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# STANDATA bulletin 20-GCB-001

## Gas

### Engines and turbines

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#### Purpose

This bulletin outlines the minimum requirements related to the installation of stationary gas engines and turbines. It is the responsibility of the owner, vendor, contractor, and user to ensure the installation and operation of appliances/equipment comply with regulations under the *Safety Codes Act*.

#### Discussion

A stationary gas engine may be part of a packaged unit or site built application. Packaged units are assembled and completed in a manufacturing facility and include an engine or turbine equipped with all accessories and components required to use natural gas or propane as a fuel source, and include the manufacturer's installation instructions. Engines that are not included as part of a packaged unit are considered site built, requiring additional accessories and components for the type of fuel being used at site. Stationary gas engines are typically coupled to an electrical generator, water pump, compressor, mechanical drive, or hydraulic end for a wide range of applications, and may be categorized as small, mid-size, or large engines/turbines that are permanently sited or portable (e.g. assembled on a skid or in a sea-container).

The installation, replacement, or relocation of a stationary gas engine or turbine requires a gas permit (or must be in compliance with the applicable quality management plan for accredited corporations) and an inspection by a gas safety codes officer (SCO) when natural gas or propane is used as a fuel supply. The safety codes gas inspection is site specific to verify code compliance at the location where the engine/turbine is installed, whether or not it is built/constructed to be portable or permanently sited. An engine or turbine may be certified or approved by an inspection body (IB), an engineer under variance 20-GCV-02[REV1] Engineer authentication at oil and gas production facilities, or accepted by a SCO under variance 20-GCV-01[REV1] Stationary gas engines.

Unless stated otherwise, all Code references in this STANDATA are to B149.1:20 Natural gas and propane installation code

Issued by the Provincial Gas Administrator

[Original signed]

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An owner may choose to utilize the services of an inspection body accredited by the Standards Council of Canada when there are significant numbers of identical installations that fall within the scope of portable or permanent equipment. This may include rental units with significant turnover and other applications where the engine is moved without significant deviations of installation and design.

Inspection bodies or an engineer under variance 20-GCV-02[REV1] may inspect, accept, and affix a label within their scope of accreditation for site-specific or portable applications. The use of the variance 20-GCV-02[REV1] includes conditions 1) to 7) and the permanent label (rating plate) must identify the equipment as permanently sited or portable.

Portable equipment approvals will specify the range of installation requirements including but not limited to, elevations, potential adjustments, fuel types, and gas characteristics that may be addressed through owner's manuals, installation instruction, logs, and start-up reports. These materials must be maintained with the equipment and readily available for a SCO upon request. Portable equipment requires a permit for each installation. Site variations may require the equipment approval and be monitored for compliance from one location to another.

Natural gas may include: sweet gas, sour gas, wet gas, dirty gas, raw gas, wellhead gas, and utility gas.

In order to clarify existing requirements and facilitate new technologies, the national gas code technical committees supported moving the requirements for engine fuel components from the installation code to the field approval code. Alberta supports national code and standard development across Canada; the 2020 versions of the B149 gas codes referenced in the Gas Code Regulation came into force February 1, 2021. Referenced gas codes are applicable from the date of adoption, are not retroactive, and would not apply to legacy equipment. The owner is responsible under the *Safety Codes Act* to ensure their installations are compliant with related regulations and codes at the time of installation.