AS 4451.4—1997
ISO 10592:1994

Australian Standard®

Small craft—Steering systems

Part 4: Hydraulic steering systems for craft up to 24 m hull length

[ISO title: Small craft—Hydraulic steering systems]

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The following interests are represented on Committee CS/1:

Aluminium Development Council

Australasian Corrosion Association

Australian Boating Industry Association

Australian Customs Service

Australian Maritime Safety Authority

Australian Yachting Federation

Boat Owners Association of N.S.W.

Department of Defence

Institute of Marine Engineers

Police Department, N.S.W.

Queensland Department of Transport

University of New South Wales

Waterways Authority

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PREFACE

This Standard was prepared by the Standards Australia Committee CS/1, Small Pleasure Boats, to supersede (in part) AS 1799.3—1985, *Small Pleasure Boats Code*, Part 3: *Engineering*.

The objective of this Standard is to provide the minimum requirements for hydraulic steering systems for craft up to 24 m hull length.

This Standard is identical with and has been reproduced from ISO 10592:1994, *Small craft—Hydraulic steering systems*.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number appears on the cover and title page while the International Standard number appears only on the cover.

(b) In the source text 'this International Standard' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to equivalent Australian Standards, as follows:

ISO		AS
10240	Small craft—Owner's manual	—

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AUSTRALIAN STANDARD

Small craft—Steering systems

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1 Scope

This International Standard specifies requirements, test methods, manuals for both the owner and the installer, and the designation for hydraulic steering systems and components from the wheel to the interface point for outboard motor, inboard motor and inboard-outdrive steering arrangements, used on small craft of up to 24 m length of hull.

Accessories connecting output rams to tiller arms or equivalent are not included.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 10240:—[1)], *Small craft — Owner's manual.*

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 system maximum working pressure: Relief valve pressure setting.

3.2 system test pressure: Non-destructive test pressure, at least one and half times the system maximum operating pressure.

3.3 minimum retained system performance: System capability after test(s) such that at least 90 % of the steering arc normally available to each side of the mid-position may be obtained by exertion of no more than 27 Nm of torque at the helm, through the wheel or other normal control.

NOTE 1 This criterion does not define steering system performance while a boat is underway but is intended to provide quantitative limits for design and test purposes.

3.4 craft-mounted hydraulic system: System in which a cylinder is secured to the boat.

3.5 motor-mounted hydraulic system: System in which a cylinder is secured to the engine.

3.6 drag link: Link in a motor-mounted steering system by which the linear force of the output ram is transmitted to the motor steering arm.

4 Outboard motor and inboard-outdrive requirements

4.1 Steering stops on an outboard motor shall permit at least 30° of angular movement to either side. The design torque at the rudder stock shall be sufficient to put the helm from hard over to hard over (30° port to 30° starboard or vice versa) in not more than 30 s.

4.2 Outboard motors shall meet the applicable dimensional requirements indicated in figures 1 and 2.

4.3 Necessary fittings to attach an outboard motor to the cylinder output rod shall be supplied with the outboard motor.

1) To be published.