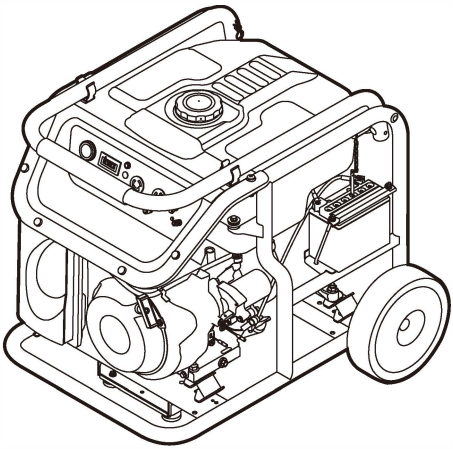
Gol Pumps Technology Company

Supply, Import, Export Water Pumps



ORIGINAL INSTRUCTIONS

THE K SERIES GENERATING SET

OPERATOR'S MANUAL

Read this manual carefully before operation.
This manual includes important guidance for safety operation.

This Manual contains important safety information and instructions for operating this generating set. **PLEASE READ THIS MANUAL CAREFULLY.** Failure to do so could result in property damage and/or personal INJURY/DEATH.

Provide this manual to any operator of this generating set. This manual should be considered as a permanent part of your generating set and should remain with it when you sell it.

The pictures and figures in the manual shall be only for reference and perhaps there will be difference between pictures & figures and physical products.

All information in this publication is based on the latest product information available at the time of printing. We reserve the right to change, alter and/or improve the product and this document at any time without notice and without incurring any obligation.

Write down the serial number and purchase information of the generating set. Keep this manual and the receipt for future reference.

Model:

_____

Serial number:

_____

Date of purchase:

_____

Contents

I. Operator safety

1.Safety rules

Pay attention to this safety alert symbol. Obey all safety messages that follow this symbol to avoid possible property damage, INJURY or DEATH.

Each safety message is preceded by a safety alert symbol and one of three words, DANGER, WARNING, or CAUTION.

⚠DANGER

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

⚠WARNING

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

⚠CAUTION

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

⚠WARNING

READ THIS MANUAL COMPLETELY BEFORE OPERATING.

DO NOT operate this generator until you have read ALL safety, operation, and maintenance Instructions listed in this manual.
Failure to follow the instructions may result in property damage, INJURY or DEATH.

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 supplied by the operator.

⚠WARNING

Do not modify the generator and or use for a purpose which is not intended to.

⚠WARNING

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.

Operate only on level surfaces.

DO NOT expose generator to excessive moisture, dust, 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 persons to operate the generator.

DO NOT run the generator unattended. Turn off the generator before leaving the area.

⚠WARNING

FIRE

Operation of this generator may create sparks that can start fires around dry vegetation.

This generator may not be equipped with a spark arresting muffler. If the generator will be used around flammable materials, or on land covered with materials such as agricultural crops, forest, brush, grass, or other similar items, then an approved spark arrester must be installed.

In some area, a spark arrester is required by law. Please contact local fire agencies for laws or regulations relating to fire prevention requirements.

⚠WARNING

Read the instructions provided with the equipment that powered by this engine for any additional safety rules that should be observed in conjunction with generator startup, shutdown, operation, or protective apparel that may be needed to operate the equipment.

⚠WARNING

HOT SURFACE

Running engines generators produce heat. Severe burns can occur on contact.

DO NOT touch generator while operating or just after stopping. Avoid contact with hot exhaust gases.

Maintain at least three feet of clearance on all sides to ensure adequate cooling.

Combustible material can catch fire on contact. Maintain at least five feet of clearance from combustible materials.

⚠DANGER

TOXIC FUMES

The exhaust of the engine contains carbon monoxide, an odorless, colorless, poison gas. Using engine indoors CAN KILL YOU!

NEVER use inside any building or any kind of enclosure, EVEN IF doors and windows are open.

Place the engine in a well-ventilated area and carefully consider wind and air currents when positioning the engine.

⚠DANGER

FIRE OR EXPLOSION

Gasoline is highly flammable and extremely explosive.

Fire or explosion can cause severe burns or death.

Keep flammable items away while handling generator.

Fill fuel tank outdoors and in a well-ventilated area with the generator stopped.

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

DO NOT operate the generator with known leaks in the fuel system.

Use proper fuel storage and handling procedures. DO NOT store fuel or other flammable materials nearby.

Empty the fuel tank before storing or transporting this generator.

Keep fire extinguisher handy and be prepared if a fire starts.

⚠DANGER

MOVING PARTS

Moving parts can cause severe injury. Keep hands and feet away.

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

DO NOT wear loose-fitting clothing, dangling drawstrings or items that could become caught. Tie up long hair and remove jewelry.

NEVER place fingers, hands, or body near the engine when it is running.

⚠WARNING

ACID

(For types equipped with battery)

Be careful when using any battery.

Keep away from open flame, heat or spark.

Battery will exhaust hydrogen while charging. Only charge a battery in a well ventilated place.

Avoid spilled battery acid. If contact with skin is made, wash immediately with clean water.

⚠WARNING

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 entanglement, traumatic amputation or laceration. Broken bones, fractures, bruises or sprains could result.

⚠DANGER

ELECTRICAL SHOCK

This generator produces powerful voltage and the electricity CAN KILL YOU.

This generator must be properly connected to an appropriate ground to help prevent electric shock. Failure to properly ground generator 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 electrical shock and death.

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

DO NOT touch bare wires or receptacles.

DO NOT operate generator in wet weather. Keep the generator dry.

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

DO NOT allow unqualified persons or children to operate or service the generator.

DO NOT hook up any generator to a buildings electrical system without the proper use and installation of a transfer switch installed by a qualified electrician.

When using generator for backup power, notify utility company. Use approved transfer generator to isolate generator from electric utility.

Failure to isolate generator from power utility can result in death or injury to electric utility workers due to backfeed of electrical energy.

II. Getting started

1. Unpacking

Remove the Generator from the Shipping Carton

1. Place the shipping carton on a solid, flat surface.

2. Carefully cut each corner of the carton box from top to bottom. Fold each side flat on the ground.

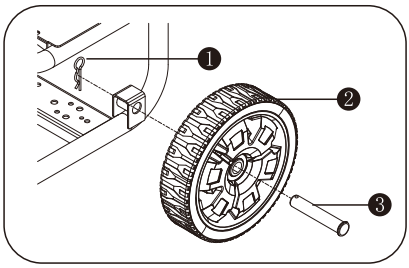
3. Remove everything from the carton except the generator.

2. Assembly

Your generator requires some assembly. If you have any questions regarding the assembly of your generator, please have your model number and serial number ready and consult your local dealer for help.

1 Install Wheel Kit

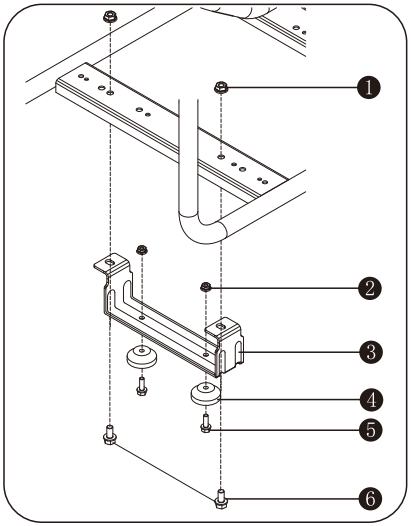
Put wheel stop pin through wheel and mounting lug hole, then fix it with the clamp.



❶ Clamp
❷ Wheel
❸ Wheel stop pin

2 Install support bracket

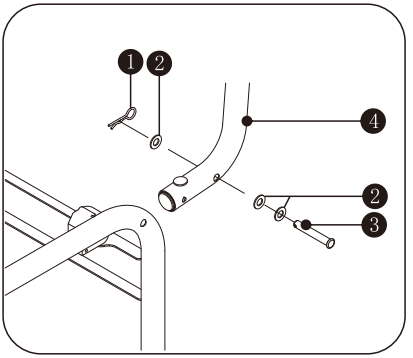
Use supporting bracket bolt to pass through the supporting bracket and the mounting hole on the rack, and then fix with the support bracket nut.



❶ Support bracket nut
❷ Damping seat nut
❸ Support bracket
❹ Damping seat
❺ Damping seat bolt
❻ Support bracket bolt

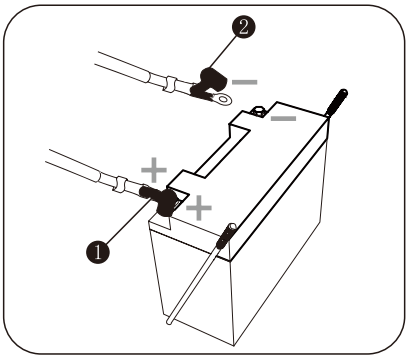
3 Install the handle

Use the handle pin to across the handle and its mounting lug hole, and then fix it with the clamp.



❶ Clamp ❷ Gasket
❸ Pin ❹ Push handle

4 Attach Negative Battery Wire



❶ Positive (+) terminal (red)
❷ Negative (-) terminal (black)

The sealed battery on the generator is fully charged and pre–installed except for the negative (black) battery cable.

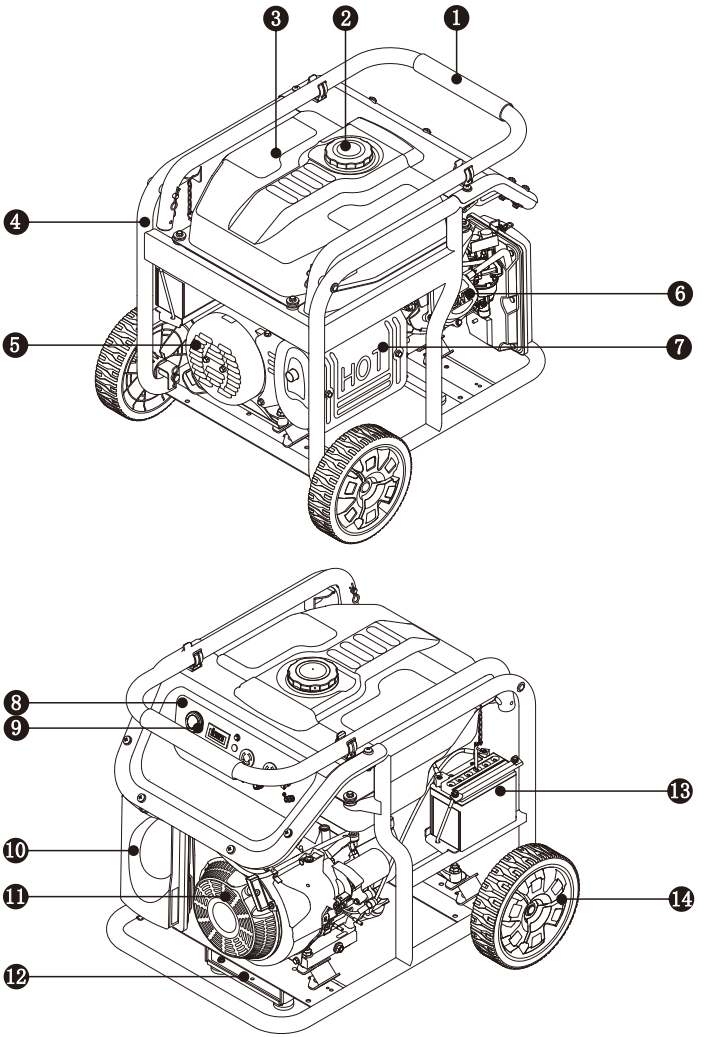
To install:

Cut off tie wrap securing loose end of negative (black) cable.

Connect the negative (black) battery cable to the negative (–) terminal on the battery.

Verify if it is correct and secure that the connections between the battery and generator.

3.Features and Controls



❶ Push handle
❷ Fuel cap
❸ Fuel tank
❹ Rack
❺ Rear cover
❻ Valve cover
❼ Muffler
❽ Control panel
❾ Engine switch
❿ Air filter
⓫ Starter
⓬ Support bracket
⓭ Battery
⓮ Wheel

III. Operating

1. Operating checklist

1 Operating Location

Only use OUTSIDE and place the generator in a well-ventilated area.

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

Operating engine in the scope of application, and please consult your local dealers if you have any question about the application scope.

Please consult your local authority. In some areas, generators must be registered with the local utility. Generators used to construction sites may be subject to additional rules and regulations.

⚠DANGER

TOXIC FUMES

The exhaust of the generator contains carbon monoxide, an odorless, colorless, poison gas. Using engine indoors CAN KILL YOU!

NEVER use inside any building or any kind of enclosure, EVEN IF doors and windows are open.

Place the generator in a well-ventilated area and carefully consider wind and air currents when positioning generator.

High altitude

This generator may require a high altitude carburetor kit to ensure correct operation at high altitudes. Consult your local dealer for high altitude kit information if you always operate your engine 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.

⚠CAUTION

Operation the engine at altitude below 5,000 feet (1,500 meters) with modified carburetor may cause the generator to overheat and result in serious engine damage.

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, serious injury or DEATH.

Remove any excessive dirt or debris, especially around the muffler and recoil starter.

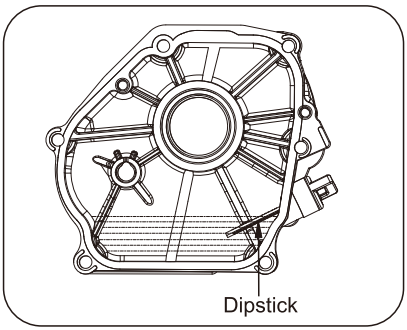
DO NOT move or tip the generator during operation.

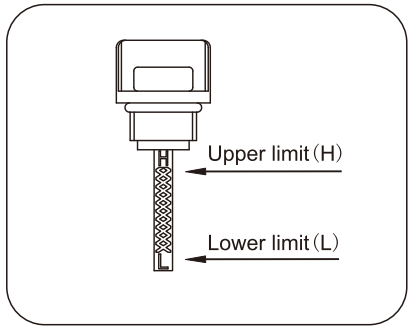
3 Engine oil

Place the engine on a level surface with engine stopped.

Remove the dipstick and wipe it clean.

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





Remove the dipstick again and check oil level. Level should be at top of indicator on dipstick.

Fill to the upper limit (marked with “H”) of the dipstick with the recommended oil if the oil level is low.

Reinstall and fully tighten the dipstick.

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.

⚠WARNING

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

⚠CAUTION

Operate generator only on level 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 inconvenient of an unexpected shutdown, fill to the upper limit and check the oil level regularly.

4 Engine fuel

With the engine stopped, check the fuel level gauge. Refill the fuel tank if necessary.

⚠CAUTION

Pressure can be built up due to fuel vapor. Allow engine to cool at least 2 minutes before removing fuel cap, and loosen the fuel cap slowly to release any pressure in the tank.

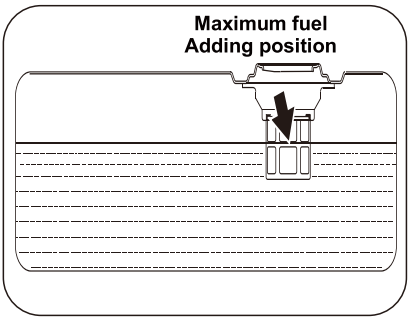
Use clean, fresh, regular unleaded gasoline.

Do not fill the tank while generator is running or in a high temperature.

Always wipe up any spilled fuel.

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

Fuel capacity (rated):
See parameters.



⚠DANGER

Do not fill the fuel tank above the upper limit. Over fill will results in engine die or damage the carbon canister (if equipped) and void your warranty.

⚠DANGER

FIRE OR EXPLOSION

Gasoline is highly flammable and extremely explosive.

Keep flammable items away while handling gasoline.

Fill fuel tank outdoors and in a well-ventilated area with the generator stopped.

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

DO NOT operate the generator with known leaks in the fuel system, and regularly check if fuel system leak.

Use proper fuel storage and handling procedures. DO NOT store fuel or other flammable materials nearby.

Empty the fuel tank before storing or transporting this generator.

Keep fire extinguisher handy and be prepared if a fire starts.

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 generating set while in storage. Be sure to review the instructions given in “Storage” section.

Gasoline/Alcohol Blends: up to 10% alcohol, 90% unleaded gasoline by volume is approved as a fuel. Other gasoline/alcohol blends are not approved. Effects of old, stale or contaminated fuel are not warrantable.

⚠CAUTION

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

⚠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.

5 **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. the electrical devices connecting in can not over the max limited and see specific limitation for the connected electric device.

6 **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 on the frame of the generator has been provided on the generator end. For remote grounding, connect of a length of heavy gauge (4 mm^2) 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.

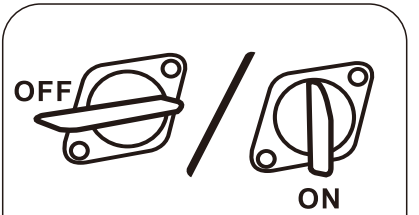
2. Starting the engine

1

Perform operating checklist, and remove all loaded.

2

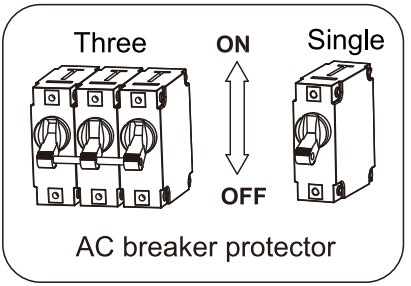
Turn fuel valve to the “ **ON** ” position.



Fuel valve

3

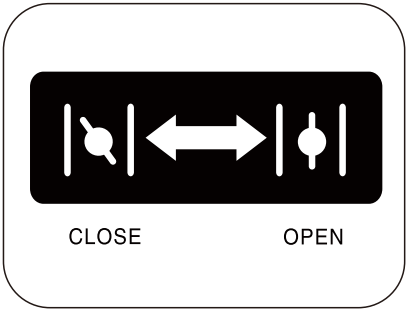
Turn off AC breaker protector.



AC breaker protector

4

Pull the choke valve switch to " **CLOSE** " position.



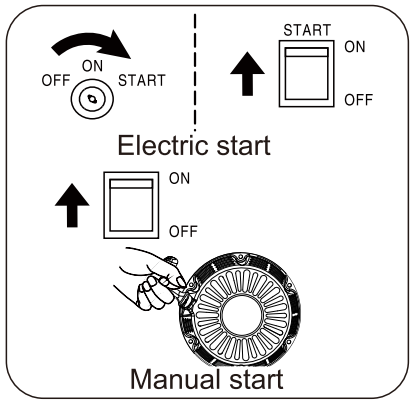
⚠CAUTION

Choke position for starting may vary depending upon temperature and other factors. If re-starting a warm engine, the choke should be left in the **HALF** or **OFF** position.

5

Electric start: Turn and keep the key to "**START**" position till the engine is started. After the engine is started, release the key to return to "**RUN**" position.

Manual start: Turn the switch to "**RUN**" position. and then seize the starter handle and slow pulling until there is a sense of resistance so far, and quickly pull to start.



⚠WARNING

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 hurtful accident.

If the starter fails to start the engine, immediately turn off the starter. Don't attempt to restart the engine before the failure cause is identified. Don't restart the engine by replacement of other storage battery without authorization.

⚠CAUTION

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

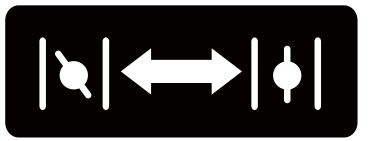
During starting, don't keep the starting switch to "start" position for more than 5s, and otherwise it is possible to damage the motor. If the unit fails to start within first time, restart after about 10s. After the unit is used for a period, if the starting speed of the motor falls, please replace the storage battery.

During the operation of the unit, the storage battery supplies power for the solenoid valve of the carburetor. For this, when the unit is turned off, make sure that the starting switch is in "**OFF**" position and otherwise the storage battery voltage is reduced due to the operating solenoid valve of the carburetor, impacting on starting for next time.

During running-in, routinely inspect the engine oil. See maintenance section for recommended maintenance period.

6

When the engine operates stably, pull the choke valve to "**OPEN**" position.



7

The generator may be normally loaded.

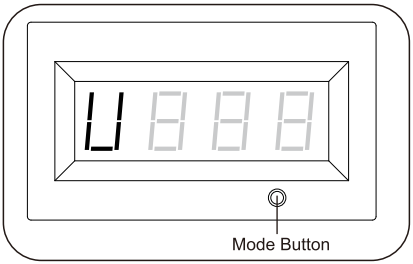
⚠WARNING

Connect the output terminal of the generator with the electric equipment. Don't start or stop the engine when the electric equipment is in "**ON**" status.

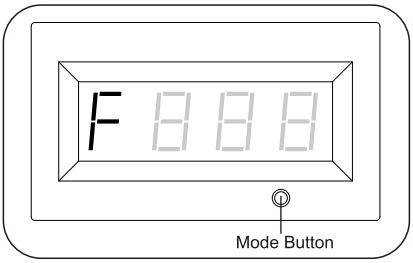
VFT meter (If applicable)

The VFT meter can be used for displaying voltage, frequency(hertz), run time, and total run time as applicable. (Display mode depends on the configuration). The LCD displays each mode by pressing the button below the display.
The display meter sets as either automatic switching mode or manual operation mode. In the manual state, press MODE BUTTON for mode switching; But in automatic mode, MODE BUTTON is used for reset (operate cautiously when necessary).

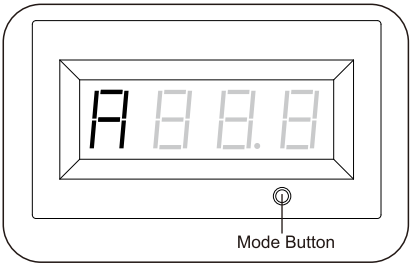
1. Voltage (U):
Output voltage of the generator.



2. Frequency (F):
Output frequency in hertz.



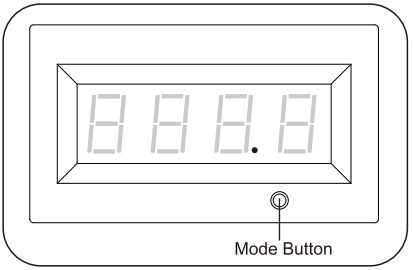
3. Run time (R):
Run time of the generator for the current session.



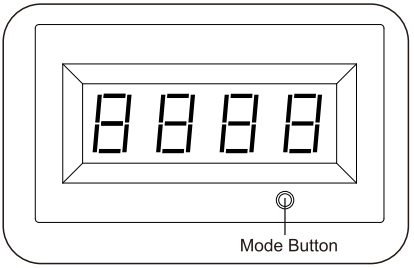
Note: If display value is less than 100,the numeric display will accurate to one decimal place. If the operation time is 100 hour or greater, the display will be “101”,“102” and so on.

4. Total run time:
Total run time of the generator since first operation.(display mode depends on the configuration)

(1) The display value is accurate to one decimal place; or

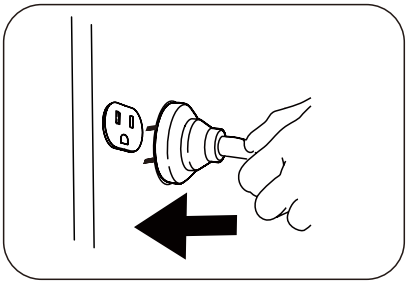


(2) The display value shows as a integer.



3. Connect to Electrical Devices

Inspect power cord for damage before using. There is a hazard of electrical shock from crushing, cutting or heat damage.



⚠DANGER

ELECTRICAL SHOCK

To reduce the risk of electrical shock, 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, while barefoot, or while hands or feet are wet.

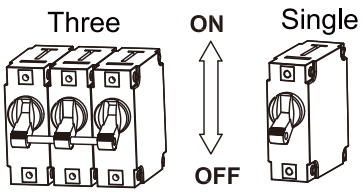
1. Allow the engine to stabilize and warm up for a few minutes after starting.

2. Make sure the electrical devices in "**OFF**" position. and the load current is not higher than the maximum withstanding current of single socket.

⚠CAUTION

If the current of single load is higher than the maximum withstanding current of single socket, please connect the load with the terminal.

3. Turn the AC breaker protector to "**ON**" position.



AC breaker protector

⚠CAUTION

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

Bearing capacity

⚠WARNING

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

You must make sure your generator can supply enough rated (running) and surge (starting) watts for the electrical devices you will power at the same time. Follow these simple steps to calculate the running and starting watts necessary for your purposes.

1. Select the electrical devices you will power at the same time.

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

3. Identify how many surge (starting) watts you will need. Surge wattage is the short burst of power needed to start electric motor-driven tools or appliances such as a circular saw or refrigerator.
Because not all motors start at the same time, total surge watts can be estimated by adding only the electrical device(s) with the highest additional surge watts to the total rated watts from step 2.

Wattage Reference Chart

Electric equipment		Rate power(W)
Appliances	Tablet computer27''	120
	Energy saving lamb	5-50
	Electric cooker	1000
	computer	400
	refrigerator	50
	Washing machine	250
	Electric fan	50
	Air-conditioner 2HP	1600
Electric tooling	Electric welding machine	2500
	Electric hammer	1000
	Water pump	800

⚠WARNING

You must isolate the generator from electric utility by opening the electrical system's main circuit breaker or main switch if the generator is used for backup power. Failure to isolate the generator from the power utility may result in injury or death to electric utility workers and damage to the generator due to backfeed of electrical energy.

4. Charging a Battery
(Applicable types)

Charge the storage battery by storage battery charging socket, and keep the full charge of the storage battery for use at any time.

Charge the storage battery in dry environment.

⚠WARNING

Storage batteries give off explosive hydrogen gas while recharging. An explosive mixture will remain around the battery for a long time after it has been charged. The slightest spark can ignite the hydrogen and cause an explosion, resulting in blindness or other serious injury.

⚠WARNING

DO NOT allow smoking, open flame, sparks or any other source of heat around a battery. Wear protective goggles, rubber apron and rubber gloves when working around a battery.

Battery electrolyte fluid is an extremely caustic sulfuric acid solution that can cause severe burns. If spill occurs flush area with clear water immediately.

To recharge Volt batteries, proceed as follows:

- Check fluid level in all battery cells. If necessary, add ONLY distilled water to cover separators in battery cells. **DO NOT use tap water.**
- If the battery is equipped with vent caps, make sure they are installed and are tight.
- If necessary, clean battery terminals.
- Connect battery charge cable clamp with **red** handle to the **positive (+)** battery terminal.
- Connect battery charge cable clamp with **black** handle to the **negative (–)** battery terminal.
- Start engine. Let the engine run while battery recharges.
- When battery has charged, shut down engine.

⚠CAUTION

Use an automotive hydrometer to test battery state of charge and condition. Follow the hydrometer manufacturer's instructions carefully. Generally, a battery is considered to be at 100% state of charge when specific gravity of its fluid (as measured by hydrometer) is 1.260 or higher.

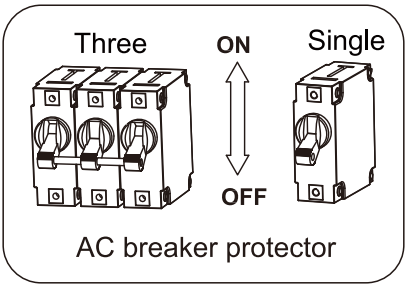
5. Stopping the engine

1

Remove all the load on generator.

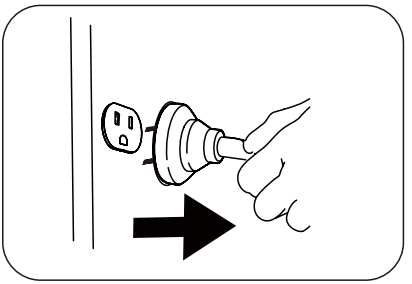
2

Turn off AC breaker protector.



AC breaker protector

Remove the plug of all electric equipment from the generator panel.



⚠WARNING

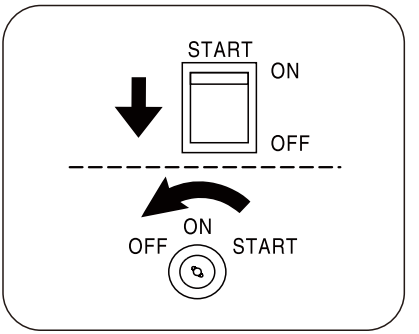
NEVER stop the engine with electrical devices connected and with the connected devices turned **"ON"**.

3

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

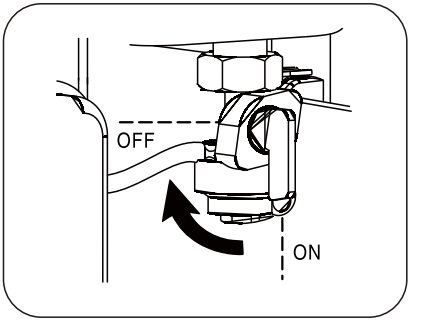
4

Turn off the flameout switch (turn the engine switch to "**OFF**" position.



5

Turn the fuel valve to "**OFF**" position.



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 operation can cause a malfunction and result in property damage, serious injury or DEATH.

Improper maintenance will void your warranty.

⚠DANGER

Accidental starts can cause severe injury or death. Remove and ground spark plug wire before performing any service.

⚠CAUTION

The filter element may contains PAHs, PAHs are harmful for your health. Please wear gloves for protection during air filter maintenance.

1. Maintenance schedule

Follow the service intervals indicated in the chart below. Service your generator more frequently when operating in adverse conditions.

Serve the generator in a lean, dry and flat area, so that no accident would happen during the serving.

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

		Each time before use	10 hours or the first month[note2]	50 hours or every three months[note2]	100 hours or every six months[note2]	300 hours or every year[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]				

Note1. Applicable types (if available).

Note2. Before each season and after then (whichever comes first).

Note3. Service more frequently under severe, dusty, dirty conditions.

Note4. To be performed by knowledgeable, experienced owners or the authorized 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 air compressor (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.

⚠WARNING

DO NOT modify the generator in any way.

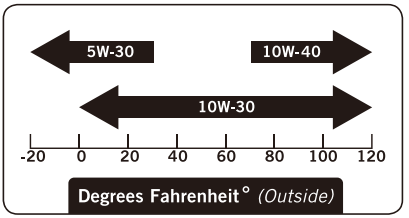
DO NOT tamper with governed speed. Generator supplies correct rated frequency and voltage when running at factory set.

Tampering with the factory set governor will void your warranty.

3. Engine maintenance

Engine Oil

SAE 10W-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.



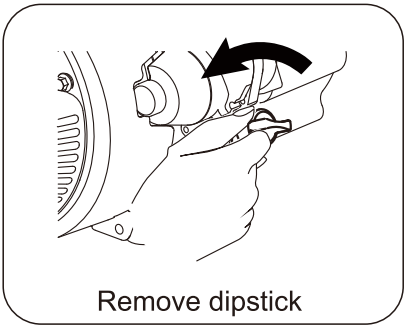
Ambient temperature

Oil capacity (rated): see parameters.

Add oil

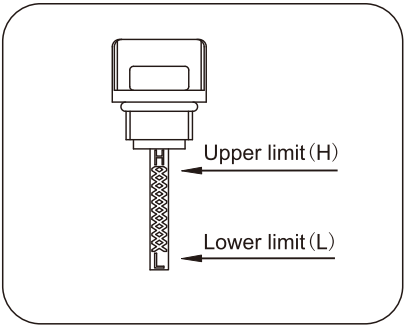
1. Place the engine on a level surface.

2. Remove the dipstick and wipe it clean.



Remove dipstick

3. Add recommended oil to the upper limit.



⚠CAUTION

Oil level check

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

4.Fully tighten the dipstick.

Change oil

⚠CAUTION

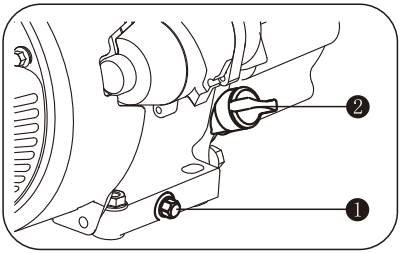
Change oil when the engine is warm from operation.

1.Place the engine on a level surface.

2.Remove oil dipstick.

3.Remove the oil drain plug and allow the oil to drain completely.

4.Replace and fully tighten the drain plug.



❶ Oil drain plug ❷ Dipstick

5.Add recommended oil to the upper limit (see add oil instruction above).

6.Reinstall and fully tighten the dipstick.

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

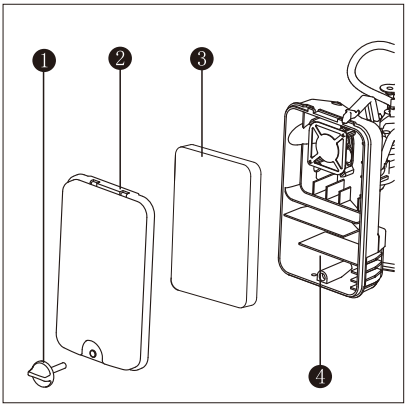
⚠WARNING

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

Clean foam filter:

1. Loosen the filter fix bolt and remove the cover of the air filter.



1. Filter fix bolt
2. Air filter cover
3. Foam filter element
4. Air filter body

2. Remove the foam filter element.

3. Wash in liquid detergent and warm water.

4. Squeeze thoroughly dry in a clean cloth.

5. Saturate in clean engine oil.

6. Place the filter in the assembly.

7. Fasten the air filter cover with the fix bolt, and the mounting it back to the air filter body.

⚠WARNING

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

Spark plug

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

2. Remove the spark plug cap.

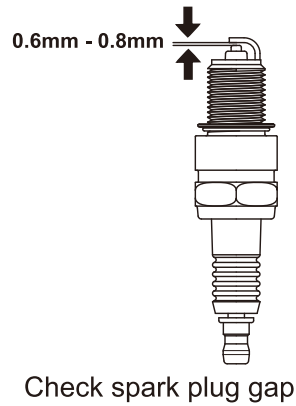
3. Using socket wrench to loose and remove the spark plug.

4. Inspect the spark plug and spark plug washer, if it's damaged or worn, replace with new one. Clean the spark plug with wire brush if reuse it.

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

Spark plug gap:

0.6mm - 0.8mm



Check spark plug gap

6. Carefully thread the plug into the engine **by hand.**

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

Spark Plug tighten Torque: 15-20 N.m

8. Attach 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.

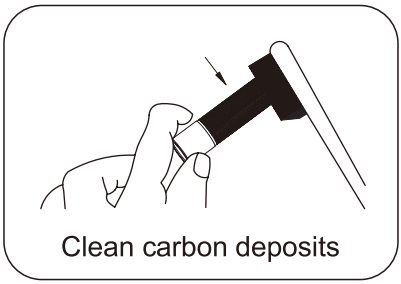
Spark Arrester
（Applicable types)

1. Allow the engine to cool completely before servicing the spark arrester.

2. Remove the two screws holding the cover plate which retains the end of the spark arrester to the muffler.

3.Remove the spark arrester screen.

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



Clean carbon deposits

5.Replace the spark arrester if it is damaged.

6.Reinstall the spark arrester in the muffler and attach with the two screws.

Speed

The speed has been pre-set at the factory and should rarely require readjustment. Consult your local authorized dealer for such needs.

⚠WARNING

Unapproved adjustment will damage your engine and/or your electrical devices and void your warranty.

Adjustment

There has no other service and/or adjustment need for your generator.

Unapproved adjustments or tampering can damage your generator and your electrical devices and will void your warranty. Contact your local dealer for such needs.

V. Trouble-shooting

Failure	Cause	Removal method
Engine won't start.	Engine switch is "**OFF**".	Turn engine switch to the "**ON**" position.
	No Fuel.	Fill tank per instructions in this manual.
	Inadequate 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 from around the plug base, then remove the spark plug. Install the spark plug in the plug cap. Turn the engine switch to "**ON**". 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.
Generator 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.

VI. Storage and transportation

Storage

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

⚠DANGER

Fire or explosion

Gasoline is highly flammable and extremely explosive. Empty the fuel tank and shut off fuel valve before storing or transporting this generating set.

1. Allow the generating set to cool completely before storage.

2. Clean the generating set according to the instructions in the Maintenance section.

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

4. Turn off the fuel supply at the fuel valve.

5. Change the oil.

6. Reattach the spark plug.

7. Remove the spark plug and pour about 15 ml of oil into the cylinder. Crank the engine slowly to distribute the oil and lubricate the cylinder.

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

Transportation

To prevent fuel spillage when transporting or during temporary storage, the generating set should be secured upright in its normal operating position, with the engine switch OFF. The fuel valve lever should be turned OFF.

⚠WARNING

When transporting:
Do not overfill the tank.
Do not operate the generating set while it is on vehicle. Take the generating set off the vehicle and use it in a well-ventilated place. Avoid a place exposed to direct sunlight when putting the generating set on a vehicle. If the generating set is left in an enclosed vehicle for many hours, high temperature inside the vehicle could cause fuel to vaporize resulting in a possible explosion.
Do not drive on a rough road for an extended period with the generating set on board. If you must transport the generating set on a rough road, drain the fuel from the generating set beforehand.

VII. Specification

1. Specifications(single phase)

Feature \ Model		KB2500(E)		KB3000(E)		KB3300(E)	
Engine parameter	Engine model	GB210(E)-2 or 170F(E)/P-2		GB210(E)-2 or 170F(E)/P-2		GB210(E)-2 or 170F(E)/P-2	
	Style	OHV, air cooled, four stroke					
	Displacement(cm^3)	208		208		208	
	Ignition system	TCI		TCI		TCI	
	Start style	Hand recoil or electric starting					
	Oil capacity(L)	0.6		0.6		0.6	
Series parameter	Voltage(V)	230	120(120/240)	230	120(120/240)	230	120(120/240)
	Frequency(Hz)	50	60	50	60	50	60
	Rated power(kW)	2.0	2.0	2.5	2.5	2.8	3.0
	Maximum power(kW)	2.2	2.2	2.8	2.8	3.0	3.3
	Power factor	1.0		1.0		1.0	
	Insulation rate	F		F		F	
	Fuel capacity(L)	13		13		13	
	operating temperature(℃)	-5～40		-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500		1500	
	Measured sound pressure level(dB(A))	≤73		≤73		≤73	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤96		≤96		≤96	
	Net weight(kg)	KB2500: 42 KB2500E: 49		KB3000: 49 KB3000E: 50		KB3300: 52 KB3300E: 53	

Feature \ Model		KH3300(E)		KH3500(E)		KB3700(E)	
Engine parameter	Engine model	FH210(E)-3 or 170F(E)/P-F		FH210(E)-3 or 170F(E)/P-F		172F(E) or GB225(E)	
	Style	OHV, forced cooling, four stroke, single cylinder					
	Displacement(cm^3)	208		208		224	
	Ignition system	TCI		TCI		TCI	
	Start style	Hand recoil or electric starting					
	Oil capacity(L)	0.6		0.6		0.6	
Series parameter	Voltage(V)	230	120(120/240)	230	120(120/240)	230	120(120/240)
	Frequency(Hz)	50	60	50	60	50	60
	Rated power(kW)	2.8	3.0	3.0	3.0	3.0	3.3
	Maximum power(kW)	3.0	3.3	3.3	3.3	3.3	3.7
	Power factor	1.0		1.0		1.0	
	Insulation rate	F		F		F	
	Fuel capacity(L)	13		13		13	
	operating temperature(℃)	-5～40		-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500		1500	
	Measured sound pressure level(dB(A))	≤73		≤73		≤74	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤96		≤96		≤97	
	Net weight(kg)	KH3300: 53 KH3300E: 55		KH3500: 50 KH3500E: 55		KB3700:54 KB3700E:55	

Feature \ Model		KB5000(E)		KH5500(E)		KB6000(E)	
Engine parameter	Engine model	GB270(E)-2 or GB270B(E)-2 or 175F(E)/P-G		FH300(E)-3 or 180F(E)/P-F		GB420(E)-2 or 190F(E)/P-2	
	Style	OHV, forced cooling, four stroke, single cylinder		OHV, forced cooling, four stroke, single cylinder		OHV, air cooled, four stroke	
	Displacement (cm^3)	272		292		420	
	Ignition system	TCI		TCI		TCI	
	Start style	Hand recoil or electric starting					
	Oil capacity(L)	0.6/1.0		1.1		1.1	
Series parameter	Voltage(V)	230	120(120/240)	230	120(120/240)	230	120(120/240)
	Frequency(Hz)	50	60	50	60	50	60
	Rated power(kW)	4.0	4.5	4.0	4.5	5.0	5.5
	Maximum power(kW)	4.5	5.0	4.5	5.0	5.5	6.0
	Power factor	1.0		1.0		1.0	
	Insulation rate	F		F		F	
	Fuel capacity(L)	13		28		28	
	operating temperature(℃)	-5～40		-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500		1500	
	Measured sound pressure level(dB(A))	≤74		≤74		≤74	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤97		≤97		≤97	
	Net weight(kg)	KB5000: 55 KB5000E: 60		KH5500: 77 KH5500E: 83		KB6000: 79 KB6000E: 87	

Feature \ Model		KH6500(E)		KB7000(E)		KH7000(E)	
Engine parameter	Engine model	FH420(E)-3 or 190F(E)/P-F		GB420(E)-2 or 190F(E)/P-2		FH420(E)-3 or 190F(E)/P-F	
	Style	OHV, forced cooling, four stroke, single cylinder		OHV, air cooled, four stroke		OHV, forced cooling, four stroke, single cylinder	
	Displacement (cm^3)	420		420		420	
	Ignition system	TCI		TCI		TCI	
	Start style	Hand recoil or electric starting					
	Oil capacity(L)	1.1		1.1		1.1	
Series parameter	Voltage(V)	230	120(120/240)	230	120(120/240)	230	120(120/240)
	Frequency(Hz)	50	60	50	60	50	60
	Rated power(kW)	5.0	5.5	6.0	6.5	6.0	6.5
	Maximum power(kW)	5.5	6.0	6.5	7.0	6.5	7.0
	Power factor	1.0		1.0		1.0	
	Insulation rate	F		F		F	
	Fuel capacity(L)	28		28		28	
	operating temperature(℃)	-5～40		-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500		1500	
	Measured sound pressure level(dB(A))	≤74		≤74		≤74	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤97		≤97		≤97	
	Net weight(kg)	KH6500: 80 KH6500E: 86		KB7000: 83 KB7000E: 90		KH7000: 89 KH7000E: 94	

Feature \ Model		KB8000(E)		KH8000(E)		KH8500(E)	
Engine parameter	Engine model	GB420(E)-2 or 190F(E)/P-2		FH420(E)-3 or 190F(E)/P-F		FH440(E)-3 or 192F(E)/P-F	
	Style	OHV, forced cooling, four stroke, single cylinder				OHV, air cooled, four stroke	
	Displacement (cm^3)	420		420		439	
	Ignition system	TCI		TCI		TCI	
	Start style	Hand recoil or electric starting					
	Oil capacity(L)	1.1		1.1		1.1	
Series parameter	Voltage(V)	230	240(120/240)	230	120(120/240)	230	120(120/240)
	Frequency(Hz)	50	60	50	60	50	60
	Rated power(kW)	6.5	7.0	6.5	7.0	8.0	8.0
	Maximum power(kW)	7.0	7.5	7.0	7.5	8.5	8.5
	Power factor	1.0		1.0		1.0	
	Insulation rate	F		F		F	
	Fuel capacity(L)	28		28		28	
	operating temperature(℃)	-5～40		-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500		1500	
	Measured sound pressure level(dB(A))	≤74		≤74		≤74	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤97		≤97		≤97	
	Net weight(kg)	KB8000:85 KB8000E:92		KH8000: 93 KH8000E: 101		KH8500: 95 KH8500E: 104	

2. Specifications (three phase)

Feature \ Model		KB6003(E)		KH6503(E)		KB7003(E)	
Engine parameter	Engine model	FH420(E)-3 or 190F(E)/P-2		FH420(E)-3 or 190F(E)/P-F		FH420(E)-3 or 190F(E)/P-2	
	Style	OHV, air cooled, four stroke		OHV, air cooled, four stroke		OHV, air cooled, four stroke	
	Displacement (cm^3)	420		420		420	
	Ignition system	TCI		TCI		TCI	
	Start style	Hand recoil or electric starting					
	Oil capacity(L)	1.1		1.1		1.1	
Series parameter	Voltage(V)	230/400		230/400		230/400	
	Frequency(Hz)	50	60	50	60	50	60
	Rated power(kW)	5.0	5.5	5.0	5.5	6.0	6.5
	Maximum power(kW)	5.5	6.0	5.5	6.0	6.5	7.0
	Power factor	0.8		0.8		0.8	
	Insulation rate	F		F		F	
	Fuel capacity(L)	28		28		28	
	operating temperature(℃)	-5～40		-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500		1500	
	Measured sound pressure level(dB(A))	≤74		≤74		≤74	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤97		≤97		≤97	
	Net weight(kg)	KB6003: 82 KB6003E: 91		KH6503: 84 KH6503E: 91		KB7003: 83 KB7003E: 90	

Feature \ Model		KH7003(E)		KH8003(E)		KH8503(E)	
Engine parameter	Engine model	FH420(E)-3 or 190F(E)/P-F		FH420(E)-3 or 190F(E)/P-F		FH440(E)-3 or 192F(E)/P-F	
	Style	OHV, air cooled, four stroke		OHV, air cooled, four stroke		OHV, air cooled, four stroke	
	Displacement (cm^3)	420		420		439	
	Ignition system	TCI		TCI		TCI	
	Start style	Hand recoil or electric starting					
	Oil capacity(L)	1.1		1.1		1.1	
Series parameter	Voltage(V)	230/400		230/400		230/400	
	Frequency(Hz)	50	60	50	60	50	60
	Rated power(kW)	6.0	6.5	6.5	7.0	8.0	8.0
	Maximum power(kW)	6.5	7.0	7.0	7.5	8.5	8.5
	Power factor	0.8		0.8		0.8	
	Insulation rate	F		F		F	
	Fuel capacity(L)	28		28		28	
	operating temperature(℃)	-5～40		-5～40		-5～40	
	Max. site altitude of installation(m)	1500		1500		1500	
	Measured sound pressure level(dB(A))	≤74		≤74		≤74	
	Measurement uncertainty(dB(A))	≤1.5		≤1.5		≤1.5	
	Guaranteed sound power level(dB(A))	≤97		≤97		≤97	
	Net weight(kg)	KH7003: 87 KH7003E: 94		KH8003: 93 KH8003E: 101		KH8503: 96 KH8503E: 103	

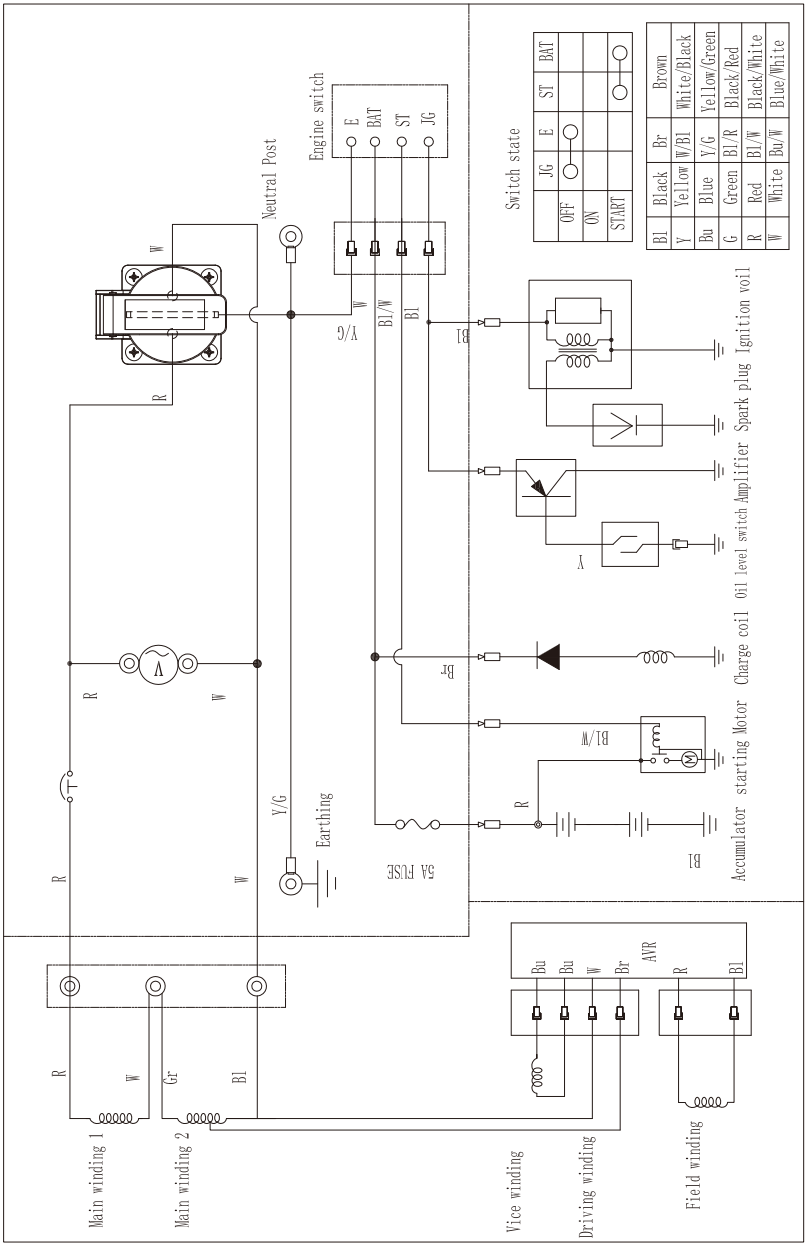
The air-fuel ratio will be more rich in higher altitude area, which will led to lower performance of engine, and higher consuming of fuel.

The output of generator should be measured according to the real operation condition such as temperature, pressure and humidity etc.

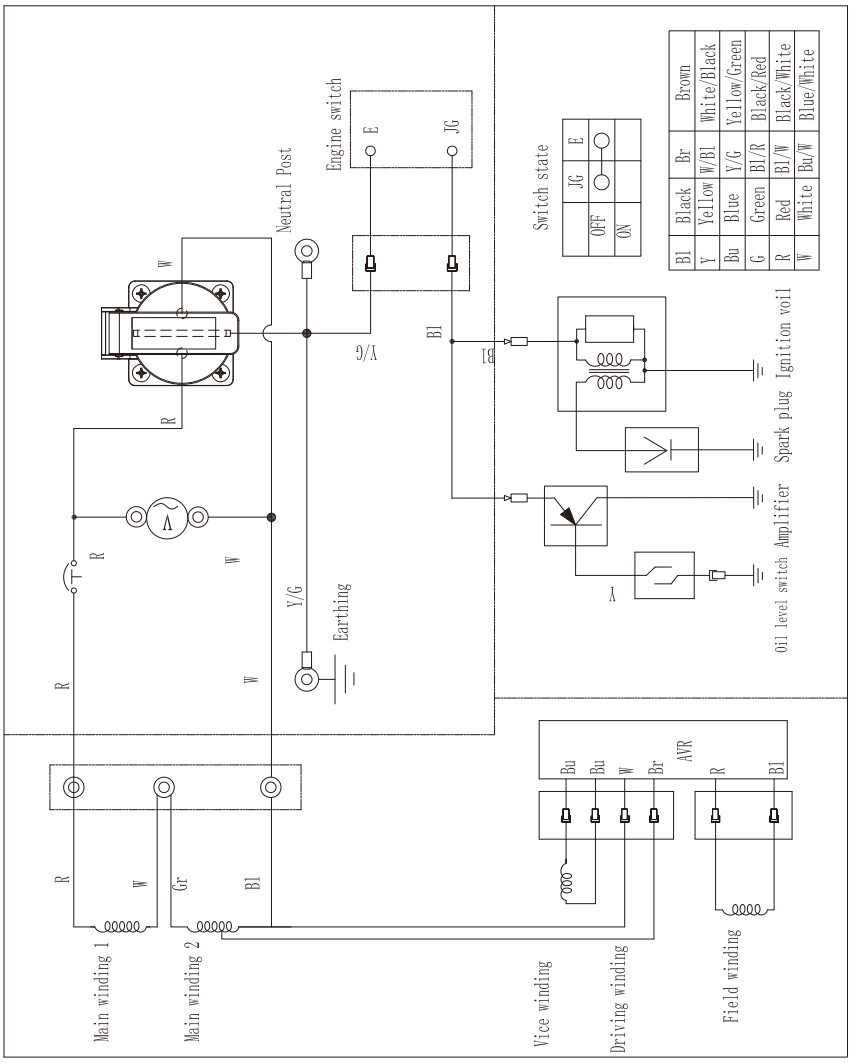
Notes: The generating set with different specification and configurations may have different parameters and may change at any time without notice. Please consult the local dealer for detailed information.

3. Wiring Diagram

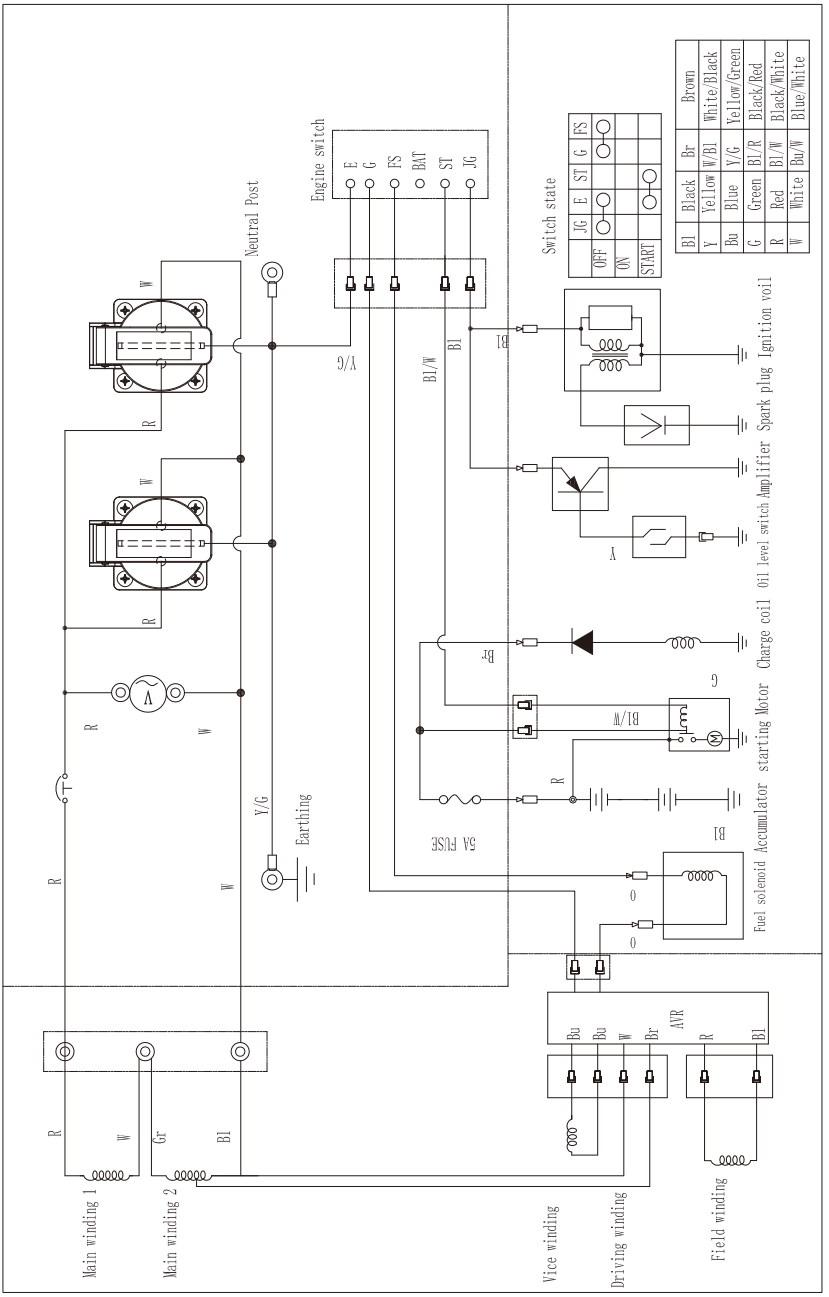
① 2-3kW electric start



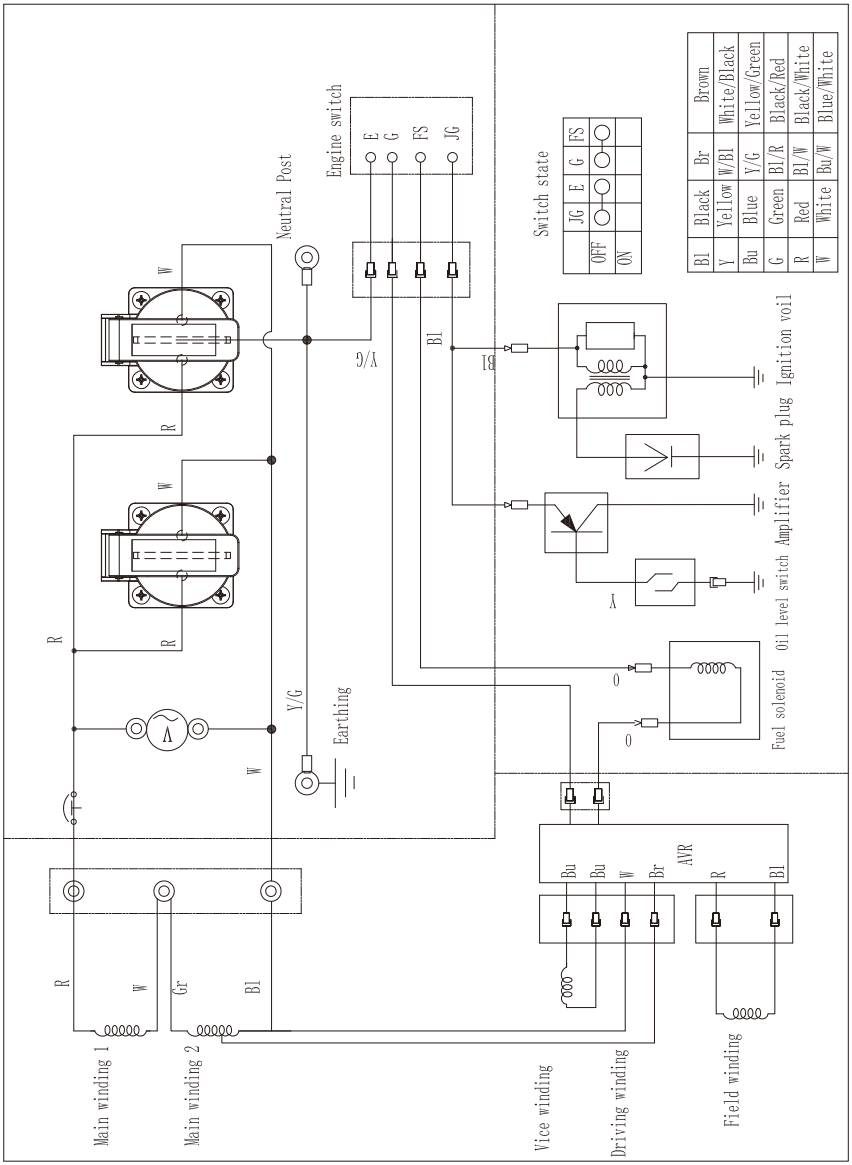
② 2-3kW recoil start



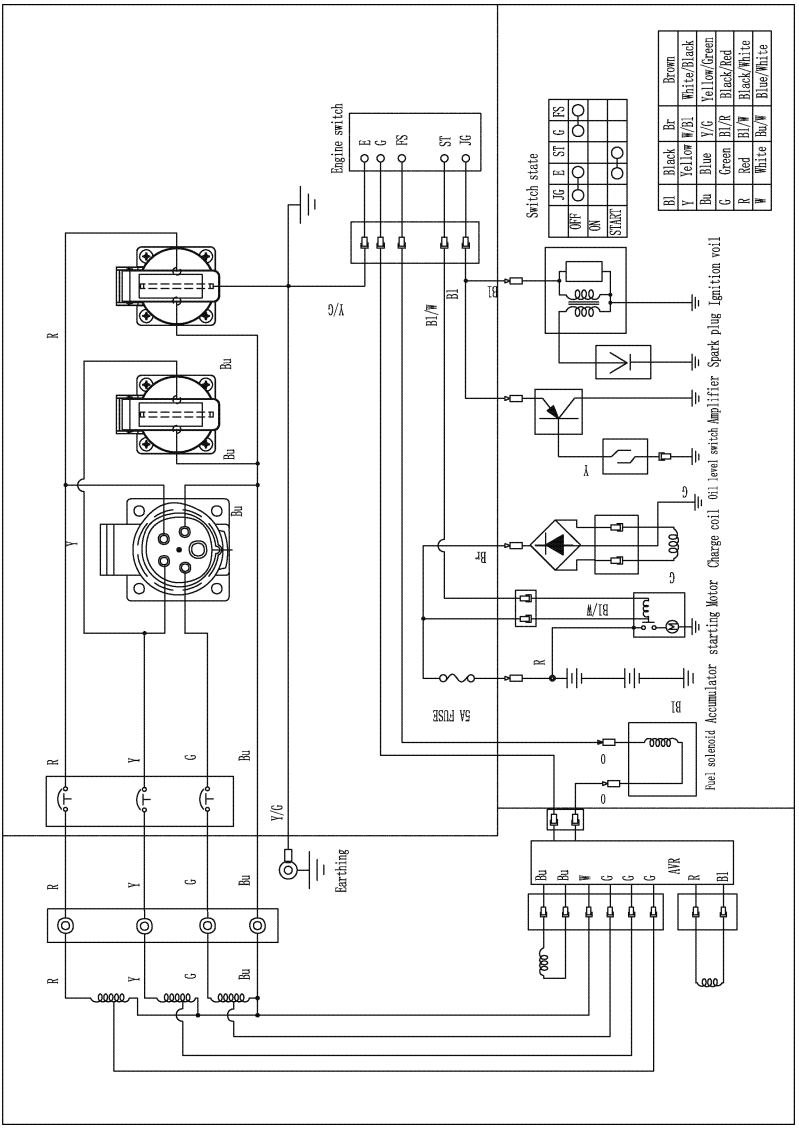
③ 3.5-8kW electric start



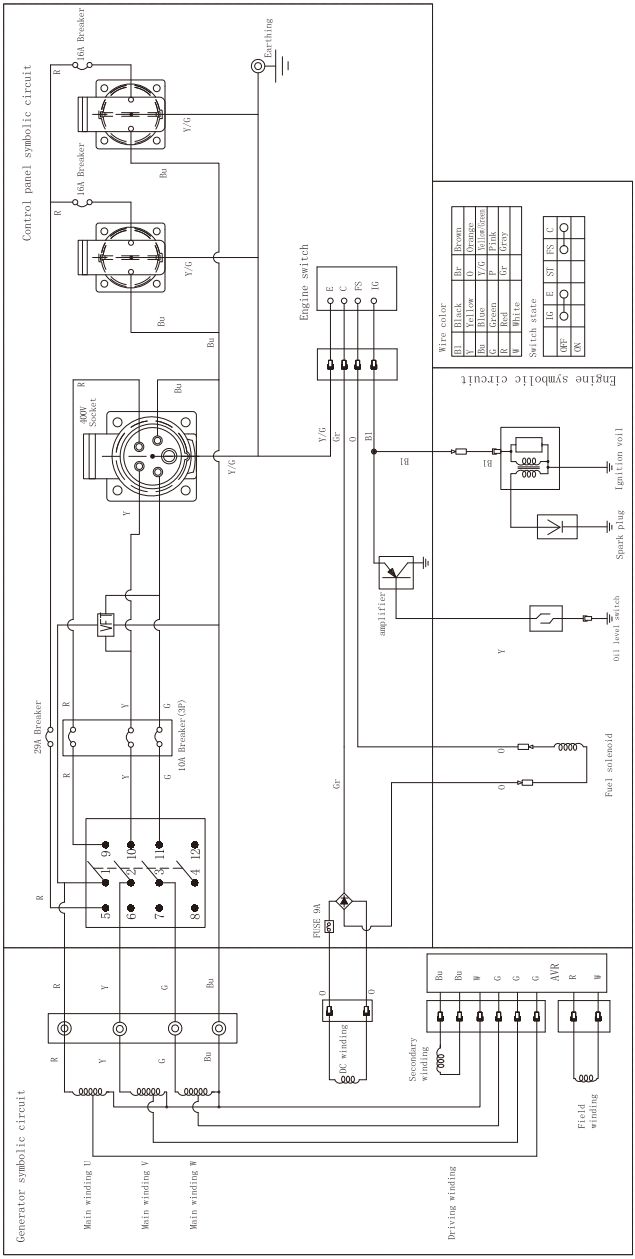
④ 3.5-8kW recoil start



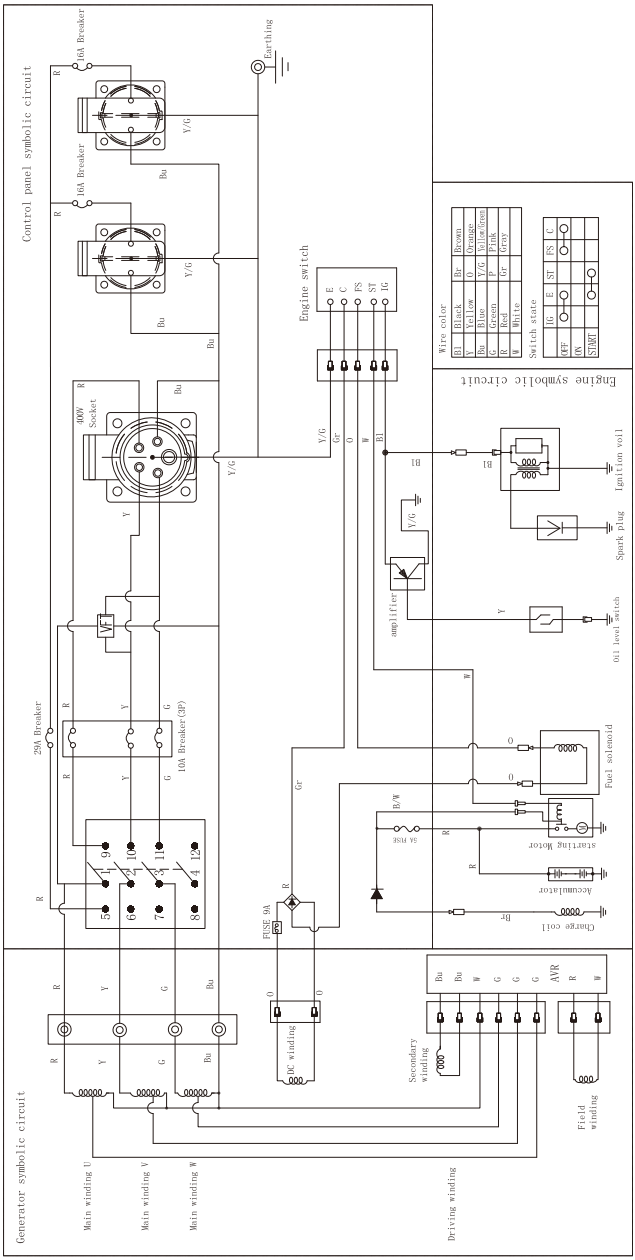
⑤ 3.5-8kW electric start (three-phase)



⑥ 3.5-8kW recoil start (three-phase or single-phase)



⑦ 3.5-8kW electric start (three-phase or single-phase)



NOTE: Because of the difference of generator, the wiring diagram is only for reference.

Gol Pumps Technology Company

Supply, Import, Export Water Pumps

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