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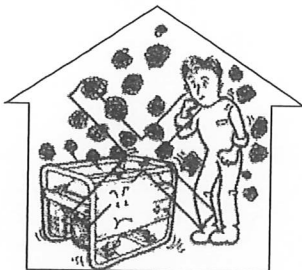
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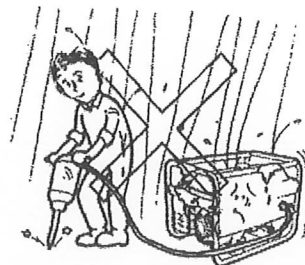
PART 1 SAFETY TIPS

Thank you for choosing our gasoline generator. Please read this manual carefully before use, and master the correct methods and tips of operation and maintenance.

Cautions: Not following the notes and safety precautions listed below may result in personal injury or severe engine damage. Please pay close attention to the following:



- Never operate in an enclosed/ poorly-ventilated area.

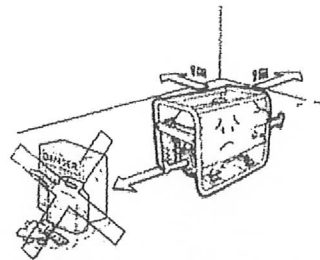


- Do not operate under wet climate (rain, snow).

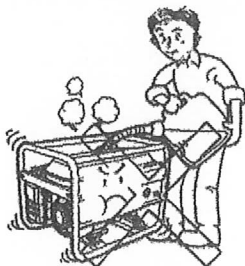
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- Never connect to house power circuit if commercial power supply is not cut.



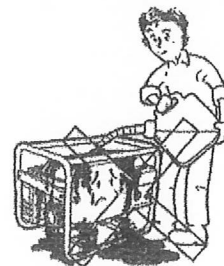
- Keep at least 1 meter away from inflammables.



- Remember to stop engine before fueling.



- No smoking when fueling.



- Avoid spilling out when fueling.

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Precaution:

1.Preventing fires

The fuel of the engine is gasoline and hence diesel, kerosene etc must not be used. Wipe away all fuel spills with clean cloth. Keep all the fuel and explosives and inflammables away from the generator, because the temperature around the exhaust muffler may be high during operation.

Operate the generator on a level surface. There may be fuel spillage if generator is tilted.

2.Preventing exhaust gas inhalation

Exhaust gas contains poisonous carbon monoxide. Never use the generator in poorly ventilated area.

Avoid indoor operation where possible and provide proper ventilation.

3.Preventing burning

Never touch the muffler or muffler cover while the engine is running or just stopped.

4.Electric shocks, short circuits

In order to avoid electric shocks or short circuit, do not touch the generator when either it or your hands are wet.

This generator is not waterproof, so it should not be used in a place exposed to rain, snow or water sprays.

The generator should be grounded to prevent electric shocks. Please connect a length of heavy wire between the generator's ground terminal and an external ground device.

Do not connect other devices to the generator before starting.

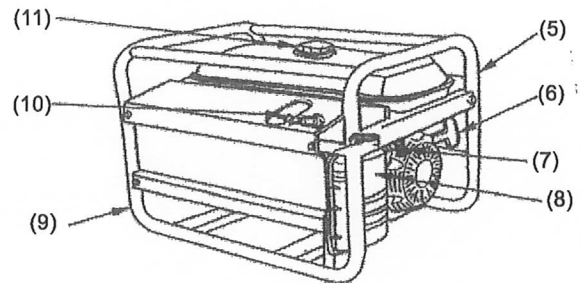
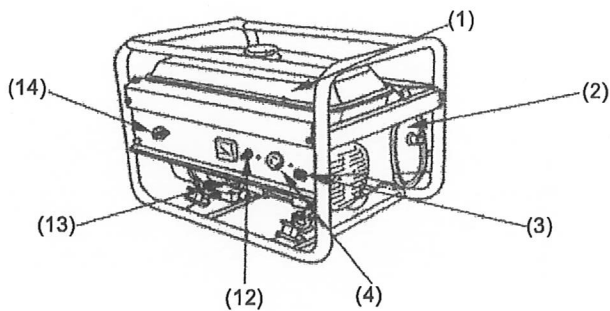
5.Other safety points

Know how to stop the generator quickly and understand how to operate all of the controls. Never permit anyone to operate the generator without proper instruction.

Always wear safety shoes and proper cloths. Keep children and pets away from the generator when it is in operation.

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PART 2 PARTS AND COMPONENTS INTRODUCTION



- | | | | | |
|------------------|---------------|------------------|-------------------|-----------------------------|
| 1.fuel tank | 2.muffler | 3.earth terminal | 4.A.C plug/socket | 5.carburetor throttle valve |
| 6.starter handle | 7.fuel cock | 8.air cleaner | 9.pipe support | 10.spark plug |
| 11.fuel tank cap | 12.AC.breaker | 13.dipstick | 14.starter switch | |

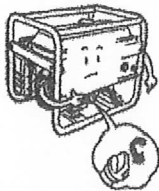
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PART 3 INSPECTION BEFORE OPERATION

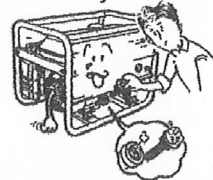
■ Machine oil level

Always check to machine oil level after stopping generator on a level ground.

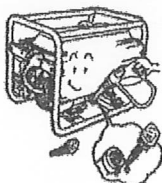
- 1.Turn out the oil filter cap and clean the dipstick with a clean cloth.



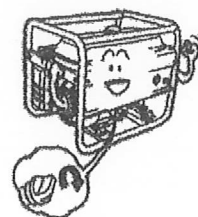
- 2.Insert the dipstick back into the oil filter hole. Oil level is checked with dipstick fully installed.



- 3.In the case that the oil level is below the lower level mark of the dipstick, refuel to the upper level mark.



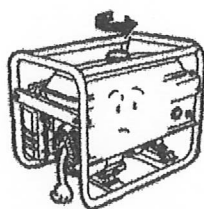
- 4.Reinstall the oil filter cap.



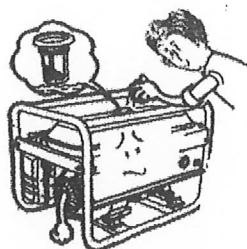
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■ Fuel oil level

1. Open the fuel tank cap.



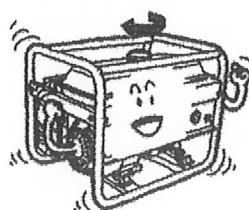
2. Check the fuel oil level, and refuel if necessary.



3. Refuel up to the shoulder of the fuel filter.



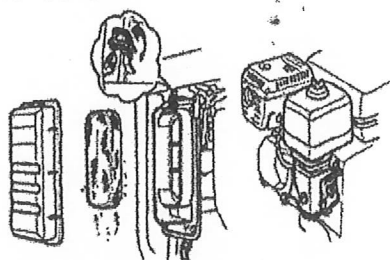
4. Reinstall the fuel tank cap.



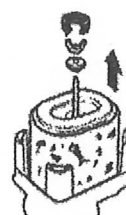
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■ Air cleaner

1. Remove the clip and dismantle the air cleaner housing or turn off the nuts and air cleaner cover.



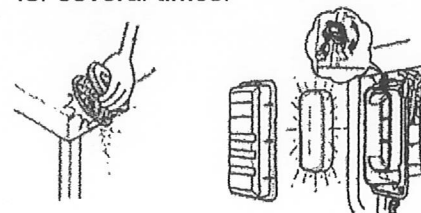
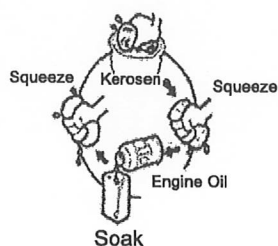
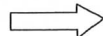
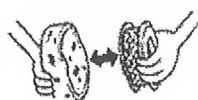
2. Turn off the nut and washer, and dismantle the filter element.



3. Dismantle the filter element.

4. Wash

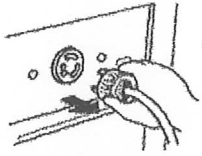
5. Slap slightly the filter element for several times.



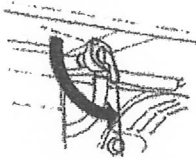
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PART 4 STARTING OF GENERATOR

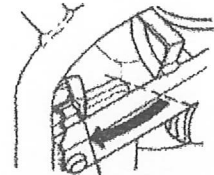
1.Remove all the loads from A.C socket and switch off the A.C breaker.



2.Set the fuel cock to "on" position.

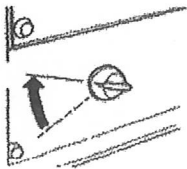


3.Push the choke lever to "choke" position.

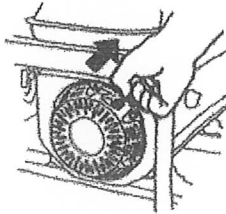


Carburetor throttle valve

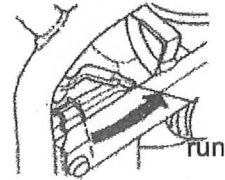
4.Turn the generator start switch to "on" position.



5.Pull the starter handle until resistance is felt,then pull it out swiftly and thoroughly.



6.Once the generator starts,set the choke level to "run" position.



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Tips and cautions for operating :

- Do not start two or more machines simultaneously.Start them one by one.
- Warm up the engine without load for about 3 minutes.If the generator is to supply power to more than one appliances,be sure to connect them one by one with higher current rated first.
Most appliance motors require more than their rated wattage for start up.Do not exceed the current limit specified for any one socket.
- Be sure that all appliances are in good working condition before connecting them to the generator.If an appliance begins to operate abnormally(becomes sluggish,or stops suddenly),turn off the generator main switch immediately.Then disconnect the appliance and examine it for signs of malfunction.
If overloading of the circuit trips the AC circuit protector,reduce the electric load on the circuit,and wait a few minutes before resuming operation.
If the indication of voltmeter is too or too high,stop the machine and examine it for cause of malfunction.The generator can load when the indicator of voltmeter show at 230V±10%(50hz)on the panel of control box.
- DC application:Do not use DC 12v and AC at the same time.
The DC terminal may be used for charging 12 volt automatic-type batteries only.When using automatic-type batteries with battery cables,be sure to disconnect the minus pole batter from the battery before charging.Do not reverse the charging cables,or serious damage to the generator and/or battery may occur.
- When connecting the generator to home power circuit,please make sure that a skilled electrician does the job.Improper connecting between the generator and appliance may cause damage of the generator or appliance,and even a fire accident. Warning:if the generator has to be connected to commercial power grid,make sure that the chief power switch must be shut off.Otherwise the sudden recovery of commercial power supply may cause damage to generator or appliance,and even a fire accident.

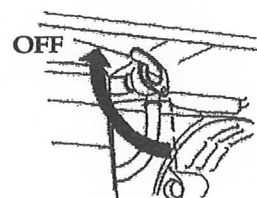
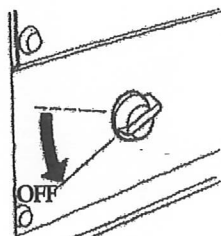
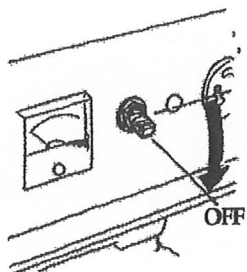
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PART 5 STOPPING OF GENERATOR

1. Switch off the AC breaker.

2. Turn the generator switch to "off" position.

3. Set the fuel cock to "off" position.



Note: To stop the generator in emergency, turn the generator switch to "off" position.

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PART 6 PERIODIC CHECKS AND MAINTENANCE

■ PERIODIC CHECKS AND MAINTENANCE

Periodic checks and maintenance are very important for keeping the engine in good condition and dependable. The generator consists of gasoline engine, alternator, control panel and frame, etc.

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

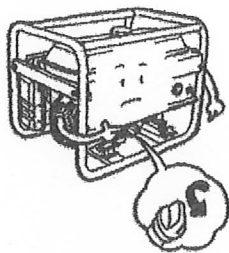
After engine has been used, clean it immediately with a cloth to prevent corrosion and remove sediment.

Item	Daily check	20hrs or first month	50 hrs or every 3 months	100hrs or every 6 months	300hrs or every 1 year
Machine oil check	○ check				
Replace engine oil		○ replace		○ replace	
Air cleaner check	○ check				
Air cleaner wash			○ clean		
Oil filter cup				○ clean	
Oil filter				○ clean	
Spark plug				○ clean	
Valve clearance					Check/adjust
Cylinder cover wash					○ clean
Fuel tank wash	Wash if necessary, replace every 3 years				

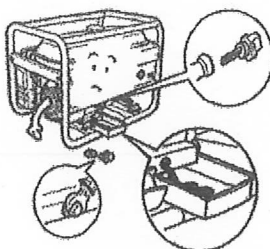
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■ Machine oil replacement

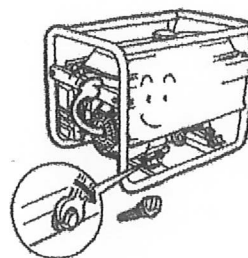
1. Turn and then take out the dipstick.



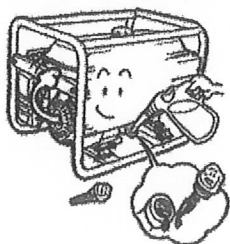
2. Turn off the drain plug, and empty the machine oil in the crankshaft.



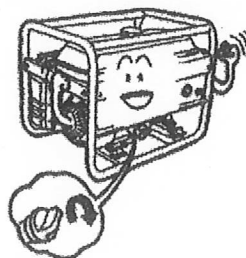
3. Screw on the drain plug.



4. Fill machine oil up to the upper level



5. Reinstall the dipstick



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Machine oil: 4 stroke gasoline engine oil-SE, SF from API Service Classification or SAE 10W-30 equivalent to SG class.

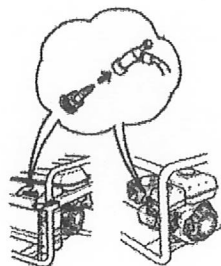
Low air temperature (below 10°C): recommended machine oil SAE10W-30

Frigid air temperature (below -15°C): SE, SF from API Service Classification or SAE10W-30 equivalent to SG class.

■ Air cleaner (refer to page 8: Air cleaner)

■ Spark plug

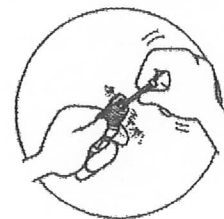
1. Dismantle the spark plug high-pressure cap.



2. Dismantle the spark plug.

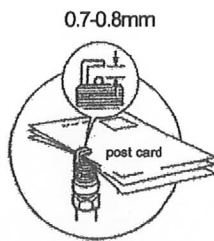


3. Clear away carbon sediment.



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4. Measure the electrodes clearance.

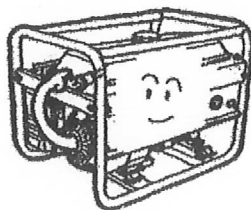


5. Reinstall the spark plug and high-pressure cap.



■ Fuel filter maintenance

1. Set the fuel cock to "off" position, and dismantle the fuel filter cup.

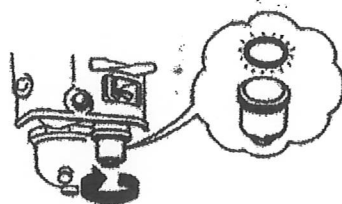


2. Clean the fuel filter cup thoroughly.



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3. Mount a new rubber ring and the filter cup securely



■ Maintenance for a long time storage

If the generator has been stored for a long time, the following preparation should be made:

1. Screw off the fuel drain plug, and empty the fuel inside the carburetor.
2. Turn off the oil filter plug and oil drain plug, and empty the machine oil inside the crankcase.
3. Reinstall the oil drain plug.
4. Fill in the machine oil up to the upper level mark of the dipstick.
5. Pull out the starter handle gently until resistance is felt.

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PART 7 TROUBLESHOOTING

Cause		Remedy
Engine can't start	Fuel oil is not enough	Refuel
	The switch is not at "on" position	Turn it to "on" position
	Lube oil is not enough	Check and fill in lube oil to proper level
	The speed and force to pull the recoil starter is not enough	Start the engine according to requirement of proper starting
	Spark plug has carbon sediment	Dismantle, check and clean spark plug.
No power generated	Main switch is not closed	Put the main switch to "on" position
	The contract of socket is not good.	Adjust the feet of socket
	The rated speed of generator can not be reached	Adjust it according to the requirements.

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PART 8 MAIN SPECIFICATIONS

Model		2000		2500		2700		3000B		3300B		4500		6200		7200		4500-3		6200-3		7200-3			
Voltage (V)		220;110/220						230;115/230						120;240;120/240						220/380;230/400					
Frequency (Hz)		50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	50	50	50				
Rated output (KVA)		2.2	2.5	2.2	2.5	2.5	2.7	3.2	3.7	3.2	3.7	4.0	4.3	6.2	6.8	7.2	8.1	4.0	6.2	7.2					
Max. output (KVA)		2.5	2.7	2.7	2.7	2.7	3.0	3.7	4.4	3.7	4.1	4.7	5.1	6.8	7.5	7.8	8.7	4.7	6.8	7.8					
Engine	Model	UP168-1						UP170				UP177		UP190		UP190		UP177		UP188		UP190			
	TYPE	Four-stroke,Air-cooled,OHV gasoline engine																							
	Max. power	5.5HP						7.0HP				9.0HP		14.0HP		14.0HP		9.0HP		13.0HP		14.0HP			
	Displacement	163cc						208cc				270cc		420cc		420cc		270cc		389cc		420cc			
	Fuel consump (g/kwh)	<395						<374						<370				<374				<370			
	Ignition system	Non-contact transistor																							
	Bore × stroke	68x45						70x54				77x58		88x64		90x66		77x58		88x64		90x66			
	Lubrication Oil	SAE 10W/30																							
Starting	Recoil or electric																								
Fuel tank capacity(L)		15										25													

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PART 8 MAIN SPECIFICATIONS

Model		4000A		8300		7000S		7000S-3		8300-3	
Voltage (V)		220V;110/220		230;115/230		120;240;120/240		220/380; 230/400			
Frequency (Hz)		50	60	50	60	50	60	50	60	50	60
Rated output (KVA)		4.0	4.5	8.7	9.3	8.5	9.1	8.5	9.1	8.7	9.3
Max. output (KVA)		4.3	5.0	9.6	10.2	9.3	9.7	9.3	9.7	9.6	10.2
Engine	Model	UP170C		UP192							
	TYPE	Four-stroke,Air-cooled,OHV gasoline engine									
	Max. power	7.5HP		15HP							
	Displacement	223cc		459cc							
	Fuel consump (g/kwh)	<395		<370							
	Ignition system	Non-contact transistor									
	Bore × stroke	70x58		92X69							
	Lubrication Oil	SAE 10W/30									
Starting		Recoil or electric									
Fuel tank capacity(L)		15		25		22		25			