

Australian Standard™

**Internal combustion engines—  
Performance**

**Part 9: Engines for road vehicle  
use—Test code, gross power**

[ISO title: Road vehicles—Engine test code—Gross 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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The following interests are represented on Committee ME/20:

Australian Automobile Association  
Australian Automotive Aftermarket Association  
Australian Industry Group  
Australian Institute of Petroleum  
Construction & Mining Equipment Association of Australia  
Electricity Supply Association of Australia  
Environment Australia  
Environment Protection Authority, N.S.W.  
Federation of Automotive Products Manufacturers  
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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/20, Internal Combustion Engines. It supersedes AS 2789.8—1986. It is identical with and has been reproduced from ISO 2534:1998, *Road vehicles—Engine test codes—Gross power*.

This Standard is the result of a consensus among the representatives on the Joint Committee to produce it as an Australian Standard.

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 (this Standard)  |
| 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  |

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:

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

| <i>Reference to International Standard or other publication</i> | <i>Australia Standard</i> |
|---|---------------------------|
| ISO   | AS                        |
| 2710  | —                         |
| 2710-1  | —                         |
| 3104  | —                         |
| 3173  | —                         |

| ISO       |  | AS |
|-----------|--|----|
| 3675      | Crude petroleum and liquid petroleum products—Laboratory determination of density or relative density—Hydrometer method  | —  |
| 3833      | Road vehicles—Types—Terms and definitions  | —  |
| 5163      | Motor and aviation-type fuels—Determination of knock characteristics—Motor method  | —  |
| 5164      | Motor fuels—Determination of knock characteristics—Research method   | —  |
| 5165      | Petroleum products—Determination of ignition quality of diesel fuels—Cetane engine method  | —  |
| 7876      | Fuel injection equipment—Vocabulary  | —  |
| 7876-1    | Part 1: Fuel injection pumps   | —  |
| 7967      | Reciprocating internal combustion engines—Vocabulary of components and systems   | —  |
| 7967-1    | Part 1: Structure and external covers  | —  |
| 7967-2    | Part 2: Main running gear  | —  |
| 7967-3    | Part 3: Valves, camshaft drive and actuating mechanisms  | —  |
| 7967-4    | Part 4: Pressure charging and air/exhaust gas ducting systems  | —  |
| 7967-5    | Part 5: Cooling systems  | —  |
| 7967-8    | Part 8: Starting systems   | —  |
| 11614     | Reciprocating internal combustion compression-ignition engines—Apparatus for measurement of the opacity and for determination of the light absorption coefficient of exhaust gas | —  |
| ASTM      |  |    |
| D 240-92  | Standard test method for heat of combustion of liquid hydrocarbon fuels by bomb calorimeter  | —  |
| D 3338-95 | Standard test method for estimation of net heat of combustion of aviation fuels  | —  |

NOTES

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## AUSTRALIAN STANDARD

# Internal combustion engines—Performance

## Part 9:

### Engines for road vehicle use—Test code, gross power

#### 1 Scope

This International Standard specifies a method for testing internal combustion engines for propulsion of road vehicles as defined in ISO 3833. It is applicable 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 speed.

This International Standard is applicable to gross power assessment.

This International Standard concerns internal combustion engines used for propulsion of passenger cars, trucks and other motor vehicles, excluding motorcycles, mopeds and agricultural tractors normally travelling on roads, and included in one of the following categories:

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

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

This International Standard is primarily intended for the communication between the engine manufacturer and the manufacturer of the vehicle. If used for advertising purposes, the ratings must clearly state that they are gross power in accordance with 9.2.

#### 2 Normative references

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

ISO 2710-1:—<sup>1)</sup>, *Reciprocating internal combustion engines — Vocabulary — Part 1: Terms for engine design and operation.*

ISO 3104:1994, *Petroleum products — Transparent and opaque liquids — Determination of kinematic viscosity and calculation of dynamic viscosity.*

ISO 3173:1974, *Road vehicles — Apparatus for measurement of the opacity of exhaust gas from diesel engines operating under steady state conditions.*

ISO 3675:1998, *Crude petroleum and liquid petroleum products — Laboratory determination of density — Hydrometer method.*

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1) To be published. (Revision of ISO 2710:1978)