



**Information Sheet # 44**

Your Reliable Guide for Power Solutions

# Safety Guidelines for Rental Generator Set Systems

## 1.0 Introduction:

Any business renting generator sets to the public, should be extremely conscious of the many potential safety issues and their responsibilities.

*This information sheet discusses safety guidelines when renting and operating rental generator set systems.*

## 2.0 Overview of Rental Safety Guidelines:

It is very important that the customer is given verbal information at the signing of the rental contract and the operator read any instructions BEFORE the unit is put into service. We suggest that a printed 'hard copy' document be supplied as part of the contract and a signed receipt of this be kept with the customer's paperwork. The rental generator also should carry a suitable 'safety warning' decal, placed in a prominent position. Any person responsible and/or involved in the rental generator operation MUST be familiar with the proper safety precautions and operational techniques, before using the set. Any nameplate, safety or instructional decal must be replaced by rental company, should they become difficult to read or damaged. We set out below our suggestions for such material:

*(Continued over)*

## Typical Rental Generator Set Package

*Refer to this info sheet for safe operation of equipment shown*

### Engine & Generator

*Always operate with doors closed*

### Sound Attenuated Enclosure

*Ensure the unit operates in a well ventilated area*

### Built-in fuel tank

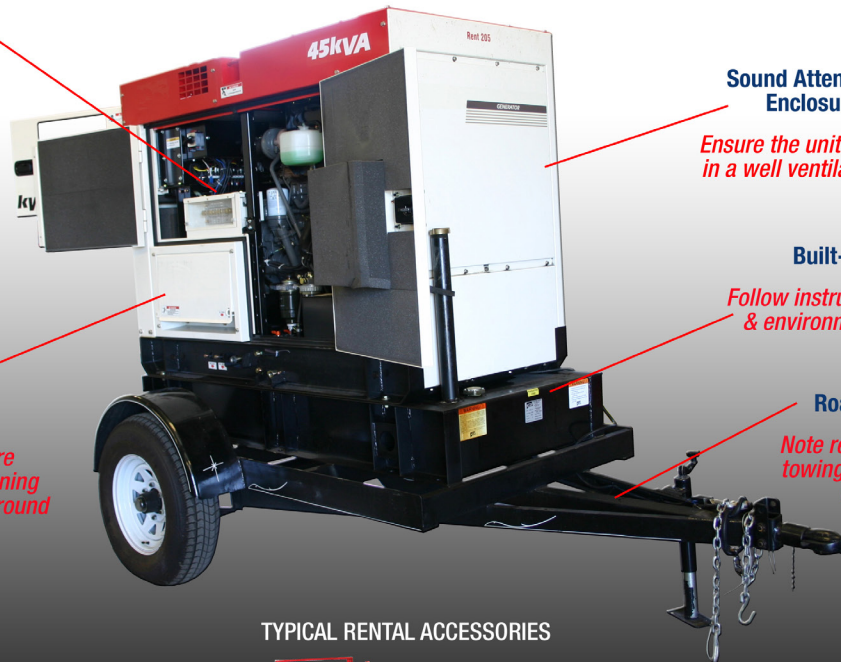
*Follow instructions for refueling & environmental regulations*

### Electrical Outlets

*Read instructions before connecting and when running keep access panel shut. Ground as instructed*

### Road Towing Trailer

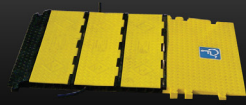
*Note renters instructions on towing safely and using the correct vehicle*



### TYPICAL RENTAL ACCESSORIES



Power Outlet Box



Cable Protector



Distribution Panel



Spider Box



Receptacles



Transformer

To fulfill our commitment to be the leading supplier and preferred service provider in the Power Generation Industry, the Clifford Power Systems, Inc. team maintains up-to-date technology and information standards on Power Industry changes, regulations and trends. As a service, our **Information Sheets** are circulated on a regular basis, to existing and potential Power Customers to maintain awareness of changes and developments in engineering standards, electrical codes, and technology impacting the Power Generation Industry.

The installation information provided in this information sheet is informational in nature only, and should not be considered the advice of a properly licensed and qualified electrician or used in place of a detailed review of the applicable National Electric Codes and local codes. Specific questions about how this information may affect any particular situation should be addressed to a licensed and qualified electrician.



Tulsa, OK  
(918) 836-0066

Oklahoma City, OK  
(405) 440-9201

Little Rock, AR  
(501) 907-5884

Dallas-Ft Worth  
(817) 640-5544

Longview, TX  
(903) 291-8305

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(512) 477-6937

San Antonio, TX  
(210) 333-0377

Kansas City, MO  
(913) 312-2031

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(346) 980-0266



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### 3.0 General:

Failure to follow instructions in the manual provided may lead to serious injury, even death! The equipment is to be operated by trained and qualified personnel only! The manufacturer assumes no responsibility for any accident caused by equipment modification by the customer. Any unauthorized equipment modification will void all warranties.

### 4.0 Mechanical Safety:

Note the following:

- Equipment should not be operated by persons under the age of 18
- Always check the machine for any loose wires, leads, threads or nuts and bolts, before starting
- The equipment is for industrial use only
- Never operate the equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices warranted by the job
- Never operate the equipment when feeling unwell due to fatigue, illness, or while taking medications, or under the influence of drugs or alcohol
- Never use any accessories or attachments which are not recommended by the renter, which may result in damage and/or injury to the operator
- Never operate the equipment in an explosive atmosphere or near combustible materials. An explosion or fire could cause serious bodily harm or even death!
- Never touch the hot exhaust manifold, muffler, exhaust tailpipe or cylinder. Allow these parts to cool sufficiently before servicing the engine or generator
- Never run the equipment without an air filter as serious engine damage may occur
- Always allow the equipment to adequately cool down before performing any service or maintenance functions. Any contact with hot components can result in serious burns
- DO NOT place hands or fingers inside the generator engine compartment while the unit is running
- DO NOT leave the generator unattended, while the unit is in manual mode

### 5.0 Cooling:

The equipment requires an adequate free flow of cooling air. Never operate the generator in any enclosed or narrow area where free air flow is restricted. Any such restriction of free air will cause serious damage to the generator and/or engine and may result in injury to people. The generator gives off deadly carbon monoxide gas in the exhaust and should be placed so inhalation is avoided.

### 6.0 Storage:

Always store the generator and accessories properly when not being used in a clean, dry location away from the reach of children.

### 7.0 Towing and transportation safety:

For trailer-mounted rental generators, always ensure the renter complies with all normal safety rules. The trailer should comply with any and all state and local safety regulations. Check that the towing vehicle's hitch and coupling are rated equal or greater than the trailer's gross vehicle weight rating. Check that the trailer safety chain is securely attached to the truck and the trailer electrical brake lights and directional signals are connected and functioning before leaving the rental yard. Raise and lock the stabilization jacks.

### 8.0 Grounding:

It is important to provide a good earth ground to guard against electrical shock and possible equipment damage. The National Electrical Code (NEC) Article 250 (Grounding) provides guidelines for the proper grounding and specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical. We suggest the following recommendations also be followed:

- ALWAYS make sure the generator is properly grounded
- ALWAYS make certain that the electrical circuits are properly grounded per NEC and local codes before operating the generator. Severe injury or death by electrocution can result from operating an ungrounded generator
- ALWAYS be sure to use the ground terminal (green wire) when connecting a load to the U, V and W terminal lugs
- NEVER use gas piping as an electrical ground

### 9.0 Electrical Safety:

To avoid the possibility of electrocution, electrical shock or burns, note the following:

- ALWAYS have a qualified electrician perform the generator wiring installation
- ALWAYS make certain the generator installation is in accordance with the NEC and local codes before operating the rental generator
- ALWAYS make certain the proper extension cord has been selected for the job
- ALWAYS stop the machine and place the circuit breaker in the OFF position, when contact with the output terminals is required
- NEVER use a defective or frayed power cable. Check the cable for cuts in the insulation
- NEVER use an extension cord that is frayed or damaged, where the insulation has been cut
- NEVER stand in water while the AC power from the generator is being transferred to a load
- NEVER use damaged or worn cables to connect the equipment to the generator. Make sure that all power connecting cables are securely connected to the generator's output terminals and adequately tightened. Insufficient tightening may cause damage to the generator and can produce electrical shocks
- NEVER touch a live power cord or the output terminals with wet hands, while set is running. This is extremely dangerous!

To avoid any back-feed to the utility system when connecting generator to a building load or backing up another power source, do not connect to any electrical system except through an approved device or after the building's main switch is opened. Always have a licensed electrician perform the installation.

### 10.0 Maintenance:

Turn off all circuit breakers on the generator before performing any generator maintenance. Always disconnect the negative battery terminal cable before performing maintenance. Always service the air filter frequently, especially when operating in dirty conditions. Never attempt to carry out service while the generator is running.

*NEVER remove the following items while the generator is running or until the unit has had time to sufficiently cool: radiator cap, coolant drain plug, or engine oil drain plug.*