

Australian Standard™

**Internal combustion engines—
Performance**

**Part 11: Engines for motorcycle
use—Test code, net power**

[ISO title: Motorcycles—Engine test code—Net power]

This Australian Standard was prepared by Committee ME/20, Internal Combustion Engines. It was approved on behalf of the Council of Standards Australia on 30 June 1999 and published on 5 August 1999.

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Australian Automobile Association
Australian Automotive Aftermarket Association
Australian Industry Group
Australian Institute of Petroleum
Construction & Mining Equipment Association of Australia
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/20, Internal Combustion Engines to supersede AS 2789.10—1986. It is identical with and has been reproduced from ISO 4106:1993, *Motorcycles—Engine test code—Net power*.

The Standards in the series are as follows:

AS

4594	Internal combustion engines—Performance
4594.0	Part 0: Application
4594.1	Part 1: Standard reference conditions, declarations of power, fuel and lubricating oil consumptions, and test methods
4594.3	Part 3: Engines for land, rail-traction and marine use—Test measurements
4594.4	Part 4: Engines for land, rail-traction and marine use—Speed governing
4594.5	Part 5: Engines for land, rail-traction and marine use—Torsional vibrations
4594.6	Part 6: Engines for land, rail-traction and marine use—Overspeed protection
4594.7	Part 7: Engines for land, rail-traction and marine use—Codes for engine power
4594.8	Part 8: Engines for road vehicle use—Test code, net power
4594.9	Part 9: Engines for road vehicle use—Test code, gross power
4594.10	Part 10: Engines for agricultural tractor and machine use—Test code, net power
4594.11	Part 11: Engines for motorcycle use—Test code, net power (this Standard).

An application Standard, AS 4594.0 has been produced to be read in conjunction with these Standards to indicate inconsistencies within the adopted ISO Standards.

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

- Terminology* The words ‘this Australian Standard’ should replace the words ‘this International Standard’ whenever they appear.
- Decimal comma* The decimal point should replace the decimal comma wherever it appears.
- Cross-references* The reference to International Standards should be replaced by references to Australian Standards as follows:

<i>Reference to International Standard</i>	<i>Australia Standard</i>
ISO	AS
2710 Reciprocating internal combustion engines—Vocabulary	—
3833 Road vehicle—Types—Terms and definitions	—

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

AUSTRALIAN STANDARD

Internal combustion engines—Performance

Part 11:

Engines for motorcycle use—Test code, net power

1 Scope

This International Standard specifies a method for testing engines designed for motorcycle use as defined in ISO 3833:1977, definition 3.5. It applies to the evaluation of their performance with a view, in particular, to presenting curves of power and specific fuel consumption at full load as a function of engine rotational speed.

It applies only to net power assessment.

This International Standard concerns internal combustion engines used for propulsion of motorcycles and included in one of the following categories:

- reciprocating internal combustion engines (spark-ignition) but excluding rotary piston engines;
- rotary piston engines.

These engines may be naturally aspirated or pressure-charged, either using a mechanical supercharger or turbocharger.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2710:1978, *Reciprocating internal combustion engines — Vocabulary*.

ISO 3833:1977, *Road vehicles — Types — Terms and definitions*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 2710 and ISO 3833 and the following definitions apply.

3.1 net power: Power obtained on a test bench at the end of the crankshaft or its equivalent¹⁾ at the corresponding engine speed with the equipment and auxiliaries listed in table 1.

3.2 torque: Torque measured under the same conditions as defined in 3.1.

3.3 specific fuel consumption: Amount of fuel consumed per unit of power output and per hour, with the amount of the lubricants excluded when they are used with a mixture of fuels.

1) If the power measurement can only be carried out with a mounted gear-box, the losses in the gear-box should be added to the measured power to give the engine power.