

**Subpart D—Specific Machinery Requirements**

**§ 119.400 Applicability.**

(a) This subpart applies to all propulsion and auxiliary machinery installations of the internal combustion piston type.

(b) Where no specific fuel designation exists, the requirements of this subpart are applicable to all types of fuels and machinery.

**§ 119.405 Fuel restrictions.**

The use of a fuel, other than diesel fuel, as an alternative fuel for an internal combustion engine, except gasoline when used as a fuel for outboard motors as allowed by § 119.458 of this part, will be reviewed on a case-by-case basis by the Commandant.

[CGD 85–080, 61 FR 922, Jan. 10, 1996, as amended by CGD 97–057, 62 FR 51047, Sept. 30, 1997]

**§ 119.410 General requirements.**

(a) Each starting motor, generator, and spark producing device must be mounted as high above the bilges as practicable.

(b) Gauges to indicate engine revolutions per minute (RPM), jacket water discharge temperature, and lubricating oil pressure must be provided for all propulsion engines installed in the vessel. The gauges must be readily visible at the operating station.

(c) In systems and applications where flexible hoses are permitted to be clamped:

(1) Double hose clamping is required on each end of the hose, where practicable, except that one hose clamp can be used if the pipe ends are expanded or beaded to provide a positive stop against hose slippage;

(2) The clamps must be of a corrosion resistant metallic material; and

(3) The clamps must not depend on spring tension for their holding power.

**§ 119.420 Engine cooling.**

(a) Except as otherwise provided in paragraph (b) of this section, all engines must be water cooled and meet the requirements of this paragraph.

(1) The engine head, block, and exhaust manifold must be water jacketed

and cooled by water from a pump that operates whenever the engine is operating.

(2) A suitable hull strainer must be installed in the circulating raw water intake line of an engine cooling water system.

(3) A closed fresh water system may be used to cool the engine.

(b) A propulsion or auxiliary diesel engine may be air cooled or employ an air cooled jacket water radiator when:

(1) Installed on an open deck and sufficient ventilation for machinery cooling is available; or

(2) Installed in an enclosed or partially enclosed space for which ventilation for machinery cooling that complies with the requirement of § 119.465(b) of this part is provided, and other necessary safeguards are taken so as not to endanger the vessel.

**§ 119.422 Integral and non-integral keel cooler installations.**

(a) A keel cooler installation used for engine cooling must be designed to prevent flooding.

(b) Except as provided in paragraph (e), a shutoff valve must be located where the cooler piping penetrates the shell, as near the shell as practicable, except where the penetration is forward of the collision bulkhead.

(c) The thickness of the inlet and discharge connections, outboard of the shutoff valves required by paragraph (b) of this section, must be at least Schedule 80.

(d) Short lengths of approved non-metallic flexible hose, fixed by two hose clamps at each end of the hose, may be used at machinery connections for a keel cooler installation.

(e) Shutoff valves are not required for integral keel coolers. A keel cooler is considered integral to the hull if the following conditions are satisfied:

(1) The cooler structure is fabricated from material of the same thickness and quality as the hull;

(2) The flexible connections are located well above the deepest subdivision draft;

(3) The end of the structure is faired to the hull with a slope no greater than 4 to 1; and