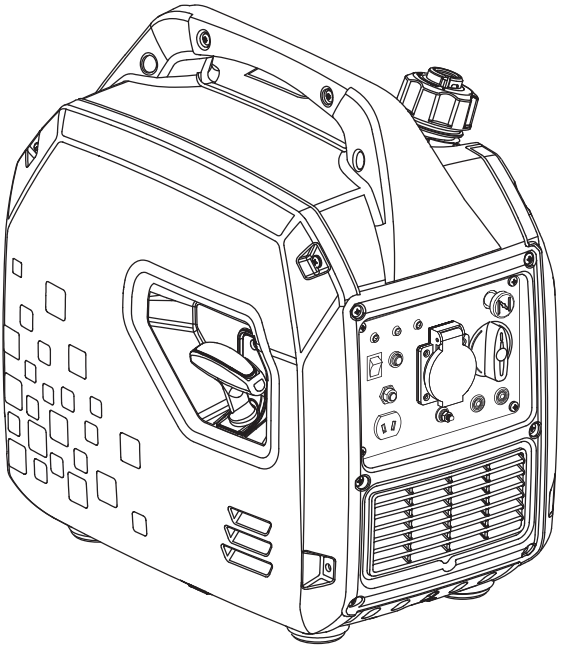
LawnMaster®



INVERTER GENERATORS
SAFETY AND OPERATING MANUAL

PLEASE READ THIS MANUAL CAREFULLY BEFORE OPERATING THE UNIT

BQH2000 | BQH2200-A

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I. OPERATOR SAFETY

SAFETY RULES

This manual contains important safety information and instructions to operate the LawnMaster Inverter Generator.

PLEASE READ THIS MANUAL CAREFULLY BEFORE USING THE UNIT.

Failure to do so could result in property damage and/or personal INJURY/DEATH.

This manual should be considered a permanent part of the generator and should remain with the unit at all times.

All information in this publication is based on the latest product information available at the time of printing.

Product Information can be altered and/or improved at any time without notice and without incurring any obligation.

No part of this publication will be reproduced without written consent.

DANGER

Indicates a hazardous situation which, if not strictly complied with, will result in substantial property damage, serious injury.

WARNING

Indicates a hazardous situation which, if not strictly complied with, may result in property damage

CAUTION

Indicates a hazardous situation which, if not strictly complied with, could result in property damage or injury.

The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur.

It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be possessed by the operator.

WARNING

This generator is intended for residential consumer use only.

Air cooled generators cannot be run full time. No personal-modifications should be made to any part of the unit.

DANGER

Toxic Fumes - The exhaust of the engine contains carbon monoxide, an odorless, colorless poison gas. Using the engine in confined/indoor spaces can be extremely dangerous and life threatening.

NEVER use the generator inside and or in enclosed spaces EVEN IF doors and windows are open. Only use the engine in a well-ventilated areas and consider wind and air currents when positioning the engine.

Kickback - 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 serious injury.

Fire - When operating the unit, the engine may create sparks that could trigger a fire. When operating around dry vegetation such as agricultural crops, forest, brush, grass, or other similar items please be careful. This engine may not be equipped with a spark arresting muffler. In some countries and regions, a spark arrester is required by law.

Please contact local fire agencies for laws or regulations relating to fire prevention requirements.

Petrol is highly flammable and explosive and a fire and or explosion from petrol can cause severe burns or even death.

Keep flammable items away while handling petrol. Fill fuel tank outdoors and in a well-ventilated area with the engine stopped.

Always wipe off spilled fuel and wait until the fuel has dried before starting the engine.

DO NOT operate the engine with known leaks in the fuel system. Use proper fuel storage and handling procedures.

DO NOT store fuel or other flammable materials near the generator.

Empty the fuel tank before storing or transporting the generator. Keep fire extinguisher handy at all times.

Battery - Lithium battery is maintenance free, if you have any question, please contact a local authorised dealer.

Hot Surface - Running the generator will produce heat. Severe burns can occur upon contact. DO NOT touch the engine while operating or just after stopping the unit.

Avoid contact with hot exhaust gases and or hot surfaces. Maintain at least 1m of clearance on all sides to ensure adequate cooling. Combustible material can catch fire upon contact. Maintain at least 3m of clearance from combustible materials.

Moving Parts - Moving parts can cause severe injury. Keep hands and feet away from the unit.

DO NOT operate engine with covers, shrouds, or guards removed.

DO NOT wear loose-fitted clothing, dangling drawstrings or items that could become caught or entangled. Tie up long hair and remove jewelry. The moving parts may catch operator's hand, feet, hair and or loose clothing resulting in serious injury.

General Warnings - Before each use, check for loose or damaged parts, signs of oil or fuel leaks, and any other condition that may affect proper operation.

Repair or replace all damaged or defective parts immediately. Locate all operating controls and safety labels.

Make sure all the safety instructions are in correct working condition. Operate only on level surfaces.

DO NOT expose the generator to excessive moisture, dust, and or dirt.

Keep all safety guards in place and in proper working order at all times.

DO NOT allow any material to block the cooling slots.

DO NOT allow children or untrained people to operate the unit.

DO NOT leave the generator unattended when it is in operation. Always turn off the generator prior to leaving the area.

Electric Shock - The generator produces powerful voltage and the electricity that is produced can be dangerous and life threatening if an electric shock is received.

Please ensure that the unit is properly connected to an appropriate ground to help prevent electric shocks.

Failure to properly ground the unit can result in electrocution, especially if the generator is equipped with a wheel kit.

Consult an electrician for local grounding requirements.

Installation should be performed by a certified electrician. Improper Installation can result in serious injury.

To reduce the risk of electric shock. DO NOT use electrical cords that are worn, frayed, bare or otherwise damaged.

DO NOT touch bare wires or receptacles.

DO NOT operate the unit in wet weather.

Keep the generator dry and DO NOT handle generator or electrical cords while standing in water, while barefoot, or while hands or feet are wet.

Keep children or pets away.

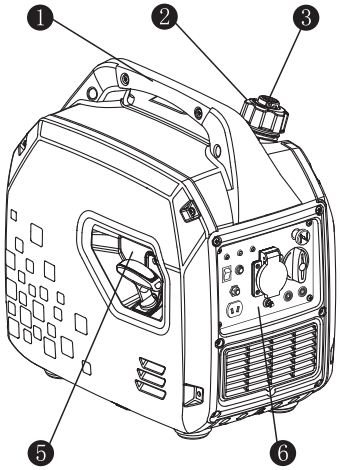
DO NOT plug the unit into a building electrical system without the proper use and installation of a transfer switch installed by a qualified electrician.

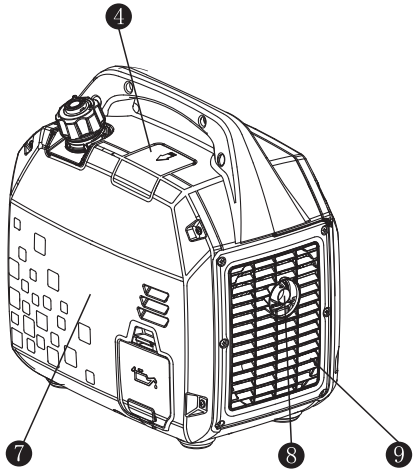
When using the generator for backup power, notify utility company.

Use approved transfer to isolate generator from electric utility.

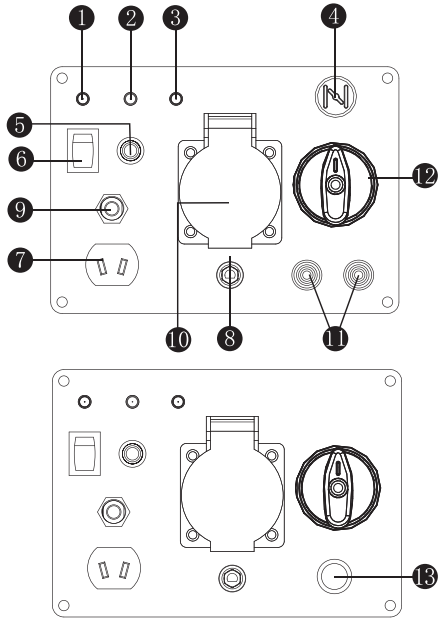
Failure to isolate the unit from power utility can result in serious injury to electric utility workers due to back-feed of electrical energy.

II. FEATURES & CONTROLS





1. Carrying Handle
2. Fuel Tank Cap
3. Ventilation Knob
4. Spark Plug Housing
5. Recoil Start
6. Control Panel
7. Generator Cover
8. Muffler
9. Muffler Blind Window

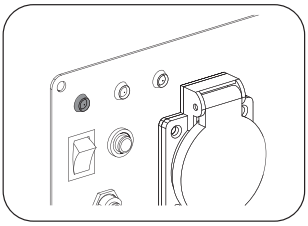


CONTROL PANEL

1. Running Indicator
2. Overload Indicator
3. Oil Alarm Indicator
4. Choke Lever
5. Reset Button
6. Energy Saving Switch
7. V-Type DC Output
8. Ground Terminal
9. Circuit Breaker
10. Euro Receptacle
11. Parallel Kit Terminal
12. Two-In-One Switch (Engine Stop & Fuel Switch
13. Push Button Start

RUNNING INDICATOR (GREEN)

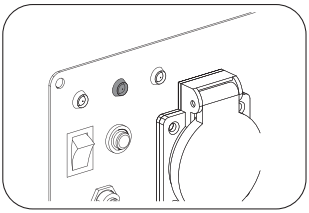
The running indicator lights up when generator starts and has normal output.



OVERLOAD INDICATOR (RED)

When the overload indicator is on, it indicates that the generator is overloaded resulting in the unit overheating, and or increase in AC voltage. Before the AC protector engages, the unit will stop the output to protect the electrical equipment and the generator itself.

At this time, the running indicator (green) is off and the overload indicator (red) is on, but the engine is still in running state.



When the generator has no output and the overload indicator is on, please take the following steps:

1. Lower the total power of the connected electric devices to the rated output range of the generator.

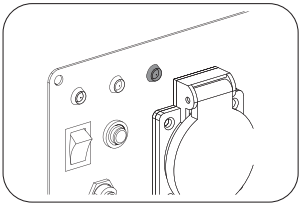
2. Check the air intake for impurities and check the control parts for any abnormalities - handle immediately if necessary.

3. Press the re button.

OIL ALARM INDICATOR (YELLOW)

When the oil level drops below the lower limit, the oil protection system will stop the engine automatically and oil alarming lamp will blink by pulling the recoil starter.

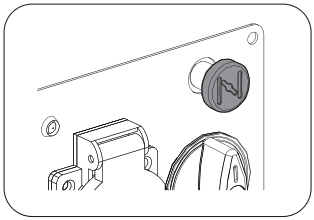
The engine will not run until the oil has been filled to the proper level.



If engine flames out or fails to start, turn the two-in-one switch to “RUN” position and then pull the recoil starter. If the oil alarming lamp lights up, it shows lack of oil. Please add appropriate oil and restart the engine.

CHOKE LEVER

NOTE: When cold start, please close (pull) the choke lever. When warm start, please open (push) the choke lever.



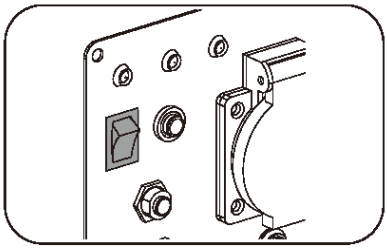
ENERGY-SAVING SWITCH

When the energy-saving switch is in “ON” position, the energy saving equipment controls the engine rotatation speed according to the connected loads.

There will be good fuel consumption and low noise.

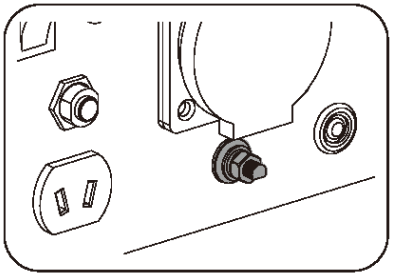
When the energy-saving switch is in “OFF” position, the engine will always run in rated rotate speed no matter it is connected to the loads or not.

Please switch the energy-saving to “OFF” position when connect to air compressors, sinking pump etc as these require large starting currents.



GROUNDING TERMINAL

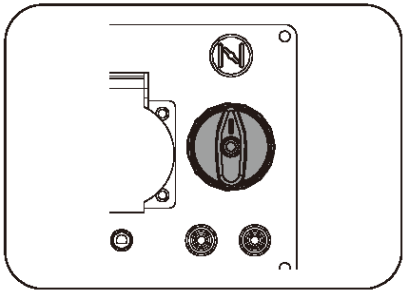
The grounding terminal is designed to prevent electric shock by connecting it to the grounding wire. The generator must be properly grounded before operation.



TWO-IN-ONE SWITCH
(Engine Stop & Fuel Switch)

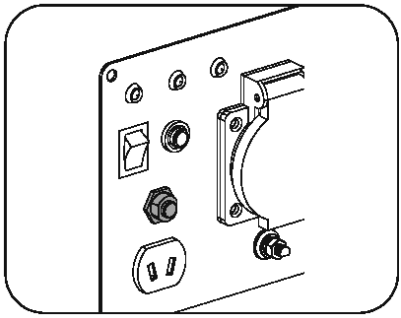
When the switch is in “OFF” position, it indicates that the generator is in stop position and fuel switch is in off state.

When the switch is in “RUN” position, it indicates that the engine stop switch and fuel switch are in on state.



RESET BUTTON

The re button is used to restore output if an overload occurs. To restore output, reduce the loads and press the re button.

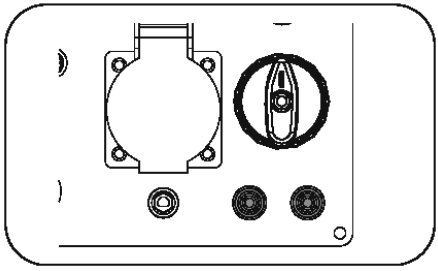


CIRCUIT BREAKER

The circuit breaker protects the generator against electrical overloads.

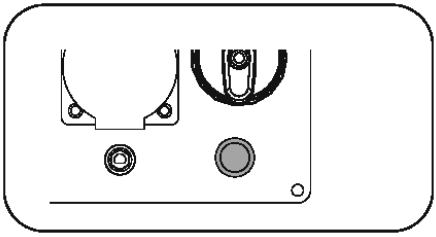
PARALLEL KIT TERMINAL

It is used for parallel operation with another inverter (parallel kits sold separately).



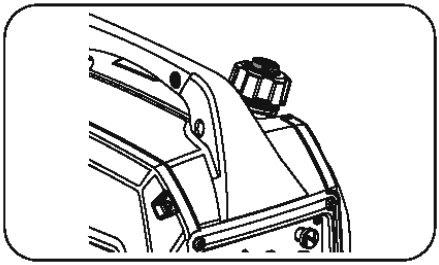
PUSH-BUTTON START
(If applicable)

You can start the generator by pressing the button with your finger.

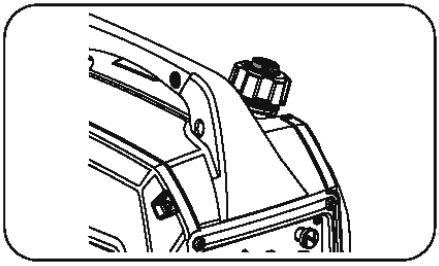


FUEL TANK CAP

Remove the fuel tank cap by rotating it anticlockwise.



VENTILATION KNOB



The fuel tank cap is equipped with the ventilation knob to prevent leakage of fuel.

The ventilation knob must be in “ON” position when operating the generator. This allows for the fuel to be injected to the carburetor and drive the engine.

To avoid fuel leakage, change to “OFF” position especially when you are carrying and or not using the generator.

III. OPERATING

1. OPERATING ENVIRONMENT

Only use and operate the generator outside in well-ventilated spaces.

Only operate the generator on a flat, level surface and in a clean, dry operating environments.

Allow 1m clearance on all sides of the generator while operating it outdoors.

Operate in safe and specified areas. In some areas, generators must be registered with the local utility company. Generator's used in construction sites may be subject to additional rules and regulations.

DANGER

TOXIC FUMES
The exhaust of the generator contains carbon monoxide, using the generator indoors can be extremely dangerous.

NEVER use inside any buildings or any kind of enclosure, EVEN IF doors and windows are open. Place the generator in a well-ventilated and clean area. Think of the wind direction and air currents when placing the unit for operation.

HIGH ALTITUDE
This generator may require a high altitude carburetor kit to ensure correct operation at high altitudes. Consult the authorised local dealer for high altitude kit information if you intend to operate the unit at altitudes above 5,000 feet (1,500 meters).

CAUTION

Even with carburetor modification, generator horsepower will decrease about 3.5% for each 1,000 feet (300 meters) increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

Operating the unit at altitude below 5,000 feet (1,500 meters) with a modified carburetor may cause the generator to overheat and result in serious engine damage. Please restore factory specifications of the carburetor at the dealer when using the engine in a low altitude area.

2. OPERATING CONDITION

Check for loose or damaged parts, signs of oil or fuel leaks, and any other condition that may affect proper operation. Repair or replace all damaged or defective parts immediately.

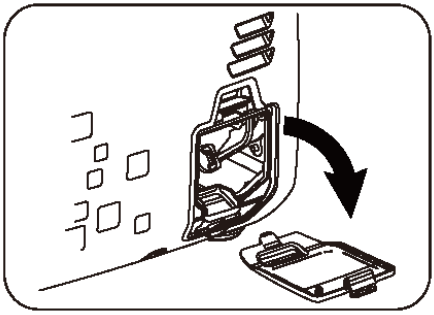
WARNING

Failing to correct problem(s) before operation could result in property damage, and serious injury.

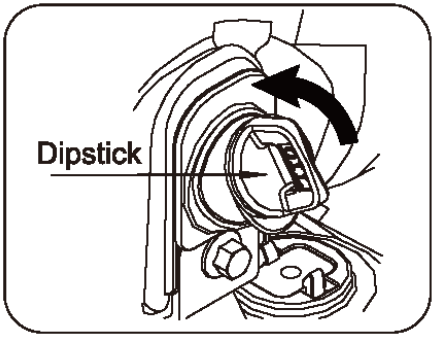
Remove any excessive dirt or debris, especially around the muffler and recoil starter. DO NOT move or tip the generator during operation. Use generator only for intended uses. If you have questions about intended use, ask your local dealer.

3. OIL CHECK

Place the engine on a level surface with engine stopped. Check the engine oil level. Remove the oil maintenance cover.



Remove the dipstick and wipe it clean.



Reinstall dipstick into hole; rest on oil fill neck, DO NOT thread cap into hole.

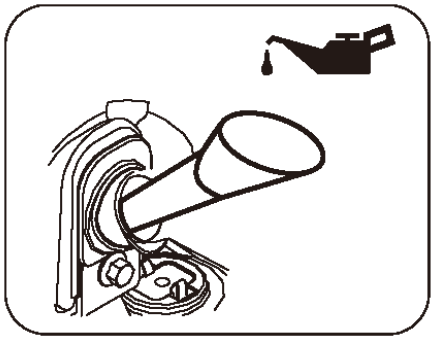
Remove the dipstick again and check oil level. Level should be between the upper and lower limit.

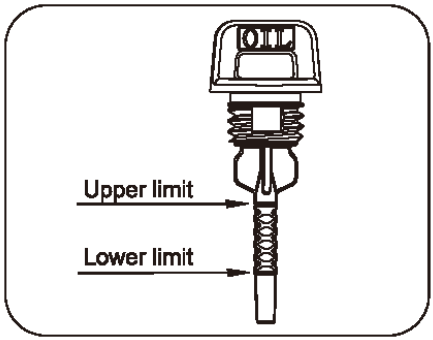
Fill to the upper limit of the dipstick with the recommended oil if the oil level is too low.

Reinstall and fully tighten the dipstick.

Reinstall the oil maintenance cover.

Refer to **add oil** instruction in **MAINTENANCE** section for more information.





Oil Capacity(Rated}:
See Parameters

WARNING

Oil is a major factor affecting performance and service life.

Use 4-stroke automotive detergent oil recommended in the MAINTENANCE section of this manual.

CAUTION

Operate generator only on leveled surfaces. The engine is equipped with a low oil sensor (applicable types) that will automatic stop the engine when the oil level falls below the safe limit. To avoid the inconvenience of an unexpected shutdown, fill to the upper limit and check the oil level regularly.

WARNING

This engine is not filled with oil before send out to the factory. Any attempt to crank or start the engine before it has been properly filled with the recommended oil type and amount of oil may result in engine damage and void your warranty.

4. FUEL CHECK

With the engine stopped, check the fuel level. Refill the fuel tank if necessary. Use clean, fresh, regular unleaded petrol.

DO NOT mix oil with petrol.

Always wipe up any spilled fuel.

CAUTION

Pressure can build up in the fuel tank. Allow the generator to cool for at least two minutes before removing fuel cap. Loosen the fuel cap slowly to relieve any pressure in the tank.

Be sure not to fill above the upper limit mark. Always allow room for fuel expansion.

Fuel capacity (rated):
See parameters.

NEVER use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

It is important to prevent gum deposits from forming in essential fuel system parts, such as the carburetor, fuel filter, fuel hose or tank during storage. Also, experience indicates that alcohol-blended fuels (called gasohol, ethanol or methanol) can attract moisture, which leads to separation and formation of acids during storage.

Acidic fuel can damage the fuel system of the generator while in storage. Be sure to review the instructions given in “Storage” section.

Petrol/Alcohol blends: up to 10% alcohol, 90% unleaded petrol by volume is approved as a fuel. Other petrol/alcohol blends are not approved. Effects of old, stale or contaminated fuel will not be covered by warranty.

CAUTION

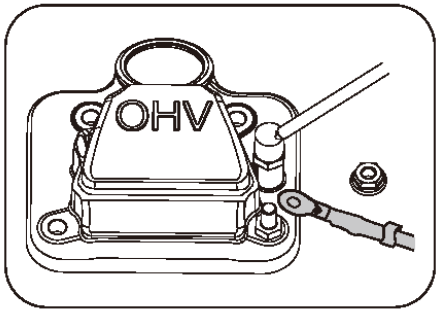
To minimize gum deposits in your fuel system and to insure easy starting, do not use petrol left over from the previous season.

Allow the generator to cool for at least two minutes before removing fuel cap when adding fuel.

Loosen the fuel cap slowly to relieve any pressure in the tank.

5. INTERNAL BATTERY GROUNDING
(Applicable Types).

Remove the appearance cover plate. Use the nut of M6 to connect the battery grounding wire with cylinder head cover to make the ground connection of internal battery.



6. ELECTRICAL DEVICES

Disconnect all electrical devices from the generator and switch off the AC circuit breaker before start the engine.
The generator may be hard to start with electrical devices connected.
The power of connected electrical devices cannot exceed the generator max power, specific power see parameter sheet for reference.

7. GENERATOR GROUNDING

The generator must be properly connected to an appropriate ground. It helps prevent electrical shock if a ground fault condition exists in the generator or in connected electrical devices, especially when the unit is equipped with a wheel kit.
Proper grounding also helps dissipate static electricity, which often builds up in ungrounded devices.

DANGER

Electrical Shock
Failure to properly ground the generator can result in electric shock.

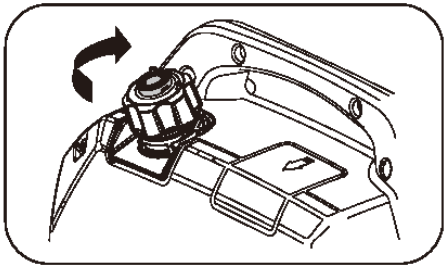
A ground terminal has been provided on the generator. For remote grounding, connect a length of heavy gauge(4 mm2) copper wire between the generator ground terminal and a copper rod driven into the ground.

Local electrical codes may also require proper grounding of the unit. We strongly recommend that you consult with a qualified electrician for grounding requirements in your area.

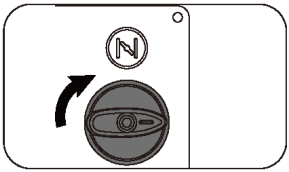
8. STARTING GENERATOR

8.1. Perform Operating checklist and remove all loads.

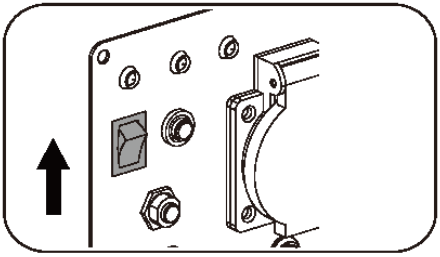
8.2. Turn the ventilation knob to “ON” position when engine is running to make sure the fuel is flowing.



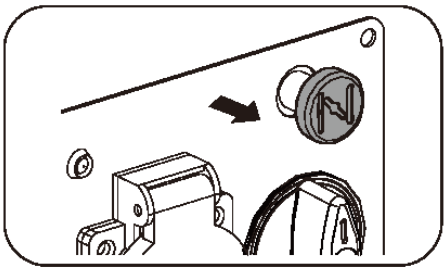
8.3. Turn the two-in-one switch to the “RUN” position.



8.4. Turn the energy saving switch to the "ON" position. (: Please the energy saving switch to "OFF" position when it needs large starting current.



8.5. (Suitable for recoil starting) Pull out the choke lever to close the choke valve.



CAUTION

Choke position for starting may vary depending upon temperature and other factors. If re-starting a warm engine, there's no need to pull out the choke lever.

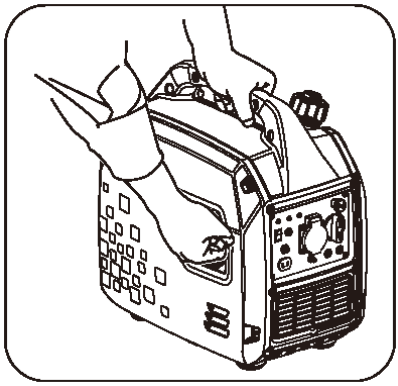
9. MANUAL START

RECOIL STARTING

CAUTION

Check starter cord before operating. Have it replaced immediately by local authorised dealer if cord is frayed.

When starting the engine, grasp the recoil starter handle and pull slowly until resistance is felt. Then pull rapidly to start the engine. When pulling the recoil starter, firmly grasp the carrying handle to avoid tumble of generator.



WARNING

KICKBACK
Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let go.

WARNING

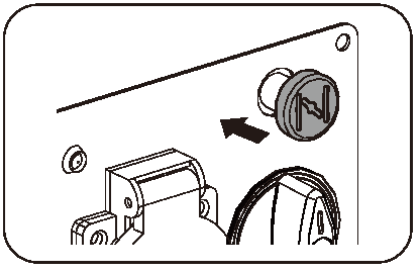
The engine starts time cannot exceed 15 minutes. If the engine fails to start, allow the starting motor to cool for 1 minute before restarting. Failure to operate according to this rule will damage the starting motor.

CAUTION

If the engine fails to start after 3 attempts or flames out after starting, inspect and ensure that the generator is placed in horizontal surface and enough engine oil is injected.

If engine is equipped with an engine oil alarm, it is possible that the engine oil in the crankcase is lower than the minimum level required.

During operation, routinely inspect the engine oil. See maintenance section for recommended maintenance period.



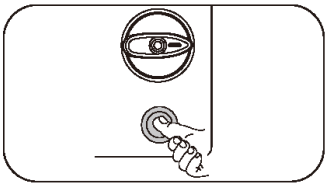
After the engine starts successfully, and the temperature has been increased, push the choke lever to open the choke valve. If the engine runs unstably (shaking exists), push the choke lever to the HALF open position. Then push it to the FULL open position after engine runs stably.

CAUTION

If the engine is in warm state, open the choke lever when restart the engine.

10. ELECTRIC STARTING
(If applicable)

Press the engine switch and release it after the engine starts.



If the starter cannot crank the engine, please release the switch button. Do not attempt to start the engine again before figuring out the cause(s). Modification or using other battery to start the engine is not allowed.

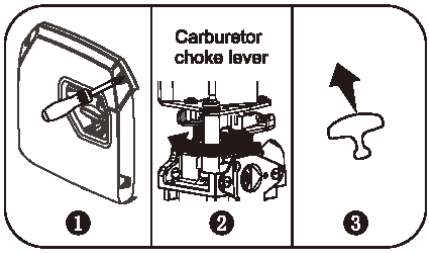
If the engine speed is raised to the speed over the starter but does not keep running (fails to start), then the engine must be completely stopped before starting again. If when the flywheel starts to rotate automatically, the starter is still engaged, then there may be a conflict between the flywheel external gear and the starter pinions, and this may cause damage to the starter.

WARNING

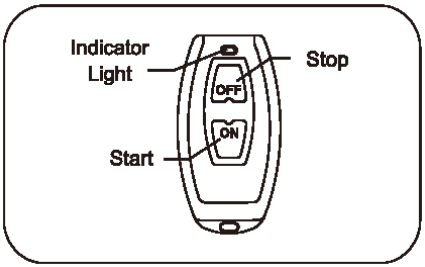
When the starting battery of the generator is low in voltage and pull starting the generator does not work, please make sure the fuel cap is in the ''on'' position.

Please try and operate the choke lever according to the below diagram.

This will add choke to the engine to help the generator engine to start when the battery is low in volts and not being able to move the choke automatically.



11. WIRELESS REMOTE CONTROL
(If applicable)



OPERATING

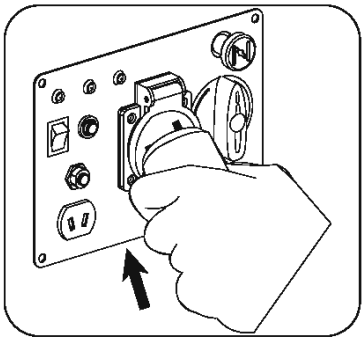
1. Turn on the remote control switch.

2. Press the START button and hold for more than 0.3s for startup.

Note: Sometimes the generator can take a few attempts to start in cold weather. If machine does not start within the first 1O seconds, wait for 30 seconds before attempting again.

If the motor turns a little then stops when you press the Start button, it may indicate a low battery. Charge the battery before operation or start by recoil start.

ONCE ALL STEPS COMPLETED
After all tasks above is completed, the engine can be normally loaded.



WARNING

Do not start or close the generator when the output terminal of the generator is connected to an electric device and the electric device is in "ON" state.

12. CONNECT TO ELECTRICAL DEVICES

1. Inspect power cord for damage prior to use. A damaged power cord is a hazard and can cause electric shocks from crushing, cutting or heat damage.

2. Make sure that the generator has been properly grounded. If the electric devices require grounding, the generator must ground.

3. Allow the engine to stabilise and warm up for a few minutes after starting.

4. Make sure that the electric devices are in "OFF" position.

5. Connect and start the electric devices.

6. Turn off all electrical devices and disconnect them from the generator.

7. If the generator is supplying power to several electric devices, start from the smallest device first through to the largest one last.

DANGER

If connected devices overheat, turn them off and disconnect them from the generator.

ELECTRICAL SHOCKS

To reduce the risk of electrical shocks, DO NOT use electrical cords that are worn, frayed, bare or otherwise damaged.

DO NOT touch bare wires or receptacles.

DO NOT handle generator or electrical cords while standing in water, or barefoot, or while hands or feet are wet.

13. LOADING CAPACITY

WARNING

DO NOT overload the generator. Exceeding the generator's capacity can damage the generator and/or electric devices connected to it.

Make sure the generator can supply enough rated (running) and (starting) watts for the electrical devices at the same time.

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

A. Count the electrical devices you will power at the same time.

B. The amount of power you need to run with the devices is the total rated (running) watts of these items.

C. Starting power is the power needed shortly when electric devices start. Since not all devices start at the same time, starting power can be estimated by the maximum power of all devices plus the total power counted in step"b".

WARNING

It is necessary to equip with circuit protector or switch to isolate the generator from the electric utility when the generator is mainly used for backup.

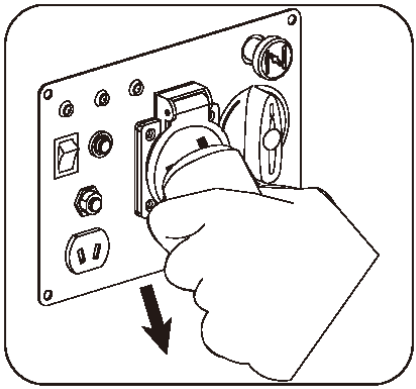
Failure to isolate the generator from the power utility may result in serious injury to the electric utility workers aswell as causing damage to the generator due to back feed of electrical energy.

14. WATTAGE REFERENCE CHART

Electric equipment		Rate power(W)	Starting power(W)
Appliances	Tablet computer27"	80	100
	Energy saving lamp	5-50	5-50
	Electric cooker	1000	1000
	Computer	250	250
	Electric fan	50	100
	Washing machine	250	500
	Refrigerator	50	300
	Air-conditioner	1600	3200
Electric tooling	Electric hammer	1000	1500
	Impact Hammer	3000	6000
	Water pump	2200	5000
	Electric welding machine	5000	7500
	Air compressor	5000	10000

15. STOPPING THE GENERATOR

1. Remove the connectors of all electric equipment from the generator panel.



WARNING

NEVER stop the engine with electrical devices connected and running.

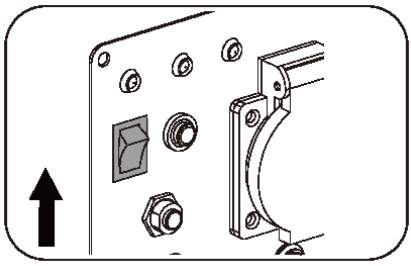
2. (Suitable for Wireless remote control)

Press the STOP key repeatedly for 2-3 seconds to stop the generator from running.

NOTE: Replace battery when the control distance is inadequate, and/or when the indicator light on remote control is not functioning. See maintenance section for more info.

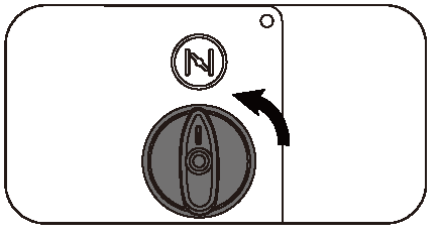
If the generator will not be in use for over 2 weeks, please turn the knob to "OFF" position, or the battery will be out of power and the generator can not be started.

3. Turn the energy saving switch to the "ON" position.



4. Allow the generator to run at no load for a few minutes to stabilise internal temperatures of the engine and generator.

5. Turn the two-in-on switch to "OFF" position.



16. PARALLEL CONNECTION
(If applicable)

Make sure that the generator is in a good running state before connecting it to other generators. The total power of electric devices should not exceed rated power of generator.

When electric motor starts, the overload indicator (red) will light up and normally it will stop within 4 seconds. If it does not or cannot stop, please consult your local dealer.

During parallel operation, energy-saving switches of generators should be in the same position.

1. Connect one generator to the other generator(s) in parallel. Use the parallel kit to make the parallel connection (the parallel kit needs to be purchased separately).

2. Start the engine in proper order and make sure that the running indicator (green) is normal.

3. Connect the plug of electric devices to the AC receptacle of parallel kit.

4. Run the electric devices.

CAUTION

When the generator is overloaded, the overload indicator (red) blinks continuously. Overloading on a regular basis will lead to the generator being damaged.

When continuously operating the generator, power cannot exceed the rated power of generator.

The total power of electric devices cannot exceed the rated power of the generator.

The manufacturers of electric devices or tools always list the rated power of similar models or serial numbers.

IV. MAINTENANCE

It is the operator's responsibility to complete all scheduled maintenance in a timely manner. Correct any issue before operating the generator. Always follow the inspection and maintenance recommendations and schedules in this manual.

WARNING

Improper maintenance or failure to correct a problem before operating the unit can cause a malfunction and result in property damage, serious injury or even DEATH. Improper maintenance will void your warranty.

Accidental starts can cause severe injury. Remove the spark plug cap and ground generator before performing any servicing.

The filter element may contain PAHs, PAHs is harmful to your health.

Please wear gloves for protection during air filter maintenance.

1. MAINTENANCE SCHEDULE

Stop the generator before servicing. Disconnect all electrical devices and battery (if equipped), and cool down the generator completely before conducting the service.

Service the generator in a clean, dry and flat area. Follow the service intervals indicated in the chart below.

Service your generator frequently when operating in adverse conditions.

Contact your local authorised service dealer for generator or engine maintenance needs.

		Each time before use	The first month or 10 hours note2	Every three months or 50 hours note2	Every six months or 100 hours note2	Every year or 300 hours note2
Engine oil	Inspection	√				
	Replacement		√		√	
Air filter	Inspection	√				
	Cleaning			√ note3		
Spark plug	Inspection and adjustment				√	
	Replacement					√
Spark Extinguisher note1	Cleaning				√	
Idle speed	Inspection and adjustment					√ note4
Valve clearance	Inspection and adjustment					√ note4
Carbon canister note1	Inspection	Every two years note4				
Low permeability oil tube note1	Inspection	Every two years note4				
Oil tube	Inspection	Every two years note4				

NOTE:
1. Applicable types (if available).
2. Before each season and after.
3. Service more frequently under severe, dusty, dirty conditions.
4. To be performed by knowledgeable, experienced owners or the authorised dealer.

2. GENERATOR MAINTENANCE

Use a damp cloth to clean exterior surfaces of the generator. Use a soft brush to clean the dirt and oil.

Use an compressed air (25 PSI) to clear dirt and debris from the generator. Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

WARNING

DO NOT use water to clean the generator. Water can enter the generator through the cooling slots and damage the generator windings.

DO NOT modify the generator in any way. DO NOT tamper with the governor.

Generator supplies correct rated frequency and voltage when running at factory. Tampering with the factory governor will void your warranty.

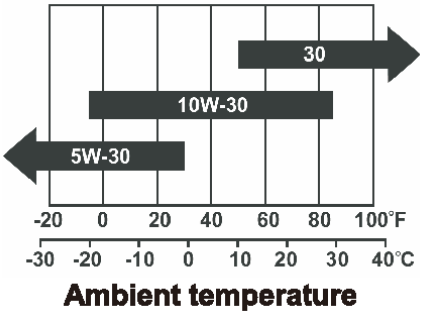
3. ENGINE MAINTENANCE

ENGINE OIL

Only use four-stroke engine oil of SJ, SL or equivalent level which are in accordance with or higher than API standard.

Check the API label on oil bottle or other container, and make sure the “SJ, SL” or equivalent level letter is in the label.

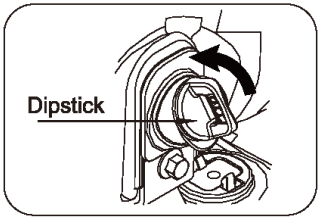
SAE 1 0W-30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.



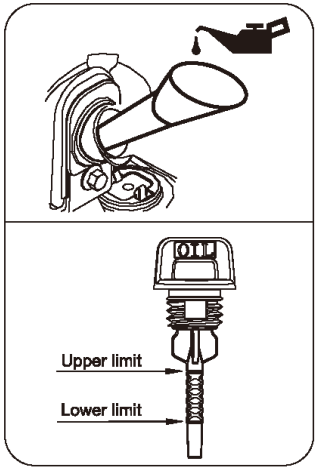
Oil capacity (rated):
See parameters
Add oil

A. Place the engine on a level Surface.

B. Remove the dipstick and wipe it clean.



C. Add recommended oil to the upper limit.



D. Fully tighten the dipstick.

E. Dispose of used oil at an approved waste management facility.

CAUTION

OIL LEVEL CHECK
Reinstall dipstick into hole; rest on oil fill neck. DO NOT thread cap into hole.

f. Properly dispose of any used oil at an approved waste management facility.

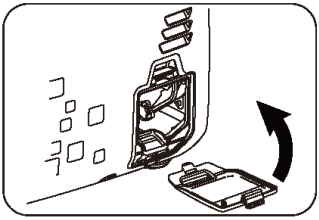
CHANGE OIL

CAUTION

Change oil when the engine is warm from operation. The oil temperature can reach up to 140° C in the warm state, and careful operation should be taken when changing the oil to prevent burns.

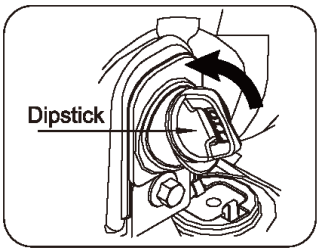
A. Place the machine on a level surface which is 300mm higher than the ground.

B. Remove the oil maintenance cover.

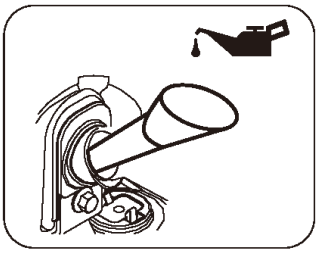


C. Place the waste oil box on the ground.

D. Remove the oil dipstick, and tilt the machine to pour the oil.



E. Add recommended oil to the upper limit.



F. Fully tighten the dipstick.

G. Properly dispose of any used oil at an approved waste management facility.

H. Reinstall the oil maintenance cover.

WARNING

The engine is not filled with oil at the factory. Any operation before it has been properly filled with the recommended type and amount of oil may result in engine damage and void your warranty.

AIR FILTER

A. Remove the appearance cover.

B. Loosen the filter fix clamp and remove the cover of the air filter.

C. Remove the foam filter element.

D. Wash in liquid detergent and warm water.

E. Squeeze thoroughly dry in a clean cloth.

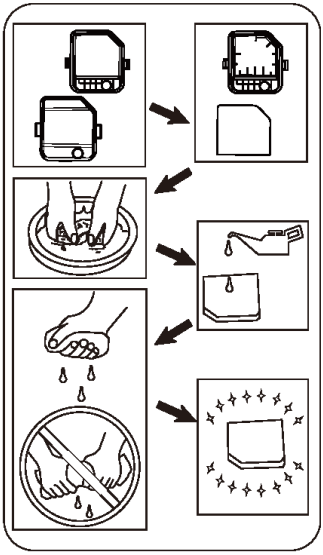
F. Saturate in clean engine oil.

G. Squeeze in a clean absorbent cloth to remove all excess oil.

H. Assemble the filter element onto the filter unit

I. Assemble the filter fix clamp.

J. Reinstall the appearance cover.



WARNING

DO NOT run the engine without the air filter, or serious danger can result.

SPARK PLUG

A. Clean any dirt from the spark plug cap and spark plug base.

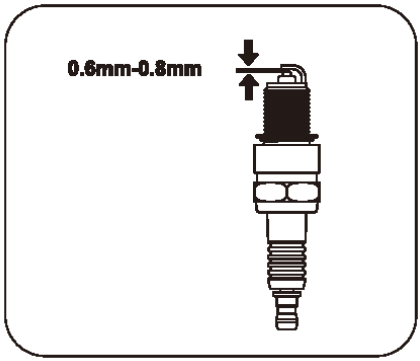
B. Remove the spark plug cap.

C. Using socket wrench to loose and remove the spark plug.

D. Inspect the spark plug and spark plug washer, if it was broken or worn, replace with a new one. Clean the spark plug with wire brush if reuse it.

E. Check spark plug gap. Carefully bend side electrode to adjust the gap if necessary.

SPARK PLUG GAP: 0.6MM-0.8MM



F. Carefully thread the plug into the engine by hand.

G. After the spark plug is seated, use spark plug wrench to tighten the plug.

SPARK PLUG TIGHTEN TORQUE:

15-20 N.m

H. Attach the spark cap to the plug and connect the spark plug wire to the plug.

WARNING

Only use recommended spark plug or equivalent. DO NOT use spark plugs that have improper heat range.

SPARK ARRESTER
(Applicable types)

A. Allow the generator to cool completely before servicing the spark arrester.

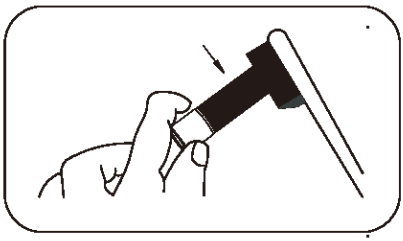
B. Remove the muffler blind window first.

C. Remove the spark arrester screen.

D. Carefully remove the carbon deposits from the spark arrester screen with a wire brush.

E. Replace the spark arrester if it is damaged.

F. Reinstall the spark arrester in the muffler and reinstall the muffler blind window.



Clean carbon deposit

V. STORAGE & TRANSPORTATION

STORAGE

The generator should be started at least once every 2 weeks and allowed to run for at least 20 minutes. Follow the instructions below for longer term storage if the generator will be out of service for 2 months or more.

WARNING

Fire or explosion
Petrol is highly flammable and extremely explosive. Empty the fuel tank and shut off fuel valve before storing or transporting this generator.

1. Allow the generator to cool completely before storage.

2. Clean the generator according to instructions in Maintenance section.

3. Drain all fuel completely from the fuel tank, fuel hose and carburetor to prevent gum from forming.

4. Close the fuel switch to cut down fuel supply.
5. Remove the appearance cover plate.

Unscrew the oil dipstick and slightly tilt the whole to pour out the oil.

6. Remove the spark plug and pour about 15 ml of oil into the cylinder. Pull the recoil starter slightly to distribute the oil and lubricate the cylinder. And then attach the spark plug.

7. Store the unit in a clean, dry area out of direct sunlight.

TRANSPORTATION

To prevent fuel spillage when transporting or during temporary storage, the generator should be secured upright in its normal operating position, with the engine switch OFF. The two-in-one switch should be turned OFF.

WARNING

Do not overfill the tank.

Do not operate the generator while it is on or inside a vehicle. Take the generator off the vehicle and use it in a well-ventilated area before operating the unit.

Avoid placing the unit exposed to direct sunlight when putting it into a vehicle. If the generator is left in an enclosed vehicle for many hours, high temperatures inside the vehicle could cause fuel to vaporize resulting in a possible explosion.

Do not drive on a rough roads with the generator on board for an extended period.

If you must transport the generator on a rough roads, drain the fuel from the generator beforehand.

VI. TROUBLESHOOTING

Failure	Trouble	Solution
Generating set fails to start	Two-in-one switch is in **"OFF"** position.	Turn two-in-one switch to the **"RUN"** position.
	Lack of fuel.	Fill fuel tank per instructions in this manual.
	Lack of engine oil.	Check oil level. This engine is equipped with a low oil sensor. The engine cannot be started unless the oil level is above the prescribed lower limit.
	No ignition.	Remove the spark plug cap. Clean any dirt around the plug base, and then remove the spark plug. Install the spark plug in the plug cap. Turn the two-in-one switch to **"RUN"** position. Grounding the electrode to any engine ground, pull the recoil starter to see if sparks jump across the gap. If there is no spark, replace the plug. Reinstall the plug and start engine according to instructions in this manual. Consult Customer Service if necessary.
	Spark plug is splashed by fuel	Remove the spark plug and wipe the fuel.
	The generating set flames out after running for a certain time.	Turn the ventilation knob on the fuel tank cap to "ON" position; Check the fuel and oil level. Add them if necessary.
Generating set has no output	Breaker trip	Reset circuit breakers.
	Inadequate cord sets or extension cords.	Check cord sets or extension cords capabilities in section controls; cable size in this manual. Consult Customer Service if necessary.

VII. SPECIFICATIONS

1. SPECIFICATION PARAMETER TABLE

Feature \ Model		BQH2000-A		BQH2000E-A	
Engine parameter	Engine model	148FD/P		148FED/P	
	Style	OHV		OHV	
	Displacement (cm^3)	79		79	
	Ignition system	CDI		CDI	
	Start style	Recoil starting		Electric starting	
	Oil capacity(L)	0.5		0.5	
Series parameter	Frequency(Hz)	50	60	50	60
	Voltage(V)	100/220/230/240	100/110/120	220/230	120
	Rated power(kW)	1.7		1.7	
	Maximum power(kW)	1.8		1.8	
	Power factor	1		1	
	Insulation rate	F		F	
	Fuel capacity(L)	4		4	
	Operating temperature(℃)	-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500	
	Measured sound pressure level(dB(A))	≤65		≤65	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤88		≤88	
	Net weight(kg)	18.3		19.7	

VII. SPECIFICATIONS

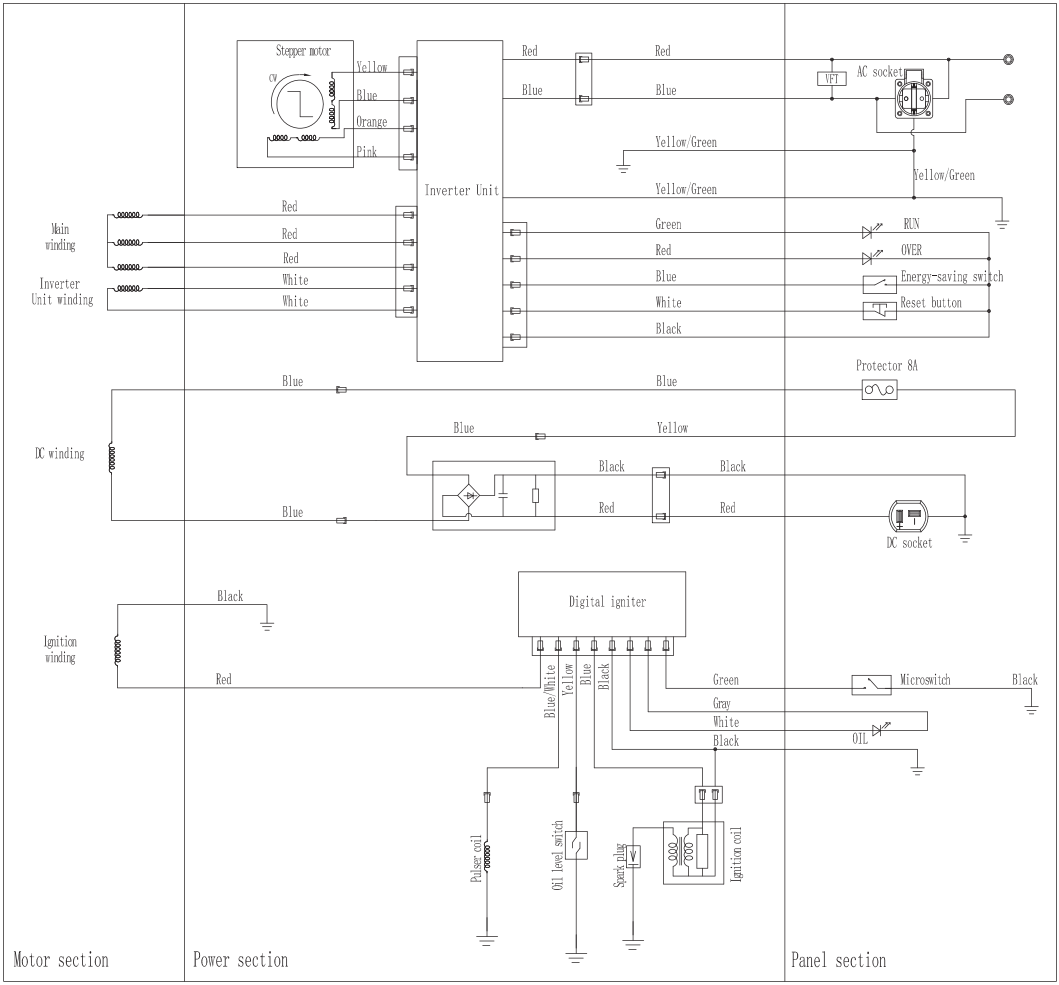
Feature \ Model		BQH2200-A		BQH2200E-A	
Engine parameter	Engine model	148FD/P		148FED/P	
	Style	OHV		OHV	
	Displacement (cm^3)	79		79	
	Ignition system	CDI		CDI	
	Start style	Recoil starting		Electric starting	
	Oil capacity(L)	0.5		0.5	
Series parameter	Frequency(Hz)	50	60	50	60
	Voltage(V)	230	110/120	230	120
	Rated power(kW)	1.9		1.9	
	Maximum power(kW)	2.0		2.0	
	Power factor	1		1	
	Insulation rate	F		F	
	Fuel capacity(L)	4		4	
	Operating temperature(℃)	-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500	
	Measured sound pressure level(dB(A))	≤72		≤72	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤92		≤92	
	Net weight(kg)	18.3		19.7	

Note: The generator with different specification and configurations may have different parameters and may change at any time without notice.

VII. SPECIFICATIONS

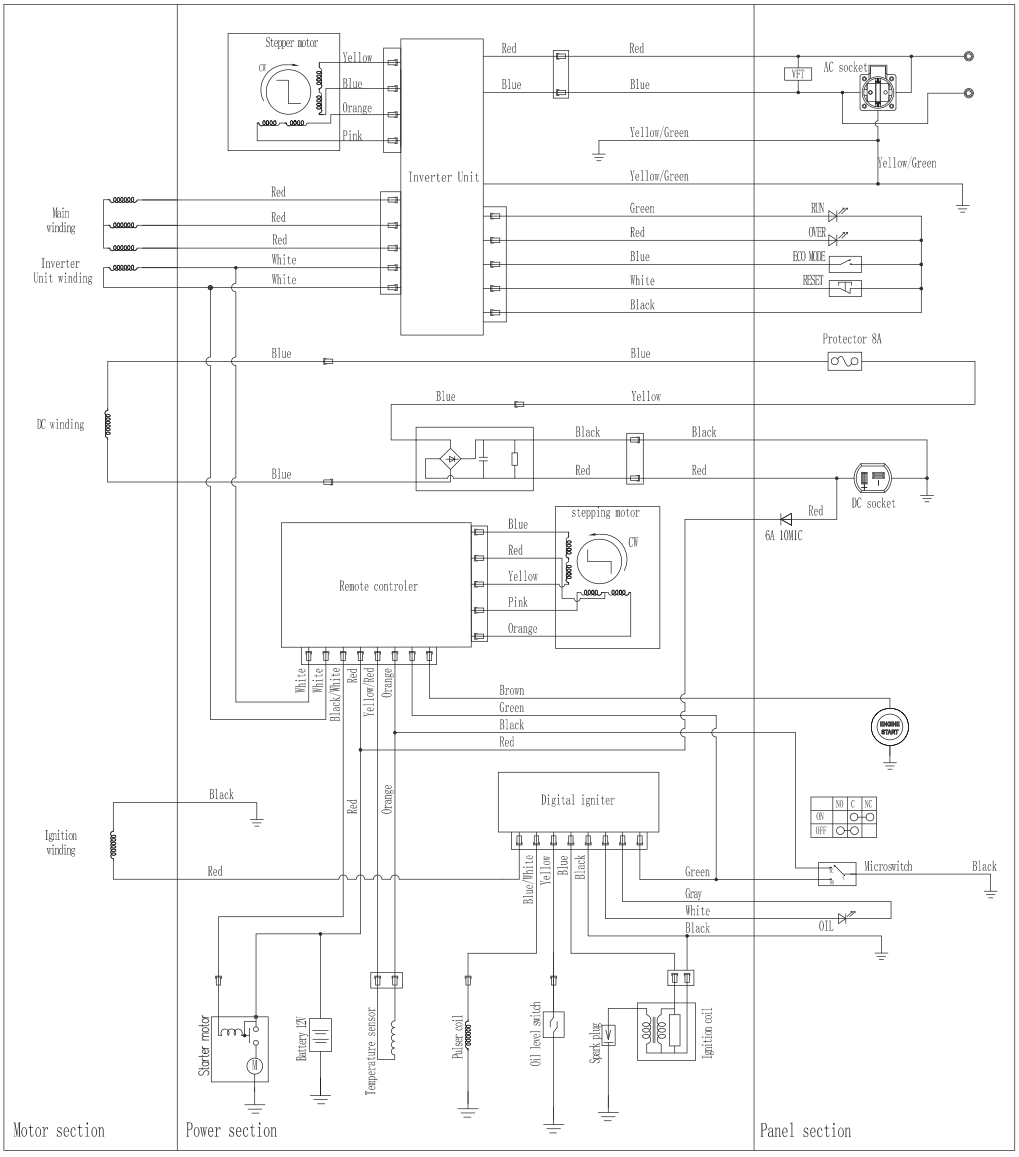
2. WIRING DIAGRAM

RECOIL STARTING



VII. SPECIFICATIONS

ELECTRIC STARTING



NOTE: Because of the differences in generators, the wiring diagram is only for reference.

VIII. WARRANTY

3-YEAR DOMESTIC CONDITIONAL WARRANTY

UP TO 90 DAYS FOR COMMERCIAL USE.

LawnMaster Dealer extended warranty period for items that are:

- Registered at the time of sale.
- Serviced by an Authorised LawnMaster Service Dealer in accordance with the service schedule using Genuine parts and oils (proof required).
- Meeting all other warranty requirements.

LAWNMASTER LIMITED WARRANTY

The warranty applies to all new LawnMaster products that are identified by their unit serial number.

In order to be eligible for the LawnMaster limited warranty, you must have, maintenance performed according to the schedule contained in the relevant owner's manual that is supplied with the product, and ongoing maintenance performed by an authorised LawnMaster dealer.

Steelfort will recognise your statutory rights under the Consumers Guarantee Act 1993. To ensure the safe operation of this product, we strongly recommend that you only use an authorised LawnMaster dealer for all maintenance and servicing requirements. Authorised LawnMaster Dealers have access to special tools, training, and genuine parts that are required to maintain your LawnMaster product for peak operating conditions. The purchaser must keep an accurate record of all service and maintenance. This may be requested when assessing any future warranty claims.

To qualify for the LawnMaster extended Warranty, a warranty registration must be completed online through the Steelfort website (www.steelfort.co.nz) within ten (10) days following the date of purchase.

Proof of purchase documentation are required and must include the engine serial number and frame serial number as appropriate for all warranty claims.

Authorised LawnMaster dealers are able to repair and or replace parts that are defective within the limits of this warranty at no expense to the owner, and this includes the cost for replacement parts and or labour. Consumable items such as, but not limited to, oils, coolants, filters and spark plugs maybe an additional charge at the expense of the owner. All defective parts will be replaced and become the property of Steelfort.

Transportation costs related to freight and or delivery of replacement parts, and or whole goods maybe an additional charge at the expense of the owner.

WARRANTY EXCLUSIONS

- Any damage which results from neglect of periodic maintenance specified by Steelfort.
- Any damage resulting from repair or maintenance by methods other than specified by Steelfort.
- Any product which has participated in a competition racing or rally event.
- Any damage which results from misuse and or use beyond the limitations of the intended purpose specified by Steelfort, such as overloading, and or under abnormal conditions.
- Any damage resulting from the use of non-genuine parts, lubricant or fluid not approved by Steelfort.
- Any damage resulting from modification or installation in other products in a way that is not approved by Steelfort that has an influence on the function and/or performance of the products.
- Any damage that results from operating under conditions that are not specified in the Owner's Manual either intentionally or by error.
- Fading of painted surfaces, deterioration of plated surfaces, deterioration of rubber and plastics including, rusting due to the passage of time.
- Normal phenomena such as noise, vibration and or oil, are considered by Steelfort as not affecting the quality, function or performance of the product.
- Any damage due to improper storage and or transport.
- Consumable replacement items: Spark plugs, contact points, shear pins, fuel strainers, oil filter elements, air cleaner elements, brake shoes or pads, clutch components, fuses, motor brushes, gaskets, tube or hoses, belts, cutting blades, light bulbs, serviceable bearings. Petroleum and others fluids: Oil, grease, battery electrolyte, and radiator coolant. Other items specified by Steelfort.
- Periodical maintenance items such as cleaning, inspection and adjustments.
- Any repair and/or adjustment performed by persons other than an authorised dealer, or damage resulting therefrom. All maintenance and repairs conducted by unauthorised service dealers and or persons will void the warranty.
- Any repair and/or adjustment to correct improperly and or poor-quality work that is previously performed.

- Incidental expenses that are incurred in the warranty claim for additional expenses such as towing, communications, accommodation and meals, that are incurred due to the breakdown of the product at a remote location are not covered.

- Any expense related to personal injury and/or property damage, (exclusive of the product itself). Compensation for loss of time, commercial losses or rental costs of a substitute product during the period of adjustment.

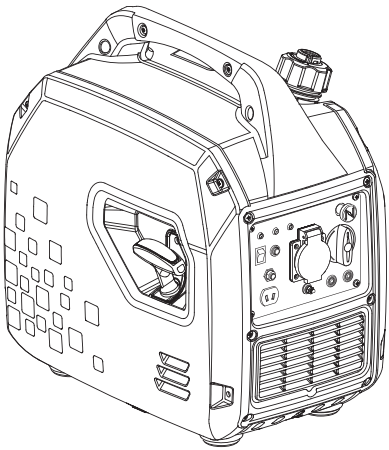
- Any damage which results from unavoidable natural disasters, fire, collision, theft, etc.

- Any normal wear or deterioration, such as that of sliding and or rotating parts caused under normal operating conditions i.e., normal wear to pistons, piston rings, cylinder bores, piston pins, valve seats, stems and bearings.

- Any damage resulting from exposure of the product to soot and smoke, medicines and chemical agents, seawater, sea breeze, salt or other environmental phenomena

DOMESTIC USE:
Personal, residential or household use only and is covered by a 3-year warranty. NOTE: These warranty conditions apply in New Zealand only.

COMMERCIAL USE:
All uses other than domestic use, including use for income-producing (including farming) or rental purposes have a 90-day warranty. NOTE: These warranty conditions apply in New Zealand only.



LawnMaster

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SCAN TO VIEW THE
LAWNMASTER RANGE

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