

§ 182.458

46 CFR Ch. I (10-1-04 Edition)

§ 182.458 Portable fuel systems.

(a) Portable fuel systems, including portable tanks and related fuel lines and accessories, are prohibited except where used for portable dewatering pumps or outboard motor installations.

(b) The design, construction and stowage of portable tanks and related fuel lines and accessories must meet the requirements of ABYC Project H-25, "Portable Gasoline Fuel systems for Flammable Liquids," or other standard specified by the Commandant.

[CGD 85-080, 61 FR 986, Jan. 10, 1996, as amended by CGD 97-057, 62 FR 51050, Sept. 30, 1997; CGD 85-080, 62 FR 51358, Sept. 30, 1997]

§ 182.460 Ventilation of spaces containing machinery powered by, or fuel tanks for, gasoline.

(a) A space containing machinery powered by, or fuel tanks for, gasoline must have a ventilation system that complies with this section and consists of:

(1) For an enclosed space:

(i) At least two natural ventilation supply ducts located at one end of the space and that extend to the lowest part of the space or to the bilge on each side of the space; and

(ii) A mechanical exhaust system consisting of at least two ventilation exhaust ducts located at the end of the space opposite from where the supply ducts are fitted, which extend to the lowest part of the bilge of the space on each side of the space, and which are led to one or more powered exhaust blowers; and

(2) For a partially enclosed space, at least one ventilation duct installed in the forward part of the space and one ventilation duct installed in the after part of the space, or as otherwise required by the cognizant OCMI. Ducts for partially enclosed spaces must have cowls or scoops as required by paragraph (i) of this section.

(b) A mechanical exhaust system required by paragraph (a)(1)(ii) of this section must be such as to assure the air changes as noted in Table 182.460(b) depending upon the size of the space.

TABLE 182.460(b)

Size of space in cubic meters (feet)		Minutes per air change
Over	Not over	
0	14 (500)	2
14 (500)	28.50 (1000)	3
28.50 (1000)	43 (1500)	4
43 (1500)	5

(c) An exhaust blower motor may not be installed in a duct, and if mounted in any space required to be ventilated by this section, must be located as high above the bilge as practicable. Blower blades must be nonsparking with reference to their housings.

(d) Where a fixed gas fire extinguishing system is installed in a space, all powered exhaust blowers for the space must automatically shut down upon release of the extinguishing agent.

(e) Exhaust blower switches must be located outside of any space required to be ventilated by this section, and must be of the type interlocked with the starting switch and the ignition switch so that the blowers are started before the engine starter motor circuit or the engine ignition is energized. A red warning sign at the switch must state that the blowers must be operated prior to starting the engines for the time sufficient to insure at least one complete change of air in the space served.

(f) The area of the ventilation ducts must be sufficient to limit the air velocity to a maximum of 10 meters per second (2,000 feet per minute). A duct may be of any shape, provided that in no case will one cross sectional dimension exceed twice the other.

(g) A duct must be so installed that ordinary collection of water in the bilge will not block vapor flow.

(h) A duct must be of rigid permanent construction, which does not allow any appreciable vapor flow except through normal openings, and made of the same material as the hull or of noncombustible material. The duct must lead as directly as possible from its intake opening to its terminus and be securely fastened and supported.

(i) A supply duct must be provided at its intake opening with a cowl or scoop having a free area not less than twice

the required duct area. When the cowl or scoop is screened, the mouth area must be increased to compensate for the area of the screen wire. A cowl or scoop must be kept open at all times except when the weather is such as to endanger the vessel if the openings are not temporarily closed.

(j) Dampers may not be fitted in a supply duct.

(k) A duct opening may not be located where the natural flow of air is unduly obstructed, adjacent to possible sources of vapor ignition, or where exhaust air may be taken into a supply duct.

(l) Provision must be made for closing all supply duct cowls or scoops and exhaust duct discharge openings for a space protected by a fixed gas extinguishing system. All closure devices must be readily available and mounted in the vicinity of the vent.

(m) A vessel of not more than 19.8 meters (65 feet) in length carrying not more than 12 passengers, with ventilation installations in accordance with ABYC Project H-2, "Ventilation of Boats Using Gasoline," or 33 CFR 183, subpart K, "Ventilation," will be considered as meeting the requirements of this section.

[CGD 85-080, 61 FR 986, Jan. 10, 1996, as amended by CGD 97-057, 62 FR 51050, Sept. 30, 1997]

§ 182.465 Ventilation of spaces containing diesel machinery.

(a) A space containing diesel machinery must be fitted with adequate means such as dripproof ventilators, ducts, or louvers, to provide sufficient air for proper operation of main engines and auxiliary engines.

(b) Air-cooled propulsion and auxiliary diesel engines installed below deck, as permitted by § 182.420, must be fitted with air supply ducts or piping from the weather deck. The ducts or piping must be so arranged and supported to be capable of safely sustaining stresses induced by weight and engine vibration and to minimize transfer of vibration to the supporting structure. Prior to installation of ventilation system for such engines, plans or sketches showing machinery arrangement including air supplies, exhaust stack, method of attachment of

ventilation ducts to the engine, location of spark arresting mufflers and capacity of ventilation blowers must be submitted to the cognizant OCMI for approval.

(c) A space containing diesel machinery must be fitted with at least two ducts to furnish natural or powered supply and exhaust ventilation. The total inlet area and the total outlet area of each ventilation duct may not be less than one square inch for each foot of beam of the vessel. These minimum areas must be increased as necessary when the ducts are considered as part of the air supply to the engines.

(d) A duct must be of rigid permanent construction, which does not allow any appreciable vapor flow except through normal openings, and made of the same material as the hull or of noncombustible material. The duct must lead as directly as possible from its intake opening to its terminus and be securely fastened and supported.

(e) A supply duct must be provided with a cowl or scoop having a free area not less than twice the required duct area. When the cowl or scoop is screened, the mouth area must be increased to compensate for the area of the screen wire. A cowl or scoop must be kept open at all times except when the weather is such as to endanger the vessel if the openings are not temporarily closed.

(f) Dampers may not be fitted in a supply duct.

(g) A duct opening may not be located where the natural flow of air is unduly obstructed, adjacent to possible sources of vapor ignition, or where exhaust air may be taken into a supply duct.

(h) provision must be made for closing all supply duct cowls or scoops and exhaust duct discharge openings for a space protected by a fixed gas extinguishing system. All closure devices must be readily available and mounted in the vicinity of the vent.

(i) A vessel of not more than 19.8 meters (65 feet) in length carrying not more than 12 passengers, with ventilation installations in accordance with ABYC Project H-32, "Ventilation of Boats Using Diesel Fuel," will be considered as meeting the requirements of this section.