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METHODS OF TEST FOR FUEL CONSUMPTION OF PASSENGER CARS, THEIR DERIVATIVES AND MULTI-PURPOSE PASSENGER CARS

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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 6 July 1982 and published on 13 September 1982.

The following interests were represented on committee responsible for the preparation of this standard:

Australian Automobile Association

Australian Consumers Association

Australian Federation of Consumer Organizations

Australian Institute of Petroleum Ltd

Australian Liquefied Petroleum Gas Association

Automotive and Petroleum Technical Council of Australia

Confederation of Australian Motor Sport

Department of National Development and Energy

Department of Transport

Federal Chamber of Automotive Industries

Federation of Automotive Products Manufacturers

Society of Automotive Engineers—Australasia

Trade Practices Commission

University of New South Wales

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PREFACE

This edition of this standard was prepared by the Association's Committee on Fuel Consumption, to supersede AS 2077 — 1979. The purpose of the revision, which was undertaken at the request of the Department of National Development and Energy, was to extend the scope of the standard to provide for the testing of LP gas-fuelled vehicles, in addition to those having petrol or diesel engines. The standard was initially prepared in response to a request from the Australian Consumers Association, and interest in the standard was also shown by the Trade Practices Commission in relation to the advertising of fuel consumption of cars.

The standard is based on the method of determining fuel consumption used by the United States Environmental Protection Agency, which makes use of the analysis of the exhaust gases to determine the amount of fuel consumed under test. As an alternative, the standard also provides for direct measurement of fuel consumption, as this method can be shown to give results that are compatible with those obtained by exhaust gas analysis.*

In preparing this standard, the main aim has been to provide a basis for comparison of the fuel consumption of different cars. The initial proposal was in part related to the need for a test that could be carried out with simple equipment under service conditions, and this was considered by the committee at some length. However, 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 types of car. Furthermore, it was felt 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. The committee recognized that the results obtained from these tests will be only broadly indicative of the fuel consumption that will be achieved by individual motorists owing to widely differing conditions of use. It is considered, however, that these tests provide the basis for a valid comparison between cars over the range of conditions experienced by the average motorist.

The requirements of this standard are compatible with those of Australian Design Rule No 27A/B for vehicle emission control, so that tests to this standard may be carried out on petrol-fuelled vehicles in conjunction with emission testing under ADR 27A/B.

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* See also SIMPSON, Bruce H., 'Improving the Measurement of Chassis Dynamometer Fuel Economy,' IN:SAE paper 750002, Automotive Engineering Congress and Exposition, Detroit, Michigan. February 24-28, 1975.

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