

AS 2789.0

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STANDARDS AUSTRALIA

WITHDRAWN:

19990805

AS 2789.0—1986  
UDC 621.43.018

SUPERSEDED BY:

AS 4594.0-1999

under Revision see DR99058CP

# Australian Standard<sup>®</sup> 2789.0—1986

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## INTERNAL COMBUSTION ENGINES— PERFORMANCE

### Part 0—APPLICATION



**STANDARDS ASSOCIATION OF AUSTRALIA**  
*Incorporated by Royal Charter*



This Australian standard was prepared by Committee ME/20, Internal Combustion Engines. It was approved on behalf of the Council of the Standards Association of Australia on 11 March 1986 and published on 5 May 1986.

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The following interests are represented on Committee ME/20:

Australian Assembly of Fire Authorities  
Australian Chamber of Commerce  
Building Owners and Managers Association of Australia Ltd  
Confederation of Australian Industries  
Construction Equipment Importers and Manufacturers of Australia  
Department of Agriculture and Rural Affairs, Victoria  
Department of Defence  
Electricity Supply Association of Australia  
Federal Chamber of Automotive Industries  
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Metal Trades Industry Association of Australia  
National Farmers Federation  
Society of Automotive Engineers—Australasia  
State Insurance Office, Victoria  
Tractor and Machinery Association of Australia  
University of Melbourne  
Victoria Police

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*Review of Australian Standards.* To keep abreast of progress in industry, Australian standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all SAA publications will be found in the Catalogue of SAA Publications; this information is supplemented each month by SAA's journal 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn standards.

Suggestions for improvements to Australian standards, addressed to the head office of the Association, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian standard should be made without delay in order that the matter may be investigated and appropriate action taken.

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*This standard was issued in draft form for comment as DR 85247.*

AS 2789 Parts 0-10 supersedes AS1501-1976

AS 2789 Parts 1-6 were published in May 1985 and in the May 1985 TAS they were given as superseding AS 1501-1976 which was withdrawn.

AS 2789 Parts 0 and 7-10 were published in May 1986. Information received from the technical officer, Peter Moore, is that they do supersede in part AS 1501-1976 but no information to that effect was given in the May 1986 TAS.

AUSTRALIAN STANDARD

INTERNAL COMBUSTION ENGINES—  
PERFORMANCE  
Part 0  
APPLICATION

AS 2789.0—1986

First published ..... 1986

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA  
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.

ISBN 0 7262 4174 7



6 MAY 1986

## PREFACE

This standard was prepared by the Association's Committee on Internal Combustion Engines. It is one of a series of 11 standards on the performance of internal combustion engines, of which ten are identical with and have been reproduced from International Standards ISO 3046/1, ISO 3046/2, ISO 3046/3, ISO 3046/4, ISO 3046/5, ISO 3046/6, ISO 1585, ISO 2288, ISO 2543, and ISO 4106. The complete series constitutes a replacement for AS 1501—1976, Method for Rating and Testing Internal Combustion Engines.

The standards in the series are as follows:

- AS 2789.0 Internal Combustion Engines—Performance, Part 0—Application
- AS 2789.1 Internal Combustion Engines—Performance, Part 1—Engines for Land, Rail Traction, and Marine Use—Standard Reference Conditions and Declarations of Power, Fuel Consumption and Lubricating Oil Consumption
- AS 2789.2 Internal Combustion Engines—Performance, Part 2—Engines for Land, Rail Traction, and Marine Use—Test Methods
- AS 2789.3 Internal Combustion Engines—Performance, Part 3—Engines for Land, Rail Traction, and Marine Use—Test Measurements
- AS 2789.4 Internal Combustion Engines—Performance, Part 4—Engines for Land, Rail Traction, and Marine Use—Speed Governing
- AS 2789.5 Internal Combustion Engines—Performance, Part 5—Engines for Land, Rail Traction, and Marine Use—Torsional Vibrations
- AS 2789.6 Internal Combustion Engines—Performance, Part 6—Engines for Land, Rail Traction, and Marine Use—Overspeed Protection
- AS 2789.7 Internal Combustion Engines—Performance, Part 7—Engines for Road Vehicle Use—Test Code, Net Power
- AS 2789.8 Internal Combustion Engines—Performance, Part 8—Engines for Road Vehicle Use—Test Code, Gross Power
- AS 2789.9 Internal Combustion Engines—Performance, Part 9—Engines for Agricultural Tractor and Machine Use—Test Code, Net Power
- AS 2789.10 Internal Combustion Engines—Performance, Part 10—Engines for Motor Cycle Use—Test Code, Net Power

This application standard provides explanation on the use of the standards and limitations in their application to suit Australian regulations and conditions.

## Contents

	<i>Page</i>
Foreword .....	3
1 Scope .....	5
2 Referenced documents .....	5
3 Application .....	6

## FOREWORD

The set of standards comprising AS 2789.1 to AS 2789.10, covering the performance of internal combustion engines, should be used with care to ensure that there is no conflict with Australian regulations or acceptable Australian practices.

The purpose of this standard is to give any necessary corrections, qualifications, or explanations when AS 2789.1 to AS 2789.10 are used for Australian applications.

International Standards are revised periodically and it is expected that this series of Australian Standards will be revised accordingly. During such period of revision, close attention will be needed by the user of the standard to ensure that the explanations contained in this standard are still relevant.

The International Standards contain variations in correction factors and tolerances on measurement because they relate to measurement of performance of various sizes and uses of internal combustion engines. It is therefore a purpose of this standard to draw attention to the user of the standards that such differences exist and care is needed in applying the correction factors. When variations in performance due to site conditions are being considered, the variations should be a matter of negotiation between the supplier and the purchaser.

In cases of dispute, where the standards require the use of reference fuels specified in the Annexes, these fuels may not be readily available in Australia or may not be appropriate, e.g. for engines designed for unleaded petrol. Where blending of a special batch or importation of conforming fuel is agreed to be not feasible, then a suitable reference fuel should be agreed between the engine supplier and the engine purchaser.

AS 2789.0—1986

4

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## STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard**  
**for**  
**INTERNAL COMBUSTION ENGINERS—PERFORMANCE**

**PART 0—APPLICATION**

- 1 SCOPE.** The series of standards AS 2789.1 to AS 2789.10 sets out methods of test for power and fuel consumption, reference conditions, corrections, and other relative engine characteristics of internal combustion engines. The series comprises 10 Australian Standards covering specific areas as follows:
- |  |  |            |   |
|--|--|------------|---|
| AS 2789.1 to AS 2789.6   | These standards are benchmark standards, and in the absence of a specific application standard these standards may be applied. They are, however, particularly applicable to large stationary engines such as power-station installations, rail traction, and marine applications. | AS 2789.4  | Internal Combustion Engines—Performance, Part 4—Engines for Land, Rail Traction, and Marine Use—Speed Governing       |
| AS 2789.7  | This standard has been written around the automotive vehicle. However, it is also considered applicable to construction equipment and should be applied to such equipment.   | AS 2789.5  | Internal Combustion Engines—Performance, Part 5—Engines for Land, Rail Traction, and Marine Use—Torsional Vibrations  |
| AS 2789.8  | This standard is considered applicable to automotive vehicles only as it is the only one that covers gross power.  | AS 2789.6  | Internal Combustion Engines—Performance, Part 6—Engines for Land, Rail Traction, and Marine Use—Overspeed Protection  |
| AS 2789.9  | This is a specific application standard and is directly applicable to agricultural machinery. It should not be used for any other application.   | AS 2789.7  | Internal Combustion Engines—Performance, Part 7—Engines for Road Vehicle Use—Test Code, Net Power                     |
| AS 2789.10   | This is a specific application standard and should only be used for motor cycles.  | AS 2789.8  | Internal Combustion Engines—Performance, Part 8—Engines for Road Vehicle Use—Test Code, Gross Power                   |
| <b>2 REFERENCED DOCUMENTS.</b> The following standards are referred to in this standard: |  | AS 2789.9  | Internal Combustion Engines—Performance, Part 9—Engines for Agricultural Tractor and Machine Use—Test Code, Net Power |
| AS 2789.1  | Internal Combustion Engines—Performance, Part 1—Engines for Land, Rail Traction, and Marine Use—Standard Reference Conditions and Declarations of Power, Fuel Consumption and Lubricating Oil Consumption  | AS 2789.10 | Internal Combustion Engines—Performance, Part 10—Engines for Motor Cycle Use—Test Code, Net Power                     |
| AS 2789.2  | Internal Combustion Engines—Performance, Part 2—Engines for Land, Rail Traction, and Marine Use—Test Methods   | ISO 1585   | Road Vehicles—Engine Test Code—Net Power  |
| AS 2789.3  | Internal Combustion Engines—Performance, Part 3—Engines for Land, Rail Traction, and Marine Use—Test Measurements  | ISO 2288   | Agricultural Tractors and Machines—Engine Test Code (Bench Test)—Net Power  |
|  |  | ISO 2534   | Road Vehicles—Engine Test Code—Gross Power  |
|  |  | ISO 3046/3 | Reciprocating Internal Combustion Engines: Performance—Part 3: Test Measurements                                      |
|  |  | ISO 4106   | Road Vehicles—Motor Cycles—Engine Test Code—Net Power   |