



The Critical Power Specialist

Winner of the 2004
BOMA CANADA
Pinnacle Award

The GAL Power Source

-Property Management Edition

Points of Interest

GAL Power Systems offers training sessions for maintenance staff.

Topics include:

- CSA C282-05 Standards
- Engine Controllers
- Generator Set
- Transfer Switches
- Inspections

This week a new 600kw – SDMO generator package engineered for underground special applications will leave our facility to land in Turkey adding a new dot in our growing export business map.

GAL Power Systems now offers an extended warranty program for new and existing generators.

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Elevator Guidelines for Emergency Generators

For this month's newsletter I approached, Elmer Szabo, our Ottawa service co-ordinator for some topics he thought our property management clients would find useful. He came back to me with plenty of great suggestions, and from that list we chose to discuss the ability of elevators to operate properly while on emergency power.

An elevator's ability to operate properly on emergency power is one of the most commonly ignored elevator operations and one of the most critical.

The most common problems elevators have operating on emergency power are:

1. Poor voltage regulation (>25%)
2. Voltage sags in excess of solid-state drive parameters
3. Improper grounding methods and increased independence of the generator system can cause additional problems with sensitive devices on the emergency bus due to increased harmonics

Property managers should also keep the following in mind for existing generators:

1. Check the governor/regulator of the emergency generator

Older buildings being renovated often have mechanical governors on their emergency generators. The newer solid-state drives simply can't operate properly with the voltage distortion created by solid-state drive and an emergency generator with a mechanical governor. Since elevators carry passengers, the operating tolerances are tight. To ensure seamless operation it is recommended that elevators with a solid-state drive operate on emergency generators that have solid-state regulators and governors installed.

2. Make sure the gen-set is adequately sized to handle the motor loads of the particular elevator.

If the generator set is not properly sized, the motor contacts will drop out and the motor will fail to operate. Age/type/motor starting methods play an important role in the generator sizing process. These variables can cause two motors with exactly the same horsepower rating to have dramatically different in-rush currents.

As in any motor application it is the in-rush current that is the first consideration when sizing a generator set for a specific application. Equally important is the existence/control of loads that can be applied to the emergency system simultaneously. For example, controls may have to be implemented to ensure that two or more elevators do not start at the same time, which would overload the generator.

3. Ensure that there are pre-transfer contacts in the automatic transfer switch to notify elevator controller of impending transfer from one source to another.

Failure to provide these contacts may prevent the elevator controls from operating properly. If you have any questions about bringing your fuel tanks up to code feel free to contact your local GAL branch or send us an e-mail at: powersourcepm@galpower.com

Single Wall Fuel Tanks Obsolete

The Ontario installation code (CSA B139-06) for all fuel-burning equipment has been updated. Changes include:

- All fuel tanks over 230 L (50 gal) located above the lowest storey, cellar, or basement or located within any portion of a building require secondary containment.
- The maximum allowable storage amount on site for multiple tanks is 2500 L (550 gal).
- The maximum amount of fuel attached to a generator set is 1250 L (275 gal)
- Bare copper lines are no longer acceptable. Fuel lines must have a temperature rating of 1000 degrees Celsius.
- Fuel oil tanks with a capacity less than 2500 L (550gal) require vent whistles or other applicable warning devices, unless the level of fuel can be visually determined.
- The vent line on the penthouse tank no longer goes to atmosphere, it is now changed to a return line to the main basement tank to allow the fuel to return rather than go out the vent line causing a fuel spill.
- Bottom-feed fuel tanks require fuel tank valves with a manual shutoff valves
- Galvanised pipe can be used for the fill and vent lines but not the supply line or return line to the generator.

These changes are important to note since some fuel providers are refusing to fill tanks that do not meet the new code. If you have any questions about bringing your fuel tanks up to code feel free to contact your local GAL branch or send us an e-mail at: powersourcepm@galpower.com

