






Home Generator Systems

7KW DUAL-MODE BACKUP GENERATOR



Model / Modelo/ Modèle
040248

Operator's Manual
Manual del Operario
Manuel d'utilisation

 WARNING	 ADVERTENCIA	 AVERTISSEMENT
Failure to read and follow the operator's manual and all operating instructions can result in death, bodily injury, and/or property damage.	Si no se leen y siguen las indicaciones del Manual del operario y todas las instrucciones de uso, se pueden producir daños materiales, lesiones o incluso la muerte.	L'omission de lire et de suivre le manuel de l'utilisateur et toutes les directives d'utilisation pourrait entraîner la mort, des blessures corporelles ou des dommages matériels.

SAVE THESE INSTRUCTIONS

Thank you for purchasing this quality-built Briggs & Stratton generator. We are pleased that you've placed your confidence in the Briggs & Stratton brand. When operated and maintained according to the instructions in this manual, your Briggs & Stratton generator will provide many years of dependable service.

This manual contains safety information to make you aware of the hazards and risks associated with gaseous fueled generators and how to avoid them. Because Briggs & Stratton does not necessarily know all the applications this generator could be used for, it is important that you read and understand these instructions. Keep this manual near the generator for convenient reference.

This generator requires final assembly before use. Refer to the Assembly section of this manual for instructions on final assembly procedures. Follow the instructions completely.

Where to Find Us

You never have to look far to find Briggs & Stratton support and service for your generator. Consult your Yellow Pages. There are over 30,000 Briggs & Stratton authorized service dealers worldwide who provide quality service. You can also contact Briggs & Stratton Customer Service by phone at 1-800-743-4115 or on the Internet at www.briggsandstratton.com.

Generator

Model Number 040248
Revision _____
Serial Number _____

Engine

Model Number _____
Serial Number _____

Date Purchased

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Briggs & Stratton Power Products Group, LLC
900 North Parkway
Jefferson, WI 53549

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Safety

Assembly

Controls

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Troubleshooting

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SAVE THESE INSTRUCTIONS

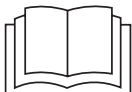







Safety Rules


 This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

The safety alert symbol () is used with a signal word (**DANGER, CAUTION, WARNING**), a pictorial and/or a safety message to alert you to hazards. **DANGER** indicates a hazard which, if not avoided, will result in death or serious injury. **WARNING** indicates a hazard which, if not avoided, could result in death or serious injury. **CAUTION** indicates a hazard which, if not avoided, might result in minor or moderate injury. **CAUTION**, when used without the alert symbol, indicates a situation that could result in equipment damage. Follow safety messages to avoid or reduce the risk of injury or death.


The manufacturer cannot possibly anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and the tags and decals affixed to the unit are, therefore, not all-inclusive. If you use a procedure, work method or operating technique that the manufacturer does not specifically recommend, you must satisfy yourself that it is safe for you and others. You must also make sure that the procedure, work method or operating technique that you choose does not render the generator unsafe.


Hazard Symbols and Meanings

 Read Manual	 Chemical Burns	 Explosive Pressure
 Explosion	 Electrical Shock	
 Fire	 Hot Surface	 Toxic Fumes


 **WARNING**

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

 **WARNING**



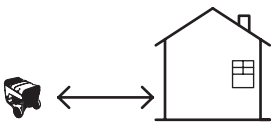
 Running generator gives off carbon monoxide, an odorless, colorless, poison gas. Breathing carbon monoxide can cause nausea, fainting or death.


- Operate generator **ONLY** outdoors.
- Keep exhaust gas from entering a confined area through windows, doors, ventilation intakes or other openings.
- **DO NOT** operate generator inside any building or enclosure (even if doors or windows are open), including the generator compartment of a recreational vehicle (RV).


 **DANGER**


Using a generator indoors **WILL KILL YOU IN MINUTES.**


Exhaust contains carbon monoxide, a poison gas you cannot see or smell.

		
NEVER use in the home or in partly enclosed areas such as garages.		ONLY use outdoors and far from open windows, doors, and vents.

 **DANGER**

 Storage batteries give off explosive hydrogen gas during recharging. Slightest spark will ignite hydrogen and cause explosion.

 Battery electrolyte fluid contains acid and is extremely acidic. Contact with battery contents will cause severe chemical burns.

 A battery presents a risk of electrical shock and high short circuit current.

- **DO NOT** dispose of battery in a fire.
- **DO NOT** allow any open flame, spark, heat, or lit cigarette during and for several minutes after charging a battery.
- **DO NOT** open or mutilate the battery.
- Wear protective goggles, rubber apron, and rubber gloves.
- Remove watches, rings, or other metal objects.
- Use tools with insulated handles.

WARNING	
	Propane and Natural Gas are extremely flammable and explosive.
	Fire or explosion can cause severe burns or death.

- Generator installation must comply with all applicable codes. To check your local codes, see your local LP gas dealer or natural gas company.
- Properly secure fuel tanks to LP fuel tank mounting tray as described in "Assembly".
- Before using the generator, fuel system hoses must be properly purged and leak tested, especially after changing fuel tanks.
- No fuel leakage is permitted. NEVER check for leaks using a match or open flame. Strong odors, colds, sinus congestion, etc. may prevent the detection of gaseous fuel. Use caution and common sense when testing for leaks (see "Leak Testing Fuel System").
- After the generator is positioned for operation, inspect the fuel system and connecting hoses for evidence of damage, excess wear or deterioration periodically. If such defects are found, replace components with manufacturer-supplied replacement parts ONLY. The fuel hoses and regulator should be replaced every five years.
- When generator is not in use, manually close fuel shut off valve(s).
- DO NOT operate generator if smell of fuel is present.
- DO NOT smoke around generator. Wipe up any oil spills immediately. Ensure that no combustible materials are left in the generator compartment. Keep area near the generator clean and free of debris.
- DO NOT supply unregulated gaseous fuel to generator. See Product Specifications for required supply pressure.
- DO NOT allow fuel hose(s) to come in contact with hot surfaces.
- DO NOT store LP gas tank(s):
 - Indoors or in the vicinity of the generator
 - In a building, garage or any other enclosed area
 - Within the reach of children.
- LP gas tank must have:
 - A safety relief device having direct communication with the cylinder vapor space
 - A listed over-filling prevention device (OPD) DOT or CAN/CSA-B339 approval
 - A shut off valve, terminating in a fuel outlet compatible with a Type I tank connector. No other tank connectors are permitted for use with this generator.
 - A collar to protect the fuel shut off valve
- DO NOT insert any foreign objects into the tank valve outlet or any of the fuel system components.
- LP tank supply system must be arranged for vapor withdrawal.
- Have LP gas tank filled to no more than 80% capacity by a reputable propane gas dealer and visually inspected and re-qualified at each filling.
- ALWAYS keep LP gas tanks in an upright position.
- ALWAYS handle LP gas tanks with care.
- The LP fuel tank is equipped with an internal thermal device that will permanently shut off gas flow if the tank is subjected to temperatures above 240° F (115° C). If this should happen, take the LP fuel tank to your fuel supplier. The cause of the excessive heat should be determined and corrected before using your generator again.
- The normal flow of gas through the regulator and hose assembly can create a humming noise. A low volume of noise is normal and will not interfere with generator operation. If humming noise is loud and excessive, the fuel supply system must be purged.

WARNING	
<ul style="list-style-type: none"> • This generator does not meet U. S. Coast Guard Regulation 33CFR-183 and should not be used on marine applications. • Failure to use the appropriate U. S. Coast Guard approved generator could result in death or serious injury and/or property damage. 	

WARNING	
	Generator produces hazardous voltage. Failure to isolate generator from power utility can result in death or injury to electric utility workers due to backfeed of electrical energy.

- When using generator for backup power, notify utility company. Use approved transfer equipment to isolate generator from electric utility.
- DO NOT use when under the influence of drugs or alcohol.
- Despite the safe design of the generator, operating this equipment imprudently, neglecting its maintenance or being careless can cause possible injury or death.
- Remain alert at all times while working on this equipment. Never work on the equipment when you are physically or mentally fatigued.
- DO NOT touch bare wires or receptacles.
- DO NOT use generator with electrical cords which are worn, frayed, bare or otherwise damaged.
- DO NOT handle generator or electrical cords while standing in water, while barefoot, or while hands or feet are wet.
- DO NOT allow unqualified persons or children to operate or service generator.
- If you must work around a unit while it is operating, stand on an insulated dry surface to reduce shock hazard.
- In case of an accident caused by electrical shock, immediately shut down the source of electrical power and contact the local authorities. Avoid direct contact with the victim.
- Before performing any maintenance on the generator, disconnect the battery cable indicated by a NEGATIVE, NEG or (-) first. When finished, reconnect that cable last.
- Remove the 15 Amp fuse BEFORE working on the equipment. When finished, replace the 15 Amp fuse.

WARNING	
	Running engines produce heat. Temperature of muffler and nearby areas can reach or exceed 150°F (65°C).
	Severe burns can occur on contact. Exhaust heat/gases can ignite combustibles, structures or damage LP fuel tank causing a fire.

- DO NOT touch hot surfaces and avoid hot exhaust gases.
- Allow equipment to cool before touching.
- Keep at least 5 ft. (152 cm) clearance on all sides of generator including overhead.
- Code of Federal Regulation (CFR) Title 36 Parks, Forests, and Public Property require equipment powered by an internal combustion engine to have a spark arrester, maintained in effective working order, complying to USDA Forest service standard 5100-1C or later revision. In the State of California a spark arrester is required under section 4442 of the California Public resources code. Other states may have similar laws.

WARNING

Unintentional sparking can result in fire or electric shock.

**When adjusting or making repairs to your generator:**

- Disconnect the spark plug wire from the spark plug and place the wire where it cannot contact spark plug.

When testing for engine spark:

- Use approved spark plug tester.
- DO NOT check for spark with spark plug removed.

CAUTION

Excessively high operating speeds increase risk of injury and damage to generator.

Excessively low speeds impose a heavy load.

- FOR RESIDENTIAL USE ONLY. DO NOT use this generator for anything other than its intended purpose.
- DO NOT tamper with governed speed. Generator supplies correct rated frequency and voltage when running at governed speed.
- DO NOT modify generator in any way.

CAUTION

Exceeding generators wattage/ampere capacity can damage generator and/or electrical devices connected to it.

- See "Don't Overload Generator".
- Start generator and let engine stabilize before connecting electrical loads.
- Connect electrical loads in OFF position, then turn ON for operation.
- Turn electrical loads OFF and disconnect from generator before stopping generator.

CAUTION

Improper treatment of generator can damage it and shorten its life.

- Use generator only for intended uses.
- If you have questions about intended use, ask dealer or contact Briggs and Stratton.
- Operate generator only on level surfaces.
- Adequate, unobstructed flow of cooling and ventilating air is critical to correct generator operation.
- The access door and roof must be installed whenever the unit is running.
- DO NOT expose generator to excessive moisture, dust, dirt, or corrosive vapors.
- DO NOT start engine with air cleaner or air cleaner cover removed.
- DO NOT insert any objects through cooling slots.
- DO NOT use the generator or any of its parts as a step. Stepping on the unit can cause stress and break parts. This may result in dangerous operating conditions from leaking exhaust gases, fuel leakage, oil leakage, etc..
- If connected devices overheat, turn them off and disconnect them from generator.
- Shut off generator if:
 - electrical output is lost;
 - equipment sparks, smokes, or emits flames;
 - unit vibrates excessively.

Equipment Description

Read this manual carefully and become familiar with your generator. Know its applications, its limitations and any hazards involved.

The generator is an engine-driven, revolving field, alternating current (AC) generator. It was designed to supply electrical power for operating compatible electrical lighting, appliances, tools and motor loads. The generator's revolving field is driven at about 3,600 rpm by a single-cylinder engine. The generator is operated on liquefied propane (LP) gas. It can operate on natural gas (NG) fuel only after conversion by a licensed professional gaseous fuel technician.

This generator incorporates GFCI (Ground Fault Circuit Interrupter) outlet protection and has its neutral bonded to grounding fastener to comply to OSHA inspections on job sites.

**DANGER**

GFCI will not function if neutral bond removed

- DO NOT remove the neutral bond.
- Removing the neutral bond could result in death, bodily injury and/or property damage.

This generator will not function when connected to a 2 pole transfer switch since its service disconnect also has a neutral bonded to ground. When both the generator and the home or building's service disconnect contains a neutral bonded to ground, the generator's GFCI will open and no outlets will function.

A switching neutral transfer switch **MUST** be used if the generator is connected to a building's electrical system.

This product is intended for residential use as an all-weather temporary source of electric power. It is capable of supplying power to loads such as heating, refrigeration systems, and communication systems. This product does not qualify for emergency standby as defined by NFPA 70 (NEC). DO NOT use this generator for anything other than its intended purpose.

Every effort has been made to ensure that the information in this manual is both accurate and current. However, the manufacturer reserves the right to change, alter or otherwise improve the generator and this documentation at any time without prior notice.

Ground Fault Protection

The generator's receptacles are equipped with Ground Fault Circuit Interrupter (GFCI) protection. This GFCI device meets applicable federal, state and local codes.

The GFCI protects against electrical shock that may be caused if your body becomes a path in which electricity travels to reach the ground. This could happen if you touch a "Live" appliance or wire, or are touching plumbing or other materials that connect to the ground.

When protected by a GFCI device, one may still feel a shock, but the GFCI should cut current off quickly enough so that a person in normal health should not suffer any serious electrical injury.

⚠ WARNING

Generator produces hazardous voltage/current.

- Contact with the hot and neutral conductor at the same time can cause electrical shock or burn, even if the circuit is GFCI protected.
- Before using the GFCI receptacle, ALWAYS push the test button to insure it works.

Connections to a Building's Electrical System

Connections from this generator to a building's electrical system must be made through a switching neutral transfer switch installed by a qualified electrician. The connection must isolate the generator power from utility power, and must comply with all applicable laws and electrical codes.

IMPORTANT: A switching neutral transfer switch **MUST** be used when switching between utility and generator power.

Customer's Responsibilities

- If considering installation with a transfer switch, read and follow the instructions given in this manual.
- Follow a regular schedule in maintaining, caring for and using your generator, as specified in this manual.
- ALWAYS disconnect and store indoors the cord used to connect generator and inlet connection box when generator is not in use.

To help you make informed choices and communicate effectively with your installation contractor(s),

Read and understand the Assembly section of this manual before starting your generator installation.

You can arrange for proper installation by contacting the store at which you purchased your generator, your Briggs & Stratton dealer, a licensed professional electrician or your utility power provider.

The generator warranty is VOID if permanent fuel connections to the generator are installed by anyone other than a licensed gaseous fuel professional.

The generator warranty is VOID if permanent electrical connections to the generator are made.

⚠ WARNING

Only qualified electricians and gaseous fuel technicians should attempt fuel conversion or permanent connection of this generator. Each installation must strictly comply with applicable codes, standards and regulations.

The Gaseous Fuel System

The generator unit has been factory set to run on liquefied petroleum gas. If the generator is to run on natural gas, the engine will need to be reconfigured using the supplied NG Conversion kit. Contact a licensed professional gaseous fuel technician to install this kit.

⚠ WARNING

Propane and Natural Gas are extremely flammable and explosive.

Fire or explosion can cause severe burns or death.

- LP gas is heavier than air and will settle in low areas.
- Natural gas is lighter than air and will collect in high areas.
- The slightest spark can ignite these fuels and cause an explosion.
- IF YOU SMELL GAS - Shut off gas to the generator at the LP cylinder(s)/source.
- If odor continues, leave the area and immediately call your gas supplier or fire department.

The generator engine is fitted with a fuel mixer system that meets the specifications of the California Air Resources Board for "tamper-proof" dual fuel systems. The unit will run on natural gas or liquefied propane vapor.

- Use clean, dry fuel, free of moisture or any particulate material. Using fuels outside the following recommended values may cause performance problems:
- Commercial grade HD5 LPG is recommended - minimum fuel energy of 2500 BTU's/ft³ with maximum propylene content of 5% and butane and heavier gas content of 2.5% and minimum propane content of 90%.
- See "Specifications" for required fuel supply pressure.

Fuel Consumption

See the following table for fuel supply requirements at half and full load for both natural gas and LP vapor.

Natural Gas*		LP Vapor**	
1/2 Load	Full Load	1/2 Load	Full Load
80	137	33	56
* = Natural Gas is in cubic feet per hour			
** = LP Vapor is in cubic feet per hour			

Fuel Supply Requirements

Assembly/Installation

Your generator is ready for use after you assemble the LP fuel tank housing pad components, make proper fuel connections, and verify that engine oil is at the proper level.

CAUTION	
Any attempt to crank or start the engine without verifying it has been properly serviced with the recommended oil will result in equipment failure.	
<ul style="list-style-type: none"> • Refer to Maintenance for oil fill information. • Damage to equipment resulting from failure to follow this instruction will void warranty. 	

If you have any problems with the assembly of your generator, please call the generator helpline at 1-800-743-4115. If calling for assistance, please have the model, revision, and serial number from the data tag available. See “Generator Controls and Features” for data tag location.

Shipment Contents

The generator is supplied with:

- Generator pre-attached to mounting pad
- LP fuel tank housing tray assembly pre-attached to mounting pad
- Fuel hose and regulator assembly pre-attached to generator
- LP fuel tank all-weather cover
- Bag containing LP fuel tank attachment hardware
- Operator’s manual
- Battery
- Oil drain tray
- Touch-up paint
- One spare 15A fuse
- NG conversion kit

You must purchase two filled 20 pound DOT LP fuel tanks that are equipped with a listed over-filling prevention device (OPD).

Lifting the Generator

CAUTION The generator weighs more than 280 pounds (130 kg). Proper tools, equipment and qualified personnel should be used in all phases of handling and moving the generator. Each full LP tank will weigh more than 20 pounds (9 kg).

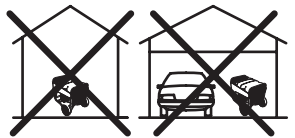
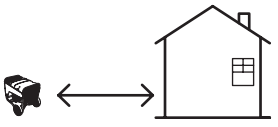
CAUTION DO NOT lift unit by roof as damage to generator will occur.

Lifting pockets are provided at each corner between the base of the generator and its mounting pad. See “Generator Controls and Features” for locations. Retouch any chipped paint with supplied touch-up paint.

Generator Location

Consider these factors when determining the proper generator operating location:

- Install the unit outdoors on a flat, level surface with provisions for adequate ventilation. This will allow for dispersion of deadly exhaust gas. DO NOT install generator where exhaust gas could accumulate and enter inside or be drawn into a potentially occupied building areas.

! DANGER	
Using a generator indoors WILL KILL YOU IN MINUTES.	
Exhaust contains carbon monoxide, a poison gas you cannot see or smell.	
	
NEVER use in the home or in partly enclosed areas such as garages.	ONLY use outdoors and far from open windows, doors, and vents.

Ensure exhaust gas is kept away from any windows, doors, ventilation intakes or other openings that can allow exhaust gas to collect in a confined area (Figure 1). Prevailing winds and air currents should be taken into consideration when positioning generator.

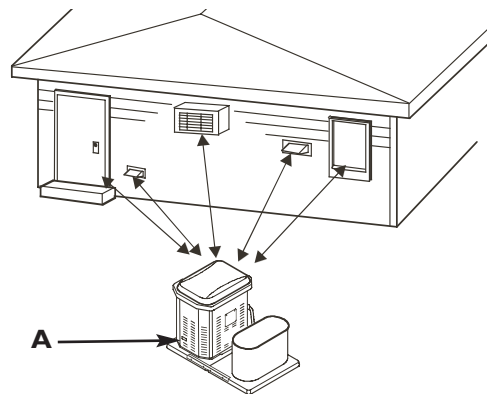



Figure 1 — Generator Clearances
A - Engine Exhaust Opening

- The unit must have at least 5 ft. (152 cm) of clearance on all sides of the enclosure and LP tank housing pad, including overhead. This will reduce the risk of exhaust heat or exhaust gases igniting nearby combustible materials and will provide for adequate cooling and generator maintenance.

! WARNING	
	Exhaust heat/gases can ignite combustibles, structures or damage LP fuel tank causing a fire.
<ul style="list-style-type: none"> • Keep at least 5 ft. (152 cm) clearance on all sides of generator including overhead. 	

- Install the unit in a location where sump pump discharge, rain gutter down spouts, roof run-off, landscape irrigation, or water sprinklers will not flood the unit or spray the enclosure and enter any air inlet or outlet openings.
- Install the unit where the location of any services such as phone, electrical, fuel, air conditioning, irrigation, including covered, concealed and underground services will not be affected or obstructed.
- Install the unit where air inlet and outlet openings will not become obstructed by leaves, grass, snow, etc. If prevailing winds will cause blowing or drifting, you may need to construct a windbreak to protect the unit.

The generator is shipped already attached to its mounting pad. Unless mandated by local code, a concrete slab is not required.

If mandated by local code, construct a concrete slab at least 3 inches thick and 6 inches longer and wider than the combined generator and LP tank pad footprint. Attach pads to slab with 1/4" diameter (minimum) masonry anchor bolts.

Attach LP Fuel Tank Housing Pad Parts

Required Tools

You will need either of the following tools to attach the LP fuel tank housing pad to the generator pad:

- 1/2 inch (13 mm) socket and ratchet OR
- 1/2 inch (13 mm) open end wrench

Attach Mounting Pads Together

1. Place LP tank housing pad (with pre-attached LP fuel tank tray) on the ground next to the side of the generator where the fuel hose(s) and regulator are attached.

Confirm that the pre-drilled holes on both mounting pads are adjacent to each other (see Figure 2).

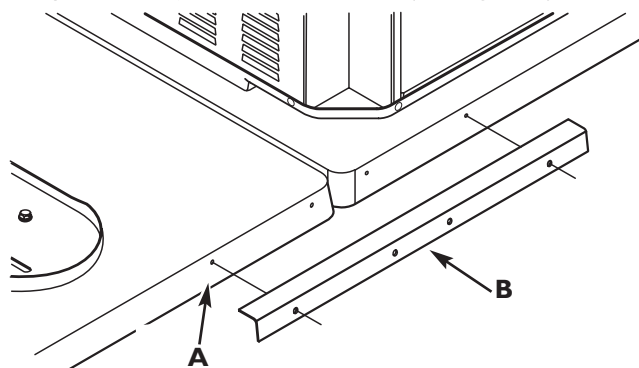


Figure 2 — Mounting Pad and Angle Bracket Holes
A - Mounting Pad Holes
B - Angle Bracket

2. Lay one 20 inch (50 cm) angle bracket across both mounting pads, aligning the bracket holes with the pre-drilled pad holes, as shown in Figure 2.
3. Pass one 5/16" X 1" lag bolt through one 5/16" flat washer, then through one hole on the angle bracket. Finger tighten lag bolt into mounting pad hole (see Figure 3).

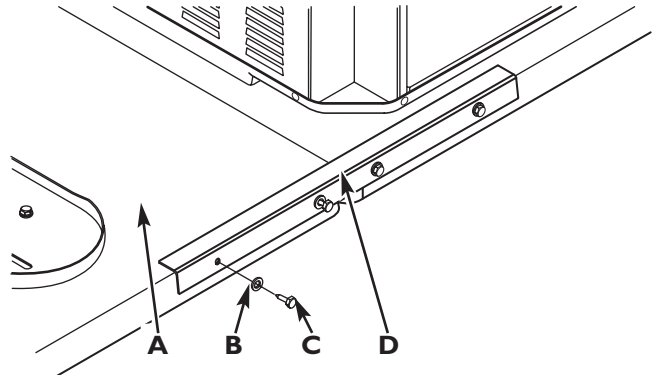


Figure 3 — Start Lag Bolts into Mounting Pad Holes
A - Mounting Pad
B - Flat Washer
C - Lag Bolt
D - Angle Bracket

4. Repeat Step 3 three more times, placing a lag bolt/washer in each angle bracket hole.
5. Tighten each lag bolt until snug using specified tool. DO NOT over-tighten as threads could strip.
6. Repeat Steps 2 through 5 to attach the second angle bracket to the opposite ends of the mounting pads.

Attach Tank Hold-Down Rod

Insert either end of the supplied threaded rod into the LP fuel tank tray location shown in Figure 4. Hand tighten rod.

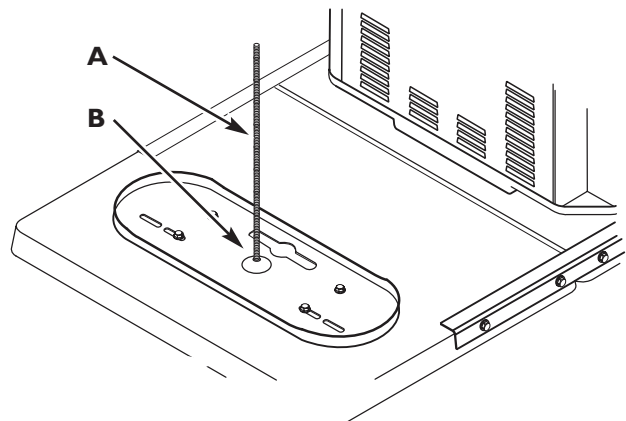




Figure 4 — Attach Tank Hold-Down Rod to LP Tank Tray
A - Hold-Down Rod
B - LP Fuel Tank Tray

LP Fuel Tank Installation

IMPORTANT: To ensure optimal performance, use two (2) LP fuel tanks during operation.

This section describes the proper method of installing and leak testing the generator's LP fuel tanks. This system is supplied with an LP fuel tank cover. Always cover the LP fuel tanks whenever they are connected to the generator.

WARNING	
	Propane Gas is extremely flammable and explosive.
	Fire or explosion can cause severe burns or death.
<ul style="list-style-type: none"> The slightest spark can ignite this fuel and cause an explosion. IF YOU SMELL GAS - Shut off gas to the generator at the LP fuel tank(s). If odor continues, leave the area and immediately call your gas supplier or fire department. 	

To Install LP Fuel Tanks:

1. Confirm both LP fuel tank shut off valves are closed (turned fully **CLOCKWISE**).
2. Place each LP tank into the LP tank tray with it's fuel valve pointing towards the generator (see Figure 5).

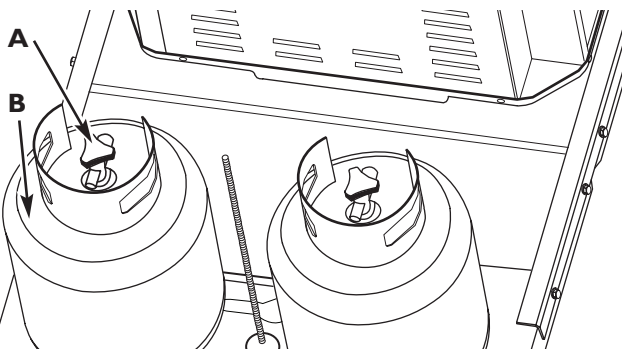


Figure 5 — Proper Position for LP Fuel Tanks
A - LP Fuel Tank Shut Off Valve Connector
B - LP Fuel Tank

3. Slide the LP fuel tank hold-down bracket onto the threaded rod. Position the bracket so that its notches are aligned with both LP fuel tank collar holes, as shown in Figure 6.

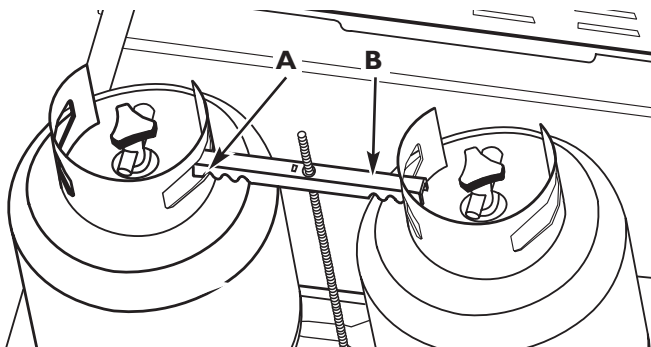


Figure 6 — Properly-Aligned Hold-Down Bracket
A - Bracket Notch over Fuel Tank Collar
B - Hold-Down Bracket

It may be necessary to “wiggle” the LP fuel tanks and the bracket to obtain proper alignment.

4. Slide the fuel hose/regulator assembly over the threaded rod so that it faces the generator and rests on the hold-down bracket (see Figure 7).

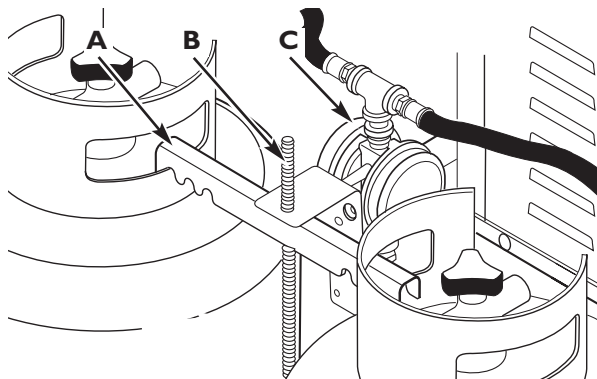


Figure 7 — Fuel Hose/Regulator Assembly Placement
A - Hold-Down Bracket
B - Threaded Rod
C - Fuel Hose/Regulator Assembly

5. Thread the wing nut **CLOCKWISE** onto the threaded rod. Hand tighten wing nut against fuel hose/regulator assembly, ensuring hold-down bracket notches remain engaged with LP fuel tank collars and LP fuel tanks are held firmly. See Figure 8.

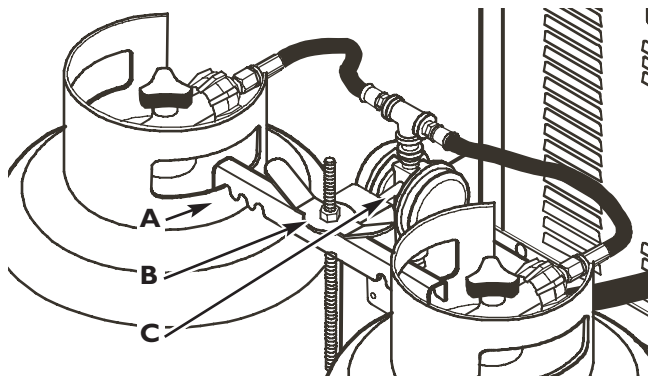


Figure 8 — Properly-Secured LP Fuel Tanks
A - LP Fuel Tank
B - Wing Nut
C - Fuel Hose/Regulator Assembly

6. Remove protective covers from both LP fuel tank shut off valve connectors. **DO NOT** discard protective covers - they should be installed any time the LP fuel tank is disconnected from the generator.
7. Insert the nipple of the left connection device (as you face the generator and LP fuel tanks) into the left LP fuel tank valve outlet (see Figure 9). Ensure it is fully inserted.

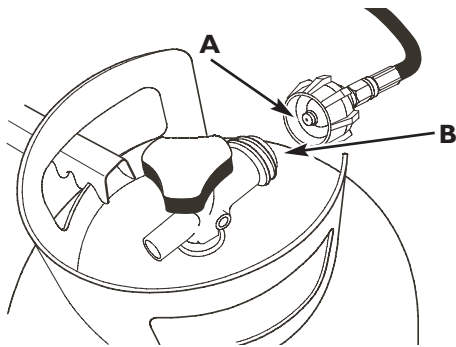


Figure 9 — Proper Connection Device Alignment
 A - Fuel Hose Connector Nipple
 B - LP Fuel Tank Shut Off Valve Connector

8. Turn the large coupling nut **CLOCKWISE** and hand tighten to a full stop.
 DO NOT cross thread the connection.
 DO NOT use thread sealant.
 DO NOT over-tighten the coupling nut.
 DO NOT use tools to tighten the connection.
- NOTE:** If you are unable to make the connection, repeat Step 7 or contact an LP fuel professional.
9. Repeat Steps 7 and 8 to attach the right LP fuel tank.
10. Confirm that each fuel hose does not have kinks and that it does not touch sharp edges or surfaces that may become hot during generator operation.
11. Perform a complete fuel leak test, using the instructions given in “Leak Testing Fuel System”.

Leak Testing Fuel System

1. Create a mixture of 50% water and 50% liquid dishwashing soap.
2. Turn **ON** the fuel supply by turning both LP fuel tank shut off valves one full turn **COUNTERCLOCKWISE**.

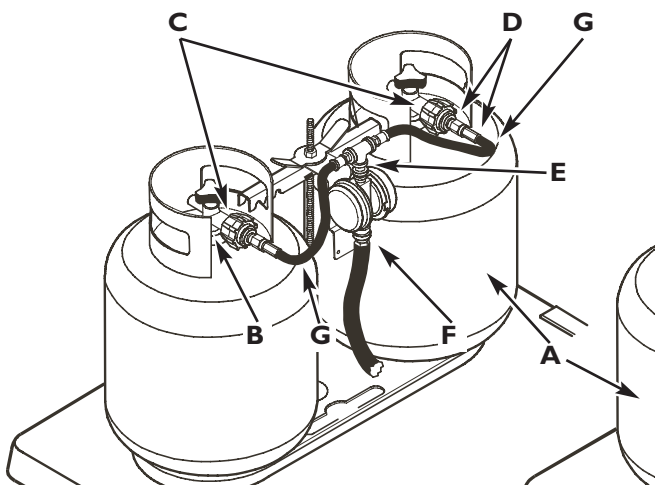
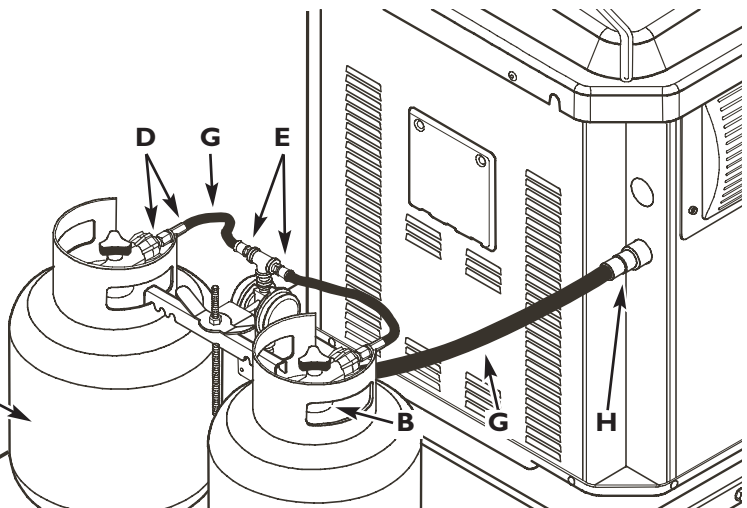




Figure 10 — Leak Test Locations
 A - LP Fuel Tank Welds
 B - LP Fuel Tank Shut Off Valves at Cylinder Connections
 C - Both Coupling Nuts to LP Fuel Tank Shut Off Valve Connections

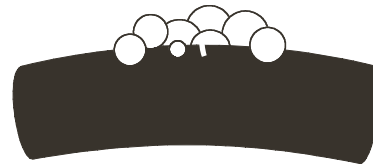


D - Back Sides of Coupling Nuts and Hose Connection Joints
 E - Brass T-Valve Connections (all joints)
 F - Regulator Connection to Fuel Hose
 G - The Full Length of all Fuel Hoses
 H - Fuel Hose Connection to Generator (all joints)

3. Using a sponge, rag or small non-metallic brush, apply the soap water mixture at each of the locations shown in Figure 10 below.

⚠ WARNING	
	Propane Gas is extremely flammable and explosive.
	Fire or explosion can cause severe burns or death.
<ul style="list-style-type: none"> • DO NOT smoke or permit ignition sources in the area while conducting a leak test. • Perform leak test OUTDOORS only in a well ventilated area. • DO NOT perform a leak test with a match or open flame. • DO NOT perform a leak test while the generator is in use. • ALWAYS perform a leak test when first using the generator. • ALWAYS perform a leak test every time an LP fuel tank or any fuel system component is changed. • ALWAYS perform a leak test whenever the generator is moved. • Perform a leak test at least once per year or if your generator has not been used for more than 60 days. 	

4. Check each location shown in Figure 10 for growing bubbles, which indicates a fuel leak. Bubbles will look something like this:



5. Close both LP fuel tank shut off valves (turn fully **CLOCKWISE**).
6. Press and hold control panel's **START/RUN/STOP** switch in **START** position for 5 seconds to release gas pressure in hoses. See “Control Panel Controls and Features”.
7. Tighten or replace any leaking connections.

8. Repeat Steps 2 through 7 until no leaks are detected. **DO NOT** use the generator if leaks cannot be stopped. Contact a qualified LP fuel professional for assistance.
9. Turn OFF both LP fuel tank shut off valves until you are ready to use the generator.
10. Wash off soapy residue with clean cold water and towel dry.
11. Wait five minutes to allow all gas to evacuate the area before starting the generator.

NOTE: The leak test must be performed in an area that has adequate lighting in order to see if bubbles are developing. **DO NOT** use a flashlight to check for bubbles.

To Remove LP Fuel Tank(s)

1. Confirm the LP fuel tank shut off valve is closed (turned fully **CLOCKWISE**).
2. Disconnect the fuel hose from the LP tank by turning the large coupling nut **COUNTERCLOCKWISE** by hand (see Figure 9).
3. Install the protective cover over the LP fuel tank shut off valve outlet.
4. Remove wing nut from threaded rod by turning it **COUNTERCLOCKWISE**. Lift and remove the fuel hose/regulator assembly from the threaded rod. See Figures 7 and 8.
5. Lift and remove the LP tank hold-down bracket from threaded rod (see Figure 6). It may be necessary to wiggle the LP fuel tanks to release the hold-down bracket.
6. Carefully lift the LP fuel tank off the LP fuel tank tray.

Verify Engine Oil Level

CAUTION

Any attempt to crank or start the engine without verifying it has been properly serviced with the recommended oil will result in equipment failure.

- Refer to Maintenance for oil fill information.
- Damage to equipment resulting from failure to follow this instruction will void warranty.

The generator engine is shipped from the factory filled with **synthetic oil** (API S/CF 5W-30W). This allows for generator operation in the widest range of temperature and climate conditions. Before starting the engine, check oil level and ensure that engine is serviced as described in "Maintenance".

NOTE: The use of synthetic oil does not alter the required oil change intervals described in the **Maintenance** section.

Removable Roof and Access Door

The generator enclosure includes a removable roof and battery access door.

To Remove Roof:

There are two screws on each side of the roof located in the half-moon roof slots. Remove the four screws and lift roof off.

To Remove Battery Access Door:





1. Disconnect any loads connected to the generator.
2. Remove roof as described above.
3. Remove screw at top of access door.
4. Pull access door outward (away) from unit while pulling door upward and out of base.

Door will come free of generator enclosure.

To Install Battery Access Door and Roof:

1. Guide bottom of access door into base.
2. Push access door in until it is flush with sides.
3. Replace door screw.
4. Replace roof and four roof screws.

Battery Connection

 DANGER	
	Storage batteries give off explosive hydrogen gas during recharging. Slightest spark will ignite hydrogen and cause explosion.
	Battery electrolyte fluid contains acid and is extremely acidic. Contact with battery contents will cause severe chemical burns.
	A battery presents a risk of electrical shock and high short circuit current.
<ul style="list-style-type: none"> • DO NOT dispose of battery in a fire. • DO NOT allow any open flame, spark, heat, or lit cigarette during and for several minutes after charging a battery. • DO NOT open or mutilate the battery. • Wear protective goggles, rubber apron, and rubber gloves. • Remove watches, rings, or other metal objects. • Use tools with insulated handles. 	

The generator is supplied with a sealed, lead-acid rechargeable 12 Volt DC, AGM type, 33 Amp-Hour, battery. The battery cables are connected at the factory.

The battery will lose some charge in shipping and prior to generator installation. If battery voltage is too low to start the engine, charge the battery, as described in "Maintenance".

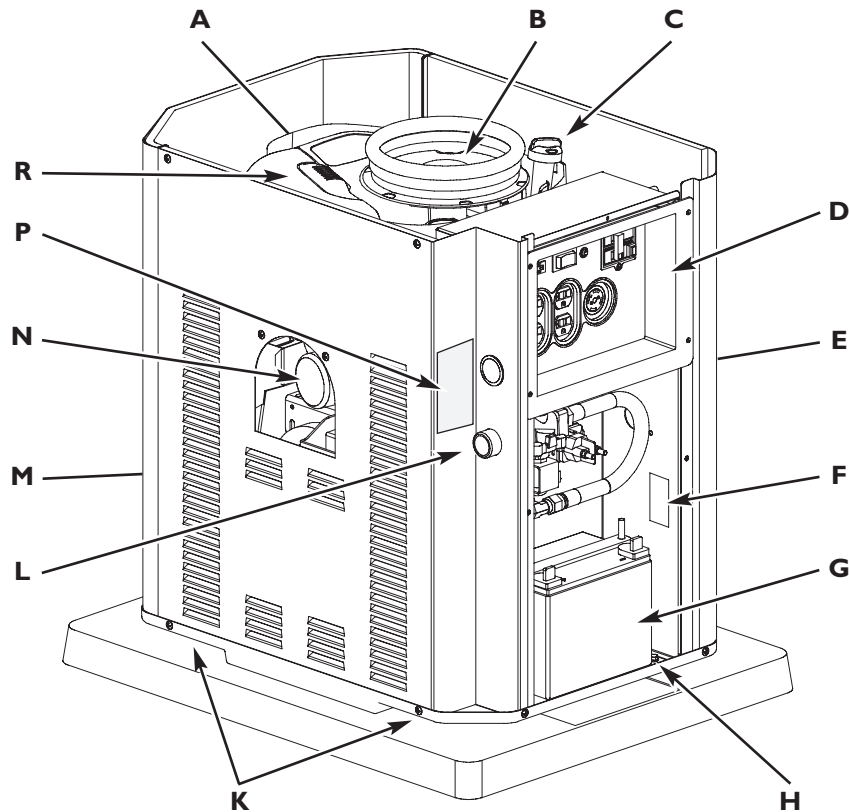
If the battery fails to take a charge, it must be replaced **ONLY** with the same type of 12 Volt DC, AGM type, 33 Amp-Hour battery. **DO NOT** replace with liquid electrolyte lead-acid type battery.

Generator Controls and Features



Read this Operator's Manual and safety rules before operating your generator.

Compare the illustrations with your generator, to familiarize yourself with the locations of various controls and adjustments. Save this manual for future reference.



Controls

Generator is shown with roof, oil filter access door, battery access door and control panel cover removed. See Figures 5 through 8, earlier, for important LP fuel tank component views.

A - Engine Model Number Identification — (stamped on top of valve cover) Identifies engine model and type.

B - Rotating Screen — Prevents large debris from entering engine cooling airflow stream.

C - Oil Fill Cap/Dipstick — Check and fill engine with recommended oil here.

D - Control Panel — Used for various operation and maintenance functions. See "Control Panel Controls and Features" on next page.

E - Oil Drain Hose — Provided to facilitate oil changing.

F - Unit Data Decal — Displays model, revision and serial numbers.

G - Battery — 12 Volt DC, 33 Amp-Hour, sealed battery provides power to start engine. Battery receives trickle charge whenever generator is running.

H - Equipment Grounding Terminal — Connect generator to earth ground here.

K - Lifting Pockets — Provided at each lower corner for lifting generator and attached pad.

L - Fuel Inlet — Fuel supply components are attached to generator here.

M - Exhaust Port — High-performance muffler lowers engine noise to comply with most residential codes. Includes approved spark arrester.

N - Oil Filter — Filters engine oil to prolong generator life.

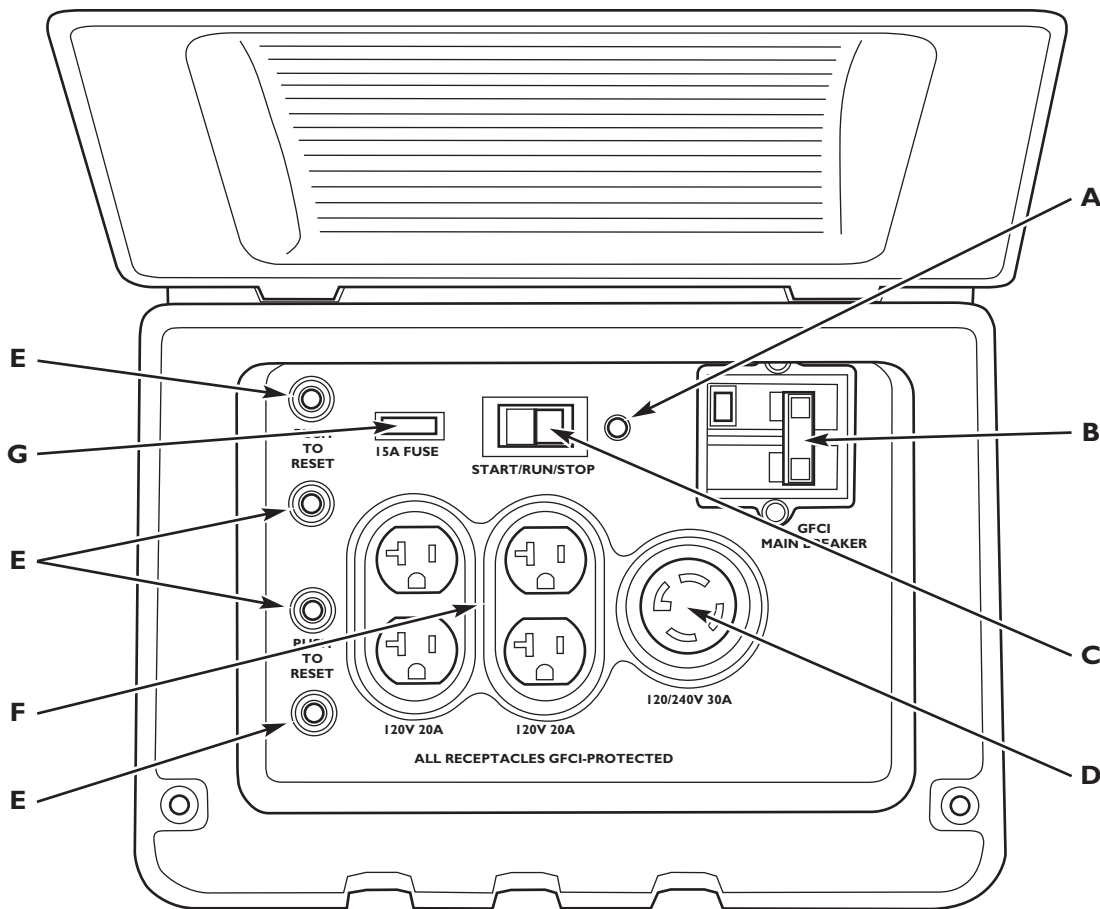
P - Hazard/Start/Stop Instructions — Observe these warnings and procedures when operating generator.

R - Air Cleaner — Uses a dry type filter element and foam precleaner to protect engine by filtering dust and debris out of intake air.

Control Panel Controls and Features

Compare this illustration with your generator's Control Panel, to familiarize yourself with the locations of the receptacles, controls and circuit breakers:

Controls



A - LED Light — Generator is producing voltage when illuminated.

B - Ground Fault Circuit Interrupter/Breaker — Protects the generator from over-current conditions electrical faults to ground and must be in the “ON” position to supply power to all of the control panel receptacles.

C - START/RUN/STOP Switch — This three-position switch is used as follows:

- “**START**” position starts the generator. Press and hold to start generator.
- “**RUN**” position is switch position while generator is running.
- “**STOP**” position turns off the generator. Press and hold until engine stops.

D - 120/240V 30 Amp Locking Receptacle — Supplies the total generator output power and is GFCI protected.

E - Push-to-Reset Circuit Breakers — Protects the generator from current overload at receptacle.

F - 120 Volt 20 Amp Receptacles — Each receptacle can supply a maximum of 20 amperes of power. The 120 Volt receptacles are GFCI protected. Total load on all four receptacles cannot exceed 7000 watts.

G - 15 Amp Fuse — Protects the generator DC control circuits. If the fuse has melted open or was removed, the engine cannot crank or start. Replace the fuse using only an identical ATO-type 15A fuse, available from most automotive parts stores.

Receptacles

CAUTION	
Exceeding generators wattage/amperage capacity can damage generator and/or electrical devices connected to it.	
<ul style="list-style-type: none"> • See “Don’t Overload Generator”. • Start generator and let engine stabilize before connecting electrical loads. • Connect electrical loads in OFF position, then turn ON for operation. • Turn electrical loads OFF and disconnect from generator before stopping generator. 	

120/240 Volt AC, 30 Amp, Locking Receptacle

This receptacle (Figure 11) supplies the entire generator output and is protected against overload by a double-pole GFCI circuit breaker.

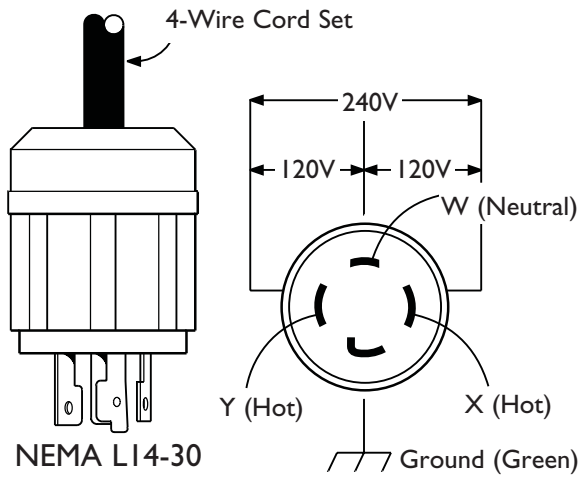


Figure 11 — 120/240 Volt AC, 30 Amp Receptacle

Use a NEMA L14-30 plug with this receptacle. Connect a 4-wire cord set rated for 250 Volt AC loads at 30 Amps (or greater). You can use the same 4-wire cord if you plan to run a 120 Volt load. Inspect cord set(s) before each use. Store cord set(s) indoors.

When operating on LP fuel, this receptacle powers 120/240 Volt AC, 60 Hz, single phase loads requiring up to 7,000 watts of power (7.0 kW) at 29.16 Amps for 240 Volts or two independent 120 Volt loads at 29.16 Amps each.

120 Volt AC, 20 Amp, Duplex Receptacles

Each individual duplex receptacle (Figure 12) is protected against overload by a push-to-reset circuit breaker. All four receptacles are also protected by a double-pole GFCI circuit breaker.

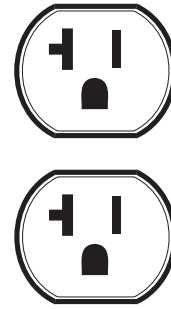


Figure 12 — 120 Volt, 20 Amp Duplex Receptacle

Use each receptacle to operate 120 Volt AC, single-phase, 60 Hz electrical loads requiring up to 2,400 watts (2.4 kW) at 20 Amps of current when operating on LP fuel. Use cord sets that are rated for 125 Volt AC loads at 20 Amps (or greater). Inspect cord set(s) before each use.

CAUTION	
Receptacles may be marked with rating value greater than generator output capacity.	
<ul style="list-style-type: none"> • NEVER attempt to power a device requiring more amperage than generator or receptacle can supply. • DO NOT overload the generator. See “Don’t Overload Generator”. 	

NOTE: Follow all safety precautions when connecting any extension cord or device to the generator.

Equipment Ground

The generator is equipped with an equipment grounding terminal that connects the generator frame components to the ground terminals on the AC output receptacles. Ground the generator per applicable codes, standards, and regulations.

The equipment ground is connected to the AC neutral wire and the neutral is bonded to the generator frame. The equipment grounding terminal is shown on “Generator Controls and Features”.

Special Requirements

There may be Federal or State Occupational Safety and Health Administration (OSHA) regulations, local codes, or ordinances that apply to the intended use of the generator. Please consult a qualified electrician, electrical inspector, or the local agency having jurisdiction.

- In some areas, generators are required to be registered with local utility companies.
- If the generator is used at a construction site, there may be additional regulations which must be observed.

Operating Your Generator

WARNING



Propane Gas is extremely flammable and explosive.



Fire or explosion can cause severe burns or death.

These steps should be performed after the generator has been assembled, stored, moved, cleaned, or repaired. **DO NOT** operate this generator until you have read and understand **ALL** of the warnings and instructions in this operator's manual.

- Insure that the generator is properly assembled.
- Inspect the LP fuel supply hoses for burns, chaffing, kinks, and proper routing before each use. Hoses should be kept at least 3 inches (8 cm) away from hot surfaces.
- Leak test all LP fuel connections and hoses. See "Leak Testing Fuel System".
- Position your generator on level ground in a well ventilated location, 5 feet (152 cm) away from combustible materials and buildings, including overhead. **DO NOT** use generator on wooden decks or other surfaces that could burn.

Starting the Engine

Use the following start instructions:

1. Make sure unit is on a flat, level surface.

IMPORTANT: Failure to start and operate unit on a level surface will cause the unit not to start or shut down during operation.

2. Open control panel cover using standard screwdriver.
3. Disconnect all load(s) to generator.
4. Open LP tank fuel shut off valve(s).
5. Confirm 15 Amp fuse is installed in control panel.
6. Push and hold START/RUN/STOP switch in START position until engine starts and control panel LED is ON.

WARNING



Running engines produce heat. Temperature of muffler and nearby areas can reach or exceed 150°F (65°C).



Severe burns can occur on contact. Exhaust heat/gases can ignite combustibles, structures or damage LP fuel tank causing a fire.

- **DO NOT** touch hot surfaces and avoid hot exhaust gases.
- Allow equipment to cool before touching.
- Keep at least 5 ft. (152 cm) clearance on all sides of generator including overhead.

IMPORTANT: If you release the switch from the START position before red LED comes on, the generator will shut down.

NOTE: **DO NOT** crank engine for more than 15 seconds, then pause for 15 seconds to reduce heat in starter. Repeat start process until engine starts.

NOTE: When starting generator, air may be present in the fuel line(s), especially after changing fuel tanks. It may take several starting cycles to purge that air before the engine will start.

Connecting Electrical Loads

1. Let engine run for two minutes after starting.
2. Open control panel cover and confirm generator's main circuit breaker is in the ON (closed) position. See "Control Panel Controls and Features".
3. Plug in, then turn on the desired 120 and/or 240 Volt AC, single phase, 60 Hz electrical loads.
3. Close and latch control panel cover.

IMPORTANT:

- **DO NOT** connect 240 Volt loads to the 120 Volt duplex receptacles.
- **DO NOT** connect 3-phase loads to the generator.
- **DO NOT** connect 50 Hz loads to the generator.
- **DO NOT OVERLOAD THE GENERATOR.** See "Don't Overload Generator".

Stopping the Engine

1. Open control panel cover using standard screwdriver.
2. Turn OFF all electrical loads. Disconnect them from control panel receptacles.

Never start or stop engine with electrical devices plugged in and turned on.

3. Let engine run for two minutes with no loads to stabilize internal temperatures of engine and generator.
4. Push and hold START/RUN/STOP switch in STOP position until LED turns off and engine stops.
5. Close manual fuel shut off valve(s).
6. Close and latch control panel cover.

Ground Fault Protection

This unit is equipped with a Ground Fault Circuit Interrupter (GFCI). This device meets applicable federal, state and local codes.

Test GFCI Circuit Breaker

Test your GFCI circuit breaker (see “Control Panel Controls and Features” for location) every month, as follows:

1. While generator is running and control panel cover open, push white “Test” button. The circuit breaker should trip (handle will move to approximate center position), which will disconnect power to outlets.

 CAUTION
If circuit breaker does not trip:
<ul style="list-style-type: none">• DO NOT use generator.• Call a Briggs & Stratton Power Products service center.

2. If handle moves to center, reset circuit breaker by firmly moving handle to “Off” (left) position, then to “On” (right) position.

 CAUTION
If circuit breaker does not reset properly:
<ul style="list-style-type: none">• DO NOT use generator.• Call a Briggs & Stratton Power Products service center.


During Generator Use

If circuit breaker trips during use, it usually indicates faulty electrical equipment or cords. However, test the circuit breaker as follows;

1. Open control panel cover, disconnect loads, reset and test circuit breaker as described earlier. Let generator run without any loads for 1 minute.

 CAUTION
If circuit breaker trips in the 1 minute period:
<ul style="list-style-type: none">• DO NOT use generator.• Call a Briggs & Stratton Power Products service center.

2. If circuit breaker tests correctly, the electrical equipment or extension cords may be faulty. Replace faulty electrical equipment and cords before further use.

 CAUTION
If circuit breaker tests correctly:
<ul style="list-style-type: none">• Have qualified personnel check all electrical equipment and cords for any defects.• Replace electrical equipment and cords or take to a qualified repair center.

Operating

Don't Overload Generator

Capacity

You must make sure your generator can supply enough rated (running) and surge (starting) watts for the items you will power at the same time. Follow these simple steps:

1. Select the items you will power at the same time.
2. Total the rated (running) watts of these items. This is the amount of power your generator must produce to keep your items running. See Figure 13.
3. Estimate how many surge (starting) watts you will need. Surge wattage is the short burst of power needed to start electric motor-driven tools or appliances such as a circular saw or refrigerator. Because not all motors start at the same time, total surge watts can be estimated by adding only the item(s) with the highest additional surge watts to the total rated watts from step 2.

Example:

Total Rated (Running) Watts = 3075
 Highest Additional Surge Watts = 1800
 Total Generator Output Required = 4875

Power Management

To prolong the life of your generator and attached devices, it is important to take care when adding electrical loads to your generator. There should be nothing connected to the generator outlets before starting it's engine. The correct and safe way to manage generator power is to sequentially add loads as follows:

1. With nothing connected to the generator, start the engine as described in this manual.
2. Plug in and turn on the first load, preferably the largest load you have.
3. Permit the generator output to stabilize (engine runs smoothly and attached device operates properly).
4. Plug in and turn on the next load.
5. Again, permit the generator to stabilize.
6. Repeat steps 4 and 5 for each additional load.

Tool or Appliance	Rated* (Running) Watts	Additional Surge (Starting) Watts
Essentials		
Light Bulb - 75 watt	75	-
Deep Freezer	500	500
Sump Pump	800	1200
Refrigerator/Freezer - 18 Cu. Ft.	800	1600
Water Well Pump - 1/3 HP	1000	2000
Heating/Cooling		
Window AC - 10,000 BTU	1200	1800
Window Fan	300	600
Furnace Fan Blower - 1/2 HP	800	1300
Kitchen		
Microwave Oven - 1000 Watt	1000	-
Coffee Maker	1500	-
Electric Stove - Single Element	1500	-
Hot Plate	2500	-
Family Room		
DVD/CD Player	100	-
VCR	100	-
Stereo Receiver	450	-
Color Television - 27"	500	-
Personal Computer w/17" monitor	800	-
Other		
Security System	180	-
AM/FM Clock Radio	300	-
Garage Door Opener - 1/2 HP	480	520
Electric Water Heater - 40 Gallon	4000	-
DIY/Job Site		
Quartz Halogen Work Light	1000	-
Airless Sprayer - 1/3 HP	600	1200
Reciprocating Saw	960	960
Electric Drill - 1/2 HP	1000	1000
Circular Saw - 7 1/4"	1500	1500
Miter Saw - 10"	1800	1800
Table Planer - 6"	1800	1800
Table Saw/Radial Arm Saw - 10"	2000	2000
Air Compressor - 1-1/2 HP	2500	2500

Figure 13 — Wattage Reference Guide

Never add more loads than the generator capacity. Take special care to consider surge loads in generator capacity, as described above.

*Wattages listed are approximate only. Check tool or appliance for actual wattage.

Maintenance Schedule

Follow the hourly or calendar intervals, whichever occurs first.

More frequent service is required when operating in adverse conditions noted below.

MAINTENANCE SCHEDULE FILL IN DATES AS YOU COMPLETE REGULAR SERVICE	SERVICE DATES				SERVICE DATES		
	Before Each Use	Every 25 Hours or Yearly	Every 50 Hours or Yearly	Every 100 Hours or Yearly			
Clean debris	X						
Check oil level	X						
Change engine oil			X ¹				
Change oil filter				X			
Service air cleaner pre-cleaner		X ²					
Replace air cleaner cartridge				X ²			
Replace spark plug				X			
Check valve clearance				X ³			
Clean cooling system				X ⁴			
Replace fuel hoses and regulator				X ⁵			

- 1 Change oil sooner when operating under dirty or dusty conditions.
- 2 Replace more often under dirty or dusty conditions.
- 3 Check yearly only.
- 4 Clean more often under dirty or dusty conditions.
- 5 Replace every five years.

General Recommendations

Regular maintenance will improve the performance and extend the life of the generator. See any authorized Briggs & Stratton dealer for service. **Never operate a damaged or defective generator.** To receive full value from the warranty, the operator must maintain the generator as instructed in this section.

All service and adjustments should be made at least once each season. Follow the requirements in the "Maintenance Schedule" chart above.

NOTE: Once a year you should clean or replace the spark plug and replace the air filter. A new spark plug and clean air filter assure proper fuel-air mixture and help your engine run better and last longer.

NOTE: The alternator assembly rotates on a prelubricated and sealed ball bearing that requires no additional lubrication for the life of the bearing.

Emissions Control

Maintenance, replacement or repair of the emissions control devices and systems may be performed by any non-road engine repair establishment or individual. See "Emissions Control System Warranty".

Maintenance

Maintenance consists of keeping the unit clean. Operate the unit in an environment where it will not be exposed to excessive dust, dirt, moisture or any corrosive vapors. Cooling air louvers on the enclosure must not become clogged with snow, leaves, or any other foreign material. Inspect cooling air slots and openings on generator. These openings must be kept clean and unobstructed.

Check the cleanliness of the unit frequently and clean when dust, dirt, oil, moisture or other foreign substances are visible on its exterior/interior surface.

NOTE: DO NOT use direct spray from a garden hose to clean generator. Water can enter the engine and generator and cause problems.

Clean Debris

- Use a damp cloth to wipe exterior surfaces clean.
- Use a soft bristle brush to loosen caked on dirt or oil.
- Use a vacuum cleaner to pick up loose dirt and debris.

Engine parts should be kept clean to reduce the risk of overheating and ignition of accumulated debris. Use the same instructions given above for the engine.

CAUTION

Improper treatment of generator can damage it and shorten its life.

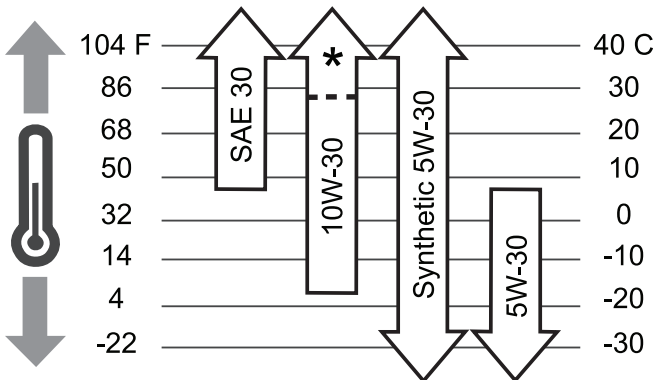
- DO NOT expose generator to excessive moisture, dust, dirt, or corrosive vapors.
- DO NOT insert any objects through cooling slots.

Oil

Oil Recommendations

NOTE: When adding oil to the engine crankcase, use only high quality detergent oil classified “For Service SF, SG, SH, SJ” or higher. DO NOT use special additives.

1. Choose a viscosity according to the following table:



*Check oil level frequently at higher temperatures.

NOTE: Synthetic oil meeting ILSAC GF-2, API certification mark and API service symbol with “SJ/CF ENERGY CONSERVING” or higher, is an acceptable oil at all temperatures. Use of synthetic oil does not alter required oil change intervals.

SAE 30: 40 °F and higher (5 °C and higher) is good for all purpose use above 40°F, use below 40°F will cause hard starting.

10W-30: 0 to 100 °F (-18 to 38 °C) is better for varying temperature conditions. This grade of oil improves cold weather starting, but may increase oil consumption at 80°F (27°C) or higher.

Synthetic 5W-30: -20 to 120 °F (-30 to 40 °C) provides the best protection at all temperatures as well as improved starting with less oil consumption.

5W-30: 40 °F and below (5 °C and below) is recommended for winter use, and works best in cold conditions.

Checking and Adding Oil

Oil level should be checked prior to each use or at least every 8 hours of operation. Keep oil level maintained.

1. Make sure unit is on a level surface.
2. Remove roof (see Removable Roof and Battery Access section).
3. Remove oil fill cap/dipstick and wipe clean with cloth.
4. Verify oil level is at the FULL mark on dipstick (Figure 14).

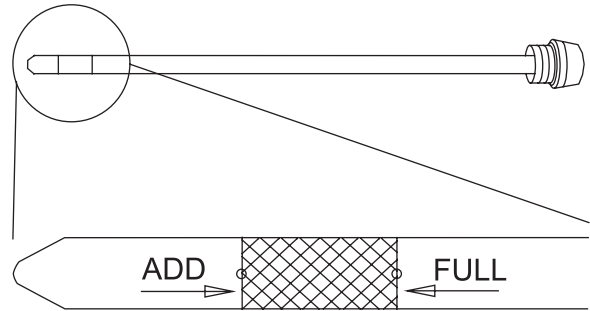


Figure 14 — Oil Fill Range

5. If needed, slowly pour oil into oil fill opening. RECHECK oil level. DO NOT overfill.
6. Replace and tighten dipstick.
7. Replace roof.

Changing Engine Oil and Filter

Remove the two screws from each plastic access cover and remove both access covers from the two sides of the generator enclosure.

Changing Oil

1. Slide oil drain tube from hose clamp and place oil drain tube into approved container.
2. Push in and rotate oil drain fitting 1/4 turn counterclockwise. Slowly pull outward until oil starts draining (Figure 15). **DO NOT** pull oil drain fitting off.

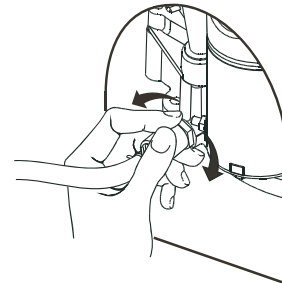


Figure 15 — Oil Drain Fitting

- When oil has drained, push oil drain fitting in and rotate 1/4 turn clockwise until it locks in place.
- Slide oil drain tube up into clamp on generator.

CAUTION

Avoid prolonged or repeated skin contact with used motor oil.

- Used motor oil has been shown to cause skin cancer in certain laboratory animals.
- Thoroughly wash exposed areas with soap and water.



KEEP OUT OF REACH OF CHILDREN. DON'T POLLUTE. CONSERVE RESOURCES. RETURN USED OIL TO COLLECTION CENTERS.

Changing Oil Filter

- Place oil drain tray over tubing and slide it under oil filter (Figure 16).

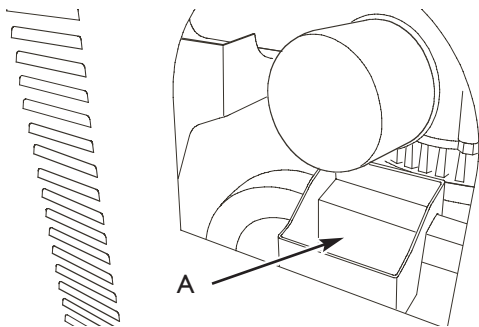


Figure 16 — Changing Oil Filter with Oil Drain Tray
A - Oil drain tray placement

- Grasp oil filter by hand and rotate counterclockwise. Filter should detach from generator.
- Before installing new filter, lightly oil filter gasket with fresh, clean engine oil.
- Carefully screw filter on until gasket contacts oil filter adapter. Tighten by hand 1/2 to 3/4 turn more.
- Remove oil drain tray from under oil filter and clean up any spilled oil.

Fill engine with oil:

- Add fresh recommended oil. Fill to FULL line on dipstick.
- Start and run generator for two minutes with no loads connected and check for oil leaks.
- Stop engine. Recheck oil level and add oil if required. DO NOT overfill.

Service Air Cleaner Elements

Your engine will not run properly and may be damaged if you run it with dirty air cleaner elements.

- Replace the air cleaner **pre-cleaner** every 25 hours of operation or once each year, whichever comes first.
- Replace the air cleaner **cartridge** every 100 hours of operation or once each year. This air filter is UL approved flame retardant material. Replace air filter cartridge with original equipment replacement part.
- Replace more often if operating under dirty or dusty conditions.

To service the air cleaner elements, follow these steps:

- Remove generator roof, as described in “Removable Roof and Battery Access”.
- Pull up on air cleaner cover handle and rotate toward engine.
- Remove air cleaner cover.
- Carefully lift air cleaner cartridge and pre-cleaner from housing. Figure 17 shows the air cleaner housing area.

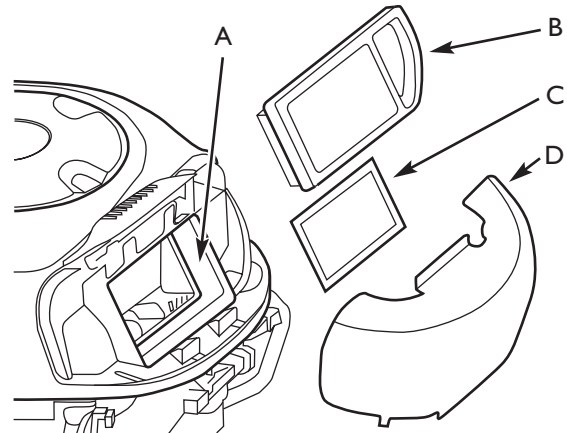


Figure 17 — Changing Air Filter Elements
A - Air cleaner housing
B - Air cleaner cartridge
C - Air cleaner pre-cleaner
D - Air cleaner cover

NOTE: To clean pre-cleaner, wash in soapy water.

Squeeze dry in a clean cloth. DO NOT wring. DO NOT oil.

- Vacuum air cleaner housing area carefully to prevent debris from entering engine.
- To clean cartridge, gently tap pleated paper side on a flat surface.



IMPORTANT: DO NOT use pressurized air or solvents to clean cartridge. Pressurized air can damage cartridge; solvents will dissolve cartridge.

7. Place air cleaner pre-cleaner and cartridge into housing. Cartridge must fit securely in housing.
8. Align tabs on cover with slots in housing and replace cover.
9. Hook handle and close cover.

WARNING	
	If air filter or air filter cover is not installed correctly, serious injury or death could result from backfire.
	
<ul style="list-style-type: none"> • DO NOT attempt to start your engine with filters or air cleaner cover removed. 	

10. Replace roof.

Service Spark Plug

WARNING	
	Unintentional sparking can result in fire or electric shock.
	
When adjusting or making repairs to your generator:	
<ul style="list-style-type: none"> • Disconnect the spark plug wire from the spark plug and place the wire where it cannot contact spark plug. 	
When testing for engine spark:	
<ul style="list-style-type: none"> • Use approved spark plug tester. • DO NOT check for spark with spark plug removed. 	

Change the spark plug every 100 hours of operation or once each year, whichever comes first. This will help your engine to start easier and run better.

1. Clean area around spark plug.
2. Remove and inspect spark plug.
3. Check electrode gap with wire feeler gauge and reset spark plug gap to recommended gap if necessary (see Figure 18 and “Specifications”).

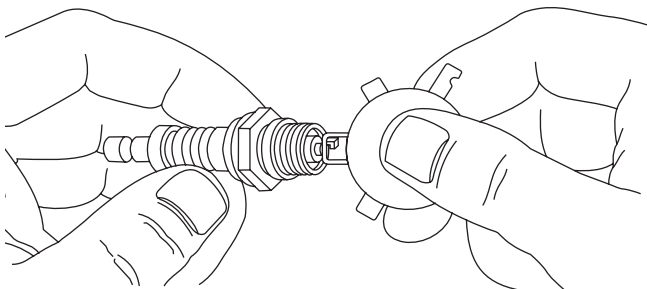


Figure 11 — Check Spark Plug Electrode Gap

4. Replace spark plug if electrodes are pitted, burned or porcelain is cracked. Use the recommended replacement spark plug. See Specifications.
5. Install spark plug and tighten firmly.

Check Valve Clearance

Regular valve clearance check and adjustment will improve performance and extend engine life. This procedure cannot be done without partial engine disassembly and the use of special tools. For this reason we recommend that you have an authorized service dealer check and adjust valve clearance at recommended intervals.




Engine Air Cooling System

Over time debris may accumulate in cylinder cooling fins and cannot be observed without partial engine disassembly. For this reason, we recommend you have an authorized Briggs & Stratton service dealer clean the cooling system per recommended intervals (see “Maintenance Schedule”). Equally important is to keep top of engine and rotating screen free from debris. See “Clean Debris”.

Replace Fuel Hoses and Regulator

It is strongly recommend that you replace the fuel hoses and fuel regulator after five years of use. Even though these components are designed for outdoor use, constant exposure to the elements and to sunlight causes deterioration.

Charge Battery

DANGER	
	Storage batteries give off explosive hydrogen gas during recharging. Slightest spark will ignite hydrogen and cause explosion.
	Battery electrolyte fluid contains acid and is extremely acidic. Contact with battery contents will cause severe chemical burns.
	A battery presents a risk of electrical shock and high short circuit current.
<ul style="list-style-type: none"> • DO NOT dispose of battery in a fire. • DO NOT allow any open flame, spark, heat, or lit cigarette during and for several minutes after charging a battery. • DO NOT open or mutilate the battery. • Wear protective goggles, rubber apron, and rubber gloves. • Remove watches, rings, or other metal objects. • Use tools with insulated handles. 	

IMPORTANT: The generator should be started at least once every seven days and allowed to run at least 30 minutes. If this cannot be done, the battery will lose its charge over time.



If the generator is not operated once a month, the battery should be removed and trickle charged regularly in order to keep the battery charged and ready to start the generator when needed. If battery voltage is too low, the battery may not take a charge and you will need a new battery.

If it is necessary to charge the battery, proceed as follows:

1. Open control panel cover.
2. Using the supplied fuse removal tool, remove the 15 Amp fuse from the control panel.
3. Disconnect the negative battery cable from the negative battery terminal (indicated by **NEGATIVE, NEG, or (-)**).

CAUTION	
Failure to disconnect negative battery cable will result in equipment failure.	
<ul style="list-style-type: none"> • DO NOT attempt to jump start the battery. • Damage to equipment resulting from failure to follow this instruction will void warranty. 	

4. Charge battery with battery charger set at 2 Amps until full charge is indicated by battery charger.

WARNING	
	Overcharging will cause the battery case to crack and battery electrolyte to spill. Battery electrolyte fluid contains acid and is extremely acidic.
	Contact with battery contents will cause severe chemical burns.
<ul style="list-style-type: none"> • DO NOT charge at a rate more than 2 Amps. • Wear protective goggles, rubber apron, and rubber gloves. 	

IMPORTANT: If the battery fails to take a charge, it must be replaced with the same type of 12 Volt DC, AGM type, 33 Amp-Hour, battery. **DO NOT** replace with liquid electrolyte lead-acid type battery.

5. Connect the negative battery cable to the negative battery terminal (indicated by **NEGATIVE, NEG, or (-)**).
6. Ensure hardware on both positive and negative battery terminals is secure.
7. Reinstall the 15 Amp fuse in the control panel.

Generator is now ready for starting and use.

Service Battery

If it is necessary to service the battery, proceed as follows:

1. Open control panel cover.
2. Remove the 15 Amp fuse from the control panel using the fuse removal tool.
3. Disconnect the negative battery cable, then disconnect the positive battery cable.
4. Service or replace battery as required.
5. Connect the red battery cable to the battery positive terminal (indicated by **POSITIVE, POS, or (+)**).
6. Connect the negative battery cable to the negative battery terminal (indicated by **NEGATIVE, NEG, or (-)**).
7. Ensure hardware on both positive and negative battery terminals is secure.
8. Reinstall the 15 Amp fuse in the control panel.

Generator is now ready for starting and use.

Storage

The generator should be started at least once every seven days and allowed to run at least 30 minutes. If this cannot be done and you must store the unit for more than 30 days, use the following guidelines to prepare it for storage:

1. While engine is still warm, change oil as described earlier in “Changing Engine Oil and Filter”.
2. Remove spark plug and pour about 1 oz. (30 ml) of engine oil into cylinder. Replace spark plug but **DO NOT** connect spark plug wire.
3. Ensure fuel supply shut off valve is closed.
4. Press **START/RUN/STOP** switch momentarily to distribute oil.
5. Connect spark plug wire to spark plug.
6. Clean the generator as outlined in “Generator Cleaning”. Ensure that cooling air slots and openings on generator are open and unobstructed.
7. Charge the battery, as described in “Charge Battery”.
8. If the generator is subjected to freezing temperatures, disconnect battery cables from battery and move it to a warmer location. Charge the battery before the next season’s use.

Troubleshooting

Problem	Cause	Correction
Engine is running, but no AC output is available.	<ol style="list-style-type: none"> 1. Circuit breaker open or defective. 2. Fault in generator. 	<ol style="list-style-type: none"> 1. Reset or replace circuit breaker. 2. Contact local service facility.
Engine runs good at no-load but "bogs down" when loads are connected.	<ol style="list-style-type: none"> 1. Short circuit in a connected load. 2. Generator is overloaded. 3. Shorted generator circuit. 4. Fuel pressure is incorrect. 5. LP fuel mixture is incorrect. 	<ol style="list-style-type: none"> 1. Disconnect shorted electrical load. 2. See "Don't Overload Generator". 3. Contact local service facility. 4. See "The Gaseous Fuel System". 5. See "The Gaseous Fuel System".
Engine will not start; or starts and runs rough.	<ol style="list-style-type: none"> 1. 15 Amp fuse missing or blown. 2. Out of fuel. 3. Failed battery. 4. Loose, improper, or failed LP fuel tank connection. 5. Ambient temperature too low to replenish vapor in LP fuel tanks. 	<ol style="list-style-type: none"> 1. Install (new) 15 Amp fuse. See "Control Panel Controls and Features". 2. Open fuel tank shut off valve(s); check LP fuel tank(s). 3. Replace battery. 4. Check LP fuel tank connections. 5. Ensure you have two 20 pound LP fuel tanks connected to generator..
Engine shuts down during operation.	<ol style="list-style-type: none"> 1. Out of fuel. 2. Engine oil low. 	<ol style="list-style-type: none"> 1. Check LP tank fuel shut off valve(s), fill LP fuel tanks. 2. Check and add oil.

Notes

Product Specifications

Rated Maximum Power (LP*)	7.0 kW
Rated Maximum Load Current:	
at 240 Volts	29.1 Amps
at 120 Volts	58.2 Amps
Rated AC Voltage	120/240 Volts
Rated Frequency	60 Hz at 3600 rpm
Phase	Single Phase
Power Factor	1.0
LP Fuel Supply Pressure	11-14 in W.C.
NG Fuel Supply Pressure	5-7 in W.C.
Normal Operating Range	-20°F (-28.8°C) to 104°F (40°C)
Output Sound Level	.81 dB(A) at 23 ft. (7 m) at full load
Shipping Weight	280 lbs.

* Natural gas rating will depend on specific fuel but typical derating of generator is between 10 to 20% off the LP gas rating. The power ratings for an individual engine model are initially developed by starting with SAE (Society of Automotive Engineers) code J1940 (Small Engine Power & Torque Rating Procedure) (Revision 2002-05). Given both the wide array of products on which our engines are placed, and the variety of environmental issues applicable to operating the equipment, it may be that the engine you have purchased will not develop the rated horsepower when used in a piece of power equipment (actual "on-site" power). This difference is due to a variety of factors including, but not limited to, the following: differences in altitude, temperature, barometric pressure, humidity, fuel, engine lubrication, maximum governed engine speed, individual engine to engine variability, design of the particular piece of power equipment, the manner in which the engine is operated, engine run-in to reduce friction and clean out of combustion chambers, adjustments to the valves and carburetor, and other factors. The power ratings may also be adjusted based on comparisons to other similar engines utilized in similar applications, and will therefore not necessarily match the values derived using the foregoing codes.

Engine

Bore	3.56 in. (90.6mm)
Stroke	3.06 in. (77.78mm)
Displacement	30.59 in. (501 cc)
Spark Plug	
Type:	Champion RC12YC or Equivalent
Set Gap To:	0.030inch (0.76mm)
Armature Air Gap:	0.010-0.014 in. (0.25-0.36mm)
Valve clearance with valve springs installed and piston 1/4 in. (6 mm) past top dead center of compression stroke (check when engine is cold).	
Intake	0.003-0.005 in. (0.08-0.13 mm)
Exhaust	0.005-0.007 in. (0.13-0.18 mm)
Oil Capacity (w/o filter)	48 Ounces (1.4 Liters)
Oil Type:	Synthetic SAE 5W-30

NOTE: For practical operation, the generator load should not exceed 85% of rated wattage. Engine power will decrease 3-1/2% for each 1,000 feet (300 meters) above sea level and 1% for each 10° F (5.6° C) above 77° F (25° C). Engine will operate satisfactorily at an angle up to 15°.

Replacement Parts

Replacement parts are available from your authorized Briggs & Stratton Service dealer. Each one carries a stock of genuine Briggs & Stratton service parts and is equipped with special service tools. Trained mechanics assure expert repair service on all Briggs & Stratton products. Only dealers advertising as "Authorized Briggs & Stratton" are required to meet Briggs & Stratton standards.

When you purchase equipment powered by a Briggs & Stratton engine, you are assured of highly skilled, reliable service at more than 30,000 Authorized Service Dealers worldwide, including more than 6,000 Master Service technicians.

You may locate your nearest authorized Briggs & Stratton Service Dealer in our dealer locator map on our web site www.briggsandstratton.com or in the telephone directory under "Engines" or "Generators" or similar category.

Maintenance Items

Many convenient and helpful service and maintenance items are available from your authorized dealer. Some of these items include:

- Air cleaner cartridge
- Engine oil
- Maintenance kit
- Oil filter
- Pre-cleaner element
- Resistor spark plug
- Spark plug wrench
- Spark tester
- Touch-up paint

EMISSIONS CONTROL SYSTEM WARRANTY

**Briggs & Stratton Corporation (B&S), the California Air Resources Board (CARB)
and the United States Environmental Protection Agency (U.S. EPA)**

Emissions Control System Warranty Statement (Owner's Defect Warranty Rights and Obligations)

California, United States and Canada Emissions Control Defects Warranty Statement

The California Air Resources Board (CARB), U.S. EPA and B&S are pleased to explain the Emissions Control System Warranty on your small off-road engine (SORE). In California, new small off-road engines model year 2006 and later must be designed, built and equipped to meet the State's stringent anti-smog standards. Elsewhere in the United States, new non-road, spark-ignition engines certified for model year 1997 and later must meet similar standards set forth by the U.S. EPA. B&S must warrant the emissions control system on your engine for the periods of time listed below, provided there has been no abuse, neglect or improper maintenance of your small off-road engine.

Your emissions control system includes parts such as the carburetor, air cleaner, ignition system, fuel line, muffler and catalytic converter. Also included may be connectors and other emissions related assemblies.

Where a warrantable condition exists, B&S will repair your small off-road engine at no cost to you including diagnosis, parts and labor.

Briggs & Stratton Emissions Control Defects Warranty Coverage

Small off-road engines are warranted relative to emissions control parts defects for a period of two years, subject to provisions set forth below. If any covered part on your engine is defective, the part will be repaired or replaced by B&S.

Owner's Warranty Responsibilities

As the small off-road engine owner, you are responsible for the performance of the required maintenance listed in your Operating and Maintenance Instructions. B&S recommends that you retain all your receipts covering maintenance on your small off-road engine, but B&S cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

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

You are responsible for presenting your small off-road engine to an Authorized B&S Service Dealer as soon as a problem exists. The undisputed warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact a B&S Service Representative at 1-414-259-5262.

The emissions warranty is a defects warranty. Defects are judged on normal engine performance. The warranty is not related to an in-use emissions test.

Briggs & Stratton Emissions Control Defects Warranty Provisions

The following are specific provisions relative to your Emissions Control Defects Warranty Coverage. It is in addition to the B&S engine warranty for non-regulated engines found in the Owner's Manual.

1. Warranted Parts

Coverage under this warranty extends only to the parts listed below (the emissions control systems parts) to the extent these parts were present on the engine purchased.

- a. Fuel Metering System
 - Cold start enrichment system (soft choke)
 - Carburetor and internal parts
 - Fuel Pump
 - Fuel line, fuel line fittings, clamps
- b. Air Induction System
 - Air cleaner
 - Intake manifold
- c. Ignition System
 - Spark plug(s)
 - Magneto ignition system
- d. Catalyst System
 - Catalytic converter
 - Exhaust manifold
 - Air injection system or pulse valve
- e. Miscellaneous Items Used in Above Systems
 - Vacuum, temperature, position, time sensitive valves and switches
 - Connectors and assemblies

2. Length of Coverage

B&S warrants to the initial owner and each subsequent purchaser that the Warranted Parts shall be free from defects in materials and workmanship which caused the failure of the Warranted Parts for a period of two years from the date the engine is delivered to a retail purchaser.

3. No Charge

Repair or replacement of any Warranted Part will be performed at no charge to the owner, including diagnostic labor which leads to the determination that a Warranted Part is defective, if the diagnostic work is performed at an Authorized B&S Service Dealer. For emissions warranty service contact your nearest Authorized B&S Service Dealer as listed in the telephone directory under “Engines, Gasoline,” “Gasoline Engines,” “Lawn Mowers,” or similar category.

4. Claims and Coverage Exclusions

Warranty claims shall be filed in accordance with the provisions of the B&S Engine Warranty Policy. Warranty coverage shall be excluded for failures of Warranted Parts which are not original B&S parts or because of abuse, neglect or improper maintenance as set forth in the B&S Engine Warranty Policy. B&S is not liable to cover failures of Warranted Parts caused by the use of add-on, non-original, or modified parts.

5. Maintenance

Any Warranted Part which is not scheduled for replacement as required maintenance or which is scheduled only for regular inspection to the effect of “repair or replace as necessary” shall be warranted as to defects for the warranty period. Any Warranted Part which is scheduled for replacement as required maintenance shall be warranted as to defects only for the period of time up to the first scheduled replacement for that part. Any replacement part that is equivalent in performance and durability may be used in the performance of any maintenance or repairs. The owner is responsible for the performance of all required maintenance, as defined in the B&S Owner’s Manual.

6. Consequential Coverage

Coverage hereunder shall extend to the failure of any engine components caused by the failure of any Warranted Part still under warranty.

Emissions Durability Period and Air Index Information On Your Engine Emissions Label

Engines that are certified to meet the California Air Resources Board (CARB) Tier 2 Emission Standards must display information regarding the Emissions Durability Period and Air Index. The engine manufacturer makes this information available to the consumer on emission labels.

The **Emissions Durability Period** describes the number of hours of actual running time for which the engine is certified to be emissions compliant, assuming proper maintenance in accordance with the Maintenance Schedule. The following categories are used:

Moderate: Engine is certified to be emission compliant for 125 hours of actual engine running time.

Intermediate: Engine is certified to be emission compliant for 250 hours of actual engine running time.

Extended: Engine is certified to be emission compliant for 500 hours of actual engine running time.

For example, a typical walk-behind lawn mower is used 20 to 25 hours per year. Therefore, the **Emissions Durability Period** of an engine with an **intermediate** rating would equate to 10 to 12 years.

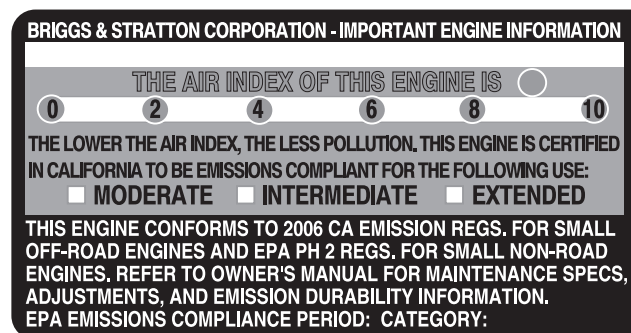
The **Air Index** is a calculated number describing the relative level of emissions for a specific engine family. The lower the **Air Index**, the cleaner the engine. This information is displayed in graphical form on the emissions label.

Emissions Compliance Period On Engine Emissions Compliance Label

After July 1, 2000 certain Briggs & Stratton engines will be certified to meet the United States Environmental Protection Agency (USEPA) Phase 2 emission standards. For phase 2 certified engines, the Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to meet Federal emission requirements. For engines less than 225 cc displacement, Category C = 125 hours, B = 250 hours and A = 500 hours. For engines of 225 cc or more, Category C = 250 hours, B = 500 hours and A = 1000 hours.

This generator engine has an intermediate rating with an Air Index of 2. The EPA Emissions compliance period is Category C. The displacement of this engine is 501 cc.

Below is a generic representation of the emission label typically found on a certified engine.



**BRIGGS & STRATTON POWER PRODUCTS GROUP, LLC
7KW AND 10KW HOME GENERATOR OWNER WARRANTY POLICY**

Effective September 1, 2005 replaces all undated Warranties and all Warranties dated before September 1, 2005

LIMITED WARRANTY

Briggs & Stratton Power Products Group, LLC will repair or replace, free of charge, any part(s) of the equipment that is defective in material or workmanship or both. Transportation charges on product submitted for repair or replacement under this warranty must be borne by purchaser. This warranty is effective for the time periods and subject to the conditions stated below. For warranty service, find the nearest Authorized Service Dealer in our dealer locator map at www.briggspowerproducts.com.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM PURCHASE, OR TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. Some states or countries do not allow limitations on how long an implied warranty lasts, and some states or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state or country to country.

WARRANTY PERIOD

Consumer Use	2 years
Commercial Use	None

The warranty period begins on the date of purchase by the first retail consumer or commercial end user, and continues for the period of time stated in the table above. "Consumer use" means personal residential household use by a retail consumer. "Commercial use" means all other uses, including use for commercial, income producing or rental purposes. Once equipment has experienced commercial use, it shall thereafter be considered as commercial use for purposes of this warranty.

NO WARRANTY REGISTRATION IS NECESSARY TO OBTAIN WARRANTY ON BRIGGS & STRATTON PRODUCTS. SAVE YOUR PROOF OF PURCHASE RECEIPT. IF YOU DO NOT PROVIDE PROOF OF THE INITIAL PURCHASE DATE AT THE TIME WARRANTY SERVICE IS REQUESTED, THE MANUFACTURING DATE OF THE PRODUCT WILL BE USED TO DETERMINE THE WARRANTY PERIOD.

ABOUT YOUR WARRANTY

We welcome warranty repair and apologize to you for being inconvenienced. Any Authorized Service Dealer may perform warranty repairs. Most warranty repairs are handled routinely, but sometimes requests for warranty service may not be appropriate. For example, warranty service would not apply if equipment damage occurred because of misuse, lack of routine maintenance, shipping, handling, warehousing or improper installation. Similarly, the warranty is void if the manufacturing date or the serial number on the equipment has been removed or the equipment has been altered or modified. During the warranty period, the Authorized Service Dealer, at its option, will repair or replace any part that, upon examination, is found to be defective under normal use and service. This warranty will not cover the following repairs and equipment:

- **Normal Wear:** Outdoor Power Equipment and engines, like all mechanical devices, needs periodic parts and service to perform well. This warranty does not cover repair when normal use has exhausted the life of a part or the equipment.
- **Installation and Maintenance:** This warranty does not apply to equipment or parts that have been subjected to improper or unauthorized installation or alteration and modification, misuse, negligence, accident, overloading, overspeeding, improper maintenance, repair or storage so as, in our judgment, to adversely affect its performance and reliability. This warranty also does not cover normal maintenance such as adjustments, fuel system cleaning and obstruction (due to chemical, dirt, carbon, lime, etc.).
- **Other Exclusions:** This warranty excludes wear items such as oil gauges, o-rings, filters, fuses, spark plugs, starting batteries, etc., or damage or malfunctions resulting from accidents, abuse, modifications, alterations, or improper servicing or freezing or chemical deterioration. Accessory parts are excluded from the product warranty. This warranty excludes failures due to acts of God and other force majeure events beyond the manufacturers control. Also excluded is used, reconditioned, and demonstration equipment; equipment used for prime power in place of utility power and equipment used in life support applications.

**BRIGGS & STRATTON POWER PRODUCTS GROUP, LLC
JEFFERSON, WI, USA**