

National Marine Manufacturers Association
Product Compliance Specialist Examination
Ventilation (2013 MY)
ABYC H-2 (08) and H-32 (08)

1. Natural ventilation shall be provided for all of the following except:
 - a. a portable fuel tank that vents into the compartment
 - b. a metallic fuel tank in a compartment with a net volume of less than 2 cubic feet
 - c. a permanently installed gasoline propulsion engine
 - d. a dedicated compartment containing a “Low CO” gasoline generator

2. When determining the net volume of a compartment, which of the following items cannot be deducted?
 - a. propulsion engines and generators
 - b. engine cranking batteries
 - c. permanently installed fuel tanks
 - d. optional waste tanks

3. A ventilation system installed in a gasoline engine compartment is primarily used for:
 - a. remove explosive fuel vapor in case of a fuel leak
 - b. expelling or diluting potentially explosive gasoline vapor
 - c. odor control and personnel comfort
 - d. provide adequate engine combustion air

4. As it applies to H-2, a boat with an enclosed accommodation compartment has:
 - a. a head compartment
 - b. a galley area with a sink
 - c. designated sleeping accommodations
 - d. all of the above

5. A portable gas tank can fit in the space under an outboard motorwell but is not intended for such use, then:
 - a. a “no ventilation is provided” label shall be posted
 - b. the space shall be redesigned to prevent tank storage
 - c. a ventilation blower shall be installed
 - d. a notice shall be in the owner’s manual

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6. What is the net compartment volume of a tank compartment that is 48" long, 32" wide 18" deep and contains a 42 gallon fuel tank:
- 11.5 cu. ft.
 - 5.6 cu. ft.
 - 10.4 cu. ft.
 - 16.4 cu. ft.
7. What is the required exhaust opening size for an engine space if the net compartment volume is 95 ft³?
- 14.7 in²
 - 15.5 in²
 - 12.3 in²
 - 13.8 in²
8. If the space in question 7 has two gasoline propulsion engines, what is the minimum blower capacity rating for each blower?
- 145 CFM
 - 160 CFM
 - 85 CFM
 - 75 CFM
9. What is the blower output for a 200 cfm blower that has 10 feet of ducting with two 90° bend attached to a louvered vent?
- 60 cfm
 - 80 cfm
 - 120 cfm
 - 100 cfm

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10. The nominal diameter of ventilation ducting shall be at least:
- 1.75 inches
 - 2 inches
 - 2 1/2 inches
 - 60 millimeter
11. If an engine compartment has two gasoline sterndrive engines and a gasoline generator then at least three blowers would be required.
- True
 - False
12. Boats with an enclosed accommodation compartment can never have ventilation openings on the aft facing surfaces at the stern.
- True
 - False
13. To determine if one compartment connects to another compartment:
- the aggregate area of interconnecting openings must be greater than 15% of the area between the compartments
 - the aggregate area of interconnecting openings must be greater than 5% of the area between the compartments
 - the aggregate area of interconnecting openings must be greater than 15 sq. in. of the area between the compartments
 - the aggregate area of interconnecting openings must be greater than 2% of the area between the compartments
14. If a powered ventilation system is properly installed then the requirements for a natural ventilation system can be disregarded.
- True
 - False

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15. An additional exhaust blower would be required if:

- a. a gasoline generator is installed in a compartment which is separate from the engine compartment
- b. a gasoline generator is installed in a compartment which has a gasoline propulsion engine
- c. a diesel generator is installed in a compartment on an outboard powered boat without a fixed fire extinguisher
- d. a diesel generator is installed in a compartment which has a gasoline propulsion engine

16. Blower Operation Warning Label must be:

- a. in plain view of the operator
- b. as close as practicable to the ignition switch
- c. located at a remote generator start switch
- d. all of the above

17. The blower exhaust duct in a gasoline engine compartment must be:

- a. permanently fixed and self-draining
- b. located above the normal accumulation of bilge water
- c. routed to the lower one third of the compartment
- d. all of the above

18. If an engine space does not have a sustained accumulated level of CO in excess of 125 ppm:

- a. ventilation openings can be placed on the aft facing surface of the stern of the boat if it has an accommodation space
- b. ventilation openings must not be placed on the aft facing surface of the stern of the boat if it has an accommodation space
- c. The engine compartment does not require a ventilation system
- d. a CO warning label does not have to be displayed in the engine space

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19. A portable fuel tank compartment is designed to be “open to the atmosphere” by providing 12 sq. in. of open area for each cubic foot of net compartment volume. Which of the following statements is correct?

- a. this compartment does not require a ventilation system
- b. this compartment is not “open to the atmosphere”
- c. this compartment is limited to only a 6 gal. portable tank
- d. this compartment is compliant with H-2

20. On a boat equipped with multiple blowers, the blowers must:

- a. have a single switch located within 7” of the power source
- b. be simultaneously operated and protected by one fuse or breaker
- c. have separate switches and protected by one fuse or breaker
- d. be simultaneously operated by one switch and each blower protected by a separate fuse or breaker

21. The purpose of a ventilation system on a diesel powered boat is:

- a. removal fixed gaseous fire extinguisher discharge
- b. cooling of the engine room for personnel comfort
- c. providing the required engine combustion air
- d. any or all of the above

22. Ventilation openings on a diesel powered inboard boat for supplying combustion air shall:

- a. accommodate at least the minimum air requirements specified by the engine manufacture
- b. accommodate at least the maximum air requirements specified by the engine manufacture
- c. accommodate at least the air requirements specified by the engine manufacture for propulsion engines only
- d. none of the above

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23. The lowest point of ventilation openings on diesel boats shall be:
- a. above the maximum heeled waterline for sailboats
 - b. above the static float plan for all powerboats
 - c. no less than 24" above the loaded waterline
 - d. no closer than 18" from the diesel tank fill
24. DC powered ventilation means must be provided if a fixed fire extinguishing system is installed in the diesel engine compartment.
- a. True
 - b. False
25. The required separation between external ventilation openings and fuel fills and fuel vents is 15", the correct way to measure this is from the hull opening inside the vent scoop to the fuel fitting.
- a. True
 - b. False