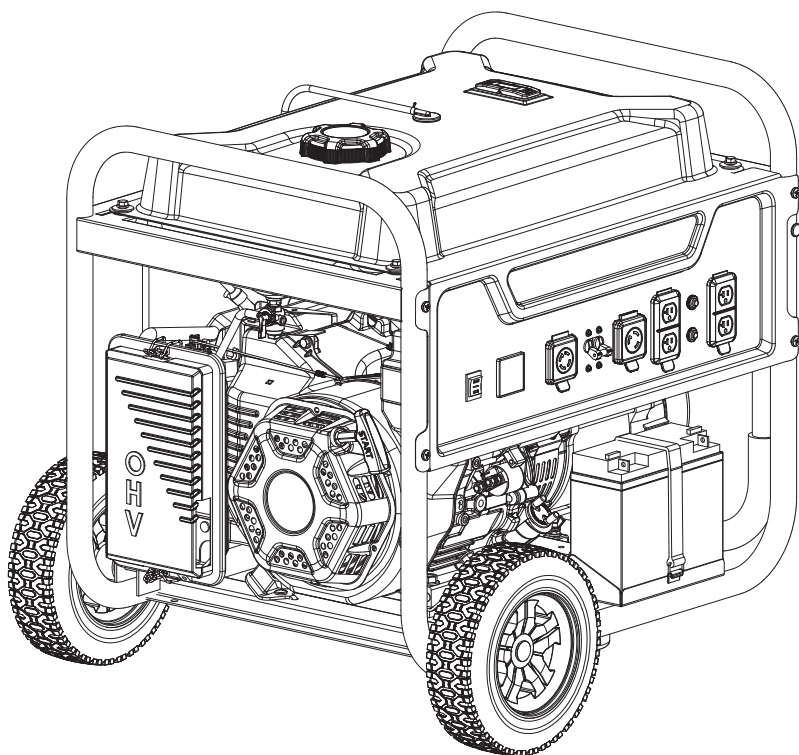


MASTERCRAFT^{®/MD}

MODEL NO. 055-0216-8 GAS-POWERED PORTABLE GENERATOR



IMPORTANT:

Please read this manual carefully before operating the generator and save it for reference.

INSTRUCTION MANUAL

TABLE OF CONTENTS

SAFETY DEFINITIONS	4
IMPORTANT SAFETY INSTRUCTIONS	5
CONTROLS AND FEATURES	15
ASSEMBLY	19
OPERATION	24
MAINTENANCE	33
STORAGE	38
GENERATOR SPECIFICATIONS	41
ENGINE SPECIFICATIONS	41
OIL SPECIFICATIONS	42
FUEL SPECIFICATIONS	42
BATTERY SPECIFICATIONS	42
TEMPERATURE SPECIFICATIONS	42
TROUBLESHOOTING	54
WARRANTY INFORMATION	56



SAVE THESE INSTRUCTIONS

This manual contains important safety and operating instructions.

Read all instructions and follow them with use of this product.

SAFETY DEFINITIONS

The purpose of safety symbols is to draw your attention to possible dangers. The safety symbols, and their explanations, require 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.

NOTE:

NOTE 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 colourless, odourless, 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' (1.5 m) from all combustible materials.



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 jewellery.
- 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 30 A 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 electric 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' (90 cm) of clearance on all sides to ensure adequate cooling.
- Maintain at least 5' (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 it 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 purposes.
- 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.

**WARNING!**

- **ICES-002 Warning:** This device complies with Industry Canada license - exempt RSS standard(s).
- Operation is subject to the following two conditions:
 - This device may not cause interference, and
 - This device must accept any interference, including interference that may cause undesired operation of the device.

FUEL SAFETY

Gasoline and gasoline vapours:

- Gasoline is highly flammable and explosive.
- Gasoline can cause a fire or explosion if ignited.
- Gasoline is a liquid fuel but its vapours can ignite.
- Gasoline is a skin irritant and needs to be cleaned up immediately if spilled on skin or clothes.
- Gasoline has a distinctive odour which will help detect potential leaks quickly.
- Gasoline expands or contracts with ambient temperatures. Never fill the gasoline tank to full capacity, as gasoline needs room to expand when temperatures rise.
- In the case of any petroleum gasoline fire, flames should never be extinguished unless the fuel supply valve can be turned OFF. By not doing so, if a fire is extinguished and the supply of fuel is not turned OFF, an explosion hazard could be created.

When adding or removing gasoline:

- DO NOT light or smoke cigarettes.
- Always turn the generator off and let cool for a minimum of two minutes before removing the gasoline cap. Afterwards, loosen gasoline cap to relieve pressure from the gasoline tank.
- Only fill or drain gasoline outdoors in a well-ventilated area.
- DO NOT pump gasoline directly into the generator at the gas station. Always use an approved fuel container to transfer the gasoline 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.



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 30 A 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.

When starting the generator:

- DO NOT attempt to start a damaged generator.
- Always make certain that the gasoline cap, air filter, spark plug, fuel lines and exhaust system are properly secured, connected and in place.
- Always 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.
- 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 or gasoline near furnaces, water heaters, or any other appliances that produce heat or have automatic ignitions.

**WARNING!**


- Spark from removed spark plug wire can result in fire or electric 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.

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
	Read Operator's Manual. To reduce the risk of injury, user must read and understand operator's manual before using this product.



Clearance. Keep all objects at least 5' (1.5 m) from generator. Heat from the muffler and exhaust gas can ignite combustible objects.



Ground. Consult with local electrician to determine grounding requirements before operation.



Electric Shock. 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.



Fire/Explosion. Fuel and its vapours are extremely flammable and explosive. Fire or explosion can cause severe burns or death. Keep generator at least 5' (1.5 m) from all objects to prevent combustion.



Hot Surface. To reduce the risk of injury or damage, avoid contact with any hot surface.












Open Flame Alert. Fuel and its vapours are extremely flammable and explosive. Keep fuel away from smoking, open flames, sparks, pilot lights, heat, and other ignition sources.











Wet Conditions Alert. Do not expose to rain or use in damp locations.

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
	Fuel/Gasoline Valve On/Off
	Locking Receptacle
	Circuit Breaker Reset: Flip
	Circuit Breaker Reset: Push
	Neutral Bonded to Frame. Neutral circuit is electrically connected to the frame/ground of the generator.
	Ground Terminal

Symbol	Meaning
	Choke
	Run
	Hertz
	Volts
	Runtime
  	Minimum Octane. Use clean, fresh, regular unleaded gasoline with a minimum octane rating of 87 and an ethanol content of less than 10% by volume.

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

Recommended oil is 5W-30.

- 1 Check oil level.**
See page 20 - "Add Engine Oil".
- 2 Check gasoline level.**
- 3 Turn fuel valve to "ON" position.**
- 4 Press ignition switch to "ON" position.**
- 5 Move the choke lever to "CHOKE" position.**
- 6 Pull the recoil cord.**
- 7 Move the choke lever to "RUN" position.**
- 8 Plug in desired device.**

Stopping the Engine

- 1 Turn off and unplug all connected electrical loads.**
- 2 Press the ignition switch to the "OFF" position.**
- 3 Turn the fuel valve to the "OFF" position.**

Electric Start

See page 24 in "Operation" section.

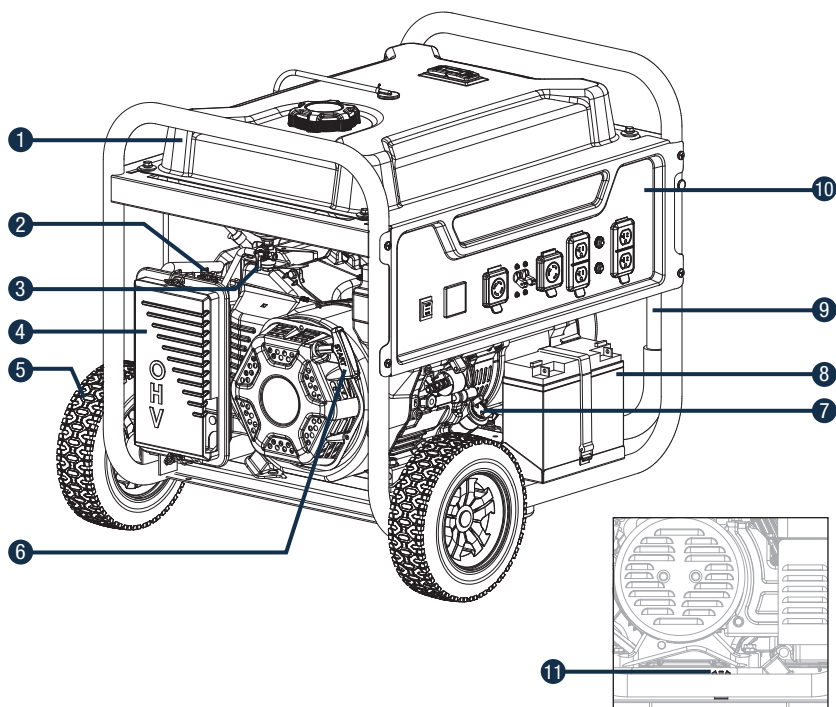


DANGER!

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

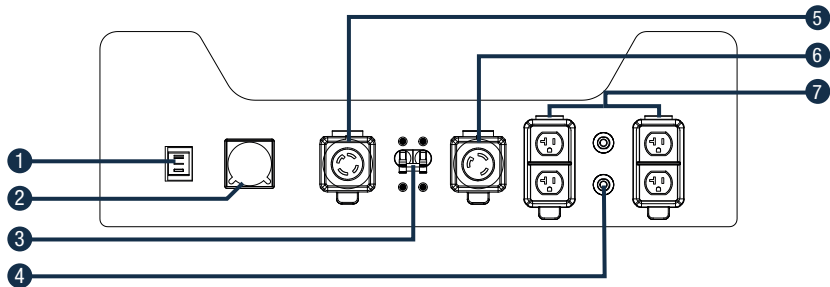
CONTROLS AND FEATURES

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.



1.	Gasoline Tank	6.1 gal. (23.1 L)
2.	Choke	Used to start the engine.
3.	Fuel Valve	Used to turn fuel supply on and off to engine.
4.	Air Filter	Protects the engine by filtering dust and debris from the intake air.
5.	Never Flat Wheels	9 1/2" (24.1 cm)
6.	Recoil Starter	Used to manually start the engine.
7.	Oil Fill Cap/Dipstick	Used to check and fill oil level.
8.	Battery	Provides 12V DC power to the starting system.
9.	Folding Handle	Used to move unit by lifting and rolling on wheels. Do not use to lift or carry the unit.
10.	Control Panel	See "Control Panel" section.
11.	Ground Terminal	Consult an electrician for local grounding regulations.

CONTROL PANEL

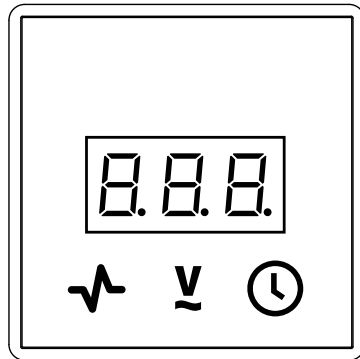



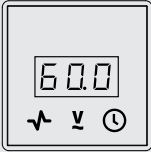
1.	Ignition Switch	Used to START or STOP the generator.
2.	Intelligauge	Three mode digital meter for displaying total run time, voltage and hertz.
3.	Circuit Breakers (Flip Reset)	Protects the generator against electrical overloads.
4.	Circuit Breakers (Push Reset)	Protects the generator against electrical overloads.
5.	120/240 V AC, 30 A Locking (NEMA L14-30R)	May be used to supply electrical power for operation of 120/240 V AC, 30 A, single phase, 60 Hz electrical loads.
6.	120 V AC, 30 A Locking (NEMA L5-30R)	May be used to supply electrical power for operation of 120 V AC, 30 A, single phase, 60 Hz electrical loads.
7.	(4×) 120 V AC, 20 A (NEMA 5-20R)	May be used to supply electrical power for operation of 120 V AC, 20 A, single phase, 60 Hz electrical loads.

INTELLIGAUGE

Three mode digital meter for displaying voltage, frequency (hertz) and total run time.

The LCD displays each mode for several seconds and then automatically cycles through.

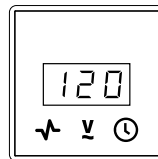



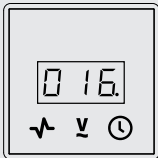
Mode	Description	
 Frequency (Hz)	Output frequency in hertz.	
	Example: 60.0 hertz	

Output voltage of the generator.


 Voltage (V)

Example: 120 voltage

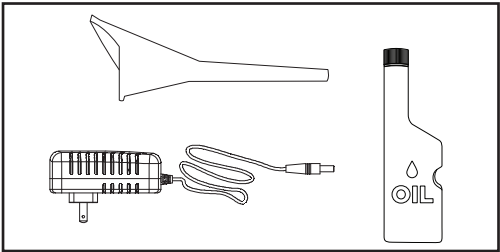


 Total Run Time (Hr)	Total run time of the generator since first operation.	
	Example: 16 hours	

PARTS INCLUDED

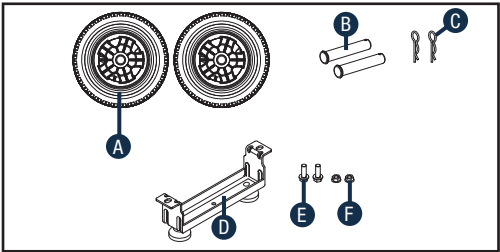
Accessories

Engine Oil	1
120 V SAE Smart Charger	1
Oil Funnel	1



Assembly Parts

Wheels	9 1/2" (24.1 cm) Never Flat Wheel (A) 2
	Roll Pin (B) 2
	Large R-clip (C) 2
Support Leg	Support Leg with Vibration Mounts (D) 1
	Flange Bolt (M8×16) (E) 2
	Flange Lock Nut (M8) (F) 2



Tools Needed

Metric Wrench or Socket Set	1
Pliers	1

ASSEMBLY

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

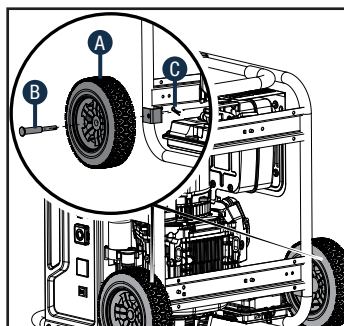
If you have any questions regarding the assembly of your generator, call our Technical Support Team at 1-800-689-9928. Please have your serial number and model number available.

UNPACKING

- 1 Set the shipping carton on a solid, flat surface.
- 2 Remove everything from the carton except the generator.
- 3 Carefully cut each corner of the box from top to bottom. Fold each side flat to the ground to provide a surface area to work with the generator.

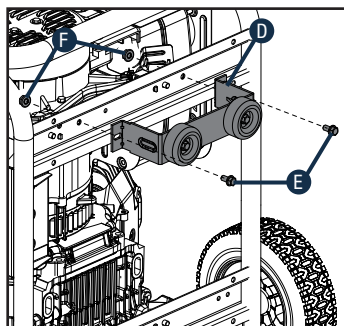
INSTALL THE WHEEL KIT

- 1 Before adding fuel and oil, tip the generator onto its recoil end.
- 2 Slide the roll pin (B) through the wheel (A) from the outside.
- 3 Slide the roll pin through the mount point on the frame.
- 4 Secure with the R-clip (C).
- 5 Repeat to attach the second wheel.



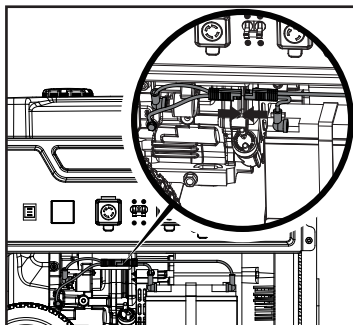
INSTALL THE SUPPORT LEG

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



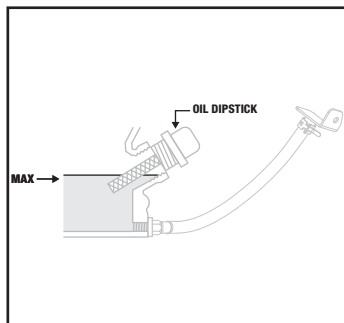
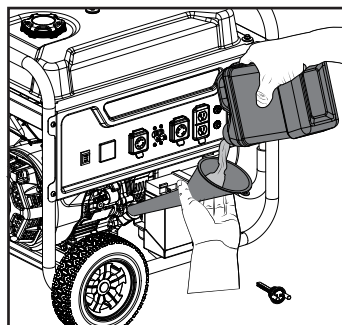
CONNECT THE BATTERY

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



ADD ENGINE OIL

- 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 37 1/5 fl. oz (1100 ml) of oil (included) and replace oil fill cap/dipstick. DO NOT OVERFILL.



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

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.



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.

Recommended Engine Oil Type								
		10W-30						
5W-30							10W-40	
5W-30 Synthetic								
°F	-20	0	20	40	60	80	100	120
°C	-28.9	-17.8	-6.7	4.4	15.6	26.7	37.8	48.9
Ambient temperature								

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

The recommended oil type for typical use is **5W-30 automotive oil**.

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



- 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.

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

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.

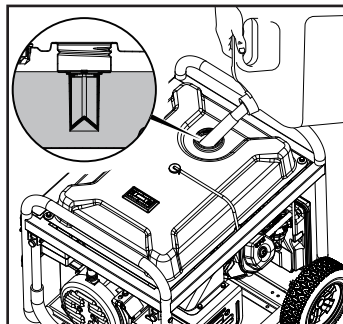
Synthetic oil may be used after the 5 hour initial break-in period. Using synthetic oil does not increase the recommended oil-change interval. Fully synthetic 5W-30 oil will aid in starting in cold ambient temperatures (below 41° F/5° C).

ADD FUEL

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.
- 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 1/4". (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.

GROUNDING

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

A ground terminal connected to the frame 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 to the 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.



WARNING!

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

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' (1.5 m) of clearance from all combustible material. In addition to clearance from all combustible material, generators must also have at least 3' (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 an 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.

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.



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.

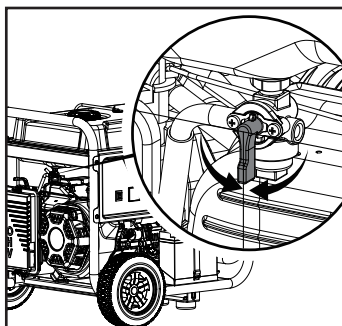


WARNING!

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

STARTING THE ENGINE

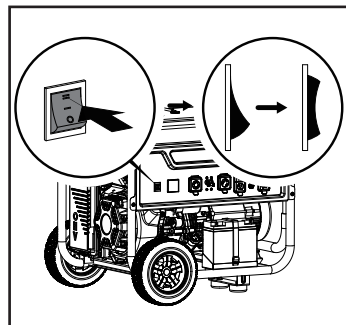
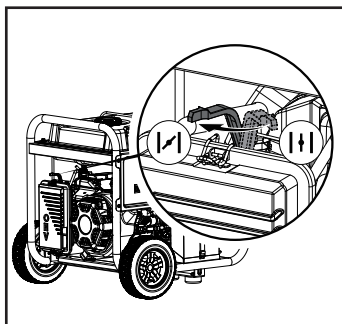
- 1 Make certain the generator is on a flat, level surface.
- 2 Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.
- 3 Turn the gasoline fuel valve to the "ON" position.



Electric Start

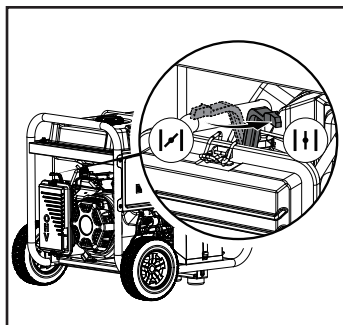
- 1 Move the choke to the "CHOKE" position.

For restarting a warm engine, move the choke to 75% of the "CHOKE" position.



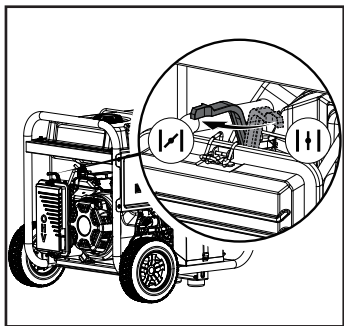
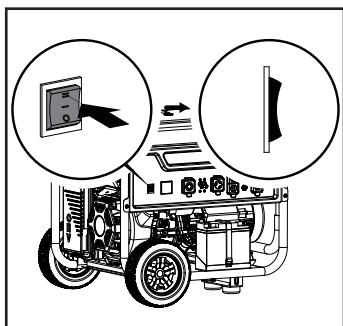
- 2 Press and hold the ignition switch to the "START" position. Release as the engine begins to start. If the engine fails to start within five seconds, release the switch and wait at least 10 seconds before attempting to start the engine again.

- 3** Do not over-choke. As soon as the engine starts, move the choke to the "RUN" position over a 2–5 second duration.



Manual Start

- 1** Push the ignition switch to the "ON" position.



- 2** Move the choke to the "CHOKE" position.

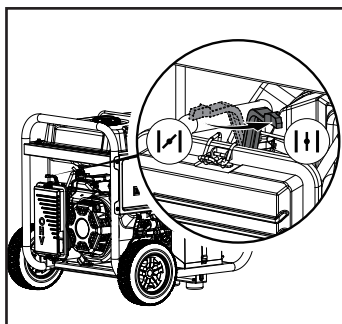
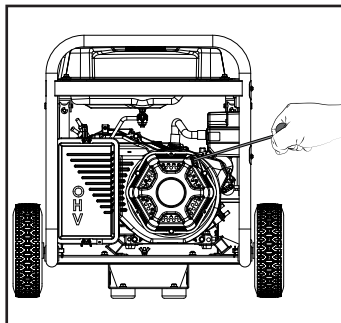
For restarting a warm engine, move the choke to 75% of the "CHOKE" position.



CAUTION!

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

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



- 4 Do not over-choke. As soon as engine starts, move the choke to the "RUN" position over a 2–5 second duration.

NOTE:

Keep choke in "CHOKE" position for only 1 pull of the recoil cord. After first pull, move choke to "RUN" position for up to 3 pulls of the recoil cord. Too much choke leads to spark plug fouling/engine flooding due to lack of incoming air. This will cause the engine to fail to start.

NOTE:

For gasoline restarts with hot engine in hot ambient > 86°F (30°C), keep choke in 75% of the "CHOKE" position for only 1 pull of the recoil cord. After first pull, move choke to "RUN" position for up to 3 pulls of the recoil cord. Too much choke leads to spark plug fouling/engine flooding due to lack of incoming air. This will cause the engine to fail to start.

NOTE:

For gas starting in cold ambient temperature < 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, gradually move the choke lever to the "RUN" position over a 2–5 second duration.

NOTE:

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.

NOTE:

Battery: The supplied 12 V battery does re-charge while the engine is running and but it is also recommended that the battery be fully charged at least once per month or maintained with the 120 V Smart Charger or automotive type battery charger.

CONNECTING ELECTRICAL LOADS

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

Plug in and turn on the desired 120 or 240 (if applicable) V AC single phase, 60 Hz electrical loads.

**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:

- ➊ Select the electrical devices you plan on running at the same time.
- ➋ Total the running watts of these items. This is the amount of power you need to keep your items running.
- ➌ 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 electrically 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:

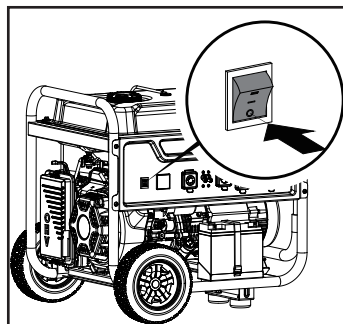
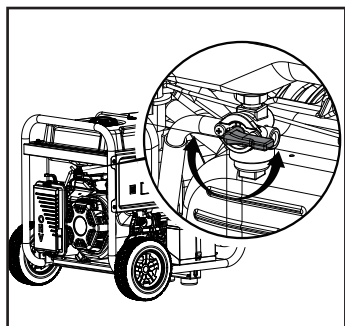
- ➊ Start the generator with no electrical load attached.
- ➋ Allow the engine to run for several minutes to get up to temperature.
- ➌ Plug in and turn on the first item. It is best to attach the item with the largest load first.
- ➍ Allow the engine to stabilize.
- ➎ Plug in and turn on the next item.
- ➏ Allow the engine to stabilize.
- ➐ Repeat steps 5-6 for each additional item.

NOTE:

Never exceed the specified capacity of the generator.

STOPPING THE ENGINE

- 1 Turn off and unplug all connected 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 ignition switch to the "OFF" position.



- 4 Turn the fuel valve to the "OFF" position.

Important: Always ensure that the fuel valve and the ignition switch are in the "OFF" position when the generator is not in use.

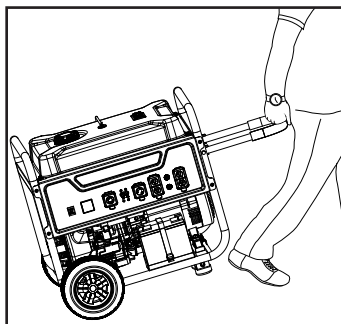
NOTE:

If the engine will not be used for a period of 30 days 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.



OPERATION AT HIGH ALTITUDE

The density of air at high altitudes is lower than at sea level. Engine power is reduced as the air mass and air-fuel ratio decrease. Engine power and generator output will be reduced approximately 3.5% for every 1000' of elevation above sea level. At high altitudes increased exhaust emissions can also result due to the increased enrichment of the air fuel ratio. Other high altitude issues can include hard starting, increased fuel consumption and spark plug fouling.

To alleviate high altitude issues other than the natural power loss, a high altitude carburetor main jet can be installed to replace the standard jet. The alternative main jet and installation instructions can be obtained by contacting our Technical Support Team.

The part number and recommended minimum altitude for the application of the high altitude carburetor main jet is listed in the following table.

In order to select the correct high altitude main jet it is necessary to identify the carburetor model. For this purpose, a code is stamped on the side of the carburetor. Select the correct high altitude jet part number corresponding to the carburetor code found on your particular carburetor.

Carb. Code	High Alt. Jet Part Number	Min. Altitude
P27-2-H	46.131017.20.01.H	5000' (1524 m)



WARNING!

- Operation using the alternative main jet at elevations lower than the recommended minimum altitude can damage the engine. For operation at lower elevations, the originally supplied standard main jet must be used. Operating the engine with the wrong engine configuration at a given altitude may increase its emissions and decrease fuel efficiency and performance.

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 vapours.

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

- 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.

NOTE:

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



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.



WARNING!

- Never operate a damaged or defective generator.



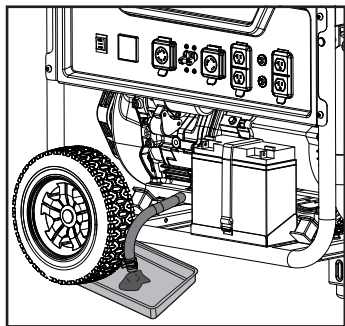
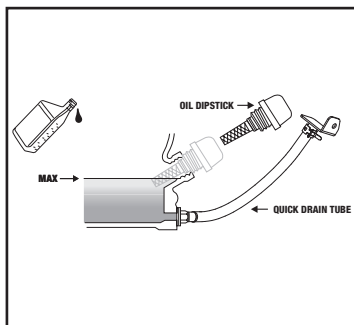
WARNING!

- Improper maintenance will void your warranty.

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 Place an appropriate oil drain container on the ground next to the frame on the oil drain/fill side of the generator.



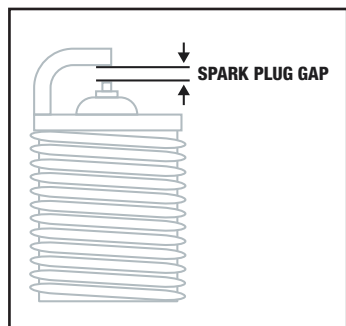
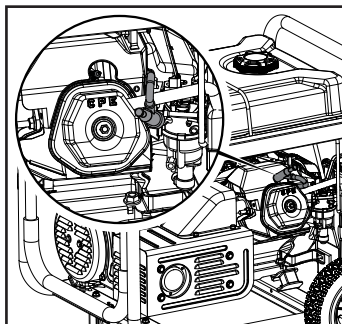
- 2 Remove oil fill cap/dipstick.
- 3 Using a pliers, slide the spring clamp down the oil drain hose and then pull the hose off the plug bracket.
- 4 Place the end of the oil drain tube into the oil drain container and allow the oil to completely drain. **NOTE:** The tube end must be lower than the engine base in order for all the oil to drain.
- 5 Add oil according to Add Engine Oil in Assembly section. **DO NOT OVERFILL.**
- 6 Dispose of used oil at an approved waste management facility.

NOTE:

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

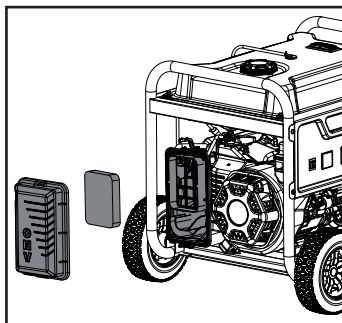
- 1 Remove the spark plug cable from the spark plug.
- 2 Use a spark plug socket tool (not included), or a 13/16" (21 mm) socket (not included) to remove the plug.



- 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.

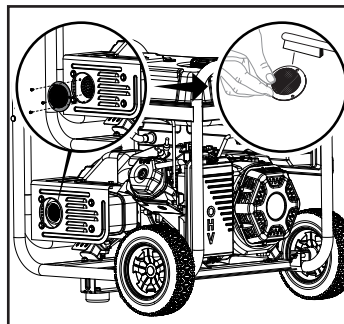
CLEANING THE AIR FILTER

- 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 three screws 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.
- 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.



ADJUSTING THE GOVERNOR

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

GENERATOR BATTERY

Your generator is equipped with an automatic battery charging circuit that charges the battery while the engine is running. The battery will maintain a proper charge if the unit is used on a regular basis (about once every two weeks). If it is used less frequently, the battery should be connected to the included 120 V Smart Charger to keep the battery properly charged.

The battery should be fully charged at least once per month. If the battery is not able to start the engine, it can be started by manually pulling the engine recoil cord. If the battery voltage is extremely low, the charging circuit may not be able to re-charge the battery. In this case, the battery must be connected to a standard automotive style battery charger for re-charging before it can be used.

The owner/operator is responsible for all periodic maintenance.

Complete all scheduled maintenance in a timely manner.

Correct any issue before operating the generator.



CAUTION!

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



CAUTION!

- Tampering with the factory-set governor will void your warranty.

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

After 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

STORAGE

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 "OFF" position.
- 4 Let the engine run until fuel starvation has stopped the engine. This usually takes a few minutes.
- 5 Move the engine/ignition 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 "ON" position.
- 4 Start and run the generator for 10 minutes so the treated gasoline cycles through the fuel system.



ANGER!

- Gasoline vapours 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.

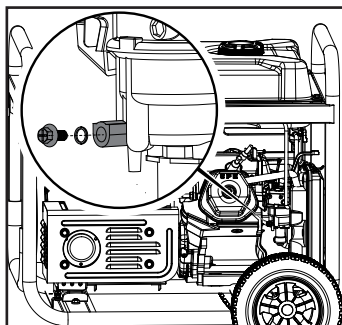
5 Option 1: Drain Gasoline from Carburetor

5a. Turn engine switch to the “OFF” position and allow generator to cool completely before continuing.

5b. Turn fuel valve to the “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.

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.



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” (page 33).

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 The generator is to be OFF and all appliances disconnected.
- 2 Turn the fuel valve to the ON position.
- 3 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.
- 4 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.
- 5 Turn the fuel valve to the "OFF" position.
- 6 Follow steps 8–11 according to "Mid-Term Storage" (page 38).

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. This process involves technically advanced tasks. For assistance please call our Technical Support Team at 1-800-689-9928.

If the gasoline tank and carburetor were properly emptied of all gasoline prior to the generator being stored, follow the steps below when removing from storage.

- 1 Be sure the engine/ignition switch is in the "OFF" position.
- 2 Add gasoline to the generator according to "Add Fuel" (page 22).
- 3 Turn the fuel valve to the "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" (page 42) 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" (page 35).
- 7 Start the generator according to "Starting the Engine" (page 25).

GENERATOR SPECIFICATIONS

Generator Model	055-0216-8
Start Type	Electric/Manual
Watts (Starting/Running)	6875/5500
Volts AC	120/240
AC Amps @ 120 V	45.8
AC Amps @ 240 V	22.9
Frequency	60 Hz
Phase	Single
Grounding Type	Neutral Bonded to Frame
Weight	176 lb (80 kg)

ENGINE SPECIFICATIONS

Displacement	389 cc
Type	4-Stroke OHV
Spark Plug:	
OEM Type	NHSP F6RTC
Replacement Type	NGK BPR6ES
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	37 1/5 fl. oz. (1100 ml)

Recommended Engine Oil Type								
		10W-30						
5W-30							10W-40	
5W-30 Synthetic								
°F	-20	0	20	40	60	80	100	120
°C	-28.9	-17.8	-6.7	4.4	15.6	26.7	37.8	48.9
Ambient temperature								

NOTE:

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	6.1 gal. (23.1 L)
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BATTERY SPECIFICATIONS

Type	Rechargeable, Non-Spillable Lead Acid
Volts DC	12 V
Capacity	15 Ah

TEMPERATURE SPECIFICATIONS

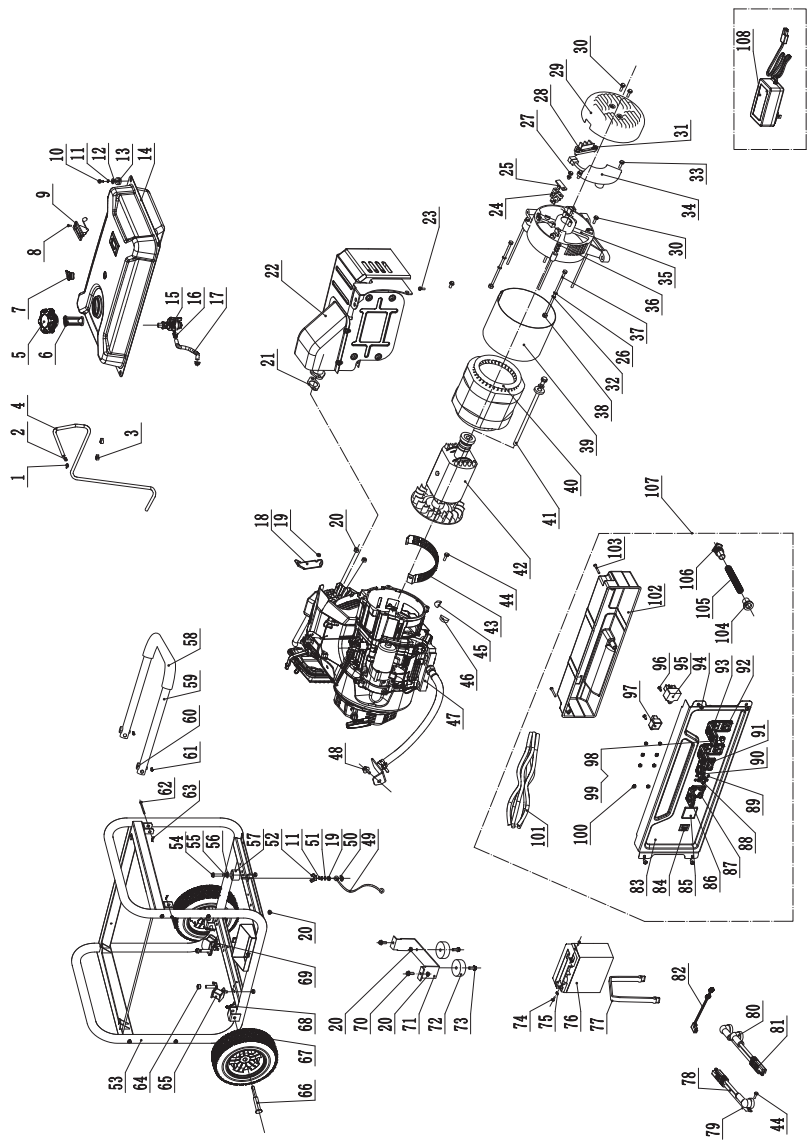
Starting Temperature Range	5 to 104°F/-15 to 40°C
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NOTE:

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.

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PARTS DIAGRAM



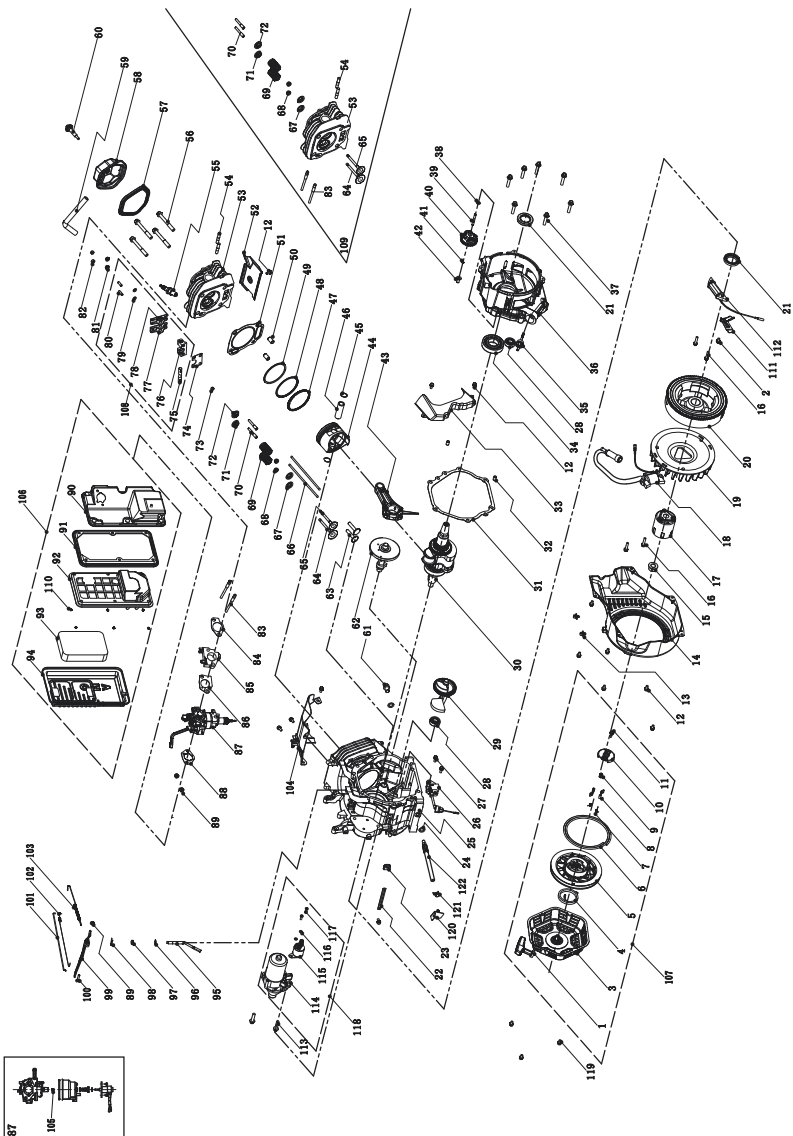
PARTS LIST

No.	Part Number	Description	Qty.
1	2.06.006	Clamp Ø7 × Ø1	1
2	24.070030.00	Hole, Breather Tube	1
3	2.05.001	Clamp Ø8 × 6.5	2
4	152.070014.06	Pipe, Reversal Valve, 730 mm	1
5	122.070100.09	Fuel Tank Cap	1
6	122.070300.03	Fuel Filter	1
7	24.070800.00	Reversal Valve	1
8	1.819.0510	Screw M5 × 10	2
9	152.072000.02	Fuel Meter Assembly	1
10	1.5789.0620.1	Flange Bolt M6 × 20, Black	4
11	1.93.06	Lock Washer Ø6	4
12	2.03.004.1	Flat Washer, Ø24 × Ø6.5 × 1.5, Black	4
13	122.070015.01	Mount Vibration, Fuel Tank	4
14	152.071000.54.21	Fuel Tank, 23.1L, Blue	1
15	122.070400.05	Fuel Valve	1
16	2.06.007	Clamp Ø8 × b6	2
17	152.070011.07	Fuel Pipe, 195 mm	1
18	45.090006.20	Holder, Air Cleaner	1
19	1.6177.1.06	Lock Nut M6, Flange	2
20	1.6177.1.08	Lock Nut M8, Flange	10
21	46.100001.07	Gasket, Exhaust	1
22	46.101000.12.2	Muffler Assembly	1
23	1.16674.0820	Flange Bolt M8 × 20	2
24	152.190300.00	Carbon Brush Assembly	1
25	122.190004.01	Pinch, Carbon Brush	1
26	1.93.05	Lock Washer Ø5	2
27	1.9074.15.0520	Bolt/Washer Assembly M5 × 20	1
28	122.190400.00	Terminal Block	1
29	152.190003.00.21	Generator End Cover, Blue	1
30	1.16674.0512.2	Flange Bolt M5 × 12	3
31	1.9074.17.0516	Screw/Washer Assembly M5 × 16	2
32	1.97.1.05	Washer Ø5	2
33	1.16674.0516	Flange Bolt M5 × 16	2
34	153.190200.03	AVR	1
35	152.190002.00	End Housing	1
36	2.08.096	Flange Bolt/Washer Assembly M6 × 149	4
37	2.08.097	Bolt M5 × 184	2

No.	Part Number	Description	Qty.
38	1.6175.05	Nut M5	2
39	151.191002.15	Stator Cover	1
40	151.191200.15	Stator Assembly, Al, Ø190 × 110 mm, CSA	1
41	2.08.095	Flange Bolt/Washer Assembly M10 × 235	1
42	151.191100.15	Rotor Assembly, Al, Ø190 × 110 mm, CSA	1
43	152.192300.01	Air Guide	1
44	1.5789.0608	Flange Bolt M6 × 8	2
45	152.190005.00	Rubber, Fore-Cover, A	1
46	152.190005.01	Rubber, Fore-Cover, B	1
47	46.605.21	Engine, 389cc	1
48	1.5789.0612	Flange Bolt M6 × 12	1
49	5.1900.029	Grounding Line 150 mm	1
50	1.862.06	Lock Washer Ø6, Toothed	1
51	1.97.1.06	Washer Ø6	2
52	1.62.06	Butterfly Type Nut M6	1
53	65299.0.8.2	Frame, 689 × 536 × 600	1
54	1.5789.0835	Flange Bolt M8 × 35	2
55	1.93.08	Lock Washer Ø8	2
56	2.03.040	Washer Ø8 × Ø24 × 3	2
57	152.201200.00	Motor Mount	2
58	152.200702.02	Cover, Handle	1
59	152.200701.02.2	Handle	1
60	152.200703.03	Pin, Handle	2
61	1.894.1.08	Circlip Ø8	2
62	152.200703.04	Pin, Handle	2
63	11.110008.00	Pin "R" Shape	2
64	1.6177.1.10	Lock Nut M10, Flange	2
65	152.201200.03	Motor Mount 1	1
66	122.201501.25.1	Pin Roll, Wheel, Ø16 × Ø10 × 107, Black	2
67	152.201701.09.2	9 1/2" (24.1 cm) Wheel, PU, Black	2
68	2.16.001.1	Pin Ø2 × 33, "R" Shape, Black	2
69	152.201200.04	Motor Mount 2	1
70	1.5789.0816	Flange Bolt M8 × 16	2
71	152.200002.01.2	Support Leg 84 mm	1
72	152.201400.00	Rubber, Support	2
73	1.5789.0825	Flange Bolt M8 × 25	2
74	1.9074.3.0510	Bolt/Washer Assembly M5×10	2
75	1.6177.1.05	Nut M5	2
76	9.1000.150	Battery 12 V 15 Ah	1

No.	Part Number	Description	Qty.
77	152.200904.00	Pinch, Rubber	1
78	5.1900.125	Wire, to SAE Motor	1
79	152.200013.02.3	Jacket, Wire, Red	2
80	152.200013.02	Jacket, Wire, Black	1
81	5.1900.126	Wire, to SAE Battery	1
82	152.200013.03	Sleeve, Connector	1
83	152.279.1.2	Control Panel, Black	1
84	5.1000.001.3	Ignition Switch, Red	1
85	5.1430.008.99	Intelligence	1
86	5.1870.003	Receptacle Cover, Receptacle L14-30R	1
87	5.1120.026	Receptacle L14-30R, CSA	1
88	5.1240.923	23 A Circuit Breaker, Double Pole, CSA	1
89	1.9074.4.0306.1	Screw/Washer Assembly M3 × 6, Black	4
90	5.1870.006	Receptacle Cover, Receptacle L5-30R	1
91	5.1120.023	Receptacle L5-30R, CSA	1
92	5.1120.027	Receptacle 5-20R, CSA	2
93	5.1870.008	Receptacle Cover, Receptacle 5-20R	2
94	2.08.171.1	Flange Bolt M6 × 12, Black	4
95	5.1810.000	Over Voltage Protector, CSA	1
96	1.818.0514	Screw M5 × 14	2
97	5.1800.000	Rectifier	1
98	5.1210.920	20 A Circuit Breaker, Push Button, CSA	2
99	5.1870.014	Circuit Breaker Cover, Push Button	2
100	1.6177.1.04.1	Lock Nut M4, Flange, Black	8
101	100687.21.10	Wire Assembly	1
102	152.210002.42	Control Box, CSA	1
103	1.9074.1.0538.2	Bolt/Washer Assembly M5 × 38	3
104	152.210003.01	Wire Jacket, Control Box	1
105	5.1320.24	Conduit, Plastic, 155 mm, CSA	1
106	152.210003.03	Plug, End Cover, CSA	1
107	100687.21	Control Panel Assembly	1
108	9.1700.009	Smart Charger, SAE	1

ENGINE PARTS DIAGRAM



ENGINE PARTS LIST

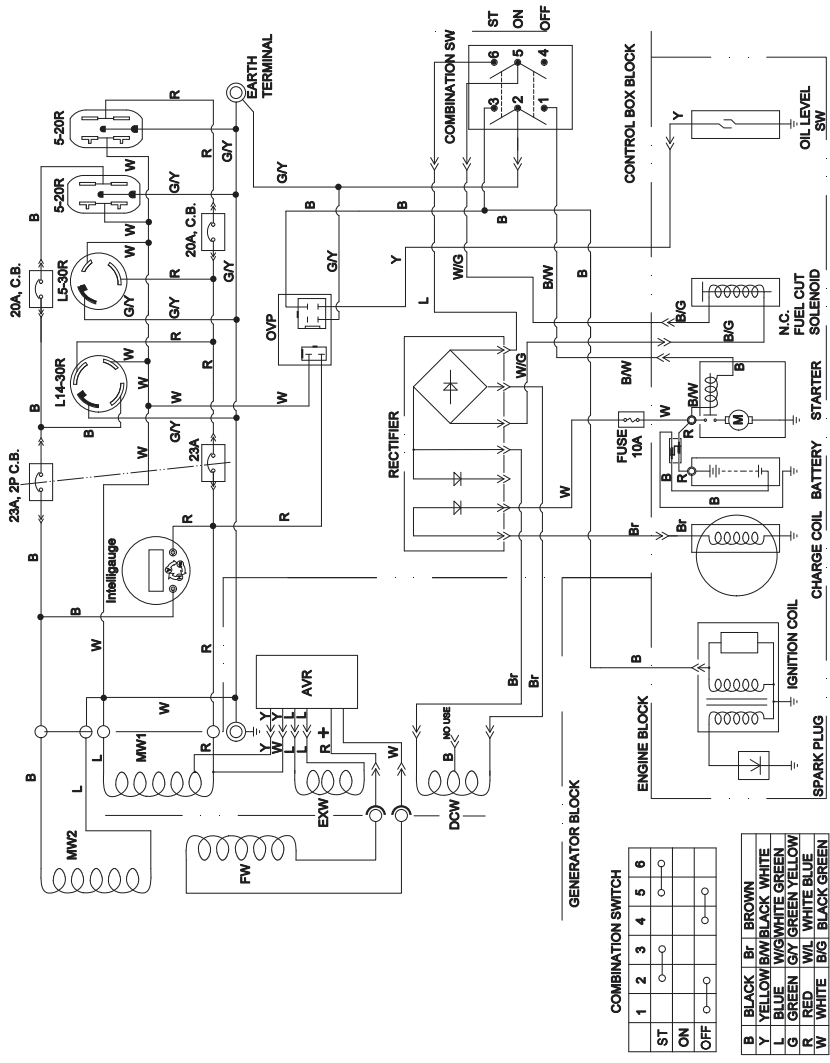
No.	Part Number	Description	Qty.
1	21.061300.01	Handle, Recoil, Soft, Black	1
2	1.5789.0608	Flange Bolt M6 × 8	1
3	46.061100.03.2	Cover, Recoil Starter, Black	1
4	45.060005.00	Spring, Recoil Starter	1
5	45.061102.00	Reel, Recoil Starter	1
6	2.10.003.1	Rope Ø4 × 1550, Black	1
7	45.060003.00	Spring, Ratchet	2
8	45.060002.00	Starter Ratchet, Steel	2
9	45.060009.00	Spring, Ratchet Guide	1
10	45.060007.00	Ratchet Guide	1
11	45.060008.00	Screw, Ratchet Guide	1
12	1.5789.0612	Flange Bolt M6 × 12	12
13	2.05.005	Clamp Ø6	2
14	46.080100.01.21	Fan Cover, Blue	1
15	2.02.007	Nut M16 × 1.5	1
16	1.5789.0629	Flange Bolt M6 × 29	4
17	45.060001.00	Pulley, Starter	1
18	46.123000.01	Ignition Coil	1
19	45.080001.00	Cooling Fan	1
20	46.120100.04	Flywheel	1
21	2.11.007	Oil Seal Ø35 × Ø52 × 8	2
22	2.05.050	Wire Clip, 100 mm	1
23	152.070031.01	Sheath, Wire	1
24	2.03.023	Washer Ø12.5 × Ø20 × 2, Drain Bolt	2
25	46.030100.04	Crankcase	1
26	45.127000.02	Oil Level Sensor	1
27	1.5789.0615	Flange Bolt M6 × 15	2
28	1.276.6202	Bearing 6202	2
29	47.050006.00	Weight Balancer	1
30	45.050100.14	Crankshaft	1
31	46.030008.00	Gasket, Crankcase Cover	1
32	2.04.001	Dowel Pin Ø9 × 14	2
33	46.080600.00	Air Guide, Right Side	1
34	1.276.6207	Bearing 6207	1
35	46.031000.01.1	Oil Dipstick Assembly, Black	1
36	45.030007.00	Cover, Crankcase	1
37	1.5789.0840	Flange Bolt M8 × 40	7
38	2.03.021.1	Washer Ø6.4 × Ø13 × 1, Black	1

No.	Part Number	Description	Qty.
39	45.110013.00	Shaft, Governor Gear	1
40	45.110100.00	Gear, Governor	1
41	21.110011.00	Clip, Governor Gear	1
42	45.110012.00	Bushing, Governor Gear	1
43	47.050200.00	Connecting Rod	1
44	46.050005.00	Piston	1
45	2.09.004	Circlip Ø21 × Ø1	2
46	45.050003.00	Pin, Piston	1
47	46.050303.00	Ring, Oil	1
48	46.050302.00	Ring, Second Piston	1
49	46.050301.00	Ring, First Piston	1
50	2.04.004	Dowel Pin Ø12 × 20	2
51	46.030009.01	Gasket, Cylinder Head	1
52	46.080400.00	Air Guide, Lower	1
53	46.010100.00	Cylinder Head	1
54	2.01.010	Stud Bolt M8 × 35	2
55	2.15.002(F6RTC)	Spark Plug F6RTC	1
56	2.08.014	Flange Bolt M10 × 80	4
57	46.020002.00	Gasket, Cylinder Head Cover	1
58	46.021000.00	Cover, Cylinder Head	1
59	45.020001.02	Breather Tube	1
60	45.020100.00	Bolt, Cylinder Head Cover	1
61	2.08.039	Drain Bolt M12 × 1.5 × 15	1
62	46.041000.00	Camshaft	1
63	45.040013.00	Lifter, Valve	2
64	45.040002.00	Valve, Intake	1
65	45.040006.00	Valve, Exhaust	1
66	46.040005.00	Push Rod	2
67	45.040015.00	Retainer, Valve Spring	2
68	45.040017.00	Oil Seal, Valve	2
69	45.040003.00	Spring, Valve	2
70	23.040010.00	Bolt, Rocker Arm	2
71	45.040001.00	Retainer, Intake Valve Spring	1
72	45.040007.00	Retainer, Exhaust Valve Spring	1
73	45.040008.00	Rotator, Exhaust Valve	1
74	46.040004.00	Guide Plate, Push Rod	1
75	46.040016.00	Shaft, Rocker Arm	1
76	46.040201.00	Retainer, Rocker Arm	1
77	46.040009.00	Rocker Arm, Intake Valve	1

No.	Part Number	Description	Qty.
78	46.040018.00	Rocker Arm, Exhaust Valve	1
79	1.97.1.06	Washer Ø6	2
80	22.040012.00	Screw, Valve Adjustment	2
81	1.6177.1.06	Flange Nut M6	2
82	21.040021.00	Nut M6 × 0.5, Lock	2
83	2.01.008	Stud Bolt M6 × M8 × 105	2
84	46.130002.20	Gasket, Insulator	1
85	45.130001.00	Insulator, Carburetor	1
86	46.130003.20	Gasket, Carburetor	1
87	46.131000.20	Carburetor	1
88	46.130004.20	Gasket, Air Cleaner	1
89	1.6177.06	Flange Nut M6	3
90	46.091100.03	Base, Air Cleaner	1
91	45.091002.20	Seal, Air Cleaner	1
92	45.091001.20	Separator, Air Cleaner	1
93	45.091003.20	Element, Air Cleaner	1
94	46.091200.04	Cover, Air Cleaner	1
95	45.110001.00	Shaft, Governor Arm	1
96	2.03.019	Washer Ø8.2 × Ø17 × 0.8	1
97	2.11.006	Oil Seal Ø7 × Ø14 × 5	1
98	45.110008.00	Pin, Shaft	1
99	45.110003.00	Arm, Governor	1
100	2.08.040	Bolt M6 × 21, Governor Arm	1
101	45.110006.00	Rod, Governor	1
102	45.110005.00	Spring, Throttle Return	1
103	45.110007.00	Spring, Governor	1
104	46.080300.20	Air Guide, Upper	1
105	46.131017.20	Standard Main Jet	1
106	46.131017.20.01	Altitude Main Jet	/
107	46.091000.03.2	Air Cleaner Assembly	1
108	46.061000.03.2	Recoil Assembly	1
109	46.040200.00	Rocker Arm Assembly	1
110	46.010000.00	Cylinder Head Assembly	1
111	1.6177.1	Flange Nut M5	6
112	45.030006.00	Plate, Coil	1
113	45.121000.00	Coil, Charging	1
114	1.5789.0835	Flange Bolt M8 × 35	2
115	45.125100.00	Starter Motor Assembly	1
116	45.125200.03	Relay, Starter, Three Gear	1

No.	Part Number	Description	Qty.
117	1.93.05	Lock Washer Ø5	2
118	45.125000.03	Starter Motor Assembly	1
119	1.16674.0608	Flange Bolt M6 × 8	3
120	45.030200.00	Support	1
121	2.06.013	Clamp Ø13.5 × b10	1
122	45.032000.00	Hose, Oil Drain	1

WIRING DIAGRAM



SPECIFICATIONS

TROUBLESHOOTING

Problem	Possible Causes	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/Ignition switch/ Power button OFF	Press engine switch/ignition switch/ power button ON.
	Old fuel or water in fuel	Drain fuel and replace with fresh fuel.
Engine starts but runs roughly.	Flooded with fuel	Let unit stand for 10 mins.
	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.
Engine shuts down during operation.	Clogged spark arrestor	Clean spark arrestor.
	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 “Do not Overload Generator” (page 29).
	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.
	Faulty brush assembly	Replace brush assembly (Service Centre).
	Faulty AVR (auto voltage regulator)	Replace AVR (Service Centre).
	Loose wiring	Inspect and tighten wiring connections.
Engine hunts or falters.	Other	Contact the help line.
	Engine governor defective	Contact the help line.
	Dirty fuel valve	Clean the fuel valve.
	Carburetor is dirty and running lean.	Contact the help line.
Repeated circuit breaker tripping.	Choke in wrong position	Move choke until it stops under RUN position or push in completely.
	Overload	Review load and adjust. See “Do not Overload Generator” (page 29).
	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.

WARRANTY INFORMATION

This Mastercraft product is guaranteed for a period of **three (3) years** from the date of original retail purchase, against defects in materials and workmanship.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period and if covered under this warranty, will be repaired or replaced (with the same model, or one of equal value or specification), at our option. We will bear the cost of any repair or replacement and any costs of labour relating thereto.

These warranties are subject to the following conditions and limitations

- a. a bill of sale verifying the purchase and purchase date must be provided;
- b. this warranty will not apply to any product or part thereof which is worn or broken or which has become inoperative due to abuse, misuse, accidental damage, neglect or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions) or which is being used for industrial, professional, commercial or rental purposes;
- c. this warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product which are expected to become inoperative or unusable after a reasonable period of use;
- d. this warranty will not apply to routine maintenance and consumable items such as, but not limited to, fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, tune-ups or adjustments;
- e. this warranty will not apply where damage is caused by repairs made or attempted by others (i.e. persons not authorized by the manufacturer);
- f. this warranty will not apply to any product that was sold to the original purchaser as a reconditioned or refurbished product (unless otherwise specified in writing);
- g. this warranty will not apply to any product or part thereof if any part from another manufacturer is installed therein or any repairs or alterations have been made or attempted by unauthorized persons;
- h. this warranty will not apply to normal deterioration of the exterior finish, such as, but not limited to, scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and
- i. this warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under the product manufacturer's warranty, if any.

Additional Limitations

This warranty applies only to the original purchaser and may not be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including, without limitation, any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product.

Notice to Consumer

This warranty gives you specific legal rights, and you may have other rights, which may vary from province to province. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable provincial or federal legislation.

Imported by Mastercraft Canada Toronto, Canada M4S 2B8

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**CHAMPION POWER EQUIPMENT, INC. (CPE)
AND THE UNITED STATES ENVIRONMENT PROTECTION AGENCY
(U.S. EPA)
EMISSION CONTROL SYSTEM WARRANTY**

Your Champion Power Equipment (CPE) engine complies with U.S. EPA emission regulations.

YOUR WARRANTY RIGHTS AND OBLIGATIONS:

The US EPA AND CPE are pleased to explain the Federal Emission Control Systems Warranty on your 2020 small off-road engine (SORE) and engine powered equipment. New engines and equipment must be designed, built and equipped, at the time of sale, to meet U.S. EPA regulations for small off-road engines (SORE). CPE warrants the emission control system on your small off-road engine (SORE) and equipment for the period of time listed below, provided there has been no abuse, neglect, unapproved modification, or improper maintenance of your equipment.

Your emission control system may include parts such as the carburetor, fuel-injection system, the ignition system, catalytic converter and fuel lines. Also included may be hoses, belts, connectors and other emission related assemblies. Where a warrantable condition exists, CPE will repair your small off-road engine (SORE) at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S EMISSION CONTROL SYSTEM WARRANTY COVERAGE:

This emission control system is warranted for two years, subject to provisions set forth below. If, during the warranty period, an emission related part on your engine is defective in materials or workmanship, the part will be repaired or replaced by CPE.

OWNER WARRANTY RESPONSIBILITIES:

As the small off-road engine (SORE) owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. CPE recommends that you retain all your receipts covering maintenance on your small off-road engine (SORE), but CPE cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the small off-road engine (SORE) owner, you should however be aware that CPE may deny you warranty coverage if your small, off-road engine (SORE) or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your small off-road engine (SORE) to an Authorized CPE service outlet or alternate service outlet as described in (3)(f.) below, CPE dealer or CPE, Santa Fe Springs, Ca. as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact:

Champion Power Equipment, Inc.
Customer Service
12039 Smith Ave.
Santa Fe Springs, CA 90670
1-877-338-0999
tech@championpowerequipment.com

EMISSION CONTROL SYSTEM WARRANTY

The following are specific provisions relative to your Emission Control System (ECS) Warranty Coverage.

- 1. APPLICABILITY:** This warranty shall apply to 1997 and later model year small off-road engines (SORE). The ECS Warranty Period shall begin on the date the new engine or equipment is delivered to its original, end-use purchaser, and shall continue for 24 consecutive months thereafter.

2. GENERAL EMISSIONS WARRANTY COVERAGE

CPE warrants to the original, end-use purchaser of the new engine or equipment and to each subsequent purchaser that each of its small off-road engines (SORE) is:

- 2a. Designed, built and equipped so as to conform to U.S. EPA emissions standards for spark-ignited engines at or below 19 kilowatts.
- 2b. Free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to the part as described in the engine manufacturer's application for certification for a period of two years.

3. THE WARRANTY ON EMISSION-RELATED PARTS WILL BE INTERPRETED AS FOLLOWS:

- 3a. Any warranted part that is not scheduled for replacement as required maintenance in the Owners Manual shall be warranted for the ECS Warranty Period. If any such part fails during the ECS Warranty Period, it shall be repaired or replaced by CPE according to Subsection "d" below. Any such part repaired or replaced under the ECS Warranty shall be warranted for any remainder of the ECS Warranty Period.
- 3b. Any warranted, emissions-related part which is scheduled only for regular inspection as specified in the Owners Manual shall be warranted for the ECS Warranty Period. A statement in such written instructions to the effect of "repair or replace as necessary", shall not reduce the ECS Warranty Period. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
- 3c. Any warranted, emissions-related part which is scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part shall be repaired or replaced by CPE according to Subsection "d" below. Any such emissions-related part repaired or replaced under the ECS Warranty, shall be warranted for the remainder of the ECS Warranty Period prior to the first scheduled replacement point for such emissions-related part.
- 3d. Repair or replacement of any warranted, emissions-related part under this ECS Warranty shall be performed at no charge to the owner at a CPE Authorized Service Outlet.

- 3e. The owner shall not be charged for diagnostic labor which leads to the determination that a part covered by the ECS Warranty is in fact defective, provided that such diagnostic work is performed at a CPE Authorized Service Outlet.
- 3f. CPE shall pay for covered emissions warranty repairs at non-authorized service outlets under the following circumstances:
 - i. The service is required in a population center with a population over 100,000 according to U.S. Census 2000 without a CPE Authorized Service Outlet AND
 - ii. The service is required more than 100 miles from a CPE Authorized Service Outlet. The 100 mile limitation does not apply in the following states: Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nebraska, Nevada, New Mexico, Oregon, Texas, Utah and Wyoming.
- 3g. CPE shall be liable for damages to other original engine components or approved modifications proximately caused by a failure under warranty of an emission-related part covered by the ECS Warranty.
- 3h. Throughout the ECS Warranty Period, CPE shall maintain a supply of warranted emission-related parts sufficient to meet the expected demand for such emission-related parts.
- 3i. Any CPE Authorized and approved emission-related replacement part may be used in the performance of any ECS Warranty maintenance or repair and will be provided without charge to the owner. Such use shall not reduce CPE's warranty obligation.
- 3j. Unapproved add-on or modified parts may not be used to modify or repair a CPE engine. Such use voids this ECS Warranty and shall be sufficient grounds for disallowing an ECS Warranty claim. CPE shall not be liable hereunder for failures of any warranted parts of a CPE engine caused by the use of such an unapproved add-on or modified part.

EMISSION-RELATED PARTS INCLUDE THE FOLLOWING: (using those portions of the list applicable to the engine)

Systems covered by this warranty	Parts Description
Fuel Metering System	Fuel regulator, Carburetor and internal parts
Air Induction System	Air cleaner, Intake manifold
Ignition System	Spark plug and parts, Magneto ignition system
Exhaust System	Exhaust manifold, catalytic converter
Miscellaneous Parts	Tubing, Fittings, Seals, Gaskets, and Clamps associated with these listed systems.
Evaporative Emissions	Fuel Tank, Fuel Cap, Fuel Line (for liquid fuel and fuel vapors), Fuel Line Fittings, Clamps, Pressure Relief Valves, Control Valves, Control Solenoids, Electronic Controls, Vacuum Control Diaphragms, Control Cables, Control Linkages, Purge Valves, Gaskets, Vapor Hoses, Liquid/Vapor Separator, Carbon Canister, Canister Mounting Brackets, Carburetor Purge Port Connector

TO OBTAIN WARRANTY SERVICE:

You must take your CPE engine or the product on which it is installed, along with your warranty registration card or other proof of original purchase date, at your expense, to any Champion Power Equipment dealer who is authorized by Champion Power Equipment, Inc. to sell and service that CPE product during his normal business hours. Alternate service locations defined in Section (3)(f.) above must be approved by CPE prior to service. Claims for repair or adjustment found to be caused solely by defects in material or workmanship will not be denied because the engine was not properly maintained and used.

If you have any questions regarding your warranty rights and responsibilities, or to obtain warranty service, please write or call Customer Service at Champion Power Equipment, Inc.

Champion Power Equipment, Inc.
12039 Smith Ave.
Santa Fe Springs, CA 90670
1-877-338-0999
Attn.: Customer Service
tech@championpowerequipment.com