

INSTALLATION GUIDELINES

CorePower™/ES Generators



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INTRODUCTION

Thank you for purchasing this compact, high performance, air-cooled, engine-driven generator. It is designed to automatically supply electrical power to operate critical loads during a utility power failure.

This unit is factory installed in an all-weather, composite enclosure that is **intended exclusively for outdoor installation**. This generator will operate using either vapor withdrawn liquid propane (LP) or natural gas (NG).

NOTE:

This generator is suitable for supplying typical residential loads such as Induction Motors (sump pumps, refrigerators, air conditioners, furnaces, etc.), Electronic Components (computer, monitor, TV, etc.), Lighting Loads and Microwaves.

READ THIS MANUAL THOROUGHLY

If any portion of this manual is not understood, contact the nearest Dealer for starting, operating and servicing procedures.

Throughout this publication, and on tags and decals affixed to the generator, DANGER, WARNING, CAUTION and NOTE blocks are used to alert personnel to special instructions about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Their definitions are as follows:

⚠ DANGER!

INDICATES A HAZARDOUS SITUATION OR ACTION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

⚠ WARNING!

Indicates a hazardous situation or action which, if not avoided, could result in death or serious injury.

⚠ CAUTION!

Indicates a hazardous situation or action which, if not avoided, could result in minor or moderate injury.

NOTE:

Notes contain additional information important to a procedure and will be found within the regular text body of this manual.

These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the action or service are essential to preventing accidents.

Four commonly used safety symbols accompany the **DANGER**, **WARNING** and **CAUTION** blocks. The type of information each indicates is as follows:

 **This symbol points out important safety information that, if not followed, could endanger personal safety and/or property of others.**

 **This symbol points out potential explosion hazard.**

 **This symbol points out potential fire hazard.**

 **This symbol points out potential electrical shock hazard.**

The operator is responsible for proper and safe use of the equipment. The manufacturer strongly recommends that the operator read and thoroughly understand all instructions before using this equipment. The manufacturer also strongly recommends instructing other users to properly start and operate the unit. This prepares them if they need to operate the equipment in an emergency.

CONTENTS

This manual contains pertinent installation information for model:
• 6 kW NG, 7 kW LP, single-cylinder OHV 432 Engine

OPERATION AND MAINTENANCE

It is the operator's responsibility to perform all safety checks, to make sure that all maintenance for safe operation is performed promptly, and to have the equipment checked periodically by a Dealer. Normal maintenance service and replacement of parts are the responsibility of the owner/operator and, as such, are not considered defects in materials or workmanship within the terms of the warranty. Individual operating habits and usage contribute to the need for maintenance service.

Proper maintenance and care of the generator ensures a minimum number of problems and keep operating expenses at a minimum. See a Dealer for service aids and accessories.

HOW TO OBTAIN SERVICE

When the generator requires servicing or repairs, contact a Dealer for assistance. Service technicians are factory-trained and are capable of handling all service needs.

When contacting a Dealer about parts and service, always supply the complete model number and serial number of the unit as given on its data decal, which is located on the generator. See section "The Generator" in the Owner's Manual for decal location.

Model No. _____ Serial No. _____

SAFETY RULES


WARNING!

 Save These Instructions – The manufacturer suggests that these rules for safe operation be copied and posted near the unit's installation site. Safety should be stressed to all operators and potential operators of this equipment.

Study these SAFETY RULES carefully before installing, operating or servicing this equipment. Become familiar with this *Owner's Manual* and with the unit. The generator can operate safely, efficiently and reliably only if it is properly installed, operated and maintained. Many accidents are caused by failing to follow simple and fundamental rules or precautions.

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit are, therefore, not all-inclusive. If using a procedure, work method or operating technique the manufacturer does not specifically recommend, ensure that it is safe for others. Also make sure the procedure, work method or operating technique utilized does not render the generator unsafe.


DANGER!

 Despite the safe design of this generator, operating this equipment imprudently, neglecting its maintenance or being careless can cause possible injury or death. Permit only responsible and capable persons to install, operate and maintain this equipment.

 Potentially lethal voltages are generated by these machines. Ensure all steps are taken to render the machine safe before attempting to work on the generator.

 Parts of the generator are rotating and/or hot during operation. Exercise care near running generators.

 Installation must always comply with applicable codes, standards, laws and regulations.

 A running generator gives off carbon monoxide, an odorless, colorless poison gas. Breathing in carbon monoxide can cause headaches, fatigue, dizziness, nausea, vomiting, confusion, fainting, seizures or death.

GENERAL HAZARDS

- For safety reasons, the manufacturer recommends that this equipment be installed, serviced and repaired by a Service Dealer or other competent, qualified electrician or installation technician who is familiar with applicable codes, standards and regulations. The operator also must comply with all such codes, standards and regulations.
- Adequate, unobstructed flow of cooling and ventilating air is critical to correct generator operation. Do not alter the installation or permit even partial blockage of ventilation provisions, as this can seriously affect safe operation of the generator. **The generator MUST be installed and operated outdoors only.**
- Keep hands, feet, clothing, etc., away from drive belts, fans, and other moving or hot parts. Never remove any drive belt or fan guard while the unit is operating.

CALIFORNIA PROPOSITION 65 WARNING

Engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

CALIFORNIA PROPOSITION 65 WARNING

This product contains or emits chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

- When working on this equipment, remain alert at all times. Never work on the equipment when physically or mentally fatigued.
- Inspect the generator regularly, and contact the nearest Dealer for parts needing repair or replacement.
- Before performing any maintenance on the generator, disconnect its battery cables to prevent accidental start up. Disconnect the cable from the battery post indicated by a NEGATIVE, NEG or (-) first, then remove the POSITIVE, POS or (+) cable. When reconnecting the cables, connect the POSITIVE cable first, the NEGATIVE cable last.
- Never use the generator or any of its parts as a step. Stepping on the unit can stress and break parts, and may result in dangerous operating conditions from leaking exhaust gases, fuel leakage, oil leakage, etc.

CARBON MONOXIDE HAZARDS

- The engine exhaust fumes contain carbon monoxide, which can be DEADLY. This dangerous gas, if breathed in sufficient concentrations, can cause unconsciousness or even death. Do NOT alter or add to the exhaust system or do anything that might render the system unsafe or in noncompliance with applicable codes and standards.
- Install a battery operated carbon monoxide alarm indoors, according to manufacturer's instructions/recommendations.

ELECTRICAL HAZARDS

- All generators covered by this manual produce dangerous electrical voltages and can cause fatal electrical shock. Utility power delivers extremely high and dangerous voltages to the transfer switch as does the standby generator when it is in operation. Avoid contact with bare wires, terminals, connections, etc., while the unit is running. Ensure all appropriate covers, guards and barriers are in place, secured and/or locked before operating the generator. If work must be done around an operating unit, stand on an insulated, dry surface to reduce shock hazard.
- Do not handle any kind of electrical device while standing in water, while barefoot, or while hands or feet are wet. DANGEROUS ELECTRICAL SHOCK MAY RESULT.
- The National Electrical Code (NEC) requires the frame and external electrically conductive parts of the generator to be connected to an approved earth ground. Local electrical codes also may require proper grounding of the generator electrical system.
- After installing this home standby electrical system, the generator may crank and start at any time without warning. When this occurs, load circuits are transferred to the STANDBY (generator) power source. To prevent possible injury if such a start and transfer occur, always set the generator's AUTO/OFF/MANUAL switch to its OFF position before working on equipment and remove the 7.5A fuse from the generator control panel.
- In case of accident caused by electric shock, immediately shut down the source of electrical power. If this is not possible, attempt to free the victim from the live conductor. AVOID DIRECT CONTACT WITH THE VICTIM. Use a nonconducting implement, such as a dry rope or board, to free the victim from the live conductor. If the victim is unconscious, apply first aid and get immediate medical help.
- Never wear jewelry when working on this equipment. Jewelry can conduct electricity resulting in electric shock, or may get caught in moving components causing injury.

FIRE HAZARDS

- For fire safety, the generator must be installed and maintained properly. **Installation must always comply with applicable codes, standards, laws and regulations.** Adhere strictly to local, state and national electrical and building codes. Comply with regulations the Occupational Safety and Health Administration (OSHA) has established. Also, ensure that the generator is installed in accordance with the manufacturer's instructions and recommendations. Following proper installation, do nothing that might alter a safe installation and render the unit in noncompliance with the aforementioned codes, standards, laws and regulations.
- Keep a fire extinguisher near the generator at all times. Extinguishers rated "ABC" by the National Fire Protection Association are appropriate for use on the standby electric system. Keep the extinguisher properly charged and be familiar with its use. Consult the local fire department with any questions pertaining to fire extinguishers.

EXPLOSION HAZARDS

- Do not smoke around the generator. Wipe up any fuel or oil spills immediately. Ensure that no combustible materials are left in the generator compartment, or on or near the generator, as FIRE or EXPLOSION may result. Keep the area surrounding the generator clean and free from debris.
- Gaseous fluids such as natural gas and liquid propane (LP) gas are extremely EXPLOSIVE. Install the fuel supply system according to applicable fuel-gas codes. Before placing the home standby electric system into service, fuel system lines must be properly purged and leak tested according to applicable code. After installation, inspect the fuel system periodically for leaks. No leakage is permitted.

STANDARDS INDEX

In the absence of pertinent standards, codes, regulations and laws, the published information listed below may be used as installation guide for this equipment.

1. NFPA No. 37, STATIONARY COMBUSTION ENGINES AND GAS TURBINES, available from the National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210.
2. NFPA No. 76A, ESSENTIAL ELECTRICAL SYSTEMS FOR HEALTH CARE FACILITIES, available same as Item 1.
3. NFPA No. 54, NATIONAL FUEL GAS CODE, available same as Item 1.
4. NFPA No. 58, AMERICAN NATIONAL STANDARD FOR STORAGE AND HANDLING OF LIQUEFIED PETROLEUM GAS, available same as Item 1.
5. NFPA No. 70, NFPA HANDBOOK OF NATIONAL ELECTRIC CODE, available same as Item 1.
6. Article X, NATIONAL BUILDING CODE, available from the American Insurance Association, 85 John Street, New York, N.Y. 10038.
7. AGRICULTURAL WIRING HANDBOOK, available from the Food and Energy Council, 909 University Avenue, Columbia, MO 65201.
8. ASAE EP-3634, INSTALLATION AND MAINTENANCE OF FARM STANDBY ELECTRICAL SYSTEMS, available from the American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085.
9. NFPA No. 30, FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE, available same as Item 1.

⚠ DANGER!

- ⚠ Only qualified electricians or contractors should attempt such installations, which must comply strictly with applicable codes, standards and regulations.**

UNPACKING/INSPECTION

After unpacking, carefully inspect the contents for damage.

- This standby generator set is ready for installation with a factory supplied and pre-mounted base pad and has a weather protective enclosure that is intended for **outdoor installation only**.
- This UL listed standby generator set is packaged with an automatic transfer switch with built in load center.
- This UL listed, 2-pole transfer switch is rated at 50A AC amperes at 250 volts maximum.

⚠ WARNING!

- ⚠ If this generator is used to power electrical load circuits normally powered by a utility power source, it is required by code to install a transfer switch. The transfer switch must effectively isolate the electrical system from the utility distribution system when the generator is operating (NEC 700, 701 & 702). Failure to isolate an electrical system by such means will result in damage to the generator and also may result in injury or death to utility power workers due to backfeed of electrical energy.**

If any loss or damage is noted at time of delivery, have the person(s) making the delivery note all damage on the freight bill or affix their signature under the consignor's memo of loss or damage.

If a loss or damage is noted after delivery, separate the damaged materials and contact the carrier for claim procedures.

“Concealed damage” is understood to mean damage to the contents of a package that is not in evidence at the time of delivery, but is discovered later.

To properly open the roof, press down on the center top lip and release the latch. If pressure is not applied from the top, the roof may appear stuck. Always verify that the side lock is unlocked before attempting to lift the roof.

BEFORE YOU BEGIN

Contact the local inspector or City Hall to be aware of all federal, state and local codes that could impact the installation. Secure all required permits before starting the job.

Carefully read and follow all of the procedures and safety precautions detailed in the installation guide. If any portion of the installation manual, technical manual or other factory-supplied documents is not completely understood, contact a dealer for assistance.

Fully comply with all relevant NEC, NFPA and OSHA standards as well as all federal, state and local building and electric codes. As with any generator, this unit must be installed in accordance with current NFPA 37 and NFPA 70 standards as well as any other federal, state, and local codes for minimum distances from other structures.

UNIT HANDLING

1. Once the generator has been unpacked. To remove it from the wooden shipping pallet, remove the four lag bolts and shipping brackets from the four corners of the base.

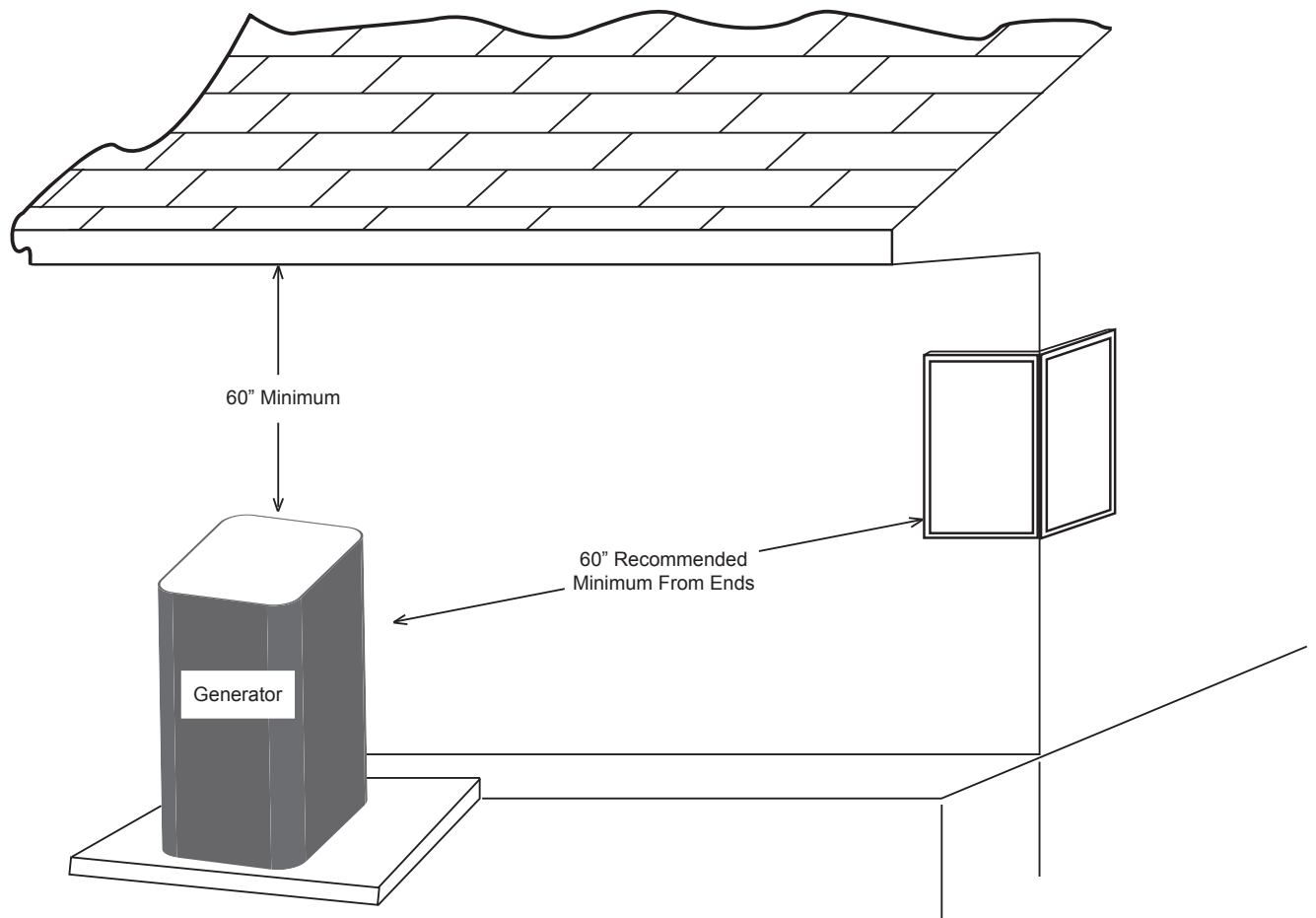
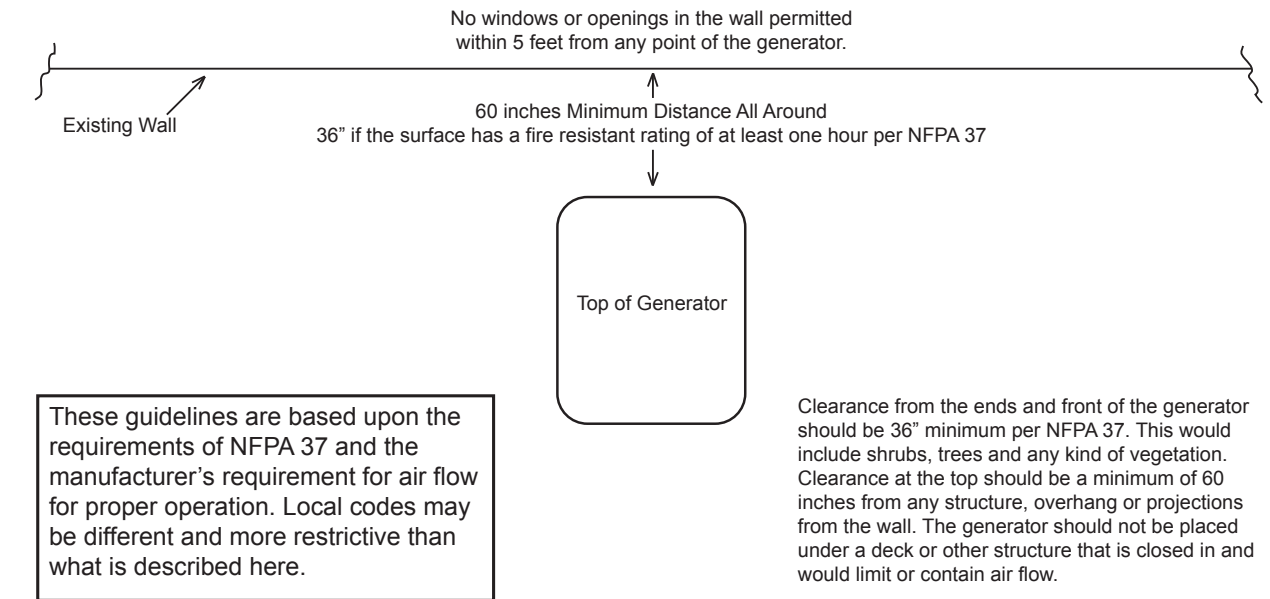


2. DO NOT ATTEMPT TO MOVE THE UNIT BY PULLING OR LIFTING ON THE ROOF OF THE ENCLOSURE.
3. Using the sides of the enclosure slide the generator to one edge of the wooden pallet.
4. Cut off one side panel of the shipping carton to use as a protective barrier.



5. Using a 2 wheeled hand truck place the cardboard between the hand truck and the generator enclosure. Slide the generator off the wooden pallet onto the hand truck. Wheel the generator to the installation location.

MINIMUM CLEARANCE REQUIREMENTS



NOTE:

Failure to follow these minimum clearance guidelines may result in the generator failing inspection by the local building, electrical or fire inspector requiring the generator be reinstalled in the correct location.

SITE PREPARATION AND GENERATOR PLACEMENT



1. Locate the mounting area as close as possible to the transfer switch and fuel supply. Leave adequate room around the area for service access (check local code), and place high enough to keep rising water from reaching the generator. Choose an open space that will provide adequate and unobstructed airflow. Do not install under or too close to partially enclosed spaces including, but not limited to, decks or buildings.



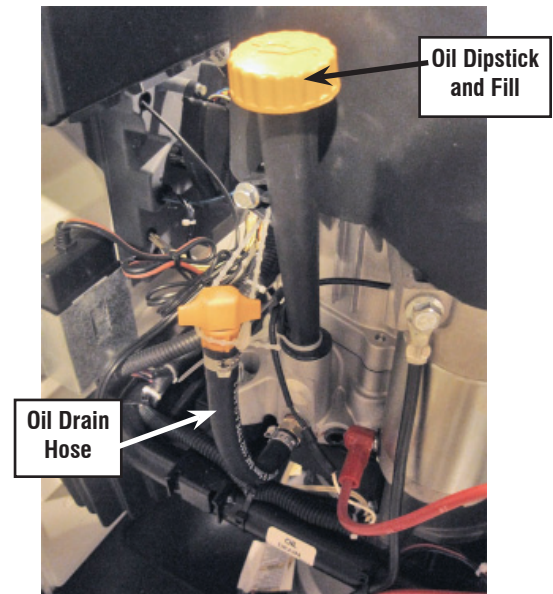
2. Place the unit so air vents won't become clogged with leaves, grass, snow or debris. Make sure exhaust fumes will not enter the building through eaves, windows, ventilation fans or other air intakes. Dig a rectangular area approximately five inches deep and about six inches longer and wider than the footprint of the generator. Cover with polyurethane film and fill with pea gravel or crushed stone. Compact and level the stone. A concrete pad can be poured if desired.
3. Set the generator onto the pad so that the gravel bed extends several inches beyond the generator on all sides. Make sure the generator is level within 1/2 inch.



4. Connect an approved grounding conductor to the grounding electrode terminal on the corner support and to an approved earth ground or grounding rod as specified by local regulations.



5. Check the engine oil and, if necessary, add enough of the recommended oil to bring the level up to the FULL mark on the dipstick. Be careful not to overfill the crankcase.



CONVERTING TO LP VAPOR

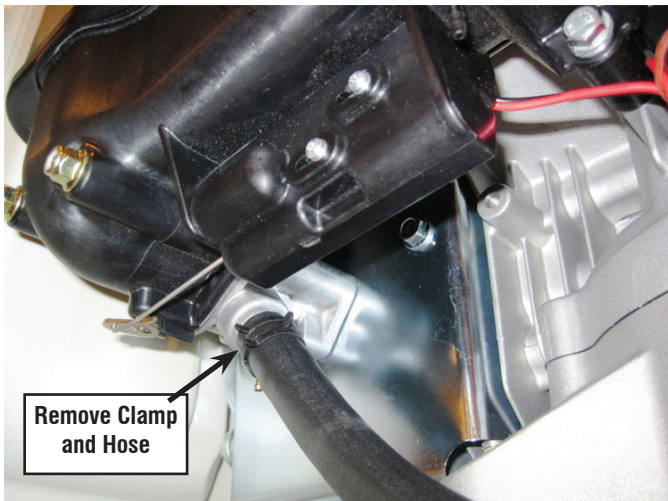
1. Remove the generator enclosure roof by turning the four quarter turn latches on the roof top. Push down slightly on the latch then turn 90 degrees to release. The latch should pop up as shown.



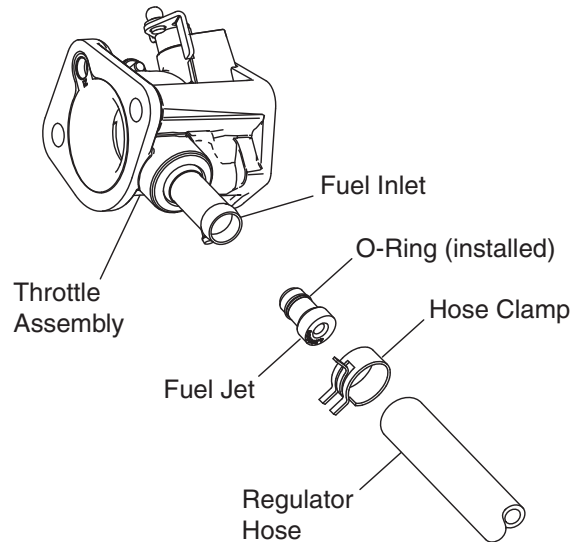
2. Remove the two side panels of the enclosure by lifting the panels straight up until they are clear.



3. Carefully place the roof and side panels to one side.
4. Locate the fuel throttle assembly mounted to the engine intake.



5. To change the fuel selection, remove the hose clamp and hose from the throttle assembly.
6. Remove the Natural Gas (Larger ID) fuel jet from the fuel inlet.
7. Obtain the fuel jet for Propane (Smaller ID that has been supplied loose with the owners manual).
8. Verify that the O-ring, supplied loose with the owners manual is installed, into the groove of the fuel jet.
9. Insert the Propane fuel jet into the end of the fuel inlet.
10. Reinstall the hose and clamp onto the fuel inlet and secure.
11. Verify the hose has not been kinked in any way.



12. The generator is now ready to run on LP Vapor fuel.

INSTALLING & CONNECTING GAS LINES



1. Both natural gas and LP Vapor are highly volatile substances, so strict adherence to all safety procedures, codes, standards and regulations is essential. Gas line connections should be made by a certified plumber familiar with local codes. Always use AGA-approved gas pipe and a quality pipe sealant or joint compound. Verify the capacity of the natural gas meter or the LP tank in regards to providing sufficient fuel for both the generator and other operating appliances.



2. Most applications will require an external manual shutoff valve on the fuel line.
3. Where the gas line is to enter the generator enclosure. Install a 3 - 5" long piece of 1/2" black iron pipe threaded at both ends (Not provided). Thread one end into the generator fuel regulator using the reducing bushing provided. On the other end of the pipe thread a 1/2" standard pipe Tee as shown (Not provided).

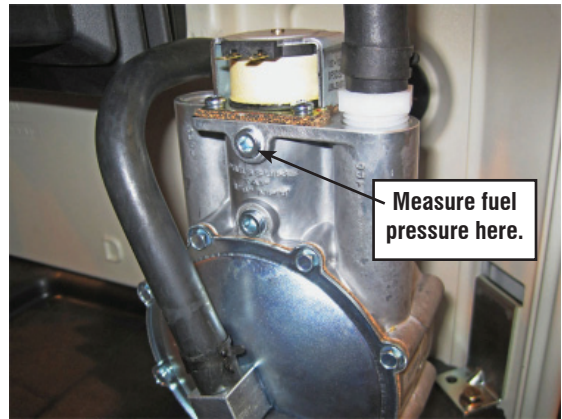


6. When connecting the gas line to the generator, use the provided section of UL Listed or AGA-approved flexible fuel line in accordance with local regulations. The purpose of the flexible fuel line is to ensure that vibration from the generator does not cause a gas leak at one of the connection points, so it's important that the line be installed with as few bends as possible.
7. Never bend the flexible fuel line to avoid using an elbow. Bending the flexible line decreases its ability to absorb vibrations and defeats its purpose as well as constricts the actual fuel flow.
8. After checking for leaks, check the gas pressure at the regulator to make sure there's enough pressure for proper generator operation.

The local gas supplier is responsible for ensuring adequate pressure, so if the pressure is too low, or if it's greater than 14 inches of water column, contact the gas supplier.

Correct static fuel pressure should be:

- Natural Gas = 6-7 inches water column
- LP = 11-12 inches water column



9. When finished checking the gas pressure, close the manual shutoff valve.



4. Make sure the center leg of the Tee is pointing straight down when fully tightened onto the pipe.
5. Thread a 3 - 4" long piece of 1/2" black iron pipe threaded at both ends (not provided) into the Tee Fitting. Fully tighten. Thread a 1/2" Pipe cap (not provided) to the other end of the pipe. Fully tighten. This downward pointing pipe will serve as a water trap and should be periodically emptied once the generator is in service.

EXTERNAL ELECTRICAL CONNECTIONS

1. Electrical Connections to the generator are to be made inside the main output circuit breaker panel. The connections will consist of the following:
 - 2 x Ungrounded conductors – Minimum wire size use 75 Deg C, 300V wire, 10AWG Copper.
 - 1 x Grounded Conductor - Minimum wire size use 75 Deg C, 300V wire, 10AWG Copper.
 - 1 x Equipment Grounding Conductor - Minimum wire size use 75 Deg C, 300V wire, 10AWG Copper.
 - 6 x Control Wires – Use 75 Deg C, 300V wire, 18AWG Copper.

NOTE:

Either use different colored wires or identify both ends of the wires for easy connection of all wires to the Transfer Switch.

NOTE:

Local codes may require the control wires to be run in a separate conduit than the power wires.

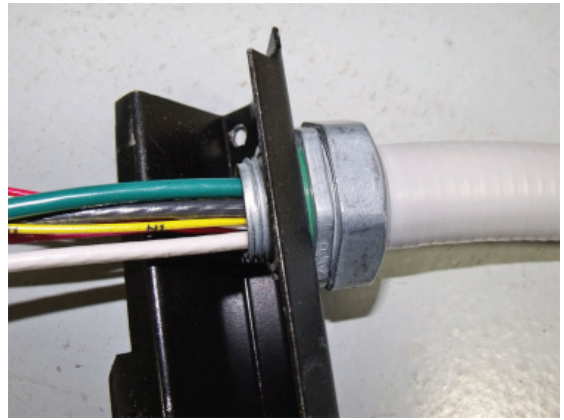
- Use Class 1 wiring methods.
 - These conductors should be fed through 3/4" Flexible Liquid-tight conduit for easy connection to the generator.
2. Remove the dead front plate from the output circuit breaker panel. Retain fastener and external tooth washer for reassembly.



3. Remove the conduit connector plate from the output circuit breaker panel. Remove the plastic hole plug from the conduit connector plate.



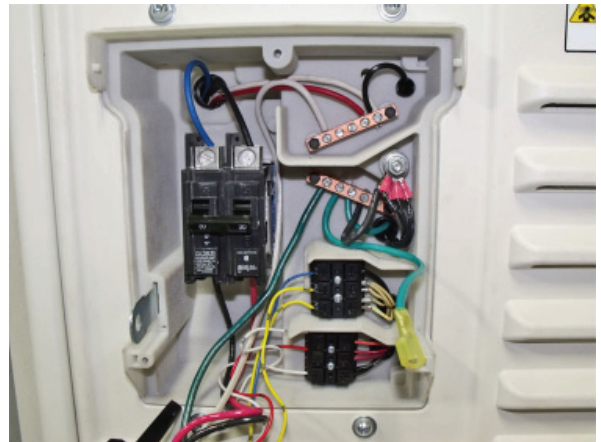
4. Pass all wires through hole in conduit connector plate, insert conduit connector, and place lock nut onto conduit connector. Fully tighten locknut.



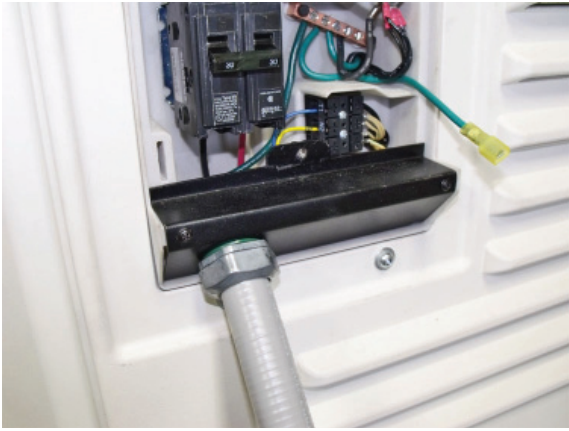
5. Support the conduit connector plate up towards the output circuit breaker. Make all the required wiring connections to the Circuit breaker, Neutral Bar, Ground bar and Terminal strips as described on the decal on the back side of the dead front plate.

NOTE:

In order to maintain separation of circuits, the DC control wires must be separated from the AC control wires. A piece of fiberglass sleeving has been provided in the manual kit to achieve this. Slide the sleeving over the AC wires OR the DC wires, but not both. Sleeving should extend over the wires from the conduit connector in the conduit plate up to the terminal blocks.



6. Once all connections are made, reattach the conduit connector plate to the output circuit breaker panel making sure no wires are trapped behind the panel.



7. Reattach the dead front plate to the output circuit breaker panel with hardware removed in Step 1. Make sure to reconnect the grounding wire.



8. Insert the padlock hasp that is supplied loose with the generator through the slot in the dead front plate. Push the padlock hasp back until it clicks and locks into place.



9. To complete the external electrical connections snap in the output circuit breaker cover that is supplied loose with the generator into the output circuit breaker panel. Allow the cover to swing down providing weather protection for the circuit breaker. The padlock hasp will now protrude through the circuit breaker cover and it is recommended that once installation of the generator is completed a padlock be used to provide suitable security to the generator.



BATTERY INSTALLATION

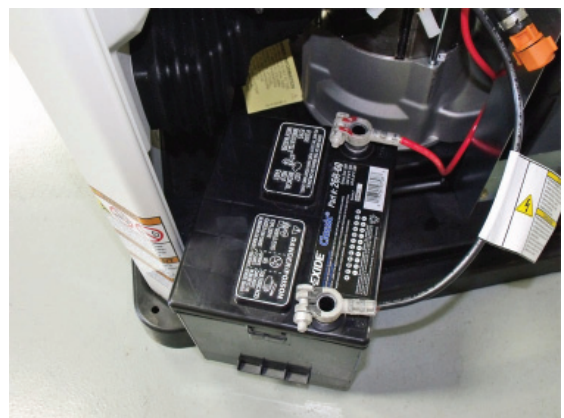
The correct size battery for this generator that will fit easily and provide the required starting ability is any maintainable automotive style group 26R with a minimum of 525 CCA @ 0 deg F.

⚠ WARNING!

- ⚠ Before attempting to install the battery make sure the auto/off/manual switch is in the off position. Remove the main fuse from the control panel.



2. Rest the battery on the base of the generator and make the battery connections. Connect battery positive (red) first then battery negative (black). Install the plastic battery covers supplied loose with the generator.



- Slide the battery under the rubber air in duct until it drops into the holding well in the generator base. It may be necessary to gently lift up the bottom edge of the rubber air in duct to allow the battery to pass underneath until it drops into its final location.



- Once the battery is in place double check that the rubber air in duct has not been displaced and is still fully connected at both ends.

AUTOMATIC TRANSFER SWITCH ELECTRICAL CONNECTIONS

⚠ WARNING!

⚡ Utility voltage is potentially lethal. It is strongly recommended that the electrical portion of this installation be performed by a qualified electrician.

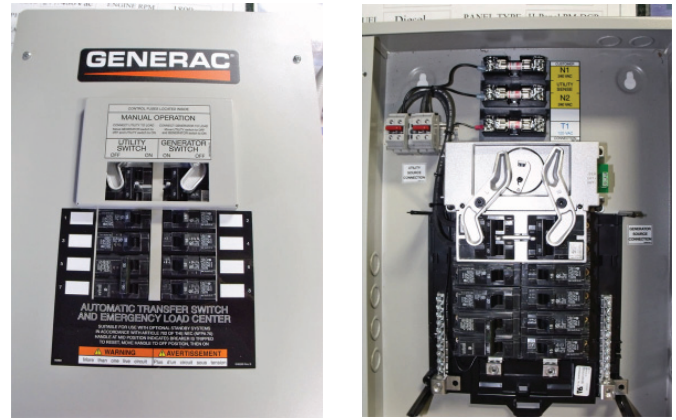
NEC ARC FAULT CIRCUIT INTERRUPTER REQUIREMENTS

Local code enforcement may require that AFCI's be incorporated into the transfer switch distribution panel. The Transfer Switch provided with this generator has a distribution panel that will accept AFCI's.

Siemens Part No. Q115AF - 15A or Q120AF - 20A can be obtained from a local electrical wholesaler and will simply replace any of the single pole circuit breakers supplied in the Transfer Switch distribution panel.

UTILITY CONNECTIONS

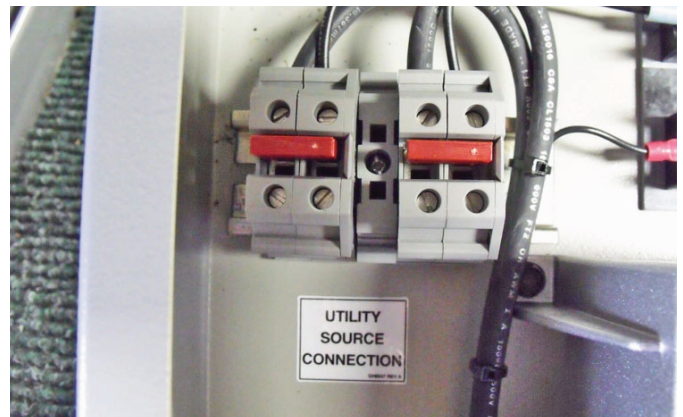
- Install the Automatic Transfer Switch as close to the home main distribution panel as possible. The Automatic Transfer Switch requires to be electrically supplied from the main distribution panel via a 50A 2-pole branch circuit breaker (Not Provided).



- Connect the utility supply from the 50A 2-pole circuit breaker in the main distribution panel to the terminals in the transfer switch marked – Utility Source Connection.

NOTE:

Make sure the 50A Circuit Breaker remains OPEN or OFF at this time.



- The automatic transfer panel incorporates the emergency load distribution panel. These are the circuits that will be powered by the generator during a power outage.
- The home owner must determine which circuits in the main distribution panel should be powered by the generator. The chosen circuit wires both Hot and Neutral should be moved from the main distribution panel to the emergency load distribution panel.

NOTE:

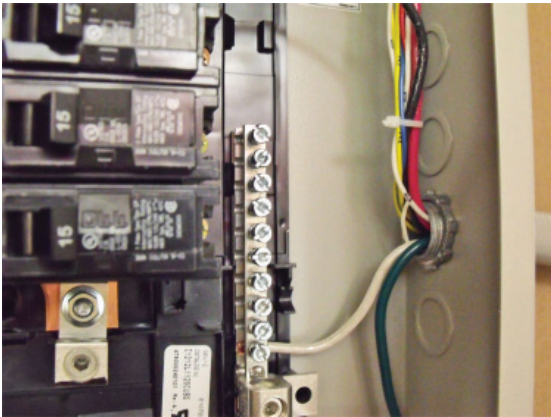
Only identically rated circuits can be moved; i.e move a 15A circuit to a 15A circuit. DO NOT move a 20A circuit to a 15A circuit.

GENERATOR CONNECTIONS

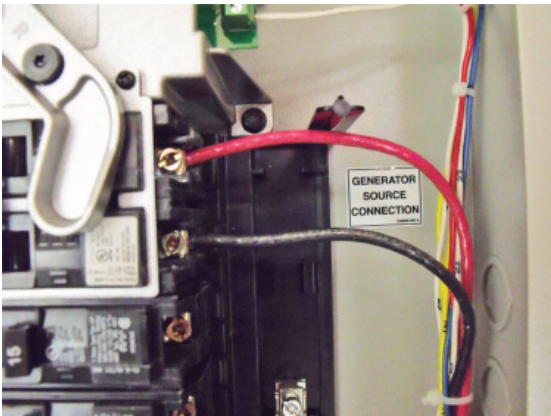
1. Remove one of the 3/4" knockouts from the side or bottom of the transfer switch enclosure.



2. Feed the power and control wires from the generator into the transfer switch enclosure and secure the conduit using a suitable conduit connector and locknut.



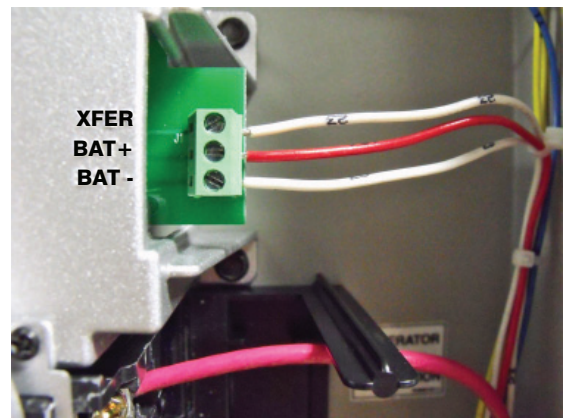
3. Cut to length, strip and attach generator power wires to Generator source connections in the Transfer Switch



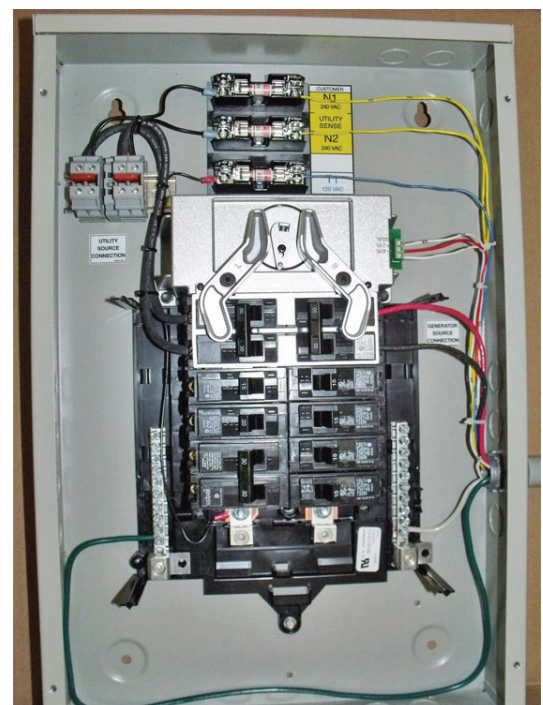
4. Cut to length, strip, identify and attach generator sensing wires marked N1, N2 & T1 to correspondingly marked Fuses in the Transfer Switch.



5. Cut to length, strip, identify and attach transfer switch control wires marked 23, 15B & 0 to XFER, BAT + and BAT - terminals respectively on the transfer switch control mechanism.



6. Cut to length, strip and attach remaining neutral and ground wires to the loadcenter grounding bars.

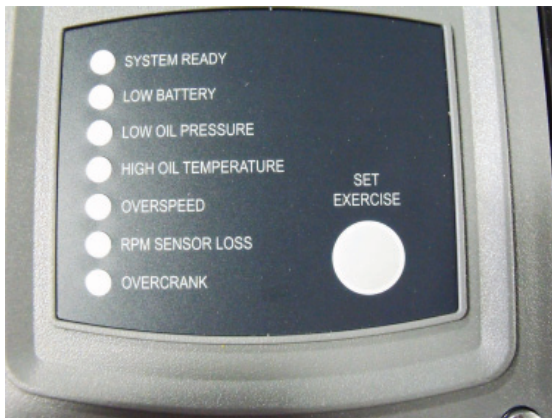


7. Move all the circuit breakers in the load center to the OFF or OPEN position.

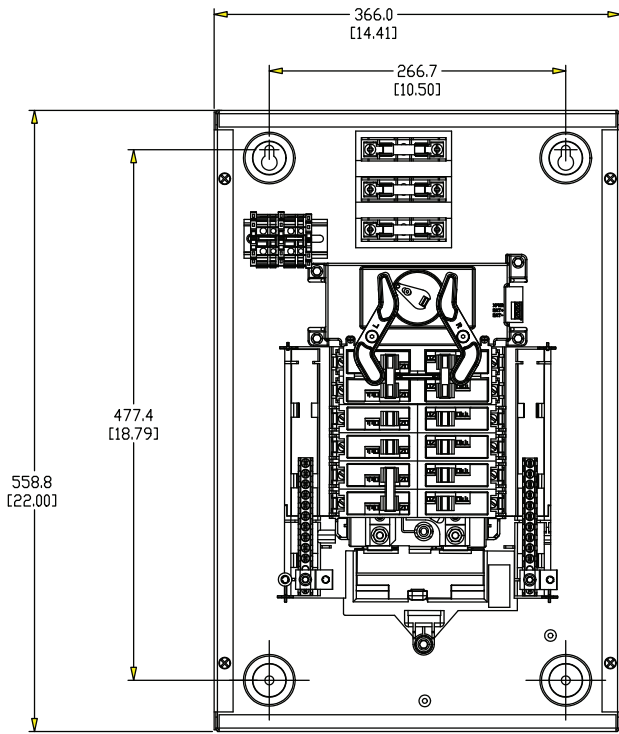
8. Manually move the transfer switch mechanism into the stand by or generator position. i.e Circuit breaker connected to generator should be closed.

OPERATIONAL TESTING

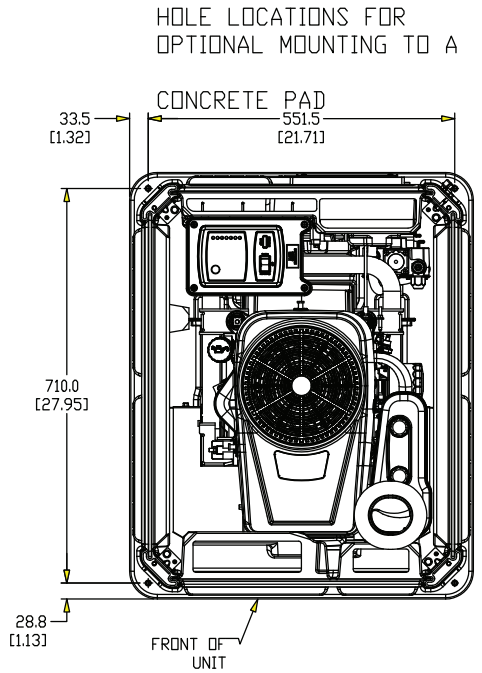
1. Turn on fuel supply.
2. Attach fuel pressure gauge to test point on fuel regulator.
3. Replace the fuse in the generator control panel and place the switch into the manual position which will start the engine.
4. Allow the generator to warm up. Move the generator main circuit breaker to the ON or CLOSED position. Generator power is now being supplied to the transfer switch.
5. Check voltage and frequency of generator output at the transfer switch terminals. Line to Line voltage should be 240V (+/- 10 VAC) and line to neutral voltage should be approximately 120V. Frequency should be 62 – 63Hz. If either the voltage or frequency are incorrect refer to the owners manual for instructions on how to adjust.
6. Once the voltage and frequency of the generator output have been confirmed and are correct move the generator main output breaker to the OFF or OPEN position and move the control panel switch to the off position.
7. Manually move the transfer switch mechanism into the utility position. i.e Circuit breaker connected to 50A utility breaker should be closed.
10. One by one move each circuit breaker in the load center to the ON or CLOSED position. Once all the circuit breakers are closed and the Generator is powering all the priority loads. Check the fuel pressure at the fuel regulator. When powering the loads the fuel pressure should NOT be less than:
 - Nat Gas Fuel = 5 inches W.C
 - LP Vapor Fuel = 10 inches W.C
11. Move the 2-pole 50A circuit breaker mounted in the main distribution panel to the ON or CLOSED position. The Transfer Switch mechanism should automatically move to the utility position. The Generator will continue to run for a pre set cool down period then will automatically shut down.
12. The operational tests are complete. Refer to the owners manual for instructions on setting the generator exercise function.



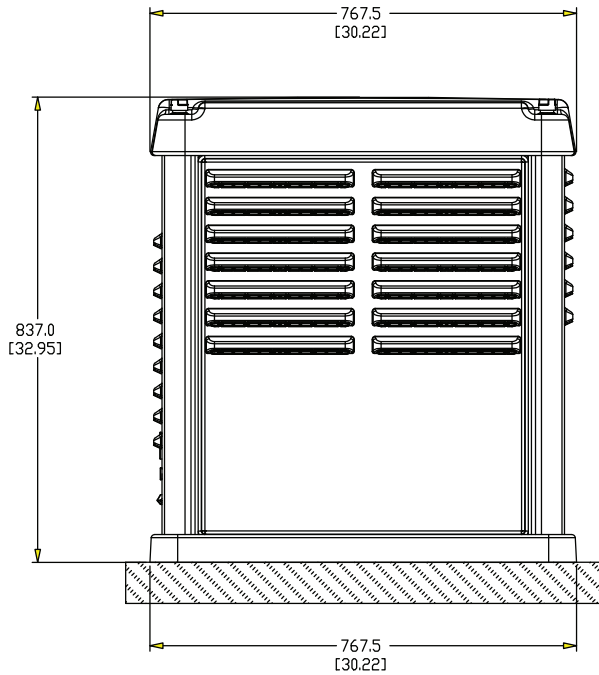
8. Move the 2-pole 50A circuit breaker mounted in the main distribution panel to the ON or CLOSED position. Move the generator control panel switch to the Auto position. To indicate that the generator control panel is able to identify the presence of utility voltage the GREEN system ready light will be illuminated on the generator control panel. (Disregard the flashing RED lights at this time.) The engine should NOT start. Move the generator main output circuit breaker to the ON or CLOSED position.
9. Move the 2-pole 50A circuit breaker mounted in the main distribution panel to the OFF or OPEN position. After a short delay the generator will start. The transfer switch mechanism should automatically move from the Utility position to the Stand By position.



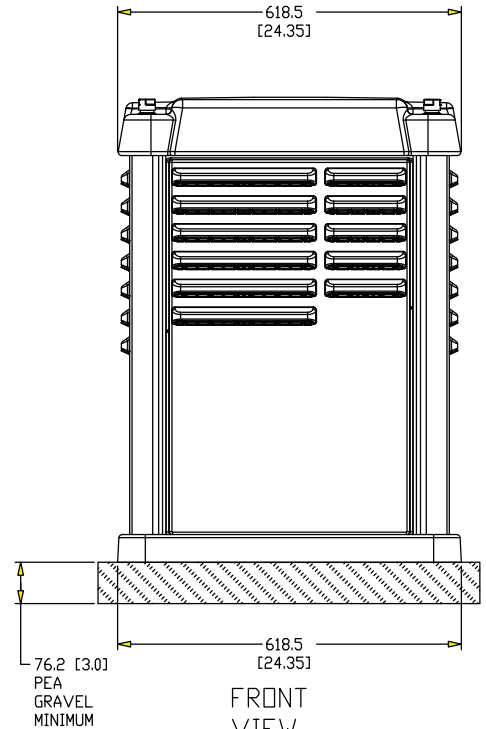
TRANSFER SWITCH DETAIL
COVER REMOVED FOR
CLARITY



GENERATOR DETAIL
ROOF REMOVED FOR
CLARITY
"DO NOT LIFT BY
ROOF"

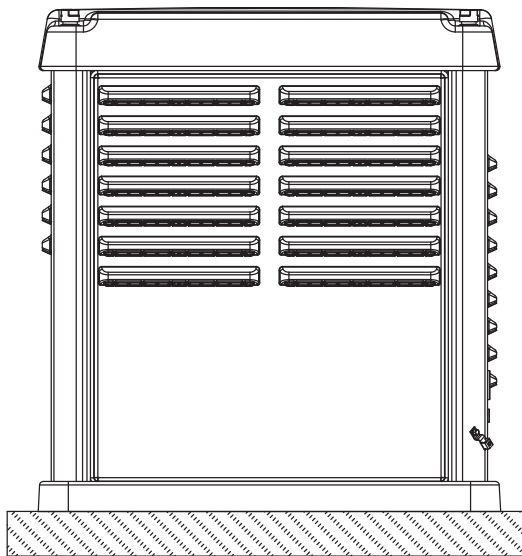
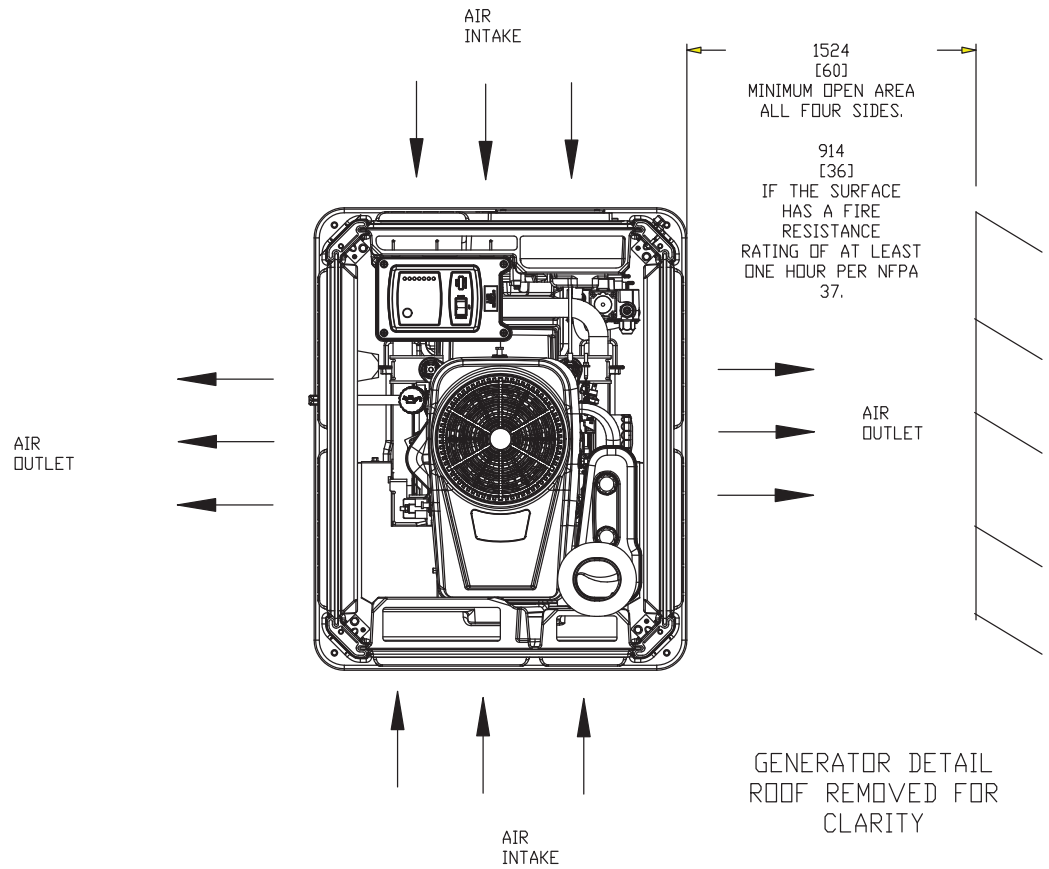


LEFT EXHAUST SIDE
VIEW

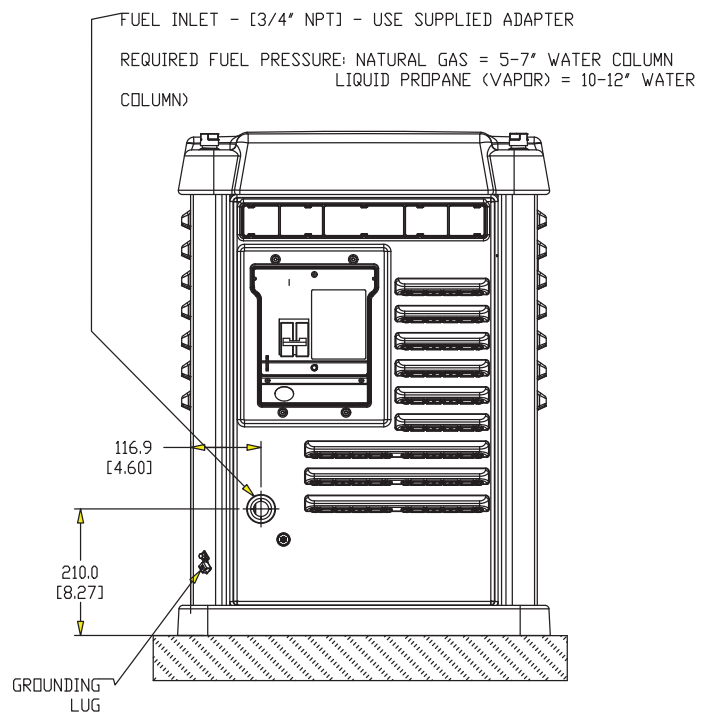


FRONT
VIEW

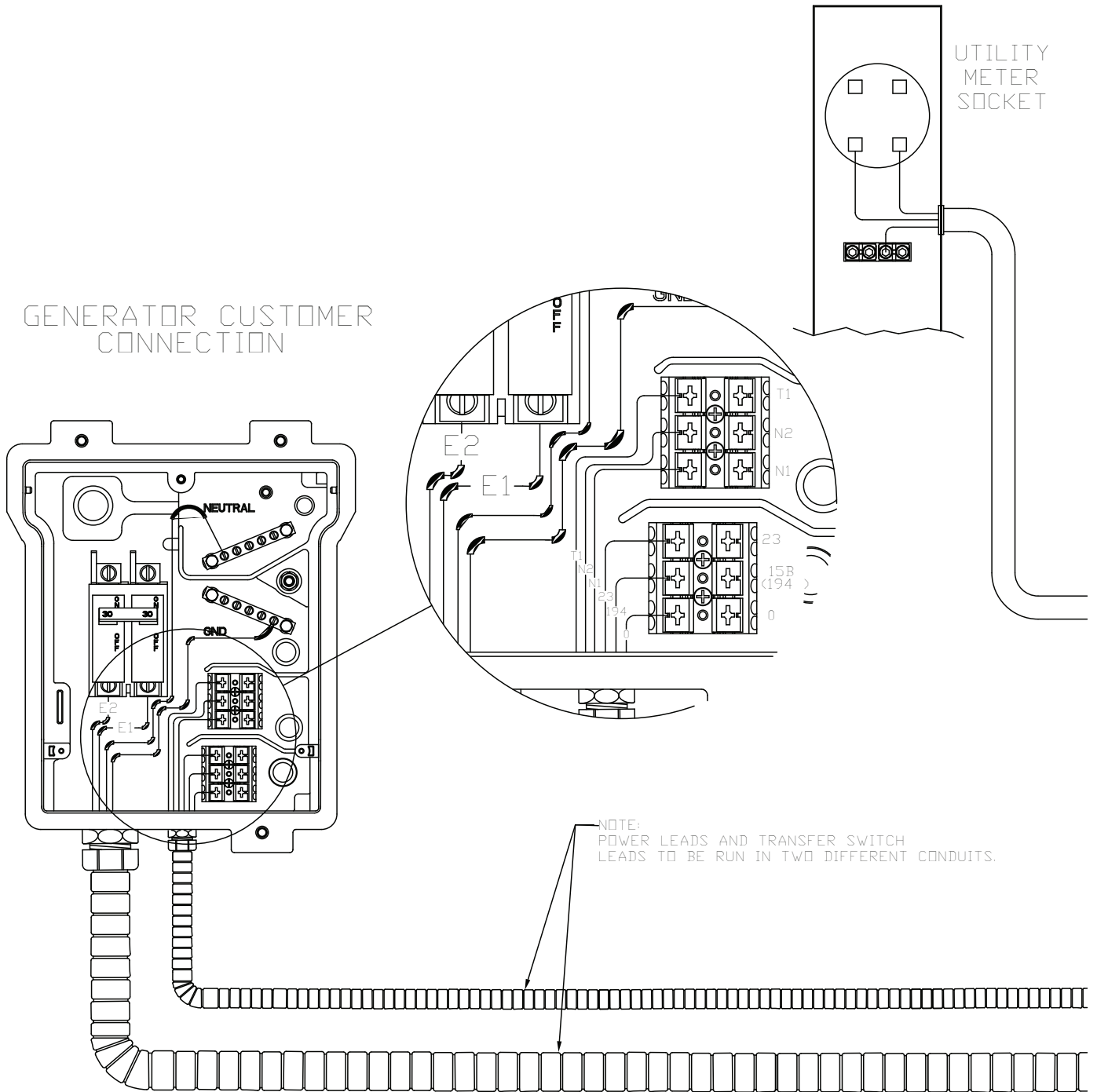
UNIT MAY BE MOVED USING HAND TRUCK FROM EITHER EXHAUST SIDE OR FRONT



RIGHT EXHAUST SIDE
VIEW



REAR
VIEW



8 CIRCUIT TRANSFER SWITCH

