

H-33 DIESEL FUEL SYSTEMS

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H-33 DIESEL FUEL SYSTEMS

Based on ABYC's assessment of existing technology, and the problems associated with achieving the goals of this standard, ABYC recommends compliance with this standard for all boats, associated equipment, and systems manufactured or installed after July 31, 2006.

33.1 PURPOSE

These standards are guides for the design, choice of materials, construction, installation, repair, and maintenance of permanently installed diesel fuel systems.

33.2 SCOPE

These standards apply to all parts of permanently installed diesel fuel systems from the fuel fill opening to the point of connection to the propulsion engine and/or to any auxiliary equipment on all boats with diesel engines.

33.3 REFERENCED ORGANIZATIONS

ABYC - American Boat & Yacht Council, Inc., 3069 Solomons Island Road, Edgewater, MD 21037-1416. Phone: (410) 956-1050. Fax: (410) 956-2737. Web site: www.abycinc.org.

ANSI - American National Standards Institute, 25 West 43rd Street, New York, NY 10036. Phone: (212) 642-4900. Fax: (212) 398-0023. Web site: www.ansi.org

ASTM International – American Society for Testing and Materials International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. Phone: (610) 832-9585. Fax: (610) 832-9555. Web site: www.astm.org.

AWS – American Welding Society. 550 N.W. LeJeune Road, Miami, Florida 33126 Phone: (800) 443-9353 Web site: www.aws.org

ISO – International Organization for Standardization, ISO Central Secretariat, 1 rue de Verambe, 1211 Geneva Switzerland, tel +41 22 749 0111, fax +41 22 734 0179, Internet central@isocs.iso.ch. Contact ABYC for availability of specific documents.

Military Specification (MIL SPEC) - A specification developed by the US Armed Forces. The referenced specifications may be obtained from the Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120 Website: www.dodssp.daps.htm.

SAE - Society of Automotive Engineers - 400 Commonwealth Drive, Warrendale, PA 15096-0001. Phone: (724) 776-4841. Fax: (724) 776-5760. Web site: www.sae.org.

UL – Underwriters Laboratories, Inc., 12 Laboratory Drive, PO Box 13995, Research Triangle Park, NC 27709-3995. Phone: (919) 549-1400. Fax: (919) 547-6000. Web site: www.ul.com.

33.4 DEFINITIONS

For the purposes of this standard, the following definitions apply.

Accessible - Capable of being reached for inspection, removal, or maintenance without removal of permanent boat structure.

Permanently installed - Securely fastened so that tools, such as wrenches and screwdrivers, must be used for removal.

Readily accessible - Capable of being reached quickly and safely for effective use under emergency conditions without the use of tools.

Static floating position - The attitude in which a boat floats in calm, fresh water, with fuel tanks filled to rated capacity, but with no person(s) or item(s) of portable equipment aboard. The boat should include all permanently installed factory supplied equipment and options such as, but not limited to the engine or engines, batteries, seats, engine oil, railings, fishing towers, etc., but not portable gear such as flags, searchlights, movable cushions, mattresses, portable fire extinguishers, lines, fenders, chairs, tables, anchors, chain, or PFDs. Other tanks such as water, holding, and live bait well tanks are to be empty.

33.5 REQUIREMENTS – IN GENERAL

33.5.1 The installed fuel system shall be designed so that a fuel temperature rise of 60°F (33°C) shall not cause liquid fuel to spill into the boat or the environment when

33.5.1.1 the fuel tank is filled to its rated capacity according to the boat manufacturers' instructions, and

33.5.1.2 the boat is in the static floating position,

NOTE: A fuel system designed to contain five percent fuel expansion is one method of meeting this requirement.

33.5.2 The entire system shall be liquid and vapor tight to the hull interior spaces.

33.5.3 The system and all components shall be capable of operation within an ambient temperature range from -20°F (-29°C) to 176°F (80°C) without failure or leakage.

33.5.4 The system shall be permanently installed and all component parts shall be installed to minimize strain on fuel lines.