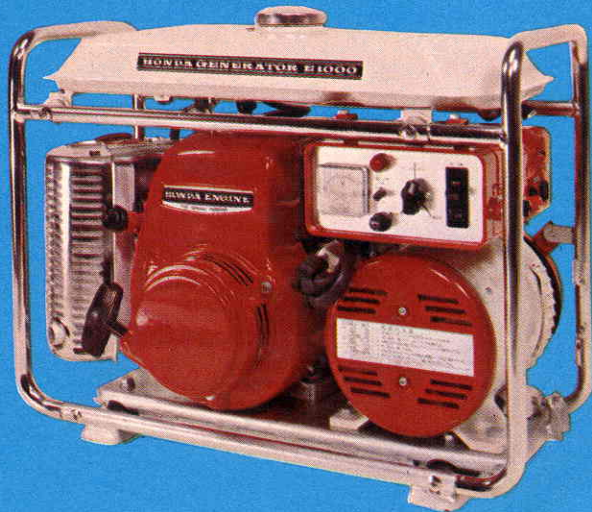
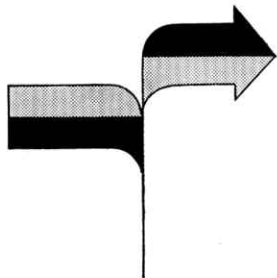


OWNER'S MANUAL

HONDA PORTABLE GENERATOR MODEL E 1000



Thank you for your decision to purchase
HONDA product



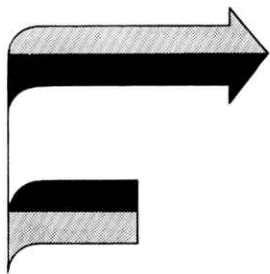
Foreword

This handbook covers the necessary information regarding the HONDA Portable Generator Model E1000 for the operator to fully understand for its proper use.

This handbook should be carefully read to thoroughly understand the proper use of the equipment before starting to use. Correct and proper operation and handling of the equipment will keep the equipment life span longer in top operating condition.

CONTENTS

Foreword	1
Outstanding features and major specifications	3
Simple and easy operation	10
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Servicing you can do easily	28
Recommended oil and grease	43



OUTSTANDING FEATURES AND MAJOR SPECIFICATIONS

1. Features of HONDA portable generator, Model E 1000
2. Major specifications
3. Names of major parts

I FEATURES OF HONDA PORTABLE GENERATOR MODEL E 1000

HONDA Portable Generator, Model E 1000 combines a general-purpose engine Model G 40 with a 1 kW AC/DC generator. This model E 1000, one of the HONDA generator series, provides both AC output of 1 kW and DC output of 100 W without a switch control for selection between them. This is one of the outstanding features never before available with small generators of this type.

*** Simple control**

The engine speed is controlled through its unique throttle knob ; the voltage is adjusted by the control box, while confirming the voltage on the voltmeter provided in the box.

*** Perfect safety**

All the rotating parts are fully protected against any possible danger, with a fuse provided at the DC output side and a no-fuse breaker at the AC output side. These arrangements fully guarantee operation convenience and utmost safety.

The muffler volume has been increased for improvement of uniform noise suppression. A spark arrestor is built in for further safety to prevent the danger of fire.

*** Easy and quick starting**

Recoil starter guarantees easy and quick starting of the engine.

Along with the change to a large muffler, the air cleaner has been made larger for improvement of intake and exhaust performance.

*** High durability and quiet operation**

The engine bed is mounted with rubber applied to the pipe-made frame, with the rubber-mounted control box suspended from the top portion of the frame, thus protecting the meters against shock.

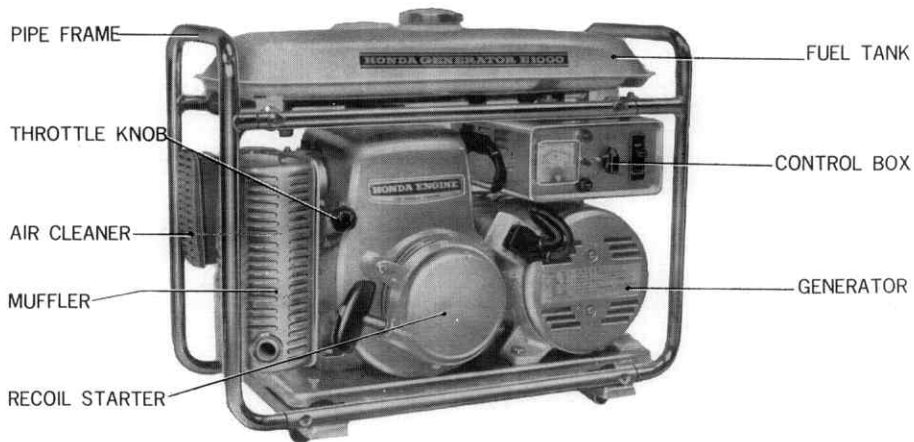
A cap for the spark plug is provided with the noise suppressor, thus reducing interference noise to radio communication.

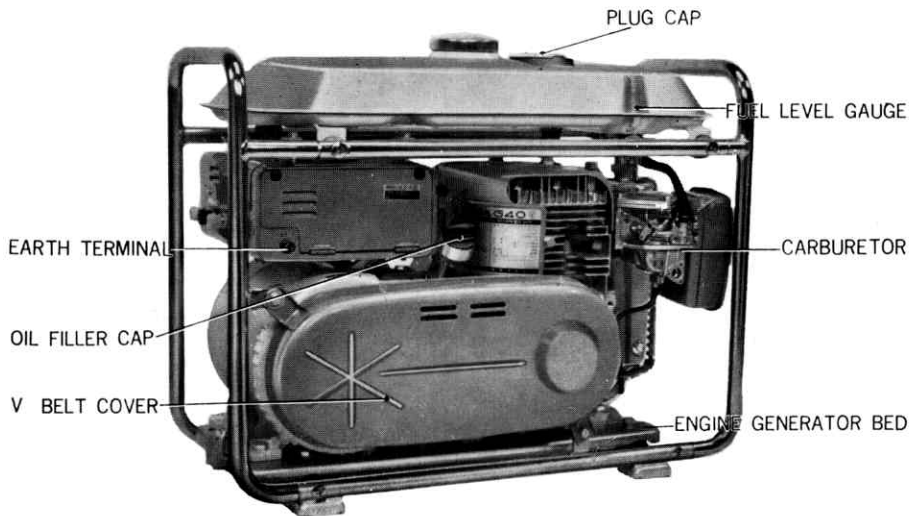
2 MAJOR SPECIFICATIONS

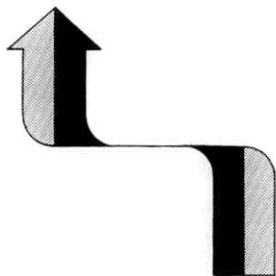
Name		HONDA portable generator E 1000
Engine	Type	Forced air cooled, single cylinder 4-cycle, side valve (HONDA engine model G 40)
	Piston displacement	170 cc (10.4 cu. in)
	Bore \times stroke	66 \times 50 mm (2.6 \times 2.0 in)
	Engine horse-power	Rated 3.3 PS/3,600 rpm Maximum 4.2 PS
	Compression ratio	6.5 : 1
	Lubricant system	Wet sump
	Engine oil capacity	0.6 liter (1.3 US pt. 1.1 Imp. pt.)
	Fuel tank capacity	6.0 liter (12.7 US pt. 10.6 Imp.pt.)
	Starting system	Recoil starter

Generator	Type	Self-excited/externally excited, 2-pole, single phase generator	
	MODEL	AC OUTPUT	DC OUTPUT
	E 1000 T	50cycles, 120 V, 1 kW	12 V, 24 V, 4.2 A
	E 1000 A	60cycles, 120 V, 1 kW	“
	E 1000 E	50cycles, 220 V, 1 kW	“
	E 1000 S	60cycles, 220 V, 1 kW	“
	E 1000 U	50cycles, 240 V, 1 kW	“
Dimensions and weight	Dry weight	53kg (116.9 lbs)	
	Length	604 mm (23.3 in)	
	Width	345 mm (13.6 in)	
	Height	475 mm (18.7 in)	

3 NAMES OF MAJOR PARTS







SIMPLE AND EASY OPERATION

1. Explanation of control box
2. Prior to starting engine
3. Starting engine
4. Stopping engine

1 EXPLANATION OF CONTROL BOX

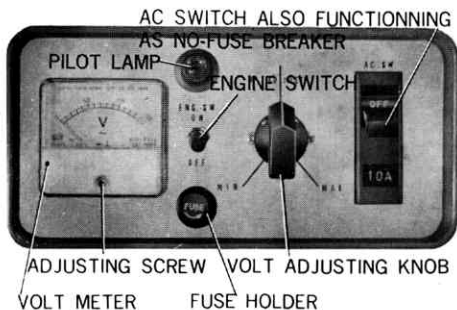
Explanation of control box

The power generated by the generator is fed into the control box, where it is converted into required voltage, and then is extracted from the output terminal. Concentrated in this control box are various high-precision meters and electrical units. This control box may be compared to the brain of a human being. This control box is mounted on the frame with rubber applied for protection of the meters against vibration.

Voltmeter

This is the meter used to indicate the voltage in use. When requiring to adjust the voltage, use the throttle knob for coarse adjustment and then the voltage adjuster for fine adjustment.

Insure that the needle pointer of the volt-meter points to 0 (zero) when the engine has been brought to a dead stop. Should the needle pointer deviate from the 0 (zero) position, turn the adjusting screw for adjustment.



2 PRIOR TO STARTING ENGINE

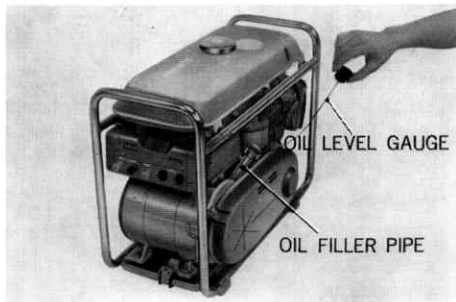
Lubricant

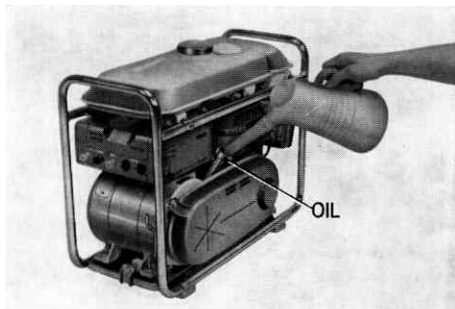
Use oil corresponding to MS or DG in the API service classification.

OUTSIDE TEMPERATURE		S. A. E. GRADE
15° C	(59° F)	SAE 30
0° C	(32° F)	SAE20 or SAE20W
		SAE10W

When filling

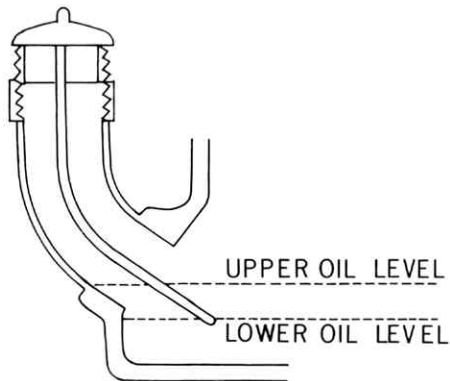
Turn the oil filler cap counterclockwise for its removal ; measure the oil amount by means of the oil level gauge, with the oil filler remaining unscrewed.





Capacity

0.6 liters (1.3 US Pt. 1.1 Imp. pt.)



NOTE

1. Engine oil performs a very important role in prolonging the life of the engine and in obtaining smooth operation.
2. Always check the oil level before starting the generator.

FUEL

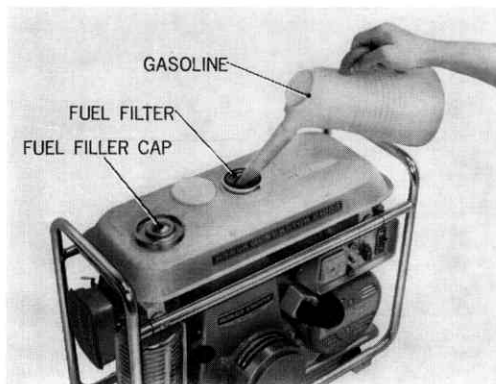
When filling with gasoline

To open the fuel filler cap, depress it and turn counterclockwise. Gasoline may be compared to food for the human body.

Maximum gasoline capacity is 6 liters (12.7 US pt. 10.6 Imp. pt.)

NOTE

1. Since gasoline is highly inflammable, before filling with gasoline, stop the engine and keep it away from any open fire.
Wipe off immediately any gasoline spilled over the casing and floor.
2. Do not use a fuel mixture. Be careful not to get dirt, dust or water in the gasoline.



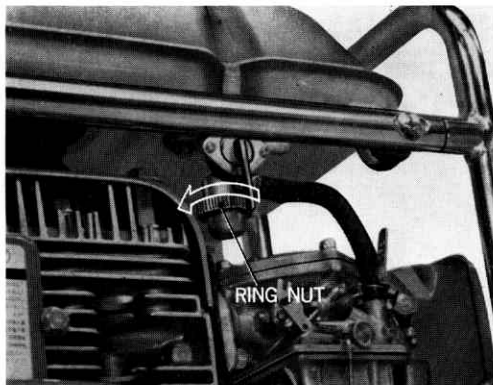
● FUEL STRAINER ●

Should the fuel be contaminated with dust, water or any other foreign material, it may damage the important parts such as carburetor or engine.

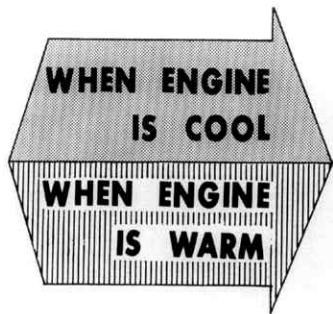
The fuel filter serves to prevent foreign material from penetrating into the fuel tank upon fueling. Further prevention of penetration of such material is made by the fuel strainer of the fuel cock.

After a long period of use, foreign material may deposit in the fuel tank, and it is recommended that the tank be checked from time to time, thus keeping the fuel tank clean.

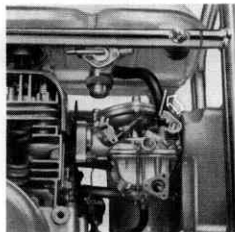
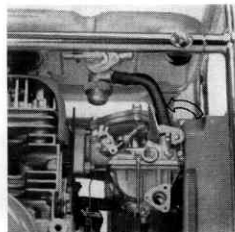
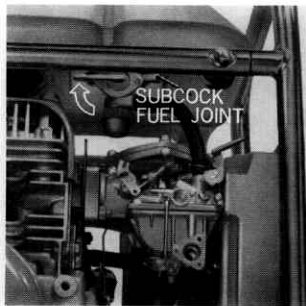
For removal of the fuel tank, the fuel cock should be turned to the "OFF" position and the ring nut in the direction of the arrow.



3 STARTING ENGINE



Set the fuel cock to the "MAIN" position.



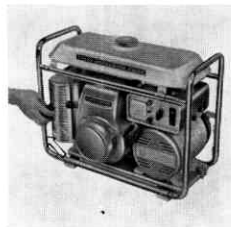
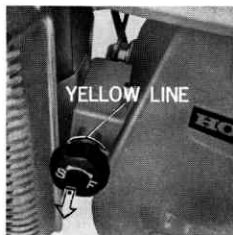
Fully close the choke by means of the lever.

Close the choke half way.

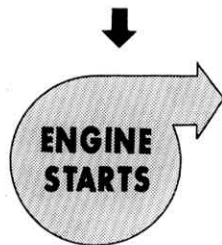
The fuel cock is available at both "MAIN" and "SUB" positions; in the former case the fuel runs from the top tank into the carburetor, while the "SUB" position is used when an auxiliary tank is in use. When a long period of operation has been effected using fuel of the auxiliary tank, fit the fuel tube running from the auxiliary tank to the sub cock fuel joint, setting the fuel cock to the "SUB" position.

Set the engine switch to the "ON" position, with the voltage adjuster knob set to point to the top intermediate position.

Forcefully pull the recoil starter.



Pull the throttle knob to the yellow line (namely, to the first stage ; when returning the nob, it should be pressed downward.

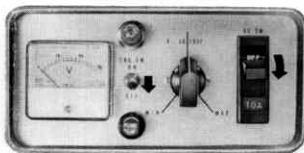


4 STOPPING ENGINE

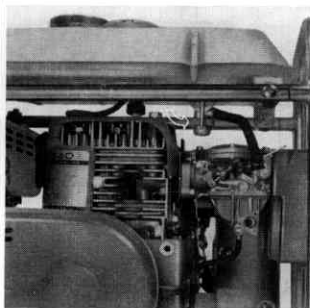
(1) Turn the throttle knob to the "S" side, thus lowering the engine rotational speed.

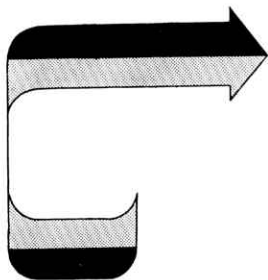


(2) Return the voltage adjuster knob to the top intermediate position ; turn the AC switch to the "OFF" position and the engine switch to the "OFF" position.



Set the fuel cock to the "STOP" position.





PROPER USE

1. For safe operation
2. Scope of E1000 application
3. Use of outlets
4. Carrying and storing

1 FOR SAFE OPERATION



PLEASE NOTE THE FOLLOWING ITEMS

1. **Do not place inflammable objects near the exhaust outlet.**

Although the muffler is provided with a "spark arrestor" for safety purposes, the temperature near the exhaust outlet will become high. Caution should be exercised with combustible items such as gasoline, matches, celluloid and explosive compounds.

Even when a flue is provided in order to extract the exhaust gas to the exterior, care should be taken near the flue.

2. **Do not use inside a room, tunnel or well with improper ventilation.**

Not only will the engine become overheated, but the accumulation of harmful carbon monoxide may prove to be dangerous. It should be placed outside for use, with a long extension cord.

When indoor use is unavoidable, take such precautionary measures as opening the window or circulating the air even for short period and provide sufficient ventilation.



3. Do not replenish fuel while the engine is running.

The fuel may evaporate and ignite from a lighted cigarette or a spark from the engine. Obey the rule of "Inflammable, Keep Out".

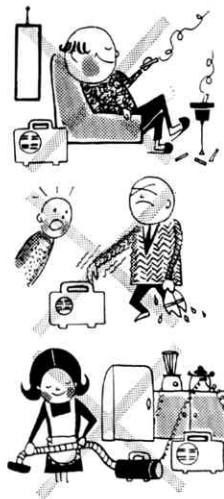
When the fuel is split, wipe it off completely before starting. Always be extremely careful about fuel leakage.

4. Do not operate with wet hands.

It may cause electric shocks, the same as home appliances. Give sufficient care when wet with rain or snow.

5. Do not connect to indoor wiring.

Possible electrical leakage may harm the generator. Use properly with complete understanding of the equipment.



2 SCOPE OF E1000 APPLICATION

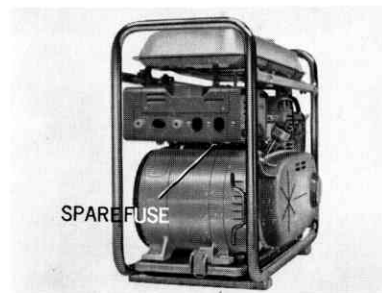
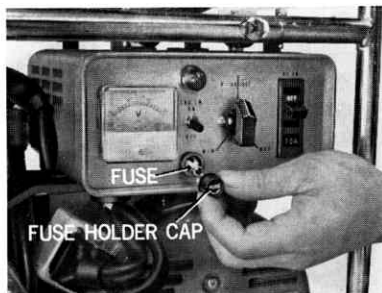
	Scope of operation	When exceeding the usable wattage. When applied equipment is abnormal.	Precaution
AC	The equipment may be applied to a maximum wattage of 1kW for lighting electrical heating, TV, radio, etc. The voltage limit is shown in the column of AC OUTPUT of the major specifications.	The AC switch automatically goes OFF and current will not flow.	<ul style="list-style-type: none">• Even when the AC switch is placed ON in that condition, it will go OFF immediately.• Check the wattage of the electrical appliance or equipment being used as well as any abnormality.
DC	The equipment may be applied for charging an automobile battery up to 12V, 4.2A or 24V, 4.2A. DC output may be obtained by connecting.	The fuse is blown out to protect the generator and other associated units in use.	

REPLACEMENT OF FUSE

- The fuse is used only in the DC circuit.
- The capacity of the fuse is 8 A, generally available on the market.
- When the fuse has blown out ;
 - * Check to see if the internal wiring or external cord of the electrical unit connected to the equipment is short circuited.
 - * Check to see if the electrical units have a total wattage of more than 100 W. When used in this manner with the maximum permissible wattage exceeded, the fuse is bound to blow out.
- For replacement

Turn the cap in the direction of the arrow for removal and replace the fuse.

 - * The spare fuse is found in the rubber holder located at the bottom of the control box.



3 USE OF OUTLETS

1. After the engine has been started, turn the throttle knob in the F direction while carefully observing the voltmeter, thus setting to the required voltage.
2. Turn the AC switch to the "ON" position.
3. Connect the electric unit to the connecting terminal at the AC side.
4. There may be a voltage fluctuation due to the condition of the connection; therefore again set to the required voltage by the throttle knob.
5. Turn the voltage adjusting knob to either MAX or MIN positions for increasing or decreasing the voltage.



●Using AC outlets●

When using the equipment for AC power supply, use the AC outlets located at the side of the control box.

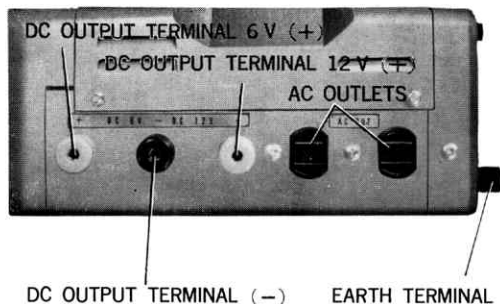
There are two AC outlets; for the wattage limit; refer to "SCOPE OF E 1000 APPLICATION" (p. 22).

●Using DC outlets●

Connect the electrical unit to the connecting terminal at the DC side. As for the DC side, when connecting to the terminal, continuity is effected regardless of whether the AC switch is at the "ON" or "OFF" position.

Consequently, confirm the polarity, plus (+) or minus (-), before connecting.

The negative terminal is common to 6 and 12 V.

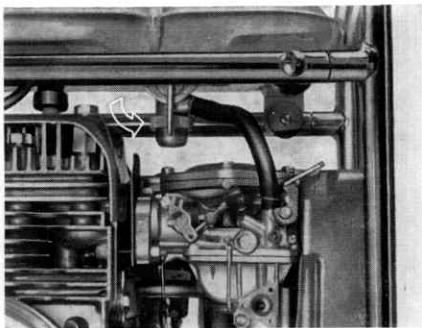


4 CARRYING AND STORING

When carrying, insure that the fuel cock lever has been set to the "OFF" position.

For long storage, set the fuel cock lever to the "OFF" position, untighten the drain screw and drain the fuel from inside the carburetor.

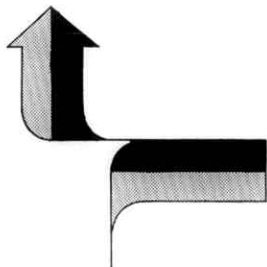
When draining the fuel from the fuel tank, set the fuel cock lever to the "MAIN" position.





Pull the starter to set the "△" window of the fan cover to the "△" mark of the starter pulley. By this, the valves for intake and exhaust close, with the piston positioned at top dead center.

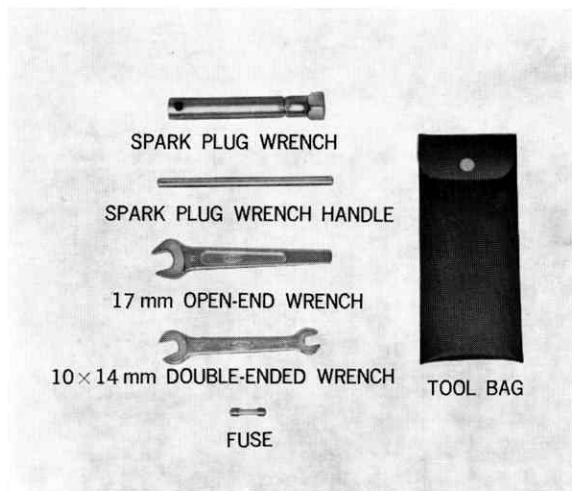
Select a storage location where there is minimum humidity and dust. The location should be level and the equipment should not be tilted while in storage.



SERVICING YOU CAN DO EASILY

1. Tool kit	29
2. Maintenance guide	30
3. Checking and changing lubricant	31
4. Cleaning of air cleaner	32
5. Cleaning of spark plug	34
6. Cleaning of brush	36
7. Adjusting of belt	38

1 TOOL KIT



A tool kit, with the contents shown left, is enclosed in the shipment carton box and is necessary for maintenance and repair.

It should therefore be kept in order and never be lost.

A spare fuse is found in the rubber holder located at the bottom of the control box.

2 MAINTENANCE GUIDE

Maintenance is the most important factor for keeping the unit in the best operating condition.

Item \ Period	20 hours	30 hours	100 hours
Replacement of engine oil	●		○
Cleaning the air cleaner		○	
Cleaning and checking spark plug			○
Cleaning and checking brush			○
Adjusting the belt			○

- Even after a lapse of 100 hours, repeat in accordance with ○ mark.
- If the drive belt seem to be damaged even slightly, replace it as soon as possible.

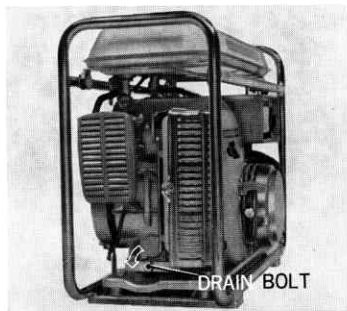
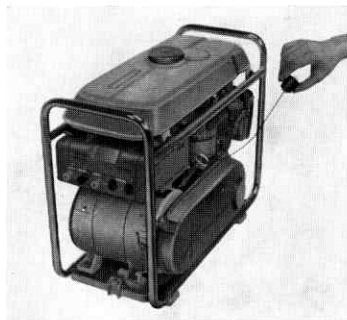
3 CHECKING AND CHANGING LUBRICANT

Periodically check the oil amount ; should the amount be found lower than the lower level line, replenish the oil to the upper level line. For checking the oil amount, use the oil level gauge, when using this oil level gauge, insure that the cap of the gauge is left unscrewed.

The top line of the oil level gauge shows the upper level, while the bottom line shows the lower level.

For change of oil, loosen the drain bolt in the direction of the arrow to drain the oil. The oil may be drained faster if the oil level gauge cap has been untightened and removed.

For replenishing the oil, refer to pages 12 and 13.

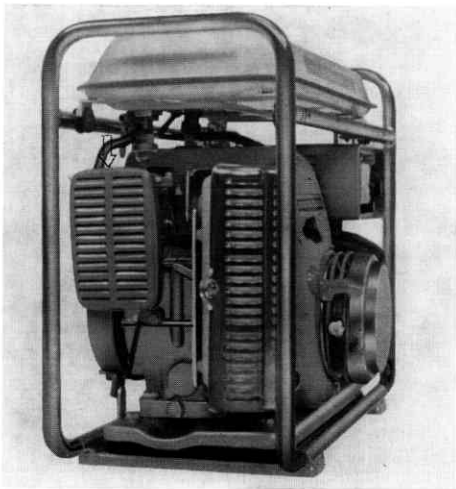


4 **CLEANING OF AIR CLEANER**

The air cleaner element filters dust and dirt from the air to prevent wear of the main engine parts, such as the piston, cylinder, etc.

A contaminated air cleaner hardly filters any dust and dirt, thus adversely affecting the engine performance.

Give careful maintenance to the air cleaner periodically.





Washing the air cleaner element

1. Press the holding hardware in the direction of the arrow "↓", thus removing the air cleaner cover, take out the air cleaner element.
2. Wash the air cleaner element with gasoline and dry. After it has been dried thoroughly, immerse the element in the oil mixture of 1 part oil and 10 parts gasoline, then rinse to dry.

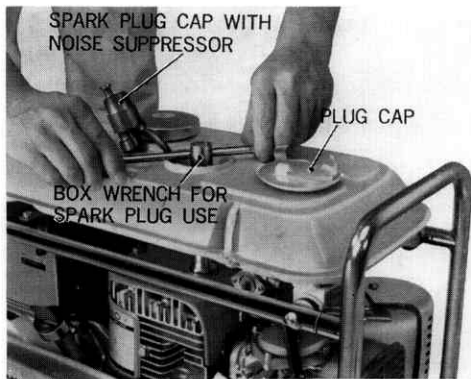


5 CLEANING SPARK PLUG

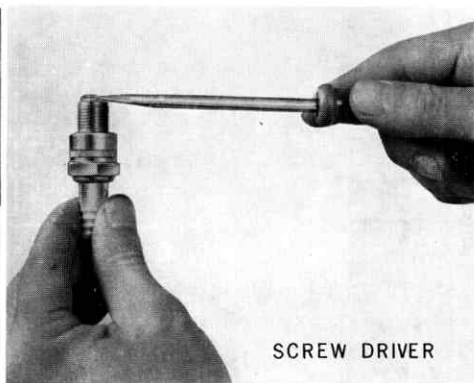
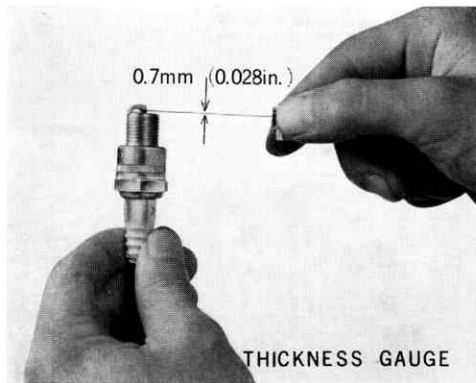
When the carbon has deposited on the electrode of the spark plug, or the plug gap is not normal, it may cause defective engine performance with the output lowered.

Therefore, it is important to give a periodical check to the spark plug contamination and plug gap.

Remove the cover of the fuel tank, designed to permit removal of the spark plug, remove the noise suppressor-provided spark plug cap and use a spark plug wrench to remove the spark plug.



Use a wire brush or the like to remove the carbon from the electrode. Clean it well with gasoline and thoroughly wipe it off with a dry cloth. Use a thickness gauge to measure the plug gap, correct the gap if it is not normal.

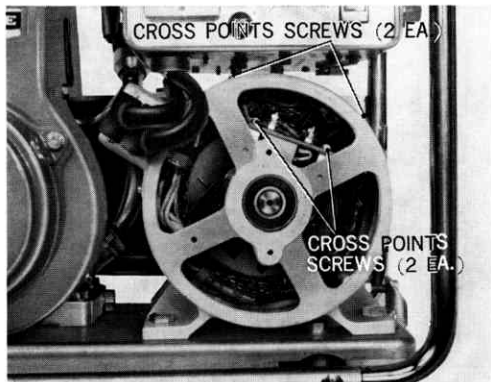


6 CLEANING BRUSH

After long use, the brush may wear. Extreme wear of the brush or contamination of the slip ring may cause loss of output and reduction of voltage. Periodically clean the brush and slip ring. The operating limit of the brush is 20mm (0.79 in).

Loosen screws at two positions and remove the generator fan cover.





Remove the fuel tank and control box, remove the cover designed to permit the removal of the generator brush ; remove the cross points screws at two positions. Check and clean the brush.

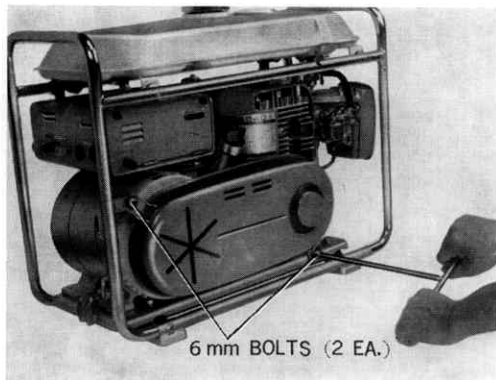
The brush lasts for a considerable period. When the brush is found worn to a length of 20 mm (0.79 in) at the center portion, replace it.

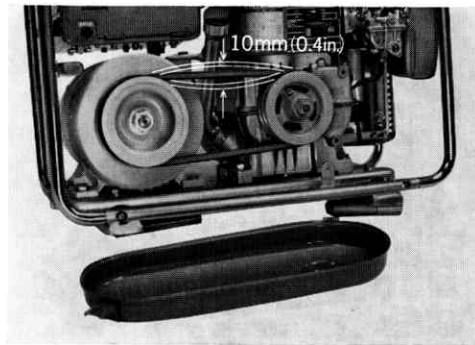
7 ADJUSTING OF BELT

When the belt has been loosened, it is bound to cause slipping, resulting in output reduction.

Overtension of the belt causes excessive load to the bearing, thus resulting in abnormal wear of the bearing.

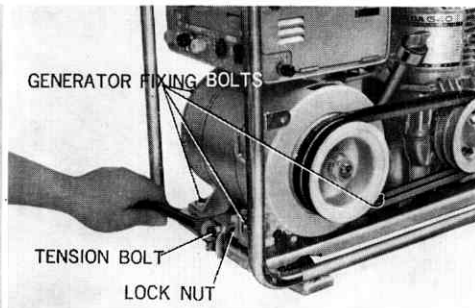
Loosen bolts at two positions and remove the belt cover.





The play of the belt is preferably approximately 10 mm (0.40 in).

Loosen the bolts used to fix the generator at four positions. Loosen the lock nuts and



use the tension bolt for adjustment of the tension of the belt.

After completion of the adjustment, tighten the fixing bolts of the generator and lock nuts.



PL → PILOT LAMP
Co → CONDENSER
CT → CURRENT TRANSFORMER
Si → SILICON SEGMENT
V → VOLT METER
NFB → NO-FUSE BREAKER
VR → VOLTAGE REGULATOR
R → RESISTOR
VA → VARIABLE RESISTOR
TE → EARTH TERMINAL
ES → ENGINE SWITCH
R → RED
W → WHITE
WG → WHITE WITH GREEN SPIRAL TRACER
Lg → LIGHT GREEN
LgW → LIGHT GREEN WITH WHITE SPIRAL TRACER
WB → WHITE WITH BLACK SPIRAL TRACER
LgB → LIGHT GREEN WITH BLACK SPIRAL TRACER
RB → RED WITH BLACK SPIRAL TRACER
RW → RED WITH WHITE SPIRAL TRACER
BrW → BROWN WITH WHITE SPIRAL TRACER
Br → BROWN
BrB → BROWN WITH BLACK SPIRAL TRACER
Y → YELLOW



SIMPLE TROUBLE SHOOTING

*** Engine hardly starts**

1. Check if it is the engine being tried to start with the electrical appliance or equipment connected and AC switch set to the "ON" position.
2. Check if it is there any fuel.
3. Check if it is there any improper adjustment of the engine parts or trouble with them.

*** Electricity is not generated**

1. Check if it is the AC switch turned to the "OFF" position.
2. Check if there is any abnormality in the electrical appliance or equipment being used.
3. Check if the contact between the brush and the slip ring is normal.

*** Electricity is generated but voltage is low**

1. Check if the engine rotational speed is low.
2. Check if the voltage regulator is defective in performance.
3. Check if the belt is slipping.
4. Check if the contact between the brush and the slip ring is normal.
5. Check if the contact of resistors inside the voltage regulator is normal.

	Temperature	SAE	ESSO		MOBIL		TEXACO	CALIFORNIA STANDARD		SHELL		CASTROL		BP	
		Grade	Brand	API grade	Brand	API grade	CALTEX	(Brand)	API grade	Brand	API grade	Brand	API grade	Brand	API grade
Engine Oil	General purpose except extreme hot and cold climates	10W/30	ESSO Extra Motor Oil 10W/30	MS~DM	Mobiloil Special	ML~DM	Havoline Five Star Motor Oil 10W/30	RPM Five Star Motor Oil 10W/30	MS	Shell X-100 Multigrade 10W/30	ML~MS	Castrolite 10W/30	MS	BP Viscostatic 10W/30	MS
	Below 15°C	20W 20	ESSO Motor Oil 20W	MS~DM	Mobiloil Arctic	ML~DG	Havoline Five Star Motor Oil 20W	RPM Five Star Motor Oil 20W	MS	Shell X-100 20W	ML~MS	Castrolite	MS~DG	BP HD Motor Oil 20W	MS~DG
					Delvac 1120	ML~DM									
	Above 15°C (59°F)	30	ESSO Motor Oil 30W	MS~DM	Mobiloil A	ML~DG	Havoline Five Star Motor Oil 30	RPM Five Star Motor Oil 30	MS	Shell X-100 30	ML~SM	Castrol XL	MS~DG	BP HD Motor Oil 30	MS~DG
					Delvac 1130	ML~DM									
	Extreme hot climate	40	ESSO Motor Oil 40W	MS~DM	Mobiloil AF	ML~DG	Havoline Five Star Motor Oil 40	RPM Five Star Motor Oil 40	MS	Shell X-100 40	ML~MS	Castrol XXL	MS~DG	BP HD Motor Oil 40	MR~DG
Delvac 1140					ML~DM										
Grease	General purpose	NILGI No. 2 Multipurpose Type	ESSO Multipurpose Grease	Mobilgrease MP		Caltex Marfak Multipurpose	RPM Multi-Motive Grease	—	Shell Retinex A		Castrolase LM		BP Energrease L2		

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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