WAC 296-24-93003 General requirements. (1) **Application.** You must ensure that compressed gas cylinder, portable tanks, and cargo tanks shall have pressure relief devices installed and maintained in accordance with Compressed Gas Association Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963.

(2) **Types of safety relief devices.** Types of safety relief devices as covered by this section are designated as follows:

(a) Type CG-1: Frangible disc.

(b) Type CG-2: Fusible plug or reinforced fusible plug utilizing a fusible alloy with yield temperature not over 170°F, nor less than 157°F (165°F nominal).

(c) Type CG-3: Fusible plug or reinforced fusible plug utilizing a fusible alloy with yield temperature not over 220°F, nor less than 208°F (212°F nominal).

(d) Type CG-4: Combination frangible disc-fusible plug, utilizing a fusible alloy with yield temperature not over 170°F, nor less than 157°F (165°F nominal).

(e) Type CG-5: Combination frangible disc-fusible plug, utilizing a fusible alloy with yield temperature not over 220°F, nor less than 208°F (212°F nominal).

(f) Type CG-7: Safety relief valve.

(g) Type CG-8: Combination safety relief valve and fusible plug.

(3) **Specifications and tests.** All safety relief devices covered by this section must meet the design, construction, marking and test specification of the "Compressed Gas Association Safety Relief Device Standards Part 1-Cylinders for Compressed Gases: S1.1-1963."

(4) **Specific requirements for safety relief devices.**

(a) Compressed gas cylinders, which under the regulations of the department of transportation must be equipped with safety relief devices, must be considered acceptable when equipped with devices of proper construction, location, and discharge capacity under the conditions prescribed in Table 1 of the Compressed Gas Associations Standard S-1.1-1963.

(b) You must only use replacement parts or assemblies provided by the manufacturer unless the advisability of interchange is proved by adequate tests.

(c) When a frangible disc is used with a compressed gas cylinder, the rated bursting pressure of the disc must not exceed the minimum required test pressure of the cylinder with which the device is used, except for DOT-3E cylinders (49 C.F.R. Ch. 1) the rated bursting pressure of the device must not exceed 4,500 pounds per square inch gage (p.s.i.g.).

(d) When a safety relief valve is used on a compressed gas cylinder, the flow rating pressure must not exceed the minimum required test pressure of the cylinder on which the safety relief valve is installed and the reseating pressure must not be less than the pressure in a normally charged cylinder at 130°F.

(e) When fittings and piping are used on either the upstream or downstream side or both of a safety relief device or devices, the passages must be so designed that the flow capacity of the safety relief device will not be reduced below the capacity required for the container on which the safety relief device assembly is installed, nor to the extent that the operation of the device could be impaired. Fittings, piping, and method of attachment must be designed to withstand normal handling and the pressures developed when the device or devices function.

(f) You must ensure that no shutoff valve is installed between the safety relief devices and the cylinder.

(5) **Maintenance requirements for safety relief devices.**

(a) As a precaution to keep cylinder safety relief devices in reliable operating condition, you must take care in the handling or storing of compressed gas cylinders to avoid damage. You must also exercise care to avoid plugging by paint or other dirt accumulation of safety relief device channels or other parts which could interfere with the functioning of the device. You must only allow qualified personnel to service safety relief devices.

(b) Each time a compressed gas cylinder is received at a point for refilling, you must examine all safety relief devices externally for corrosion, damage, plugging of external safety relief device channels, and mechanical defects such as leakage or extrusion of fusible metal. If there is any doubt regarding the suitability of the safety relief device for service you must not fill the cylinder until it is equipped with a suitable device.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 15-24-100, § 296-24-93003, filed 12/1/15, effective 1/5/16; Order 73-5, § 296-24-93003, filed 5/9/73 and Order 73-4, § 296-24-93003, filed 5/7/73.]