

HONDA

GENERATOR

E2500

OWNER'S MANUAL

This manual covers operation and maintenance of the E2500 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. The manual should be considered a permanent part of the generator and remain with the generator when sold.

Read the manual carefully. Pay special attention to statements preceded by the following words:

WARNING

Indicates a possibility of personal injury or loss of life if instructions are not followed.

CAUTION

Indicates a possibility of equipment damage if instructions are not followed.

Thank you for purchasing a Honda Generator.

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

WARNING

The 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.

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GENERATOR SAFETY

WARNING

To ensure safe operation –

- * Know how to stop the generator quickly and understand operation of all the controls. Never permit anyone to operate the generator without proper instruction.*
- * Keep children and pets away from the generator when in operation.*
- * The generator is a potential source of electrical shock when misused: Do not operate with wet hands. Do not operate in rain or snow.*

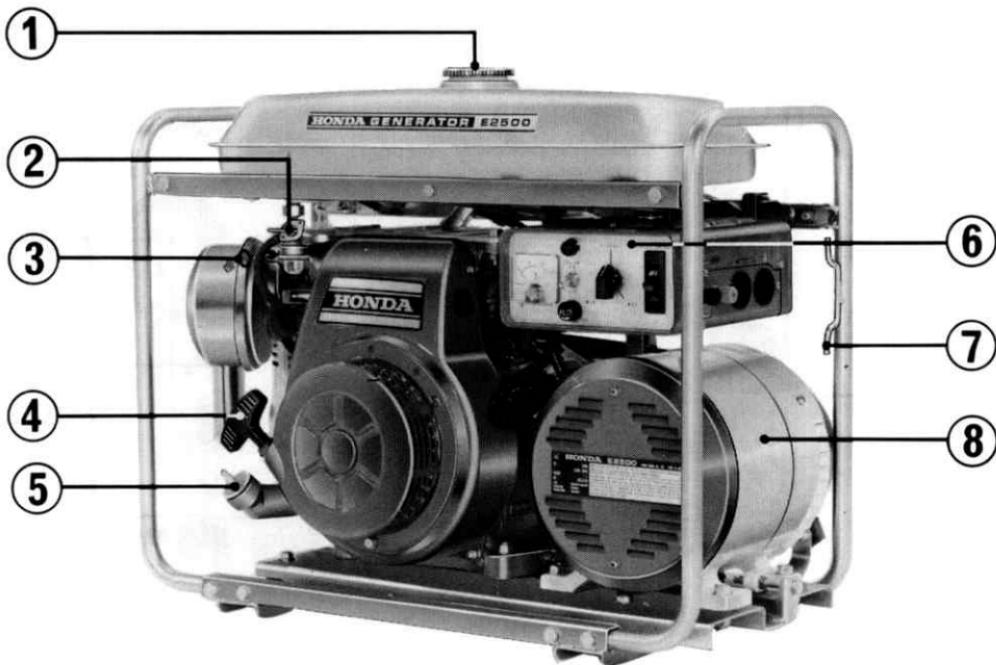
When charging a battery –

- * Battery electrolyte contains sulphuric acid. Protect your eyes, skin and clothing. In case of contact, flush thoroughly with water and call a doctor if your eyes were exposed.*
- * Batteries generate hydrogen gas which can be highly explosive. Do not smoke or allow flames or sparks near a battery, especially while charging it.*

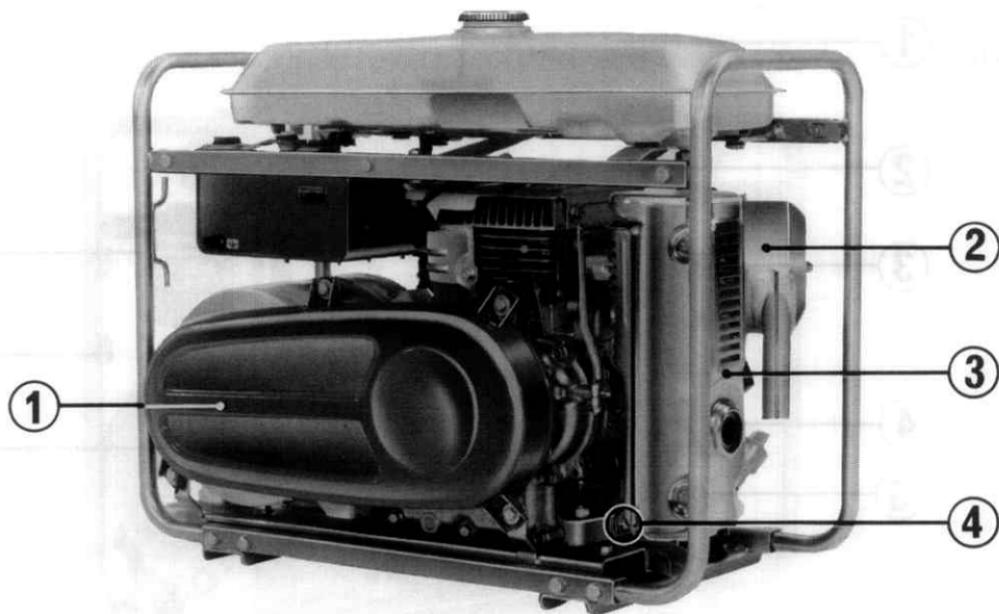


COMPONENT IDENTIFICATION

- (1) Fuel filler cap
- (2) Fuel valve
- (3) Choke rod
- (4) Recoil starter
- (5) Oil filler cap
- (6) Control box
- (7) Cord hanger
- (8) Generator

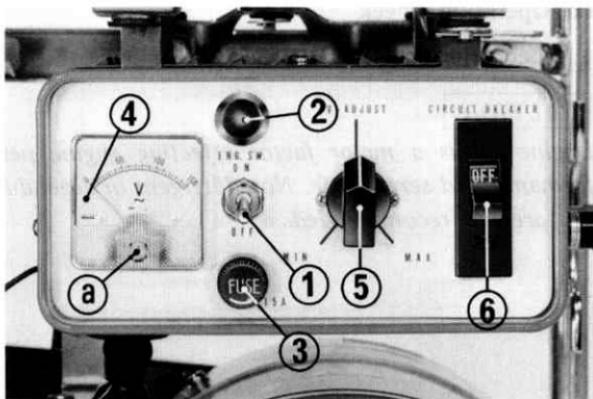


- (1) Belt cover
- (2) Air cleaner
- (3) Muffler
- (4) Oil drain plug



CONTROL BOX

- (1) **ENGINE SWITCH.** Turn ON before starting the engine. Turn OFF to stop the engine.
- (2) **PILOT LAMP.** Lights when the engine is running.
- (3) **FUSE HOLDER.** Houses a 15A fuse for the D.C. circuit.
- (4) **VOLTMETER.** Indicates voltage being generated. If the meter does not register "0" when the motor is not running, turn the adjusting screw (a) in the meter face to zero the needle.
- (5) **VOLTAGE CONTROL KNOB.** Fine adjustments can be made by use of the knob.
- (6) **A.C. SWITCH (CIRCUIT BREAKER).** The switch has two functions:
 - A) It switches A.C. power ON or OFF when the generator is running.
 - B) As a safety device (circuit breaker), the switch will automatically snap OFF if the A.C. circuit is overloaded.



OPERATION

WARNING

- * *Exhaust gas contains poisonous carbon monoxide. Never run the generator in an enclosed area. Be sure to provide adequate ventilation.*
- * *Operate the generator on a level surface. If the generator is tilted, fuel spillage may result.*

CAUTION

The generator is air-cooled and may be damaged if ventilation is inadequate.

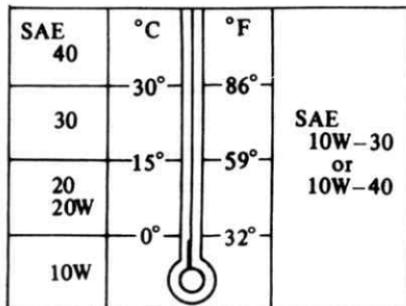
Pre-Operation Check

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, or an equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturer's requirements for Service Classification SE. (Motor oils classified SE will show this designation on the container.) SAE 10W-40 is recommended for general, all-temperature use. If single viscosity oil is used, select the appropriate viscosity for the average temperature in your area.

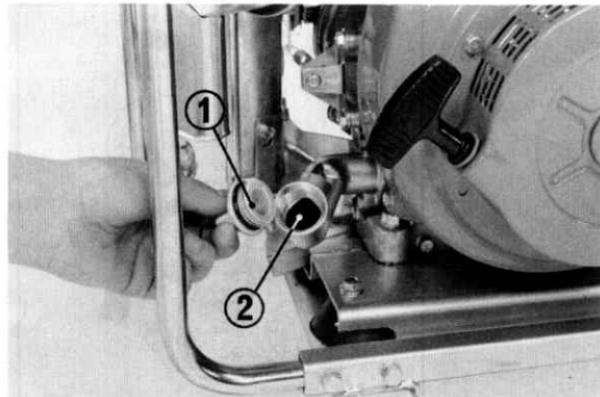


- A. With the generator on a level surface, remove the oil filler cap and check the oil level.
- B. If the level is low, fill to the upper limit with the recommended oil.
- Do not overfill; excess oil will result in power loss and smoking.

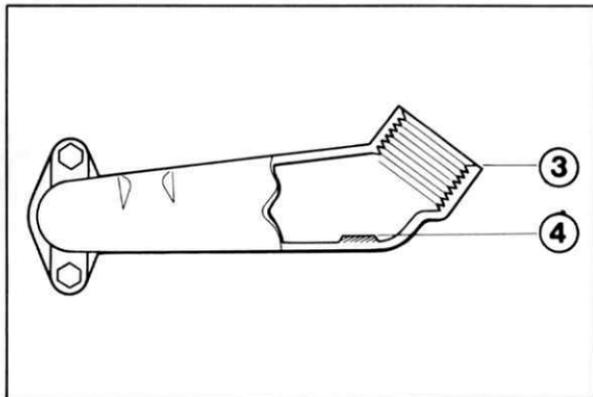
CAUTION

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

- (1) Oil filler cap
(2) Oil filler hole



- (3) Upper limit
(4) Lower limit



2. Check the fuel level.

Use automotive gasoline with a research octane of 91 or higher or a pump octane ($\frac{R+M}{2}$) of 86 or higher. Fill to half-way up the filler screen.

Never use an oil/gasoline mixture or dirty gasoline. Avoid getting dirt, dust or water in the fuel tank.

WARNING

* Gasoline is extremely flammable and explosive under certain conditions. Refuel in a well ventilated area with the engine stopped.

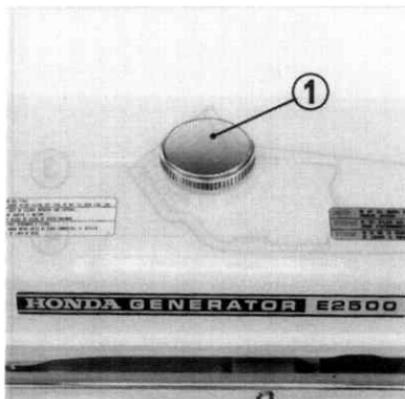
* Do not smoke or allow open flames or sparks in the area where the generator is re-fueled or where gasoline is stored.

* Do not overfill the tank and make sure the filler cap is securely closed after refueling.

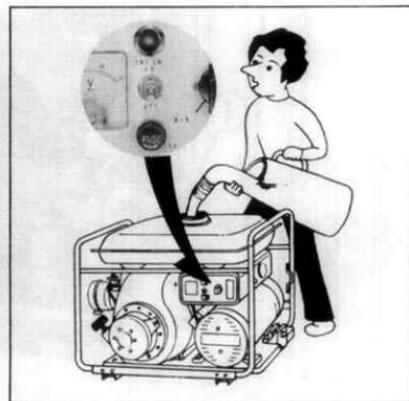
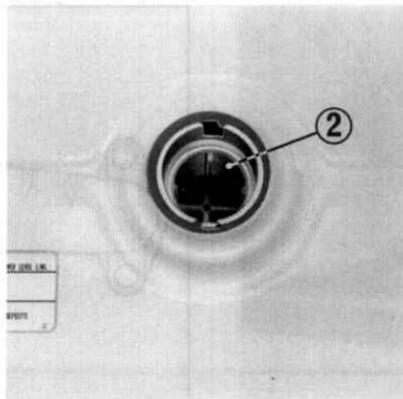
* Be careful not to spill fuel when refueling. Fuel vapor or spilled fuel may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.

3. Be sure that the engine switch is OFF.

(1) Fuel filler cap



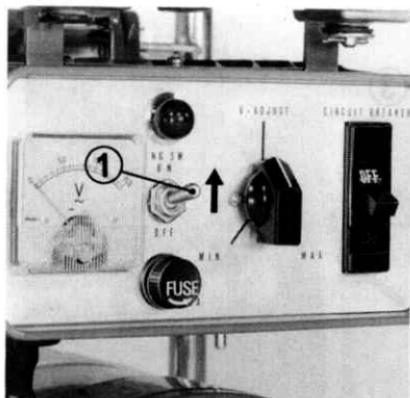
(2) Fuel filler hole



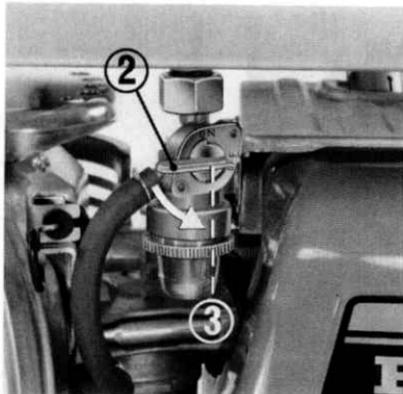
Starting the Engine

1. Turn the engine switch ON and turn the voltage control knob to the middle of its range.
2. Turn the fuel valve to ON. Close the choke fully.

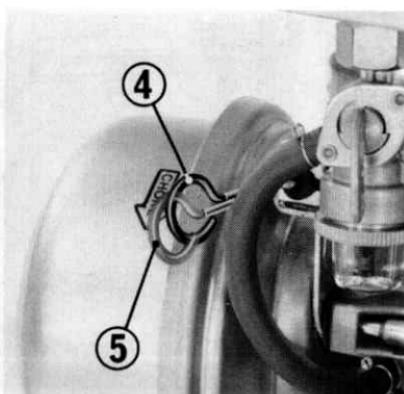
(1) Engine switch



(2) Fuel valve
(3) ON position

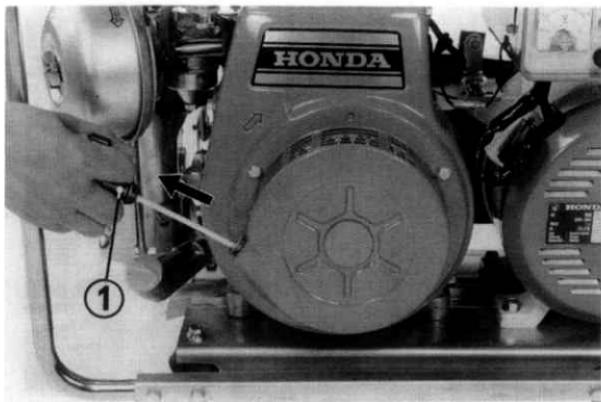


(4) Choke rod
(5) CLOSE position

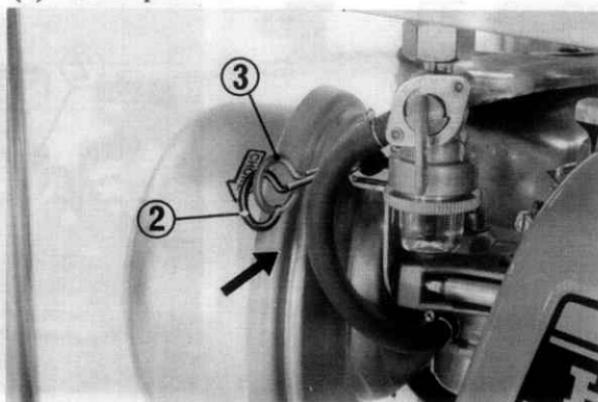


3. Pull the recoil starter rope lightly until resistance is felt, then pull swiftly.
4. Open the choke as the engine warms up.

(1) Starter rope



(2) Choke rod
(3) OPEN position



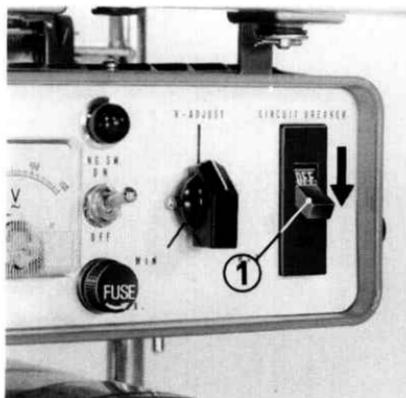
Stopping the Engine

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

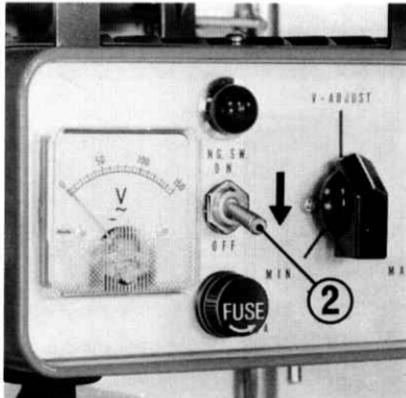
In normal use:

1. Switch the A.C. power OFF.
2. Turn the engine switch OFF.
3. Turn the fuel valve OFF.

(1) Circuit breaker



(2) Engine switch



(3) Fuel valve



GENERATOR USE

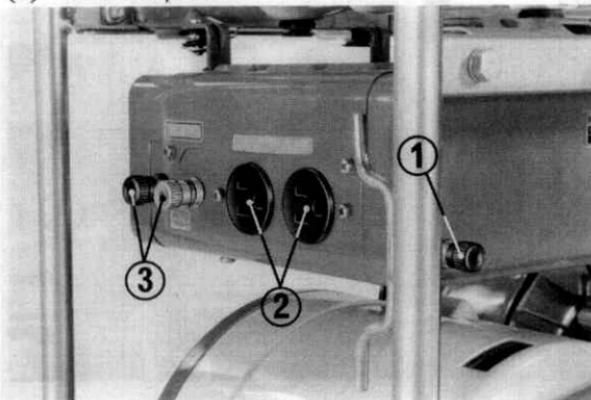
A.C. Applications

The maximum power available at the A.C. receptacles is 2.5 KVA (2,500 watts).

CAUTION

* Operation requiring maximum power should be limited to 30 minutes. For continuous operation, a maximum of 2.0 KVA (2,000 watts) should be observed.

- (1) Ground terminal (3) D.C. terminals
(2) A.C. receptacles



* Do not connect the generator to a household electrical circuit. This could cause damage to the generator and/or the circuit.

WARNING

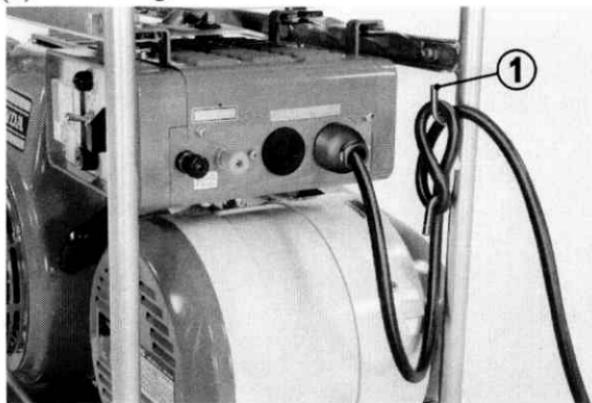
To prevent electrical shock from faulty appliances the generator should be grounded. Connect a length of heavy wire between the ground source and the terminal at the rear of the generator.

1. Plug the appliance cord into the A.C. receptacle; switch the A.C. power ON.

2. If the voltage drops, reset the voltage adjust knob as required.

A cord hanger is provided to prevent the cord from being accidentally pulled from the receptacle. Wind the cord around the hanger several times.

(1) Cord hanger

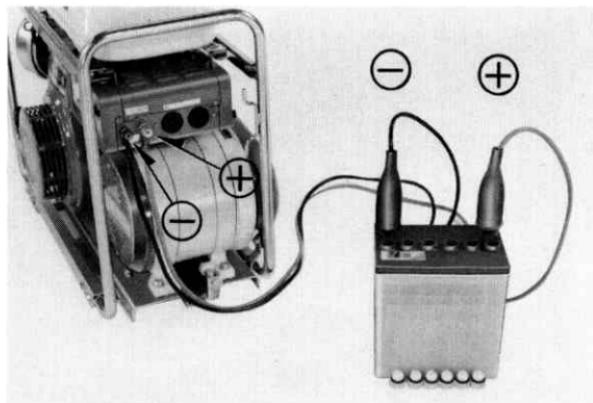


D.C. Application

CAUTION

Use the D.C. terminals for charging 12 volt automotive type batteries only. Check the positive (+) and negative (-) side and make a proper connection. Do not reverse the polarity of the terminals when charging a battery. Serious damage to the generator and/or battery may occur.

NOTE: The D.C. terminals may be used while the A.C. outlet is in use.



MAINTENANCE

The purpose of periodic maintenance and adjustment is to keep the generator in the best operating condition. Perform service as scheduled in the table on page 17.

WARNING

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 only new genuine HONDA parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the generator.

Maintenance Schedule

REGULAR SERVICE PERIOD Perform at every indicated month or operating hour intervals, which- ever occurs first.		Daily	First month or 20 Hrs.	Every 3 months or 50 Hrs.	Every 6 months or 100 Hrs.	Every year or 300 Hrs.
ITEM						
Engine oil	Inspection	○				
	Change		○		○	
Air cleaner element	Inspection	○				
	Cleaning			○ (1)		
Fuel filter cleaning					○	
Spark plug maintenance					○	
Drive belt adjustment					○	
Spark arrester cleaning					○ (Every 100 Hrs.)	
Ignition timing adjustment						○ (2)
Valve clearance adjustment						○ (2)
Combustion chamber and valve cleaning						○ (2)
Fuel line inspection (Replace if necessary)						○

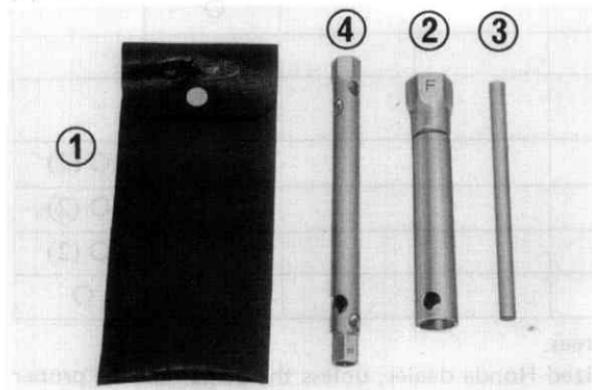
NOTE (1): Service more frequently when used in dusty areas.

(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.

Tool Kit

A tool kit is supplied with every new generator and should always be kept with the generator.

- (1) Tool bag
- (2) Plug wrench
- (3) Plug wrench handle
- (4) Socket wrench 12 x 10 mm

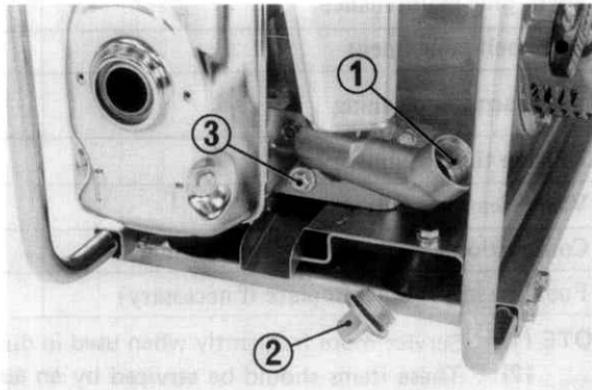


Changing Oil

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

1. Remove the drain bolt, drain the oil, and re-tighten the bolt securely.
2. Refill with the recommended oil (see p.8) and check the level.

- (1) Oil filler hole
- (2) Oil filler cap
- (3) Drain plug

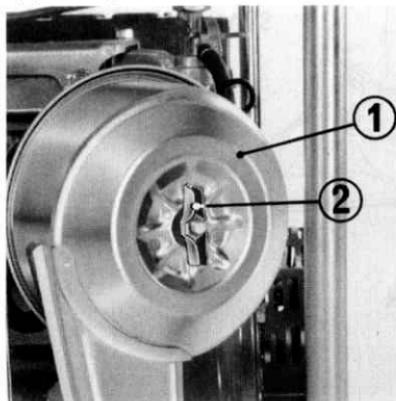


Air Cleaner Service

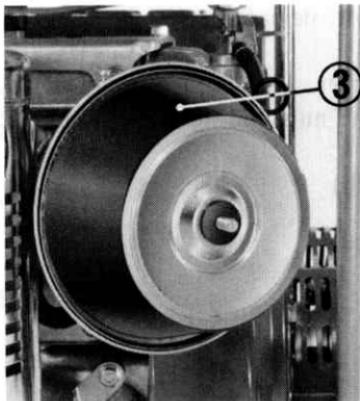
1. Loosen the wing nut to remove the cover.
Remove and separate the cleaner elements.
2. Wash the foam element in liquid detergent and water and flush until water is clear. Dry it thoroughly by applying compressed air. After drying, soak in oil and squeeze out the excess.
3. Remove dust from paper element by applying compressed air or tapping the case lightly. If the paper element is excessively dirty, replace or wash it in liquid detergent and water and flush

until water is clear. Dry it thoroughly by applying compressed air before installing.

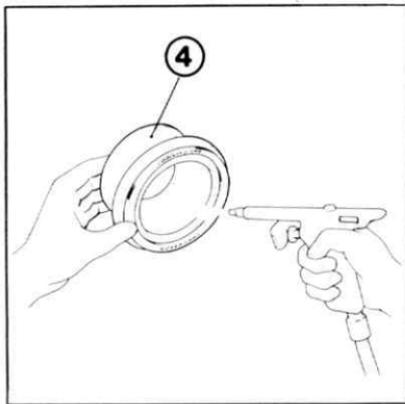
- (1) Air cleaner cover
- (2) Wing nut



- (3) Foam element



- (4) Paper element



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. Loosen two nuts and a bolt and remove the muffler and gasket.
2. Check the muffler exhaust port for carbon deposits. Clean if necessary.
3. Remove the spark arrester from the muffler. Clean the screen and inspect it for damage. Replace if necessary.
4. Install the spark arrester in the muffler. Install the muffler and gasket and tighten the nuts and bolt securely.

TORQUE: 200–280 kg cm (15–20 ft lb)

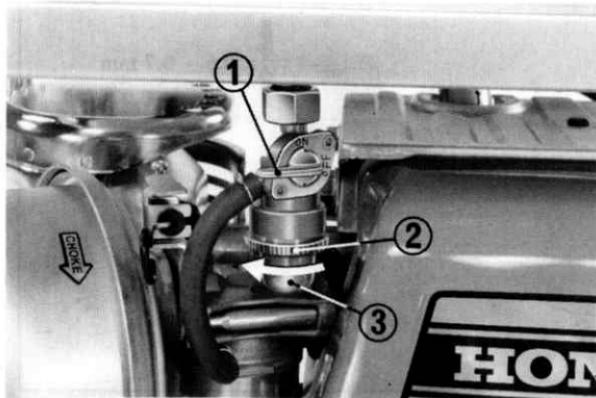


Fuel Filter Service

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. Turn the fuel valve OFF. Remove the ring nut and cup.
2. Clean the cup thoroughly.
3. Re-assemble. Do not damage the rubber gasket.

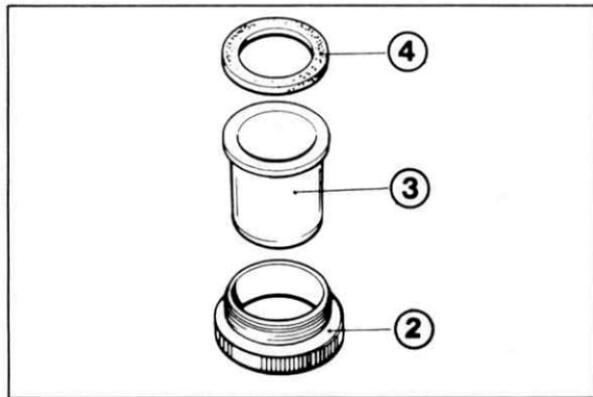
- (1) Fuel valve
(2) Ring nut



WARNING

After installing the filter cup, be sure to tighten the ring nut securely. Check for fuel leaks and make sure the area is dry before starting the engine.

- (3) Filter cup
(4) Rubber gasket



Spark Plug Service

Recommended spark plug: BR-4HS (NGK)

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

1. Clean any dirt from around the spark plug base.
2. Remove the plug cap, and use the wrench to remove the spark plug.
3. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped.
4. Check the plug gap with a wire-type feeler gauge. The gap should be 0.6–0.7 mm (0.024–0.028 in). Correct as necessary by bending the side electrode.

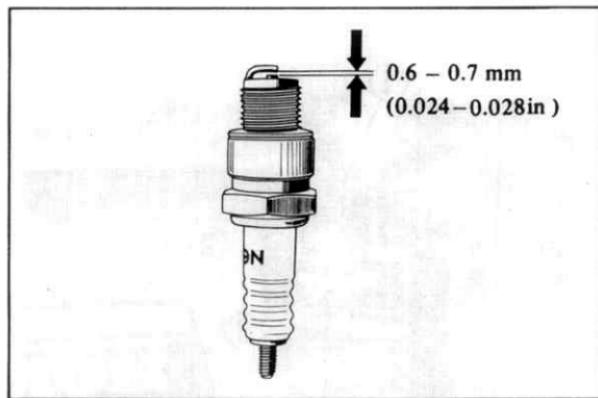
- (1) Spark plug wrench
- (2) Plug wrench handle



5. Attach the plug washer.
Thread the plug in by hand to prevent cross-threading.
6. Tighten a new spark plug 1/2 turn with the wrench to compress the washer.
If you are reusing a plug, it should only take 1/8–1/4 turn after the plug seats.

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.*



Drive Belt Adjustment

A loose or slipping belt will cause a drop in output power.

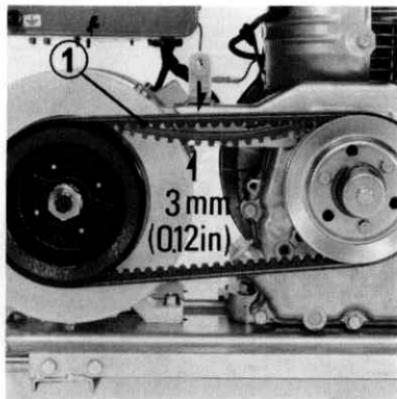
1. Remove the belt cover and check tension by pushing the middle of the belt. There should be approximately 3 mm (0.12 in) of slack.
2. To adjust tension, loosen the generator mounting bolts, loosen the lock nut on the adjusting bolt, and turn the bolt.

CAUTION

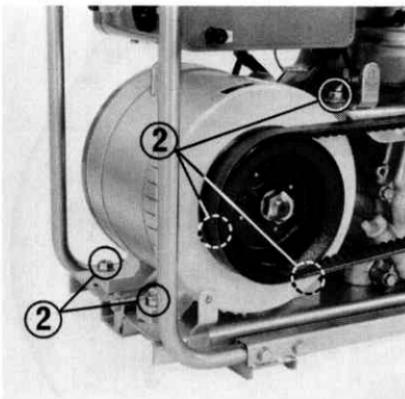
An overtightened drive belt will cause rapid bearing wear.

3. Retighten the lock nut and mounting bolts securely.

(1) Belt

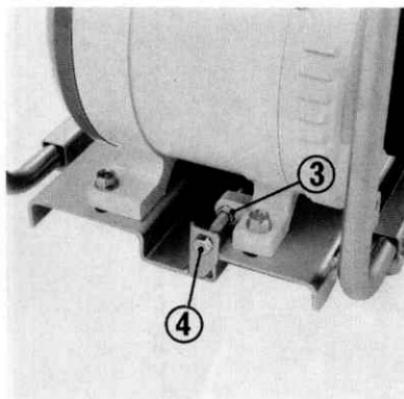


(2) Generator mounting bolt



(3) Lock nut

(4) Adjusting bolt



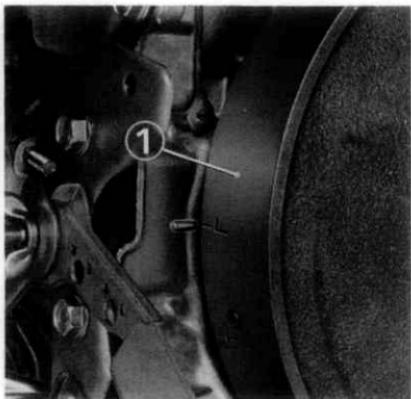
Ignition Timing Adjustment

Check the timing when specified by the periodic maintenance chart. Incorrect ignition timing will cause starting difficulty and loss of power.

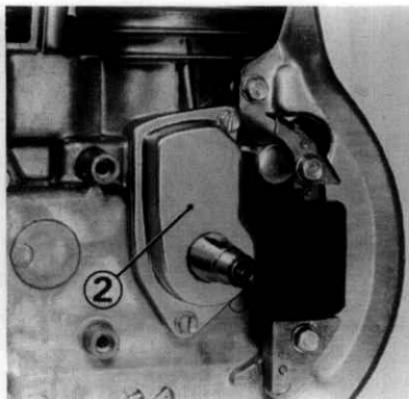
1. Remove the fan cover.
2. Proper timing is determined by correct point opening: Using a commercially available timing tester, rotate the flywheel clockwise and check that the points start to open when the flywheel "F" mark passes the mark on the crankcase.

3. If timing is not correct, remove the starter pulley, fan, flywheel, and point cover.
4. Loosen the 5 mm screw and move the breaker plate to the right or left as required. Retighten the screw and recheck timing.

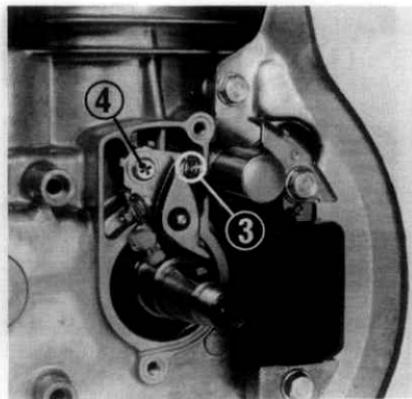
(1) Flywheel



(2) Point cover



(3) Contact breaker points (4) 5 mm screw



TRANSPORTING/STORAGE

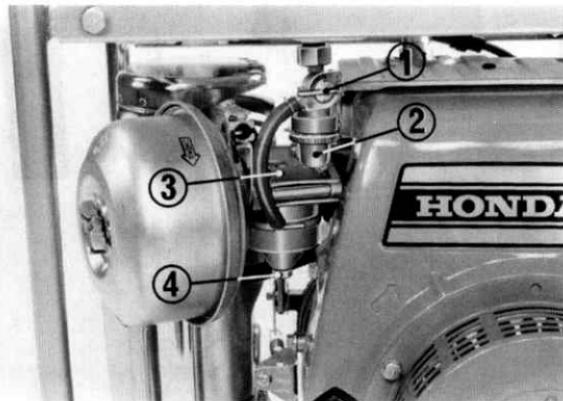
WARNING

When transporting the generator, shut off the fuel valve and keep the generator level to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

Before storing the unit for an extended period:

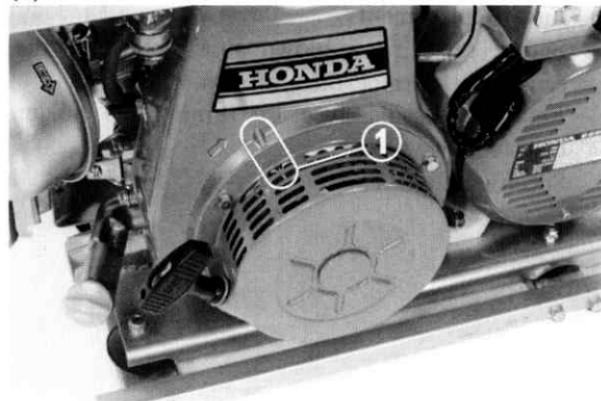
1. Assure that the storage area is free of excessive humidity and dust.

- | | |
|----------------|------------------|
| (1) Fuel valve | (3) Carburetor |
| (2) Filter cup | (4) Sealing bolt |



2. Drain the fuel tank –
 - A. Turn the fuel valve OFF and disconnect the fuel line at the carburetor.
 - B. Turn the valve ON and drain the gasoline into a suitable container.
 - C. Remove and empty the filter cup.
3. Drain the carburetor into a suitable container by loosening the sealing bolt.
4. Pull the starter rope so that the mark on the pulley is aligned with the index mark on the fan shroud on the compression stroke. This helps protect the engine from corrosion.

- (1) Marks



TROUBLESHOOTING

A) Difficult Starting

- 1) Remove any appliances that may be connected to the generator.
- 2) Check the fuel level.
- 3) Check choke position.

B) No Electricity at the Outlet Receptacles

- 1) Be sure the A.C. switch is ON.
- 2) Check the electrical appliance or equipment for any defects.

C) Generator Voltage is Low

- 1) Check for slipping drive belt.

D) Fuse Replacement

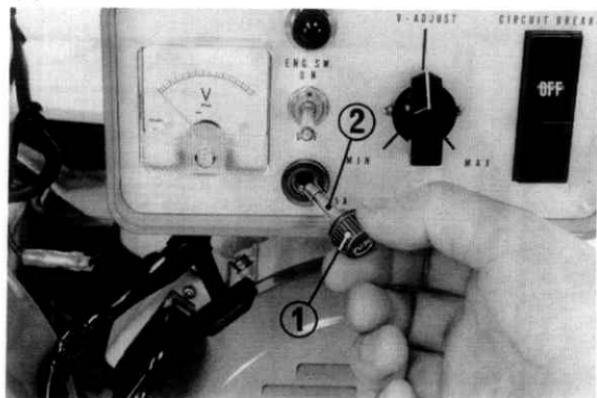
Before replacing a blown fuse, determine the cause and correct the problem.

Remove the old fuse by turning the holder counterclockwise.

Specified fuse: 15A

(1) Fuse holder

(2) Fuse



SPECIFICATIONS

Dimension and Weight

Length x Width x Height	660 x 380 x 550 mm (26.0 x 15.0 x 21.7 in)
Dry weight	64 kg (141.1 lb)

Engine

Model	Honda G300
Engine Type	4 cycle, side valve, 1 cylinder, forced air cooled
Displacement [Bore x Stroke]	272 cc (16.6 cu in) [76 x 60 mm (3.0 x 2.4 in)]
Ignition timing	20° BTDC, fixed
Ignition	Flywheel magneto
Oil capacity	1.2ℓ (2.54 US pt)
Fuel tank capacity	9.2ℓ (2.4 US gal)
Spark plug	BR-4HS (NGK)

Generator

AC output	Rated voltage	115V
	Rated output	2.0 KVA (2,000 W) [17.4 A]
	Max output	2.5 KVA (2,500 W)
	Cycles	60 Hz
DC output	Only for charging 12V automotive batteries. Maximum charging output: 8.3A	

	Part Name
MC	Main Coil
EC	Exciter Coil
FC	Field Coil
Ge	Generator Block
DCC	DC Armature Coil
⊕ M	⊕ Mark
FM	Frequency Mark
CP ₈	8P Connector
TP ₂	2P Outer Terminal
Co	Condenser
CP ₄	4P Connector
VR	Variable Resistor
ESw	Engine Switch
CB	Control Box Block
Fu	Fuse
VM	Volt Meter
NFB	Circuit Breaker
OR	AC Output Receptacle
GT	Ground Terminal

	Color
B	Black
Bl	Blue
Br	Brown
G	Green
Lg	Light Green
Lg/B	Light Green/Black
Lg/R	Light Green/Red
Lg/W	Light Green/White
R	Red
W	White

MEMO

MEMO

MEMO

Current customer service contact information:

United States, Puerto Rico, and U.S. Virgin Islands:

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

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

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

Or telephone: (770) 497-6400 M-F, 8:30 am - 5:00 pm EST

When you write or call, please provide the following information:

- Model and serial numbers
- Name of the dealer who sold the Honda power equipment to you
- Name and address of the dealer who services your equipment
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem



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