

AS 2877—1986

Australian Standard<sup>®</sup>

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**METHODS OF TEST FOR FUEL  
CONSUMPTION OF MOTOR  
VEHICLES DESIGNED TO  
COMPLY WITH AUSTRALIAN  
DESIGN RULES 37 AND 40**

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This Australian standard was prepared by Committee CS/27, Fuel Consumption. It was approved on behalf of the Council of the Standards Association of Australia on 8 April 1986 and published on 5 May 1986.

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The following interests are represented on Committee CS/27:

Australian Automatic Association  
Australian Consumers Association  
Australian Federation of Consumer Organizations  
Australian Institute of Petroleum Ltd  
Australian Liquefied Petroleum Gas Association  
Confederation of Australian Motor Sport  
Department of Consumer Affairs, N.S.W.  
Department of Resources and Energy  
Department of Transport  
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## PREFACE

This standard was prepared by the Association's Committee on Fuel Consumption in response to requests by Government and the Motor Vehicle Industry.

This standard, like AS 2077—1982, Methods of Test for Fuel Consumption of Passenger Cars, Their Derivatives and Multi-Purpose Passenger Cars, has been based on the method of determining fuel consumption used by the United States Environmental Protection Agency. Also, both this standard and AS 2077 permit simultaneous testing of exhaust emissions and fuel consumption as well as direct quantitative measurement of fuel consumption. However, this standard is intended to apply to vehicles designed to comply with Australian Design Rules 37 and 40 while AS 2077 is intended to apply to vehicles designed to comply with Australian Design Rules 27A/B. Essentially then, this standard introduces the following variations over the calculation methods specified in AS 2077:

- (a) Revised methods of determining road load power settings for the dynamometer to take account of the aerodynamic shape of the vehicle under test, and smaller increments in vehicle equivalent inertia settings for the dynamometer to represent more accurately the mass of the vehicle under test.
- (b) An additional test phase in the city drive cycle to take account of a hot start and a short drive, after the vehicle has remained parked for a short period. (As a result of the additional test phase, there is an approximate 5% reduction in the calculated fuel consumption of a vehicle driven over the city cycle, in accordance with this standard as compared with that specified in AS 2077.)

In preparing this standard, the main aim has been to provide a basis for comparison of the fuel consumption of different cars. Although the need for a test that could be carried out with simple equipment under service conditions was considered by the committee, it was decided that such a test, although useful to the individual motorist in relation to his own particular car, would be subject to such variation due to uncontrolled test conditions that it would be of no use in attempting to compare the fuel consumption of different cars. However, it was believed that there would be considerable benefit to motorists and the community in general if it were possible to compare fuel consumption data from different sources (such as manufacturers' advertising) that had been derived from a standard method of test. Because of the widely differing conditions of use, the committee recognized that the results obtained from these tests will only broadly indicate the on-road fuel consumption that may be achieved by individual motorists. Nevertheless, these tests will provide a basis for valid comparison between cars over the range of conditions experienced by the average motorist.

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