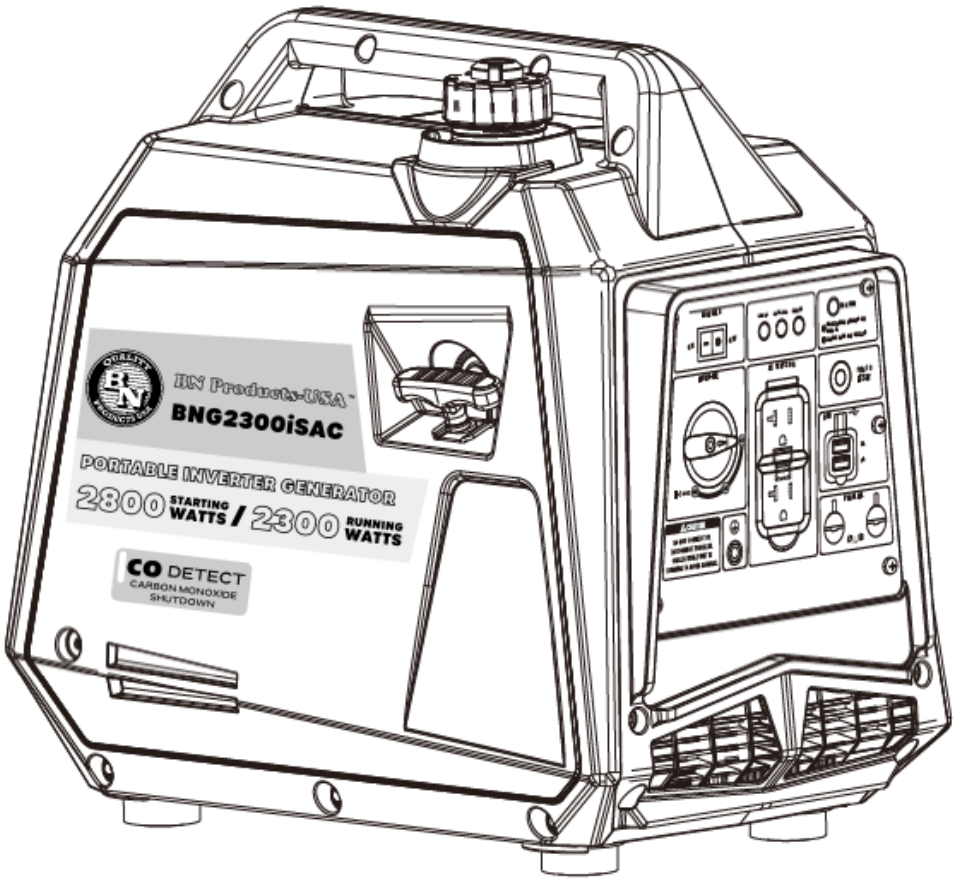
BN Products-USA™
A DIVISION OF BENNER-NAWMAN, INC.
WWW.BNPRODUCTS.COM

# OPERATOR MANUAL

BN Products-USA™ Customer Service
(800) 992-3833 | mail@bnproducts.com

**Inverter Generator | 2300 Running / Max 2800 Watts | 120V - 20A**

# BNG2300iSAC




BNG2300iSAC INVERTER GENERATOR | SERIAL NUMBER

S/N #

MODEL INFO

BNPRODUCTS.COM

**SAVE THIS MANUAL - KEEP IN A SAFE PLACE**

*This manual contains important details regarding safety and operation of this Inverter Generator. Before using this product, read all warnings, instructions, and labels. Serious personal injury and/or property damage may occur if cautions and recommendations are not followed.*

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## Table of Contents



**GENERATOR PRODUCT SAFETY** — **OPERATOR MANUAL**

*This manual contains important details regarding safety and operation of this Inverter Generator. Before using, read this manual in its entirety before operating this machine. Serious injury or damage, including death, are possible if warnings and instructions are not properly followed.*

**CALIFORNIA PROPOSITION 65** — **WARNINGS & DISCLOSURES**

- Components of this product and its related accessories may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling this product and related accessories.
- The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm

**CAUTION**

When opening or moving the generator or packaging, use assistance and proper lifting techniques. The generator is heavy and may cause injury in lifting. Use care when opening packaging. The box contains staples that may cause harm when opening or cutting the box.

## BNG2300iSAC Inverter Generator Package - Contents

### Accessories Included in this Package:

- Spark plug socket tool (1)
- Adjustable (Flat/Phillips) Screwdriver (1)
- Funnel (1)
- 450 ml 10W-30 Oil (1)
- Operator Manual & Warranty (1)

### Tool Required - Removing Box Contents

**Box Cutter or similar tool**

1) Carefully cut the packing tape on the top of the box
2) Remove socket wrench and funnel; store in a secure place
3) Carefully cut two sides of the carton to remove the Inverter Generator unit

## Accessory Descriptions

| | |
|---|---|
|  | **Spark Plug Socket Wrench**<br><br>Use for spark plug maintenance, inspection, and installation & removal |
|  | **Dual Screwdriver**<br><br>Flathead and Phillips screwdriver, use for generator maintenance |
|  | **Funnel**<br><br>Use for safe gasoline-fill with this generator |

*This Generator is not shipped with engine oil. You MUST add approximately 0.48 quarts (0.45L) of SAE 10W-30 motor oil before starting this generator. The engine oil dipstick provides the exact measurement for reference.

The actual appearance of tools or accessories may vary from the images displayed. BN Products-USA™ reserves the right to modify included accessories and package contents, with or without prior notification.

## Notices

All information, diagrams, and product attributes in this manual are based on the latest information available at the time of publication. The illustrations in this guide are reference images only. Product improvements and supporting materials are in continual development.

BN Products-USA™ reserves the right to modify and/or update the product and its corresponding manual at any time. Some product images may vary as product updates are implemented.

## Carbon Monoxide Safety

This Inverter Generator set is equipped with Carbon Monoxide Shutdown Detect technology that monitors the accumulation of carbon monoxide, a poisonous gas produced by engine exhaust. If the on-board CO sensor detects unsafe or elevated CO gas, the inverter generator's engine will shut down automatically.


**Carbon Monoxide Shutdown Detect** is NOT a substitute for an indoor carbon monoxide alarm or for assumed safe operation. DO NOT allow engine exhaust fumes to enter a confined space through doors, windows, or other possible vents. Generators must always be used outdoors, and away from buildings with engine exhaust directed away for people and structures.

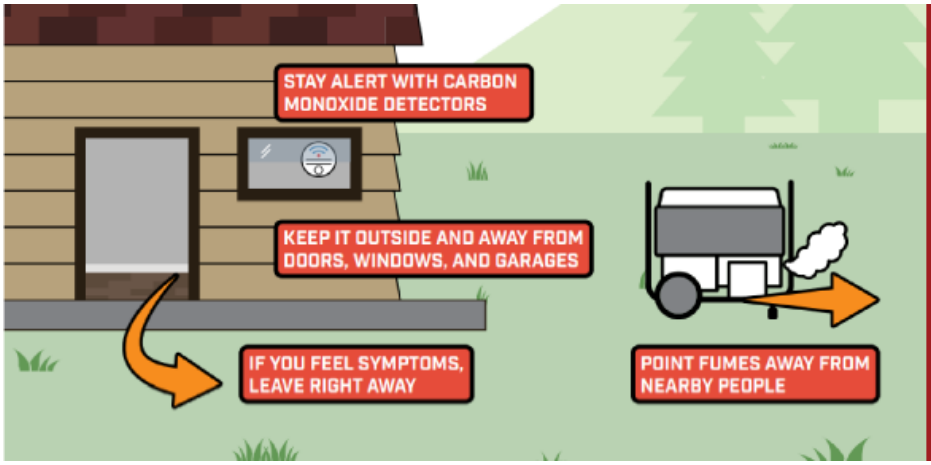
This product meets the requirements of ANSI/PGMA G300-2018.

ANSI/PGMA G300-2018 is a safety standard for portable generators, particularly focusing on the prevention of carbon monoxide (CO) poisoning. It requires generators to have CO sensors that automatically shut off the machine if CO levels become dangerously high.

### Carbon Monoxide-Specific Warnings

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

- Operate this product ONLY outside, away from windows, doors and vents to reduce the risk of carbon monoxide gas from accumulating and potentially being drawn towards occupied spaces.
- Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery back-up according to the manufacturer's instructions. Smoke alarms cannot substitute for CO detection.
- DO NOT run this product inside homes, garages, basements, crawlspaces, sheds, or other partially-enclosed spaces even if using fans or opening doors and windows for ventilation. Carbon monoxide can quickly build up in these spaces and can linger for hours, even after this generator set has been shut off.
- ALWAYS place this product downwind, and point the engine exhaust away from occupied spaces. If you start to feel sick, dizzy, or weak while using this product, shut it off and get to fresh air RIGHT AWAY. Seek immediate medical attention if carbon monoxide poisoning is suspected.
- If you start to feel sick, dizzy, or weak while using the portable generator, you may have carbon monoxide poisoning. Move outside into fresh air immediately, and seek emergency medical assistance. Very high levels of CO can rapidly cause victims to lose consciousness before they can rescue themselves. DO NOT attempt to shut off the generator before moving to fresh air. Entering an enclosed space where a generator is or has been running may put you at greater risk of CO poisoning.




TAKE IT OUTSIDE™

CARBON MONOXIDE KILLS

**CARBON MONOXIDE SAFETY: THE BIG PICTURE**

As the only safe way to use a portable generator, taking your generator outside is absolutely mandatory to keep your family safe from carbon monoxide. But there's even more you can do. By educating yourself about all carbon monoxide risks, you'll be better prepared to protect your family from this colorless, odorless threat.

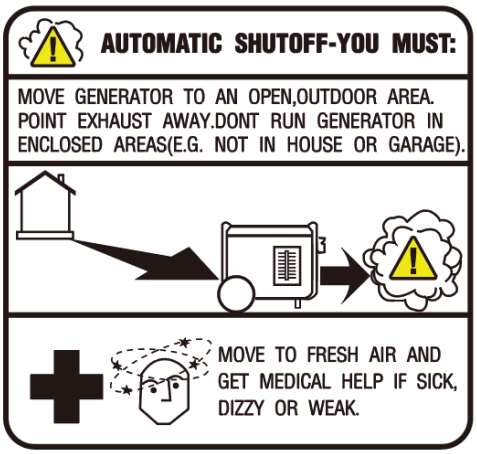
**MORE CO SAFETY RESOURCES**

VISIT https://www.takeyourgeneratoroutside.com/

## Never operate this generator in any of the following locations:

- Near a door, vent, or window
- Garage
- Basement
- Temporary Structure or Tent
- Living Area / Home
- Attic
- Entry Way or Foyer
- Porch, Shed, or Crawl Space

## Carbon Monoxide (CO) Labels on the BNG2300iSAC Inverter Generator




It is extremely important to know and understand the procedure to follow should this generator shut down automatically due to detection of unacceptable levels of carbon monoxide. This label is included for emergency reference on the product, in addition to general warnings about the danger of carbon monoxide exposure.

READ WARNINGS | HAVE AN EMERGENCY PLAN

## General Safety Warnings

- Familiarize yourself with the operation of the various components, and learn how to effectively shut down the generator quickly.
- Know the environment where you intend to use the Inverter Generator;
  - **DO NOT USE** the generator:
    - **Indoors**
    - **In rainy or wet conditions**
    - **Near buildings or close to people**
- Safety practices are vital to protecting the operator of this generator, other people, and property. Read all safety notices in this manual.
- Read all Decals, Labels, and Maintenance Instructions. Instructions in this manual and on safety decals secured on the generator unit are generally categorized as a DANGER, WARNING, or requires the operator to be CAREFUL or give special ATTENTION to the instruction:

| | |
|---|---|
| DANGER<br>WARNING | Failure to follow the instruction will result in being in peril of your life or extremely serious injury. |
| CAREFUL | Injury or material damage is possible if instructions or recommendations are not followed |
| ATTENTION | Damage to this inverter generator may result of recommended action or directions are not followed |

### Safety Instructions: Follow at All Times

- Do NOT use the inverter generator indoors at any time
- Do NOT use the inverter generator in a wet or rainy environment, or in a thunderstorm
- This inverter generator may NOT be directly connected to a household power supply system
- ALWAYS shut the inverter generator OFF when adding gasoline, refueling, or adding oil
- NEVER smoke when adding gasoline, or any time when the fuel cap is opened
- NEVER connect a generator to a wall outlet; this is extremely dangerous, causing a reverse flow of power into the electrical grid or home wiring system known as backfeed. This practice is extremely dangerous, and illegal in most jurisdictions, and must be avoided.
- Use the provided funnel when adding gasoline to the inverter generator; avoid fuel spills at all times
- Do NOT touch any surface that may be hot during or after using the inverter generator, indicated by a warning label. Serious burns and injuries may result from touching generator parts.

# Operator Parts - BNG2300iSAC Inverter Generator


**1 - Fuel Tank Cap**

**2 - Starter Pull Handle**

**3 - Side Cover Bolt** (2) (Left and Right)

**4 - Left Side Cover**

**5 - Control Panel**: See Control Panel Function (next page)

**6 - Engine Cooling Vents**

**7 - Right Side Cover**

**8 - Muffler**: Avoid Contact during and after running

**9: Spark Plug Access Cover**

**10 - Oil Dipstick**: You must remove the right-side cover using the cover bolt (#3) to access the engine oil dipstick. The dipstick contains a precise fill line for proper oil maintenance.

## LOCATE AND RECORD SERIAL NUMBER

Locate the generator serial number and **record that number in the space provided on the front of this manual**, and keep the manual in a safe place for reference, as it is helpful for product support and identification. The serial number is found in two locations on this unit:

1. Bar-code decal applied to the top of the generator housing - **Figure 1A**
2. Stamped onto the motor housing inside the frame - directly above the oil dipstick (remove right side cover panel to locate) - **Figure 1B**

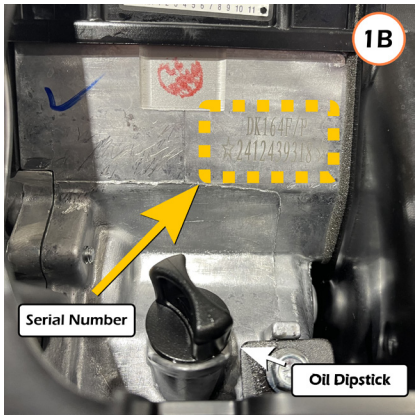
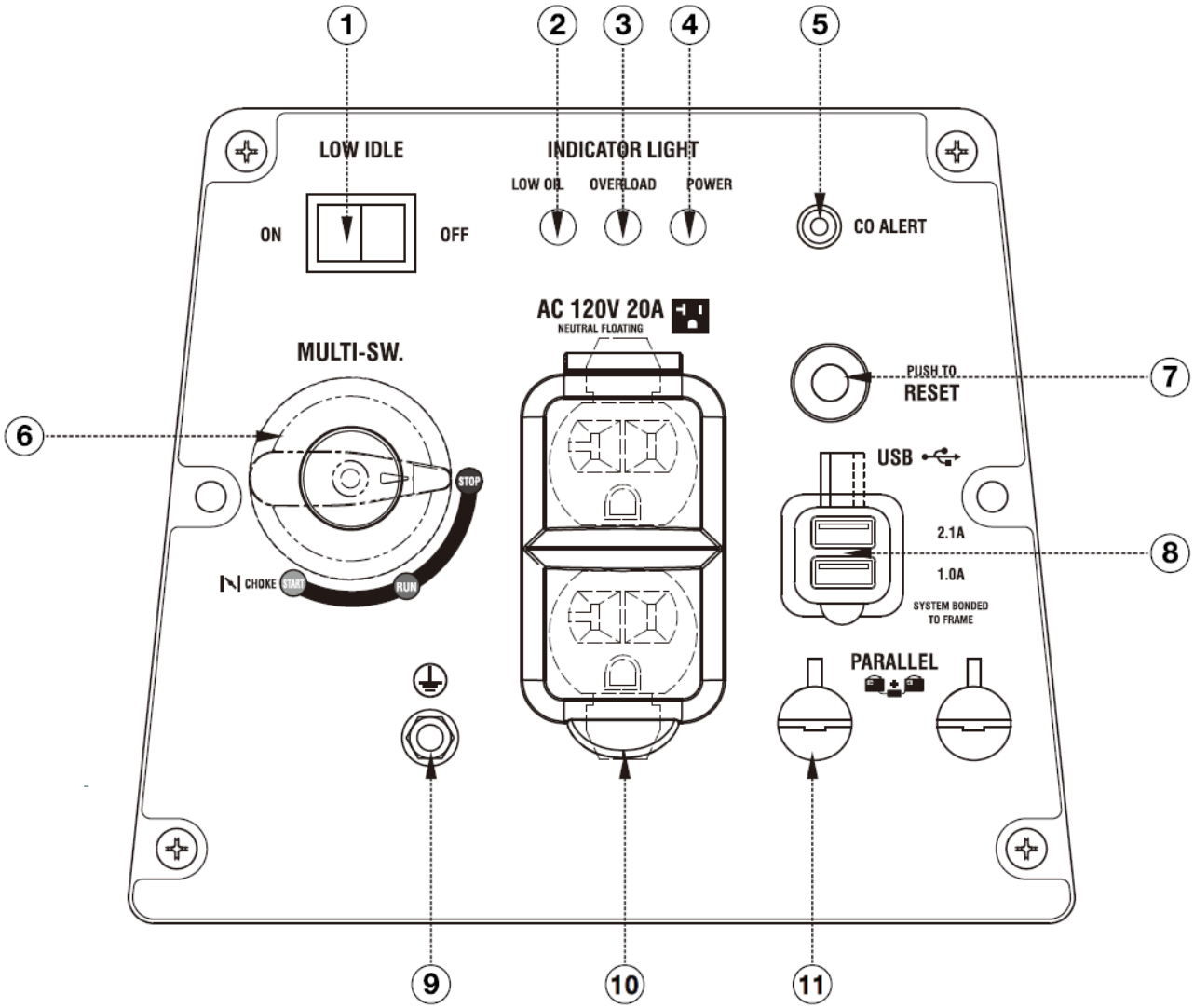




**FIGURE 1A/1B:**
Serial Number locations on the BNG2300iSAC Inverter Generator

- **Ensure Both Numbers Match**
- **Write Down Serial Number on Front Page of this Manual**

## Control Panel Functions




**1 - Low Idle Switch**: When ON, engine will run at fuel-optimized level for load

**2 - Low Oil Alarm**: Indicates low oil level

**3 - Overload Alarm**: Indicates overload condition

**4 - Power Indicator**: Indicates power-ready

**5 - CO Alarm:** IF flashing RED, move to ventilated area immediately; IF flashing YELLOW, sensor malfunction is detected. Service the sensor immediately

**6 - Multi-Switch**: Turn to CHOKE to start engine; adjust to RUN when running. Switch to OFF to stop the inverter.

**7 - Reset:** If overload condition exists, engine will run with no power output. Unplug devices, then select reset breaker.

**8 - USB Duplex**: 5V DC 1 A / 2.1 A

**9 - Ground Terminal:** The ground terminal is used for external ground for the inverter.

10 - 120V AC 20A 5-20R Outlet: Maximum outlet capacity is 20 A.

**11 - Parallel Connection Set**: Sockets are used to connect two inverter generators and may not be used for AC power outlet. Parallel kit must be purchased separately; use only approved parallel kit for this inverter generator set.

# Preparing for Use

## ADD ENGINE OIL BEFORE FIRST USE

**THIS GENERATOR IS NOT SHIPPED WITH ENGINE OIL. Do NOT attempt to start the generator without adding engine oil to the generator.**

- Use SAE 10W-30 motor oil for this generator; API standard Type SE or higher.

1. Place the generator on a flat, secure surface
2. Use a Phillips-head screwdriver to loosen the cover screw on the right side cover of the unit
3. Remove the right side cover, then locate the oil plug and dipstick. (FIGURE A)
4. Remove the oil plug/dipstick (unscrew, counter-clockwise)
   - The dipstick is marked with a fill line that is the proper fill level. (FIGURE B)
   - ADD SAE 10W-30 engine oil (FIGURE C)
     **Be careful not to under-fill or exceed the recommended oil fill level when operating this generator.**
     - **Use the guide on the dipstick (Figure B) to measure oil fill**
     - **The oil capacity for this generator is 0.12 gallons (0.45 liters)**
5. When the engine oil is filled to the proper level, re-insert the dipstick into the threaded receptacle, and hand-tighten by turning clockwise until the oil plug/dipstick is firmly secured. Be careful to avoid mis-threading the plug when replacing the dipstick.
6. Replace the right side cover of the generator
7. Re-secure the right side cover using the bolt that was removed in Step 1; make sure that the screw is threaded properly before securing. Do not over-tighten.

**The recommended oil type for normal use is SAE 10W-30 motor oil. The diagram shown in FIGURE D indicates optimal engine oil usage for more extreme weather conditions, including the first 5 hours of generator usage.**


FIGURE A

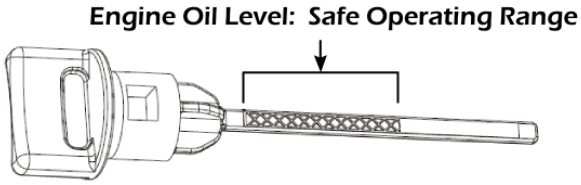



FIGURE B

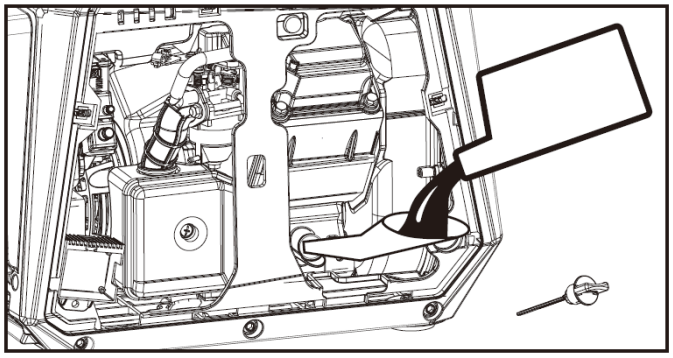


FIGURE C

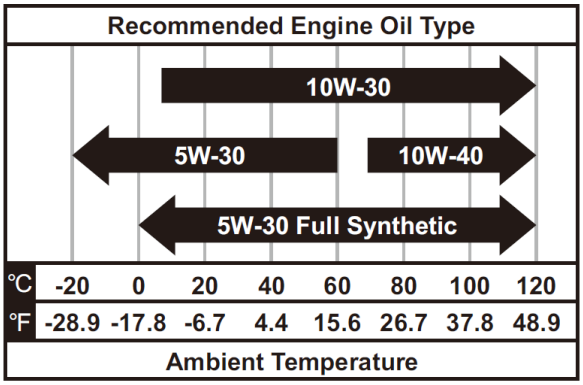



FIGURE D

## ADDING FUEL (GASOLINE ONLY) TO THE GENERATOR

**DANGER**

- Gasoline is highly flammable and toxic, follow all safety procedures and instructions
- Do not overfill the fuel tank; avoid fuel spills
- Secure fuel tank cap after fueling before attempting to start the generator

**ATTENTION**

- After adding fuel, clean any gasoline residue using a clean, soft cloth to avoid damage to the plastic exterior parts of the generator.
- Use only unleaded gasoline with this generator to avoid damage to engine or engine parts; Use 87-91 octane, **do NOT use gasoline containing greater than 10% ethanol**.
- This inverter generator is strictly a gasoline-powered generator. Alternative fuels can not be used with this generator.

1. Remove the fuel tank cap by twisting in a counter-clockwise direction
2. Use the included funnel when adding gasoline to the generator
3. Carefully fill the fuel tank; do not exceed the indicated fuel maximum fill line. The maximum fill line is indicated by the red insert in the fuel filter under the fuel cap. **See Figure E**.

- **Fuel capacity for the BNG2300iSAC Inverter Generator is 0.9 gallons (3.6 Liters)**
- **Do NOT use gasoline that contains more than 10% ethanol (i.e.E85)**

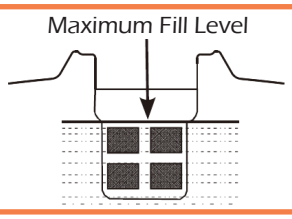



**FIGURE E**
Maximum Fuel Fill

### Generator "Break-In"

The first five hours of usage is commonly referred to as the break-in period. The purpose of the break-in period is to seat the rings of the piston. During the break in period, it is recommended to operate the generator below 50% of the running wattage rating. It is also recommended to vary the load occasionally to allow stator windings to heat and cool. It is not necessary to run the generator for five hours straight to do the break-in period. The generator can run for five hours over any period up until they reach those five hours.

## INSPECTION: Prior to Each Use

**WARNING**
Inspect all components prior to each use. System parts and components may be damaged even when the generator is not in-service.

**Fuel**

- Check fuel level before each use, add gasoline as needed

**Oil**

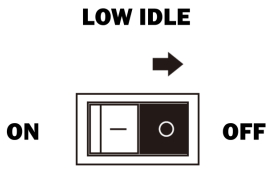
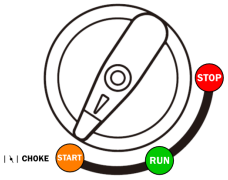
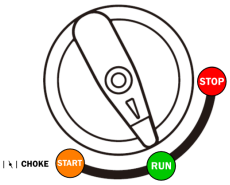
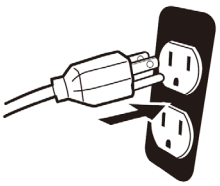
- Check the oil level by removing the right side cover, and using the dipstick. Oil level must be in the safe operating range as indicated by the hash marks in Figure B.
- While checking the oil level, inspect for any oil leaks in the bottom of the casing or under the generator

**During Operation**

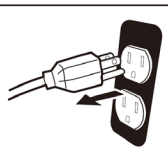
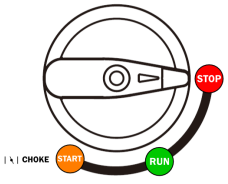
- Observe the running condition of the generator; abnormal conditions or running speed may indicate a maintenance issue; contact BN Products-USA™ Customer Service at (800) 992-3833 when you have questions or need assistance.

# Using the Inverter Generator

## STARTING

| | | |
|---|---|---|
| **1** | • Remove all devices (load) from outlet plugs<br>• No electrical devices should be connected to the generator | |
| **2** | • Switch the Low Idle Switch to "OFF" |  |
| **3** | • Turn the Multi-Switch to the "CHOKE" position |  |
| **4** | • Gently pull the starter cord handle until the cord stops without additional effort.<br>• Hold the generator carrying handle firmly to stabilize the generator (prevent accidents or overturning the generator)<br>• Use a firm and controlled pull to start the engine |  |
| **5** | • After the generator starts, turn the Multi-Switch to the "RUN" position |  |
| **6** | • Once the generator is running, and the Multi-Switch is in the "RUN" position, **it is safe to plug in devices**.<br>• Ensure that devices do not require watts or amperage beyond the generator's running power capacity. |  |

## SHUT DOWN

| | | |
|---|---|---|
| **1** | • Unplug / Remove all devices (load) from outlet plugs<br>• No electrical devices should be connected to the generator |  |
| **2** | • Turn the generator's Multi-Switch to the "OFF" position |  |

## OPERATING ENVIRONMENT

Generators, like all electrical appliances, operate optimally under specific conditions. Standard temperature and pressure ("STP", near sea level) provide the ideal environment for best efficiency. Deviations from these conditions—such as high altitude, extreme temperatures, or humidity—can reduce generator output and, in severe cases, cause performance failures, maintenance problems, or malfunction. Knowing your generator's operating range and these factors is crucial for maintaining long and reliable performance.

**Optimal Use Conditions**

- Temperature Range: **23° F ~ 104° F** (-5° C ~ 40° C)
- Humidity: Below 95% relative humidity
- Elevation: Ideal range is below 4,900 ft (1500 M) above sea level

**Additional Information**: Studies indicate that increases in ambient temperature, humidity, and elevation will cause a portable generator to operate with less efficiency.

- A 9° F (5° C) increase in ambient temperature will reduce the power of a generator by about 2%.
- 30% of increase in relative humidity of air will reduce the power of a generator by about 1.5%.
- Every 1,000 ft (@ 300 m) of elevation increase above sea level will reduce the power a generator by about 4.5%.

**Questions?**

If you have questions or concerns related to the operating environment for your inverter generator, the Customer Service team at BN Products-USA™ may be able to help; contact our representatives at (800) 992-3833.

## USING EXTENSION CORDS

**ATTENTION**

Extension cords are commonly used with portable generators to ensure safe working distances from a running generator. When using an extension cord - always follow these requirements to ensure safety, and prevent damage to your generator and connected devices:

- **Use only heavy-duty, outdoor-rated extension cords.**
    - Indoor extension cords should never be used with a portable generator.
- **Ensure the cord's wattage rating exceeds the total wattage of all connected appliances.**
- **Choose cords long enough to keep the generator outdoors, far from windows, doors, and vents.**
- **Inspect cords for cuts, tears, and missing prongs before use.**
- **Prevent cords from being pinched or crushed; follow all safety labels, including length limits.**
- **DO NOT ATTEMPT to connect a generator as a household backup power source. Backup power wiring must be installed by a licensed, professional electrician.**

## CONNECTING DEVICES TO YOUR INVERTER GENERATOR

**ATTENTION**

- Make sure that all electrical equipment, including wires and plugs, are in good condition before connecting to the generator
- All loads powered by the generator must be within rated load (watts, amperage) range of the generator, and connected electrical equipment

| | |
|---|---|
| **1** | START the generator engine following the instructions contained in this Operator Manual |
| **2** | Turn the Low-Idle control switch to the "ON" position* if desired |
| **3** | Insert the plug of a corded device into the AC outlet; or if applicable, you may also power or charge USB-powered devices using the 1A or 2A USB receptacles |
| **4** | Ensure that the generator is able to generate output (Output LED indicator) |
| **5** | It is safe to turn on your electrical device or equipment if all safety and preparation steps are followed |

***Turning the Low-Idle switch to the "OFF" position will allow engine speed to increase for maximum output. When this is "ON," engine speed is determined by load demand. If powering multiple loads, power on the device with the largest load demand first, then power on devices or equipment with the smaller load requirement.

### Generator Grounding

The need to ground a portable generator depends on its intended use. If using extension cords alone, grounding with a ground rod is not necessary.

However, when connecting the generator to an electrical panel, building electrical system, manual transfer switch, RV, or similar applications, grounding with a ground rod is required. For proper grounding, the rod should be earth-grounded and connected to the ground terminal on the front of generator, using a ground cable. Custom installations to building electrical systems or home power sources should be performed by a qualified and licensed electrician.

It is important to note that an operator must adhere to all applicable federal, state, and local regulations regarding generator grounding. Please consult all appropriate guidelines to ensure that all relevant regulations are met.

This inverter generator features a grounding post designed to secure a ground wire with a 1/4" (6.35 mm) ring terminal. (**See Figure F**)

Consult local regulations and professional assistance if you need help understanding gauged copper and ground rod requirements in your area.

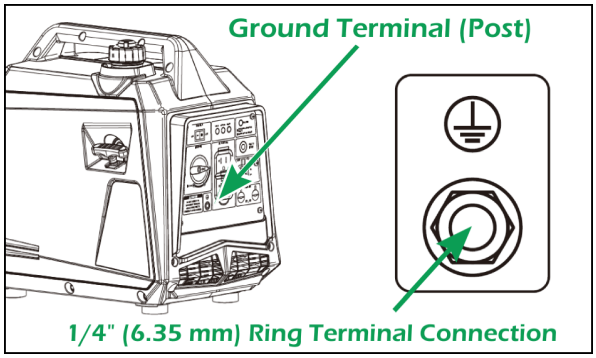



**FIGURE F**

## PARALLEL OPERATION - BNG2300iSAC Inverter

The parallel connection ports allow you to connect two generators to increase the total available electrical power. Parallel kits (not included with generator) may only be used with two **identical** generators (make and model) that provide the same power flow at the same frequency. Follow the instructions included with your parallel connection kit for proper installation and operation.

**Parallel Connectors (120V OUTPUT)**: To increase AC power output, the connector sockets are used to connect the two identical inverter generators with paired (+/-) terminal connections and ground on each generator. A parallel power outlet included with a parallel kit is then used as the combined power source from two generators running in parallel. (See illustration in Figure G to indicate parallel kit connections)

Th BNG2300ISAC Inverter Generator supports 120V AC parallel output only when a parallel kit is attached to two BNG2300iSAC generators. This generator set does **not** include a 240V connector.

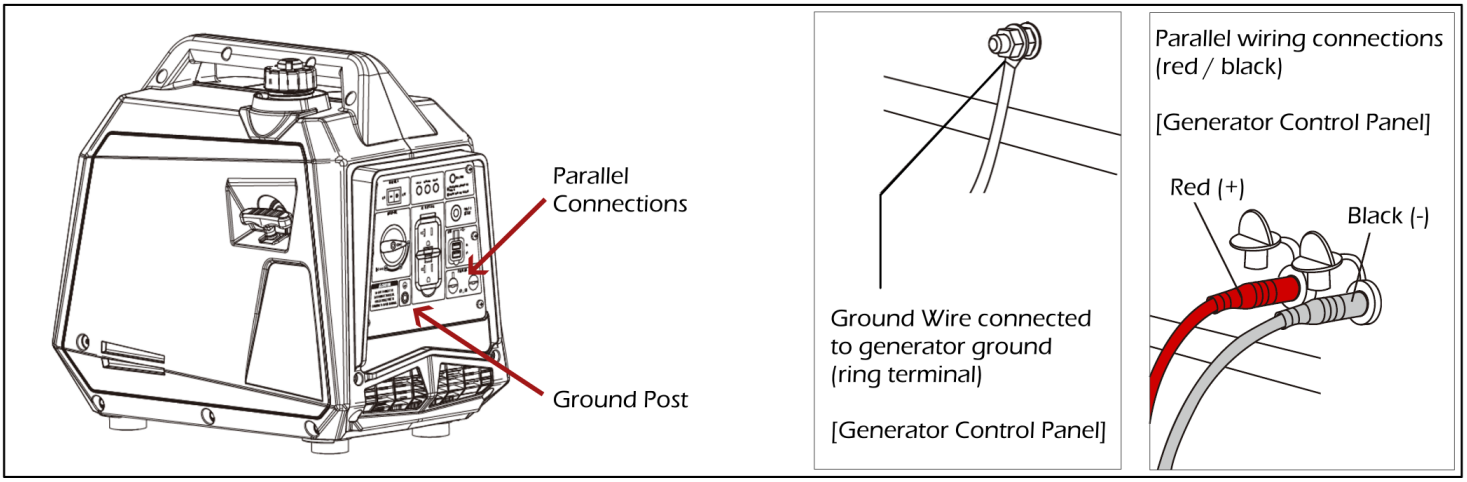



**FIGURE G**

Parallel Kits +/- cabling and ground connections - Generator control panel (front)

**WARNING**

TO PREVENT SERIOUS INJURY, DEATH, OR GENERATOR AND/OR EQUIPMENT DAMAGE FROM ELECTRIC SHOCK:

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

# Service and Maintenance

## Spark Plug Inspection & Replacement

The generator's spark plug should be inspected regularly to ensure consistent starting performance.

- Make sure the generator is not running and cool; remove the Spark Plug Service cover on the top of the generator, then remove the spark plug cap covering the spark plug. (**See Figure H**)

### Visual Inspection

- Use the spark plug socket wrench to insert into the spark plug housing, and turn counterclockwise to remove the spark plug. (**See Figure I**)
- Examine the spark plug for signs of wear, including cracks, damage, debris, or discoloration.
- A good spark plug will have a light brown or gray-tan color
- Look for excessive deposits, like black/carbon soot or oily residue

### Gap Test

- Measure the gap between the electrodes using a wire gauge or feeler gauge.
- Adjust the gap if necessary, using a small tool to gently bend the side electrode. (**See Figure J**)

**Replacement** - Consider replacing the spark plug if there are signs of wear, damage, deposits, or if the generator fails to start if spark plug is suspected. Spark plug ignition may also be tested with a spark tester; follow instructions from the manufacturer of any spark tester used.

- If replacing or re-installing the spark plug, use the socket wrench to thread the spark plug clockwise into the threaded socket. Optimal torque is 12.5 N.m if a torque wrench is used in place of the socket tool.

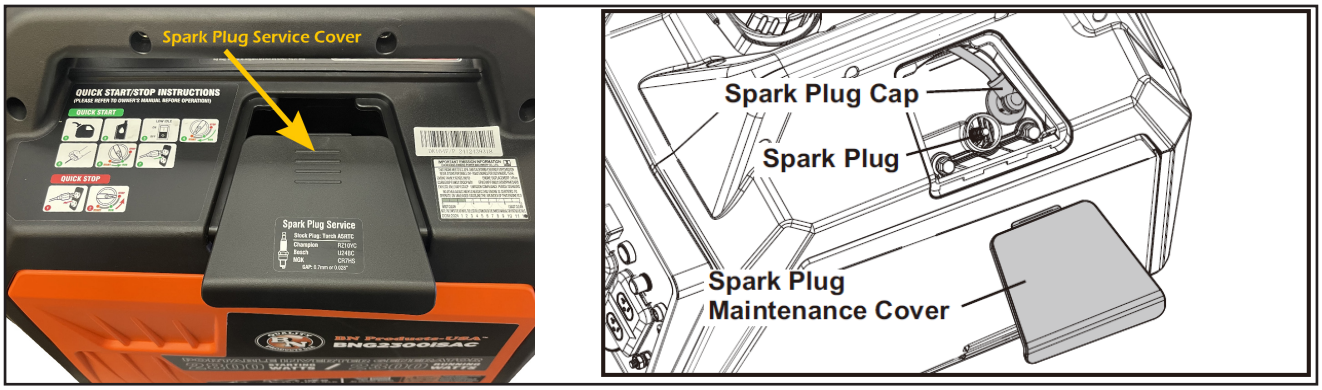



**FIGURE H**

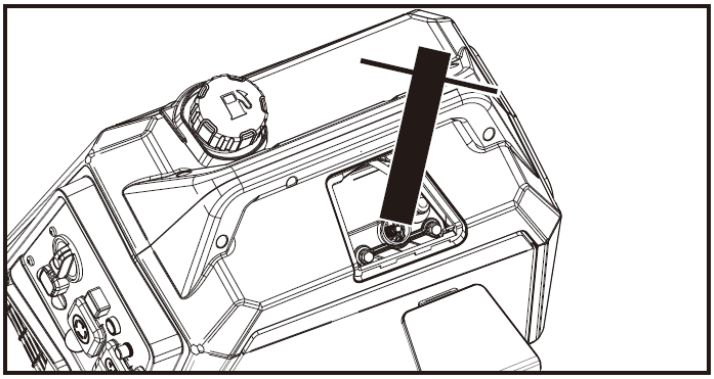


**FIGURE I**

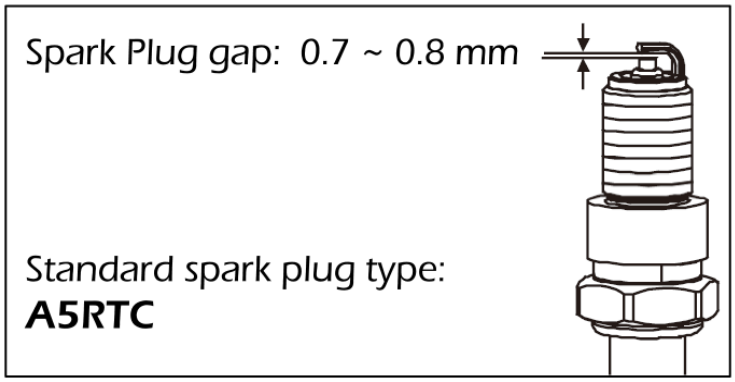



**FIGURE J**

## AIR CLEANER MAINTENANCE & REPLACEMENT

Clean the air filter after the first 25 hours of use. Following that point, clean or replace the air filter every 6 months or after each 50 hours of use. Clean or replace the filter more often when used in dusty conditions - always replace the air filter foam element every two years or 100 hours of use.

### Clean the Foam Filter Element

Wash the foam air filter in a solution of household detergent and warm water, rinsing completely and thoroughly. Allow the foam element to dry completely before re-installing.

### Replace Air Filter

A dirty air filter will affect engine performance if not replaced on a regular basis.

- Loosen the right side cover bolt to remove the right side cover of the generator (**See Figure K**)
- Locate the air filter enclosure, and remove the screws and the cover (**See Figure L**)
- Remove the foam air filter.
  - (Recommended) If replacing the foam air filter, insert the new filter; be sure to use a damp cloth to clean any residue from the air filter cover when re-installing.
  - There can be some benefit from cleaning a dirty foam filter element; if you choose to clean the filter - inspect the filter frequently and replace as soon as possible
- Re-assemble the air filter cover back into its original position, firmly securing with screws.
- Re-attach the right side cover on to the generator frame; tighten the bolt firmly to secure the side cover

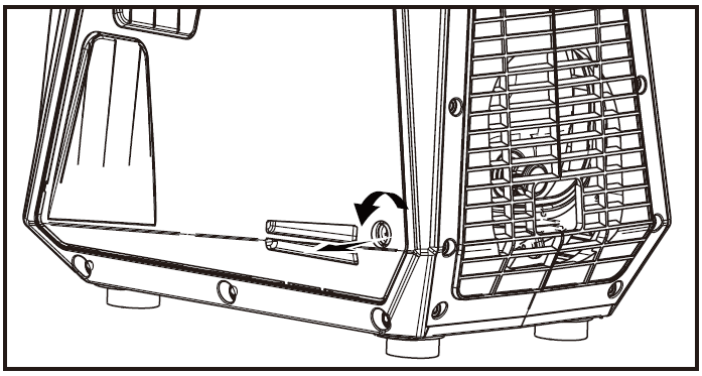


**FIGURE K - Right Side Cover/Bolt**

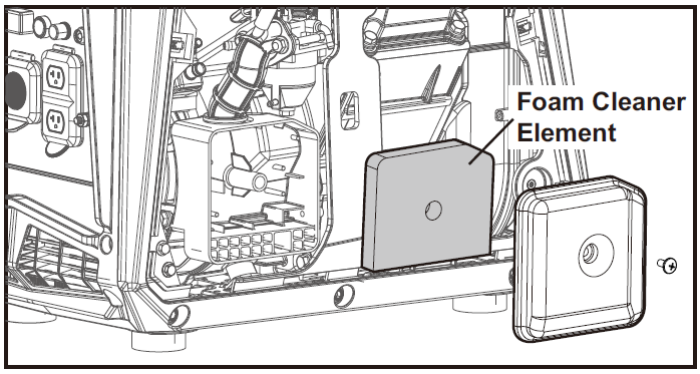



**FIGURE L - Air Filter Cover/Element**

**ATTENTION**

Never start the generator engine without an air filter installed, or before a filter has been replaced, if one has been removed. Serious engine damage or buildup of toxic fumes may occur.

## CARBURETOR ADJUSTMENT

- A carburetor may need to be adjusted, especially if the engine is not running smoothly or appears to stall.
- Contact Customer Service for assistance with locating a repair center, if necessary. It is recommended that carburetor servicing or adjustment be performed by an authorized repair center.

## CHANGE ENGINE OIL

**WARNING**
Use extreme caution when draining the oil after turning off the generator. During operation, the oil is very hot after the generator has been running. Direct exposure to hot engine oil may cause serious burns.

- Place the generator on a stable and flat surface outdoors. It is recommended that the generator is started and run for several minutes to warm the oil temperature (never run the generator indoors or where exhaust can build up).
- Stop the generator.
- Loosen the right side cover bolt, and remove the exterior cover plate. Be careful to avoid contact with engine parts that may remain very hot.
- Remove the oil plug/dipstick by un-screwing in a counter-clockwise direction
- Place an oil pan under the engine, then tilt the generator to pour the used oil out of the generator. Tilt the generator at a steep enough angle, and make sure that all of the used oil is drained from the engine. (**See Figure M**)

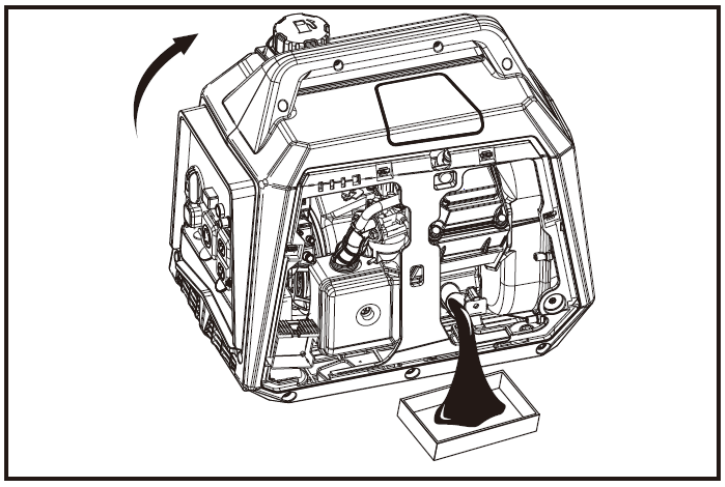


**FIGURE M (Left)**

Title the generator in the direction of the oil drain and fill opening, emptying oil into an oil pan to drain used oil from the generator engine

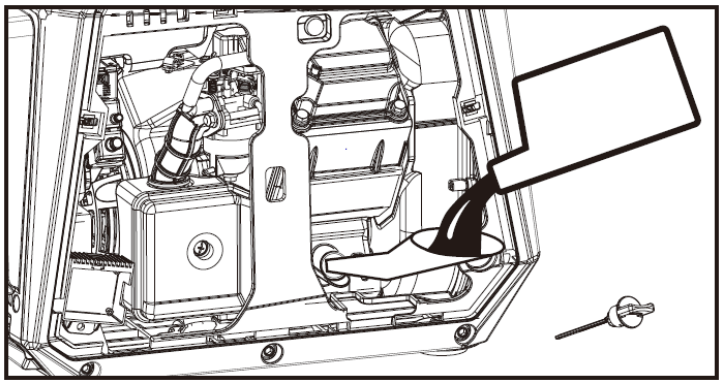


**FIGURE N (Right)**

Fill engine oil using SAE-10W-30 motor oil for general use. Be careful to NOT overfill the engine beyond the maximum fill level marked on the dipstick

- Use a funnel to add new oil until the oil level is at the proper level, as indicated by the hashed marks on the dipstick. The safe operating oil fill range is indicated in **Figure B** under "**Preparing for Use**."
- SAE 10W-30 motor oil is recommended for general use
- Do NOT overfill engine oil; if the oil reservoir is overfilled, internal damage to the engine may occur if the engine is started. (**See Figure N**)
- Replace the dipstick by firmly twisting into place in a clockwise direction.
- Re-assemble the right side cover, and secure the side cover bolt.

## Sediment Cup (Fuel Tank Filter Screen) - Maintenance

**WARNING**

Be aware of the environment around your generator before opening the fuel tank cap. Never open the fuel tank cap near a heat source, or where sparks or flames could be present, including smoking.

- Check the Multi-Switch to make sure that it is in the "OFF" position
- Open the fuel fill cap by twisting in a counter-clockwise direction
- Remove the fuel tank filter screen by lifting from the fuel inlet
- Look for signs of trapped debris or particles
- If necessary, you may clean the sediment cup using a non-flammable or high flash-point solvent (**See Figure O**)
- Rinse thoroughly with the solvent to remove any remaining sediment and then allow all components to dry completely.
- Re-assemble by re-installing the sediment cup filter, ensuring that it is properly seated in the fuel tank inlet (**See Figure P**)
- Add gasoline if necessary, and re-install the fuel tank cap firmly
- Use a soft cloth to wipe down any external parts of the generator that may have residues or contaminants from cleaning generator parts

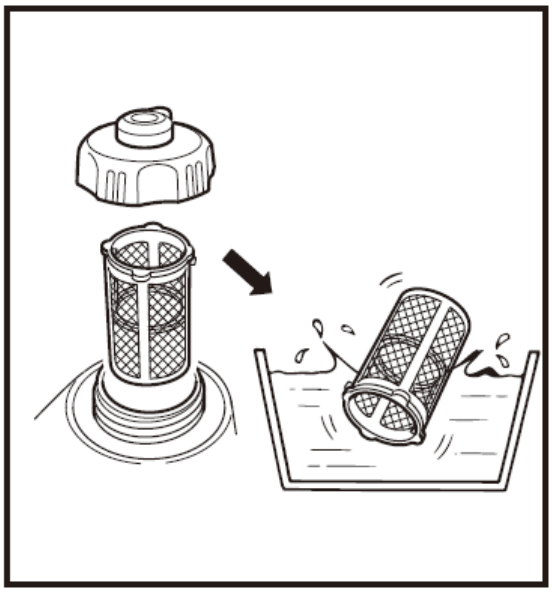


**FIGURE O**

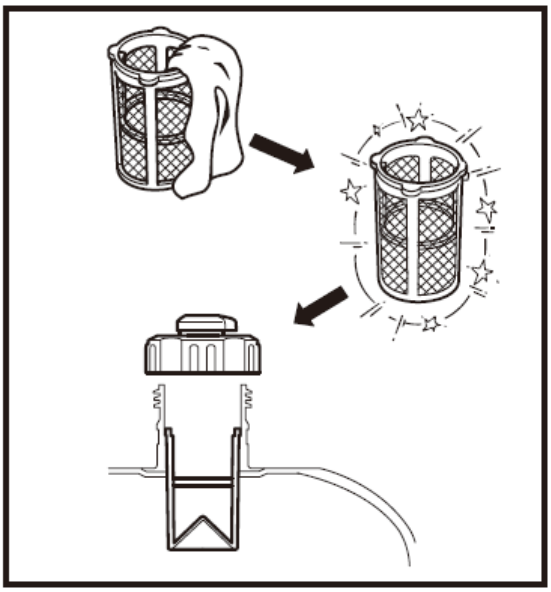


**FIGURE P**

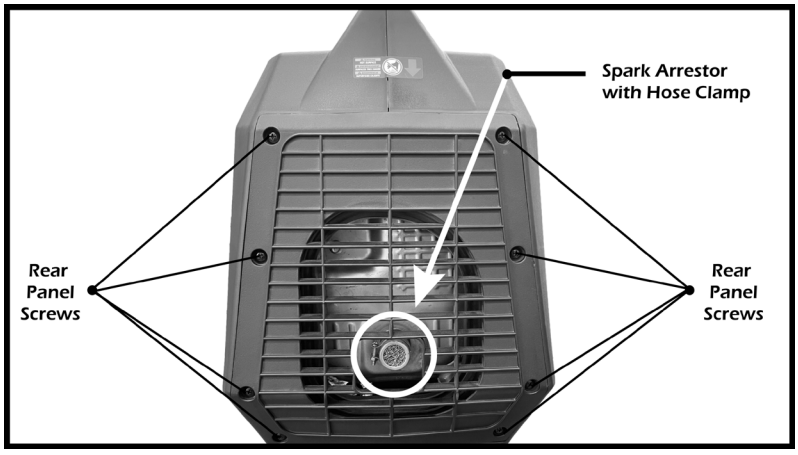
Fuel Inlet - Sediment Cup (Screen Filter)

## Spark Arrestor - Inspection and Cleaning

This inverter generator is equipped with a muffler attachment known as a spark arrestor. This is a device that traps or destroys hot exhaust particles to prevent fires. It's crucial for safety, especially in areas with dry vegetation or where regulations require their use.

Carbon deposits may build up on the spark arrestor, which may inhibit exhaust flow or overall performance of the generator. Service the spark arrestor every 100 hours of use to keep the device functioning as designed, and operating the generator at peak performance and safety:

- Allow the engine to cool; disconnect the spark plug cap
- Remove the plastic rear grille panel using a Phillips head screwdriver; remove the eight (8) screws securing the panel, and place the panel and 8 screws in a safe location.
- The spark arrestor (**See Figure Q**) is secured to the muffler with a hose clamp style brace. After the grille panel has been removed, use the Phillips head screwdriver to loosen the clamp screw sufficiently, so that the spark arrestor may be slide off of the unit in the direction away from the generator.
- Inspect the spark arrestor and exhaust port. Use a small brush to remove any carbon deposits from the screen; replace the spark arrestor if torn or damaged. (**See Figure R**)
- Once the spark arrestor and exhaust port are clean and free of debris and damage, replace the spark arrestor back onto the exhaust port, and firmly tighten the clamp screw. Do not over tighten.
- Replace the grille panel, securing it with the eight screws that were removed to remove the panel.



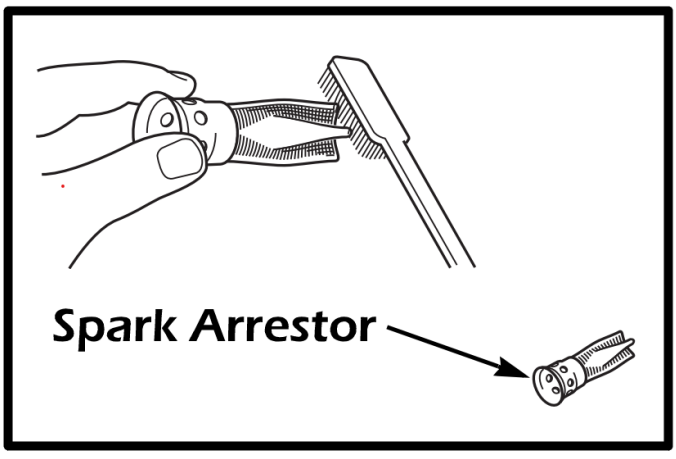




**FIGURE Q** **FIGURE R**

Generator rear grille panel, mounting screws, and spark arrestor (Q);
Clean carbon deposits from spark arrestor device and exhaust port (R)

## MAINTENANCE SCHEDULE

Refer to the Maintenance Schedule table in Figure S. Use this table as a general guide to inspect and maintain the working condition of this generator; perform additional inspection and service as needed, or if you suspect servicing is necessary between scheduled maintenance intervals.

| Maintenance Item | Maintenance Task | Each Use | First 25 Hours of Use | Every 3 Months or 50 Hours of Use | Every year or 100 Hours of Use |
|---|---|---|---|---|---|
| Engine Oil | Check - Fill | X | | | |
| | Replace | | X | X | |
| Air Cleaner Element | Inspect | X | | | |
| | Clean | | X | | |
| | Replace | | | X | |
| Sediment Cup (Fuel Fill Inlet) | Clean | | | | X |
| Spark Arrestor | Inspection/Clean | | | | X |

**FIGURE S**

# Transportation and Storage

## TRANSPORTATION

- Allow the generator to cool before transporting or loading into a vehicle. Avoid contact with exhaust system or hot engine components.
- Inspect the fuel fill cap to ensure that it is firmly secured, and make sure that no excess fuel is able to spill or leak outside of the generator.
- Gently pull the starter cord handle until you feel resistance, allowing the intake and exhaust valve to be closed.
- Turn the Multi-Switch to the "OFF" position to prevent fuel from leaking into or flooding the carburetor.
- Use proper lifting techniques when lifting or moving the generator at all times.
- When transporting - ensure that the generator is placed on a level surface in the bed of a vehicle. Secure the generator to avoid excess movement; use tie-downs or straps as needed, avoiding contact with the control panel components.
- Never operate the generator during transportation.

## GENERATOR STORAGE

Proper storage is essential for readiness, for the next time that you plan to use the generator. Follow each storage recommendation to avoid starting problems, breakdown of old gasoline, and rust or corrosion of generator or engine parts. This section of the operator manual will cover:

- Drain or Treat remaining fuel
- Change Oil and coat engine cylinder
- Generator cleaning
- Proper choice of storage location

### Fuel

The Manufacturer Limited Warranty will not cover fuel system damage or engine performance problems that are a direct result of neglected storage preparation, or problems stemming from aged gasoline.

| **During Normal Usage** | **More Info:** |
|---|---|
| Never use gasoline containing more than 10% ethanol. | Not all automotive fuel is safe for yoru generator. Higher levels of ethanol in fuel may attract water moisture, which can create solids in the fuel or fuel lines, corrosion, or cause other engine performance problems. |
| Store gasoline in a clean, plastic, sealed container approved for gasoline storage. Always store fuel away from direct sunlight; if the container is vented, keep the container airtight with the vent closed. | Plastic storage containers remove the risk of rust particles and other metallic elements from entering your fuel tank. Gasoline will break down more quickly when exposed to sunlight, temperature change, and air. |
| Use fuel stabilizer if you expect gasoline to remain in the fuel tank or in storage for more than 60 days. | Follow manufacturer directions when adding a fuel stabilizer. Remember stabilizer will extend the life of gasoline, and will not reconstitute stale or broken down fuel. |
| Keep your generator's tank full of fresh fuel when not in use; make sure that the Multi-Switch is in the OFF position to avoid leakage into the carburetor or fuel system. | If a fuel tank is only partially filled, air in the tank may cause the fuel to break down more rapidly. |
| Keep the air filter clean at all times, and check before every use. | Clean air filtration will prevent dirt or other contaminents from entering the carburetor. When this occurs, small lines and passages within the carburetor could become blocked or constricted. |
| **1 Month Before Next Use** | **More Info:** |
| Keep the generator fuel tank full of fresh fuel when not in use; ensure that the Multi-Switch is in the OFF position | If a fuel tank is only partially filled, air in the tank may cause the fuel to break down more rapidly. |
| **1 to 3 Months before Next Use** | **More Info:** |
| If you did not add fuel stabilizer to your fuel storage container, fill your generator tank with fresh gasoline. | If a fuel tank is only partially filled, air in the tank may cause the fuel to break down more rapidly. |
| Add fuel stabilizer to the genrator's fuel tank according to manufacturer instructions. | Fuel stabilizer will extend the life of gasoline, and will not reconstitute stale or broken down fuel. |
| Run the engine outdoors for 10 minutes | This will help treated gasoline replace older fuel throughout the fuel system. |
| More than 3 Months Before Next Use | More Info: |
| Avoid leaving fuel in the fuel tank. Do not allow gasoline to remain unused for more than 90 days of inactivity. | Fuel stabilizers have a shelf life, meaning that they are only helpful for a limited period. If your generator is going to be inactive for more than 90 days, it is best to store with an empty fuel tank. |

**Long-Term Storage - Fuel Drainage**

The following are recommended procedures for long term storage (> 90 days) of the generator.

- With the generator not running, make sure that the Multi-Switch is moved to the "OFF" position.
- Open the fuel tank cap, remove the fuel sediment cup screen. Use a pump to empty remaining fuel into a storage tank for storage or proper disposal. (**See Figure T**)
- Start the engine to consume or burn off any fuel left in the carburetor, and shut the generator down, with the Multi-Switch in the "OFF" position.
- Loosen the bolt on the right side cover, removing the cover panel.
- Unscrew the fuel drain plug on the carburetor (**Figure U**), and drain the remaining gasoline into a fuel storage tank for storage or proper disposal.
- Replace the fuel drain plug, tightening firmly. Do not over-tighten.

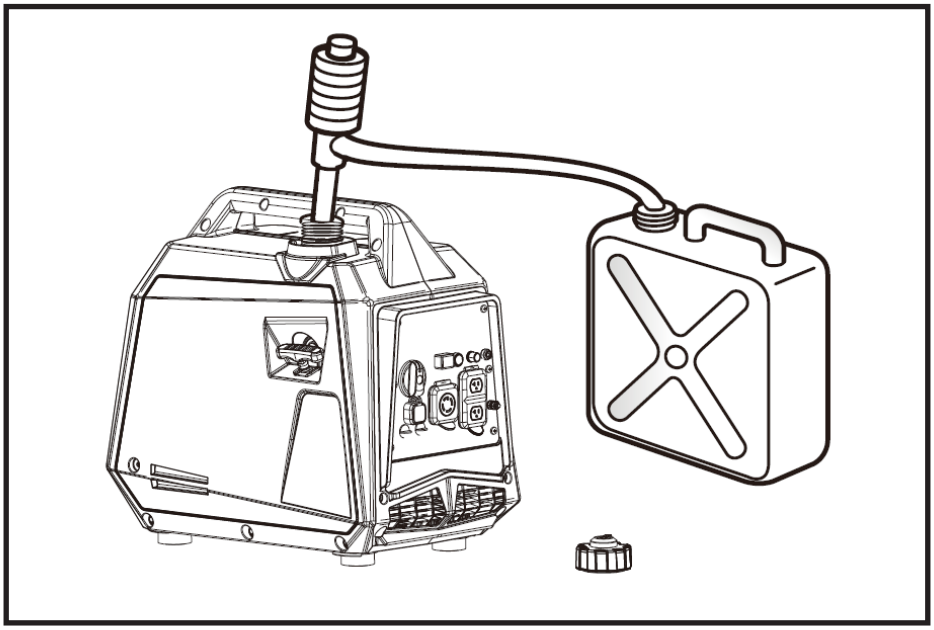


**FIGURE T**

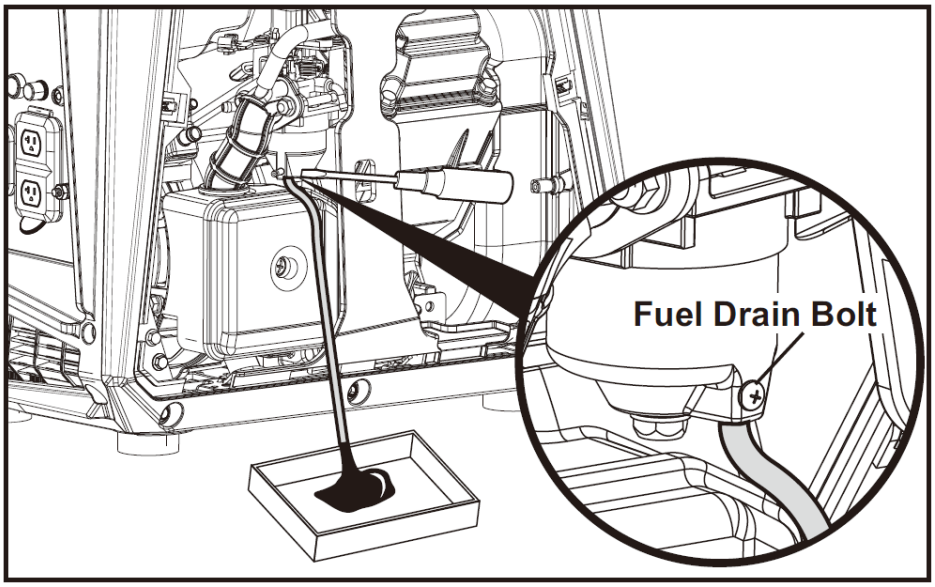



**FIGURE U**

**Long-Term Storage - Engine/Oil Maintenance**

- With the right side cover removed from the generator:
- Locate the engine oil dipstick. Unscrew the dipstick, and drain the engine oil.
- Add new engine oil as explained in the 'Change Engine Oil" procedure in this manual.
- Insert and secure the dipstick by threading firmly into place, being careful not to over-tighten.
- Remove the spark plug cap and the spark plug.
- Pour a small amount of clean oil into the combustion chamber. Turn the crankshaft several times to distribute the oil, then re-install the spark plug and the spark plug cap. (**See Figure V**)
- Gently pull the starter handle until you feel resistance, which allows the intake valve and the exhaust valve to be properly closed.
- Place the generator set in a clean and dry area, free from excessive moisture, heat, or cold conditions.

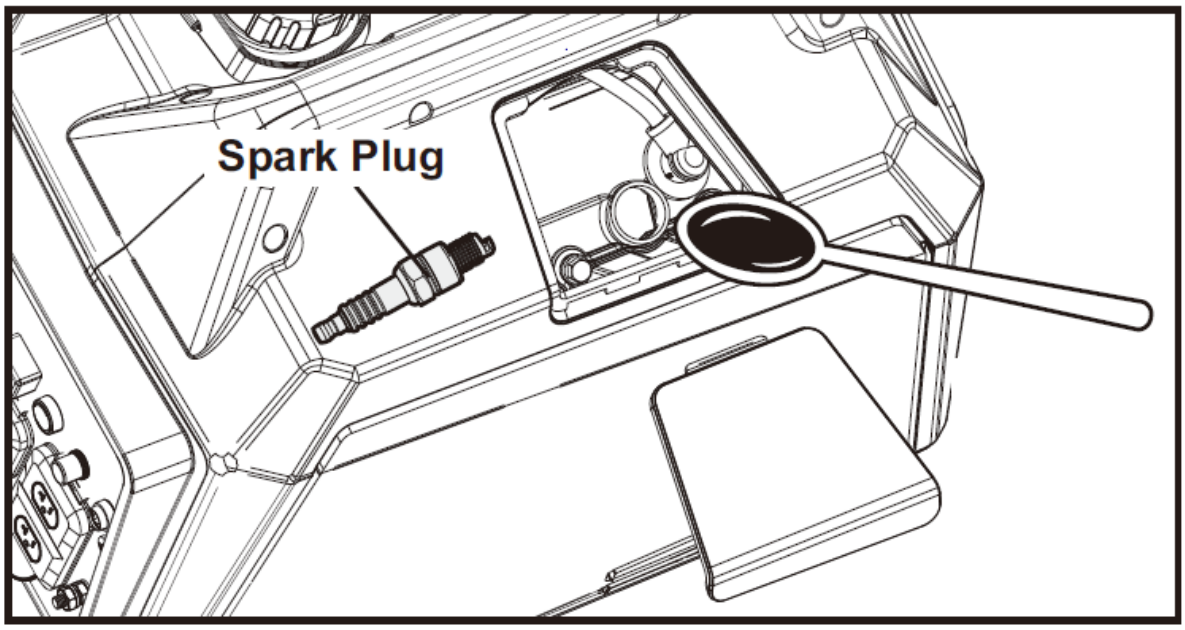



**FIGURE V**

Remove Spark Plug, add a small amount of clean oil into the combustion chamber; turn the crankcase several times to distribute oil; replace spark plug and spark plug cap.

# Troubleshooting

| Problem | Possible Causes | Probable Solutions |
|---|---|---|
| Engine will not start | FUEL RELATED: | FUEL RELATED: |
| | 1. No fuel in tank or fuel valve closed. | 1. Fill fuel tank with fresh 87+ octane stabilizer-treated unleaded gasoline and open fuel valve. **Do not use gasoline with more than 10% ethanol (E15, E20, E85, etc.).** |
| | 2. Choke not in START position, cold engine. | 2. Move Choke to START position. |
| | 3. Gasoline with more than 10% ethanol used. (E15, E20, E85, etc.) | 3. Clean out ethanol rich gasoline from fuel system. Replace components damaged by ethanol. Use fresh 87+ octane stabilizer-treated unleaded gasoline only. **Do not use gasoline with more than 10% ethanol (E15, E20, E85, etc.).** |
| | 4. Low quality or deteriorated, old gasoline. | 4. Use fresh 87+ octane stabilizer-treated unleaded gasoline. **Do not use gasoline with more than 10% ethanol (E15, E20, E85, etc.).** |
| | 5. Carburetor not primed. | 5. Pull on Starter Handle to prime. |
| | 6. Dirty fuel passageways. | 6. Clean out passageways using fuel additive. Heavy deposits may require further cleaning. |
| | 7. Carburetor needle stuck. Fuel can be smelled in the air. | 7. **Gently** tap side of carburetor float chamber with screwdriver handle. |
| | 8. Too much fuel in chamber. This can be caused by the carburetor needle sticking. | 8. Turn Choke to RUN position. Remove spark plug and pull the start handle several times to air out the chamber. Reinstall spark plug and set Choke to START position. |
| | 9. Clogged Fuel Filter. | 9. Replace Fuel Filter. |
| | IGNITION (SPARK) RELATED: | IGNITION (SPARK) RELATED: |
| | 1. Power Switch at OFF position. | 1. Turn Power Switch to ON. |
| | 2. Spark plug cap not connected securely. | 2. Connect spark plug cap properly. |
| | 3. Spark plug electrode wet or dirty. | 3. Clean spark plug. |
| | 4. Incorrect spark plug gap. | 4. Correct spark plug gap. |
| | 5. Spark plug cap broken. | 5. Replace spark plug cap. |
| | 6. Circuit breaker tripped (electric start models only). | 6. Reset circuit breaker. Check wiring and starter motor if breaker continues to trip. |
| | 7. Incorrect spark timing or faulty ignition system. | 7. Have qualified technician diagnose/ repair ignition system. |
| | COMPRESSION RELATED: | COMPRESSION RELATED: |
| | 1. Cylinder not lubricated. Problem after long storage periods. | *Most problems related to engine components or compression require service from a qualified and authorized repair center. |
| | 2. Loose or broken spark plug. (Hissing noise will occur when trying to start.) | This includes failure to start due to an extended period of storage. It is best have the engine serviced by an authorized repair professional to address starting and run problems. |
| | 3. Loose cylinder head or damaged head gasket. (Hissing noise will occur when trying to start.) | If necessary, contact Customer Service for assistance if you suspect engine damage or malfunctioning engine parts. |
| | 4. Engine valves or tappets mis-adjusted or stuck. | |
| | ENGINE OIL RELATED: | ENGINE OIL RELATED: |
| | 1. Low engine oil. | 1. Fill engine oil to proper level. Check engine oil before EVERY use. |
| | 2. Engine mounted on slope, triggering low oil shutdown. | 2. Operate engine on level surface. Check engine oil level. |
| | SPARK ARRESTOR RELATED: | SPARK ARRESTOR RELATED: |
| | 1. Spark Arrestor clogged with soot. | 1. Clean and replace Spark Arrestor. |

**Follow all safety precautions whenever diagnosing or servicing the generator or engine.**

| Problem | Possible Causes | Probable Solutions |
|---|---|---|
| Engine misfires | 1. Spark plug cap loose.<br>2. Incorrect spark plug gap or damaged spark plug.<br>3. Defective spark plug cap.<br>4. Old or low quality gasoline. | 1. Check cap and wire connections.<br>2. Re-gap or replace spark plug.<br>3. Replace spark plug cap.<br>4. Use only fresh 87+ octane stabilizer-treated unleaded gasoline. **Do not use gasoline with more than 10% ethanol (E15, E20, E85, etc.).** |
| Engine stops suddenly | 1. Carbon Monoxide level high. Red light on Carbon Monoxide Sensor illuminates.<br>2. CO Sensor Alarm flashes yellow continually shortly after starting.<br>3. CO Sensor Alarm flashes yellow continually after longer period of operation.<br>4. Low oil shutdown.<br>5. Fuel tank empty or full of impure or low quality gasoline.<br>6. Defective fuel tank cap creating vacuum, preventing proper fuel flow.<br>7. Faulty magneto.<br>8. Disconnected or improperly connected spark plug cap. | 1. Leave area immediately and allow area to ventilate thoroughly. Only operate generator outside.<br>2. Carbon monoxide sensor malfunction. Sensor needs service. Do not use the Generator until the sensor is working properly.<br>3. Make sure to operate generator within rated ambient temperature; maintain minimum 5 ft. clearance from all sides.<br>4. Fill engine oil to proper level. Check engine oil before EVERY use.<br>5. Fill fuel tank with fresh 87+ octane stabilizer treated unleaded gasoline. Do not use gasoline with more than 10% ethanol (E15, E20, E85, etc.).<br>6. Test/replace fuel tank cap.<br>7. Have qualified technician service magneto.<br>8. Secure spark plug cap. |
| Engine stops when under heavy load | 1. Dirty air filter<br>2. Engine running cold. | 1. Clean element.<br>2. Allow engine to warm up prior to operating equipment. |
| Engine knocks | 1. Old or low quality gasoline.<br>2. Engine overloaded.<br>3. Incorrect spark timing, deposit buildup, worn engine, or other mechanical problems. | 1. Fill fuel tank with fresh 87+ octane stabilizer-treated unleaded gasoline. **Do not use gasoline with more than 10% ethanol (E15, E20, E85, etc.).**<br>2. Do not exceed equipment's load rating.<br>3. Have qualified technician diagnose and service engine. |
| Engine backfires | 1. Impure or low quality gasoline.<br>2. Engine too cold.<br>3. Intake valve stuck or overheated engine.<br>4. Incorrect timing. | 1. Fill fuel tank with fresh 87+ octane stabilizer-treated unleaded gasoline. **Do not use gasoline with more than 10% ethanol (E15, E20, E85, etc.).**<br>2. Use cold weather fuel and oil additives to prevent backfiring.<br>3. Have qualified technician diagnose and service engine.<br>4. Check engine timing. |
| Attached device doesn't have power | 1. Device not plugged in properly.<br>2. Circuit Breaker tripped.<br>3. Product needs service. | 1. Turn off and unplug the device, then plug it back in again and turn on.<br>2. Turn off and unplug device, reset Circuit Breaker, plug in device and turn on.<br>3. Have product repaired. |
| Attached device begins to operate abnormally | 1. Problem with device.<br>2. Rated load capacity exceeded. | 1. Immediately unplug device. Have device repaired by a qualified technician, or replace device.<br>2. Lower the number of items plugged into the generator to stay within the rated capacity, or use a more powerful generator. |

**Follow all safety precautions whenever diagnosing or servicing the generator or engine.**

## BNG2300iSAC Inverter Generator

| | |
|---|---|
| Rated Power (kW) | 2.3 |
| Max. Power (kW) | 2.8 |
| Engine Model | 164F/P-2 |
| Valve Clearance | Input valve: 0.03~0.08 mm, Output valve: 0.03~0.08 mm |
| Stroke × Bore (mm) | 64×45 |
| Engine Type | 4-stroke |
| Displacement (cc) | 145 |
| Gas Distribution Mode | OHV |
| Cooling Mode | Air-Cooled |
| Rated Speed (RPM) | 4850 |
| Starting Method | Recoil / Pull Start |
| Fuel Tank Volume (gal) | 0.95(3.6L) |
| Fuel Type | Gasoline |
| Lubricating Oil Capacity (gal) | 0.12(0.45L) |
| Lubricating Oil Model | SAE 10W/30 |
| Noise dB (at 7m)(25% load) | 62 |
| Rated Voltage (V) | 120 |
| Rated Frequency (Hz) | 60 |
| Rated Power Factor | 1 |
| Phase Number | Single phase |
| Overall Dimension (in.) | 19.1x11.2x17.9(485×285×455mm) |
| Net Weight (lb.) | 44.1 (20kg) |

# LIMITED MANUFACTURER WARRANTY

**BN Products-USA™** ("Company") warrants this product to the original purchaser to be free of defects in materials and workmanship under normal and appropriate use and service, **for one year or 750 hours of use from the date of purchase.**

The Company responsibility under this warranty is limited to the replacement or repair, at a designated facility, of only the part or parts evaluated by BN Products-USA™ upon inspection to be defective in materials and quality. Any related part/parts determined by BN Products-USA™ to be defective will be either repaired or replaced free of charge. This warranty does not apply to parts considered "wear components" or tools or parts subject to abuse or unauthorized repairs.

Liability of the Company hereunder shall be limited to repair or replacement of the defective part/parts, including labor. It shall not, under any circumstances, include special, incidental, or consequential damages whether or not known by or disclosed by BN Products-USA™. Such repair or replacement shall constitute a fulfillment of the full warranty.

This warranty does not extend to any costs or loss arising from or due to inconvenience, transportation damage, misuse, abuse, accident, theft, vandalism, or a similar incident. This warranty is exclusive and supersedes all other warranties, including any guarantee of quality, expressed or implied

BN Products-USA™ will not be responsible for a replacement unit given to a customer without prior authorization.

BN Products-USA™ has Authorized Warranty Repair Centers throughout the United States. Repairs by an unauthorized warranty repair center may void this Warranty policy.

## Warranty Repair Procedure

Customers owning items purchased from BN Products-USA™ that need repair during the warranty period must follow the following procedure:

- The Customer or Distributor must fill out a Warranty Repair Request Form complete with the customer's name, copy of an invoice, date of purchase, serial number, and contact information. This form is an on-line form available at the URL below; you may also scan the QR Code on this page: **https://www.bnproducts.com/warranty-request/**
- Proof of Purchase and Serial Number are required to submit a Warranty claim
- Contact BN Products-USA™ Customer Service at (800) 992-3833 if you need assistance.

Warranty Request
**SCAN QR CODE**

## Inquiries

BN Products-USA™ Customer Service

Telephone **(800) 992-3833**
Email **mail@bnproducts.com**

# BNG2300iSAC INVERTER GENERATOR

FROM

## BN Products-USA™



The **BNG2300iSAC** is a 2800 Watt (Max) / 2300 Watt (Rated), gasoline-powered inverter generator that is a great addition to our line of BN Products USA™ generators. The compact design and enclosed case make this unit a convenient and lightweight power plant that quietly produces stable power for your job site or recreational needs.

- GFCI protected, offering stable power and parallel capability; Safe for electronics
- Speed Regulation Switch, Fuel Gauge, Low Oil Indicator, and Automatic Shut-off
- Covered receptacles, Carbon Monoxide (CO) Protection with auto-shutoff
- Parallel connection port
- EPA & CARB Certified

## Company Information

**BN Products-USA™**

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Quality Since 1925