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

This manual contains safety information to make you aware of the hazards and risks associated with residential generator systems and how to avoid them. This generator system is designed and intended only for use as an optional home standby system that provides an alternate source of electric power and to serve loads such as heating, refrigeration systems, and communication systems that, when stopped during any power outage, could cause discomfort or inconvenience. Save these original instructions for future reference.

This generator system requires professional installation before use. The installer should follow the instructions completely.

Where to Find Us
You never have to look far to find support and service for your generator. Consult your Yellow Pages. There are many Briggs & Stratton authorized service dealers worldwide who provide quality service. You can also contact Briggs & Stratton Customer Service by phone at 800-743-4115 between 8:00 AM and 5:00 PM CT., or click on Find a Dealer at BRIGGSandSTRATTON.COM, which provides a list of authorized dealers.

For Future Reference
Please fill out the information below and keep with your receipt to assist in unit identification for future purchase issues.

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<th>Date of Purchase</th>
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**Generator**

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**Engine**

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Briggs & Stratton Power Products Group, LLC
P.O. Box 702
Milwaukee, WI 53201-0702

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Save These Instructions

Important Safety Instructions

SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during installation and maintenance of the generator and batteries.

Safety Symbols and Meanings

- Explosion
- Fire
- Electrical Shock
- Toxic Fumes
- Rotating Parts
- Hot Surface
- Auto Start
- Explosive Pressure
- Chemical Burn
- Lift Hazard
- Read Manual

⚠️ The safety alert symbol indicates a potential personal injury hazard. A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to designate a degree or level of hazard seriousness. A safety symbol may be used to represent the type of hazard. The signal word NOTICE is used to address practices not related to personal injury.

⚠️ 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, could result in minor or moderate injury.

NOTICE addresses practices not related to personal injury.

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 system unsafe.

⚠️ 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, could result in minor or moderate injury.

NOTICE Addresses practices not related to personal injury.

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 system unsafe.

⚠️ WARNING Running engine gives off carbon monoxide, an odorless, colorless, poison gas. Breathing carbon monoxide could result in death, serious injury, headache, fatigue, dizziness, vomiting, confusion, seizures, nausea or fainting.

- Operate this product ONLY outdoors in an area that will not accumulate deadly exhaust gas.
- Keep exhaust gas away from any windows, doors, ventilation intakes, soffit vents, crawl spaces, open garage doors or other openings that can allow exhaust gas to enter inside or be drawn into a potentially occupied building or structure.
- Carbon monoxide detector(s) MUST be installed and maintained indoors according to the manufacturer’s instructions/recommendations. Smoke alarms cannot detect carbon monoxide gas.

⚠️ 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 Certain components in this product and related accessories contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling.

⚠️ WARNING Storage batteries give off explosive hydrogen gas during recharging. Slightest spark will ignite hydrogen and cause explosion, resulting in death, serious injury and/or property damage.

Battery electrolyte fluid contains acid and is extremely caustic. Contact with battery contents could 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. Recycle battery.
- 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, rubber boots and rubber gloves.
- Remove watches, rings, or other metal objects.
- Use tools having insulated handles.
**WARNING** Propane and Natural Gas are extremely flammable and explosive, which could cause burns, fire or explosion resulting in death, serious injury and/or property damage.

- Install the fuel supply system according to NFPA 37 and other applicable fuel-gas codes.
- Before placing the generator into service, the fuel system lines must be properly purged and leak tested.
- After the generator is installed, you should inspect the fuel system periodically.
- NO leakage is permitted.
- DO NOT operate engine if smell of fuel is present or other explosive conditions exist.
- DO NOT smoke around the generator. Wipe up any oil spills immediately. Ensure that no combustible materials are left in the generator compartment. Keep the area near the generator clean and free of debris.

**WARNING** Hazardous Voltage - Contact with power lines could cause electric shock or burns, resulting in death or serious injury. Lifting Hazard / Heavy Object - Could result in serious injury.

- If lifting or hoisting equipment is used, DO NOT contact any power lines.
- DO NOT lift or move generator without assistance.
- Use lifting pipes as described in Lifting the Generator.
- DO NOT lift unit by roof as damage to generator will occur.

**WARNING** Generator produces hazardous voltage. Failure to properly ground generator could result in electrocution. Failure to isolate generator from utility power could result in death or serious injury to electric utility workers due to backfeed of electrical energy.

- When using generator for backup power, notify utility company.
- DO NOT touch bare wires or bare 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.
- If you must work around a unit while it is operating, stand on an insulated dry surface to reduce the risk of a shock hazard.
- DO NOT allow unqualified persons or children to operate or service generator.
- 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.
- Despite the safe design of the generator, operating this equipment imprudently, neglecting its maintenance or being careless could 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.
- Before performing any maintenance on the generator, disconnect the battery cable indicated by a NEGATIVE, NEG or (-) first. When finished, reconnect that cable last.
- After your system is installed, the generator may crank and start without warning any time there is a power failure. To prevent possible injury, always set the generator’s system switch to OFF, remove the service disconnect from the disconnect box AND remove the 15 Amp fuse BEFORE working on the equipment.
**WARNING** Exhaust heat/gases could ignite combustibles or structures resulting in death, serious injury and/or property damage. Contact with muffler area could cause burns resulting in serious injury.

- DO NOT touch hot parts and AVOID hot exhaust gases.
- Allow equipment to cool before touching.
- Exhaust outlet side of weatherproof enclosure must have at least 5 ft. (1.5 m) minimum clearance from any structure, shrubs, trees or any kind of vegetation.
- Standby generator weatherproof enclosure must be at least 5 ft. (1.5 m) from windows, doors, any wall opening, shrubs or vegetation over 12 inches (30.5 cm) in height.
- Standby generator weatherproof enclosure must have a minimum of 5 ft. (1.5 m) overhead clearance from any structure, overhang or trees.
- DO NOT place weatherproof enclosure under a deck or other type of structure that may confine airflow.
- Use only flexible fuel line provided. Connect provided fuel line to generator, DO NOT use with or substitute any other flexible fuel line.
- Smoke detector(s) MUST be installed and maintained indoors according to the manufacturer's instructions/recommendations. Carbon monoxide alarms cannot detect smoke.
- Keep at least minimum distances shown in *General Location Guidelines* to insure for proper generator cooling and maintenance clearances.
- It is a violation of California Public Resource Code, Section 4442, to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the exhaust system is equipped with a spark arrester, as defined in Section 4442, maintained in effective working order. Other states or federal jurisdictions may have similar laws.
- Contact the original equipment manufacturer, retailer, or dealer to obtain a spark arrester designed for the exhaust system installed on this engine.
- Replacement parts must be the same and installed in the same position as the original parts.

**CAUTION** Installing the 15A fuse could cause the engine to start at any time without warning resulting in minor or moderate injury.

- Observe that the 15 Amp fuse has been removed from the control panel for shipping.
- DO NOT install this fuse until all plumbing and wiring has been completed and inspected.

**CAUTION** Excessively high operating speeds could result in minor injury and/or equipment damage. Excessively low speeds impose a heavy load on generator.

- 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.

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

- Use generator only for intended uses.
- If you have questions about intended use, contact your authorized dealer.
- Operate generator only on level surfaces.
- Adequate, unobstructed flow of cooling and ventilating air is critical to correct generator operation.
- The access panels/doors must be installed whenever the unit is running.
- DO NOT expose generator to excessive moisture, dust, dirt, or corrosive vapors.
- Remain alert at all times while working on this equipment. Never work on the equipment when you are physically or mentally fatigued.
- 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 could 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.

**WARNING** Starter and other rotating parts could entangle hands, hair, clothing, or accessories resulting in serious injury.

- NEVER operate generator without protective housings, covers, or guards in place.
- DO NOT wear loose clothing, jewelry or anything that could be caught in the starter or other rotating parts.
- Tie up long hair and remove jewelry.
- Before servicing, remove 15 Amp fuse from control panel and disconnect **Negative (NEG or -)** battery cable.

**Shut off generator if**

- electrical output is lost;
- equipment sparks, smokes, or emits flames;
- unit vibrates excessively;
- unit makes unusual noises.
Installation

Equipment Description
This product is only for use as an optional generator system which provides an alternate source of electric power and to serve loads such as heating, refrigeration systems, and communication systems that, when stopped during any power outage, could cause discomfort or inconvenience.

NOTICE This product does NOT qualify for either an emergency standby or legally required standby system as defined by NFPA 70 (NEC).

- Emergency generator systems are intended to automatically supply illumination, power, or both, to designated areas and equipment in the event of failure of the normal supply. Emergency systems may also provide power for such functions as ventilation where essential to maintain life, where current interruption of the normal supply would produce serious life safety or health hazards.
- Legally Required standby generator systems are intended to automatically supply power to selected loads in the event of failure of the normal source which could create hazards or hamper rescue or firefighting operations.

Every effort has been made to ensure that information in this manual is accurate and current. However, we reserve the right to change, alter, or otherwise improve the product and this document at any time without prior notice.

Only current licensed electrical and plumbing professionals should attempt home generator system installations. Installations must strictly comply with all applicable codes, industry standards, laws and regulations.

Home Owner Responsibilities
- Read and follow the instructions given in the operator’s manual.
- Follow a regular schedule in maintaining, caring for and using your generator, as specified in the operator’s manual.
- Carbon monoxide detector(s) MUST be installed and maintained indoors according to the manufacturer’s instructions/recommendations. Smoke alarms cannot detect carbon monoxide gas.

If you have questions about intended use, ask your installer or dealer or call 877-369-9400 between 8:00 AM and 5:00 PM CT.

Installing Dealer/Contractor Responsibilities
- Read and observe the safety rules.
- Install only an UL approved transfer switch that is compatible with the generator.
- Read and follow the instructions given in this installation and start-up manual.
- Installation must strictly comply with all applicable codes, industry standards, laws, and regulations.
- Allow sufficient room on all sides of the generator for maintenance and servicing.

Cold Weather Kit
If operating the generator below 40°F (5°C), it is HIGHLY RECOMMENDED that a Model 6030A Cold Weather Kit (includes oil warmer and battery warmer) be installed. These items are available at your local servicing dealer.

If you need more information on this matter, please call (877) 369-9400, between 8:00 AM and 5:00 PM CT.

Unpacking Precautions
The unit is shipped bolted to its mounting pad, ready for installation. Avoid damage from dropping, bumping, collision, etc. Store and unpack carton with the proper side up, as noted on the shipping carton.

Delivery Inspection
After removing the carton, carefully inspect the generator for any damage that may have occurred during shipment. If loss or damage is noted at time of delivery, have the person(s) making delivery note all damage on the freight bill and affix his signature under the consignor’s memo of loss or damage. If loss or damage is noted after delivery, separate the damaged materials and contact the carrier for claim procedures. Parts damaged in shipping are not warranted.
Shipment Contents

The generator is supplied with:
- Pre-attached mounting pad
- Fully-serviced oil/lubricating system
- Flexible steel fuel line
- Installation and start-up manual
- Operator's manual
- Spare access door keys
- Spare 15 Amp ATO-type fuse
- Two-pin connector plug
- Ten-pin connector plug
- Lifting hold plugs (4)
- LP conversion jet
- Battery tie-down strap

Not Included:
- Carbon monoxide detector(s)
- Smoke detector(s)
- Starting battery (see page 24)
- Connecting wire and conduit
- Fuel supply valves/plumbing
- Crane, lifting straps, chains or cables
- Two 48" lengths of 1" pipe (NOT conduit)
- Hole punches for 16ga steel
- Torque screwdriver, 5 to 50 inch-pound range
- Voltage/frequency meter
**Installation Checklist**

This generator has been installed per the manufacturer's instructions:

Installing Contractor Signature: ________________________________

Date: ________________________________

**Carbon Monoxide (CO) Detector/Smoke Detector**

- [ ] Carbon Monoxide (CO) detector(s) installed and in working order.
- [ ] Smoke detector(s) installed and in working order.

**Placement**

- [ ] Required permits have been obtained.
- [ ] Generator placed in a Carbon Monoxide (CO) safe zone. See Placement of Standby Generator to Reduce the Risk of Carbon Monoxide Poisoning.
- [ ] Generator placed in a fire safe zone. See Placement of Standby Generator to Reduce the Risk of Fire.
- [ ] Generator placed in a water damage safe zone. See Other General Location Guidelines.
- [ ] Generator placed in a utility safe zone. See Other General Location Guidelines.
- [ ] Generator placed in a debris free zone. See Other General Location Guidelines.
- [ ] Generator placed on flat ground with provisions for water drainage. See Other General Location Guidelines.

**Fuel**

- [ ] Generator is connected to fuel source with flexible fuel line, has no fuel leaks and conforms to local codes. See The Gaseous Fuel System.
- [ ] Proper fuel pressure has been measured with all gas appliances operating. See The Gaseous Fuel System.
- [ ] Fuel system has been configured for the proper fuel supply: Natural gas (NG) or liquefied petroleum (LP). See Fuel Conversion.
- [ ] Fuel type: (circle one) NG LP
- [ ] Fuel pipe size used: (circle one) 3/4” 1” 1-1/4” 1-1/2” See NFPA 54, Chapter 6.
- [ ] Fuel pressure at fuel inlet port with generator on and at full load and all gas appliances turned on and operating ________________.

**Electrical**

- [ ] Generator neutral is connected to Automatic Transfer Switch. See Generator AC Connection System.
- [ ] Generator is grounded. See Gounding the Generator and NFPA 70, NEC.
- [ ] Generator is connected to the transfer switch with the specified wiring. See Utility Circuit Connection and Transfer Switch Communication.
- [ ] Generator is connected to the transfer switch with the specified wiring. #18AWG twisted pair wiring from the generator control panel to the transfer switch is installed in a separate conduit from high voltage wires unless the insulation rating on all wiring is rated for 600V See Transfer Switch Communication.
- [ ] Dipswitches in most transfer switches must be set to correspond to the wattage of the generator. See Transfer Switch Operator/Installation Manual.

**Operation**

- [ ] Cold weather kit is installed in temperatures below 40°F (5°C). See Cold Weather Kit.
- [ ] Correct battery type is installed and fully charged. See Final Installation Considerations.
- [ ] Generator engine oil level is at full mark. See Final Installation Considerations.
- [ ] Circuit breaker is in the ON position.
- [ ] Utility was shut off to test the operation of generator and transfer switch. Note any fault codes and make corrections as required.
- [ ] AC Voltage Output ____________________________.
- [ ] Frequency Output ____________________________.

**Owner Information**

Name: ________________________________

Address: ________________________________

___________________________________________

Phone/e-mail: ________________________________

**Unit Information**

Generator Model: ________________________________

Generator Serial Number: ________________________________

**Installing Contractor Information**

Name: ________________________________

Address: ________________________________

___________________________________________

Phone/FAX: ________________________________

**Electrician:** ________________________________

Signature: ________________________________

**Plumber:** ________________________________

Signature: ________________________________

**Inspector Information**

Name: ________________________________

Address: ________________________________

________________________________________________________________________

Title: ________________________________

Inspection Date: ________________________________

This generator has been installed per the manufacturer's instructions:

Installing Contractor Signature: ________________________________

Date: ________________________________
Generator Placement

Before installing generator, consult with home owner and convey the following requirements, which must be satisfied before the installation is complete.

There are two equally important safety concerns in regards to carbon monoxide poisoning and fire. There are also several general location guidelines that must be met before the installation is considered complete.

**WARNING** Running engine gives off carbon monoxide, an odorless, colorless, poison gas.

Breathing carbon monoxide could result in death serious injury, headache, fatigue, dizziness, vomiting, confusion, seizures, nausea or fainting.

- Operate this product ONLY outdoors in an area that will not accumulate deadly exhaust gas.
- Keep exhaust gas away from any windows, doors, ventilation intakes, soffit vents, crawl spaces, open garage doors or other openings that can allow exhaust gas to enter inside or be drawn into a potentially occupied building or structure.
- Carbon monoxide detector(s) MUST be installed and maintained indoors according to the manufacturer’s instructions/recommendations. Smoke alarms cannot detect carbon monoxide gas.

Exhaust Side of the Generator

- Exhaust outlet side of weatherproof enclosure
- Weatherproof enclosure opposite exhaust side

Other General Location Guidelines

- Place the standby generator in a prepared location that is flat and has provisions for water drainage.
- Install the standby generator in a location where sump pump discharge, rain gutter downspouts, 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 standby generator where it will not affect or obstruct and services including covered, concealed and underground, such as telephone, electric, fuel (natural gas/ LPG vapor), irrigation, air conditioning, cable, septic, sewer, well and so forth.
- Install the standby generator where leaves, grass, snow, etc. will not obstruct air inlet and outlet openings. If prevailing winds will cause blowing or drifting, you may need to construct a windbreak to protect the unit.

National Fire Protection Association (NFPA) Standard NFPA 37 Requirements and Testing

Requirements:

NFPA 37 2010, section 4.1.4, Engines Located Outdoors. Engines, and their weatherproof housings if provided, that are installed outdoors shall be located at least 1.5m (5 ft) from openings in walls and at least 1.5 m (5 ft) from structures having combustible walls. A minimum separation shall not be required where either of the following conditions exist:

1. The adjacent wall of the structure has a fire resistance rating of at least 1 hour.
2. The weatherproof enclosure is constructed of noncombustible materials and it has been demonstrated that a fire within the enclosure will not ignite combustible materials outside the enclosure.

* Annex A Explanatory Material

A.4.1.4 (2) Means of demonstrating compliance are by means of full-scale fire tests or by calculation procedures, such as those given in NFPA 555, Guide on Methods for Evaluating Potential for Room Flashover.

To comply with condition 2 above the weatherproof enclosure has been constructed completely of non-combustible materials and full-scale fire tests have been conducted to demonstrate that a fire within the enclosure will not ignite combustible materials outside the enclosure.
All fossil fuel burning equipment, such as standby generators, contains carbon monoxide (CO) gas in the engine exhaust. CO gas is odorless, colorless and tasteless and is unlikely to be noticed until a person is overcome. CO gas can kill you so it is required that the following is included as part of the installation:

- Install generator outdoors in an area that will not accumulate deadly exhaust gas.
- DO NOT install generator where exhaust gas could accumulate and enter inside or be drawn into a potentially occupied building or structure.
- By law it is required in many states to have a Carbon Monoxide (CO) detector in operating condition in your home. Carbon monoxide detector(s) (A) MUST be installed and maintained indoors according to the manufacturer’s instructions / recommendations. A CO monitor is an electric device that detects hazardous levels of CO. When there is a buildup of CO, the monitor will alert the occupants by flashing visual indicator light and alarm. Smoke alarms cannot detect CO gas.
- Your neighbor(s) home may be exposed to the engine exhaust from your standby generator and must be considered when installing your standby generator.
- Ensure exhaust gas is kept away from:
  - B - windows
  - C - doors
  - D - ventilation intakes
  - E - soffit vents
  - F - garage doors
  - G - crawl spaces or other openings that can allow exhaust gas to enter inside or be drawn into a potentially occupied building or structure.

Placement of Standby Generator to REDUCE THE RISK OF CARBON MONOXIDE POISONING

The arrows in the figure below point to POTENTIAL points of entry for Carbon Monoxide Gas.
• Direct the standby generator exhaust away from or parallel to the building or structure. DO NOT direct the generator exhaust towards a potentially occupied building, structure, windows, doors, ventilation intakes, soffit vents, crawl spaces, open garage doors or other openings where exhaust gas could accumulate and enter inside or be drawn into potentially occupied building or structure.

• DO NOT place standby generator in any area where leaves or debris normally accumulates. Position standby generator in an area where winds will carry the exhaust gas away from any potentially occupied building or structure.
Placement of Standby Generator to REDUCE THE RISK OF FIRE

The National Fire Protection Association (NFPA) standard NFPA 37 establishes criteria for minimizing the hazard of fire during the installation and operation of stationary combustion engines. NFPA 37 limits the spacing of an enclosed generator from openings in walls, structures, and combustible materials outside the enclosure.

The placement requirements provided are based on compliance to NFPA 37 2010.

**WARNING** Exhaust heat/gases could ignite combustibles or structures resulting in death, serious injury and/or property damage.

- Exhaust outlet side of weatherproof enclosure must have at least 5 ft. (1.5 m) minimum clearance from any structure, shrubs, trees or any kind of vegetation.
- Standby generator weatherproof enclosure must be at least 5 ft. (1.5 m) from windows, doors, any wall opening, shrubs or vegetation over 12 inches (30.5 cm) in height.
- Standby generator weatherproof enclosure must have a minimum of 5 ft. (1.5 m) overhead clearance from any structure, overhang or trees.
- DO NOT place weatherproof enclosure under a deck or other type of structure that may confine airflow.
- Use only flexible fuel line provided. Connect provided fuel line to generator, DO NOT use with or substitute any other flexible fuel line.
- Smoke detector(s) MUST be installed and maintained indoors according to the manufacturer’s instructions/recommendations. Carbon monoxide alarms cannot detect smoke.
- DO NOT place weatherproof enclosure in manner other than shown in illustrations.

**Examples of standby generator locations to reduce the risk of fire:**

**Vertical Clearances**

**Legend for Generator Locations to reduce the risk of fire:**

- **A** - Standby weatherproof enclosure must be at least 5 ft. (1.5 m) from windows, doors, any wall opening, shrubs, or vegetation over 12 inches (30.5 cm) in height.
- **B** - Exhaust outlet side of weatherproof enclosure must have at least 5 ft. (1.5 m) minimum clearance from any structure, overhang or trees.
- **C** - Standby weatherproof enclosure must have a minimum of 5 ft. (1.5 m) overhead clearance from any structure, overhang, or trees.
- **D** – Standby Weatherproof enclosure must have a minimum of 18 inches (45.7 cm) clearance from any structures with or without a fire rating.

**NOTICE** DO NOT place weatherproof enclosure under a deck or other type of cover and structure that may confine airflow.
Single Structure Installations

**NOTICE** The figures below show the minimum installation distances allowed to structures and items in the legend.

Legend for Generator Locations to reduce the risk of fire:

- **A** - Standby weatherproof enclosure must be at least 5 ft. (1.5 m) from windows, doors, any wall opening, shrubs, or vegetation over 12 inches (30.5 cm) in height.

- **B** - Exhaust outlet side of weatherproof enclosure must have at least 5 ft. (1.5 m) minimum clearance from any structure, overhang or trees.

- **C** - Standby weatherproof enclosure must have a minimum of 5 ft. (1.5 m) overhead clearance from any structure, overhang, or trees.

- **D** – Standby Weatherproof enclosure must have a minimum of 18 inches (45.7 cm) clearance from any structures with or without a fire rating.

**NOTICE** DO NOT place weatherproof enclosure under a deck or other type of coverend structure that may confine airflow.
Two Structure Installations

*NOTICE* The figures below show the minimum installation distances allowed to structures and items in the legend.

Legend for Generator Locations to reduce the risk of fire:

A - Standby weatherproof enclosure must be at least 5 ft. (1.5 m) from windows, doors, any wall opening, shrubs, or vegetation over 12 inches (30.5 cm) in height.

B - Exhaust outlet side of weatherproof enclosure must have at least 5 ft. (1.5 m) minimum clearance from any structure, overhang or trees.

C - Standby weatherproof enclosure must have a minimum of 5 ft. (1.5 m) overhead clearance from any structure, overhang, or trees.

D - Standby Weatherproof enclosure must have a minimum of 18 inches (45.7 cm) clearance from any structures with or without a fire rating.

*NOTICE* DO NOT place weatherproof enclosure under a deck or other type of coverend structure that may confine airflow.
Electrical and Fuel Inlet Locations

The 3/4 inch N.P.T. fuel inlet connector (A) and electrical inlet location (B) are shown below.

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

Lifting the Generator

**WARNING** Hazardous Voltage - Contact with power lines could cause electric shock or burns, resulting in death or serious injury.

Lifting Hazard / Heavy Object - Could result in serious injury.

- If lifting or hoisting equipment is used, DO NOT contact any power lines.
- DO NOT lift or move generator without assistance.
- Use lifting pipes as described in *Lifting the Generator*.
- DO NOT lift unit by roof as damage to generator will occur.

The generator has a shipping weight of approximately 605 pounds (274 kg). Proper tools, equipment and qualified personnel should be used in all phases of handling and moving the generator.

Two 48" lengths of 1" pipe (C), supplied by the installer, are required to lift the generator manually. Insert pipes through the lifting holes (D) located near the unit’s base.

You may also lift the unit using a “hook and hoist” method attached to the lifting pipes, provided that you use a spreader bar to ensure that the chains or cables DO NOT touch the generator’s roof.

After unit is in place, fill the lifting holes with the supplied lifting hole plugs.
Access Ports
Each generator is shipped with a set of identical keys. These keys fit the locks that secure the access ports.

To open access door:
1. Insert key into lock of access door and turn key one quarter turn counterclockwise.
2. Remove key.

To close access door:
1. Close control panel door and insert key into lock and turn key one quarter turn clockwise.
2. Remove key.

The generator is equipped with a removable roof and removable side panels to permit simple servicing.

To remove roof and divider:
1. Open the control panel access door.
2. Set generator’s circuit breaker to OFF position.
3. Set control panel system switch to OFF.
4. Remove 15 Amp fuse from control panel.
5. Move roof latch (A) to the left until roof pops up slightly.
7. Rotate 4 knobs 1/4 turn and lift divider off.
8. Replace divider and roof in reverse order.

To remove side panels:
1. Open the control panel access door.
2. Set generator’s circuit breaker to OFF position.
3. Set control panel system switch to OFF.
4. Remove 15 Amp fuse from control panel.
5. Remove roof and divider.
6. Lift latches (B) up on both sides of panel to release.
7. Pull panel upward and out of grooves.

To remove exhaust panel:
1. Remove roof and divider.
2. Remove side panels.

⚠️ WARNING Contact with muffler area could cause burns resulting in serious injury.

- DO NOT touch hot parts and AVOID hot exhaust gases.
- Allow equipment to cool before touching.

3. Remove 6 screws (C) from exhaust panel.
4. Pull panel (A) up and out of base.

5. Remove two screws (B) and pull muffler cover off.

6. Replace muffler cover and exhaust panel in reverse order.

**To install side panels:**

1. Place panel in grooves and slide down in place.
2. Push latches down on both sides of panel to lock into place.
3. Replace divider and roof.

**Generator AC Connection System**

A single-phase, three-wire AC connection system is used in the generator. The stator assembly consists of a pair of stationary windings with two leads brought out of each winding. The junction of leads 22 and 33 forms the neutral lead, as shown schematically and as wiring diagram. A complete schematic and wiring diagram can be found later in this manual.

**NOTICE** Neutral is not bonded to ground at generator.
The Gaseous Fuel System

The information below is provided to assist gaseous fuel system technicians in planning installations. In no way should this information be interpreted to conflict with applicable fuel gas codes. Consult with your local fuel supplier or Fire Marshall if questions or problems arise.

**TO THE INSTALLER:** Consult with the generator owner(s) and convey any technical considerations that might affect their installation plans before applying these general guidelines.

The following general rules apply to gaseous fuel system piping:

**WARNING** Propane and Natural Gas are extremely flammable and explosive, which could cause burns, fire or explosion resulting in death, serious injury and/or property damage.

- 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 could ignite these fuels and cause an explosion.
- DO NOT light a cigarette or smoke.

- The piping should be of a material that conforms to federal and local codes, rigidly mounted and protected against vibration.
- Piping should be protected from physical damage where it passes through flower beds, shrub beds, and other cultivated areas where damage could occur.
- Install the flexible steel fuel line (B) (supplied) between the generator fuel inlet port (A) and rigid piping to prevent thermal expansion or contraction from causing excessive stress on the piping material.
- A union (C) or flanged connection shall be provided downstream to permit removal of controls.
- A manometer port should be provided (D). When the initial test runs are completed, the manometer is removed and the port is plugged. The manometer port permits temporary installation of a manometer to ensure that the engine receives the correct fuel pressure to operate efficiently throughout its operating range.
- Where the formation of hydrates or ice is known to occur, piping should be protected against freezing. The termination of hard piping should include a sediment trap (F) where condensate is not likely to freeze.
- A minimum of one accessible, approved manual shutoff valve (E) shall be installed in the fuel supply line within 6 ft. (180 cm) of the generator.

- A manual fuel shut-off valve located in the interior of the building.
- Where local conditions include earthquake, tornado, unstable ground, or flood hazards, special consideration shall be given to increase strength and flexibility of piping supports and connections.
- Piping must be of the correct size to maintain the required supply pressures and volume flow under varying generator load conditions with all gas appliances connected to the fuel system turned on and operating.
- Use a pipe sealant or joint compound approved for use with NG/LPG on all threaded fittings to reduce the possibility of leakage.
- Installed piping must be properly purged and leak tested, in accordance with applicable codes and standards.

**WARNING** Propane and Natural Gas are extremely flammable and explosive, which could cause burns, fire or explosion resulting in death, serious injury and/or property damage.

- 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 could ignite these fuels and cause an explosion.
- DO NOT light a cigarette or smoke.

Before placing the generator into service, the fuel system lines must be properly purged and leak tested.

No leakage is permitted.
**Fuel Consumption**

Estimated fuel supply requirements at half and full load for natural gas and LP vapor fuels are shown below.

<table>
<thead>
<tr>
<th></th>
<th>Natural Gas</th>
<th>LP Vapor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/2 Load</td>
<td>Full Load</td>
</tr>
<tr>
<td>10 kW</td>
<td>113.16 C</td>
<td>46.26 C</td>
</tr>
<tr>
<td></td>
<td>113,160 B</td>
<td>115,650 B</td>
</tr>
<tr>
<td>12 kW</td>
<td>119.46 C</td>
<td>51.00 C</td>
</tr>
<tr>
<td></td>
<td>119,460 B</td>
<td>127,500 B</td>
</tr>
</tbody>
</table>

* C = Cubic feet per hour
  * B = BTU's per hour

**Power Loss**

Air density is less at high altitudes, resulting in less available engine power. Specifically, engine power will decrease 3.5% for each 1,000 feet (300 meters) above sea level and 1% for each 10° F (5.6°C) above 77°F (25°C). Make sure you and your installer consider these factors when determining total generator load.

**Fuel Pipe Sizing**

There are numerous on-line or otherwise-published references for fuel pipe sizing. For example, NFPA 54-Natural Fuel Gas Code, 2006 (Item #: 320-6031-06) is a common resource.

The installer should consider the specific gravity of gas and compensate for a nominal amount of restriction from bends, fittings, etc. If an unusual number of fittings, bends, or other restrictions are used, refer to federal and local codes for guidance.

**Fuel Conversion**

The engine of your generator system is factory calibrated to run on natural gas (NG). It may also be operated on liquefied petroleum (LP) vapor. There is no additional hardware/equipment required to switch between either fuel. However, LP fuel inlet pressure must be between 11 and 14 inches water column at full load with all gas appliances turned on and operating.

To configure the fuel system for LP use:

1. Set generator’s system switch to OFF.
2. Remove 15 Amp fuse from control panel.
3. Remove roof, divider, side panels, exhaust panel and muffler cover.
4. Change main jet in fuel mixer following instructions provided in LP Conversion Kit.
5. Reinstall muffler cover, exhaust panel, side panels, divider and roof.
6. Reinstall 15 Amp fuse in control panel.
7. Set generator’s system switch to AUTO.

The system is now ready to operate automatically using LP vapor fuel.

---

**Physical Properties**

<table>
<thead>
<tr>
<th></th>
<th>LP Vapor</th>
<th>Natural Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Atmospheric State</td>
<td>Gas</td>
<td>Gas</td>
</tr>
<tr>
<td>Boiling Point (in °F):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial</td>
<td>-44</td>
<td>-259</td>
</tr>
<tr>
<td>End</td>
<td>-44</td>
<td>-259</td>
</tr>
<tr>
<td>Heating Value:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BTU per gallon (Net LHV*)</td>
<td>83,340</td>
<td>63,310</td>
</tr>
<tr>
<td>BTU per gallon (gross**)</td>
<td>91,547</td>
<td>1,000</td>
</tr>
<tr>
<td>Cubic feet (gas)</td>
<td>2,500</td>
<td></td>
</tr>
<tr>
<td>Density***</td>
<td>36.39</td>
<td>57.75</td>
</tr>
<tr>
<td>Weight†</td>
<td>4.24</td>
<td>2.65</td>
</tr>
<tr>
<td>Octane Number:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>110+</td>
<td>110+</td>
</tr>
<tr>
<td>Motor</td>
<td>97</td>
<td></td>
</tr>
</tbody>
</table>

* LHV (Low Heat Value) is the more realistic rating.
  ** Gross heat value does not consider heat lost in the form of water during combustion.
  *** Density is given in “Cubic Feet of Gas per Gallon of Liquid”.
  † Weight is given in “Pounds per Gallon of Liquid”.

**Fuel Pressure**

Both LP vapor and natural gas fuel supply pressure at the generator’s fuel inlet port should be between the following levels at full load with all gas appliances turned on and operating.

- NG is 3.5-7” W.C.
- LP is 11-14” W.C.

Ensure that all gas line shutoff valves are OPEN and that adequate fuel pressure is available whenever automatic operation is desired.
System Connectors

Low Voltage connections to signal fault contacts, transfer switch communication, remote LED and auxiliary 12VDC power are made via a removable ten-pin connector plug. Compare this illustration with your generator to familiarize yourself with the location of these important connections. Count down to the proper pin location on the control board since visual alignment with the decal can be misleading:

A - Ten-pin Connector Plug

B - Fault Contacts — Use NO, COM and NC to hook up a siren, light, etc. to alert you in case of a fault. Contacts reverse state (NO goes to NC and vice versa) upon a fault condition.

C - Transfer Switch Communication — Connect to transfer switch control board for communication interface using 18AWG twisted pair wire.

D - Remote LED Output — Use this to hook up the optional remote LED. The remote LED will turn on and off in a series of blinks if certain faults are detected in the generator.

E - +12 Volt DC, .5 Amp Output — Internal power supply.

F - 240 Volt Utility — Use to hook up the 240V utility leads from the transfer switch to the generator.

G - Two-pin Connector Plug

- For power output connection, use minimum 300 volt 75°C-90°C wire of the AWG specified in this table (ref. NEC Table 310.16, 100 ft. Use National Electric Code for correction factors and wire size calculations.):
- For Utility Circuit connection use #14 AWG minimum 300 volt 75°C-90°C wire.
- For transfer switch communication use #18 AWG twisted pair conductors, no greater than 200 ft in length, 300 volt 75°C-90°C wire.
- When connecting to the connector plugs, fasten only one wire to each connector screw.
- Torque connector plug screws to 7 in-lb (7.9 Newton meter).

<table>
<thead>
<tr>
<th>Generator</th>
<th>Wire Size (AWG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 kW</td>
<td>6</td>
</tr>
<tr>
<td>12 kW</td>
<td>6</td>
</tr>
</tbody>
</table>
Generator AC Connection System
The conduit (A) between the corner electrical inlet and the control panel is a UL requirement. If removed, it must be replaced with similar conduit.

Grounding the Generator
Ground the generator per applicable codes, standards, and regulations. The generator GND lug is located inside the control panel door under the circuit breaker cover.

Utility Circuit Connection
“240V Utility” leads must be routed in conduit. The “240V Utility” leads deliver power to the generator’s circuit board, optional battery warmer and optional oil warmer. This power also charges the battery. When power on these leads is lost, the generator will start.

Using provided 2 pin connector plug and installer-supplied minimum 300V, 14 AWG wire, connect each control circuit terminal in the generator to the two-amp fuse terminals in the automatic transfer switch.

When making connections, obey wire type and torque specifications printed on the circuit breaker and neutral ground connector.

Transfer Switch Communication
(Units with ACCM II or later transfer switch only)
Using #18 AWG twisted pair conductors, no greater than 200 ft in length, connect Tx Rx and Tx Rx GND from the generator control panel (B) to GND and T/R on the transfer switch control board (C) via the low voltage access hole (D).

Fault Detection System
The generator may have to run for long periods of time with no operator present. For that reason, the system is equipped with sensors that automatically shut down the generator in the event of potentially damaging conditions, such as low oil pressure, high temperature, over speed, and other conditions. Refer to Fault Detection System in the operator’s manual for more detailed information.
**System Control Panel**

The generator control panel, located inside the generator housing, is shown below. Brief descriptions of the controls used during installation are:

A – SET EXERCISE — Used to set the exercise cycle.

B - Circuit Breaker — Must be ON to supply power to the transfer switch

C - 15 Amp Fuse — Protects DC control circuits. Of the fuse has “blown” (melted open) or was removed, the engine cannot crank or start. Replace the fuse using only an identical ATO 15A fuse. One spare fuse is supplied with the unit. If fuse was blown or removed, you will need to rest the exercise timer (see Setting Exercise Timer).

D - System Switch — This two-position switch is the most important control on the home generator and is used as follows:
- “AUTO” position is the normal operating position. If a utility power outage is sensed, the system will start the generator. When utility power is restored, the engine stabilize internal temperatures, shuts off the generator, and waits for the next utility power outage.
- “OFF” position turns off running generator, prevents unit from starting and resets any detected faults.

E - MANUAL OVER-RIDE — Used to manually start and stop the generator.

F - Digital Display — Displays running time in hour or fault codes.

More information may be found in Controls in the operator’s manual.

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**Concrete Slab (Optional)**

If mandated by local code, construct a concrete slab at least 3 in. (76 mm) thick and 6 in. (152 mm) longer and wider than the unit (34.6 in. (880 mm) X 39.4 in. (1000 mm)). Attach unit to slab with 1/4” (6 mm) diameter (minimum) masonry anchor bolts long enough to retain the unit. Drill anchor bolt holes into the unit base at the four ideal locations (M) indicated.

**Anchor Bolt Drill Location Measurements**

<table>
<thead>
<tr>
<th>Letter</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>5.51 in. (140 mm)</td>
</tr>
<tr>
<td>H</td>
<td>23.62 in. (600 mm)</td>
</tr>
<tr>
<td>J</td>
<td>16.78 in. (426.4 mm)</td>
</tr>
<tr>
<td>K</td>
<td>2.55 in. (65 mm)</td>
</tr>
<tr>
<td>L</td>
<td>1.57 in. (40 mm)</td>
</tr>
<tr>
<td>M</td>
<td>1/4 in. (6 mm) holes</td>
</tr>
</tbody>
</table>

---

**Gravel Base (Optional)**

If mandated by local code, clear an area approximately five inches deep and about six inches wider than the footprint of the standby generator. Line the area with polyurethane film and fill with pea gravel or crushed stone. Compact and level the stone. If concrete slab is required, see Concrete Slab section in this manual.
Final Installation Considerations

Engine Oil

**NOTICE** Any attempt to crank or start the engine before it has been properly serviced with the recommended oil will result in equipment failure.

- Refer to Maintenance in the operator’s manual for oil fill information.
- Damage to equipment resulting from failure to follow this instruction will void engine and generator warranty.

The engine is shipped from the factory pre-run and filled with synthetic oil (API SJ/CF 5W-30). This allows for system operation in a wide range of temperature and climate conditions. Before starting the engine, check oil level and ensure that engine is serviced as described in Maintenance of the Operator’s Manual.

The use of synthetic oil does not alter the required oil change intervals described in the Operator’s Manual.

Battery

**WARNING** Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

The installer must supply and install a sealed, valve-regulated, lead-acid rechargeable starting battery. The starting battery MUST conform to the specifications shown below in the chart.

<table>
<thead>
<tr>
<th>Battery Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volts</strong></td>
</tr>
<tr>
<td><strong>Amps (MIN)</strong></td>
</tr>
<tr>
<td><strong>Type</strong></td>
</tr>
<tr>
<td><strong>Terminal Hardware</strong></td>
</tr>
<tr>
<td><strong>Dimensions (MAX):</strong></td>
</tr>
<tr>
<td><strong>Width</strong></td>
</tr>
<tr>
<td><strong>Length</strong></td>
</tr>
<tr>
<td><strong>Height</strong></td>
</tr>
</tbody>
</table>

Install the battery as described in **Servicing the Battery** in the **Maintenance** section of the Operator’s Manual.

**WARNING** Storage batteries give off explosive hydrogen gas during recharging. Slightest spark will ignite hydrogen and cause explosion, resulting in death, serious injury and/or property damage.

Battery electrolyte fluid contains acid and is extremely caustic. Contact with battery contents could 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. Recycle battery.
- **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, rubber boots and rubber gloves.
- Remove watches, rings, or other metal objects.
- Use tools having insulated handles.

Use the supplied tie-down strap (A) to secure the battery to the unit. One end of strap should be attached to the platform and the other end to the slot that is cut in the back wall of the unit.

**NOTICE** Be sure the battery terminals do not contact the back wall as this may cause a short.
Initial Start-up (No Load)

Unit has been set-up for NG operation at the factory. Fuel conversion, if needed, must be completed prior to performing these steps. See Fuel Conversion later in this section.

Before operating the generator or placing it into service, inspect the entire installation carefully. Then begin testing the system without any electrical loads connected, as follows:

1. Remove four screws (A) that secure control box front to enclosure to expose unit’s circuit breaker.

2. Connect an accurate frequency meter to line side of generator’s main circuit breaker.

3. Set generator’s main circuit breaker to ON (closed) position.

4. Set generator’s system switch to OFF.

5. Install 15 Amp fuse in control panel.

6. Set generator’s system switch to AUTO.

7. Push and hold MANUAL OVER-RIDE button on control panel for about six seconds. Engine will start.

When the generator is started for the very first time, it will require that air in the gaseous fuel lines be purged. This may take a few minutes.

8. Listen for unusual noises, vibration or other indications of abnormal operation. Check for oil leaks while engine runs.

9. Let engine warm up for about five minutes to allow internal temperatures to stabilize.

10. Check generator output at load side of circuit breaker. Voltage should be 239-262 Volts, frequency should be 62.0 - 62.5 Hz.

If either parameter is outside these ranges, perform Engine Adjustment described later in this section.

11. Check generator output between one generator connection lug and neutral lug, then between other generator connection lug and neutral lug. In both cases, voltage reading should be between 119-131 Volts.

DO NOT proceed until you are certain that generator AC voltage and frequency are correct and within the stated limits. To obtain the proper generator frequency, see Engine Adjustment.

12. Push and hold MANUAL OVER-RIDE button on control panel again until engine stops.

13. Reinstall circuit breaker enclosure cover.

Engine Adjustment

There are regional variances in the composition of gaseous fuel. Each home generator unit leaves the factory set for NG operation. If the generator output voltage or frequency measured during Initial Start-Up is outside the listed ranges, the combustibility of the gas supplied at the installation site may be substantially different from the fuel used at the factory.

To adjust the engine for this difference, proceed as follows.

1. Remove four screws (B) that secure control box front to enclosure to expose unit’s circuit breaker.

2. Connect an accurate frequency meter to line side of generator’s main circuit breaker.

3. Ensure that the 15 Amp fuse is installed.

4. Set the generator’s main circuit breaker ON.

5. Set the generator’s system switch to AUTO.

6. Push MANUAL OVER-RIDE on control panel. When the engine starts, allow it to warm up for five minutes.
7. Normal no load frequency is 62.0 to 62.5 Hz. If adjustment is needed at no load, remove unit side panels. Using needle nose pliers, bend spring anchor tang (A) slowly up or down until frequency is 62.0 to 62.5 Hz.

8. Turn utility service disconnect to transfer switch **OFF**. After a short time delay, transfer switch will connect to generator.
9. Load generator to full load.
10. After load stabilizes, frequency should be above 57.0 Hz.
11. If frequency is below 57.0 Hz, bend spring anchor tang until frequency is above 57.0 Hz.
12. Turn service disconnect to transfer switch **ON**. Transfer switch will connect to utility power after five minutes.
13. Push and hold **MANUAL OVER-RIDE** on control panel until engine stops.
14. After the engine has stopped:
   - If an adjustment was made in step 11, repeat steps 2 through 7.
   - If an adjustment was not made in step 11, proceed to step 15.

If no load frequency falls out of the no load range shown in step 7 after full load adjustment is made, contact an authorized service center.
15. Reinstall circuit breaker enclosure cover.
10000 Watt Wiring Diagram
Operation

Automatic Operation Sequence
The generator’s control panel houses a logic control circuit board. This control board constantly monitors utility power source voltage. Should that voltage drop below a preset level, control board action will signal the engine to crank and start.

When utility source voltage is restored above a preset voltage level, the engine is signaled to shut down.

The actual system operation is not adjustable and is sequenced by sensors and timers on the control board, as follows:

Utility Voltage Dropout Sensor
- This sensor monitors utility source voltage.
- If utility source voltage drops below about 70 percent of the nominal supply voltage, the sensor energizes a 10 second timer. The timer is used to ‘sense’ brown-outs.
- Once the timer has expired, the engine will crank and start.

Utility Voltage Pickup Sensor
This sensor monitors utility power supply voltage. When that voltage is restored above 80 percent of the nominal source voltage, a time delay starts timing and the engine will go to engine cool-down.

Engine Cool-down Timer
- When the load is transferred back to the utility power source, the engine cool-down timer starts timing.
- The timer will run for about one minute, then the generator will stop.
- Minimum engine run time is 5 minutes.

Setting Exercise Timer
The generator is equipped with an exercise timer that will start and exercise the system once every seven days. During this exercise period, the unit runs for approximately 20 minutes and then shuts down. Electrical load transfer DOES NOT occur during the exercise cycle (unless an utility power outage occurs).

A button on the control panel is labeled “SET EXERCISE” (see System Control Panel). The specific day and the specific time of day this button is pressed is programmed into the control board memory. This date and time is then used to automatically initiate the system exercise cycle. The “SET EXERCISE” legend on the control panel will flash until the set exercise cycle is set.

To perform the Set Exercise procedure:
1. Choose the day and time you want your generator to exercise.
2. On that day and time, press and hold the “SET EXERCISE” button for three seconds.
   The “SET EXERCISE” display will illuminate then turn off to confirm that the exercise timer has been set. Then release the button.
   The unit will crank and run the exercise cycle. During the cycle, “Set Exercise” will illuminate.
   Once the exercise cycle is complete, the unit will turn off and “Set Exercise” will no longer be displayed.
   The exercise cycle may be discontinued at anytime by turning the System Switch to OFF.
3. The unit will then start and run its 20 minute exercise cycle.

For example, if you press SET EXERCISE on Sunday morning at 10:00 AM, the unit is set to run an exercise cycle every Sunday at 10:00 AM (+/- 1/2 hour).
“Set Exercise” will only work if the unit is in the AUTO mode and this exact procedure is followed. The exerciser will need to be re-set if the 15 Amp fuse is removed or changed, or if the starting battery is disconnected.
If you want to change the day and time the unit exercises, simply perform the “Set Exercise” procedure at the exact weekday and time you want it to take place.
Generator will not exercise if timer is not set.

Installation Inspection
Before placing the generator system into service, inspect the entire installation carefully.

This completes the installation and start-up instructions. The operator’s manual provides full details on Operation, Maintenance and Troubleshooting for this generator system.