

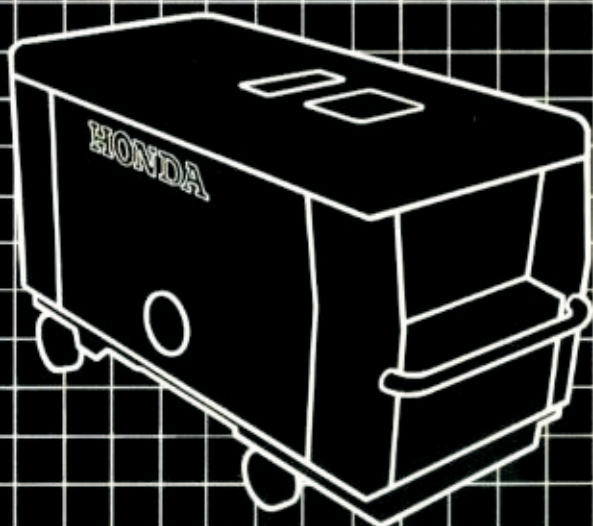
HONDA

Power

Equipment

Owner's Manual

EB12D



Thank you for purchasing a Honda generator.

This manual describes operation and maintenance of the Honda EB12D Generator. All information in this publication is based on the latest product information available at the time of 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 is a permanent part of the generator, and it must stay with the generator if resold.

The Honda EB12D generator is not factory equipped with a spark arrester. In some areas, it is illegal to operate an engine without a USDA-qualified spark arrester. Check local laws and regulations before operating. An optional spark arrester is available from an authorized Honda generator dealer.

READ THIS OWNER'S MANUAL CAREFULLY. Pay special attention to these symbols and any instructions that follow:

⚠ DANGER —Indicates serious injury or death **WILL** result if instructions are not followed.

⚠ WARNING —Indicates a strong possibility that serious injury or death could result if instructions are not followed.

⚠ CAUTION —Indicates a possibility that minor injury can result if instructions are not followed.

NOTICE —Indicates that equipment or property damage can result if instructions are not followed.

NOTE: Gives helpful information.

Honda generators are designed to give safe and dependable service if operated according to instructions. Operating this generator requires special effort on your part to ensure your safety of others. Using this generator for a purpose not intended may cause injury or property damage.

⚠ WARNING Careless operation or misuse may cause injury or property damage. Read and understand the owner's manual before operating this generator.

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

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1. SAFETY INFORMATION

SAFETY INFORMATION

For your safety and the safety of others, pay special attention to these precautions:

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.

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 the Ground Fault Circuit Interrupter (GFCI) receptacle, and all other electrical components on the control panel, before each use. Moisture or ice can cause a malfunction or short circuit in electrical components which could result in electrocution.
- Do not connect to a building's electrical system unless an isolation switch has been installed by a qualified electrician.

Fire and Burn Hazards

- 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.
 - Keep flammable materials away from the generator.
- The muffler becomes very hot during operation and remains hot for 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.
- Diesel fuel is flammable, and fuel vapor can explode. Refuel in a well ventilated area with the engine stopped. Keep flames and sparks away, and do not smoke in the area.
- Diesel fuel may spill and ignite if the generator is tilted or overturned. Place the generator on a firm, level surface. Avoid loose sand or snow.

Carbon Monoxide Hazards

- Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death.
- If you run the generator in an area that is confined, or even partially enclosed, the air you breathe could contain a dangerous amount of exhaust gas. To keep exhaust gas from building up, provide adequate ventilation.

WARNING LABEL LOCATION

Read these labels before operating the generator.

Your Honda generator comes with several labels containing important safety information. Anyone who uses the generator should read and understand this information before operating the generator.

The labels should be considered as permanent parts of the generator. If a label comes off or becomes hard to read, contact an authorized Honda generator dealer for replacements.

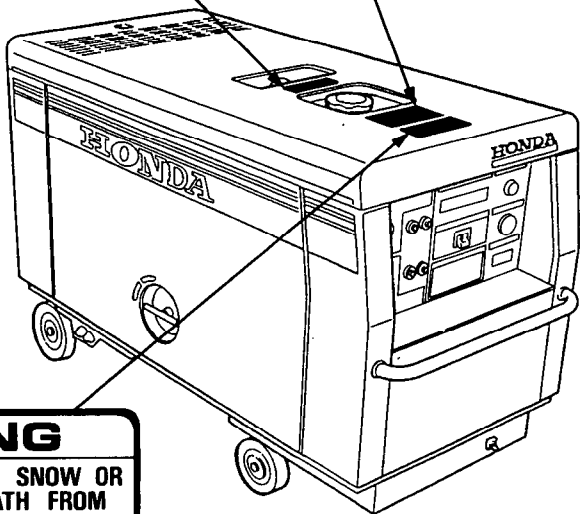
⚠ WARNING

- ELECTROCUTION OR PROPERTY DAMAGE CAN OCCUR.
- DO NOT CONNECT THIS GENERATOR TO ANY BUILDING'S ELECTRICAL SYSTEM UNLESS AN ISOLATION SWITCH HAS BEEN INSTALLED BY A LICENSED ELECTRICIAN.
- NEVER RUN THE ENGINE IN AN ENCLOSED AREA.
- THE EXHAUST CONTAINS POISONOUS CARBON MONOXIDE GAS THAT CAN CAUSE LOSS OF CONSCIOUSNESS AND MAY LEAD TO DEATH.
- READ OWNER'S MANUAL CAREFULLY. ^(A)



⚠ WARNING

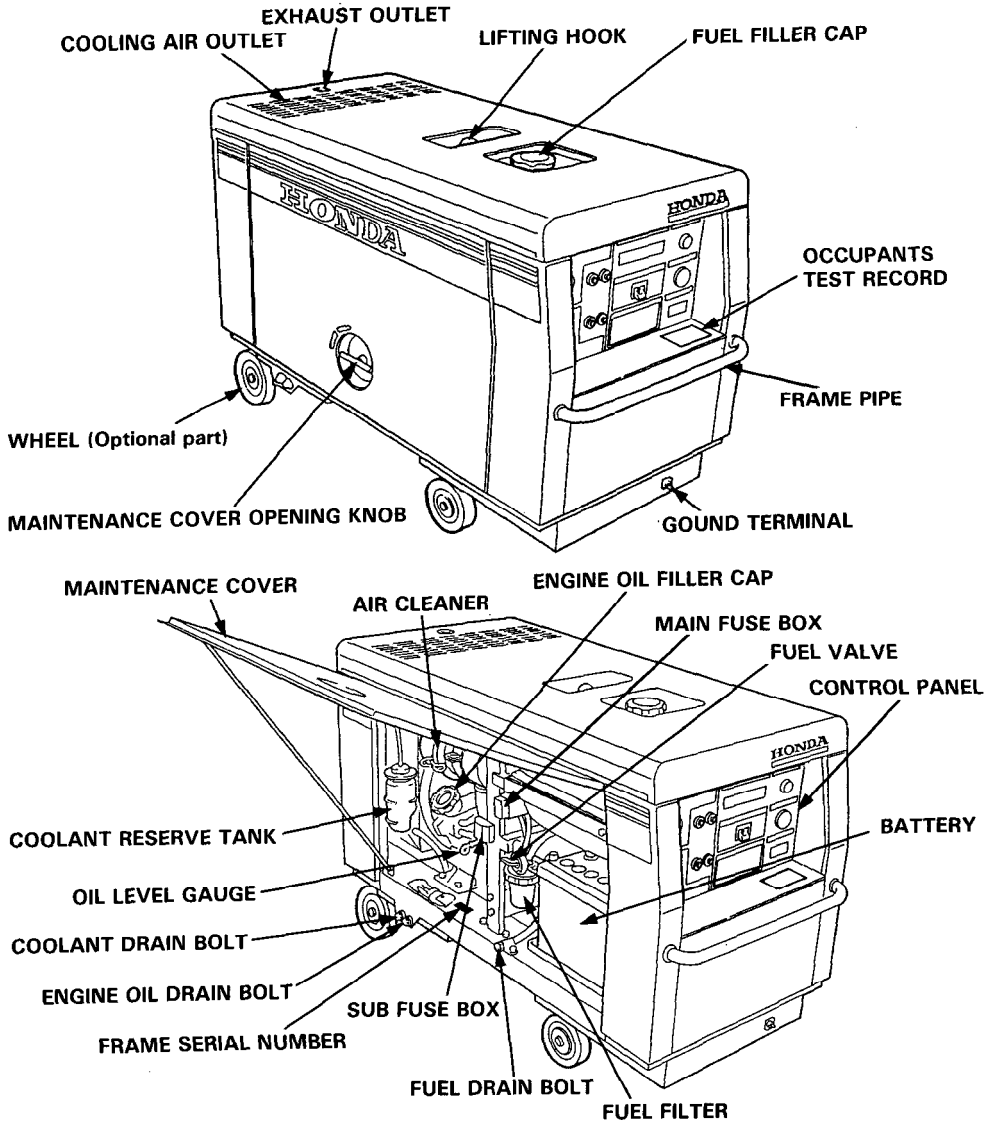
FUEL IS FLAMMABLE.
STOP ENGINE, AVOID HEAT,
SPARKS, AND OPEN FLAME
WHEN REFUELING.



⚠ WARNING

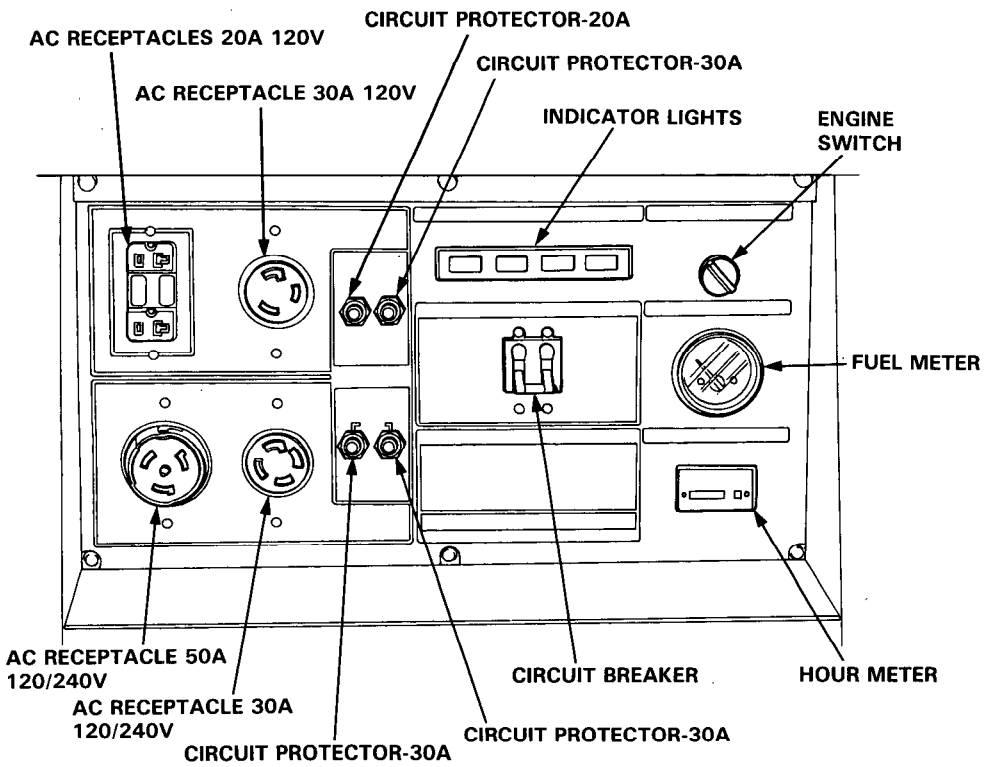
USING THE GENERATOR IN RAIN, SNOW OR
NEAR WATER CAN LEAD TO DEATH FROM
ELECTRIC SHOCK. KEEP GENERATOR DRY.

2. COMPONENT IDENTIFICATION



* Record the frame serial number for your reference. Refer to the serial number when ordering parts, and when making technical or warranty inquiries (see page 46).

Frame serial number: _____



3. CONTROLS

Engine Switch

To start and stop the engine.

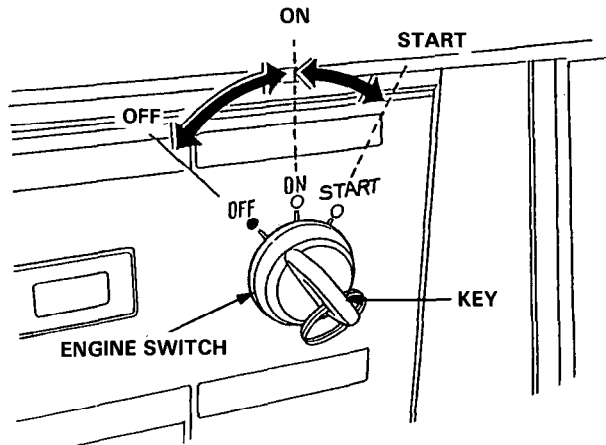
Key position:

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

ON: To run the engine after starting.

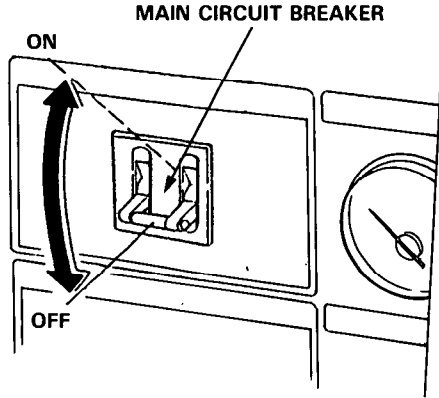
START: To start the engine by turning the starter motor. Return the key to the ON position once the engine has started. Do not use the starter for more than 5 seconds at a time. If the engine fails to start, release the switch and wait 10 seconds before operating the starter again.

NOTICE Make sure the engine switch is set to the OFF position when the engine is stopped. The charge warning light will come on if the switch is left in the ON position with the engine not running. The battery may discharge if the engine switch is left in the ON position with the engine not running.



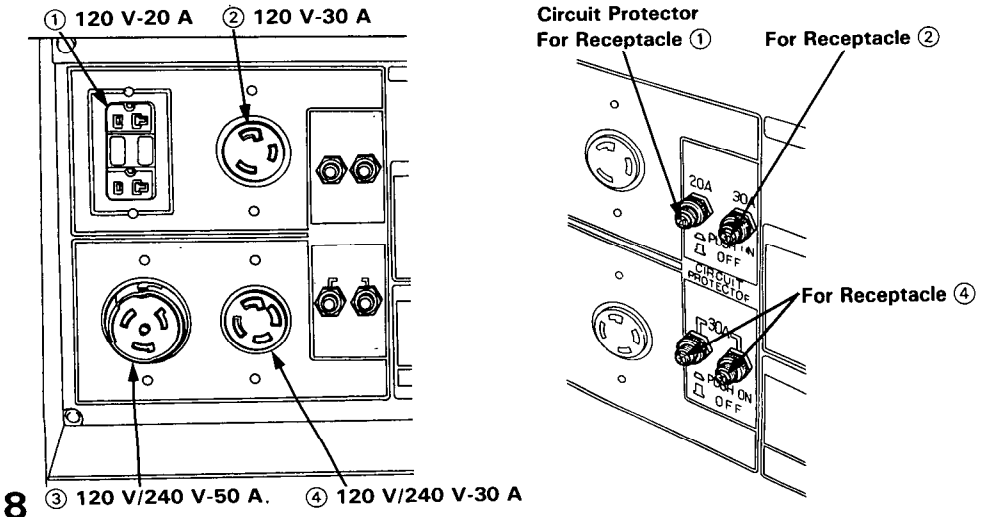
Circuit Breaker

The circuit breaker protects the individual circuit protectors and the 50A 120/240V receptacle. The circuit breaker will automatically switch OFF if the circuit is overloaded or the appliance plugged into the circuit is faulty. If the circuit breaker is switched OFF automatically, check that the appliance is working properly or is exceeding the rated load capacity of the circuit before switching the circuit breaker ON again.



Circuit Protector

The circuit protectors will automatically switch OFF if the circuit is overloaded or the appliance plugged into the circuit is faulty. If the circuit breaker is switched OFF automatically, check that the appliance is working properly or is exceeding the rated load capacity of the circuit before resetting the circuit protector.



Ground Fault Circuit Interrupter (GFCI) Receptacle

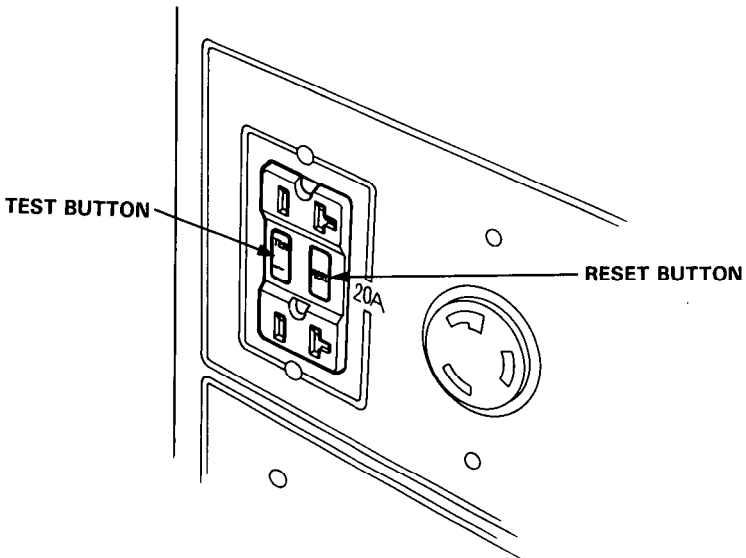
⚠ WARNING Using the generator in rain, snow or near water can lead to death from electric shock. Keep the generator dry.

This receptacle is protected by a Ground Fault Circuit interrupter (GFCI) for protection against electrical shock.

TEST BUTTON To test, depress the "TEST" button (see pages 28, 29).

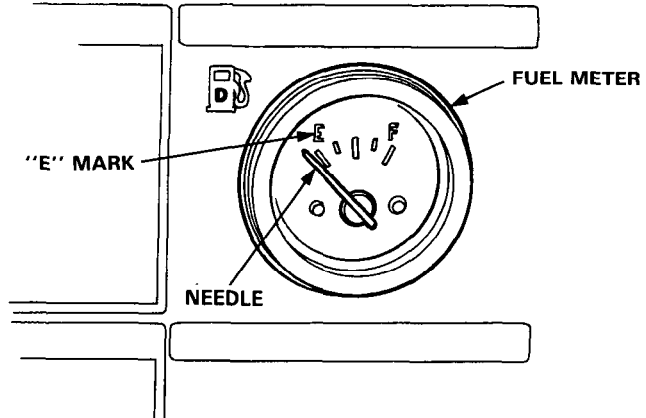
RESET BUTTON To restore power, depress the "RESET" button (see pages 28, 29).

Perform this test monthly to ensure proper operation of the GFCI Receptacle. If the generator is stored outdoors, unprotected from the weather, test the GFCI receptacle before each use. Record your test on the GFCI test card provided on the control panel.



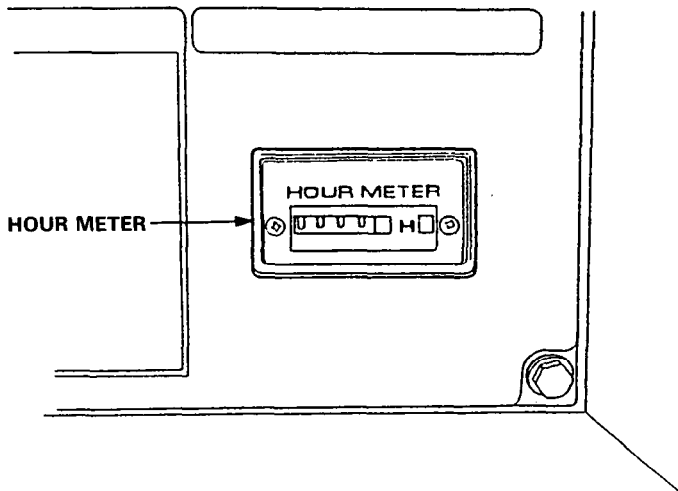
Fuel Meter

Indicates the amount of fuel in the fuel tank when the engine switch is in the ON position. Turn the engine switch to the OFF position and refill the fuel tank when the needle is near the "E" mark.



Hour Meter

Indicates the hours the generator has been operated. Use it to determine when scheduled maintenance should be performed (see Page 33).



Indicator Lights

The EB12D generator is equipped with four indicator lights that monitor three engine functions and the generator operation. All four lights come on when the engine switch is turned from the OFF position to the ON position. This allows the operator to check the bulbs of each indicator light. The four lights will stay on for 4 seconds with the engine switch left in the ON position. The lights will go out if the engine switch is turned to the start position before 4 seconds.

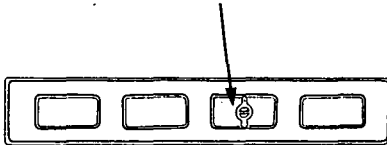
Oil pressure Light

Lights when the engine oil level is low or the engine lubrication system is not working properly. The engine will stop automatically when the light comes on.

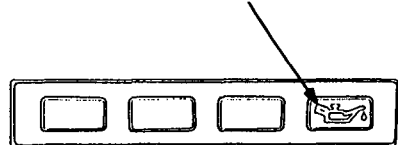
If this occurs:

- Check the engine oil level, and add the correct engine oil if necessary (see page 14).
- To restart the engine, turn the engine switch to the OFF position and start according to the starting procedure (see page 21).
- If the oil pressure indicator light continues to light even though the engine oil level is correct, stop operating the generator and see an authorized Honda generator dealer.

COOLANT TEMPERATURE INDICATOR LIGHT



OIL PRESSURE INDICATOR LIGHT



Coolant Temperature Light

Lights when the coolant temperature becomes higher than normal. The engine will stop automatically.

If this occurs:

- Check the coolant level, and add coolant if the level is low (see page 17).
- Check the cooling air openings and the radiator for obstructions that would restrict air flow.
- To restart the engine, first turn the engine switch to the OFF position. Next, turn the engine switch to the ON position and observe the coolant temperature indicator light. If the light remains on, allow the engine to cool before attempting to start the engine.
- If the coolant temperature indicator light continues to come on even though the coolant level is correct, discontinue operation and see an authorized Honda generator dealer.

NOTICE Check the coolant level before each use. The coolant temperature indicator light may not function if there is insufficient coolant in the radiator.

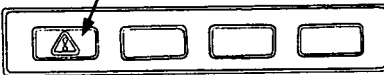
Generator Indicator Light

The generator indicator light comes on and the engine will stop automatically when there is a problem with the generator or the rated load capacity of the generator has been exceeded.

If this occurs:

- Turn the engine switch to the "OFF" position.
- Disconnect the appliance from the generator.
- Reset the AC circuit breaker or circuit protector.
- Start the engine (see page 21) and observe the generator warning light:
 - If the light does not come on, plug the appliance in and check to see if the light comes on. If the light comes on and the engine stops automatically, check the appliance for proper operation or exceeding the rated load capacity of the circuit.
 - If the light comes on after the engine has been restarted and the engine stops automatically, discontinue operation of the generator and contact an authorized Honda generator dealer.

GENERATOR INDICATOR LIGHT



CHARGE INDICATOR LIGHT



Charge Indicator Light

The charge indicator light comes on and the engine is stopped automatically when there is a problem in the battery charging system.

If this occurs:

- Turn the engine switch to the OFF position.
- Start the engine (see page 21).
- If the engine stops again automatically, determine when the charge indicator light comes on:
 - If the light comes on immediately when the engine stops, the problem is the charging system. Stop using the generator and contact an authorized Honda generator dealer.
 - If the engine stops automatically and the charge indicator light comes on approximately 15 seconds after the engine stops, the problem is either in the fuel system (see page 15) or a problem with the engine. See your authorized Honda generator dealer if the charge indicator light comes on even though there is sufficient fuel.

4. PRE-OPERATION CHECKS

Check these items before starting the generator. Be sure the generator is on a level surface. Block the wheels if the optional wheel kit is installed.

Maintenance Cover Opening and Closing

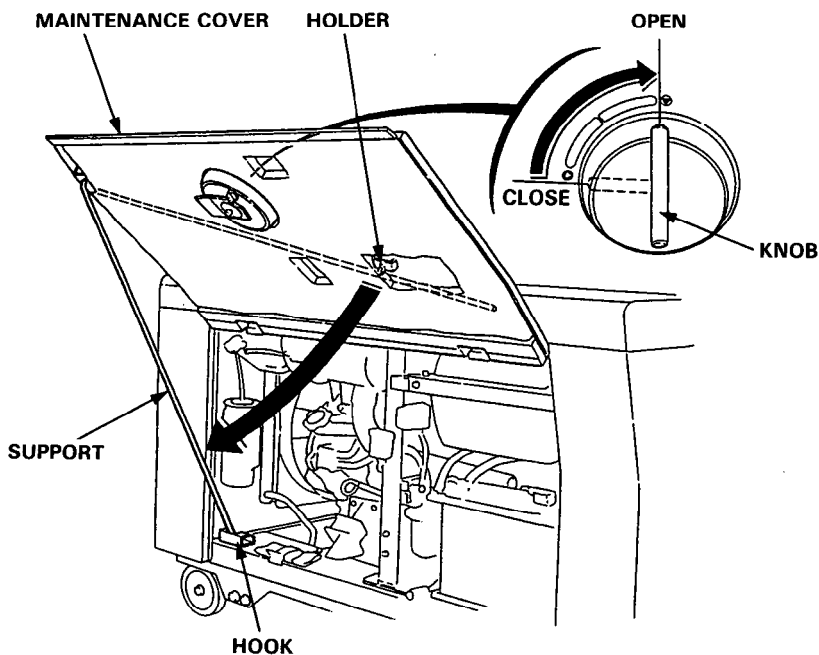
- **To open:**

1. Turn the maintenance cover opening knob to the OPEN position and pull up on the cover.
2. Pull the support from the holder and hook the end of the support as shown.

- **To close:**

1. Lift the maintenance cover slightly to unhook the support from the hook.
2. Set the support in the holder on the maintenance cover and gently lower the cover.
3. Turn the maintenance cover knob to the CLOSE position to latch the cover in place.

NOTICE Keep the maintenance cover closed while operating the generator. Operating the generator with the maintenance up will reduce the cooling efficiency resulting in generator damage.



Engine Oil

NOTICE Engine oil is a major factor affecting engine performance and service life. Running the engine with insufficient oil can cause serious engine damage. Non-detergent oil and 2-stroke engine oil are not recommended.

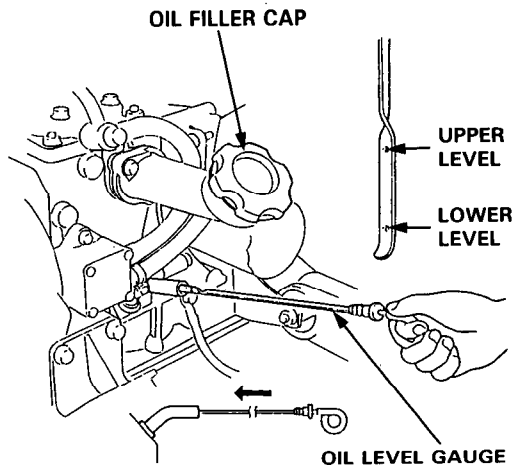
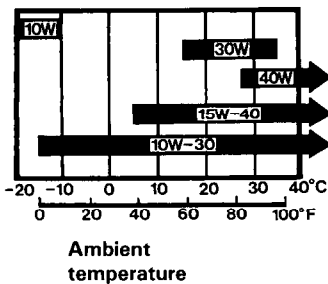
Be sure to check the engine oil on a level surface with the engine stopped and the wheels blocked (if installed).

Use only high-detergent premium quality motor oil certified to meet or exceed American Petroleum Institute (API) Service Classification CE, CD, or CDII. (Motor oils intended for diesel service CE, CD, or CDII will show this designation on the container). SAE 15W-40 is recommended for general use. Select the appropriate viscosity from the chart below for the average temperature in your area.

NOTE: SAE 10W-30 with a API Service Classification SG, SF/CC, or CD may be used if a diesel service classification CE, CD, or CDII is unavailable.

1. Open the maintenance cover (see page 13).
2. Remove and wipe the oil level gauge clean.
3. Insert the oil level gauge into the oil level inspection hole as shown.
4. Check the oil level on the oil level gauge as shown. If near the lower level, remove the oil filler cap and fill to the upper level with the recommended engine oil.

■ OIL: API CE, CD, CDII, CC



Fuel

Fuel tank capacity: 38 lit. (10 US gal, 8.4 Imp. gal)

Turn the engine switch ON and check the fuel meter.

Refill the tank to the upper level if necessary. Do not fill the fuel tank above the upper level mark.

Use ONLY clean high-quality fuel.

Recommended fuel specifications: ASTM D-975-1-D/2-D

Use No. 2-D fuel at temperatures above 20°F (-7°C)

Use No. 1-D fuel at temperatures below 20°F (-7°C)

Use No. 1-D fuel for all temperatures at altitudes above 5000 ft (1500 m).

Diesel fuel with a cetane rating as low as 40 may be used, but a cetane rating of 45 is recommended.

Do not use contaminated diesel fuel.

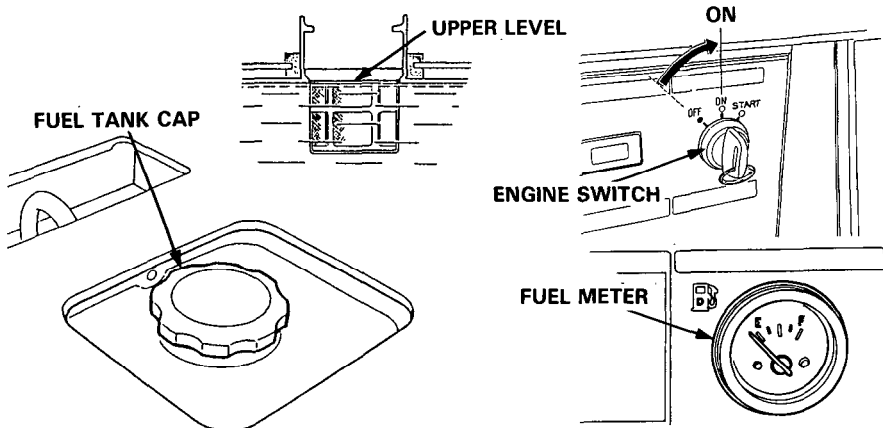
Do not mix different grades of diesel fuels.

Avoid getting dirt, dust or water in the fuel tank.

After refueling, be sure to tighten the fuel tank cap securely.

⚠ WARNING

- Diesel fuel is flammable and 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 diesel fuel is stored.
- Do not overfill the tank, and make sure the filler cap is securely closed after refueling.
- Be careful not to spill fuel when refueling. Spilled fuel vapor may ignite. If fuel is spilled, make sure the area is dry before starting the engine.
- Use diesel fuel only. Do not use gasoline, kerosene or any other fuel oils. Do not mix gasoline with diesel fuel.



NOTE:

- Depending on the season and the ambient temperature, a different grade of diesel fuel should be used. If a summer grade fuel is used in the winter, the summer fuel may freeze preventing the engine from starting. Winter grade fuel is used in the summer could result in a lack of engine power. Be sure to use the proper grade of diesel fuel which complies with the ambient temperature.
- Keep the fuel tank filled in the winter. Water can accumulate from condensation if the tank is kept only partially filled. Refill the fuel tank after each use.
- Check the fuel filter before each use for water and contaminants. Service the fuel filter if any contaminants are found (see page 18).

Air Bleeding

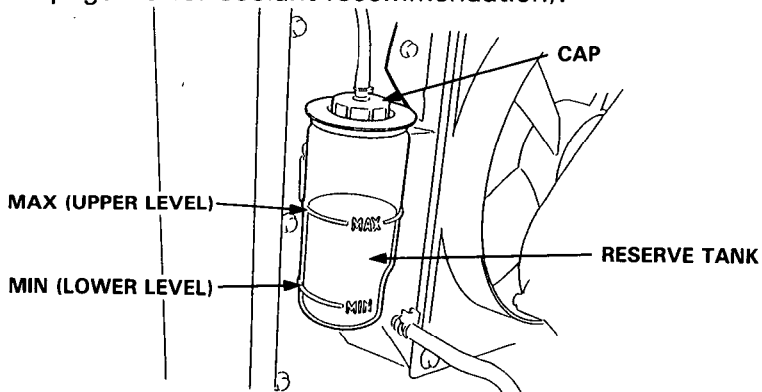
The generator is equipped with an automatic air bleeding system in the event the engine is run out of fuel. Refill the tank (see page 15). Make sure that fuel is supplied to the fuel filter, then start the engine (see page 21).

NOTE: Light blue exhaust will be seen and the engine speed may fluctuate as air bleeding is occurring. This is normal. Run the engine without a load until the engine speed stabilizes and the exhaust smoke clears.

Coolant

1. Open the maintenance cover (see page 13).
2. Check the coolant level in the reserve tank when the engine is at normal operating temperature.

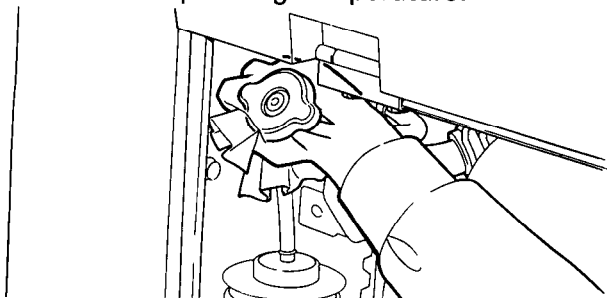
If the level is near the MIN level, add coolant to bring it up to the MAX level (see page 18 for coolant recommendation).



3. If there is no coolant in the reserve tank, the cooling system should be checked for leaks and repaired if necessary. Coolant must then be added to the radiator and reserve tank.

⚠ WARNING The coolant is hot and under pressure and sever scalding could result. Never remove the radiator cap when the engine is hot.

Wait until the engine is cool, then turn the radiator cap counterclockwise until it stops. **DO NOT PRESS DOWN WHILE TURNING THE CAP.** After any remaining pressure has been relieved, remove the cap by pressing down and again turning it counterclockwise. Add enough coolant to fill the radiator, and reinstall the cap. Be sure to tighten it securely. Fill the reserve tank up to the MAX level with the engine cold. Recheck the reserve tank once the engine reaches normal operating temperature.



Coolant Recommendation

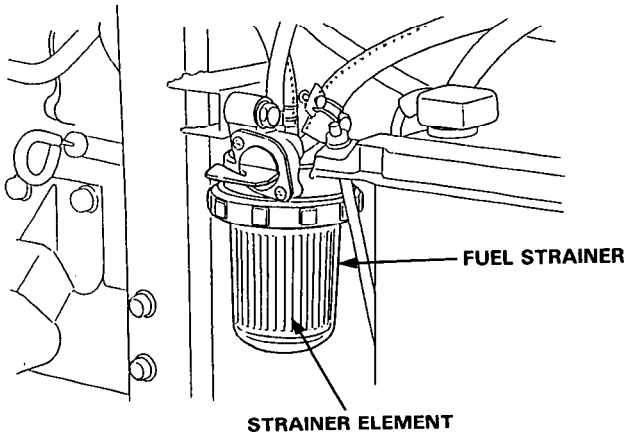
Use high quality ethylene glycol antifreeze that is specifically formulated for use in aluminum engines. Mix the antifreeze with low-mineral drinking water or distilled water.

A 50/50 mixture of ethylene glycol antifreeze and water is recommended for most temperature and provides good corrosion protection. A higher concentration of antifreeze decrease cooling efficiency and is recommended only if additional protection against freezing is needed. A concentration of less than 40% antifreeze will not provide proper corrosion protection.

NOTICE The use of unsuitable antifreeze, hard water, or salt water will cause corrosion damage that will shorten the life of the engine.

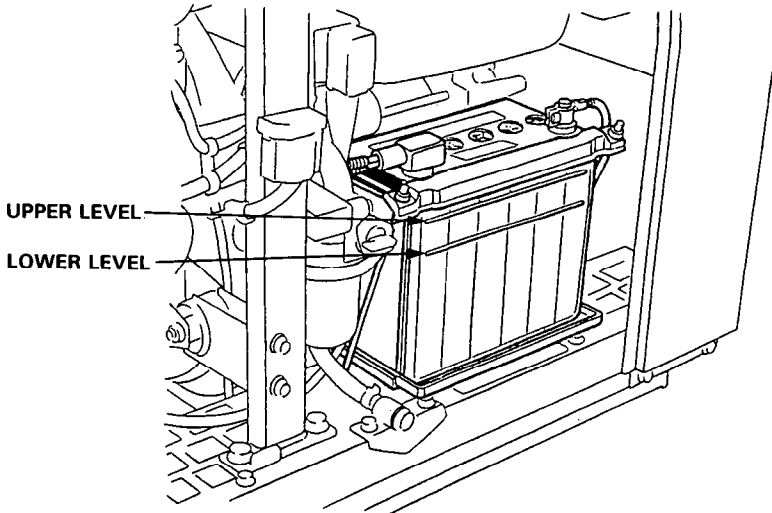
Fuel Filter

1. Open the maintenance cover (see page 13).
2. Inspect the fuel filter for dirt, water, or other contaminants and clean the fuel filter if necessary (see page 37).



Battery

The electrolyte level must be kept between the UPPER and LOWER level marks. If the electrolyte level is near the LOWER level, remove the battery filler caps and carefully add distilled water to the upper level line (see page 38).



▲ DANGER The battery contains corrosive sulfuric acid. Contact with eyes or skin causes burns. Wear protective clothing and use eye protection when working near the battery.

POISON—KEEP OUT OF REACH OF CHILDREN

EMERGENCY PROCEDURES:

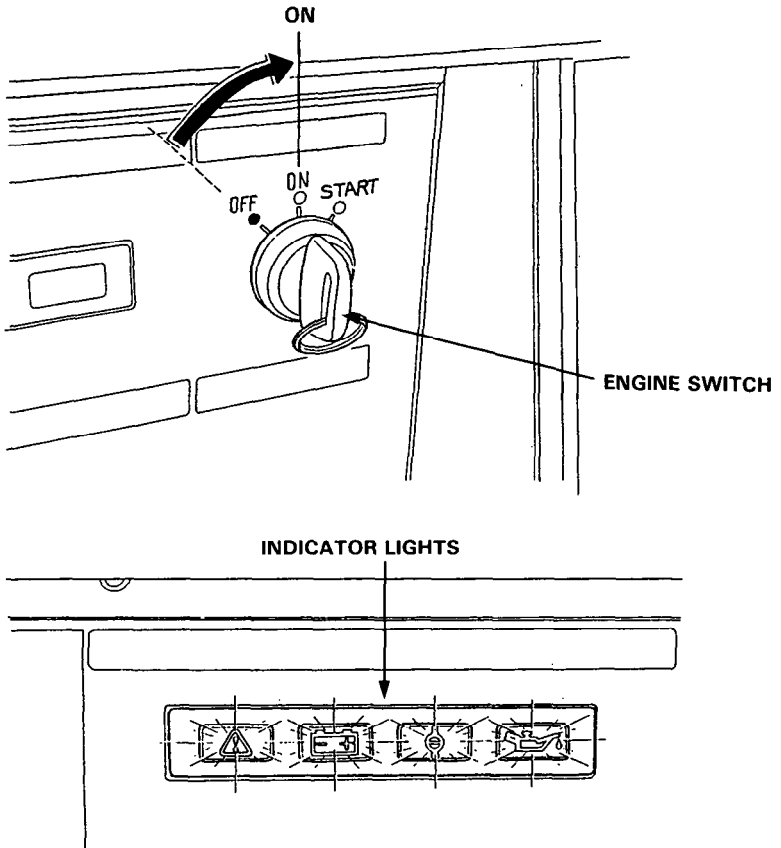
- Eyes — Flush with water from a cup or other container for at least 15 minutes. Call a physician immediately.
- Skin — Remove contaminated clothing. Flush skin with large quantities of water. Call a physician.
- If swallowed — Drink water or milk and call your poison control center or a physician immediately.

Indicator lights

Turn the engine switch to the ON position and check to see if the indicator lights come on. The indicator lights should go out after 4 seconds with the engine switch in the ON position.

Return the engine switch to the OFF position.

If the indicator light(s) does not come on, or do not go out after 4 seconds with the engine switch in the ON position, contact an authorized Honda generator dealer.

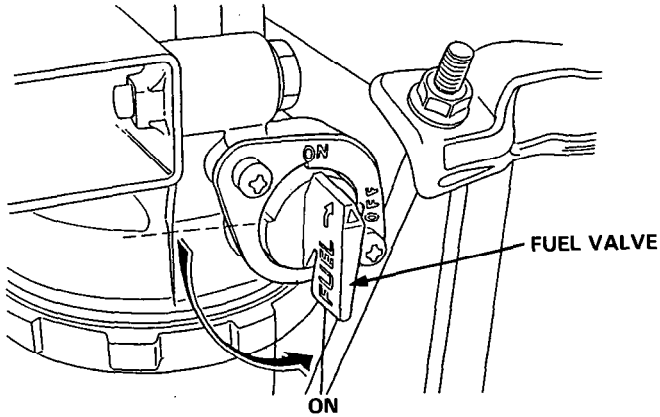


5. STARTING AND STOPPING THE ENGINE

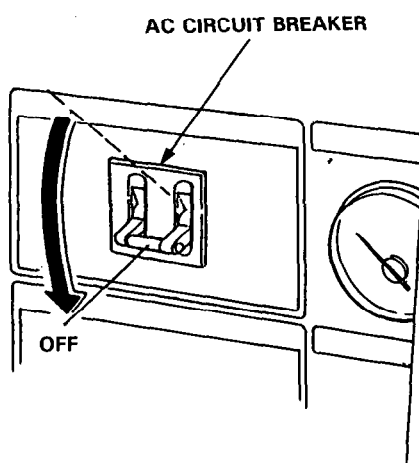
Starting the engine

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

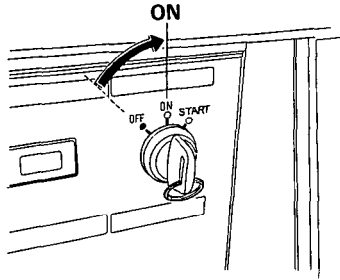
1. Open the maintenance cover (see page 13) and turn the fuel valve to the ON position.



2. Close the maintenance cover (see page 13).
3. Turn the AC circuit breaker OFF.

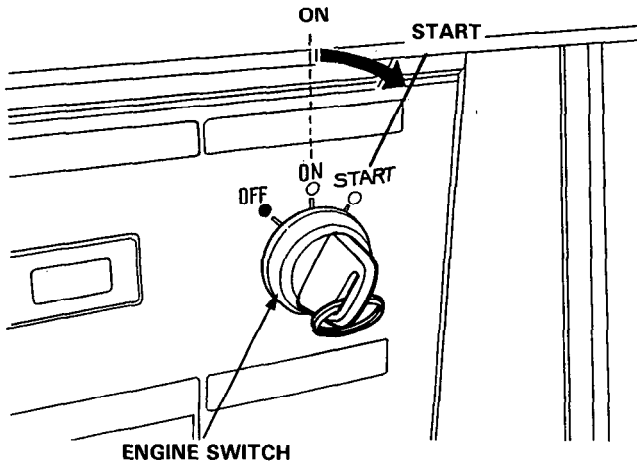


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4. Insert the key and turn the engine switch to the ON position. If the ambient temperature is below freezing, wait for the indicator lights to go OFF before turning the key to the start position. This allows the glows plug to pre-heat the combustion chambers.

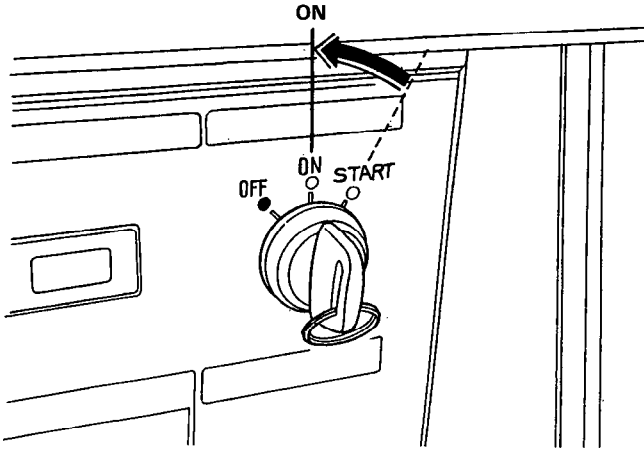


5. Turn the engine switch to the START position and hold it there until the engine starts.

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



6. After the engine starts, let the engine switch return to the ON position.



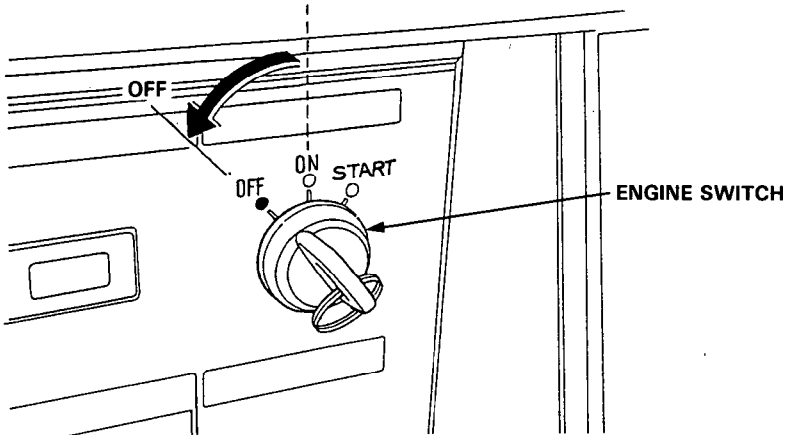
7. Warm the engine for 2 or 3 minutes before applying a load to the generator. Blue smoke might be emitted from the exhaust during the warm-up. This is a normal occurrence.

NOTICE Proper engine warm-up will stabilize the engine speed. It also is needed to warm-up the engine oil and properly lubricate internal engine parts.

Stopping the engine

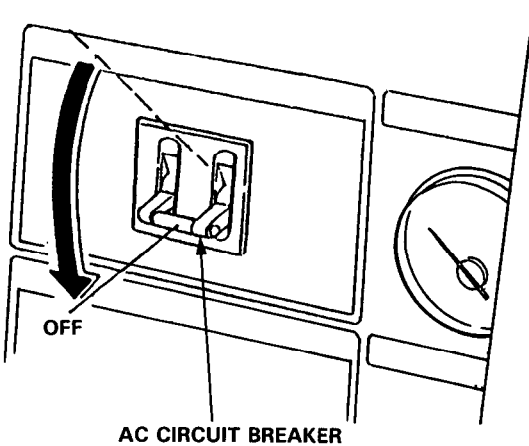
In an emergency:

Turn the engine switch to the OFF position.

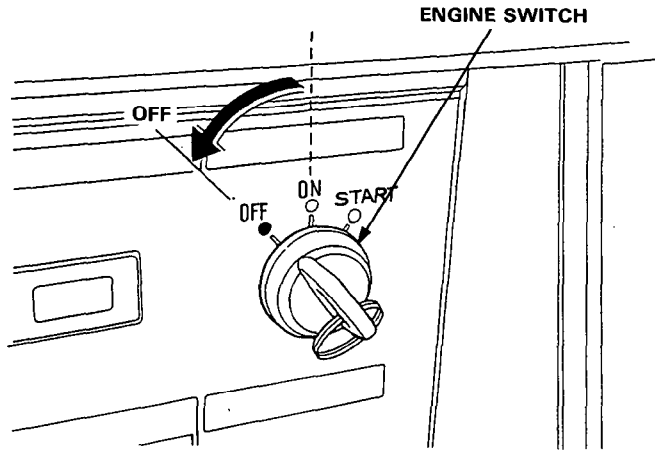


In normal use:

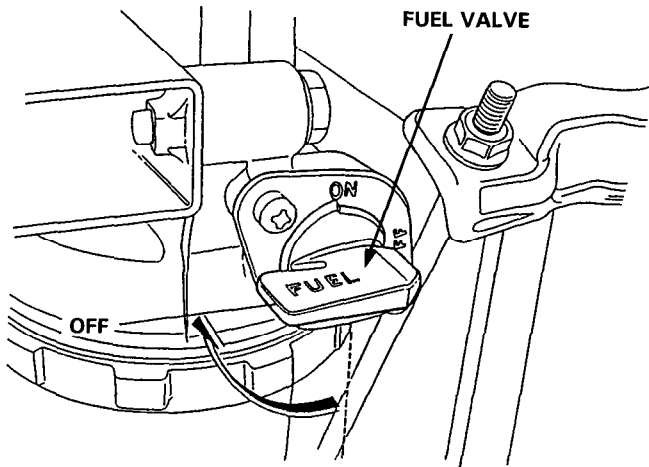
1. Turn all electrical appliance's connected to the generator OFF.
2. Turn the AC circuit breaker OFF.



3. Turn the engine switch to the OFF position.



4. Open the maintenance cover (see page 13) and turn the fuel valve to the OFF position.



6. GENERATOR USE

Connections to a Building's Electrical System

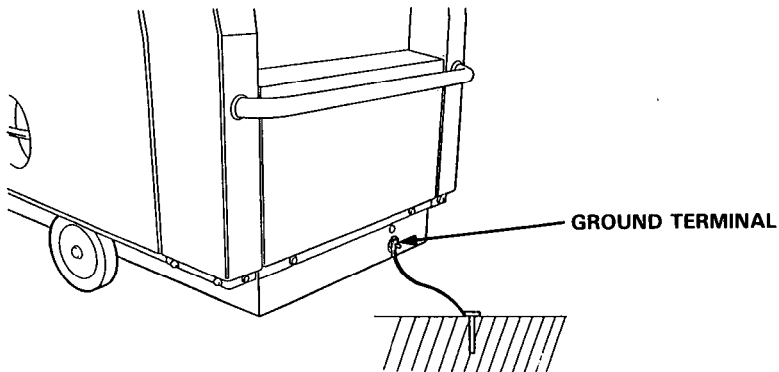
If the generator will be used as an alternative to utility company power, an isolation switch must be installed to disconnect the utility lines from the building when the generator is connected. Installation must be performed by a qualified electrician and must comply with all applicable laws and electrical codes.

⚠ WARNING Improper connections to a building's electrical system can allow electricity from the generator to backfeed into utility lines and may cause serious injury or death to utility company workers or others who contact the lines. Consult the utility company or a qualified electrician.

NOTICE Improper connections to a building's electrical system can allow electricity from the utility company to backfeed into the generator, which will severely damage the generator and may cause a fire.

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

To ground the generator chassis, connect a length of heavy wire between the ground terminal and an independent ground source. Consult a qualified electrician for your particular application.



AC Applications

Make sure all appliances are in good working order before connecting them to the generator. 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.

NOTICE

Substantial overloading of the generator will switch off the circuit breaker. Marginal overloading may not switch off the circuit breaker, but will shorten the service life of the generator. Be sure that appliances do not exceed the generator's rated load capacity for more than 30 minutes and that they never exceed the maximum load capacity.

Most appliance and power tool motors require more than the rated operating current for start-up. To match appliance power needs to generator capability, allow enough generator power reserve to accommodate motor start-up requirements.

An overload will trip (switch off) the circuit breaker. If this happens, reduce the electrical load on the circuit. Wait a few minutes before resetting the circuit breaker.

Ground-Fault Circuit Interrupter (GFCI) Receptacle

⚠ WARNING Using the generator in rain, or snow or near water can lead to death from electric shock. Keep the generator dry.

INSPECTION

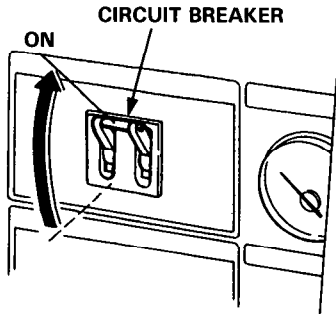
Before each use:

If the generator is stored outdoors, unprotected from the weather, test the GFCI receptacle before each use as described in the monthly inspection.

Monthly:

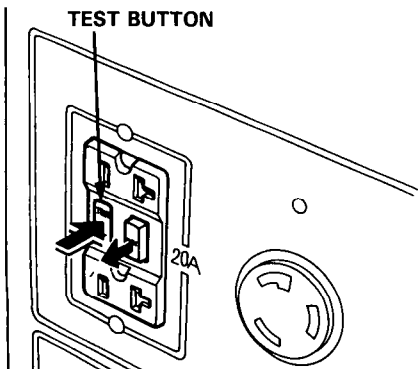
Under normal operating conditions, perform the GFCI test monthly. Record your test on the GFCI test card provided on the control panel.

1. Unplug all appliance's from the GFCI receptacles.
2. Start the engine.
3. Turn the circuit breaker ON.

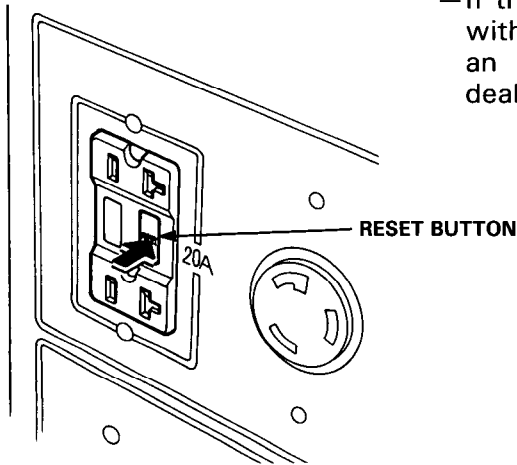


4. Press the TEST BUTTON

- The RESET BUTTON should extend with a click.
- If the RESET BUTTON does not extend, contact an authorized Honda generator dealer.



5. Press the RESET BUTTON



- The RESET BUTTON should be flush with the test button.
- If the RESET BUTTON is not flush with the TEST BUTTON, contact an authorized Honda generator dealer.

6. When the RESET BUTTON extends during operation:

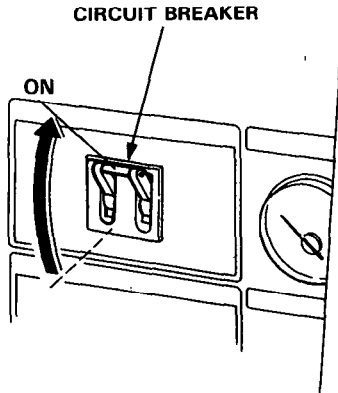
- Unplug all appliance's from the GFCI protected receptacle.
- Press the RESET BUTTON.

IF THE GFCI CAN NOT BE RESET: The GFCI is faulty. Contact an authorized Honda generator dealer.

IF THE GFCI RESETS PROPERLY: Check the appliance or its cord.

Operation

1. Start the engine (see page 21).
2. Switch the AC circuit breaker ON.



3. Plug the appliance into the appropriate AC receptacle.

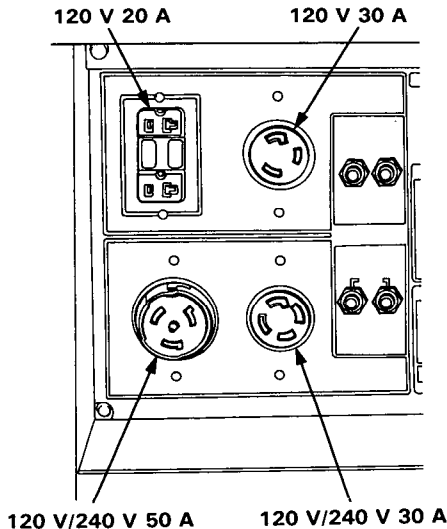
How to use the receptacle

When two or more receptacles are used, refer to the table below and apply the load to each receptacle equally to prevent overloading.

Voltage fluctuation can be prevented by applying the load equally to the single phase receptacles.

Receptacle Case	240 V		120 V		
	50 A	30 A	50 A	30 A	20 A Max. for both
Using 240 V only	41.7 A Max.	30 A Max.			
	41.7 A Total				
Using 120 V only			50 A Max.	30 A Max.	20 A Max. at one
			Total 83.4 A		
Using both 120 V and 240 V	Total 10 A		Total 63.3 A		
	Total 20 A		Total 43.3 A		
	Total 30 A		Total 23.3 A		

When both 240 V and 120 V receptacles are use, be sure that the ampere draw at each receptacle is less than the specified capacity and the total ampere(s) are less that 83.4 amperes.



7. MAINTENANCE

Periodic maintenance and adjustment are necessary to keep the engine in good operating condition. Service and inspect according to the MAINTENANCE SCHEDULE.

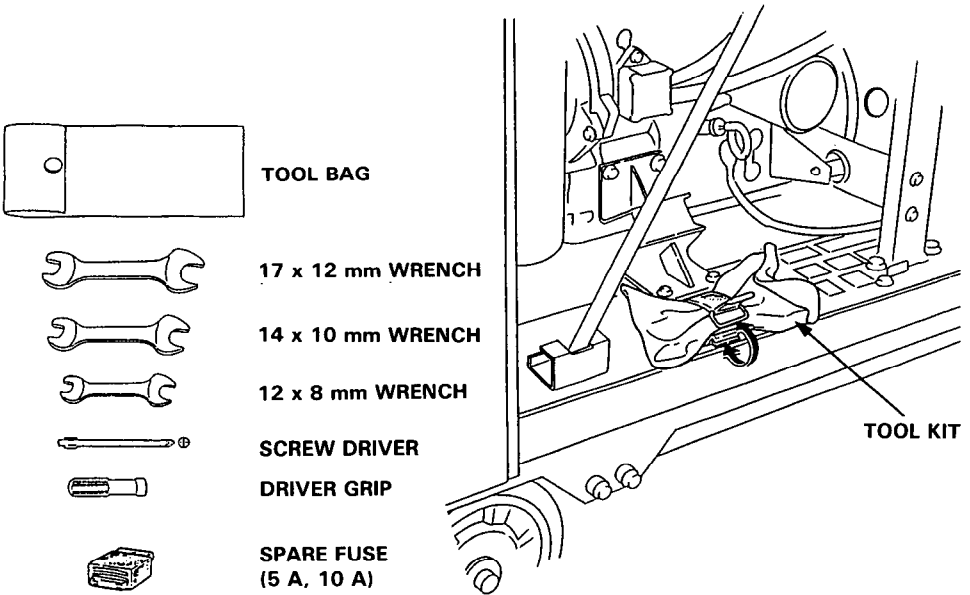
▲WARNING To avoid carbon monoxide poisoning, shut off the engine before performing any maintenance. If you run the engine in an area that is confined, or even partially enclosed, the air you breathe could contain a dangerous amount of exhaust gas. If the engine must be run for any reason, be sure the area is well-ventilated.

To avoid serious burns, let the engine cool before performing maintenance.

NOTICE Use only genuine Honda parts or their equivalent for maintenance and repair. Parts of lower quality may damage the engine.

Tool kit

The tools necessary for performing some of the periodic maintenance, simple adjustments and repairs are supplied in the tool kit. Always keep the tool kit with the generator.



Maintenance Schedule

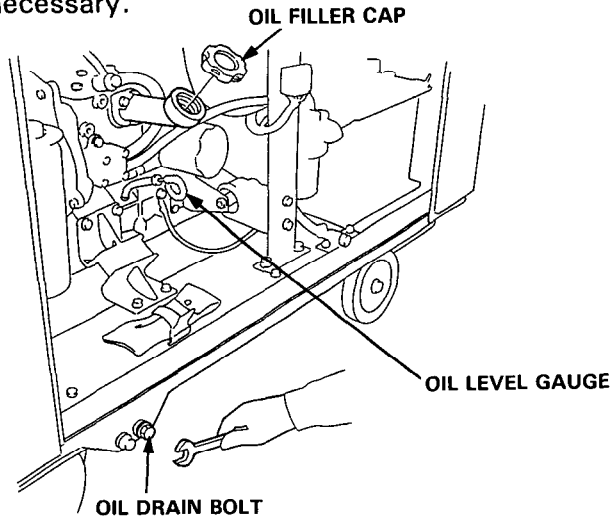
REGULAR SERVICE PERIOD		EACH USE	FIRST 50 HRS(3)	EVERY 200 HRS(3)	EVERY 400 HRS(3)	EVERY 600 HRS(3)	EVERY 1000 HRS(3)	EVERY 4000 HRS(3)
ITEM								
Engine oil	Check	○						
	Change		○	○				
Oil filter	Change				○ (2)			
Battery electrolyte	Check	○						
Radiator coolant	Check	○						
	Change	Every 2 years (2)						
Fuel filter	Check	○						
Diesel fuel	Check	○						
Indicator lights	Check	○						
Fan belt	Check		○ (2)	○ (2)				
Air cleaner element	Check			○ (1)				
	Change					○		
Fuel filter element	Change				○			
Generator Brushes	Check						○ (2)	
Injection nozzle	Check						○ (2)	
Valve clearance	Check-Adjust						○ (2)	
Timing belt	Change							○ (2)
Fuel line (Replace if necessary)	Check	Every 2 years (2)						

- NOTE: (1) Service more frequently when used in dusty areas.
 (2) These items should be serviced by an authorized HONDA generator dealer unless the owner has the proper tools and is mechanically proficient. See the Shop Manual.
 (3) For professional commercial use log hours of operation to determine proper maintenance intervals.

Engine oil change

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

1. Open the maintenance cover (see page 13).
2. Remove the oil filler cap and drain plug to drain the oil.
3. After draining is complete, check that the sealing washer is in good condition (replace if necessary), then retighten the drain bolt securely.
4. Refill with the recommended engine oil and check the oil level with the oil level gauge (see page 14).
5. Install the oil filler cap.
6. Start the engine and allow it to warm to normal operating temperature. Stop the engine and recheck the oil level with the oil level gauge (see page 14). Add if necessary.



ENGINE OIL CAPACITY: 4.8 lit. (5.0 US qt, 4.2 Imp qt)

▲ CAUTION

Used motor oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely, unless you handle used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil.

NOTE:

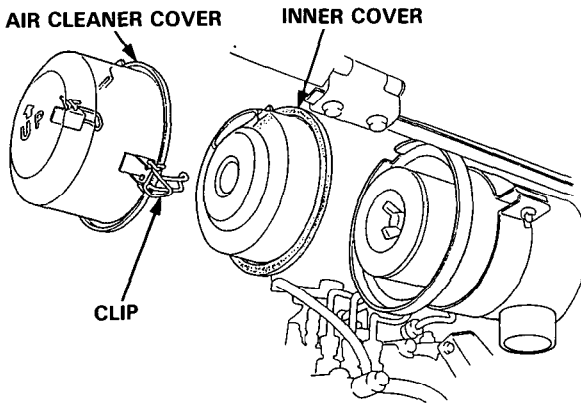
Please dispose of used motor oil in a manner that doesn't harm our environment. We suggest you take it in a sealed container to your local oil reclamation station. Do not throw it in the trash or pour it on the ground or down a drain.

Air cleaner

If you operate the generator in very dusty areas, check and replace the air cleaner more often than specified in the MAINTENANCE SCHEDULE.

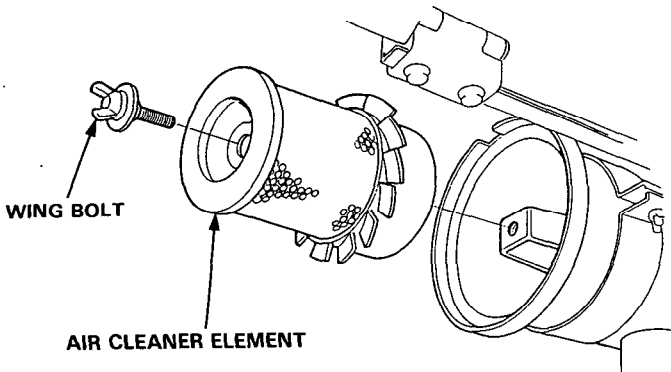
NOTICE Operating the engine without the air cleaner will cause rapid engine wear.

1. Open the maintenance cover (see page 13).
2. Unhook the clips and remove the air cleaner cover and the inner cover.



3. Remove the wing bolt and the air cleaner element.

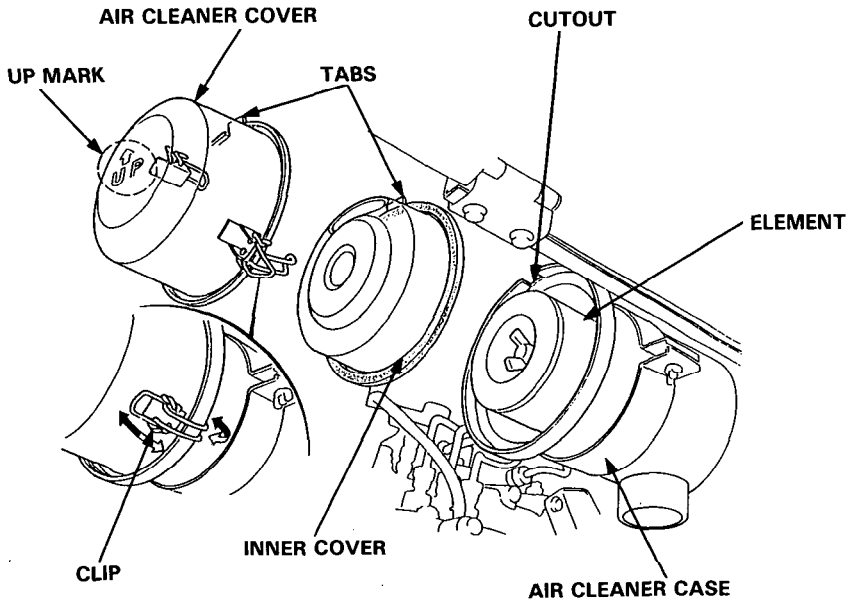
NOTE: Do not clean the paper element. Replace it with a new one if it is dirty.



-
4. Install the element, inner cover and air cleaner cover in the reverse order of removal.

NOTE: Install the cover with the UP mark facing up and align the tabs of the inner cover and the air cleaner cover with the cutout of the air cleaner case.

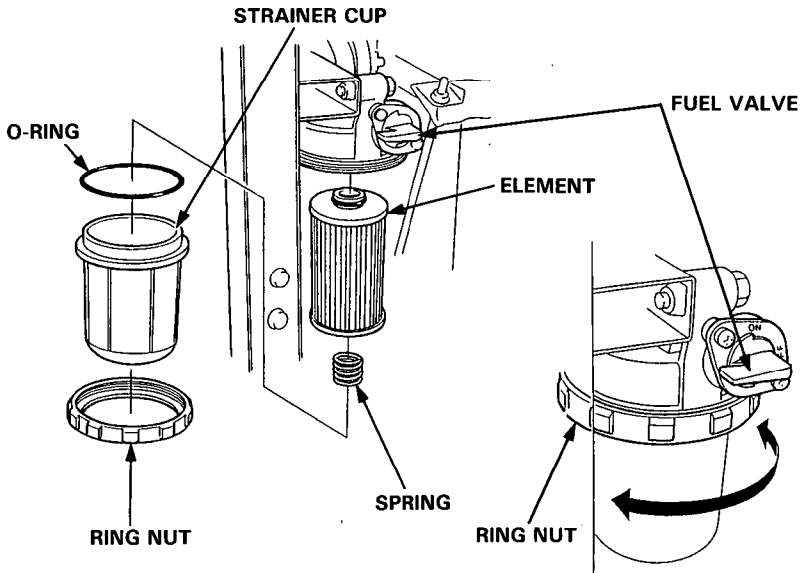
5. Fasten the cover clips securely.



Fuel filter

⚠ WARNING Diesel fuel is extremely flammable and explosive under certain condition. Do not smoke or allow flames or sparks in the area.

1. Open the maintenance cover (see page 13).
2. Turn the fuel valve to the OFF position.
3. Loosen the ring nut and then remove the strainer cup, O-ring, spring and element.
4. Inspect the fuel in the strainer cup for contaminates or water. Clean the strainer cup thoroughly.
5. Install a new element using the spring, strainer cup, O-ring and ring nut. Make sure that the O-ring is in good condition and is set properly on the strainer cup.
6. After installing the strainer cup, turn the fuel valve to the ON position. Check for fuel leaks. Make sure the area is dry before starting the engine.



Battery

■ Refilling battery fluid

If the generator is operated with insufficient battery electrolyte, sulfation and battery plate damage will occur.

If rapid loss of electrolyte is experienced, or if your battery seems to be weak, causing slow starting or other electrical problems, see your authorized Honda generator dealer.

Open the maintenance cover and check the electrolyte level in each battery cell. Fill the battery with distilled water to the upper level line. Never overflow the battery.

▲ DANGER The battery contains corrosive sulfuric acid. Contact with eyes or skin causes burns.

Wear protective clothing and use eye protection when working near the battery.

POISON-KEEP OUT OF REACH OF CHILDREN

EMERGENCY PROCEDURES:

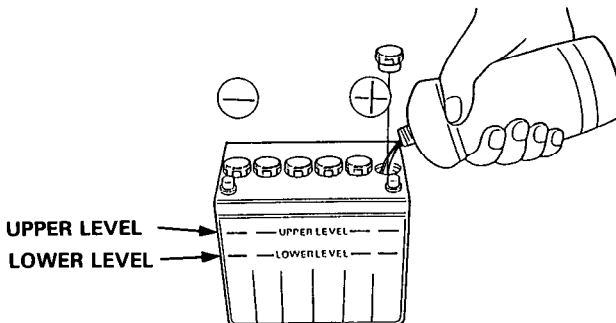
- Eyes — Flush with water from a cup or other container for at least 15 minutes. Call a physician immediately.
- Skin — Remove contaminated clothing. Flush skin with large quantities of water. Call a physician.
- If swallowed — Drink water or milk and call your poison control center or a physician immediately.

▲ WARNING Batteries produce explosive hydrogen gas. A spark or flame can explode the battery causing serious injury or blindness.

Provide adequate ventilation.

Keep sparks and flames away.

Follow the above procedure carefully.

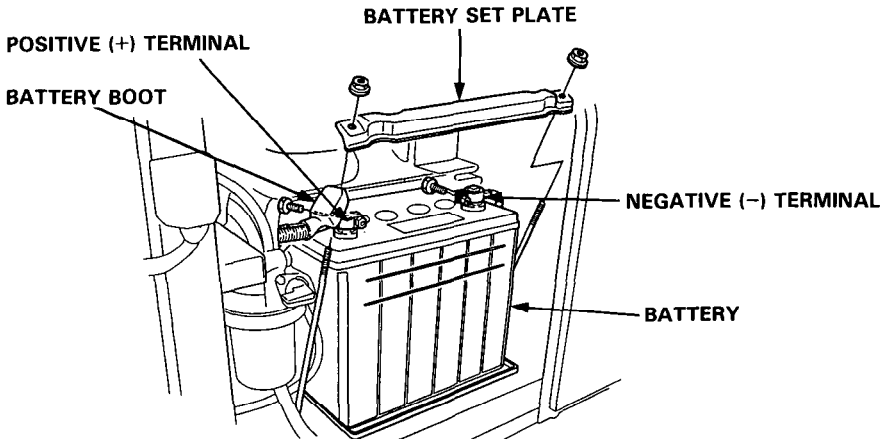


■ Battery cleaning

If the battery terminals are contaminated or corroded, remove the battery and clean the terminals.

Removal:

1. Remove the battery set plate.
2. Disconnect the negative (-) battery cable first, then disconnect the positive (+) battery cable.
3. Remove the battery.
4. Clean the terminals with a wire brush or sand paper. Clean the battery with a solution of baking soda and warm water, taking care not to get the solution of water in the battery cells. Dry the battery thoroughly.
5. Clean the battery cable ends with a wire brush or sand paper.



Installation:

1. Install the battery into the generator.
2. Connect the positive (+) battery cable first and tighten the nut securely. Slide the battery boot over the positive (+) cable and terminal.
3. Connect the negative (-) battery cable. Tighten the nut securely.
4. Coat the battery terminals and cable ends with clean grease.
5. Reinstall the battery set plate.

Fuse replacement

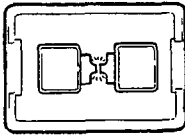
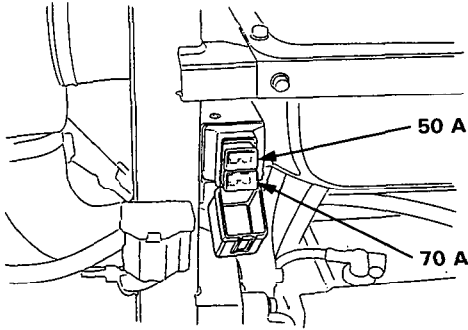
Turn the engine switch OFF and remove the key before checking or replacing fuses to prevent accidental short-circuiting.

To replace a sub fuse, pull the old fuse out of the clips with your fingers. Push a new fuse into the clips.

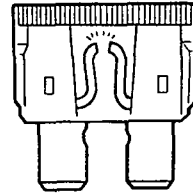
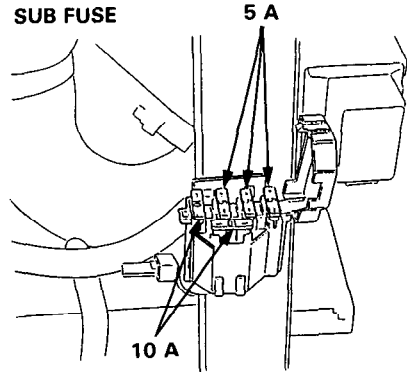
If frequent fuse failure occurs, determine the cause and correct the problem before attempting to operate the generator.

If a main fuse is blown, see an authorized Honda generator dealer.

MAIN FUSE



SUB FUSE



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

8. TRANSPORTING AND STORAGE

The engine becomes very hot during operation and remains hot for a while after stopping. Allow the engine to cool before transporting or storing indoors.

Transporting

⚠ WARNING Contact with a hot engine or exhaust system can cause serious burns or fires. Let the engine cool before transporting or storing indoors.

When transporting the generator, turn the engine switch to the OFF position and keep the generator level to prevent fuel spillage.

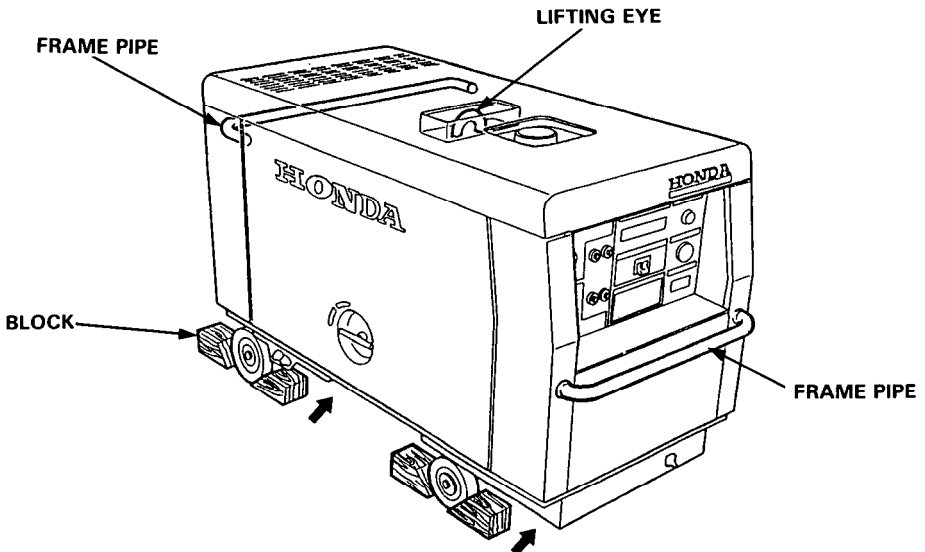
Take care not to drop or strike the generator when transporting. Do not place heavy objects on the generator.

Load and unload the generator in a level area. Use the lifting eye when lifting the generator. Do not use the frame pipes to lift the generator.

When maneuvering the generator on the ground, use the frame pipe opposite the control panel. When transporting the generator in a truck, tie ropes to the frame pipes to secure the generator.

If a fork truck is used to lift the generator, insert the fork arms under the positions marked with ➔ and lift the generator.

On wheel equipped models; block the wheels securely.



Before storing the generator for an extended period:

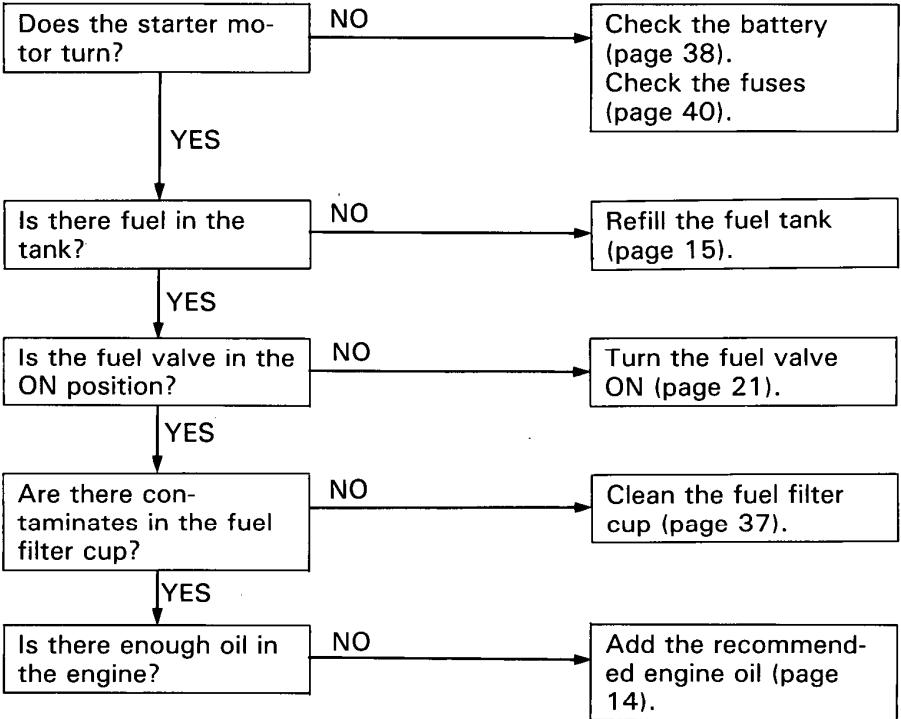
1. Be sure the storage area is free of excessive humidity and dust.
2. Clean the generator.
3. Check the generator according to the maintenance schedule (see page 33) and repair/replace any items as necessary.
4. Fill the fuel tank with fresh diesel fuel (see page 15).
5. Fully charge the battery. Recharge the battery once a month.
6. Cover the generator and place it in a well ventilated and dry area.

Before starting the engine after storage:

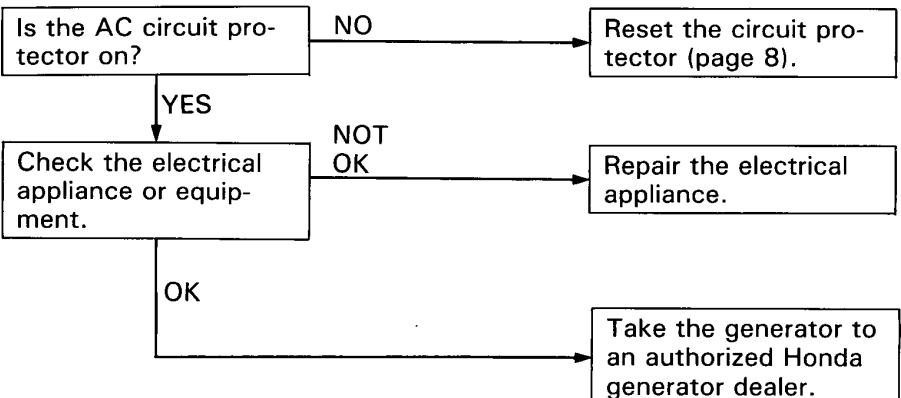
1. Change the engine oil (see page 34).
2. Fully charge the battery.
3. Remove the radiator cap and check the coolant level. Add as necessary (see page 17).
4. Start the engine and allow it to warm to operating temperature before applying a load to the generator.

9. TROUBLESHOOTING

When the engine will not start:



No electricity at the AC receptacles:



10. SPECIFICATIONS

Dimensions

Model	EB12D
Description	ECD
Length x Width x Height	1390 x 630 x 815 mm (54.7 x 24.8 x 32.1 in)
Dry weight	340 kg (701 lb)

Engine

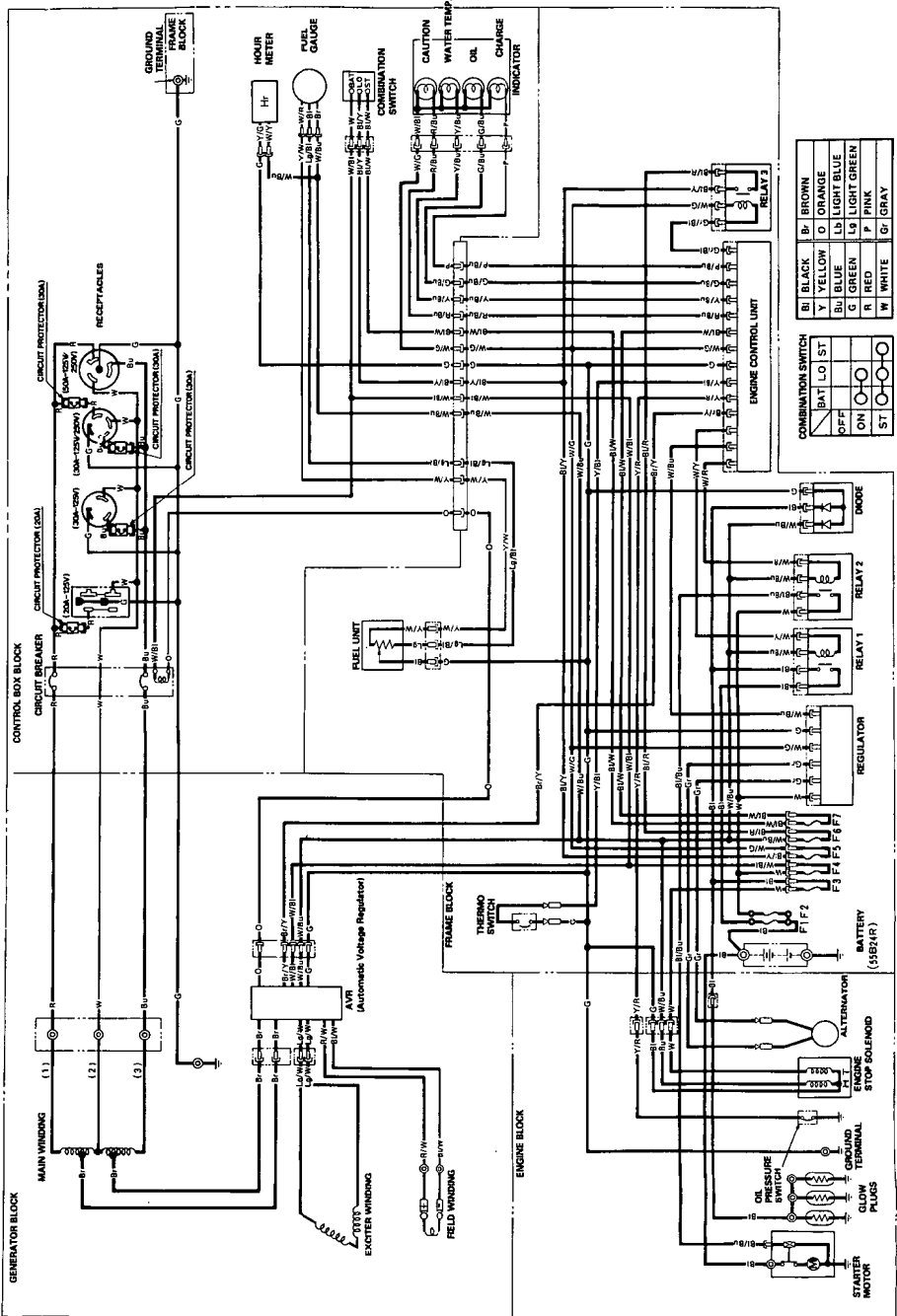
Model	GD1100
Type	4-stroke OHC 3 cylinder water cooled diesel
Displacement [Bore x Stroke]	1061 cm ³ [76 x 78 mm (3.0 x 3.1 in)]
Rated output	20 PS/3,600 min ⁻¹ (rpm)
Max. torque	55.9 N·m (5.7 kg-m, 41.2 ft-lb)/ 2,000 min ⁻¹ (rpm)
Cooling system	Liquid cooled
Combustion method	Direct injection
Fuel	Diesel fuel
Fuel tank capacity	38 lit (10 US gal, 8.4 Imp gal)
Oil capacity	4.8 lit (5.0 US qt, 4.2 Imp qt)

Generator

Type	AG	
AC output	Rated voltage	120/240 V
	Rated frequency	60 Hz
	Rated ampere	83.4 A/41.7 A
	Rated output	10 kVA
	Max output	12 kVA
	Max ampere	100 A/50 A
	Power factor	Cos θ = 1

NOTE: Specifications are subject to change without notice.

11. WIRING DIAGRAM



12. WARRANTY SERVICE

Owner Satisfaction

Your satisfaction and goodwill are important to your dealer and to us. All Honda warranty details are explained in the Distributor's Limited Warranty. Normally, any problems concerning the product will be handled by your dealer's service department. If you have a warranty problem that has not been handled to your satisfaction, we suggest you take the following action:

- Discuss your problem with a member of dealership management. Often complaints can be quickly resolved at that level. If the problem has already been reviewed with the Service Manager, contact the owner of the dealership or the General Manager.
- If your problem still has not been resolved to your satisfaction, contact:

American Honda Motor Co., Inc.
P.O. Box 100021
Duluth, Georgia 30136-9421
Telephone: (404) 497-6400

We will need the following information in order to assist you:

- Your name, address, and telephone number
- Product model and serial number
- Date of purchase
- Dealer name and address
- Nature of the problem

After reviewing all the facts involved, you will be advised of what action can be taken. Please bear in mind that your problem will likely be resolved at the dealership, using the dealer's facilities, equipment, and personnel, so it is very important that your initial contact be with the dealer.

Your purchase of Honda product is greatly appreciated by both your dealer and American Honda Motor Co., Inc. We want to assist you in every way possible to assure your complete satisfaction with your purchase.

MEMO

MEMO

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