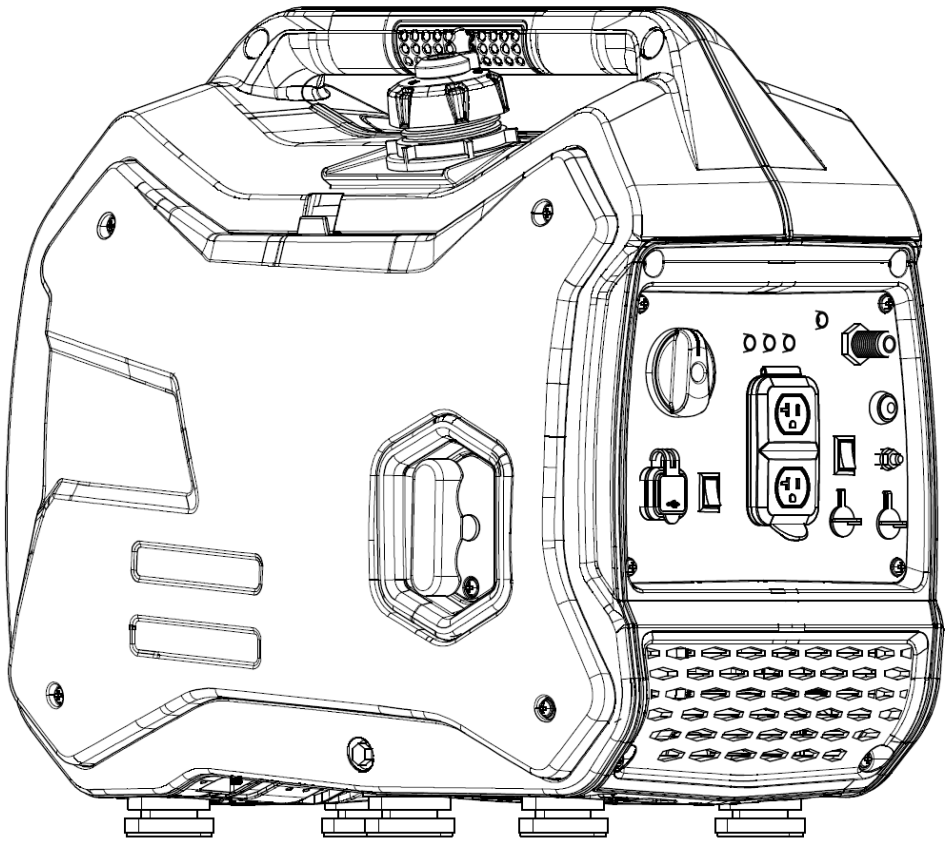
Rosewill®

# Model: RGX25BiSCO

# 2500-Watt Dual Fuel Inverter Generator

## OPERATOR'S MANUAL



### Caution:

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

techsupport@rosewill.com 1-800-575-9885 www.rosewill.com

Thank you for purchasing a quality Rosewill product.
Please register your product at www.rosewill.com for complete warranty information and support for your product.

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# Introduction

Thank you for choosing this **Rosewill** generator!

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 **1-800.575.9885** or at **techsupport@rosewill.com** before using your generator.

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

**WARNING:** This product can expose you to chemicals including carbon monoxide, gasoline engine exhaust, and benzene, which are known to the State of California to cause cancer and birth defects or other reproductive harm. **For more information go to www.P65Warnings.ca.gov**

# 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.**

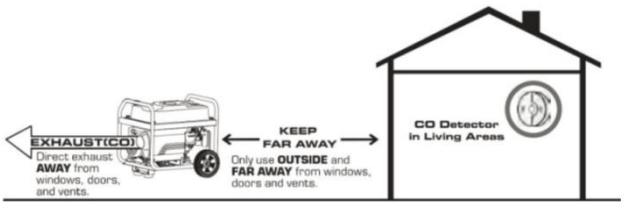
**Avoid operating this product under the following circumstances:**

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.



- **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.**

## 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 filter are properly in place.**

**DO NOT** crank the engine with the spark plug removed.

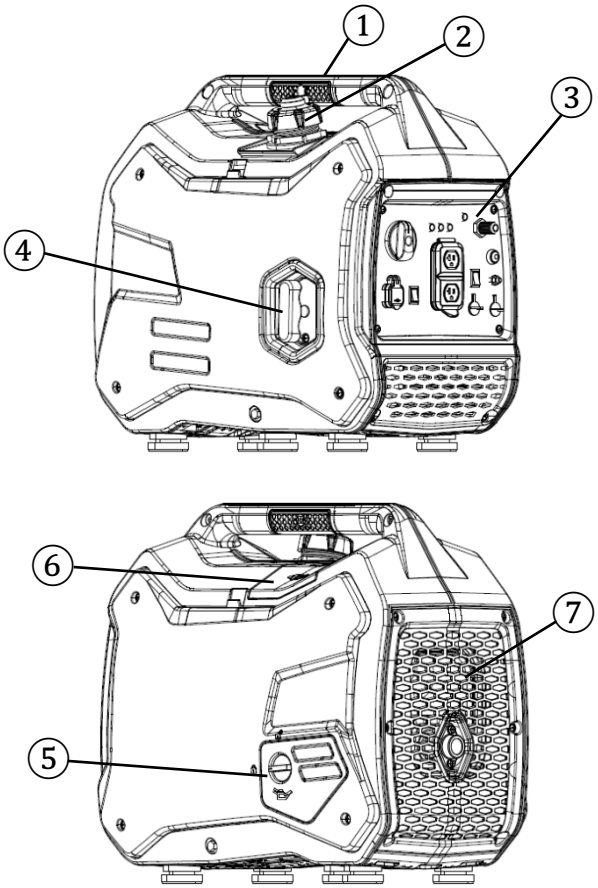
**NOTICE**

- **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.

## Components




① **Carry Handle**: Facilitates easy transport of the generator.

② **Fuel Cap**: Use this cap to add gasoline to the generator.

③ **Control Panel**: Contains the electrical outlets and operational controls for the generator.

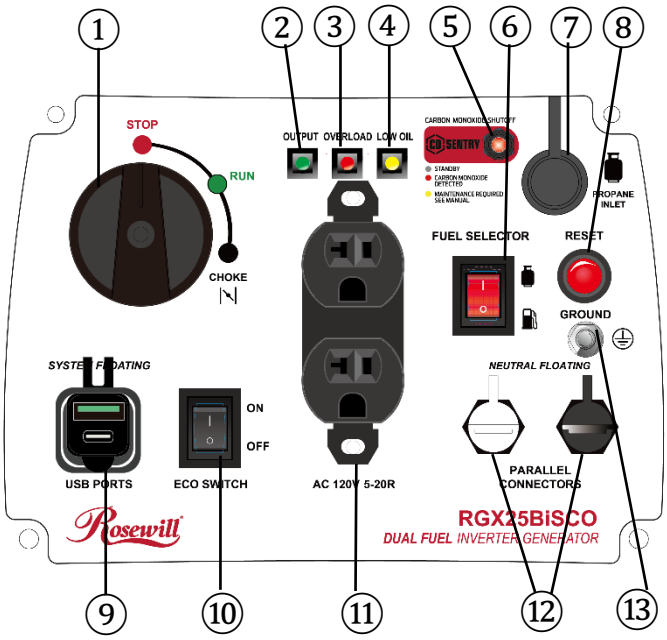
④ **Recoil Start Handle**: Pull this handle to manually start the engine.

⑤ **Oil Maintenance Cover**: This cover could be removed to drain or fill the oil.

⑥ **Spark Plug Cover**: This cover must be removed to maintain the spark plug.

⑦ **Muffler and Spark Arrestor**: The spark arrestor prevents sparks from exiting the muffler, enhancing safety.

# Control Panel




1 **Engine Switch:** Used to start, run, and stop the engine. Turn the switch to CHOKE when starting a cold engine, to RUN after the engine starts, and to STOP to shut down the engine.

2 **Output Ready LED(Green):** Illuminates when the generator is operating normally, indicating that it is producing power and ready for use.

3 **Overload LED(Red)**: This light indicates that the generator is overloaded and may need to be disconnected from excess electrical loads.

4 **Low Oil LED(Yellow)**: This indicator illuminates when the oil level in the crankcase falls below the safe operating limit. In such cases, the generator will automatically shut off the engine to prevent damage.

5 **CO SENTRY:** Detects the presence of carbon monoxide and may shut down the unit automatically for safety.

6 **Fuel Selector:** Used to switch the generator fuel source between gasoline and LPG/propane.

7 **LPG Inlet:** When LPG gas is used, install the dedicated LPG hose on the connection port.

8 **RESET Button:** The reset button is used to restore output if an overload occurs.

9. **USB Ports**: Features include USB Type A (5V/3.6A, 9V/2.5A, 12V/2A) and USB Type C ports for convenient charging of devices.

10. **ECO Switch:** Minimizes engine speed, noise, and fuel consumption under light electrical load.

11. **120 Volt AC, 20 Amp Duplex NEMA 5-20R Receptacle**: This receptacle is rated for a maximum of 15.8 amps.

12. **Parallel Connectors:** Used to connect two inverter generators for increased output capacity. (parallel kit PGIPAIRB5 or PGIPAIRB6 sold separately)

13. **Ground Terminal:** Used to externally ground the generator, enhancing safety during operation.

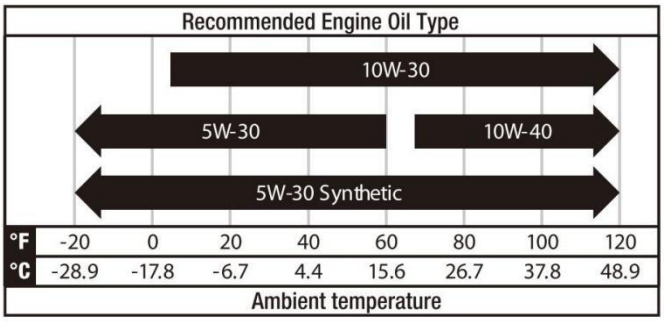
# Preparation

## Add Engine Oil

**NOTICE**

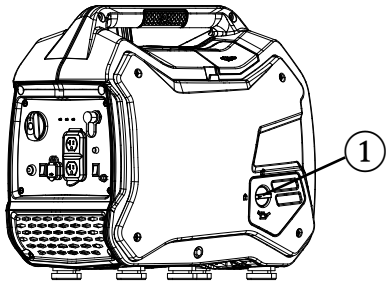
**Failure to follow this instruction may result in damage to your generator and other property.**

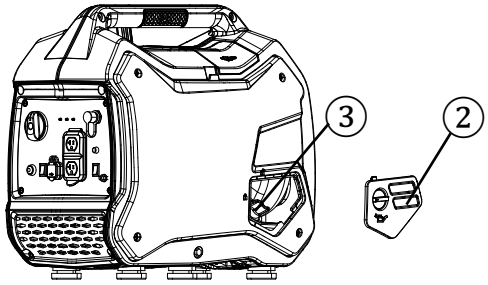
**If you are operating the generator in extreme temperatures, please refer to the following chart for the recommended oil type.**




**The generator is shipped without engine oil. Do not start the engine without ensuring it has sufficient oil.**

1. Place the generator on a level surface.
2. Turn the maintenance cover knob ① to unlock the cover, then remove the maintenance cover ②.
3. Remove the oil dipstick ③ and wipe it clean.

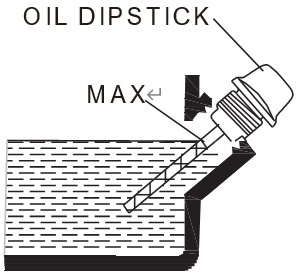



4. Slowly add the specified amount of the recommended engine oil. DO NOT overfill.

5. Insert the oil dipstick into the oil filler neck without screwing it in, then remove it again to check the oil level. The oil level should be at the MAX mark on the oil dipstick.

6. Reinstall and tighten the oil dipstick ③ securely. Reattach the maintenance cover ② and turn the maintenance cover knob ① to lock the cover.




**NOTICE**

**Recommended Engine Oil:**

- **Type**: SAE 10W-30
- **Oil Grade**: API Service SE type or higher
- **Engine Oil Capacity**: 13.5 fl. oz

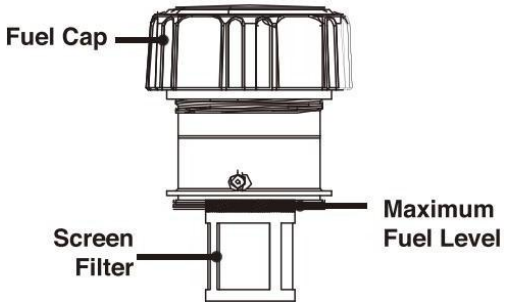
**Residual oil from the factory may remain in the engine to help protect internal components and reduce the risk of a dry start. This does not mean the generator has been filled with oil. Add oil slowly to prevent overfilling. DO NOT screw in the oil dipstick while checking the oil level.**

**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 engine components break in properly. 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.**

## Add 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. DO NOT fill above the bottom of the screen filter or the maximum fuel level mark. Allow space for fuel expansion.
- 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 fuel tank to no more than 80% capacity. Securely replace the fuel cap and wipe up any spills.**

**⚠ 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, so never fill the tank near an open flame, and always check for spills.**

**Do not use E15 or E85 fuel in this product. Engine or equipment damage caused by the use of unapproved fuels (such as E15 or E85 ethanol blends) is not covered by warranty. Only use unleaded gasoline containing up to 10% ethanol.**

**Always use only fresh, unleaded gasoline with an octane rating of 87-93. Never use OLD, STALE or CONTAMINATED gasoline and avoid introducing dirt or water into the fuel tank. Gasoline ages in the tank, which may make future starts difficult. Do not store the generator for extended periods with gasoline in the tank.**



**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.**

## Connecting an LPG Tank

- Propane tanks that use liquid withdrawal system cannot be used on these models.
- Use only an approved LPG tank equipped with an OPD (Overfilling prevention device) valve. Confirm that the qualification date on the tank has not expired.
- DO NOT use included LPG hose for any other appliances.

**NOTICE**

**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.**

**⚠ DANGER**

**Explosion hazard.**
**DO NOT start generator if you smell propane.**
**Never connect or disconnect the LPG/propane hose while the engine is running. Do not smoke or create sparks while handling LPG/propane.**
**Always turn the engine off and allow the generator to cool for at least five minutes before connecting the propane tank.**
**ALWAYS fully close the propane tank valve and disconnect the LPG hose from the generator when not in use.**

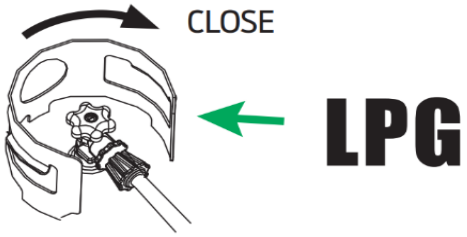
**⚠ WARNING**

**Never use a gas container, LPG/propane hose, propane tank or any other fuel item that appears to be damaged.**

**⚠ WARNING**

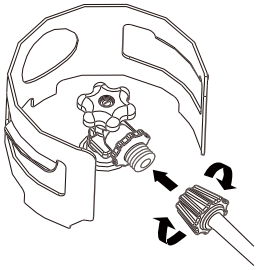
**To reduce the risk of injury, perform a leak test any time the LPG tank is disconnected and reconnected.**

1. Place the generator on a flat surface in a well-ventilated area.
2. Verify that the propane tank valve is in the fully closed position.



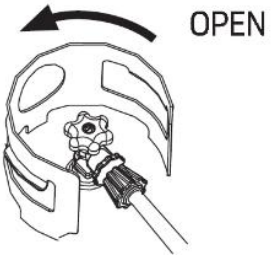

3. Remove the cover on the generator propane inlet.
4. Attach the propane hose securely to the gas inlet (threaded tightly) and ensure a secure connection.

   **IMPORTANT:** DO NOT use thread seal tape or any other type of sealant to seal the LPG hose connection.
5. Remove the safety plug or cap from the LPG tank valve and attach the other end of the hose to the LPG connector on the tank. Hand-tighten.



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.



## Grounding the Generator

**Attach a grounding wire if required by local code:**

- Connect a suitable grounding wire to the grounding stud on the control panel and tighten the nut.
- Attach the other end to a copper or brass grounding rod driven into the earth.

**A commonly acceptable grounding wire is a No. 12 AWG (American Wire Gauge) stranded copper wire. Since grounding codes vary by location, consult a local electrician to ensure compliance with local regulations.**

## 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.**

**⚠ DANGER**

**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.**

## Selecting the Fuel Source

**⚠ DANGER**

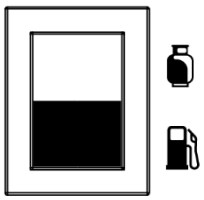
**Fire and explosion hazard. DO NOT add gasoline to the fuel tank or connect the LPG/propane hose to the generator while the generator is in operation.**

**Do not overload the generator. Load capacities differ depending on the fuel source. Before switching fuel sources, make sure the generator can supply enough running and peak watts for your connected appliance.**

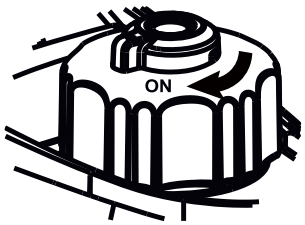
## Start Generator with Gasoline

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 loads connected.
3. Make sure there is gasoline in the fuel tank.
4. Make sure that the ECO switch is on OFF position.
5. Turn the fuel selector to GAS position.

FUEL SELECTOR

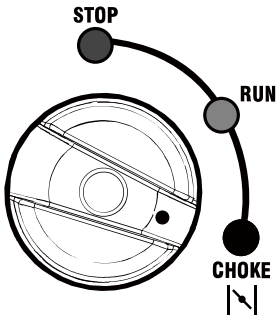


6. Open fuel cap vent.

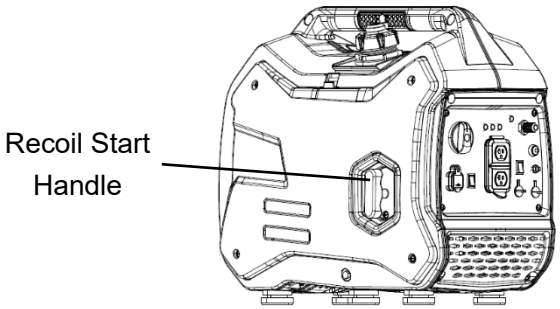



7. Turn the engine switch knob to the CHOKE position.

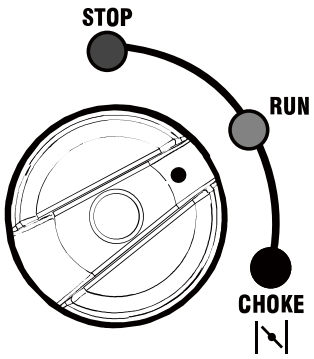
**Note:** For restarting a warm engine, turn the Engine switch directly to the RUN position.




8. Pull the recoil start handle until resistance is felt, let it retract, then pull swiftly. Repeat as necessary until the engine starts.

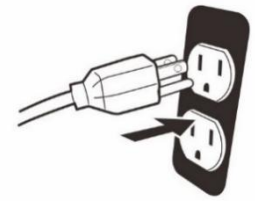



9. After the engine starts, slowly turn the engine switch from the CHOKE position to the RUN position.




10. Let the generator run for several minutes before connecting any electrical devices. This allows the generator to stabilize its speed and temperature.

11. Plug in electrical devices



12. After the generator is running smoothly and electrical devices are connected, turn the ECO switch to the ON position if reduced noise and improved fuel efficiency are desired. Keep the ECO switch in the OFF position during initial warm-up or when using equipment that requires constant full power.

**When Starting Your Generator in Cold Temperatures (below 32°F / 0°C)**

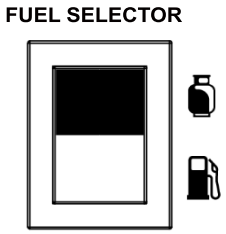
1. Turn the engine switch to the CHOKE position.
2. Use the recoil start handle to start the generator.
3. Move the engine switch partway between CHOKE and RUN for about 15 seconds.
4. This allows the generator to run more stably and the engine to warm up.
5. NOTE: This step is only required when operating in temperatures below freezing (32°F / 0°C).
6. Turn the engine switch to the RUN position.

**NOTICE**

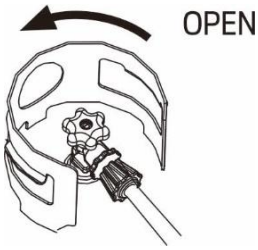
**If engine starts, but does not continue to run, rotate the engine switch to STOP position and repeat starting instructions to restart the generator.**

## Start Generator with Propane

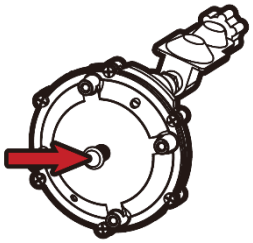
1. Make sure the generator is on a solid, flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical loads connected.
3. Make sure the propane/LPG tank is properly connected and the connections have been checked for leaks. For detailed instructions, see “Connecting an LPG Tank” on page 7 of this manual.
4. Turn the fuel selector to LPG position.



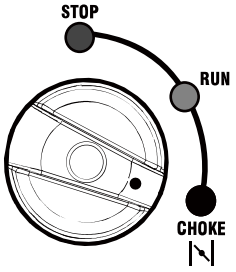

5. Make sure that the ECO switch is on OFF position
6. Slowly open the propane tank valve.



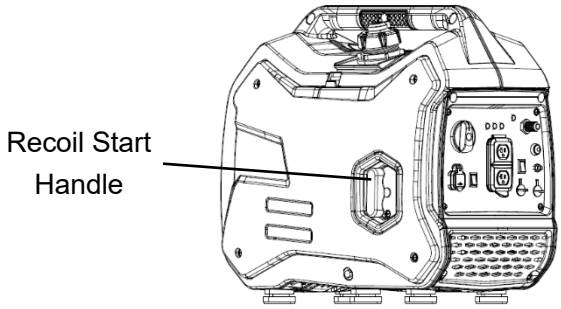

7. Press the LPG primer button 3–5 times.



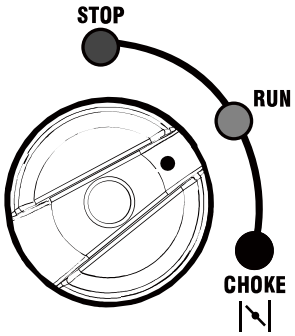
8. Turn the engine switch to the CHOKE position.



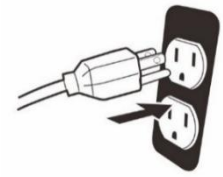

9. Pull the recoil start handle 2–3 times.




10. Turn the engine switch to the RUN position.




11. Pull the recoil start handle until resistance is felt, let it retract, then pull swiftly. Repeat as necessary until the engine starts.
12. After the generator is running properly, plug in the electrical loads. Do not exceed the generator’s rated load.



13. Turn the ECO switch to the ON position if reduced noise and improved fuel efficiency are desired. Keep the ECO switch in the OFF position during initial warm-up or when using equipment that requires constant full power.

## Overload Indicator (Red)

**Note: The OVERLOAD light may turn on briefly when starting a large device. This is normal for loads near the generator's rated capacity.**

- Ensure the total combined load does not exceed the generator's rated running power.
- If the OVERLOAD light stays on and power stops, the generator is overloaded or may require service.
- Turn off and unplug all devices, then stop the engine. Compare device wattage to generator output and reduce if necessary. Ensure proper ventilation around the generator.
- Check if any circuit breakers have tripped and reset them before restarting.
- Restart the engine, reconnect devices, and avoid overloading.
- If the issue persists, have the generator serviced by an authorized service center.

## Low Oil Indicator (Yellow)

1. If the engine oil level becomes too low, the LOW OIL light will turn on, and the engine will automatically shut off.

2. The engine cannot be restarted until the correct amount of oil has been added. Fill with the appropriate type and viscosity of engine oil until the oil level reaches the proper mark.

**Recommended oil: SAE 10W-30**

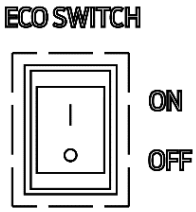
**NOTICE**

**Do not attempt to start the engine with insufficient oil. The engine will shut off automatically if the oil level is too low.**

## ECO Switch

When the ECO switch is ON, engine speed automatically decreases under light or no load to reduce fuel consumption. Keep ECO OFF during startup, warm-up, or when using equipment that requires constant full power.

When ECO switch is in OFF position, the engine is always at high speed, which is suitable for the situation where the load of electrical appliances varies greatly or when the electrical equipment needs a large instantaneous power.



## Parallel Operation

Make sure both generators are OFF before making any parallel connections. Use only an approved parallel kit designed for this generator. The parallel kit is sold separately.

The total power of the connected electrical devices must not exceed the rated output of the parallel system. When an electric motor starts, the overload indicator may illuminate briefly. This is normal if the indicator turns off within a few seconds.

During parallel operation, the ECO switches on both generators should be in the same position. For parallel operation, follow these steps:

1. Connect the two generators using the approved parallel kit. (the parallel kit PGIPAIRB5 or PGIPAIRB6 needs to be purchased separately).

2. Start the first generator according to the starting instructions in this manual. Make sure the Output Ready Indicator (Green) is illuminated before starting the second generator.

3. Start the second generator according to the starting instructions in this manual. Make sure the Output Ready Indicator (Green) is illuminated on the second generator.

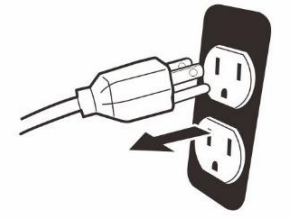
4. Connect electrical devices to the AC receptacle on the parallel kit.

5. Turn on and operate the electrical devices. Do not exceed the rated output of the parallel system.

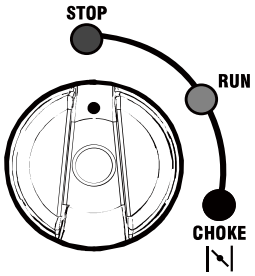
**NOTE:** We recommend using two generators of the same model for parallel operation.

## Stop the Engine

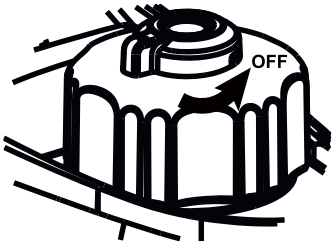
1. Switch off and disconnect all electrical loads.



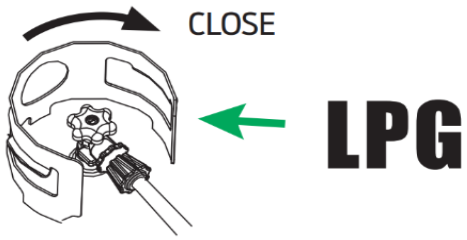
2. Turn the engine switch to STOP position.




3. Close the fuel cap vent.




4. If using propane, close the propane tank valve.




5. After the generator has completely cooled down, remove the propane hose if applicable and store the generator in a cool, dry, sheltered area. Drain all untreated gasoline from the fuel tank or run the generator until the fuel tank is empty, if you plan to store the generator for longer than 3 months.

## 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: Volts x Amps = 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.

## Safety Precautions Before Maintenance

**⚠ WARNING**

**Turn Off the Generator:** Switch the generator to STOP, 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 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 filter. 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.

## 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 strainer and discard any dirt and debris, then replace the strainer.

**NOTICE**

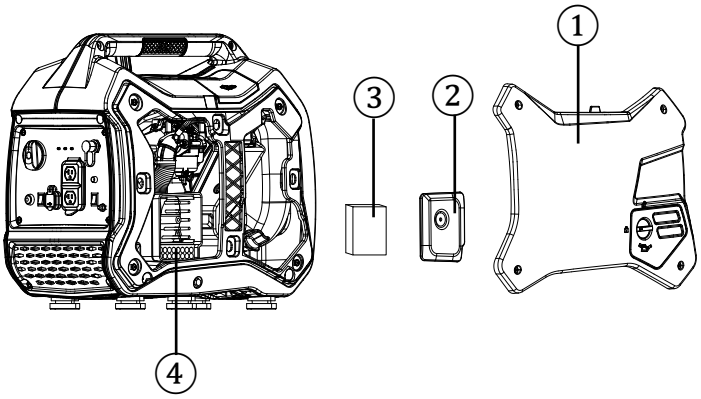
**Do not use gasoline containing more than 10% ethanol (E10) or E85 ethanol.**

**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 side cover (①).
2. Remove the air filter case cover(②).
3. Take out the foam element(③).
4. Wash the foam element in warm, soapy water. Never use a solvent




**NOTICE**

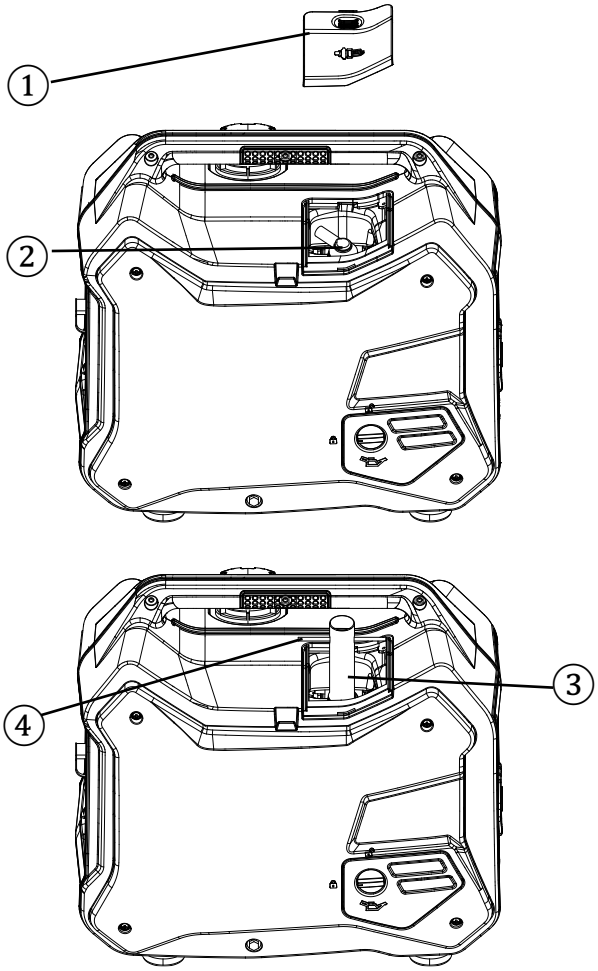
**Do not wring out the foam element when squeezing it, as this could cause it to tear.**

5. Apply a few drops of clean engine oil to the foam element and squeeze out the excess oil. The foam element should be lightly coated with oil but not dripping. Ensure the oil is evenly distributed for a light film across the foam material.
6. Reinstall the foam element in the air filter box(④). The engine should never run without the foam element, as premature engine wear may result.
7. Install the air filter case cover in its original position.

## Spark Plug Maintenance

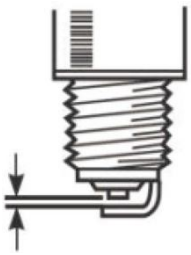
**The spark plug is critical for good engine performance; it should be removed, cleaned, inspected, adjusted, and/or replaced regularly to maintain optimal performance.**

1. **Remove the Spark Plug:** Remove the spark plug access cover (①) and then the spark plug boot (②). Insert the spark plug tool through the hole and fit it securely over the spark plug. Use the T-handle (④) through the spark plug wrench (③) and turn it counterclockwise until the spark plug can be removed.




2. **Inspect and Clean:** Check the spark plug. If the spark plug insulator is cracked or chipped, replace the spark plug. 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.

3. **Reinstall the Spark Plug:** Tighten the spark plug to 12.5 N·m (9.2 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: A5RTC**
**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 Draining:** Drain the fuel tank and carburetor completely. Dispose of old gasoline properly according to local regulations. Do not store the generator with untreated gasoline in the fuel system for longer than 30 days.
- **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**

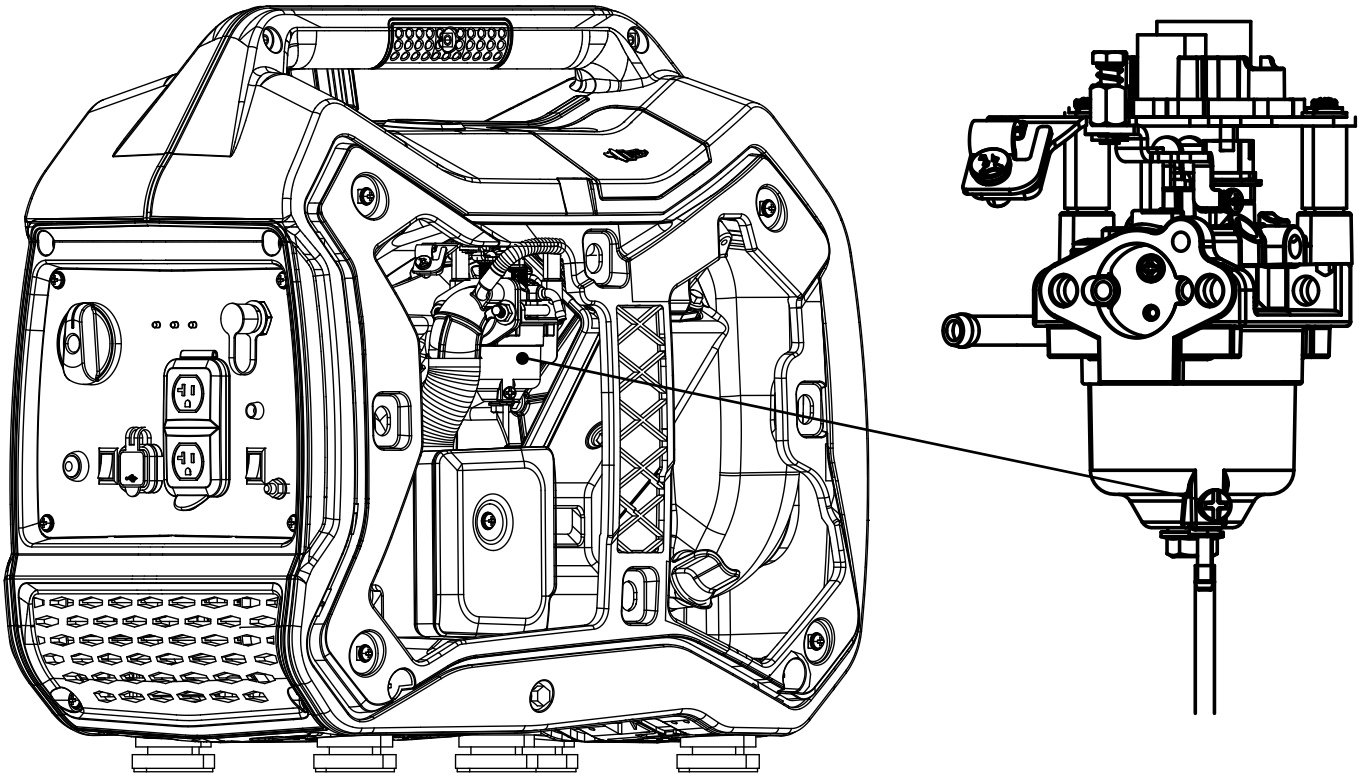
**Fill the fuel tank in a well-ventilated area away from ignition sources. If the engine is hot from use, allow it to cool before adding fuel. Do not smoke or vape while refueling.**

## 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** | 2500W Dual Fuel Inverter Generator |
| **Engine Type** | Single Cylinder,4-Stroke, Forced Air Cooling Gasoline Engine, OHV |
| **Displacement (cc)** | 80 |
| **Start Type** | Recoil Start |
| **Fuel Type** | Gasoline, Propane (LPG) |
| **Fuel Tank Capacity (gal)** | 1(3.8L) |
| **Oil Type** | SAE 10W-30 |
| **Oil Capacity** | 13.5 fl. oz/400ml |
| **Peak Power** | 2500W (Gas) / 2200W (LPG) |
| **Rated Power** | 1900W (Gas) / 1700W (LPG) |
| **Voltage Rating** | 120V |
| **Gasoline Burn at Half Load (gal/hr)** | 0.15 |
| **Propane Burn at Half Load (lb/hr)** | 0.27 |
| **Rated Frequency** | 60Hz |
| **Spark Plug Brand & Model NO.** | A5RTC |
| **Amperage (120V Rated Current)** | 15.8A (GAS) / 14.2A(LPG) |
| **Outlet** | 2xAC 120V 5-20R, 1xUSB-A, 1xUSB-C PD |
| **Total Harmonic Distortion (%)** | <3% |
| **Product Dimensions (in)** | 18.89 in × 11.81 in × 17.72 in |
| **NW (lb.)** | 42 lb |
| **Warranty** | 3 Years |

# Troubleshooting Guide

| Problem | Possible Causes | Probable Solutions |
|---|---|---|
| **Engine will not start** | **Fuel Related:**<br>1. Out of fuel.<br>2. Old, stale, or contaminated gasoline<br>3. Engine Switch is not set to Choke position for a cold engine.<br>4. Gasoline with more than 10% ethanol used (E15, E20, E85, etc.)<br>5. Excessive fuel in combustion chamber due to stuck float.<br>6. Clogged or dirty fuel filter.<br>7. Dirty fuel passages.<br>8. Carburetor float/needle stuck (fuel odor present).<br>9. Out of propane/LPG.<br>10. LPG tank valve / propane supply valve is not open. | **Fuel Related:**<br>1. Fill fuel tank.<br>2. Drain fuel tank and carburetor; fill with fresh fuel.<br>3. Move Engine Switch to Choke position for a cold engine.<br>4. Drain and replace ethanol-contaminated fuel. Replace damaged components if necessary.<br>5. Shut off fuel valve and move generator outdoors. Contact authorized service center before restarting.<br>6. Replace fuel filter.<br>7. Clean fuel passages. Heavy deposits may require service.<br>8. Gently tap carburetor float bowl to free stuck float.<br>9. Replace LPG Tank / check propane/LPG supply.<br>10. Fully open LPG tank valve / propane/LPG supply valve. |
| | **Ignition / Spark Related:**<br>1. Engine switch to OFF.<br>2. Spark plug wire not connected securely.<br>3. Spark plug electrode wet or dirty.<br>4. Incorrect spark plug gap.<br>5. Spark plug damaged.<br>6. Circuit breaker tripped.<br>7. Faulty ignition coil or ignition module. | **Ignition / Spark Related:**<br>1. Turn Engine switch to RUN.<br>2. Reconnect spark plug wire securely.<br>3. Remove and clean spark plug.<br>4. Check and correct spark plug gap.<br>5. Replace spark plug.<br>6. Reset circuit breaker and check connected load.<br>7. Have qualified technician diagnose ignition system. |

# Troubleshooting Guide

| Problem | Possible Causes | Probable Solutions |
|---|---|---|
| **Engine will not start** | **Compression Related:**<br><br>1. Cylinder not lubricated after long storage.<br><br>2. Loose or damaged spark plug (hissing sound during starting).<br><br>3. Loose cylinder head or damaged head gasket (hissing sound during starting).<br><br>4. Valves or tappets misadjusted or stuck. | **Compression Related:**<br><br>1. Pour 1 tablespoon of engine oil into the spark plug hole. Pull the recoil starter a few times, then try starting again.<br><br>2. Tighten or replace spark plug.<br><br>3. Have a qualified technician inspect the cylinder head or head gasket.<br><br>4. Have a qualified technician adjust or repair valves/tappets. |
| | **Engine Oil Related:**<br><br>1. Low engine oil.<br><br>2. Generator operating on an incline causing low-oil shutdown. | **Engine Oil Related:**<br><br>1. Fill engine oil to proper level. Always check oil before EVERY start.<br><br>2. Operate the generator on a level surface. |
| | **Spark Arrestor Related:**<br><br>1. Spark arrestor clogged with soot. | **Spark Arrestor Related:**<br><br>1. Clean or replace spark arrestor. |
| **Engine misfires / runs rough** | 1. Loose spark plug cap.<br><br>2. Incorrect spark plug gap or damaged plug.<br><br>3. Defective spark plug cap.<br><br>4. Old or low-quality gasoline.<br><br>5. Low compression. | 1. Check spark plug cap and wire connection.<br><br>2. Adjust spark plug gap or replace spark plug.<br><br>3. Replace spark plug cap.<br><br>4. Use only fresh, unleaded gasoline with an octane rating of 87-93. Do not use gasoline with more than 10% ethanol (E15, E20, E85).<br><br>5. Have a qualified technician diagnose compression (see Compression Related section). |
| **Engine stops suddenly** | 1. Low-oil shutdown triggered. | 1. Fill engine oil to proper level. Check oil before EVERY use. |

| Problem | Possible Causes | Probable Solutions |
|---|---|---|
| **Engine stops suddenly** | 1. Out of gasoline or propane/LPG.<br>2. Defective fuel tank cap creating vacuum and preventing fuel flow.<br>3. Faulty magneto.<br>4. Disconnected or improperly connected spark plug cap. | 1. Fill fuel tank with fresh, unleaded gasoline with an octane rating of 87-93, or replace LPG cylinder/check propane/LPG supply.<br>2. Test or replace the fuel tank cap.<br>3. Have a qualified technician inspect and replace magneto if necessary.<br>4. Securely reconnect spark plug cap. |
| **Engine stops under heavy load** | 1. Dirty air filter.<br>2. Engine too cold. | 1. Clean or replace air filter.<br>2. Allow the engine to warm up before applying heavy load. |
| **Engine knocks** | 1. Old or low-quality gasoline.<br>2. Generator overloaded.<br>3. Incorrect ignition timing, carbon buildup, or worn engine parts. | 1. Fill tank with fresh, unleaded gasoline with an octane rating of 87-93. Do not use gasoline with more than 10% ethanol.<br>2. Reduce load to within rated capacity.<br>3. Have a qualified technician adjust ignition timing and inspect the engine. |
| **Engine backfires** | 1. Contaminated or low-quality gasoline.<br>2. Engine running too cold.<br>3. Intake valve stuck or overheated engine.<br>4. Incorrect ignition timing. | 1. Use fresh, stabilizer-treated unleaded gasoline (max 10% ethanol).<br>2. Use cold-weather fuel and oil additives to prevent backfiring.<br>3. Have a qualified technician clean or adjust the valve.<br>4. Check and correct ignition timing. |
| **No power to connected device** | 1. Device not properly plugged in.<br>2. Circuit breaker tripped.<br>3. Generator malfunction. | 1. Turn off the device, unplug it, then plug it in again and restart.<br>2. Reset circuit breaker, then reconnect the device.<br>3. Contact an authorized Service Center for inspection or repair. |

# Electrical Schematic

