

Stationary Gas Engines

PURPOSE

This variance allows compliance monitoring of small engines up to 500 HP (372 kW) by safety codes officers (SCO) as an alternative to prescriptive requirements within the CSA B149.3 - 20 code for the field approval of fuel-burning appliances and equipment.

DISCUSSION

This variance recognizes the role of gas safety codes officers and prescriptive requirements related to the installation of small stationary gas engines intended for temporary or permanent installations at oil and gas sites.

A permit is required for the installation, replacement or relocation of small stationary gas engines, and a site inspection is required by a gas safety codes officer when natural gas or propane is used as the fuel supply. Alternatively, accredited corporations must ensure the installation complies with their quality management plan (QMP). The site inspection is required to verify code compliance for the installation of engine, components, fuel source, and fuel connections (piping, tubing, hose). When a stationary gas engine is designed and built to be portable (on a skid or in a sea-container), the same requirements are applied at each location where the unit is being installed for use.

ISSUE

Industry stakeholders wanted to maintain the existing SCO compliance monitoring process at locations where small stationary engines are being used. The requirements for small engines have been relocated from the CSA B149.1-20 Natural gas and propane installation code to the CSA B149.3-20 Code for field approval of fuel-burning appliances and equipment. This aligns engines with other equipment and appliances to ensure prescriptive requirements are appropriately placed within codes to recognize installation/approval requirements.

Regulations will also support the identification of complex projects for unique applications that may require oversight by the professional of record. If necessary, there is an option to utilize the services of an inspection body, or an engineer under the authentication variance, VAR-GAS-03-19 to inspect and accept the engine components, installation on a skid or in a sea-container including labelling the units as portable if applicable.

CODE REQUIREMENT

CSA B149.1: 20 Natural gas and propane installation code

7.2.4 Non-motive engines and turbines

7.2.4.1

An engine or turbine shall be certified or comply with Clause 17.3 of CSA B149.3-20

Issuance of this STANDATA is authorized by
the Provincial Gas Administrator

[Original Signed]
Sidney Manning

The logo for the province of Alberta, featuring the word "Alberta" in a stylized, cursive font with a small blue square at the end of the word.

Annex N (informative)**Generators, compressors/pressure boosters, engines, and turbines**

Note: This informative (non-mandatory) Annex is written in normative (mandatory) language to facilitate adoption where users of the Code or regulatory authority wish to adopt it formally as additional requirements to this Code.

APPLICATION

This variance applies to all oil and gas sites, including transload locations in the province of Alberta.

VARIANCE

In addition to the prescriptive requirements of CSA B149.1-20 Natural gas and propane installation code, an engine up to 500 HP (372 kW) in size shall

1. Be certified, or
2. Comply with Clause 17.3 of CSA B149.3-20 Code for the field approval of fuel-burning appliances and equipment, or
3. Comply with Annex N of the CSA B149.1-20 Natural gas and propane installation code (allowing compliance monitoring of small engines by Safety Codes Officers).

This variance expires Feb 1, 2026.

This variance provides approximately equivalent or greater safety performance with respect to persons and property as provided for by the *Safety Codes Act*.

This VARIANCE is applicable throughout the province of Alberta.