BEEM Outdoors LLC. Natural Gas & LPG Generator Set Model # BMG5

Operation Instruction & Owner's Manual

BEEM Outdoors LLC. MODEL NO. : BMG5

Caution:

Carefully read and understand this Owner's Manual before starting this generator

Introduction

Introduction

Congratulations on your purchase of our generator. We design and build generators to strict specifications. With proper use and maintenance, this generator will bring you years of satisfying service.

Generator Set

This unit is LPG or natural gas engine driven, alternating current (AC) generator. It is designed to supply electrical power for lighting, appliances, tools and similar equipment. Do not use gasoline or other fuels.

This Booklet

This manual covers operation and maintenance. All information in this publication is based on the latest product information available at the time of approval for printing. Every effort has been made to ensure the accuracy and completeness of the information in this manual. We reserve the right to change, alter and / or improve the products and this document at any time without prior notice and without incurring any obligation.
Record the model and serial number as well as date and places of purchase for future reference. Have this information available when ordering parts and when technical or warranty inquiries.

Authorized Sales & Service Distributor:
Model Number:
Engine Serial Number:
Air-Fuel Mixer Serial Number:
Date Of Purchase:
Purchase Location:

Manual Conventions

Manual Conventions

This manual uses the following symbols to help differentiate between different kinds of information. The safety symbol is used with a key word to alert you to potential hazards in operating and owning power equipment.
Following all safety messages to avoid or reduce the risk of serious injury or death.

Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Caution indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Notice gives helpful information.

Safety Rules

Please read and understand this manual thoroughly before operating your generator. Failure to follow instructions could result in serious injury even death.

Exhaust gas contains poisonous carbon monoxide, which is harmful to the health. Never use the generator set at the confined places or poor ventilated locations. If it's necessary to run the generator set, be sure to provide the adequate ventilation.

Generator produces powerful voltage.

1. DO NOT touch bare wires or receptacles.
2. DO NOT use electrical cords that are worn, damaged or frayed.
3. DO NOT operate generator in wet condition or with wet hand.
4. DO NOT allow children or unqualified persons to operate or service the generator.
5. DO NOT use a ground fault circuit interrupter (GFCI) in damp areas and areas containing conductive material such as metal decking.

Use approved transfer equipment to isolate generator from your electric utility and notify your utility company before connecting your generator to your power system.

Sparks can result in fire or electrical shock. When servicing the generator, disconnect the spark plug wire and place it where it cannot contact the plug. DO NOT check for spark with the plug removed. Use only approved spark plug testers.

Safety Rules

Running engines produce heat. Severe burns can occur on contact. Combustible material can catch fire on contact.

1. DO NOT touch hot surfaces.
2. Avoid contact hot exhaust gas.
3. Never touching the equipment until it's cool.
4. Maintain at least 3 feet (about 1meter) of clearance on all sides to ensure adequate cooling.
5. Maintain at least 5 feet (about 1.5 meters) of clearance from combustible materials.

1. Propane (LPG) and natural gas (NG) is highly flammable and explosive. Fire or explosion can cause severe burns or death if the gas is ignited.
2. Before starting the generator, inspect your LPG tank and NG pipeline and valve for damage or leaks, attach only approved tanks that have been properly filled by an approved station, DO NOT light or smoke cigarette.
3. Replace the hose at the first sign of a leak or if age-cracking becomes apparent.
4. When starting the generator DO NOT attempt to start a damaged generator, make certain that the LPG tank, air filter, spark plug, fuel lines and exhaust system are properly in place, make certain that the generator resting firmly on level ground.
5. When operating the generator DO NOT move or tip the generator during operation, DO NOT tip the generator or allow oil to spill.
6. When transporting or servicing the generator make certain that the generator is disconnected and properly shut off, disconnect the spark plug wire.
7. When storing the generator store away from sparks, open flames, pilot lights, heat and other sources of ignition.

1. Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let go. Unintentional startup can result in entanglement, traumatic amputation or laceration. Broken bones, fractures, bruises or sprains could result in.
2. When starting engine, pull the starter cord slowly until resistance is felt and then pull rapidly to avoid kickback.
3. DO NOT start or stop the engine with electrical devices plugged in.

1. The battery contains acid. Acid is strongly corrosive.
2. DO NOT use, store or expose the battery in high temperature situations, as in the direct sunlight, inside automobiles during hot weather, directly in front of a heater, etc.
3. Be sure to turn off the equipment after use.

Safety Rules

Warning

The noise is harmful to your health when the generator set is running. Serious noise will result in tinnitus, earache, hearing damage even deafness, eye and nervous system damage, etc. Please do something for noise protection before running the generator set if it's necessary, like as wearing hearing protector and so on.

Caution

Exceeding the generator's running capacity can damage the generator and/or electrical devices connected to it.

1. DO NOT overload the generator.
2. Start the generator and allow the engine to stabilize before connecting electrical loads. Connect electrical equipment in the off position, and then turn them on for operation.
3. Turn electrical equipment off and disconnect before stopping the generator.
4. DO NOT tamper with the speed governor.
5. DO NOT modify the generator in any way.

Caution

Improper treatment or use of the generator can damage it, shorten its life and void your warranty. Use the generator only for intended use.

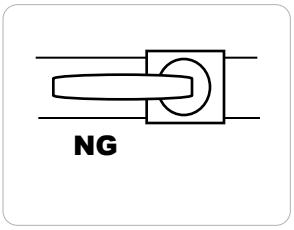
1. Operate only on level surfaces.
2. DO NOT expose generator to excessive moisture, dust, or dirt.
3. DO NOT allow any material to block the cooling slots.
4. If connected devices overheat, turn them off and disconnect them from the generator.
5. DO NOT use the generator if electrical output is lost, equipment sparks, smokes or emits flames and equipment vibrates excessively.

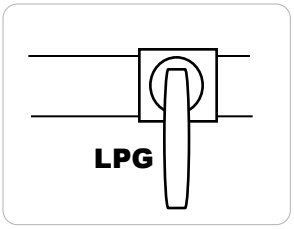
Warning

Use only genius AUTHORIZED SALES & SERVICE DEALER/ DISTRIBUTOR parts or their equivalent. The set of replacement which is not equivalent quality may damage your generator.

Component Identification

BMG5





LPG/NG change-over-switch

Air-fuel mixer
series number

Component Identification

Controls & Features

Read this owner's manual before operating your generator. Familiarize yourself with the location and function of the controls and features. Save this manual for future reference.

Oil Fill Cap:
Check and fill engine oil level.

Engine:
Used to power generator (alternator).

Air Cleaner:
Protects the engine by filtering dust and debris from the intake air.

Engine & Air-fuel Mixer Serial Number:
Please have this number available when calling for assistance.

Low Oil Sensor:
Senses the level of oil in the crankcase and shuts the engine down if the level falls too low.

Auto Choke Valve:
Used to control air flow rate.

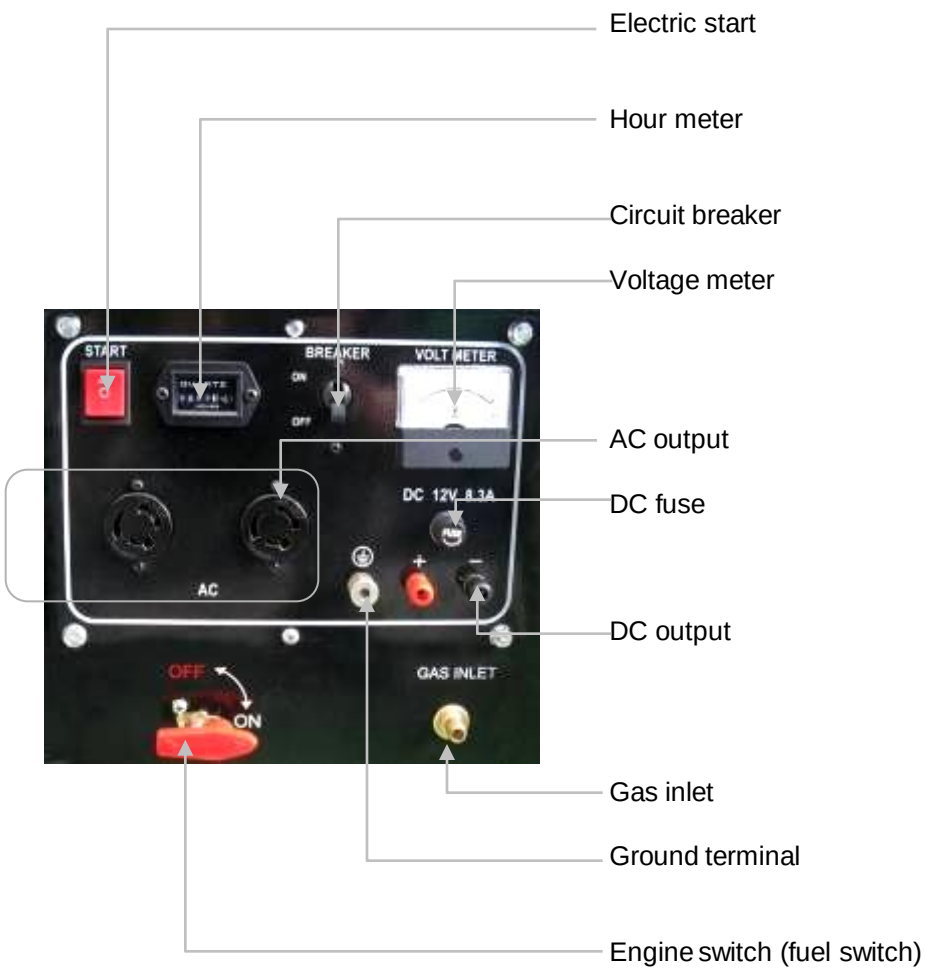
Bolt:
Used to fix the engine cover (front cover).

Power Output Panel:
Please refer to "Power output Panel" description.

Power output panel

Controls & Features

Read this owner's manual before operating your generator. Familiarize yourself with the location and function of the controls and features. Save this manual for future reference.



Assembly

Parts Included

Your generator set ships with the following parts.

	Description	Nos.
	Generator set	1
	Spark plug socket	1
	AC plug	2
	DC battery cable	1
	Gas pipe clip	1
	Wrench	1
	Vibration mount	4
	12V, 15AH battery	1
	Cap screw M8*25	4
	Cap screw M5*12 Washer Φ5 Spring Washer Φ5 Nut M5	2 2 2 2
	Owner's Manual Certificate of Quality	1 1

Assembly

Assembly Introduction

Your generator requires some assembly.

This unit ships from our factory without engine oil.

It must be properly serviced with fuel and oil before operation.

If you have any question regarding the assembly or your generator, call your help line of authorized sales & service distributor/ dealer. Please have your engine & air-fuel mixer serial number and model number available.

Install vibration mount

Before installing vibration mount, make sure NO LUBE OIL inside the crankcase .

Warning

All the vibration mounts must be installed to ensure enough air flow rate.
Otherwise the generator will be easily over heating & break down.

Install Battery

Attach the red lead to the red terminal on the battery with cap screw & nut.

Warning

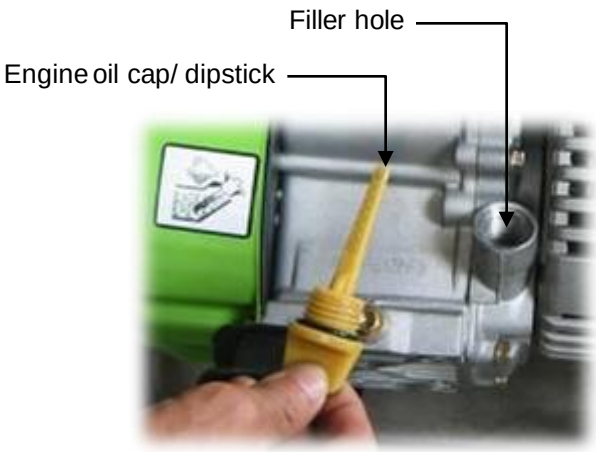
The 12V DC Battery is usually equipped with ELECTRICAL START GENERATOR SET.

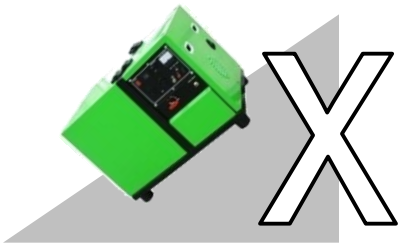
1. DO NOT use the battery if it is leaking, or abnormal in any other way.
2. DO NOT connect the battery in reverse polarity.
3. Charge the battery equipped with generator for firstly use.

Assembly

Add Engine Oil (Lube Oil)

1. Place the generator on a flat, level surface.
2. Remove OIL FILL CAP / DIPSTICK to add oil. Use the DIPSTICK to measure the oil level. The engine oil level must be in regulated range.
3. Add engine oil and reinstall OIL FILL CAP / DIPSTICK.
4. Check engine oil level for each use and add as needed.





Caution

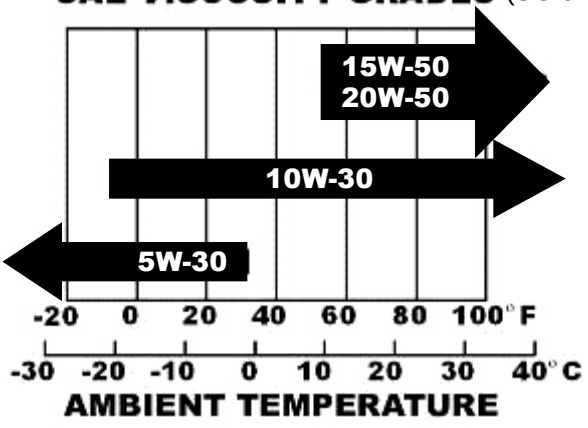
Running the engine with insufficient engine oil can cause serious engine damage.

Lube oil capacity for different generator

Model	BMG5
Oil Capacity	1.1L

4-stroke motor oil.

SAE VISCOSITY GRADES (SG or higher level)



Assembly

Connect Gas Supply Source

Step 01:
Keep gas supply source closed and ENGINE SWITCH at OFF position.

Step 02:
Attached the gas pipeline to GAS INLET and gas supply source.

Step 03:
tighten the clip at each end of gas pipeline until it's not easy to pull down from gas pipeline and prevent gas leaking.

Warning

1. All gas pipe joints should be fixed tightly before operating the machine.
2. Usually check the joints and gas hose for leakage or breaks, replace the damaged if necessary.
3. Change the gas pipeline for each 18 months use.
4. LPG & Nature gas is extremely flammable and explosive.

Assembly

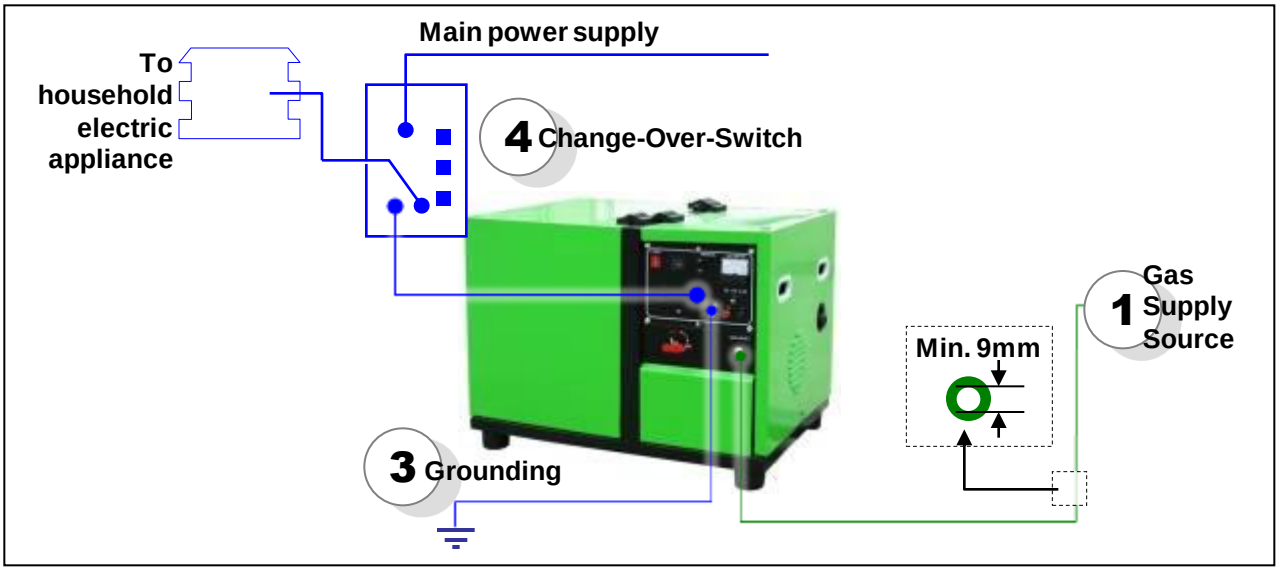
Grounding

Your generator must be properly connected to an appropriate ground to help preventing electric shock.

Warning

1. To prevent electrical shock from faulty appliances, the generator should be grounded. Connect a length of heavy wire between the ground terminal and the ground source.
2. We strongly recommend that you consult with a qualified electrician to ensure compliance with local electrical codes.

Installation Guide for Household use



Caution

Connections for emergency power to household circuits must be made by a qualified electrician and must comply with all applicable laws and electrical codes. Improper installation may result in personal injury or damage to equipment or property.
Change-over-switch must be used when connect generator power for household use.

Working Condition

Environment Requirement

Temperature: for NG powered generator set: -30 ℃～40 ℃;
for LPG powered generator set: -5 ℃～40 ℃.

Sea level: Height above sea level: below 1000m

The generator output power will decline if working above sea level 1000m.

Gas Requirement

LPG

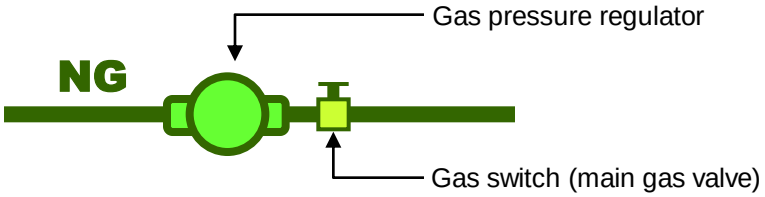
1. LPG Pressure Regulator should be equipped on LPG cylinder.
2. Be sure place the LPG cylinder vertically.

Regulator outlet pressure should be as follow:

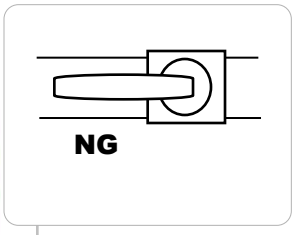
Type	BMG5
Flow rate	QLPG ≥ 2.0 kg/h or QLPG ≥1 m^3/h
Regulator outlet pressure	2.8±0.5KPa (0.4 ± 0.07 PSI)

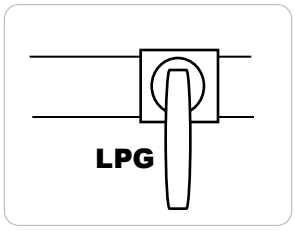
Natural Gas

Main Gas Valve should be equipped on main gas pipe.
Recommended gas pressure: 2.0～6.0kPa (0.29～0.87 PSI)



Pre-operation Check





(1) LPG / NG Change-Over-Switch

(2) Check if engine oil is enough.

(3) Check gas supply source is in good condition.
Check gas inlet connection is tightly fixed, not leaking.

(4) AC circuit breaker is at OFF position.

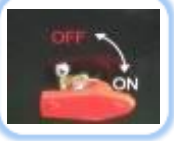
(5) AC output no load connected.
Disconnect all electrical loads from the generator set before starting engine. The generator may be hard to start if a load is connected.

(6) DC output is nothing connected.

(7) Ground terminal is properly grounded.

Start Engine

Step 1: Open gas fuel source (NG or LPG).



Step 2: Turn engine switch at ON position.

Step 3: Push electric start push button to start engine. If the engine fails to start with 5 seconds, release the button and wait at least 5 seconds before attempting to start engine again.

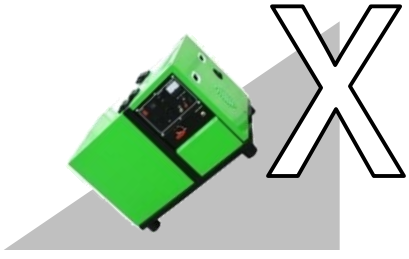
Step 4: Turn circuit breaker at ON position.

Notice

If your engine is starting, do an inspection on the top cooling fan, and ensure it is operating. Otherwise, you should stop the engine.

Notice

If the engine starts but does not run, make certain that the generator is on a flat, level surface. The engine is equipped with a low oil sensor that will prevent the engine from running when the oil level falls below a critical threshold.



Caution

1. This generator must have at least 5 feet (about 1.5 meters) of clearance from combustible material.
2. Leave at least 3 feet (about 1 meter) of clearance on all side of the generator to allow for adequate cooling, maintenance and servicing.
3. Place the generator in a well-ventilated area.
4. DO NOT place the generator near vents or intakes.

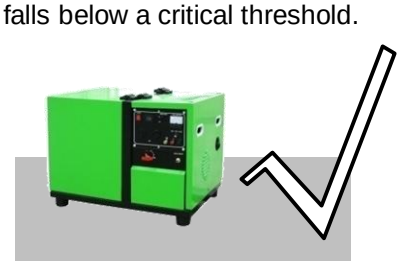
Start Engine

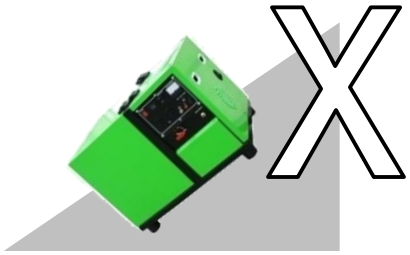
Notice

If your engine is starting, do an inspection on the top cooling fan, and ensure it is operating. Otherwise, you should stop the engine.

Notice

If the engine starts but does not run, make certain that the generator is on a flat, level surface. The engine is equipped with a low oil sensor that will prevent the engine from running when the oil level falls below a critical threshold.





Caution

1. This generator must have at least 5 feet (about 1.5 meters) of clearance from combustible material.
2. Leave at least 3 feet (about 1 meter) of clearance on all side of the generator to allow for adequate cooling, maintenance and servicing.
3. Place the generator in a well-ventilated area.
4. DO NOT place the generator near vents or intakes.

Use Generator

AC application

Caution

1. Limit operation requiring maximum power to 30 minutes.
2. For continuous operation, DO NOT exceed the rated power. Recommend continuous running time is not more than 8 hours without stop.
3. DO NOT exceed the current limit specified for any one receptacle.
4. Connection for emergency power to household circuit must be made by a qualified electrician and must comply with all applicable laws and electrical codes.
5. Improper installation may result in personal injury or damage to equipment or property.
6. Be sure that appliances DO NOT exceed the rated load for more than 30 minutes, and never exceed the maximum load. Substantial overloading will switch off the circuit breaker. Lesser overloading will not switch off the circuit breaker and will shorten the service life of the generator.

Notice

1. If the power output reduces when in on-load status, adjust by closing the choke valve gradually till the desired result.
2. Appliances / Equipments drawing higher current should be switched on firstly. Wattage would differ amongst different brands. Hence, kindly check the same before use.

Use Generator

DC application

Warning

Do not connect DC output to generator battery, Otherwise, there will be serious alternator damage and other potential accidents.

Charge battery:
Red, positive (+)
Black, negative (-)

Notice

1. For 18AH/15AH storage battery: charge electricity not more than 2 hours
2. For 9AH storage battery: charge electricity not more than 1 hour

Caution

1. The DC output (12V, 8.3A) can be used to charge 12V accumulative battery. Connect DC output(+) with battery positive, Connect DC output (-) with battery negative.
2. DO NOT attempt to start an automobile engine with the generator still connect to the battery. The generator may be damaged.
3. DO NOT reverse the charging cables, or serious damage to the generator and / or battery may occur.

Warning

Battery produces explosive gases. Keep sparks, flames, and cigarettes away. To prevent the possibility of creating a spark near the battery, connect charging cables first to the battery, then to the generator, and disconnect cables first at the generator.

Battery Maintenance

1. Make sure correct connection of battery for positive (+) and negative (-).
2. Battery needs maintenance for every 6months. We suggest to charge storage battery by special battery charger.

Battery type	Charger output ampere	Charger output voltage
15AH	0.9A	13.5 ~ 14.8V

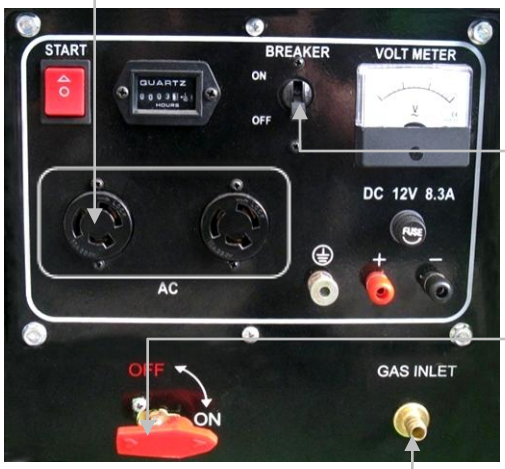
Stop Engine

Stop Engine in Emergency Use

To stop the engine in an emergency, directly turn the ENGINE SWITCH at OFF position, or close the GAS SUPPLY SOURCE.

Stop Engine in Normal Use

To stop the engine in normal use, please follow the below operation steps.



(1) Turn off and unplug all electric loads. Never start or stop the generator with electric devices plugged in or turned on.

(2) Let the generator run at no-load for several minutes to stabilize internal temperatures of the engine and generator (alternator). Turn the circuit breaker to OFF.

(3) Turn engine switch to the OFF position.

(4) Close gas supply source.

Maintenance

Warning

Importance

1. Complete all scheduled maintenance in a timely manner. Correct any issue before operating the generator.
2. Improper maintenance will void your warranty. Tampering with the factory set governor will void your warranty.
3. To ensure the best quality, use only designated parts or contact your local dealer.

Safety

1. Read the instructions before you begin, and make sure you have the tools and skills required.
2. Always follow the procedures and maintenance instructions in the owner's manual.

How To Read Hour Meter ?

The Hour Meter records the total running hours the generator set has been used. With the help of Hour Meter, user can more easy to follow the scheduled maintenance activities. And assure longer life of your generator set.

How to read HOUR METER?

- Example-1: 000012 

  Calculation: 0x10000 + 0x1000+0x100+0x10+1x1+2x6=1hour and 12min.

- Example-2: 006189 

  Calculation: 0x10000 + 0x1000+6x100+1x10+8x1+9x6=618hours and 54min.

Maintenance

Maintenance Schedule

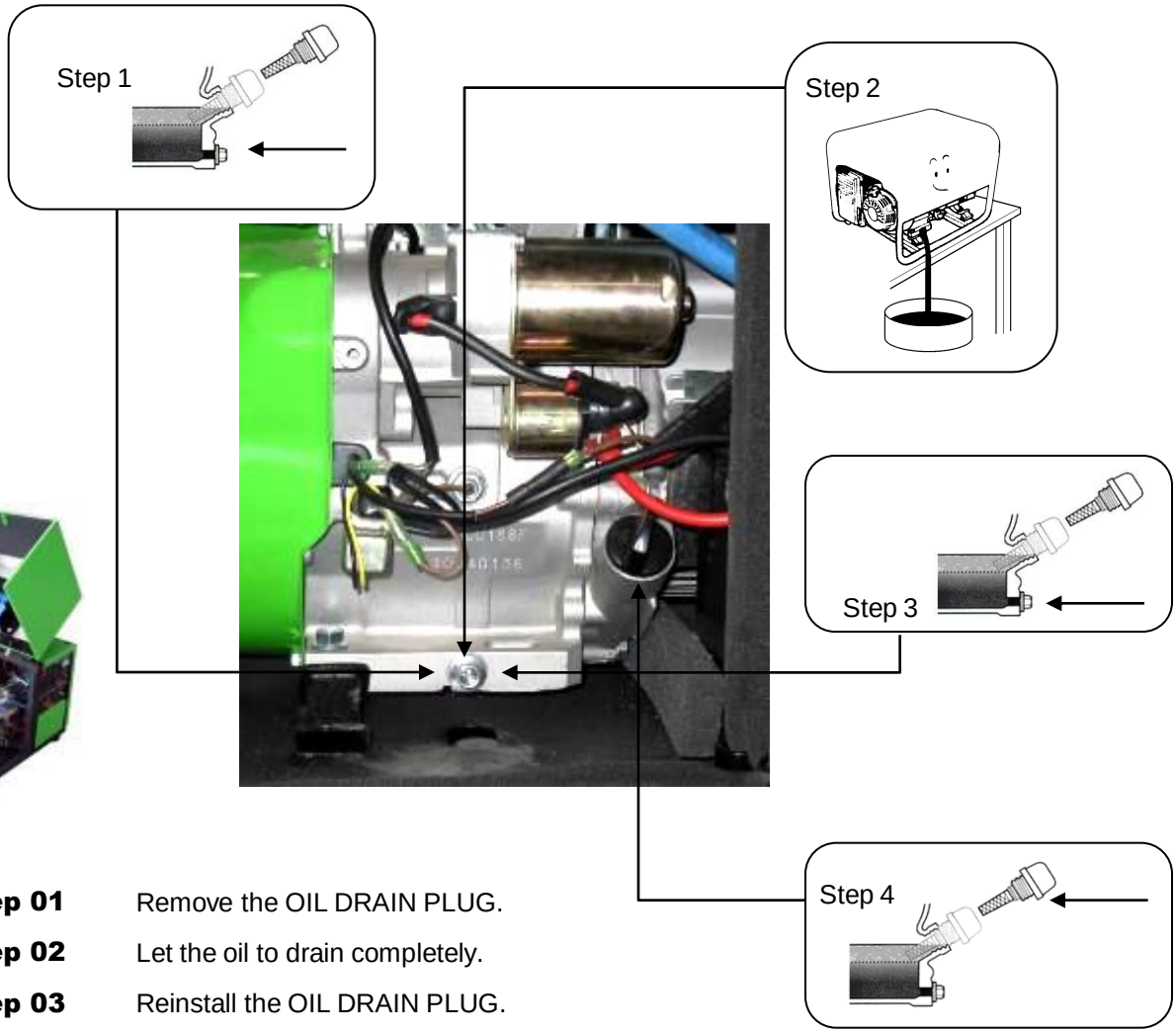
Total running time		Initial ration	Every 1month	Every 3months	Every 6months	Every 12months
Item		or 20h	or 20h	or 50h	or 100h	or 300h
Spark plug	Remove carbon, adjust gas, replace if necessary			√		
Engine oil	Check oil level	√				
	Replace		√		√	
Valve Clearance	Check or adjust when engine is cold					√ (※)
Air filter	Clean or replace if necessary			√		
Clean Carbon residue	More frequently if necessary					√ (※)
Fittings, Fasteners	Check all fittings, fasteners adjust if necessary				√	
Gas hose	Change	Every 18months				

Notice

1. Service the generator more frequently when operating in adverse conditions.
2. Marked with (※) items should be serviced by authorized sales & service distributor / dealer or distributor, unless the owner has relative technical background and necessary repairing tools.

Maintenance

Engine – Changing Engine Oil



Step 01 Remove the OIL DRAIN PLUG.

Step 02 Let the oil to drain completely.

Step 03 Reinstall the OIL DRAIN PLUG.

Step 04 Remove OIL FILL CAP / DIPSTICK to add oil.

Caution

1. Change lube oil after 1st 20hours or 30 days use.
2. After 1st use, change lube oil every 100 hours use.

Maintenance

Engine – Clean Air Filter

A dirty air cleaner will restrict air flow to the Air-Fuel Mixer. To prevent Air-Fuel Mixer malfunction, service the air cleaner regularly. Service more frequently when operating the generator in extremely dusty areas.

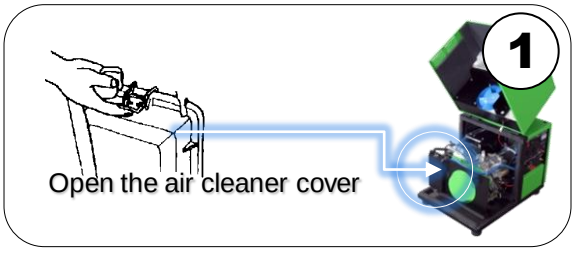
Warning

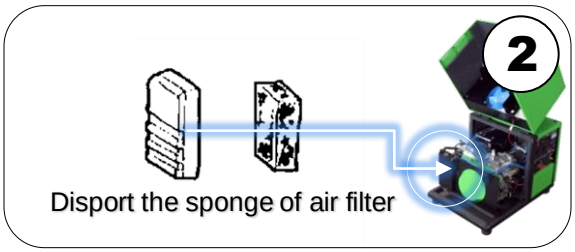
Never use gasoline or low flash point solvents for cleaning the air cleaner element. A fire or explosion could be result in.

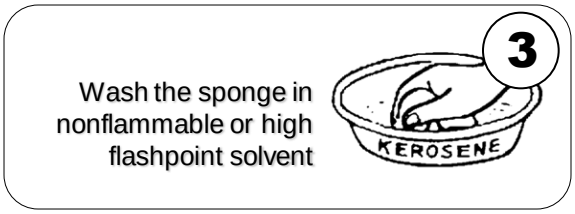
Caution

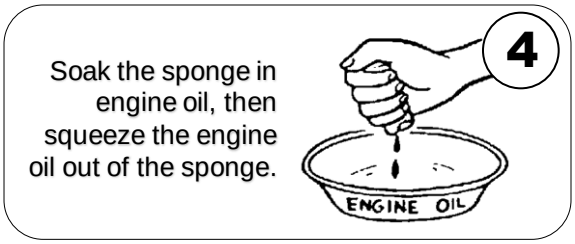
Never run the generator without the air cleaner. Rapid engine wear may be result in.

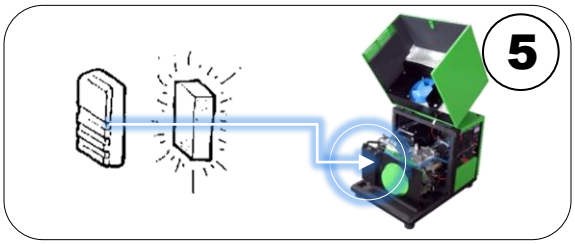
1. Remove the snap-on cover holding the air filter to the assembly.
2. Remove the foam element.
3. Wash in liquid detergent and water. Use an air compressor (25 PSI) to clear dirt and debris from the engine.
4. Squeeze in a clean, absorbent cloth to remove al excess oil.
5. Place the filter in the assembly. Reattach the air filter cover and snap in place.











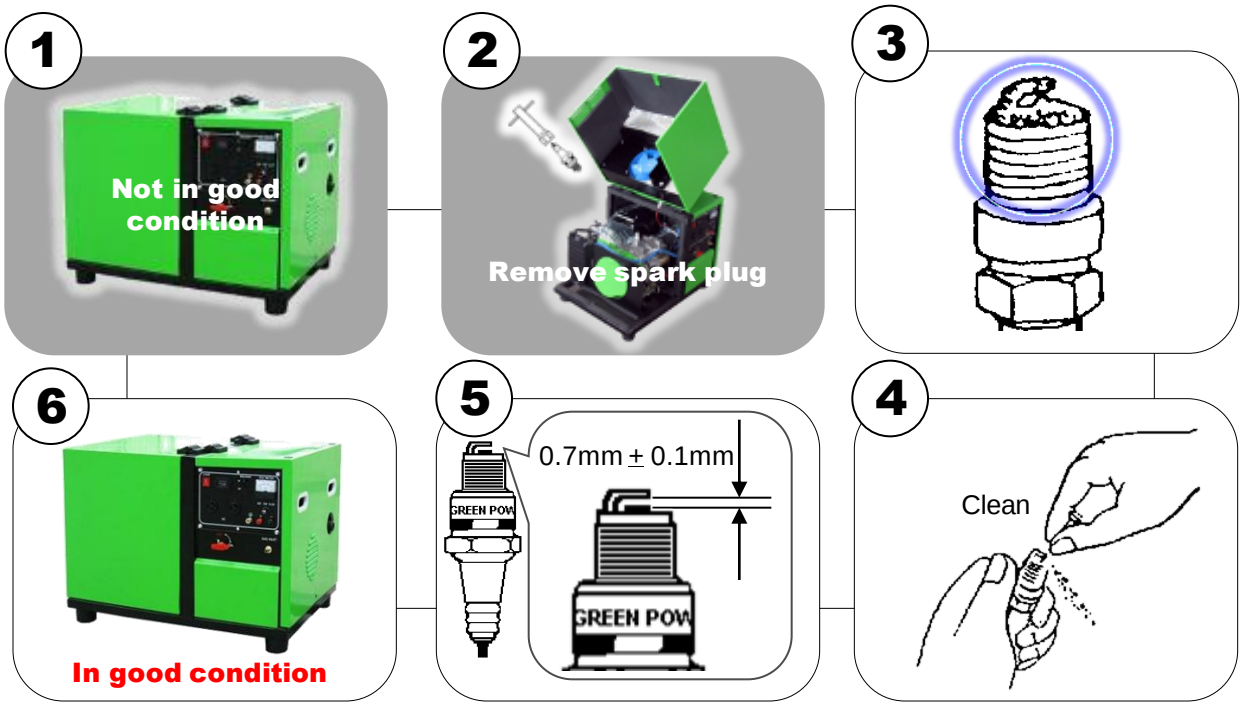
Clean the Generator Set

Caution

1. DO NOT spray engine with water, water can contaminate the fuel system.
2. Use a damp cloth to clean exterior surfaces of the engine.
3. Use a soft bristle brush to remove dirt and oil.
4. Use an air compressor (25 PSI) to clear dirt and debris from the engine.
5. Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

Maintenance

Engine – Clean Spark Plug



1. Generator is not in good condition.
2. Remove the spark plug cap. Use the wrench supplied to remove the spark plug.
3. Visually inspect the spark plug.
4. Discard it if the insulator is cracked or chipped.
5. Measure the plug gap with a feeler gauge. The gap should be 0.7mm± 0.1mm, correct as necessary by bending the side electrode.
6. Attach the plug washer. Thread the plug in by hand to prevent cross-threading. 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

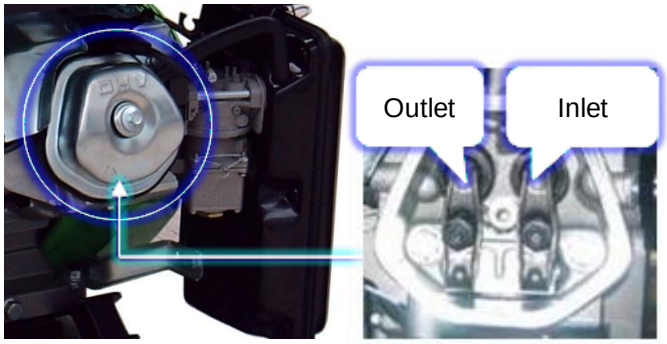
1. Allow the engine to cool before removing the spark plug. Otherwise, it may be damaged.
2. The spark plug must be securely tightened. An improperly tightened plug can become very hot and possibly damage the generator.
3. Use only GREEN POWER brand replacement natural gas or LPG spark plug.

Maintenance

Engine – Adjusting Inlet & Outlet Clearance

Caution

Allow the engine to cool before adjusting inlet or outlet valve clearance. Otherwise, it may be damaged. This operation must be performed by professional technical staff, please contact with authorized sales & service distributor/ dealer for further details.



Inlet & Outlet Valve Clearance

Model Number	Inlet Valve Clearance (cold)	Outlet Valve Clearance (cold)
5000	0.06~0.08 mm	0.08~0.10 mm

Engine – Air-fuel Mixer

Warning

1. Disassemble Air-fuel Mixer will void your warranty. Please contact authorized sales & service distributor/ dealer if you need change Air-fuel Mixer.
2. The Air-fuel Mixer is not adjustable.
3. Tampering with the governor can damage your generator and your electrical devices, and will void your warranty.

Generator (Alternator)

1. Make certain that the generator is kept clean and stored properly.
2. Only operate the unit on a flat, level surface in a clean, dry operating environment.
3. DO NOT expose the unit to extreme conditions, excessive dust, dirt, moisture or corrosive vapors.

Clean the Generator Set

Caution

1. DO NOT spray engine with water, water can contaminate the fuel system.
2. Use a damp cloth to clean exterior surfaces of the engine.
3. Use a soft bristle brush to remove dirt and oil.
4. Use an air compressor (25 PSI) to clear dirt and debris from the engine.
5. Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

Troubleshooting

Trouble	Cause	Solution
Fail to start	Battery not connected or wrong connection	Connect the battery in correct way
	Battery not charged	Recharge or replace battery
	No fuel supply	Open GAS SUPPLY SOURCE
	Faulty spark plug	Replace spark plug
	Unit loaded during start up	Unload the unit
	Low engine oil level	Fill crankcase to the proper level, place generator on a flat, level Surface
Generator set starts but runs roughly or frequency fluctuating obviously	Choke in wrong position	Adjust Choke Valve
	GAS SUPPLY SOURCE pressure exceed claimed value or mixer is damaged	Adjust GAS SUPPLY SOURCE pressure according to instruction or replace air-fuel mixer, or contact your local Dealer
Generator set shuts down during operation	No fuel supply	Check GAS SUPPLY SOURCE
	Low engine oil level	Fill crankcase to the proper level, place generator on a flat, level surface
Power output decline or overheating	Overloading	Check loading and do an adjusting. Refer to Power Management
	Gas pressure is out of range	Change GAS SUPPLY SOURCE, or contact your local dealer
	High ambient temperature causes low gas density	Adjust Choke Valve gradually
	Running under low ambient temperature causes low fuel vapor	Adjust Choke Valve gradually
No AC output	Cable not properly connected	Check all connections
	Connected device is defective	Replace defective device
	AC Circuit Breaker is OFF	Adjust loading and reset the AC Circuit Breaker
	Capacitor defective	Replace Capacitor (Service Center)
	Faulty brush assembly	Replace brush assembly (Service Center)
	Faulty AVR	Replace AVR (Service Center)
	Loose wiring	Inspect and tighten wiring connections
	Others	Contact your local dealer
Generator set idle	Engine governor system defective	Adjust, or Contact your local dealer
Repeated circuit breaker tripping	Overloading	Check loading and adjust. Refer to Power Management
	Short circuit	Check for damaged, bare or frayed wires. Replace defective device

Storage & Transportation

Storage

The generator set should be started at least once every 14 days and allowed to run for at least 20 minutes. For longer term storage, please follow these guidelines.

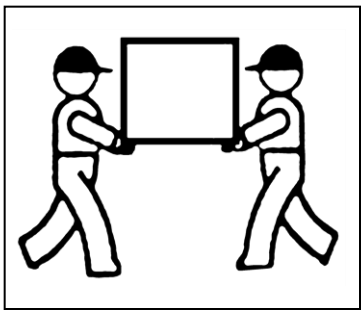
1. Allow the engine to cool completely before storage.
2. Clean the engine according to the instructions in the Maintenance section.
3. Turn the ENGINE SWITCH to OFF position.
4. Close the manual shutoff valve on the LPG cylinder or on the NG pipeline and disconnect from the generator set.
5. Drain all the oil.
6. Remove the spark plug and pour about 15g (about 0.5 ounce) of oil into the cylinder. Crank the engine slowly to distribute the oil and lubricate the cylinder.
7. Re-attach the spark plug.
8. Store the unit in a clean, dry area, out of direct sunlight.

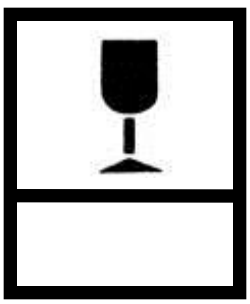
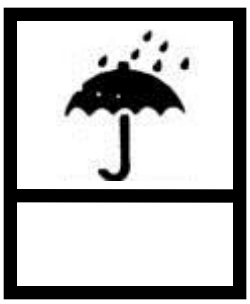
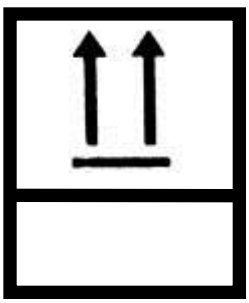
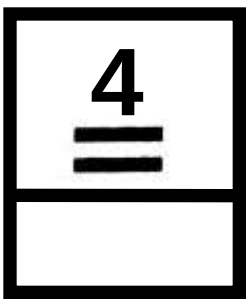
Transportation

1. Drain all remained oil in the crankcase.
2. Package generator set according factory state.

Caution

Never lay the generator set with upside down.



Power Management

Power Calculation

Follow these simple steps to calculate the running and starting watts necessary for your purposes.

1. Select the electrical devices you plan on running at the same time.
2. Total the running watts of these items.
3. This is the amount of power you need to keep your items running.
4. Identify the highest starting wattage of all devices identified in step 1. Add this number to the number calculated in step 2. Surge wattage is the extra burst of power needed to start some electric driven equipment. Following the steps listed under “Power Management” will guarantee that only one device will be started at a time.

Use the following formula to convert voltage and amperage to watts:

Volts x Amps = Watts

To prolong the life of your generator and attached devices, follow these steps to add electrical load:

1. Start the generator with no electrical load attached.
2. Allow the engine to run for several minutes to stabilize.
3. Plug in and turn on the first item. It is best to attach the item with the largest load first.
4. Allow the engine to stabilize.
5. Plug in and turn on the next item.
6. Allow the engine to stabilize.
7. Repeat steps 5-6 for each additional item.

Never exceed the generator capacity when adding loads.

If frequent lightening is occurring around your neighborhood, it's a good idea to turn off your air conditioner. Power surges from lightning can overload the compressor and damage the air conditioner.

Power Management Chart

Use the chart to determine approximate wattage requirements for your equipment.

Starting watts can exceed 3 times the running watts. The values in the following table are approximate. Refer to your tool or appliance for actual wattage consumption.

Power Management

Essentials	Running Watt	Starting Watt
Light bulb 100W	100W	-
Refrigerator / Freezer	1000W	2000W
Freezer	100W	300W
Sump Pump	600W	1800W
Well Pump 1HP	2000W	4000W
Water Heater (Electric)	4000W	-
Security System	180W	-
AM / FM Radio	50W	-
Garage Door Opener 1/2HP	500W	600W
Battery Charger 12V DC	110W	-

Heating / Cooling	Running Watt	Starting Watt
Air Conditioner 12000 BTU	1200W	2200W
Fan	300W	600W
Furnace Fan 1/3 HP	1200W	2000W

Home Appliances	Running Watt	Starting Watt
Microwave 1000W	1000W	-
Electric range – one element	1500W	-
Electric skillet	1250W	-
Coffee Maker	1300W	-
Clothes Washer	1200W	-

Entertainment	Running Watt	Starting Watt
CD / DVD Player	50W	-
VCR	60W	-
Stereo Receiver	450W	-
Television 27”	200W	-
PC with 17” Monitor	500W	-

Job Site	Running Watt	Starting Watt
Belt Sander 3”	1000W	1500W
Bench Grinder 6”	700W	1500W
Circular Grinder	1500W	1500W
Compressor 1 1/2 HP	1500W	2500W
Edge Trimmer	500W	500W
Hand Drill 1/2”	100W	180W
Lawn Mower	1200W	1800W
Paint Sprayer	600W	1200W
Table Saw	2000W	2000W

Technical Specification

Model	Series		BMG5
	Structure		Low noise
	Fuel type		LPG/NG
Alternator	NG running power	(KW)	4.2
	NG max. power	(KW)	4.4
	LPG running power	(KW)	4.4
	LPG max. power	(KW)	4.6
	Voltage/ frequency		230V/50Hz
			Single-phase
Engine	Engine type		Air cooled/ 4-stroke/ OHV
	Nos of cylinder	(mm)	Single-cylinder
	Running speed	(rpm)	3000
	Ignition system		TCI
	Starting mode		Electric start
	Engine model		188F
	Horse power	(hp)	13
	Displacement	(cc)	389
	Engine oil volume	(liter)	1.1
	Fuel consumption		LPG: About 0.65 gal per kW·h NG: About 0.4CBM per kW.h

Technical Specification

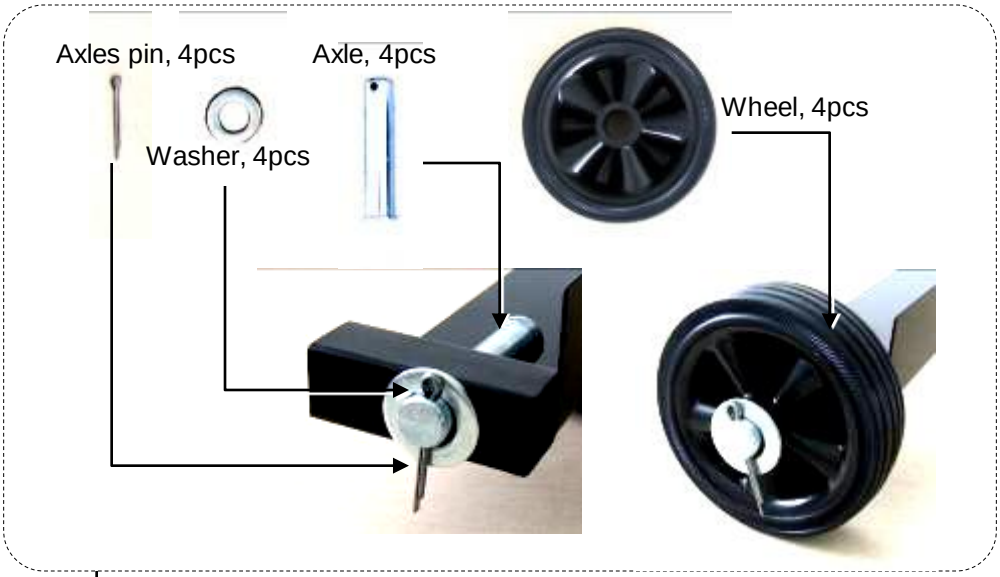
Model	Series		BMG5 Three-phase	BMG5 Single-phase
	Structure		Low noise	Low noise
	Fuel type		LPG/NG	LPG/NG
Alternator	NG running power	(KW)	4.2	4.2
	NG max. power	(KW)	4.4	4.4
	LPG running power	(KW)	4.4	4.4
	LPG max. power	(KW)	4.6	4.6
	Voltage/ frequency		220V/380V/50Hz	230V/50Hz
			three-phase	Single-phase
Engine	Engine type		Air cooled/ 4-stroke/ OHV	Air cooled/ 4-stroke/ OHV
	Nos of cylinder	(mm)	Single-cylinder	Single-cylinder
	Running speed	(rpm)	3000	3000
	Ignition system		TCI	TCI
	Starting mode		Electric start	Electric start
	Engine model		188F	188F
	Horse power	(hp)	13	13
	Displacement	(cc)	389	389
	Engine oil volume	(liter)	1.1	1.1
	Fuel consumption		LPG: About 0.65 gal per kW·h NG: About 0.4CBM per kW.h	LPG: About 0.65 gal per kW·h NG: About 0.4CBM per kW.h

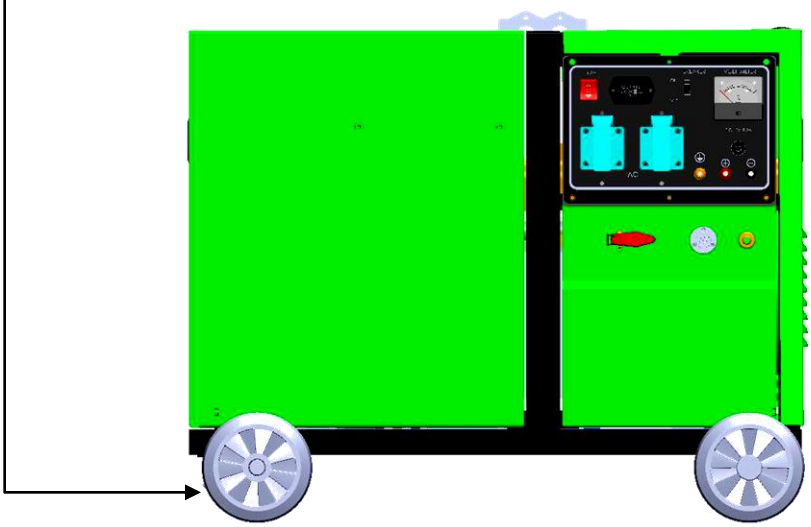
Technical Specification

Model	Series		BMG5 Three-phase	BMG5 Single-phase
	Structure		Low noise	Low noise
	Fuel type		LPG/NG	LPG/NG
Alternator	NG running power	(KW)	4.2	4.2
	NG max. power	(KW)	4.4	4.4
	LPG running power	(KW)	4.4	4.4
	LPG max. power	(KW)	4.6	4.6
	Voltage/ frequency		117V/220V/60Hz	120V/240V/60Hz
			three-phase	Single-phase
Engine	Engine type		Air cooled/ 4-stroke/ OHV	Air cooled/ 4-stroke/ OHV
	Nos of cylinder	(mm)	Single-cylinder	Single-cylinder
	Running speed	(rpm)	3600	3600
	Ignition system		TCI	TCI
	Starting mode		Electric start	Electric start
	Engine model		188F	188F
	Horse power	(hp)	13	13
	Displacement	(cc)	389	389
	Engine oil volume	(liter)	1.1	1.1
	Fuel consumption		LPG: About 0.65 gal per kW·h NG: About 0.4CBM per kW.h	LPG: About 0.65 gal per kW·h NG: About 0.4CBM per kW.h

Accessories à option

Kit à 4 roues





How to brake (stop)?

Brake (stop)

Walk

Note