



**MARS LOCATION:**  
310 CLAY AVENUE (SHIPPING)  
PO BOX 897 (MAILING)  
MARS, PA 16046  
PHONE: 724-625-4260  
FAX: 724-625-4227

**BRIDGEPORT LOCATION:**  
5793 W VETERANS MEMORIAL  
HIGHWAY - SUITE 102  
BRIDGEPORT, WV 26330  
PHONE: 304-842-8611  
FAX: 304-842-8684

Date: May 28, 2015  
To: Keating Township Supervisors  
Subject: Powering the Grinder Pump with a Portable Generator\

E/One has recently become aware of a few issues associated with grinder pump stations being run by portable generators during power outages or start-ups. After extensive research and testing, E/One has developed a list of best practices for these situations. Please note, most of these best practices apply to powering any common appliance with a generator.

To ensure proper operation of E/One grinder pump stations, the following generator guidelines must be followed:

- **The 240V generator must be rated to start a 6500-watt load minimum.**
  - Never use an undersized generator; it will likely cause damage to the generator, pump and/or panel.
  - When the grinder pump starts, it will need approximately 6500 watts for up to ¼ of a second at 240 volts.
  - Once the grinder pump motor is running, the wattage will drop to between 500 and 1200 watts depending on the LPS system pressure.
- **Read and understand the generator's operation and maintenance manual.**
  - Follow all safety, operational and maintenance procedures.
- **Allow the generator's motor to warm up completely before supplying power to the grinder pump station.**
  - A generator that has just been started will not be up to full performance until the generator's motor warms up completely.
  - Before the generator motor is fully warmed up, it will exhibit lower performance, which will cause the voltage output to drop quicker. This can cause component failures within the pump and/or panel.
- **Before connecting to the grinder pump station, measure that the voltage the generator is putting out unloaded. It should be 235 to 250 volts.**
  - Your generator's manual will give instructions on how to adjust it to the proper voltage.
  - If the generator is operated at a voltage that is too low or too high, damage can occur within the pump and/or panel.
- **If the generator is not running smoothly or is revving up and down, do not use it until it is repaired.**
  - Any issues with the motor on the generator will prevent it from producing power at its fullest potential.

- When a load is put on the generator and the generator struggles to stay at the proper speed, the generator should be quickly shut down to investigate the problem.
- **E/One does not recommend using any type of “Auto-Idle” feature (if your generator is so equipped).**
  - We have found, in some cases, that this feature engages very slowly (as far as electrical current is concerned). Because of this, the voltage stays low during the motor start process, potentially causing damage to the pump and/or panel.
- **Check all wire connections between the generator and the panel.**
  - Ensure wire connections within each plug end are tight and in good condition.
  - The plugs must fit tightly into the receptacles. If they do not, replace the worn components.
  - Poor and loose connections can cause voltage drops, causing the generator to work harder and possibly causing damage to the pump and/or panel.