

Subject: Foundations for Small Standby Generators

Purpose

This advisory clarifies regulatory requirements related to foundations for residential or small commercial standby generators (typically up to 26 kW) fueled by natural gas or propane.

Background

CSA B149.1-20 "Natural Gas and Propane Installation Code" contains the following requirements relevant to general foundations:

7.2.1.1

The installation of appliances and associated equipment covered by Clause 7.2 shall comply with this Code, applicable Standards, **manufacturer's instructions**, and local requirements, including fire regulations, building codes, and zoning requirements.

7.2.1.6

. . .

Appliances and associated equipment covered by Clause 7.2 shall be installed on a **firm level foundation**, set on a suitable framework supplied by the manufacturer, or field fabricated in accordance with the manufacturer's instructions.

Therefore, generators to which this code applies must be installed on "a firm level, foundation" and must be installed in accordance with manufacturer's instructions.

Manufacturer's instructions often require, recommend or permit installation on a poured concrete pad, a prefabricated concrete slab, compacted soil, gravel, patio stones or other similar materials.

TSSA Interpretation

TSSA considers an installation to be in compliance with the clause 7.2.1.6 requirement for a generator to be installed on "a firm level, foundation" so long as the foundation meets the requirements or recommendations contained in the manufacturer's instructions. If the manufacturer's instructions are mandatory (i.e., utilize language such as "required" or "must" or "shall"), the requirements must be strictly followed.

If the manufacturer's instructions contain only recommendations, or they are unclear, or if the manufacturer's instructions do not specify foundation requirements, TSSA will consider the installation to be in compliance with clause 7.2.1.6 so long as the foundation meets the following requirements:

- 1) it is composed of compacted crushed gravel or limestone base and a non-combustible platform (e.g. patio stones or a concrete slab); and
- 2) the top surface of the foundation is at least 2 inches above the surrounding ground surface.