



ABYC P-4 July, 2012

**Machinery Division Standard
Engine and 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ABYC reviews each standard at least every five years at which time it may be reaffirmed, revised, or withdrawn.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



ENGINE AND POWERTRAIN PROJECT TECHNICAL COMMITTEE

John McKnight, Chairman

Glenn Anderson
Daniel Clarkson
Earnie Cook
David DeHorn

Allen Douglas
Eric Johnson
Richard Kolb

David Marlow
Robert Newsome
Rich Waggoner
Richard Wlezien

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

NOTE: 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 was developed under procedures accredited as meeting the criteria for American National Standards. 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.

This standard, which is the result of extended and careful consideration of available knowledge and experience on the subject, is intended to provide minimum performance requirements.

ABYC's Project Technical Committee meetings are open to the public. All contact regarding standards activity, interpretations, or meeting attendance should be directed to the ABYC Technical Department at comments@abycinc.org.

ABYC and its committee's do not "approve", "certify", or "endorse" any item, construction, or proprietary device.

REQUEST FOR INTERPRETATIONS

On 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 which may be answered in a yes or no fashion.

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

P-4 MARINE INBOARD ENGINES AND TRANSMISSIONS

Table of Contents

| | | |
|-----|--|----------|
| 4.1 | PURPOSE..... | 1 |
| 4.2 | SCOPE..... | 1 |
| 4.3 | REFERENCES..... | 1 |
| 4.4 | DEFINITIONS | 1 |
| 4.5 | REQUIREMENTS - IN GENERAL | 2 |
| 4.6 | DESIGN AND CONSTRUCTION..... | 3 |
| 4.7 | INSTRUMENTATION..... | 5 |
| 4.8 | INSTRUCTION OR OWNER'S MANUAL | 6 |
| 4.9 | IDENTIFICATION LABELS | 6 |
| | <i>Origin and Development of P-4, Marine Inboard Engines and Transmissions</i> | <i>7</i> |

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, 2013.

4.1 PURPOSE

This standard is a guide for the design, selection of materials, construction, and installation, of inboard engines and transmissions.

4.2 SCOPE

This standard applies to all inboard engines and transmissions used for propulsion and auxiliary equipment.

4.3 REFERENCES

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

4.3.2 ABYC - American Boat & Yacht Council, Inc., 613 Third Street, Ste. 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 Machinery](#)

4.3.3 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.access.gpo.gov. An excerpted edition of the CFR is also available from ABYC, Inc.

33 CFR 183

4.3.4 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*

4.3.5 UL - Underwriters Laboratories, Inc., 12 Laboratory Drive, PO Box 13995, Research Triangle Park, NC 27709. Phone: (919) 549-1400. Web site: 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.