



ABYC P-4 July 2019

**Equipment Division Standard
Engine & Powertrain Project
Technical Committee**

The ABYC Standards and Technical Information Reports for Small Craft are the product of a consensus of representatives of government, industry and public sectors. It is intended solely as a guide to aid manufacturers and the marine community in the design, construction, equipage and maintenance of small craft.

ABYC reviews each standard at least every five years at which time it may be reaffirmed, revised, or withdrawn. ABYC welcomes any written comments on the standards and technical information reports.

ABYC P-4

MARINE INBOARD ENGINES AND TRANSMISSIONS



Origin and Development

ABYC published the first edition of P-4, *Marine Inboard Engines and Transmissions* in 1970. The standard was modified in 1972, 1974, 1989, 1996, corrected in 2001, and modified in 2012. The 2019 revised edition 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.

John McKnight, *Chair*

Rich Waggoner, *Vice Chair*

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Eric Johnson
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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.

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 Changes

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-4, *Marine Inboard Engines and Transmissions* as compared with the previous edition dated 7/12, are:

- Scope and Purpose were combined
- Units of Measure section was added
- Diagnostic requirements were clarified

DISCLAIMER

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P-4 MARINE INBOARD ENGINES AND TRANSMISSIONS

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 engines and transmissions manufactured after July 31, 2020.

4.1 SCOPE

This standard applies to the design, selection of materials, construction, and installation of marine inboard engines and transmissions used for propulsion and auxiliary equipment.

4.2 UNITS OF MEASURE

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

4.3 REFERENCES

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

4.3.1 ABYC - American Boat & Yacht Council, Inc, 613 Third Street, Suite 10, Annapolis MD 21403. Phone: (410) 990-4460. Fax: (410) 990-4466. Website: www.abycinc.org

[ABYC E-11, AC and DC Electrical Systems on Boats](#)

[ABYC H-24, Gasoline Fuel Systems](#)

[ABYC H-33, Diesel Fuel Systems](#)

[ABYC P-1, Installation of Exhaust Systems for Propulsion and Auxiliary Engines](#)

4.3.2 CFR - Code of Federal Regulations and other government publications. May be obtained from the Superintendent of Documents, United States Government Information, PO Box 371954, Pittsburgh, PA 15250-7954. Phone: (202) 512-1800. Fax: (202) 512-2104. Website: www.gpo.gov An excerpted edition of the CFR is also available from ABYC, Inc.

33 CFR 183
40 CFR 1060

4.3.3 SAE - Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096. Phone: (724) 776-4970. Fax: (724) 776-0790. Website: www.sae.org

SAE J962, *Formed Tube Ends for Hose Connections*

SAE J1191, *High Tension Ignition Cable Assembly*

SAE J1223, *Marine Carburetors and Fuel Injection Throttle Bodies*

SAE J1294, *Ignition Distributors*

SAE J1527, *Marine Fuel Hose*

SAE J1928, *Backfire Control Devices*

SAE J1939-05, *Marine Stern Drive and Inboard Spark-Ignition Engine On-Board Diagnostics Implementation Guide*

4.3.4 UL - Underwriters Laboratories, Inc, 12 Laboratory Drive, PO Box 13995, Research Triangle Park, NC 27709. Phone: (919) 549-1400. Website: www.ul.com

UL 1120, *Marine Engine Ignition Systems and Components*

4.4 DEFINITIONS

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

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

4.4.2 Automatic Operation - self-acting; designed to start, run, and stop without an operator when actuated by one or more control devices sensitive to a change in temperature, pressure, voltage, or a mechanical action.