# HONDA

# EX2200

# OWNER'S MANUAL



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

Thank you for purchasing a Honda generator.

This manual covers operation and maintenance of the EX2200 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.

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

Pay special attention to statements preceded by the following words:

WARNING Indicates a strong possibility of severe personal injury or loss of life 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 generators are 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.

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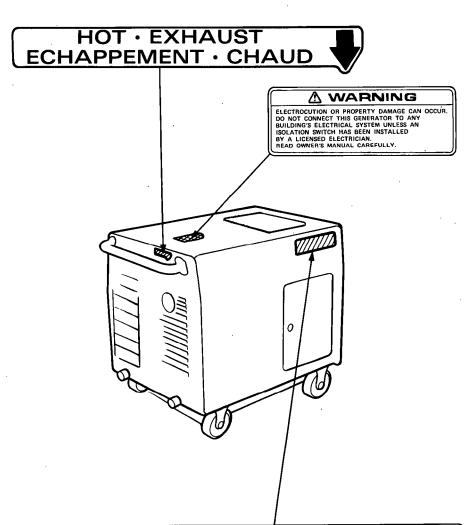
### WARNING

### To ensure safe operation-

- Place the generator at least 1 m (3 ft) away from buildings or other equipment during operation.
- Operate the generator on a level surface.
  - If the generator is tilted, fuel spillage may result.
- Exhaust gas contains poisonous carbon monoxide.
   Never run the generator in an enclosed area.
  - Be sure to provide adequate ventilation.
- Know how to stop the generator quickly and understand the operation of all controls. Never permit anyone to operate the generator without proper instructions.
- The generator is a potential source of electrical shock if misused. Do not expose the generator to moisture, rain or snow. Do not let the generator get wet, and do not operate it with wet hands.
- Keep children and pets away from the generator when it is in operation.
- · Keep away from rotating parts while the generator is running.
- Connections for standby power to a building's electrical system must be
  made by a qualified electrician and must comply with all applicable laws
  and electrical codes. Improper connections can allow electrical 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 when utility power is restored, the generator
  may explode, burn, or cause fires in the building's electrical system.

# When charging a battery-

- Battery electrolyte contains sulphuric acid. Protect your eyes, skin and clothing. In case of contact, flush thoroughly with water and get prompt medical attention, especially if your eyes are affected.
- Batteries generate hydrogen gas which can be highly explosive. Do not smoke or allow flames or sparks near a battery, especially during charging.

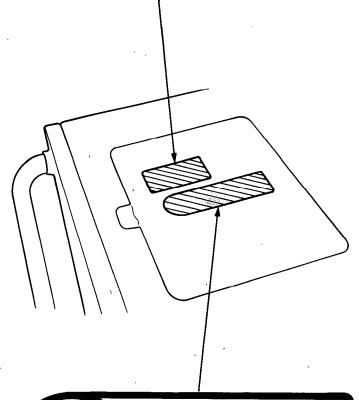


EX2200 HONDA MOTOR CO., LTD. MADE IN JAPAN (A)					
CAUTION	AC	DC			
BE SURE TO FILL CRANKCASE WITH RECOMMENDED OIL		VOLTAGE 12V CURRENT 8.3A			
BEFORE USING. FOR DETAILED EXPLANATION, SEE THE OWNER'S MANUAL.	RATED OUTPUT 2.0kVA MAX. OUTPUT 2.2kVA PHASE 1 Ø				

WARNING DO NOT USE INDOORS. EXHAUST GAS CONTAINS POISONOUS CARBON MONOXIDE.

ATTENTION NE PAS UTILISER DANS UN ENDROIT FERME A CAUSE DU RISQUE D'EMPOISONNENT DU GAZ.

ATENCION NO LO USE EN LUGARES CERRADOS PORQUE EL MONOXIDE DE CARBONO ES VENENOSO.



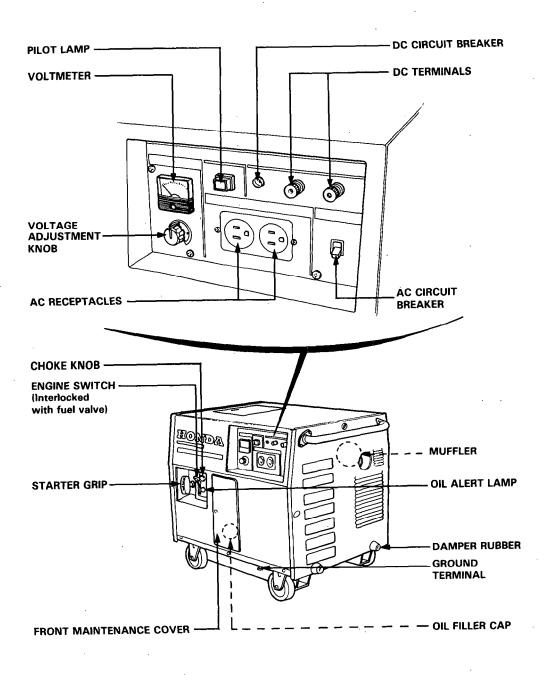
■CHECK FOR SPILLED FUEL OR FUEL LEAKS. STOP ENGINE BEFORE REFUELING.

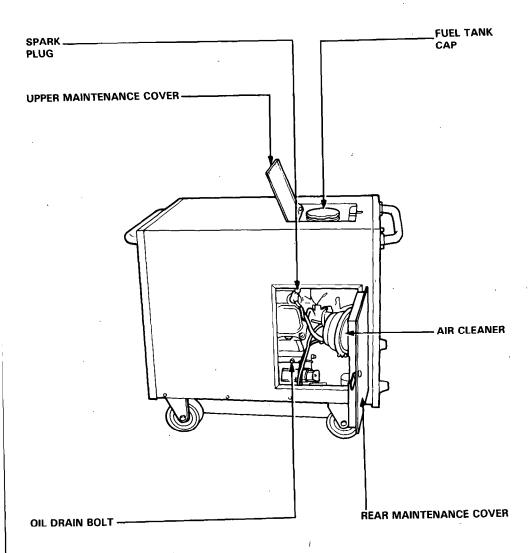
CONTROLER QU'IL N'Y A NI FUITE NI ESSENCE REPANDUE SUR L'APPAREIL. ARRETER LE MOTEUR AVANT DE REFAIRE LE PLEIN.

INSPECCIONAR PARA COMBUSTIBLE DERRAMADO O ESCAPE.

PARAR MOTOR ANTES DE ECHAR.

# 3. COMPONENT IDENTIFICATION





# 4. PRE-OPERATION CHECK

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

1. Check the engine oil level.

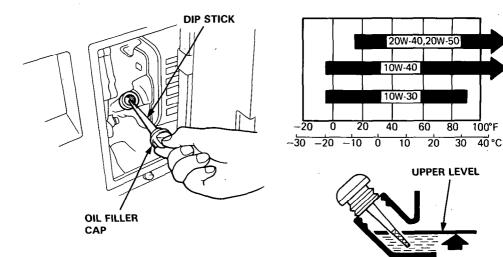
CAUTION: Engine oil is a major factor affecting engine performance and service life. Non-detergent or vegetable oils are not recommended.

Use Honda 4-stroke oil, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturers' requirements for Service Classification SG, SF/CC, CD. Motor oils classified SG, SF/CC, CD will show this designation on the container.

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

Remove the oil filler cap, and wipe the dipstick with a clean rag. Check the oil level by inserting the dipstick in the filler hole without screwing it in. If the oil level is below the end of the dipstick, add oil to the upper level mark on the dipstick.

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.

Check the fuel gauge and refill the tank if the fuel level is low.

Your engine is designed to use any gasoline that has a pump octane number  $(\frac{R+M}{2})$  of 86 or higher, or that has a research octane number of 91 or higher. Gasoline pumps at service station normally display the pump octane number.

We recommend that you use unleaded fuel because it produces fewer engine and spark plug deposits and extends the life of exhaust system components.

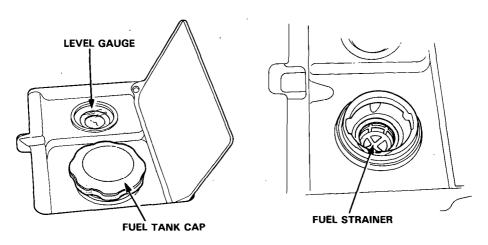
Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt, dust or water in the fuel tank. Use of a lower octane gasoline can cause persistent "pinging" or heavy "spark knock" (a metallic rapping noise) which, if severe, can lead to engine damage.

CAUTION: If "spark knock" or "pinging" occurs at a steady engine speed under normal load, change brands of gasoline. If spark knock or pinging persists, consult your authorized Honda dealer. Failure to do so is considered misuse, and damage caused by misuse is not covered by Honda's Limited Warranty.

Occasionally you may experience light spark knock while operating under heavy loads. This is no cause for concern, it simply means your engine is operating efficiently.

After refuelling, be sure to tighten the fuel tank cap firmly.

Fuel tank capacity: 8.3 \( \ell (2.19 US gal) \)



# **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 in the filler neck).
   After refueling, make sure the tank 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.

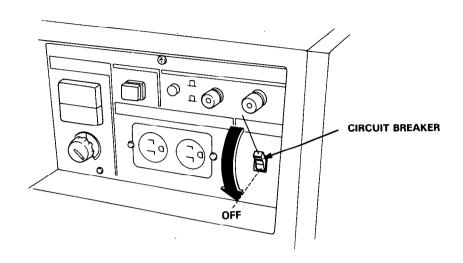
## **GASOLINES CONTAINING ALCOHOL**

If you decide to use a gasoline containing alcohol (gasohol), be sure it's 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 methanol (methyl or wood alcohol) that does not also contain cosolvents and corrosion inhibitors for methanol. Never use gasoline containing more than 5% methanol, even if it has cosolvents and corrosion inhibitors.

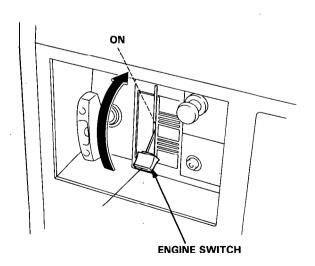
# NOTE:

- Fuel system damage or engine performance problems resulting from the
  use of fuels that contain alcohol is not covered under the warranty.
  Honda cannot endorse the use of fuels containing methanol since
  evidence of their suitability is as yet incomplete.
- Before buying fuel from an unfamiliar station, try to find out if the fuel contains alcohol, if it does, confirm the type and percentage of alcohol used. If you notice any undesirable operating symptoms while using a gasoline that contains alcohol, or one that you think contains alcohol, switch to a gasoline that you know does not contain alcohol.

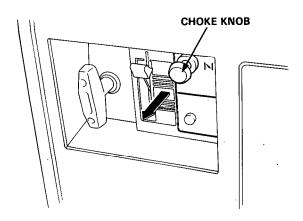
1. Turn off the AC circuit breaker.



2. Turn on the engine switch.



### 3. Pull the choke knob out to close.

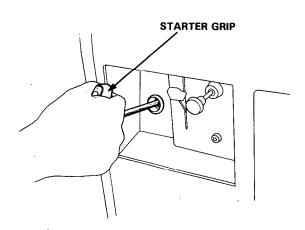


4. Pull the starter rope lightly until resistance is felt, then pull briskly.

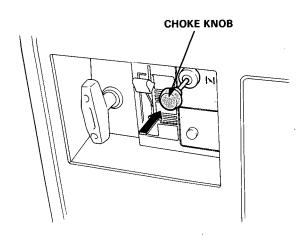
#### **CAUTION:**

- Do not allow the starter grip to snap back. Return it slowly by hand.
- Do not let the starter rope rub against the generator body or the rope will wear out prematurely.

NOTE: Make sure the pilot lamp comes on. If not, check the bulb filament.



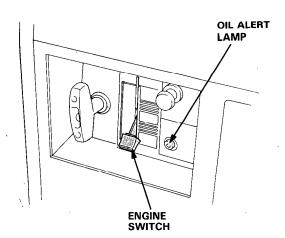
# 5. Push the choke knob in as the engine warms up.



# Oil Alert System

Before the oil level in the crankcase can fall below a safe limit, the Oil Alert System will automatically shut off the engine. The Oil Alert Lamp will light when the recoil starter grip is pulled.

To restart, add enough recommended engine oil to bring the oil level to the upper level mark on the dipstick (See page 8), and restart the engine.

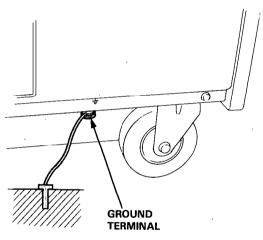


NOTE: The engine switch will remain in the ON position if the engine is stopped by the Oil Alert System.

# 6. GENERATOR USE

# **W**WARNING

- To prevent electrical shock from faulty appliances, the generator should be grounded. Connect a length of heavy wire between the ground terminal and an external ground source.
- Connections for standby power to a building's electrical system must be made by a qualified electrician and must comply with all applicable laws and electrical codes. Improper connections can allow electrical 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 when utility power is restored, the generator may explode, burn, or cause fires in the building's electrical system.



#### **CAUTION**

- Limit operation requiring maximum power (2.2kVA) to 30 minutes.
   For continuous operation, do not exceed the rated power of 2.0 kVA.
   In either case, the total wattage of all appliances connected must be considered.
- Most appliance motors require more than their rated wattage for startup.
- Do not exceed the current limit specified for any one receptacle.

# **AC** applications

- 1. Start the engine and make sure the pilot lamp comes on. If not, check the filament.
- 2. Switch on the AC Circuit Breaker.

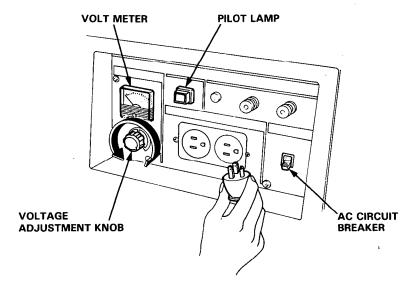
NOTE: Although voltage adjustment is usually not required, fine adjustments may be made by turning the voltage adjustment knob. Use the generator at the specified voltage (120V).

3. Plug in the appliance; always use three-pronged plugs.

CAUTION: 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. Substantial overloading will switch off the circuit breaker. Marginal overloading may not switch off the circuit breaker, but it will shorten the service life of the generator.

Be sure that 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 off the circuit breaker and the generator engine switch immediately. Then disconnect the appliance and examine it for signs of malfunction.

NOTE: If an overloaded circuit causes the AC circuit breaker to switch off, reduce the electrical load on the circuit and wait a few minutes before resetting the circuit breaker.



## DC application

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

### WARNING

- The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging or using batteries in an enclosed space.
- The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.
  - If electrolyte gets on your skin, flush with water.
  - If electrolyte gets in your eyes, flush with water for at least 15 minutes and call a physician immediately.
- Electrolyte is poisonous.
- If swallowed, drink large quantities of water or milk and follow with milk of magnesia or vegetable oil and call a physician.

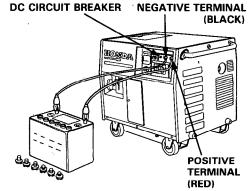
  • KEEP OUT OF REACH OF CHILDREN.
- To prevent the possibility of creating a spark near the battery, connect charging cables first to the battery, then to the generator. Disconnect cables first at the generator.
- Before connecting charging cables to a battery that is installed in a vehicle, disconnect the vehicle's grounded battery cable. Reconnect the vehicle's grounded 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 while the generator is still connected to the battery. The generator may be damaged.
- Connect the positive battery terminal to the positive generator terminal. Do not reverse the charging cables or serious damage to the generator and/or battery may occur.

### NOTE:

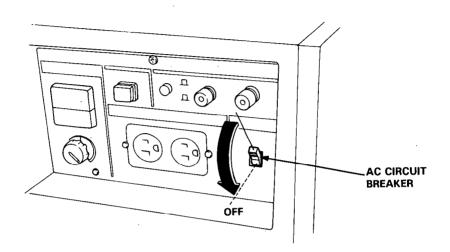
- The DC terminals may be used while the AC power is in use.
- An overloaded DC circuit will trip the DC circuit protector (push button comes out). If this happens, wait a few minutes before pushing in the circuit protector to resume operation.



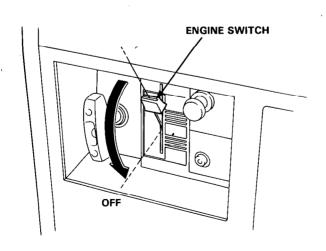
# 7. STOPPING THE ENGINE

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

1. Turn off the AC circuit breaker.



2. Turn off the engine switch.



# 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 on the next page.

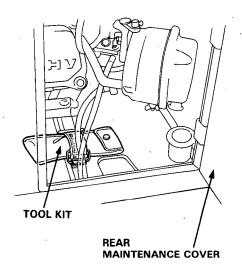
Shut off the engine before performing any maintenance. If the engine must be run, make sure the area is well ventilated. The exhaust contains poisonous carbon monoxide gas.

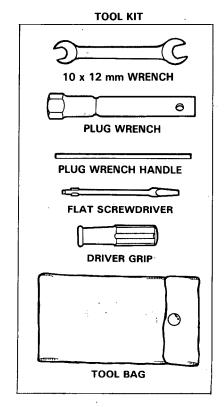
CAUTION: Use genuine HONDA parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the generator.

#### Tool kit

The tools supplied are necessary for performing some periodic maintenance, simple adjustments and repairs.

Always keep the tool kit with the generator.





# **Maintenance Schedule**

REGULAR SERVICE PERIOD Performed 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 YEAR OR 300 HRS
Engine oil	Check level	0				
Engine on	Change		0		0	
Air cleaner	Check	0				,
All Cleaner	Clean			0(1)		
Spark plug	Clean-Readjust				0	
Spark arrester	Clean				0	
Fuel sediment cup	Clean				0	
Valve clearance	Check-Readjust					0(2)
Fuel tank and strainer Clean						0(2)
Fuel line Check (Replace if necessary)		Every 3 years (2)				

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

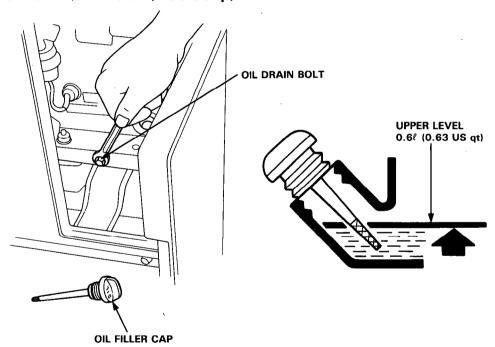
(2) These items should be serviced by an authorized Honda dealer, unless the owner has the proper tools and is mechanically proficient. See the Honda Shop Manual.

### Changing oil

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

- 1. Open the front maintenance cover.
- 2. Remove the drain bolt and filler cap, and drain the oil. Retighten the bolt securely.
- 3. Refill with the recommended oil (see page 8) and check the level.
- 4. Close and latch the front maintenance cover.

### OIL CAPACITY: 0.6 (0.63 US at)



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 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.

#### Air cleaner service

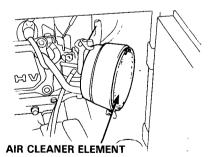
A dirty air cleaner will restrict air flow to the carburetor. To prevent carburetor malfunction, service the air cleaner regularly (page 18). Service more frequently when operating the generator in extremely dusty areas.

WARNING Never use gasoline or low flash point solvents for cleaning the air cleaner element. A fire or explosion could result.

CAUTION: Never run the generator without the air cleaner. Rapid engine wear will result.

- 1. Open the rear maintenance cover.
- Unscrew the wing nut and then remove the air cleaner cover and air cleaner element.
- 3. Wash the element in a nonflammable or high flash point solvent and dry it thoroughly.
- 4. Soak the element in clean engine oil and squeeze out the excess oil.
- 5. Reinstall the air cleaner element, the cover and the wing nut.
- Close and latch the rear maintenance cover.





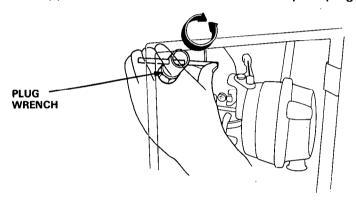


## Spark plug service

# Recommended spark plug: BPR6ES (NGK) W20EPR-U (ND)

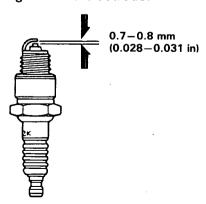
To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

- 1. Open the rear maintenance cover.
- 2. Remove the spark plug cap.
- 3. Clean any dirt from around the spark plug base.
- 4. Use the wrench supplied in the tool kit to remove the spark plug.



- 5. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.
- 6. Measure the plug gap with a feeler gauge.

  The gap should be 0.7-0.8 mm (0.028-0.031 in). Correct as necessary by carefully bending the side electrode.



- 7. Inspect the plug washer and then thread the plug in by hand to prevent 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 its washer. If a used plug is being reinstalled, it should only require 1/8 to 1/4 turn after being seated.

#### **CAUTION:**

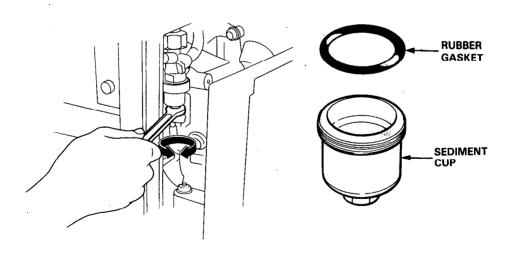
- The spark plug must be securely tightened. An improperly tightened plug can become very hot and could possibly damage the generator.
- Never use a spark plug with an improper heat range.
- 9. Close and latch the rear maintenance cover.

## Fuel sediment cup service

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

- 1. Open the front maintenance cover.
- 2. Turn the engine switch to STOP. Remove the sediment cup by turning it counterclockwise.
- 3. Clean the cup and rubber gasket in solvent thoroughly.
- 4. Reassemble the rubber gasket and sediment cup. Tighten securely.
- 5. Close and latch the front maintenance cover.

WARNING After installing the sediment cup, check for fuel leaks and make sure the area is dry before starting the engine.

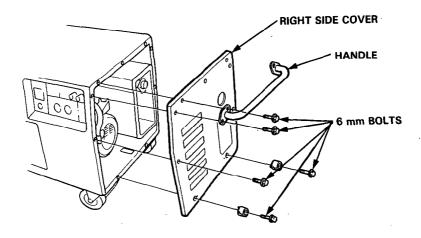


### Spark arrester maintenance

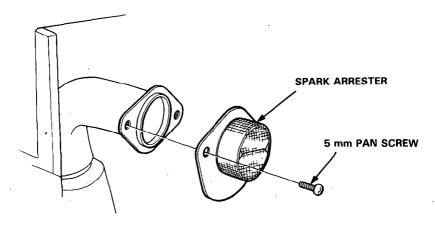
WARNING If the generator has been running, the muffler will be very hot. Allow it to cool before proceeding.

CAUTION: The spark arrester must be serviced every 100 hours to maintain its efficiency.

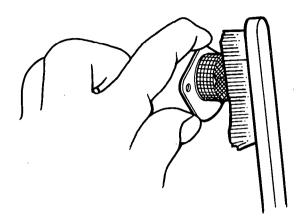
1. Remove the nine 6 mm bolts, the handle and right side cover.



2. Remove the two 5 mm pan screws, and the spark arrester.



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



NOTE: Inspect the spark arrester screen for holes or tears. Replace if necessary.

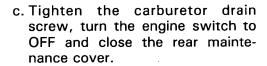
4. Reinstall the spark arrester, right side cover and handle.

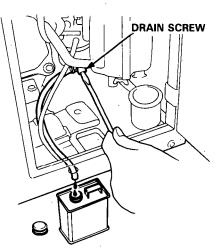
WARNING When transporting the generator, turn the engine switch OFF and keep the generator level to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

Before storing the unit for an extended period:

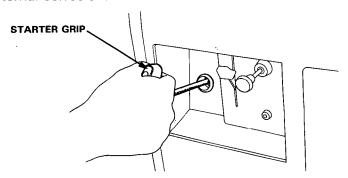
- 1. Be sure the storage area is free of excessive humidity and dust.
- 2. Drain the fuel
  - a. Open the rear maintenance cover.
  - b. Turn the engine switch to ON and then loosen the carburetor drain screw. Drain the gasoline from the carburetor and fuel tank into a suitable container.

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.





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

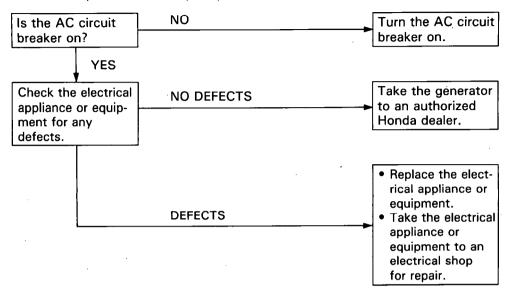


# 10. TROUBLESHOOTING

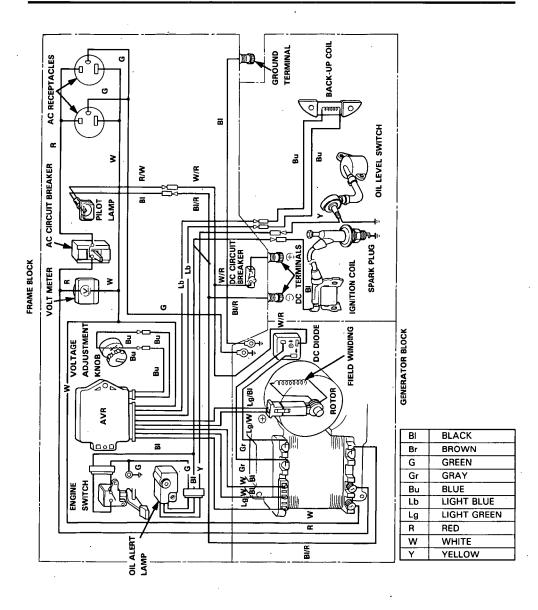
When the engine will not start: NO Is there fuel in the Refill the fuel tank? tank. YES NO Turn the engine Is the engine switch on? switch on. YES NO Is there enough oil Add the recomin the engine? mended oil. (The oil alert lamp goes on when pulling the starter grip.) YES Still No spark Is there a spark NO Replace the Take the generator from the spark plug? spark plug. to an authorized HONDA dealer. To check: **W**WARNING 1) Remove the spark plug cap and clean any dirt from Be sure there is no around the spark plug. spilled fuel around 2) Remove the spark plug and the spark plug. Spillinstall the spark plug in the ed fuel may ignite. plug cap. 3) Set the plug side electrode YES on the cylinder head. 4) Pull the recoil starter, sparks should jump across the gap. NO Is the fuel reaching Clean the fuel the carburetor? sediment cup. To check: 1) Turn off the engine switch and loosen the drain screw. YES 2) Fuel should flow from the drain when the engine If the engine still switch is turned on. does not start, take the generator to an authorized

HONDA dealer.

# No electricity at the AC receptacles:



# 11. WIRING DIAGRAM



# **Dimensions**

Length x Width x Height	755 x 480 x 590 mm (29.7 x 18.9 x 23.2 in)
Dry Weight	69 kg (152.1 lb)

# **Engine**

Model	HONDA GX140
Engine Type	4-Stroke, O.H.V. 1 cylinder
	(25° tilted)
Displacement	144 cm³ (8.8 cu in)
[Bore x Stroke]	64 x 45 mm (2.5 x 1.8 in)
Compression Ratio	8.75 : 1
Engine Speed	3600 rpm
Cooling System	Forced air cooled
Ignition System	Transistorized magneto
Oil Capacity	0.6 ℓ (0.63 US qt)
Fuel Tank Capacity	8.3 ℓ (2.19 US gal)
Spark Plug	BPR6ES (NGK)
•	W20EPR-U (ND)

# Generator

	Rated voltage Rated frequency	120V 60Hz
AC output	Rated ampere	16.7 (A)
	Rated output	2.0 kVA (2000W)
:	Maximum output	2.2 kVA (2200W)

### High altitude operation

At high altitude, the standard carburetor air-fuel mixture will be excessively rich. Performance will decrease, and fuel consumption will increase.

High altitude performance can be improved by installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screw. If you always operate the generator at altitudes higher than 6,000 feet above sea level, have your authorized Honda Generator dealer perform these carburetor modifications.

Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for each 1,000 foot increase in altitude. The affect 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.

#### **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 50 Gardena, California 90247-0805 Telephone: (213) 604-2400

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 a 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.

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