

meters long. You may also certify primer bulbs separately. The standard applies with respect to the total permeation emissions divided by the wetted internal surface area of the assembly. Where it is not practical to determine the actual internal surface area of the assembly, you may assume that the internal surface area per unit length of the assembly is equal to the ratio of internal surface area per unit length of the hose section of the assembly.

[73 FR 59298, Oct. 8, 2008, as amended at 74 FR 8426, Feb. 24, 2009]

**§ 1060.103 What permeation emission control requirements apply for fuel tanks?**

(a) Fuel tanks must meet permeation requirements as follows:

(1) Marine SI fuel tanks, including engine-mounted fuel tanks and portable marine fuel tanks, must meet the permeation requirements in this section.

(2) Large SI fuel tanks must meet diurnal emission standards as specified in § 1060.105, which includes measurement of permeation emissions. No separate permeation standard applies.

(3) Fuel tanks for recreational vehicles must meet the permeation requirements specified in 40 CFR 1051.110 or in this section.

(4) Small SI fuel tanks must meet the permeation requirements in this section unless they are installed in equipment certified to meet diurnal emission standards under § 1060.105(e).

(b) Permeation emissions from fuel tanks may not exceed 1.5 g/m<sup>2</sup>/day when measured at a nominal temperature of 28 °C with the test procedures for tank permeation in § 1060.520. You may also choose to meet a standard of 2.5 g/m<sup>2</sup>/day if you perform testing at a nominal temperature of 40 °C under § 1060.520(d).

(c) The exhaust standard-setting part may allow for certification of fuel tanks to a family emission limit for calculating evaporative emission credits as described in subpart H of this part instead of meeting the emission standards in this section.

(d) For purposes of this part, fuel tanks do not include fuel lines that are subject to § 1060.102, petcocks designed for draining fuel, grommets used with

fuel lines, or grommets used with other hose or tubing excluded from the definition of “fuel line.” Fuel tanks include other fittings (such as fuel caps, gaskets, and O-rings) that are directly mounted to the fuel tank.

(e) Fuel caps may be certified separately relative to the permeation emission standard in paragraph (b) of this section using the test procedures specified in § 1060.521. Fuel caps certified alone do not need to meet the emission standard. Rather, fuel caps would be certified with a Family Emission Limit, which is used for demonstrating that fuel tanks meet the emission standard as described in § 1060.520(b)(5). For the purposes of this paragraph (e), gaskets or O-rings that are produced as part of an assembly with the fuel cap are considered part of the fuel cap.

(f) Metal fuel tanks that meet the permeation criteria in § 1060.240(d)(2) or use certified nonmetal fuel caps will be deemed to be certified as in conformity with the requirements of this section without submitting an application for certification.

[73 FR 59298, Oct. 8, 2008, as amended at 74 FR 8427, Feb. 24, 2009; 75 FR 23026, Apr. 30, 2010]

**§ 1060.104 What running loss emission control requirements apply?**

(a) Engines and equipment must meet running loss requirements as follows:

(1) Marine SI engines and vessels are not subject to running loss emission standards.

(2) Large SI engines and equipment must prevent fuel boiling during operation as specified in 40 CFR 1048.105.

(3) Recreational vehicles are not subject to running loss emission standards.

(4) Nonhandheld Small SI engines and equipment that are not used in wintertime equipment must meet running loss requirements described in this section. Handheld Small SI engines and equipment are not subject to running loss emission standards.

(b) You must demonstrate control of running loss emissions in one of the following ways if your engines or equipment are subject to the requirements of this section:

(1) Route running loss emissions into the engine intake system so fuel vapors

vented from the tank during engine operation are combusted in the engine. This may involve routing vapors through a carbon canister. If another company has certified the engine with respect to exhaust emissions, state in your application for certification that you have followed the engine manufacturer's installation instructions.

(2) Use a fuel tank that remains sealed under normal operating conditions. This may involve a bladder or other means to prevent pressurized fuel tanks.

(3) Get an approved Executive Order from the California Air Resources Board showing that your system meets applicable running loss standards in California.

(c) If you are subject to both running loss and diurnal emission standards, use good engineering judgment to ensure that the emission controls are compatible.

**§ 1060.105 What diurnal requirements apply for equipment?**

(a) Fuel tanks must meet diurnal emission requirements as follows:

(1) Marine SI fuel tanks, including engine-mounted fuel tanks and portable marine fuel tanks, must meet the requirements related to diurnal emissions specified in this section.

(2) Large SI fuel tanks must meet the requirements related to diurnal emissions specified in 40 CFR 1048.105.

(3) Recreational vehicles are not subject to diurnal emission standards.

(4) Small SI fuel tanks are not subject to diurnal emission standards, except as specified in paragraph (e) of this section.

(b) Diurnal emissions from Marine SI fuel tanks may not exceed 0.40 g/gal/day when measured using the test procedures specified in §1060.525 for general fuel temperatures. An alternative standard of 0.16 g/gal/day applies for fuel tanks installed in nontrailerable boats when measured using the corresponding fuel temperature profile in §1060.525. Portable marine fuel tanks are not subject to the requirements of this paragraph (b), but must instead comply with the requirements of paragraphs (c) and (d) of this section.

(c) Portable marine fuel tanks and associated fuel-system components must meet the following requirements:

(1) They must be self-sealing (without any manual vents) when not attached to the engines. The tanks may not vent to the atmosphere when attached to an engine.

(2) They must remain sealed up to a positive pressure of 24.5 kPa (3.5 psig); however, they may contain air inlets that open when there is a vacuum pressure inside the tank. Such fuel tanks may not contain air outlets that vent to the atmosphere at pressures below 34.5 kPa (5.0 psig).

(d) Detachable fuel lines that are intended for use with portable marine fuel tanks must be self-sealing (without any manual vents) when not attached to the engine or fuel tank.

(e) Manufacturers of nonhandheld Small SI equipment may optionally meet the diurnal emission standards adopted by the California Air Resources Board in the Final Regulation Order, Article 1, Chapter 15, Division 3, Title 13, California Code of Regulations, July 26, 2004 (incorporated by reference in §1060.810). To meet this requirement, equipment must be certified to the performance standards specified in Title 13 CCR §2754(a) based on the applicable requirements specified in CP-902 and TP-902, including the requirements related to fuel caps in Title 13 CCR §2756. Equipment certified under this paragraph (e) does not need to use fuel lines or fuel tanks that have been certified separately. Equipment certified under this paragraph (e) are subject to all the referenced requirements as if these specifications were mandatory.

(f) The following general provisions apply for controlling diurnal emissions:

(1) If you are subject to both running loss and diurnal emission standards, use good engineering judgment to ensure that the emission controls are compatible.

(2) You may not use diurnal emission controls that increase the occurrence of fuel spitback or spillage during in-use refueling. Also, if you use a carbon canister, you must incorporate design features that prevent liquid gasoline