

# CERTIFICATE

## By Authority Of THE UNITED STATES OF AMERICA Legally Binding Document

By the Authority Vested By Part 5 of the United States Code § 552(a) and Part 1 of the Code of Regulations § 51 the attached document has been duly INCORPORATED BY REFERENCE and shall be considered legally binding upon all citizens and residents of the United States of America. HEED THIS NOTICE: Criminal penalties may apply for noncompliance.



**Document Name:** ABYC H-32: Ventilation of Boats Using Diesel Fuel

**CFR Section(s):** 46 CFR 182.470(c)

**Standards Body:** American Boat and Yacht Council



Official Incorporator:

THE EXECUTIVE DIRECTOR  
OFFICE OF THE FEDERAL REGISTER  
WASHINGTON, D.C.



## **H-32 RECOMMENDED PRACTICES AND STANDARDS COVERING VENTILATION OF BOATS USING DIESEL FUEL**

*Based on ABYC's assessment of the state of existing technology and the problems associated with achieving the requirements of this standard, ABYC recommends compliance with this standard by August 1, 1988.*

### **H-32.1. PURPOSE**

These recommended practices and engineering standards establish requirements for ventilation of boats using diesel fuel.

### **H-32.2. SCOPE**

These recommended practices and engineering standards apply to boats using diesel fuel only for electrical generation, mechanical power and propulsion.

*NOTE: Ventilation requirements for boats using gasoline as fuel are contained in ABYC H-2, "Ventilation of Boats Using Gasoline".*

### **H-32.3. DEFINITION**

**Ventilation** - The changing of air within a compartment by natural or mechanical means. Ventilation may be effected by dilution of contaminated air, by introduction of fresh air, or by local exhaust of contaminated air.

### **H-32.4. REQUIREMENTS -IN GENERAL**

- a. *Ventilation Principle* - Ventilation cannot be relied upon to remove all vapors that are possible from the presence of liquid fuel resulting from fuel system failures or fuel spillage. (See ABYC H-33, "Diesel Fuel Systems")
- b. *Storage Batteries* - Compartments containing storage batteries shall be vented to provide for the escape of hydrogen in accordance with ABYC E-10, "Location and Installation of Storage Batteries".
- c. *Diesel Fuel Vapors* - Due to the characteristics of diesel fuel and the closed nature of the diesel engine fuel system, neither mechanical nor natural ventilation, as prescribed for gasoline powered vessels, is necessary to remove diesel fuel vapors. (See ABYC H-2, "Ventilation of Boats Using Gasoline")
- d. *Removal of Fixed Gaseous Fire Extinguishing System Discharge* - Ventilation means shall be provided to remove the discharge from fixed gaseous fire extinguishing systems.
- e. *Combustion Air* - Ventilating provisions and openings to the machinery space provided for supplying combustion air shall accommodate the air requirements required by the engine manufacturer(s) for each propulsion and auxiliary engine in that space. These openings may also function as means of providing natural ventilation.
- f. *Additional Uses of Ventilation* - Power or natural ventilation is not required on a diesel boat, but may be used to control compartment temperature. power ventilation may also be used in the machinery space for odor control and personnel comfort while servicing equipment.

- g. *Ambient Temperature* - For design purposes, the ambient temperature of machinery spaces is considered to be 50° C (122° F) and of all other spaces is considered to be 30° C (86° F).

*EXCEPTION: Temperatures in machinery spaces after engine shut-down may exceed this design ambient temperature.*

H-32.5. *INSTALLATION*

- a. Non-metallic materials used for ventilating ducts and components installed below deck shall be capable of continuous exposure to a temperature range of -30° C(-22°) to 85° C(194° F) without failure.
- b. Non-metallic ventilating components shall be installed at least 9 inches horizontally from or below, or 18 inches above, any surface capable of reaching a temperature of 150° C(302° F).

*EXCEPTION: Ventilation system components designed for use in higher temperature locations.*

- c. Ventilation openings shall be located to prevent entrance of significant amounts of water considering normal maximum conditions of heel, trim, reverse operation, eccentric loading or wave action.
- d. External openings of ventilation openings shall be located and oriented to prevent entry of fuel vapors. In no instance shall the ventilation openings be closer than 15 inches from the diesel fill and vent fittings.
- e. Ventilation openings shall remain outside of weather enclosures.

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