. Reinstall the spark plug maintenance cover.

CAUTION:

- **The spark plug must be securely tightened. An improperly tightened plug can become very hot and possibly damage the generator.**
- **Never use a spark plug with an improper heat range.**

9. TRANSPORTING/STORAGE

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

The fuel filler cap vent lever is turned fully counterclockwise to the OFF position.

Allow the engine to cool well before turning the fuel filler cap vent lever to the OFF position.

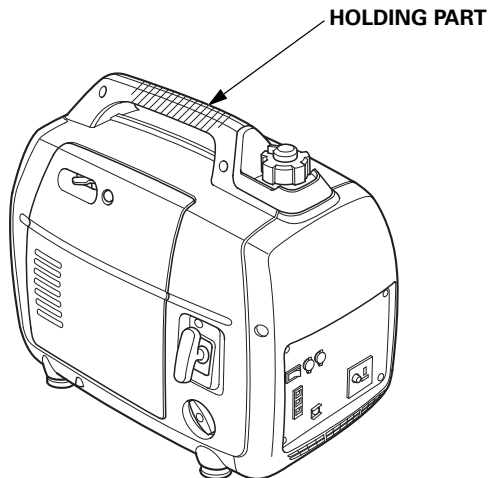
▲WARNING

When transporting the generator:

- **Do not overfill the tank (there should be no fuel in the filler neck).**
- **Do not operate the generator while it is on a vehicle. Take the generator off the vehicle and use it in a well ventilated place.**
- **Avoid a place exposed to direct sunlight when putting the generator on a vehicle. If the generator is left in an enclosed vehicle for many hours, high temperature inside the vehicle could cause fuel to vaporize resulting in a possible explosion.**
- **Do not drive on a rough road for an extended period with the generator on board. If you must transport the generator on a rough road, drain the fuel from the generator beforehand.**

NOTE:

To transport the generator, hold the holding part (shaded areas in the figure below).



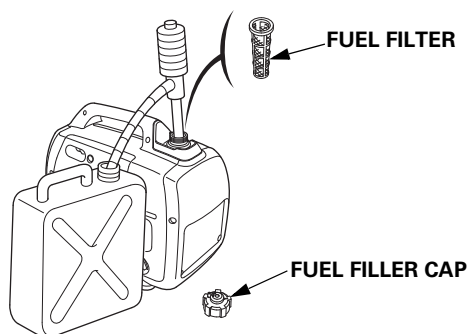
Before storing the unit for an extended period:

1. Be sure the storage area is free of excessive humidity and dust.
2. Drain the fuel.

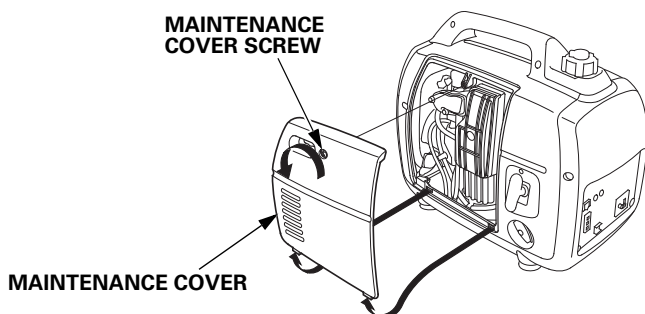
⚠ WARNING

Gasoline is extremely flammable and is explosive under certain conditions. Perform this task in a well ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area during this procedure.

- a. Unscrew the fuel filler cap (see page 17), remove the fuel filter, and empty the fuel tank into an approved gasoline container. We recommend using a commercially available gasoline hand pump to empty the tank. Do not use an electric pump. Reinstall the fuel filter and the fuel filler cap.

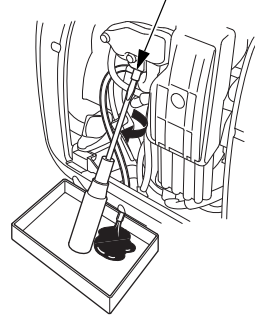


- b. Loosen the maintenance cover screw and remove the maintenance cover (see page 43).

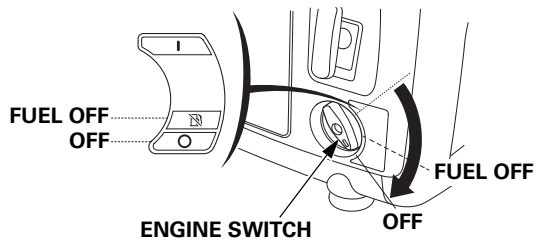


- c. Loosen the carburetor drain screw, and drain the gasoline from the carburetor into a suitable container.

CARBURETOR DRAIN SCREW

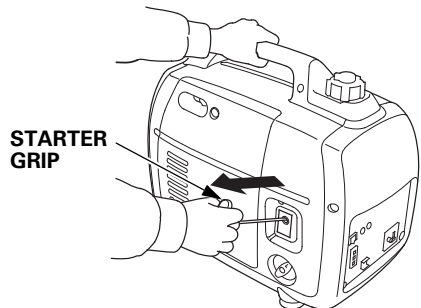


- d. Remove the spark plug maintenance cover and the spark plug cap (see page 45).
e. Turn the engine switch to the ON position (see page 20).
f. Pull the starter grip 3 to 4 times to drain the gasoline from the fuel pump into a suitable container.
g. Turn the engine switch to the OFF position securely.



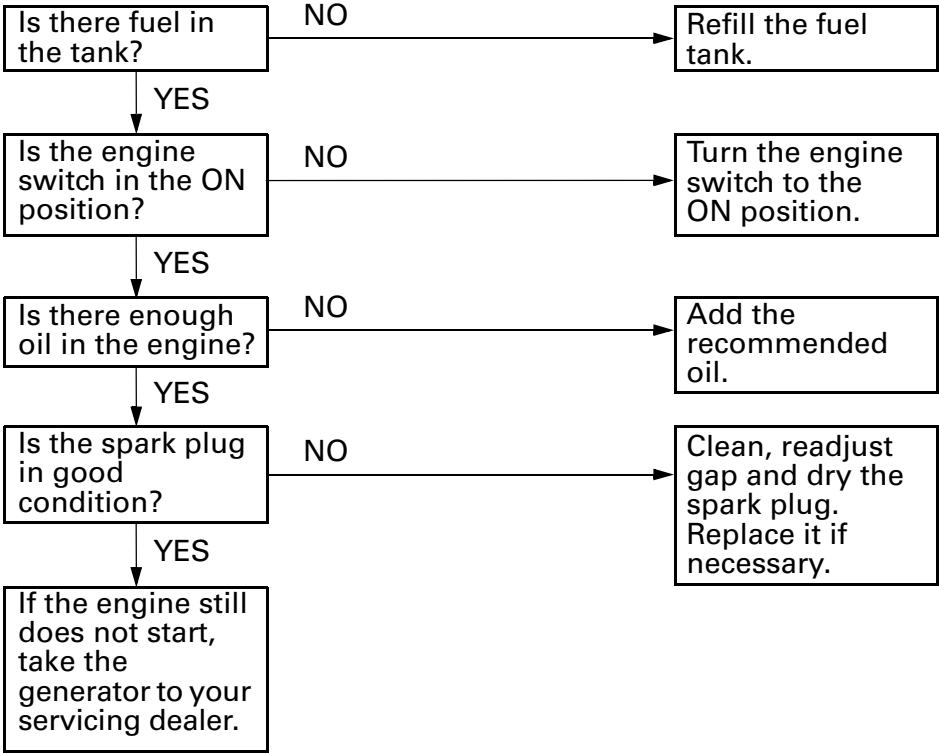
- h. Tighten the carburetor drain screw.

3. Change the engine oil (see page 43).
4. Remove the spark plug and pour about a tablespoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug (see page 45).
5. 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.

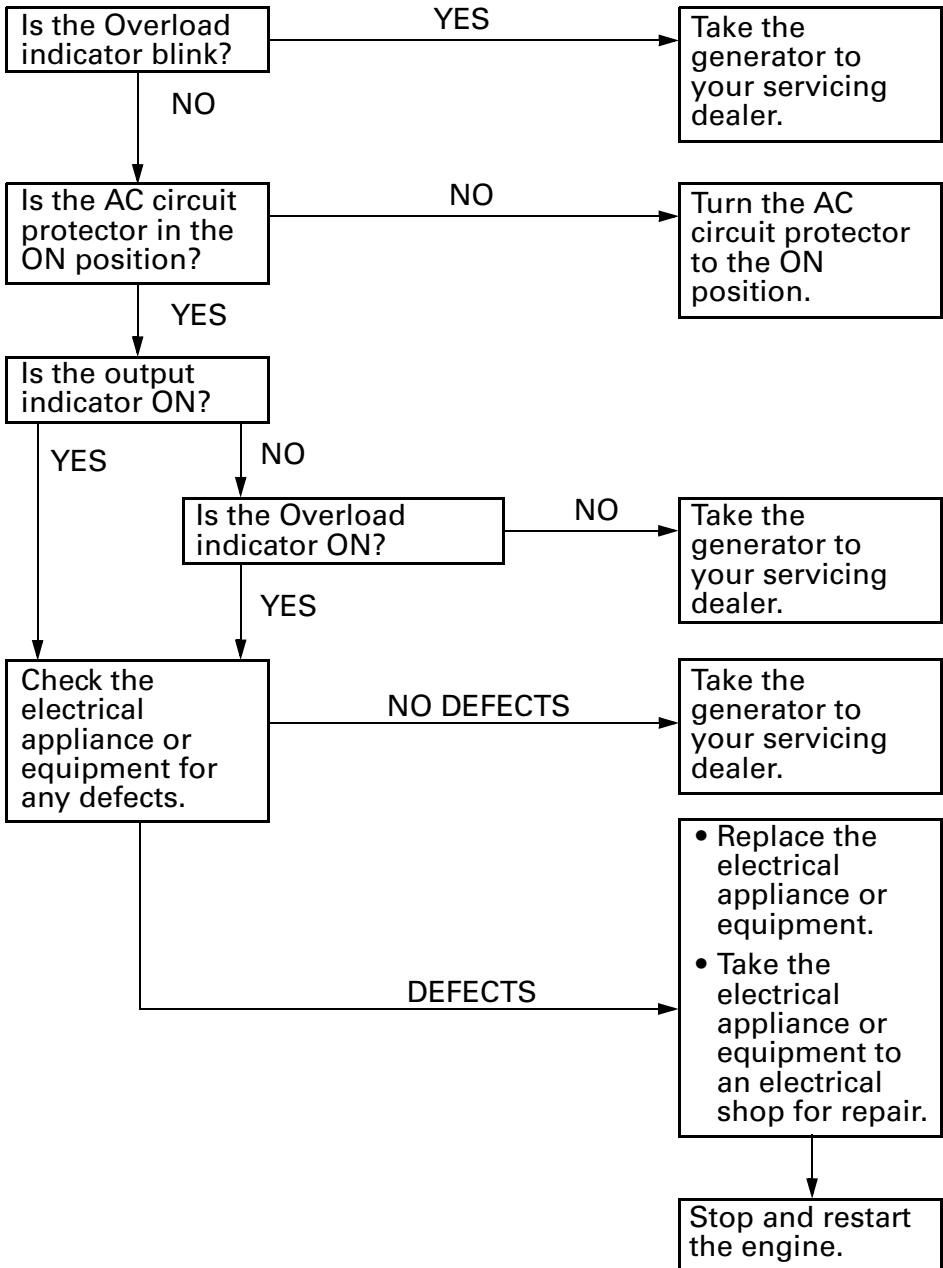


10. TROUBLESHOOTING

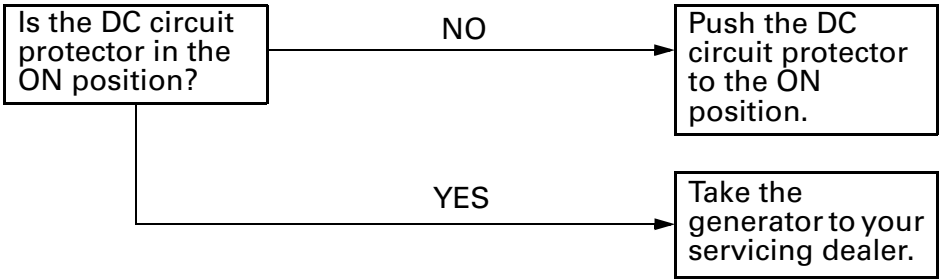
When the engine will not start:



Appliance does not operate:



No electricity at the DC receptacle (Except B type):



11. SPECIFICATIONS

Dimensions and Weight

Model	EU22iT		
Type	E, W, B1, F	G	B
Description code	EAMT		
Length	509 mm (20.0 in)	519 mm (20.4 in)	541 mm (21.3 in)
Width	290 mm (11.4 in)		
Height	425 mm (16.7 in)		
Dry weight	21.1 kg (46.5 lbs)		

Engine

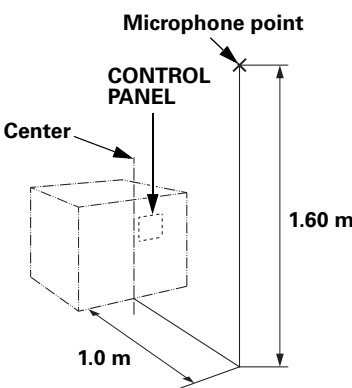
Model	GXR120T
Engine type	4-stroke, overhead camshaft, single cylinder
Displacement	121 cm ³ (7.38 cu-in)
Bore×Stroke	60.0x43.0 mm (2.36x1.69 in)
Compression ratio	8.5:1
Engine speed	2,800–4,500 rpm 4,000–4,500 rpm (with eco throttle switch OFF)
Cooling system	Forced air
Ignition system	Full transistor
Engine oil capacity	0.44 L (0.46 US qt, 0.39 Imp qt)
Fuel tank capacity	3.6 L (0.95 US gal, 0.79 Imp gal)
Spark plug	CR5HSB (NGK)
Carbon dioxide (CO ₂) emissions*	931 g/kW·hr

* This CO₂ measurement results from testing over a fixed test cycle under laboratory conditions a(n) (parent) engine representative of the engine type (engine family) and shall not imply or express any guarantee of the performance of a particular engine.

Generator

Model		EU22iT	
Type		E, W, B1, F, G	B
AC output	Rated Voltage	230 V	110 V
	Rated Frequency	50 Hz	
	Rated Ampere	7.8 A	16.4 A
	Rated Output	1.8 kVA	
	Max Output	2.2 kVA	
DC rated output		Only for charging 12 V automotive batteries. 12 V, 8.3 A	–

Noise

Model	EU22iT
Type	E, W, B1, F, G, B
Sound pressure level at the workstation (2006/42/EC)	72 dB (A) (with Eco throttle ON)
 <p>The diagram illustrates the measurement setup for noise at the workstation. A dashed rectangular box represents the workstation. A vertical line with a double-headed arrow indicates a height of 1.60 m from the center of the workstation to the microphone point. A horizontal line with a double-headed arrow indicates a distance of 1.0 m from the center of the workstation to the microphone point. Labels include 'Microphone point', 'CONTROL PANEL', 'Center', and '1.60 m' and '1.0 m' with arrows pointing to the respective dimensions.</p>	
Uncertainty	2 dB (A)
Measured sound power level (2000/14/EC, 2005/88/EC)	88 dB (A) (with Eco throttle ON)
Uncertainty	2 dB (A)
Guaranteed sound power level (2000/14/EC, 2005/88/EC)	90 dB (A) (with Eco throttle ON)

“the figures quoted are emission levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of work-force include the characteristics of the work room, the other sources of noise, etc. i.e. the number of machines and other adjacent processes, and the length of time for which an operator is exposed to the noise. Also the permissible exposure level can vary from country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk”.

NOTE:

Specifications are subject to change without notice.

12. WIRING DIAGRAM

INDEX

(See inside back cover)

B1, E, F, G, W Types	W-1
B Type	W-2

ABBREVIATIONS

Symbol	Part name
AC,CP	AC Circuit Protector
ACOR	AC Output Receptacle
(B1)	B1 Type
Cot	Parallel operation socket
CPB	Control Panel Block
DC,CP	DC Circuit Protector
DC,D	DC Diode
DC,NF	DC Noise Filter
DCOR	DC Output Receptacle
DC,W	DC Winding
EcoSw	Eco throttle switch
EgB	Engine Block
EgG	Engine Ground
ESw	Engine Switch
ExW	Exciter Winding
FrB	Frame Block
FrG	Frame Ground
FTU	Full-Transistor Unit
(F)	F Type
(G, E)	G, E Types
GeB	Generator Block
GT	Ground Terminal
IB	Inverter Block
IgC	Ignition Coil
IU	Inverter Unit
MW	Main Winding
OAL	Oil Alert Indicator
OAU	Oil Alert Unit
OI	Overload Indicator
OLSw	Oil Level Switch
PC	Pulser Coil
PL	Output Indicator
RBx	Receptacle Box for Parallel Operation
SP	Spark Plug

Symbol	Part name
SpU	Spark Unit
StpM	Stepping Motor (Throttle Control)
SW	Sub Winding
To Ge	To Generator
(W)	W Type

WIRE COLOR CODE

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

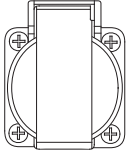

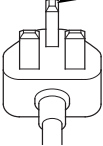
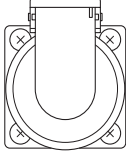

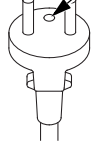
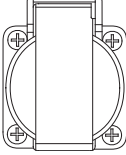

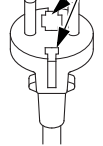
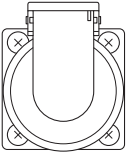
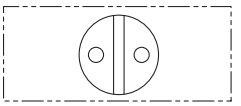
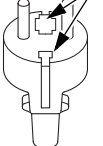
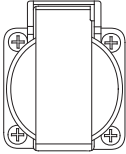

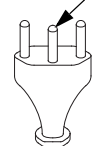
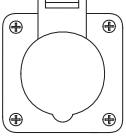
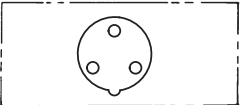
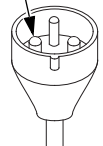
ENGINE SWITCH

	G	Bl
OFF	o	o
ON		

ECO THROTTLE SWITCH

	R/W	R/Y
ON		
OFF	o	o

RECEPTACLE

Type	Shape		Plug
B1			
F			
E			
G			
W			
B			

MEMO