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**SAVE THESE INSTRUCTIONS.** This manual contains important safety precautions which should be read and understood before operating the product. Failure to do so could result in serious injury. This manual should remain with the product.

Specifications, descriptions and illustrations in this manual are as accurate as known at the time of publication, but are subject to change without notice.

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## INTRODUCTION

Congratulations on your purchase of a Champion Power Equipment (CPE) product. CPE designs, builds, and supports all of our products to strict specifications and guidelines. With proper product knowledge, safe use, and regular maintenance, this product should bring years of satisfying service.

Every effort has been made to ensure the accuracy and completeness of the information in this manual at the time of publication, and we reserve the right to change, alter and/or improve the product and this document at any time without prior notice.

CPE highly values how our products are designed, manufactured, operated, and serviced as well as providing safety to the operator and those around the generator. Therefore, it is IMPORTANT to review this product manual and other product materials thoroughly and be fully aware and knowledgeable of the assembly, operation, dangers and maintenance of the product before use. Fully familiarize yourself, and make sure others who plan on operating the product fully familiarize themselves too, with the proper safety and operation procedures before each use. Please always exercise common sense and always err on the side of caution when operating the product to ensure no accident, property damage, or injury occurs. We want you to continue to use and be satisfied with your CPE product for years to come.

When contacting CPE about parts and/or service, you will need to supply the complete model and serial numbers of your product. Transcribe the information found on your product's nameplate label to the table below

<b>CPG TECHNICAL SUPPORT TEAM</b>
<b>MODEL NUMBER</b>
CPG4000DHY-DF-UK
<b>SERIAL NUMBER</b>
<b>DATE OF PURCHASE</b>
<b>PURCHASE LOCATION</b>

## SAFETY DEFINITIONS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

### DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### WARNING

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

### CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### NOTICE

NOTICE indicates information considered important, but not hazard-related (e.g., messages relating to property damage).

## IMPORTANT SAFETY INSTRUCTIONS

### ⚠ DANGER

Generator exhaust contains carbon monoxide, a colorless, odorless, poisonous gas. Breathing carbon monoxide will cause nausea, dizziness, fainting or death. If you start to feel dizzy or weak, get to fresh air immediately.

#### OPERATE GENERATOR OUTDOORS ONLY IN A WELL VENTILATED AREA AND POINT EXHAUST AWAY.

DO NOT operate the generator inside any building, including garages, basements, crawlspaces and sheds, enclosure or compartment, including the generator compartment of a recreational vehicle.

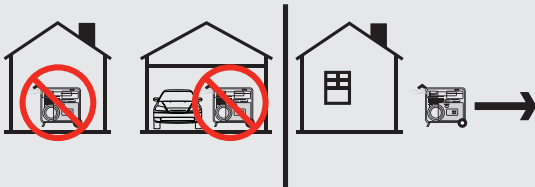
DO NOT allow exhaust fumes to enter a confined area through windows, doors, vents or other openings.

### ⚠ DANGER

Using a generator indoors **CAN KILL YOU IN MINUTES**. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.

**NEVER** use inside a home or garage, **EVEN IF** doors and windows are open.

**ONLY** use **OUTSIDE** and far away from windows, doors, and vents.



Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery back-up according to the manufacturer's instructions.

### ⚠ WARNING

Although the generator contains a spark arrester, maintain a minimum distance of 5 ft. (1.5 m) from dry vegetation to prevent fires.

### ⚠ DANGER

Operate equipment with guards in place.

Rotating parts can entangle hands, feet, hair, clothing and/or accessories. Traumatic amputation or severe laceration can result.

Keep hands and feet away from rotating parts.

Tie up long hair and remove jewelry.

DO NOT wear loose-fitting clothing, dangling drawstrings or items that could become caught.

### ⚠ DANGER

Generator produces powerful voltage.

DO NOT touch bare wires or receptacles.

DO NOT use electrical cords that are worn, damaged or frayed. Use only Champion electrical cords for proper application.

DO NOT operate generator in wet weather.

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

Use a ground fault circuit interrupter (GFCI) in damp areas and areas containing conductive material such as metal decking.

Connection to your home's electrical system requires a listed 30A transfer switch installed by a licensed electrician and approved by the local authority having jurisdiction. The connection must isolate the generator from the utility power and must comply with all applicable laws and electrical codes.

### ⚠ WARNING

Do not use generator for medical and life support uses.

In case of emergency, call 911 immediately.

**NEVER** use this product to power life support devices or life support appliances.

**NEVER** use this product to power medical devices or medical appliances.

Inform your electricity provider immediately if you or anyone in your household depends on electrical equipment to live.

Inform your electrical provider immediately if a loss of power would cause you or anyone in your household to experience a medical emergency.



**⚠ WARNING**

Spark from removed spark plug wire can result in fire or electrical shock.

**When servicing the generator:**

Disconnect the spark plug wire and place it where it cannot contact the plug or any other metal object.

DO NOT check for spark with the plug removed.

Use only approved spark plug testers.

**⚠ WARNING**

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

DO NOT touch hot surfaces.

Avoid contact with hot exhaust gases.

Allow equipment to cool before touching.

Maintain at least 3 ft. (91.4 cm) of clearance on all sides to ensure adequate cooling.

Maintain at least 5 ft. (1.5 m) of clearance from combustible materials.

**⚠ WARNING**

Rapid retraction of the recoil 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.

When starting engine, pull the recoil cord slowly until resistance is felt and then pull rapidly to avoid kickback.

DO NOT start or stop the engine with electrical devices plugged in and turned on.

**⚠ CAUTION**

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

DO NOT overload the generator.

DO NOT tamper with the governed speed.

DO NOT modify the generator in any way.

**⚠ CAUTION**

Start the generator and allow the engine to stabilize before connecting electrical loads.

Connect electrical equipment in the off position, and then turn them on for operation.

Turn electrical equipment off and disconnect before stopping the generator.

**⚠ CAUTION**

Improper treatment or use of the generator can damage it, shorten its life or void the warranty.

Use the generator only for intended uses.

Operate only on level surfaces.

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

DO NOT allow any material to block the cooling slots.

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

**DO NOT use the generator if:**

- Electrical output is lost
- Equipment sparks, smokes or emits flames
- Equipment vibrates excessively

## Fuel Safety

### **⚠ DANGER**

**GASOLINE, GASOLINE VAPORS AND PROPANE (LPG) ARE HIGHLY FLAMMABLE AND EXPLOSIVE.**

Fire or explosion can cause severe burns or death.

#### **Gasoline and gasoline vapors:**

- Gasoline is highly flammable and explosive.
- Gasoline can cause a fire or explosion if ignited.
- Gasoline is a liquid fuel but it's vapors can ignite.
- Gasoline is a skin irritant and needs to be cleaned up immediately if spilled on skin or clothes.
- Gasoline has a distinctive odor, this will help detect potential leaks quickly.
- In any petroleum gas fire, flames should not be extinguished unless by doing so the fuel supply valve can be turned OFF. This is because if a fire is extinguished and a supply of fuel is not turned OFF, then an explosion hazard could be created.
- Gasoline expands or contracts with ambient temperatures. Never fill the gasoline tank to full capacity, as gasoline needs room to expand if temperatures rise.

#### **LPG:**

- LPG is highly flammable and explosive.
- LPG is under pressure and can cause a fire or explosion if ignited.
- LPG is heavier than air and can settle in low places while dissipating.
- LPG has a distinctive odor added to help detect potential leaks quickly.
- In any petroleum gas fire, flames should not be extinguished unless the fuel supply valve is turned OFF. This is because if a fire is extinguished and a supply of fuel is not turned OFF, then an explosion hazard could be created.
- When exchanging LPG cylinders, be sure the cylinder valve is of the same type.
- Always keep the LPG cylinder in an upright position.
- LPG will burn skin if it comes in contact with it. Keep any and all LPG away from skin at all times.

#### **When adding or removing gasoline:**

DO NOT light or smoke cigarettes.

Turn the generator off and let it cool for at least two minutes before removing the gasoline cap. Loosen the cap slowly to relieve pressure in the tank.

Only fill or drain gasoline outdoors in a well-ventilated area.

DO NOT pump gasoline directly into the generator at the gas station. Use an approved container to transfer the fuel to the generator.

DO NOT overfill the gasoline tank.

Always keep gasoline away from sparks, open flames, pilot lights, heat and other sources of ignition.

#### **When starting the generator:**

DO NOT attempt to start a damaged generator.

Make certain that the gasoline cap, air filter, spark plug, fuel lines and exhaust system are properly in place.

Allow spilled gasoline to evaporate fully before attempting to start the engine.

Make certain that the generator is resting firmly on level ground.

#### **When operating the generator:**

DO NOT move or tip the generator during operation.

DO NOT tip the generator or allow fuel or oil to spill.

#### **When transporting or servicing the generator:**

Make certain that the fuel valve is in the OFF position and the gasoline tank is empty.

For LPG compatible models, be sure that the LPG cylinder is disconnected and stored securely away from the generator.

Disconnect the spark plug wire.

#### **When storing the generator:**

Store away from sparks, open flames, pilot lights, heat and other sources of ignition.

Do not store generator, gasoline or LPG cylinders near furnaces, water heaters, or any other appliances that produce heat or have automatic ignitions.

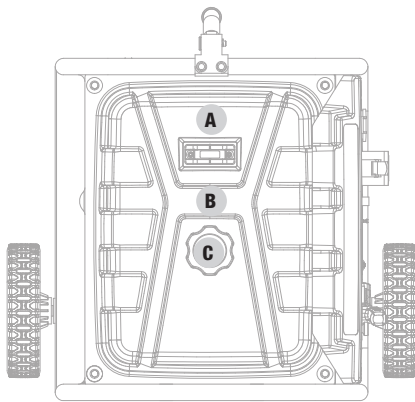
### **⚠ WARNING**

Never use a gasoline container, gasoline tank, LPG connector hose, LPG cylinder or any other fuel item that is broken, cut, torn or damaged.

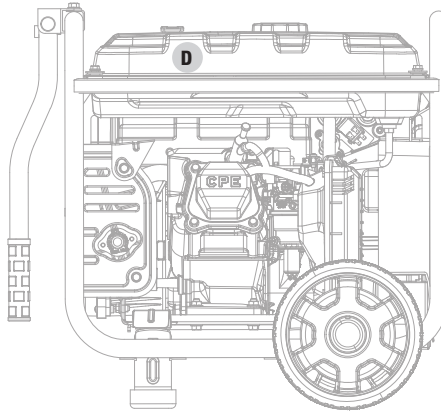
**Safety and Dataplate Labels**

These labels warn you of potential hazards that can cause serious injury. Read them carefully.

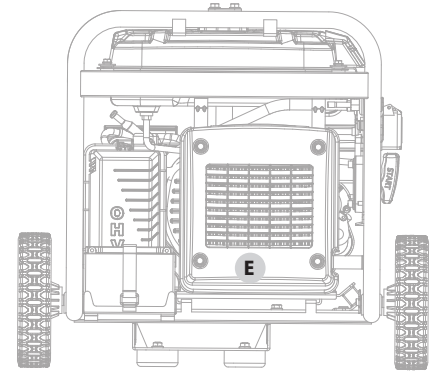
If a label comes off or becomes hard to read, contact Technical Support Team for possible replacement.



Top



Back



Side

	LABEL	DESCRIPTION																																
A		Safety Symbols/ CO Danger																																
B		Safety Symbols/ CO Danger																																
C		Fuel																																
D		Hot Surface																																
E	<table border="1"> <tr> <td colspan="2"> <b>CHAMPION POWER EQUIPMENT, INC.</b>                      12039 SMITH AVENUE                      SANTA FE SPRINGS, CA 90670                      USA / E.-U.                      MADE IN CHINA                      Low Power Generating Set                      CE UKCA                      1020-BY-L-A                 </td> <td> <table border="1"> <tr><td>FREQUENCY (Hz)</td><td>50</td></tr> <tr><td>RPM</td><td>3600</td></tr> <tr><td>PHASE</td><td>1</td></tr> <tr><td>POWER FACTOR</td><td>1.0</td></tr> <tr><td>AC VOLTS</td><td>240V</td></tr> <tr><td>AC AMPS</td><td>14.6A</td></tr> <tr><td>Performance Class</td><td>G2</td></tr> </table> </td> <td> <table border="1"> <tr><td>NET WEIGHT</td><td>43.2kg</td></tr> <tr><td>QUALITY CLASS</td><td>X</td></tr> <tr><td>MAX AMBIENT TEMP</td><td>104°F/40°C</td></tr> <tr><td>INSULATION CLASS</td><td>F</td></tr> <tr><td>RATED OUTPUT</td><td>COP-3.5kW</td></tr> <tr><td>MAX POWER</td><td>3.6kW S2 5min</td></tr> <tr><td>PROPANE WATTS</td><td>3.15kW</td></tr> </table> </td> </tr> </table>	<b>CHAMPION POWER EQUIPMENT, INC.</b> 12039 SMITH AVENUE SANTA FE SPRINGS, CA 90670 USA / E.-U. MADE IN CHINA Low Power Generating Set CE UKCA 1020-BY-L-A		<table border="1"> <tr><td>FREQUENCY (Hz)</td><td>50</td></tr> <tr><td>RPM</td><td>3600</td></tr> <tr><td>PHASE</td><td>1</td></tr> <tr><td>POWER FACTOR</td><td>1.0</td></tr> <tr><td>AC VOLTS</td><td>240V</td></tr> <tr><td>AC AMPS</td><td>14.6A</td></tr> <tr><td>Performance Class</td><td>G2</td></tr> </table>	FREQUENCY (Hz)	50	RPM	3600	PHASE	1	POWER FACTOR	1.0	AC VOLTS	240V	AC AMPS	14.6A	Performance Class	G2	<table border="1"> <tr><td>NET WEIGHT</td><td>43.2kg</td></tr> <tr><td>QUALITY CLASS</td><td>X</td></tr> <tr><td>MAX AMBIENT TEMP</td><td>104°F/40°C</td></tr> <tr><td>INSULATION CLASS</td><td>F</td></tr> <tr><td>RATED OUTPUT</td><td>COP-3.5kW</td></tr> <tr><td>MAX POWER</td><td>3.6kW S2 5min</td></tr> <tr><td>PROPANE WATTS</td><td>3.15kW</td></tr> </table>	NET WEIGHT	43.2kg	QUALITY CLASS	X	MAX AMBIENT TEMP	104°F/40°C	INSULATION CLASS	F	RATED OUTPUT	COP-3.5kW	MAX POWER	3.6kW S2 5min	PROPANE WATTS	3.15kW	Dataplate
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**Safety Symbols**









Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to more safely operate the product.

SYMBOL	MEANING
	<p><b>Read Operator’s Manual.</b> To reduce the risk of injury, user must read and understand operator’s manual before using this product.</p>
	<p><b>Clearance.</b> Keep all objects at least 5 feet (1.5m) from generator. Heat from the muffler and exhaust gas can ignite combustible objects.</p>
	<p><b>Ground.</b> Consult with local electrician to determine grounding requirements before operation.</p>
	<p><b>Electric Shock.</b> Failure to use in dry conditions and to observe safe practices can result in electric shock. Improper connections to a building can allow current to backfeed into utility lines, creating an electrocution hazard. A transfer switch must be used when connecting to a building.</p>
	<p><b>Fire/Explosion.</b> Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe burns or death. Keep generator at least 5 feet (1.5m) from all objects to prevent combustion.</p>
	<p><b>Hot Surface.</b> To reduce the risk of injury or damage, avoid contact with any hot surface.</p>
	<p><b>Open Flame Alert.</b> Fuel and its vapors are extremely flammable and explosive. Keep fuel away from smoking, open flames, sparks, pilot lights, heat, and other ignition sources.</p>
	<p><b>Wet Conditions Alert.</b> Do not expose to rain or use in damp locations.</p>

### Operation Symbols

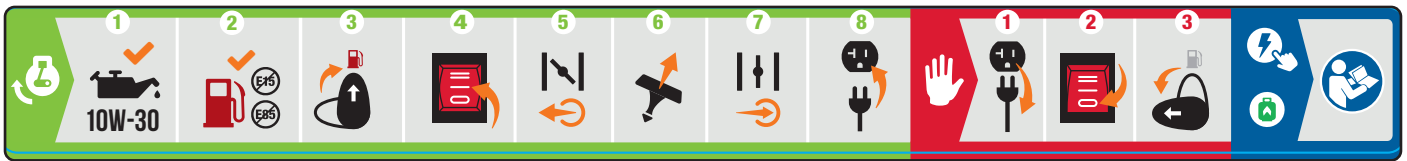
Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to more safely operate the product.

SYMBOL	MEANING
	Start
	ON
	STOP or OFF
	Gasoline Valve ON
	Propane Valve ON
	Choke Knob
	<b>Choke.</b> Pull choke knob to “CHOKE” position.
	<b>Run.</b> Push choke knob to “RUN” position.

SYMBOL	MEANING
	Economy Mode Button
	Low Oil
	Ground Terminal
	12V Direct Current
	Parallel Connection(s)
	Circuit Breaker Reset: Push
	Overload Reset button
	<b>Neutral Floating.</b> Neutral circuit <b>IS NOT</b> electrically connected to the frame/ground of the generator.

## Quickstart Label Symbols

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to more safely operate the product.



### Starting the Engine

#### **⚠ DANGER**

Move generator outside and far away from windows, doors and intake ventilation covers.

1. **Check oil level.**  
Recommended oil is 10W-30.
2. **Add fuel.**  
When adding gasoline, use a minimum octane rating of 87 and an ethanol content of 10% or less by volume.
3. **Fuel selector.**  
Turn the fuel selector to the vertical position for **gasoline** operation.
4. Press engine switch to the **“ON”** position.
5. Pull choke knob to **“CHOKE”** position.
6. Pull the recoil cord.
7. Push the choke knob to **“RUN”** position.
8. Plug in desired device.

### Stopping the Engine

1. Turn off and unplug all connected electrical loads.
2. Press the engine switch to the **“OFF”** position.
3. **Turn fuel off.**  
Turn the fuel selector to the horizontal position.

For adding fuel and starting the engine with LPG see *Add Fuel: Propane (LPG)* in *Assembly* section and *Starting the Engine: Propane (LPG)* in the *Operation* section.

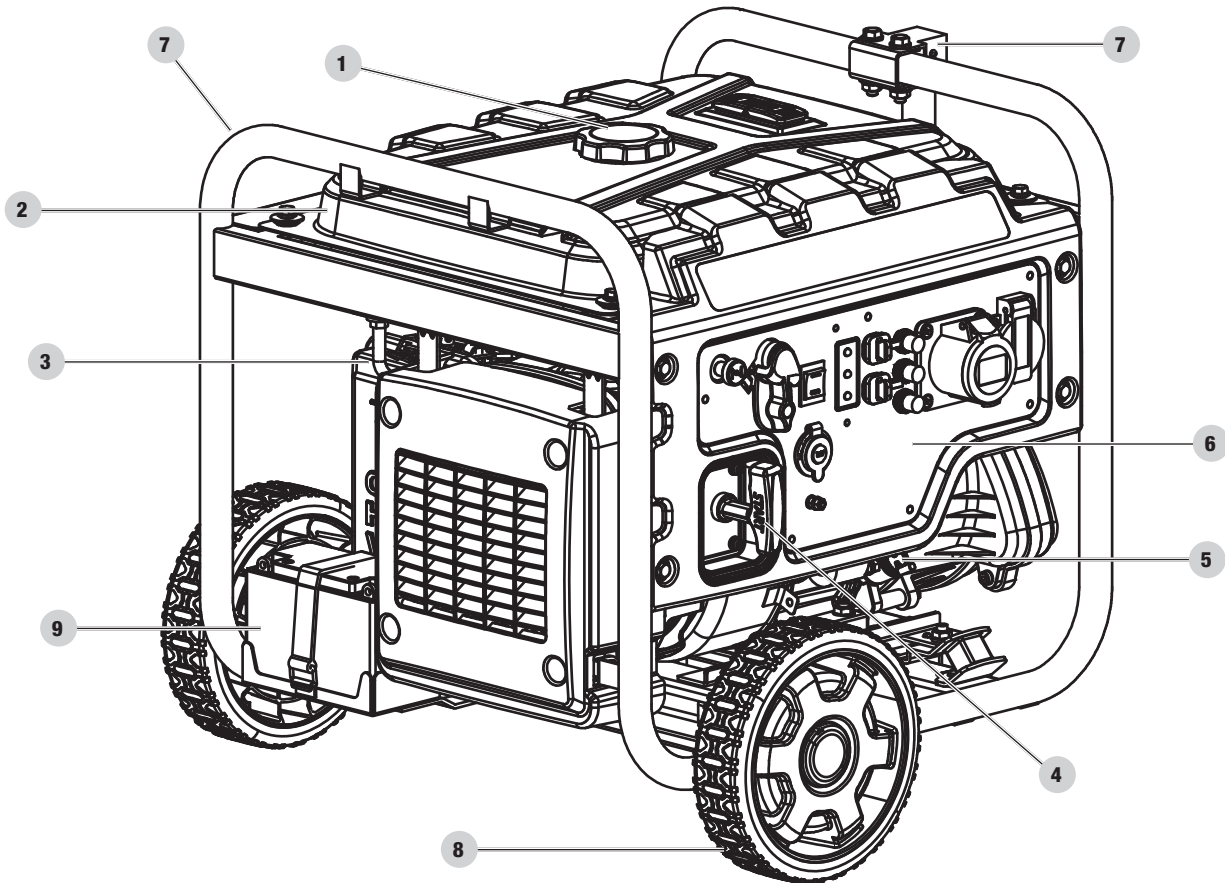
For Electric Start, see *“Starting the Engine”* section in the *Operation* section.



## CONTROLS AND FEATURES

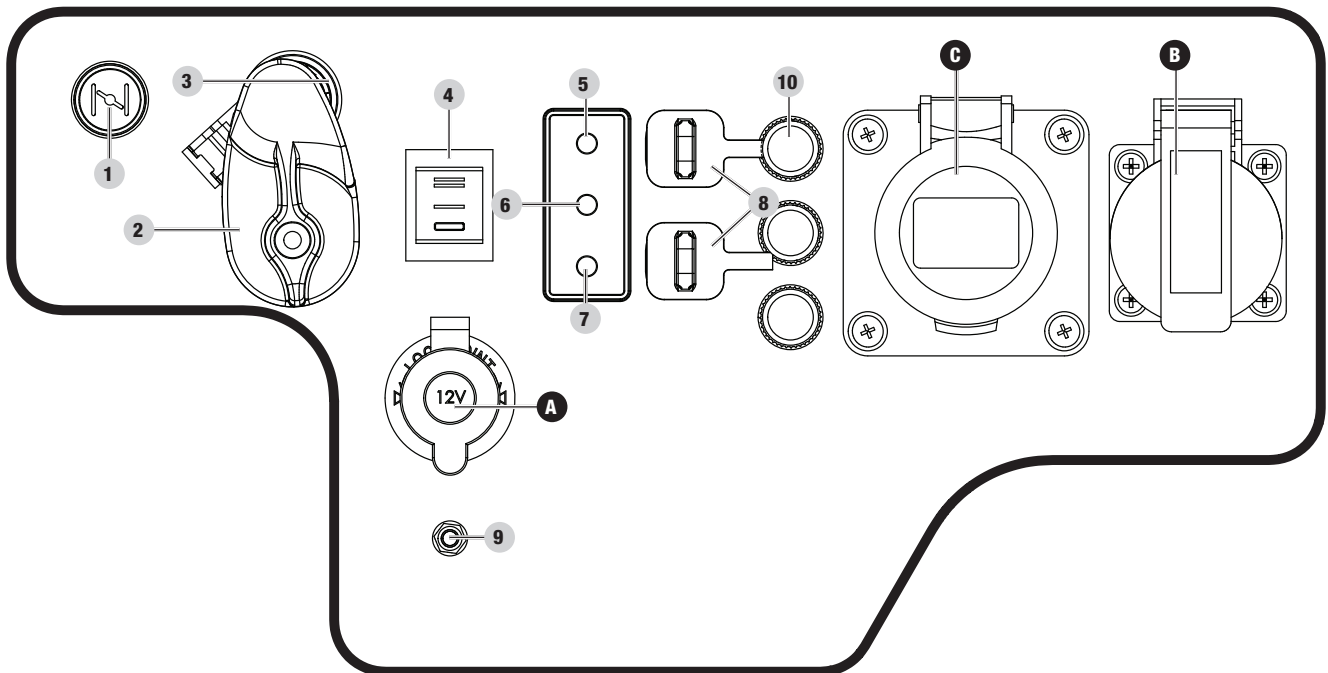
Read this operator's manual before operating your generator. Familiarize yourself with the location and function of the controls and features. Save this manual for future reference.

### Generator



1. **Fuel Cap** – Remove to add fuel.
2. **Gasoline Tank** – 2.9 gal. (11 L)
3. **Air Filter** – Protects the engine by filtering dust and debris from the intake air.
4. **Recoil Starter** – Used to manually start the engine.
5. **Oil Fill Cap/Dipstick** – Used to check and fill oil level.
6. **Control Panel** – See “Control Panel” section.
7. **Carrying Handle(s)** – Used to lift or carry the unit.
8. **Never Flat Wheels** – 8 in. (20.3 cm)
9. **Battery** – Provides 12V DC power the starting system.

## Control Panel



1. **Choke** – Used to start a cold engine.
2. **Fuel Selector Switch** – Used to select and turn on gasoline or propane (LPG) fuel source.
3. **LPG Inlet** – Used to connect LPG fuel source to generator.
4. **Engine Switch** – Used to put in START mode or STOP the generator. When operating by propane, this switch will NOT stop the engine.
5. **Economy Mode Button** – Enables/disables automatic idle control.
6. **Oil Warning Indicator Light** – When ON, engine will shut down and not run. Check oil level.
7. **AC Overload Reset Button** – Used to re-energize receptacles after overload fault.
8. **Parallel Outlets** – Used for parallel operation (parallel kit sold separately).
9. **Ground Terminal** – Consult an electrician for local grounding regulations.
10. **Circuit Breakers (Push Reset)** – Protects the generator against electrical overloads.

RECEPTACLES		
A		<b>12V DC, 8 Amp (Automotive)</b> May be used to supply electrical power for operation of 12 Volt DC, 8 Amp electrical loads.
B		<b>240V AC, 13A</b> May be used to supply electrical power for operation of 240 Volt AC, 13 Amp, single phase, 50 Hz electrical loads.
C		<b>240V AC, 16A</b> May be used to supply electrical power for operation of 240 Volt AC, 16 Amp, single phase, 50 Hz electrical loads.

## Parts Included

### Accessories

Oil Funnel .....	1
USB Adapter .....	1
Battery Charging Cables .....	1
Spark Plug Socket .....	1
Smart Charger .....	1
LPG Hose With Regulator .....	1

### Assembly Parts

#### Wheels

8 in. (20.3 cm) Never Flat Wheel (A) .....	2
Wheel hub cap (B) .....	2
Roll Pin (C) .....	2
Large R-clip (D) .....	2

#### Engine Vibration Mounts

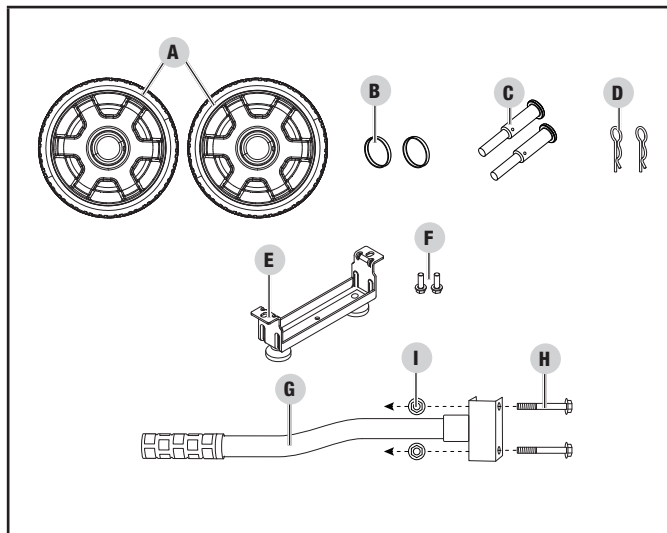
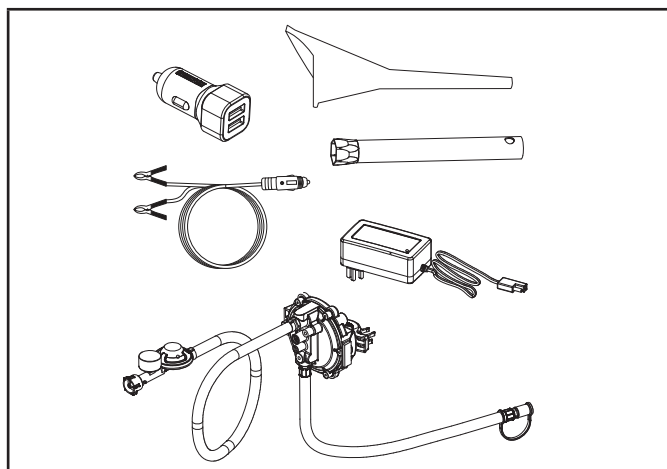
Support Leg with Vibration Mounts (E) .....	1
Flange Bolt (M8×16) (F) .....	2

#### Folding Handle

Handle (G) .....	1
Flange Bolt M8x45 (H) .....	2
Flange Lock Nut M8 (I) .....	2

## Tools Needed

- Wrench/Socket set (metric)
- Pliers



## ASSEMBLY

Your generator requires some assembly. This unit ships from our factory without oil. It must be properly serviced with fuel and oil before operation.

. Please have your serial number and model number available.

### Unpacking

1. Set the shipping carton on a solid, flat surface.
2. Remove everything from the carton except the generator.
3. Using the carrying handles of the unit, carefully remove the generator from the box (two people lifting is recommended).

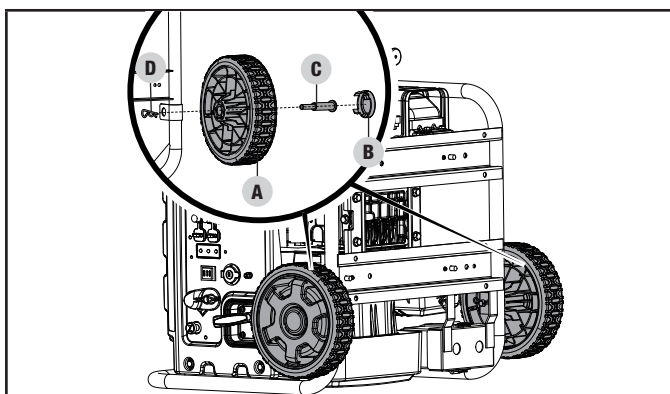
### Install the Wheel Kit

#### ⚠ CAUTION

The wheel kit is not intended for over-the-road use.

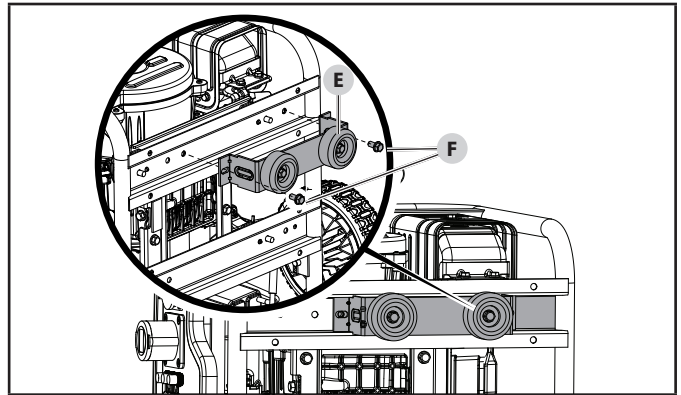
#### Install the Wheels

1. Before adding fuel and oil, tip the generator onto its recoil end.
2. Remove wheel hub cap (B) from wheel by inserting a small screwdriver into the slot provided and pry upward.
3. Slide the roll pin (C) through the wheel (A) from the outside.
4. Slide the roll pin through the mount point on the frame.
5. Secure with the r-clip (D).
6. Re-install hub cap on wheel.
7. Repeat to attach the second wheel.



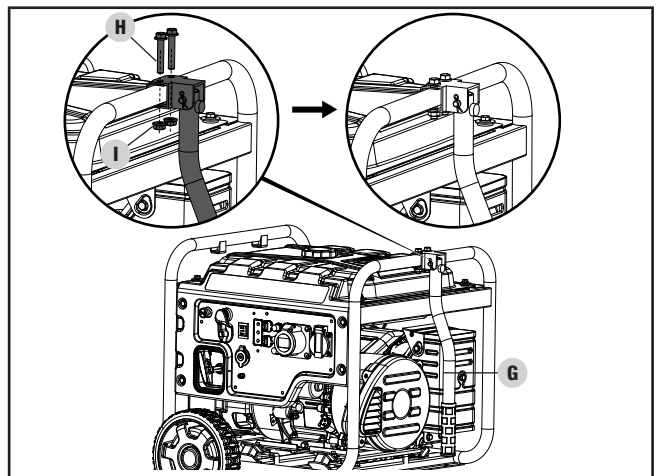
#### Install the Support Leg

1. Attach the support leg (E) to the generator frame with flange bolts (F).
2. Slowly tip the generator back down so that it rests on the wheels and support leg.



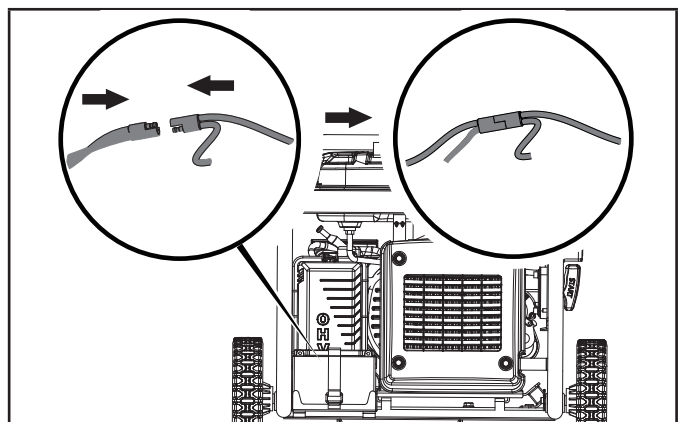
#### Install the Handle

1. Place the handle (G) over the mounting channel on the frame.
2. Secure the handle to the frame using the two flange bolts (H) (M8x45).
3. Place a flange lock nut (I) on the end of each bolt and fasten securely. DO NOT over tighten the flange lock nuts.



#### Connect the Battery

1. Cut cable tie on each side of battery connector.
2. Push two halves of battery connector together tightly.



## Add Engine Oil

### CAUTION

DO NOT attempt to crank or start the engine before it has been properly filled with the recommended type and amount of oil. Damage to the generator as a result of failing to follow these instructions will void your warranty.

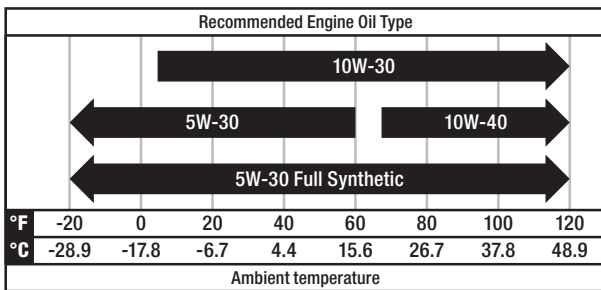
### NOTICE

The generator rotor has a sealed, pre-lubricated ball bearing that requires no additional lubrication for the life of the bearing.

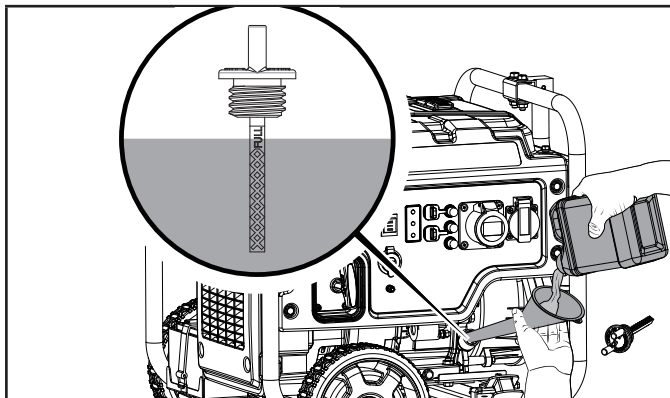
### NOTICE

The recommended oil type for typical use is **10W-30 automotive oil**.

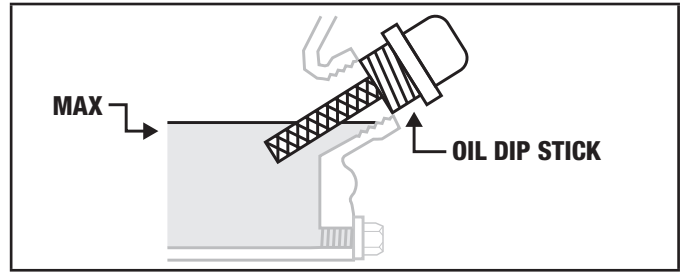
If running generator in extreme temperatures, refer to the following chart for recommended oil type.



1. Place the generator on a flat, level surface.
2. Remove oil fill cap/dipstick to add oil.
3. Using a funnel, add up to 20.3 fl. oz. (600 ml) of oil (not included) and replace oil fill cap/dipstick.  
**DO NOT OVERFILL.**



4. Check engine oil level at every use and add as needed.



### NOTICE

Once oil has been added, a visual check should show oil about 1-2 threads from running out of the fill hole.

When using the dipstick to check oil level, **DO NOT** screw in the dipstick while checking.

### NOTICE

Check oil level often during the break-in period. Refer to the Maintenance section for recommended service intervals.

### CAUTION

This engine is equipped with a low oil shut-off and will stop when the oil level in the crankcase falls below the threshold level.

### NOTICE

The first 5 hours of run time are the break-in period for the unit. During the break in period stay at or below 50% of the running watt rating and vary the load occasionally to allow stator windings to heat and cool. Adjusting the load will also cause engine speed to vary slightly and help seat piston rings. After the 5 hour break-in period, change the oil.

### NOTICE

Synthetic oil may be used after the 5 hour initial break-in period. Using synthetic oil does not increase the recommended oil change interval. Full synthetic 5W-30 oil will aid in starting in cold ambient < 41° F (5° C) temperatures.

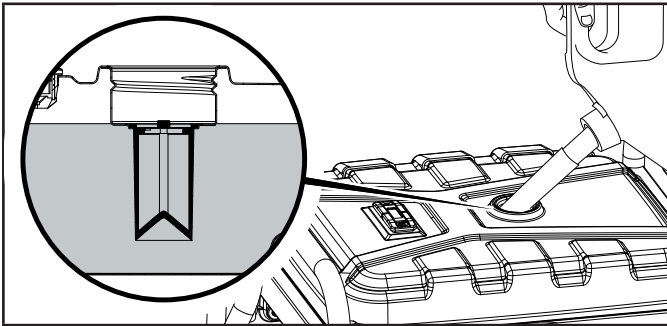
## Add Fuel: Gasoline

Use clean, fresh, regular unleaded gasoline with a minimum octane rating of 87 and an ethanol content of 10% or less by volume.

**DO NOT** mix oil with gasoline.

1. Remove the gasoline cap.

2. Slowly add gasoline to the tank. Tank is full when gasoline reaches red circle on screen. **DO NOT OVERFILL.** Gasoline can expand after filling. A minimum of  $\frac{1}{4}$  in. (6.4 mm) of space left in the tank is required for gasoline expansion, although more than  $\frac{1}{4}$  in. (6.4 mm) is recommended. Gasoline can be forced out of the tank as a result of expansion if overfilled, and can affect the stable running condition of the generator. The approximate fuel level is shown on the fuel gauge on top of the fuel tank.



3. Screw on the gasoline cap and wipe away any spilled fuel.

### **CAUTION**

Use unleaded gasoline with a minimum octane rating of 87 and an ethanol content of 10% or less by volume.

DO NOT light cigarettes or smoke when filling the tank.

DO NOT mix oil and gasoline.

DO NOT overfill the tank. Fill tank to approximately  $\frac{1}{4}$  in. (6.4 mm) below the top of the tank to allow for gasoline expansion.

DO NOT pump gasoline directly into the generator at the pump. Use an approved container to transfer the gasoline to the generator.

DO NOT fill tank indoors.

DO NOT fill tank when the engine is running or hot.

### **WARNING**

Pouring gasoline too fast through the fuel screen may result in gasoline splashing over the generator and operator while filling.

### **NOTICE**

The generator engine works well with 10% or less ethanol blend gasoline. When using ethanol-gasoline blends there are some issues worth noting:

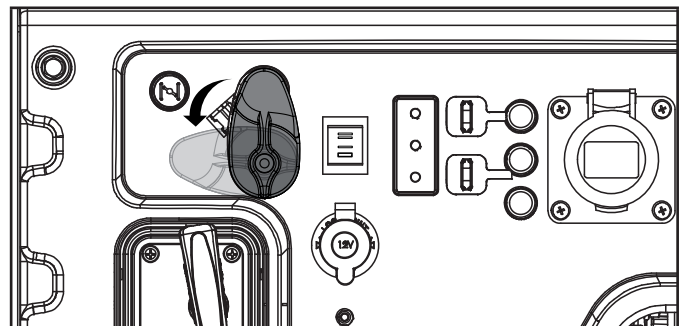
- Ethanol-gasoline blends can absorb more water than gasoline alone.
- These blends can eventually separate, leaving water or a watery goo in the tank, fuel valve and carburetor. The compromised gasoline can be drawn into the carburetor and cause damage to the engine and/or potential hazards.
- If a fuel stabilizer is used, confirm that it is formulated to work with ethanol-gasoline blends.
- Any damages or hazards caused by using improper gasoline, improperly stored gasoline, and/or improperly formulated stabilizers, are not covered by manufacturer's warranty.

It is advisable to always shut off the gasoline supply and run the engine to starvation after each use. See Storage instructions for extended non-use.

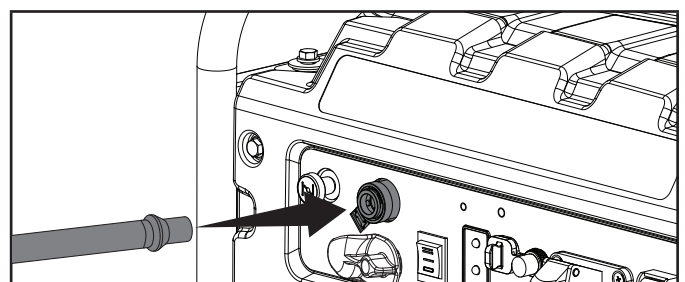
## **Add Fuel: Propane (LPG)**

### **Connecting an LPG cylinder**

1. Make certain the generator is on a flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.



3. Turn the fuel selector switch to the horizontal "LPG" position





4. Insert the hose fitting into the quick connect coupling and push in until you hear a “click” and the outside collar of the quick connect coupling moves forward.
5. Connect the other end of the LPG hose to the LPG cylinder valve and hand tighten.
6. Open valve on LPG cylinder and check all connections for leaks by wetting the fittings with a solution of soap and water. Bubbles which appear or bubbles which grow indicate that a leak exists. If a leak exists at a fitting then turn off the valve on the cylinder and tighten the fitting. Turn the valve back on and recheck the fitting with the soap and water solution. If the leak continues or if the leak is not at a fitting then do not use the generator and contact customer service.

### NOTICE

- The LPG hose included with this unit works with standard 20, 30, and 40 pound LPG tanks.
- Verify the re-qualification date on the cylinder has not expired.
- All new cylinders must be purged of air and moisture prior to filling. Used cylinders that have not been plugged or kept closed must also be purged.
- The purging process should be done by an LPG supplier (cylinders from an exchange supplier should have been purged and filled properly already).
- Always position the cylinder so the connection between the cylinder valve and generator inlet won't cause sharp bends or kinks in the LPG hose.

### CAUTION

Do not allow children to tamper or play with the LPG cylinder or hose connections.

### CAUTION

Use approved LPG cylinders equipped with an OPD (overfilling prevention device) valve. Always keep the cylinder in a vertical position with the valve on top and installed at ground level on a flat surface. Cylinders must not be installed near any heat source and should not be exposed to sun, rain, and dust. When transporting and storing, turn off the cylinder valve and generator LPG valve, and disconnect the cylinder. Plug the outlet, usually by a plastic protective cap, if one is available. Keep cylinders away from heat and ventilated when in a vehicle.

### WARNING

If there is a strong smell of LPG: Close valve on the cylinder. Check all connections for leaks by wetting the fittings with a solution of soap and water. Bubbles which appear or bubbles which grow indicate that a leak exists. Do not smoke or light a cigarette, or check for leaks using a match, open flame source or lighter. Contact a qualified technician to inspect and repair an LPG system if a leak is found, before using the generator.

## Grounding

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

### WARNING

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

A ground terminal connected to the panel of the generator has been provided (see Controls and Features for terminal location). For remote grounding, connect a length of heavy gauge (12 AWG minimum) copper wire between the generator ground terminal and a copper rod driven into the ground. We strongly recommend that you consult with a qualified electrician to ensure compliance with local electrical codes.

#### Neutral Floating\*

- Neutral circuit **IS NOT** electrically connected to the frame/ground of the generator.
- The generator (stator winding) is isolated from the frame and from the AC receptacle ground pin.
- Electrical devices that require a grounded receptacle pin connection will not function if the receptacle ground pin is not functional.

#### Neutral Bonded to Frame\*

- Neutral circuit **IS** electrically connected to the frame/ground of the generator.
- The generator system ground connects lower frame cross-member below the alternator. The system ground is connected to the AC neutral wire.

\*See your Specifications section for specified type of grounding.

## OPERATION

### Generator Location

NEVER operate the generator inside any building, including garages, basements, crawlspaces and sheds, enclosure or compartment, including the generator compartment of a recreational vehicle. Please consult your local authority. In

some areas, generators must be registered with the local utility. Generators used at construction sites may be subject to additional rules and regulations. Generators should be on a flat, level surface at all times. (Even while not in operation) Generators must have at least 5 ft. (1.5 m) of clearance from all combustible material. In addition to clearance from all combustible material, generators must also have at least 3 ft. (91.4 cm) of clearance on all sides to allow for adequate cooling, maintenance and servicing. Generators should never be started or operated in the back of a SUV, camper, trailer, in the bed of a truck (regular, flat or otherwise), under staircases/stairwells, next to walls or buildings, or in any other location that will not allow for adequate cooling of the generator and/or the muffler. DO NOT contain generators during operation. Allow generators to properly cool before transport or storage.

Place the generator in a well-ventilated area. DO NOT place the generator near vents or intakes where exhaust fumes could be drawn into occupied or confined spaces. Carefully consider wind and air currents when positioning generator.

Failure to follow proper safety precautions may void manufacturer's warranty.

### **⚠ WARNING**

Do not operate or store the generator in rain, snow, or wet weather.

Using a generator or electrical appliance in wet conditions, such as rain or snow, or near a pool or sprinkler system, or when your hands are wet, could result in electrocution.

### **⚠ WARNING**

During operation the muffler and exhaust fumes will become hot. If adequate cooling and breathing space are not supplied, or if the generator is blocked or enclosed, temperatures can become extremely heated and may lead to fire.

## Surge Protection

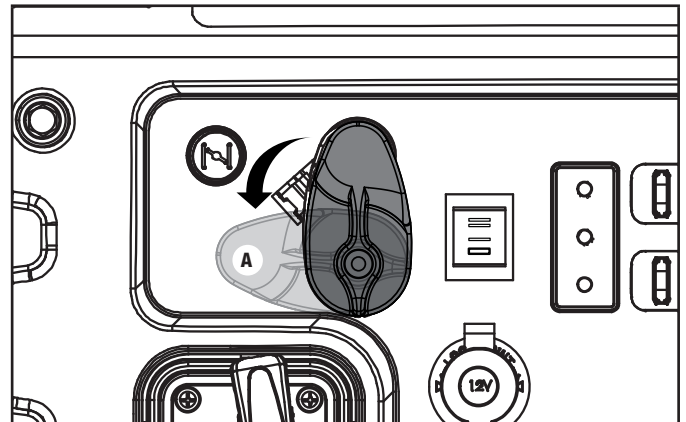
Electronic devices, including computers and many programmable appliances use components that are designed to operate within a narrow voltage range and may be affected by momentary voltage fluctuations. While there is no way to prevent voltage fluctuations, you can take steps to protect sensitive electronic equipment.

- Install UL1449, CSA-listed, plug-in surge suppressors on the outlets feeding your sensitive equipment.  
Surge suppressors come in single- or multi-outlet styles. They're designed to protect against virtually all short-duration voltage fluctuations.

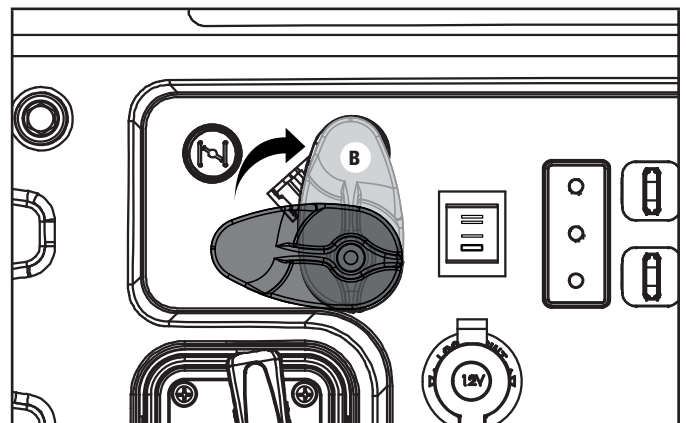
## Fuel Selector Switch

The fuel selector switch on the front panel of the generator is designed to choose the desired fuel source – gasoline or propane

(LPG). To select the desired fuel source, simply rotate the selector switch to the fuel symbol on the panel. Turn the fuel selector switch to the 9 o'clock (horizontal) position for LPG operation (A).



Turn the fuel selector switch to the 12 o'clock (vertical) position for gasoline operation (B).



### **🗨 NOTICE**

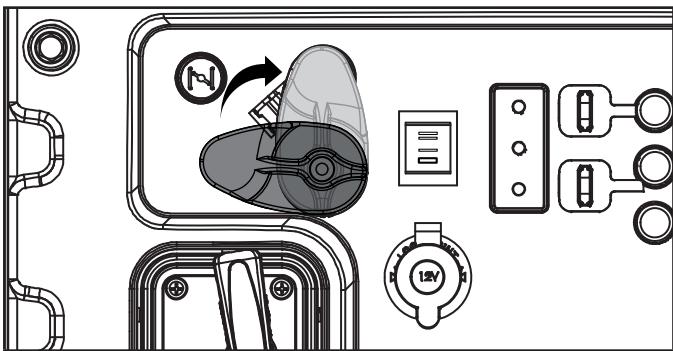
When the fuel selector switch is in the 12 o'clock position, the gas fuel valve is OPEN. To CLOSE the gas fuel valve, turn the selector switch to the 9 o'clock position.

## Starting the Engine: Gasoline

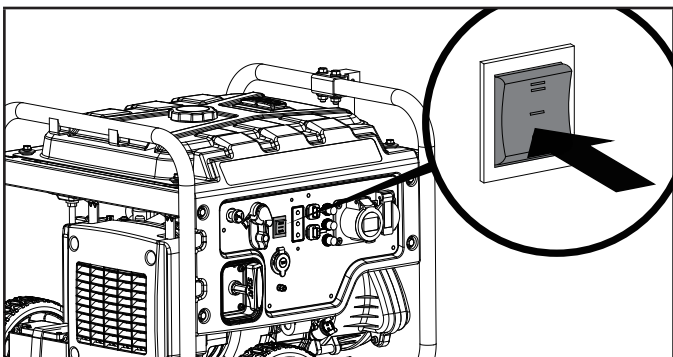
### Manual Start

1. Make certain the generator is on a flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.

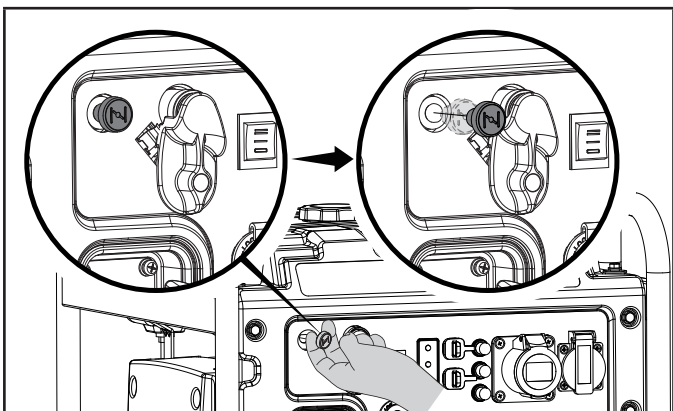
3. Make sure the fuel selector is set to gasoline operation.



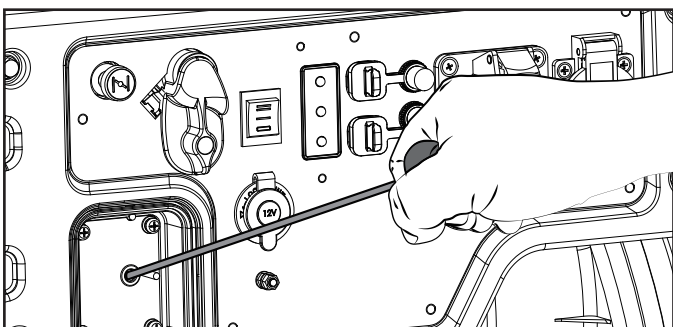
4. Push the engine switch to the "ON" position.



5. Pull the choke out to the full "CHOKE" position.



6. Pull the recoil cord slowly until resistance is felt and then pull rapidly.



7. DO NOT OVER-CHOKE. Allow the engine to warm up several seconds before gradually pushing the choke to the "RUN" position.

#### NOTICE

**For gasoline restarts with hot engine in hot ambient > 86°F (30°C):** Keep the choke in 75% of the "CHOKE" position for 1-2 pulls of the recoil cord. After first pulls, push choke to the "RUN" position for up to 3 more pulls of the recoil cord. Too much choke leads to spark plug fouling/engine flooding due to the lack of incoming air. This will cause the engine not to start.

#### NOTICE

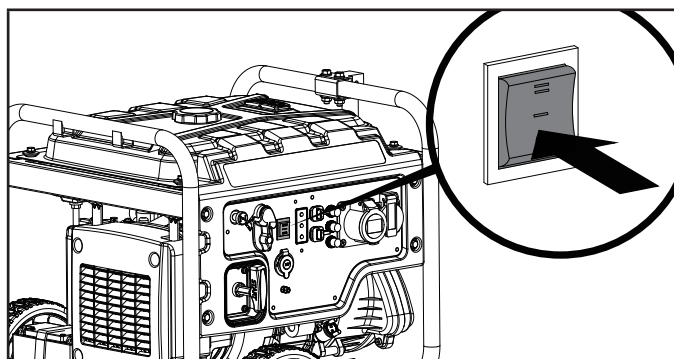
**For gas starting in cold ambient < 59°F (15°C):** The choke must be in 100% of the "CHOKE" position for manual start procedures. Do not over-choke. As soon as engine starts, allow the engine to warm up for 20 seconds and push the choke knob in the "RUN" position.

#### NOTICE

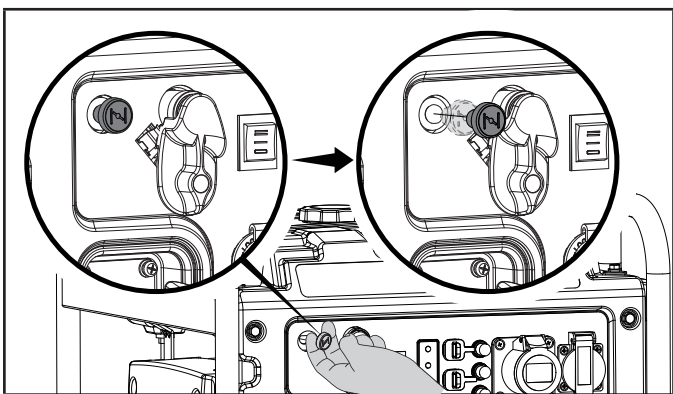
If the engine starts but does not continue to run make certain that the generator is on a flat, level surface. The engine is equipped with a low oil sensor that will prevent the engine from running when the oil level falls below a critical threshold.

#### Electric Start

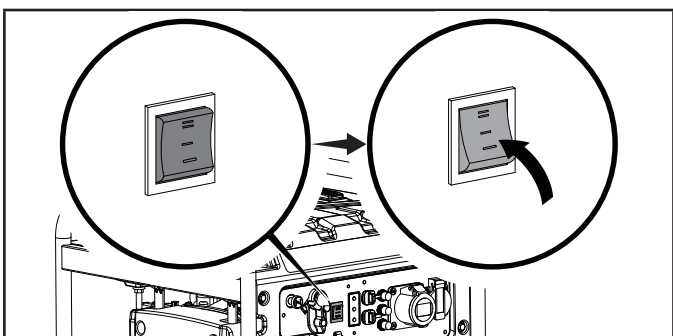
1. Make certain the generator is on a flat, level surface.
2. Push the engine switch to the "ON" position.



3. Pull the choke out to the full "CHOKE" position.



4. Press and hold the ignition switch to the "START" position. Release as the engine begins to roll over. If the engine fails to start within five seconds, release the switch and wait at least ten seconds before attempting to start the engine again.



5. DO NOT OVER-CHOKE. Allow the engine to warm up several seconds before gradually pushing the choke to the "RUN" position.

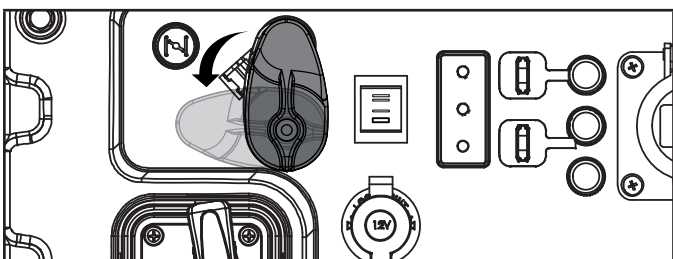
**⚠ CAUTION**

If the ignition switch is held down in the "START" position longer than 5 seconds it could damage the starter.

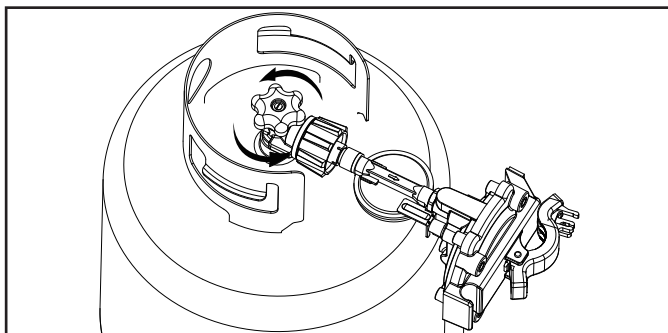
**Starting the Engine: Propane (LPG)**

**Manual Start**

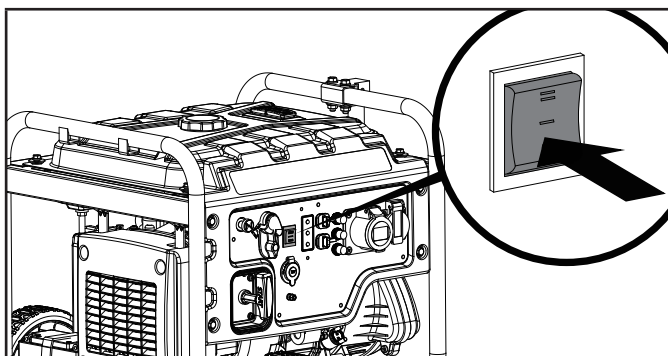
1. Make certain the generator is on a flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.
3. Turn the fuel selector switch to the horizontal "LPG" position and connect LPG hose.



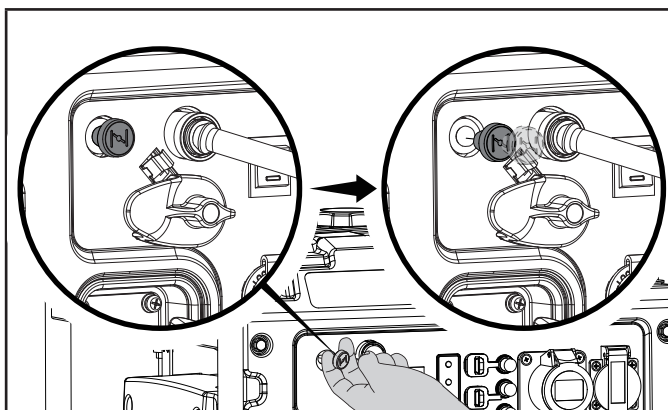
4. Fully open the LPG cylinder fuel knob.



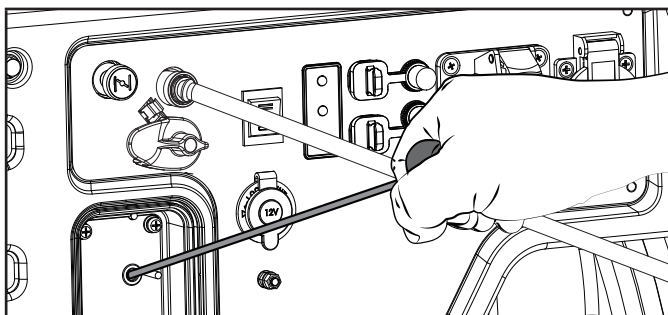
5. Push the engine switch to the "ON" position.



6. Pull the choke to the "CHOKE" position.



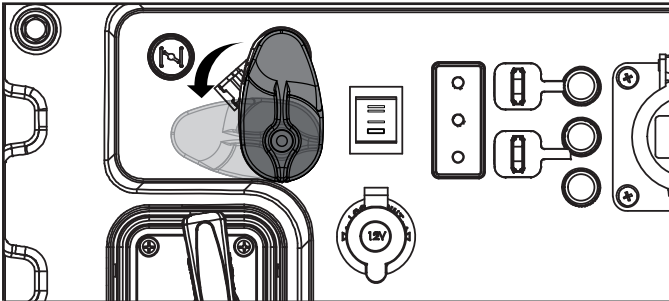
7. Pull the recoil cord slowly 1-5 times to prime the engine with LPG.
8. Push the choke knob to "RUN" position.
9. Pull the recoil cord slowly until resistance is felt and then pull rapidly.



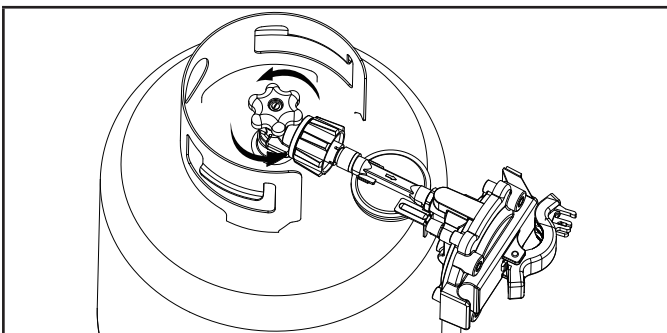


**Electric Start**

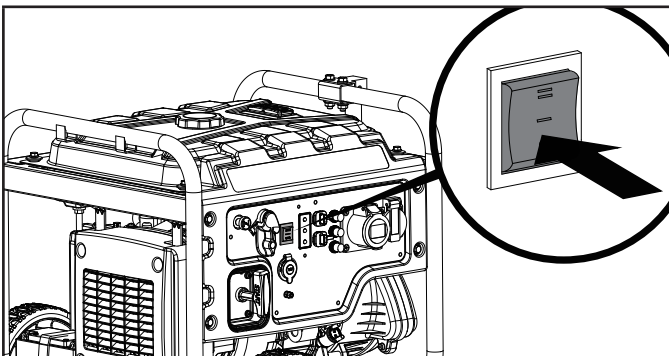
1. Make certain the generator is on a flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.
3. Turn the fuel selector switch to the horizontal "LPG" position and connect LPG hose.



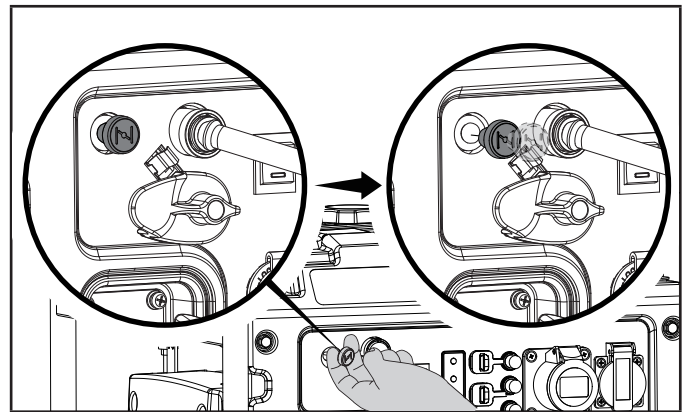
4. Fully open the LPG cylinder fuel knob.



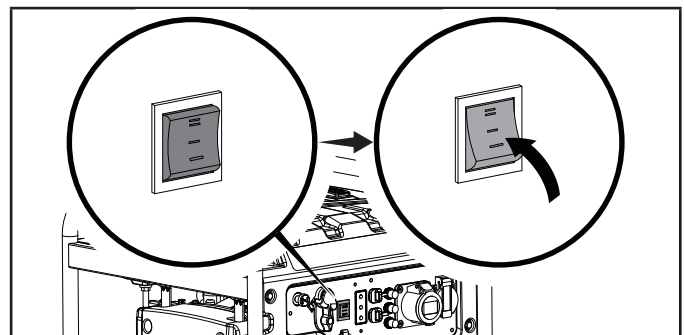
5. Push the engine switch to the "ON" position.



6. Pull the choke to the "CHOKE" position.



7. Press and hold the ignition switch to the "START" position. Release as the engine begins to roll over. If the engine fails to start within five seconds, release the switch and wait at least ten seconds before attempting to start the engine again.



8. DO NOT OVER-CHOKE. Allow the engine to warm up several seconds before gradually pushing the choke to the "RUN" position.

**NOTICE**

**For LPG restarts with hot engine in hot ambient temperature > 86°F (30°C),** move the choke to the half "CHOKE" position and prime the engine with only 1-2 slow pulls. Then follow normal starting procedure.

**NOTICE**

**For LPG starting in cold ambient < 59°F (15°C),** move the choke to the half "CHOKE" position and prime the engine with 3-5 slow pulls. Then follow normal starting procedure.

**NOTICE**

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

**NOTICE**

Accumulation of frost on LPG cylinder and regulators is common during operation and normally is not an indication of a problem. As LPG vaporizes and travels from the cylinder to the generator engine it expands. The amount of frost that forms can be affected by the size of the cylinder, the amount of LPG being used, the humidity of the air and other operating conditions.

In unusual situations this frost may eventually restrict the flow of LPG to the generator resulting in deteriorating performance. For example, if the cylinder temperature is reduced to a very low level then the rate at which the LPG vaporizes is also reduced and may not provide sufficient flow to the engine. This is not an indication of a problem with the generator but only a problem with the flow of LPG from the cylinder. If generator performance seems to be deteriorating at the same time that ice formation is observed on tank valve, hose or regulator then some actions may be taken to eliminate this symptom.

In these rare situations it can be helpful to reduce or eliminate the cold fuel system effects by doing one of the following:

- Exchanging fuel cylinders to allow the first cylinder to warm up, repeating as necessary.
- Placing the cylinder at the end of the generator near the handle, where engine fan air flows out from the generator. This air is slightly heated by flowing over the engine. The cylinder should not be placed in the path of the muffler outlet.
- The cylinder can be temporarily warmed by pouring warm water over the top of the cylinder.

**Connecting Electrical Loads**

Let the engine stabilize and warm up for a few minutes after starting.

Plug in and turn on the desired 240 (if applicable) Volt AC single phase, 50 Hz electrical loads.

- DO NOT connect 3-phase loads to the generator.
- DO NOT overload the generator.

**WARNING**

Connecting a generator to your electric utility company's power lines or to another power source may be against the law. In addition this action, if done incorrectly, could damage your generator and appliances and could cause serious injury or even death to you or a utility worker who may be working on nearby power lines. If you plan to run a portable electric generator during an outage, please notify your electric utility company immediately and remember to plug your appliances directly into the generator. Do not plug the generator into any electric outlet in your home. Doing so could create a connection to the utility company power lines. You are responsible for ensuring that your generator's electricity does not feed back into the electric utility power lines.

If the generator will be connected to a building electrical system, consult your local utility company or a qualified electrician. Connections must isolate generator power from utility power and must comply with all applicable laws and codes.

**Do Not Overload Generator****Capacity**

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

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

**Power Management**

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

$$\text{Volts} \times \text{Amps} = \text{Watts}$$

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

1. Start the generator with no electrical load attached.
2. Allow the engine to run for several minutes to get up to temperature.
3. Plug in and turn on the first item. It is best to attach the item with the largest load first.
4. Allow the engine to stabilize.
5. Plug in and turn on the next item.



6. Allow the engine to stabilize.
7. Repeat steps 5-6 for each additional item.

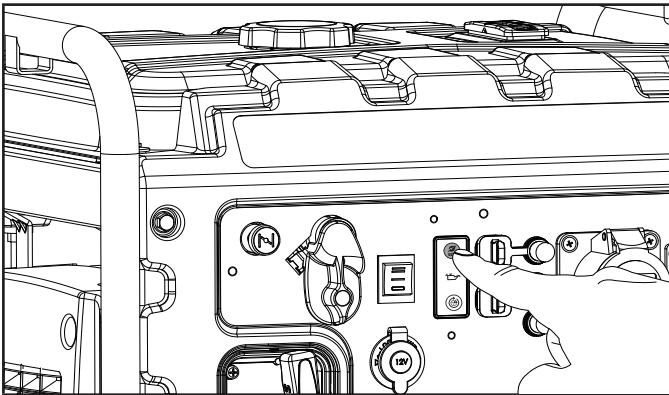
### NOTICE

Never exceed the specified capacity when adding loads to the generator.

## Eco (Economy) Mode

The Eco Mode button can be activated to turn on economy control in order to minimize fuel consumption and noise while operating the unit during times of reduced electrical output. Eco Mode allows the engine speed to idle during periods of non-use.

The engine speed returns to normal when an electrical load is connected. When the economy switch is off, the engine runs at normal speed continuously.



### CAUTION

For periods of high electrical load or momentary fluctuations, the Eco Mode should be off.

## 12V DC Automotive Style Outlet

The 12V DC outlet(s) can be used with supplied accessories and other commercially available 12V DC automotive style plugs. The DC output is unregulated and can damage some products. Confirm the input voltage range of your item is at least 12-24V DC. When using the DC outlet turn the Eco Mode switch to the "OFF" position.

### WARNING

Do not operate a device while it is plugged in to the 12V DC outlet.

Prolonged exposure to engine exhaust can cause serious injury or death.

### CAUTION

While charging a device do not place on the exhaust side of the generator. Extreme heat caused by exhaust can damage the device, and cause a potential fire hazard.

## Battery Charging

1. Before connecting the battery charging cable (included) to a battery that is installed in a vehicle, disconnect the vehicle battery ground cable from the negative (-) battery terminal.
2. Plug the battery charging cable into the 12V DC receptacle of the generator.
3. Connect the red (+) battery charger lead to the red (+) battery terminal.
4. Connect the black (-) battery charger lead to the black (-) battery terminal.
5. Start the generator.

**Important:** The 12V DC outlet is ONLY to be used with the supplied 12V DC battery charging cable. The 12V DC output is unregulated and will damage other 12V DC products. When using the 12V DC outlet, turn the Economy mode switch to the "OFF" position. Be sure all electric devices including the lines and plug connections are in good condition before connection to the generator.

### CAUTION

Do not start the vehicle while the battery charging cable is connected and the generator is running. It will not give the battery a boost of power. The vehicle or the generator may be damaged. Charge only vented wet lead acid batteries. Other types of batteries may burst, causing personal injury or damage.

### NOTICE

Be sure all electric devices including the lines and plug connections are in good condition before connection to the generator.

## Parallel Operation

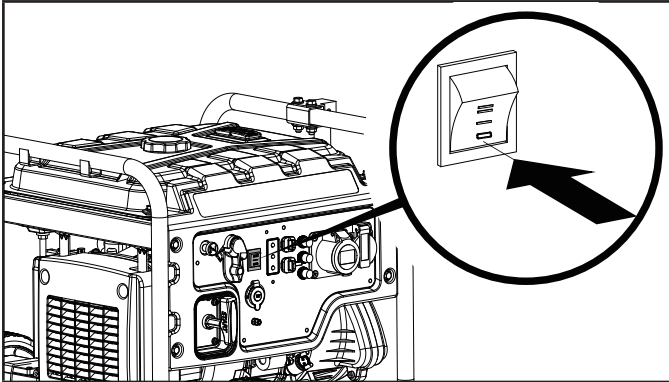
The Champion model CPG4000DHY-DF-UK is parallel ready and can be operated in parallel with another Champion unit to increase the total available electrical power. A Champion model 100319 parallel kit (optional equipment) is required for parallel operation.

Detailed instructions for parallel kit installation and operation of the connected generators are provided in the parallel kit operator's manual.

## Stopping the Engine

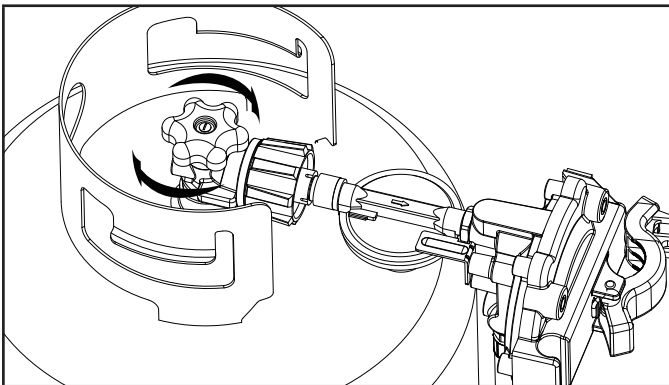
### Gasoline:

1. Turn off and unplug all electrical loads. Never start or stop the generator with electrical devices plugged in or turned on.
2. Let the generator run at no-load for several minutes to stabilize internal temperatures of the engine and generator.
3. Press the engine switch to the "OFF" position.



### Propane:

1. Turn off and unplug all electrical loads. Never start or stop the generator with electrical devices plugged in or turned on.
2. Let the generator run at no-load for several minutes to stabilize internal temperatures of the engine and generator.
3. Close the fuel valve on the propane cylinder.



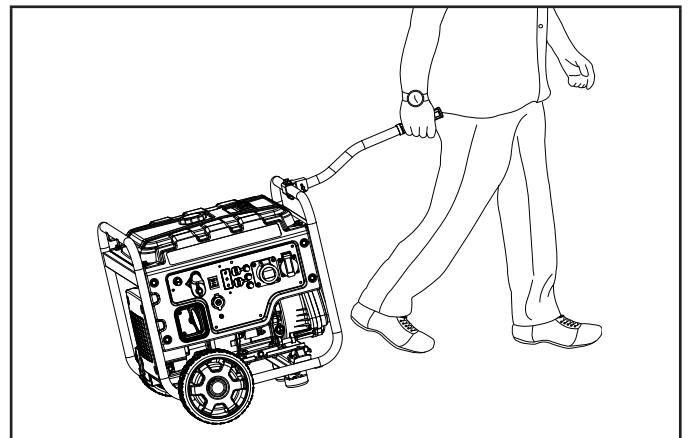
### NOTICE

If the generator will not be used for a period of two (2) weeks or longer, please see the Storage section for proper engine and fuel storage.

## Moving the Generator

- NEVER lift or carry the generator using the folding handle.

- ALWAYS place the generator on its wheels in the upright position.
- ALWAYS turn the generator off and ensure the fuel valve is closed.
- ALWAYS make sure engine and muffler are cooled down before the generator can be handled safely (typically 15-30 minutes).
  1. Begin by raising the folding handle, found on opposite side of wheels.
  2. Using the handle, tilt the end of the generator slightly off the ground until balanced on the wheels.
  3. While maintaining balance, roll the generator to the desired location.



- NEVER tilt sideways while moving the generator.
- Failure to follow these instructions could result in personal injury or damage to the generator.

## MAINTENANCE

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

### WARNING

Never operate a damaged or defective generator.

### WARNING

Improper maintenance will void your warranty.

### NOTICE

For Emission control devices and systems, read and understand your responsibilities for service as stated in the Emission Control Warranty Statement of this manual.

The owner/operator is responsible for all periodic maintenance.  
Complete all scheduled maintenance in a timely manner.  
Correct any issue before operating the generator.

## Cleaning the Generator

### ⚠ CAUTION

DO NOT spray generator directly with water.

Water can enter the generator through the cooling slots and damage the generator windings. It can also contaminate the fuel system.

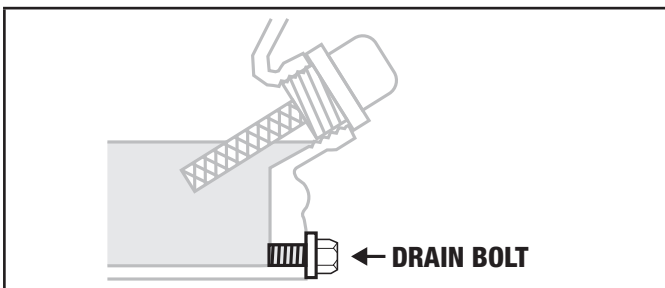
1. Use a damp cloth to clean exterior surfaces of the generator.
2. Use a soft bristle brush to remove dirt and oil.
3. Use an air compressor (25 PSI) to clear dirt and debris from the generator.
4. Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

To prevent accidental starting, remove and ground the spark plug wire before performing any service.

## Changing the Engine Oil

Change oil when the engine is warm. Refer to the oil specification to select the proper grade for your operating environment.

1. Remove the oil drain bolt with a 12 mm socket (not included) and extension.



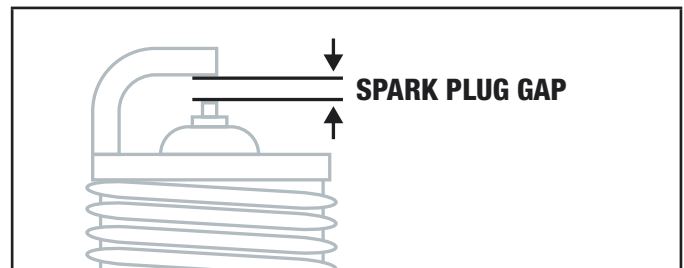
2. Allow the oil to drain completely into an appropriate container.
3. Replace the oil drain bolt.
4. Add oil according to *Add Engine Oil* in Assembly section. DO NOT OVERFILL. Oil not included for routine maintenance.
5. Dispose of used oil at an approved waste management facility.

### 🗨 NOTICE

Once oil has been added, a visual check should show oil about 1-2 threads from running out of the fill hole. If using the dipstick to check oil level, DO NOT screw in the dipstick while checking.

## Cleaning and Adjusting the Spark Plug

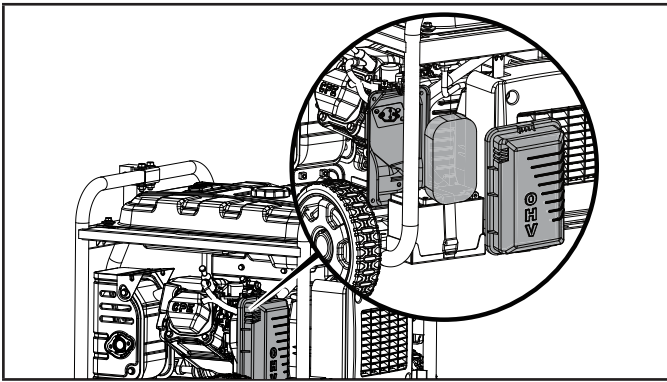
1. Remove the spark plug cable from the spark plug.
2. Use a spark plug socket tool (not included), or a 13/16 in. (21 mm) socket (not included) to remove the plug.
3. Inspect the electrode on the plug. It must be clean and not worn to produce the spark required for ignition.
4. Make certain the spark plug gap is 0.028-0.031 in. (0.7-0.8 mm).



5. Refer to the spark plug types in *Specifications* when replacing the plug.
6. Firmly re-install the plug.
7. Attach the spark plug cable to the spark plug.

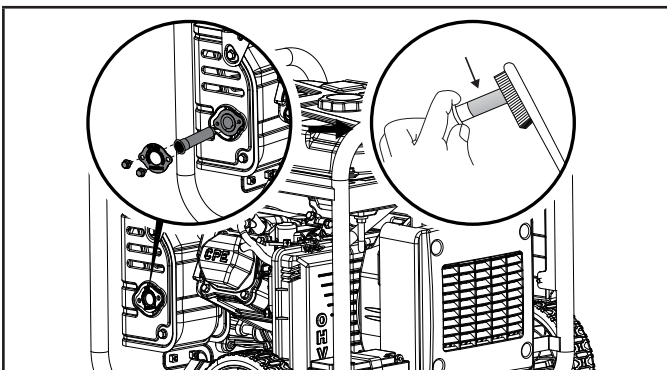
## Cleaning the Air Filter

1. Remove the snap-on cover holding the air filter to the assembly.
2. Remove the foam element.
3. Wash in liquid detergent and water. Squeeze thoroughly dry in a clean cloth.
4. Saturate in clean engine oil.
5. Squeeze in a clean, absorbent cloth to remove all excess oil.
6. Place the filter in the assembly.
7. Reattach the air filter cover and snap in place.



## Cleaning the Spark Arrestor

1. Allow the engine to cool completely before servicing the spark arrestor.
2. Remove the two holding the cover plate which retains the spark arrestor to the muffler.
3. Remove the spark arrestor screen.
4. Carefully remove the carbon deposits from the spark arrestor screen with a wire brush.



*\*See your model's parts list for specified type of spark arrestor.*

5. Replace the spark arrestor if it is damaged.
6. Position the spark arrestor on the muffler and attach with the screws removed in step 2.

### **CAUTION**

Failure to clean the spark arrestor will result in degraded engine performance.

### **NOTICE**

Federal and local laws and administrative requirements indicate when and where spark arrestors are required. When ordered, spark arrestors are required for operation of this generator in National Forest lands. In California, this generator must not be used on any forest-covered land, brush-covered land, or grass-covered land unless the engine is equipped with a spark arrestor.

## Adjusting the Governor

### **WARNING**

Tampering with the factory set governor will void your warranty.

The air-fuel mixture is not adjustable. Tampering with the governor can damage your generator and your electrical devices and will void your warranty. Contact our

## Maintenance Schedule

Follow the service intervals indicated in the following maintenance schedule.

Service your generator more frequently when operating in adverse conditions.

### EVERY 8 HOURS OR PRIOR TO EACH USE

- Check oil level
- Clean around air intake and muffler
- Check propane (LPG) hose for leaks

### FIRST 5 HOURS (BREAK IN)

- Change oil

### EVERY 50 HOURS OR ANNUALLY

- Clean air filter
- Change oil if operating under heavy load or in hot environments

### EVERY 100 HOURS OR ANNUALLY

- Change oil
- Clean/adjust spark plug
- Clean spark arrestor
- Clean fuel valve filter\*

### EVERY 250 HOURS

- Clean combustion chamber\*
- Check/adjust valve clearance\*

### EVERY 3 YEARS

- Replace fuel line\*
- Replace LPG hose

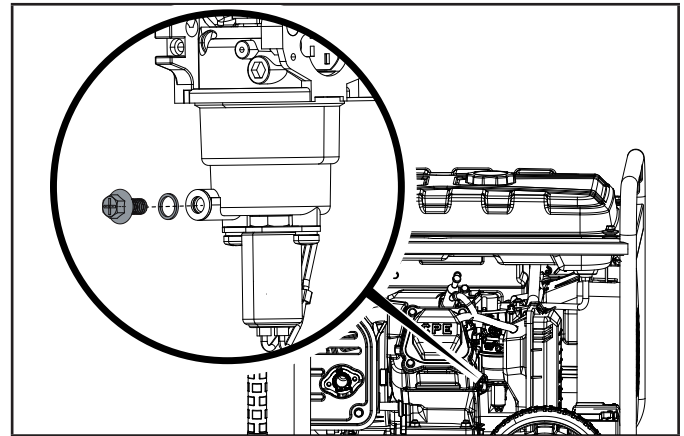
*\*To be performed by knowledgeable, experienced owners or CPE certified service centers.*

## STORAGE

### **⚠ DANGER**

Gasoline vapors are highly flammable and extremely explosive.

Fire or explosion can cause severe burns or death. Only fill or drain fuel outdoors in a well-ventilated area. DO NOT pump gasoline directly into the generator. Use an approved container to transfer the fuel to the generator. Never use a gasoline container, gasoline tank, or any other fuel item that is damaged or appears damaged. DO NOT overfill the gasoline tank. Always keep fuel away from sparks, open flames, pilot lights, heat and other sources of ignition. DO NOT light or smoke cigarettes.



5d. When gasoline stops flowing from the carburetor, replace and tighten the carburetor drain bolt and be sure to properly dispose of the drained gasoline according to local regulations or guidelines.

### Short Term Storage (up to 30 days)

Gasoline may gum up and clog the carburetor if the generator is not run or carburetor drained within 4 weeks.

1. Be sure all appliances are disconnected from the generator.
2. Start the generator as instructed in *Starting the Engine* section.
3. Turn the fuel valve to the horizontal "OFF" (LPG) position.
4. Let the engine run until fuel starvation has stopped the engine. This usually takes a few minutes.
5. Move the engine switch to the "OFF" position.

### Mid Term Storage (30 days – 1 year)

Gasoline in the tank has a maximum shelf life of up to 1 year with the addition of a properly formulated fuel stabilizer and stored in a cool, dry place.

1. Be sure all appliances are disconnected from the generator.
2. Add a properly formulated fuel stabilizer to the gasoline tank.
3. Turn the fuel valve to the vertical "ON" position.
4. Start and run the generator for 10 minutes so the treated gasoline cycles through the fuel system.
5. **Option 1: Drain Gasoline from Carburetor**
  - 5a. Turn engine switch to the "OFF" position and allow generator to cool completely before continuing.
  - 5b. Turn the fuel valve to the horizontal "OFF" position.
  - 5c. Use the drain bolt on the carburetor to empty any excess gasoline from the carburetor into an appropriate container. Use a funnel (and appropriate hose if necessary) under the carburetor drain bolt to avoid spillage.

#### 6. Option 2: Run Dry

- 6a. With the generator running, turn the fuel valve to the "OFF" position and allow the generator to run until the engine stops from complete fuel starvation. This may take a few minutes.
- 6b. Turn engine switch to the "OFF" position and allow generator to cool completely before continuing.
7. Remove the spark plug cap and spark plug and pour about a tablespoon of oil into the cylinder.
8. Pull the recoil cord slowly to crank the engine to distribute the oil and lubricate the cylinder.
9. Install the spark plug and spark plug cap.
10. Clean the generator according to *Cleaning the Generator*.
11. Store the generator in a cool, dry place out of direct sunlight.

### Long Term Storage (over 1 year)

For storage over 1 year, the gasoline tank and carburetor must be completely drained of gasoline.

1. Follow steps 1-4 according to *Mid Term Storage*.
  - 1a. Turn engine switch to the "OFF" position and allow generator to cool completely before continuing.
2. Use the drain bolt on the carburetor to empty any excess gasoline from the gasoline tank and carburetor into an appropriate container. Use a funnel (and appropriate hose if necessary) under the carburetor drain bolt to avoid spillage.
3. When gasoline stops flowing from the carburetor, replace and tighten the carburetor drain bolt and be sure to properly dispose of the drained gasoline according to local regulations or guidelines.
4. Turn the fuel valve to the horizontal "OFF" position.
5. Follow steps 8-11 according to *Mid Term Storage*.

## Removing from Storage

If the generator has been improperly stored for a long period of time with gasoline in the gasoline tank and/or carburetor, all fuel must be drained and the carburetor must be thoroughly cleaned. If the gasoline tank and carburetor were properly emptied of all gasoline prior to the generator being stored, follow the below steps when removing from storage.

1. Be sure the engine switch is in the "OFF" position.
2. Add gasoline to the generator according to *Add Fuel: Gasoline*.
3. Turn the fuel valve to the vertical "ON" position.
4. After 5 minutes check the carburetor and air filter areas for any leaking gasoline. If any leaks are found, the carburetor will need to be disassembled and cleaned or replaced. If no gasoline leaks are found, turn the fuel valve to the "OFF" position.
5. Check engine oil level and add clean, fresh oil if needed. See *Oil Specifications* for proper oil type.
6. Check and clear air filter of any obstructions such as bugs or cobwebs. If necessary, clean air filter according to *Cleaning the Air Filter*.
7. Start the generator according to *Starting the Engine*.



# SPECIFICATIONS

## Generator Specifications

Generator Model .....	CPG4000DHY-DF-UK
Start Type .....	Recoil/Electric
Watts (Gas) (max/Running) .....	3600/3500
Watts (LPG) (max/Running) .....	3600/3150
AC Volts .....	240
AC Amps @ 240V .....	14.6
DC Volts .....	12
DC Amps .....	8
Frequency .....	50 Hz
Phase .....	Single
Grounding Type .....	Neutral Floating
Weight .....	95.2 lb. (43.2 kg)
Length .....	23.5 in. (59.8 cm)
Width .....	24.4 in. (62.1 cm)
Height .....	21.7 in. (55 cm)

## Engine Specifications

Model .....	YF172IV
Displacement .....	224 cc
Type .....	4-Stroke OHV

### Spark Plug

OEM Type .....	NHSP F6RTC
Replacement Type .....	NGK BPR6ES or equivalent
Gap .....	0.028-0.031 in. (0.7-0.8 mm)

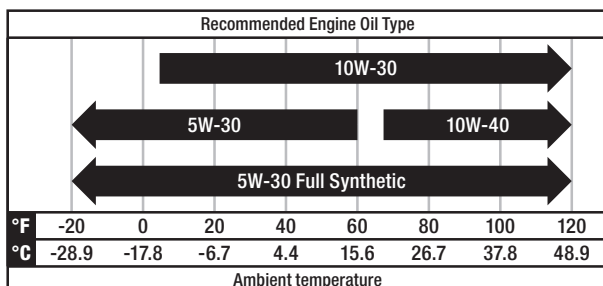
### Valve

Intake Clearance .....	0.005-0.007 in. (0.13-0.17 mm)
Exhaust Clearance .....	0.007-0.009 in. (0.18-0.22 mm)

## Oil Specifications

DO NOT OVERFILL.

Type .....	*See following chart
Capacity .....	20.3 fl. oz. (600 ml)



## NOTICE

Temperature will affect engine oil and engine performance. Change the type of engine oil used based on the temperature to suit the engine needs.

## Fuel Specifications

Use unleaded gasoline with a minimum octane rating of 87 and an ethanol content of 10% or less by volume. DO NOT USE E15 or E85. DO NOT OVERFILL.

Gasoline Capacity ..... 2.9 gal. (11 L)

### Propane (LPG)

- Use only an approved LPG cylinder equipped with an OPD (overfilling prevention device) valve.

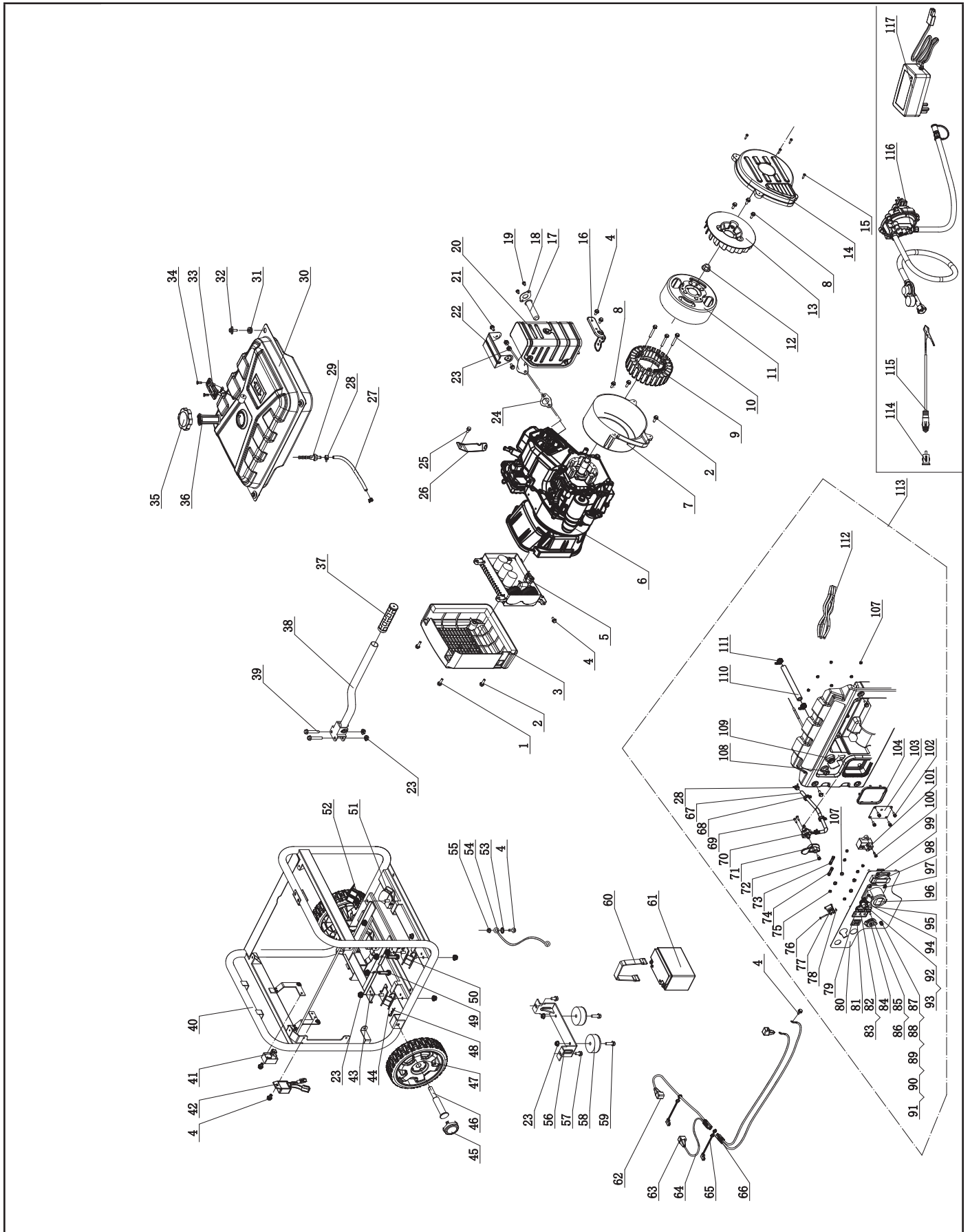
## Temperature Specifications

Starting Temperature Range (°F/°C) ..... 5 to 104/-15 to 40

## NOTICE

**An important message about temperature:** Your product is designed and rated for continuous operation at ambient temperatures up to 104°F (40°C). When needed, it may be operated at temperatures ranging from 5°F (-15°C) to 122°F (50°C) for short periods of time. If exposed to temperatures outside this range during storage, it should be brought back within this range before operation. In any event, the product must always be operated outdoors, in a well-ventilated area and away from doors, windows and vents.

Parts Diagram



## Parts List

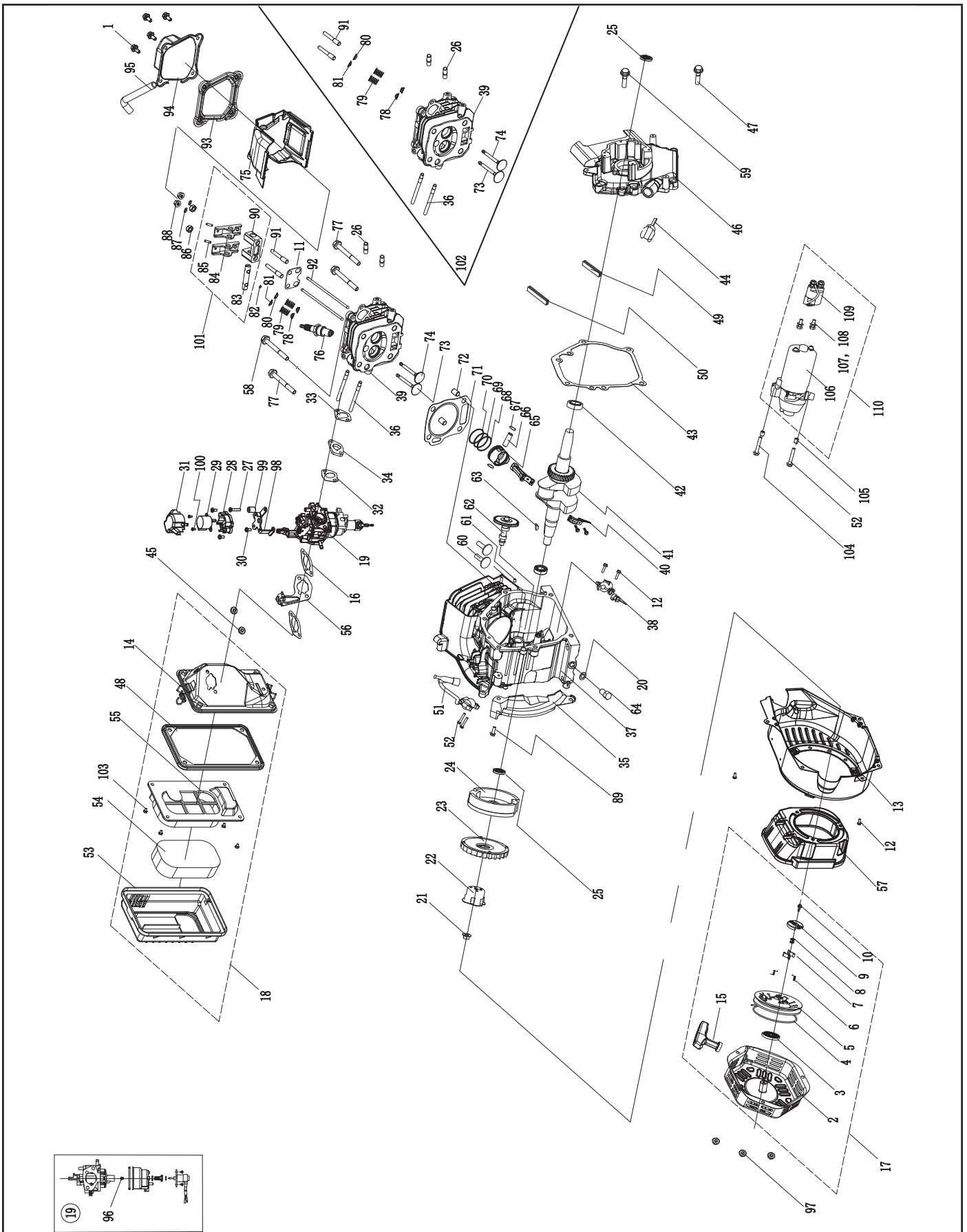
#	Part Number	Description	Qty.
1	1.5789.0625	Flange Bolt M6 x 25	2
2	1.5789.0620	Flange Bolt M6 x 20	4
3	85.220005.01	Protection Cover, Control Unit	1
4	1.5789.0612	Flange Bolt M6 x 12	7
5	85.221000.13	Control Unit, 3.3KW, 230V/50Hz, Wireless Parallel	1
6	CPG4000DHY-DF-UK	Engine, 224cc	1
7	85.190002.01	End Housing, Motor	1
8	1.5789.0615	Flange Bolt M6 x 15	4
9	85.191000.16	Stator Assembly	1
10	1.9074.14.0650	Bolt/Washer Assembly M6 x50	3
11	85.191100.03	Rotor Assembly	1
12	2.02.006	Nut M14 x 1.5	1
13	83.190001.01	Fan, Generator	1
14	85.190003.01	End Cover, Generator	1
15	1.845.4219	Screw ST4.2 x 19	4
16	85.100100.01.2	Bracket, Muffler	1
17	46.101300.08	Spark Arrester Assembly	1
18	46.101503.08	Plate, Spark Arrester	1
19	1.9074.4.0514	Screw/Washer Assembly M5 x 14	2
20	85.101000.01.2	Muffler Assembly	1
21	1.9704.17.0610	Bolt/Washer Assembly M6 x 10	2
22	85.101203.01.2	Cover, Exhaust Pipe	1
23	1.6177.1.08	Lock Nut M8, Flange	18
24	26.100001.00	Gasket, Muffler	1
25	1.5789.0608	Flange Bolt M6 x 8	1
26	23.090006.21	Holder, Air Cleaner	1
27	85.070011.04	Fuel Pipe 350+25 mm, Fuel Tank to Fuel Valve	1
28	2.06.007	Clamp, Ø8.2 x b8	4
29	21.070600.03	Connect, Al	1
30	85.071000.01.48	Fuel Tank, 11L, Yellow	1
31	122.070015.01	Mount Vibration, Fuel Tank	4
32	2.08.143.1	Flange Bolt/Washer Assembly M6 x 20, Black	4
33	122.072000.02	Fuel Level Assembly	1

#	Part Number	Description	Qty.
34	1.819.0510	Screw M5 x 10	2
35	21.070100.80	Fuel Tank Cap	1
36	122.070300.03	Fuel Filter	1
37	152.200702.00	Cover, Handle	1
38	122.200700.03.2	Handle	1
39	1.5789.0845	Flange Bolt M8 x 45	2
40	61184.0.2	Frame, 520 x 481x 474	1
41	5.1820.009	Charger	1
42	5.1800.009	Rectifier	1
43	85.201600.01	Supporter	1
44	85.201200.01	Motor Mount 1	1
45	122.201702.11.48	Wheel Cover, Tooth Profile 8-10 in, Yellow	2
46	122.201501.23.1	Pin Roll, Wheel, Ø16 x Ø10 x 97, Black	2
47	122.201701.11.48	8 in. Wheel, PU, Yellow	2
48	2.16.001	Pin Ø2 x 33, "R" Shape	2
49	1.5789.0832	Flange Bolt M8 x 32	4
50	85.201200.02	Motor Mount 2	2
51	85.201200.03	Motor Mount 3	1
52	85.100007.01	Insulation Board, Motor Mount	1
53	1.862.06	Lock Washer Ø6, Toothed	1
54	5.1900.093	Grounding Line 180mm	1
55	1.6177.1.06	Lock Nut M6, Flange	1
56	1.5789.0816	Flange Bolt M8 x 16	1
57	152.200002.00.2	Support Leg 60 mm	1
58	152.201400.00	Rubber, Support	2
59	1.5789.0825	Flange Bolt M8 x 25	2
60	122.200904.00	Pinch, Rubber	1
61	9.1000.07001	Battery 12V7AH	1
62	152.200013.02	Jacket, Wire, Black	1
63	152.200013.02.3	Jacket, Wire, Red	2
64	5.1900.127	Wire, To SAE Battery	1
65	152.200013.03	Sleeve, Connector	2
66	5.1900.146	Wire, To SAE Motor	1
67	85.070011.03	Fuel Pipe, Fuel Valve to Carburator, 350+25 mm	1
68	2.05.009	Clamp Ø12.5 x 7	2
69	1.845.4819	Screw ST4.8 x 19	2
70	83.070400.01.0	Fuel Valve	1
71	87.070001.01	Knob, Fuel Valve	1

#	Part Number	Description	Qty.
72	1.9074.4.0414.1	Screw/Washer Assembly M4 x 14, Black	1
73	5.1280.003	Fuse 10A	1
74	5.1280.008	Fuse 5A	1
75	1.6177.1.04.2	Lock Nut M4, Flange	6
76	1.823.0325	Screw M3 x 25	2
77	5.1050.000	Switch	1
78	1.6170.03	Nut M3	2
79	83.210016.02	Speed Limiter	1
80	85.019.20.2	Control Panel, Black	1
81	5.1000.015.3	Ignition Switch, Red	1
82	5.1870.010.3	Receptacle Cover, Connect Port, Red	1
83	83.210001.00.3	Connect Port, 125V/25A, Red	1
84	5.1110.005	Receptacle, DC 12V	1
85	83.210001.00.1	Connect Port, 125V/25A, Black	1
86	5.1870.010	Receptacle Cover, Connect Port, Black	1
87	1.5783.0520.1	Bolt M5 x 20, Black	1
88	1.93.05.1	Lock Washer Ø5, Black	2
89	1.862.05	Lock Washer Ø5, Toothed	1
90	1.6170.05.1	Nut M5, Black	2
91	1.97.1.05.1	Washer Ø5, Black	1
92	5.1200.308	8Amp Circuit Breaker, Push Button	1
93	5.1870.014	Receptacle Cover, Push Button	3
94	5.1210.913	13Amp Circuit Breaker, Push Button	1
95	5.1210.916	16Amp Circuit Breaker, Push Button	1
96	5.1120.014	Receptacle	1
97	1.819.0516.2	Screw M5×16	4

#	Part Number	Description	Qty.
98	5.1120.063	Receptacle	1
99	1.819.0418.2	Screw M4×18	4
100	1.845.4216	Screw ST4.2 x 16	1
101	5.1820.012	Charger	1
102	1.9074.4.0514.1	Screw/Washer Assembly M5 x 14, Black	4
103	85.061200.02.2	Guide Plate, Rope, Black	1
104	113.200106.00	Protector, Front Cover	1
105	1.5789.0615.1	Flange Bolt M6 x 15, Black	4
106	85.210002.03	Control Box	1
107	1.6177.1.05	Lock Nut M5, Flange	10
108	85.130300.02	Pull Choke Assembly	1
109	85.070021.00	Quick Coupler	1
110	152.070012.12	Hose 325 mm	1
111	2.06.023	Clip Ø20	2
112	CPG4000DHY-DF-UK.21.10	Wire Assembly	1
113	CPG4000DHY-DF-UK.21	Control Panel Assembly	1
114	9.1700.008	Plug, USB 5V/2.4A	1
115	9.1600.009	Cables, 12V, 2m, CSA	1
116	87.130000.95	LPG Hose With Regulator	1
117	9.1700.011	Smart Charger, SAE	1

# Engine Parts Diagram



## Engine Parts List

#	Part Number	Description	Qty.
1	1.5789.0615	Flange Bolt M6 x 15	4
2	22.061100.00.2	Cover, Recoil Starter, Black	1
3	21.061005.00	Spring, Recoil Starter	1
4	2.10.003.1	Rope Ø4 x 1550, Black	1
5	21.061001.01	Reel, Recoil Starter	1
6	45.060003.00	Spring, Ratchet	2
7	45.060002.00	Starter Ratchet, Steel	2
8	45.060009.00	Spring, Ratchet Guide	1
9	45.060007.00	Ratchet Guide	1
10	45.060008.00	Screw, Ratchet Guide	1
11	24.040004.00	Guide Plate, Push Rod	1
12	1.5789.0612	Flange Bolt M6 x 12	6
13	85.080100.02.48	Fan Cover, Yellow	1
14	85.091100.01	Base, Air Cleaner	1
15	21.061300.01.48	Handle, Recoil, Soft, Yellow	1
16	24.130004.20	Gasket, Air Cleaner	2
17	22.061000.01	Recoil Assembly	1
18	85.091000.01	Air Cleaner Assembly	1
19	85.131000.05	Carburetor	1
20	2.03.016	Washer Ø10 x Ø16 x 1.5, Drain Bolt	1
21	2.02.006	Nut M14 x 1.5	1
22	23.060001.01	Pulley, Starter	1
23	27.080001.00	Cooling Fan	1
24	24.120100.10	Flywheel	1
25	2.11.001	Oil Seal Ø25 x Ø41.3 x 6	2
26	2.01.010	Stud Bolt M8 x 35	2
27	1.9074.4.0420.1	Screw M4 x 20	1
28	85.132100.04	Support, Stepper Motor	1
29	85.132200.01	Stepper Motor	1
30	1.9074.3.0408	Screw M4 x 8	3
31	81.132001.00	Cover, Stepper Motor	1
32	22.130003.00	Gasket, Carburetor	1
33	24.130002.00	Gasket, Insulator	1
34	27.130001.00	Insulator, Carburetor	1
35	23.080600.00	Air Guide, Right Side	1
36	2.01.003	Stud Bolt M6 x 90	2
37	85.030100.01	Crankcase	1
38	21.127000.02	Oil Level Sensor	1
39	26.010100.01	Cylinder Head, 224cc	1
40	27.050200.00	Connecting Rod	1
41	85.050100.01	Crankshaft	1

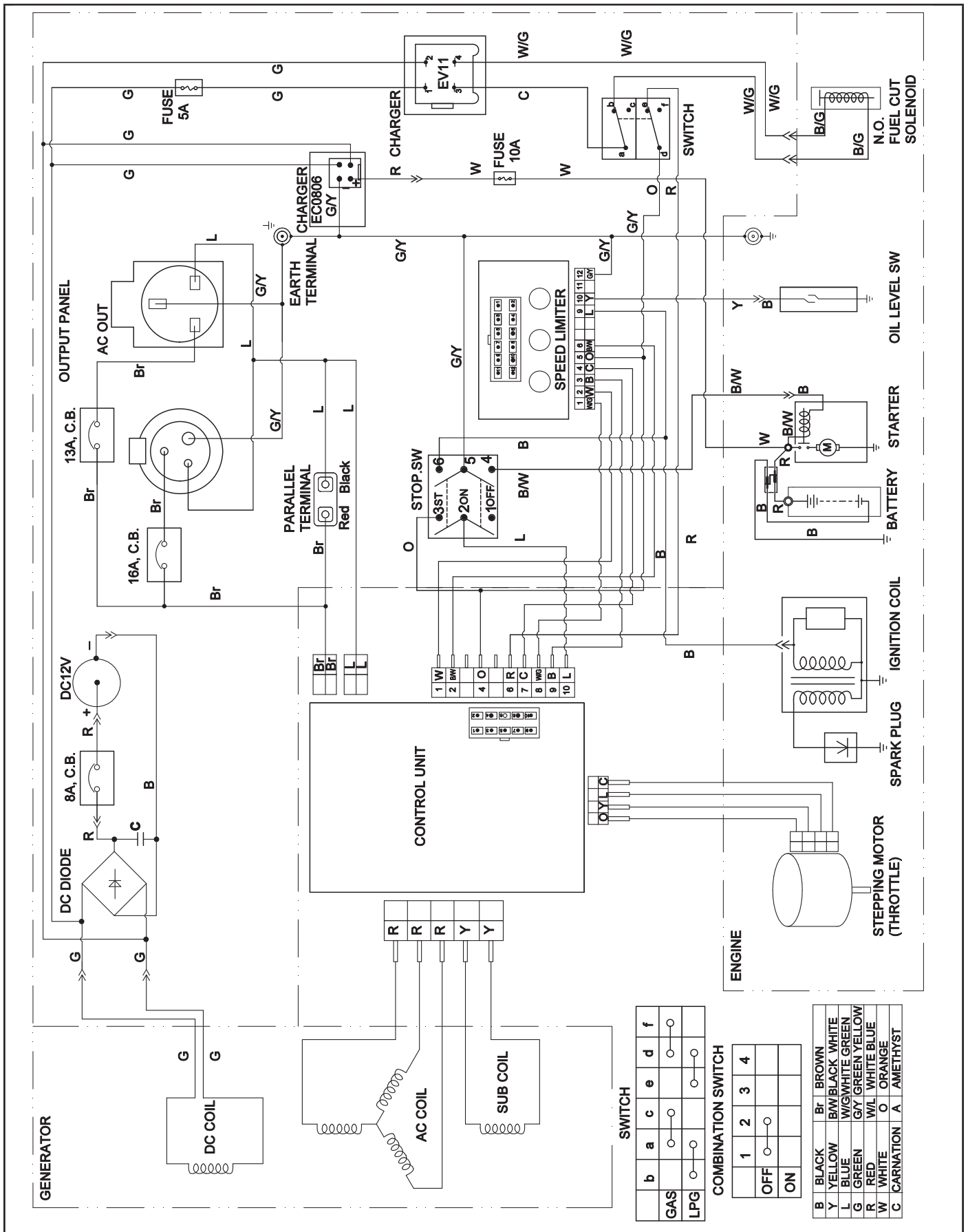
#	Part Number	Description	Qty.
42	1.276.6205	Bearing 6205	2
43	24.030008.00	Gasket, Crankcase Cover	1
44	46.031000.00.48	Oil Dipstick Assembly, Yellow	1
45	1.6177.06	Flange Nut M6	2
46	85.030007.01	Cover, Crankcase	1
47	1.5789.0832	Flange Bolt M8 x 32	5
48	23.091002.21	Seal, Air Cleaner	1
49	27.030013.01	Seal Strip, Crankcase Cover, Short	1
50	27.030013.00	Seal Strip, Crankcase Cover, Long	1
51	22.123000.02	Ignition Coil	1
52	1.5789.0625	Flange Bolt M6 x 25	3
53	27.091200.01	Cover, Air Cleaner	1
54	23.091003.21	Element, Air Cleaner	1
55	23.091001.21	Separator, Air Cleaner	1
56	85.130200.01	Support, Choker Rod	1
57	85.220005.03	Protective Cover, Control Unit, Engine	1
58	2.08.121	Flange Bolt M10 x 65	1
59	1.5789.0840	Flange Bolt M8 x 40	1
60	25.040013.00	Lifter, Valve	2
61	2.04.001	Dowel Pin Ø9 x 14	2
62	27.041000.01	Camshaft	1
63	2.14.012	Woodruff Key 4 x 7.5 x 19	1
64	2.08.037	Drain Bolt M10 x 1.25 x 25	1
65	27.050005.00	Piston	1
66	23.050003.00	Pin, Piston	1
67	2.09.001	Circlip Ø18 x Ø1	2
68	27.050303.00	Ring, Oil	1
69	27.050302.00	Ring, Second Piston	1
70	27.050301.00	Ring, First Piston	1
71	27.030009.01	Gasket, Cylinder Head	1
72	2.04.003	Dowel Pin Ø10 x 14	2
73	23.040002.02	Valve, Intake	1
74	27.040006.00	Valve, Exhaust	1
75	85.080200.01	Air Shroud, Cylinder	1
76	2.15.002(F6RTC)	Spark Plug F6RTC	1
77	1.5789.0865	Flange Bolt M8 x 65	3
78	23.040017.00	Oil Seal, Valve, Steel	2
79	21.040003.00	Spring, Valve	2
80	21.040007.00	Retainer, Exhaust Valve Spring	1



#	Part Number	Description	Qty.
81	21.040001.00	Retainer, Intake Valve Spring	1
82	21.040008.00	Rotator, Exhaust Valve	1
83	24.040202.00	Shaft, Rocker Arm	1
84	22.040009.00	Rocker Arm	2
85	22.040012.00	Screw, Valve Adjustment	2
86	21.040021.00	Nut M6 x 0.5, Lock	2
87	1.97.1.06	Washer Ø6	2
88	1.6177.1.06	Lock Nut M6, Flange	2
89	1.5789.0620	Flange Bolt M6 x 20	1
90	24.040201.00	Retainer, Rocker Arm	1
91	23.040010.00	Bolt, Rocker Arm	2
92	27.040005.00	Push Rod	2
93	21.020002.01	Gasket, Cylinder Head Cover	1
94	24.021000.00	Cover, Cylinder Head	1
95	23.020001.02	Breather Tube, 112 + 35 mm	1
96	27.131017.01	Main Jet, Standard	1
	27.131017.01.01	Main Jet, Altitude	/
97	1.6177.1.05	Lock Nut M5, Flange	3
98	85.130005.04	Support, Stepper Motor	1
99	2.13.034	Bush Ø5 x Ø10 x 12	1
100	1.823.0306.1	Screw M3 x 6	2
101	24.040200.00	Rocker Arm Assembly	1
102	27.010000.00	Cylinder Head Assembly	1
103	2.08.166	Flange Bolt M5x12	4
104	1.5789.0629	Flange Bolt M6 x 29	1
105	2.04.005	Dowel Pin Ø8 x 10	2
106	27.125100.00	Starter Motor	1
107	1.93.05	Lock Washer Ø5	2
108	1.16674.0516	Flange Bolt M5 x 16	2
109	23.125000.03	Relay, Starter, Three Gear	1
110	27.125000.01	Starter Motor Assembly	1



Wiring Diagram



## TROUBLESHOOTING

Problem	Cause	Solution
Engine will not start.	No fuel.	Add fuel.
	Faulty spark plug.	Clean and adjust spark plug or replace.
	Low oil level.	Fill crankcase to the proper level.
		Place generator on a flat, level surface.
	Spark plug wire loose.	Attach wire to spark plug.
	Fuel valve is closed.	Open fuel valve.
	Engine switch OFF.	Press engine switch ON.
	Old fuel or water in fuel.	Drain fuel and replace with fresh fuel.
Flooded with fuel.	Let unit stand for 10 mins.	
Engine starts but runs roughly.	Choke in the wrong position.	Move choke until it stops under RUN position or push in completely.
	Dirty air filter.	Clean or replace air filter.
	Dirty fuel valve.	Clean the fuel valve.
	Clogged spark arrestor.	Clean spark arrestor.
Engine shuts down during operation.	Out of fuel.	Fill fuel tank.
	Low oil level.	Fill crankcase to the proper level. Place generator on a flat, level surface.
	Clogged spark arrestor.	Clean spark arrestor.
Generator cannot supply enough power or overheating.	Generator is overloaded.	Review load and adjust. See "Connecting Electrical Loads."
	Dirty air filter.	Clean or replace air filter.
	Choke in wrong position.	Move choke until it stops under RUN position or push in completely.
Engine is running but no AC output.	Poor cord connection.	Check all connections.
	Circuit breaker is open.	Reset circuit breaker.
	Loose wiring.	Inspect and tighten wiring connections.
	Other.	Contact the help line.
Engine hunts or falters.	Engine governor defective.	Contact the help line.
	Dirty fuel valve.	Clean the fuel valve.
	Carburetor is dirty and running lean.	Contact the help line.
	Choke in wrong position.	Move choke until it stops under RUN position or push in completely.
DUAL FUEL MODELS ONLY: Engine will not stop.	Propane valve is still open.	Turn the propane valve to the CLOSED position on the tank.
Repeated circuit breaker tripping.	Overload.	Review load and adjust. See "Connecting Electrical Loads."
	Faulty power cords or device.	Check for damaged, bare or frayed wires. Replace defective device.
	Circuit breaker still too hot.	Let unit sit for 5 mins.