



**ABYC P-1 July 2019**  
**Machinery Division Standard**  
**Engine and Powertrain Project**  
**Technical Committee**

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## **ABYC P-1**

# **INSTALLATION OF EXHAUST SYSTEMS FOR PROPULSION AND AUXILIARY ENGINES**



P-1  
7/19

### ***Origin and Development***

Development of P-1, *Installation of Exhaust Systems for Propulsion and Auxiliary Engines* was initiated in 1955. The standard was published for the first time in 1962. Revised editions were published in 1970, 1973, 1986, 1993, 1999, 2002, and 2009. The standard was reaffirmed with editorial corrections in 2014. The 2019 publication is the work of the Engine and Powertrain Project Technical Committee.

### ***Engine and Powertrain Project Technical Committee***

*This list represents the membership at the time the Committee was balloted.*

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Rich Waggoner, *Vice Chair*

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Membership on a committee shall not in and of itself constitute an endorsement of ABYC or any document developed by the committee on which the member serves.

This standard, which is the result of extended and careful consideration of available knowledge and experience on the subject, was developed under procedures accredited as meeting the criteria for American National Standards and is intended to provide minimum performance requirements. The Project Technical Committee that approved the standard was balanced to ensure that individuals from competent and concerned interests have had an opportunity to participate.

ABYC's Project Technical Committee (PTC) meetings are open to the public. All inquiries regarding standards activity, interpretations, or meeting attendance should be directed to the ABYC Technical Department at [comments@abycinc.org](mailto:comments@abycinc.org).

ABYC and its committees do not "approve" or "endorse" any item, construction, or proprietary device.

### ***Request for Interpretations***

Upon written request the Engine and Powertrain PTC will render an interpretation of any requirement of the standard. The request for interpretation should be clear and unambiguous. Requests should be presented to the PTC in a manner in which they may be answered in a "Yes" or "No" fashion.

The committee reserves the right to reconsider any interpretation when or if additional information that might affect it becomes available to the PTC. Persons aggrieved by an interpretation may appeal to the Committee for reinterpretation.

### Summary of Revisions

*This list indicates revisions to the standard when compared with the previously published version. It is not intended to be used independently of the standard. It should be used for informational purposes and as a guide to the official requirements contained in this standard. It is the responsibility of the user to read and understand the complete standard.*

The main changes in this revision of P-1, *Installation of Exhaust Systems for Propulsion and Auxiliary Engines* as compared with the previous edition dated 7/14, are:

- Scope and Purpose were combined
- Units of Measure section was added
- Exhaust gas terminus location requirements were expanded
- Riser height requirements were expanded
- Siphon break requirements were revised
- Figures were updated

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## **P-1 INSTALLATION OF EXHAUST SYSTEMS FOR PROPULSION AND AUXILIARY ENGINES**

Based on ABYC's assessment of the 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 after July 31, 2020.

### **1.1 SCOPE**

This standard is for the design and installation of exhaust systems on boats equipped with inboard or sterndrive engines, or permanently installed auxiliary engines, from the exhaust outlet of the engine or the turbocharger, if used, through the terminus where the exhaust gases are discharged.

#### **EXCEPTIONS:**

1. Engine mounted components covered by [ABYC P-4, Marine Inboard Engines and Transmissions](#) (e.g., exhaust risers, mixing elbows).
2. Engine systems that include all exhaust components through the terminus where the exhaust gases are discharged.

**NOTE:** Some jurisdictions require noise abatement compliance. Exhaust system design should comply with the noise level limits.

### **1.2 UNITS OF MEASURE**

Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate.

### **1.3 REFERENCES**

The following references form a part of this standard. Unless otherwise noted the latest version of referenced standards shall apply.

1.3.1 ABYC - American Boat & Yacht Council, Inc, 613 Third Street, Suite 10, Annapolis, MD 21403. Phone: (410) 990-4460. Fax: (410) 956-2737. Website: [www.abycinc.org](http://www.abycinc.org)

[ABYC H-2, Ventilation of Boats Using Gasoline](#)

[ABYC H-27, Seacocks, Thru-Hull Fittings, and Drain Plugs](#)

[ABYC P-4, Marine Inboard Engines and Transmissions](#)

[ABYC TH-23, Design, Construction, and Testing of Boats in Consideration of Carbon Monoxide](#)

1.3.2 SAE - Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096-0001. Phone: (724) 776-4841. Fax: (724) 776-5760. Website: [www.sae.org](http://www.sae.org)

SAE J2006, *Marine Exhaust Hose*

1.3.3 UL - Underwriters Laboratories, Inc, 12 Laboratory Drive, PO Box 13995, Research Triangle Park, NC 27709-3995. Phone: (919) 549-1400. Fax: (919) 547-6000. Website: [www.ul.com](http://www.ul.com)

UL 1129, *Standard for Wet Exhaust Components for Marine Engines*

UL 94, *Test for Flammability of Plastic Materials for Parts in Devices and Applications*

1.3.4 EPA - US Environmental Protection Agency Office of Transportation & Air Quality (6401A), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 564-1682. Website: [www.epa.gov/otag/marine.htm](http://www.epa.gov/otag/marine.htm)

### **1.4 DEFINITIONS**

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

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