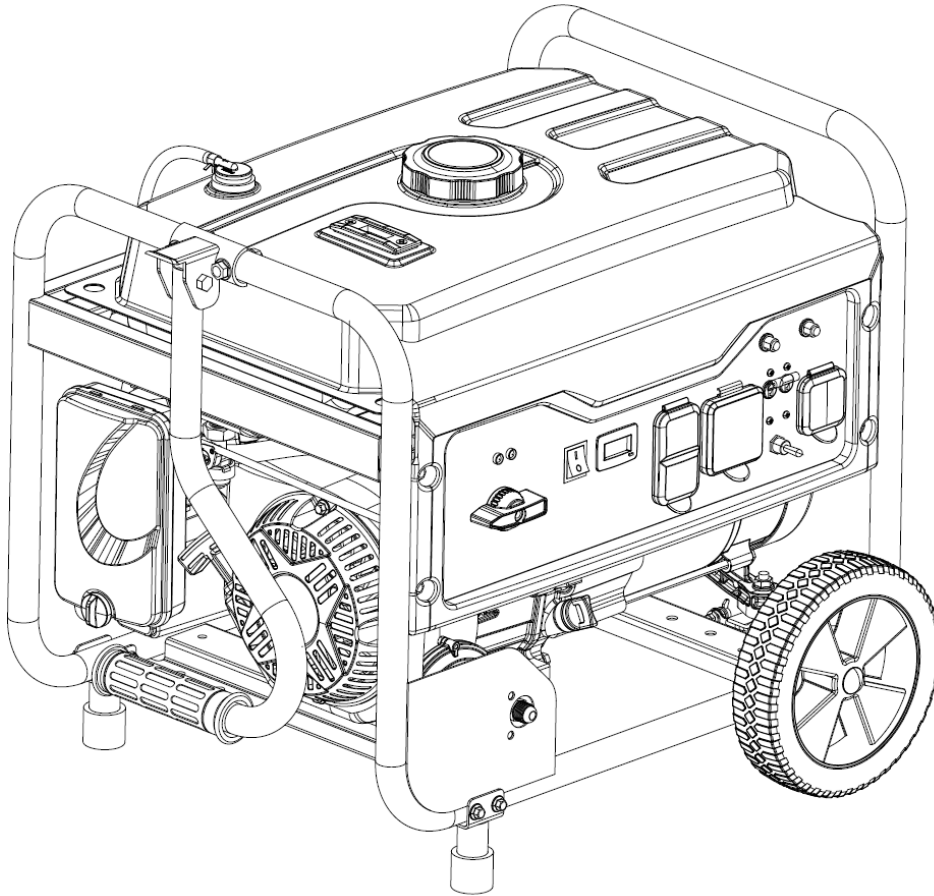




Model: PG5250BCO

5250 Watt Dual-Fuel Open Frame Generator

OPERATOR'S MANUAL



Caution:

- Before using your generator, please read this manual carefully to understand proper use.
- Keep this manual with the generator.



Warning: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



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 instructions on how to safely and correctly operate your generator. Please read and fully understand this manual before using your generator. If you have any questions, contact us at **1-866.591.8921 (Monday–Friday)** or at **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. For the latest updates, please contact Pulsar Support at **866.591.8921** or **support@pulsar-products.com**.

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

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, you must read and fully understand all cautions, warnings, instructions, and product labels. Failure to do so could result in serious personal injury and/or property damage.

Safety Definitions

 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 Instructions

Safety Symbols

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

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

SYMBOL	DESCRIPTION
	Safety Alert Symbol
	Electrocution Hazard
	Asphyxiation Hazard
	Burn Hazard. DO NOT touch hot surfaces.
	Electrical Shock Hazard
	Fire Hazard
	Maintain Safe Distance
	Lifting Hazard
	Read Manufacturer's Instructions
	DO NOT Operate in Wet Conditions
	Grounding. Consult a qualified electrician to determine the necessary grounding requirements before operating this product.

Safety Precautions

WARNING



Operate this product **ONLY** outdoors, far away from windows, doors, and vents, to reduce the risk of carbon monoxide gas buildup, which could accumulate and be drawn into occupied spaces.

DO NOT operate this product under the influence of alcohol, while exhausted or sleep-deprived, when drowsy from medications, or under any condition that could impair your judgment or prevent safe operation.

Avoid operating this product under the following circumstances:

1. When the ground is slippery or when other conditions exist which might make it not possible to maintain a steady posture.
2. At night, at times of heavy fog, or at any other times when your field of vision might be limited, it would be difficult to gain a clear view of the area.
3. During rainstorms, during lightning storms, at times of strong or gale-force winds, or at any other times when weather conditions might make it unsafe to use this product.

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.



Safety Instructions

- **Never** operate this product in enclosed or partially enclosed spaces, including homes, garages, sheds, basements, or crawlspaces, even if using fans or open windows and doors for ventilation. Carbon monoxide can build up quickly and linger for hours, even after the engine is off.
- **Install battery-operated or plug-in carbon monoxide alarms with battery backup** as per the manufacturer's instructions. **Most smoke alarms do not detect carbon monoxide.**
- **Position the product downwind** and direct the exhaust away from occupied spaces. If you experience symptoms like dizziness, weakness, or nausea, immediately turn off the product, move to fresh air, and seek medical attention, as these may indicate carbon monoxide poisoning.

WARNING

Never store fuel cans or refill the fuel tank in areas with boilers, stoves, wood fires, electrical sparks, welding sparks, or any other sources of heat or fire that could ignite the fuel.

Smoking while operating the product or refilling its fuel tank is extremely dangerous. Never smoke or vape while working with your generator.

When refilling the fuel tank, always turn off the engine first. Carefully inspect the area to ensure there are no sparks or open flames nearby before refueling. If any fuel spills occur during refueling, use a dry rag to clean up the spills before restarting the engine.

After refueling, securely screw the fuel cap back onto the tank and move the product at least 3 meters (10 feet) away from the refueling area before restarting the engine.

Additionally, be aware that starter cord kickback (rapid retraction) can pull your hand and arm toward the engine faster than you can release it, potentially causing broken bones, fractures, bruises, sprains, or other serious injuries.

WARNING



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.

To prevent serious injury, fire, and burns:

- Keep exhaust at least 5 feet away from all objects.
- Close objects may reflect heat and cause fuel tank to explode.
- Point exhaust away from buildings. Do not touch hot muffler or exhaust during or after use.

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 them if necessary.
- DO NOT smoke or vape anything.

Before Starting the Unit

Before starting your generator, you must read and understand the manual and familiarize yourself with safe operating practices. Improper treatment of the generator could damage it and shorten its lifespan.

Keep the handles dry, clean, and free of oil or fuel residue.

Safety Instructions

⚠ WARNING

Never touch the muffler, spark plug, or other metal parts of the inverter generator while it is running or immediately after stopping. Doing so could result in serious burns or electrical shock.

When Starting the Unit

Ensure the spark plug, muffler, fuel cap, and air cleaner are properly in place.

DO NOT crank the engine with the spark plug removed.

NOTICE

- Use the generator only for its intended applications.
- Operate the generator only on solid, level surfaces.
- **DO NOT** insert any objects through the cooling slots.
- **DO NOT** expose the generator to excessive moisture, dust, dirt, or corrosive vapors.
- If connected devices overheat, turn them off and disconnect them from the generator immediately.

Shut off the generator if:

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

CO Sentry

The CO Sentry system was created to protect from dangerous carbon monoxide. Just like the detector for your home the CO Sentry tests the air for dangerous levels of carbon monoxide. If dangerous levels of carbon monoxide are detected this generator will automatically shut off.

⚠ WARNING

Automatic shut off accompanied with a flashing **RED** light in the CO Sentry portion of the control panel is an indication that the generator was improperly located. If you start to feel sick, dizzy, weak, or carbon monoxide detectors in your home indicate an alarm, get to fresh air immediately. Call emergency services. You may have carbon monoxide poisoning.

CO Sentry Indicator Lights

RED

Carbon monoxide has accumulated around the generator. After shut off, the RED indicator light in the CO Sentry area of the control panel will flash to provide notification that the generator was shut off due to an accumulating CO hazard. The RED light will flash for at least five minutes after a CO shut off. Move the generator to an open, outdoor area far away from occupied spaces with exhaust pointed away. Once relocated to a safe area, the generator can be restarted. Introduce fresh air and ventilate the area where the generator had shut down.

YELLOW

A CO Sentry system fault occurred. When a system fault occurs, the generator is automatically shut down and the YELLOW indicator light in the CO auto shut off area of the control panel will flash to provide notification that a fault has occurred. The YELLOW light will flash for at least five minutes after a fault. The generator can be re-started, but may continue to shut off.

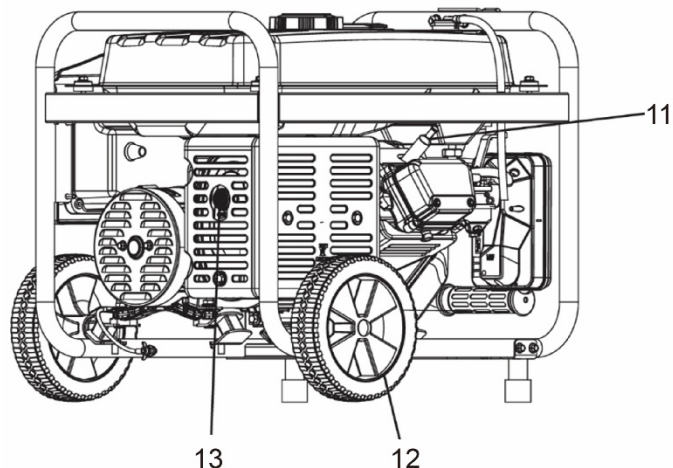
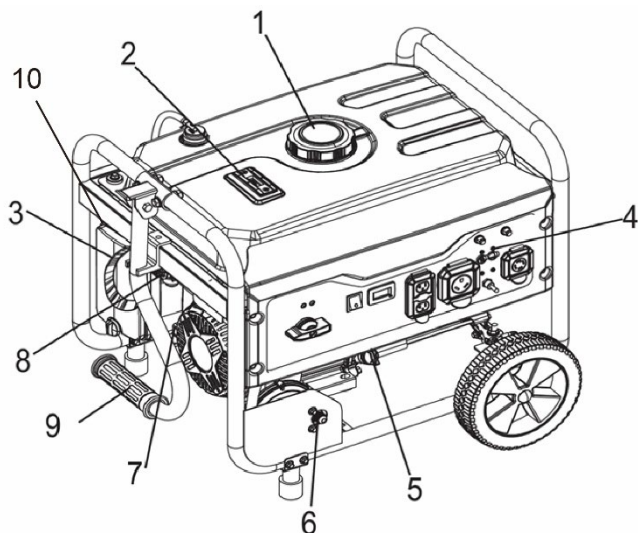


NOTICE

Once the CO safety shutdown is activated, the battery switch must be turned again, and then the generator can be restarted.

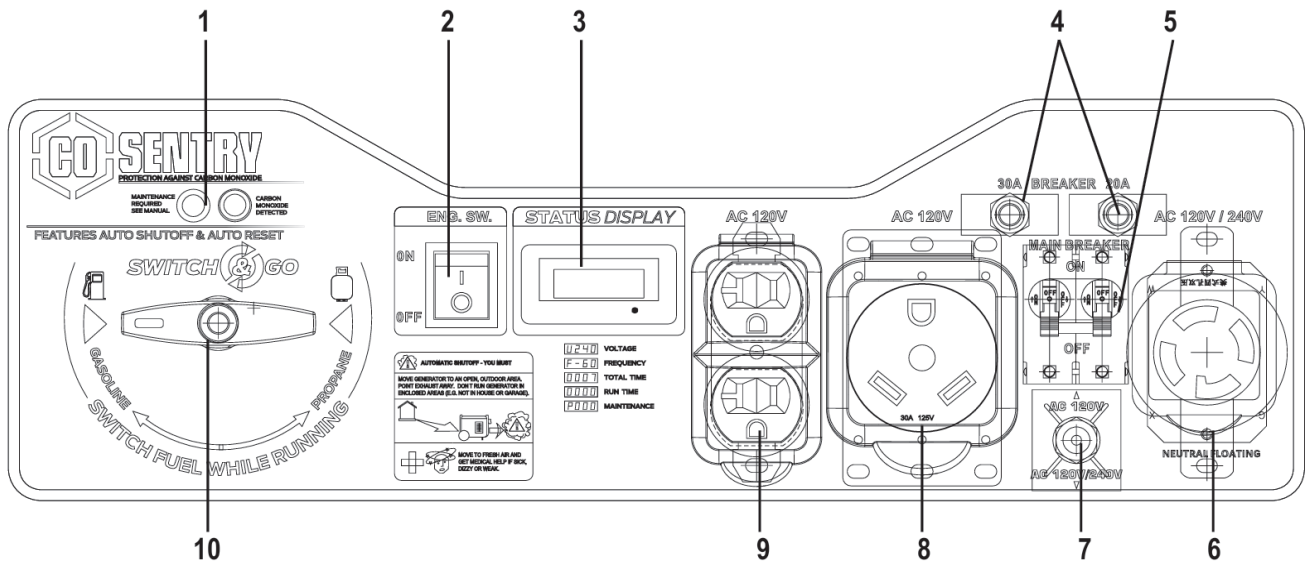
Components

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



1. **Fuel Cap:** Remove the fuel cap to add gasoline to the fuel tank.
2. **Fuel Gauge:** Indicates the amount of fuel in the fuel tank.
3. **Air Filter:** The air filter prevents dirt and debris from entering the engine. Clean or replace as required.
4. **Control Panel:** The control panel contains the outlets, circuit breakers, and operating controls.
5. **Oil Dipstick:** Remove the oil dipstick to check the engine oil level and add oil if necessary.
6. **LPG Supply Hose and Inlet Connector:** Used to connect the propane gas supply hose. Ensure all gas connections are secure and comply with local regulations.
7. **Recoil Handle:** Pull the recoil handle to manually start the engine.
8. **Fuel Valve:** Controls the flow of gasoline from the fuel tank to the carburetor. Turn the valve ON to allow fuel flow and OFF to stop the fuel supply.
9. **Carry Handles:** Helps transport the generator.
10. **Choke:** Used to assist with starting a cold engine. Move the choke to the CLOSED position when starting a cold engine and return it to the OPEN position after the engine starts.
11. **Spark Plug Cover:** Remove this cover to access the spark plug for inspection or maintenance.
12. **Transport Wheels:** Wheels that allow the generator to be moved easily.
13. **Muffler and Spark Arrestor:** The muffler reduces engine noise. The spark arrestor prevents sparks from exiting the exhaust.

Control Panel



1. **CO Sentry Indicator Lights:** Detects the presence of carbon monoxide and may shut down the unit automatically for safety.
2. **Engine Switch:** The engine switch controls the ignition system of the generator. Turn the switch to the ON position to enable starting of the engine.
3. **Data Display:** Press the mode button to cycle through the display modes: Voltage, Frequency (Hz), Lifetime Hours, Run Time, and Maintenance Codes.
4. **AC Thermal Protection:** Protects the generator from overload by cutting power when excessive current or overheating occurs.
5. **Main Breaker:** The receptacles are protected by AC circuit breakers. If the generator is overloaded or a short circuit occurs, the breaker will trip.
6. **120/240V AC, L14-30R Outlet:** The outlet can carry a maximum of 18 amps.
7. **Voltage Selector Switch:**

120V Position: All available power is supplied to the 120V outlets. This setting is recommended when only 120V devices are being used.

120/240V Position: Power is distributed between 120V and 240V outputs. Use this setting when operating 240V appliances.
8. **120V AC, 30 Amp NEMA TT-30R Outlet:** The outlet can carry a maximum of 30 amps.
9. **120V AC, 20 Amp Duplex NEMA 5-20R Receptacle:** This receptacle is rated for a maximum of 20 amps.
10. **Fuel Selector:** Used to select the fuel source: Gasoline or Propane.

Preparation

NOTICE

Your generator requires some assembly. It ships from the factory without oil and must be properly filled before operation.

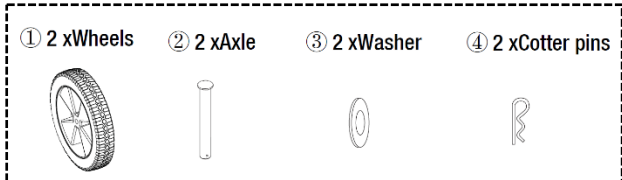
Unpacking

1. Set the shipping carton on a solid, flat surface.
2. Remove all items from the carton except the generator. To assist with assembly, it is recommended to cut one side of the carton (at least two people are required)
3. Using the carrying handles of the unit, carefully remove the generator from the box.

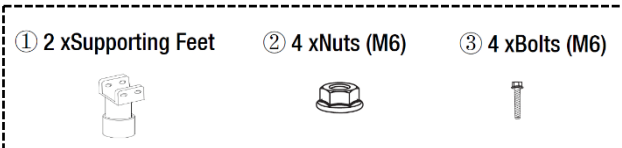
Included Accessories

- 1×Warranty Card
- 1×Operator's Manual
- 1x Exploded View and Parts List
- 1×Spark Plug Wrench
- 2×Combination Wrench
- 1×Funnel

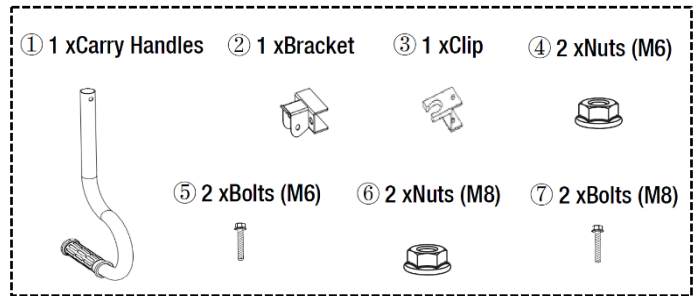
- **Wheel Assembly Kit**



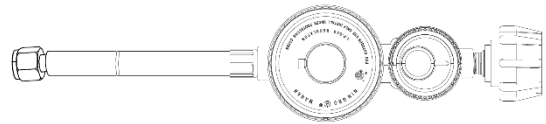
- **Support Foot Kit**



- **Carry Handle Kit**



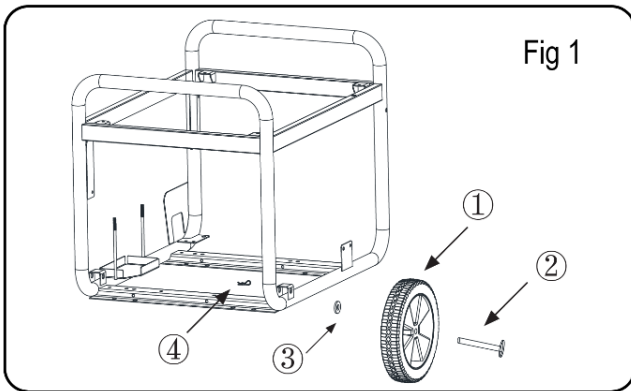
- **1×Propane Hose**



Preparation

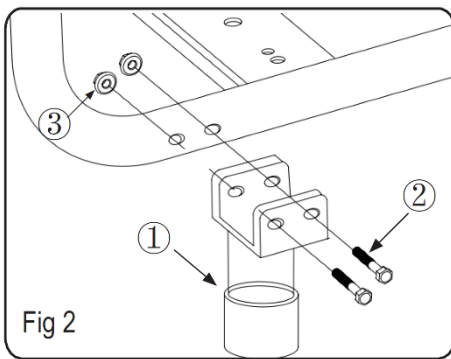
Wheel Assembly (See Fig 1)

- Parts required: ① 2×Wheels, ② 2×Axles, ③ 2×Washers, and ④ 2×Cotter Pins.
- Raise or tilt the generator so the wheel axle can be inserted through the wheel, washer, and the mounting hole on the frame.
- Secure the wheel assembly by inserting a cotter pin through hole at the end of the wheel axle and pressing until it locks into place.
- Repeat this process to install the other wheel.



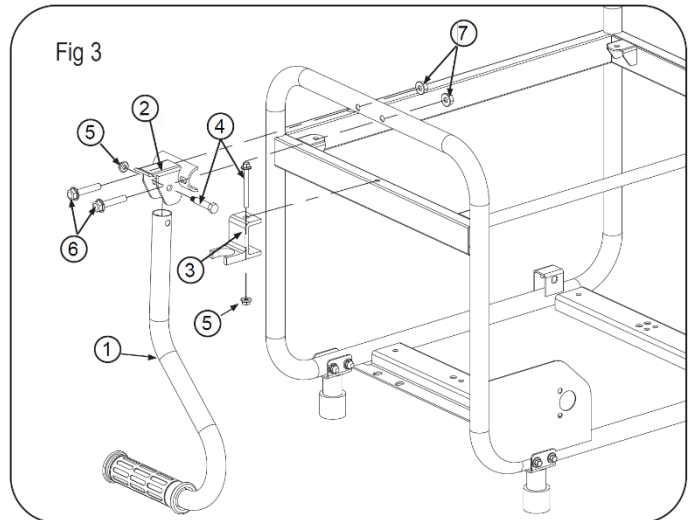
Support Foot Assembly (See Fig 2)

- Parts required: ① 2×Support Feet, ② 4×Bolts (M6), ③ 4×Nuts (M6).
- Raise the front end of the generator high enough to access the bottom of the frame. Support the unit securely using suitable blocks or stands.
- Align the support feet with the mounting holes on the generator frame. Insert the bolts through the holes, install the nuts, and tighten securely.
- Repeat this procedure for the other support foot.



Carry Handle Assembly (See Fig 3)

- Parts required: ① 1×Carry Handle, ② 1×Bracket, ③ 1×Clip, ④ 2×Bolts (M6), ⑤ 2×Nuts (M6), ⑥ 2×Bolts (M8), ⑦ 2×Nuts (M8).
- First secure the clip to the frame using an M6 bolt and nut.
- Secure the clip to the generator frame using an M6 bolt and nut.
- Attach the bracket to the upper frame using M8 bolts and nuts and tighten securely.
- Position the handle onto the frame and align with the mounting holes. Insert the M6 bolt through the handle and frame, then install the nut and tighten securely.



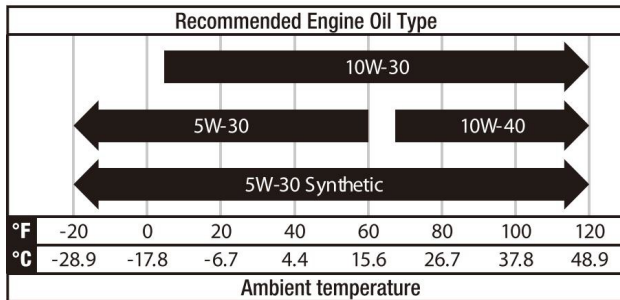
Preparation

NOTICE

Add Engine Oil

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

If you are operating the generator in extreme temperatures, please refer to the following chart for the recommended oil type.



CAUTION

Important: Do not start the engine until it has been filled with the correct type and amount of oil.

NOTICE

Recommended Engine Oil:

- **Type:** SAE 10W-30
- **Oil Grade:** API Service SE type or higher
- **Engine Oil Capacity:** 20.3 fl. oz

NOTICE

Residual oil from the factory may remain in the engine. Add oil slowly to prevent overfilling. Once oil has been added, the oil level should be 1-2 threads below the fill hole. **DO NOT** screw in the dipstick while checking the oil level.

During the first 5 hours of operation (the break-in period), check the oil level frequently and operate at or below 50% of the running watt rating. Vary the load occasionally to help the stator windings heat and cool, which aids in seating the piston rings. After this period, change the oil.

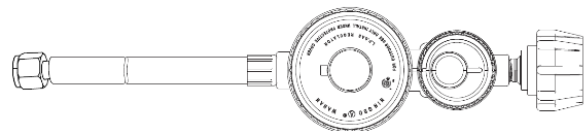
The engine features a low oil shut-off that stops operation when the oil level is critically low. Refer to the Maintenance section for service intervals.

CAUTION

New propane tanks must be purged of air and moisture before filling. Used propane tanks that have not been kept sealed must also be purged.

The purging process should be performed by a qualified propane supplier. (Propane tanks obtained through exchange services are typically pre-purged and ready for use.)

Always position the propane tank so that the connection between the valve and the gas inlet does not cause sharp bends or kinks in the hose.



WARNING

Explosion hazard:

DO NOT start the generator if you smell propane.

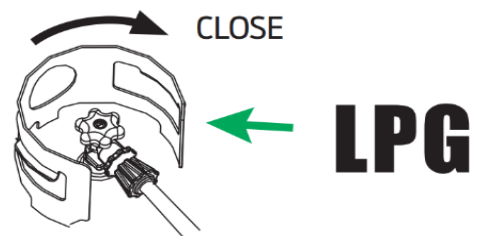
ALWAYS fully close the LPG tank valve and disconnect the propane hose from the generator when not in use.

NEVER invert (turn upside down) an LPG tank while in use.

Fuel the Unit - LPG

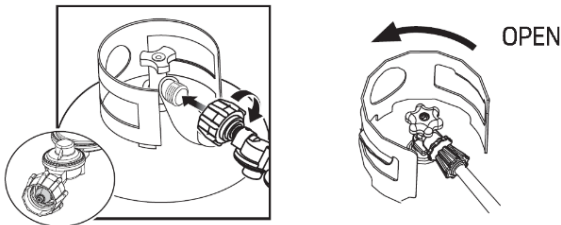
Connecting a Propane Tank

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



Preparation

3. Remove the cap of the generator propane inlet.
4. Attach the propane hose securely to the gas inlet (threaded tight) and ensure a secure connection.
5. Remove the safety plug or cap from the propane tank. Attach the regulator end of the hose to the tank's LPG connector and hand-tighten. Then turn the fuel selector switch to "LPG."
6. Turn the tank valve to the fully open position:
 - Check for leaks by applying a soapy water solution to all fittings.
 - Bubbles forming or growing indicate a leak.
 - If a leak exists at a fitting, close the valve and retighten.
 - If a leak persists or is not at a visible fitting, do not use the generator. Contact an authorized service center.

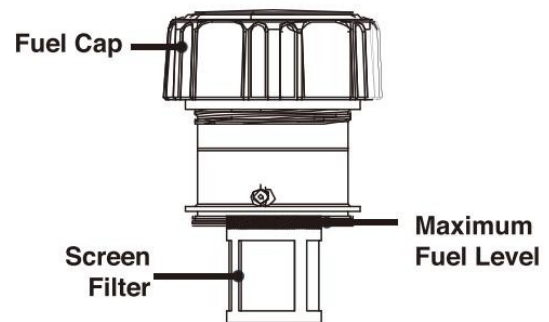


⚠ CAUTION

- Fire and Explosion Hazard! NEVER connect or disconnect ANY Gas Hose while the engine is running!
- Always shut the generator OFF and allow it to cool for at least 5 minutes before adding or removing

Fuel the Unit - Gasoline

- Ensure the generator is on a solid, flat, level surface.
- Unscrew the fuel cap and set it aside.
- Slowly add gasoline to the fuel tank, taking care not to overfill.
- Replace the fuel cap and wipe up any spilled gasoline with a dry cloth, then safely remove the cloth from the area.



⚠ CAUTION

Remove the fuel cap and place it in a clean location. Fill the tank to no more than 80% of capacity to allow for fuel expansion. Securely replace the cap and wipe off any spilled fuel.

⚠ WARNING

Gasoline is extremely flammable. Never smoke or vape anything near fuel. You must stop the engine and allow it to cool before refueling. Select outdoor bare ground for fueling and move the generator at least 3m (10 ft) away from the fueling point before starting the engine.

Gasoline can expand; do not fill the tank to the top. Leave at least 1.5 inches of open space. Gasoline fumes are explosive, never fill the tank near an open flame, and always check for spills.

To ensure smooth operation, use only fresh gasoline with an octane rating of 87. Never use old gasoline and avoid introducing dirt or water into the fuel tank. Gasoline ages in the tank, making future starts difficult. Do not store the generator for extended periods with gasoline in the tank.

Preparation

Grounding the Generator

This generator features a floating neutral design.

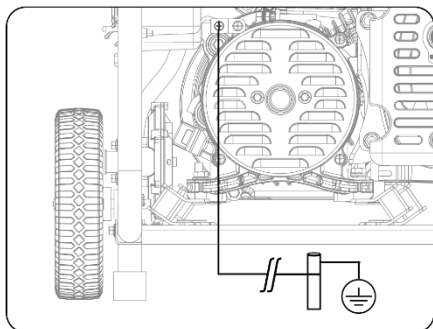
The generator must be properly connected to an appropriate ground in accordance with all applicable local, state, and national electrical codes.

To ground the unit, connect a suitable copper grounding wire to the grounding terminal on the motor tail frame and secure it with the nut.

Connect the other end of the wire to a copper or brass grounding rod driven into the earth.

A commonly acceptable grounding wire is No. 12 AWG stranded copper wire.

Since grounding requirements may vary by location, consult a qualified electrician for proper grounding methods.



⚠ WARNING

Failure to properly ground the generator can result in electrocution.

Connecting Generator to a Building Electrical System

- If connecting the generator to a building electrical system for standby power, the generator must be connected through a transfer switch installed by a qualified electrician. The generator must be isolated from the utility power source. All connections must comply with applicable local, state, and national electrical codes.
- Never handle the generator, electrical devices, or any cords while standing in water, barefoot, or when hands or feet are wet.
- Always keep the generator dry. Never operate the generator in rain or wet conditions.

- Use a ground fault circuit interrupter (GFCI) in damp or highly conductive areas, such as metal decking or steel work.
- Never plug electrical devices into the generator if they have frayed, worn, or damaged cords. Never touch bare wires or live receptacles.
- Never allow children or unqualified persons to operate the generator. Keep children at least 1 foot (30 cm) away from the generator.
- If using the generator for backup power, notify the utility company.
- Failure to properly isolate the generator from the utility power source can result in serious injury or death to utility workers.

Operation

Operating the Generator

Location: Do not operate the generator inside any building, garage, basement, crawlspace, shed, RV compartment, or other enclosed spaces.

Outdoor Setup: Avoid operating the generator in a truck bed, camper, trailer, or any other confined location, such as under staircases or next to walls, which may restrict airflow or exhaust.

Weather Conditions: Never operate or store the generator in wet conditions (e.g., rain or snow) to avoid serious injury or death from electrocution.

Clearances: Maintain a minimum of 5 feet (1.5 meters) of clearance from all combustible materials. Ensure at least 5 feet (1.5 meters) of airflow clearance on all sides for cooling, maintenance, and safe exhaust flow.

Ventilation: Position the generator in a well-ventilated area and away from air intake vents or confined spaces where exhaust fumes could enter.

Wind Direction: Be mindful of wind direction when positioning the generator to prevent exhaust from flowing toward occupied spaces.

Cooling: Allow the generator to cool fully before transporting or storing.

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

WARNING

During operation, the muffler and engine will be very hot. Without adequate cooling space or if the generator is blocked or enclosed, temperatures may rise quickly and could lead to a fire.

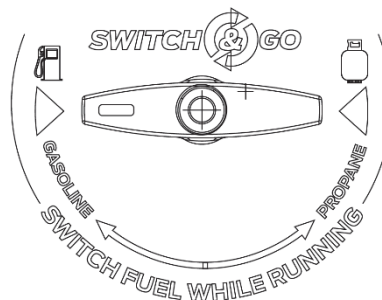
Starting the Generator

1. Place the generator on a solid, flat, and level surface.
2. Disconnect all electrical loads from the generator.
Never start or stop the generator with electrical devices connected.

Turn the fuel selector switch to your desired fuel source:

- When set to **Gasoline**, the generator will start with gasoline.
- When set to **Propane (LPG)**, the generator will start using propane fuel.

(Use the illustrations below to identify proper fuel positions.)



3. Prepare the selected fuel source:

- **For Gasoline:** Turn the fuel valve to the ON position.

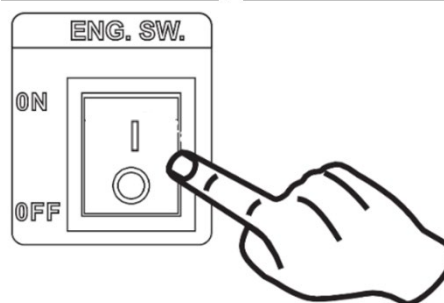
- **For Propane:** Open the LPG tank valve. (see **page 10** for LPG hose connection instructions).

4. Choke Setting:

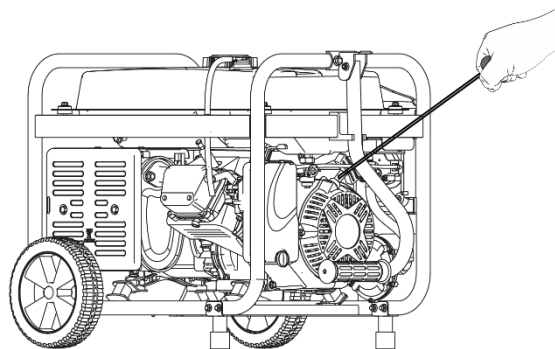
For a cold start (engine has not been running or is completely cooled down), move the choke lever to the CLOSED position.

For a warm start (engine was recently running and is still warm), set the choke lever to the OPEN position.

5. Turn the engine switch to **ON**.



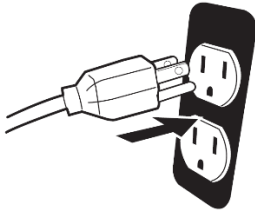
6. Pull the recoil starter handle slowly until resistance is felt, then pull briskly to start the engine.



7. After the engine starts, if the choke is in the CLOSED position, gradually move it to the OPEN position as the engine warms up.

Operation

8. Plug in devices: Once the generator is running, plug in your devices as needed.



NOTICE

When starting the generator using propane (LPG), the choke position may need to be adjusted for easier starting depending on engine temperature and conditions.

For a cold start, begin with the choke in the CLOSED position. Pull the recoil starter to start the engine. If the engine does not start, move the choke gradually toward the OPEN position and try again.

After the engine starts, gradually move the choke to the OPEN position. For warm starts, move the choke to OPEN immediately. In colder conditions, keep the choke partially or fully CLOSED until the engine runs smoothly, then move it fully to OPEN.

Ensure the choke is fully in the OPEN position before connecting any electrical loads to the generator.

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.

Gasoline To LPG

IMPORTANT: Load capacity is reduced when operating on LPG. Ensure the generator can supply sufficient running and starting watts for connected devices before switching to LPG. The generator is equipped with a fuel selector switch that allows switching between fuel sources while running.

1. Turn the LPG tank valve to the fully OPEN position.
2. Turn the fuel selector switch to LPG.

The engine may run unevenly for several seconds while residual gasoline is purged from the carburetor.

LPG To Gasoline

1. Turn the fuel selector switch to Gasoline.
2. Turn the LPG tank valve to the fully CLOSED position.

If the engine shuts off during switching, disconnect all electrical loads and restart the generator using the selected fuel.

Circuit Breaker

- The total combined load connected to the generator must not exceed the generator's rated running wattage.
- If a circuit breaker trips, turn off all connected devices and disconnect them from the outlets. Reset the circuit breaker to the ON position.
- Restart the engine if necessary, then reconnect the devices one at a time, ensuring the generator is not overloaded.

Low Oil Indicator

- If the engine oil level becomes too low, the engine will automatically shut off.
- The engine cannot be restarted until the proper amount of engine oil is added..

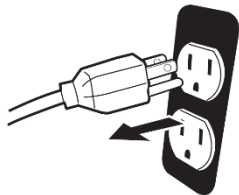
NOTICE

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

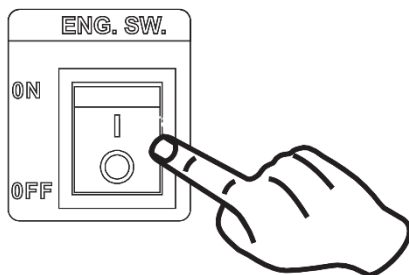
Operation

Stopping the Generator

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



2. To stop the generator with engine switch: Set the engine switch to **OFF**. The engine will shut down.



3. Shut off the fuel supply:

For gasoline: Turn the fuel valve to the OFF position.

For propane: Close the LPG tank valve.
4. If using propane (LPG), disconnect the propane hose from the tank and the generator.

Data Display

Press the mode button to cycle through the data display modes.

Voltage: Displays current voltage output.

Frequency (Hz): Displays power output frequency in Hertz.

Lifetime Hours: Displays the total accumulated operating hours.

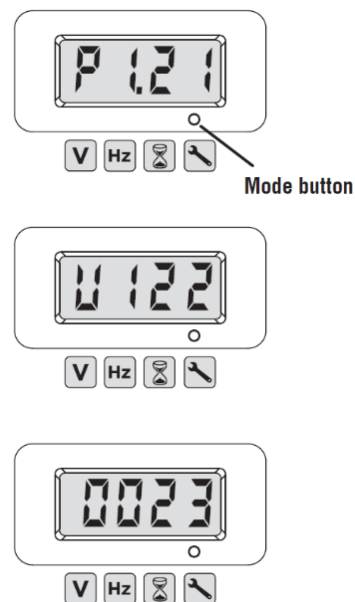
Run Time: Displays the current running time for this operating session.

Maintenance Codes:

P25 - Change engine oil

P50 - Clean air filter, change engine oil

P100 - Change engine oil, clean air filter, replace fuel filter



Break in Period

For proper break-in, do not exceed 50% of the rated running watts during the first five hours of operation.

Use the supplied oil until the first recommended oil change. Do not use full synthetic oil during the break-in period, as it may prevent proper seating of the piston rings.

Vary the load occasionally to allow the stator windings to heat and cool and help seat the piston rings.

Operation

Generator Capacity

NOTICE

Do not exceed the generator's power capacity. Exceeding the wattage capacity can lead to damage to both the generator and the electrical devices connected to it.

Ensure that the generator can supply sufficient continuous (running) and surge (starting) watts for the devices you plan to power simultaneously.

When determining power requirements, consider the total power needs of all connected devices using the formula: $\text{Volts} \times \text{Amps} = \text{Watts}$. Appliance and power tool manufacturers typically provide rating information near the model or serial number.

To determine power requirements:

1. **Select the Devices:** Identify the devices you intend to power simultaneously with the generator.
2. **Total Continuous Watts:** Calculate the total continuous (running) watts of these devices. This total represents the power the generator must consistently produce to keep all selected items operational.
3. **Estimate Surge Watts:** Determine the estimated surge (starting) watts required. Surge wattage is the initial burst of power needed to start electric motor-driven tools or appliances, such as a circular saw or refrigerator. Since not all motors start at the same time, you can estimate total surge watts by adding the item(s) with the highest additional surge wattage to the continuous watt total from step 2.

High Altitude Operation

Operating the generator at high altitudes can affect performance due to a richer air/fuel mixture, leading to decreased efficiency and increased fuel consumption. It may also cause spark plug fouling and hard starting. Extended operation at altitudes different from the engine's certification may result in higher emissions.

For those using the generator above 5,000 feet (1,500 meters), a qualified technician should perform carburetor modifications to improve performance. While these modifications will help meet emission standards, note that engine power will decrease by approximately 3.5% for every 1,000-foot (300-meter) increase in altitude.

Maintenance

Safety Precautions Before Maintenance

⚠ WARNING

Turn Off the Generator: Switch the generator to "OFF," wait for the engine to cool, and disconnect the spark plug cable before performing any inspections, maintenance, or cleaning.

Equipment Failure: Do not use damaged equipment. If you notice abnormal noise, vibration, or excessive smoke, correct the issue before further use.

Qualified Technician: Many maintenance tasks, including those not detailed in this manual, should be performed by a qualified technician to ensure safety. If you are unsure about servicing the equipment or engine, please contact an authorized Pulsar Service Center for assistance.

Cleaning, Maintenance, and Lubrication Schedule

This schedule serves as a general guide. If performance decreases or if the generator operates unusually, have it inspected immediately. Maintenance needs may vary based on factors such as duty cycle, temperature, air quality, and fuel quality.

The following procedures are in addition to the regular checks and maintenance outlined for the generator:

Before Each Use: Check engine oil level.

Every 3 Months or 50 Hours of Use: Clean or replace air cleaner. Check/adjust idle speed.

Every 6 Months or 100 Hours of Use: Change engine oil. Check and clean spark plug and spark arrestor. Check/adjust valve clearance.

Yearly or Every 300 Hours of Use: Clean fuel tank, strainer, and carburetor. Clean carbon build-up from combustion chamber.

Every 2 Years: Replace fuel line if necessary.

Maintenance

Checking and Filling Fuel

⚠ WARNING

To Prevent Serious Injury from Fire: Always 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 fuel strainer and clean any dirt or debris, then reinstall the strainer.

NOTICE

Do not use gasoline containing more than 10% ethanol (E10) or E85 ethanol.

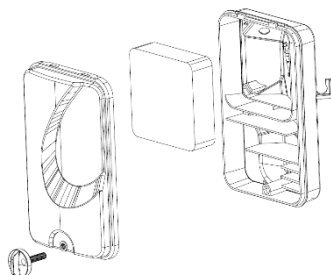
Add a fuel stabilizer (such as Sta-Bil or Pri-G) to the gasoline; failure to do so will void the warranty.

Avoid using gasoline that has been stored in a metal or dirty fuel container, as it can introduce particles that affect engine performance or cause damage.

4. Add fuel if needed, do not overfill.
5. Replace the fuel cap securely.
6. Wipe up any spilled fuel and allow any residue to evaporate before starting the engine. To prevent fire, do not start the engine while the smell of fuel lingers in the air.

Air Filter Maintenance

1. Remove the air filter case cover.
2. Take out the foam element.
3. Wash the foam element in hot, soapy water. Never use a solvent.



NOTICE

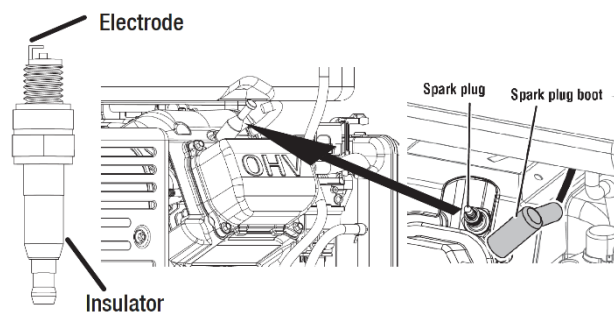
Do not wring the foam element, as this may cause it to tear.

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 in the air filter box. The engine should never run without the foam element, as premature engine wear may result.
6. Install the air filter case cover in its original position.

Spark Plug Maintenance

The spark plug is critical for good engine performance; it should be removed, cleaned, inspected, adjusted, and/or replaced regularly to maintain optimal performance.

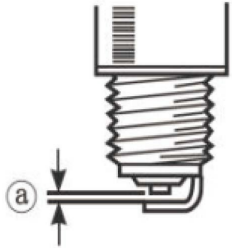
1. **Remove the Spark Plug:** Remove the spark plug access cover and then the spark plug boot. Insert the spark plug tool through the hole and fit it securely over the spark plug. Use the T-handle through the spark plug wrench and turn it counterclockwise until the spark plug can be removed.



2. **Inspect and Clean:** Check the porcelain insulator nose; it should be a light tan color. Use a wire brush to remove any black carbon deposits. Measure the spark plug gap according to the specified table. Adjust the gap or replace the spark plug as necessary, ensuring the gap is measured with a wire thickness gauge.

Maintenance

3. **Reinstall the Spark Plug:** Tighten the spark plug to 25 N·m (18.4 lb·ft). Proper tightening is crucial: If the spark plug is too loose, it can cause the engine to overheat. If it is over-tightened, it may damage the threads in the cylinder head.



Standard Spark Plug: A7TC
Spark Plug Gap: 0.6-0.8 mm

NOTICE

If a torque wrench is not available, a good estimate of the correct torque is 1/4 to 1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

4. **Reconnect the Spark Plug Boot:** Ensure it clicks into place. Tug gently on the boot to confirm a secure connection.
5. **Reinstall the Spark Plug Cover.**

Generator Storage

When the generator will remain idle for longer than 30 days, prepare the engine for storage as follows:

- **Cleaning:** Allow the engine to cool. Open both side access panels and blow or vacuum any dirt or debris. Do not use water for cleaning, as it can enter the engine and cause damage.
- **Fuel Treatment/Draining:** Fill the fuel tank with fresh gasoline that has been treated with a fuel stabilizer additive (such as Sta-Bil or Pri-G). Follow the fuel stabilizer manufacturer's recommendations for use.
- **Storage Area:** Cover the generator and store it in a dry, level, well-ventilated area out of reach of children, away from ignition sources like water heaters and furnaces.
- **Engine Operation During Storage:** Start the engine every 3 months and allow it to run for 15-20 minutes.

⚠ WARNING

Fill the fuel tank in a well-ventilated area away from ignition sources. If the engine is hot from use, allow it to cool before adding fuel. Do not smoke or vape while refueling.

Draining the Carburetor

1. Shut off the gasoline flow.
2. Place an appropriate container under the carburetor.
3. Carefully open the drain bolt at the bottom of the carburetor bowl, allowing the fuel to drain completely.
4. Replace the drain bolt after draining.

NOTICE

Aged gasoline that has not been treated with a stabilizer must be safely drained and disposed of. Never run old gasoline through the engine. To prevent serious injury and fire, ensure the engine is cool before performing any maintenance procedures.

Specifications

Product Description	5250 Watt Dual-Fuel Open Frame Generator with CO Sentry
Engine Type	Single Cylinder, 4-Stroke, Forced Air Cooling Gasoline Engine, OHV
Displacement (cc)	224
Peak Power (Gasoline)	5250W
Rated Power (Gasoline)	4250W
Peak Power (LPG/Propane)	4750W
Rated Power (LPG/Propane)	3850W
Gallons/Hour at Half Load (Gasoline)	0.39 gal/h (1.48 L/h)
Fuel Tank Capacity	4gal (15L)
Run Time at Half Load	10h
Voltage Rating	120V/240V
Rated Frequency	60Hz
Amperage - 120V Rated/Peak (A)	35.4A / 43.8A
Amperage - 240V Rated/Peak (A)	17.7A / 21.9A
Starting Type	Recoil Start
Outlet	2×120V 5-20R (Standard), 1×120V TT-30R RV, 1×120V/240V L14-30R
Oil Type	SAE 10W-30
Oil Capacity	20.3 fl oz (0.6L)
Maximum Ambient Temperature	40°C (104°F)
Product Dimensions	25 × 23 × 21 in
NW	110 lb
Warranty	3 Years

Troubleshooting Guide

Problem	What to Do
THE ENGINE WILL NOT START	Check Fuel Level: Ensure there is enough gasoline in the tank or sufficient fuel in the LPG cylinder.
	Check Fuel Valve / LPG Valve: For gasoline, turn the fuel valve to the ON position. For propane, ensure the LPG tank valve is fully open.
	Check Fuel Selector Switch: Make sure the selector switch is set to the correct fuel source (Gasoline or LPG).
	Check Engine Switch: Ensure the engine switch is in the ON position.
	Check Choke Position: For a cold start, set the choke to the CLOSED position. For a warm engine, set it to OPEN.
	Check Oil Level: Ensure the oil level is at the proper level. Low oil will prevent the engine from starting.
	Inspect Fuel Quality: Use fresh gasoline (87 octane or higher). Drain and replace stale fuel if necessary.
	Spark Plug Condition: Remove and inspect the spark plug. Clean or replace if fouled or worn. Ensure the spark plug cap is securely attached.
	Air Filter: Check for dirt or blockage. Clean or replace if necessary.
	LPG Hose Connection: Ensure the propane hose is securely connected and not leaking.
	Carburetor / Internal Issues: If the engine still does not start, contact an authorized service center.

Troubleshooting Guide

Problem	What to Do
GENERATOR WILL NOT PRODUCE POWER	Check Circuit Breakers: Ensure all circuit breakers are in the "ON" position. If any are tripped, reset them and test for power.
	Verify Connections: Make sure all power cords are connected securely and that any connected devices are operational.
	Check for Overload: Disconnect all devices and restart the generator. Reconnect devices gradually within the rated capacity.
	Inspect Outlets: Check for damage, debris, or loose connections at the outlets
	Reduce Load: Make sure the total load does not exceed the generator's rated output.
	Internal Electrical Issue: If no power is produced after these checks, contact an authorized service center.
	Professional Service: If none of the above steps restore power, it could be an issue with internal components, and you may need to contact a service center for repair.

Electrical Schematic

