

DIRECTIVE

PROPANE STORAGE TANK PRESSURE RELIEF VALVE SERVICING AND INSPECTION INTERVALS

This directive is being issued by a provincial safety manager pursuant to section 30 of the Safety Standards Act.

Date of Issue: September 12, 2016

Directive No: D-BP-2016-01

1) General Details:

The purpose of this directive is to set out the implementation timelines for the visual inspection and servicing intervals for pressure relief valves (PRVs) installed on propane storage tanks. CSA-B51-14 Boiler, pressure vessel, and pressure piping code (CSA B51) requires that:

1. For pressure vessels in liquefied petroleum gas (LPG) service governed by CSA B149.2 Propane Storage and Handling code, the maximum servicing intervals for PRVs are:
 - Vessels greater than 2500 USWG shall have a maximum servicing interval of 10 years;
 - Vessels 2500 USWG or less (excluding cylinders as defined by CSA B149.2) with an external PRV shall have a maximum servicing interval of 10 years; and
 - Vessels 2500 USWG or less (excluding cylinders as defined by CSA B149.2) with an internal PRV shall have a maximum servicing interval of 25 years.
2. The frequency of the required periodic visual inspection for propane storage tank PRVs depends on the operating environment and the manufacturer's recommendations but shall not exceed five years.

In consultation with owners and stakeholders, it has been recognized that there are many existing propane storage tank PRVs that are not in compliance with CSA B51's inspection and servicing requirements and that it is not practical to achieve full compliance within a short period of time.

This directive does not impose any new requirements beyond those already required by CSA B51. The implementation timelines set out in this directive are provided to allow owners reasonable time to establish a visual inspection and servicing program for propane tank PRVs that will comply with CSA B51.

The 2014 Edition of CSA B51 was adopted in June, 2015 and has been in force since that time.

2) Specific Details

This directive applies to propane storage tank PRVs that are required to have an operating permit in British Columbia, that are in operation, and that are within the scope of CSA B149.2. The implementation timelines provided in this directive only apply to PRVs on propane storage tanks that were or will be placed into operation prior to January 1, 2017. For propane storage tanks placed into operation on or after January 1, 2017, owners shall perform the visual inspection and servicing of the PRVs within the maximum intervals prescribed in CSA B51.

Owners of propane storage tanks shall establish a documented program that addresses the required inspection, testing, and servicing or replacement of PRVs in accordance with the requirements of CSA B51 and this directive. Owners shall implement the program by giving priority to servicing and inspection of vessels with the highest safety risk, based on age and time since last servicing or inspection. Records shall be retained by the owner for five years in order to provide a means to verify that the required visual inspections and servicing of PRVs are in compliance with CSA-B51 and this directive. The owner shall make these records available to a BCSA safety officer upon request.

DIRECTIVE

PRV Maximum Servicing Intervals

All pressure vessels in propane service to which this directive applies shall be in compliance with CSA B51-14 Table 5 before:

- **January 1, 2024**, for vessels greater than 2500 USWG;
- **January 1, 2024**, for vessels 2500 USWG or less (excluding cylinders as defined by CSA B149.2) with an external PRV; and
- **January 1, 2027**, for vessels 2500 USWG or less (excluding cylinders as defined by CSA B149.2) with an internal PRV.

Servicing of a propane tank PRV shall include: disassembly; inspection of all internal components; refurbishing; replacement of parts as necessary; testing; and recertification. Servicing and recertification of PRV's to be installed to propane tanks shall be performed by the original manufacturer of the PRV or by an organization holding a current and valid "VR" stamp Certificate of Accreditation issued by the National Board of Boiler and Pressure Vessel Inspectors or by an organization holding a BCSA contractor licence, class "SRV" for PRV service.

PRV Visual Inspection

Owners shall ensure that periodic visual inspection of propane storage tank PRV's are performed as required by CSA B51.

Owners of pressure vessels in propane service to which this directive applies shall be in compliance with the visual inspection requirements of CSA B51 before **January 1, 2022**.

PRVs shall be serviced or replaced if there is evidence of a malfunction. Unsafe or suspect PRVs shall be replaced immediately. Corrective action shall be taken if any inspection criteria are not met. The owner shall maintain records related to any corrective action in order to verify that the cause of the inspection failure has been rectified and the PRV operates properly.

CSA B51 requires that personnel performing in-service inspection shall be trained and competent in the duties for which they are responsible. The owner's servicing and inspection program shall include details concerning how this requirement will be met.

BCSA will begin enforcing servicing and inspection requirements in accordance with the implementation timelines set out in this directive. BCSA reserves the right to require immediate correction or servicing of a PRV in any case where evidence suggests such action is necessary for public safety and may use progressive enforcement to achieve the required outcome in such cases.

A handwritten signature in black ink, appearing to read "T. Scholl", written over a horizontal line.

Tony Scholl
Provincial Safety Manager
Boilers and Pressure Vessels

DIRECTIVE

Definitions

Cylinder – a "Cylinder" means a container designed and manufactured in accordance with a cylinder specification authorized for the containment and transportation of propane under the Transportation of Dangerous Goods (TDG) Regulations of Transport Canada, as stated in the CSA B149.2 Code, Section 3

In operation – means a propane storage tank pressurized above 103 kPa (15 psig) and with relief valves set at a pressure of greater than 103 kPa (15 psig)

Pressure Vessel – for the purposes of the Act a "Pressure Vessel" means a vessel and its fittings, other than a boiler, that is capable of being used to contain, store, distribute, transfer, distil, process or otherwise handle gas, vapour or liquids under pressure, as stated in the Boiler Regulation Section 1.

Propane Storage Tank – a "Tank" means the class of container for the storage of compressed natural gas or propane, designed and fabricated in accordance with CSA B51, as stated in CSA B149.2 Code, Section 3.

References:

Relevant Legislation

Safety Standards Act

Operating permits

28 (1) In accordance with the regulations, a safety officer may issue an operating permit that allows the use of a regulated product listed in section 2 (1) (b) for one or more disciplines.

(2) A permit issued under subsection (1) is subject to terms and conditions provided for under the regulations or attached to the permit by a safety officer.

(3) An operating permit may be issued for a term up to 5 years.

(4) A person who holds a permit issued under this section must comply with the terms and conditions of the permit.

Safety Standards General Regulation

Operating permits

18 (1) A person must have an operating permit to do any of the following:

- (a) operate a regulated product;
- (b) maintain a regulated product.

(2) An operating permit may be issued to any of the following:

- (a) an owner of a regulated product;
- (b) the owner of a building or other premises where regulated work is to be performed.

Responsibilities of operating permit holder

19 The holder of an operating permit must do all of the following:

- (a) if required under the permit, maintain a log of work performed under the permit;
- (b) in the case of a multi-year operating permit, pay any required installments of the permit fee;
- (c) submit any required declaration confirming compliance with the Act;
- (d) if a field safety representative is named in the permit, immediately notify the regulatory authority if the field safety representative ceases to be contracted or employed by the permit holder.



DIRECTIVE

Power Engineers, Boiler, Pressure Vessel & Refrigeration Safety Regulation

Definitions for the Act

1 For the purposes of the Act:

"pressure vessel" means a vessel and its fittings, other than a boiler, that is capable of being used to contain, store, distribute, transfer, distil, process or otherwise handle gas, vapour or liquids under pressure;

Permits

62 (2) A person must hold an operating permit for each boiler, pressure vessel or refrigeration system.

For more information on the British Columbia Safety Authority, please visit our web site at:
www.safetyauthority.ca