Notice

Code Requirements for Propane Fuel Tanks

The purpose of this notice is to ensure the propane industry, including vendors, conversion/inspection stations and owners of propane-fuelled vehicles are aware of the requirements within the CSA B149.5 and CSA B51 codes for propane fuel tanks.

CSA B149.5

The CSA B149.5 is the Installation code for propane fuel systems and tanks on highway vehicles. This code applies to the installation, servicing and repair of propane fuel system components and tanks on highway vehicles for the provision of motive power. The CSA B149.5 code requires that fuels tanks comply with the CSA B51 Boiler, pressure vessel, and pressure piping code.

- Propane conversion/inspection stations are reminded that when installing or inspecting tanks, it is their responsibility to ensure compliance to the CSA-B149.5-20 code with careful attention to the following:

5.4.9 Tank mounting brackets, complete with a resilient material to be installed between the supports or clamping bands and the container so that there is no direct metal-to-metal contact, shall be provided by the tank manufacturer.

5.4.10 Tanks shall be installed on a vehicle with the brackets supplied by the tank manufacturer and in accordance with the manufacturer's installation instructions. Welding shall not be used as a means of attaching a tank bracket to a vehicle.

CSA B51

The CSA B51 is the Boiler, pressure vessel, and pressure piping code. This code, including Annex G, applies to the design and construction of automotive propane vessels. Annex G is a mandatory part of the CSA B51 code, providing specific requirements for automotive propane tanks.

- Annex G requirements include:
  - Corrosion allowance, such as the minimum corrosion allowance required for exterior mounted tanks;
  - Tank openings, such as the design of tank openings to prevent the release of contents
  - when a vehicle is involved in an accident;
  - Manifold vessels, such as the crush test requirements for manifold tanks;
  - Brackets, such as the design of brackets for a minimum specific load for manifold tanks;
  - Valve guards, such as the design of the valve guards to withstand a specific minimum direct blow for bed-mounted, chassis-mounted and under-mounted tanks;
  - Vessel appurtenances, such as the type of materials required to attach appurtenances to the tanks; and
  - Nameplates, such as the mounting requirements for nameplates.

- If the manufacturer's nameplate does not specify that the tank complies with Annex G, it is the responsibility of the conversion/inspection station to obtain documentation from the vendor or the tank manufacturer verifying total compliance to the CSA B51 code, including Annex G.
- New or reconditioned propane tanks that are externally mounted on any highway vehicles and converted after April 1, 2006, must be in compliance with the requirements specified in Annex G. This includes any tank that has been in service and is being reinstalled, or installed on another highway vehicle.
- When a tank is removed from an existing propane vehicle and the tank does not comply with Annex G, it shall be scrapped. The liquid contents of all scrapped tanks must be removed by flaring or transferring the propane to another container. Once the propane is removed from a tank being scrapped, all valves, gauges and fittings should be removed, and the manufacturers' nameplates must be removed or destroyed.

As authorized by the Government of Alberta, the Alberta Boiler Safety Association (ABSA) is responsible for the administration and delivery of safety programs related to boilers, pressure vessels and pressure piping systems in Alberta. The requirements of CSA B51 Annex G were adopted by regulation under the *Safety Codes Act* on April 1, 2006. However, the Crush Test requirement for manifold tanks was introduced under CSA-B51-97 Appendix (I) and has been in effect since January 1, 1998.

For further information, contact Municipal Affairs, Corporate and Technical Support Division toll-free at 1-866-421-6929. You can also contact ABSA at 780-437-9100.