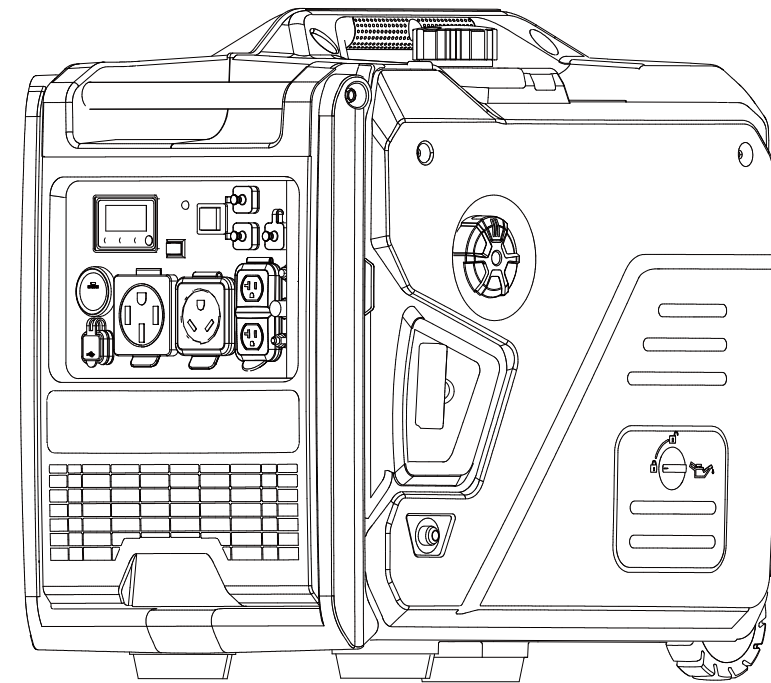




Model: PGX60BiSRCO

6000 Watt Inverter Generator
OPERATOR'S MANUAL



WARNING: This product, its exhaust and other substances that may become airborne from its use may contain chemicals, including lead, known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling. For more information, visit www.P65warnings.ca.gov.



DO NOT RETURN TO STORE!
HAVE QUESTIONS OR NEED SERVICE?



1-866-591-8921



support@pulsar-products.com

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Introduction

Thank you for choosing Pulsar Products!
This manual provides instruction on how to operate and use your generator safely and correctly; be sure to read and understand this manual before using your generator. If you have ANY questions, please phone 1.866.591.8921 M-F or support@pulsar-products.com BEFORE using your generator.

All details and images in this Manual are believed to be accurate at the time of publication.

Pulsar Products reserves the right to make updates to this manual at any time.

Please contact Pulsar Support at 1.866.591.8921 or support@pulsar-products.com for the latest updates.

This manual is a permanent part of the generator set. If the generator is resold, kindly include this manual with the generator.

Safety Warnings and Notices

WARNING: Save This Manual For Future Reference

This manual contains important information regarding the safety, operation, maintenance, and storage of this product. Before use, read carefully and understand all cautions, warnings, instructions, and product labels. Failure to do so could result in serious personal injury and/or property damage.

Safety Definitions

The words DANGER, WARNING, CAUTION, and NOTICE are used throughout this manual to highlight important information. Make sure that the meaning of this safety information is known to all who operate, perform maintenance on, or are near the generator.

 This safety alert symbol appears with most safety statements. It means to pay attention and be alert, your safety is involved! Please read and abide by the message that follows the safety alerts symbol.

DANGER

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

WARNING

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

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE












Failure to follow the instruction may result in the damage to your generator and other property.

Safety Symbols

Follow all safety information contained in this manual and on the generator.

Safety Instructions


Before operating your generator, you must read and understand the manual and familiarize yourself with the safe operation practices.

| SYMBOL | DESCRIPTION |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
|  | Safety Alert Symbol |
|  | Electrocution Hazard |
|  | Asphyxiation Hazard |
|  | Burn Hazard. DO NOT touch hot surfaces. |
|  | Electrical Shock Hazard |
|  | Fire Hazard |
| 4 FEET  | Maintain Safe Distance |
|  | Lifting Hazard |
|  | Read Manufacturer's Instructions |
|  | DO NOT Operate in Wet Conditions |
|  | Ground. Consult with electrician to determine grounding requirements before |


Safety Precautions

⚠ 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.

⚠ WARNING

POISONOUS GAS HAZARD: Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You CAN NOT smell it, see it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas.

Operate this product **ONLY** outside far away from windows, doors, and vents to reduce the risk of carbon monoxide gas from accumulating and potentially being drawn towards occupied spaces.

Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery backup according to the manufacturer's instructions. Most smoke alarms cannot detect carbon monoxide gas.

DO NOT run this product inside homes, garages, basements, crawlspaces, sheds, or other partially enclosed spaces even if using fans or opening doors and windows for ventilation. Carbon monoxide can quickly build up in these spaces and can linger for hours, even after this product has shut off.

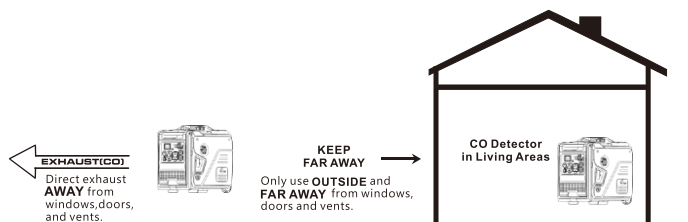
ALWAYS place this product downwind and point the engine exhaust away from occupied spaces. If you start to feel sick, dizzy, or weak while using this product, shut it off and get to fresh air **IMMEDIATELY** - then see a doctor; you may have carbon monoxide poisoning.

Safety Instructions

Correct Usage

Example location to reduce risk of carbon monoxide poisoning

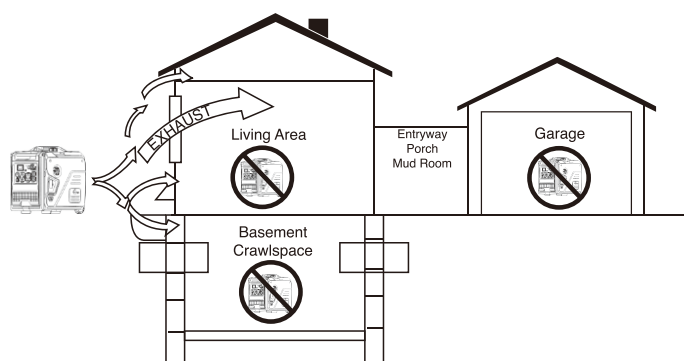
- **ONLY** use outside and downwind, far away from windows, doors, and vents.
- Direct exhaust away from occupied spaces.



Incorrect Usage

Do not operate in any of the following locations:

- Near any door, window, or vent
- Garage
- Basement
- Crawl Space
- Living Area
- Attic
- Entry Way
- Porch
- Mud Room



Starter cord kickback (rapid retraction) could pull hand and arm toward the engine faster than you can let go which could cause broken bones, fractures, bruises, sprains, or other serious injuries.



Fuel and its vapors are extremely flammable and explosive which could cause burns, fire, or explosion resulting in death or serious injury and/or property damage.

When Adding Or Draining Gasoline

Turn the generator engine OFF and let it cool for at least 2 minutes before removing the fuel cap. Loosen the cap slowly to relieve pressure in the tank.

- Fill or drain fuel tank outdoors.
- **DO NOT** overfill the tank. Allow space for fuel expansion.
- If fuel spills, wipe it up and let the area dry before starting the engine.
- Keep fuel away from sparks, open flames, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks; replace if necessary.
- **DO NOT** light a cigarette or smoke anything.

When Starting Equipment

- Ensure spark plug, muffler, fuel cap, and air cleaner are in place.
- **DO NOT** crank engine with spark plug removed.

When Operating Equipment

- **DO NOT** operate this product inside any building, carport, porch, mobile enclosure, marine applications, or shed.
- **DO NOT** tip engine or equipment at an angle that causes fuel to spill.
- **DO NOT** stop the engine by moving the choke control to the "Start" position.
- **DO NOT** exceed the generator's wattage capacity.
- Start the generator and let the engine stabilize before connecting electrical loads.
- Connect electrical loads in the OFF position, then turn ON for operation.
- Turn electrical loads OFF and disconnect from the generator before stopping the generator.

Safety Instructions

NOTICE

Improper treatment of the generator could damage it and shorten its life.

- Use generator only for intended applications.
- If you have questions about intended use, ask a dealer or contact your local Pulsar service center.
- Operate generator only on solid, level surfaces.
- DO NOT expose the generator to excessive moisture, dust, dirt, or corrosive vapors.
- DO NOT insert any objects through cooling slots.
- If connected devices overheat, turn them off and disconnect them from the generator.

Shut off the generator if:

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

Parallel Kit Precautions



To prevent serious injury, death, and generator and/or equipment damage from electric shock and fire:

1. Follow Parallel Kit instructions provided with it for connection and use of a Parallel Kit.
2. Only connect two identical Inverter Generators together using a Parallel Kit.
3. Connect Parallel Kit only to terminals marked “Parallel” on the front of the Generator.
4. Do not remove or connect a Parallel Kit while the Generator is running.
5. Do not use a Parallel Kit that is attached to only one Generator.

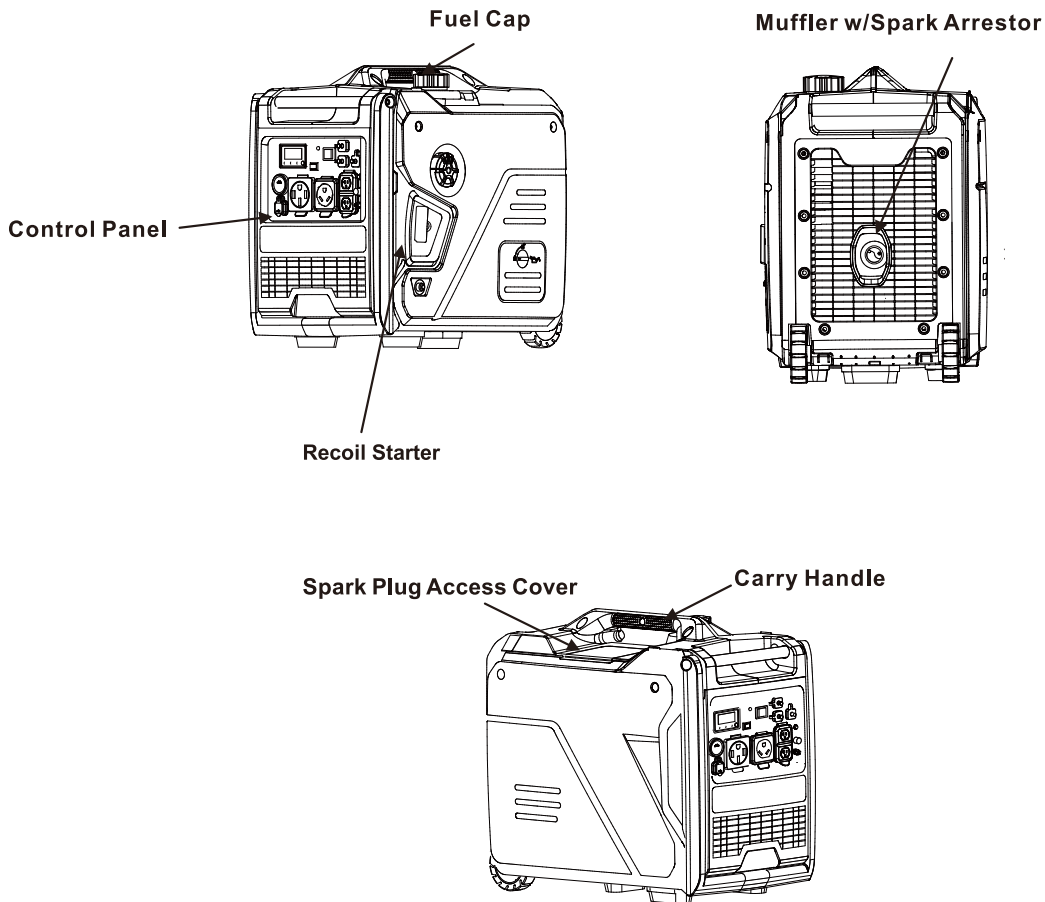
Carbon Monoxide Safety

Carbon Monoxide

Generators are very convenient, but they can also be very dangerous. All fuel-burning appliances and equipment release a poisonous gas called carbon monoxide. Carbon monoxide (also known as CO) can be dangerous for humans and pets, even in small amounts, because it blocks oxygen from getting into your body. Carbon monoxide poisoning can lead to death in a very short time. It is odorless, tasteless and invisible, so you may be exposed without knowing it. That is why carbon monoxide is sometimes called “the silent killer.”

Components

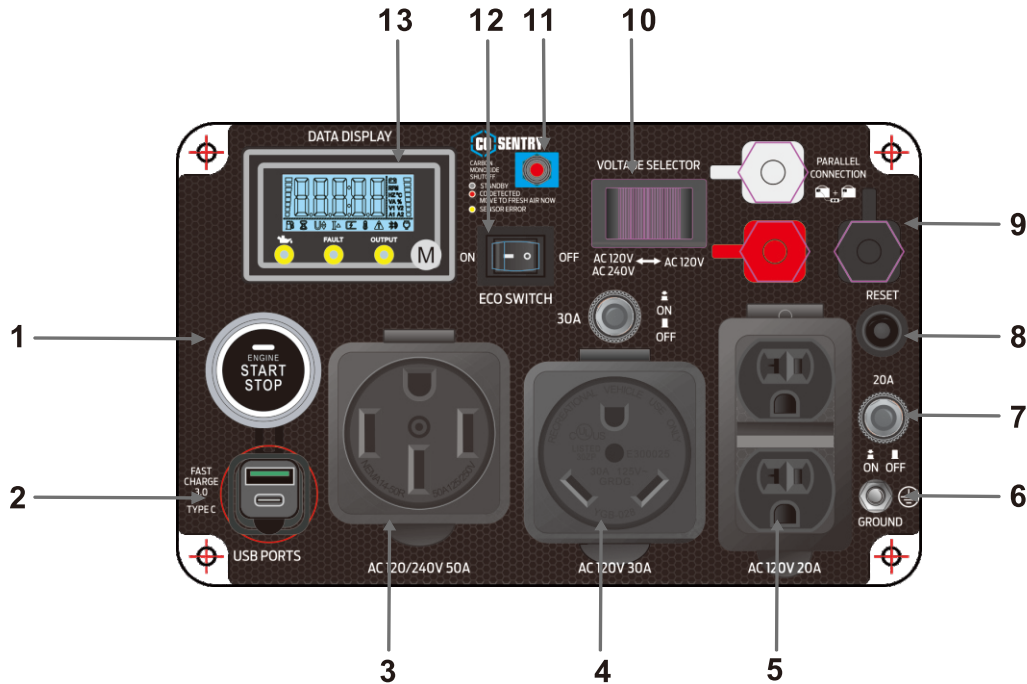
Before operating your generator, you must read and understand the manual and familiarize yourself with the safe operation practices.



- 1. Fuel Cap:** Add gasoline here.
- 2. Carry Handles:** Helps transport the generator.
- 3. Recoil Handle:** Pull the recoil handle to manually start the engine.
- 4. Control Panel:** The control panel contains the outlets and operational controls.
- 5. Spark Plug Cover:** Spark plug can be maintained after removing this cover.
- 6. Muffler and Spark Arrestor:** The spark arrestor prevents sparks from exiting the muffler.

Control Panel

COMPONENTS CONTROL PANEL COMPONENTS



1. Engine Start/Stop Button
2. USB Ports: USB Type A 5V/3.6A, 9V/2.5A, 12V/2A and USB Type C.
3. NEMA 14-50R
4. 120 Volt AC, 30 Amp NEMA TT-30R Receptacle: This receptacle can supply a maximum of 30 Amps.
5. 120 Volt AC, 20 Amp Duplex NEMA 5-20R Receptacle: The receptacle can supply a maximum of 20 Amps.
6. Ground Terminal: The ground terminal is used to externally ground the generator.
7. 20 Amp AC Circuit Breaker: Circuit breaker limits the current that can be delivered

- through the NEMA 5-20R receptacle to 20 Amps.
8. Overload Reset - Protects the inverter from overload. Reduce load as necessary and press to reset.
9. Parallel Connectors: A compatible Pulsar Inverter Generator can be connected for additional power output.
10. Voltage 120/240V
11. CO Sensor
12. ECO Switch - Minimizes rpm, sound, and fuel burn when under light electrical load.
13. Multifunction LCD
Low Oil LCD / Fault LCD / Output Ready LCD

Specifications

| | |
|------------------------------|-----------------------------------------------------------------------|
| Model | PGX60BiSRCO |
| Engine Type | Single Cylinder, Four Stroke, Forced Air Cooling Gasoline Engine, OHV |
| Displacement | 224cc |
| Rated Power (kW) Gasoline | 5,400 Watts |
| Peak Power (kW) Gasoline | 6,000 Watts |
| Rated Power (kW) LPG/Propane | 4,600 Watts |
| Peak Power (kW) LPG/Propane | 5,400 Watts |
| Rated Voltage | 120/240V AC |
| Rated Frequency | 60 Hz |
| Phase | Single Phase |
| Starting Type | Recoil, Electric Start, and Remote |
| Fuel Type | Regular Gasoline |
| Fuel Capacity | 3 Gallons |
| Total Harmonic Distortion | ≤ 3% |
| Oil Type | 10w-30 |
| Oil Capacity | 1 Liter,(34 fl oz) |
| Maximum Ambient Temperature | 104°F (40° C) |

Preparation

Preparation

Your generator requires some assembly. This generator ships from our factory without oil; it must be properly filled with oil before operation.

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 carton (two people use the handles at either end of the machine to lift it out of the carton).

Add Engine Oil



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 from failing to follow these instructions will void your warranty.

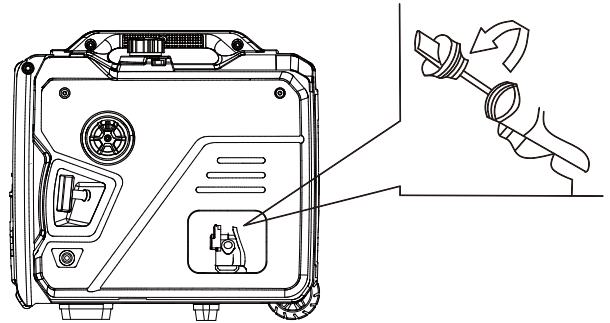


Failure to follow this instruction may result in the damage to your generator and other property.

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

| 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 | |

1. On a level surface, remove the cover and oil dipstick.



2. Using the supplied funnel, add oil into the engine. As residual oil from the factory may remain in the engine, add the oil slowly near the end of the bottle to prevent overfilling the engine. See Engine Oil Level Check in the Maintenance section.
3. Replace the oil dipstick and hand-tighten.
4. Replace the cover.



Residual oil from the factory may remain in the engine, add oil slowly to prevent overfilling of the engine.

Once the oil has been added, oil level should appear 1-2 threads below the fill hole. DO NOT screw in the dipstick while checking.

Preparation

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 a critical level.

NOTICE

The first 5 hours of run time are the break-in period for the generator. 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 the engine speed to vary slightly and help seat the 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 < 41° F (5° C) temperatures.

Add Gasoline

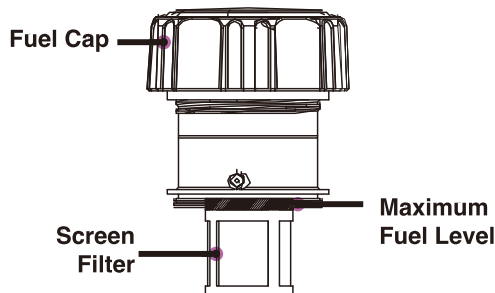
WARNING



TO PREVENT SERIOUS INJURY FROM FIRE:

Fill the gasoline tank in a well-ventilated area away from ignition sources. If the engine is hot from use, shut the engine off and wait for it to cool before adding gasoline. Do not smoke.

1. Make sure the generator is on a solid, flat, level surface.
2. Unscrew the fuel cap and set it aside.
3. Slowly add gasoline to the fuel tank. Be careful not to overfill. The fuel gauge on the top of the fuel tank indicates how much gasoline is in the generator fuel tank.



4. Replace the fuel cap and wipe up any spilled gasoline with a dry cloth then remove the cloth from the area.

DANGER

Do not overfill the gasoline the tank. Overfilling can result in a fire, explosion, or death.

WARNING

Gasoline can expand. Do not fill the gasoline tank to the top. Leave a minimum of 1.5 inches open space. Gasoline fumes are explosive. Do not fill the tank near an open flame. Always check for gasoline spills.

- To ensure that the generator runs smoothly use only **FRESH, FRESH GASOLINE WITH AN OCTANE RATING OF 87.**
- Never use old gasoline.
- Avoid getting dirt or water in the gasoline tank.
- Never store generator for extended periods of time with gasoline in the fuel tank
- Gasoline **WILL** age in the tank and make it hard to start the generator in the future.

Connecting a Propane Tank

NOTICE

- Propane tanks that use liquid withdrawal system can not be used on these models.
- Confirm that the re-qualification date on the tank has not expired.
- **DO NOT** use included LPG hose for any other appliances.

Preparation

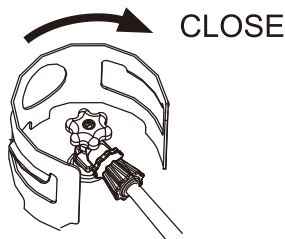
NOTICE

- All new propane tanks must be purged of air and moisture prior to filling. Used propane tanks that have not been capped or kept closed must also be purged. The purging process should be done by a propane tank supplier (propane tanks from an exchange supplier should have been purged and filled properly).
- ALWAYS position the propane tank so the connection between the valve and the gas inlet will not cause sharp bends or kinks in the hose.

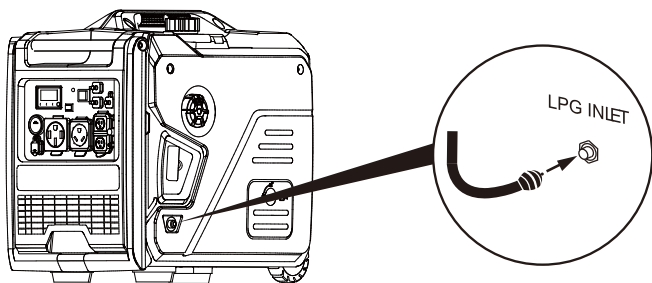
WARNING

Explosion hazard. DO NOT start generator if you smell propane. ALWAYS fully close the propane tank valve and disconnect the LPG hose from the generator when not in use. Never invert (turn up side down) a LPG tank while in use.

1. Turn the generator OFF and leave on a flat surface in a well ventilated area.
2. Verify that the propane tank valve is in the fully closed position.



3. Remove the cover on the generator propane inlet.
4. Use your fingers to hand thread the LPG hose (included) to the propane inlet on the generator.

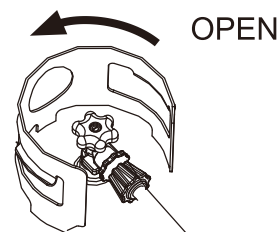


IMPORTANT: DO NOT use thread seal tape or any other type of sealant to seal the LPG hose connection.

5. Tighten the LPG hose connector with an adjustable wrench until it is snug. DO NOT overtighten.

6. Remove the safety plug or cap from the propane tank valve and attach the other end of the hose to the LPG connector on the tank; hand-tighten.

7. Turn the propane tank valve to the fully open position. 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, turn the propane tank valve to the fully closed position and tighten the fitting. Open the propane tank valve 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 an authorized Pulsar service center.



Operation

Generator Location



NEVER operate the generator inside any building, garage, basement, crawlspace, shed, or enclosure, including the generator compartment of a recreational vehicle.

NEVER operate or start the generator in the back of an SUV, camper, trailer, truck bed (regular sides, flat or other configuration), under staircases, stairwells, next to walls or buildings, or in any other location that will not allow for adequate cooling of the generator or for the proper exit of the exhaust flow.

DO NOT operate or store the generator in wet weather conditions such as rain or snow. Using a generator in wet conditions could result in serious injury or death due to electrocution.

Generators must have a minimum of 5 feet (1.5 m) of clearance from all combustibile material.

Generators must also have a minimum of 5 feet (1.5 m) of airflow clearance on all sides to allow for adequate cooling, maintenance, and service.

Always place the generator in a well-ventilated area. NEVER place the generator near air intake vents or where exhaust fumes could be drawn into occupied or confined spaces.

Always carefully consider wind and air currents when positioning the generator.

Always allow generators to properly cool before transport or for storage purposes.

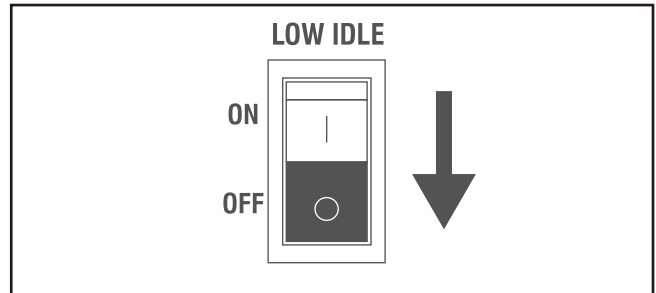
Failure to follow proper safety precautions may result in personal injury, damage to the generator, and void the manufacturer's warranty.



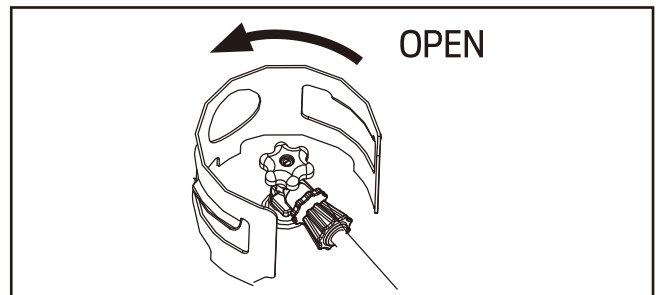
During operation, the muffler and exhaust fumes will become hot. If there is inadequate cooling space or if the generator is blocked or enclosed, temperatures can rise quickly and may lead to a fire.

Starting The Generator

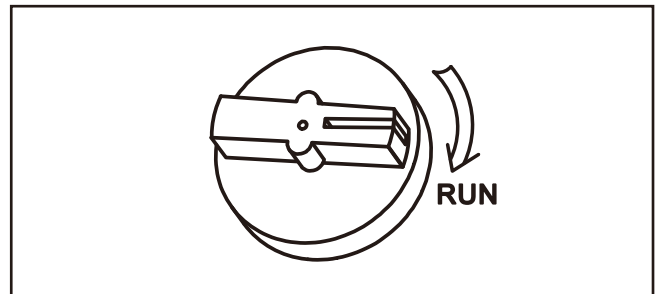
1. Make sure the generator is on a solid, flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in turned on.
3. Switch OFF low Idle. The low idle switch is located next to the push start button on the panel. Flip the switch down to disable low idle when starting the generator.



4. Open the LPG valve of the propane cylinder.

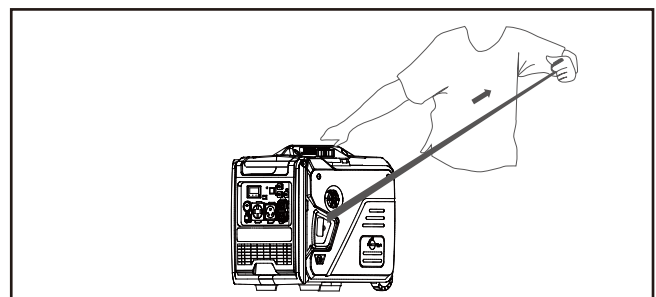


5. Turn the Combination switch to the "RUN" position.



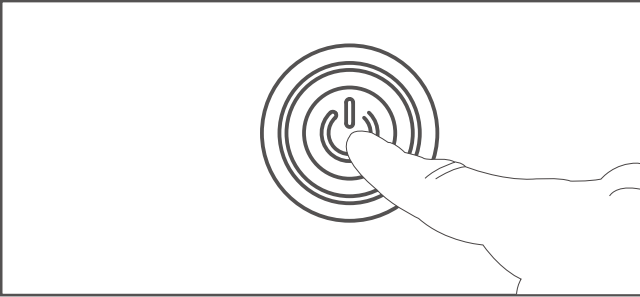
Choose the starting method

Recoil Start: Firmly grasp and pull the recoil handle slowly until you feel resistance, let it retract then pull swiftly.

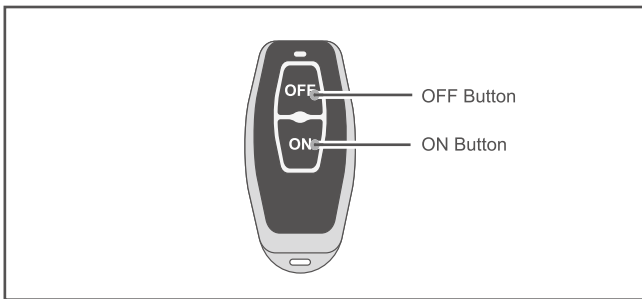


Operation

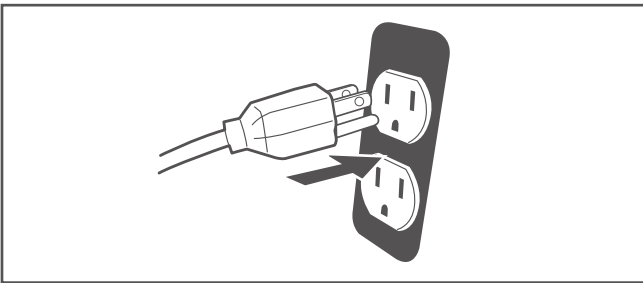
Button Start: Press the start button down for 1-3 seconds, then release, to start the generator.



Remote Start: Push and hold the ON button on the remote start key fob for one second.



7. Plug in devices



⚠ DANGER

Fire and explosion hazard. Always turn the propane tank valve to the fully closed position if not running the generator on propane.

⚠ WARNING

When using the generator with propane, make sure there is no possible ignition source close to the generator.

Parallel Operation

The parallel connection ports allow you to connect two generators to increase the total available electrical power. Follow the instructions included with your parallel connection kit for proper installation and operation.

Overload Indicator

Note: The OVERLOAD light may turn on for a few seconds as a large device starts. This is normal for loads approaching the capacity of this generator.

1. The total combined load through the outlets on the generator shall not exceed the rated power of the generator.
2. If the OVERLOAD light turns on and the generator stops producing power, it has been overloaded.
3. Turn off and disconnect all electrical devices and stop the engine. Compare device requirements to generator rating and reduce the total wattage of connected devices if necessary. Move anything that may be limiting generator ventilation away.
4. Check if any circuit breakers have tripped and make sure that ALL circuit breakers are reset before starting the generator again.
5. Restart the engine and reconnect devices while being careful to not overload the generator.

Low Oil Indicator

1. If the engine oil level is too low, the LOW OIL light turns on and the engine will automatically shut off.
2. The engine cannot be restarted until the proper amount of oil has been added. Add the appropriate type of oil until the oil level is at the proper level. SAE 10w-30 oil is recommended for general use.

NOTICE

Do not run the engine with too little oil. Engine will shut off if engine oil level is too low.

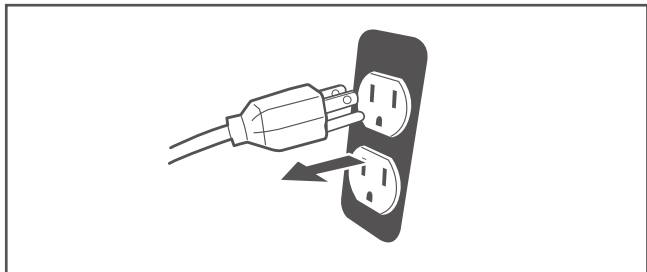
Low Idle Switch

1. Turn the low idle Switch ON to limit noise and fuel consumption for lighter generator loads.
2. Switch low idle OFF to operate engine at normal speed when:
 - Starting the generator
 - A heavy load is applied

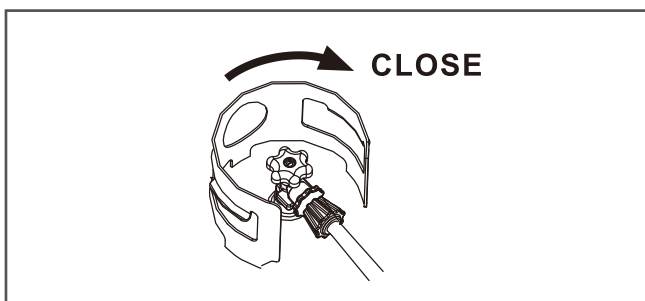
Operation

Shutting Down the Generator

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

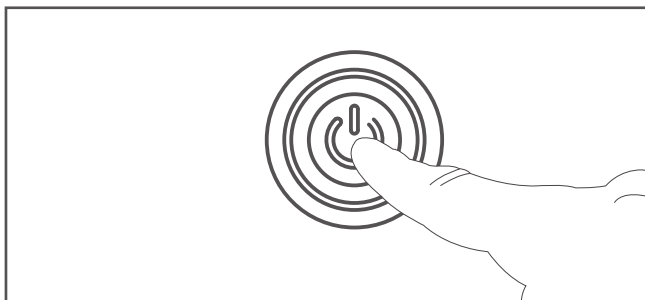


2. Close the Propane supply valve.

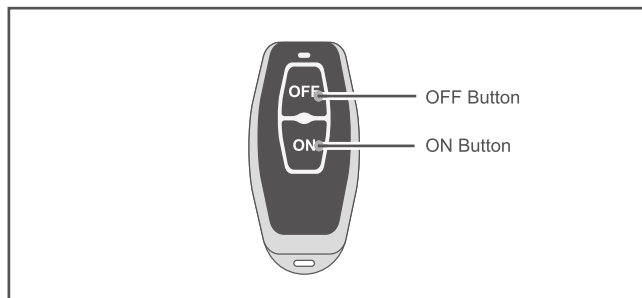


3. Shutting Down the Generator

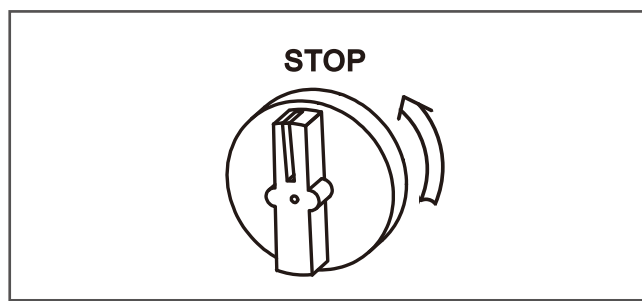
a. Button stop: Press the button to turn off the generator.



b. Remote Stop: Hold down the OFF button on the remote start key for one second.



4. Turn the combination switch to the "STOP" position.



5. After the generator has completely cooled down, remove propane hose if applicable and store the generator in a cool, dry, sheltered storage area.

6. Remove or consume all untreated gasoline if you plan to store the generator longer than 3 months.

Operation

Generator Capacity

NOTICE

Do not overload generator's capacity. Exceeding your generator's wattage capacity can damage the generator and/or electrical devices connected to it.

Make sure the generator can supply enough continuous (running) and surge (starting) watts for the devices you will power at the same time.

The total power requirements (Volts x Amps=Watts) of all devices connected must be considered. Appliance and power tool manufacturers usually list rating information near the model or serial number. To determine power requirements:

1. Select the devices you will power at the same time.
2. Total the continuous (running) watts of these devices. This is the amount of power the generator must produce to keep the items running. See the wattage reference chart on the next page.
3. Estimate how many surge (starting) watts you will need. Surge wattage is the short burst of power needed to start electric motor-driven tools or appliances such as a circular saw or refrigerator. Not all motors start at the same time, total surge watts can be estimated by adding only the item(s) with the highest additional surge watts to the total rated watts from point 2.

Example:

| Tool or Appliance | Running Watts* | Starting Watts* |
|---------------------------------|---------------------------|------------------------------|
| RV Air Conditioner (13,000 BTU) | 1100 | 1800 |
| TV (Flat Screen) | 150 | 150 |
| RV Refrigerator | 180 | 600 |
| Radio | 50 | 50 |
| Light (75 Watts) | 75 | 75 |
| Coffee Maker | 600 | 600 |
| | 2155 Total Running Watts* | 3275 Highest Starting Watts* |

*Wattages listed are approximate. Verify actual wattage.

High Altitude Operation

At high altitude, the standard carburetor air/fuel mixture will be too rich. Performance will decrease, and fuel consumption will increase. A very rich mixture will also foul the spark plug and cause hard starting. Operation at an altitude that differs from that at which this engine was certified, for extended periods of time, may increase emissions. High altitude performance can be improved by specific modifications to the carburetor. If you always operate your generator at altitudes above 5,000 feet (1,500 meters), have your qualified technician perform this carburetor modification. This engine, when operated at high altitude with the carburetor modifications for high altitude use, will again meet each emission standard. Even with carburetor modification, engine power will decrease about 3.5% for each 1,000-foot (300-meter) increase in altitude.

Maintenance



Turn the generator “OFF”, wait for the engine to cool, and disconnect the spark plug cable before performing any inspection, maintenance, or cleaning procedures.

EQUIPMENT FAILURE: Do not use damaged equipment. If abnormal noise, vibration, or excess smoking occurs, have the problem corrected before further use.

Many maintenance procedures, including any not detailed in this manual, will need to be performed by a qualified technician for safety. If you have any doubts about your ability to safely service the equipment or engine, have a qualified technician service the equipment instead.

Power

Cleaning, Maintenance, and Lubrication Schedule

Note: This maintenance schedule is intended as a general guide. If performance decreases or if equipment operates unusually, have the generator inspected at once. The maintenance needs of generator will differ depending on factors such as duty-cycle, temperature, air quality, fuel quality.

Note: The following procedures are in addition to the regular checks and maintenance explained as part of the regular generator.

| Procedure | Before Each Use | Monthly or every 8 hr. of use | Every 3 mo. or 50 hr. of use | Every 6 mo. or 100 hr. of use | Yearly or every 300 hr. of use | Every 2 Years |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------|------------------------------|-------------------------------|--------------------------------|---------------|
| 1. Brush off outside of engine 2. Check engine oil level 3. Check air filter | ✓ | | | | | |
| Change engine oil | | | | ✓ | | |
| Clean/replace air cleaner | | | ✓ | | | |
| 1. Check and clean spark plug 2. Check and clean spark arrestor | | | | ✓ | | |
| 1. Check/adjust idle speed 2. Check/adjust valve clearance 3. Clean fuel tank, strainer and carburetor 4. Clean carbon build-up from combustion chamber | | | | | ✓ | |
| Replace fuel line if necessary | | | | | | ✓ |

Maintenance

Checking and Filling Fuel



TO PREVENT SERIOUS INJURY FROM FIRE:
You must shut off the engine while refueling.

1. Clean the Fuel Cap and the area around it.
2. Unscrew and remove the Fuel Cap.
3. Remove the strainer and discard any dirt and debris, then replace the strainer. Note: Do not use gasoline containing more than 10% ethanol (E10) . Do not use E85 ethanol. Add a fuel stabilizer (such as Sta-Bil, or Pri - G) to the gasoline or the Warranty is VOID.

Note: Do not use gasoline that has been stored in a metal fuel container or a dirty fuel container. It can cause particles to enter the carburetor, affecting engine performance and/or causing damage.

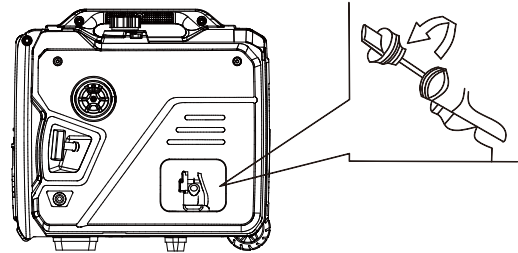
4. Add fuel, if needed.
5. Replace the Fuel Cap.
6. Wipe up any spilled fuel and allow excess to evaporate before starting the engine. To prevent FIRE, do not start the engine while the smell of fuel hangs in the air.

Engine Oil Change

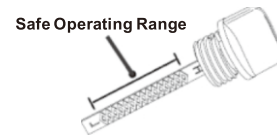


Oil is very hot during operation and can cause burns. Wait for the engine to cool before changing the oil.

1. Place the generator on a level surface and allow the engine to cool for several minutes.
2. Remove the oil access cover.
3. With a damp rag, clean around the oil dipstick.
4. Remove the oil dipstick and wipe the dipstick clean.



5. Insert the dipstick into the filler neck without screwing it in. Remove the dipstick and verify that the oil level is within safe operating range.



6. If the engine oil is low, add recommended engine oil incrementally and recheck until the level is between the L and H marks on the dipstick. DO NOT overfill. If over the full mark on dipstick, drain the oil to reduce oil level to the full mark on dipstick.
7. Replace the oil dipstick and hand-tighten.
8. Install the access cover.

NOTICE

Do not attempt to run the generator with too little oil. The engine will not start with low or no engine oil.

Maintenance

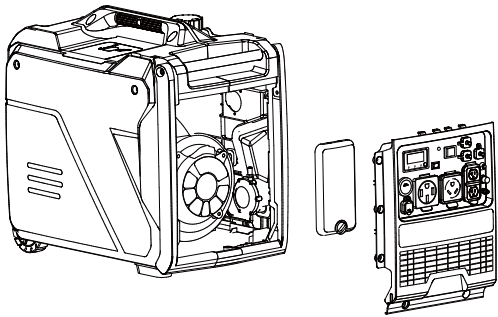
Air Filter Maintenance



Fire hazard! Never use gasoline or any flammable solvent to clean the air filter!

The air filter must be cleaned after every 50 hours of use or six months (frequency should be increased if the generator is operated in a dusty environment).

1. Place the generator on a level surface and allow the engine to cool for several minutes.
2. Remove the engine service cover.
3. Remove the screw securing the air cleaner cover and remove the cover.



NOTICE

Do not wring out the foam element when squeezing it, as this could cause it to tear.

1. Remove the foam element from the air cleaner housing and soak it in hot water with some dish detergent.
2. Squeeze the soapy water solution through the foam element until it is clean.
3. Rinse the foam element completely in warm water, wring out or blot excess water, and allow the foam element to dry thoroughly before reinstalling it.

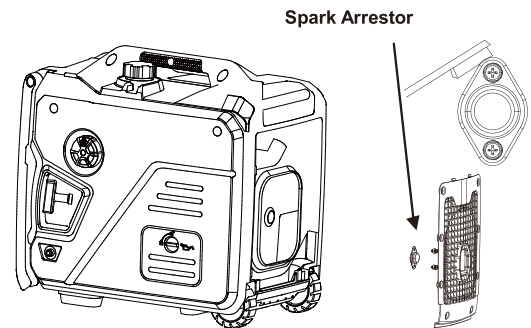
*Dispose of any oil-contaminated water per local ordinance.

4. Apply a few drops of clean engine oil to the foam element and squeeze out the excess oil. The foam should have a light coating but not dripping. Ensure the oil is evenly distributed for a light film across the foam material.
5. Reinstall the foam element into the air cleaner housing.
6. Reinstall the engine service panel.

Spark Arrestor Maintenance

Allow the muffler to cool completely before servicing the spark arrestor. Check and clean the spark arrestor after every 100 hours of use or six months. Failure to clean the spark arrestor will result in degraded engine performance.

1. Place the generator on a level surface.
2. Remove the cover screws and the muffler cover. Use a screw driver to remove the spark arrestor.



3. Carefully remove the carbon deposits from the spark arrestor screen with a wire brush. The spark arrestor must be free of breaks and tears. Replace the spark arrestor if damaged.
4. Reinstall the spark arrestor and muffler cover.

Spark Plug Maintenance

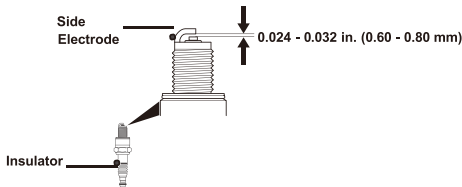
Inspect and clean the spark plug after every 100 hours of use or six months. Replace the spark plug after 300 hours of use or every year.

1. Place the generator on a level surface and allow the engine to cool.
2. Remove the spark plug cover.
3. Remove the spark plug boot by firmly grasping and pulling the Spark Plug Boot with a slight twist if necessary. Do NOT pull on the cable!
4. Clean the area around the spark plug.
5. Remove the spark plug with the included spark plug socket wrench.

Maintenance

6. Inspect the spark plug. Replace if electrodes are pitted, bumpy, or the insulator is cracked. Only use a recommended replacement plug.
7. Measure the spark plug electrode gap with a wire-type feeler gauge. If necessary, correct the gap by carefully bending the side electrode.

Spark plug gap: 0.60 - 0.80 mm



8. Carefully install the spark plug finger tight, then tighten as additional 3/8 to 1/2 turn with the spark plug wrench.
9. Install the spark plug boot and engine service cover.

Storage

When the generator is to remain idle for longer than 20 days, prepare the engine for storage as follows:

1. CLEANING:

Wait for the engine to cool, open both side access panels and blow (or vacuum) any dirt or debris.

NOTICE

Do not clean using water. The water will gradually enter the engine and cause damage.

2. FUEL:

Gasoline Treatment/Draining the Fuel Tank

To protect the fuel tank during storage, fill the tank with fresh gasoline that has been treated with a fuel stabilizer additive (such as Sta - iBl, or Pri - G).

Follow fuel stabilizer manufacturer's recommendations for use.

WARNING

To prevent serious injury and fire, move the fuel selector to LPG to shut off gasoline supply before draining the carburetor.

3. Extended storage:

- a. Change engine oil.
- b. Clean out the area around the spark plug. Remove the spark plug and pour one tablespoon of engine oil into the cylinder through the spark plug hole.
- c. Replace spark plug, but leave spark plug cap disconnected.
- d. Pull Starter Handle to distribute oil in the cylinder. Stop after one or two revolutions when you feel the piston start the compression stroke (when you start to feel resistance).

4. STORAGE AREA:

Cover and store in a dry, level, well-ventilated area out of reach of children. The storage area should also be away from ignition sources, such as water heaters, clothes dryers, and furnaces.

NOTICE

During extended storage periods, the engine should be started every 3 months and allowed to run for 15-20 minutes.

5. AFTER STORAGE:

Untreated gasoline will deteriorate quickly. Drain the fuel tank and change to fresh fuel if untreated gasoline has been sitting for a month, if treated gasoline has been stored beyond the fuel stabilizer's recommended time, or if the engine does not start.

Troubleshooting

| Problem | Cause | Solution |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engine is running, but AC output is not available | <ol style="list-style-type: none"> 1. Open circuit breaker 2. Poor connection 3. Defective cord set 4. Connected device is faulty 5. Fault in generator | <ol style="list-style-type: none"> 1. Reset circuit breaker 2. Check and repair 3. Check and repair 4. Connect a device that is working properly 5. Contact service department |
| Engine runs well without load but bogs down when loads are connected | <ol style="list-style-type: none"> 1. Short circuit in connected device 2. Generator is overloaded LED light 3. Clogged fuel filter 4. Engine speed is too slow 5. Short circuit in generator | <ol style="list-style-type: none"> 1. Disconnect device 2. See pg 15 "Don't overload generator" 3. Contact service to replace fuel filter 4. Contact service department 5. Contact service department |
| Engine will not start, shuts down during operation, or starts and runs rough. | <ol style="list-style-type: none"> 1. ON/OFF switch set to "OFF" 2. Dirty Air filter 3. Clogged fuel filter 4. Stale fuel 5. Spark plug wire disconnected from spark plug 6. Bad spark plug 7. Water in fuel 8. Low oil level (Low oil LED light) 9. Intake valve stuck open or close 10. Loss of engine compression 11. Engine has flooded 12. CO Sensor indicator light turn red 13. CO Sensor indicator light turns yellow | <ol style="list-style-type: none"> 1. Turn switch to "ON" 2. Replace Air filter 3. Clean or replace fuel filter 4. Replace fuel 5. Reconnect spark plug wire 6. Replace spark plug 7. Drain fuel tank and replace fuel 8. Add oil 9. Contact service department 10. Contact service department 11. Contact service department 12. Move the generator to an open outdoor area 13. Contact service department |
| Engine lacks power | <ol style="list-style-type: none"> 1. Generator is overloaded 2. Clogged in-line filter 3. Dirty air filter 4. Engine needs servicing | <ol style="list-style-type: none"> 1. See pg. 12 "Don't overload generator" 2. Contact service to replace in-line filter 3. Replace Air filter 4. Contact service department |
| Engine "hunts" or falters | <ol style="list-style-type: none"> 1. Clogged in-line filter 2. Carburetor is running too rich or too lean | <ol style="list-style-type: none"> 1. Contact service to replace in-line filter 2. Contact service department |

Schematics

SCHEMATICS

